Bonfiglioli

Riduttori

300M series

Modular planetary gearboxes



PRODUCT

Bonfiglioli

Forever Forward

NORTH AMERICA EDITION

Chapter	Description	Page
GENERAL INFORMATION		**2**
1	Symbols and units of measure	2
2	Introduction	4
3	Allowed temperature limits	4
4	Specifications	5
5	Versions	6
6	Output torque	8
7	Power	9
8	Efficiency	10
9	Reduction ratio	10
10	Angular speed	10
11	Service factor	10
12	Service factor requested by application	11
13	Life factor	11
14	Product selection	12
15	Installation	23
16	Lubrication	25
17	Storage	27
18	Supply conditions	27
SERIES 300M MODULAR PLANETARY GEARBOXES		**28**
19	300M Gearbox designation	28
20	3/V_M Gearbox designation	30
21	3/A Gearbox designation	32
22	Motor designation	34
23	Surface protection and painting options	35
24	Mounting position	36
25	Rating charts	41
26	Dimensions	226
CUSTOMER'S SHAFT		**518**
TORQUE ARM		**521**
TORQUE ARM KIT FOR FP VERSIONS		**521**

Chapter	Description	Page
NEGATIVE MULTIDISC BRAKE AND HYDRAULIC MOTORS		**522**
H1	symbols and units of measure	522
H2	negative multidisc brake	522
H3	inputs for hydraulic motors	523
H4	hydraulic motors	533
H5	technical features	533
H6	designation	534
H7	displacement selection	535
H8	checking	535
H9	technical data mg motors	536
H10	dimensions mg motors	538
H11	technical databrakes for mg motors	539
H12	installation	539
ELECTRIC MOTORS		**542**
M1	Symbols and units of measurement	542
M2	Introduction	543
M3	General characteristics	545
M4	Motor designation	547
M5	Variants and options	550
M6	Mechanical features	552
M7	Electrical characteristics	556
M8	Asynchronous brake motors	566
M9	DC brake motors type BN_FD and M_FD	567
M10	AC brake motors type BN_FA and M_FA	571
M11	Brake release systems	574
M12	Options	576
M13	Tables of motors correlation	588
M14	Motor rating charts BX-MX	592
M15	Motors dimensions BX-MX	596
M16	Motor rating charts BE-ME	610
M17	Motors dimensions BE-ME	616
M18	Motor rating charts BN-M	620
M19	Motors dimensions BN-M	632

Revisions

Refer to page 644 for the catalogue revision index. Visit www.bonfiglioli.com to search for catalogues with up-to-date revisions.

1 SYMBOLS AND UNITS OF MEASURE

Symbols	Units of Measure	Description
$A_{c\ 1,2}$	[lbs]	Calculated thrust load
$A_{n\ 1,2}$	[lbs]	Rated thrust load
A_{r2}	[lbs]	Thrust load at gearbox output shaft
F_h	–	Lifetime factor for gearbox calculation
$F_{h\ 1,2}$	–	Lifetime factor for bearing calculation
$f_{n\ 1,2}$	–	Speed factor referred to input and output shaft loading
f_L	–	Lifetime factor
f_m	–	Increase factor
$f_{h\ 1,2}$	–	Load corrective factor on shafts
f_S	–	Service factor
f_S'	–	Service factor required by the application
f_t	–	Thermal factor
f_v	–	Speed factor
h	[h]	Lifetime in hours
i	–	Reduction ratio
K_a	–	Axial load duty factor
K_r	–	Radial load factor
l	–	Intermittence factor
T_2	[lb•in]	Torque delivered to output shaft
T_{c2}	[lb•in]	Calculated torque at gearbox output
T_{2REF}	[lb•in]	Reference torque
T_{n2}	[lb•in]	Gearbox rated output torque
T_{2max}	[lb•in]	Gearbox max. output torque
Tb	[lb•in]	Rated brake torque

Symbols	Units of Measure	Description
$T_{r\ 1,2}$	[lb•in]	Required torque at gearbox
$n_{\ 1,2}$	[rpm]	Angular speed
P_1	[hp]	Max transmissible power at gearbox input
P_1'	[hp]	Transmitted power at gearbox input
P_2	[hp]	Transmitted power at gearbox output
P_n	[hp]	Motor rated power
P_{r1}	[hp]	Required input power
P_{r2}	[hp]	Output power at n_2 max
P_{r2}'	[hp]	Output power at n_2 min
P_S	[hp]	Excess power
P_t	[hp]	Gearbox thermal capacity
$R_{c\ 1,2}$	[lbs]	Calculated radial load
$R_{n1\ 1,2}$	[lbs]	Rated radial load at shaft mid-point
$R_{x\ 1,2}$	[lbs]	Rated radial load at gearbox re-calculated with respect to different load application points
t_a	[°C/°F]	Ambient temperature
t_S	[°C/°F]	Surface temperature
t_o	[°C/°F]	Oil temperature
X	[mm/in]	Load application distance from shaft shoulder
η_d	–	Dynamic efficiency
Z	–	Frequency of starts

$_1$ value applies to input shaft

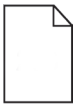
$_2$ value applies to output shaft



Symbol referring to weight of gearboxes.



Columns marked with this symbol indicate the reference page showing dimensions.



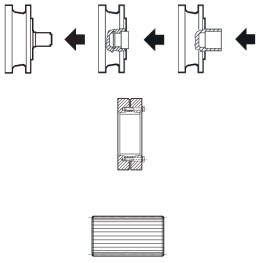
This symbol identifies reference page number.



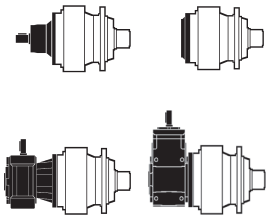
DANGER - WARNING
This symbol indicates situations of danger, which if ignored, may result in serious injury to the operator.



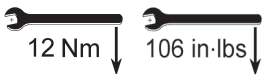
IMPORTANT
This symbol indicates important technical information.



These symbols identify the mounting positions of accessories.



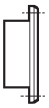
These symbols identify the position of gearbox input (black-filled areas).



The number associated with the wrench symbol indicates the tightening torque for friction coupling screws.



Negative multidisc brake.



Hydraulic motor connection.



Cover for standard input flanging.



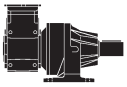
Inline units.



Right angle units.



Worm-planetary combined design.



Bevel helical-planetary combined design.

2 INTRODUCTION

This catalogue presents BONFIGLIOLI RIDUTTORI's range of Series 300M modular planetary gearboxes. The range has been expanded and integrated with new sizes, technical improvements and enhanced modularity right through to the larger sizes. This feature signifies greater flexibility in internal production to ensure quick availability of products in the sizes and types requested either directly from the company or from the many affiliates belonging to the BONFIGLIOLI sales network in various countries around the world.

The gearboxes are tested in conformity with the following standards:

ISO 6336 : 2006 - method B for gears
ISO 281 for bearings
DIN 743 : 2012 for shafts

3 ALLOWED TEMPERATURE LIMITS

Symbols	Description / Condition	Value (*)	
		Synthetic Oil	Mineral Oil
t_a	Ambient temperature		
$t_{au\ min}$	Minimum operating ambient temperature	**- 30°C [-22°F]**	**-10°C [+14°F]**
$t_{au\ Max}$	Maximum operating ambient temperature	**+50°C [+122°F]**	**+40°C [+104°F]**
$t_{as\ min}$	Minimum storage ambient temperature	**-40°C [-40°F]**	**-10°C [+14°F]**
$t_{as\ Max}$	Maximum storage ambient temperature	**+50°C [+122°F]**	**+50°C [+122°F]**
t_s	Surface temperature		
$t_{s\ min}$	Minimum gearbox surface temperature starting with partial load (#)	**-25°C [-13°F]**	**-10°C [+14°F]**
$t_{sc\ min}$	Minimum gearbox surface temperature starting with full load	**-10°C [+14°F]**	**-5°C [+23°F]**
$t_{s\ Max}$	Maximum casing surface temperature during continuous operation (measured next to the gearbox input)	**+100°C [+212°F]**	**+100°C** (@) **[+212°F]**
t_o	Oil temperature		
$t_{o\ Max}$	Maximum oil temperature during continuous operation	**+95°C [+203°F]**	**+95°C** (@) **[+203°F]**

(*) = Refer to the table "Selection of the optimal oil viscosity" for further information about minimum and maximum values of different oil viscosity. For values of t_a < -20°C [+70°F] and t_s, t_o > 80 °C [+176°F], choose (as permitted in the product configuration stage) the sealing type of the most suitable material to the type of application. If needed contact Bonfiglioli Technical Service.

(@) = Continuous operation it is not advised if t_s and t_o range is 80°C [+176°F] to 95 °C [+203°F].

(#) = For full load start-up it is recommended to ramp-up and provide for greater absorption of the motor. If needed, contact Bonfiglioli Technical Service.

4 SPECIFICATIONS

The 300M series consist of a range of multi-purpose planetary gearboxes that can be operated by electric motors. Basic features are:

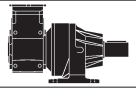
- 20 frame sizes of modular design
- output torque up to 11,388,260 lb•in
- transmissible power up to 1,400 hp
- ratios from 3.4:1 to 5234:1
- versions:
  - in-line with 1 to 4 reductions
  - right angle (spiral bevel gear set into first stage) with 2 to 4 reductions
- combinations with:
  - worm gear units
  - bevel-helical gear units
- flange, foot and shaft mounting arrangements
- slow output shafts: keyed, splined male, splined hollow, shrink disk mounted
- input adaptors for:
  - IEC and NEMA normalised electric motors
  - IEC integral motor for in-line units up to size 307 and for units combined with bevel helical and worm gears
- parallel input shafts
- gearmotors with electric motors IEC
- output shaft accessories:
  - flanges
  - pinions
  - splined bars
  - shrink discs

More design features:

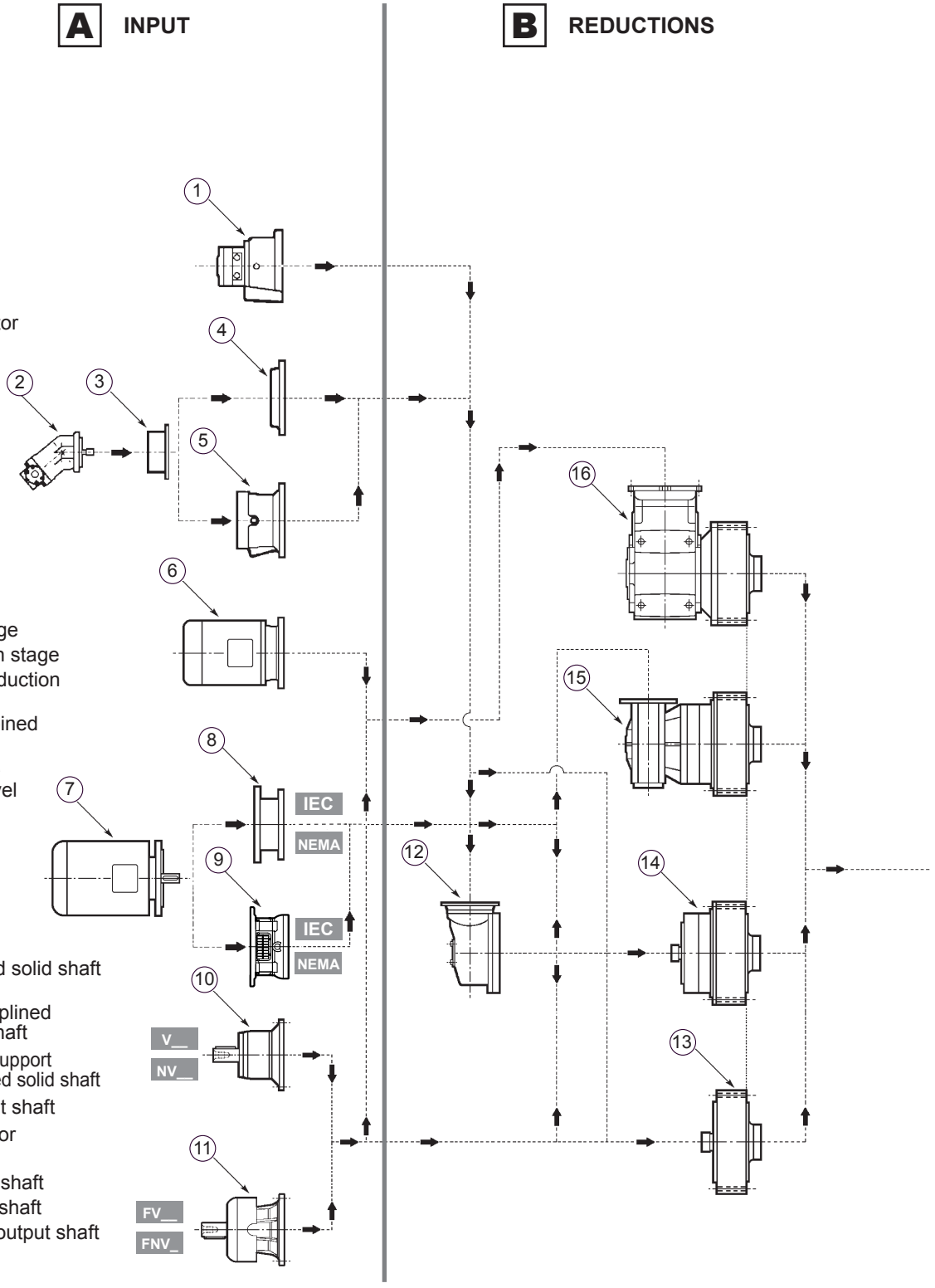
- high ratio of transmissible torque to overall dimensions
- high overhung and axial load capacity due to heavy duty tapered roller bearings featured on H and P versions
- high efficiency
- inner parts are coupled through splined connections rather than keys
- planetary gears mounted onto self-centering carriers to ensure the most even load distribution among planetary gears
- housing made of spheroidal cast iron.

Configurations

(A 1)

Configuration	Power	Torque	Ratios	Efficiency	Noise level
	$0.33 \le P_n$ [hp] ≤ 100	$T_{2REF} \le$11,388,250 lb•in	$3.4 \le i \le 2916$	High	Medium
	$0.33 \le P_n$ [hp] ≤ 75	$T_{2REF} \le$ 5,799,011 lb•in	$7 \le i \le 953$	High	Medium
	$0.33 \le P_n$ [hp] ≤ 60	$T_{2REF} \le$ 5,799,011 lb•in	$370 \le i \le 5234$	Medium	Low
	$0.33 \le P_n$ [hp] ≤ 30	$T_{2REF} \le$ 138,780 lb•in	$18.7 \le i \le 731$	High	Low

5 VERSIONS



A

1 Orbital hydraulic motor MG with/without brake
2 Hydraulic motor
3 Hydraulic motor setting
4 Cover
5 Negative brake
6 Compact electric motor
7 IEC or NEMA electric motor
8 Electric motor setting
9 Electric motor connection with integrated fan
10 Input shaft
11 Solid input shaft with fan

B

12 Right-angle reduction stage
13 Single planetary reduction stage
14 Two or more planetary reduction stages
15 Planetary reduction combined with wormgear unit
16 Planetary reduction stage combined with helical bevel gear unit

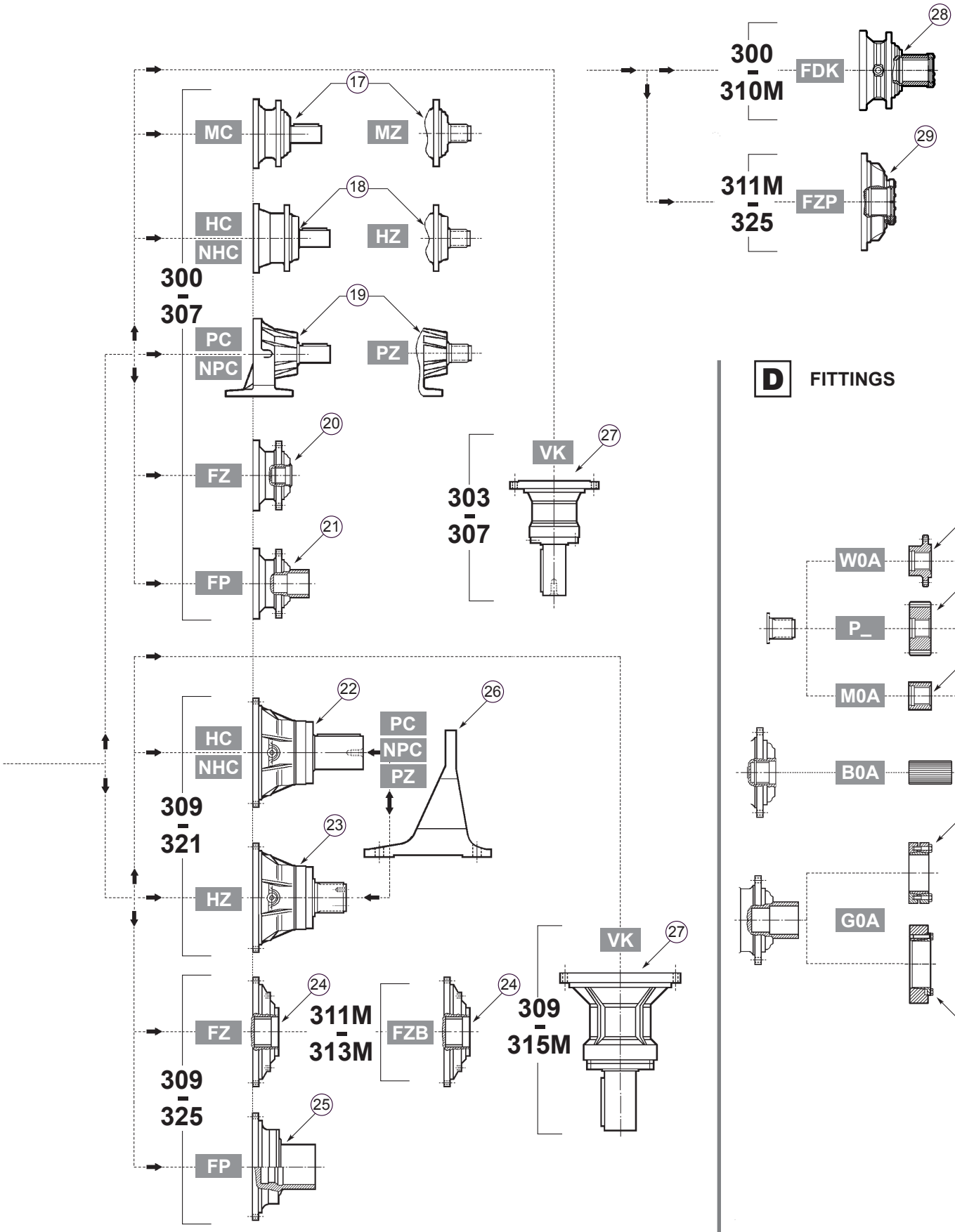
C

17 **MC/MZ** - Keyed or splined solid shaft output
18 **HC-NHC/HZ** - Keyed or splined heavy duty solid output shaft
19 **PC-NPC/PZ** - Output with support bracket and keyed or splined solid shaft
20 **FZ** - Splined hollow output shaft
21 **FP** - Hollow output shaft for shrink disc
22 **HC** - Parallel solid output shaft
23 **HZ** - Splined solid output shaft
24 **FZ/FZB** - Splined hollow output shaft
25 **FP** - Hollow output shaft for shrink disc
26 **PC** - Foot mount
27 **VK** - Reinforced output with parallel shaft for stirrers and mixers
28 **FDK** - Hollow shaft with double keyway
29 **FZP** - Hollow splined shaft with axial blockage device

D

30 **W0A** - Flange
31 **P_** - Pinion
32 **M0A** - Sleeve coupling
33 End plate
34 **B0A** - Splined bar
35 **G0A** - Shrink disc

C OUTPUT

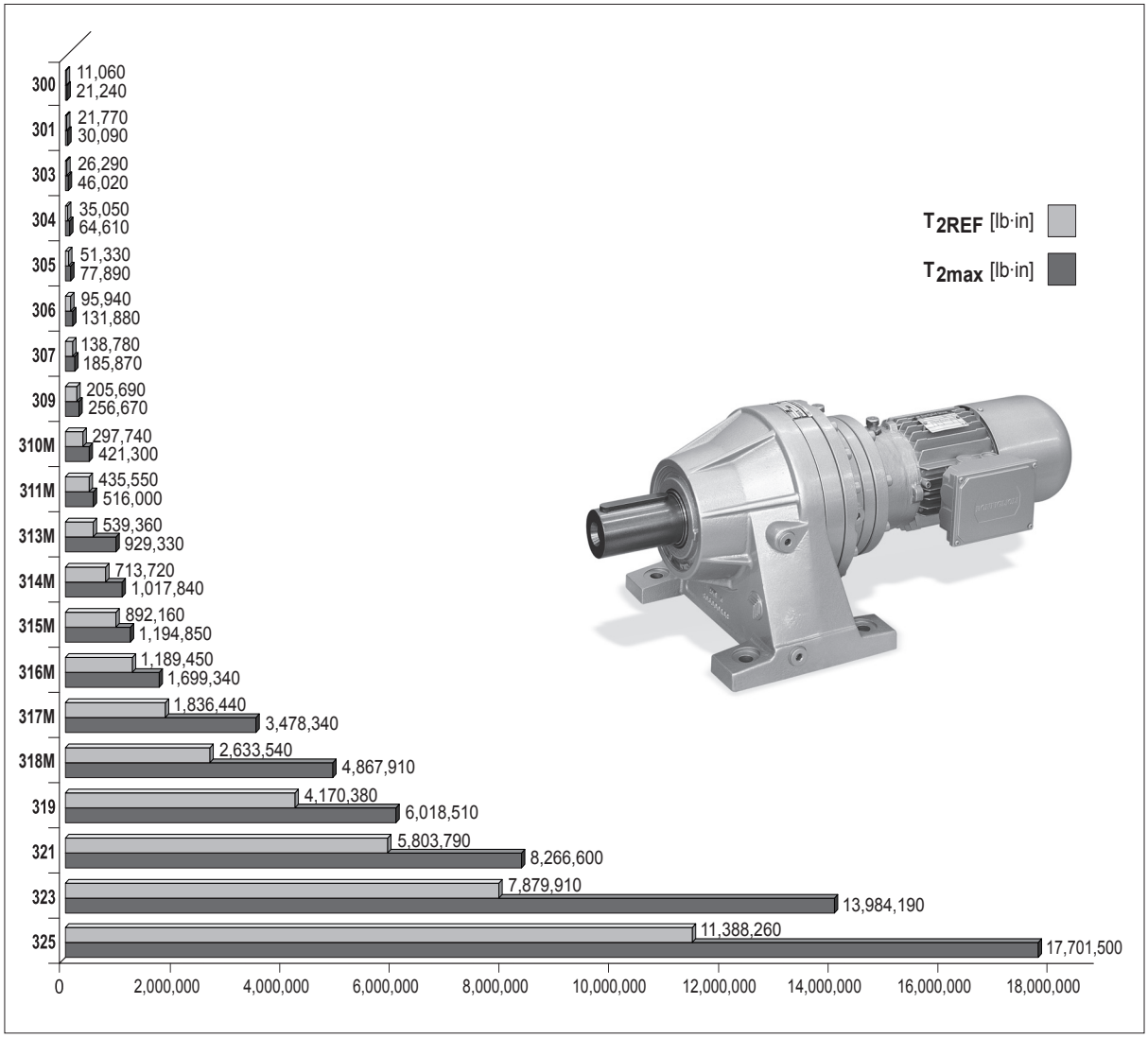


D FITTINGS

The following paragraphs contain information on essential elements for selection and correct use of gearmotors.

6 OUTPUT TORQUE

(A 2)



6.1 Reference torque T_{2REF} [lb•in]

It is the significant value for the size. It is equivalent to the maximum value of nominal torque T_{n2} for a life factor n_2 x h = 10000 (referred to single stage configuration L1).

6.2 Rated output torque T_{n2} [lb•in]

It is the output torque which the gearbox can transmit with steady load under working condition specified in the calculation method.

6.3 Maximun torque T_{2max} [lb•in]

It is the output torque that the gearbox can withstand under static or almost static conditions. It is generally meant as a momentary peak load or starting-up torque under load.
The values in the tables are valid only in versions with output splined shaft (accessories excluded).

6.4 Required torque T_{r2} [lb•in]

The torque drawn by the application. It must always be equal to or less than rated output torque T_{n2} for the gearbox under study.

7 POWER

7.1 Input rated power P_{n1} [hp]

P_{n1} is the maximum power that can be safely applied to the gearbox when the same is operated:
- at a n_1 drive speed
- yielding a theoretical lifetime of 10000 hours
- service factor f_s=1

Check that the formula here below is always satisfied:

$$P_1' \times fs \leq P_1 \quad (1)$$

7.2 Output power P_2 [hp]

This value is the net power delivered to the output shaft.
It can be calculated through the following formulas:

Efficiency values are listed in table (A3).

$$P2 = P1 \times \eta d \quad (2)$$

$$P_2 = \frac{T_{r2} \times n_2}{63025} \quad (3)$$

7.3 Thermal power P_t [hp]

This parameter is linked to the gearbox thermal limit. Values for the thermal capacity are listed within the rating charts of gearboxes and gearmotors and represent the mechanical power that can be transmitted continuously at an input speed n_1 and at an ambient temperature of 20°C [70°F], without the lubricant exceeding the temperature of 85-90°C [185-194°F] and the gear case the temperature of 75-80°C [167-175°F], without the use a supplementary cooling system.

8 EFFICIENCY

8.1 Dynamic efficiency η_d

The parameter is defined as the relationship of the net power delivered to the output shaft P_2 to the power applied to the input shaft P_1:

$$\eta_d = \frac{P_2}{P_1} \quad (4)$$

Indicative values for the efficiency are listed in the chart here after.

(A 3)

No. of reductions	Configuration		
	Planetary	Combined with worm gear unit	Combined with right-angle unit
1	0.97	—	—
2	0.94	0.73	—
3	0.91	0.70	0.91
4	0.88	—	—

9 REDUCTION RATIO i

It is defined as the relationship of the speed the input shaft is driven at and the speed delivered at the output shaft of a gearbox.

$$i = \frac{n_1}{n_2} \quad (5)$$

10 ANGULAR SPEED

10.1 Input speed n_1 [rpm]

The speed the gearbox is driven at.
The value is coincident with the motor speed if this is directly connected to the gearbox.
Input speed should never exceed the n_{1max} value listed in the gearbox rating chart.

10.2 Output speed n_2 [rpm]

It is calculated from drive speed $\mathbf{n_1}$ and gear ratio **i**, as per the following equation:

$$n_2 = \frac{n_1}{i} \quad (6)$$

11 SERVICE FACTOR f_S

This is the relationship of the gear unit rated power to the power of the electric motor actually driving the unit.

$$f_S = \frac{P_{n1}}{P_1} \quad (7)$$

12 SERVICE FACTOR REQUESTED BY APPLICATION f_S'

It's a coefficient that represents the severity of the application. This factor takes into account, although approximately, the type of load the gearbox operates with, the specific duty cycle as well as the operating daily hours.
The table (A4) is of reference when determining the appropriate service factor for the application.

(A 4)

Service factor f_S' required depending on the application

Type of load	Number of starts/hour z	Total operating hours (h)				
		≤ 5000	10000	15000	25000	50000
		Daily operating hours (h)				
		h < 4	4 < h < 8	8 < h < 12	12 < h < 16	16 < h < 24
Uniform load	Z < 10	0.90	1.00	1.15	1.30	1.60
	10 < Z < 30	0.95	1.15	1.30	1.50	1.80
	30 < Z < 100	1.00	1.25	1.45	1.60	2.00
Moderate shock load	Z < 10	1.00	1.25	1.45	1.60	2.00
	10 < Z < 30	1.10	1.40	1.60	1.80	2.20
	30 < Z < 100	1.20	1.50	1.70	2.00	2.40
Heavy shock load	Z < 10	1.20	1.50	1.70	2.00	2.40
	10 < Z < 30	1.30	1.60	1.80	2.10	2.60
	30 < Z < 100	1.40	1.75	2.00	2.30	2.80

13 LIFE FACTOR F_{h1}, F_{h2}

Factor resulting by multiplying angular speed at input (n_1) or output (n_2) by actual operating working hours h, break times excluded.

$$F_{h1} = (n_1 \times h) \quad (8)$$

$$F_{h2} = (n_2 \times h) \quad (9)$$

Life factor is directly proportional to gearbox rpms during the whole duty time

14 PRODUCT SELECTION

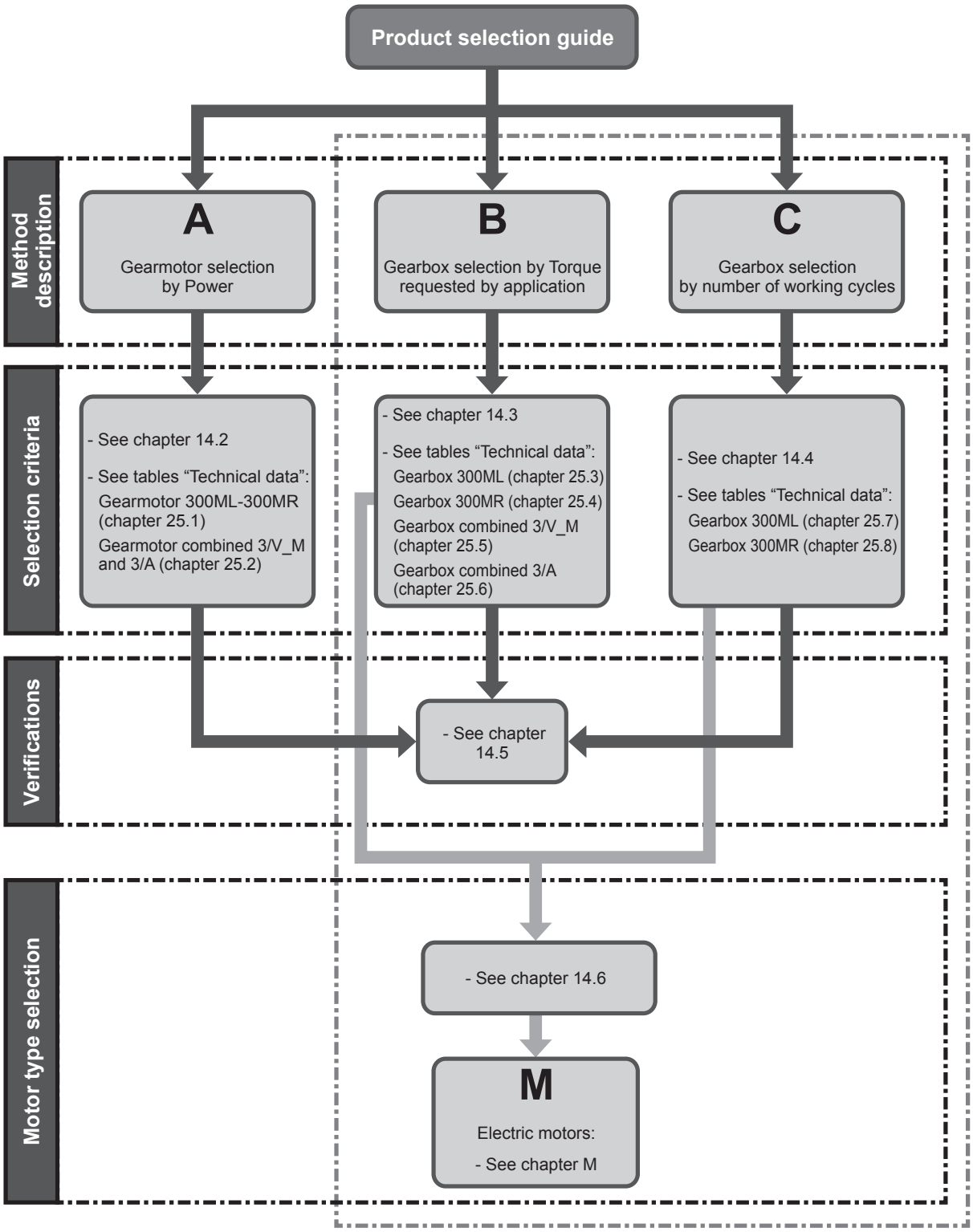
Bonfiglioli Forever Forward	TECHNICAL DATA REQUIRED FOR THE SELECTION OF 300M	Nr:	
		Date:	
		Rev_	Date:

		A)	***GENERAL DATA***							
#	1		Company / Customer							
#	2		Contact							
#	3		Branch / Distributor							
#	4		Order quantity							
	5		Delivery time							
		B_1)	***ELECTRIC MOTOR***			*B_2)*	***HYDRAULIC MOTOR***			
	6		Motor Type							
#	7	P_{n1}	Rated motor Power		[hp]	V	Displacement		[cm³]	
#	8	P_{r1}	Motor power demand		[hp]	Δp	Max drop of pressure		[bar]	
	9	n_1	Input speed		[rpm]	Q	Max oil flow rate		[l/min]	
	10		Pole number							
	11		Motor mounting: B3 - B5 - B14							
		C_1)	***PLANETARY GEARBOX***							
#	12		Gearbox configuration							
#	13	i	Gear ratio							
#	14	n_2	Output speed		[rpm]					
#	15	M_{r2}	Output torque demand		[lb•in]					
#	16	M_{p2}	Peak torque demand		[lb•in]					
#	17	f_S	Service factor demand							
	18		Rotation of the output shaft [frontal view]:		**CW**			**CCW**		
#	19	L_{10H}	Bearings lifetime		[h]					
#	20		Gears lifetime		[h]					
	21	SF_{min}	Safety for tooth root stress		standard reference (ISO preferred)					
	22	SH_{min}	Safety for flank pressure		standard reference (ISO preferred)					
		D)	***ADDITIONAL LOADS***							
	23	R_{c2}	Radial load on output shaft		[lbs]					
	24	x_2	Load application distance from shaft shoulder		[lbs]					
	26	R_{c1}	Radial load on input shaft		[lbs]					
	27	x_1	Load application distance from shaft shoulder		[lbs]					
	29	A_{n2}	Thrust load on output shaft (+ / -)		[lbs]					
	30	A_{n1}	Thrust load on input shaft (+ / -)		[lbs]					
		E)	***APPLICATION***							
#	31		Type of application							
	32		Duty cycle	Time phase %	Time phase hours	Gearbox output torque [Nm]	Gearbox output speed [min⁻¹]			
				,,,,	,,,,					
				,,,,	,,,,					
				,,,,	,,,,					
				,,,,	,,,,					
				,,,,	,,,,					
	33		Notes about Duty Cycle:							
			Duty type	**S1**	**S2**	**S3**	**S4-S8**			
	34	v_A	Ambient air velocity		[m/s]	≤ 0.5	> 0.5 ≤ 1.4	> 1.4		
#	35	t_a	Ambient temperature range		[°F]					
	36		Altitude a.s.l.		[ft]					
	37		Rating according FEM class	T-	L-	M-				
		F)	***OPTIONS OR ADDITIONAL REQUESTS***							
	38		Lubrication							
	39		Supplementary cooling systems							
	40		Paint coating							
	41		To specific requests for testing							
		G)	***NOTES***							
	42		Notes and additional Customer requirements:							
#	43		**PLP number if present for Special Gearbox**							

Mandatory for the selection

The form. duly filled in. can be forwarded to our Technical Service which will assist the Customer in selecting the most suitable drive for the specific application.

14.1 PRODUCT SELECTION GUIDE



NOTE:
The selection criteria and specifications reported in this catalogue are not valid for every and each application, including those where the gearbox operates as a safety device preventing injury to persons or damage to objects, as is the case with hoisting equipment.
For these applications, the gearbox should be selected according to specific criteria and in compliance with the applicable safety regulations. Should this be the case we recommend that you seek advice from BONFIGLIOLI Technical Service.

14.2 METHOD A (Gearbox selection by power)

Based on application type, it should be defined :
a) Required service factor $\mathbf{f_S'}$ (see tab A4);

b) Required drive power:

$$P_{r1} = \frac{T_{r2} \times n_2}{63025 \times \eta_d} \quad (10)$$

Table (A3) lists the indicative values of efficiency ηd for the different types of gearboxes.

c) After required power $\mathbf{P_{r1}}$ and output speed $\mathbf{n_2}$ are known, locate the gearmotor rating charts and select the one relevant to normalized power $\mathbf{P_n}$ equal to or greater than $\mathbf{P_{r1}}$:

$$P_n \geq P_{r1} \quad (11)$$

Unless otherwise specified, power $\mathbf{P_n}$ listed in the motor rating chart refers to continuous duty S1.
For motors operating in conditions other than S1, determine type of duty according to CEI 2-3/IEC 60034-1 standards.
Note that for duty cycles from S2 to S8 and motor frame sizes up to 132 included, power may be up-graded over that specified for continuous duty. In this event, the condition to be verified is the following:

$$P_n = \frac{P_{r1}}{f_m} \quad (12)$$

The adjusting factor $\mathbf{f_m}$ can be obtained from table (A5).

(A 5)

	DUTY						
	S2			**S3***			**S4-S8**
	Cycle duration			Cyclic duration factor			Please contact us
	10	**30**	**60**	**25%**	**40%**	**60%**	
f_m	1.35	1.15	1.05	1.25	1.15	1.1	

* Cycle time must be equal to or less than 10 minutes. Should this not be the case contact our Technical Service for assistance.

Cyclic duration rate: see formula (25).

For the output speed $\mathbf{n_2}$, or closest to, select the gearmotor that yields a service factor $\mathbf{f_S}$ meeting the following condition:

$$f_S \geq f_S' \quad (13)$$

In case of **FP** configuration, please see Verification paragraph (chapter 14.5 - item g) .

14.3 METHOD B (Gearbox selection by Torque requested by application)

Based on application type, it should be defined :
a) Required service factor $\mathbf{f_S'}$ (see tab A4);

b) Determine calculated torque according to required output torque $\mathbf{T_{r2}}$ as follows:

$$T_{c2} = T_{r2} \times f_S' \quad (14)$$

c) Determine gear ratio from required output speed $\mathbf{n_2}$ and drive speed $\mathbf{n_1}$:

$$i = \frac{n_1}{n_2} \quad (15)$$

d) Once $\mathbf{T_{c2}}$ and **i** are determined, locate the gearbox rating chart for the drive speed $\mathbf{n_1}$ and select a gearbox featuring the ratio i nearest to calculated ratio that also satisfies the condition:

$$T_{n2} \geq T_{c2} \quad (16)$$

If a IEC-normalised motor is to be fitted onto the gearbox, check availability of the applicable adapter.

In case of **FP** configuration, please see Verification paragraph (chapter 14.5 - item g) .

14.4 METHOD C (Gearbox selection by number of working cycles)

a) Determine the following according to the required application:
- Required service factor $\mathbf{f_S'}$ (see tab. A4)
- required gearbox working life h
- required drive unit

b) Define the calculated torque with the required output torque T_{r2}:

$$T_{c2} = T_{r2} \times f_S' \quad (17)$$

c) Calculate the life factor with required working life h and output speed n_2.:

$$Fh_2 = (n_2 \times h) \quad (18)$$

d) Calculate the required reduction ratio:

$$i = \frac{n_1}{n_2} \quad (19)$$

e) Select gearbox size which, having a reduction ratio close to the calculated value, which satisties the following

$$T_{c2} \leq T_{n2} \quad (20)$$

$$Fh_2 \leq (n_2 \times h) \quad (21)$$

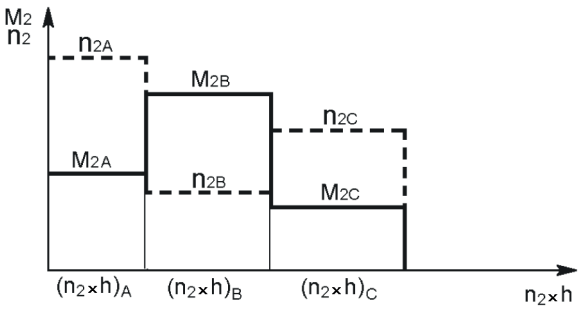
where T_{n2} and Fh_2 are indicated in the tables on technical features for each gearbox size.

In case of applications in which the required torque T_{r2} and speed n_2 vary within a wide range, best selection could be an equivalent required torque given by:

$$T_{r2} = \sqrt[4]{\frac{(n_2 \times h)_A \times T_A^4 + (n_2 \times h)_B \times T_B^4 + (n_2 \times h)_C \times T_C^4 + ...}{(n_2 \times h)_A + (n_2 \times h)_B + (n_2 \times h)_C + ...}} \quad (22)$$

referred to:

(A 6)



and calculating the life factor Fh with:

$$Fh_{calc} = (n_2 \times h)_A + (n_2 \times h)_B + (n_2 \times h)_C + ... \quad (23)$$

Then follow the same procedure as specified in d) and e).

In case of **FP** configuration, please see Verification paragraph (chapter 14.5 - item g) .

14.5 VERIFICATION

After selecting the drive units, please check the following:

a) Thermal power

Make sure that the thermal capacity of the gearbox is equal to or greater than the the mechanical power required by the application, as per equation (24).
If this is not the case provide a supplementary cooling system or select a larger gearbox.
When the duty cycle is formed by short operating periods and rest time is long enough for the unit to cool down, the thermal capacity is hardly significant and it may be omitted from calculation.
For ambient temperatures other than 20°C [70°F], intermittent duty and drive speed n_1 other than the reference speed listed in the rating charts, P_t is to be adjusted through thermal factor f_t and/or speed factor f_v as listed in table (A7).
Finally, make sure that the following condition is always satisfied:

$$P_{r1} \leq P_t \times f_t \times f_v \quad (24)$$

(A 7)

f_t					
t_a **max.** °C [°F]	Continuous duty	Intermittent duty			
		Cyclic duration factor % (I)			
		80	60	40	20
10 [50]	1.2	1.3	1.6	1.8	2.0
20 [70]	1.0	1.1	1.3	1.5	1.7
30 [85]	0.9	1.0	1.2	1.3	1.5
40 [105]	0.7	0.8	0.9	1.0	1.2
50 [120]	0.5	0.6	0.7	0.8	0.9

n_1	f_v
500	1.35
900	1.2
1500	1.0
1800	0.85

Cyclic duration factor is the relationship of operating time under load t_f to total cycle time (t_f + t_r, where t_r stands for time at rest), expressed as a percentage.

$$I = \frac{t_f}{t_f + t_r} \times 100 \quad (25)$$

Should the gear unit in the conventional configuration fall short of thermal capacity and not verify the condition (24) above, it is recommended to apply the following executions:

1) fan cooled input shaft - ordering code FV_ _ or NFV_ _
2) electric motor connection with integrated fan - ordering code PF_ _

The relevant thermal capacity is listed in the chart here after.

(A 8)

Thermal capacity
P_t [hp] @ n_1= 1450 rpm

FV _ _
FNV _ _



		05B	06B	07A	07B	010B	011B
303	L1	41	–	–	–	–	–
304	L1	42	–	–	–	–	–
305	L1	44	–	–	–	–	–
306	L1	–	63	–	–	–	–
	L2	44	–	–	–	–	–
307	L1	–	–	69	69	–	–
	L2	51	–	–	–	–	–
309	L1	–	–	73	73	–	–
	L2	51	–	–	–	–	–
310M	L1	–	–	–	–	87	–
	L2	–	69	–	–	–	–
	L3	51	–	–	–	–	87
311M	L1	–	–	–	–	–	–
	L2	–	–	75	73	–	–
	L3	51	–	–	–	–	–
313M	L1	–	–	–	–	–	–
	L2	–	–	80	80	–	–
	L3	51	–	–	–		–
314M	L2	–	–	–	–	94	–
	L3	–	73	–	–	–	–
	L4	47	–	–	–	–	–
315M	L2	–	–	–	–	–	101
	L3	–	–	80	80	–	–
	L4	51	–	–	–	–	–
316M	L2	–	–	–	–	–	101
	L3	–	–	80	80	–	–
	L4	51	–	–	–	–	–
317M	L2	–	–	–	–	–	109
	L3	–	–	87	87	–	–
	L4	51	–	–	–	–	–
318M	L3	–	–	–	–	–	87
	L4	–	–	63	63	–	–
319	L3	–	–	–	–	–	109
	L4	–	–	80	80	–	–
321	L3	–	–	–	–	–	122
	L4	–	–	87	87	–	–
323	L4	–	–	–	–	–	122
325	L4	–	–	–	–	–	122

Thermal capacity
P_t [hp] @ n_1= 1450 rpm

FV _ _
FNV _ _



		05B	06B
307	R2	73	–
309	R2	73	–
310M	R2 (B)	–	116
	R2 (C)	–	116
311M	R2 (B)	–	144
	R2 (C)	–	–
	R3	82	–
313M	R2 (B)	–	144
	R2 (C)	–	149
	R3	82	–
314M	R3 (B)	–	116
	R3 (C)	–	116
	R4	–	–
315M	R3 (B)	–	144
	R3 (C)	–	149
	R4	82	–
316M	R3 (B)	–	144
	R3 (C)	–	149
	R4	88	–
317M	R3 (B)	–	149
	R3 (C)	–	179
	R4	96	–
318M	R4 (B)	–	152
	R4 (C)	–	193
319	R4 (B)	–	172
	R4 (C)	–	200
321	R4 (B)	–	186
	R4 (C)	–	214

Thermal capacity
P_t [hp] @ n_1= 1450 rpm

PF _ _



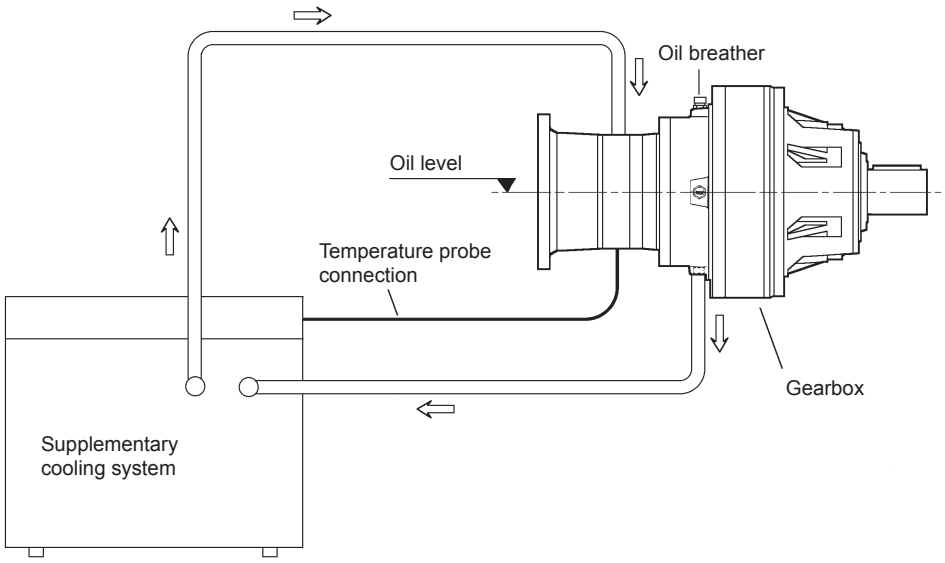
		160 N250TC	180 N280TC	200 N320TC	225 N360TC	250 N400TC
303	L1	46	46	46	46	–
	L2	34	34	–	–	–
	L3	14	14	–	–	–
304 305	L1	71	71	71	71	–
	L2	48	48	–	–	–
	L3	27	27	–	–	–
306	L1	–	84	84	84	–
	L2	61	61	61	61	–
	L3	34	34	–	–	–
307	L1	–	–	133	133	–
	L2	88	88	88	88	–
	L3	48	48	–	–	–
	L4	20	20	–	–	–
309	L1	–	–	170	170	–
	L2	82	82	82	82	–
	L3	48	48	–	–	–
	L4	20	20	–	–	–
310M	L1	–	–	–	184	–
	L2	–	82	82	82	–
	L3	54	54	54	54	–
	L4	27	27	–	–	–
311M	L1	–	–	–	184	–
	L2	–	122	122	122	–
	L3	54	54	54	54	–
	L4	41	41	–	–	–
313M	L2	–	–	129	129	–
	L3	54	54	54	54	–
	L4	41	41	–	–	–
314M	L2	–	–	–	143	–
	L3	–	68	68	68	–
	L4	41	41	41	41	–
315M 316M	L2	–	–	–	150	–
	L3	–	–	95	95	–
	L4	48	48	48	48	–
317M	L3	–	–	102	102	–
	L4	48	48	48	48	–
318M	L3	–	–	109	109	–
	L4	68	68	68	68	–
319	L3	–	–	–	122	–
	L4	–	–	82	82	–
321	L4	–	–	88	88	–
323	L4	–	–	–	109	–

b) Supplementary cooling systems

In the event transmitted mechanical power is higher than transmissible thermal power (see tables of gearbox specifications), gearboxes are available complete with a cooling system.

These separate cooling systems are made up of an air-oil heat exchanger, a motor pump, a filter for warm oil and an electric system that incorporates an overload cutout for electric motors.
A special feature of these cooling systems is their low noise.

NOTE: If a supplementary cooling system is required with CSA/UL certified motors please contact our Technical Service



Technical data

(A 9)

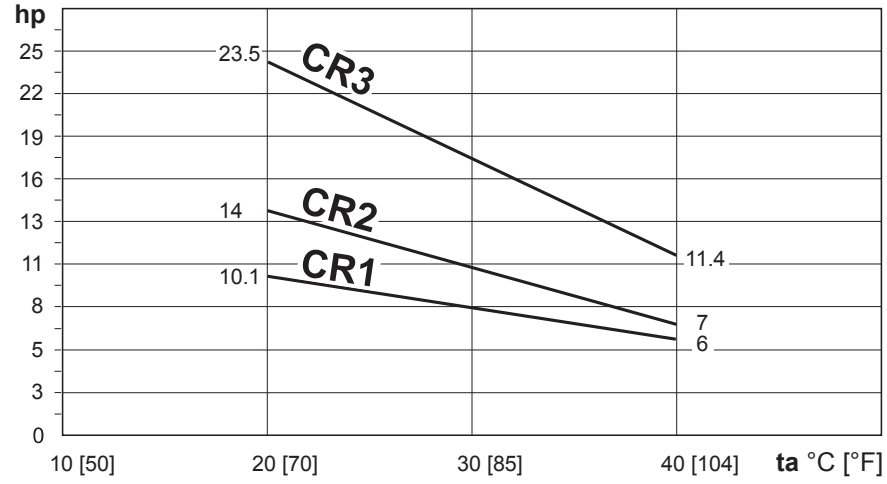
Selection criteria		CR1	CR2	CR3
Power absorbtion	[hp]	0.75	1	1.5
Pumpflow	[l/min]	13	22	34
Air flow	[m^3/h]	850	1500	2000
Noise level at 1 mt.	[dB(A)]	68	70	75
Weight	[*kg* / lbs]	*24* / 53	*36* / 80	*58* / 128

Power P to be transmitted is known. Once you have determined that it is higher than thermal power P_t, calculate excess power P_s using this formula:

$$P_s = 0.1 \times (P - P_t) \quad (26)$$

Select cooling system size in chart (A10) according to ambient temperature ta (20° - 40°C [70° - 104°F]).
Check that the cooling system you have selected will fit the gearbox (see table A11).
If this is not the case, contact our sales organization.

(A 10)

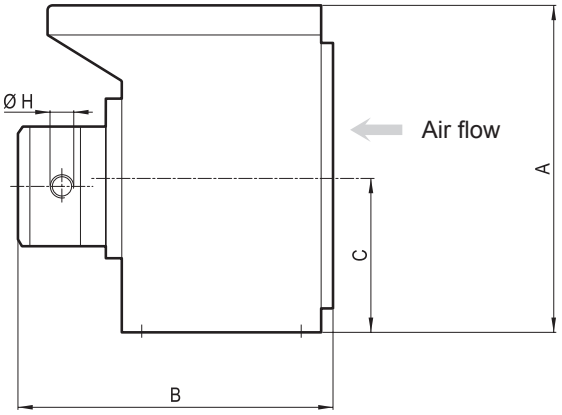


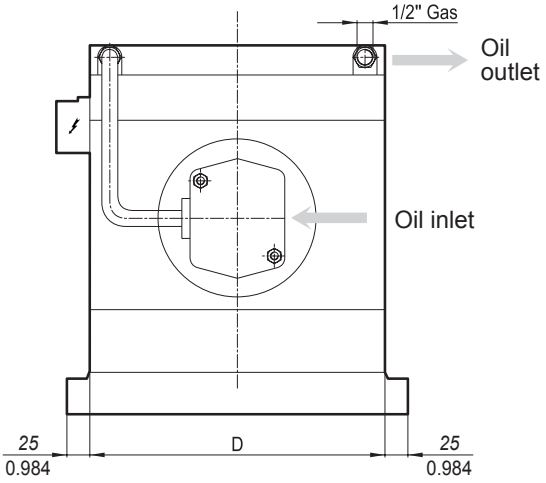
(A 11)

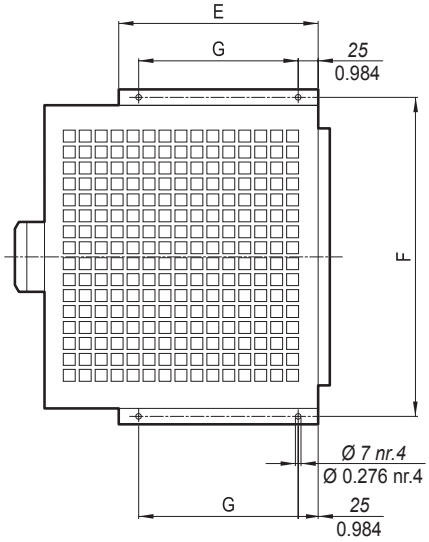
Gearbox	L1	L2	L3	L4	R2	R3	R4
306	CR1	CR1	—	—	—	—	—
307	CR1	CR1	—	—	CR1	—	—
309	CR1	CR1	CR1	—	CR1	—	—
310M	CR2	CR1	CR1	—	—	CR1	—
311M	CR2	CR1	CR1	—	CR1	CR1	—
313M	CR2	CR1	CR1	—	CR1	CR1	—
314M	CR3	CR2	CR1	—	—	CR1	—
315M	CR3	CR2	CR1	—	—	CR1	—
316M	CR3	CR2	CR1	—	—	CR1	—
317M	CR3	CR2	CR2	CR1	—	—	—
318M	CR3	CR2	CR2	CR1	—	—	—
319	CR3	CR2	CR2	CR1	—	—	—
321	CR3	CR2	CR2	CR2	—	—	—

Dimensions

Dimensions are in *mm (italic)* and inches.







(A 12)

	A	B	C	D	E	F	G	H
	[*mm*] [in]							
CR1	*410* 16.142	*395* 15.551	*193* 7.598	*370* 14.567	*250* 9.843	*400* 15.748	*200* 7.874	1/2" Gas
CR2	*450* 17.717	*405* 15.945	*203* 7.992	*470* 18.504	*250* 9.843	*500* 19.685	*200* 7.874	3/4" Gas
CR3	*495* 19.488	*455* 17.913	*225* 8.858	*520* 20.472	*290* 11.417	*550* 21.654	*240* 9.449	3/4" Gas

c) Maximum torque
Make sure that neither the momentary peak torque nor the starting torque under load ever exceed the T_{2max} value that the gearbox is rated for (see figure A2).

d) Radial loads
Examine the application and establish:
- overhung load applying to input and/or output shaft through the following formula:

$$R_{c1-2} = \frac{2 \times T_{r1-2} \times K_r}{d} \quad (27)$$

R_{c1-2} = overhung load [lbs]
1 = for input shaft
2 = for output shaft
T_{r1-2} = Torque at the shaft [lb•in]
d = P.C.D [ins] of transmission element (sprocket, gear, pulley, etc.)
K_r =1 chain transmission
K_r =1.25 gear transmission
K_r =1.5-2.5 V-belt transmission

- Define the trust load position X onto shaft. Check this value with the chart indicating the load R_{x1-2} bearable by the gearbox. Check that the following is satisfied:

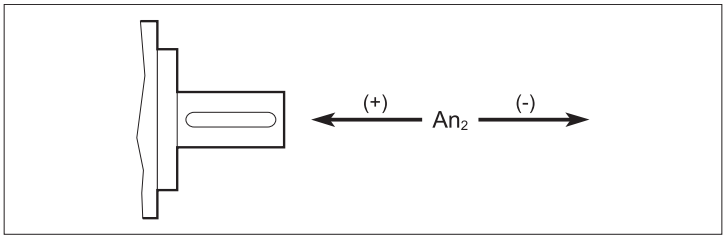
$$R_{c1-2} \leq Rx_{1-2} \times fh_{1-2} \quad (28)$$

where fh_{1-2} are the radial and thrust load corrective factor depending on the required life factor Fh_1 and Fh_2 (refers to radial and thrust loads in the "Dimensions" chapter).

e) Thrust loads
Check the thrust load, when exerted onto the output shaft, as specified for the radial load.
The following should be satisfied:

$$\pm A_{c2} \leq \pm A_{n2} \times fh_2 \quad (29)$$

(A 13)



where fh_2 are the radial and thrust load corrective factor depending on the required life factor Fh_2 (refers to radial and thrust loads in the "Dimensions" chapter).

When a thrust load is combined with an axial load contact our Sales Dept. for a proper checking procedure.

f) VK output
Determine:
- Radial load $\mathbf{R_{c2}}$
- Thrust load $\mathbf{A_{c2}}$
- Offset x of load $\mathbf{R_{c2}}$

Look up the diagram relevant to the gearbox under study and identify permitted radial load $\mathbf{R_{x2}}$ corresponding to distance X and the ratio $\mathbf{A_{n2}/R_{n2}}$ nearest to value $\mathbf{A_{c2}/R_{c2}}$.
Make sure the following equation is verified:

$$R_{x2} \geq R_{c2} \quad (30)$$

Values in the diagram refer to:
- n_2 = 10 rpm
- 10000 hrs theoretical lifetime

For different output speed $\mathbf{n_2}$, or lifetime expectancy, consider:
- a speed factor $\mathbf{f_{n2}}$ as per table (A14):

(A 14)

n_2	1	2.5	5	10	15	25	50	100
$\mathbf{f_{n2}}$	2.0	1.51	1.23	1.00	0.88	0.76	0.62	0.50

- a lifetime factor $\mathbf{f_L}$ according to table (A15).

(A 15)

Lifetime	2500 h	5000 h	10000 h	15000 h	25000 h	50000 h	100000 h	100
$\mathbf{f_L}$	0.66	0.81	1.00	1.13	1.32	1.62	2.00	0.50

This condition must be verified:

$$R_{x2} \times f_{n2} \geq R_{c2} \times f_L \quad (31)$$

g) FP output (FDK and FZP when and if available)
On shaft-mounted installations, gearmotors produce a reaction force due to fixing position and motor weight and/or external loads from other connection elements.

These forces combination is added to normal load condition and will influence :
• berings life
• output shaft resistance
• flange tightening condition

In the event that there is an additional load (like a large size electric motor) and /or a single stage gearbox (with particular attention to sizes from 300 to 307), it' recommended to contact our Technical Service.
For the specific reaction loads due to fixing position, in the dimensional section for each size are reported the minimum lenght for torque reaction arms (single or double) that can reach the rated performances.

14.6 HOW TO SELECT THE MOTOR

14.6.1 Electric motor (see section M in this catalogue)

a) n_2 and dynamic efficiency η_d are known, calculate input power based on torque T_{r2} as follows

$$P_{r1} = \frac{T_{r2} \times n_2}{63025 \times \eta_d} [hp] \quad (32)$$

Table (A3) reports the values of efficiency η_d related to the different reduction stages of the gearboxes of series 300.

b) Look up the motor selection charts and select a size with such rated power to satisfy this condition:

$$P_{r1} \leq P_n \quad (33)$$

4-pole motors and over should be preferred.

Unless otherwise specified, power P_n of motors indicated in the catalogue refers to continuous duty S1. For motors used in conditions other than S1, the type of duty required by reference to CEI 2-3/IEC 34-1 Standards must be mentioned.
For duties from S2 to S8 in particular and for IEC motor frame 132 or smaller, extra power can be obtained with respect to continuous duty power, consequently the following condition must be satisfied:

$$\frac{P_{r1}}{f_m} \leq P_n \quad (34)$$

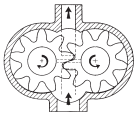
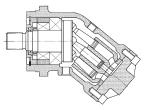
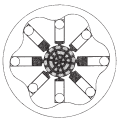
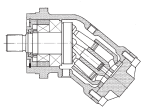
The increased power factor f_m can be obtained from table (A5).

For duties other than S1 with considerable number of starts per hour, factor Z must be considered (it is ascertained by using the information in the motors chapter). Factor Z defines the maximum number of starts for the application under consideration.

14.6.2 Hydraulic motor (see section H in this catalogue)

Determine hydraulic motor type according to the application, choosing from the options given in guidance table (A16).

(A 16)

Duty	Light		Medium		Heavy	
Pressure p [bar]	<175		175 - 200		200 - 450	
Motor design	orbital 	gear motor 	radial piston 	axial piston 	cam motor 	axial piston 
Speed	medium ≤ 700	high ≤ 3000	medium ≤ 500	high ≤ 4000	low ≤ 200	medium ≤ 4000
ηmh	0.80	0.85	0.95	0.93	0.93	0.93
ηv	0.90	0.87	0.95	0.95	0.95	0.95

Based on the specifi cations of gearbox input:
- input torque Mr1 [Nm]
- input speed n1 [min-1]
and on allowed pressure p [bar] for the hydraulic circuit, calculate the displacement of the hydraulic motor by formula:

$$V_c = \frac{20 \times \pi \times M_{r1}}{p \times \eta mh} [cm^3] \quad (35)$$

where ηmh is the hydraulic mechanical efficiency of the motor (tab. A16).
Select a motor size with displacement V that satisfies the following condition:

$$V_c \leq V \quad (36)$$

Calculate the flow required for the hydraulic motor

$$Q_1 = \frac{V \times n_1}{\eta_v \times 1000} [l/min] \quad (37)$$

where ηv is volumetric efficiency.
For hydraulic orbital motors by BONFIGLIOLI TRASMITAL, please see section H in this catalogue. For other types of hydraulic motors, see the relevant technical literature.

15 INSTALLATION

Observing a few rules for correct installation is essential to the reliable and proper operation of the gearbox.
The rules set out here are intended as a preliminary guide to selecting gearbox.
For effective and proper installation, follow the instructions given in the Installation, use and maintenance manual available from our Sales network.
Following is a brief outline of installation rules:

a) Fastening:
– Place the gearbox on a surface providing adequate rigidity. Mating surfaces should be machined and flat.

– This applies especially to flange-mounted gearboxes with splined hollow output shafts (refer to the Installation, Operation and Maintenance Manual available on www.bonfiglioli.com).

– In applications that involve high radial loads at the output end, flange mounting is recommended for some gearboxes as this mounting pattern benefits from the double pilot diameters provided on these gearboxes (refer to the Installation, Operation and Maintenance Manual available on www.bonfiglioli.com).

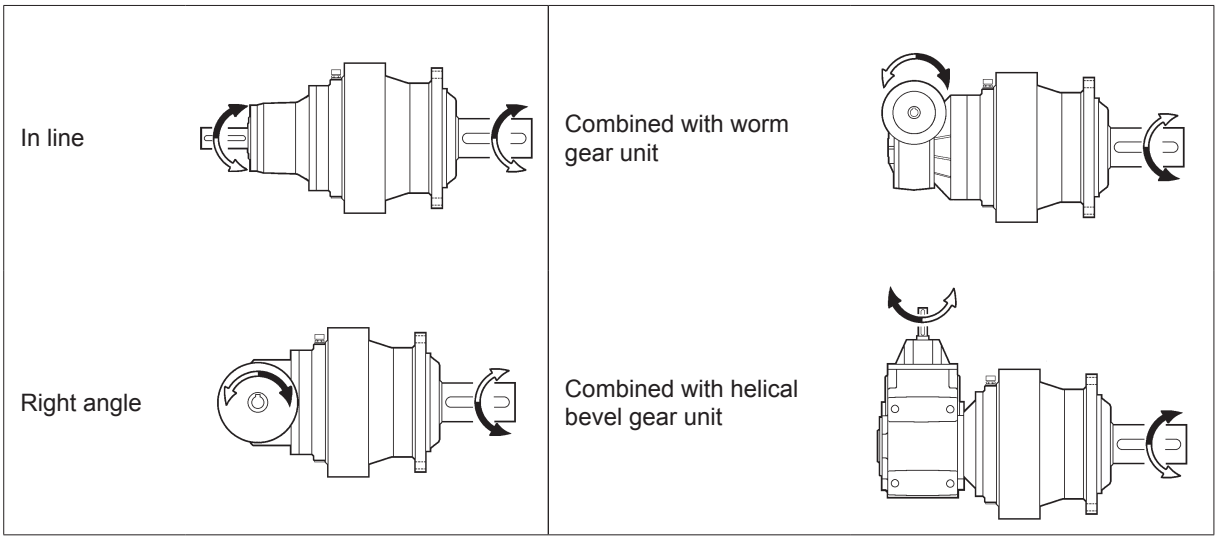
– Make sure the gearbox is suitable for the required mounting position.

– Use bolts specified in Use and Maintenance Manual (available on www.bonfiglioli.com) and tighten the bolts to the rated values specified in the relevant charts.

b) Connections
– When fitting transmission elements onto the gearbox do not tap them with hammers or similar tools. To slide these parts in, use the service screws and tappings provided at the shaft ends.
Be sure to clean off any grease or rust preventative from the shafts before fitting any parts.

– Direction of rotation
Before wiring the motor please note the input/output shaft arrangement, as described in the diagram here after:

(A 17)



RA/RO: For the monodirectional applications or for the applications requiring a sense of rotation prevailing on that opposite to it, the selection of "**RA/RO**" option ensures the declared performance.
For applications not requiring a prevailing sense of rotation with respect to each other, the performances are guaranteed regardless of the selected "**RA/RO**" option.

c) Paint coating
– Use paint compatible with the primer applied to the gearbox, see "Supply conditions".
Prior to painting, tape the seal rings installed on the shafts. Contact with the solvent may damage the seals with subsequent oil leakage.

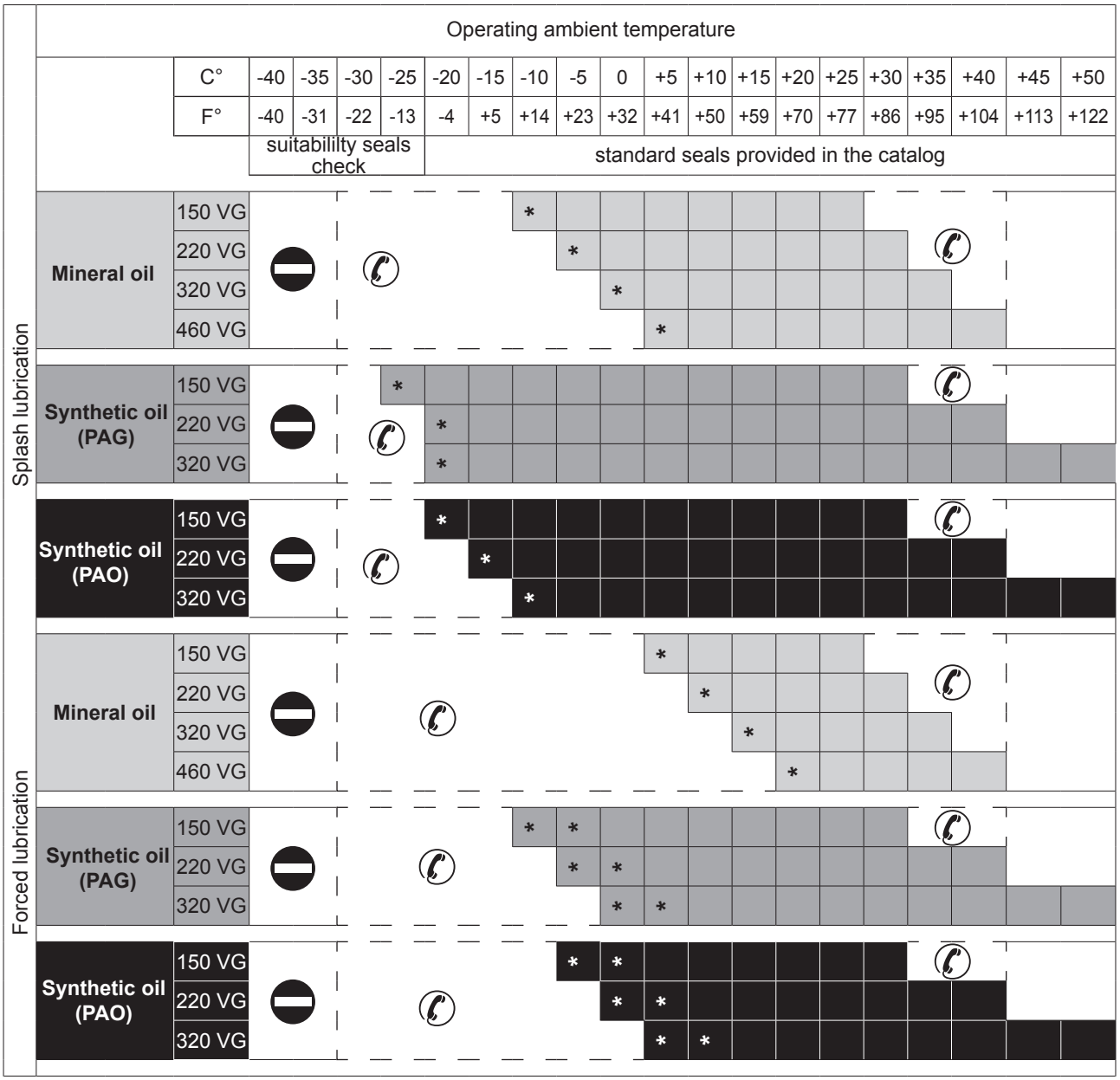
d) Lubrication
– Prior to commissioning, fill the gearbox with the recommended type and quantity of oil (refer to the Installation, Operation and Maintenance Manual available on www.bonfiglioli.com).
The level is to be checked through the appropriate plug, or sight glass, each gearbox is provided with, and located according to the mounting position originally specified.

NOTE: Combined gearboxes feature separate lubrication for planetary stages and for worm gears (series 3/V_M) or bevel helical units (series 3/A).
The operations described above are not to be performed with life-lubed gearboxes, that are factory filled with synthetic oil.

16 LUBRICATION

Refer to the User's Manual available at www.bonfiglioli.com for indications about checking the oil level and its replacement for other types of gearboxes.
Do not mix mineral oils with synthetic oils and/or different brands.
However, oil level should be checked at regular intervals and topped up as required.
Check monthly if unit operates under intermittent duty, more frequently if duty is continuous.

16.1 Selection of the optimal oil viscosity (data relating to Shell Oils)



Recommended operating limits

Allowed operating limits.

Forbidden operating limits.

* = It is recommended to ramp-up and to provide for greater absorption of the motor.
If needed and in the event of impulse loads, contact Bonfiglioli Technical Service.

16.2 Lubrication for 300M series gearboxes

All gearboxes are oil-bath lubricated. For applications calling for gearboxes with a vertically positioned axis, in which oil coverage during operation would not be sufficient to ensure correct lubrication of upper bearings, suitable life lubrication systems are used.
Before start-up, fill the gearbox with the correct quantity of oil, selecting the viscosity level as per table (A10). These gearboxes are provided with oil filling, level and drain plugs.

Prior to starting-up, fill the gearbox with the appropriate quantity of oil.
Gearboxes are generally provided with oil fill, level and drain plugs. As such, the mounting position needs always to be specified when ordering the gearbox.
For the reference charts of oil plugs placement and quantity of lubricant, refer to the Installation, Operation and Maintenance Manual (available on www.bonfiglioli.com).

– Note: For applications with non-routine operating conditions, consult factory with complete information.
– Unless otherwise specified, gear units are supplied unlubricated. Primary gear units belonging to 3/V_M and 3/A combinations instead may be supplied factory filled with long-life synthetic lubricant, depending on their frame size, as indicated in the Use and Maintenance Manual (available at www.bonfiglioli.com).
– The oil capacities listed for the various types of unit are indicative only. Fill the gearbox up to the level plug, located as per the mounting position specified when ordering to ensure the gearbox is properly filled.
– Should transmitted power exceed the thermal capacity of the unit a supplementary cooling unit must be provided (see: Supplementary cooling systems).

NOTE: Combined gearboxes and gearmotors feature separate lubrication for planetary stages and for worm gearboxes (3/V_M) or helical bevel units (3/A).

16.3 Brakes lubrification

The hydraulically operated multidisc brakes are lubricated by the same oil as the gearbox.

17 STORAGE

Observe the following instructions to ensure correct storage of delivered products:

a) Do not store outdoors, in areas exposed to weather or with excessive humidity.

b) Always place boards, wood, or other material between the products and the floor.
The gearbox should not have direct contact with the floor.

c) For storage periods of over 60 days, all machined surfaces such as flanges, shafts and couplings must be protected with a suitable anti-oxidation product.

d) When units are expected to be in storage for more than 6 months, the following extra measures are required:
- Smear all machined parts with grease to prevent oxidation.
- Place the gearbox so that the breather plug is uppermost and fill it with oil (this does not apply to life-lubricated gearboxes). Before the gearbox is put into operation, the appropriate type and quantity of oil should be restored.

18 SUPPLY CONDITIONS

Gearboxes are supplied as follows:

a) arranged for installation in the mounting position specified in the purchase order;

b) Unlubricated. Inner parts are protected by a film of the oil used for testing purpose;

c) when no specific protection class is requested, the surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2), realized with a grey antioxidant water-based primer Ral 7042. Mating surface are not coated.

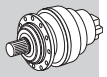
d) tested to factory specifications;

e) suitably packed;

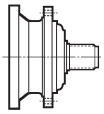
f) complete with mounting hardware for IEC electric or hydrauilc motors;

g) gearboxes lubricated “for life” are factory filled with oil.

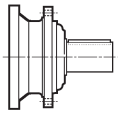
3 11M L 2 16.7 NHC



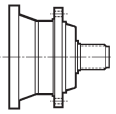
OUTPUT VERSION



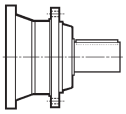
MZ: Splined male shaft



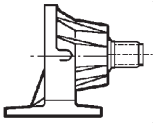
MC: Solid keyed shaft



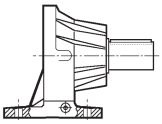
HZ: Heavy duty splined male shaft



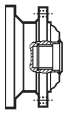
HC / NHC: Heavy duty solid keyed shaft



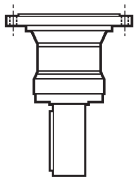
PZ: Foot base with splined shaft



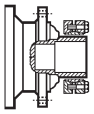
PC / NPC: Foot base with solid keyed shaft



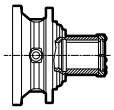
FZ / FZB: Hollow splined shaft



VK: Reinforced output with heavy duty keyed shaft for stirrers and mixer



FP: Hollow shaft for shrink disc



FDK: Hollow shaft with double keyway



FZP: Hollow splined shaft with axial blockage device (recommended for shaft mounted installation)

Reduction ratio

Fill in the value of the transm. ratio (including point and decimals) reported in the selection charts

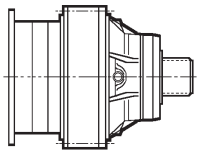
Es. : 1/5.33 = 5.33 1/44.6 = 44.6 1/131 = 131

No. OF REDUCTIONS

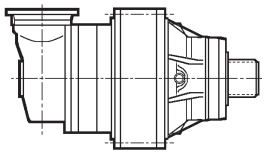
1, 2, 3, 4

DESIGN

L = Linear



R = Right angle



GEARBOX SIZE

00 = 300	226	**05** = 305	294	**10M** = 310	364	**15M** = 315	434	**19** = 319	486
01 = 301	242	**06** = 306	312	**11M** = 311	382	**16M** = 316	450	**21** = 321	498
03 = 303	258	**07** = 307	330	**13M** = 313	400	**17M** = 317	462	**23** = 323	510
04 = 304	276	**09** = 309	348	**14M** = 314	418	**18M** = 318	474	**25** = 325	514

SERIES

6A N320TC A A W0A ... ...

OPTIONS
GASKET
STANDARD = NBR
PV = Fluoro elastomer

SURFACE PROTECTION
C2 (default)**, C3, C4** 35

CERTIFICATES
AC, CC 36

ONLY FOR RIGHT ANGLE DESIGN
preferential input direction of rotation

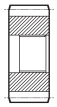
RA = left
RO = right



PAINTING
RAL7042 (default)**, RAL5010, RAL9005, RAL9006, RAL9010** 35

SUPPLEMENTARY COOLING SYSTEM
CR1, CR2, CR3 18

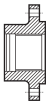
OUTPUT FITTINGS


P... = Pinions


B0A = Splined bar


M0A = Sleeve coupling


G0A = Shrink disc


W0A = Flange

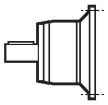
MOTOR FLANGE ORIENTATION 461

MOUNTING POSITION 36

INPUT

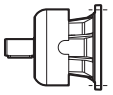

Without motor adaptor

V9AA	V9AC	V9AE	V9AG	V9AL
V9AB	V9AD	V9AF	V9AH	


Input keyed shaft

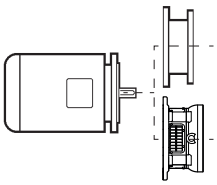
	V01A	V01B	V05B	V06B	V07A	V07B	V10B	V11B	V15B
diam. [mm]	*Ø24*	*Ø38*	*Ø48*	*Ø60*	*Ø60*	*Ø80*	*Ø80*	*Ø80*	*Ø120*

	NV01A	NV01B	NV05B	NV06B	NV07A	NV07B	NV10B	NV11B
diam. [ins]	Ø1.125	Ø1.165	Ø1.875	Ø2.375	Ø2.375	Ø3.000	Ø3.000	Ø3.000


Solid input shaft with fan

	FV05B	FV06B	FV07A	FV07B	FV10B	FV11B
diam. [mm]	*Ø48*	*Ø60*	*Ø60*	*Ø80*	*Ø80*	*Ø80*

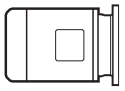
	FNV05B	FNV06B	FNV07A	FNV07B	FNV10B	FNV11B
diam. [ins]	Ø1.875	Ø2.375	Ø3.000	Ø3.000	Ø3.000	Ø3.000

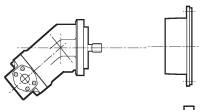

Electric motor connection
P+IEC (P71...P250), **NEMA** (N56TC...N400TC)

Electric motor connection with integrated fan

PF160	PF180	PF200	PF225	PF250

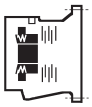
PF N250TC	PF N280TC	PF N320TC	PF N360TC	PF N400TC


Integrated gearmotor with in-built compact electric motor (available up to size 307) **S2, S3, S4**


Hydraulic Motor connection (PV option BONFIGLIOLI TECHNICAL SERVICE) **S5AP, COAA, HOBA, ...** 461


Hydraulic motor MG (PV option BONFIGLIOLI TECHNICAL SERVICE) 471

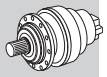
ONLY WITH HYDRAULIC MOTOR ADAPTOR


Standard negative multidisc brake

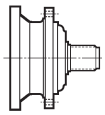
6 = Type : **4, 5, 6**
A = Braking torque : **A, B, C, ...** 460

Negative multidisc brake for MG hydraulic motor
SF = Without brake 477

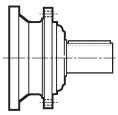
3/V 05 L 3 614 NPC



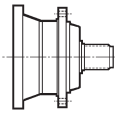
OUTPUT VERSION



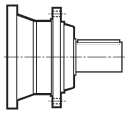
MZ: Splined male shaft



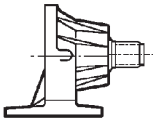
MC: Solid keyed shaft



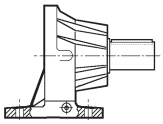
HZ: Heavy duty splined male shaft



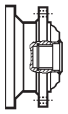
HC / NHC: Heavy duty solid keyed shaft



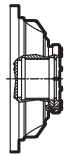
PZ: Foot base with splined shaft



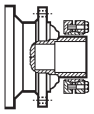
PC / NPC: Foot base with solid keyed shaft



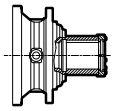
FZ / FZB: Hollow splined shaft



FZP: Hollow splined shaft with axial blockage device (recommended for shaft mounted installation)



FP: Hollow shaft for shrink disc



FDK: Hollow shaft with double keyway

REDUCTION RATIO

Fill in the value of the transm. ratio reported in the selection charts

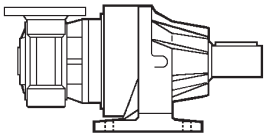
Es. : 1/773 = 773

No. OF REDUCTIONS

3, 4

DESIGN

L = Combined 300M unit, 2 or 3 planetary stages + worm gear units



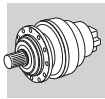
GEARBOX SIZE

00 = 3/V 00	226	**05** = 3/V 05	294	**10M** = 3/V 10	364	**15M** = 3/V 15	434	**19** = 3/V 19	486
01 = 3/V 01	242	**06** = 3/V 06	312	**11M** = 3/V 11	382	**16M** = 3/V 16	450	**21** = 3/V 21	498
03 = 3/V 03	258	**07** = 3/V 07	330	**13M** = 3/V 13	400	**17M** = 3/V 17	462		
04 = 3/V 04	276	**09** = 3/V 09	348	**14M** = 3/V 14	418	**18M** = 3/V 18	474		

SERIES

Combined 300M gearboxes / Worm gear units

N140TC B5 AF W0A ...



OPTIONS

GASKET
STANDARD = NBR
PV = Fluoro elastomer

SURFACE PROTECTION
C2 (default)**, C3, C4**

35

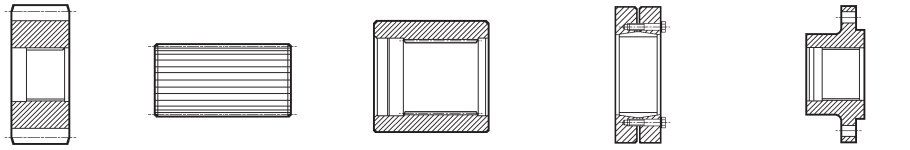
PAINTING
RAL7042 (default)**, RAL5010, RAL9005, RAL9006, RAL9010**

35

CERTIFICATES
AC, CC

36

OUTPUT FITTINGS



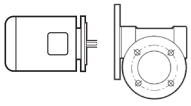
P... = Pinions | **B0A =** Splined bar | **M0A =** Sleeve coupling | **G0A =** Shrink disc | **W0A =** Flange

MOUNTING POSITION

36

DESIGN
B5, B14

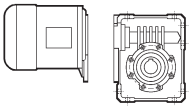
INPUT



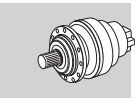
Electric motor connection — **P+IEC** (P63...P180), **NEMA** (N56TC...N210TC)



Input keyed shaft — **HS, NHS**

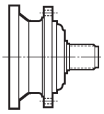


Integrated gearmotor with in-built compact electric motor — **S1, S2, S3**

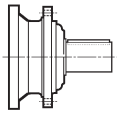


3/A 06 L 2 69.9 NPC

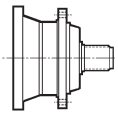
OUTPUT VERSION



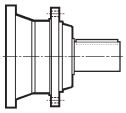
MZ: Splined male shaft



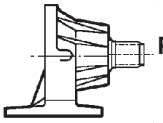
MC: Solid keyed shaft



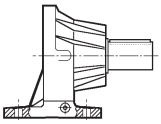
HZ: Heavy duty splined male shaft



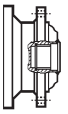
HC / NHC: Heavy duty solid keyed shaft



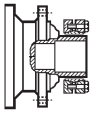
PZ: Foot base with splined shaft



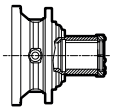
PC / NPC: Foot base with solid keyed shaft



FZ: Hollow splined shaft



FP: Hollow shaft for shrink disc



FDK: Hollow shaft with double keyway

REDUCTION RATIO

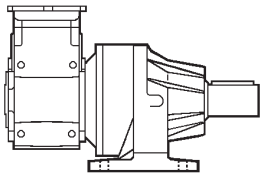
Fill in the value of the transm. ratio reported in the selection charts
Es. : 1/19.4 = 19.4 1/175 = 175

No. OF REDUCTIONS

2

DESIGN

L = Combined 300M unit,
1 planetary stages + A helical bevel units



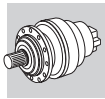
GEARBOX SIZE

00 = 3/A 00 (300+A10)	226	**05 =** 3/A 05 (305+A41)	294
01 = 3/A 01 (301+A20)	242	**06 =** 3/A 06 (306+A50)	312
03 = 3/A 03 (303+A30)	258	**07 =** 3/A 07 (307+A60)	330
04 = 3/A 04 (304+A41)	276		

SERIES

Combined 300M gearboxes / A series helical bevel gear units

N180TC EF W0A ...



OPTIONS

GASKET
STANDARD = NBR
PV = Fluoro elastomer

SURFACE PROTECTION
C2 (default)**, C3, C4**

35

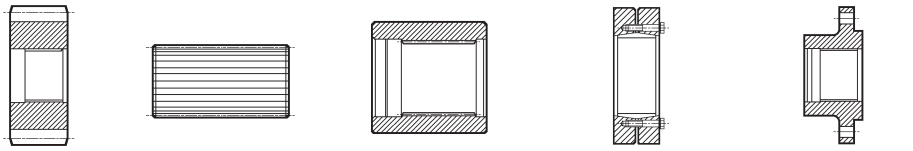
PAINTING
RAL7042 (default)**, RAL5010, RAL9005, RAL9006, RAL9010**

35

CERTIFICATES
AC, CC

36

OUTPUT FITTINGS

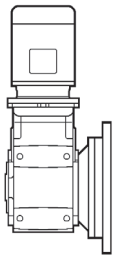


P... = Pinions **B0A =** Splined bar **M0A =** Sleeve coupling **G0A =** Shrink disc **W0A =** Flange

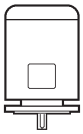
MOUNTING POSITION

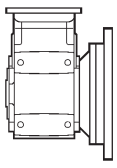
36

INPUT

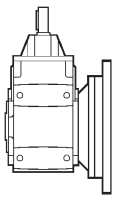


Integrated gearmotor with in-built compact electric motor **S2, S3, S4**



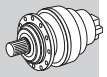


Electric motor connection **P+IEC** (P63...P180), **NEMA** (N56C...N280TC)



Input keyed shaft **HS, NHS**

22 MOTOR DESIGNATION



MOTOR | BRAKE

M 1LA 4 230/400-50 IP54 CLF ... **W** | **FD** 7.5 R SB 220 SA ...

MOTOR TYPE
M = compact 3-phase **ME** = compact 3-phase, class IE2 **MX** = compact 3-phase, class IE3
BN = IEC 3-phase **BE** = IEC 3-phase, class IE2 **BX** = IEC 3-phase, class IE3
NEMA motors to be specified thru their ordering numbers

MOTOR SIZE
1SD - 5LA (compact motor)
63A - 250M (IEC motor)

POLE NUMBER
4, 6, 2/4, 2/6, 2/8, 2/12

VOLTAGE - FREQUENCY

DEGREE OF PROTECTION
IP55 standard (IP54 - brake motor)

INSULATION CLASS
CL F standard
CL H option

MOTOR MOUNTING
— (compact motor)
B5 (IEC - motor)

TERMINAL BOX POSITION
W (default), **N, E, S**

BRAKE TYPE
FD (d.c. brake)
FA (a.c. brake)

BRAKE TORQUE (specify Nm!)
[**1 ft•lb = 1.356 Nm**]

BRAKE HAND RELEASE
R, RM

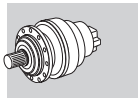
RECTIFIER TYPE
NB, SB, NBR, SBR

BRAKE SUPPLY

OPTIONS

23 ADDITIONAL OPTIONS

23.1 SURFACE PROTECTION



When no specific protection class is requested, the surfaces of gearboxes are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, gearboxes can be delivered with C3 and C4 surface protection, obtained by painting the complete gearbox.

SURFACE PROTECTION	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
C3	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C [248 F°]	C3
C4	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C [248 F°]	C4

Gearboxes with optional protection to class C3 or C4 are available in a choice of colours.
If no specific colour is requested (see the “PAINTING” option) gearboxes are finished in RAL 7042.
Gearboxes can also be supplied with surface protection for corrosivity class C5 according to UNI EN ISO 12944-2. Contact our Technical Service for further details.

23.2 PAINTING

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

PAINTING	Colour	RAL number
RAL7042*	Traffic Grey A	7042
RAL5010	Gentian Blue	5010
RAL9005	Jet Black	9005
RAL9006	White Aluminium	9006
RAL9010	Pure White	9010

* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.

23.3 CERTIFICATES

AC - Certificate of compliance
The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

CC - Inspection certificate
The document entails checking on order compliance, the visual inspection of external conditions and of mating dimensions. Checking on main functional parameters in unloaded conditions is also performed along with oil seal proofing, both in static and in running conditions. Units inspected are sampled within the shipping batch and marked individually.

23.4 TACONITE SEALS

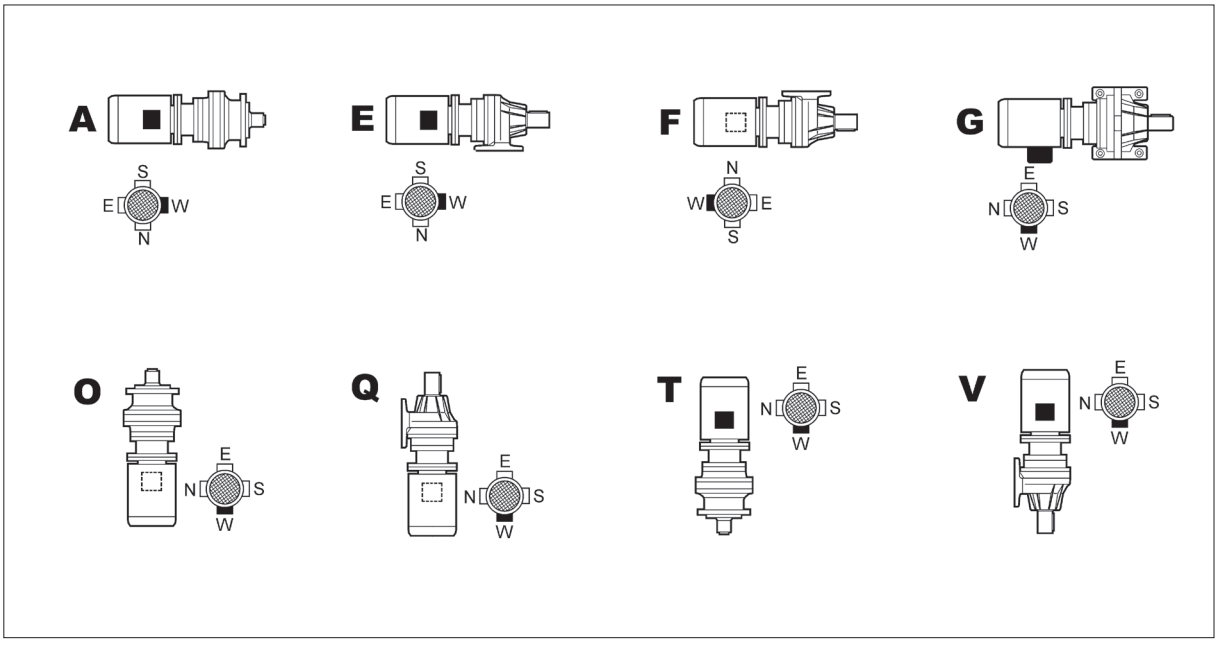
Taconite seals are recommended for environments characterised by the presence of abrasive dust or powders. Taconite seals incorporate a combination of sealing rings, labyrinths and a grease chamber. This option is available for **FP** and **FZ** version from size 314 to 325.
For detailed information please contact our Technical Service.

24 MOUNTING POSITION

The product designation is only complete when the mounting position is also specified. Please refer to table (A17) for in-line gear units and to (A18) for right angle drives.

24.1 In-line units

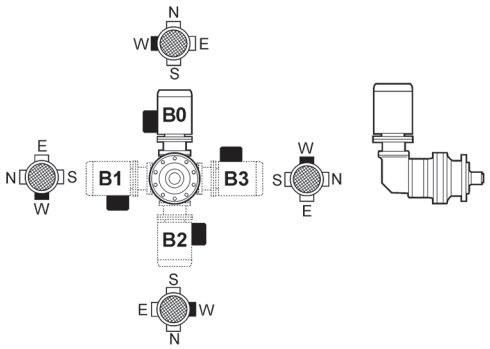
(A 17)



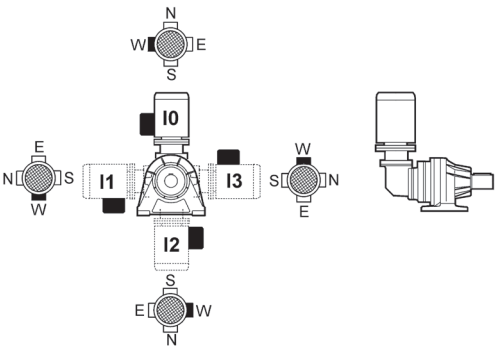
24.2 Right angle units

(A 18)

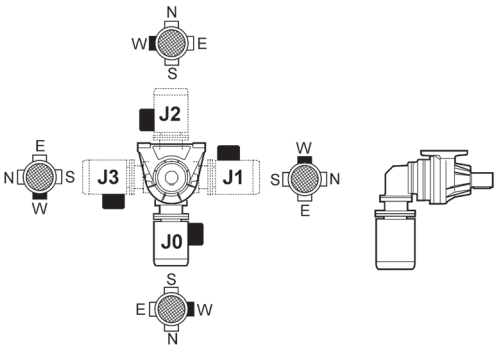
B0 - B1 - B2 - B3



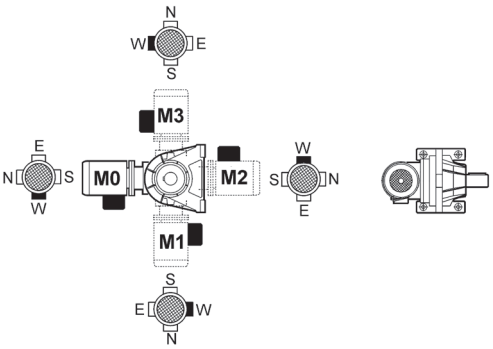
I0 - I1 - I2 - I3



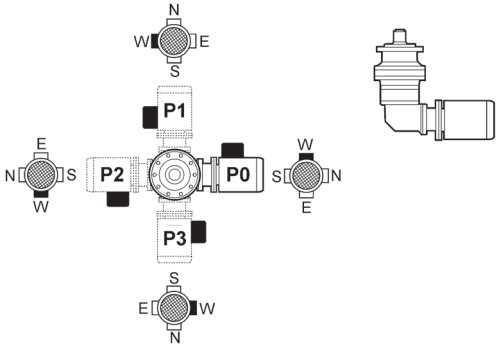
J0 - J1 - J2 - J3



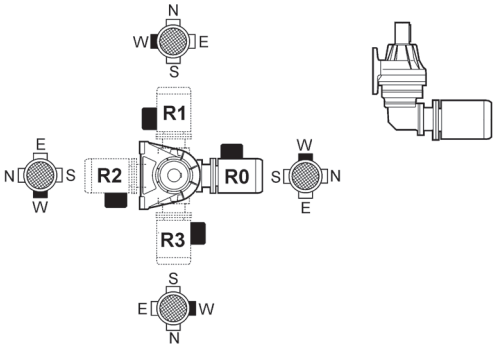
M0 - M1 - M2 - M3



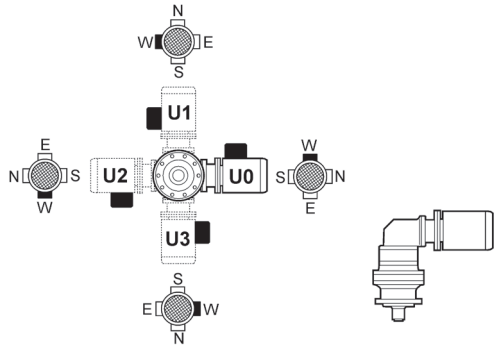
P0 - P1 - P2 - P3



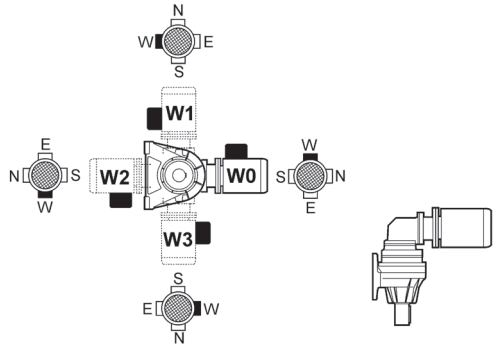
R0 - R1 - R2 - R3



U0 - U1 - U2 - U3



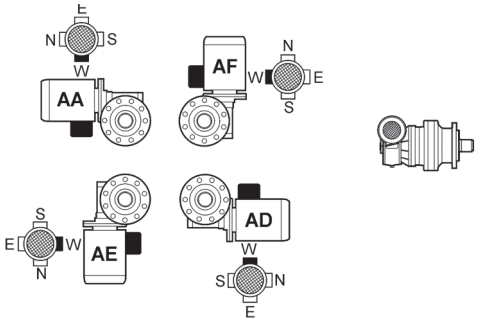
W0 - W1 - W2 - W3



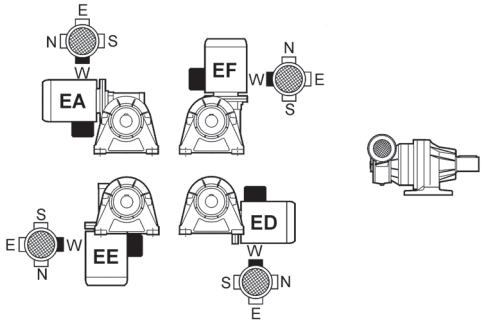
24.3 3/V_M Series

(A 19)

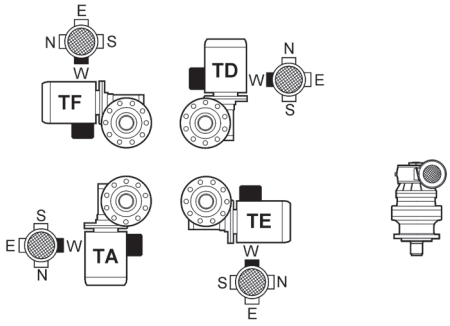
AA - AE - AF - AD



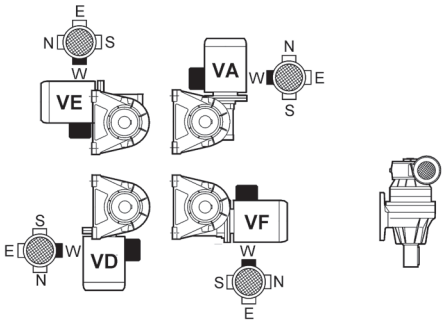
EA - EE - EF - ED



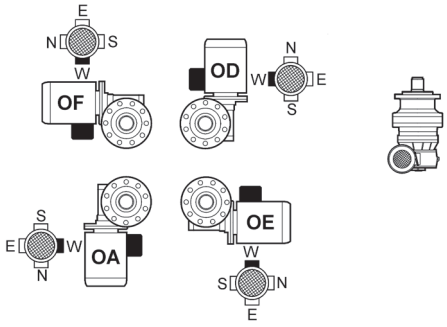
TA - TE - TF - TD



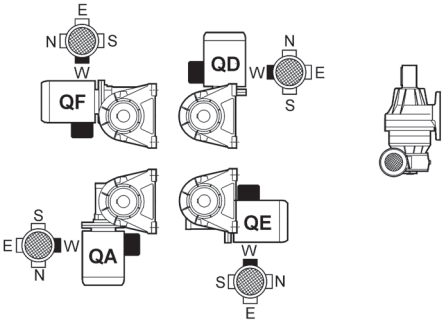
VA - VE - VF - VD



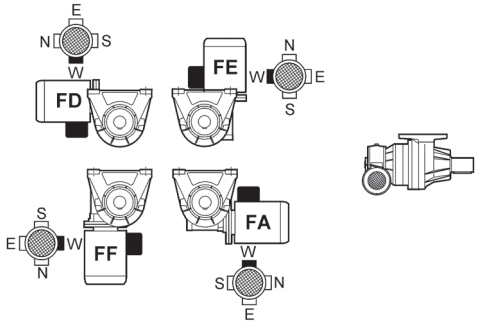
OA - OE - OF - OD



QA - QE - QF - QD



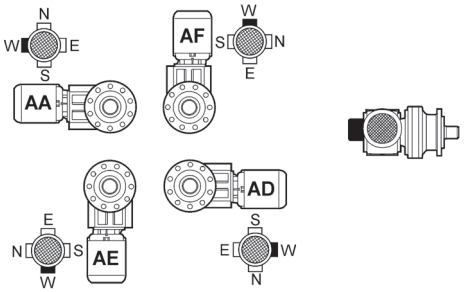
FA - FE - FF - FD



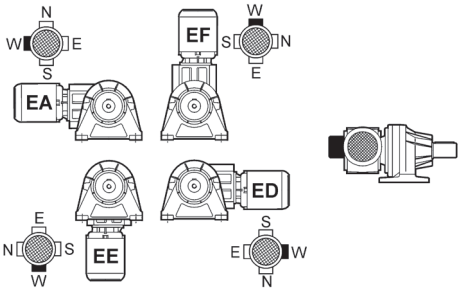
24.4 3/A Series

(A 20)

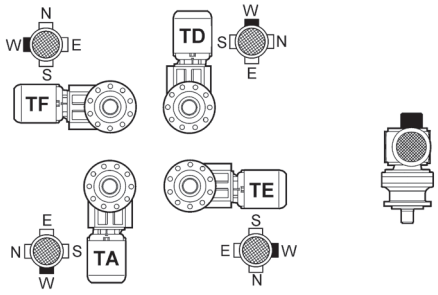
AA - AE - AF - AD



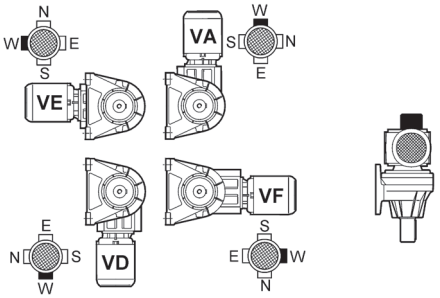
EA - EE - EF - ED



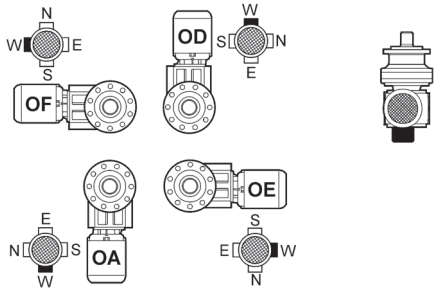
TA - TE - TF - TD



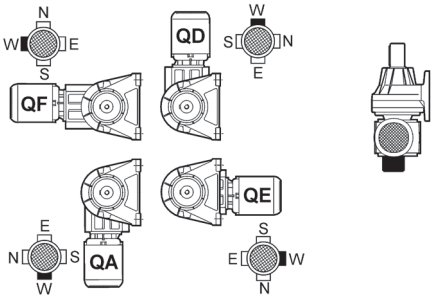
VA - VE - VF - VD



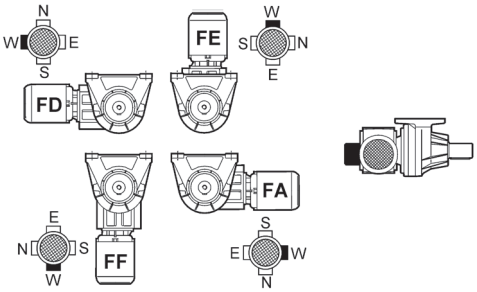
OA - OE - OF - OD

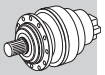


QA - QE - QF - QD

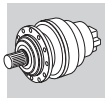


FA - FE - FF - FD





25 RATING CHARTS



A

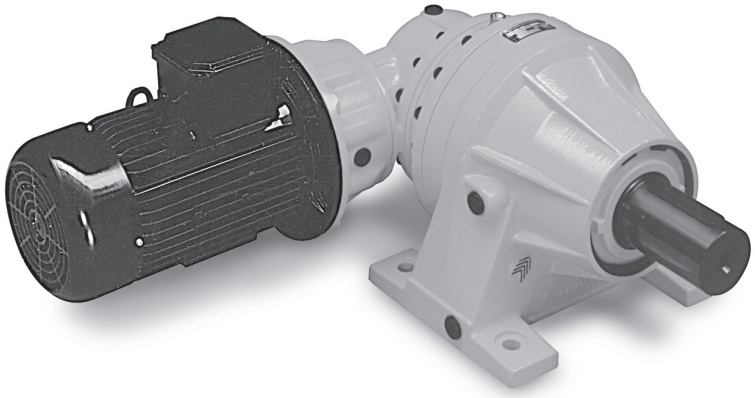
B

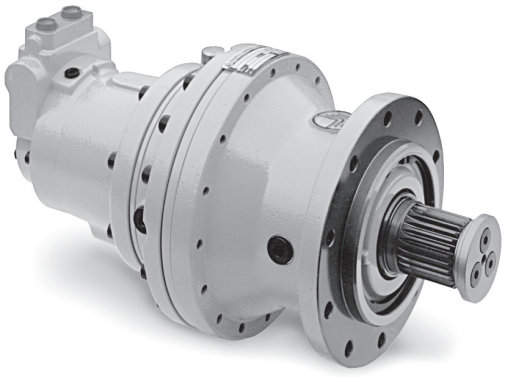
C

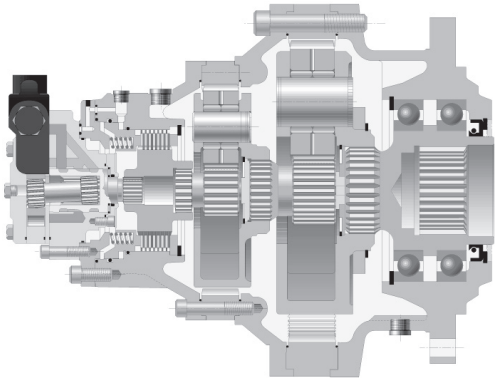
A GEARMOTOR SELECTION BY POWER

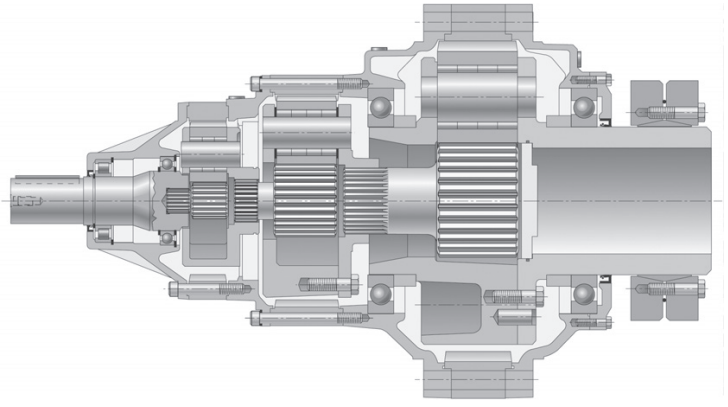
B GEARBOX SELECTION BY APPLICATION TORQUE

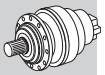
C GEARBOX SELECTION BY NUMBER OF WORKING CYCLES





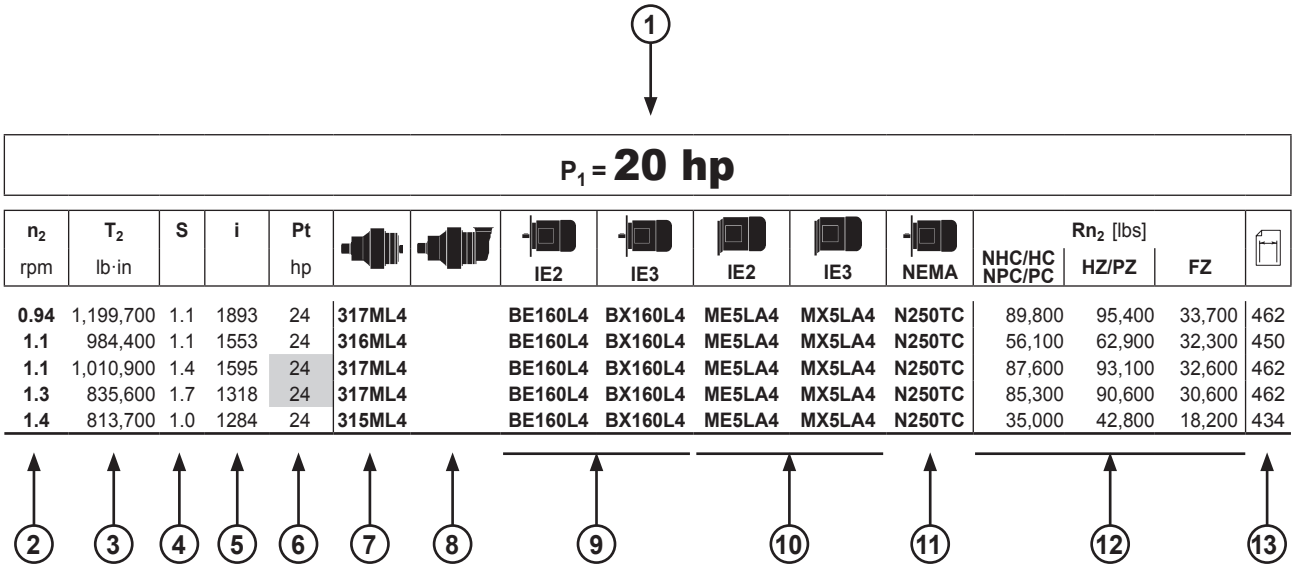






25.1 300ML - 300MR GEARMOTOR RATING CHARTS

Reading the rating chart.



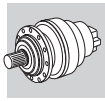
Thermal capacity lower than power applied

1	Rating of electric motor connected to the gearbox
2	Gearbox output speed
3	Rated torque to the output shaft based on: - specified service factor - 10000 h theoretical lifetime
4	Service factor
5	Gear ratio
6	Gearbox thermal capacity
7	Frame size of the in-line gear unit
8	Frame size of the right-angle gear unit. NOTE: letters (B) (C) near size indication identify different angle reduction dimensions. See dimensions pages.
9	IEC motor size and pole number
10	Integral motor frame size and pole number
11	NEMA motor size
12	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
13	Dimensions page. Gearmotor overall dimensions refer to matches with BONFIGLIOLI motors only

The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is below 0.75kW (1HP), BN/M motors can be provided.
Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power. BX, BE, MX and ME brakemotors are available on request.

P_1 = 0.33 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.57	32,700	1.9	2916	8.0	**306L4**		**BN71A4**		**N56C**	16,000	20,200	7,870	312
0.60	31,400	1.1	2799	8.0	**305L4**		**BN71A4**		**N56C**	11,600	14,600	5,400	298
0.68	27,500	1.0	2453	8.0	**304L4**		**BN71A4**		**N56C**	11,400	14,300	5,400	276
0.71	26,200	2.4	2337	8.0	**306L4**		**BN71A4**		**N56C**	15,500	19,500	7,870	312
0.74	25,400	1.0	2269	8.0	**304L4**		**BN71A4**		**N56C**	11,200	14,200	5,400	276
0.74	25,100	1.3	2243	8.0	**305L4**		**BN71A4**		**N56C**	11,200	14,200	5,400	298
0.81	23,200	2.7	2074	8.0	**306L4**		**BN71A4**		**N56C**	15,200	19,200	7,870	312
0.84	22,300	1.1	1991	8.0	**303L4**		**BN71A4**		**N56C**	11,000	13,900	5,400	258
0.84	22,300	1.5	1991	8.0	**304L4**		**BN71A4**		**N56C**	11,000	13,900	5,400	276
0.84	22,300	2.2	1991	8.0	**305L4**		**BN71A4**		**N56C**	11,000	13,900	5,400	298
0.90	20,800	1.0	1854	8.0	**303L4**		**BN71A4**		**N56C**	10,900	13,800	5,400	258
0.90	20,800	2.0	1854	8.0	**305L4**		**BN71A4**		**N56C**	10,900	13,800	5,400	298
0.92	20,300	1.3	1815	8.0	**304L4**		**BN71A4**		**N56C**	10,900	13,700	5,400	276
1.0	17,800	1.0	1591	8.0	**301L4**		**BN71A4**		**N56C**	5,560	6,600	1,770	242
1.1	17,800	1.1	1586	8.0	**303L4**		**BN71A4**		**N56C**	10,700	13,500	5,300	258
1.1	17,800	2.0	1586	8.0	**304L4**		**BN71A4**		**N56C**	10,700	13,500	5,300	276
1.1	17,800	2.4	1586	8.0	**305L4**		**BN71A4**		**N56C**	10,700	13,500	5,300	298
1.2	15,500	1.0	1383	8.0	**301L4**		**BN71A4**		**N56C**	5,450	6,470	1,690	242
1.2	15,300	1.4	1370	8.0	**303L4**		**BN71A4**		**N56C**	10,500	13,200	5,050	258
1.2	15,100	2.2	1344	8.0	**304L4**		**BN71A4**		**N56C**	10,400	13,200	5,020	276
1.2	15,300	2.6	1370	8.0	**305L4**		**BN71A4**		**N56C**	10,500	13,200	5,050	298
1.3	14,300	1.5	1275	8.0	**301L4**		**BN71A4**		**N56C**	5,390	6,400	1,640	242
1.3	14,300	1.7	1278	8.0	**303L4**		**BN71A4**		**N56C**	10,300	13,100	4,940	258
1.3	14,200	2.4	1271	8.0	**304L4**		**BN71A4**		**N56C**	10,300	13,100	4,930	276
1.4	13,000	1.9	1164	8.0	**304L4**		**BN71A4**		**N56C**	10,200	12,900	4,780	276
1.5	12,400	1.1	1108	8.0	**301L4**		**BN71A4**		**N56C**	5,280	6,270	1,570	242
1.5	12,300	1.6	1098	8.0	**303L4**		**BN71A4**		**N56C**	10,100	12,800	4,690	258
1.6	11,400	1.8	1022	8.0	**301L4**		**BN71A4**		**N56C**	5,220	6,200	1,530	242
1.6	11,400	2.1	1018	8.0	**303L4**		**BN71A4**		**N56C**	10,000	12,700	4,580	258
1.6	11,400	3.0	1018	8.0	**304L4**		**BN71A4**		**N56C**	10,000	12,700	4,580	276
1.8	10,600	1.0	942	8.0	**300L4**		**BN71A4**		**N56C**	5,160	6,520	1,490	226
1.8	10,600	1.9	942	8.0	**301L4**		**BN71A4**		**N56C**	5,160	6,130	1,490	242
1.9	10,000	1.9	896	8.0	**303L4**		**BN71A4**		**N56C**	9,840	12,400	4,380	258
2.0	9,170	1.1	819	8.0	**300L4**		**BN71A4**		**N56C**	5,060	6,390	1,420	226
2.0	9,170	2.1	819	8.0	**301L4**		**BN71A4**		**N56C**	5,060	6,000	1,420	242
2.0	9,140	2.6	816	8.0	**303L4**		**BN71A4**		**N56C**	9,710	12,300	4,250	258
2.0	9,230	2.1	824	16.1		**303R4**	**BN71A4**		**N56C**	9,720	12,300	4,260	260
2.1	8,930	1.8	797	16.1		**303R4**	**BN71A4**		**N56C**	9,670	12,200	4,220	260
2.2	8,460	1.1	755	8.0	**300L4**		**BN71A4**		**N56C**	5,000	6,310	1,380	226
2.2	8,460	2.3	755	8.0	**301L4**		**BN71A4**		**N56C**	5,000	5,940	1,380	242
2.2	8,580	1.5	766	13.4		**301R4**	**BN71A4**		**N56C**	5,010	5,950	1,390	244
2.3	8,040	2.3	718	8.0	**303L4**		**BN71A4**		**N56C**	9,530	12,000	4,070	258
2.4	7,860	2.9	702	8.0	**304L4**		**BN71A4**		**N56C**	9,500	12,000	4,040	276
2.4	7,830	2.9	699	16.1		**304R4**	**BN71A4**		**N56C**	9,490	12,000	4,040	278
2.5	7,380	2.5	659	16.1		**303R4**	**BN71A4**		**N56C**	9,410	11,900	3,960	260
2.6	7,270	2.8	649	8.0	**303L4**		**BN71A4**		**N56C**	9,390	11,900	3,940	258
2.7	6,900	1.4	616	8.0	**300L4**		**BN71A4**		**N56C**	4,860	6,130	1,290	226
2.7	6,870	0.9	613	13.4		**300R4**	**BN71A4**		**N56C**	4,850	6,130	1,290	228

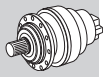


P_1 = 0.33 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.7	6,900	2.7	616	8.0	**301L4**		**BN71A4**		**N56C**	4,860	5,770	1,290	242
2.7	6,870	1.9	613	13.4		**301R4**	**BN71A4**		**N56C**	4,850	5,760	1,290	244
3.0	6,250	1.5	558	8.0	**300L4**		**BN71A4**		**N56C**	4,790	6,050	1,250	226
3.0	6,250	2.9	558	8.0	**301L4**		**BN71A4**		**N56C**	4,790	5,680	1,250	242
3.2	5,910	3.0	528	16.1		**303R4**	**BN71A4**		**N56C**	9,120	11,500	3,680	260
3.4	5,530	1.6	494	8.0	**300L4**		**BN71A4**		**N56C**	4,710	5,940	1,200	226
3.4	5,500	1.1	491	13.4		**300R4**	**BN71A4**		**N56C**	4,700	5,940	1,200	228
3.4	5,500	2.2	491	13.4		**301R4**	**BN71A4**		**N56C**	4,700	5,580	1,200	244
3.7	5,010	1.8	447	8.0	**300L4**		**BN71A4**		**N56C**	4,640	5,860	1,160	226
3.7	5,070	1.7	453	13.4		**300R4**	**BN71A4**		**N56C**	4,650	5,870	1,160	228
4.1	4,510	1.3	403	8.0	**300L4**		**BN71A4**		**N56C**	4,570	5,770	1,120	226
4.1	4,510	2.6	403	8.0	**301L4**		**BN71A4**		**N56C**	4,570	5,430	1,120	242
4.2	4,410	1.3	394	13.4		**300R4**	**BN71A4**		**N56C**	4,560	5,750	1,110	228
4.2	4,410	2.7	394	13.4		**301R4**	**BN71A4**		**N56C**	4,560	5,410	1,110	244
4.5	4,320	1.4	374	10.1	**300L3**		**BN71A4**		**N56C**	4,520	5,710	1,090	226
4.5	4,320	2.7	374	10.1	**301L3**		**BN71A4**		**N56C**	4,520	5,370	1,090	242
4.6	4,070	2.1	363	13.4		**300R4**	**BN71A4**		**N56C**	4,500	5,690	1,080	228
5.1	3,700	2.3	330	8.0	**300L4**		**BN71A4**		**N56C**	4,450	5,620	1,050	226
5.6	3,450	1.7	299	10.1	**300L3**		**BN71A4**		**N56C**	4,450	5,620	1,010	226
5.7	3,260	2.5	291	13.4		**300R4**	**BN71A4**		**N56C**	4,450	5,620	1,000	228
6.2	3,000	2.7	268	13.4		**300R4**	**BN71A4**		**N56C**	4,450	5,620	980	228
7.0	2,770	2.1	240	10.1	**300L3**		**BN71A4**		**N56C**	4,450	5,620	940	226
7.0	2,660	2.2	237	13.4		**300R4**	**BN71A4**		**N56C**	4,450	5,620	940	228
8.7	2,220	2.6	192	10.1	**300L3**		**BN71A4**		**N56C**	4,450	5,620	870	226

P_1 = 0.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.58	47,500	1.3	2916	8.0	**306L4**		**BN71B4**	**M1SD4**	**N56C**	16,000	20,100	7,870	312
0.70	39,500	2.5	2423	10.1	**307L4**		**BN71B4**	**M1SD4**	**N56C**	19,400	26,400	10,100	330
0.73	38,100	1.6	2337	8.0	**306L4**		**BN71B4**	**M1SD4**	**N56C**	15,500	19,500	7,870	312
0.76	36,500	0.9	2243	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	11,200	14,100	5,400	298
0.82	33,800	1.8	2074	8.0	**306L4**		**BN71B4**	**M1SD4**	**N56C**	15,200	19,200	7,870	312
0.85	32,400	1.0	1991	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	11,000	13,900	5,400	276
0.85	32,400	1.5	1991	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	11,000	13,900	5,400	298
0.92	30,200	1.4	1854	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	10,900	13,700	5,400	298
0.92	30,000	3.0	1843	8.0	**306L4**		**BN71B4**	**M1SD4**	**N56C**	14,900	18,800	7,870	312
0.94	29,400	0.9	1815	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	10,900	13,700	5,400	276
1.1	25,800	1.4	1586	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	10,600	13,400	5,270	276
1.1	25,800	1.6	1586	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	10,600	13,400	5,270	298
1.1	26,000	2.9	1597	8.0	**306L4**		**BN71B4**	**M1SD4**	**N56C**	14,600	18,500	7,710	312
1.2	22,300	0.9	1370	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,200	5,020	258
1.2	22,300	1.8	1370	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,200	5,020	298
1.3	20,800	1.0	1275	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	5,380	6,380	1,630	242
1.3	20,800	1.2	1278	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	10,300	13,000	4,910	258
1.3	20,700	1.7	1271	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	10,300	13,000	4,900	276
1.3	21,900	1.5	1344	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,100	4,990	276
1.3	20,800	2.3	1278	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	10,300	13,000	4,910	298
1.5	17,900	1.1	1098	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	10,100	12,800	4,660	258
1.5	19,000	1.3	1164	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	10,200	12,900	4,760	276
1.5	17,900	2.2	1098	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	10,100	12,800	4,660	298
1.7	16,600	1.2	1022	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	5,210	6,180	1,520	242
1.7	16,600	1.5	1018	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,990	12,600	4,550	258
1.7	16,600	2.0	1018	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	9,990	12,600	4,550	276
1.7	16,600	2.9	1018	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	9,990	12,600	4,550	298
1.8	15,300	1.3	942	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	5,150	6,110	1,480	242
1.9	14,600	1.3	896	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,810	12,400	4,360	258
1.9	14,600	2.5	896	8.0	**305L4**		**BN71B4**	**M1SD4**	**N56C**	9,810	12,400	4,360	298
2.1	13,300	1.5	819	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	5,050	5,990	1,410	242



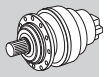
A

P_1 = 0.5 hp

n_2	T_2	S	i	Pt						Rn_2 [lbs]			
rpm	lb·in			hp			IE1	IE1	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
2.1	13,300	1.8	816	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,680	12,200	4,220	258
2.1	13,000	1.2	797	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	9,650	12,200	4,190	260
2.1	13,400	1.4	824	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	9,690	12,200	4,240	260
2.1	13,300	2.5	816	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	9,680	12,200	4,220	276
2.1	13,000	2.3	797	16.1		**305R4**	**BN71B4**	**M1SD4**	**N56C**	9,650	12,200	4,190	296
2.1	13,400	2.7	824	16.1		**305R4**	**BN71B4**	**M1SD4**	**N56C**	9,690	12,200	4,240	296
2.2	12,500	1.1	766	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	5,000	5,930	1,380	244
2.3	12,300	1.6	755	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,990	5,920	1,370	242
2.4	11,700	1.6	718	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,510	12,000	4,050	258
2.4	11,400	2.0	702	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	9,470	12,000	4,020	276
2.4	11,400	2.0	699	16.1		**304R4**	**BN71B4**	**M1SD4**	**N56C**	9,470	12,000	4,010	278
2.6	10,600	1.9	649	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,370	11,800	3,910	258
2.6	10,700	1.7	659	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	9,390	11,900	3,930	260
2.6	10,600	2.9	649	8.0	**304L4**		**BN71B4**	**M1SD4**	**N56C**	9,370	11,800	3,910	276
2.8	10,000	0.9	616	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,850	6,120	1,280	226
2.8	10,000	1.9	616	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,850	5,750	1,280	242
2.8	9,980	1.3	613	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,840	5,750	1,280	244
3.0	9,080	1.0	558	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,780	6,030	1,240	226
3.0	9,080	2.0	558	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,780	5,670	1,240	242
3.0	9,230	2.3	567	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	9,190	11,600	3,740	260
3.0	9,110	2.4	560	16.1		**304R4**	**BN71B4**	**M1SD4**	**N56C**	9,170	11,600	3,730	278
3.1	9,060	2.7	556	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,160	11,600	3,720	258
3.2	8,600	2.0	528	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	9,100	11,500	3,650	260
3.4	8,040	1.1	494	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,690	5,930	1,190	226
3.4	8,040	2.2	494	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,690	5,570	1,190	242
3.5	8,000	1.5	491	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,690	5,570	1,190	244
3.5	8,020	3.0	492	8.0	**303L4**		**BN71B4**	**M1SD4**	**N56C**	9,010	11,400	3,570	258
3.8	7,280	1.2	447	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,630	5,840	1,150	226
3.8	7,380	1.2	453	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,640	5,860	1,160	228
3.8	7,280	2.4	447	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,630	5,490	1,150	242
3.8	7,380	2.3	453	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,640	5,500	1,160	244
3.8	7,360	2.7	452	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	8,900	11,200	3,470	260
4.2	6,560	0.9	403	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,560	5,760	1,110	226
4.2	6,560	1.8	403	8.0	**301L4**		**BN71B4**	**M1SD4**	**N56C**	4,560	5,410	1,110	242
4.2	6,750	2.5	402	10.1	**303L3**		**BN71B4**	**M1SD4**	**N56C**	8,750	11,100	3,340	258
4.3	6,410	0.9	394	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,550	5,740	1,100	228
4.3	6,410	1.8	394	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,550	5,390	1,100	244
4.4	6,530	2.3	389	10.1	**303L3**		**BN71B4**	**M1SD4**	**N56C**	8,710	11,000	3,300	258
4.4	6,350	2.6	390	16.1		**303R4**	**BN71B4**	**M1SD4**	**N56C**	8,710	11,000	3,300	260
4.5	6,280	0.9	374	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,510	5,700	1,090	226
4.5	6,280	1.9	374	10.1	**301L3**		**BN71B4**	**M1SD4**	**N56C**	4,510	5,360	1,090	242
4.7	5,910	1.4	363	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,490	5,670	1,070	228
4.7	5,910	2.9	363	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,490	5,330	1,070	244
5.1	5,380	1.6	330	8.0	**300L4**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	1,040	226
5.7	5,020	1.1	299	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	1,010	226
5.7	5,020	2.3	299	10.1	**301L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	1,010	242
5.8	4,740	1.7	291	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	1,000	228
6.3	4,370	1.9	268	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	970	228
7.1	4,020	1.4	240	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	940	226
7.1	4,020	2.9	240	10.1	**301L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	940	242
7.2	3,870	1.5	237	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	930	228
7.2	3,870	3.0	237	13.4		**301R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	930	244
7.7	3,710	2.1	221	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	910	226
7.9	3,500	2.2	215	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	900	228
8.9	3,220	1.8	192	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	870	226
9.6	2,970	2.6	177	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	850	226
9.7	2,860	2.7	175	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	840	228
10.7	2,590	2.9	159	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,360	5,510	820	228
11.9	2,330	2.5	143	13.4		**300R4**	**BN71B4**	**M1SD4**	**N56C**	4,230	5,340	790	228
12.8	2,230	2.2	133	16.1		**300R3**	**BN71B4**	**M1SD4**	**N56C**	4,130	5,220	770	228
14.7	1,940	3.0	116	10.1	**300L3**		**BN71B4**	**M1SD4**	**N56C**	3,970	5,010	730	226

P_1 = 0.75 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.71	58,300	1.7	2423	10.1	**307L4**		**BN80A4**	**M1LA4**	**N56C**	19,400	26,400	10,100	330
0.71	58,300	2.6	2423	10.1	**309L4**		**BN80A4**	**M1LA4**	**N56C**	19,400	26,400	8,090	348
0.73	56,200	1.1	2337	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	15,400	19,500	7,870	312
0.82	49,900	1.2	2074	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	15,200	19,100	7,870	312
0.84	49,100	2.6	2041	10.1	**307L4**		**BN80A4**	**M1LA4**	**N56C**	18,900	25,800	10,100	330
0.86	47,900	1.0	1991	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	11,000	13,900	5,400	298
0.92	44,600	0.9	1854	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	10,900	13,700	5,400	298
0.93	44,400	2.0	1843	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	14,900	18,800	7,870	312
1.1	38,200	0.9	1586	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	10,600	13,400	5,260	276
1.1	38,200	1.1	1586	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	10,600	13,400	5,260	298
1.1	38,400	2.0	1597	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	14,600	18,400	7,690	312
1.2	33,000	1.2	1370	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	10,400	13,200	5,010	298
1.2	35,500	2.5	1475	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	14,500	18,200	7,490	312
1.3	30,600	1.1	1271	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	10,300	13,000	4,890	276
1.3	32,300	1.0	1344	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	10,400	13,100	4,980	276
1.3	30,800	1.6	1278	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	10,300	13,000	4,900	298
1.3	30,800	2.4	1279	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	14,200	17,900	7,140	312
1.6	26,400	1.5	1098	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	10,100	12,700	4,650	298
1.6	26,300	2.6	1095	8.0	**306L4**		**BN80A4**	**M1LA4**	**N56C**	13,900	17,500	6,780	312
1.7	24,500	1.0	1018	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,980	12,600	4,540	258
1.7	24,500	1.4	1018	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,980	12,600	4,540	276
1.7	24,500	2.0	1018	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	9,980	12,600	4,540	298
1.9	21,600	1.7	896	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	9,800	12,400	4,350	298
2.1	19,700	1.0	819	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	5,040	5,980	1,410	242
2.1	19,600	1.2	816	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,670	12,200	4,220	258
2.1	19,800	1.0	824	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	9,690	12,200	4,230	260
2.1	19,600	1.7	816	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,670	12,200	4,220	276
2.1	19,600	2.4	816	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	9,670	12,200	4,220	298
2.1	19,200	1.6	797	16.1		**305R4**	**BN80A4**	**M1LA4**	**N56C**	9,640	12,200	4,180	296
2.1	19,800	1.8	824	16.1		**305R4**	**BN80A4**	**M1LA4**	**N56C**	9,690	12,200	4,230	296
2.1	20,000	2.7	830	16.1		**306R4**	**BN80A4**	**M1LA4**	**N56C**	13,300	16,800	6,180	314
2.3	18,200	1.1	755	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,980	5,920	1,370	242
2.4	17,300	1.1	718	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,500	12,000	4,040	258
2.4	16,900	1.3	702	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,470	12,000	4,010	276
2.4	16,800	1.4	699	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	9,460	12,000	4,010	278
2.4	17,300	2.1	718	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	9,500	12,000	4,040	298
2.6	15,600	1.3	649	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,360	11,800	3,910	258
2.6	15,900	1.2	659	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	9,380	11,900	3,930	260
2.6	15,600	2.0	649	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,360	11,800	3,910	276
2.6	15,600	2.5	649	8.0	**305L4**		**BN80A4**	**M1LA4**	**N56C**	9,360	11,800	3,910	298
2.6	15,900	2.2	659	16.1		**305R4**	**BN80A4**	**M1LA4**	**N56C**	9,380	11,900	3,930	296
2.8	14,800	1.3	616	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,840	5,750	1,280	242
3.0	13,600	1.5	567	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	9,180	11,600	3,730	260
3.1	13,400	1.4	558	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,770	5,670	1,240	242
3.1	13,400	1.9	556	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,160	11,600	3,710	258
3.1	13,400	2.5	556	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,160	11,600	3,710	276
3.1	13,500	1.6	560	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	9,170	11,600	3,720	278
3.2	12,700	1.4	528	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	9,090	11,500	3,650	260
3.2	12,700	2.7	528	16.1		**305R4**	**BN80A4**	**M1LA4**	**N56C**	9,090	11,500	3,650	296
3.5	11,900	1.5	494	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,690	5,570	1,190	242
3.5	11,800	1.0	491	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,690	5,560	1,190	244
3.5	11,800	2.0	492	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	9,000	11,400	3,560	258
3.5	11,800	2.8	492	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	9,000	11,400	3,560	276
3.8	10,800	1.6	447	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,620	5,490	1,150	242
3.8	10,900	1.5	453	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,630	5,500	1,160	244
3.8	10,700	2.3	446	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	8,870	11,200	3,450	258
3.8	10,900	1.8	452	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,890	11,200	3,460	260
3.8	10,900	3.0	452	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	8,890	11,200	3,460	278
4.0	10,600	2.0	426	10.1	**304L3**		**BN80A4**	**M1LA4**	**N56C**	8,810	11,100	3,390	276
4.1	9,940	2.1	413	8.0	**303L4**		**BN80A4**	**M1LA4**	**N56C**	8,780	11,100	3,360	258
4.1	9,940	2.6	413	8.0	**304L4**		**BN80A4**	**M1LA4**	**N56C**	8,780	11,100	3,360	276
4.1	9,950	2.2	414	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	8,780	11,100	3,360	278
4.2	9,700	1.2	403	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,560	5,410	1,110	242
4.3	9,470	1.2	394	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,540	5,390	1,100	244
4.3	9,970	1.7	402	10.1	**303L3**		**BN80A4**	**M1LA4**	**N56C**	8,740	11,000	3,330	258



A

P_1 = 0.75 hp

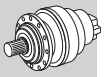
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
4.4	9,650	1.5	389	10.1	**303L3**		**BN80A4**	**M1LA4**	**N56C**	8,700	11,000	3,290	258
4.4	9,390	1.8	390	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,700	11,000	3,300	260
4.4	9,650	2.9	389	10.1	**305L3**		**BN80A4**	**M1LA4**	**N56C**	8,700	11,000	3,290	294
4.6	9,280	1.3	374	10.1	**301L3**		**BN80A4**	**M1LA4**	**N56C**	4,510	5,350	1,080	242
4.7	8,740	1.0	363	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,490	5,670	1,070	228
4.7	8,740	1.9	363	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,490	5,330	1,070	244
4.7	8,760	2.3	364	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,620	10,900	3,220	260
4.7	8,760	2.9	364	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	8,620	10,900	3,220	278
5.0	8,470	2.5	341	10.1	**304L3**		**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,150	276
5.1	8,080	2.4	336	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,140	260
5.1	8,120	2.6	338	16.1		**304R4**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,140	278
5.2	7,950	1.1	330	8.0	**300L4**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	1,040	226
5.2	7,950	2.1	330	8.0	**301L4**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	1,040	242
5.3	7,970	2.0	321	10.1	**303L3**		**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,090	258
5.5	7,520	2.2	313	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,060	260
5.7	7,420	1.6	299	10.1	**301L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	1,010	242
5.9	7,000	1.2	291	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	1,000	228
5.9	7,000	2.4	291	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	1,000	244
6.2	6,860	2.9	276	10.1	**303L3**		**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,940	258
6.4	6,460	1.3	268	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	970	228
6.4	6,460	2.5	268	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	970	244
6.6	6,390	2.5	258	10.1	**303L3**		**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,870	258
6.7	6,140	2.6	255	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,860	260
7.1	5,950	1.0	240	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	930	226
7.1	5,950	1.9	240	10.1	**301L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	930	242
7.2	5,710	1.0	237	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	930	228
7.2	5,710	2.0	237	13.4		**301R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	930	244
7.4	5,560	2.9	231	16.1		**303R4**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,770	260
7.7	5,480	1.4	221	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	910	226
7.7	5,480	2.9	221	10.1	**301L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	910	242
8.0	5,170	1.5	215	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	900	228
8.9	4,760	1.2	192	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	870	226
8.9	4,760	2.4	192	10.1	**301L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	870	242
9.7	4,390	1.7	177	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	840	226
9.7	4,220	1.8	175	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	840	228
10.8	3,820	2.0	159	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,350	5,500	810	228
11.9	3,450	1.7	143	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,220	5,330	790	228
12.1	3,520	2.2	142	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,210	5,310	780	226
12.9	3,300	1.5	133	16.1		**300R3**	**BN80A4**	**M1LA4**	**N56C**	4,130	5,210	770	228
13.1	3,250	2.3	131	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	4,110	5,190	760	226
13.2	3,120	2.4	130	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	4,100	5,170	760	228
14.8	2,870	2.0	116	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	3,960	5,000	730	226
16.1	2,640	2.2	106	16.1		**300R3**	**BN80A4**	**M1LA4**	**N56C**	3,860	4,880	710	228
16.2	2,550	3.0	106	13.4		**300R4**	**BN80A4**	**M1LA4**	**N56C**	3,850	4,870	710	228
16.3	2,600	2.9	105	10.1	**300L3**		**BN80A4**	**M1LA4**	**N56C**	3,840	4,850	710	226
20.1	2,110	2.7	85.2	16.1		**300R3**	**BN80A4**	**M1LA4**	**N56C**	3,610	4,560	660	228
26.4	1,660	2.9	64.8	10.1	**300L2**		**BN80A4**	**M1LA4**	**N56C**	3,330	4,200	600	226

P_1 = 1 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.70	80,700	2.6	2523	14.8	**310ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	22,800	29,500	14,600	364
0.72	77,500	1.3	2423	10.1	**307L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	19,300	26,300	10,100	330
0.72	77,500	1.9	2423	10.1	**309L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	19,300	26,300	8,090	348
0.85	66,300	0.9	2074	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	15,100	19,100	7,870	312
0.86	65,300	1.9	2041	10.1	**307L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,900	25,700	10,100	330
0.88	64,000	2.3	2003	10.1	**309L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,800	25,600	8,090	348
0.95	58,900	1.5	1843	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,900	18,700	7,870	312

P_1 = 1 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.99	56,500	2.5	1767	10.1	**307L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,500	25,100	10,100	330
1.0	55,100	2.7	1723	10.1	**309L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,400	25,100	8,040	348
1.1	51,100	1.5	1597	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,600	18,400	7,620	312
1.1	50,900	2.6	1591	10.1	**307L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,200	24,800	9,790	330
1.1	51,300	2.9	1605	10.1	**309L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	18,200	24,800	7,860	348
1.2	47,200	1.9	1475	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,400	18,200	7,420	312
1.3	43,800	0.9	1370	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,400	13,100	4,970	298
1.4	40,900	1.2	1278	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,300	13,000	4,850	298
1.4	40,900	1.8	1279	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,100	17,800	7,080	312
1.4	40,800	2.7	1274	10.1	**307L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	17,600	24,000	9,090	330
1.6	35,100	1.1	1098	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,100	12,700	4,610	298
1.6	35,000	2.0	1095	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,800	17,400	6,720	312
1.7	32,600	1.0	1018	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,950	12,600	4,500	276
1.7	32,600	1.5	1018	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,950	12,600	4,500	298
1.7	32,500	2.6	1015	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,700	17,200	6,560	312
2.0	28,700	1.3	896	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,770	12,300	4,310	298
2.0	28,000	2.4	877	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,400	16,900	6,240	312
2.1	26,300	1.4	824	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,650	12,200	4,190	296
2.1	26,500	2.0	830	16.1		**306R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,300	16,700	6,130	314
2.2	26,100	0.9	816	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,640	12,200	4,180	258
2.2	26,100	1.3	816	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,640	12,200	4,180	276
2.2	26,100	1.8	816	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,640	12,200	4,180	298
2.2	25,500	1.2	797	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,600	12,100	4,150	296
2.2	25,900	2.6	809	8.0	**306L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,200	16,700	6,080	312
2.4	23,000	1.5	718	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,460	12,000	4,010	298
2.5	22,400	1.0	702	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,430	11,900	3,980	276
2.5	22,400	1.0	699	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,430	11,900	3,970	278
2.6	21,300	2.4	665	16.1		**306R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	12,900	16,200	5,690	314
2.7	20,800	1.0	649	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,330	11,800	3,870	258
2.7	20,800	1.5	649	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,330	11,800	3,870	276
2.7	20,800	1.9	649	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,330	11,800	3,870	298
2.7	21,100	1.7	659	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,350	11,800	3,890	296
2.8	19,700	0.9	616	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,820	5,730	1,270	242
3.1	17,800	1.0	558	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,760	5,640	1,230	242
3.1	18,100	1.2	567	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,150	11,600	3,700	260
3.1	17,900	1.2	560	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,130	11,500	3,690	278
3.1	18,100	2.3	567	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,150	11,600	3,700	296
3.2	17,800	1.4	556	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,120	11,500	3,680	258
3.2	17,800	1.9	556	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,120	11,500	3,680	276
3.2	17,800	2.7	556	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,120	11,500	3,680	298
3.3	16,900	1.0	528	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,060	11,400	3,620	260
3.3	16,900	2.0	528	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,060	11,400	3,620	296
3.6	15,800	1.1	494	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,670	5,550	1,180	242
3.6	15,700	1.5	492	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,970	11,300	3,530	258
3.6	15,700	2.1	492	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,970	11,300	3,530	276
3.6	15,700	3.0	492	8.0	**305L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,970	11,300	3,530	298
3.9	14,300	1.2	447	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,610	5,470	1,140	242
3.9	14,500	1.2	453	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,620	5,480	1,150	244
3.9	14,200	1.7	446	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,840	11,200	3,420	258
3.9	14,400	1.4	452	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,860	11,200	3,430	260
3.9	14,200	2.3	446	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,840	11,200	3,420	276
3.9	14,400	2.3	452	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,860	11,200	3,430	278
3.9	14,400	2.9	452	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,860	11,200	3,430	296
4.1	14,000	1.5	426	10.1	**304L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,780	11,100	3,370	276
4.2	13,200	1.5	413	8.0	**303L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,740	11,000	3,330	258
4.2	13,200	2.0	413	8.0	**304L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,740	11,000	3,330	276
4.2	13,200	1.6	414	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,750	11,000	3,330	278
4.4	12,900	0.9	403	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,540	5,390	1,100	242
4.4	13,200	1.3	402	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,710	11,000	3,300	258
4.4	13,200	2.5	402	8.0	**305L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,710	11,000	3,300	294
4.5	12,600	0.9	394	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,520	5,370	1,090	244
4.5	12,800	1.1	389	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,670	10,900	3,260	258
4.5	12,500	1.3	390	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,670	11,000	3,270	260
4.5	12,800	2.2	389	10.1	**305L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,670	10,900	3,260	294
4.5	12,500	2.6	390	16.1		**305R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,670	11,000	3,270	296



A

P_1 = 1 hp

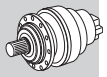
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
4.7	12,300	0.9	374	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,490	5,330	1,070	242
4.8	11,600	1.5	363	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,470	5,310	1,060	244
4.8	11,600	1.7	364	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,590	10,800	3,190	260
4.8	11,600	2.2	364	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,590	10,800	3,190	278
5.1	11,200	1.9	341	10.1	**304L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,130	276
5.2	10,700	1.8	336	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,110	260
5.2	10,800	2.0	338	16.1		**304R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,110	278
5.3	10,600	1.6	330	8.0	**301L4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	1,030	242
5.5	10,600	1.5	321	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,060	258
5.5	10,600	3.0	321	10.1	**305L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,060	294
5.6	10,000	1.6	313	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,040	260
5.9	9,860	1.2	299	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	1,000	242
6.0	9,300	1.8	291	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	990	244
6.1	9,270	2.5	290	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,960	260
6.3	9,110	2.2	276	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,910	258
6.4	9,000	2.4	273	10.1	**304L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,900	276
6.5	8,580	0.9	268	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	960	228
6.5	8,580	1.9	268	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	960	244
6.8	8,490	1.9	258	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,850	258
6.9	8,160	2.0	255	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,840	260
7.3	7,900	1.5	240	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	930	242
7.4	7,590	1.5	237	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	920	244
7.6	7,390	2.2	231	16.1		**303R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,740	260
7.9	7,290	1.1	221	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	900	226
7.9	7,290	2.1	221	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	900	242
8.0	7,260	2.7	220	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,700	258
8.2	6,870	1.1	215	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	890	228
8.2	6,870	2.3	215	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	890	244
9.1	6,330	0.9	192	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	860	226
9.1	6,330	1.8	192	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	860	242
9.2	6,270	2.6	190	10.1	**303L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,570	258
9.9	5,840	1.3	177	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	840	226
9.9	5,840	2.6	177	10.1	**301L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	840	242
10.0	5,610	1.4	175	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,620	830	228
10.0	5,610	2.7	175	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	830	244
11.0	5,080	1.5	159	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,320	5,450	810	228
11.0	5,080	3.0	159	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,320	5,130	810	244
12.3	4,580	1.3	143	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,190	5,290	780	228
12.3	4,580	2.5	143	13.4		**301R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,190	4,970	780	244
12.4	4,680	1.6	142	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,180	5,270	780	226
13.2	4,380	1.1	133	16.1		**300R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,090	5,170	760	228
13.2	4,380	2.3	133	16.1		**301R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,090	4,860	760	244
13.4	4,310	1.8	131	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,080	5,150	760	226
13.5	4,150	1.8	130	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,060	5,130	750	228
15.2	3,820	1.5	116	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,930	4,960	730	226
16.5	3,510	1.6	106	16.1		**300R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,830	4,840	710	228
16.6	3,380	2.2	106	13.4		**300R4**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,820	4,830	710	228
16.7	3,460	2.2	105	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,810	4,820	700	226
20.5	2,820	2.7	85.6	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,590	4,530	660	226
20.6	2,810	2.0	85.2	16.1		**300R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,580	4,520	660	228
22.3	2,590	2.9	78.7	16.1		**300R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,500	4,420	640	228
22.7	2,550	2.9	77.5	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,480	4,400	640	226
25.1	2,300	2.5	69.9	10.1	**300L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,380	4,260	610	226
25.7	2,250	2.6	68.2	16.1		**300R3**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,350	4,230	610	228
27.1	2,200	2.2	64.8	10.1	**300L2**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	3,300	4,170	600	226

P_1 = 1.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.69	118,600	1.8	2523	14.8	**310ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	22,900	29,500	14,600	364
0.72	113,900	1.3	2423	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	19,400	26,300	8,090	348
0.85	96,000	1.3	2041	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,900	25,700	10,100	330
0.86	95,100	2.2	2022	14.8	**310ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	22,100	28,600	14,600	364

P_1 = 1.5 hp

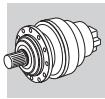
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.87	94,100	1.6	2003	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,800	25,600	8,090	348
0.94	86,700	1.0	1843	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,900	18,800	7,870	312
0.97	84,400	2.5	1794	14.8	**310ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	21,800	28,100	14,600	364
0.98	83,100	1.7	1767	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,500	25,200	10,100	330
1.0	81,000	1.9	1723	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,400	25,100	8,070	348
1.0	78,600	2.7	1672	14.8	**310ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	21,500	27,800	14,400	364
1.1	75,100	1.0	1597	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,600	18,400	7,650	312
1.1	74,800	1.8	1591	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,200	24,800	9,820	330
1.1	75,400	2.0	1605	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,300	24,800	7,880	348
1.2	69,300	1.3	1475	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,400	18,200	7,450	312
1.2	66,200	2.1	1408	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,900	24,400	9,430	330
1.3	64,900	2.2	1380	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,900	24,300	7,490	348
1.4	60,200	1.2	1279	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,100	17,800	7,100	312
1.4	59,900	1.8	1274	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,700	24,000	9,120	330
1.4	60,400	2.4	1286	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,700	24,100	7,320	348
1.5	54,400	2.3	1157	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,400	23,700	8,830	330
1.5	54,000	2.6	1149	10.1	**309L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,400	23,700	7,050	348
1.6	51,500	1.3	1095	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,800	17,400	6,740	312
1.7	47,900	1.0	1018	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,960	12,600	4,510	298
1.7	47,700	1.7	1015	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,700	17,200	6,570	312
1.7	47,000	2.5	999	10.1	**307L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,100	23,200	8,410	330
2.0	41,200	1.6	877	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,400	16,900	6,260	312
2.1	38,400	1.2	816	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,650	12,200	4,190	298
2.1	38,700	0.9	824	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,660	12,200	4,200	296
2.1	39,000	1.4	830	16.1		**306R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,300	16,700	6,150	314
2.2	38,000	1.8	809	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,200	16,700	6,100	312
2.4	33,800	1.1	718	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,470	12,000	4,020	298
2.5	32,900	2.5	700	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,000	16,300	5,810	312
2.5	32,400	2.6	690	20.1		**307R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	16,200	22,000	7,430	332
2.6	31,000	1.1	659	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,360	11,800	3,900	296
2.6	31,300	1.7	665	16.1		**306R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,900	16,200	5,710	314
2.7	30,500	1.0	649	8.0	**304L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,340	11,800	3,880	276
2.7	30,500	1.3	649	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,340	11,800	3,880	298
2.7	29,900	2.8	636	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,800	16,100	5,620	312
2.9	27,800	2.7	590	16.1		**306R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,700	16,000	5,490	314
3.0	27,700	2.9	589	8.0	**306L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,700	15,900	5,480	312
3.1	26,100	1.0	556	8.0	**303L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,130	11,500	3,690	258
3.1	26,100	1.3	556	8.0	**304L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,130	11,500	3,690	276
3.1	26,100	1.9	556	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,130	11,500	3,690	298
3.1	26,600	1.6	567	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,160	11,600	3,710	296
3.2	25,900	2.4	550	16.1		**306R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,500	15,800	5,360	314
3.3	24,800	1.4	528	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,070	11,500	3,630	296
3.5	23,100	1.0	492	8.0	**303L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,980	11,300	3,540	258
3.5	23,100	1.4	492	8.0	**304L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,980	11,300	3,540	276
3.5	23,100	2.0	492	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,980	11,300	3,540	298
3.8	21,400	2.8	455	16.1		**306R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,200	15,400	5,030	314
3.9	21,000	1.2	446	8.0	**303L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,850	11,200	3,430	258
3.9	21,200	0.9	452	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,870	11,200	3,440	260
3.9	21,000	1.6	446	8.0	**304L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,850	11,200	3,430	276
3.9	21,200	1.5	452	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,870	11,200	3,440	278
3.9	21,000	2.3	446	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,850	11,200	3,430	298
3.9	21,200	2.0	452	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,870	11,200	3,440	296
4.1	20,600	1.0	426	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,790	11,100	3,370	276
4.2	19,400	1.0	413	8.0	**303L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,760	11,100	3,340	258
4.2	19,400	1.3	413	8.0	**304L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,760	11,100	3,340	276
4.2	19,400	1.1	414	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,760	11,100	3,340	278
4.2	19,400	2.1	413	8.0	**305L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,760	11,100	3,340	298
4.3	19,500	1.7	402	8.0	**305L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,720	11,000	3,310	294
4.3	19,600	2.5	405	10.1	**306L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,000	15,100	4,840	312
4.5	18,300	0.9	390	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,680	11,000	3,280	260
4.5	18,800	1.5	389	10.1	**305L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,680	11,000	3,270	294
4.5	18,300	1.8	390	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,680	11,000	3,280	296
4.8	17,100	1.0	363	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,480	5,320	1,070	244
4.8	17,100	1.2	364	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,600	10,900	3,200	260
4.8	17,100	1.5	364	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,600	10,900	3,200	278



A

P_1 = 1.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
4.8	17,100	2.3	364	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,600	10,900	3,200	296
5.1	16,500	1.3	341	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,130	276
5.2	15,800	1.3	336	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,120	260
5.2	15,900	1.3	338	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,120	278
5.2	15,800	2.5	336	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,120	296
5.3	15,500	1.1	330	8.0	**301L4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	1,030	242
5.4	15,600	1.0	321	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,070	258
5.4	15,600	2.0	321	10.1	**305L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,070	294
5.6	14,700	1.1	313	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,040	260
5.6	14,700	2.2	313	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,040	296
5.7	14,400	2.1	307	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,020	278
6.0	13,700	1.2	291	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	990	244
6.0	13,600	1.7	290	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,970	260
6.0	13,600	2.4	290	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,970	278
6.3	13,400	1.5	276	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,920	258
6.3	13,400	2.9	276	10.1	**305L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,920	294
6.4	13,200	1.6	273	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,910	276
6.5	12,600	1.3	268	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	960	244
6.5	12,600	2.6	267	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,890	278
6.8	12,500	1.3	258	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,850	258
6.8	12,000	1.4	255	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,850	260
6.8	12,500	2.6	258	10.1	**305L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,850	294
6.8	12,000	2.7	255	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,850	296
7.3	11,600	1.0	240	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	930	242
7.3	11,200	1.0	237	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	930	244
7.5	10,900	1.5	231	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,750	260
7.5	10,900	2.9	231	16.1		**305R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,750	296
7.7	10,600	2.9	227	16.1		**304R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,730	278
7.9	10,700	1.5	221	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	900	242
7.9	10,700	1.9	220	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,710	258
7.9	10,700	3.0	220	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,710	276
8.1	10,100	1.6	215	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	900	244
8.1	10,100	2.4	214	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,680	260
8.6	9,780	2.2	202	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,630	276
9.1	9,310	1.2	192	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	860	242
9.1	9,220	1.7	190	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,580	258
9.4	8,690	2.4	185	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,560	260
9.8	8,580	1.8	177	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	840	242
9.8	8,600	2.3	178	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,520	258
9.8	8,600	2.9	178	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,520	276
9.9	8,250	0.9	175	13.4		**300R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,620	840	228
9.9	8,250	1.9	175	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	840	244
10.6	7,930	2.5	164	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,390	10,600	2,450	258
10.6	7,980	2.7	165	10.1	**304L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,400	10,600	2,460	276
11.0	7,470	1.0	159	13.4		**300R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,330	5,470	810	228
11.0	7,470	2.0	159	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,330	5,140	810	244
11.4	7,390	2.2	152	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,210	10,400	2,400	258
11.7	6,970	2.9	148	16.1		**303R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,140	10,300	2,370	260
12.1	6,730	1.7	143	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,200	4,980	780	244
12.3	6,880	1.1	142	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,190	5,290	780	226
12.3	6,880	2.2	142	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,190	4,970	780	242
13.1	6,440	1.6	133	16.1		**301R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,100	4,870	760	244
13.3	6,340	1.2	131	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,090	5,160	760	226
13.3	6,340	2.4	131	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,090	4,850	760	242
13.4	6,100	1.2	130	13.4		**300R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,080	5,150	760	228
13.4	6,100	2.5	130	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,080	4,840	760	244
14.0	6,030	2.7	124	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	7,730	9,760	2,240	258
15.0	5,610	1.0	116	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,940	4,970	730	226
15.0	5,610	2.0	116	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,940	4,680	730	242
15.2	5,540	2.9	114	18.8		**303R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	7,530	9,510	2,180	260
15.4	5,460	2.9	113	10.1	**303L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	7,500	9,470	2,170	258
16.3	5,160	1.1	106	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,840	4,850	710	228
16.3	5,160	2.2	106	16.1		**301R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,840	4,560	710	244
16.4	4,980	1.5	106	13.4		**300R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,830	4,840	710	228
16.4	4,980	3.0	106	13.4		**301R4**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,830	4,550	710	244

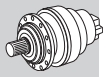


P_1 = 1.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
16.6	5,080	1.5	105	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,820	4,830	710	226
16.6	5,080	2.9	105	10.1	**301L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,820	4,540	710	242
20.3	4,150	1.8	85.6	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,600	4,540	660	226
20.4	4,130	1.4	85.2	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,590	4,540	660	228
20.4	4,130	2.8	85.2	16.1		**301R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,590	4,260	660	244
22.1	3,810	2.0	78.7	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,510	4,430	640	228
22.5	3,760	2.0	77.5	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,490	4,410	640	226
24.9	3,390	1.7	69.9	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,390	4,270	620	226
25.5	3,310	1.7	68.2	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,360	4,240	610	228
26.9	3,240	1.5	64.8	10.1	**300L2**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,310	4,180	600	226
27.5	3,070	2.4	63.2	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,290	4,150	600	226
27.7	3,050	2.5	62.9	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,280	4,140	590	228
34	2,590	2.2	51.9	10.1	**300L2**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,100	3,910	560	226
34	2,500	3.0	51.6	10.1	**300L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,090	3,900	560	226
42	2,080	2.8	41.5	10.1	**300L2**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	2,900	3,660	520	226
42	1,990	2.9	41.2	16.1		**300R3**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	2,890	3,650	520	228

P_1 = 2 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.69	164,100	1.3	2523	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	22,900	29,500	14,600	364
0.72	157,500	1.0	2423	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	19,400	26,400	8,090	348
0.79	142,200	2.5	2187	14.8	**313ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	38,900	48,700	18,000	400
0.83	136,300	2.4	2096	14.8	**311ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	27,800	29,100	14,600	382
0.85	132,700	1.0	2041	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,900	25,700	10,100	330
0.86	131,500	1.6	2022	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	22,200	28,600	14,600	364
0.87	130,200	1.2	2003	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,900	25,600	8,090	348
0.97	116,700	1.8	1794	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	21,800	28,100	14,600	364
0.98	114,900	1.2	1767	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,500	25,200	10,100	330
1.0	112,000	1.3	1723	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,500	25,100	8,070	348
1.0	108,700	1.9	1672	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	21,600	27,800	14,400	364
1.0	109,200	2.9	1680	14.8	**311ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	27,000	28,200	14,500	382
1.1	103,400	1.3	1591	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,200	24,800	9,830	330
1.1	104,400	1.4	1605	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,300	24,800	7,890	348
1.2	95,900	0.9	1475	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	14,400	18,200	7,450	312
1.2	91,600	1.5	1408	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,900	24,400	9,440	330
1.2	93,500	2.2	1438	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	21,100	27,200	13,700	364
1.3	83,600	1.7	1286	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,700	24,100	7,320	348
1.3	89,800	1.6	1380	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,900	24,300	7,500	348
1.4	82,900	1.3	1274	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,700	24,000	9,130	330
1.4	81,900	2.7	1259	14.8	**310ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	20,700	26,700	13,100	364
1.5	75,200	1.6	1157	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,400	23,700	8,840	330
1.5	74,700	1.9	1149	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,400	23,700	7,060	348
1.6	71,200	1.0	1095	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,800	17,400	6,750	312
1.7	66,000	1.3	1015	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,700	17,200	6,580	312
1.7	65,000	1.8	999	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,100	23,200	8,420	330
1.7	65,000	2.5	999	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,100	23,200	6,730	348
1.9	58,900	2.3	906	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,800	22,900	8,150	330
1.9	58,900	2.7	906	10.1	**309L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,800	22,900	6,520	348
2.0	57,000	1.2	877	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,400	16,900	6,270	312
2.1	52,600	0.9	816	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,650	12,200	4,200	298
2.1	52,600	1.3	809	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,200	16,700	6,100	312
2.1	54,000	1.0	830	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,300	16,800	6,150	314
2.2	52,100	2.2	801	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,500	22,500	7,820	330
2.4	47,000	2.8	722	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,300	22,200	7,550	330
2.5	45,500	1.8	700	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,000	16,400	5,810	312
2.5	44,900	1.9	690	20.1		**307R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,200	22,000	7,440	332
2.5	44,900	2.8	690	20.1		**309R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,200	22,000	5,950	350
2.6	43,300	1.2	665	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,900	16,200	5,720	314
2.7	42,200	0.9	649	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,340	11,800	3,890	298
2.7	41,300	2.0	636	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,800	16,100	5,630	312



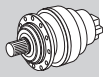
A

P_1 = 2 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
2.7	42,500	2.6	654	10.1	**307L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,100	21,900	7,310	330
2.9	38,300	2.1	589	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,700	16,000	5,490	312
2.9	38,400	1.9	590	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,700	16,000	5,490	314
3.0	37,800	2.9	581	20.1		**307R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	15,800	21,500	7,030	332
3.1	36,200	0.9	556	8.0	**304L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,140	11,500	3,690	276
3.1	36,200	1.3	556	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,140	11,500	3,690	298
3.1	36,900	1.1	567	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,160	11,600	3,720	296
3.2	35,800	1.8	550	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,500	15,800	5,360	314
3.3	34,300	1.0	528	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,070	11,500	3,630	296
3.4	33,100	2.5	509	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,400	15,600	5,230	312
3.5	32,000	1.0	492	8.0	**304L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,980	11,300	3,550	276
3.5	32,000	1.5	492	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,980	11,300	3,550	298
3.5	31,900	2.5	490	20.1		**307R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	15,400	21,000	6,640	332
3.6	31,700	2.5	488	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,300	15,500	5,160	314
3.8	29,400	1.1	452	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,870	11,200	3,450	278
3.8	29,400	1.4	452	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,870	11,200	3,450	296
3.8	29,600	2.0	455	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,200	15,400	5,040	314
3.9	29,000	1.1	446	8.0	**304L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,850	11,200	3,430	276
3.9	29,000	1.7	446	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,850	11,200	3,430	298
4.1	27,300	2.8	420	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,100	15,200	4,900	314
4.2	26,900	1.0	413	8.0	**304L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,760	11,100	3,340	276
4.2	26,900	1.5	413	8.0	**305L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,760	11,100	3,340	298
4.3	26,900	1.2	402	8.0	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,720	11,000	3,310	294
4.3	27,200	1.8	405	10.1	**306L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,000	15,100	4,840	312
4.4	25,400	1.3	390	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,690	11,000	3,280	296
4.4	25,400	2.3	391	8.0	**306L4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,900	15,000	4,790	312
4.5	26,100	1.1	389	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,680	11,000	3,280	294
4.5	25,300	2.7	389	16.1		**306R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,900	15,000	4,780	314
4.8	23,700	1.1	364	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,600	10,900	3,210	278
4.8	23,700	1.7	364	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,600	10,900	3,210	296
5.1	22,900	0.9	341	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,140	276
5.1	22,000	1.0	338	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,130	278
5.2	21,800	0.9	336	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,120	260
5.2	21,800	1.8	336	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,120	296
5.3	21,800	2.2	325	10.1	**306L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,700	14,800	4,500	312
5.4	21,500	1.5	321	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,080	294
5.6	20,300	1.6	313	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,050	296
5.7	19,900	1.5	307	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,030	278
6.0	18,900	1.2	290	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,970	260
6.0	18,900	1.7	290	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,970	278
6.0	18,900	2.5	290	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,970	296
6.0	19,300	2.5	288	10.1	**306L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,700	14,800	4,320	312
6.3	18,500	1.1	276	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,930	258
6.3	18,500	2.1	276	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,930	294
6.4	18,300	1.2	273	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,910	276
6.5	17,400	0.9	268	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	970	244
6.5	17,400	1.8	267	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,890	278
6.5	18,000	2.7	268	10.1	**306L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,700	14,800	4,220	312
6.7	17,300	0.9	258	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,860	258
6.7	17,300	1.8	258	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,860	294
6.8	16,600	1.0	255	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,850	260
6.8	16,600	1.9	255	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,850	296
7.5	15,000	1.1	231	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,760	260
7.5	15,000	2.1	231	16.1		**305R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,760	296
7.7	14,700	2.1	227	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,740	278
7.9	14,800	1.1	221	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	900	242
7.9	14,800	1.3	220	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,710	258
7.9	14,800	2.1	220	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,710	276
7.9	14,800	2.8	220	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,710	294
8.1	14,000	1.1	215	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	900	244
8.1	13,900	1.7	214	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,690	260
8.1	13,900	2.3	214	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,690	278
8.6	13,500	1.6	202	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,630	276
9.0	12,800	0.9	192	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	860	242
9.1	12,800	1.3	190	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,580	258

P_1 = 2 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
9.1	12,800	2.5	190	10.1	**305L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,580	294
9.4	12,000	1.7	185	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,560	260
9.4	12,000	2.5	185	16.1		**304R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,560	278
9.8	11,900	1.3	177	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	840	242
9.8	11,900	1.6	178	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,520	258
9.8	11,900	2.1	178	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,520	276
9.9	11,400	1.3	175	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,450	5,280	840	244
10.5	11,000	1.9	165	10.1	**304L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,410	10,600	2,460	276
10.6	11,000	1.8	164	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,400	10,600	2,460	258
10.9	10,300	1.5	159	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,330	5,140	810	244
11.0	10,300	2.3	158	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,310	10,500	2,430	260
11.4	10,200	1.6	152	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,220	10,400	2,400	258
11.7	9,640	2.1	148	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,150	10,300	2,380	260
12.1	9,310	1.2	143	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,200	4,990	780	244
12.2	9,510	1.6	142	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,190	4,970	780	242
12.3	9,480	2.4	141	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,040	10,100	2,340	258
13.1	8,910	1.1	133	16.1		**301R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,110	4,880	760	244
13.3	8,770	1.7	131	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,090	4,850	760	242
13.4	8,360	0.9	130	13.4		**300R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,080	5,150	760	228
13.4	8,430	1.8	130	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,080	4,840	760	244
13.4	8,410	2.7	129	16.1		**303R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,820	9,880	2,270	260
13.9	8,350	1.9	124	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,730	9,770	2,240	258
14.3	8,130	2.6	121	18.8		**304R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,670	9,690	2,220	278
15.0	7,770	1.5	116	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,940	4,680	730	242
15.2	7,670	2.1	114	18.8		**303R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,540	9,520	2,180	260
15.4	7,550	2.1	113	10.1	**303L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,510	9,480	2,170	258
16.3	7,140	1.6	106	16.1		**301R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,840	4,560	710	244
16.4	6,880	1.1	106	13.4		**300R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,840	4,850	710	228
16.4	6,880	2.2	106	13.4		**301R4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,840	4,550	710	244
16.5	7,030	1.1	105	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,830	4,830	710	226
16.5	7,030	2.1	105	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,830	4,540	710	242
19.0	6,140	2.6	91.5	18.8		**303R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,050	8,910	2,020	260
20.3	5,740	1.3	85.6	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,600	4,550	660	226
20.3	5,740	2.6	85.6	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,600	4,270	660	242
20.4	5,710	1.0	85.2	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,600	4,540	660	228
20.4	5,710	2.0	85.2	16.1		**301R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,600	4,270	660	244
22.1	5,270	1.4	78.7	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,510	4,430	640	228
22.1	5,270	2.6	78.7	16.1		**301R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,510	4,170	640	244
22.4	5,190	1.4	77.5	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,500	4,410	640	226
22.4	5,190	2.8	77.5	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,500	4,150	640	242
24.8	4,680	1.2	69.9	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,390	4,280	620	226
24.8	4,680	2.5	69.9	10.1	**301L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,390	4,020	620	242
25.4	4,570	1.3	68.2	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,360	4,250	610	228
25.4	4,570	2.5	68.2	16.1		**301R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,360	3,990	610	244
26.8	4,480	1.1	64.8	10.1	**300L2**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,310	4,180	600	226
26.8	4,480	2.3	64.8	10.1	**301L2**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,310	3,930	600	242
27.4	4,240	1.8	63.2	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,290	4,150	600	226
27.6	4,220	1.8	62.9	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,280	4,150	600	228
33	3,590	1.6	51.9	10.1	**300L2**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,100	3,910	560	226
34	3,460	2.2	51.6	10.1	**300L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,090	3,910	560	226
34	3,380	2.2	50.4	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,070	3,880	550	228
42	2,870	2.0	41.5	10.1	**300L2**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,900	3,660	520	226
42	2,760	2.1	41.2	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,890	3,650	520	228
45	2,650	2.8	38.4	10.1	**300L2**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,830	3,570	500	226
47	2,500	3.0	37.3	16.1		**300R3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,810	3,540	500	228
52	2,300	2.5	33.3	10.1	**300L2**		**BE90LA4**	**BX90LA4**	ME3SB4	**MX3SB4**	**N140TC**	2,710	3,420	480	226
94	1,280	2.6	18.5	16.1		**300R2**	**BE90LA4**	**BX90LA4**	ME3SB4	**MX3SB4**	**N140TC**	2,270	2,870	400	228



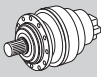
A

P_1 = 3 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.70	235,300	0.9	2523	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	22,800	29,500	14,600	364
0.80	203,900	1.7	2187	14.8	**313ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	38,800	48,600	18,000	400
0.84	195,500	1.7	2096	14.8	**311ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	27,800	29,000	14,600	382
0.87	188,500	1.1	2022	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	22,100	28,500	14,600	364
0.97	169,400	3.0	1817	14.8	**313ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	37,800	47,300	18,000	400
0.98	167,300	1.3	1794	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	21,700	28,100	14,600	364
1.0	160,600	0.9	1723	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	18,400	25,000	8,040	348
1.0	156,600	2.0	1680	14.8	**311ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	26,900	28,100	14,400	382
1.0	164,700	2.2	1766	14.8	**311ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	27,100	28,300	14,600	382
1.1	149,600	1.0	1605	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	18,200	24,800	7,850	348
1.1	155,900	1.3	1672	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	21,500	27,800	14,400	364
1.2	131,300	1.0	1408	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,900	24,300	9,390	330
1.2	134,100	1.5	1438	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	21,100	27,200	13,700	364
1.2	132,000	2.8	1415	14.8	**311ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	26,300	27,400	13,600	382
1.3	128,700	1.1	1380	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,800	24,300	7,460	348
1.4	118,800	0.9	1274	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,600	24,000	9,080	330
1.4	119,900	1.2	1286	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,700	24,000	7,290	348
1.4	117,400	1.9	1259	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	20,700	26,700	13,100	364
1.5	107,900	1.1	1157	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,400	23,700	8,800	330
1.5	107,200	1.3	1149	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,400	23,600	7,020	348
1.5	108,600	2.3	1164	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	20,400	26,400	12,700	364
1.8	93,200	1.3	999	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,000	23,200	8,380	330
1.8	93,200	1.7	999	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	17,000	23,200	6,700	348
1.8	93,400	2.6	1002	14.8	**310ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	20,000	25,800	12,100	364
1.9	84,500	1.6	906	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,800	22,900	8,110	330
1.9	84,500	1.9	906	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,800	22,900	6,490	348
2.0	83,700	2.2	898	20		**310MR4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	19,700	25,400	11,700	366
2.2	74,600	1.5	801	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,500	22,400	7,780	330
2.2	74,600	2.1	801	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,500	22,400	6,220	348
2.4	67,300	2.0	722	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,300	22,100	7,520	330
2.4	67,300	2.8	722	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,300	22,100	6,010	348
2.5	65,200	1.3	700	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,900	16,300	5,790	312
2.6	64,300	1.3	690	20		**307R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,200	22,000	7,400	332
2.6	64,300	2.0	690	20		**309R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,200	22,000	5,920	350
2.7	60,900	1.8	654	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,000	21,800	7,270	330
2.7	60,900	2.6	654	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	16,000	21,800	5,820	348
2.8	59,300	1.4	636	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,800	16,100	5,600	312
2.8	59,500	3.0	639	20		**310MR4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	18,800	24,200	10,400	366
3.0	55,000	1.5	589	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,600	15,900	5,460	312
3.0	55,100	1.3	590	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,600	15,900	5,470	314
3.0	54,000	2.4	579	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,800	21,400	6,980	330
3.0	54,200	2.0	581	20		**307R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,800	21,400	6,990	332
3.0	54,200	2.6	581	20		**309R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,800	21,400	5,590	350
3.2	51,900	0.9	556	8.0	**305L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	9,120	11,500	3,670	298
3.2	51,300	1.2	550	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,500	15,800	5,340	314
3.5	47,500	1.8	509	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,400	15,600	5,200	312
3.5	47,500	2.6	509	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,500	21,000	6,690	330
3.5	47,500	2.7	509	10.1	**309L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,500	21,000	5,350	348
3.6	45,900	1.0	492	8.0	**305L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,960	11,300	3,530	298
3.6	45,500	1.7	488	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,300	15,500	5,130	314
3.6	45,700	1.8	490	20		**307R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,400	20,900	6,610	332
3.6	45,700	2.6	490	20		**309R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,400	20,900	5,290	350
3.8	43,300	2.4	465	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,300	20,800	6,490	330
3.9	41,600	1.2	446	8.0	**305L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,840	11,200	3,410	298
3.9	42,100	1.0	452	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,850	11,200	3,430	296
3.9	42,400	1.4	455	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,200	15,300	5,010	314
3.9	42,200	2.8	453	20		**307R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,200	20,700	6,430	332
3.9	42,600	2.8	457	20		**309R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,200	20,700	5,160	350
4.0	41,400	2.1	444	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,100	15,300	4,970	312
4.2	39,100	1.9	420	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,000	15,200	4,880	314
4.3	38,500	1.1	413	8.0	**305L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,740	11,000	3,330	298
4.3	38,900	1.3	405	10.1	**306L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	12,000	15,100	4,820	312
4.3	37,800	2.7	406	10.1	**307L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,000	20,400	6,200	330
4.3	38,500	2.7	413	20		**307R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	15,000	20,400	6,240	332
4.5	36,500	1.6	391	8.0	**306L4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,900	15,000	4,770	312

P_1 = 3 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
4.5	36,300	1.9	389	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,900	15,000	4,760	314
4.8	33,900	1.2	364	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,580	10,800	3,190	296
5.2	31,300	1.3	336	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	3,110	296
5.2	32,300	2.4	336	14.8	**307L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	14,700	20,000	5,830	330
5.4	31,200	1.6	325	10.1	**306L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	4,480	312
5.5	30,900	1.0	321	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	3,060	294
5.6	29,100	1.1	313	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	3,030	296
5.6	29,100	2.3	312	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	4,420	314
5.7	28,600	1.1	307	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	3,010	278
6.1	27,000	1.2	290	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,960	278
6.1	27,000	1.7	290	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,960	296
6.1	27,700	1.8	288	10.1	**306L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	4,300	312
6.1	26,900	2.7	289	16.1		**306R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	4,310	314
6.4	26,600	1.5	276	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,910	294
6.6	24,900	1.3	267	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,880	278
6.6	25,800	1.9	268	10.1	**306L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	4,200	312
6.8	24,800	1.3	258	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,840	294
6.9	23,800	1.3	255	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,830	296
7.6	21,500	1.5	231	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,740	296
7.8	21,100	1.5	227	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,720	278
7.9	21,300	2.7	222	10.1	**306L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	11,700	14,800	3,940	312
8.0	21,200	0.9	220	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,700	258
8.0	21,200	1.5	220	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,700	276
8.0	21,200	2.0	220	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,700	294
8.2	20,000	1.2	214	16.1		**303R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,670	260
8.2	20,000	1.6	214	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,670	278
8.2	20,000	2.4	214	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,670	296
8.7	19,400	1.1	202	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,620	276
9.2	18,300	1.7	190	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,570	294
9.5	17,200	1.2	185	16.1		**303R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,550	260
9.5	17,200	1.8	185	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,550	278
9.5	17,200	2.3	185	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,550	296
9.9	17,000	0.9	177	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,450	5,280	840	242
9.9	17,100	1.1	178	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,510	258
9.9	17,100	1.5	178	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,510	276
9.9	17,100	2.3	178	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,540	10,800	2,510	294
10.0	16,400	0.9	175	13.4		**301R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,450	5,280	830	244
10.7	15,800	1.3	165	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,370	10,600	2,450	276
10.8	15,700	1.2	164	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,360	10,600	2,440	258
10.8	15,700	2.5	164	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,360	10,600	2,440	294
11.1	14,800	1.0	159	13.4		**301R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,320	5,120	810	244
11.1	14,800	1.6	158	16.1		**303R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,280	10,500	2,420	260
11.1	14,800	2.1	158	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,280	10,500	2,420	278
11.5	14,700	1.1	152	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,180	10,300	2,390	258
11.5	14,700	2.2	152	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,180	10,300	2,390	294
11.8	14,400	2.1	150	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,140	10,300	2,370	276
11.9	13,800	1.5	148	16.1		**303R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,110	10,200	2,360	260
11.9	13,800	2.2	148	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,110	10,200	2,360	278
11.9	13,800	2.8	148	16.1		**305R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,110	10,200	2,360	296
12.4	13,600	1.1	142	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,170	4,950	780	242
12.4	13,600	1.7	141	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,000	10,100	2,330	258
12.4	13,600	2.3	141	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	8,000	10,100	2,330	276
13.4	12,600	1.2	131	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,070	4,830	760	242
13.5	12,500	2.5	130	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,810	9,860	2,270	276
13.6	12,100	1.2	130	13.4		**301R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	4,060	4,820	750	244
13.6	12,100	1.9	129	16.1		**303R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,790	9,840	2,260	260
13.6	12,100	2.6	129	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,790	9,840	2,260	278
14.1	12,000	1.3	124	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,700	9,730	2,230	258
14.1	12,000	2.7	124	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,700	9,730	2,230	294
14.5	11,700	1.8	121	18.8		**304R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,640	9,650	2,210	278
15.2	11,100	1.0	116	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,930	4,660	730	242
15.4	11,000	1.5	114	18.8		**303R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,510	9,480	2,170	260
15.4	11,000	2.9	114	18.8		**305R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,510	9,480	2,170	296
15.6	10,800	1.5	113	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,470	9,440	2,160	258
15.6	10,800	2.9	113	10.1	**305L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,470	9,440	2,160	294



A

P_1 = 3 hp

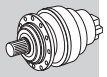
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
15.9	10,600	2.8	111	10.1	**304L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,430	9,380	2,140	276
16.1	10,200	2.9	109	16.1		**304R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,410	9,360	2,140	278
16.5	10,200	1.1	106	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,830	4,540	710	244
16.6	9,870	1.5	106	13.4		**301R4**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,820	4,540	700	244
16.8	10,100	1.5	105	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,810	4,520	700	242
16.8	10,000	2.2	105	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,310	9,230	2,110	258
18.1	9,320	2.3	97.0	18.8		**304R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,140	9,020	2,050	278
19.2	8,800	1.8	91.5	18.8		**303R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	7,020	8,870	2,010	260
19.5	8,670	2.3	90.2	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,990	8,830	2,000	258
20.6	8,230	0.9	85.6	10.1	**300L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,590	4,530	660	226
20.6	8,230	1.8	85.6	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,590	4,260	660	242
20.7	8,190	1.4	85.2	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,580	4,250	660	244
22.4	7,560	1.0	78.7	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,500	4,410	640	228
22.4	7,560	1.8	78.7	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,500	4,150	640	244
22.4	7,570	2.5	78.7	18.8		**303R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,710	8,480	1,920	260
22.7	7,450	1.0	77.5	10.1	**300L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,480	4,390	640	226
22.7	7,450	2.0	77.5	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,480	4,130	640	242
22.8	7,420	3.0	77.2	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,670	8,430	1,900	258
24.0	7,050	2.3	73.3	18.8		**303R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,570	8,300	1,870	260
24.4	6,950	2.8	72.3	10.1	**303L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,540	8,260	1,860	258
25.2	6,720	1.7	69.9	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,370	4,000	610	242
25.8	6,560	1.8	68.2	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,350	3,980	610	244
27.2	6,420	1.6	64.8	10.1	**301L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,300	3,910	600	242
27.8	6,080	1.2	63.2	10.1	**300L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,270	4,130	590	226
27.8	6,080	2.4	63.2	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,270	3,890	590	242
28	6,050	1.2	62.9	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,270	4,130	590	228
28	6,050	2.4	62.9	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,270	3,880	590	244
32	5,530	2.9	55.8	12.1	**303L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	6,050	7,650	1,710	258
34	5,150	1.1	51.9	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,090	3,900	560	226
34	4,960	1.5	51.6	10.1	**300L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,080	3,890	550	226
34	5,150	2.2	51.9	10.1	**301L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,090	3,660	560	242
34	4,960	2.9	51.6	10.1	**301L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,080	3,660	550	242
35	4,850	1.5	50.4	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,060	3,860	550	228
35	4,850	2.9	50.4	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	3,060	3,630	550	244
42	4,120	1.4	41.5	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,890	3,640	520	226
42	4,120	2.8	41.5	10.1	**301L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,890	3,430	520	242
43	3,960	1.5	41.2	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,880	3,630	510	228
43	3,960	2.9	41.2	16.1		**301R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,880	3,420	510	244
46	3,800	2.0	38.4	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,820	3,560	500	226
47	3,580	2.1	37.3	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,790	3,530	500	228
53	3,300	1.7	33.3	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,700	3,410	480	226
57	3,040	2.4	30.7	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,640	3,330	470	226
58	2,920	2.5	30.4	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,630	3,320	460	228
71	2,390	2.7	24.8	16.1		**300R3**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,470	3,120	430	228
72	2,440	2.8	24.6	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,470	3,110	430	226
88	1,990	2.8	20.1	10.1	**300L2**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,320	2,930	400	226
95	1,830	1.8	18.5	16.1		**300R2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,260	2,860	390	228
119	1,460	2.9	14.8	16.1		**300R2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	2,120	2,670	370	228
196	920	2.9	9.00	10.1	**300L1**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**	**N180TC**	1,820	2,300	310	226

P_1 = 4 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.80	281,000	1.3	2187	14.8	**313ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	38,800	48,600	18,000	400
0.83	269,400	1.2	2096	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	27,800	29,000	14,600	382
0.96	233,500	2.2	1817	14.8	**313ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	37,800	47,300	18,000	400
0.98	230,600	0.9	1794	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	21,700	28,100	14,600	364
0.99	227,000	1.6	1766	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	27,100	28,300	14,600	382
1.0	214,800	1.0	1672	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	21,500	27,800	14,400	364
1.0	215,900	1.5	1680	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	26,900	28,100	14,400	382

P_1 = 4 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.2	184,800	1.1	1438	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	21,100	27,200	13,700	364
1.2	181,900	2.0	1415	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	26,300	27,400	13,600	382
1.2	193,000	2.6	1502	14.8	**313ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	36,800	46,100	17,100	400
1.3	179,100	2.5	1394	14.8	**313ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	36,400	45,600	16,700	400
1.4	161,800	1.4	1259	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	20,700	26,700	13,100	364
1.4	158,100	2.5	1230	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	25,800	26,900	13,000	382
1.4	162,600	2.9	1266	14.8	**313ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	35,900	44,900	16,100	400
1.5	147,700	0.9	1149	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,400	23,700	7,030	348
1.5	149,600	1.7	1164	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	20,400	26,400	12,800	364
1.7	128,700	1.9	1002	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	20,000	25,800	12,100	364
1.7	136,000	2.9	1058	14.8	**311ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	25,200	26,300	12,400	382
1.8	128,400	0.9	999	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,100	23,200	8,390	330
1.8	128,400	1.3	999	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,100	23,200	6,710	348
1.8	125,200	2.2	974	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	19,900	25,700	12,000	364
1.9	116,500	1.1	906	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,800	22,900	8,120	330
1.9	116,500	1.4	906	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,800	22,900	6,500	348
1.9	115,400	1.6	898	20		**310MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	19,700	25,400	11,700	366
2.2	102,900	1.1	801	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,500	22,500	7,790	330
2.2	102,900	1.6	801	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,500	22,500	6,240	348
2.2	102,600	2.3	798	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	19,400	25,000	11,200	364
2.3	97,200	2.3	757	20		**310MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	19,200	24,800	11,100	366
2.3	95,900	2.9	746	30		**311MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	24,000	25,000	11,000	384
2.4	92,800	1.4	722	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,300	22,100	7,530	330
2.4	92,800	2.0	722	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,300	22,100	6,030	348
2.4	93,300	2.4	726	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	19,100	24,700	10,900	364
2.5	89,900	0.9	700	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	13,000	16,300	5,800	312
2.5	88,600	1.0	690	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,200	22,000	7,420	332
2.5	88,600	1.4	690	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,200	22,000	5,930	350
2.7	84,000	1.3	654	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,000	21,800	7,290	330
2.7	84,000	1.9	654	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,000	21,800	5,830	348
2.7	81,800	2.7	637	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	18,800	24,200	10,400	364
2.7	82,100	2.2	639	20		**310MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	18,800	24,200	10,400	366
2.8	81,700	1.0	636	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,800	16,100	5,610	312
3.0	75,700	1.1	589	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,600	15,900	5,470	312
3.0	75,900	1.0	590	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,600	15,900	5,480	314
3.0	74,400	1.8	579	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,800	21,400	7,000	330
3.0	74,700	1.5	581	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,800	21,500	7,010	332
3.0	74,400	2.5	579	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,800	21,400	5,600	348
3.0	74,700	1.9	581	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,800	21,500	5,600	350
3.0	75,800	2.9	590	14.8	**310ML4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	18,600	24,000	10,200	364
3.0	75,800	2.3	590	20		**310MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	18,600	24,000	10,200	366
3.4	65,400	1.3	509	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,400	15,600	5,210	312
3.4	65,400	1.9	509	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,500	21,100	6,700	330
3.4	65,400	1.9	509	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,500	21,100	5,360	348
3.6	62,700	1.2	488	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,300	15,500	5,140	314
3.6	63,000	1.3	490	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,400	20,900	6,620	332
3.6	63,000	1.9	490	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,400	20,900	5,300	350
3.8	58,400	1.0	455	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,200	15,400	5,020	314
3.8	59,700	1.8	465	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,300	20,800	6,500	330
3.8	59,700	2.6	465	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,300	20,800	5,200	348
3.8	58,700	2.0	457	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,200	20,700	5,170	350
3.9	57,100	1.5	444	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,100	15,300	4,980	312
3.9	58,200	2.0	453	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,200	20,700	6,450	332
3.9	58,400	2.9	454	20		**310MR4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,900	23,100	9,320	366
4.2	54,000	1.4	420	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,000	15,200	4,890	314
4.2	53,100	1.9	413	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,000	20,400	6,250	332
4.2	53,100	2.9	413	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,000	20,400	5,000	350
4.3	53,700	0.9	405	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,000	15,100	4,830	312
4.3	52,100	2.0	406	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,000	20,400	6,210	330
4.3	52,100	3.0	406	10.1	**309L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,000	20,400	4,970	348
4.5	50,200	1.2	391	8.0	**306L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,900	15,000	4,770	312
4.5	50,000	1.3	389	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,900	15,000	4,770	314
4.7	48,100	2.6	374	20		**309R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,800	20,200	4,840	350
4.8	46,600	2.3	363	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,800	20,100	5,990	332
5.0	44,900	2.9	349	10.1	**307L4**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,910	330



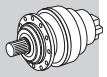
A

P_1 = 4 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
5.2	43,100	0.9	336	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	3,110	296
5.2	44,600	1.7	336	14.8	**307L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,840	330
5.2	44,600	2.6	336	14.8	**309L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	4,670	348
5.3	42,600	2.3	331	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,810	332
5.4	43,000	1.1	325	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,490	312
5.6	40,000	1.7	312	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,430	314
6.0	37,300	1.3	290	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,960	296
6.1	38,200	1.3	288	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,310	312
6.1	37,100	2.0	289	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,320	314
6.2	37,600	2.6	284	14.8	**307L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,510	330
6.2	36,600	2.7	284	20		**307R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,520	332
6.3	36,600	1.1	276	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,920	294
6.5	34,400	0.9	267	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,880	278
6.5	35,500	1.4	268	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,210	312
6.8	34,100	0.9	258	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,850	294
6.9	32,800	1.0	255	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,840	296
7.0	31,900	2.3	249	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,110	314
7.3	31,700	2.4	239	14.8	**307L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,210	330
7.4	31,500	2.3	238	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,050	312
7.6	29,700	1.1	231	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,750	296
7.6	29,600	2.3	230	16.1		**306R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,000	314
7.7	29,100	1.1	227	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,730	278
7.9	29,200	1.1	220	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,700	276
7.9	29,200	1.4	220	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,700	294
7.9	29,400	2.0	222	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,950	312
8.2	27,500	1.2	214	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,680	278
8.2	27,500	1.7	214	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,680	296
8.5	27,100	2.6	205	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,850	312
9.2	25,200	1.3	190	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,580	294
9.2	25,100	2.3	190	10.1	**306L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,750	312
9.5	23,800	1.3	185	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,550	278
9.5	23,800	1.7	185	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,550	296
9.9	23,500	1.1	178	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,520	276
9.9	23,500	1.7	178	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,520	294
10.6	21,800	1.0	165	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,390	10,600	2,450	276
10.7	21,700	1.8	164	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,370	10,600	2,450	294
11.1	20,300	1.1	158	16.1		**303R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,290	10,500	2,420	260
11.1	20,300	1.5	158	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,290	10,500	2,420	278
11.1	20,300	2.3	158	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,290	10,500	2,420	296
11.5	20,200	1.6	152	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,200	10,400	2,390	294
11.7	19,800	1.5	150	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,150	10,300	2,380	276
11.8	19,000	1.1	148	16.1		**303R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,130	10,300	2,370	260
11.8	19,000	1.6	148	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,130	10,300	2,370	278
11.8	19,000	2.1	148	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,130	10,300	2,370	296
12.1	19,100	2.5	144	18.8		**306R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,100	14,000	3,420	314
12.4	18,700	1.2	141	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,010	10,100	2,330	258
12.4	18,700	1.7	141	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,010	10,100	2,330	276
12.4	18,700	2.4	141	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,010	10,100	2,330	294
13.4	17,300	1.8	130	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,820	9,880	2,270	276
13.5	16,700	0.9	130	13.4		**301R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	4,070	4,830	760	244
13.5	16,600	1.4	129	16.1		**303R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,800	9,850	2,260	260
13.5	16,600	1.9	129	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,800	9,850	2,260	278
13.5	16,600	2.7	129	16.1		**305R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,800	9,850	2,260	296
14.1	16,500	1.0	124	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,710	9,740	2,240	258
14.1	16,500	1.9	124	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,710	9,740	2,240	294
14.4	16,100	1.3	121	18.8		**304R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,650	9,670	2,220	278
15.3	15,200	1.1	114	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,520	9,500	2,170	260
15.3	15,200	2.1	114	18.8		**305R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,520	9,500	2,170	296
15.5	14,900	1.1	113	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,490	9,460	2,160	258
15.5	14,900	2.1	113	10.1	**305L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,490	9,460	2,160	294
15.8	14,600	2.0	111	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,440	9,400	2,150	276
16.0	14,100	2.1	109	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,420	9,370	2,140	278
16.5	13,600	1.1	106	13.4		**301R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,830	4,540	710	244
16.7	13,900	1.1	105	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,820	4,530	700	242
16.7	13,800	1.6	105	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,320	9,250	2,110	258

P_1 = 4 hp

n_2	T_2	S	i	Pt			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs]			
rpm	lb·in			hp								NHC/HC NPC/PC	HZ/PZ	FZ	
16.7	13,800	2.2	105	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,320	9,250	2,110	276
18.0	12,800	1.6	97.0	18.8		**304R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,160	9,040	2,060	278
19.1	12,100	1.3	91.5	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,030	8,880	2,020	260
19.1	12,100	2.6	91.5	18.8		**305R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,030	8,880	2,020	296
19.4	11,900	1.7	90.2	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,000	8,850	2,010	258
19.4	11,900	2.4	90.2	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,000	8,850	2,010	276
19.6	11,500	2.5	89.4	16.1		**304R4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,980	8,820	2,000	278
20.4	11,300	1.3	85.6	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,590	4,260	660	242
20.6	11,300	1.0	85.2	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,590	4,260	660	244
22.2	10,400	1.3	78.7	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,500	4,160	640	244
22.2	10,400	1.8	78.7	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,720	8,490	1,920	260
22.2	10,400	2.4	78.7	18.8		**304R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,720	8,490	1,920	278
22.6	10,300	1.4	77.5	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,490	4,140	640	242
22.7	10,200	2.2	77.2	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,680	8,440	1,910	258
22.7	10,300	3.0	77.2	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,680	8,440	1,910	276
23.9	9,710	1.7	73.3	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,580	8,310	1,870	260
24.2	9,570	2.0	72.3	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,550	8,280	1,860	258
24.2	9,640	3.0	72.3	10.1	**304L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,550	8,280	1,860	276
25.0	9,260	1.2	69.9	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,380	4,010	610	242
25.6	9,040	1.3	68.2	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,360	3,980	610	244
27.0	8,850	1.2	64.8	10.1	**301L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,300	3,920	600	242
27.7	8,380	1.7	63.2	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,280	3,890	590	242
27.7	8,360	2.3	63.1	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,290	7,950	1,780	260
27.7	8,410	3.0	63.1	18.8		**304R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,290	7,950	1,780	278
27.8	8,340	1.7	62.9	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,280	3,890	590	244
27.8	8,350	2.6	63.1	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,290	7,940	1,780	258
29.6	8,080	2.6	59.1	12.1	**304L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,170	7,790	1,740	276
31	7,620	2.1	55.8	12.1	**303L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,060	7,660	1,710	258
32	7,180	2.2	54.2	18.8		**303R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,010	7,590	1,690	260
33	7,080	2.7	53.4	10.1	**303L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,980	7,560	1,690	258
34	6,840	1.1	51.6	10.1	**300L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,090	3,900	560	226
34	7,090	1.6	51.9	10.1	**301L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,090	3,670	560	242
34	6,840	2.1	51.6	10.1	**301L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,090	3,660	560	242
35	6,680	1.1	50.4	16.1		**300R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,060	3,870	550	228
35	6,680	2.1	50.4	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,060	3,640	550	244
39	6,100	2.6	44.6	12.1	**303L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,670	7,160	1,590	258
42	5,670	1.0	41.5	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,890	3,650	520	226
42	5,670	2.0	41.5	10.1	**301L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,890	3,430	520	242
43	5,450	1.1	41.2	16.1		**300R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,880	3,640	520	228
43	5,450	2.1	41.2	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,880	3,420	520	244
46	5,240	1.4	38.4	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,820	3,560	500	226
46	5,240	2.6	38.4	10.1	**301L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,820	3,350	500	242
47	4,940	1.5	37.3	16.1		**300R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,800	3,530	500	228
47	4,940	2.8	37.3	16.1		**301R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,800	3,320	500	244
53	4,550	1.3	33.3	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,710	3,420	480	226
53	4,550	2.5	33.3	10.1	**301L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,710	3,210	480	242
57	4,190	1.7	30.7	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,640	3,330	470	226
58	4,030	1.8	30.4	16.1		**300R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,630	3,320	470	228
70	3,290	2.0	24.8	16.1		**300R3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,480	3,130	440	228
71	3,360	2.0	24.6	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,470	3,120	430	226
71	3,380	2.2	24.8	24		**303R2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	4,750	6,000	1,310	260
87	2,740	2.0	20.1	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,320	2,940	410	226
95	2,520	1.3	18.5	16.1		**300R2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,270	2,860	390	228
95	2,520	2.6	18.5	16.1		**301R2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,270	2,690	390	244
96	2,480	2.6	18.2	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,260	2,850	390	226
118	2,030	3.0	14.8	10.1	**300L2**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,120	2,680	370	226
119	2,020	2.1	14.8	16.1		**300R2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,120	2,680	370	228
194	1,270	2.1	9.00	10.1	**300L1**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	1,830	2,310	310	226



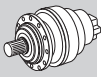
A

P_1 = 5 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
0.80	344,400	1.0	2187	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	38,800	48,600	18,000	400
0.84	330,200	1.0	2096	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	27,800	29,000	14,600	382
0.97	286,100	1.8	1817	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	37,800	47,300	18,000	400
1.0	264,600	1.2	1680	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	26,900	28,100	14,400	382
1.0	278,200	1.3	1766	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	27,100	28,300	14,600	382
1.2	226,500	0.9	1438	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	21,100	27,200	13,700	364
1.2	222,900	1.6	1415	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	26,300	27,400	13,600	382
1.2	236,500	2.1	1502	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	36,800	46,000	17,100	400
1.3	219,500	2.0	1394	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	36,400	45,500	16,600	400
1.4	198,300	1.1	1259	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	20,700	26,700	13,100	364
1.4	193,800	2.1	1230	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	25,800	26,900	13,000	382
1.4	199,300	2.4	1266	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	35,900	44,900	16,100	400
1.5	183,400	1.4	1164	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	20,400	26,400	12,700	364
1.6	175,900	2.5	1117	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	35,200	44,100	15,500	400
1.7	166,700	2.3	1058	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	25,200	26,300	12,300	382
1.7	159,700	2.9	1014	14.8	**313ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	34,800	43,500	15,000	400
1.8	157,400	1.0	999	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	17,000	23,200	6,700	348
1.8	153,400	1.8	974	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	19,900	25,700	12,000	364
1.8	157,700	1.5	1002	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	20,000	25,800	12,100	364
1.8	155,300	2.5	986	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	25,000	26,000	12,000	382
1.9	142,700	0.9	906	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,800	22,900	8,110	330
1.9	142,700	1.1	906	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,800	22,900	6,490	348
2.0	141,400	1.3	898	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	19,700	25,400	11,700	366
2.1	129,900	2.9	825	14.8	**311ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	24,300	25,400	11,300	382
2.2	126,100	0.9	801	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,500	22,400	7,780	330
2.2	126,100	1.3	801	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,500	22,400	6,220	348
2.2	125,700	1.8	798	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	19,400	25,000	11,200	364
2.3	119,200	1.8	757	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	19,200	24,800	11,000	366
2.3	122,600	2.5	778	30		**313MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	33,500	41,900	13,700	402
2.4	113,700	1.2	722	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,300	22,100	7,520	330
2.4	113,700	1.7	722	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,300	22,100	6,010	348
2.4	114,300	2.0	726	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	19,100	24,700	10,900	364
2.4	117,500	2.4	746	30		**311MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	24,000	25,000	11,000	384
2.6	108,600	1.2	690	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,200	22,000	5,920	350
2.7	102,900	1.1	654	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,000	21,800	7,270	330
2.7	102,900	1.5	654	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	16,000	21,800	5,820	348
2.8	100,300	2.2	637	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,700	24,200	10,400	364
2.8	100,600	1.8	639	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,800	24,200	10,400	366
3.0	91,100	1.4	579	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,800	21,400	6,980	330
3.0	91,500	1.2	581	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,800	21,400	6,990	332
3.0	91,100	2.1	579	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,800	21,400	5,590	348
3.0	91,500	1.5	581	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,800	21,400	5,590	350
3.0	92,900	2.4	590	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,500	23,900	10,100	364
3.0	92,900	1.8	590	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,500	23,900	10,100	366
3.4	81,400	2.6	517	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,200	23,500	9,710	366
3.5	80,200	1.0	509	8.0	**306L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	12,400	15,600	5,200	312
3.5	80,200	1.5	509	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,500	21,000	6,690	330
3.5	80,200	1.6	509	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,500	21,000	5,350	348
3.5	79,900	2.7	507	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	18,100	23,400	9,650	364
3.6	76,900	1.0	488	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	12,300	15,500	5,130	314
3.6	77,200	1.0	490	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,400	20,900	6,610	332
3.6	77,200	1.6	490	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,400	20,900	5,290	350
3.8	73,200	1.4	465	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,300	20,800	6,490	330
3.8	73,200	2.1	465	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,300	20,800	5,190	348
3.9	71,300	1.6	453	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,200	20,700	6,430	332
3.9	72,000	1.7	457	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,200	20,700	5,160	350
3.9	71,500	2.3	454	20		**310MR4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	17,900	23,100	9,300	366
4.0	70,000	1.2	444	8.0	**306L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	12,100	15,300	4,970	312
4.2	66,100	1.1	420	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	12,000	15,200	4,880	314
4.3	63,900	1.6	406	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,000	20,400	6,200	330

P_1 = 5 hp

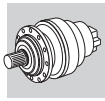
n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
4.3	65,100	1.6	413	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,000	20,400	6,240	332
4.3	63,900	2.4	406	10.1	**309L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,000	20,400	4,960	348
4.3	65,100	2.4	413	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,000	20,400	4,990	350
4.5	61,600	1.0	391	8.0	**306L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,900	15,000	4,770	312
4.5	61,300	1.1	389	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,900	15,000	4,760	314
4.5	61,700	2.6	392	14.8	**310ML4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	17,500	22,600	8,860	364
4.7	59,000	2.1	374	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,800	20,100	4,830	350
4.9	57,100	1.9	363	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,980	332
5.0	55,000	2.4	349	10.1	**307L4**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,900	330
5.2	54,600	1.4	336	14.8	**307L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,830	330
5.2	54,600	2.1	336	14.8	**309L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,660	348
5.3	52,200	1.9	331	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,800	332
5.3	52,200	2.9	331	20		**309R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,640	350
5.4	52,700	0.9	325	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,480	312
5.6	49,100	1.4	312	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,420	314
5.9	47,200	2.6	300	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,610	332
6.1	45,700	1.0	290	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,960	296
6.1	46,800	1.0	288	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,300	312
6.1	45,500	1.6	289	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,310	314
6.2	46,000	2.1	284	14.8	**307L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,500	330
6.2	44,800	2.2	284	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,510	332
6.2	46,000	3.0	284	14.8	**309L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,400	348
6.6	43,600	1.1	268	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,200	312
7.1	39,200	1.8	249	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,100	314
7.4	38,700	1.9	238	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,040	312
7.4	38,800	2.0	239	14.8	**307L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,200	330
7.4	38,800	3.0	239	14.8	**309L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,160	348
7.6	36,300	1.9	230	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,990	314
7.6	36,600	2.7	232	20		**307R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,150	332
7.9	36,000	1.6	222	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,940	312
8.0	35,800	1.2	220	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,700	294
8.2	33,700	0.9	214	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	8,540	10,800	2,670	278
8.2	33,700	1.4	214	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,670	296
8.2	33,600	2.5	214	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,900	314
8.6	33,300	2.1	205	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,840	312
8.7	32,700	2.9	202	14.8	**307L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,910	330
9.2	30,900	1.0	190	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,570	294
9.3	30,800	1.9	190	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,740	312
9.5	29,100	1.0	185	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	8,540	10,800	2,550	278
9.5	29,100	1.4	185	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,550	296
9.7	28,500	2.9	181	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,690	314
9.9	28,800	1.4	178	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,510	294
10.5	26,400	2.5	168	16.1		**306R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,600	14,600	3,590	314
10.8	26,600	1.5	164	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,360	10,600	2,440	294
11.1	24,900	0.9	158	16.1		**303R4**	**BE112M4**	**BX112M4**			**N180TC**	8,280	10,500	2,420	260
11.1	24,900	1.3	158	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	8,280	10,500	2,420	278
11.1	24,900	1.9	158	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,280	10,500	2,420	296
11.5	24,800	1.3	152	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,180	10,300	2,390	294
11.6	24,700	2.7	152	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,200	14,200	3,480	312
11.8	24,300	1.2	150	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,140	10,300	2,370	276
11.9	23,300	1.3	148	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	8,110	10,200	2,360	278
11.9	23,300	1.7	148	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,110	10,200	2,360	296
12.2	23,400	2.1	144	18.8		**306R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,100	13,900	3,420	314
12.4	23,000	1.0	141	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,000	10,100	2,330	258
12.4	23,000	1.4	141	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,000	10,100	2,330	276
12.4	23,000	1.9	141	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,000	10,100	2,330	294
12.5	23,200	3.0	141	10.1	**306L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,000	13,800	3,390	312
13.5	21,200	1.5	130	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,810	9,860	2,270	276
13.6	20,400	1.1	129	16.1		**303R4**	**BE112M4**	**BX112M4**			**N180TC**	7,790	9,840	2,260	260
13.6	20,400	1.5	129	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	7,790	9,840	2,260	278



A

P_1 = 5 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
13.6	20,400	2.2	129	16.1		**305R4**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,790	9,840	2,260	296
14.1	20,200	1.6	124	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,700	9,730	2,230	294
14.5	19,700	1.1	121	18.8		**304R3**	**BE112M4**	**BX112M4**			**N180TC**	7,640	9,650	2,210	278
14.8	19,300	3.0	119	18.8		**306R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	10,400	13,200	3,210	314
15.4	18,600	1.7	114	18.8		**305R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,510	9,480	2,170	296
15.6	18,300	1.7	113	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,470	9,440	2,160	294
15.9	17,900	1.6	111	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,430	9,380	2,140	276
16.1	17,200	1.7	109	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	7,410	9,360	2,140	278
16.8	17,000	1.3	105	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,310	9,230	2,110	258
16.8	17,000	1.8	105	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,310	9,230	2,110	276
16.8	17,000	2.6	105	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,310	9,230	2,110	294
18.1	15,700	1.3	97.0	18.8		**304R3**	**BE112M4**	**BX112M4**			**N180TC**	7,140	9,020	2,050	278
19.2	14,900	1.1	91.5	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	7,020	8,870	2,010	260
19.2	14,900	2.1	91.5	18.8		**305R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,020	8,870	2,010	296
19.5	14,600	1.3	90.2	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,990	8,830	2,000	258
19.5	14,600	2.0	90.2	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,990	8,830	2,000	276
19.5	14,600	2.5	90.2	10.1	**305L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,990	8,830	2,000	294
19.7	14,100	2.1	89.4	16.1		**304R4**	**BE112M4**	**BX112M4**			**N180TC**	6,970	8,810	2,000	278
20.6	13,900	1.1	85.6	10.1	**301L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,590	4,260	660	242
22.4	12,800	1.1	78.7	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	3,500	4,150	640	244
22.4	12,800	1.5	78.7	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	6,710	8,480	1,920	260
22.4	12,800	2.0	78.7	18.8		**304R3**	**BE112M4**	**BX112M4**			**N180TC**	6,710	8,480	1,920	278
22.4	13,000	3.0	78.7	18.8		**305R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,710	8,480	1,920	296
22.7	12,600	1.2	77.5	10.1	**301L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,480	4,130	640	242
22.8	12,500	1.8	77.2	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,670	8,430	1,900	258
22.8	12,500	2.5	77.2	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,670	8,430	1,900	276
24.0	11,900	1.4	73.3	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	6,570	8,300	1,870	260
24.0	11,900	2.7	73.3	18.8		**305R3**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,570	8,300	1,870	296
24.4	11,700	1.7	72.3	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,540	8,260	1,860	258
24.4	11,700	2.5	72.3	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,540	8,260	1,860	276
25.2	11,300	1.0	69.9	10.1	**301L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,370	4,000	610	242
25.8	11,100	1.0	68.2	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	3,350	3,980	610	244
27.2	10,800	0.9	64.8	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,300	3,910	600	242
27.8	10,300	1.4	63.2	10.1	**301L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,270	3,890	590	242
27.9	10,200	2.1	63.1	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,280	7,930	1,780	258
27.9	10,200	1.9	63.1	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	6,280	7,930	1,780	260
27.9	10,200	3.0	63.1	10.1	**304L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,280	7,930	1,780	276
27.9	10,200	2.5	63.1	18.8		**304R3**	**BE112M4**	**BX112M4**			**N180TC**	6,280	7,930	1,780	278
28.0	10,200	1.4	62.9	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	3,270	3,880	590	244
29.8	9,900	2.1	59.1	12.1	**304L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,160	7,780	1,740	276
32	9,340	1.7	55.8	12.1	**303L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,050	7,650	1,710	258
32	8,800	1.8	54.2	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	6,000	7,580	1,690	260
33	8,670	2.2	53.4	10.1	**303L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,970	7,550	1,680	258
34	8,690	1.3	51.9	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,090	3,660	560	242
34	8,380	1.7	51.6	10.1	**301L3**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	3,080	3,660	550	242
35	8,190	0.9	50.4	16.1		**300R3**	**BE112M4**	**BX112M4**			**N180TC**	3,060	3,860	550	228
35	8,190	1.7	50.4	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	3,060	3,630	550	244
35	8,160	2.5	50.3	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	5,870	7,410	1,650	260
37	7,920	2.7	47.3	12.1	**304L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,760	7,280	1,620	276
38	7,570	2.5	46.6	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	5,730	7,240	1,610	260
39	7,470	2.2	44.6	12.1	**303L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,660	7,150	1,590	258
41	6,910	2.6	42.6	18.8		**303R3**	**BE112M4**	**BX112M4**			**N180TC**	5,580	7,050	1,560	260
42	6,950	1.7	41.5	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,890	3,430	520	242
43	6,680	1.7	41.2	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	2,880	3,420	510	244
46	6,420	1.2	38.4	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,820	3,560	500	226
46	6,420	2.1	38.4	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,820	3,350	500	242
46	6,430	3.0	38.4	12.1	**303L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,410	6,830	1,510	258
47	6,050	1.2	37.3	16.1		**300R3**	**BE112M4**	**BX112M4**			**N180TC**	2,790	3,530	500	228
47	6,050	2.3	37.3	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	2,790	3,320	500	244
49	5,990	2.7	35.8	12.1	**303L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,300	6,690	1,470	258

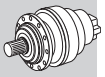


P_1 = 5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
53	5,570	1.0	33.3	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,700	3,410	480	226
53	5,570	2.1	33.3	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,700	3,210	480	242
57	5,140	1.4	30.7	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,640	3,330	470	226
57	5,140	2.6	30.7	10.1	**301L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,640	3,130	470	242
58	4,940	1.5	30.4	16.1		**300R3**	**BE112M4**	**BX112M4**			**N180TC**	2,630	3,320	460	228
58	4,940	2.7	30.4	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	2,630	3,120	460	244
71	4,030	1.6	24.8	16.1		**300R3**	**BE112M4**	**BX112M4**			**N180TC**	2,470	3,120	430	228
71	4,030	3.0	24.8	16.1		**301R3**	**BE112M4**	**BX112M4**			**N180TC**	2,470	2,940	430	244
71	4,150	1.8	24.8	24		**303R2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	4,740	5,990	1,300	260
72	4,120	1.7	24.6	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,470	3,110	430	226
88	3,360	1.7	20.1	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,320	2,930	400	226
95	3,090	1.1	18.5	16.1		**300R2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,260	2,860	390	228
95	3,090	2.1	18.5	16.1		**301R2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,260	2,690	390	244
97	3,040	2.1	18.2	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,250	2,840	390	226
119	2,480	2.4	14.8	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,120	2,680	370	226
119	2,470	1.7	14.8	16.1		**300R2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	2,120	2,670	370	228
145	2,030	2.8	12.1	10.1	**300L2**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	1,990	2,520	340	226
149	1,980	2.5	11.8	16.1		**300R2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	1,980	2,500	340	228
196	1,550	1.7	9.00	10.1	**300L1**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	1,820	2,300	310	226
244	1,240	2.8	7.20	10.1	**300L1**		**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	1,710	2,150	290	226

P_1 = 7.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.97	422,800	1.2	1817	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	37,700	47,300	18,000	400
0.98	420,100	1.7	1805	24	**315ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		36,800	44,900	20,200	434
0.99	418,000	1.3	1796	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		36,800	44,900	20,200	418
1.1	361,400	3.0	1553	24	**316ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		56,100	62,900	32,300	450
1.2	349,500	1.4	1502	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	36,700	46,000	17,000	400
1.2	345,600	1.6	1485	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		35,800	43,700	19,100	418
1.2	347,300	2.0	1492	24	**315ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		35,800	43,700	19,100	434
1.3	329,400	1.1	1415	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	26,300	27,400	13,600	382
1.3	324,400	1.4	1394	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	36,300	45,500	16,600	400
1.4	286,300	1.4	1230	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	25,700	26,900	12,900	382
1.4	294,500	1.6	1266	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	35,800	44,900	16,100	400
1.4	297,300	2.1	1277	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		35,000	42,700	18,100	418
1.4	298,700	2.6	1284	24	**315ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		35,000	42,800	18,200	434
1.5	270,900	0.9	1164	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	20,400	26,400	12,700	364
1.6	259,900	1.7	1117	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	35,200	44,100	15,400	400
1.6	255,700	2.4	1099	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		34,300	41,800	17,300	418
1.7	246,300	1.6	1058	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	25,200	26,300	12,300	382
1.7	236,000	1.9	1014	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	34,700	43,500	14,900	400
1.7	241,400	2.7	1038	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		34,000	41,500	16,900	418
1.8	226,700	1.2	974	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	19,900	25,700	12,000	364
1.8	233,100	1.0	1002	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	20,000	25,800	12,100	364
1.8	229,400	1.7	986	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	24,900	26,000	12,000	382
1.9	215,500	2.8	926	20	**314ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		33,500	40,800	16,300	418
1.9	211,600	2.9	909	54		**315MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	33,400	40,700	16,200	436
2.0	207,000	2.2	889	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	34,100	42,700	14,300	400
2.1	191,900	2.0	825	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	24,300	25,400	11,300	382
2.2	185,700	1.2	798	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	19,300	25,000	11,200	364
2.2	183,800	2.4	790	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	33,500	42,000	13,700	400
2.3	176,100	1.2	757	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	19,200	24,800	11,000	366
2.3	181,100	1.7	778	30		**313MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	33,400	41,900	13,700	402
2.4	168,900	1.3	726	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	19,100	24,600	10,900	364



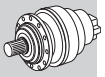
A

P_1 = 7.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.4	173,600	1.6	746	30		**311MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	24,000	25,000	11,000	384
2.5	168,100	1.1	722	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	16,300	22,100	6,000	348
2.5	161,800	2.7	695	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	32,900	41,200	13,200	400
2.7	152,100	1.0	654	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	16,000	21,800	5,810	348
2.7	150,500	2.8	647	30		**313MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	32,600	40,800	12,900	402
2.8	148,200	1.5	637	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,700	24,200	10,400	364
2.8	148,600	1.2	639	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,700	24,200	10,400	366
2.8	145,800	2.5	627	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	23,400	24,400	10,300	382
2.8	146,300	2.4	629	30		**311MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	23,400	24,400	10,300	384
2.8	147,300	2.9	633	14.8	**313ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	32,500	40,600	12,800	400
3.0	135,200	1.0	581	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,800	21,400	5,580	350
3.0	137,200	1.6	590	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,500	23,900	10,100	364
3.0	137,200	1.2	590	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,500	23,900	10,100	366
3.1	134,700	1.0	579	10.1	**307L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,700	21,400	6,970	330
3.1	134,700	1.4	579	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,700	21,400	5,580	348
3.1	132,100	2.7	568	14.8	**311ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	23,000	24,000	10,000	382
3.4	120,300	1.8	517	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,200	23,500	9,700	366
3.4	120,900	2.9	520	30		**311MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	22,800	23,700	9,710	384
3.5	118,500	1.0	509	10.1	**307L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,500	21,000	6,680	330
3.5	118,500	1.1	509	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,500	21,000	5,340	348
3.5	118,100	1.8	507	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	18,100	23,400	9,630	364
3.6	114,100	1.1	490	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,400	20,900	5,280	350
3.6	114,000	2.5	490	30		**311MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	22,600	23,500	9,520	384
3.8	108,200	1.0	465	10.1	**307L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,300	20,800	6,480	330
3.8	108,200	1.5	465	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,300	20,800	5,180	348
3.9	105,400	1.1	453	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,200	20,700	6,420	332
3.9	106,300	1.1	457	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,200	20,700	5,150	350
3.9	105,500	2.4	453	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	17,800	23,000	9,280	364
3.9	105,700	1.6	454	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	17,800	23,000	9,290	366
4.3	96,200	1.1	413	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,000	20,400	6,230	332
4.3	96,200	1.6	413	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,000	20,400	4,980	350
4.4	94,400	1.1	406	10.1	**307L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,000	20,400	6,190	330
4.4	94,400	1.6	406	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	15,000	20,400	4,950	348
4.5	91,100	1.8	392	14.8	**310ML4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	17,500	22,600	8,840	364
4.6	89,100	2.3	383	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	17,400	22,500	8,770	366
4.7	87,100	1.5	374	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,800	20,100	4,820	350
4.9	84,400	1.3	363	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,970	332
5.1	81,200	1.6	349	10.1	**307L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,890	330
5.1	81,200	2.3	349	10.1	**309L4**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,710	348
5.1	84,100	1.9	350	24	**310ML3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		17,200	22,200	8,520	364
5.3	80,700	1.0	336	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,820	330
5.3	77,100	1.3	331	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,790	332
5.3	80,700	1.4	336	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,650	348
5.3	77,100	1.9	331	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,630	350
5.7	72,500	0.9	312	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	4,410	314
5.8	71,000	2.8	305	20		**310MR4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	17,200	22,200	8,130	366
5.9	69,800	1.8	300	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,600	332
6.0	70,800	2.8	295	24	**310ML3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		17,200	22,200	8,040	364
6.1	67,300	1.1	289	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	4,300	314
6.2	68,000	1.4	284	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,490	330
6.2	66,200	1.5	284	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,500	332
6.2	68,000	2.0	284	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,400	348
6.2	66,200	2.2	284	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,400	350
6.9	60,100	2.1	258	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,320	332
6.9	60,100	2.6	258	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,260	350
7.1	57,900	1.2	249	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	4,090	314
7.1	59,800	2.7	249	24	**310ML3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		17,200	22,200	7,600	364
7.4	57,100	1.3	238	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	4,030	312
7.4	57,400	1.3	239	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,190	330
7.4	57,400	2.0	239	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,150	348

P_1 = 7.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
7.6	54,000	1.8	232	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,140	332
7.6	54,000	2.7	232	20		**309R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,110	350
7.7	53,600	1.3	230	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,990	314
7.9	53,500	2.2	223	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,060	348
8.0	53,200	1.1	222	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,940	312
8.0	53,000	2.1	221	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,060	330
8.3	49,900	0.9	214	16.1		**305R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,540	10,800	2,670	296
8.3	49,700	1.7	214	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,890	314
8.6	49,100	1.4	205	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,830	312
8.6	47,900	2.6	206	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,940	332
8.8	48,400	2.0	202	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,900	330
8.8	48,400	3.0	202	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	3,920	348
9.3	45,500	1.3	190	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,740	312
9.3	44,400	2.7	191	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,810	332
9.6	43,000	0.9	185	16.1		**305R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,540	10,800	2,540	296
9.7	43,800	2.9	183	14.8	**309L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	3,800	348
9.8	42,100	2.0	181	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,680	314
10.0	42,600	0.9	178	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,540	10,800	2,510	294
10.0	42,500	2.6	177	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,700	330
10.5	39,000	1.7	168	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,500	14,600	3,590	314
10.7	38,400	2.5	165	20		**307R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,400	19,600	4,590	332
10.8	39,300	1.0	164	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,340	10,500	2,440	294
11.0	38,800	2.4	162	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,300	19,400	4,550	330
11.2	36,800	1.3	158	16.1		**305R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,260	10,400	2,410	296
11.2	36,700	2.3	158	16.1		**306R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,300	14,300	3,520	314
11.6	36,500	1.8	152	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,200	14,100	3,470	312
11.9	34,500	1.1	148	16.1		**305R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,100	10,200	2,360	296
12.3	34,600	1.4	144	18.8		**306R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,000	13,900	3,410	314
12.5	33,900	0.9	141	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,990	10,100	2,320	276
12.5	33,900	1.3	141	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,990	10,100	2,320	294
12.6	33,800	2.0	141	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,000	13,800	3,390	312
12.8	33,300	2.8	139	14.8	**307L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	13,600	18,600	4,330	330
13.6	31,300	1.0	130	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,800	9,850	2,260	276
13.7	30,100	1.0	129	16.1		**304R4**	**BE132S4**	**BX132SB4**			**N210TC**	7,770	9,820	2,260	278
13.7	30,100	1.5	129	16.1		**305R4**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,770	9,820	2,260	296
14.2	29,900	1.1	124	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,690	9,710	2,230	294
14.6	29,100	2.3	121	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,500	13,200	3,220	312
14.8	28,700	2.6	120	30		**307R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	13,100	17,800	4,120	332
14.9	28,600	2.0	119	18.8		**306R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,400	13,100	3,200	314
15.5	27,400	1.2	114	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,490	9,470	2,170	296
15.7	27,000	1.2	113	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,460	9,420	2,150	294
15.8	27,000	2.4	112	10.1	**306L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,200	12,900	3,140	312
16.0	26,500	1.1	111	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,420	9,370	2,140	276
16.2	25,500	1.2	109	16.1		**304R4**	**BE132S4**	**BX132SB4**			**N210TC**	7,400	9,340	2,130	278
16.9	25,100	1.2	105	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,290	9,210	2,100	276
16.9	25,100	1.7	105	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,290	9,210	2,100	294
18.0	23,600	2.4	98.5	18.8		**306R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	9,840	12,400	3,000	314
18.2	23,300	0.9	97.0	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	7,130	9,010	2,050	278
19.3	22,000	1.4	91.5	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,010	8,850	2,010	296
19.6	21,600	0.9	90.2	10.1	**303L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,980	8,820	2,000	258
19.6	21,600	1.3	90.2	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,980	8,820	2,000	276
19.6	21,600	1.7	90.2	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,980	8,820	2,000	294
19.8	20,800	1.4	89.4	16.1		**304R4**	**BE132S4**	**BX132SB4**			**N210TC**	6,960	8,790	1,990	278
22.5	18,900	1.0	78.7	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	6,700	8,460	1,910	260
22.5	18,900	1.3	78.7	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	6,700	8,460	1,910	278
22.5	18,900	2.0	78.7	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,700	8,460	1,910	296
22.9	18,500	1.2	77.2	10.1	**303L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,660	8,410	1,900	258
22.9	18,500	1.7	77.2	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,660	8,410	1,900	276
22.9	18,500	2.2	77.2	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,660	8,410	1,900	294
24.1	17,600	0.9	73.3	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	6,560	8,280	1,870	260



A

P_1 = 7.5 hp

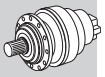
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
24.1	17,600	1.8	73.3	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,560	8,280	1,870	296
24.4	17,900	2.6	72.5	17.4	**306L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		8,980	11,300	2,710	312
24.5	17,300	1.1	72.3	10.1	**303L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,530	8,250	1,860	258
24.5	17,300	1.7	72.3	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,530	8,250	1,860	276
24.5	17,300	2.1	72.3	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,530	8,250	1,860	294
28.0	15,200	1.0	63.2	10.1	**301L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	3,270	3,880	590	242
28.1	15,100	1.0	62.9	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	3,260	3,870	590	244
28.1	15,100	1.5	63.1	10.1	**303L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,270	7,920	1,780	258
28.1	15,100	1.3	63.1	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	6,270	7,920	1,780	260
28.1	15,100	2.0	63.1	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,270	7,920	1,780	276
28.1	15,100	1.7	63.1	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	6,270	7,920	1,780	278
28.1	15,100	2.7	63.1	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,270	7,920	1,780	294
28.1	15,100	2.5	63.1	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,270	7,920	1,780	296
29.9	14,600	1.4	59.1	12.1	**304L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,150	7,770	1,740	276
32	13,800	1.2	55.8	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,040	7,630	1,700	258
32	13,800	2.3	55.8	12.1	**305L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,040	7,630	1,700	294
33	12,800	1.5	53.4	10.1	**303L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,960	7,530	1,680	258
33	13,000	1.2	54.2	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,990	7,570	1,690	260
33	12,800	2.2	53.4	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,960	7,530	1,680	276
33	12,800	2.7	53.4	10.1	**305L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,960	7,530	1,680	294
33	13,000	2.4	54.2	18.8		**305R3**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,990	7,570	1,690	296
34	12,400	1.2	51.6	10.1	**301L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	3,080	3,650	550	242
35	12,100	1.2	50.4	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	3,050	3,620	550	244
35	12,100	1.7	50.3	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,860	7,400	1,650	260
35	12,100	2.5	50.3	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,860	7,400	1,650	278
37	11,700	1.8	47.3	12.1	**304L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,750	7,260	1,610	276
38	11,200	1.7	46.6	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,720	7,230	1,610	260
38	11,200	2.3	46.6	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,720	7,230	1,610	278
40	11,000	1.5	44.6	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,650	7,140	1,580	258
40	11,000	2.9	44.6	12.1	**305L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,650	7,140	1,580	294
41	10,500	2.7	43.6	10.1	**304L3**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,610	7,090	1,570	276
42	10,200	1.8	42.6	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,570	7,040	1,560	260
42	10,200	2.7	42.6	18.8		**304R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,570	7,040	1,560	278
43	10,300	1.1	41.5	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,880	3,420	510	242
43	9,870	1.2	41.2	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,870	3,410	510	244
46	9,490	1.4	38.4	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,810	3,340	500	242
46	9,500	2.0	38.4	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,400	6,820	1,500	258
46	9,500	2.7	38.4	12.1	**304L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,400	6,820	1,500	276
48	8,940	1.6	37.3	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,790	3,310	500	244
48	8,910	2.3	37.1	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,350	6,750	1,490	260
49	8,850	1.8	35.8	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,290	6,680	1,470	258
53	8,230	1.4	33.3	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,700	3,200	480	242
56	7,550	2.4	31.5	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	5,090	6,430	1,410	260
58	7,590	0.9	30.7	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,630	3,320	470	226
58	7,300	1.0	30.4	16.1		**300R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,620	3,310	460	228
58	7,590	1.8	30.7	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,630	3,120	470	242
58	7,300	1.8	30.4	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,620	3,110	460	244
58	7,610	2.5	30.8	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,050	6,380	1,400	258
67	6,540	2.5	26.4	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,830	6,100	1,330	258
69	6,160	2.8	25.7	18.8		**303R3**	**BE132S4**	**BX132SB4**			**N210TC**	4,790	6,050	1,320	260
71	5,960	1.1	24.8	16.1		**300R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,470	3,120	430	228
71	5,960	2.0	24.8	16.1		**301R3**	**BE132S4**	**BX132SB4**			**N210TC**	2,470	2,930	430	244
71	6,130	1.2	24.8	24		**303R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,740	5,980	1,300	260
72	6,080	1.1	24.6	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,460	3,110	430	226
72	6,080	2.1	24.6	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,460	2,920	430	242
72	6,060	3.0	24.5	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,720	5,960	1,300	258
85	5,140	3.0	20.8	12.1	**303L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,490	5,670	1,230	258
88	4,970	1.1	20.1	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,320	2,930	400	226
88	4,970	2.2	20.1	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,320	2,750	400	242
92	4,750	2.8	19.2	24		**303R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,390	5,540	1,190	260

P_1 = 7.5 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
96	4,560	1.4	18.5	16.1		**301R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,260	2,680	390	244
97	4,500	1.4	18.2	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,250	2,840	390	226
97	4,500	2.5	18.2	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,250	2,670	390	242
119	3,670	1.6	14.8	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,120	2,670	370	226
119	3,670	2.9	14.8	10.1	**301L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,120	2,510	370	242
120	3,650	1.2	14.8	16.1		**300R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,110	2,670	360	228
120	3,650	2.2	14.8	16.1		**301R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	2,110	2,510	360	244
146	3,000	1.9	12.1	10.1	**300L2**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,990	2,510	340	226
150	2,930	1.7	11.8	16.1		**300R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,980	2,500	340	228
183	2,460	2.6	9.67	14.8	**303L1**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**		3,570	4,510	950	258
197	2,290	1.2	9.00	10.1	**300L1**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,820	2,300	310	226
197	2,290	2.3	9.00	10.1	**301L1**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,820	2,160	310	242
203	2,160	2.4	8.74	16.1		**300R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,810	2,280	310	228
246	1,840	1.9	7.20	10.1	**300L1**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,700	2,150	290	226
248	1,760	2.8	7.13	16.1		**300R2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,700	2,140	290	228
307	1,470	2.7	5.77	10.1	**300L1**		**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	1,590	2,010	270	226

P_1 = 10 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.94	600,600	2.2	1893	24	**317ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		89,800	95,400	33,700	462
0.98	572,900	1.2	1805	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		36,800	44,900	20,200	434
0.99	570,000	1.0	1796	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		36,800	44,900	20,200	418
1.1	492,800	2.2	1553	24	**316ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		56,100	62,900	32,300	450
1.1	506,100	2.7	1595	24	**317ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		87,600	93,100	32,600	462
1.2	476,600	1.0	1502	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	36,700	46,000	17,000	400
1.2	471,200	1.2	1485	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		35,800	43,700	19,100	418
1.2	473,600	1.4	1492	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		35,800	43,700	19,100	434
1.3	442,300	1.0	1394	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	36,300	45,500	16,600	400
1.4	390,400	1.0	1230	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	25,700	26,900	12,900	382
1.4	401,600	1.2	1266	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	35,800	44,900	16,100	400
1.4	405,400	1.6	1277	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		35,000	42,700	18,100	418
1.4	407,400	1.9	1284	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		35,000	42,800	18,200	434
1.4	392,700	2.6	1237	24	**316ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		54,300	60,900	29,900	450
1.4	415,200	2.5	1308	24	**316ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		54,700	61,400	30,500	450
1.6	354,400	1.2	1117	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	35,200	44,100	15,400	400
1.6	348,700	1.8	1099	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		34,300	41,800	17,300	418
1.6	350,400	2.2	1104	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		34,300	41,900	17,300	434
1.6	350,400	2.9	1104	24	**316ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		53,400	59,900	28,800	450
1.7	335,900	1.2	1058	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	25,200	26,300	12,300	382
1.7	321,800	1.4	1014	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	34,700	43,500	14,900	400
1.7	329,200	2.0	1038	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		34,000	41,500	16,900	418
1.7	330,900	2.6	1043	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		34,000	41,500	17,000	434
1.8	309,100	0.9	974	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	19,900	25,700	12,000	364
1.8	312,900	1.2	986	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	24,900	26,000	12,000	382
1.9	293,800	2.1	926	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		33,500	40,800	16,300	418
1.9	295,300	2.6	930	24	**315ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		33,500	40,900	16,300	434
1.9	288,600	2.2	909	54		**315MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	33,400	40,700	16,200	436
2.0	282,200	1.6	889	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	34,100	42,700	14,300	400
2.1	261,700	1.4	825	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	24,300	25,400	11,300	382
2.1	272,200	2.4	858	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		33,100	40,400	15,900	418
2.2	253,300	0.9	798	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	19,300	25,000	11,200	364
2.2	250,700	1.7	790	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	33,500	42,000	13,700	400
2.3	240,100	0.9	757	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	19,200	24,800	11,000	366



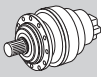
A

P_1 = 10 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.3	247,000	1.2	778	30		**313MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	33,400	41,900	13,700	402
2.4	230,300	1.0	726	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	19,100	24,600	10,900	364
2.4	236,800	1.2	746	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	24,000	25,000	11,000	384
2.4	234,100	2.7	738	20	**314ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		32,400	39,500	15,100	418
2.5	220,600	1.9	695	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	32,900	41,200	13,200	400
2.7	205,200	2.1	647	30		**313MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	32,600	40,800	12,900	402
2.8	202,000	1.1	637	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	18,700	24,200	10,400	364
2.8	198,900	1.8	627	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	23,400	24,400	10,300	382
2.8	199,500	1.8	629	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	23,400	24,400	10,300	384
2.8	200,800	2.1	633	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	32,500	40,600	12,800	400
2.9	194,800	2.4	614	30		**314MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	31,500	38,500	14,200	420
3.0	187,200	1.2	590	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	18,500	23,900	10,100	364
3.0	187,100	0.9	590	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	18,500	23,900	10,100	366
3.1	183,600	1.0	579	10.1	**309L4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	15,700	21,400	5,580	348
3.1	180,100	2.0	568	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	23,000	24,000	10,000	382
3.1	178,900	2.7	564	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	31,900	40,000	12,300	400
3.3	169,600	2.4	535	30		**313MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	31,700	39,700	12,100	402
3.4	164,100	1.3	517	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	18,200	23,500	9,700	366
3.4	164,900	2.1	520	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	22,800	23,700	9,710	384
3.4	163,000	2.5	514	14.8	**313ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	31,500	39,500	11,900	400
3.5	161,000	1.3	507	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	18,100	23,400	9,630	364
3.5	162,500	2.5	512	14.8	**311ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	22,700	23,700	9,660	382
3.6	155,500	1.8	490	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	22,600	23,500	9,520	384
3.6	157,400	2.7	496	30		**313MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	31,400	39,300	11,800	402
3.8	147,500	1.1	465	10.1	**309L4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	15,300	20,800	5,180	348
3.9	143,800	1.8	453	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,800	23,000	9,280	364
3.9	144,100	1.2	454	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,800	23,000	9,290	366
3.9	142,900	2.8	450	30		**313MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	30,900	38,700	11,400	402
4.0	139,000	2.4	438	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	22,200	23,200	9,170	384
4.3	131,100	1.2	413	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	15,000	20,400	4,980	350
4.3	131,000	2.5	413	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	22,000	23,000	8,990	384
4.4	128,700	1.2	406	10.1	**309L4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	15,000	20,400	4,950	348
4.5	124,300	1.3	392	14.8	**310ML4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,500	22,600	8,840	364
4.6	121,400	1.7	383	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,400	22,500	8,770	366
4.7	118,800	1.1	374	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,800	20,100	4,820	350
4.9	115,200	0.9	363	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,970	332
5.1	110,800	1.2	349	10.1	**307L4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,890	330
5.1	110,800	1.7	349	10.1	**309L4**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,710	348
5.1	114,700	1.4	350	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	8,520	364
5.1	110,000	2.4	347	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,200	22,200	8,490	366
5.2	108,300	3.0	341	30		**311MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	21,500	22,500	8,440	384
5.3	105,100	0.9	331	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,790	332
5.3	110,100	1.0	336	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,650	348
5.3	105,100	1.4	331	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,630	350
5.8	96,800	2.1	305	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,200	22,200	8,130	366
5.8	99,400	2.7	304	24	**313ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		29,900	37,400	9,990	400
5.9	95,200	1.3	300	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,600	332
6.0	96,600	2.1	295	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	8,040	364
6.1	95,300	2.5	291	24	**311ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		21,500	22,500	8,010	382
6.2	92,700	1.1	284	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,490	330
6.2	90,300	1.1	284	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,500	332
6.2	92,700	1.5	284	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,400	348
6.2	90,300	1.6	284	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,400	350
6.4	87,700	2.8	276	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,200	22,200	7,870	366
6.9	81,900	1.5	258	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,320	332
6.9	81,900	1.9	258	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,260	350
6.9	82,000	2.4	258	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,200	22,200	7,690	366
7.1	78,900	0.9	249	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	4,090	314
7.1	81,500	1.9	249	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	7,600	364
7.4	77,900	0.9	238	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	4,030	312

P_1 = 10 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
7.4	78,300	1.0	239	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,190	330
7.4	78,300	1.5	239	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,150	348
7.6	73,700	1.3	232	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,140	332
7.6	73,700	2.0	232	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,110	350
7.7	73,100	0.9	230	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,990	314
7.7	75,300	2.3	230	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	7,400	364
7.9	72,900	1.6	223	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,060	348
8.0	72,300	1.5	221	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,060	330
8.3	67,800	1.3	214	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,890	314
8.6	67,000	1.1	205	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,830	312
8.6	65,300	1.9	206	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,940	332
8.6	65,300	2.6	206	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	3,950	350
8.6	65,300	3.0	206	20		**310MR4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	17,200	22,200	7,130	366
8.8	66,000	1.5	202	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,900	330
8.8	66,000	2.2	202	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	3,920	348
8.8	66,000	2.9	202	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	7,090	364
9.3	62,100	0.9	190	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,740	312
9.3	60,500	2.0	191	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,810	332
9.3	60,500	2.5	191	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	3,850	350
9.7	59,700	2.1	183	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	3,800	348
9.8	57,400	1.5	181	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,680	314
10.0	57,900	1.9	177	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,700	330
10.0	58,000	2.7	177	24	**310ML3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		17,200	22,200	6,790	364
10.5	53,200	1.2	168	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,500	14,600	3,590	314
10.7	52,400	1.8	165	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,400	19,600	4,590	332
10.7	52,400	2.7	165	20		**309R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,400	19,600	3,670	350
11.0	52,800	1.8	162	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,300	19,400	4,550	330
11.0	52,800	2.7	162	14.8	**309L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,300	19,400	3,640	348
11.2	50,200	0.9	158	16.1		**305R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,260	10,400	2,410	296
11.2	50,100	1.7	158	16.1		**306R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,300	14,300	3,520	314
11.6	49,700	1.3	152	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,200	14,100	3,470	312
11.6	48,200	2.4	152	20		**307R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,000	19,100	4,460	332
12.1	47,900	2.4	146	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,900	18,900	4,410	330
12.3	47,200	1.0	144	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,000	13,900	3,410	314
12.5	46,300	1.0	141	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,990	10,100	2,320	294
12.6	46,100	1.5	141	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,000	13,800	3,390	312
12.8	45,400	2.1	139	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,600	18,600	4,330	330
13.7	41,000	1.1	129	16.1		**305R4**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,770	9,820	2,260	296
14.1	41,200	2.7	126	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,300	18,000	4,190	330
14.6	39,700	1.7	121	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,500	13,200	3,220	312
14.8	39,200	1.9	120	30		**307R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,100	17,800	4,120	332
14.8	39,200	2.9	120	30		**309R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,100	17,800	3,300	350
14.9	39,000	1.5	119	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,400	13,100	3,200	314
15.6	37,100	2.5	113	14.8	**307L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	12,800	17,500	4,050	330
15.8	36,800	1.8	112	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,200	12,900	3,140	312
16.9	34,200	0.9	105	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,290	9,210	2,100	276
16.9	34,200	1.3	105	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,290	9,210	2,100	294
17.0	34,100	2.2	104	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,000	12,600	3,060	312
17.9	32,400	2.3	99.0	30		**307R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	12,300	16,800	3,870	332
18.0	32,200	1.8	98.5	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,840	12,400	3,000	314
19.3	29,900	1.1	91.5	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,010	8,850	2,010	296
19.6	29,500	1.0	90.2	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,980	8,820	2,000	276
19.6	29,500	1.3	90.2	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,980	8,820	2,000	294
19.8	28,400	1.0	89.4	16.1		**304R4**	**BE132MA4**	**BX132MA4**			**N210TC**	6,960	8,790	1,990	278
20.1	28,900	2.5	88.3	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,520	12,000	2,900	312
20.9	27,700	2.4	84.7	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,410	11,900	2,860	314
21.6	26,800	2.2	81.9	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,310	11,700	2,820	312
22.5	25,800	1.0	78.7	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	6,700	8,460	1,910	278
22.5	25,800	1.5	78.7	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,700	8,460	1,910	296
22.9	25,300	1.2	77.2	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,660	8,410	1,900	276



A

P_1 = 10 hp

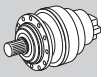
n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
22.9	25,300	1.6	77.2	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,660	8,410	1,900	294
23.0	25,200	2.8	77.0	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,140	11,500	2,770	312
24.1	24,000	1.3	73.3	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,560	8,280	1,870	296
24.3	23,800	2.7	72.9	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,990	11,300	2,720	314
24.4	24,500	1.9	72.5	17.4	**306L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		8,980	11,300	2,710	312
24.5	23,600	1.2	72.3	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,530	8,250	1,860	276
24.5	23,600	1.5	72.3	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,530	8,250	1,860	294
26.2	22,100	2.8	67.5	18.8		**306R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,790	11,100	2,650	314
27.1	21,300	3.0	65.2	10.1	**306L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,700	11,000	2,620	312
28.1	20,600	1.1	63.1	10.1	**303L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,270	7,920	1,780	258
28.1	20,600	0.9	63.1	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	6,270	7,920	1,780	260
28.1	20,600	1.5	63.1	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,270	7,920	1,780	276
28.1	20,600	1.2	63.1	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	6,270	7,920	1,780	278
28.1	20,600	2.0	63.1	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,270	7,920	1,780	294
28.1	20,600	1.9	63.1	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,270	7,920	1,780	296
29.9	19,900	1.1	59.1	12.1	**304L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,150	7,770	1,740	276
31	19,000	2.4	56.3	17.4	**306L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		8,320	10,500	2,490	312
32	18,800	1.7	55.8	12.1	**305L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,040	7,630	1,700	294
33	17,500	1.1	53.4	10.1	**303L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,960	7,530	1,680	258
33	17,700	0.9	54.2	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,990	7,570	1,690	260
33	17,500	1.6	53.4	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,960	7,530	1,680	276
33	17,500	2.0	53.4	10.1	**305L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,960	7,530	1,680	294
33	17,700	1.8	54.2	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,990	7,570	1,690	296
35	16,400	1.3	50.3	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,860	7,400	1,650	260
35	16,400	1.9	50.3	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,860	7,400	1,650	278
35	16,400	2.3	50.3	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,860	7,400	1,650	296
37	16,000	1.3	47.3	12.1	**304L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,750	7,260	1,610	276
38	15,200	1.2	46.6	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,720	7,230	1,610	260
38	15,200	1.7	46.6	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,720	7,230	1,610	278
38	15,200	2.5	46.6	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,720	7,230	1,610	296
40	15,100	1.1	44.6	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,650	7,140	1,580	258
40	15,100	2.1	44.6	12.1	**305L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,650	7,140	1,580	294
41	14,300	2.0	43.6	10.1	**304L3**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,610	7,090	1,570	276
42	13,900	1.3	42.6	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,570	7,040	1,560	260
42	13,900	2.0	42.6	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,570	7,040	1,560	278
42	13,900	2.4	42.6	18.8		**305R3**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,570	7,040	1,560	296
46	12,900	1.0	38.4	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,810	3,340	500	242
46	13,000	1.5	38.4	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,400	6,820	1,500	258
46	13,000	1.9	38.4	12.1	**304L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,400	6,820	1,500	276
46	13,000	2.9	38.4	12.1	**305L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,400	6,820	1,500	294
48	12,200	1.2	37.3	16.1		**301R3**	**BE132MA4**	**BX132MA4**			**N210TC**	2,790	3,310	500	244
48	12,200	1.7	37.1	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,350	6,750	1,490	260
48	12,200	2.5	37.1	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,350	6,750	1,490	278
49	12,100	1.3	35.8	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,290	6,680	1,470	258
49	12,100	2.6	35.8	12.1	**305L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,290	6,680	1,470	294
53	11,200	1.0	33.3	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,700	3,200	480	242
56	10,300	1.7	31.5	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,090	6,430	1,410	260
56	10,300	2.6	31.5	18.8		**304R3**	**BE132MA4**	**BX132MA4**			**N210TC**	5,090	6,430	1,410	278
58	10,400	1.3	30.7	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,630	3,120	470	242
58	9,950	1.3	30.4	16.1		**301R3**	**BE132MA4**	**BX132MA4**			**N210TC**	2,620	3,110	460	244
58	10,400	1.8	30.8	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,050	6,380	1,400	258
58	10,400	2.4	30.8	12.1	**304L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,050	6,380	1,400	276
67	8,910	1.8	26.4	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,830	6,100	1,330	258
69	8,400	2.0	25.7	18.8		**303R3**	**BE132MA4**	**BX132MA4**			**N210TC**	4,790	6,050	1,320	260
71	8,120	1.5	24.8	16.1		**301R3**	**BE132MA4**	**BX132MA4**			**N210TC**	2,470	2,930	430	244
71	8,350	0.9	24.8	24		**303R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,740	5,980	1,300	260
72	8,300	1.5	24.6	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,460	2,920	430	242
72	8,270	2.2	24.5	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,720	5,960	1,300	258
78	7,670	2.4	22.7	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,620	5,830	1,260	258
85	7,000	2.2	20.8	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,490	5,670	1,230	258

P_1 = 10 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
88	6,770	1.6	20.1	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,320	2,750	400	242
92	6,480	2.1	19.2	24		**303R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,390	5,540	1,190	260
96	6,220	1.1	18.5	16.1		**301R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,260	2,680	390	244
97	6,130	1.0	18.2	10.1	**300L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,250	2,840	390	226
97	6,130	1.9	18.2	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,250	2,670	390	242
98	6,110	2.8	18.1	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,310	5,450	1,170	258
111	5,360	2.9	15.9	24		**303R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,140	5,240	1,120	260
115	5,180	2.8	15.3	12.1	**303L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,100	5,180	1,110	258
119	5,000	1.2	14.8	10.1	**300L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,120	2,670	370	226
119	5,000	2.1	14.8	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,120	2,510	370	242
120	4,980	1.6	14.8	16.1		**301R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	2,110	2,510	360	244
146	4,080	1.4	12.1	10.1	**300L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,990	2,510	340	226
146	4,080	2.5	12.1	10.1	**301L2**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,990	2,360	340	242
150	3,990	1.2	11.8	16.1		**300R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,980	2,500	340	228
150	3,990	2.4	11.8	16.1		**301R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,980	2,350	340	244
183	3,360	1.9	9.67	14.8	**303L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**		3,570	4,510	950	258
197	3,130	1.7	9.00	10.1	**301L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,820	2,160	310	242
203	2,950	1.7	8.74	16.1		**300R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,810	2,280	310	228
246	2,500	1.4	7.20	10.1	**300L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,700	2,150	290	226
246	2,500	2.5	7.20	10.1	**301L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,700	2,020	290	242
248	2,410	2.0	7.13	16.1		**300R2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,700	2,140	290	228
307	2,010	2.0	5.77	10.1	**300L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,590	2,010	270	226
415	1,480	2.8	4.26	10.1	**300L1**		**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	1,460	1,840	240	226

P_1 = 15 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.94	879,400	1.5	1893	24	**317ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	89,800	95,400	33,700	462
1.1	721,500	1.5	1553	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	56,100	62,900	32,300	450
1.1	741,000	1.9	1595	24	**317ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	87,600	93,100	32,600	462
1.2	693,400	1.0	1492	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	35,800	43,700	19,100	434
1.3	612,500	2.3	1318	24	**317ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	85,300	90,600	30,600	462
1.4	593,500	1.1	1277	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	35,000	42,700	18,100	418
1.4	596,500	1.3	1284	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	35,000	42,800	18,200	434
1.4	575,000	1.8	1237	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	54,300	60,900	29,900	450
1.4	608,000	1.7	1308	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	54,700	61,400	30,500	450
1.6	510,600	1.2	1099	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	34,300	41,800	17,300	418
1.6	513,100	1.5	1104	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	34,300	41,900	17,300	434
1.6	513,100	2.0	1104	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	53,400	59,900	28,800	450
1.6	526,900	2.6	1134	24	**317ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	83,400	88,600	29,100	462
1.7	471,200	1.0	1014	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	34,700	43,500	14,900	400
1.7	482,100	1.4	1038	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	34,000	41,500	16,900	418
1.7	484,500	1.8	1043	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	34,000	41,500	17,000	434
1.7	473,700	2.2	1020	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	52,800	59,300	28,100	450
1.9	430,200	1.4	926	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	33,500	40,800	16,300	418
1.9	432,300	1.8	930	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	33,500	40,900	16,300	434
1.9	422,500	1.5	909	54		**315MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	33,400	40,700	16,200	436
1.9	443,000	2.7	953	67		**317MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	81,400	86,500	27,400	464
2.0	413,200	1.1	889	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	34,100	42,700	14,300	400
2.0	408,900	2.5	880	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	51,700	58,000	26,700	450
2.1	383,200	1.0	825	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	24,300	25,400	11,300	382
2.1	398,500	1.6	858	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	33,100	40,400	15,900	418
2.1	400,500	2.1	862	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	33,100	40,400	15,900	434
2.2	367,000	1.2	790	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	33,500	42,000	13,700	400



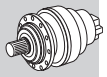
A

P_1 = 15 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.3	363,400	2.1	782	54		**315MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	32,700	39,900	15,400	436
2.3	364,300	2.7	784	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	50,900	57,100	25,700	450
2.3	363,400	2.7	782	60		**316MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	50,900	57,100	25,700	452
2.4	342,800	1.9	738	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	32,400	39,500	15,100	418
2.4	344,500	2.4	741	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	32,400	39,600	15,100	434
2.5	323,000	1.3	695	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	32,900	41,200	13,200	400
2.5	329,400	3.0	706	24	**316ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	50,100	56,200	24,800	450
2.6	310,500	2.2	668	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	31,900	39,000	14,600	418
2.6	312,100	2.7	672	24	**315ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	32,000	39,000	14,600	434
2.7	300,500	1.4	647	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	32,600	40,800	12,900	402
2.7	306,200	2.4	659	54		**315MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	31,900	38,900	14,600	436
2.8	291,200	1.2	627	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	23,400	24,400	10,300	382
2.8	292,100	1.2	629	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	23,400	24,400	10,300	384
2.8	294,100	1.5	633	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	32,500	40,600	12,800	400
2.8	289,600	2.9	623	54		**315MR4**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	31,600	38,600	14,300	436
2.9	285,200	1.6	614	30		**314MR4**	**BE160M4**	**BX160MB4**			**N250TC**	31,500	38,500	14,200	420
3.0	273,200	2.3	588	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	31,300	38,300	14,000	418
3.1	263,800	1.3	568	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	23,000	24,000	10,000	382
3.1	261,900	1.8	564	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	31,900	40,000	12,300	400
3.1	267,100	2.2	575	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	31,200	38,100	13,900	418
3.3	248,400	1.7	535	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	31,700	39,700	12,100	402
3.4	241,500	1.4	520	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	22,800	23,700	9,710	384
3.4	238,700	1.7	514	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	31,500	39,500	11,900	400
3.4	245,300	2.3	528	30		**314MR4**	**BE160M4**	**BX160MB4**			**N250TC**	30,900	37,700	13,500	420
3.5	235,700	0.9	507	14.8	**310ML4**		**BE160M4**	**BX160MB4**			**N250TC**	18,100	23,400	9,630	364
3.5	237,900	1.7	512	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	22,700	23,700	9,660	382
3.6	227,600	1.2	490	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	22,600	23,500	9,520	384
3.6	230,500	1.9	496	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	31,400	39,300	11,800	402
3.6	229,800	2.9	495	20	**314ML4**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	30,600	37,300	13,200	418
3.9	210,600	1.2	453	14.8	**310ML4**		**BE160M4**	**BX160MB4**			**N250TC**	17,800	23,000	9,280	364
3.9	209,900	2.4	452	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	30,900	38,700	11,400	400
3.9	209,300	1.9	450	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	30,900	38,700	11,400	402
4.0	203,500	1.7	438	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	22,200	23,200	9,170	384
4.0	206,700	2.4	445	30		**314MR4**	**BE160M4**	**BX160MB4**			**N250TC**	30,100	36,800	12,800	420
4.2	195,500	3.0	421	30		**314MR4**	**BE160M4**	**BX160MB4**			**N250TC**	29,900	36,500	12,500	420
4.3	190,700	2.1	410	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	22,000	23,000	8,980	382
4.3	191,800	1.7	413	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	22,000	23,000	8,990	384
4.5	183,100	2.7	394	14.8	**313ML4**		**BE160M4**	**BX160MB4**			**N250TC**	30,300	38,000	10,900	400
4.6	177,800	1.1	383	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,400	22,500	8,770	366
4.6	180,000	2.2	387	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	30,300	37,900	10,800	402
5.1	162,200	1.2	349	10.1	**309L4**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,710	348
5.1	167,900	0.9	350	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	8,520	364
5.1	161,100	1.6	347	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	8,490	366
5.1	161,500	2.5	348	14.8	**311ML4**		**BE160M4**	**BX160MB4**			**N250TC**	21,500	22,500	8,490	382
5.2	158,500	2.0	341	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	21,500	22,500	8,440	384
5.3	153,900	1.0	331	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,630	350
5.7	143,500	2.6	309	30		**313MR4**	**BE160M4**	**BX160MB4**			**N250TC**	29,900	37,400	10,000	402
5.8	141,700	1.4	305	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	8,130	366
5.8	145,500	1.8	304	24	**313ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	29,900	37,400	9,990	400
6.0	141,500	1.4	295	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	8,040	364
6.0	136,400	2.4	294	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	21,500	22,500	8,030	384
6.1	139,500	1.7	291	24	**311ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	21,500	22,500	8,010	382
6.2	135,800	1.0	284	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,400	348
6.2	132,200	1.1	284	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,400	350
6.4	128,300	1.9	276	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	7,870	366
6.7	124,000	3.0	266	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	21,500	22,500	7,770	384
6.9	119,900	1.1	258	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	5,320	332
6.9	119,900	1.3	258	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,260	350
6.9	120,000	1.6	258	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	7,690	366
7.1	119,400	1.3	249	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	7,600	364

P_1 = 15 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
7.2	117,500	2.7	245	24.1	**311ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	21,500	22,500	7,560	382
7.4	114,600	1.0	239	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,150	348
7.4	110,400	2.2	238	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	7,480	366
7.6	107,900	0.9	232	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	5,140	332
7.6	107,900	1.4	232	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,110	350
7.7	110,200	1.6	230	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	7,400	364
7.9	106,800	1.1	223	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,060	348
8.0	105,800	1.1	221	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	5,060	330
8.6	95,500	1.3	206	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,940	332
8.6	95,500	1.8	206	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	3,950	350
8.6	95,600	2.0	206	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	7,130	366
8.8	96,600	1.0	202	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,900	330
8.8	96,600	1.5	202	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	3,920	348
8.8	96,700	2.0	202	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	7,090	364
8.9	92,400	3.0	198	30		**311MR4**	**BE160M4**	**BX160MB4**			**N250TC**	21,500	22,500	7,040	384
9.3	88,600	1.4	191	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,810	332
9.3	88,600	1.7	191	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	3,850	350
9.3	88,000	2.7	189	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	17,200	22,200	6,940	366
9.7	87,500	1.4	183	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	3,800	348
9.8	84,100	1.0	181	16.1		**306R4**	**BE160M4**	**BX160MB4**			**N250TC**	11,700	14,800	3,680	314
10.0	84,800	1.3	177	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,700	20,000	4,700	330
10.0	84,900	1.9	177	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	17,200	22,200	6,790	364
10.7	76,700	1.2	165	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,400	19,600	4,590	332
10.7	76,700	1.8	165	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,400	19,600	3,670	350
10.8	78,400	2.9	164	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	16,800	21,700	6,610	364
11.0	77,400	1.2	162	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,300	19,400	4,550	330
11.0	77,400	1.8	162	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	14,300	19,400	3,640	348
11.0	74,500	3.0	160	20		**310MR4**	**BE160M4**	**BX160MB4**			**N250TC**	16,700	21,600	6,560	366
11.2	73,300	1.1	158	16.1		**306R4**	**BE160M4**	**BX160MB4**			**N250TC**	11,300	14,300	3,520	314
11.6	72,800	0.9	152	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	11,200	14,100	3,470	312
11.6	70,600	1.6	152	20		**307R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,000	19,100	4,460	332
11.6	70,600	2.2	152	20		**309R4**	**BE160M4**	**BX160MB4**			**N250TC**	14,000	19,100	3,570	350
11.9	71,500	2.7	149	24	**310ML3**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	16,400	21,100	6,410	364
12.1	70,100	1.6	146	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	13,900	18,900	4,410	330
12.6	67,500	1.0	141	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	11,000	13,800	3,390	312
12.8	66,500	1.4	139	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	13,600	18,600	4,330	330
12.8	66,500	2.1	139	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	13,600	18,600	3,460	348
14.1	60,300	1.8	126	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	13,300	18,000	4,190	330
14.1	60,300	2.3	126	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	13,300	18,000	3,350	348
14.6	58,100	1.2	121	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	10,500	13,200	3,220	312
14.8	57,400	1.3	120	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	13,100	17,800	4,120	332
14.8	57,400	2.0	120	30		**309R3**	**BE160M4**	**BX160MB4**			**N250TC**	13,100	17,800	3,300	350
14.8	57,400	2.6	120	30		**310MR3**	**BE160M4**	**BX160MB4**			**N250TC**	15,300	19,800	5,950	366
14.9	57,100	1.0	119	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	10,400	13,100	3,200	314
15.6	54,300	1.7	113	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,800	17,500	4,050	330
15.6	54,300	2.5	113	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,800	17,500	3,240	348
15.8	53,800	1.2	112	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	10,200	12,900	3,140	312
17.0	49,900	1.5	104	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	10,000	12,600	3,060	312
17.6	48,000	2.2	100	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,400	16,800	3,890	330
17.6	48,000	2.9	100	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,400	16,800	3,110	348
17.9	47,400	1.6	99.0	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	12,300	16,800	3,870	332
17.9	47,400	2.4	99.0	30		**309R3**	**BE160M4**	**BX160MB4**			**N250TC**	12,300	16,800	3,090	350
17.9	47,400	2.9	99.0	30		**310MR3**	**BE160M4**	**BX160MB4**			**N250TC**	14,500	18,700	5,590	366
18.0	47,200	1.2	98.5	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	9,840	12,400	3,000	314
19.0	44,600	2.3	93.0	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,100	16,500	3,790	330
19.0	44,600	2.9	93.0	14.8	**309L3**		**BE160M4**	**BX160MB4**			**N250TC**	12,100	16,500	3,030	348
20.1	42,300	1.7	88.3	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	9,520	12,000	2,900	312
20.9	40,600	1.6	84.7	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	9,410	11,900	2,860	314
21.2	40,000	2.2	83.4	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	11,700	15,900	3,650	332
21.2	40,000	3.0	83.4	30		**309R3**	**BE160M4**	**BX160MB4**			**N250TC**	11,700	15,900	2,920	350



A

P_1 = 15 hp

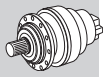
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
21.6	39,200	1.5	81.9	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	9,310	11,700	2,820	312
22.0	38,600	2.3	80.6	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	11,600	15,800	3,610	330
22.5	37,800	1.0	78.7	18.8		**305R3**					**N250TC**	6,700	8,460	1,910	296
22.5	37,700	2.5	78.6	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	11,500	15,600	3,580	332
22.9	37,000	1.1	77.2	10.1	**305L3**		**BE160M4**	**BX160MB4**			**N250TC**	6,660	8,410	1,900	294
23.0	36,900	1.9	77.0	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	9,140	11,500	2,770	312
23.9	35,500	2.8	74.1	14.8	**307L3**		**BE160M4**	**BX160MB4**			**N250TC**	11,300	15,400	3,510	330
24.3	34,900	1.9	72.9	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	8,990	11,300	2,720	314
24.4	35,800	1.3	72.5	17.4	**306L2**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	8,980	11,300	2,710	312
24.5	34,600	1.0	72.3	10.1	**305L3**		**BE160M4**	**BX160MB4**			**N250TC**	6,530	8,250	1,860	294
24.7	34,400	2.6	71.8	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	11,200	15,200	3,480	332
26.2	32,300	1.9	67.5	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	8,790	11,100	2,650	314
27.1	31,200	2.0	65.2	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	8,700	11,000	2,620	312
27.2	31,200	3.0	65.0	30		**307R3**	**BE160M4**	**BX160MB4**			**N250TC**	10,900	14,800	3,360	332
28.1	30,200	1.0	63.1	10.1	**304L3**		**BE160M4**	**BX160MB4**			**N250TC**	6,270	7,920	1,780	276
28.1	30,200	1.4	63.1	10.1	**305L3**		**BE160M4**	**BX160MB4**			**N250TC**	6,270	7,920	1,780	294
28.1	30,300	1.3	63.1	18.8		**305R3**					**N250TC**	6,270	7,920	1,780	296
30	27,800	2.3	58.1	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	8,400	10,600	2,520	314
31	27,800	1.6	56.3	17.4	**306L2**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	8,320	10,500	2,490	312
32	27,600	1.1	55.8	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	6,040	7,630	1,700	294
33	25,600	1.1	53.4	10.1	**304L3**		**BE160M4**	**BX160MB4**			**N250TC**	5,960	7,530	1,680	276
33	25,600	1.4	53.4	10.1	**305L3**		**BE160M4**	**BX160MB4**			**N250TC**	5,960	7,530	1,680	294
33	26,000	1.2	54.2	18.8		**305R3**					**N250TC**	5,990	7,570	1,690	296
33	25,500	2.4	53.2	10.1	**306L3**		**BE160M4**	**BX160MB4**			**N250TC**	8,180	10,300	2,450	312
35	24,200	1.3	50.3	18.8		**304R3**					**N250TC**	5,860	7,400	1,650	278
35	24,200	1.6	50.3	18.8		**305R3**					**N250TC**	5,860	7,400	1,650	296
37	23,400	0.9	47.3	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,750	7,260	1,610	276
38	22,400	1.1	46.6	18.8		**304R3**					**N250TC**	5,720	7,230	1,610	278
38	22,400	1.7	46.6	18.8		**305R3**					**N250TC**	5,720	7,230	1,610	296
38	23,000	2.5	46.5	17.4	**306L2**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	7,860	9,910	2,340	312
38	22,200	2.9	46.3	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	7,850	9,890	2,340	314
40	22,000	1.4	44.6	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,650	7,140	1,580	294
41	20,900	1.3	43.6	10.1	**304L3**		**BE160M4**	**BX160MB4**			**N250TC**	5,610	7,090	1,570	276
42	20,500	1.4	42.6	18.8		**304R3**					**N250TC**	5,570	7,040	1,560	278
42	20,500	1.6	42.6	18.8		**305R3**					**N250TC**	5,570	7,040	1,560	296
45	18,800	3.0	39.2	18.8		**306R3**	**BE160M4**	**BX160MB4**			**N250TC**	7,470	9,410	2,210	314
46	19,000	1.0	38.4	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,400	6,820	1,500	258
46	19,000	1.3	38.4	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,400	6,820	1,500	276
46	19,000	2.0	38.4	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,400	6,820	1,500	294
48	17,900	1.2	37.1	18.8		**303R3**					**N250TC**	5,350	6,750	1,490	260
48	17,900	1.7	37.1	18.8		**304R3**					**N250TC**	5,350	6,750	1,490	278
48	17,900	2.1	37.1	18.8		**305R3**					**N250TC**	5,350	6,750	1,490	296
49	17,700	0.9	35.8	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,290	6,680	1,470	258
49	17,700	1.8	35.8	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,290	6,680	1,470	294
56	15,100	1.2	31.5	18.8		**303R3**					**N250TC**	5,090	6,430	1,410	260
56	15,100	1.8	31.5	18.8		**304R3**					**N250TC**	5,090	6,430	1,410	278
56	15,100	2.1	31.5	18.8		**305R3**					**N250TC**	5,090	6,430	1,410	296
58	14,600	0.9	30.4	16.1		**301R3**					**N250TC**	2,620	3,110	460	244
58	15,200	1.2	30.8	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,050	6,380	1,400	258
58	15,200	1.6	30.8	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,050	6,380	1,400	276
58	15,200	2.4	30.8	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	5,050	6,380	1,400	294
67	13,100	1.2	26.4	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,830	6,100	1,330	258
67	13,100	2.4	26.4	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,830	6,100	1,330	294
69	12,300	1.4	25.7	18.8		**303R3**					**N250TC**	4,790	6,050	1,320	260
69	12,300	2.1	25.7	18.8		**304R3**					**N250TC**	4,790	6,050	1,320	278
69	12,300	2.5	25.7	18.8		**305R3**					**N250TC**	4,790	6,050	1,320	296
71	11,900	1.0	24.8	16.1		**301R3**					**N250TC**	2,470	2,930	430	244
72	12,200	1.0	24.6	10.1	**301L2**						**N250TC**	2,460	2,920	430	242
72	12,100	1.5	24.5	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,720	5,960	1,300	258
72	12,100	2.2	24.5	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,720	5,960	1,300	276

P_1 = 15 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
72	12,100	2.7	24.5	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,720	5,960	1,300	294
78	11,200	1.6	22.7	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,620	5,830	1,260	258
78	11,200	2.2	22.7	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,620	5,830	1,260	276
78	11,200	3.0	22.7	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,620	5,830	1,260	294
85	10,300	1.5	20.8	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,490	5,670	1,230	258
85	10,300	2.5	20.8	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,490	5,670	1,230	276
85	10,300	2.7	20.8	12.1	**305L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,490	5,670	1,230	294
88	9,950	1.1	20.1	10.1	**301L2**						**N250TC**	2,320	2,750	400	242
92	9,520	1.4	19.2	24		**303R2**					**N250TC**	4,390	5,540	1,190	260
92	9,520	2.6	19.2	24		**305R2**					**N250TC**	4,390	5,540	1,190	296
97	9,010	1.3	18.2	10.1	**301L2**						**N250TC**	2,250	2,670	390	242
98	8,950	1.9	18.1	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,310	5,450	1,170	258
98	8,950	2.8	18.1	12.1	**304L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,310	5,450	1,170	276
105	8,350	2.5	16.8	24		**304R2**					**N250TC**	4,220	5,330	1,140	278
111	7,870	2.0	15.9	24		**303R2**					**N250TC**	4,140	5,240	1,120	260
115	7,580	1.9	15.3	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	4,100	5,180	1,110	258
119	7,350	1.5	14.8	10.1	**301L2**						**N250TC**	2,120	2,510	370	242
120	7,310	1.1	14.8	16.1		**301R2**					**N250TC**	2,110	2,510	360	244
130	6,770	2.5	13.7	24		**303R2**					**N250TC**	3,960	5,000	1,070	260
141	6,190	2.2	12.5	12.1	**303L2**		**BE160M4**	**BX160MB4**			**N250TC**	3,860	4,880	1,040	258
146	6,000	1.0	12.1	10.1	**300L2**						**N250TC**	1,990	2,510	340	226
146	6,000	1.7	12.1	10.1	**301L2**						**N250TC**	1,990	2,360	340	242
150	5,860	1.7	11.8	16.1		**301R2**					**N250TC**	1,980	2,350	340	244
163	5,400	3.0	10.9	24		**303R2**					**N250TC**	3,700	4,670	990	260
183	4,920	1.3	9.67	14.8	**303L1**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	3,570	4,510	950	258
197	4,600	1.1	9.00	10.1	**301L1**						**N250TC**	1,820	2,160	310	242
203	4,330	1.2	8.74	16.1		**300R2**					**N250TC**	1,810	2,280	310	228
203	4,330	2.1	8.74	16.1		**301R2**					**N250TC**	1,810	2,140	310	244
236	3,820	2.7	7.50	14.8	**303L1**		**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**	**N250TC**	3,310	4,180	870	258
246	3,680	0.9	7.20	10.1	**300L1**						**N250TC**	1,700	2,150	290	226
246	3,680	1.7	7.20	10.1	**301L1**						**N250TC**	1,700	2,020	290	242
248	3,540	1.4	7.13	16.1		**300R2**					**N250TC**	1,700	2,140	290	228
248	3,540	2.5	7.13	16.1		**301R2**					**N250TC**	1,700	2,020	290	244
307	2,950	1.4	5.77	10.1	**300L1**						**N250TC**	1,590	2,010	270	226
307	2,950	2.7	5.77	10.1	**301L1**						**N250TC**	1,590	1,890	270	242
415	2,180	1.9	4.26	10.1	**300L1**						**N250TC**	1,460	1,840	240	226
509	1,780	2.2	3.48	10.1	**300L1**						**N250TC**	1,370	1,730	230	226

P_1 = 20 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.94	1,199,700	1.1	1893	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	89,800	95,400	33,700	462
1.1	984,400	1.1	1553	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	56,100	62,900	32,300	450
1.1	1,010,900	1.4	1595	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	87,600	93,100	32,600	462
1.3	835,600	1.7	1318	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	85,300	90,600	30,600	462
1.4	813,700	1.0	1284	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	35,000	42,800	18,200	434
1.4	784,400	1.3	1237	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	54,300	60,900	29,900	450
1.4	829,400	1.3	1308	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	54,700	61,400	30,500	450
1.6	700,000	1.1	1104	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	34,300	41,900	17,300	434
1.6	700,000	1.5	1104	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	53,400	59,900	28,800	450
1.6	718,800	1.9	1134	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	83,400	88,600	29,100	462
1.7	657,700	1.0	1038	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	34,000	41,500	16,900	418
1.7	660,900	1.3	1043	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	34,000	41,500	17,000	434
1.7	646,300	1.6	1020	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	52,800	59,300	28,100	450
1.7	654,400	2.3	1032	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	82,300	87,500	28,200	462
1.9	586,900	1.0	926	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	33,500	40,800	16,300	418



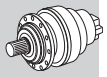
A

P_1 = 20 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.9	589,800	1.3	930	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	33,500	40,900	16,300	434
1.9	576,400	1.1	909	54		**315MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	33,400	40,700	16,200	436
1.9	604,300	2.0	953	67		**317MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	81,400	86,500	27,400	464
2.0	557,800	1.8	880	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	51,700	58,000	26,700	450
2.0	572,800	2.4	904	24	**317ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	80,800	85,800	27,000	462
2.1	543,700	1.2	858	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	33,100	40,400	15,900	418
2.1	546,400	1.6	862	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	33,100	40,400	15,900	434
2.2	509,200	2.7	803	67		**317MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	79,400	84,400	25,900	464
2.3	495,800	1.5	782	54		**315MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	32,700	39,900	15,400	436
2.3	497,000	2.0	784	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	50,900	57,100	25,700	450
2.3	495,800	2.0	782	60		**316MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	50,900	57,100	25,700	452
2.4	467,700	1.4	738	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	32,400	39,500	15,100	418
2.4	470,000	1.8	741	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	32,400	39,600	15,100	434
2.5	440,600	1.0	695	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	32,900	41,200	13,200	400
2.5	447,800	2.2	706	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	50,100	56,200	24,800	450
2.6	423,700	1.6	668	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,900	39,000	14,600	418
2.6	425,800	2.0	672	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	32,000	39,000	14,600	434
2.7	409,900	1.0	647	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	32,600	40,800	12,900	402
2.7	417,800	1.8	659	54		**315MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,900	38,900	14,600	436
2.7	417,800	2.3	659	60		**316MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	49,600	55,700	24,300	452
2.8	397,300	0.9	627	14.8	**311ML4**		**BE160L4**	**BX160L4**			**N250TC**	23,400	24,400	10,300	382
2.8	401,200	1.1	633	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	32,500	40,600	12,800	400
2.8	395,100	2.1	623	54		**315MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,600	38,600	14,300	436
2.8	398,100	2.4	628	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	49,300	55,300	23,900	450
2.8	395,100	2.5	623	60		**316MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	49,200	55,200	23,800	452
2.8	396,800	2.7	626	67		**317MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	76,700	81,400	23,800	464
2.9	389,000	1.2	614	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	31,500	38,500	14,200	420
3.0	372,700	1.7	588	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,300	38,300	14,000	418
3.0	374,500	2.2	591	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,400	38,300	14,000	434
3.1	359,800	1.0	568	14.8	**311ML4**		**BE160L4**	**BX160L4**			**N250TC**	23,000	24,000	10,000	382
3.1	357,400	1.3	564	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	31,900	40,000	12,300	400
3.1	364,400	1.6	575	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	31,200	38,100	13,900	418
3.1	356,800	2.8	563	24	**316ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	48,500	54,400	23,000	450
3.3	338,800	1.2	535	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	31,700	39,700	12,100	402
3.3	338,100	2.5	533	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,900	37,700	13,600	434
3.4	329,400	1.1	520	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	22,800	23,700	9,710	384
3.4	325,600	1.3	514	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	31,500	39,500	11,900	400
3.4	334,700	1.7	528	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	30,900	37,700	13,500	420
3.4	332,900	2.5	525	54		**315MR4**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,800	37,700	13,500	436
3.5	324,600	1.3	512	14.8	**311ML4**		**BE160L4**	**BX160L4**			**N250TC**	22,700	23,700	9,660	382
3.6	310,500	0.9	490	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	22,600	23,500	9,520	384
3.6	314,500	1.4	496	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	31,400	39,300	11,800	402
3.6	313,500	2.1	495	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,600	37,300	13,200	418
3.6	308,600	2.7	487	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,500	37,200	13,200	434
3.9	286,300	1.7	452	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	30,900	38,700	11,400	400
3.9	285,500	1.4	450	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	30,900	38,700	11,400	402
3.9	290,400	2.3	458	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,300	36,900	12,900	418
4.0	277,600	1.2	438	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	22,200	23,200	9,170	384
4.0	282,000	1.8	445	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	30,100	36,800	12,800	420
4.0	279,500	3.0	441	24	**315ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	30,100	36,700	12,700	434
4.2	266,700	2.2	421	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	36,500	12,500	420
4.3	260,100	1.6	410	14.8	**311ML4**		**BE160L4**	**BX160L4**			**N250TC**	22,000	23,000	8,980	382
4.3	261,600	1.3	413	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	22,000	23,000	8,990	384
4.5	249,800	2.0	394	14.8	**313ML4**		**BE160L4**	**BX160L4**			**N250TC**	30,300	38,000	10,900	400
4.5	249,800	2.6	394	20	**314ML4**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	29,600	36,100	12,300	418
4.6	245,600	1.6	387	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	30,300	37,900	10,800	402
5.0	224,700	2.2	354	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,200	35,600	11,800	420

P_1 = 20 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
5.1	219,700	1.2	347	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	8,490	366
5.1	220,300	1.8	348	14.8	**311ML4**		**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	8,490	382
5.1	219,000	2.2	346	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	10,400	402
5.2	216,300	1.5	341	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	8,440	384
5.7	195,700	1.9	309	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	10,000	402
5.8	193,300	1.0	305	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	8,130	366
5.8	198,500	1.3	304	24	**313ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	29,900	37,400	9,990	400
6.0	193,000	1.0	295	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	17,200	22,200	8,040	364
6.0	186,100	1.7	294	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	8,030	384
6.1	190,300	1.3	291	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	21,500	22,500	8,010	382
6.3	178,200	2.2	281	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	9,740	402
6.4	175,100	1.4	276	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	7,870	366
6.4	175,100	2.2	276	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,200	35,600	10,900	420
6.7	168,500	2.2	266	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	7,770	384
6.9	163,600	0.9	258	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	4,260	350
6.9	163,700	1.2	258	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	7,690	366
7.0	164,900	2.3	252	24	**313ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	29,900	37,400	9,400	400
7.1	162,900	1.0	249	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	17,200	22,200	7,600	364
7.2	160,300	2.0	245	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	21,500	22,500	7,560	382
7.4	150,600	1.6	238	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	7,480	366
7.4	156,500	2.7	240	34	**314ML3**		**BE160L4**	**BX160L4**				29,200	35,600	10,400	418
7.4	150,600	2.2	238	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,200	35,600	10,400	420
7.5	150,200	2.2	237	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	9,200	402
7.6	147,200	1.0	232	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	4,110	350
7.7	150,400	1.1	230	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	17,200	22,200	7,400	364
7.7	145,000	2.2	229	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	7,390	384
8.5	136,300	2.7	209	24	**313ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	29,900	37,400	8,820	400
8.6	130,300	0.9	206	20		**307R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	4,940	332
8.6	130,300	1.3	206	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	3,950	350
8.6	130,500	1.5	206	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	7,130	366
8.7	132,500	2.4	203	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	21,500	22,500	7,100	382
8.8	131,700	1.1	202	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	3,920	348
8.8	131,900	1.5	202	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	17,200	22,200	7,090	364
8.8	127,200	2.2	201	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	8,700	402
8.9	125,600	2.2	198	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	7,040	384
9.3	120,900	1.0	191	20		**307R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	4,810	332
9.3	120,900	1.3	191	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	3,850	350
9.3	120,000	2.0	189	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	17,200	22,200	6,940	366
9.3	124,900	2.3	191	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	21,500	22,500	6,960	382
9.3	120,000	2.2	189	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,200	35,600	9,600	420
9.6	117,000	2.2	185	30		**313MR4**	**BE160L4**	**BX160L4**			**N250TC**	29,900	37,400	8,470	402
9.7	119,300	1.1	183	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	3,800	348
9.7	115,500	2.2	182	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	21,500	22,500	6,850	384
9.7	118,900	2.2	182	24	**313ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	29,900	37,400	8,430	400
10.0	115,700	0.9	177	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	14,700	20,000	4,700	330
10.0	115,800	1.4	177	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	17,200	22,200	6,790	364
10.4	111,700	2.8	171	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	21,300	22,500	6,700	382
10.7	104,700	0.9	165	20		**307R4**	**BE160L4**	**BX160L4**			**N250TC**	14,400	19,600	4,590	332
10.7	104,700	1.4	165	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,400	19,600	3,670	350
10.8	106,900	2.1	164	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	16,800	21,700	6,610	364
11.0	105,600	1.3	162	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	14,300	19,400	3,640	348
11.0	101,700	2.2	160	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	16,700	21,600	6,560	366
11.0	105,300	2.9	161	24	**311ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	20,900	22,500	6,570	382
11.0	101,700	2.2	160	30		**314MR4**	**BE160L4**	**BX160L4**			**N250TC**	28,300	34,600	9,090	420
11.5	97,900	2.2	154	30		**311MR4**	**BE160L4**	**BX160L4**			**N250TC**	20,700	22,500	6,480	384
11.6	96,300	1.2	152	20		**307R4**	**BE160L4**	**BX160L4**			**N250TC**	14,000	19,100	4,460	332
11.6	96,300	1.6	152	20		**309R4**	**BE160L4**	**BX160L4**			**N250TC**	14,000	19,100	3,570	350



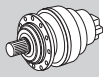
A

P_1 = 20 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
11.6	100,000	2.7	153	54		**313MR3**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	28,600	35,800	7,950	402
11.9	97,600	2.0	149	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	16,400	21,100	6,410	364
12.1	95,600	1.2	146	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	13,900	18,900	4,410	330
12.1	95,800	2.5	147	53.6		**311MR3**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	20,400	22,500	6,370	384
12.8	90,700	1.0	139	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	13,600	18,600	4,330	330
12.8	90,700	1.5	139	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	13,600	18,600	3,460	348
13.0	86,100	2.2	136	20		**310MR4**	**BE160L4**	**BX160L4**			**N250TC**	15,900	20,500	6,210	366
13.1	88,400	2.5	135	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	15,900	20,500	6,200	364
14.1	82,300	1.4	126	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	13,300	18,000	4,190	330
14.1	82,300	1.7	126	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	13,300	18,000	3,350	348
14.8	78,300	1.0	120	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	13,100	17,800	4,120	332
14.8	78,300	1.5	120	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	13,100	17,800	3,300	350
14.8	78,300	1.9	120	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	15,300	19,800	5,950	366
14.9	77,800	2.4	119	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	15,300	19,700	5,940	364
15.6	74,000	1.2	113	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	12,800	17,500	4,050	330
15.6	74,000	1.8	113	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	12,800	17,500	3,240	348
16.4	70,400	2.9	108	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	14,800	19,200	5,750	364
17.0	68,100	1.1	104	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	10,000	12,600	3,060	312
17.6	65,500	1.6	100	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	12,400	16,800	3,890	330
17.6	65,500	2.1	100	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	12,400	16,800	3,110	348
17.6	65,900	2.7	101	24	**310ML3**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	14,500	18,800	5,620	364
17.9	64,700	1.2	99.0	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	12,300	16,800	3,870	332
17.9	64,700	1.7	99.0	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	12,300	16,800	3,090	350
17.9	64,700	2.1	99.0	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	14,500	18,700	5,590	366
19.0	60,800	1.7	93.0	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	12,100	16,500	3,790	330
19.0	60,800	2.1	93.0	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	12,100	16,500	3,030	348
20.1	57,700	1.3	88.3	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	9,520	12,000	2,900	312
20.9	55,400	1.2	84.7	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	9,410	11,900	2,860	314
21.2	54,500	1.6	83.4	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	11,700	15,900	3,650	332
21.2	54,500	2.2	83.4	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	11,700	15,900	2,920	350
21.2	54,500	2.2	83.4	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	13,700	17,700	5,280	366
21.6	53,500	1.1	81.9	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	9,310	11,700	2,820	312
22.0	52,700	1.7	80.6	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	11,600	15,800	3,610	330
22.0	52,700	2.4	80.6	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	11,600	15,800	2,890	348
22.5	51,400	1.9	78.6	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	11,500	15,600	3,580	332
22.5	51,400	2.2	78.6	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	13,500	17,400	5,180	366
23.0	50,300	1.4	77.0	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	9,140	11,500	2,770	312
23.9	48,400	2.0	74.1	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	11,300	15,400	3,510	330
23.9	48,400	2.6	74.1	14.8	**309L3**		**BE160L4**	**BX160L4**			**N250TC**	11,300	15,400	2,810	348
24.3	47,600	1.4	72.9	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	8,990	11,300	2,720	314
24.4	48,800	0.9	72.5	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,980	11,300	2,710	312
24.7	46,900	1.9	71.8	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	11,200	15,200	3,480	332
24.7	46,900	2.3	71.8	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	11,200	15,200	2,780	350
24.7	46,900	2.2	71.8	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	13,100	17,000	5,020	366
26.2	44,100	1.4	67.5	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	8,790	11,100	2,650	314
27.1	42,600	1.5	65.2	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	8,700	11,000	2,620	312
27.2	42,500	2.2	65.0	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	10,900	14,800	3,360	332
27.2	42,500	2.2	65.0	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	10,900	14,800	2,690	350
27.2	42,500	2.2	65.0	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	12,800	16,500	4,860	366
28.1	41,200	1.0	63.1	10.1	**305L3**		**BE160L4**	**BX160L4**			**N250TC**	6,270	7,920	1,780	294
28.1	41,200	0.9	63.1	18.8		**305R3**					**N250TC**	6,270	7,920	1,780	296
29.3	39,500	2.4	60.5	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	10,600	14,500	3,280	330
30	38,000	1.7	58.1	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	8,400	10,600	2,520	314
31	37,900	1.2	56.3	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,320	10,500	2,490	312
32	36,500	2.3	55.9	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	10,400	14,100	3,200	332
32	36,500	2.3	55.9	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	10,400	14,100	2,560	350
32	36,500	2.2	55.9	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	12,200	15,700	4,620	366

P_1 = 20 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
33	34,900	1.0	53.4	10.1	**305L3**		**BE160L4**	**BX160L4**			**N250TC**	5,960	7,530	1,680	294
33	34,800	1.7	53.2	10.1	**306L3**		**BE160L4**	**BX160L4**			**N250TC**	8,180	10,300	2,450	312
35	32,900	0.9	50.3	18.8		**304R3**					**N250TC**	5,860	7,400	1,650	278
35	32,900	1.2	50.3	18.8		**305R3**					**N250TC**	5,860	7,400	1,650	296
35	33,500	2.7	51.3	14.8	**307L3**		**BE160L4**	**BX160L4**			**N250TC**	10,100	13,800	3,110	330
38	30,500	1.2	46.6	18.8		**305R3**					**N250TC**	5,720	7,230	1,610	296
38	31,300	1.8	46.5	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,860	9,910	2,340	312
38	30,200	2.1	46.3	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	7,850	9,890	2,340	314
38	31,500	2.3	46.7	24	**307L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	9,850	13,400	3,010	330
40	30,100	1.0	44.6	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	5,650	7,140	1,580	294
40	29,100	2.3	44.6	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	9,710	13,200	2,960	332
40	29,100	2.3	44.6	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	9,710	13,200	2,370	350
40	29,100	2.2	44.6	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	11,400	14,700	4,280	366
41	28,500	1.0	43.6	10.1	**304L3**		**BE160L4**	**BX160L4**			**N250TC**	5,610	7,090	1,570	276
42	27,800	1.0	42.6	18.8		**304R3**					**N250TC**	5,570	7,040	1,560	278
42	27,800	1.2	42.6	18.8		**305R3**					**N250TC**	5,570	7,040	1,560	296
45	25,600	2.2	39.2	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	7,470	9,410	2,210	314
46	25,900	1.0	38.4	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	5,400	6,820	1,500	276
46	25,900	1.5	38.4	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	5,400	6,820	1,500	294
46	25,900	2.2	38.4	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,420	9,360	2,200	312
46	26,000	2.8	38.6	24	**307L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	9,300	12,600	2,830	330
47	24,700	2.3	37.7	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	9,230	12,600	2,810	332
47	24,700	2.3	37.7	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	9,230	12,600	2,240	350
47	24,700	2.2	37.7	30		**310MR3**	**BE160L4**	**BX160L4**			**N250TC**	10,800	14,000	4,050	366
48	24,300	1.3	37.1	18.8		**304R3**					**N250TC**	5,350	6,750	1,490	278
48	24,300	1.5	37.1	18.8		**305R3**					**N250TC**	5,350	6,750	1,490	296
49	24,100	1.3	35.8	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	5,290	6,680	1,470	294
53	21,700	2.3	33.2	18.8		**306R3**	**BE160L4**	**BX160L4**			**N250TC**	7,100	8,950	2,090	314
54	22,300	2.7	33.1	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,090	8,940	2,090	312
56	20,600	1.3	31.5	18.8		**304R3**					**N250TC**	5,090	6,430	1,410	278
56	20,600	1.6	31.5	18.8		**305R3**					**N250TC**	5,090	6,430	1,410	296
56	20,700	2.3	31.6	30		**307R3**	**BE160L4**	**BX160L4**			**N250TC**	8,760	11,900	2,640	332
56	20,700	2.3	31.6	30		**309R3**	**BE160L4**	**BX160L4**			**N250TC**	8,760	11,900	2,120	350
58	20,700	0.9	30.8	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	5,050	6,380	1,400	258
58	20,700	1.2	30.8	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	5,050	6,380	1,400	276
58	20,700	1.8	30.8	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	5,050	6,380	1,400	294
62	19,200	2.9	28.4	17.4	**306L2**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	6,780	8,550	1,990	312
67	17,800	0.9	26.4	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,830	6,100	1,330	258
67	17,800	1.7	26.4	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,830	6,100	1,330	294
69	16,800	1.0	25.7	18.8		**303R3**					**N250TC**	4,790	6,050	1,320	260
69	16,800	1.6	25.7	18.8		**304R3**					**N250TC**	4,790	6,050	1,320	278
69	16,800	1.8	25.7	18.8		**305R3**					**N250TC**	4,790	6,050	1,320	296
72	16,500	1.1	24.5	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,720	5,960	1,300	258
72	16,500	1.6	24.5	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	4,720	5,960	1,300	276
72	16,500	2.0	24.5	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,720	5,960	1,300	294
78	15,300	1.2	22.7	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,620	5,830	1,260	258
78	15,300	1.6	22.7	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	4,620	5,830	1,260	276
78	15,300	2.2	22.7	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,620	5,830	1,260	294
85	14,000	1.1	20.8	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,490	5,670	1,230	258
85	14,000	1.8	20.8	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	4,490	5,670	1,230	276
85	14,000	2.0	20.8	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,490	5,670	1,230	294
92	13,000	1.0	19.2	24		**303R2**					**N250TC**	4,390	5,540	1,190	260
92	13,000	1.9	19.2	24		**305R2**					**N250TC**	4,390	5,540	1,190	296
92	12,900	2.3	19.2	24		**306R2**	**BE160L4**	**BX160L4**			**N250TC**	6,030	7,600	1,740	314
97	12,200	0.9	18.2	10.1	**301L2**						**N250TC**	2,250	2,670	390	242
98	12,200	1.4	18.1	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,310	5,450	1,170	258
98	12,200	2.0	18.1	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	4,310	5,450	1,170	276



A

P_1 = 20 hp

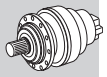
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
98	12,200	2.5	18.1	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,310	5,450	1,170	294
105	11,300	1.8	16.8	24		**304R2**					**N250TC**	4,220	5,330	1,140	278
111	10,700	1.5	15.9	24		**303R2**					**N250TC**	4,140	5,240	1,120	260
111	10,700	2.3	15.9	24		**305R2**					**N250TC**	4,140	5,240	1,120	296
111	10,700	2.3	15.9	24		**306R2**	**BE160L4**	**BX160L4**			**N250TC**	5,690	7,180	1,640	314
115	10,300	1.4	15.3	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	4,100	5,180	1,110	258
115	10,300	2.3	15.3	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	4,100	5,180	1,110	276
115	10,300	2.5	15.3	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	4,100	5,180	1,110	294
119	10,000	1.1	14.8	10.1	**301L2**						**N250TC**	2,120	2,510	370	242
130	9,210	1.8	13.7	24		**303R2**					**N250TC**	3,960	5,000	1,070	260
130	9,210	2.3	13.7	24		**304R2**					**N250TC**	3,960	5,000	1,070	278
130	9,210	2.3	13.7	24		**305R2**					**N250TC**	3,960	5,000	1,070	296
130	9,210	2.3	13.7	24		**306R2**	**BE160L4**	**BX160L4**			**N250TC**	5,440	6,860	1,560	314
141	8,440	1.6	12.5	12.1	**303L2**		**BE160L4**	**BX160L4**			**N250TC**	3,860	4,880	1,040	258
141	8,440	2.7	12.5	12.1	**304L2**		**BE160L4**	**BX160L4**			**N250TC**	3,860	4,880	1,040	276
141	8,440	2.9	12.5	12.1	**305L2**		**BE160L4**	**BX160L4**			**N250TC**	3,860	4,880	1,040	294
146	8,160	1.3	12.1	10.1	**301L2**						**N250TC**	1,990	2,360	340	242
150	7,970	1.2	11.8	16.1		**301R2**					**N250TC**	1,980	2,350	340	244
163	7,340	2.2	10.9	24		**303R2**					**N250TC**	3,700	4,670	990	260
163	7,340	2.3	10.9	24		**304R2**					**N250TC**	3,700	4,670	990	278
163	7,340	2.3	10.9	24		**305R2**					**N250TC**	3,700	4,670	990	296
163	7,340	2.3	10.9	24		**306R2**	**BE160L4**	**BX160L4**			**N250TC**	5,080	6,410	1,440	314
183	6,710	0.9	9.67	14.8	**303L1**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	3,570	4,510	950	258
192	6,220	2.3	9.23	24		**303R2**					**N250TC**	3,520	4,450	940	260
192	6,220	2.3	9.23	24		**304R2**					**N250TC**	3,520	4,450	940	278
192	6,220	2.3	9.23	24		**305R2**					**N250TC**	3,520	4,450	940	296
192	6,210	2.3	9.23	24		**306R2**	**BE160L4**	**BX160L4**			**N250TC**	4,840	6,100	1,360	314
203	5,890	1.6	8.74	16.1		**301R2**					**N250TC**	1,810	2,140	310	244
236	5,210	2.0	7.50	14.8	**303L1**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	3,310	4,180	870	258
246	5,000	1.3	7.20	10.1	**301L1**						**N250TC**	1,700	2,020	290	242
248	4,810	1.0	7.13	16.1		**300R2**					**N250TC**	1,700	2,140	290	228
248	4,810	1.8	7.13	16.1		**301R2**					**N250TC**	1,700	2,020	290	244
285	4,310	2.7	6.20	14.8	**303L1**		**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	3,130	3,950	820	258
307	4,010	1.0	5.77	10.1	**300L1**						**N250TC**	1,590	2,010	270	226
307	4,010	2.0	5.77	10.1	**301L1**						**N250TC**	1,590	1,890	270	242
415	2,960	1.4	4.26	10.1	**300L1**						**N250TC**	1,460	1,840	240	226
415	2,960	2.5	4.26	10.1	**301L1**						**N250TC**	1,460	1,730	240	242
509	2,420	1.6	3.48	10.1	**300L1**						**N250TC**	1,370	1,730	230	226
509	2,420	2.9	3.48	10.1	**301L1**						**N250TC**	1,370	1,630	230	242

P_1 = 25 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.94	1,471,100	0.9	1893	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	89,700	95,300	33,700	462
1.1	1,239,500	1.1	1595	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	87,500	93,000	32,500	462
1.3	1,079,400	2.7	1389	40	**319L4**		**BE180M4**	**BX180M4**				99,200	109,200	41,400	486
1.4	961,900	1.1	1237	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	54,300	60,900	29,900	450
1.4	1,017,000	1.0	1308	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	54,700	61,400	30,400	450
1.4	1,024,700	1.3	1318	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	85,200	90,500	30,500	462
1.6	858,300	0.9	1104	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	34,300	41,800	17,300	434
1.6	858,300	1.2	1104	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	53,400	59,900	28,800	450
1.6	881,400	1.6	1134	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	83,400	88,600	29,000	462
1.7	810,500	1.1	1043	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	34,000	41,500	16,900	434

P_1 = 25 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.7	792,500	1.3	1020	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	52,800	59,200	28,000	450
1.7	802,400	1.9	1032	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	82,300	87,400	28,100	462
1.7	823,200	2.8	1059	30	**318ML4**		**BE180M4**	**BX180M4**				84,200	88,700	37,800	474
1.9	723,200	1.1	930	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	33,400	40,800	16,300	434
1.9	741,000	1.6	953	67		**317MR4**	**BE180M4**	**BX180M4**			**N280TC**	81,300	86,400	27,400	464
2.0	684,000	1.5	880	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	51,700	58,000	26,700	450
2.0	702,400	2.0	904	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	80,700	85,700	26,900	462
2.1	666,700	1.0	858	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	33,100	40,400	15,900	418
2.1	670,000	1.3	862	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	33,100	40,400	15,900	434
2.2	615,600	2.8	792	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	79,200	84,100	25,700	462
2.2	624,400	2.2	803	67		**317MR4**	**BE180M4**	**BX180M4**			**N280TC**	79,400	84,300	25,900	464
2.3	608,000	1.2	782	54		**315MR4**	**BE180M4**	**BX180M4**			**N280TC**	32,600	39,800	15,400	436
2.3	609,400	1.6	784	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	50,800	57,000	25,700	450
2.3	608,000	1.6	782	60		**316MR4**	**BE180M4**	**BX180M4**			**N280TC**	50,800	57,000	25,600	452
2.4	573,500	1.1	738	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	32,400	39,500	15,100	418
2.4	576,300	1.5	741	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	32,400	39,500	15,100	434
2.5	549,100	1.8	706	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	50,100	56,200	24,800	450
2.5	558,900	2.6	719	24	**317ML4**		**BE180M4**	**BX180M4**			**N280TC**	78,100	83,000	24,900	462
2.6	526,100	2.6	677	67		**317MR4**	**BE180M4**	**BX180M4**			**N280TC**	77,400	82,300	24,400	464
2.7	519,500	1.3	668	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	31,900	38,900	14,600	418
2.7	522,100	1.6	672	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	31,900	39,000	14,600	434
2.7	512,300	1.4	659	54		**315MR4**	**BE180M4**	**BX180M4**			**N280TC**	31,800	38,900	14,500	436
2.7	512,300	1.9	659	60		**316MR4**	**BE180M4**	**BX180M4**			**N280TC**	49,600	55,600	24,200	452
2.8	488,200	2.0	628	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	49,200	55,200	23,800	450
2.8	486,500	2.2	626	67		**317MR4**	**BE180M4**	**BX180M4**			**N280TC**	76,600	81,400	23,800	464
2.9	480,900	1.0	614	30		**314MR4**					**N280TC**	31,500	38,500	14,200	420
2.9	484,500	1.7	623	54		**315MR4**	**BE180M4**	**BX180M4**			**N280TC**	31,600	38,600	14,300	436
2.9	484,500	2.1	623	60		**316MR4**	**BE180M4**	**BX180M4**			**N280TC**	49,200	55,200	23,800	452
3.0	457,000	1.4	588	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	31,300	38,200	14,000	418
3.0	459,300	1.8	591	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	31,300	38,300	14,000	434
3.1	446,900	1.3	575	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	31,200	38,100	13,900	418
3.2	441,800	1.1	564	14.8	**313ML4**						**N280TC**	31,900	39,900	12,300	400
3.2	437,500	2.3	563	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	48,500	54,400	23,000	450
3.3	418,900	1.0	535	30		**313MR4**					**N280TC**	31,700	39,600	12,000	402
3.3	414,600	2.0	533	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	30,900	37,700	13,500	434
3.4	413,700	1.4	528	30		**314MR4**					**N280TC**	30,800	37,600	13,500	420
3.4	408,200	2.1	525	54		**315MR4**	**BE180M4**	**BX180M4**			**N280TC**	30,800	37,600	13,500	436
3.4	408,200	2.7	525	60		**316MR4**	**BE180M4**	**BX180M4**			**N280TC**	48,000	53,900	22,400	452
3.5	401,300	1.0	512	14.8	**311ML4**						**N280TC**	22,700	23,700	9,650	382
3.5	402,500	1.0	514	14.8	**313ML4**						**N280TC**	31,500	39,400	11,900	400
3.6	388,800	1.1	496	30		**313MR4**					**N280TC**	31,300	39,200	11,700	402
3.6	384,400	1.7	495	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	30,600	37,300	13,200	418
3.6	389,000	2.8	500	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	47,700	53,500	22,100	450
3.7	378,400	2.2	487	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	30,500	37,200	13,100	434
3.9	354,000	1.4	452	14.8	**313ML4**						**N280TC**	30,900	38,700	11,400	400
3.9	356,100	1.8	458	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	30,200	36,900	12,900	418
4.0	352,900	1.1	450	30		**313MR4**					**N280TC**	30,900	38,700	11,400	402
4.0	348,600	1.4	445	30		**314MR4**					**N280TC**	30,100	36,700	12,700	420
4.0	342,800	2.4	441	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	30,100	36,700	12,700	434
4.1	343,100	1.0	438	30		**311MR4**					**N280TC**	22,200	23,200	9,160	384
4.1	334,600	2.7	430	60		**316MR4**	**BE180M4**	**BX180M4**			**N280TC**	46,700	52,300	21,000	452
4.2	329,700	1.8	421	30		**314MR4**					**N280TC**	29,900	36,400	12,500	420
4.3	321,600	1.3	410	14.8	**311ML4**						**N280TC**	22,000	22,900	8,960	382
4.3	323,500	1.0	413	30		**311MR4**					**N280TC**	22,000	23,000	8,980	384
4.3	318,100	2.6	409	54		**315MR4**	**BE180M4**	**BX180M4**			**N280TC**	29,700	36,300	12,400	436
4.5	308,800	1.6	394	14.8	**313ML4**						**N280TC**	30,300	38,000	10,900	400
4.5	306,300	2.1	394	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	29,600	36,100	12,200	418



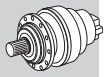
A

P_1 = 25 hp

n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
4.5	310,100	2.9	399	24	**316ML4**		**BE180M4**	**BX180M4**			**N280TC**	46,200	51,800	20,500	450
4.6	303,600	1.3	387	30		**313MR4**					**N280TC**	30,200	37,900	10,800	402
4.8	287,300	2.9	370	24	**315ML4**		**BE180M4**	**BX180M4**			**N280TC**	29,300	35,800	12,000	434
5.0	277,800	1.8	354	30		**314MR4**					**N280TC**	29,200	35,600	11,800	420
5.1	271,600	1.0	347	20		**310MR4**					**N280TC**	17,200	22,200	8,470	366
5.1	272,400	1.5	348	14.8	**311ML4**						**N280TC**	21,500	22,500	8,480	382
5.2	267,400	1.2	341	30		**311MR4**					**N280TC**	21,500	22,500	8,430	384
5.2	270,800	1.8	346	30		**313MR4**					**N280TC**	29,900	37,400	10,400	402
5.7	244,100	2.6	314	20	**314ML4**		**BE180M4**	**BX180M4**			**N280TC**	29,200	35,600	11,300	418
5.8	241,900	1.6	309	30		**313MR4**					**N280TC**	29,900	37,400	10,000	402
5.9	243,400	1.1	304	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,900	37,400	9,980	400
6.1	233,300	1.0	291	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	21,500	22,500	7,990	382
6.1	230,000	1.4	294	30		**311MR4**					**N280TC**	21,500	22,500	8,010	384
6.3	220,300	1.8	281	30		**313MR4**					**N280TC**	29,900	37,400	9,720	402
6.4	216,500	1.1	276	20		**310MR4**					**N280TC**	17,200	22,200	7,850	366
6.4	216,500	1.8	276	30		**314MR4**					**N280TC**	29,200	35,600	10,900	420
6.7	208,400	1.8	266	30		**311MR4**					**N280TC**	21,500	22,500	7,750	384
6.9	202,400	1.0	258	20		**310MR4**					**N280TC**	17,200	22,200	7,680	366
7.1	202,200	1.9	252	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,900	37,400	9,380	400
7.3	196,600	1.6	245	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	21,500	22,500	7,550	382
7.4	191,900	2.2	240	34	**314ML3**		**BE180M4**	**BX180M4**				29,200	35,600	10,400	418
7.4	192,900	2.7	241	40	**315ML3**		**BE180M4**	**BX180M4**				29,200	35,600	10,400	434
7.5	186,200	1.3	238	20		**310MR4**					**N280TC**	17,200	22,200	7,470	366
7.5	185,600	1.8	237	30		**313MR4**					**N280TC**	29,900	37,400	9,180	402
7.5	186,200	1.8	238	30		**314MR4**					**N280TC**	29,200	35,600	10,300	420
7.7	184,400	0.9	230	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	17,200	22,200	7,390	364
7.8	179,200	1.8	229	30		**311MR4**					**N280TC**	21,500	22,500	7,370	384
8.5	167,200	2.2	209	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,900	37,400	8,800	400
8.6	161,300	1.2	206	20		**310MR4**					**N280TC**	17,200	22,200	7,120	366
8.7	161,100	1.0	206	20		**309R4**					**N280TC**	14,700	20,000	3,940	350
8.8	161,700	1.2	202	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	17,200	22,200	7,070	364
8.8	162,500	1.9	203	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	21,500	22,500	7,080	382
8.9	157,200	1.8	201	30		**313MR4**					**N280TC**	29,900	37,400	8,690	402
9.0	155,300	1.8	198	30		**311MR4**					**N280TC**	21,500	22,500	7,030	384
9.2	155,100	2.8	194	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,900	37,400	8,580	400
9.3	149,400	1.0	191	20		**309R4**					**N280TC**	14,700	20,000	3,840	350
9.3	153,200	1.8	191	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	21,500	22,500	6,950	382
9.4	148,400	1.6	189	20		**310MR4**					**N280TC**	17,200	22,200	6,920	366
9.4	148,400	1.8	189	30		**314MR4**					**N280TC**	29,200	35,600	9,590	420
9.6	144,600	1.8	185	30		**313MR4**					**N280TC**	29,900	37,400	8,450	402
9.8	142,800	1.8	182	30		**311MR4**					**N280TC**	21,500	22,500	6,840	384
9.8	145,800	1.8	182	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,900	37,400	8,410	400
10.0	142,000	1.1	177	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	17,200	22,200	6,770	364
10.1	140,800	2.6	176	24	**313ML3**		**BE180M4**	**BX180M4**			**N280TC**	29,800	37,300	8,310	400
10.4	136,900	2.3	171	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	21,300	22,500	6,690	382
10.8	129,400	1.1	165	20		**309R4**					**N280TC**	14,400	19,500	3,660	350
10.9	131,100	1.8	164	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	16,800	21,700	6,590	364
11.0	130,500	1.1	162	14.8	**309L3**						**N280TC**	14,300	19,400	3,640	348
11.1	125,700	1.8	160	20		**310MR4**					**N280TC**	16,700	21,500	6,550	366
11.1	129,100	2.4	161	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	20,900	22,500	6,560	382
11.1	125,700	1.8	160	30		**314MR4**					**N280TC**	28,300	34,500	9,070	420
11.5	121,000	1.8	154	30		**311MR4**					**N280TC**	20,600	22,500	6,470	384
11.6	122,600	2.2	153	54		**313MR3**	**BE180M4**	**BX180M4**			**N280TC**	28,600	35,700	7,940	402
11.7	119,100	1.0	152	20		**307R4**					**N280TC**	14,000	19,000	4,450	332
11.7	119,100	1.3	152	20		**309R4**					**N280TC**	14,000	19,000	3,560	350
11.8	122,100	3.0	151	24	**313ML3**						**N280TC**	28,400	35,600	7,910	400
11.9	119,700	1.6	149	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	16,300	21,100	6,400	364

P_1 = 25 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
12.1	117,800	2.6	147	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	20,300	22,500	6,360	382
12.1	117,500	2.0	147	54		**311MR3**	**BE180M4**	**BX180M4**			**N280TC**	20,300	22,500	6,360	384
12.2	118,200	1.0	146	14.8	**307L3**						**N280TC**	13,800	18,800	4,400	330
12.8	112,100	1.2	139	14.8	**309L3**						**N280TC**	13,600	18,500	3,460	348
13.1	106,500	1.8	136	20		**310MR4**					**N280TC**	15,900	20,500	6,200	366
13.2	108,400	2.0	135	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	15,900	20,500	6,190	364
13.4	106,700	2.8	133	24	**311ML3**		**BE180M4**	**BX180M4**			**N280TC**	19,700	22,500	6,160	382
14.1	101,700	1.1	126	14.8	**307L3**						**N280TC**	13,200	18,000	4,180	330
14.1	101,700	1.4	126	14.8	**309L3**						**N280TC**	13,200	18,000	3,350	348
14.4	99,000	3.0	124	54		**311MR3**	**BE180M4**	**BX180M4**			**N280TC**	19,300	22,500	6,010	384
14.9	96,700	1.2	120	30		**309R3**					**N280TC**	13,000	17,700	3,290	350
14.9	96,700	1.5	120	30		**310MR3**					**N280TC**	15,300	19,700	5,940	366
15.0	95,400	2.0	119	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	15,300	19,700	5,930	364
15.7	91,500	1.0	113	14.8	**307L3**						**N280TC**	12,800	17,400	4,040	330
15.7	91,500	1.5	113	14.8	**309L3**						**N280TC**	12,800	17,400	3,230	348
16.5	86,400	2.4	108	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	14,800	19,100	5,740	364
17.1	84,200	0.9	104	10.1	**306L3**						**N280TC**	9,990	12,600	3,060	312
17.7	81,000	1.3	100	14.8	**307L3**						**N280TC**	12,400	16,800	3,880	330
17.7	81,000	1.7	100	14.8	**309L3**						**N280TC**	12,400	16,800	3,100	348
17.7	80,800	2.2	101	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	14,500	18,700	5,610	364
18.0	80,000	0.9	99.0	30		**307R3**					**N280TC**	12,300	16,700	3,860	332
18.0	80,000	1.4	99.0	30		**309R3**					**N280TC**	12,300	16,700	3,090	350
18.0	80,000	1.7	99.0	30		**310MR3**					**N280TC**	14,400	18,600	5,580	366
19.1	75,100	1.4	93.0	14.8	**307L3**						**N280TC**	12,100	16,400	3,780	330
19.1	75,100	1.7	93.0	14.8	**309L3**						**N280TC**	12,100	16,400	3,030	348
19.2	74,300	2.6	92.7	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	14,200	18,300	5,460	364
20.2	71,300	1.0	88.3	10.1	**306L3**						**N280TC**	9,510	12,000	2,890	312
21.0	68,500	1.0	84.7	18.8		**306R3**					**N280TC**	9,390	11,800	2,850	314
21.3	67,400	1.3	83.4	30		**307R3**					**N280TC**	11,700	15,900	3,650	332
21.3	67,400	1.8	83.4	30		**309R3**					**N280TC**	11,700	15,900	2,920	350
21.3	67,400	1.8	83.4	30		**310MR3**					**N280TC**	13,700	17,700	5,270	366
22.1	65,100	1.4	80.6	14.8	**307L3**						**N280TC**	11,600	15,700	3,610	330
22.1	65,100	2.0	80.6	14.8	**309L3**						**N280TC**	11,600	15,700	2,880	348
22.2	64,400	2.8	80.3	24	**310ML3**		**BE180M4**	**BX180M4**			**N280TC**	13,600	17,500	5,200	364
22.6	63,500	1.5	78.6	30		**307R3**					**N280TC**	11,500	15,600	3,580	332
22.6	63,500	1.8	78.6	30		**310MR3**					**N280TC**	13,500	17,400	5,170	366
23.1	62,200	1.1	77.0	10.1	**306L3**						**N280TC**	9,130	11,500	2,760	312
24.0	59,900	1.7	74.1	14.8	**307L3**						**N280TC**	11,300	15,300	3,510	330
24.0	59,900	2.1	74.1	14.8	**309L3**						**N280TC**	11,300	15,300	2,810	348
24.4	58,900	1.1	72.9	18.8		**306R3**					**N280TC**	8,980	11,300	2,710	314
24.8	58,000	1.5	71.8	30		**307R3**					**N280TC**	11,200	15,200	3,470	332
24.8	58,000	1.8	71.8	30		**309R3**					**N280TC**	11,200	15,200	2,770	350
24.8	58,000	1.8	71.8	30		**310MR3**					**N280TC**	13,100	16,900	5,010	366
26.4	54,500	1.1	67.5	18.8		**306R3**					**N280TC**	8,770	11,100	2,640	314
27.3	52,700	1.2	65.2	10.1	**306L3**						**N280TC**	8,680	10,900	2,610	312
27.4	52,500	1.8	65.0	30		**307R3**					**N280TC**	10,900	14,800	3,360	332
27.4	52,500	1.8	65.0	30		**309R3**					**N280TC**	10,900	14,800	2,680	350
27.4	52,500	1.8	65.0	30		**310MR3**					**N280TC**	12,700	16,400	4,850	366
29.4	48,900	1.9	60.5	14.8	**307L3**						**N280TC**	10,600	14,400	3,280	330
29.4	48,900	2.4	60.5	14.8	**309L3**						**N280TC**	10,600	14,400	2,620	348
31	46,900	1.4	58.1	18.8		**306R3**					**N280TC**	8,390	10,600	2,510	314
32	46,500	1.0	56.3	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	8,310	10,500	2,490	312
32	45,200	1.8	55.9	30		**307R3**					**N280TC**	10,400	14,100	3,190	332
32	45,200	1.8	55.9	30		**309R3**					**N280TC**	10,400	14,100	2,550	350
32	45,200	1.8	55.9	30		**310MR3**					**N280TC**	12,200	15,700	4,610	366
33	43,000	1.4	53.2	10.1	**306L3**						**N280TC**	8,170	10,300	2,440	312
35	40,600	0.9	50.3	18.8		**305R3**					**N280TC**	5,850	7,380	1,640	296



A

P_1 = 25 hp

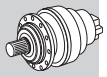
n_2	T_2	S	i	Pt								Rn_2 [lbs]			
rpm	lb·in			hp			IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
35	41,400	2.2	51.3	14.8	**307L3**						**N280TC**	10,100	13,700	3,100	330
35	41,400	2.7	51.3	14.8	**309L3**						**N280TC**	10,100	13,700	2,480	348
38	37,700	1.0	46.6	18.8		**305R3**					**N280TC**	5,720	7,220	1,600	296
38	38,400	1.5	46.5	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	7,850	9,890	2,330	312
38	37,400	1.7	46.3	18.8		**306R3**					**N280TC**	7,830	9,880	2,330	314
38	38,600	1.9	46.7	24	**307L2**		**BE180M4**	**BX180M4**			**N280TC**	9,830	13,400	3,010	330
38	38,600	2.9	46.7	24	**309L2**		**BE180M4**	**BX180M4**			**N280TC**	9,830	13,400	2,410	348
40	36,000	1.8	44.6	30		**307R3**					**N280TC**	9,690	13,200	2,960	332
40	36,000	1.8	44.6	30		**309R3**					**N280TC**	9,690	13,200	2,370	350
40	36,000	1.8	44.6	30		**310MR3**					**N280TC**	11,400	14,700	4,270	366
42	34,400	1.0	42.6	18.8		**305R3**					**N280TC**	5,560	7,030	1,550	296
45	31,700	1.8	39.2	18.8		**306R3**					**N280TC**	7,450	9,400	2,210	314
46	32,000	1.2	38.4	12.1	**305L2**						**N280TC**	5,390	6,810	1,500	294
46	31,800	1.8	38.4	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	7,410	9,340	2,190	312
46	31,900	2.3	38.6	24	**307L2**		**BE180M4**	**BX180M4**			**N280TC**	9,280	12,600	2,820	330
47	30,500	1.8	37.7	30		**307R3**					**N280TC**	9,220	12,500	2,800	332
47	30,500	1.8	37.7	30		**309R3**					**N280TC**	9,220	12,500	2,240	350
47	30,500	1.8	37.7	30		**310MR3**					**N280TC**	10,800	14,000	4,040	366
48	30,000	1.0	37.1	18.8		**304R3**					**N280TC**	5,340	6,740	1,490	278
48	30,000	1.2	37.1	18.8		**305R3**					**N280TC**	5,340	6,740	1,490	296
50	29,800	1.1	35.8	12.1	**305L2**						**N280TC**	5,280	6,670	1,470	294
54	27,300	2.2	33.1	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	7,080	8,930	2,080	312
54	26,800	1.8	33.2	18.8		**306R3**					**N280TC**	7,090	8,940	2,090	314
55	26,900	3.0	32.6	24	**307L2**		**BE180M4**	**BX180M4**			**N280TC**	8,820	12,000	2,670	330
56	25,600	1.8	31.6	30		**307R3**					**N280TC**	8,740	11,900	2,640	332
56	25,600	1.8	31.6	30		**309R3**					**N280TC**	8,740	11,900	2,110	350
57	25,400	1.1	31.5	18.8		**304R3**					**N280TC**	5,080	6,420	1,410	278
57	25,400	1.3	31.5	18.8		**305R3**					**N280TC**	5,080	6,420	1,410	296
58	25,600	1.0	30.8	12.1	**304L2**						**N280TC**	5,050	6,370	1,400	276
58	25,600	1.4	30.8	12.1	**305L2**						**N280TC**	5,050	6,370	1,400	294
63	23,500	2.4	28.4	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	6,770	8,530	1,980	312
67	22,000	1.4	26.4	12.1	**305L2**						**N280TC**	4,820	6,090	1,330	294
68	21,800	2.5	26.4	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	6,620	8,340	1,930	312
69	20,700	1.3	25.7	18.8		**304R3**					**N280TC**	4,780	6,040	1,310	278
69	20,700	1.5	25.7	18.8		**305R3**					**N280TC**	4,780	6,040	1,310	296
73	20,400	1.3	24.5	12.1	**304L2**						**N280TC**	4,710	5,950	1,290	276
73	20,400	1.6	24.5	12.1	**305L2**						**N280TC**	4,710	5,950	1,290	294
78	18,900	1.0	22.7	12.1	**303L2**						**N280TC**	4,610	5,820	1,260	258
78	18,900	1.3	22.7	12.1	**304L2**						**N280TC**	4,610	5,820	1,260	276
78	18,900	1.8	22.7	12.1	**305L2**						**N280TC**	4,610	5,820	1,260	294
79	18,700	2.8	22.7	17.4	**306L2**		**BE180M4**	**BX180M4**			**N280TC**	6,320	7,970	1,840	312
86	17,300	1.5	20.8	12.1	**304L2**						**N280TC**	4,480	5,660	1,220	276
86	17,300	1.6	20.8	12.1	**305L2**						**N280TC**	4,480	5,660	1,220	294
93	16,000	1.6	19.2	24		**305R2**					**N280TC**	4,380	5,530	1,190	296
93	16,000	1.8	19.2	24		**306R2**					**N280TC**	6,020	7,590	1,740	314
98	15,100	1.1	18.1	12.1	**303L2**						**N280TC**	4,300	5,440	1,170	258
98	15,100	1.6	18.1	12.1	**304L2**						**N280TC**	4,300	5,440	1,170	276
98	15,100	2.0	18.1	12.1	**305L2**						**N280TC**	4,300	5,440	1,170	294
106	14,000	1.5	16.8	24		**304R2**					**N280TC**	4,210	5,320	1,140	278
112	13,200	1.2	15.9	24		**303R2**					**N280TC**	4,140	5,230	1,120	260
112	13,200	1.8	15.9	24		**305R2**					**N280TC**	4,140	5,230	1,120	296
112	13,200	1.8	15.9	24		**306R2**					**N280TC**	5,680	7,170	1,630	314
116	12,800	1.1	15.3	12.1	**303L2**						**N280TC**	4,100	5,170	1,110	258
116	12,800	1.9	15.3	12.1	**304L2**						**N280TC**	4,100	5,170	1,110	276
116	12,800	2.0	15.3	12.1	**305L2**						**N280TC**	4,100	5,170	1,110	294
130	11,400	1.5	13.7	24		**303R2**					**N280TC**	3,960	5,000	1,060	260
130	11,400	1.8	13.7	24		**304R2**					**N280TC**	3,960	5,000	1,060	278

P_1 = 25 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
130	11,400	1.8	13.7	24		**305R2**					**N280TC**	3,960	5,000	1,060	296
130	11,400	1.8	13.7	24		**306R2**					**N280TC**	5,430	6,850	1,550	314
142	10,400	1.3	12.5	12.1	**303L2**						**N280TC**	3,850	4,870	1,030	258
142	10,400	2.2	12.5	12.1	**304L2**						**N280TC**	3,850	4,870	1,030	276
142	10,400	2.4	12.5	12.1	**305L2**						**N280TC**	3,850	4,870	1,030	294
147	10,100	1.0	12.1	10.1	**301L2**						**N280TC**	1,990	2,360	340	242
151	9,850	1.0	11.8	16.1		**301R2**					**N280TC**	1,970	2,340	340	244
163	9,070	1.8	10.9	24		**303R2**					**N280TC**	3,690	4,670	990	260
163	9,070	1.8	10.9	24		**304R2**					**N280TC**	3,690	4,670	990	278
163	9,070	1.8	10.9	24		**305R2**					**N280TC**	3,690	4,670	990	296
163	9,070	1.8	10.9	24		**306R2**					**N280TC**	5,080	6,400	1,440	314
193	7,680	1.8	9.23	24		**303R2**					**N280TC**	3,520	4,440	930	260
193	7,680	1.8	9.23	24		**304R2**					**N280TC**	3,520	4,440	930	278
193	7,680	1.8	9.23	24		**305R2**					**N280TC**	3,520	4,440	930	296
193	7,680	1.8	9.23	24		**306R2**					**N280TC**	4,830	6,090	1,360	314
204	7,280	1.3	8.74	16.1		**301R2**					**N280TC**	1,800	2,140	310	244
237	6,390	1.6	7.50	14.8	**303L1**		**BE180M4**	**BX180M4**			**N280TC**	3,300	4,170	870	258
237	6,390	3.0	7.50	17.4	**305L1**		**BE180M4**	**BX180M4**			**N280TC**	3,300	4,170	870	294
247	6,180	1.0	7.20	10.1	**301L1**						**N280TC**	1,700	2,020	290	242
250	5,940	1.5	7.13	16.1		**301R2**					**N280TC**	1,700	2,010	290	244
271	5,600	2.8	6.57	16.1	**304L1**		**BE180M4**	**BX180M4**			**N280TC**	3,180	4,010	830	276
287	5,280	2.2	6.20	14.8	**303L1**		**BE180M4**	**BX180M4**			**N280TC**	3,120	3,940	820	258
309	4,950	1.6	5.77	10.1	**301L1**						**N280TC**	1,590	1,890	270	242
334	4,540	2.8	5.33	14.8	**303L1**		**BE180M4**	**BX180M4**			**N280TC**	2,980	3,770	780	258
418	3,660	1.1	4.26	10.1	**300L1**						**N280TC**	1,450	1,830	240	226
418	3,660	2.0	4.26	10.1	**301L1**						**N280TC**	1,450	1,720	240	242
511	2,990	1.3	3.48	10.1	**300L1**						**N280TC**	1,370	1,730	220	226
511	2,990	2.4	3.48	10.1	**301L1**						**N280TC**	1,370	1,620	220	242

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.1	1,474,400	0.9	1595	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	87,600	93,000	32,500	462
1.3	1,218,900	1.1	1318	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	85,200	90,500	30,500	462
1.3	1,283,900	2.3	1389	40	**319L4**		**BE180L4**	**BX180L4**				99,200	109,300	41,400	486
1.5	1,104,500	2.7	1195	40	**319L4**		**BE180L4**	**BX180L4**				97,100	106,900	39,400	486
1.6	1,021,000	1.0	1104	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	53,400	59,900	28,800	450
1.6	1,048,500	1.3	1134	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	83,400	88,600	29,000	462
1.7	942,700	1.1	1020	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	52,800	59,200	28,000	450
1.7	954,500	1.6	1032	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	82,300	87,400	28,100	462
1.7	979,200	2.3	1059	30	**318ML4**		**BE180L4**	**BX180L4**				84,300	88,700	37,900	474
1.9	881,400	1.4	953	67		**317MR4**	**BE180L4**	**BX180L4**			**N280TC**	81,400	86,400	27,400	464
1.9	842,300	2.8	911	30	**318ML4**		**BE180L4**	**BX180L4**				82,500	86,800	36,000	474
2.0	813,600	1.2	880	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	51,700	58,000	26,700	450
2.0	835,500	1.7	904	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	80,700	85,800	26,900	462
2.1	796,900	1.1	862	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	33,100	40,400	15,900	434
2.2	732,300	2.3	792	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	79,200	84,200	25,800	462
2.2	742,700	1.9	803	67		**317MR4**	**BE180L4**	**BX180L4**			**N280TC**	79,400	84,400	25,900	464
2.3	723,200	1.0	782	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	32,600	39,800	15,400	436
2.3	724,900	1.4	784	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	50,900	57,000	25,700	450
2.3	723,200	1.4	782	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	50,800	57,000	25,700	452
2.4	682,200	0.9	738	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	32,400	39,500	15,100	418



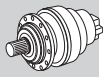
A

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
2.4	685,500	1.2	741	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	32,400	39,500	15,100	434
2.5	653,100	1.5	706	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	50,100	56,200	24,800	450
2.5	664,800	2.2	719	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	78,200	83,000	25,000	462
2.6	621,000	1.3	672	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	31,900	39,000	14,600	434
2.6	625,800	2.2	677	67		**317MR4**	**BE180L4**	**BX180L4**			**N280TC**	77,500	82,300	24,500	464
2.7	617,900	1.1	668	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	31,900	39,000	14,600	418
2.7	609,400	1.2	659	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	31,900	38,900	14,500	436
2.7	609,400	1.6	659	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	49,600	55,600	24,200	452
2.8	576,300	1.5	623	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	31,600	38,600	14,300	436
2.8	580,700	1.7	628	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	49,300	55,300	23,900	450
2.8	576,300	1.7	623	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	49,200	55,200	23,800	452
2.8	578,700	1.9	626	67		**317MR4**	**BE180L4**	**BX180L4**			**N280TC**	76,600	81,400	23,800	464
2.9	571,900	2.6	619	24	**317ML4**		**BE180L4**	**BX180L4**			**N280TC**	76,500	81,300	23,700	462
3.0	543,600	1.2	588	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	31,300	38,200	14,000	418
3.0	546,300	1.5	591	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	31,400	38,300	14,000	434
3.1	524,300	0.9	564	14.8	**313ML4**						**N280TC**	31,900	40,000	12,300	400
3.1	531,600	1.1	575	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	31,200	38,100	13,900	418
3.2	520,500	1.9	563	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	48,500	54,400	23,000	450
3.3	493,200	1.7	533	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	30,900	37,700	13,600	434
3.4	491,000	1.2	528	30		**314MR4**					**N280TC**	30,900	37,700	13,500	420
3.4	485,600	1.7	525	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	30,800	37,600	13,500	436
3.4	485,600	2.3	525	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	48,000	53,900	22,500	452
3.5	462,700	2.4	500	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	47,700	53,500	22,100	450
3.6	461,400	0.9	496	30		**313MR4**					**N280TC**	31,300	39,200	11,800	402
3.6	457,300	1.5	495	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	30,600	37,300	13,200	418
3.6	450,100	1.9	487	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	30,500	37,200	13,100	434
3.9	420,100	1.2	452	14.8	**313ML4**						**N280TC**	30,900	38,700	11,400	400
3.9	418,900	1.0	450	30		**313MR4**					**N280TC**	30,900	38,700	11,400	402
3.9	423,600	1.6	458	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	30,200	36,900	12,900	418
4.0	413,700	1.2	445	30		**314MR4**					**N280TC**	30,100	36,800	12,800	420
4.0	407,700	2.1	441	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	30,100	36,700	12,700	434
4.0	413,400	2.7	447	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	46,900	52,600	21,300	450
4.0	409,200	2.7	443	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	46,900	52,600	21,200	452
4.1	398,000	2.3	430	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	46,700	52,400	21,000	452
4.2	391,300	1.5	421	30		**314MR4**					**N280TC**	29,900	36,500	12,500	420
4.3	381,600	1.1	410	14.8	**311ML4**						**N280TC**	22,000	23,000	8,970	382
4.3	378,400	2.2	409	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	29,800	36,300	12,400	436
4.4	368,900	2.4	399	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	46,200	51,800	20,500	450
4.5	366,500	1.4	394	14.8	**313ML4**						**N280TC**	30,300	38,000	10,900	400
4.5	364,400	1.8	394	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	29,600	36,100	12,300	418
4.6	360,400	1.1	387	30		**313MR4**					**N280TC**	30,300	37,900	10,800	402
4.8	341,700	2.5	370	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	29,300	35,800	12,000	434
4.9	335,300	2.6	363	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	45,600	51,100	19,900	452
5.0	329,700	1.5	354	30		**314MR4**					**N280TC**	29,200	35,600	11,800	420
5.1	323,300	1.2	348	14.8	**311ML4**						**N280TC**	21,500	22,500	8,490	382
5.1	321,400	1.5	346	30		**313MR4**					**N280TC**	29,900	37,400	10,400	402
5.1	318,800	2.6	345	54		**315MR4**	**BE180L4**	**BX180L4**			**N280TC**	29,200	35,600	11,700	436
5.1	319,500	2.8	346	24	**316ML4**		**BE180L4**	**BX180L4**			**N280TC**	45,400	50,900	19,500	450
5.2	317,400	1.0	341	30		**311MR4**					**N280TC**	21,500	22,500	8,430	384
5.3	311,800	2.8	337	60		**316MR4**	**BE180L4**	**BX180L4**			**N280TC**	45,400	50,900	19,400	452
5.7	287,200	1.3	309	30		**313MR4**					**N280TC**	29,900	37,400	10,000	402
5.7	290,400	2.2	314	20	**314ML4**		**BE180L4**	**BX180L4**			**N280TC**	29,200	35,600	11,400	418
5.8	289,500	0.9	304	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,900	37,400	9,980	400
5.9	279,500	3.0	302	24	**315ML4**		**BE180L4**	**BX180L4**			**N280TC**	29,200	35,600	11,200	434
6.0	273,000	1.2	294	30		**311MR4**					**N280TC**	21,500	22,500	8,020	384
6.3	261,500	1.5	281	30		**313MR4**					**N280TC**	29,900	37,400	9,730	402
6.4	256,900	0.9	276	20		**310MR4**					**N280TC**	17,200	22,200	7,860	366

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
6.4	256,900	1.5	276	30		**314MR4**					**N280TC**	29,200	35,600	10,900	420
6.7	247,300	1.5	266	30		**311MR4**					**N280TC**	21,500	22,500	7,760	384
7.0	240,500	1.6	252	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,900	37,400	9,390	400
7.2	233,900	1.4	245	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	21,500	22,500	7,560	382
7.4	228,300	1.8	240	34	**314ML3**		**BE180L4**	**BX180L4**				29,200	35,600	10,400	418
7.4	229,400	2.3	241	40	**315ML3**		**BE180L4**	**BX180L4**				29,200	35,600	10,400	434
7.5	221,000	1.1	238	20		**310MR4**					**N280TC**	17,200	22,200	7,480	366
7.5	220,300	1.5	237	30		**313MR4**					**N280TC**	29,900	37,400	9,190	402
7.5	221,000	1.5	238	30		**314MR4**					**N280TC**	29,200	35,600	10,400	420
7.8	212,700	1.5	229	30		**311MR4**					**N280TC**	21,500	22,500	7,380	384
8.5	198,800	1.9	209	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,900	37,400	8,810	400
8.6	191,400	1.0	206	20		**310MR4**					**N280TC**	17,200	22,200	7,130	366
8.6	196,400	2.7	206	34	**314ML3**		**BE180L4**	**BX180L4**				29,200	35,600	9,870	418
8.8	192,400	1.0	202	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	17,200	22,200	7,080	364
8.8	193,300	1.6	203	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	21,500	22,500	7,090	382
8.8	186,600	1.5	201	30		**313MR4**					**N280TC**	29,900	37,400	8,700	402
9.0	184,300	1.5	198	30		**311MR4**					**N280TC**	21,500	22,500	7,040	384
9.2	184,500	2.3	194	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,900	37,400	8,590	400
9.3	182,200	1.6	191	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	21,500	22,500	6,950	382
9.4	176,100	1.3	189	20		**310MR4**					**N280TC**	17,200	22,200	6,930	366
9.4	176,100	1.5	189	30		**314MR4**					**N280TC**	29,200	35,600	9,600	420
9.6	171,700	1.5	185	30		**313MR4**					**N280TC**	29,900	37,400	8,460	402
9.7	169,500	1.5	182	30		**311MR4**					**N280TC**	21,500	22,500	6,840	384
9.8	173,500	1.5	182	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,900	37,400	8,420	400
10.0	168,900	0.9	177	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	17,200	22,200	6,780	364
10.1	167,500	2.2	176	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,800	37,300	8,320	400
10.4	162,900	1.9	171	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	21,300	22,500	6,700	382
10.7	153,600	0.9	165	20		**309R4**					**N280TC**	14,400	19,500	3,670	350
10.8	156,000	1.5	164	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	16,800	21,700	6,600	364
10.9	155,500	2.8	163	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	29,100	36,500	8,120	400
11.0	154,900	0.9	162	14.8	**309L3**						**N280TC**	14,300	19,400	3,640	348
11.0	153,500	2.0	161	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	20,900	22,500	6,570	382
11.1	149,200	1.5	160	20		**310MR4**					**N280TC**	16,700	21,600	6,560	366
11.1	149,200	1.5	160	30		**314MR4**					**N280TC**	28,300	34,500	9,080	420
11.3	149,700	2.8	157	74		**314MR3C**	**BE180L4**	**BX180L4**				28,100	34,300	9,020	420
11.5	143,600	1.5	154	30		**311MR4**					**N280TC**	20,700	22,500	6,470	384
11.6	145,800	1.8	153	54		**313MR3**	**BE180L4**	**BX180L4**			**N280TC**	28,600	35,800	7,940	402
11.7	141,300	1.1	152	20		**309R4**					**N280TC**	14,000	19,100	3,570	350
11.7	144,100	2.5	151	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	28,500	35,700	7,910	400
11.9	142,300	1.3	149	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	16,400	21,100	6,400	364
12.1	140,100	2.2	147	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	20,400	22,500	6,370	382
12.1	139,800	1.7	147	54		**311MR3**	**BE180L4**	**BX180L4**			**N280TC**	20,300	22,500	6,360	384
12.4	136,300	2.7	143	24	**313ML3**		**BE180L4**	**BX180L4**			**N280TC**	28,000	35,100	7,770	400
12.8	133,100	1.0	139	14.8	**309L3**						**N280TC**	13,600	18,500	3,460	348
13.1	128,900	1.7	135	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	15,900	20,500	6,200	364
13.1	126,400	1.5	136	20		**310MR4**					**N280TC**	15,900	20,500	6,200	366
13.3	126,900	2.4	133	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	19,800	22,500	6,160	382
14.0	121,200	2.9	127	54		**313MR3**	**BE180L4**	**BX180L4**			**N280TC**	27,000	33,800	7,470	402
14.1	120,700	0.9	126	14.8	**307L3**						**N280TC**	13,200	18,000	4,190	330
14.1	120,700	1.1	126	14.8	**309L3**						**N280TC**	13,200	18,000	3,350	348
14.4	117,800	2.5	124	54		**311MR3**	**BE180L4**	**BX180L4**			**N280TC**	19,300	22,500	6,010	384
14.8	114,800	1.0	120	30		**309R3**					**N280TC**	13,000	17,700	3,290	350
14.8	114,800	1.3	120	30		**310MR3**					**N280TC**	15,300	19,800	5,950	366
14.9	113,400	1.7	119	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	15,300	19,700	5,940	364
15.5	109,200	2.7	115	24	**311ML3**		**BE180L4**	**BX180L4**			**N280TC**	18,900	22,500	5,860	382
15.7	108,600	1.2	113	14.8	**309L3**						**N280TC**	12,800	17,400	3,230	348
16.5	102,700	2.0	108	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	14,800	19,100	5,740	364



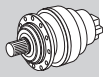
A

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
17.0	99,300	2.9	104	54		**311MR3**	**BE180L4**	**BX180L4**			**N280TC**	18,400	22,500	5,680	384
17.6	96,100	1.9	101	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	14,500	18,800	5,620	364
17.7	96,200	1.1	100	14.8	**307L3**						**N280TC**	12,400	16,800	3,880	330
17.7	96,200	1.4	100	14.8	**309L3**						**N280TC**	12,400	16,800	3,110	348
17.9	94,900	1.2	99.0	30		**309R3**					**N280TC**	12,300	16,800	3,090	350
17.9	94,900	1.4	99.0	30		**310MR3**					**N280TC**	14,500	18,700	5,580	366
18.4	91,800	2.8	96.3	54		**311MR3**	**BE180L4**	**BX180L4**			**N280TC**	17,900	22,500	5,530	384
19.1	89,200	1.2	93.0	14.8	**307L3**						**N280TC**	12,100	16,400	3,790	330
19.1	89,200	1.4	93.0	14.8	**309L3**						**N280TC**	12,100	16,400	3,030	348
19.1	88,400	2.2	92.7	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	14,200	18,300	5,460	364
21.3	80,000	1.1	83.4	30		**307R3**					**N280TC**	11,700	15,900	3,650	332
21.3	80,000	1.5	83.4	30		**309R3**					**N280TC**	11,700	15,900	2,920	350
21.3	80,000	1.5	83.4	30		**310MR3**					**N280TC**	13,700	17,700	5,270	366
22.0	77,300	1.2	80.6	14.8	**307L3**						**N280TC**	11,600	15,800	3,610	330
22.0	77,300	1.7	80.6	14.8	**309L3**						**N280TC**	11,600	15,800	2,890	348
22.1	76,600	2.3	80.3	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	13,600	17,500	5,210	364
22.6	75,400	1.3	78.6	30		**307R3**					**N280TC**	11,500	15,600	3,580	332
22.6	75,400	1.5	78.6	30		**310MR3**					**N280TC**	13,500	17,400	5,170	366
23.1	73,800	1.0	77.0	10.1	**306L3**						**N280TC**	9,130	11,500	2,760	312
23.9	71,100	1.4	74.1	14.8	**307L3**						**N280TC**	11,300	15,400	3,510	330
23.9	71,100	1.8	74.1	14.8	**309L3**						**N280TC**	11,300	15,400	2,810	348
24.0	70,400	2.7	73.9	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	13,200	17,100	5,060	364
24.4	69,900	0.9	72.9	18.8		**306R3**					**N280TC**	8,990	11,300	2,710	314
24.7	68,800	1.3	71.8	30		**307R3**					**N280TC**	11,200	15,200	3,470	332
24.7	68,800	1.5	71.8	30		**309R3**					**N280TC**	11,200	15,200	2,780	350
24.7	68,800	1.5	71.8	30		**310MR3**					**N280TC**	13,100	16,900	5,010	366
26.3	64,700	1.0	67.5	18.8		**306R3**					**N280TC**	8,780	11,100	2,650	314
27.2	62,500	1.0	65.2	10.1	**306L3**						**N280TC**	8,690	11,000	2,620	312
27.3	62,300	1.5	65.0	30		**307R3**					**N280TC**	10,900	14,800	3,360	332
27.3	62,300	1.5	65.0	30		**309R3**					**N280TC**	10,900	14,800	2,690	350
27.3	62,300	1.5	65.0	30		**310MR3**					**N280TC**	12,700	16,400	4,850	366
28.4	59,700	2.8	62.6	24	**310ML3**		**BE180L4**	**BX180L4**			**N280TC**	12,600	16,300	4,790	364
29.3	58,000	1.6	60.5	14.8	**307L3**						**N280TC**	10,600	14,500	3,280	330
29.3	58,000	2.1	60.5	14.8	**309L3**						**N280TC**	10,600	14,500	2,620	348
31	55,700	1.2	58.1	18.8		**306R3**					**N280TC**	8,390	10,600	2,520	314
32	53,600	1.5	55.9	30		**307R3**					**N280TC**	10,400	14,100	3,190	332
32	53,600	1.5	55.9	30		**309R3**					**N280TC**	10,400	14,100	2,560	350
32	53,600	1.5	55.9	30		**310MR3**					**N280TC**	12,200	15,700	4,610	366
33	51,100	1.2	53.2	10.1	**306L3**						**N280TC**	8,180	10,300	2,440	312
35	49,100	1.9	51.3	14.8	**307L3**						**N280TC**	10,100	13,800	3,100	330
35	49,100	2.3	51.3	14.8	**309L3**						**N280TC**	10,100	13,800	2,480	348
38	45,700	1.3	46.5	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	7,850	9,900	2,340	312
38	44,400	1.4	46.3	18.8		**306R3**					**N280TC**	7,840	9,880	2,330	314
38	45,900	1.6	46.7	24	**307L2**		**BE180L4**	**BX180L4**			**N280TC**	9,840	13,400	3,010	330
38	45,900	2.4	46.7	24	**309L2**		**BE180L4**	**BX180L4**			**N280TC**	9,840	13,400	2,410	348
40	42,700	1.5	44.6	30		**307R3**					**N280TC**	9,700	13,200	2,960	332
40	42,700	1.5	44.6	30		**309R3**					**N280TC**	9,700	13,200	2,370	350
40	42,700	1.5	44.6	30		**310MR3**					**N280TC**	11,400	14,700	4,280	366
45	37,600	1.5	39.2	18.8		**306R3**					**N280TC**	7,460	9,400	2,210	314
46	38,000	1.0	38.4	12.1	**305L2**						**N280TC**	5,400	6,820	1,500	294
46	37,800	1.5	38.4	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	7,420	9,350	2,190	312
46	38,000	1.9	38.6	24	**307L2**		**BE180L4**	**BX180L4**			**N280TC**	9,290	12,600	2,820	330
46	38,000	2.9	38.6	24	**309L2**		**BE180L4**	**BX180L4**			**N280TC**	9,290	12,600	2,260	348
47	36,200	1.5	37.7	30		**307R3**					**N280TC**	9,230	12,500	2,800	332
47	36,200	1.5	37.7	30		**309R3**					**N280TC**	9,230	12,500	2,240	350
47	36,200	1.5	37.7	30		**310MR3**					**N280TC**	10,800	14,000	4,050	366
48	35,600	1.1	37.1	18.8		**305R3**					**N280TC**	5,340	6,750	1,490	296

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
53	31,800	1.5	33.2	18.8		**306R3**					**N280TC**	7,100	8,950	2,090	314
54	32,500	1.8	33.1	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	7,090	8,940	2,090	312
55	32,000	2.5	32.6	24	**307L2**		**BE180L4**	**BX180L4**			**N280TC**	8,830	12,000	2,670	330
56	30,200	1.1	31.5	18.8		**305R3**					**N280TC**	5,080	6,420	1,410	296
56	30,300	1.5	31.6	30		**307R3**					**N280TC**	8,750	11,900	2,640	332
56	30,300	1.5	31.6	30		**309R3**					**N280TC**	8,750	11,900	2,110	350
58	30,400	1.2	30.8	12.1	**305L2**						**N280TC**	5,050	6,380	1,400	294
58	30,100	2.7	30.7	24	**307L2**		**BE180L4**	**BX180L4**			**N280TC**	8,670	11,800	2,620	330
62	28,000	2.0	28.4	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	6,780	8,540	1,980	312
63	27,500	2.8	28.0	24	**307L2**		**BE180L4**	**BX180L4**			**N280TC**	8,440	11,500	2,540	330
67	26,100	1.2	26.4	12.1	**305L2**						**N280TC**	4,820	6,090	1,330	294
67	25,900	2.1	26.4	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	6,620	8,350	1,930	312
69	24,600	1.1	25.7	18.8		**304R3**					**N280TC**	4,780	6,040	1,310	278
69	24,600	1.2	25.7	18.8		**305R3**					**N280TC**	4,780	6,040	1,310	296
72	24,200	1.1	24.5	12.1	**304L2**						**N280TC**	4,720	5,960	1,290	276
72	24,200	1.3	24.5	12.1	**305L2**						**N280TC**	4,720	5,960	1,290	294
75	23,100	3.0	23.5	47		**307R2**	**BE180L4**	**BX180L4**			**N280TC**	8,010	10,900	2,390	332
78	22,500	1.1	22.7	12.1	**304L2**						**N280TC**	4,610	5,830	1,260	276
78	22,500	1.5	22.7	12.1	**305L2**						**N280TC**	4,610	5,830	1,260	294
78	22,300	2.3	22.7	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	6,330	7,980	1,840	312
85	20,500	1.2	20.8	12.1	**304L2**						**N280TC**	4,490	5,670	1,220	276
85	20,500	1.3	20.8	12.1	**305L2**						**N280TC**	4,490	5,670	1,220	294
92	19,000	1.3	19.2	24		**305R2**					**N280TC**	4,380	5,540	1,190	296
92	19,000	1.5	19.2	24		**306R2**					**N280TC**	6,020	7,590	1,740	314
98	17,900	0.9	18.1	12.1	**303L2**						**N280TC**	4,310	5,440	1,170	258
98	17,900	1.4	18.1	12.1	**304L2**						**N280TC**	4,310	5,440	1,170	276
98	17,900	1.7	18.1	12.1	**305L2**						**N280TC**	4,310	5,440	1,170	294
98	17,700	2.8	18.1	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	5,910	7,450	1,710	312
105	16,600	1.3	16.8	24		**304R2**					**N280TC**	4,210	5,320	1,140	278
112	15,700	1.0	15.9	24		**303R2**					**N280TC**	4,140	5,230	1,120	260
112	15,700	1.5	15.9	24		**305R2**					**N280TC**	4,140	5,230	1,120	296
112	15,700	1.5	15.9	24		**306R2**					**N280TC**	5,690	7,170	1,630	314
116	15,200	0.9	15.3	12.1	**303L2**						**N280TC**	4,100	5,180	1,110	258
116	15,200	1.6	15.3	12.1	**304L2**						**N280TC**	4,100	5,180	1,110	276
116	15,200	1.7	15.3	12.1	**305L2**						**N280TC**	4,100	5,180	1,110	294
116	15,000	2.8	15.3	17.4	**306L2**		**BE180L4**	**BX180L4**			**N280TC**	5,630	7,090	1,610	312
130	13,500	1.2	13.7	24		**303R2**					**N280TC**	3,960	5,000	1,070	260
130	13,500	1.6	13.7	24		**304R2**					**N280TC**	3,960	5,000	1,070	278
130	13,500	1.6	13.7	24		**305R2**					**N280TC**	3,960	5,000	1,070	296
130	13,500	1.6	13.7	24		**306R2**					**N280TC**	5,440	6,850	1,550	314
142	12,400	1.1	12.5	12.1	**303L2**						**N280TC**	3,860	4,870	1,030	258
142	12,400	1.8	12.5	12.1	**304L2**						**N280TC**	3,860	4,870	1,030	276
142	12,400	2.0	12.5	12.1	**305L2**						**N280TC**	3,860	4,870	1,030	294
163	10,800	1.5	10.9	24		**303R2**					**N280TC**	3,700	4,670	990	260
163	10,800	1.5	10.9	24		**304R2**					**N280TC**	3,700	4,670	990	278
163	10,800	1.5	10.9	24		**305R2**					**N280TC**	3,700	4,670	990	296
163	10,800	1.5	10.9	24		**306R2**					**N280TC**	5,080	6,400	1,440	314
192	9,120	1.5	9.23	24		**303R2**					**N280TC**	3,520	4,440	930	260
192	9,120	1.5	9.23	24		**304R2**					**N280TC**	3,520	4,440	930	278
192	9,120	1.5	9.23	24		**305R2**					**N280TC**	3,520	4,440	930	296
192	9,120	1.5	9.23	24		**306R2**					**N280TC**	4,830	6,090	1,360	314
203	8,640	1.1	8.74	16.1		**301R2**					**N280TC**	1,800	2,140	310	244
237	7,600	1.3	7.50	14.8	**303L1**		**BE180L4**	**BX180L4**			**N280TC**	3,310	4,180	870	258
237	7,600	2.5	7.50	17.4	**305L1**		**BE180L4**	**BX180L4**			**N280TC**	3,310	4,180	870	294



A

P_1 = 30 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
249	7,050	1.2	7.13	16.1		**301R2**					**N280TC**	1,700	2,010	290	244
270	6,660	2.4	6.57	16.1	**304L1**		**BE180L4**	**BX180L4**			**N280TC**	3,180	4,010	830	276
286	6,280	1.9	6.20	14.8	**303L1**		**BE180L4**	**BX180L4**			**N280TC**	3,120	3,940	820	258
308	5,880	1.3	5.77	10.1	**301L1**						**N280TC**	1,590	1,890	270	242
333	5,400	2.3	5.33	14.8	**303L1**		**BE180L4**	**BX180L4**			**N280TC**	2,980	3,770	780	258
416	4,340	1.0	4.26	10.1	**300L1**						**N280TC**	1,450	1,840	240	226
416	4,340	1.7	4.26	10.1	**301L1**						**N280TC**	1,450	1,730	240	242
418	4,310	2.8	4.25	14.8	**303L1**		**BE180L4**	**BX180L4**			**N280TC**	2,790	3,520	720	258
510	3,550	1.1	3.48	10.1	**300L1**						**N280TC**	1,370	1,730	230	226
510	3,550	2.0	3.48	10.1	**301L1**						**N280TC**	1,370	1,620	230	242

P_1 = 40 hp

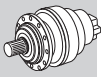
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.3	1,762,700	1.6	1389	40	**319L4**		**IEC200L4**				**N320TC**	99,400	109,400	41,500	486
1.5	1,516,300	1.9	1195	40	**319L4**		**IEC200L4**				**N320TC**	97,200	107,100	39,500	486
1.6	1,439,400	1.0	1134	24	**317ML4**		**IEC200L4**					83,500	88,700	29,100	462
1.7	1,310,400	1.2	1032	24	**317ML4**		**IEC200L4**					82,400	87,500	28,200	462
1.7	1,344,300	1.7	1059	30	**318ML4**		**IEC200L4**				**N320TC**	84,400	88,800	38,000	474
1.7	1,277,600	2.2	1007	40	**319L4**		**IEC200L4**				**N320TC**	94,900	104,500	37,300	486
1.8	1,210,100	1.0	953	67		**317MR4**	**IEC200L4**					81,500	86,500	27,500	464
1.9	1,147,100	1.2	904	24	**317ML4**		**IEC200L4**					80,800	85,900	27,000	462
1.9	1,156,400	2.1	911	30	**318ML4**		**IEC200L4**				**N320TC**	82,600	86,900	36,100	474
1.9	1,157,300	2.4	912	40	**319L4**		**IEC200L4**				**N320TC**	93,600	103,000	36,100	486
1.9	1,150,500	2.4	906	154		**319R4C**	**IEC200L4**				**N320TC**	93,500	102,900	36,000	488
2.0	1,117,000	0.9	880	24	**316ML4**		**IEC200L4**					51,800	58,100	26,800	450
2.2	995,200	1.0	784	24	**316ML4**		**IEC200L4**					50,900	57,100	25,800	450
2.2	1,005,300	1.7	792	24	**317ML4**		**IEC200L4**					79,300	84,300	25,800	462
2.2	1,019,600	1.4	803	67		**317MR4**	**IEC200L4**					79,500	84,500	26,000	464
2.2	1,018,100	2.7	802	40	**319L4**		**IEC200L4**				**N320TC**	91,900	101,200	34,600	486
2.3	992,900	1.0	782	60		**316MR4**	**IEC200L4**					50,900	57,100	25,700	452
2.3	974,400	2.4	768	30	**318ML4**		**IEC200L4**				**N320TC**	80,600	84,800	34,100	474
2.3	989,600	2.8	780	154		**319R4C**	**IEC200L4**				**N320TC**	91,500	100,700	34,300	488
2.4	912,700	1.6	719	24	**317ML4**		**IEC200L4**					78,200	83,100	25,000	462
2.4	921,500	2.5	726	30	**318ML4**		**IEC200L4**				**N320TC**	79,900	84,200	33,500	474
2.5	896,700	1.1	706	24	**316ML4**		**IEC200L4**					50,200	56,300	24,900	450
2.5	877,400	2.6	691	148		**318MR4C**	**IEC200L4**				**N320TC**	79,400	83,600	32,900	476
2.6	852,600	1.0	672	24	**315ML4**		**IEC200L4**					32,000	39,000	14,700	434
2.6	859,100	1.6	677	67		**317MR4**	**IEC200L4**					77,600	82,400	24,500	464
2.7	836,600	1.2	659	60		**316MR4**	**IEC200L4**					49,700	55,700	24,300	452
2.7	821,000	2.8	647	30	**318ML4**		**IEC200L4**				**N320TC**	78,600	82,800	32,200	474
2.8	791,200	1.1	623	54		**315MR4**	**IEC200L4**					31,600	38,600	14,300	436
2.8	797,200	1.2	628	24	**316ML4**		**IEC200L4**					49,300	55,300	23,900	450
2.8	791,200	1.3	623	60		**316MR4**	**IEC200L4**					49,300	55,300	23,900	452
2.8	785,200	1.9	619	24	**317ML4**		**IEC200L4**					76,600	81,400	23,800	462
2.8	794,500	1.4	626	67		**317MR4**	**IEC200L4**					76,700	81,500	23,900	464

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

P_1 = 40 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
2.9	776,500	2.9	612	30	**318ML4**		**IEC200L4**				**N320TC**	78,000	82,100	31,600	474
3.0	750,000	1.1	591	24	**315ML4**		**IEC200L4**					31,400	38,300	14,100	434
3.0	754,800	3.0	595	148		**318MR4C**	**IEC200L4**				**N320TC**	77,700	81,800	31,300	476
3.1	714,500	1.4	563	24	**316ML4**		**IEC200L4**					48,600	54,500	23,100	450
3.2	700,200	2.4	552	24	**317ML4**		**IEC200L4**					75,300	80,000	22,900	462
3.3	677,100	1.2	533	24	**315ML4**		**IEC200L4**					30,900	37,800	13,600	434
3.4	666,700	1.3	525	54		**315MR4**	**IEC200L4**					30,900	37,700	13,500	436
3.4	666,700	1.7	525	60		**316MR4**	**IEC200L4**					48,100	53,900	22,500	452
3.4	660,000	2.2	520	67		**317MR4**	**IEC200L4**					74,700	79,400	22,500	464
3.5	635,300	1.7	500	24	**316ML4**		**IEC200L4**					47,800	53,600	22,200	450
3.6	627,800	1.1	495	20	**314ML4**		**IEC200L4**					30,600	37,400	13,300	418
3.6	617,900	1.4	487	24	**315ML4**		**IEC200L4**					30,500	37,300	13,200	434
3.6	625,700	2.4	493	24	**317ML4**		**IEC200L4**					74,100	78,800	22,100	462
3.8	581,500	1.1	458	20	**314ML4**		**IEC200L4**					30,300	37,000	12,900	418
3.9	567,500	1.9	447	24	**316ML4**		**IEC200L4**					47,000	52,700	21,400	450
3.9	569,700	2.8	449	24	**317ML4**		**IEC200L4**					73,200	77,700	21,400	462
4.0	559,800	1.5	441	24	**315ML4**		**IEC200L4**					30,100	36,800	12,800	434
4.0	561,700	2.0	443	60		**316MR4**	**IEC200L4**					46,900	52,600	21,300	452
4.0	556,100	2.4	438	67		**317MR4**	**IEC200L4**					72,900	77,400	21,200	464
4.1	546,400	1.7	430	60		**316MR4**	**IEC200L4**					46,700	52,400	21,100	452
4.3	519,500	1.6	409	54		**315MR4**	**IEC200L4**					29,800	36,400	12,400	436
4.4	506,400	1.8	399	24	**316ML4**		**IEC200L4**					46,200	51,900	20,600	450
4.4	506,400	2.5	399	67		**317MR4**	**IEC200L4**					71,900	76,400	20,600	464
4.5	500,200	1.3	394	20	**314ML4**		**IEC200L4**					29,600	36,200	12,300	418
4.8	469,100	1.8	370	24	**315ML4**		**IEC200L4**					29,400	35,800	12,000	434
4.9	460,400	1.9	363	60		**316MR4**	**IEC200L4**					45,600	51,200	19,900	452
5.1	437,700	1.9	345	54		**315MR4**	**IEC200L4**					29,200	35,600	11,800	436
5.1	438,700	2.0	346	24	**316ML4**		**IEC200L4**					45,400	50,900	19,600	450
5.2	428,000	2.1	337	60		**316MR4**	**IEC200L4**					45,400	50,900	19,400	452
5.2	426,700	2.5	336	67		**317MR4**	**IEC200L4**					70,700	75,100	19,400	464
5.5	403,600	2.7	318	24	**316ML4**		**IEC200L4**					45,400	50,900	19,100	450
5.6	398,600	1.6	314	20	**314ML4**		**IEC200L4**					29,200	35,600	11,400	418
5.8	383,700	2.2	302	24	**315ML4**		**IEC200L4**					29,200	35,600	11,200	434
6.1	366,800	2.5	289	60		**316MR4**	**IEC200L4**					45,400	50,900	18,500	452
6.6	341,100	2.3	269	54		**315MR4**	**IEC200L4**					29,200	35,600	10,800	436
6.6	341,100	2.5	269	60		**316MR4**	**IEC200L4**					45,400	50,900	18,000	452
6.7	332,500	2.5	262	67		**317MR4**	**IEC200L4**					70,700	75,100	17,900	464
7.0	330,200	1.1	252	24	**313ML3**		**IEC200L4**					29,900	37,400	9,410	400
7.2	321,000	1.0	245	24	**311ML3**		**IEC200L4**					21,500	22,500	7,580	382
7.3	313,400	1.3	240	34	**314ML3**		**IEC200L4**				**N320TC**	29,200	35,600	10,400	418
7.3	315,000	1.7	241	40	**315ML3**		**IEC200L4**				**N320TC**	29,200	35,600	10,400	434
7.8	285,900	2.5	225	54		**315MR4**	**IEC200L4**					29,200	35,600	10,200	436
7.8	285,900	2.5	225	60		**316MR4**	**IEC200L4**					45,400	50,900	17,000	452
8.0	278,600	2.5	220	67		**317MR4**	**IEC200L4**					70,700	75,100	16,800	464
8.4	273,000	1.4	209	24	**313ML3**		**IEC200L4**					29,900	37,400	8,830	400
8.5	269,600	2.0	206	34	**314ML3**		**IEC200L4**				**N320TC**	29,200	35,600	9,900	418
8.5	271,000	2.5	207	40	**315ML3**		**IEC200L4**				**N320TC**	29,200	35,600	9,910	434
8.7	265,400	1.2	203	24	**311ML3**		**IEC200L4**					21,500	22,500	7,110	382

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



A

P_1 = 40 hp

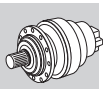
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
9.1	253,300	1.7	194	24	**313ML3**		**IEC200L4**					29,900	37,400	8,620	400
9.2	250,200	1.1	191	24	**311ML3**		**IEC200L4**					21,500	22,500	6,970	382
9.7	238,200	1.1	182	24	**313ML3**		**IEC200L4**					29,900	37,400	8,440	400
10.0	230,000	1.6	176	24	**313ML3**		**IEC200L4**					29,900	37,400	8,340	400
10.1	227,200	2.3	174	34	**314ML3**		**IEC200L4**				**N320TC**	29,000	35,400	9,350	418
10.1	228,300	2.9	174	40	**315ML3**		**IEC200L4**				**N320TC**	29,100	35,500	9,360	434
10.3	223,600	1.4	171	24	**311ML3**		**IEC200L4**					21,300	22,500	6,720	382
10.7	214,800	2.4	164	34	**314ML3**		**IEC200L4**				**N320TC**	28,600	34,900	9,180	418
10.8	214,100	1.1	164	24	**310ML3**		**IEC200L4**					16,800	21,800	6,620	364
10.8	213,500	2.1	163	24	**313ML3**		**IEC200L4**					29,200	36,600	8,140	400
10.9	210,800	1.5	161	24	**311ML3**		**IEC200L4**					21,000	22,500	6,590	382
11.2	205,600	2.0	157	74		**314MR3C**	**IEC200L4**				**N320TC**	28,200	34,400	9,040	420
11.2	205,600	2.6	157	121		**315MR3C**	**IEC200L4**				**N320TC**	28,200	34,400	9,040	436
11.5	200,200	1.3	153	54		**313MR3**	**IEC200L4**					28,600	35,900	7,970	402
11.6	197,900	1.8	151	24	**313ML3**		**IEC200L4**					28,500	35,700	7,940	400
11.8	195,400	1.0	149	24	**310ML3**		**IEC200L4**					16,400	21,200	6,420	364
12.0	192,400	1.6	147	24	**311ML3**		**IEC200L4**					20,400	22,500	6,390	382
12.0	191,900	1.3	147	54		**311MR3**	**IEC200L4**					20,400	22,500	6,380	384
12.3	187,100	2.0	143	24	**313ML3**		**IEC200L4**					28,100	35,100	7,790	400
13.0	177,000	1.2	135	24	**310ML3**		**IEC200L4**					15,900	20,500	6,210	364
13.0	176,800	2.9	135	74		**314MR3C**	**IEC200L4**				**N320TC**	26,900	32,900	8,600	420
13.1	176,500	2.4	135	24	**313ML3**		**IEC200L4**					27,600	34,500	7,640	400
13.2	174,300	1.7	133	24	**311ML3**		**IEC200L4**					19,800	22,500	6,180	382
13.8	166,300	2.1	127	54		**313MR3**	**IEC200L4**					27,100	33,900	7,490	402
14.2	161,700	1.8	124	54		**311MR3**	**IEC200L4**					19,400	22,500	6,030	384
14.6	157,700	2.3	120	24	**313ML3**		**IEC200L4**					26,700	33,400	7,360	400
14.8	155,700	1.2	119	24	**310ML3**		**IEC200L4**					15,300	19,800	5,950	364
15.4	149,900	2.0	115	24	**311ML3**		**IEC200L4**					18,900	22,500	5,880	382
15.5	148,500	2.8	113	74		**314MR3B**	**IEC200L4**				**N320TC**	25,600	31,200	8,110	420
16.0	143,600	2.7	110	24	**313ML3**		**IEC200L4**					25,900	32,500	7,130	400
16.3	141,100	1.5	108	24	**310ML3**		**IEC200L4**					14,900	19,200	5,760	364
16.4	140,200	2.3	107	54		**313MR3**	**IEC200L4**					25,700	32,200	7,070	402
16.9	136,300	2.1	104	54		**311MR3**	**IEC200L4**					18,400	22,500	5,690	384
17.0	135,800	2.2	104	24	**311ML3**		**IEC200L4**					18,400	22,500	5,690	382
17.5	131,900	1.4	101	24	**310ML3**		**IEC200L4**					14,600	18,800	5,630	364
18.0	127,600	2.5	97.5	54		**313MR3**	**IEC200L4**					25,000	31,300	6,860	402
18.3	126,000	2.0	96.3	54		**311MR3**	**IEC200L4**					18,000	22,500	5,550	384
19.0	121,300	1.6	92.7	24	**310ML3**		**IEC200L4**					14,200	18,300	5,480	364
19.7	116,800	2.5	89.3	24	**311ML3**		**IEC200L4**					17,600	22,500	5,410	382
21.4	107,500	2.5	82.2	54		**313MR3**	**IEC200L4**					23,800	29,800	6,480	402
21.7	106,200	2.4	81.1	54		**311MR3**	**IEC200L4**					17,100	22,300	5,240	384
21.9	105,100	1.7	80.3	24	**310ML3**		**IEC200L4**					13,600	17,600	5,220	364
22.8	101,200	2.8	77.3	24	**311ML3**		**IEC200L4**					16,800	22,000	5,160	382
23.8	96,700	2.0	73.9	24	**310ML3**		**IEC200L4**					13,300	17,100	5,080	364
24.7	93,100	2.9	71.1	24	**311ML3**		**IEC200L4**					16,400	21,400	5,010	382
25.2	91,500	2.5	69.9	54		**313MR3**	**IEC200L4**					22,700	28,400	6,140	402
25.9	89,000	2.5	68.0	54		**311MR3**	**IEC200L4**					16,200	21,100	4,940	384
27.5	83,800	2.5	64.0	54		**313MR3**	**IEC200L4**					22,100	27,600	5,960	402

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

P_1 = 40 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
27.8	82,700	2.5	63.2	54		**311MR3**	**IEC200L4**					15,800	20,700	4,820	384
28.1	81,900	2.0	62.6	24	**310ML3**		**IEC200L4**					12,600	16,300	4,810	364
33	69,400	2.3	53.0	24	**310ML3**		**IEC200L4**					12,000	15,500	4,550	364
33	69,300	2.5	53.0	54		**311MR3**	**IEC200L4**					15,000	19,600	4,550	384
33	70,200	2.5	53.7	54		**313MR3**	**IEC200L4**					20,900	26,200	5,620	402
38	62,700	0.9	46.5	17.4	**306L2**		**IEC200L4**					7,870	9,920	2,340	312
38	63,000	1.2	46.7	24	**307L2**		**IEC200L4**					9,860	13,400	3,020	330
38	63,000	1.8	46.7	24	**309L2**		**IEC200L4**					9,860	13,400	2,410	348
38	63,000	2.5	46.7	30	**310ML2**		**IEC200L4**				**N320TC**	11,600	14,900	4,360	364
46	51,900	1.1	38.4	17.4	**306L2**		**IEC200L4**					7,430	9,370	2,200	312
46	52,100	1.4	38.6	24	**307L2**		**IEC200L4**					9,310	12,700	2,830	330
46	52,100	2.1	38.6	24	**309L2**		**IEC200L4**					9,310	12,700	2,270	348
53	44,600	1.3	33.1	17.4	**306L2**		**IEC200L4**					7,110	8,960	2,090	312
54	43,900	1.8	32.6	24	**307L2**		**IEC200L4**					8,850	12,000	2,680	330
54	43,900	2.5	32.6	24	**309L2**		**IEC200L4**					8,850	12,000	2,140	348
57	41,400	2.0	30.7	24	**307L2**		**IEC200L4**					8,690	11,800	2,620	330
62	38,400	1.5	28.4	17.4	**306L2**		**IEC200L4**					6,790	8,560	1,990	312
63	37,800	2.0	28.0	24	**307L2**		**IEC200L4**					8,460	11,500	2,540	330
63	37,800	2.8	28.0	24	**309L2**		**IEC200L4**					8,460	11,500	2,040	348
67	35,500	1.5	26.4	17.4	**306L2**		**IEC200L4**					6,640	8,370	1,940	312
69	34,200	2.2	25.4	24	**307L2**		**IEC200L4**					8,210	11,200	2,460	330
69	34,200	2.6	25.4	24	**309L2**		**IEC200L4**					8,210	11,200	1,970	348
75	31,800	2.2	23.5	47		**307R2**	**IEC200L4**					8,030	10,900	2,400	332
75	31,800	2.5	23.5	47		**309R2**	**IEC200L4**					8,030	10,900	1,920	350
78	30,600	1.7	22.7	17.4	**306L2**		**IEC200L4**					6,350	8,000	1,840	312
81	29,400	2.5	21.8	24	**307L2**		**IEC200L4**					7,850	10,700	2,340	330
81	29,400	2.9	21.8	24	**309L2**		**IEC200L4**					7,850	10,700	1,870	348
89	26,800	2.5	19.8	47		**307R2**	**IEC200L4**					7,630	10,400	2,270	332
89	26,800	2.5	19.8	47		**309R2**	**IEC200L4**					7,630	10,400	1,810	350
97	24,400	2.0	18.1	17.4	**306L2**		**IEC200L4**					5,930	7,470	1,710	312
101	23,500	2.9	17.4	24	**307L2**		**IEC200L4**					7,330	9,970	2,170	330
114	20,800	2.5	15.5	47		**307R2**	**IEC200L4**					7,080	9,620	2,090	332
114	20,800	2.5	15.5	47		**309R2**	**IEC200L4**					7,080	9,620	1,670	350
115	20,600	2.0	15.3	17.4	**306L2**		**IEC200L4**					5,640	7,110	1,620	312
136	17,500	2.3	13.0	17.4	**306L2**		**IEC200L4**					5,370	6,760	1,530	312
136	17,500	2.5	13.0	47		**307R2**	**IEC200L4**					6,710	9,130	1,970	332
136	17,500	2.5	13.0	47		**309R2**	**IEC200L4**					6,710	9,130	1,570	350
235	10,400	1.0	7.50	14.8	**303L1**		**IEC200L4**					3,310	4,190	870	258
235	10,400	1.8	7.50	17.4	**305L1**		**IEC200L4**					3,310	4,190	870	294
268	9,140	1.7	6.57	16.1	**304L1**		**IEC200L4**					3,190	4,020	840	276
284	8,620	1.4	6.20	14.8	**303L1**		**IEC200L4**					3,130	3,950	820	258
284	8,620	2.6	6.20	17.4	**305L1**		**IEC200L4**					3,130	3,950	820	294
330	7,420	1.7	5.33	14.8	**303L1**		**IEC200L4**					2,990	3,780	780	258
330	7,420	2.3	5.33	16.1	**304L1**		**IEC200L4**					2,990	3,780	780	276
330	7,420	2.9	5.33	17.4	**305L1**		**IEC200L4**					2,990	3,780	780	294
414	5,910	2.0	4.25	14.8	**303L1**		**IEC200L4**					2,800	3,530	720	258
414	5,910	2.7	4.25	16.1	**304L1**		**IEC200L4**					2,800	3,530	720	276
489	5,010	2.3	3.60	14.8	**303L1**		**IEC200L4**					2,660	3,360	680	258

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



A

P_1 = 50 hp

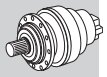
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.3	2,170,700	1.3	1389	40	**319L4**		**IEC225S4**				**N320TC**	99,300	109,400	41,500	486
1.5	1,867,300	1.6	1195	40	**319L4**		**IEC225S4**				**N320TC**	97,200	107,000	39,500	486
1.6	1,753,200	2.7	1122	47	**321L4**		**IEC225S4**				**N320TC**	136,300	162,200	235,500	428
1.7	1,655,500	1.4	1059	30	**318ML4**		**IEC225S4**				**N320TC**	84,300	88,800	37,900	474
1.8	1,573,400	1.8	1007	40	**319L4**		**IEC225S4**				**N320TC**	94,900	104,400	37,300	486
1.9	1,424,100	1.7	911	30	**318ML4**		**IEC225S4**				**N320TC**	82,500	86,900	36,100	474
1.9	1,425,200	2.0	912	40	**319L4**		**IEC225S4**				**N320TC**	93,500	103,000	36,100	486
1.9	1,416,800	2.0	906	154		**319R4C**	**IEC225S4**				**N320TC**	93,500	102,900	36,000	488
2.1	1,329,500	2.6	850	40	**319L4**		**IEC225S4**				**N320TC**	92,600	102,000	35,200	486
2.2	1,253,800	2.2	802	40	**319L4**		**IEC225S4**				**N320TC**	91,800	101,100	34,600	486
2.3	1,199,900	1.9	768	30	**318ML4**		**IEC225S4**				**N320TC**	80,500	84,800	34,100	474
2.3	1,218,700	2.3	780	154		**319R4C**	**IEC225S4**				**N320TC**	91,500	100,700	34,200	488
2.4	1,134,800	2.0	726	30	**318ML4**		**IEC225S4**				**N320TC**	79,900	84,100	33,400	474
2.6	1,080,500	2.1	691	148		**318MR4C**	**IEC225S4**				**N320TC**	79,300	83,500	32,900	476
2.7	1,011,100	2.2	647	30	**318ML4**		**IEC225S4**				**N320TC**	78,600	82,800	32,200	474
2.7	1,023,400	2.6	655	127		**319R4B**	**IEC225S4**				**N320TC**	89,200	98,200	32,300	488
2.7	1,026,900	2.6	657	154		**319R4C**	**IEC225S4**				**N320TC**	89,300	98,300	32,300	488
2.8	977,000	2.7	625	40	**319L4**		**IEC225S4**				**N320TC**	88,600	97,600	31,800	486
2.9	956,200	2.4	612	30	**318ML4**		**IEC225S4**				**N320TC**	78,000	82,100	31,600	474
3.0	929,500	2.4	595	148		**318MR4C**	**IEC225S4**				**N320TC**	77,600	81,800	31,300	476
3.1	880,300	3.0	563	127		**319R4B**	**IEC225S4**				**N320TC**	87,300	96,100	30,700	488
3.4	805,700	2.7	515	30	**318ML4**		**IEC225S4**				**N320TC**	76,100	80,100	29,800	474
3.5	780,500	2.8	499	121		**318MR4B**	**IEC225S4**				**N320TC**	75,700	79,700	29,500	476
3.5	783,200	2.8	501	148		**318MR4C**	**IEC225S4**				**N320TC**	75,800	79,800	29,500	476
3.7	745,100	2.9	477	30	**318ML4**		**IEC225S4**				**N320TC**	75,200	79,200	29,100	474
3.7	740,700	2.9	474	148		**318MR4C**	**IEC225S4**				**N320TC**	75,200	79,200	29,000	476
7.0	406,700	2.5	252	47	**317ML3**		**IEC225S4**				**N320TC**	70,700	75,100	17,600	462
7.3	387,900	1.4	241	40	**315ML3**		**IEC225S4**				**N320TC**	29,200	35,600	10,400	434
7.4	386,000	1.1	240	34	**314ML3**		**IEC225S4**				**N320TC**	29,200	35,600	10,400	418
8.5	333,700	2.0	207	40	**315ML3**		**IEC225S4**				**N320TC**	29,200	35,600	9,900	434
8.5	333,700	2.6	207	47	**316ML3**		**IEC225S4**				**N320TC**	45,400	50,900	16,500	450
8.6	332,000	1.6	206	34	**314ML3**		**IEC225S4**				**N320TC**	29,200	35,600	9,890	418
10.1	281,100	2.3	174	40	**315ML3**		**IEC225S4**				**N320TC**	29,100	35,500	9,350	434
10.2	279,800	1.9	174	34	**314ML3**		**IEC225S4**				**N320TC**	29,000	35,400	9,340	418
10.7	265,900	2.9	165	40	**315ML3**		**IEC225S4**				**N320TC**	28,600	34,900	9,180	434
10.8	264,600	2.0	164	34	**314ML3**		**IEC225S4**				**N320TC**	28,500	34,800	9,170	418
11.2	253,200	1.7	157	74		**314MR3C**	**IEC225S4**				**N320TC**	28,200	34,400	9,030	420
11.2	253,200	2.1	157	121		**315MR3C**	**IEC225S4**				**N320TC**	28,200	34,400	9,030	436
12.8	222,900	2.6	138	34	**314ML3**		**IEC225S4**				**N320TC**	27,100	33,100	8,660	418
13.1	217,800	2.4	135	74		**314MR3C**	**IEC225S4**				**N320TC**	26,900	32,800	8,590	420
13.1	217,800	3.0	135	121		**315MR3C**	**IEC225S4**				**N320TC**	26,900	32,800	8,590	436
15.5	183,500	2.8	114	74		**314MR3C**	**IEC225S4**				**N320TC**	25,600	31,200	8,110	420
15.6	182,900	2.3	113	74		**314MR3B**	**IEC225S4**				**N320TC**	25,500	31,200	8,110	420
15.6	182,900	2.9	113	101		**315MR3B**	**IEC225S4**				**N320TC**	25,500	31,200	8,110	436
16.4	173,700	2.7	108	34	**314ML3**		**IEC225S4**				**N320TC**	25,100	30,700	7,970	418
16.4	173,500	2.8	108	74		**314MR3C**	**IEC225S4**				**N320TC**	25,100	30,700	7,970	420
19	149,400	3.0	92.7	34	**314ML3**		**IEC225S4**				**N320TC**	24,000	29,300	7,580	418
38	77,600	2.0	46.7	30	**310ML2**		**IEC225S4**				**N320TC**	11,600	14,900	4,360	364
46	64,200	2.5	38.6	30	**310ML2**		**IEC225S4**				**N320TC**	10,900	14,100	4,090	364
58	51,000	2.8	30.7	30	**310ML2**		**IEC225S4**				**N320TC**	10,200	13,200	3,790	364
235	12,800	2.7	7.50	24	**306L1**		**IEC225S4**				**N320TC**	4,550	5,740	1,270	312

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

P_1 = 60 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.3	2,633,100	1.1	1389	40	**319L4**		**IEC225M4**				**N360TC**	99,300	109,300	41,500	486
1.5	2,265,100	1.3	1195	40	**319L4**		**IEC225M4**				**N360TC**	97,200	107,000	39,400	486
1.6	2,126,700	2.2	1122	47	**321L4**		**IEC225M4**				**N360TC**	136,200	162,100	235,300	428
1.7	2,008,200	1.1	1059	30	**318ML4**		**IEC225M4**				**N360TC**	84,300	88,800	37,900	474
1.8	1,908,500	1.5	1007	40	**319L4**		**IEC225M4**				**N360TC**	94,800	104,400	37,200	486
1.9	1,727,500	1.4	911	30	**318ML4**		**IEC225M4**				**N360TC**	82,500	86,900	36,000	474
1.9	1,728,800	1.6	912	40	**319L4**		**IEC225M4**				**N360TC**	93,500	102,900	36,000	486
1.9	1,791,900	2.8	945	47	**321L4**		**IEC225M4**				**N360TC**	132,900	158,200	223,500	428
2.0	1,718,600	1.6	906	154		**319R4C**	**IEC225M4**				**N360TC**	93,400	102,800	36,000	488
2.1	1,612,700	2.2	850	40	**319L4**		**IEC225M4**				**N360TC**	92,600	101,900	35,200	486
2.2	1,520,900	1.8	802	40	**319L4**		**IEC225M4**				**N360TC**	91,800	101,100	34,500	486
2.3	1,455,600	1.6	768	30	**318ML4**		**IEC225M4**				**N360TC**	80,500	84,800	34,000	474
2.3	1,478,400	1.9	780	154		**319R4C**	**IEC225M4**				**N360TC**	91,400	100,700	34,200	488
2.4	1,376,600	1.7	726	30	**318ML4**		**IEC225M4**				**N360TC**	79,900	84,100	33,400	474
2.5	1,358,900	2.5	717	40	**319L4**		**IEC225M4**				**N360TC**	90,300	99,500	33,300	486
2.6	1,310,700	1.7	691	148		**318MR4C**	**IEC225M4**				**N360TC**	79,300	83,500	32,900	476
2.6	1,285,100	2.6	678	40	**319L4**		**IEC225M4**				**N360TC**	89,600	98,700	32,600	486
2.7	1,226,500	1.9	647	30	**318ML4**		**IEC225M4**				**N360TC**	78,600	82,700	32,100	474
2.7	1,241,400	2.2	655	127		**319R4B**	**IEC225M4**				**N360TC**	89,200	98,200	32,300	488
2.7	1,245,700	2.1	657	154		**319R4C**	**IEC225M4**				**N360TC**	89,200	98,200	32,300	488
2.8	1,185,100	2.2	625	40	**319L4**		**IEC225M4**				**N360TC**	88,600	97,500	31,800	486
2.9	1,159,900	1.9	612	30	**318ML4**		**IEC225M4**				**N360TC**	77,900	82,100	31,600	474
3.0	1,127,500	2.0	595	148		**318MR4C**	**IEC225M4**				**N360TC**	77,600	81,700	31,300	476
3.1	1,082,800	2.9	571	40	**319L4**		**IEC225M4**				**N360TC**	87,400	96,300	30,800	486
3.1	1,067,900	2.4	563	127		**319R4B**	**IEC225M4**				**N360TC**	87,300	96,100	30,700	488
3.2	1,058,900	3.0	558	40	**319L4**		**IEC225M4**				**N360TC**	87,200	96,000	30,600	486
3.2	1,056,100	3.0	555	154		**319R4C**	**IEC225M4**				**N360TC**	87,100	95,900	30,500	488
3.4	977,300	2.2	515	30	**318ML4**		**IEC225M4**				**N360TC**	76,000	80,100	29,800	474
3.4	976,400	2.6	515	40	**319L4**		**IEC225M4**				**N360TC**	86,200	94,900	29,800	486
3.5	946,800	2.3	499	121		**318MR4B**	**IEC225M4**				**N360TC**	75,700	79,700	29,500	476
3.5	950,000	2.3	501	148		**318MR4C**	**IEC225M4**				**N360TC**	75,700	79,800	29,500	476
3.7	903,800	2.4	477	30	**318ML4**		**IEC225M4**				**N360TC**	75,200	79,200	29,000	474
3.7	898,500	2.4	474	148		**318MR4C**	**IEC225M4**				**N360TC**	75,100	79,100	29,000	476
3.7	899,800	2.8	475	127		**319R4B**	**IEC225M4**				**N360TC**	85,200	93,800	29,000	488
4.1	814,400	2.6	430	121		**318MR4B**	**IEC225M4**				**N360TC**	74,100	78,000	28,000	476
4.2	801,000	2.6	422	30	**318ML4**		**IEC225M4**				**N360TC**	73,900	77,800	27,900	474
4.4	761,600	2.8	402	30	**318ML4**		**IEC225M4**				**N360TC**	73,400	77,300	27,400	474
4.4	757,000	2.8	399	148		**318MR4C**	**IEC225M4**				**N360TC**	73,300	77,200	27,400	476
4.9	688,500	3.0	362	121		**318MR4B**	**IEC225M4**				**N360TC**	72,300	76,100	26,500	476
7.0	493,300	2.0	252	47	**317ML3**		**IEC225M4**				**N360TC**	70,700	75,100	17,600	462
7.4	468,200	0.9	240	34	**314ML3**		**IEC225M4**				**N360TC**	29,200	35,600	10,400	418
7.4	470,500	1.1	241	40	**315ML3**		**IEC225M4**				**N360TC**	29,200	35,600	10,400	434
8.5	404,800	1.6	207	40	**315ML3**		**IEC225M4**				**N360TC**	29,200	35,600	9,900	434
8.5	404,800	2.2	207	47	**316ML3**		**IEC225M4**				**N360TC**	45,400	50,900	16,500	450
8.6	402,800	1.3	206	34	**314ML3**		**IEC225M4**				**N360TC**	29,200	35,600	9,880	418
10.1	341,000	1.9	174	40	**315ML3**		**IEC225M4**				**N360TC**	29,000	35,400	9,350	434
10.1	341,000	2.6	174	47	**316ML3**		**IEC225M4**				**N360TC**	45,200	50,700	15,600	450
10.2	339,400	1.6	174	34	**314ML3**		**IEC225M4**				**N360TC**	29,000	35,400	9,330	418
10.7	322,500	2.4	165	40	**315ML3**		**IEC225M4**				**N360TC**	28,500	34,800	9,170	434
10.8	320,900	1.6	164	34	**314ML3**		**IEC225M4**				**N360TC**	28,500	34,800	9,160	418
11.3	307,100	1.4	157	74		**314MR3C**	**IEC225M4**				**N360TC**	28,100	34,300	9,030	420

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



A

P_1 = 60 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
11.3	307,100	1.7	157	121		**315MR3C**	**IEC225M4**				**N360TC**	28,100	34,300	9,030	436
12.7	271,800	2.8	139	40	**315ML3**		**IEC225M4**				**N360TC**	27,100	33,100	8,660	434
12.8	270,400	2.2	138	34	**314ML3**		**IEC225M4**				**N360TC**	27,100	33,100	8,650	418
13.1	264,200	2.0	135	74		**314MR3C**	**IEC225M4**				**N360TC**	26,900	32,800	8,580	420
13.1	264,200	2.4	135	121		**315MR3C**	**IEC225M4**				**N360TC**	26,900	32,800	8,580	436
15.5	222,600	2.3	114	74		**314MR3C**	**IEC225M4**				**N360TC**	25,500	31,200	8,110	420
15.5	222,600	2.9	114	121		**315MR3C**	**IEC225M4**				**N360TC**	25,500	31,200	8,110	436
15.6	221,800	1.9	113	74		**314MR3B**	**IEC225M4**				**N360TC**	25,500	31,100	8,100	420
15.6	221,800	2.4	113	101		**315MR3B**	**IEC225M4**				**N360TC**	25,500	31,100	8,100	436
16.4	210,700	2.2	108	34	**314ML3**		**IEC225M4**				**N360TC**	25,100	30,700	7,960	418
16.4	210,500	2.3	108	74		**314MR3C**	**IEC225M4**				**N360TC**	25,100	30,700	7,960	420
18.1	190,800	2.6	97.6	74		**314MR3B**	**IEC225M4**				**N360TC**	24,400	29,800	7,700	420
19.1	181,300	2.5	92.7	34	**314ML3**		**IEC225M4**				**N360TC**	24,000	29,300	7,570	418
19.5	177,400	2.9	90.7	74		**314MR3C**	**IEC225M4**				**N360TC**	23,900	29,100	7,520	420
21.5	160,800	2.9	82.3	74		**314MR3B**	**IEC225M4**				**N360TC**	23,200	28,300	7,270	420
22.8	152,100	3.0	77.8	74		**314MR3B**	**IEC225M4**				**N360TC**	22,800	27,800	7,140	420
24	144,400	3.0	73.9	34	**314ML3**		**IEC225M4**				**N360TC**	22,400	27,400	7,020	418
25	138,700	3.0	70.7	74		**314MR3C**	**IEC225M4**				**N360TC**	22,100	27,000	6,920	420
38	94,200	1.7	46.7	30	**310ML2**		**IEC225M4**				**N360TC**	11,500	14,900	4,350	364
46	77,900	2.0	38.6	30	**310ML2**		**IEC225M4**				**N360TC**	10,900	14,100	4,080	364
54	65,600	2.7	32.6	30	**310ML2**		**IEC225M4**				**N360TC**	10,400	13,400	3,860	364
58	61,800	2.3	30.7	30	**310ML2**		**IEC225M4**				**N360TC**	10,200	13,100	3,780	364
70	51,100	2.7	25.4	30	**310ML2**		**IEC225M4**				**N360TC**	9,610	12,400	3,550	364
70	51,100	3.0	25.3	74		**310MR2C**	**IEC225M4**				**N360TC**	9,610	12,400	3,550	366
236	15,600	2.2	7.50	24	**306L1**		**IEC225M4**				**N360TC**	4,550	5,730	1,270	312
285	12,900	2.7	6.20	24	**306L1**		**IEC225M4**				**N360TC**	4,290	5,410	1,190	312

P_1 = 75 hp

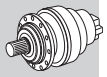
n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.3	3,209,800	0.9	1389	40	**319L4**		**IEC250M4**				**N360TC**	99,300	109,300	41,500	486
1.4	2,957,400	2.6	1279	67	**323L4**		**IEC250M4**					—	—	224,300	510
1.4	2,957,400	2.9	1279	87	**325L4**		**IEC250M4**					—	—	285,500	514
1.5	2,761,100	1.1	1195	40	**319L4**		**IEC250M4**				**N360TC**	97,200	107,000	39,400	486
1.6	2,592,400	1.8	1122	47	**321L4**		**IEC250M4**				**N360TC**	136,200	162,100	235,300	428
1.6	2,544,000	3.0	1101	67	**323L4**		**IEC250M4**					—	—	214,400	510
1.7	2,448,000	0.9	1059	30	**318ML4**		**IEC250M4**				**N360TC**	84,300	88,800	37,900	474
1.8	2,326,500	1.2	1007	40	**319L4**		**IEC250M4**				**N360TC**	94,800	104,400	37,200	486
1.9	2,105,800	1.1	911	30	**318ML4**		**IEC250M4**				**N360TC**	82,500	86,900	36,000	474
1.9	2,107,500	1.3	912	40	**319L4**		**IEC250M4**				**N360TC**	93,500	102,900	36,000	486
1.9	2,184,300	2.3	945	47	**321L4**		**IEC250M4**				**N360TC**	132,900	158,200	223,500	428
2.0	2,095,000	1.3	906	154		**319R4C**	**IEC250M4**				**N360TC**	93,400	102,800	36,000	488
2.1	1,965,900	1.8	850	40	**319L4**		**IEC250M4**				**N360TC**	92,600	101,900	35,200	486
2.2	1,853,900	1.5	802	40	**319L4**		**IEC250M4**				**N360TC**	91,800	101,100	34,500	486
2.2	1,840,500	2.6	796	47	**321L4**		**IEC250M4**				**N360TC**	129,700	154,400	212,300	428
2.3	1,774,400	1.3	768	30	**318ML4**		**IEC250M4**				**N360TC**	80,500	84,800	34,000	474

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

P_1 = 75 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.3	1,802,100	1.5	780	154		**319R4C**	**IEC250M4**				**N360TC**	91,400	100,700	34,200	488
2.4	1,678,100	1.4	726	30	**318ML4**		**IEC250M4**				**N360TC**	79,900	84,100	33,400	474
2.4	1,702,100	2.7	736	47	**321L4**		**IEC250M4**				**N360TC**	128,300	152,700	207,400	428
2.4	1,692,000	2.7	732	168		**321R4C**	**IEC250M4**				**N360TC**	128,200	152,600	207,000	500
2.5	1,656,500	2.1	717	40	**319L4**		**IEC250M4**				**N360TC**	90,300	99,500	33,300	486
2.6	1,597,800	1.4	691	148		**318MR4C**	**IEC250M4**				**N360TC**	79,300	83,500	32,900	476
2.6	1,566,600	2.1	678	40	**319L4**		**IEC250M4**				**N360TC**	89,600	98,700	32,600	486
2.7	1,495,100	1.5	647	30	**318ML4**		**IEC250M4**				**N360TC**	78,600	82,700	32,100	474
2.7	1,513,300	1.8	655	127		**319R4B**	**IEC250M4**				**N360TC**	89,200	98,200	32,300	488
2.7	1,518,500	1.8	657	154		**319R4C**	**IEC250M4**				**N360TC**	89,200	98,200	32,300	488
2.8	1,444,600	1.8	625	40	**319L4**		**IEC250M4**				**N360TC**	88,600	97,500	31,800	486
2.9	1,413,900	1.6	612	30	**318ML4**		**IEC250M4**				**N360TC**	77,900	82,100	31,600	474
2.9	1,425,700	3.0	617	168		**321R4C**	**IEC250M4**				**N360TC**	125,100	148,900	196,600	500
3.0	1,374,400	1.6	595	148		**318MR4C**	**IEC250M4**				**N360TC**	77,600	81,700	31,300	476
3.1	1,320,000	2.4	571	40	**319L4**		**IEC250M4**				**N360TC**	87,400	96,300	30,800	486
3.1	1,301,700	2.0	563	127		**319R4B**	**IEC250M4**				**N360TC**	87,300	96,100	30,700	488
3.2	1,290,700	2.5	558	40	**319L4**		**IEC250M4**				**N360TC**	87,200	96,000	30,600	486
3.2	1,283,100	2.5	555	154		**319R4C**	**IEC250M4**				**N360TC**	87,100	95,900	30,500	488
3.4	1,191,400	1.8	515	30	**318ML4**		**IEC250M4**				**N360TC**	76,000	80,100	29,800	474
3.4	1,190,300	2.2	515	40	**319L4**		**IEC250M4**				**N360TC**	86,200	94,900	29,800	486
3.4	1,220,700	2.5	528	40	**319L4**		**IEC250M4**				**N360TC**	86,500	95,200	30,000	486
3.4	1,213,500	2.6	525	154		**319R4C**	**IEC250M4**				**N360TC**	86,400	95,100	30,000	488
3.5	1,154,100	1.9	499	121		**318MR4B**	**IEC250M4**				**N360TC**	75,700	79,700	29,500	476
3.5	1,158,100	1.9	501	148		**318MR4C**	**IEC250M4**				**N360TC**	75,700	79,800	29,500	476
3.5	1,184,400	3.0	512	168		**321R4C**	**IEC250M4**				**N360TC**	121,800	145,000	186,000	500
3.7	1,101,800	2.0	477	30	**318ML4**		**IEC250M4**				**N360TC**	75,200	79,200	29,000	474
3.7	1,095,200	2.0	474	148		**318MR4C**	**IEC250M4**				**N360TC**	75,100	79,100	29,000	476
3.7	1,096,800	2.3	475	127		**319R4B**	**IEC250M4**				**N360TC**	85,200	93,800	29,000	488
3.7	1,110,900	3.0	481	168		**321R4C**	**IEC250M4**				**N360TC**	120,700	143,700	182,400	500
4.0	1,028,600	2.9	445	40	**319L4**		**IEC250M4**				**N360TC**	84,400	92,900	28,400	486
4.0	1,022,500	2.9	442	154		**319R4C**	**IEC250M4**				**N360TC**	84,300	92,800	28,300	488
4.1	992,800	2.1	430	121		**318MR4B**	**IEC250M4**				**N360TC**	74,100	78,000	28,000	476
4.2	976,400	2.2	422	30	**318ML4**		**IEC250M4**				**N360TC**	73,900	77,800	27,900	474
4.3	948,500	2.6	410	40	**319L4**		**IEC250M4**				**N360TC**	83,400	91,800	27,600	486
4.4	928,300	2.3	402	30	**318ML4**		**IEC250M4**				**N360TC**	73,400	77,300	27,400	474
4.4	922,800	2.3	399	148		**318MR4C**	**IEC250M4**				**N360TC**	73,300	77,200	27,400	476
4.4	922,900	3.0	399	168		**321R4C**	**IEC250M4**				**N360TC**	117,500	139,900	172,600	500
4.9	836,500	2.5	362	121		**318MR4B**	**IEC250M4**				**N360TC**	72,300	76,100	26,500	476
5.2	791,100	2.6	342	121		**318MR4B**	**IEC250M4**				**N360TC**	72,100	75,900	26,000	476
5.3	778,000	2.6	337	30	**318ML4**		**IEC250M4**				**N360TC**	72,100	75,900	25,900	474
5.7	723,400	2.8	313	30	**318ML4**		**IEC250M4**				**N360TC**	72,100	75,900	25,200	474
5.7	719,100	2.8	311	148		**318MR4C**	**IEC250M4**				**N360TC**	72,100	75,900	25,200	476
5.8	708,100	3.0	306	168		**321R4C**	**IEC250M4**				**N360TC**	115,500	137,500	159,400	500
7.0	601,300	1.7	252	47	**317ML3**		**IEC250M4**				**N360TC**	70,700	75,100	17,600	462
7.4	573,600	0.9	241	40	**315ML3**		**IEC250M4**				**N360TC**	29,200	35,600	10,400	434
8.3	506,700	2.5	213	47	**317ML3**		**IEC250M4**				**N360TC**	70,700	75,100	16,600	462
8.5	493,400	1.4	207	40	**315ML3**		**IEC250M4**				**N360TC**	29,200	35,600	9,900	434

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



A

P_1 = 75 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
8.5	493,400	1.8	207	47	**316ML3**		**IEC250M4**				**N360TC**	45,400	50,900	16,500	450
8.6	491,000	1.1	206	34	**314ML3**		**IEC250M4**				**N360TC**	29,200	35,600	9,880	418
9.9	426,900	3.0	179	47	**317ML3**		**IEC250M4**				**N360TC**	70,700	75,100	15,700	462
10.1	415,700	1.6	174	40	**315ML3**		**IEC250M4**				**N360TC**	29,000	35,400	9,350	434
10.1	415,700	2.1	174	47	**316ML3**		**IEC250M4**				**N360TC**	45,200	50,700	15,600	450
10.2	413,700	1.3	174	34	**314ML3**		**IEC250M4**				**N360TC**	29,000	35,400	9,330	418
10.7	393,200	2.0	165	40	**315ML3**		**IEC250M4**				**N360TC**	28,500	34,800	9,170	434
10.7	393,200	2.5	165	47	**316ML3**		**IEC250M4**				**N360TC**	44,500	49,900	15,300	450
10.7	394,800	2.7	166	47	**317ML3**		**IEC250M4**				**N360TC**	69,300	73,600	15,300	462
10.7	392,500	2.5	165	134		**317MR3C**	**IEC250M4**					69,100	73,500	15,300	464
10.8	391,200	1.3	164	34	**314ML3**		**IEC250M4**				**N360TC**	28,500	34,800	9,160	418
11.3	374,400	1.1	157	74		**314MR3C**	**IEC250M4**				**N360TC**	28,100	34,300	9,030	420
11.3	374,400	1.4	157	121		**315MR3C**	**IEC250M4**				**N360TC**	28,100	34,300	9,030	436
12.7	331,300	2.3	139	40	**315ML3**		**IEC250M4**				**N360TC**	27,100	33,100	8,660	434
12.7	331,300	3.0	139	47	**316ML3**		**IEC250M4**				**N360TC**	42,200	47,400	14,400	450
12.8	329,700	1.8	138	34	**314ML3**		**IEC250M4**				**N360TC**	27,100	33,100	8,650	418
13.1	322,000	1.6	135	74		**314MR3C**	**IEC250M4**				**N360TC**	26,900	32,800	8,580	420
13.1	322,000	2.0	135	121		**315MR3C**	**IEC250M4**				**N360TC**	26,900	32,800	8,580	436
13.1	322,000	2.6	135	121		**316MR3C**	**IEC250M4**				**N360TC**	41,900	47,000	14,300	452
15.5	271,300	1.9	114	74		**314MR3C**	**IEC250M4**				**N360TC**	25,500	31,200	8,110	420
15.5	271,300	2.3	114	121		**315MR3C**	**IEC250M4**				**N360TC**	25,500	31,200	8,110	436
15.5	271,300	2.9	114	121		**316MR3C**	**IEC250M4**				**N360TC**	39,800	44,600	13,500	452
15.6	270,400	1.6	113	74		**314MR3B**	**IEC250M4**				**N360TC**	25,500	31,100	8,100	420
15.6	270,400	1.9	113	101		**315MR3B**	**IEC250M4**				**N360TC**	25,500	31,100	8,100	436
16.3	258,100	2.8	108	40	**315ML3**		**IEC250M4**				**N360TC**	25,200	30,700	7,970	434
16.4	256,900	1.8	108	34	**314ML3**		**IEC250M4**				**N360TC**	25,100	30,700	7,960	418
16.4	256,600	1.9	108	74		**314MR3C**	**IEC250M4**				**N360TC**	25,100	30,700	7,960	420
16.4	256,600	2.8	108	121		**315MR3C**	**IEC250M4**				**N360TC**	25,100	30,700	7,960	436
18.1	232,600	2.1	97.6	74		**314MR3B**	**IEC250M4**				**N360TC**	24,400	29,800	7,700	420
18.1	232,600	2.7	97.6	101		**315MR3B**	**IEC250M4**				**N360TC**	24,400	29,800	7,700	436
19.1	221,000	2.0	92.7	34	**314ML3**		**IEC250M4**				**N360TC**	24,000	29,300	7,570	418
19.5	216,200	2.4	90.7	74		**314MR3C**	**IEC250M4**				**N360TC**	23,900	29,100	7,520	420
21.5	196,000	2.4	82.3	74		**314MR3B**	**IEC250M4**				**N360TC**	23,200	28,300	7,270	420
21.5	196,000	3.0	82.3	101		**315MR3B**	**IEC250M4**				**N360TC**	23,200	28,300	7,270	436
22.8	185,400	2.4	77.8	74		**314MR3B**	**IEC250M4**				**N360TC**	22,800	27,800	7,140	420
24.0	176,100	2.4	73.9	34	**314ML3**		**IEC250M4**				**N360TC**	22,400	27,400	7,020	418
25.0	168,500	2.5	70.7	74		**314MR3C**	**IEC250M4**				**N360TC**	22,100	27,000	6,920	420
27.0	156,200	2.7	65.5	74		**314MR3B**	**IEC250M4**				**N360TC**	21,600	26,400	6,740	420
28.3	149,200	2.8	62.6	34	**314ML3**		**IEC250M4**				**N360TC**	21,300	26,100	6,640	418
35	121,700	2.7	51.1	74		**314MR3B**	**IEC250M4**				**N360TC**	20,100	24,500	6,210	420
38	114,800	1.4	46.7	30	**310ML2**		**IEC250M4**				**N360TC**	11,500	14,900	4,350	364
44	99,500	2.7	40.5	40	**313ML2**		**IEC250M4**				**N360TC**	19,200	24,000	5,110	400
46	94,900	1.7	38.6	30	**310ML2**		**IEC250M4**				**N360TC**	10,900	14,100	4,080	364
46	95,400	2.5	38.8	35	**311ML2**		**IEC250M4**				**N360TC**	13,700	17,800	4,090	382
54	80,000	2.2	32.6	30	**310ML2**		**IEC250M4**				**N360TC**	10,400	13,400	3,860	364
58	75,400	1.9	30.7	30	**310ML2**		**IEC250M4**				**N360TC**	10,200	13,100	3,780	364
63	68,800	2.5	28.0	30	**310ML2**		**IEC250M4**				**N360TC**	9,900	12,800	3,670	364

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

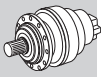
P_1 = 75 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
70	62,300	2.3	25.4	30	**310ML2**		**IEC250M4**				**N360TC**	9,610	12,400	3,550	364
70	62,200	2.4	25.3	74		**310MR2C**	**IEC250M4**				**N360TC**	9,610	12,400	3,550	366
81	53,600	2.5	21.8	30	**310ML2**		**IEC250M4**				**N360TC**	9,190	11,900	3,380	364
83	52,800	3.0	21.3	74		**310MR2C**	**IEC250M4**				**N360TC**	9,130	11,800	3,350	366
236	19,000	1.8	7.50	24	**306L1**		**IEC250M4**				**N360TC**	4,550	5,730	1,270	312
285	15,700	2.3	6.20	24	**306L1**		**IEC250M4**				**N360TC**	4,290	5,410	1,190	312
332	13,500	2.5	5.33	24	**306L1**		**IEC250M4**				**N360TC**	4,100	5,170	1,140	312

P_1 = 100 hp

n_2 rpm	T_2 lb·in	S	i	Pt hp			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
1.4	4,045,300	1.9	1279	67	**323L4**						**N400TC**	—	—	224,200	510
1.4	4,045,300	2.1	1279	87	**325L4**						**N400TC**	—	—	285,300	514
1.6	3,479,900	2.2	1101	67	**323L4**						**N400TC**	—	—	214,300	510
1.6	3,479,900	2.4	1101	87	**325L4**						**N400TC**	—	—	272,700	514
1.7	3,241,500	2.3	1025	67	**323L4**						**N400TC**	—	—	209,700	510
2.0	2,788,400	2.7	882	67	**323L4**						**N400TC**	—	—	200,500	510

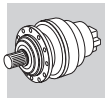
The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



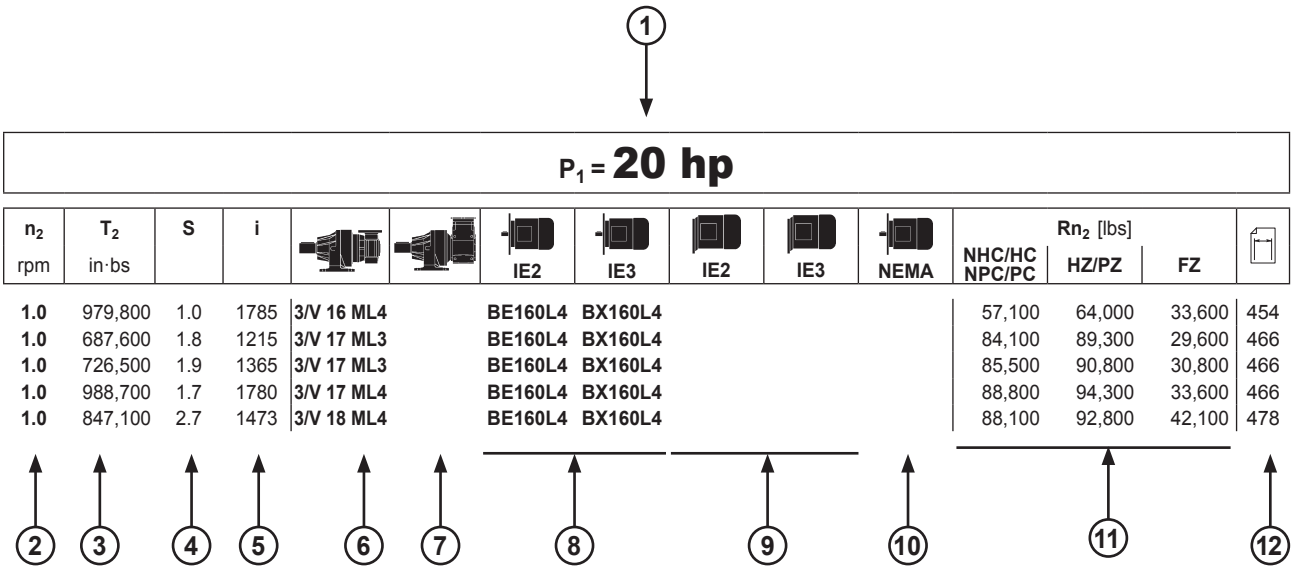
A

25.2 3/V_M - 3/A GEARMOTOR RATING CHARTS

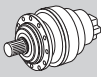
Reading the rating chart.



A



1	Power applied at gearbox input shaft
2	Gearbox output speed
3	Torque delivered at output shaft: - specified service factor - 10000 h theoretical lifetime
4	Service factor
5	Gear ratio
6	Model and frame size of combined planetary + worm gear unit
7	Model and frame size of combined planetary + helical bevel gear unit
8	IEC motor size and pole number
9	Compact motor size and pole number
10	NEMA motor size
11	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
12	Dimensions page. Gearmotor overall dimensions refer to matches with BONFIGLIOLI motors only



A

The selection of motors without brake takes into account the requirements of Regulation EC 640/2009 (see section **M** of this catalogue). When the motor rated power is below 0.75kW (1HP), BN/M motors can be provided.
Considering that the Regulation EC 640/2009 shall not apply to the motors equipped with brake, the brakemotor selection takes into account BN/M motors only, without taking into account the rated power. BX, BE, MX and ME brakemotors are available on request.

P_1 = 0.33 hp

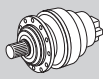
n_2 rpm	T_2 in·bs	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.60	22,500	2.8	2588	**3/V 06 L3**		**BN71A4**		**N56C**	15,600	19,600	7,870	318
0.70	20,000	1.0	2511	**3/V 03 L3**		**BN71A4**		**N56C**	11,300	14,200	5,400	264
0.70	20,300	1.3	2366	**3/V 04 L3**		**BN71A4**		**N56C**	11,200	14,100	5,400	282
0.70	19,100	2.0	2232	**3/V 05 L3**		**BN71A4**		**N56C**	11,100	14,000	5,400	300
0.80	16,000	1.3	2009	**3/V 03 L3**		**BN71A4**		**N56C**	10,900	13,800	5,400	264
0.90	14,000	1.1	1869	**3/V 01 L3**		**BN71A4**		**N56C**	5,630	6,680	1,800	248
0.90	16,300	1.6	1774	**3/V 04 L3**		**BN71A4**		**N56C**	10,700	13,600	5,370	282
0.90	16,200	1.6	1893	**3/V 04 L3**		**BN71A4**		**N56C**	10,800	13,700	5,400	282
0.90	15,300	2.7	1786	**3/V 05 L3**		**BN71A4**		**N56C**	10,700	13,600	5,380	300
1.0	10,400	1.0	1381	**3/V 00 L3**		**BN71A4**		**N56C**	5,390	6,810	1,650	232
1.0	9,560	1.5	1198	**3/V 01 L3**		**BN71A4**		**N56C**	5,290	6,270	1,570	248
1.0	10,400	1.6	1381	**3/V 01 L3**		**BN71A4**		**N56C**	5,390	6,400	1,650	248
1.0	11,900	1.2	1495	**3/V 01 L3**		**BN71A4**		**N56C**	5,460	6,470	1,690	248
1.0	9,480	2.1	1189	**3/V 03 L3**		**BN71A4**		**N56C**	10,100	12,800	4,700	264
1.0	11,000	2.2	1385	**3/V 03 L3**		**BN71A4**		**N56C**	10,400	13,100	4,940	264
1.0	12,800	1.7	1610	**3/V 03 L3**		**BN71A4**		**N56C**	10,600	13,400	5,200	264
1.0	13,800	1.8	1728	**3/V 03 L3**		**BN71A4**		**N56C**	10,700	13,500	5,320	264
1.0	10,600	2.9	1152	**3/V 04 L3**		**BN71A4**		**N56C**	10,100	12,700	4,650	282
1.0	10,600	2.9	1231	**3/V 04 L3**		**BN71A4**		**N56C**	10,200	12,900	4,750	282
1.0	13,000	2.0	1419	**3/V 04 L3**		**BN71A4**		**N56C**	10,400	13,100	4,980	282
1.0	13,200	2.4	1536	**3/V 04 L3**		**BN71A4**		**N56C**	10,500	13,300	5,120	282
1.0	15,300	2.5	1674	**3/V 05 L3**		**BN71A4**		**N56C**	10,600	13,400	5,270	300
2.0	8,610	1.8	731		**3/A 03 L2**	**BN71A4**		**N56C**	9,450	11,900	4,000	266
2.0	5,820	1.6	689	**3/V 00 L3**		**BN71A4**		**N56C**	4,880	6,170	1,310	232
2.0	6,130	1.6	818	**3/V 00 L3**		**BN71A4**		**N56C**	5,000	6,320	1,380	232
2.0	6,770	1.0	903	**3/V 00 L3**		**BN71A4**		**N56C**	5,080	6,410	1,430	232
2.0	8,300	1.2	1107	**3/V 00 L3**		**BN71A4**		**N56C**	5,230	6,600	1,530	232
2.0	5,820	2.6	689	**3/V 01 L3**		**BN71A4**		**N56C**	4,880	5,800	1,310	248
2.0	7,130	1.9	799	**3/V 01 L3**		**BN71A4**		**N56C**	4,990	5,920	1,370	248
2.0	6,770	1.6	903	**3/V 01 L3**		**BN71A4**		**N56C**	5,080	6,030	1,430	248
2.0	8,900	1.5	997	**3/V 01 L3**		**BN71A4**		**N56C**	5,150	6,110	1,480	248
2.0	8,810	2.0	1105	**3/V 01 L3**		**BN71A4**		**N56C**	5,220	6,200	1,530	248
2.0	6,990	2.7	793	**3/V 03 L3**		**BN71A4**		**N56C**	9,560	12,100	4,110	264
2.0	8,130	2.8	923	**3/V 03 L3**		**BN71A4**		**N56C**	9,770	12,300	4,320	264
2.0	8,160	2.9	1023	**3/V 03 L3**		**BN71A4**		**N56C**	9,920	12,500	4,470	264
2.0	8,980	2.6	887	**3/V 04 L3**		**BN71A4**		**N56C**	9,720	12,300	4,260	282
3.0	6,280	1.6	533		**3/A 01 L2**	**BN71A4**		**N56C**	4,710	5,590	1,200	250
3.0	7,840	1.3	665		**3/A 01 L2**	**BN71A4**		**N56C**	4,860	5,770	1,290	250
3.0	5,830	2.6	495		**3/A 03 L2**	**BN71A4**		**N56C**	8,940	11,300	3,510	266
3.0	6,760	2.2	574		**3/A 03 L2**	**BN71A4**		**N56C**	9,130	11,500	3,690	266

P_1 = 0.33 hp

n_2 rpm	T_2 in·bs	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
3.0	7,130	2.2	605		**3/A 03 L2**	**BN71A4**		**N56C**	9,200	11,600	3,750	266
3.0	4,300	2.1	509	**3/V 00 L3**		**BN71A4**		**N56C**	4,680	5,910	1,180	232
3.0	4,750	1.3	562	**3/V 00 L3**		**BN71A4**		**N56C**	4,740	5,990	1,220	232
3.0	5,220	1.8	654	**3/V 00 L3**		**BN71A4**		**N56C**	4,850	6,120	1,280	232
3.0	4,300	2.6	509	**3/V 01 L3**		**BN71A4**		**N56C**	4,680	5,550	1,180	248
3.0	4,750	2.6	562	**3/V 01 L3**		**BN71A4**		**N56C**	4,740	5,630	1,220	248
3.0	5,220	2.0	654	**3/V 01 L3**		**BN71A4**		**N56C**	4,850	5,750	1,280	248
4.0	4,610	1.0	391		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,500	5,690	1,080	234
4.0	5,200	1.1	441		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,580	5,790	1,130	234
4.0	4,630	1.6	393		**3/A 01 L2**	**BN71A4**		**N56C**	4,510	5,350	1,080	250
4.0	5,350	1.9	454		**3/A 01 L2**	**BN71A4**		**N56C**	4,600	5,460	1,140	250
4.0	3,510	2.5	415	**3/V 00 L3**		**BN71A4**		**N56C**	4,540	5,740	1,100	232
4.0	3,480	1.9	436	**3/V 00 L3**		**BN71A4**		**N56C**	4,570	5,780	1,120	232
4.0	4,110	2.9	443	**3/V 01 L3**		**BN71A4**		**N56C**	4,580	5,440	1,130	248
5.0	3,760	1.0	319		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,450	5,620	1,010	234
5.0	4,350	1.1	369		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,470	5,640	1,060	234
5.0	3,660	2.8	311		**3/A 01 L2**	**BN71A4**		**N56C**	4,450	5,280	1,000	250
5.0	4,290	2.7	364		**3/A 01 L2**	**BN71A4**		**N56C**	4,460	5,290	1,060	250
6.0	3,490	1.6	296		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,450	5,620	990	234
6.0	3,170	2.8	269		**3/A 01 L2**	**BN71A4**		**N56C**	4,450	5,280	950	250
7.0	2,980	1.6	253		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,450	5,620	930	234
8.0	2,390	2.4	203		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,450	5,620	870	234
8.0	2,580	2.1	219		**3/A 00 L2**	**BN71A4**	**M05C4**	**N56C**	4,450	5,620	890	234
8.0	2,590	2.8	220		**3/A 01 L2**	**BN71A4**		**N56C**	4,450	5,280	890	250
10.0	2,010	2.4	171		**3/A 00 L2**	**BN71A4**	**M05C4**	N56C	4,390	5,540	820	234

P_1 = 0.5 hp

n_2 rpm	M_2 Nm	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.70	29,500	0.9	2366	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	11,200	14,100	5,400	282
0.70	32,700	1.9	2588	**3/V 06 L3**		**BN71B4**	**M1SD4**	**N56C**	15,600	19,600	7,870	318
0.80	23,300	0.9	2009	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	10,900	13,800	5,400	264
0.80	27,800	1.4	2232	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	11,100	14,000	5,400	300
0.80	27,000	2.8	2139	**3/V 06 L3**		**BN71B4**	**M1SD4**	**N56C**	15,100	19,100	7,870	318
0.90	23,600	1.1	1893	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,800	13,700	5,400	282
1.0	13,900	1.0	1198	**3/V 01 L3**		**BN71B4**		**N56C**	5,290	6,270	1,570	248
1.0	15,100	1.1	1381	**3/V 01 L3**		**BN71B4**		**N56C**	5,390	6,400	1,650	248
1.0	13,800	1.5	1189	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	10,100	12,800	4,700	264
1.0	16,100	1.5	1385	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,100	4,940	264
1.0	18,700	1.1	1610	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	10,600	13,400	5,200	264
1.0	20,000	1.3	1728	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	10,700	13,500	5,320	264
1.0	15,400	2.0	1152	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,100	12,700	4,650	282
1.0	15,300	2.0	1231	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,200	12,900	4,750	282
1.0	18,900	1.3	1419	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,100	4,980	282
1.0	19,100	1.7	1536	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,500	13,300	5,120	282
1.0	23,600	1.1	1774	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	10,700	13,600	5,370	282
1.0	17,800	2.2	1431	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	10,400	13,100	5,000	300
1.0	22,300	1.7	1674	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	10,600	13,400	5,270	300
1.0	22,300	1.9	1786	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	10,700	13,600	5,380	300
2.0	12,500	1.2	731		**3/A 03 L2**	**BN71B4**		**N56C**	9,450	11,900	4,000	266
2.0	8,470	1.1	689	**3/V 00 L3**		**BN71B4**		**N56C**	4,880	6,170	1,310	232
2.0	8,920	1.1	818	**3/V 00 L3**		**BN71B4**		**N56C**	5,000	6,320	1,380	232
2.0	8,470	1.8	689	**3/V 01 L3**		**BN71B4**		**N56C**	4,880	5,800	1,310	248



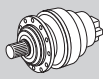
A

P_1 = 0.5 hp

n_2 rpm	M_2 Nm	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.0	10,400	1.3	799	**3/V 01 L3**		**BN71B4**		**N56C**	4,990	5,920	1,370	248
2.0	9,850	1.1	903	**3/V 01 L3**		**BN71B4**		**N56C**	5,080	6,030	1,430	248
2.0	12,900	1.1	997	**3/V 01 L3**		**BN71B4**		**N56C**	5,150	6,110	1,480	248
2.0	12,800	1.4	1105	**3/V 01 L3**		**BN71B4**		**N56C**	5,220	6,200	1,530	248
2.0	9,430	2.5	736	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	9,460	12,000	4,000	264
2.0	10,200	1.8	793	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	9,560	12,100	4,110	264
2.0	11,800	2.0	923	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	9,770	12,300	4,320	264
2.0	11,900	2.0	1023	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	9,920	12,500	4,470	264
2.0	10,400	2.2	710	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	9,410	11,900	3,960	282
2.0	10,600	2.7	769	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	9,520	12,000	4,060	282
2.0	13,000	1.8	887	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	9,720	12,300	4,260	282
2.0	12,200	2.8	981	**3/V 04 L3**		**BN71B4**	**M1SD4**	**N56C**	9,860	12,500	4,410	282
2.0	12,400	3.0	894	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	9,730	12,300	4,270	300
2.0	13,200	2.9	1057	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	9,960	12,600	4,520	300
2.0	15,500	2.5	1116	**3/V 05 L3**		**BN71B4**	**M1SD4**	**N56C**	10,000	12,700	4,600	300
3.0	9,130	1.1	533		**3/A 01 L2**	**BN71B4**		**N56C**	4,710	5,590	1,200	250
3.0	8,480	1.8	495		**3/A 03 L2**	**BN71B4**	**M1SD4**	**N56C**	8,940	11,300	3,510	266
3.0	9,830	1.5	574		**3/A 03 L2**	**BN71B4**	**M1SD4**	**N56C**	9,130	11,500	3,690	266
3.0	10,400	1.5	605		**3/A 03 L2**	**BN71B4**		**N56C**	9,200	11,600	3,750	266
3.0	8,910	2.5	520		**3/A 04 L2**	**BN71B4**	**M1SD4**	**N56C**	9,000	11,400	3,570	284
3.0	10,200	2.8	594		**3/A 05 L2**	**BN71B4**	**M1SD4**	**N56C**	9,180	11,600	3,730	302
3.0	6,250	1.4	509	**3/V 00 L3**		**BN71B4**		**N56C**	4,680	5,910	1,180	232
3.0	7,580	1.2	654	**3/V 00 L3**		**BN71B4**		**N56C**	4,850	6,120	1,280	232
3.0	6,250	1.8	509	**3/V 01 L3**		**BN71B4**		**N56C**	4,680	5,550	1,180	248
3.0	6,910	1.8	562	**3/V 01 L3**		**BN71B4**		**N56C**	4,740	5,630	1,220	248
3.0	7,580	1.4	654	**3/V 01 L3**		**BN71B4**		**N56C**	4,850	5,750	1,280	248
3.0	7,040	2.5	502	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	8,960	11,300	3,530	264
3.0	7,980	2.5	623	**3/V 03 L3**		**BN71B4**	**M1SD4**	**N56C**	9,240	11,700	3,790	264
4.0	6,730	1.1	393		**3/A 01 L2**	**BN71B4**		**N56C**	4,510	5,350	1,080	250
4.0	7,780	1.3	454		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,600	5,460	1,140	250
4.0	7,010	2.4	409		**3/A 03 L2**	**BN71B4**	**M1SD4**	**N56C**	8,700	11,000	3,290	266
4.0	8,030	2.7	469		**3/A 04 L2**	**BN71B4**	**M1SD4**	**N56C**	8,870	11,200	3,440	284
4.0	5,100	1.7	415	**3/V 00 L3**		**BN71B4**		**N56C**	4,540	5,740	1,100	232
4.0	5,060	1.3	436	**3/V 00 L3**		**BN71B4**		**N56C**	4,570	5,780	1,120	232
4.0	6,030	2.8	430	**3/V 01 L3**		**BN71B4**		**N56C**	4,570	5,420	1,120	248
4.0	5,980	2.0	443	**3/V 01 L3**		**BN71B4**		**N56C**	4,580	5,440	1,130	248
5.0	5,330	1.9	311		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	1,000	250
5.0	6,240	1.8	364		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,460	5,290	1,060	250
5.0	5,580	2.6	326		**3/A 03 L2**	**BN71B4**	**M1SD4**	**N56C**	8,540	10,800	3,050	266
5.0	6,030	3.0	352		**3/A 03 L2**	**BN71B4**	**M1SD4**	**N56C**	8,540	10,800	3,130	266
6.0	5,070	1.1	296		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	990	234
6.0	4,610	1.9	269		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	950	250
7.0	4,330	1.1	253		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	930	234
7.0	4,370	2.3	255		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	940	250
8.0	3,480	1.7	203		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	870	234
8.0	3,750	1.5	219		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,620	890	234
8.0	3,770	1.9	220		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	890	250
9.0	3,150	2.9	184		**3/A 01 L2**	**BN71B4**	**M1SD4**	**N56C**	4,450	5,280	840	250
10.0	2,930	1.7	171		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,390	5,540	820	234
13.0	2,300	2.1	134		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	4,070	5,140	760	234
17.0	1,710	2.8	100		**3/A 00 L2**	**BN71B4**	**M1SD4**	**N56C**	3,730	4,710	690	234

P_1 = 0.75 hp

n_2 rpm	T_2 in·bs	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	89,800	2.8	4959	**3/V 10 ML4**		**BN80A4**	**M1LA4**	**N56C**	25,000	32,300	14,600	370
0.70	48,300	1.3	2588	**3/V 06 L3**		**BN80A4**	**M1LA4**	**N56C**	15,600	19,600	7,870	318
0.70	44,300	2.2	2472	**3/V 07 L3**		**BN80A4**			19,300	26,300	10,100	336
0.80	41,100	1.0	2232	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	11,100	14,000	5,400	300
0.80	39,900	1.9	2139	**3/V 06 L3**		**BN80A4**	**M1LA4**	**N56C**	15,100	19,100	7,870	318
0.80	40,700	2.4	2150	**3/V 07 L3**		**BN80A4**			18,900	25,800	10,100	336
1.0	20,400	1.0	1189	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	10,100	12,800	4,700	264
1.0	23,700	1.0	1385	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	10,400	13,100	4,940	264
1.0	22,700	1.3	1152	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	10,100	12,700	4,650	282
1.0	22,700	1.4	1231	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	10,200	12,900	4,750	282
1.0	27,900	0.9	1419	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	10,400	13,100	4,980	282
1.0	28,300	1.1	1536	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	10,500	13,300	5,120	282
1.0	22,700	2.1	1231	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	10,200	12,900	4,750	300
1.0	26,400	1.5	1431	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	10,400	13,100	5,000	300
1.0	33,000	1.2	1674	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	10,600	13,400	5,270	300
1.0	32,900	1.3	1786	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	10,700	13,600	5,380	300
1.0	27,100	2.7	1395	**3/V 06 L3**		**BN80A4**	**M1LA4**	**N56C**	14,200	18,000	7,230	318
1.0	33,000	2.3	1768	**3/V 06 L3**		**BN80A4**	**M1LA4**	**N56C**	14,700	18,600	7,820	318
2.0	12,500	1.2	689	**3/V 01 L3**		**BN80A4**		**N56C**	4,880	5,800	1,310	248
2.0	13,900	1.7	736	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,460	12,000	4,000	264
2.0	15,000	1.2	793	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,560	12,100	4,110	264
2.0	17,500	1.3	923	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,770	12,300	4,320	264
2.0	17,500	1.3	1023	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,920	12,500	4,470	264
2.0	15,400	1.5	710	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,410	11,900	3,960	282
2.0	15,700	1.8	769	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,520	12,000	4,060	282
2.0	19,300	1.2	887	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,720	12,300	4,260	282
2.0	18,100	1.9	981	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,860	12,500	4,410	282
2.0	15,200	2.3	715	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	9,420	11,900	3,970	300
2.0	15,600	2.3	793	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	9,560	12,100	4,110	300
2.0	18,300	2.0	894	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	9,730	12,300	4,270	300
2.0	19,500	1.9	1057	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	9,960	12,600	4,520	300
2.0	22,800	1.7	1116	**3/V 05 L3**		**BN80A4**	**M1LA4**	**N56C**	10,000	12,700	4,600	300
3.0	12,500	1.2	495		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,940	11,300	3,510	266
3.0	14,500	1.0	574		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	9,130	11,500	3,690	266
3.0	15,300	1.0	605		**3/A 03 L2**	**BN80A4**		**N56C**	9,200	11,600	3,750	266
3.0	13,200	1.7	520		**3/A 04 L2**	**BN80A4**	**M1LA4**	**N56C**	9,000	11,400	3,570	284
3.0	12,400	2.7	491		**3/A 05 L2**	**BN80A4**	**M1LA4**	**N56C**	8,930	11,300	3,500	302
3.0	15,000	1.9	594		**3/A 05 L2**	**BN80A4**	**M1LA4**	**N56C**	9,180	11,600	3,730	302
3.0	9,240	1.0	509	**3/V 00 L3**		**BN80A4**		**N56C**	4,680	5,910	1,180	232
3.0	9,240	1.2	509	**3/V 01 L3**		**BN80A4**		**N56C**	4,680	5,550	1,180	248
3.0	10,200	1.2	562	**3/V 01 L3**		**BN80A4**		**N56C**	4,740	5,630	1,220	248
3.0	10,400	1.7	502	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	8,960	11,300	3,530	264
3.0	10,300	2.3	544	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,060	11,400	3,620	264
3.0	11,800	1.7	623	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	9,240	11,700	3,790	264
3.0	9,230	2.9	501	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	8,960	11,300	3,520	282
3.0	11,600	2.3	568	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,120	11,500	3,670	282
3.0	12,300	2.5	623	**3/V 04 L3**		**BN80A4**	**M1LA4**	**N56C**	9,240	11,700	3,790	282
4.0	10,400	1.6	409		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,700	11,000	3,290	266
4.0	9,770	2.2	386		**3/A 04 L2**	**BN80A4**	**M1LA4**	**N56C**	8,630	10,900	3,230	284
4.0	11,900	1.8	469		**3/A 04 L2**	**BN80A4**	**M1LA4**	**N56C**	8,870	11,200	3,440	284
4.0	10,100	2.7	398		**3/A 05 L2**	**BN80A4**	**M1LA4**	**N56C**	8,670	10,900	3,260	302
4.0	7,540	1.1	415	**3/V 00 L3**		**BN80A4**		**N56C**	4,540	5,740	1,100	232
4.0	8,910	1.9	430	**3/V 01 L3**		**BN80A4**		**N56C**	4,570	5,420	1,120	248
4.0	8,840	1.4	443	**3/V 01 L3**		**BN80A4**		**N56C**	4,580	5,440	1,130	248
4.0	8,180	2.4	395	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	8,660	10,900	3,250	264
4.0	8,710	2.3	460	**3/V 03 L3**		**BN80A4**	**M1LA4**	**N56C**	8,850	11,200	3,420	264
5.0	7,870	1.3	311		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	1,000	250



A

P_1 = 0.75 hp

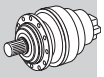
n_2 rpm	T_2 in·bs	S	i			IE1	IE1	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
5.0	9,210	1.2	364		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,460	5,290	1,060	250
5.0	8,250	1.8	326		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,050	266
5.0	8,910	2.0	352		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,130	266
5.0	8,020	2.6	317		**3/A 04 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,030	284
5.0	8,830	2.4	349		**3/A 04 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	3,120	284
6.0	6,810	1.3	269		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	950	250
6.0	6,810	2.4	269		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,860	266
7.0	6,460	1.6	255		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	940	250
8.0	5,140	1.1	203		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	870	234
8.0	5,540	1.0	219		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,620	890	234
8.0	5,160	2.2	204		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	870	250
8.0	5,570	1.3	220		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	890	250
8.0	5,570	2.6	220		**3/A 03 L2**	**BN80A4**	**M1LA4**	**N56C**	8,540	10,800	2,680	266
9.0	4,660	2.0	184		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,450	5,280	840	250
10.0	4,330	1.1	171		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	4,390	5,540	820	234
10.0	4,200	2.4	166		**3/A 01 L2**	**BN80A4**	**M1LA4**	**N56C**	4,350	5,160	810	250
13.0	3,390	1.4	134		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	4,070	5,140	760	234
16.0	2,710	2.1	107		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	3,810	4,810	700	234
17.0	2,530	1.9	100		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	3,730	4,710	690	234
19.0	2,240	2.2	88.6		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	3,600	4,540	660	234
21.0	2,030	2.8	80.2		**3/A 00 L2**	**BN80A4**	**M1LA4**	**N56C**	3,490	4,410	640	234

P_1 = 1 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.40	111,800	2.4	4036	**3/V 10 ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	24,300	31,400	14,600	370
0.40	111,600	2.4	4637	**3/V 10 ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	24,800	32,000	14,600	370
0.40	119,300	2.1	4959	**3/V 10 ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	25,000	32,300	14,600	370
0.50	90,600	2.7	3273	**3/V 10 ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	23,600	30,500	14,600	370
0.50	89,400	3.0	3570	**3/V 10 ML4**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	23,900	30,900	14,600	370
0.70	64,200	1.0	2588	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	15,600	19,600	7,870	318
0.70	58,800	1.7	2472	**3/V 07 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**		19,300	26,300	10,100	336
0.80	53,100	1.4	2139	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	15,100	19,100	7,870	318
0.80	54,100	1.8	2150	**3/V 07 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**		18,900	25,800	10,100	336
0.90	46,700	2.3	1964	**3/V 07 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**		18,700	25,400	10,100	336
1.0	30,100	1.0	1231	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,200	12,900	4,750	282
1.0	30,100	1.6	1231	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,200	12,900	4,750	300
1.0	35,000	1.1	1431	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,400	13,100	5,000	300
1.0	43,700	0.9	1786	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,700	13,600	5,380	300
1.0	30,100	2.3	1212	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,000	17,600	6,900	318
1.0	36,000	2.0	1395	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,200	18,000	7,230	318
1.0	43,900	1.7	1768	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	14,700	18,600	7,820	318
1.0	39,900	2.4	1545	**3/V 07 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**		18,100	24,600	9,610	336
2.0	18,500	1.3	736	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,460	12,000	4,000	264
2.0	19,900	0.9	793	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,560	12,100	4,110	264
2.0	23,200	1.0	923	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,770	12,300	4,320	264
2.0	23,300	1.0	1023	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,920	12,500	4,470	264
2.0	20,500	1.1	710	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,410	11,900	3,960	282
2.0	20,900	1.4	769	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,520	12,000	4,060	282

P_1 = 1 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.0	25,600	0.9	887	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,720	12,300	4,260	282
2.0	24,000	1.4	981	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,860	12,500	4,410	282
2.0	30,100	1.0	1152	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,100	12,700	4,650	282
2.0	20,200	1.8	715	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,420	11,900	3,970	300
2.0	20,800	1.7	793	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,560	12,100	4,110	300
2.0	24,300	1.5	894	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,730	12,300	4,270	300
2.0	25,900	1.5	1057	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,960	12,600	4,520	300
2.0	30,300	1.3	1116	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	10,000	12,700	4,600	300
2.0	26,500	2.6	930	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,400	16,900	6,310	318
2.0	29,800	2.4	1153	**3/V 06 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	13,900	17,500	6,780	318
3.0	17,500	1.3	520		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,000	11,400	3,570	284
3.0	20,000	1.4	594		**3/A 05 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,180	11,600	3,730	302
3.0	20,100	2.6	611		**3/A 06 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	12,700	16,000	5,490	320
3.0	22,100	2.3	671		**3/A 06 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	12,800	16,200	5,660	320
3.0	12,300	0.9	509	**3/V 01 L3**		**BE80B4**	**BX90SR4**			**N56C**	4,680	5,550	1,180	248
3.0	13,600	0.9	562	**3/V 01 L3**		**BE80B4**	**BX90SR4**			**N56C**	4,740	5,630	1,220	248
3.0	16,600	0.9	689	**3/V 01 L3**		**BE80B4**	**BX90SR4**			**N56C**	4,880	5,800	1,310	248
3.0	13,800	1.3	502	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,960	11,300	3,530	264
3.0	13,700	1.8	544	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,060	11,400	3,620	264
3.0	15,700	1.3	623	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,240	11,700	3,790	264
3.0	15,400	1.8	568	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,120	11,500	3,670	282
3.0	16,300	1.9	623	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,240	11,700	3,790	282
3.0	14,900	2.3	529	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,020	11,400	3,590	300
3.0	16,600	2.5	576	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,140	11,500	3,690	300
3.0	16,300	2.4	623	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	9,240	11,700	3,790	300
4.0	13,800	1.2	409		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,700	11,000	3,290	266
4.0	16,600	0.9	495		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,940	11,300	3,510	266
4.0	15,800	1.4	469		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,870	11,200	3,440	284
4.0	13,400	2.1	398		**3/A 05 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,670	10,900	3,260	302
4.0	14,200	2.6	422		**3/A 05 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,740	11,000	3,330	302
4.0	16,500	2.0	491		**3/A 05 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,930	11,300	3,500	302
4.0	11,800	1.4	430	**3/V 01 L3**		**BE80B4**	**BX90SR4**			**N56C**	4,570	5,420	1,120	248
4.0	11,700	1.0	443	**3/V 01 L3**		**BE80B4**	**BX90SR4**			**N56C**	4,580	5,440	1,130	248
4.0	10,900	1.8	395	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,660	10,900	3,250	264
4.0	11,600	1.8	460	**3/V 03 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,850	11,200	3,420	264
4.0	12,300	2.7	453	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,830	11,200	3,410	282
4.0	12,300	2.2	501	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,960	11,300	3,520	282
4.0	11,400	2.8	396	**3/V 05 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,660	10,900	3,260	300
5.0	12,200	0.9	364		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,460	5,290	1,060	250
5.0	11,000	1.3	326		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,050	266
5.0	11,800	1.5	352		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,130	266
5.0	11,700	1.8	349		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,120	284
5.0	13,000	1.6	386		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,630	10,900	3,230	284
5.0	11,100	2.9	329		**3/A 05 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,060	302
5.0	10,400	3.0	384	**3/V 04 L3**		**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,620	10,900	3,220	282
6.0	10,500	1.0	311		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	1,000	250
6.0	9,520	2.6	283		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,910	284
6.0	10,700	2.0	317		**3/A 04 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	3,030	284
7.0	8,580	1.2	255		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	940	250
7.0	9,050	1.0	269		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	950	250
7.0	9,050	1.8	269		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,860	266
8.0	7,400	1.0	220		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	890	250
8.0	7,400	2.0	220		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,680	266
9.0	6,860	1.7	204		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	870	250



A

P_1 = 1 hp

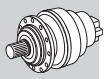
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
10.0	6,190	1.5	184		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,450	5,280	840	250
10.0	6,120	2.6	182		**3/A 03 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	8,540	10,800	2,510	266
11.0	5,580	1.8	166		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,350	5,160	810	250
13.0	4,510	1.1	134		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,070	5,140	760	234
13.0	4,470	2.6	133		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	**N56C**	4,070	4,830	760	250
16.0	3,600	1.6	107		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,810	4,810	700	234
17.0	3,430	3.0	102		**3/A 01 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,750	4,450	690	250
18.0	3,360	1.4	100		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,730	4,710	690	234
20.0	2,980	1.6	88.6		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,600	4,540	660	234
22.0	2,700	2.1	80.2		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,490	4,410	640	234
25.0	2,390	2.4	71.0		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,370	4,250	610	234
29.0	2,060	2.8	61.2		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,220	4,070	580	234
34	1,740	2.8	51.8		**3/A 00 L2**	**BE80B4**	**BX90SR4**	**ME2SB4**	**MX2SB4**	N56C	3,060	3,870	550	234

P_1 = 1.5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	195,800	2.2	5326	**3/V 11 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	31,600	33,000	14,600	388
0.30	180,600	2.5	5046	**3/V 13 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	43,200	51,900	18,000	406
0.40	164,000	1.6	4036	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	24,300	31,400	14,600	370
0.40	163,700	1.6	4637	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	24,800	32,000	14,600	370
0.40	175,100	1.4	4959	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	25,000	32,300	14,600	370
0.40	147,000	2.9	4106	**3/V 11 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	30,500	31,800	14,600	388
0.40	164,300	2.6	4410	**3/V 11 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	30,800	32,200	14,600	388
0.40	168,900	3.0	4536	**3/V 13 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	42,900	51,900	18,000	406
0.50	133,000	1.8	3273	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	23,600	30,500	14,600	370
0.50	131,200	2.0	3570	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	23,900	30,900	14,600	370
0.50	127,300	2.9	3557	**3/V 11 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	29,900	31,200	14,600	388
0.60	121,400	2.2	2987	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	23,300	30,100	14,600	370
0.70	86,300	1.1	2472	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	19,300	26,300	10,100	336
0.70	100,900	2.4	2455	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	22,700	29,200	14,600	370
0.80	77,900	1.0	2139	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	15,100	19,100	7,870	318
0.80	79,300	1.2	2150	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,900	25,800	10,100	336
0.80	87,600	2.8	2156	**3/V 10 ML4**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	22,200	28,700	14,600	370
0.90	68,600	1.6	1964	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,700	25,400	10,100	336
1.0	44,200	1.1	1231	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	10,200	12,900	4,750	300
1.0	44,100	1.6	1212	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,000	17,600	6,900	318
1.0	52,900	1.4	1395	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,200	18,000	7,230	318
1.0	64,400	1.2	1768	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	14,700	18,600	7,820	318
1.0	47,500	2.6	1288	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,600	24,000	9,050	336
1.0	52,100	2.1	1411	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,800	24,300	9,330	336
1.0	58,600	1.6	1545	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	18,100	24,600	9,610	336
2.0	30,700	0.9	769	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,520	12,000	4,060	282
2.0	35,200	1.0	981	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,860	12,500	4,410	282
2.0	29,600	1.2	715	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,420	11,900	3,970	300
2.0	30,400	1.2	793	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,560	12,100	4,110	300
2.0	35,700	1.0	894	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,730	12,300	4,270	300
2.0	38,000	1.0	1057	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,960	12,600	4,520	300
2.0	29,600	2.2	698	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,900	16,300	5,740	318
2.0	30,000	2.2	791	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,100	16,600	5,980	318

P_1 = 1.5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
2.0	39,000	1.7	930	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,400	16,900	6,310	318
2.0	37,600	2.2	992	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,600	17,100	6,450	318
2.0	43,700	1.6	1153	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	13,900	17,500	6,780	318
2.0	32,400	2.7	773	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	16,400	22,300	7,630	336
2.0	44,500	2.0	1159	**3/V 07 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	17,300	23,600	8,740	336
3.0	29,300	1.0	594		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,180	11,600	3,730	302
3.0	24,400	2.5	505		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,300	15,500	5,150	320
3.0	26,800	2.3	555		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,500	15,700	5,320	320
3.0	29,500	1.7	611		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,700	16,000	5,490	320
3.0	32,400	1.6	671		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,800	16,200	5,660	320
3.0	20,100	1.2	544	**3/V 03 L3**		**BE90S4**	**BX90S4**			**N140TC**	9,060	11,400	3,620	264
3.0	18,000	1.5	501	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,960	11,300	3,520	282
3.0	22,700	1.2	568	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,120	11,500	3,670	282
3.0	23,900	1.3	623	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,240	11,700	3,790	282
3.0	21,900	1.5	529	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,020	11,400	3,590	300
3.0	24,400	1.7	576	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,140	11,500	3,690	300
3.0	23,900	1.6	623	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	9,240	11,700	3,790	300
3.0	27,700	2.9	661	**3/V 06 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	12,800	16,100	5,640	318
4.0	23,100	0.9	469		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,870	11,200	3,440	284
4.0	19,600	1.4	398		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,670	10,900	3,260	302
4.0	20,800	1.8	422		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,740	11,000	3,330	302
4.0	24,200	1.4	491		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,930	11,300	3,500	302
4.0	18,800	2.6	388		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	11,900	15,000	4,720	320
4.0	16,000	1.2	395	**3/V 03 L3**		**BE90S4**	**BX90S4**			**N140TC**	8,660	10,900	3,250	264
4.0	17,000	1.2	460	**3/V 03 L3**		**BE90S4**	**BX90S4**			**N140TC**	8,850	11,200	3,420	264
4.0	18,100	1.8	453	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,830	11,200	3,410	282
4.0	16,800	1.9	396	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,660	10,900	3,260	300
4.0	19,600	2.1	462	**3/V 05 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,850	11,200	3,430	300
5.0	16,100	0.9	326		**3/A 03 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,050	266
5.0	17,400	1.0	352		**3/A 03 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,130	266
5.0	15,600	1.4	317		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,030	284
5.0	17,200	1.2	349		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,120	284
5.0	19,100	1.1	386		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,630	10,900	3,230	284
5.0	16,200	2.0	329		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	3,060	302
5.0	18,400	3.0	380		**3/A 06 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	11,800	14,900	4,690	320
5.0	15,300	2.0	384	**3/V 04 L3**		**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,620	10,900	3,220	282
6.0	13,300	1.2	269		**3/A 03 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,860	266
6.0	14,000	1.8	283		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,910	284
6.0	13,800	2.3	280		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,900	302
7.0	12,300	2.5	250		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,790	284
8.0	10,900	1.3	220		**3/A 03 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,680	266
8.0	10,100	2.5	205		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,620	284
8.0	11,200	2.8	226		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,700	284
8.0	10,500	2.6	212		**3/A 05 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,650	302
9.0	9,080	1.0	184		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	840	250
9.0	10,100	1.1	204		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,450	5,280	870	250
10.0	8,190	1.2	166		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,350	5,160	810	250
10.0	8,980	1.8	182		**3/A 03 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,540	10,800	2,510	266
10.0	8,590	3.0	174		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,450	10,700	2,480	284
12.0	7,350	2.9	149		**3/A 04 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	8,070	10,200	2,350	284
13.0	6,560	1.8	133		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	4,070	4,830	760	250
16.0	5,280	1.1	107		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,810	4,810	700	234
17.0	4,940	1.0	100		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,730	4,710	690	234



A

P_1 = 1.5 hp

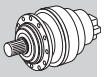
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
17.0	5,030	2.0	102		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,750	4,450	690	250
20.0	4,370	1.1	88.6		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,600	4,540	660	234
21.0	4,010	2.9	81.3		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,510	4,160	640	250
22.0	3,960	1.5	80.2		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,490	4,410	640	234
23.0	3,660	2.8	74.2		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,410	4,050	620	250
25.0	3,500	1.6	71.0		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,370	4,250	610	234
28.0	3,020	1.9	61.2		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,220	4,070	580	234
32	2,670	2.7	54.2		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,110	3,690	560	250
34	2,560	1.9	51.8		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	3,060	3,870	550	234
42	2,050	2.2	41.5		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	**N140TC**	2,870	3,620	510	234
43	1,980	2.7	40.1		**3/A 01 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	N140TC	2,840	3,370	510	250
44	1,950	2.3	39.6		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	N140TC	2,830	3,570	500	234
55	1,560	2.3	31.7		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	N140TC	2,640	3,340	470	234
74	1,150	2.3	23.4		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	N140TC	2,420	3,050	420	234
91	940	2.3	19.1		**3/A 00 L2**	**BE90S4**	**BX90S4**	**ME3SA4**	**MX3SA4**	N140TC	2,270	2,870	400	234

P_1 = 2 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	241,200	1.0	4959		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	25,000	32,300	14,600	370
0.30	269,700	1.6	5326		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	31,600	33,000	14,600	388
0.30	248,800	1.8	5046		**3/V 13 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	43,200	51,900	18,000	406
0.40	225,900	1.2	4036		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	24,300	31,400	14,600	370
0.40	225,500	1.2	4637		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	24,800	32,000	14,600	370
0.40	202,400	2.1	4106		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	30,500	31,800	14,600	388
0.40	226,200	1.9	4410		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	30,800	32,200	14,600	388
0.40	207,600	2.6	4046		**3/V 13 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	42,200	51,900	18,000	406
0.40	232,700	2.2	4536		**3/V 13 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	42,900	51,900	18,000	406
0.50	183,200	1.3	3273		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	23,600	30,500	14,600	370
0.50	180,800	1.5	3570		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	23,900	30,900	14,600	370
0.50	180,300	2.3	3222		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	29,500	30,700	14,600	388
0.50	175,400	2.1	3557		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	29,900	31,200	14,600	388
0.50	182,600	2.6	3263		**3/V 13 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	40,900	51,300	18,000	406
0.50	196,700	2.6	3515		**3/V 13 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	41,400	51,800	18,000	406
0.60	167,200	1.6	2987		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	23,300	30,100	14,600	370
0.60	169,400	2.5	3063		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	29,200	30,500	14,600	388
0.70	139,000	1.7	2455		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	22,700	29,200	14,600	370
0.70	149,000	2.8	2663		**3/V 11 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	28,700	29,900	14,600	388
0.80	120,700	2.1	2156		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	22,200	28,700	14,600	370
0.90	94,400	1.2	1964		**3/V 07 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,700	25,400	10,100	336
0.90	103,800	2.3	1855		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	21,800	28,100	14,600	370
0.90	112,800	2.3	2016		**3/V 10 ML4**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	22,000	28,400	14,600	370
1.0	60,800	1.1	1212		**3/V 06 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	14,000	17,600	6,900	318
1.0	72,800	1.0	1395		**3/V 06 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	14,200	18,000	7,230	318
1.0	61,300	1.5	1159		**3/V 07 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,300	23,600	8,740	336
1.0	65,500	1.9	1288		**3/V 07 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,600	24,000	9,050	336
1.0	71,700	1.5	1411		**3/V 07 L3**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,800	24,300	9,330	336

P_1 = 2 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.0	80,700	1.2	1545	**3/V 07 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	18,100	24,600	9,610	336
1.0	91,600	2.7	1617	**3/V 10 ML4**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	21,300	27,600	14,100	370
2.0	40,800	1.6	698	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,900	16,300	5,740	318
2.0	41,300	1.6	791	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,100	16,600	5,980	318
2.0	53,700	1.3	930	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,400	16,900	6,310	318
2.0	51,800	1.6	992	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,600	17,100	6,450	318
2.0	60,200	1.2	1153	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	13,900	17,500	6,780	318
2.0	44,600	1.9	773	**3/V 07 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,400	22,300	7,630	336
2.0	48,700	2.2	920	**3/V 07 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	16,800	22,800	8,090	336
2.0	53,000	2.4	1015	**3/V 07 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	17,000	23,100	8,360	336
3.0	33,600	1.8	505		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,300	15,500	5,150	320
3.0	36,900	1.7	555		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,500	15,700	5,320	320
3.0	40,700	1.3	611		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,700	16,000	5,490	320
3.0	44,700	1.2	671		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,800	16,200	5,660	320
3.0	24,800	1.1	501	**3/V 04 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,960	11,300	3,520	282
3.0	32,900	0.9	623	**3/V 04 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,240	11,700	3,790	282
3.0	30,200	1.1	529	**3/V 05 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,020	11,400	3,590	300
3.0	33,600	1.3	576	**3/V 05 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,140	11,500	3,690	300
3.0	32,900	1.2	623	**3/V 05 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	9,240	11,700	3,790	300
3.0	30,400	2.2	527	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,400	15,600	5,220	318
3.0	32,800	2.3	569	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,500	15,800	5,360	318
3.0	38,100	2.1	661	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,800	16,100	5,640	318
4.0	27,100	1.0	398		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,670	10,900	3,260	302
4.0	28,700	1.3	422		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,740	11,000	3,330	302
4.0	33,400	1.0	491		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,930	11,300	3,500	302
4.0	25,800	1.9	388		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,900	15,000	4,720	320
4.0	29,000	2.4	435		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	12,100	15,200	4,900	320
4.0	27,000	2.9	405		**3/A 07 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	14,900	20,300	6,150	338
4.0	29,200	2.7	439		**3/A 07 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	15,100	20,500	6,320	338
4.0	24,900	1.3	453	**3/V 04 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,830	11,200	3,410	282
4.0	23,100	1.4	396	**3/V 05 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,660	10,900	3,260	300
4.0	27,000	1.5	462	**3/V 05 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,850	11,200	3,430	300
4.0	23,100	2.9	395	**3/V 06 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,900	15,000	4,750	318
5.0	21,500	1.0	317		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,030	284
5.0	22,400	1.4	329		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	3,060	302
5.0	21,400	2.7	321		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,700	14,800	4,430	320
5.0	25,300	2.2	380		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,800	14,900	4,690	320
5.0	21,100	1.5	384	**3/V 04 L3**		**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,620	10,900	3,220	282
6.0	19,200	1.3	283		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,910	284
6.0	19,000	1.7	280		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,900	302
6.0	17,800	2.7	267		**3/A 06 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	11,700	14,800	4,170	320
7.0	17,000	1.8	250		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,790	284
7.0	16,400	2.3	241		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,760	302
8.0	15,000	1.0	220		**3/A 03 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,680	266
8.0	13,900	1.8	205		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,620	284
8.0	15,400	2.0	226		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,700	284
8.0	14,400	1.9	212		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,650	302
10.0	11,300	0.9	166		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,350	5,160	810	250
10.0	12,400	1.3	182		**3/A 03 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,540	10,800	2,510	266
10.0	11,800	2.2	174		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,450	10,700	2,480	284
10.0	11,900	2.7	175		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,480	10,700	2,480	302
11.0	11,000	2.3	162		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,280	10,500	2,420	284
11.0	11,000	2.3	162		**3/A 05 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,280	10,500	2,420	302



A

P_1 = 2 hp

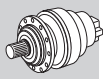
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
12.0	10,100	2.1	149		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	8,070	10,200	2,350	284
13.0	9,040	1.3	133		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	4,070	4,830	760	250
13.0	8,770	2.7	129		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,730	9,770	2,240	284
15.0	7,950	2.7	117		**3/A 04 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,510	9,480	2,170	284
17.0	6,930	1.5	102		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,750	4,450	690	250
18.0	6,590	2.3	96.9		**3/A 03 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	7,090	8,960	2,040	266
20.0	6,020	2.4	88.5		**3/A 03 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	6,900	8,720	1,980	266
21.0	5,530	2.1	81.3		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,510	4,160	640	250
22.0	5,450	1.1	80.2		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,490	4,410	640	234
23.0	5,040	2.0	74.2		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,410	4,050	620	250
24.0	4,830	1.2	71.0		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,370	4,250	610	234
28.0	4,160	1.4	61.2		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,220	4,070	580	234
29.0	4,040	2.7	59.4		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,190	3,790	580	250
32	3,680	1.9	54.2		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,110	3,690	560	250
33	3,520	1.4	51.8		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,060	3,870	550	234
35	3,340	2.2	49.1		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	3,010	3,580	540	250
40	2,980	2.8	43.9		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,920	3,460	520	250
42	2,820	1.6	41.5		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,870	3,620	510	234
43	2,730	1.9	40.1		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,840	3,370	510	250
44	2,690	1.7	39.6		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,830	3,570	500	234
48	2,430	2.8	35.8		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,740	3,260	490	250
55	2,150	1.7	31.7		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,640	3,340	470	234
56	2,120	2.7	31.2		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,630	3,120	470	250
74	1,590	1.7	23.4		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,420	3,050	420	234
75	1,560	2.7	23.0		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,400	2,850	420	250
91	1,300	1.7	19.1		**3/A 00 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,270	2,870	400	234
92	1,280	2.7	18.8		**3/A 01 L2**	**BE90LA4**	**BX90LA4**	**ME3SB4**	**MX3SB4**	**N140TC**	2,260	2,680	390	250

P_1 = 3 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	391,600	1.1	5326	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		31,600	33,000	14,600	388
0.30	361,200	1.2	5046	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		43,200	51,900	18,000	406
0.30	405,100	2.0	5234	**3/V 15 ML4**		**BE100LA4**	**BX100LA4**				42,700	52,200	20,200	440
0.40	293,900	1.5	4106	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		30,500	31,800	14,600	388
0.40	328,500	1.3	4410	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		30,800	32,200	14,600	388
0.40	301,400	1.8	4046	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		42,200	51,900	18,000	406
0.40	337,900	1.5	4536	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		42,900	51,900	18,000	406
0.40	320,600	2.0	3993	**3/V 14 ML4**		**BE100LA4**	**BX100LA4**				41,100	50,200	20,200	424
0.40	321,200	2.2	4312	**3/V 14 ML4**		**BE100LA4**	**BX100LA4**				41,600	50,700	20,200	424
0.40	369,400	1.9	4959	**3/V 14 ML4**		**BE100LA4**	**BX100LA4**				42,400	51,800	20,200	424
0.40	322,800	2.8	4171	**3/V 15 ML4**		**BE100LA4**	**BX100LA4**				41,400	50,500	20,200	440
0.40	383,100	2.3	4950	**3/V 15 ML4**		**BE100LA4**	**BX100LA4**				42,400	51,700	20,200	440
0.40	383,100	2.7	4950	**3/V 16 ML4**		**BE100LA4**	**BX100LA4**				66,000	74,100	33,700	454
0.50	266,000	0.9	3273	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		23,600	30,500	14,600	370
0.50	262,500	1.0	3570	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		23,900	30,900	14,600	370
0.50	261,800	1.6	3222	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		29,500	30,700	14,600	388
0.50	254,600	1.5	3557	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		29,900	31,200	14,600	388

P_1 = 3 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.50	265,200	1.8	3263	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		40,900	51,300	18,000	406
0.50	285,600	1.8	3515	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		41,400	51,800	18,000	406
0.60	242,700	1.1	2987	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		23,300	30,100	14,600	370
0.60	245,900	1.7	3063	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		29,200	30,500	14,600	388
0.60	206,600	2.5	2773	**3/V 13 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		40,000	50,100	18,000	406
0.60	255,500	2.7	3182	**3/V 14 ML4**		**BE100LA4**	**BX100LA4**				39,800	48,600	20,200	424
0.70	201,900	1.2	2455	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		22,700	29,200	14,600	370
0.70	216,400	2.0	2663	**3/V 11 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		28,700	29,900	14,600	388
0.70	179,300	2.0	2430	**3/V 13 ML3**		**BE100LA4**	**BX100LA4**				39,200	49,100	18,000	406
0.80	165,100	0.9	2150	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				18,900	25,800	8,090	354
0.80	175,200	1.4	2156	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		22,200	28,700	14,600	370
0.80	171,900	1.9	2329	**3/V 11 ML3**		**BE100LA4**	**BX100LA4**				28,100	29,400	14,600	388
0.90	150,700	1.6	1855	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		21,800	28,100	14,600	370
0.90	163,800	1.6	2016	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		22,000	28,400	14,600	370
0.90	144,900	2.5	1963	**3/V 11 ML3**		**BE100LA4**	**BX100LA4**				27,400	28,600	14,600	388
1.0	95,100	1.3	1288	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		17,600	24,000	9,050	336
1.0	104,100	1.0	1411	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		17,800	24,300	9,330	336
1.0	98,900	1.9	1288	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				17,600	24,000	7,240	354
1.0	115,000	1.4	1497	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				18,000	24,500	7,610	354
1.0	116,500	1.1	1623	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				18,200	24,800	7,820	354
1.0	128,700	1.5	1792	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				18,500	25,100	8,080	354
1.0	94,200	1.8	1227	**3/V 10 ML3**		**BE100LA4**	**BX100LA4**				20,500	26,500	12,900	370
1.0	108,400	1.6	1411	**3/V 10 ML3**		**BE100LA4**	**BX100LA4**				20,900	27,000	13,500	370
1.0	133,000	1.9	1617	**3/V 10 ML4**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		21,300	27,600	14,100	370
1.0	124,000	2.9	1636	**3/V 11 ML3**		**BE100LA4**	**BX100LA4**				26,700	27,900	14,200	388
2.0	60,000	1.1	791	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		13,100	16,600	5,980	318
2.0	75,200	1.1	992	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		13,600	17,100	6,450	318
2.0	58,400	2.1	761	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		16,300	22,200	7,590	336
2.0	64,800	1.3	773	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		16,400	22,300	7,630	336
2.0	70,700	1.5	920	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		16,800	22,800	8,090	336
2.0	76,900	1.6	1015	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		17,000	23,100	8,360	336
2.0	89,000	1.0	1159	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		17,300	23,600	8,740	336
2.0	60,700	2.1	761	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				16,300	22,200	6,070	354
2.0	67,000	2.6	840	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				16,600	22,500	6,280	354
2.0	77,100	2.1	1004	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				17,000	23,100	6,660	354
2.0	92,500	1.5	1159	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				17,300	23,600	6,990	354
2.0	73,400	2.3	920	**3/V 10 ML3**		**BE100LA4**	**BX100LA4**				19,700	25,400	11,700	370
2.0	86,000	2.9	1120	**3/V 10 ML3**		**BE100LA4**	**BX100LA4**				20,300	26,100	12,500	370
3.0	48,800	1.3	505		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,300	15,500	5,150	320
3.0	53,600	1.2	555		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,500	15,700	5,320	320
3.0	44,200	1.5	527	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,400	15,600	5,220	318
3.0	47,700	1.6	569	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,500	15,800	5,360	318
3.0	55,400	1.5	661	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,800	16,100	5,640	318
3.0	59,200	1.1	698	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,900	16,300	5,740	318
3.0	42,500	2.8	507	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		15,400	21,000	6,630	336
3.0	50,300	2.5	655	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		16,000	21,700	7,220	336
3.0	52,300	3.0	655	**3/V 09 L3**		**BE100LA4**	**BX100LA4**				16,000	21,700	5,780	354
4.0	42,000	1.6	435		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,100	15,200	4,900	320
4.0	39,100	2.0	405		**3/A 07 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		14,900	20,300	6,150	338
4.0	42,400	1.9	439		**3/A 07 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		15,100	20,500	6,320	338
4.0	36,100	0.9	453	**3/V 04 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,830	11,200	3,410	282
4.0	33,600	1.0	396	**3/V 05 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,660	10,900	3,260	300
4.0	39,200	1.1	462	**3/V 05 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,850	11,200	3,430	300
4.0	33,500	2.0	395	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,900	15,000	4,750	318



A

P_1 = 3 hp

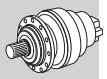
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
4.0	36,200	2.1	427	**3/V 06 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		12,000	15,200	4,870	318
4.0	38,500	2.8	460	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		15,200	20,700	6,420	336
5.0	32,500	1.0	329		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	3,060	302
5.0	31,000	1.9	321		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,700	14,800	4,430	320
5.0	37,500	1.3	388		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,900	15,000	4,720	320
5.0	36,700	1.5	380		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,800	14,900	4,690	320
5.0	30,600	1.0	384	**3/V 04 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,620	10,900	3,220	282
5.0	33,500	2.3	386	**3/V 07 L3**		**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		14,800	20,200	6,060	336
6.0	27,900	0.9	283		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,910	284
6.0	27,600	1.2	280		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,900	302
6.0	26,700	2.6	276		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,700	14,800	4,210	320
6.0	27,300	2.8	282		**3/A 07 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		14,700	20,000	5,450	338
7.0	24,700	1.3	250		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,790	284
7.0	23,800	1.6	241		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,760	302
7.0	25,800	1.9	267		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,700	14,800	4,170	320
8.0	22,300	1.4	226		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,700	284
8.0	20,900	1.3	212		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,650	302
8.0	21,400	2.7	221		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,700	14,800	3,910	320
9.0	20,200	1.3	205		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,540	10,800	2,620	284
9.0	19,100	2.5	198		**3/A 06 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		11,700	14,800	3,770	320
10.0	17,200	1.5	174		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,450	10,700	2,480	284
10.0	17,300	1.8	175		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,480	10,700	2,480	302
11.0	16,000	1.6	162		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,280	10,500	2,420	284
11.0	16,000	1.6	162		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,280	10,500	2,420	302
12.0	14,700	1.4	149		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		8,070	10,200	2,350	284
12.0	13,900	2.3	141		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,930	10,000	2,310	302
14.0	12,700	1.9	129		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,730	9,770	2,240	284
15.0	11,500	1.8	117		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,510	9,480	2,170	284
15.0	11,900	2.6	121		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,580	9,580	2,190	302
17.0	10,100	1.0	102		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,750	4,450	690	250
17.0	10,100	2.2	102		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,200	9,100	2,070	284
17.0	10,300	2.6	104		**3/A 05 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,240	9,140	2,080	302
18.0	9,560	1.6	96.9		**3/A 03 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		7,090	8,960	2,040	266
19.0	8,950	2.4	90.7		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		6,950	8,780	1,990	284
20.0	8,740	1.7	88.5		**3/A 03 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		6,900	8,720	1,980	266
22.0	8,020	1.4	81.3		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,510	4,160	640	250
22.0	8,060	2.6	81.7		**3/A 04 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		6,740	8,510	1,920	284
24.0	7,320	1.4	74.2		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,410	4,050	620	250
24.0	7,230	2.1	73.2		**3/A 03 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		6,520	8,240	1,860	266
28.0	6,210	2.1	62.9		**3/A 03 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		6,230	7,870	1,760	266
29.0	6,040	1.0	61.2		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,220	4,070	580	234
30	5,860	1.9	59.4		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,190	3,790	580	250
32	5,350	1.3	54.2		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,110	3,690	560	250
34	5,110	1.0	51.8		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,060	3,870	550	234
34	5,180	2.8	52.5		**3/A 03 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		5,900	7,460	1,660	266
36	4,850	1.5	49.1		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		3,010	3,580	540	250
40	4,330	1.9	43.9		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,920	3,460	520	250
42	4,100	1.1	41.5		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,870	3,620	510	234
44	3,910	1.2	39.6		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,830	3,570	500	234
44	3,960	1.3	40.1		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,840	3,370	510	250
49	3,530	1.9	35.8		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,740	3,260	490	250
56	3,130	1.2	31.7		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,640	3,340	470	234
56	3,080	1.8	31.2		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,630	3,120	470	250
75	2,310	1.2	23.4		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,420	3,050	420	234

P_1 = 3 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
77	2,270	1.8	23.0		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,400	2,850	420	250
92	1,890	1.2	19.1		**3/A 00 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,270	2,870	400	234
94	1,860	1.8	18.8		**3/A 01 L2**	**BE100LA4**	**BX100LA4**	**ME3LA4**	**MX3LA4**		2,260	2,680	390	250

P_1 = 4 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	494,200	0.9	5046		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	43,200	51,900	18,000	406
0.30	554,100	1.5	5234		**3/V 15 ML4**	**BE100LB4**	**BX100LB4**				42,700	52,200	20,200	440
0.40	402,100	1.1	4106		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	30,500	31,800	14,600	388
0.40	449,400	0.9	4410		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	30,800	32,200	14,600	388
0.40	412,300	1.3	4046		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	42,200	51,900	18,000	406
0.40	462,200	1.1	4536		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	42,900	51,900	18,000	406
0.40	438,600	1.5	3993		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				41,100	50,200	20,200	424
0.40	439,400	1.6	4312		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				41,600	50,700	20,200	424
0.40	505,300	1.4	4959		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				42,400	51,800	20,200	424
0.40	441,600	2.0	4171		**3/V 15 ML4**	**BE100LB4**	**BX100LB4**				41,400	50,500	20,200	440
0.40	524,100	1.7	4950		**3/V 15 ML4**	**BE100LB4**	**BX100LB4**				42,400	51,700	20,200	440
0.40	441,600	2.7	4171		**3/V 16 ML4**	**BE100LB4**	**BX100LB4**				64,400	72,300	33,700	454
0.40	524,100	2.0	4950		**3/V 16 ML4**	**BE100LB4**	**BX100LB4**				66,000	74,100	33,700	454
0.50	358,200	1.2	3222		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	29,500	30,700	14,600	388
0.50	348,300	1.1	3557		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	29,900	31,200	14,600	388
0.50	362,700	1.3	3263		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	40,900	51,300	18,000	406
0.50	390,700	1.3	3515		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	41,400	51,800	18,000	406
0.50	349,500	2.0	3182		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				39,800	48,600	20,200	424
0.60	336,400	1.3	3063		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	29,200	30,500	14,600	388
0.60	282,600	1.8	2773		**3/V 13 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	40,000	50,100	18,000	406
0.60	294,500	2.4	2782		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				39,000	47,700	20,200	424
0.70	296,000	1.4	2663		**3/V 11 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	28,700	29,900	14,600	388
0.70	245,300	1.4	2430		**3/V 13 ML3**	**BE100LB4**	**BX100LB4**				39,200	49,100	18,000	406
0.70	255,200	2.8	2504		**3/V 14 ML4**	**BE100LB4**	**BX100LB4**				38,500	46,900	20,200	424
0.80	239,700	1.0	2156		**3/V 10 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	22,200	28,700	14,600	370
0.80	235,100	1.4	2329		**3/V 11 ML3**	**BE100LB4**	**BX100LB4**				28,100	29,400	14,600	388
0.80	234,000	2.4	2318		**3/V 14 ML3**	**BE100LB4**	**BX100LB4**				38,000	46,400	20,200	424
0.90	206,200	1.2	1855		**3/V 10 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	21,800	28,100	14,600	370
0.90	224,100	1.2	2016		**3/V 10 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	22,000	28,400	14,600	370
0.90	198,200	1.8	1963		**3/V 11 ML3**	**BE100LB4**	**BX100LB4**				27,400	28,600	14,600	388
0.90	203,800	2.5	2019		**3/V 13 ML3**	**BE100LB4**	**BX100LB4**				38,200	47,900	18,000	406
1.0	130,000	1.0	1288		**3/V 07 L3**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,600	24,000	9,050	336
1.0	135,300	1.4	1288		**3/V 09 L3**	**BE100LB4**	**BX100LB4**				17,600	24,000	7,240	354
1.0	157,300	1.0	1497		**3/V 09 L3**	**BE100LB4**	**BX100LB4**				18,000	24,500	7,610	354
1.0	176,000	1.1	1792		**3/V 09 L3**	**BE100LB4**	**BX100LB4**				18,500	25,100	8,080	354
1.0	128,900	1.3	1227		**3/V 10 ML3**	**BE100LB4**	**BX100LB4**				20,500	26,500	12,900	370
1.0	148,200	1.2	1411		**3/V 10 ML3**	**BE100LB4**	**BX100LB4**				20,900	27,000	13,500	370
1.0	181,900	1.4	1617		**3/V 10 ML4**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	21,300	27,600	14,100	370
1.0	132,100	2.2	1274		**3/V 11 ML3**	**BE100LB4**	**BX100LB4**				25,800	26,900	13,000	388
1.0	142,900	2.8	1378		**3/V 11 ML3**	**BE100LB4**	**BX100LB4**				26,100	27,200	13,400	388
1.0	169,600	2.2	1636		**3/V 11 ML3**	**BE100LB4**	**BX100LB4**				26,700	27,900	14,200	388
1.0	174,400	2.9	1682		**3/V 13 ML3**	**BE100LB4**	**BX100LB4**				37,200	46,600	17,600	406



A

P_1 = 4 hp

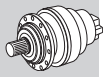
n_2	T_2	S	i								Rn_2 [lbs]			
rpm	in·bs					IE2	IE3	IE2	IE3	NEMA	NHC/HC NPC/PC	HZ/PZ	FZ	
2.0	79,900	1.6	761	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,300	22,200	7,590	336
2.0	88,600	1.0	773	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,400	22,300	7,630	336
2.0	96,600	1.1	920	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,800	22,800	8,090	336
2.0	105,200	1.2	1015	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	17,000	23,100	8,360	336
2.0	83,100	1.5	761	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				16,300	22,200	6,070	354
2.0	84,000	2.2	800	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				16,500	22,400	6,180	354
2.0	91,700	1.9	840	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				16,600	22,500	6,280	354
2.0	105,500	1.5	1004	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				17,000	23,100	6,660	354
2.0	126,500	1.1	1159	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				17,300	23,600	6,990	354
2.0	100,400	1.7	920	**3/V 10 ML3**		**BE100LB4**	**BX100LB4**				19,700	25,400	11,700	370
2.0	105,500	2.6	1004	**3/V 10 ML3**		**BE100LB4**	**BX100LB4**				19,900	25,700	12,000	370
2.0	117,700	2.1	1120	**3/V 10 ML3**		**BE100LB4**	**BX100LB4**				20,300	26,100	12,500	370
3.0	66,800	0.9	505		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,300	15,500	5,150	320
3.0	60,400	1.1	527	**3/V 06 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,400	15,600	5,220	318
3.0	65,200	1.2	569	**3/V 06 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,500	15,800	5,360	318
3.0	75,800	1.1	661	**3/V 06 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,800	16,100	5,640	318
3.0	58,100	2.1	507	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,400	21,000	6,630	336
3.0	68,800	1.8	655	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	16,000	21,700	7,220	336
3.0	71,500	2.2	655	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				16,000	21,700	5,780	354
4.0	57,500	1.2	435		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,100	15,200	4,900	320
4.0	53,500	1.5	405		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,900	20,300	6,150	338
4.0	58,000	1.4	439		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,100	20,500	6,320	338
4.0	45,800	1.5	395	**3/V 06 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,900	15,000	4,750	318
4.0	49,500	1.5	427	**3/V 06 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	12,000	15,200	4,870	318
4.0	52,700	2.1	460	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	15,200	20,700	6,420	336
5.0	42,400	1.4	321		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,430	320
5.0	51,300	1.0	388		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,900	15,000	4,720	320
5.0	50,200	1.1	380		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,800	14,900	4,690	320
5.0	45,100	2.2	341		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,810	338
5.0	45,800	1.7	386	**3/V 07 L3**		**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,800	20,200	6,060	336
5.0	40,400	2.9	370	**3/V 09 L3**		**BE100LB4**	**BX100LB4**				14,700	20,000	4,780	354
6.0	36,500	1.9	276		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,210	320
6.0	37,300	2.1	282		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,450	338
7.0	33,800	0.9	250		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,790	284
7.0	32,500	1.2	241		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,760	302
7.0	35,300	1.4	267		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	4,170	320
7.0	31,900	2.5	241		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,180	338
8.0	30,500	1.0	226		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,700	284
8.0	28,600	1.0	212		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,650	302
8.0	29,200	2.0	221		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,910	320
8.0	29,500	2.7	223		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	5,040	338
9.0	27,700	0.9	205		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,540	10,800	2,620	284
9.0	25,100	2.7	190		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,720	320
9.0	26,200	1.9	198		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,700	14,800	3,770	320
9.0	26,200	2.9	198		**3/A 07 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	14,700	20,000	4,840	338
10.0	23,500	1.1	174		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,450	10,700	2,480	284
10.0	23,600	1.4	175		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,480	10,700	2,480	302
11.0	21,900	1.2	162		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,280	10,500	2,420	284
11.0	21,900	1.2	162		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,280	10,500	2,420	302
11.0	21,700	2.7	164		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	11,400	14,400	3,540	320
12.0	20,100	1.1	149		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	8,070	10,200	2,350	284
12.0	19,000	1.7	141		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,930	10,000	2,310	302
14.0	17,400	1.4	129		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,730	9,770	2,240	284
14.0	16,300	1.9	121		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,580	9,580	2,190	302
14.0	16,900	2.8	125		**3/A 06 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	10,500	13,200	3,230	320

P_1 = 4 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
15.0	15,800	1.3	117		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,510	9,480	2,170	284
17.0	13,800	1.6	102		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,200	9,100	2,070	284
17.0	14,000	1.9	104		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,240	9,140	2,080	302
18.0	13,100	1.1	96.9		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	7,090	8,960	2,040	266
19.0	12,200	1.7	90.7		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,950	8,780	1,990	284
20.0	11,900	1.2	88.5		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,900	8,720	1,980	266
20.0	11,600	2.7	85.6		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,830	8,630	1,950	302
21.0	11,000	1.9	81.7		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,740	8,510	1,920	284
22.0	11,000	1.0	81.3		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,510	4,160	640	250
23.0	10,200	2.6	75.8		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,590	8,320	1,880	302
24.0	10,000	1.0	74.2		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,410	4,050	620	250
24.0	9,880	1.6	73.2		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,520	8,240	1,860	266
24.0	9,790	3.0	72.5		**3/A 05 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,500	8,220	1,850	302
26.0	9,240	2.7	68.4		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,390	8,070	1,810	284
28.0	8,490	1.6	62.9		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,230	7,870	1,760	266
28.0	8,430	3.0	62.4		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	6,220	7,850	1,760	284
29.0	8,020	1.4	59.4		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,190	3,790	580	250
32.0	7,320	1.0	54.2		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,110	3,690	560	250
32	7,360	2.7	54.5		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,970	7,540	1,680	284
33	7,090	2.1	52.5		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,900	7,460	1,660	266
35	6,710	3.0	49.7		**3/A 04 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,810	7,340	1,630	284
36	6,630	1.1	49.1		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	3,010	3,580	540	250
40	5,930	1.4	43.9		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,920	3,460	520	250
40	5,860	2.2	43.4		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,580	7,040	1,560	266
43	5,470	2.6	40.5		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,460	6,900	1,520	266
44	5,410	1.0	40.1		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,840	3,370	510	250
49	4,830	1.4	35.8		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,740	3,260	490	250
52	4,520	2.6	33.5		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	5,160	6,510	1,430	266
56	4,210	1.3	31.2		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,630	3,120	470	250
61	3,890	2.6	28.8		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	4,930	6,230	1,360	266
76	3,110	1.3	23.0		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,400	2,850	420	250
76	3,110	2.6	23.0		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	4,610	5,820	1,260	266
90	2,620	2.6	19.4		**3/A 03 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	4,380	5,530	1,190	266
93	2,540	1.3	18.8		**3/A 01 L2**	**BE100LB4**	**BX100LB4**	**ME3LB4**	**MX3LB4**	**N180TC**	2,260	2,680	390	250

P_1 = 5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	680,200	1.2	5234	**3/V 15 ML4**		**BE112M4**	**BX112M4**				42,700	52,200	20,200	440
0.40	506,100	1.1	4046	**3/V 13 ML4**		**BE112M4**	**BX112M4**			**N180TC**	42,200	51,900	18,000	406
0.40	538,400	1.2	3993	**3/V 14 ML4**		**BE112M4**	**BX112M4**				41,100	50,200	20,200	424
0.40	539,400	1.3	4312	**3/V 14 ML4**		**BE112M4**	**BX112M4**				41,600	50,700	20,200	424
0.40	620,300	1.2	4959	**3/V 14 ML4**		**BE112M4**	**BX112M4**				42,400	51,800	20,200	424
0.40	542,100	1.6	4171	**3/V 15 ML4**		**BE112M4**	**BX112M4**				41,400	50,500	20,200	440
0.40	643,300	1.4	4950	**3/V 15 ML4**		**BE112M4**	**BX112M4**				42,400	51,700	20,200	440
0.40	542,100	2.2	4171	**3/V 16 ML4**		**BE112M4**	**BX112M4**				64,400	72,300	33,700	454
0.40	643,300	1.6	4950	**3/V 16 ML4**		**BE112M4**	**BX112M4**				66,000	74,100	33,700	454
0.50	439,700	1.0	3222	**3/V 11 ML4**		**BE112M4**	**BX112M4**			**N180TC**	29,500	30,700	14,600	388
0.50	445,300	1.1	3263	**3/V 13 ML4**		**BE112M4**	**BX112M4**			**N180TC**	40,900	51,300	18,000	406
0.50	479,700	1.1	3515	**3/V 13 ML4**		**BE112M4**	**BX112M4**			**N180TC**	41,400	51,800	18,000	406
0.50	456,700	2.6	3514	**3/V 16 ML4**		**BE112M4**	**BX112M4**				62,900	70,500	33,700	454



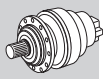
A

P_1 = 5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.60	413,000	1.0	3063	**3/V 11 ML4**		**BE112M4**	**BX112M4**			**N180TC**	29,200	30,500	14,600	388
0.60	346,900	1.5	2773	**3/V 13 ML4**		**BE112M4**	**BX112M4**			**N180TC**	40,000	50,100	18,000	406
0.60	361,600	2.0	2782	**3/V 14 ML4**		**BE112M4**	**BX112M4**				39,000	47,700	20,200	424
0.60	429,100	1.6	3182	**3/V 14 ML4**		**BE112M4**	**BX112M4**				39,800	48,600	20,200	424
0.60	374,300	2.8	2880	**3/V 16 ML4**		**BE112M4**	**BX112M4**				61,100	68,600	33,700	454
0.70	363,400	1.2	2663	**3/V 11 ML4**		**BE112M4**	**BX112M4**			**N180TC**	28,700	29,900	14,600	388
0.70	301,200	1.2	2430	**3/V 13 ML3**		**BE112M4**	**BX112M4**				39,200	49,100	18,000	406
0.70	313,200	2.3	2504	**3/V 14 ML4**		**BE112M4**	**BX112M4**				38,500	46,900	20,200	424
0.70	348,000	2.8	2678	**3/V 16 ML4**		**BE112M4**	**BX112M4**				60,500	67,900	33,700	454
0.80	288,600	1.1	2329	**3/V 11 ML3**		**BE112M4**	**BX112M4**				28,100	29,400	14,600	388
0.80	287,300	1.9	2318	**3/V 14 ML3**		**BE112M4**	**BX112M4**				38,000	46,400	20,200	424
0.90	253,100	0.9	1855	**3/V 10 ML4**		**BE112M4**	**BX112M4**			**N180TC**	21,800	28,100	14,600	370
0.90	275,100	0.9	2016	**3/V 10 ML4**		**BE112M4**	**BX112M4**			**N180TC**	22,000	28,400	14,600	370
0.90	243,300	1.5	1963	**3/V 11 ML3**		**BE112M4**	**BX112M4**				27,400	28,600	14,600	388
0.90	250,200	2.0	2019	**3/V 13 ML3**		**BE112M4**	**BX112M4**				38,200	47,900	18,000	406
0.90	247,100	2.5	1994	**3/V 14 ML3**		**BE112M4**	**BX112M4**				37,200	45,400	20,200	424
1.0	166,100	1.1	1288	**3/V 09 L3**		**BE112M4**	**BX112M4**				17,600	24,000	7,240	354
1.0	158,200	1.1	1227	**3/V 10 ML3**		**BE112M4**	**BX112M4**				20,500	26,500	12,900	370
1.0	182,000	0.9	1411	**3/V 10 ML3**		**BE112M4**	**BX112M4**				20,900	27,000	13,500	370
1.0	223,300	1.1	1617	**3/V 10 ML4**		**BE112M4**	**BX112M4**			**N180TC**	21,300	27,600	14,100	370
1.0	162,200	1.8	1274	**3/V 11 ML3**		**BE112M4**	**BX112M4**				25,800	26,900	13,000	388
1.0	175,400	2.3	1378	**3/V 11 ML3**		**BE112M4**	**BX112M4**				26,100	27,200	13,400	388
1.0	208,200	1.8	1636	**3/V 11 ML3**		**BE112M4**	**BX112M4**				26,700	27,900	14,200	388
1.0	164,300	2.7	1291	**3/V 13 ML3**		**BE112M4**	**BX112M4**				35,900	44,900	16,100	406
1.0	180,500	2.7	1418	**3/V 13 ML3**		**BE112M4**	**BX112M4**				36,300	45,500	16,600	406
1.0	214,100	2.3	1682	**3/V 13 ML3**		**BE112M4**	**BX112M4**				37,200	46,600	17,600	406
1.0	165,900	2.5	1339	**3/V 14 ML3**		**BE112M4**	**BX112M4**				35,200	42,900	18,300	424
1.0	196,900	2.5	1589	**3/V 14 ML3**		**BE112M4**	**BX112M4**				36,000	44,000	19,400	424
2.0	98,100	1.3	761	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	16,300	22,200	7,590	336
2.0	118,600	0.9	920	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	16,800	22,800	8,090	336
2.0	129,200	1.0	1015	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	17,000	23,100	8,360	336
2.0	102,000	1.2	761	**3/V 09 L3**		**BE112M4**	**BX112M4**				16,300	22,200	6,070	354
2.0	103,200	1.8	800	**3/V 09 L3**		**BE112M4**	**BX112M4**				16,500	22,400	6,180	354
2.0	112,500	1.5	840	**3/V 09 L3**		**BE112M4**	**BX112M4**				16,600	22,500	6,280	354
2.0	129,500	1.2	1004	**3/V 09 L3**		**BE112M4**	**BX112M4**				17,000	23,100	6,660	354
2.0	123,300	1.4	920	**3/V 10 ML3**		**BE112M4**	**BX112M4**				19,700	25,400	11,700	370
2.0	129,500	2.2	1004	**3/V 10 ML3**		**BE112M4**	**BX112M4**				19,900	25,700	12,000	370
2.0	144,400	1.7	1120	**3/V 10 ML3**		**BE112M4**	**BX112M4**				20,300	26,100	12,500	370
2.0	124,400	2.5	1004	**3/V 11 ML3**		**BE112M4**	**BX112M4**				24,900	26,000	12,000	388
3.0	74,100	0.9	527	**3/V 06 L3**		**BE112M4**	**BX112M4**			**N180TC**	12,400	15,600	5,220	318
3.0	80,000	0.9	569	**3/V 06 L3**		**BE112M4**	**BX112M4**			**N180TC**	12,500	15,800	5,360	318
3.0	71,300	1.7	507	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	15,400	21,000	6,630	336
3.0	84,500	1.5	655	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	16,000	21,700	7,220	336
3.0	87,800	1.8	655	**3/V 09 L3**		**BE112M4**	**BX112M4**				16,000	21,700	5,780	354
4.0	70,600	1.0	435		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	12,100	15,200	4,900	320
4.0	65,700	1.2	405		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,900	20,300	6,150	338
4.0	71,200	1.1	439		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	15,100	20,500	6,320	338
4.0	56,200	1.2	395	**3/V 06 L3**		**BE112M4**	**BX112M4**			**N180TC**	11,900	15,000	4,750	318
4.0	60,800	1.2	427	**3/V 06 L3**		**BE112M4**	**BX112M4**			**N180TC**	12,000	15,200	4,870	318
4.0	64,700	1.7	460	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	15,200	20,700	6,420	336
4.0	59,200	2.6	442	**3/V 09 L3**		**BE112M4**	**BX112M4**				15,100	20,600	5,070	354
5.0	52,100	1.1	321		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,430	320
5.0	55,300	1.8	341		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,810	338
5.0	56,200	1.4	386	**3/V 07 L3**		**BE112M4**	**BX112M4**			**N180TC**	14,800	20,200	6,060	336
5.0	49,600	2.3	370	**3/V 09 L3**		**BE112M4**	**BX112M4**				14,700	20,000	4,780	354

P_1 = 5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
6.0	44,800	1.5	276		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,210	320
6.0	45,800	1.7	282		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,450	338
7.0	39,900	1.0	241		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,540	10,800	2,760	302
7.0	43,300	1.1	267		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	4,170	320
7.0	39,100	2.0	241		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,180	338
8.0	35,900	1.6	221		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,910	320
8.0	36,200	2.2	223		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	5,040	338
9.0	30,800	2.2	190		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,720	320
9.0	32,100	1.5	198		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,700	14,800	3,770	320
9.0	32,100	2.4	198		**3/A 07 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	14,700	20,000	4,840	338
10.0	29,000	1.1	175		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,480	10,700	2,480	302
11.0	26,900	1.0	162		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,280	10,500	2,420	284
11.0	26,900	1.0	162		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,280	10,500	2,420	302
11.0	26,600	2.2	164		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	11,400	14,400	3,540	320
12.0	23,400	1.4	141		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,930	10,000	2,310	302
12.0	23,200	3.0	141		**3/A 06 L2**					**N180TC**	10,900	13,700	3,360	320
14.0	21,400	1.1	129		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,730	9,770	2,240	284
14.0	20,700	2.3	125		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	10,500	13,200	3,230	320
15.0	19,400	1.1	117		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,510	9,480	2,170	284
15.0	20,100	1.6	121		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,580	9,580	2,190	302
16.0	18,400	3.0	112		**3/A 06 L2**					**N180TC**	10,200	12,800	3,120	320
17.0	16,900	1.3	102		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,200	9,100	2,070	284
17.0	17,200	1.6	104		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,240	9,140	2,080	302
18.0	16,100	0.9	96.9		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	7,090	8,960	2,040	266
18.0	16,300	2.9	98.3		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	9,790	12,300	2,980	320
19.0	15,000	1.4	90.7		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,950	8,780	1,990	284
20.0	14,700	1.0	88.5		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	6,900	8,720	1,980	266
20.0	14,700	2.5	88.5		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	9,480	12,000	2,880	320
21.0	14,200	2.2	85.6		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,830	8,630	1,950	302
22.0	13,500	1.6	81.7		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,740	8,510	1,920	284
22.0	13,500	3.0	81.2		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	9,240	11,700	2,800	320
23.0	12,600	2.1	75.8		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,590	8,320	1,880	302
24.0	12,100	1.3	73.2		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	6,520	8,240	1,860	266
24.0	12,000	2.4	72.5		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,500	8,220	1,850	302
25.0	11,600	3.0	69.9		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,830	11,100	2,660	320
26.0	11,300	2.2	68.4		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,390	8,070	1,810	284
28.0	10,400	1.3	62.9		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	6,230	7,870	1,760	266
28.0	10,300	2.4	62.4		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,220	7,850	1,760	284
28.0	10,400	2.7	62.6		**3/A 05 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	6,220	7,860	1,760	302
30	9,850	1.1	59.4		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	3,190	3,790	580	250
32	9,030	2.2	54.5		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,970	7,540	1,680	284
32	9,230	3.0	55.7		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	8,250	10,400	2,470	320
33	8,950	3.0	53.3		**3/A 05 L2**					**N180TC**	5,930	7,490	1,670	302
34	8,700	1.7	52.5		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	5,900	7,460	1,660	266
35	8,240	2.4	49.7		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,810	7,340	1,630	284
36	8,140	0.9	49.1		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	3,010	3,580	540	250
37	7,820	3.0	47.2		**3/A 06 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	7,850	9,900	2,340	320
40	7,280	1.1	43.9		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	2,920	3,460	520	250
40	7,340	2.7	44.3		**3/A 04 L2**	**BE112M4**	**BX112M4**	**ME4SA4**	**MX4SA4**	**N180TC**	5,610	7,080	1,570	284
41	7,190	1.8	43.4		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	5,580	7,040	1,560	266
43	6,710	2.1	40.5		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	5,460	6,900	1,520	266
49	5,930	1.1	35.8		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	2,740	3,260	490	250
53	5,550	2.1	33.5		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	5,160	6,510	1,430	266
56	5,170	1.1	31.2		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	2,630	3,120	470	250
61	4,770	2.1	28.8		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	4,930	6,230	1,360	266
77	3,810	1.1	23.0		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	2,400	2,850	420	250



A

P_1 = 5 hp

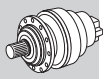
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
77	3,810	2.1	23.0		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	4,610	5,820	1,260	266
91	3,220	2.1	19.4		**3/A 03 L2**	**BE112M4**	**BX112M4**			**N180TC**	4,380	5,530	1,190	266
94	3,120	1.1	18.8		**3/A 01 L2**	**BE112M4**	**BX112M4**			**N180TC**	2,260	2,680	390	250

P_1 = 7.5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	1,015,900	2.3	5099	**3/V 18 ML4**		**BE132S4**	**BX132SB4**				105,300	110,800	45,000	478
0.40	800,900	1.1	4171	**3/V 15 ML4**		**BE132S4**	**BX132SB4**				41,400	50,500	20,200	440
0.40	950,500	0.9	4950	**3/V 15 ML4**		**BE132S4**	**BX132SB4**				42,400	51,700	20,200	440
0.40	800,900	1.5	4171	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				64,400	72,300	33,700	454
0.40	950,500	1.1	4950	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				66,000	74,100	33,700	454
0.40	822,600	1.9	4129	**3/V 17 ML4**		**BE132S4**	**BX132SB4**				99,400	105,700	33,700	466
0.40	811,600	2.2	4449	**3/V 17 ML4**		**BE132S4**	**BX132SB4**				99,400	105,700	33,700	466
0.40	990,200	1.1	4970	**3/V 17 ML4**		**BE132S4**	**BX132SB4**				99,400	105,700	33,700	466
0.50	700,100	0.9	3472	**3/V 14 ML4**		**BE132S4**	**BX132SB4**				40,300	49,200	20,200	424
0.50	665,400	1.3	3300	**3/V 15 ML4**		**BE132S4**	**BX132SB4**				40,000	48,800	20,200	440
0.50	703,500	1.2	3489	**3/V 15 ML4**		**BE132S4**	**BX132SB4**				40,300	49,200	20,200	440
0.50	674,800	1.8	3514	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				62,900	70,500	33,700	454
0.60	512,500	1.0	2773	**3/V 13 ML4**		**BE132S4**	**BX132SB4**			**N210TC**	40,000	50,100	18,000	406
0.60	534,200	1.3	2782	**3/V 14 ML4**		**BE132S4**	**BX132SB4**				39,000	47,700	20,200	424
0.60	633,900	1.1	3182	**3/V 14 ML4**		**BE132S4**	**BX132SB4**				39,800	48,600	20,200	424
0.60	560,500	1.6	2780	**3/V 15 ML4**		**BE132S4**	**BX132SB4**				39,000	47,700	20,200	440
0.60	553,000	1.9	2880	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				61,100	68,600	33,700	454
0.60	519,200	2.8	2773	**3/V 17 ML4**		**BE132S4**	**BX132SB4**				94,600	100,500	33,700	466
0.60	631,200	2.7	3168	**3/V 17 ML4**		**BE132S4**	**BX132SB4**				96,400	102,400	33,700	466
0.70	462,800	1.5	2504	**3/V 14 ML4**		**BE132S4**	**BX132SB4**				38,500	46,900	20,200	424
0.70	514,200	1.9	2678	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				60,500	67,900	33,700	454
0.80	424,500	1.3	2318	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				38,000	46,400	20,200	424
0.80	418,700	1.7	2318	**3/V 15 ML3**		**BE132S4**	**BX132SB4**				38,000	46,400	20,200	440
0.80	472,400	2.5	2343	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				59,300	66,600	33,700	454
0.90	359,500	1.0	1963	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				27,400	28,600	14,600	388
0.90	369,700	1.4	2019	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				38,200	47,900	18,000	406
0.90	365,100	1.7	1994	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				37,200	45,400	20,200	424
0.90	360,200	2.3	1994	**3/V 15 ML3**		**BE132S4**	**BX132SB4**				37,200	45,400	20,200	440
0.90	387,100	2.6	1920	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				57,700	64,700	33,700	454
1.0	239,600	1.2	1274	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				25,800	26,900	13,000	388
1.0	259,200	1.6	1378	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				26,100	27,200	13,400	388
1.0	307,700	1.2	1636	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				26,700	27,900	14,200	388
1.0	242,800	1.8	1291	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				35,900	44,900	16,100	406
1.0	266,700	1.8	1418	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				36,300	45,500	16,600	406
1.0	312,700	1.1	1620	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				37,000	46,400	17,400	406
1.0	316,300	1.6	1682	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				37,200	46,600	17,600	406
1.0	249,000	2.2	1324	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				35,100	42,900	18,300	424
1.0	245,200	1.7	1339	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				35,200	42,900	18,300	424
1.0	291,000	1.7	1589	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				36,000	44,000	19,400	424
1.0	312,600	2.1	1662	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				36,300	44,300	19,700	424
1.0	263,300	2.9	1400	**3/V 15 ML3**		**BE132S4**	**BX132SB4**				35,400	43,200	18,600	440
1.0	312,600	2.6	1662	**3/V 15 ML3**		**BE132S4**	**BX132SB4**				36,300	44,300	19,700	440
1.0	359,900	2.6	1785	**3/V 16 ML4**		**BE132S4**	**BX132SB4**				57,100	64,000	33,600	454
2.0	152,400	1.2	800	**3/V 09 L3**		**BE132S4**	**BX132SB4**				16,500	22,400	6,180	354
2.0	166,300	1.0	840	**3/V 09 L3**		**BE132S4**	**BX132SB4**				16,600	22,500	6,280	354

P_1 = 7.5 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
2.0	160,700	1.1	773	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				19,200	24,800	11,000	370
2.0	182,100	0.9	920	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				19,700	25,400	11,700	370
2.0	191,300	1.5	1004	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				19,900	25,700	12,000	370
2.0	213,400	1.1	1120	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				20,300	26,100	12,500	370
2.0	139,000	2.6	720	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				23,800	24,800	10,800	388
2.0	169,900	2.2	827	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				24,300	25,300	11,300	388
2.0	169,300	2.2	900	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				24,500	25,600	11,600	388
2.0	183,900	1.7	1004	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				24,900	26,000	12,000	388
2.0	212,900	1.8	1103	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				25,300	26,400	12,400	388
2.0	143,000	2.8	741	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				33,100	41,500	13,400	406
2.0	167,900	2.8	870	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				33,900	42,400	14,100	406
2.0	207,200	2.2	1009	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				34,600	43,300	14,800	406
2.0	204,600	2.2	1088	**3/V 13 ML3**		**BE132S4**	**BX132SB4**				35,000	43,800	15,200	406
2.0	163,100	2.7	794	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				32,600	39,800	15,400	424
2.0	172,400	2.8	893	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				33,200	40,500	16,000	424
2.0	204,800	2.7	997	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				33,700	41,200	16,600	424
2.0	209,900	2.2	1116	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				34,300	41,800	17,300	424
3.0	105,400	1.1	507	**3/V 07 L3**		**BE132S4**	**BX132SB4**			**N210TC**	15,400	21,000	6,630	336
3.0	124,800	1.0	655	**3/V 07 L3**		**BE132S4**	**BX132SB4**			**N210TC**	16,000	21,700	7,220	336
3.0	105,400	1.2	507	**3/V 09 L3**		**BE132S4**	**BX132SB4**				15,400	21,000	5,310	354
3.0	129,700	1.2	655	**3/V 09 L3**		**BE132S4**	**BX132SB4**				16,000	21,700	5,780	354
3.0	105,400	2.1	507	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				18,100	23,400	9,580	370
3.0	116,400	1.9	560	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				18,300	23,700	9,900	370
3.0	127,600	1.3	614	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				18,600	24,000	10,200	370
3.0	150,900	1.2	701	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				18,900	24,500	10,700	370
3.0	132,300	2.7	644	**3/V 11 ML3**		**BE132S4**	**BX132SB4**				23,400	24,400	10,400	388
3.0	134,100	2.8	695	**3/V 14 ML3**		**BE132S4**	**BX132SB4**				32,000	39,100	14,700	424
4.0	95,600	1.1	460	**3/V 07 L3**		**BE132S4**	**BX132SB4**			**N210TC**	15,200	20,700	6,420	336
4.0	87,500	1.8	442	**3/V 09 L3**		**BE132S4**	**BX132SB4**				15,100	20,600	5,070	354
4.0	90,600	2.6	436	**3/V 10 ML3**		**BE132S4**	**BX132SB4**				17,700	22,900	9,110	370
5.0	81,800	1.2	341		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,810	338
5.0	83,100	0.9	386	**3/V 07 L3**		**BE132S4**	**BX132SB4**			**N210TC**	14,800	20,200	6,060	336
5.0	73,200	1.6	370	**3/V 09 L3**		**BE132S4**	**BX132SB4**				14,700	20,000	4,780	354
6.0	66,200	1.0	276		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	4,210	320
6.0	67,600	1.1	282		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,450	338
7.0	57,800	1.4	241		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,180	338
8.0	53,000	1.1	221		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,910	320
8.0	53,500	1.5	223		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	5,040	338
9.0	45,600	1.5	190		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,720	320
9.0	47,500	1.0	198		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,700	14,800	3,770	320
9.0	47,500	1.6	198		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,840	338
10.0	43,200	2.2	180		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,700	20,000	4,700	338
11.0	39,300	1.5	164		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,400	14,400	3,540	320
11.0	37,200	2.1	155		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	14,000	19,100	4,470	338
13.0	34,500	0.9	141		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,930	10,000	2,310	302
13.0	33,800	2.0	141		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,900	13,700	3,360	320
13.0	33,600	2.9	140		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	13,600	18,500	4,320	338
14.0	30,600	1.6	125		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,500	13,200	3,230	320
15.0	29,600	1.0	121		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,580	9,580	2,190	302
16.0	26,900	2.0	112		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,200	12,800	3,120	320
16.0	26,100	3.0	109		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	12,600	17,200	3,970	338
17.0	25,000	0.9	102		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,200	9,100	2,070	284
17.0	25,500	1.1	104		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,240	9,140	2,080	302
18.0	24,100	2.0	98.3		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	9,790	12,300	2,980	320
20.0	22,200	1.0	90.7		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,950	8,780	1,990	284
20.0	21,700	1.7	88.5		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	9,480	12,000	2,880	320
20.0	21,500	2.7	87.7		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,800	16,100	3,690	338



A

P_1 = 7.5 hp

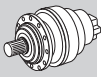
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
21.0	21,000	1.5	85.6		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,830	8,630	1,950	302
22.0	20,000	1.0	81.7		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,740	8,510	1,920	284
22.0	19,900	2.0	81.2		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	9,240	11,700	2,800	320
23.0	18,600	1.5	75.8		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,590	8,320	1,880	302
24.0	17,800	1.7	72.5		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,500	8,220	1,850	302
25.0	17,100	2.0	69.9		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,830	11,100	2,660	320
26.0	16,800	1.5	68.4		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,390	8,070	1,810	284
26.0	16,700	2.7	68.3		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	11,000	14,900	3,400	338
28.0	15,300	1.6	62.4		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,220	7,850	1,760	284
28.0	15,300	1.9	62.6		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,220	7,860	1,760	302
29.0	14,700	2.7	60.1		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,450	10,600	2,530	320
31	14,000	2.1	57.0		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	6,050	7,640	1,710	302
31	14,000	2.7	57.3		**3/A 07 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	10,400	14,200	3,210	338
32	13,300	1.5	54.5		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,970	7,540	1,680	284
32	13,600	2.0	55.7		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,250	10,400	2,470	320
33	13,100	2.1	53.3		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,930	7,490	1,670	302
34	12,700	2.7	51.7		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	8,070	10,200	2,410	320
36	12,200	1.7	49.7		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,810	7,340	1,630	284
38	11,600	2.0	47.2		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,850	9,900	2,340	320
40	10,800	1.9	44.3		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,610	7,080	1,570	284
40	10,800	2.7	44.0		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,600	7,070	1,570	302
45	9,580	2.1	39.1		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,400	6,830	1,510	284
45	9,550	2.8	39.0		**3/A 05 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,400	6,820	1,500	302
50	8,650	2.3	35.3		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,240	6,620	1,450	284
51	8,550	2.7	34.9		**3/A 06 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	7,180	9,040	2,110	320
59	7,400	2.7	30.2		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	5,000	6,310	1,380	284
69	6,270	2.7	25.6		**3/A 04 L2**	**BE132S4**	**BX132SB4**	**ME4SB4**	**MX4SB4**	**N210TC**	4,760	6,010	1,310	284

P_1 = 10 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	1,382,800	1.7	5099	**3/V 18 ML4**		**BE132MA4**	**BX132MA4**				105,300	110,800	45,000	478
0.30	1,316,100	2.8	5164	**3/V 19 L4**		**BE132MA4**	**BX132MA4**				119,500	131,600	45,000	490
0.40	1,090,300	1.1	4171	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				64,400	72,300	33,700	454
0.40	1,119,800	1.4	4129	**3/V 17 ML4**		**BE132MA4**	**BX132MA4**				99,400	105,700	33,700	466
0.40	1,104,800	1.6	4449	**3/V 17 ML4**		**BE132MA4**	**BX132MA4**				99,400	105,700	33,700	466
0.40	1,189,400	2.2	4386	**3/V 18 ML4**		**BE132MA4**	**BX132MA4**				103,000	108,500	45,000	478
0.40	1,237,800	2.4	4457	**3/V 19 L4**		**BE132MA4**	**BX132MA4**				117,000	128,800	45,000	490
0.50	905,700	1.0	3300	**3/V 15 ML4**		**BE132MA4**	**BX132MA4**				40,000	48,800	20,200	440
0.50	918,500	1.3	3514	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				62,900	70,500	33,700	454
0.50	947,800	2.8	3495	**3/V 18 ML4**		**BE132MA4**	**BX132MA4**				99,700	105,000	45,000	478
0.50	1,002,300	2.6	3696	**3/V 18 ML4**		**BE132MA4**	**BX132MA4**				100,500	105,900	45,000	478
0.60	727,200	1.0	2782	**3/V 14 ML4**		**BE132MA4**	**BX132MA4**				39,000	47,700	20,200	424
0.60	763,000	1.2	2780	**3/V 15 ML4**		**BE132MA4**	**BX132MA4**				39,000	47,700	20,200	440
0.60	752,800	1.4	2880	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				61,100	68,600	33,700	454
0.60	706,700	2.1	2773	**3/V 17 ML4**		**BE132MA4**	**BX132MA4**				94,600	100,500	33,700	466
0.60	859,100	2.0	3168	**3/V 17 ML4**		**BE132MA4**	**BX132MA4**				96,400	102,400	33,700	466
0.70	630,000	1.1	2504	**3/V 14 ML4**		**BE132MA4**	**BX132MA4**				38,500	46,900	20,200	424
0.70	700,000	1.4	2678	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				60,500	67,900	33,700	454
0.80	577,800	1.0	2318	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				38,000	46,400	20,200	424
0.80	570,000	1.2	2318	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				38,000	46,400	20,200	440
0.80	643,100	1.8	2343	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				59,300	66,600	33,700	454
0.90	503,300	1.0	2019	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				38,200	47,900	18,000	406
0.90	497,000	1.3	1994	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				37,200	45,400	20,200	424

P_1 = 10 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.90	490,300	1.7	1994	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				37,200	45,400	20,200	440
0.90	527,000	1.9	1920	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				57,700	64,700	33,700	454
1.0	352,800	1.2	1378	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				26,100	27,200	13,400	388
1.0	330,500	1.3	1291	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				35,900	44,900	16,100	406
1.0	363,000	1.3	1418	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				36,300	45,500	16,600	406
1.0	430,600	1.2	1682	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				37,200	46,600	17,600	406
1.0	338,900	1.6	1324	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				35,100	42,900	18,300	424
1.0	333,800	1.3	1339	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				35,200	42,900	18,300	424
1.0	396,100	1.3	1589	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				36,000	44,000	19,400	424
1.0	425,500	1.5	1662	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				36,300	44,300	19,700	424
1.0	349,200	2.3	1329	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				35,100	42,900	18,300	440
1.0	358,400	2.1	1400	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				35,400	43,200	18,600	440
1.0	425,500	1.9	1662	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				36,300	44,300	19,700	440
1.0	338,900	2.9	1324	**3/V 16 ML3**		**BE132MA4**	**BX132MA4**				54,700	61,400	30,400	454
1.0	406,800	2.4	1589	**3/V 16 ML3**		**BE132MA4**	**BX132MA4**				56,100	63,000	32,300	454
1.0	489,900	1.9	1785	**3/V 16 ML4**		**BE132MA4**	**BX132MA4**				57,100	64,000	33,600	454
2.0	207,500	0.9	800	**3/V 09 L3**		**BE132MA4**	**BX132MA4**				16,500	22,400	6,180	354
2.0	260,400	1.1	1004	**3/V 10 ML3**		**BE132MA4**	**BX132MA4**				19,900	25,700	12,000	370
2.0	189,200	1.9	720	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				23,800	24,800	10,800	388
2.0	231,200	1.6	827	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				24,300	25,300	11,300	388
2.0	230,400	1.6	900	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				24,500	25,600	11,600	388
2.0	250,300	1.3	1004	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				24,900	26,000	12,000	388
2.0	289,800	1.4	1103	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				25,300	26,400	12,400	388
2.0	194,700	2.1	741	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				33,100	41,500	13,400	406
2.0	228,600	2.1	870	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				33,900	42,400	14,100	406
2.0	282,100	1.6	1009	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				34,600	43,300	14,800	406
2.0	278,500	1.6	1088	**3/V 13 ML3**		**BE132MA4**	**BX132MA4**				35,000	43,800	15,200	406
2.0	222,000	2.0	794	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				32,600	39,800	15,400	424
2.0	234,600	2.1	893	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				33,200	40,500	16,000	424
2.0	278,700	2.0	997	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				33,700	41,200	16,600	424
2.0	285,700	1.6	1116	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				34,300	41,800	17,300	424
2.0	278,700	2.8	997	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				33,700	41,200	16,600	440
2.0	294,300	2.6	1120	**3/V 15 ML3**		**BE132MA4**	**BX132MA4**				34,300	41,900	17,300	440
3.0	143,500	1.5	507	**3/V 10 ML3**		**BE132MA4**	**BX132MA4**				18,100	23,400	9,580	370
3.0	158,500	1.4	560	**3/V 10 ML3**		**BE132MA4**	**BX132MA4**				18,300	23,700	9,900	370
3.0	173,700	1.0	614	**3/V 10 ML3**		**BE132MA4**	**BX132MA4**				18,600	24,000	10,200	370
3.0	180,000	2.0	644	**3/V 11 ML3**		**BE132MA4**	**BX132MA4**				23,400	24,400	10,400	388
3.0	182,600	2.1	695	**3/V 14 ML3**		**BE132MA4**	**BX132MA4**				32,000	39,100	14,700	424
4.0	119,100	1.3	442	**3/V 09 L3**		**BE132MA4**	**BX132MA4**				15,100	20,600	5,070	354
4.0	123,400	1.9	436	**3/V 10 ML3**		**BE132MA4**	**BX132MA4**				17,700	22,900	9,110	370
5.0	99,700	1.2	370	**3/V 09 L3**		**BE132MA4**	**BX132MA4**				14,700	20,000	4,780	354
7.0	78,700	1.0	241		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,180	338
8.0	72,800	1.1	223		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	5,040	338
9.0	62,000	1.1	190		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,700	14,800	3,720	320
9.0	64,600	1.2	198		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,840	338
10.0	58,800	1.6	180		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,700	20,000	4,700	338
11.0	53,500	1.1	164		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,400	14,400	3,540	320
11.0	50,600	1.6	155		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	14,000	19,100	4,470	338
13.0	46,000	1.5	141		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,900	13,700	3,360	320
13.0	45,700	2.2	140		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,600	18,500	4,320	338
14.0	41,700	1.1	125		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,500	13,200	3,230	320
14.0	42,400	2.3	130		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	13,300	18,100	4,210	338
16.0	36,600	1.5	112		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,200	12,800	3,120	320
16.0	35,600	2.2	109		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	12,600	17,200	3,970	338
18.0	32,800	1.4	98.3		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,790	12,300	2,980	320
20.0	29,500	1.2	88.5		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,480	12,000	2,880	320
20.0	29,200	2.0	87.7		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,800	16,100	3,690	338



A

P_1 = 10 hp

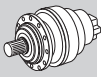
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
21.0	28,500	1.1	85.6		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,830	8,630	1,950	302
22.0	27,100	1.5	81.2		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	9,240	11,700	2,800	320
23.0	25,300	1.1	75.8		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,590	8,320	1,880	302
24.0	24,200	1.2	72.5		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,500	8,220	1,850	302
25.0	23,300	1.5	69.9		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,830	11,100	2,660	320
26.0	22,800	1.1	68.4		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,390	8,070	1,810	284
26.0	22,800	2.0	68.3		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	11,000	14,900	3,400	338
28.0	20,800	1.2	62.4		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,220	7,850	1,760	284
28.0	20,900	1.4	62.6		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,220	7,860	1,760	302
29.0	20,000	2.0	60.1		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,450	10,600	2,530	320
31	19,000	1.5	57.0		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,050	7,640	1,710	302
31	19,100	2.0	57.3		**3/A 07 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	10,400	14,200	3,210	338
32	18,200	1.1	54.5		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,970	7,540	1,680	284
32	18,600	1.5	55.7		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,250	10,400	2,470	320
33	17,800	1.5	53.3		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,930	7,490	1,670	302
34	17,200	2.0	51.7		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	8,070	10,200	2,410	320
36	16,600	1.2	49.7		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,810	7,340	1,630	284
38	15,700	1.5	47.2		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,850	9,900	2,340	320
40	14,800	1.4	44.3		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,610	7,080	1,570	284
40	14,700	2.0	44.0		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,600	7,070	1,570	302
43	13,700	2.3	41.1		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,530	9,500	2,230	320
45	13,000	1.5	39.1		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,400	6,830	1,510	284
45	13,000	2.0	39.0		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,400	6,820	1,500	302
50	11,800	1.7	35.3		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,240	6,620	1,450	284
51	11,600	2.0	34.9		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,180	9,040	2,110	320
54	10,900	2.3	32.7		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	7,040	8,870	2,070	320
55	10,700	2.7	32.2		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,100	6,440	1,410	302
59	10,100	2.0	30.2		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	5,000	6,310	1,380	284
64	9,230	2.7	27.7		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,870	6,160	1,340	284
64	9,230	2.7	27.7		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,870	6,160	1,340	302
64	9,230	2.3	27.7		**3/A 06 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	6,690	8,440	1,960	320
69	8,530	2.0	25.6		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,760	6,010	1,310	284
80	7,370	2.7	22.1		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,550	5,750	1,240	284
80	7,370	2.7	22.1		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,550	5,750	1,240	302
95	6,230	2.7	18.7		**3/A 04 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,330	5,470	1,180	284
95	6,230	2.7	18.7		**3/A 05 L2**	**BE132MA4**	**BX132MA4**	**ME4LA4**	**MX4LA4**	**N210TC**	4,330	5,470	1,180	302

P_1 = 15 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	2,027,900	1.2	5099	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				105,300	110,800	45,000	478
0.30	1,930,000	1.9	5164	**3/V 19 L4**		**BE160M4**	**BX160MB4**				119,500	131,600	45,000	490
0.40	1,642,100	1.0	4129	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				99,400	105,700	33,700	466
0.40	1,744,300	1.5	4386	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				103,000	108,500	45,000	478
0.40	1,628,600	2.1	4095	**3/V 19 L4**		**BE160M4**	**BX160MB4**				115,600	127,300	45,000	490
0.40	1,815,200	1.6	4457	**3/V 19 L4**		**BE160M4**	**BX160MB4**				117,000	128,800	45,000	490
0.40	1,831,300	2.7	4550	**3/V 21 L4**		**BE160M4**	**BX160MB4**				166,000	197,600	269,800	502
0.40	1,907,800	2.6	5040	**3/V 21 L4**		**BE160M4**	**BX160MB4**				168,400	200,500	269,800	502
0.50	1,459,300	0.9	3583	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				98,100	104,200	33,700	466
0.50	1,390,000	1.9	3495	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				99,700	105,000	45,000	478
0.50	1,469,900	1.8	3696	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				100,500	105,900	45,000	478
0.50	1,315,900	2.4	3231	**3/V 19 L4**		**BE160M4**	**BX160MB4**				111,700	123,000	45,000	490
0.50	1,521,400	2.7	3780	**3/V 21 L4**		**BE160M4**	**BX160MB4**				161,700	192,400	269,800	502
0.60	1,036,400	1.4	2773	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				94,600	100,500	33,700	466

P_1 = 15 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.60	1,259,900	1.3	3168	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				96,400	102,400	33,700	466
0.60	1,171,200	2.1	2945	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				97,300	102,500	45,000	478
0.70	1,047,800	1.1	2485	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				93,100	98,900	33,700	466
0.70	1,003,500	2.6	2464	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				94,900	99,900	45,000	478
0.80	943,000	1.3	2343	**3/V 16 ML4**		**BE160M4**	**BX160MB4**				59,300	66,600	33,700	454
0.80	912,700	2.1	2295	**3/V 18 ML4**		**BE160M4**	**BX160MB4**				93,900	98,900	45,000	478
0.90	719,000	1.1	1994	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				37,200	45,400	20,200	440
0.90	772,800	1.3	1920	**3/V 16 ML4**		**BE160M4**	**BX160MB4**				57,700	64,700	33,700	454
0.90	870,700	1.8	2065	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				90,700	96,300	33,700	466
1.0	512,100	1.5	1329	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				35,100	42,900	18,300	440
1.0	525,600	1.5	1400	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				35,400	43,200	18,600	440
1.0	623,900	1.3	1662	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				36,300	44,300	19,700	440
1.0	497,100	2.0	1324	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				54,700	61,400	30,400	454
1.0	596,500	1.7	1589	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				56,100	63,000	32,300	454
1.0	718,400	1.3	1785	**3/V 16 ML4**		**BE160M4**	**BX160MB4**				57,100	64,000	33,600	454
1.0	504,100	2.5	1215	**3/V 17 ML3**		**BE160M4**	**BX160MB4**				84,100	89,300	29,600	466
1.0	532,700	2.6	1365	**3/V 17 ML3**		**BE160M4**	**BX160MB4**				85,500	90,800	30,800	466
1.0	725,000	2.3	1780	**3/V 17 ML4**		**BE160M4**	**BX160MB4**				88,800	94,300	33,600	466
2.0	277,400	1.3	720	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				23,800	24,800	10,800	388
2.0	339,100	1.1	827	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				24,300	25,300	11,300	388
2.0	425,000	0.9	1103	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				25,300	26,400	12,400	388
2.0	285,500	1.4	741	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				33,100	41,500	13,400	406
2.0	340,100	0.9	810	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				33,500	42,000	13,800	406
2.0	335,200	1.4	870	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				33,900	42,400	14,100	406
2.0	413,700	1.1	1009	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				34,600	43,300	14,800	406
2.0	325,500	1.3	794	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				32,600	39,800	15,400	424
2.0	344,100	1.4	893	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				33,200	40,500	16,000	424
2.0	408,800	1.3	997	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				33,700	41,200	16,600	424
2.0	344,400	2.1	840	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				32,900	40,200	15,700	440
2.0	408,800	1.9	997	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				33,700	41,200	16,600	440
2.0	431,500	1.8	1120	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				34,300	41,900	17,300	440
2.0	329,500	2.7	794	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				50,800	57,000	25,700	454
2.0	348,500	2.6	893	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				51,700	58,000	26,700	454
2.0	413,300	2.5	1059	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				53,000	59,400	28,300	454
2.0	353,100	2.7	851	**3/V 17 ML3**		**BE160M4**	**BX160MB4**				79,900	84,900	26,300	466
2.0	424,900	2.7	1024	**3/V 17 ML3**		**BE160M4**	**BX160MB4**				82,000	87,200	27,900	466
2.0	442,500	2.6	1134	**3/V 17 ML3**		**BE160M4**	**BX160MB4**				83,200	88,400	28,900	466
3.0	210,400	1.0	507	**3/V 10 ML3**		**BE160M4**	**BX160MB4**				18,100	23,400	9,580	370
3.0	232,400	0.9	560	**3/V 10 ML3**		**BE160M4**	**BX160MB4**				18,300	23,700	9,900	370
3.0	214,100	1.3	510	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				22,600	23,600	9,600	388
3.0	231,400	1.5	551	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				22,900	23,900	9,850	388
3.0	264,000	1.3	644	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				23,400	24,400	10,400	388
3.0	216,700	2.0	516	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				31,500	39,400	11,900	406
3.0	238,100	1.7	567	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				31,900	39,900	12,200	406
3.0	282,600	1.5	673	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				32,700	40,900	13,000	406
3.0	251,700	1.8	579	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				31,200	38,100	13,900	424
3.0	279,200	2.1	665	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				31,800	38,800	14,500	424
3.0	267,800	1.4	695	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				32,000	39,100	14,700	424
3.0	279,200	2.6	665	**3/V 15 ML3**		**BE160M4**	**BX160MB4**				31,800	38,800	14,500	440
3.0	277,600	2.7	669	**3/V 16 ML3**		**BE160M4**	**BX160MB4**				49,600	55,700	24,200	454
4.0	180,900	1.3	436	**3/V 10 ML3**		**BE160M4**	**BX160MB4**				17,700	22,900	9,110	370
4.0	180,500	1.9	430	**3/V 11 ML3**		**BE160M4**	**BX160MB4**				22,100	23,100	9,060	388
4.0	184,700	2.1	425	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				30,600	38,300	11,100	406
4.0	172,600	2.4	397	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				29,600	36,100	12,200	424
4.0	187,300	2.3	446	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				30,100	36,700	12,700	424
4.0	216,500	2.4	498	**3/V 14 ML3**		**BE160M4**	**BX160MB4**				30,500	37,300	13,200	424
5.0	155,400	2.3	370	**3/V 13 ML3**		**BE160M4**	**BX160MB4**				30,000	37,600	10,600	406



A

P_1 = 15 hp

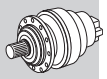
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
10.0	86,200	1.1	180		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		14,700	20,000	4,700	338
11.0	74,200	1.1	155		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		14,000	19,100	4,470	338
13.0	67,500	1.0	141		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		10,900	13,700	3,360	320
13.0	67,000	1.5	140		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		13,600	18,500	4,320	338
14.0	62,200	1.6	130		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		13,300	18,100	4,210	338
16.0	53,600	1.0	112		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		10,200	12,800	3,120	320
16.0	52,200	1.5	109		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		12,600	17,200	3,970	338
18.0	48,100	1.0	98.3		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		9,790	12,300	2,980	320
20.0	42,900	1.4	87.7		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		11,800	16,100	3,690	338
22.0	39,700	1.0	81.2		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		9,240	11,700	2,800	320
25.0	34,200	1.0	69.9		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,830	11,100	2,660	320
26.0	33,400	1.4	68.3		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		11,000	14,900	3,400	338
29.0	29,400	1.4	60.1		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,450	10,600	2,530	320
31	28,000	1.4	57.3		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		10,400	14,200	3,210	338
32	27,200	1.0	55.7		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,250	10,400	2,470	320
34	25,300	1.4	51.7		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,070	10,200	2,410	320
36	24,100	2.7	49.2		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		9,950	13,500	3,050	338
38	23,100	1.0	47.2		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		7,850	9,900	2,340	320
43	20,100	1.6	41.1		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		7,530	9,500	2,230	320
43	20,300	2.7	41.5		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		9,450	12,900	2,880	338
51	17,100	1.4	34.9		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		7,180	9,040	2,110	320
54	16,000	1.6	32.7		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		7,040	8,870	2,070	320
55	15,800	2.7	32.3		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,770	11,900	2,650	338
64	13,500	1.6	27.7		**3/A 06 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		6,690	8,440	1,960	320
65	13,200	2.7	27.1		**3/A 07 L2**	**BE160M4**	**BX160MB4**	**ME5SA4**	**MX5SB4**		8,320	11,300	2,500	338

P_1 = 20 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	2,632,100	1.4	5164	**3/V 19 L4**		**BE160L4**	**BX160L4**				119,500	131,600	45,000	490
0.40	2,378,900	1.1	4386	**3/V 18 ML4**		**BE160L4**	**BX160L4**				103,000	108,500	45,000	478
0.40	2,221,100	1.5	4095	**3/V 19 L4**		**BE160L4**	**BX160L4**				115,600	127,300	45,000	490
0.40	2,475,700	1.2	4457	**3/V 19 L4**		**BE160L4**	**BX160L4**				117,000	128,800	45,000	490
0.40	2,497,600	2.0	4550	**3/V 21 L4**		**BE160L4**	**BX160L4**				166,000	197,600	269,800	502
0.40	2,601,900	1.9	5040	**3/V 21 L4**		**BE160L4**	**BX160L4**				168,400	200,500	269,800	502
0.50	1,895,600	1.4	3495	**3/V 18 ML4**		**BE160L4**	**BX160L4**				99,700	105,000	45,000	478
0.50	2,004,600	1.3	3696	**3/V 18 ML4**		**BE160L4**	**BX160L4**				100,500	105,900	45,000	478
0.50	1,794,700	1.8	3231	**3/V 19 L4**		**BE160L4**	**BX160L4**				111,700	123,000	45,000	490
0.50	2,023,200	2.3	3600	**3/V 21 L4**		**BE160L4**	**BX160L4**				160,500	191,100	269,800	502
0.50	2,074,900	2.0	3780	**3/V 21 L4**		**BE160L4**	**BX160L4**				161,700	192,400	269,800	502
0.60	1,413,400	1.0	2773	**3/V 17 ML4**		**BE160L4**	**BX160L4**				94,600	100,500	33,700	466
0.60	1,718,300	1.0	3168	**3/V 17 ML4**		**BE160L4**	**BX160L4**				96,400	102,400	33,700	466
0.60	1,597,300	1.5	2945	**3/V 18 ML4**		**BE160L4**	**BX160L4**				97,300	102,500	45,000	478
0.70	1,368,600	1.9	2464	**3/V 18 ML4**		**BE160L4**	**BX160L4**				94,900	99,900	45,000	478
0.70	1,434,200	2.3	2582	**3/V 19 L4**		**BE160L4**	**BX160L4**				108,200	119,200	45,000	490
0.80	1,286,100	0.9	2343	**3/V 16 ML4**		**BE160L4**	**BX160L4**				59,300	66,600	33,700	454
0.80	1,244,800	1.5	2295	**3/V 18 ML4**		**BE160L4**	**BX160L4**				93,900	98,900	45,000	478
0.90	1,053,900	1.0	1920	**3/V 16 ML4**		**BE160L4**	**BX160L4**				57,700	64,700	33,700	454
0.90	1,187,500	1.3	2065	**3/V 17 ML4**		**BE160L4**	**BX160L4**				90,700	96,300	33,700	466
1.0	698,400	1.1	1329	**3/V 15 ML3**		**BE160L4**	**BX160L4**				35,100	42,900	18,300	440
1.0	716,800	1.1	1400	**3/V 15 ML3**		**BE160L4**	**BX160L4**				35,400	43,200	18,600	440
1.0	850,900	0.9	1662	**3/V 15 ML3**		**BE160L4**	**BX160L4**				36,300	44,300	19,700	440
1.0	677,900	1.5	1324	**3/V 16 ML3**		**BE160L4**	**BX160L4**				54,700	61,400	30,400	454
1.0	813,600	1.2	1589	**3/V 16 ML3**		**BE160L4**	**BX160L4**				56,100	63,000	32,300	454

P_1 = 20 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.0	979,800	1.0	1785	**3/V 16 ML4**		**BE160L4**	**BX160L4**				57,100	64,000	33,600	454
1.0	687,600	1.8	1215	**3/V 17 ML3**		**BE160L4**	**BX160L4**				84,100	89,300	29,600	466
1.0	726,500	1.9	1365	**3/V 17 ML3**		**BE160L4**	**BX160L4**				85,500	90,800	30,800	466
1.0	988,700	1.7	1780	**3/V 17 ML4**		**BE160L4**	**BX160L4**				88,800	94,300	33,600	466
1.0	847,100	2.7	1473	**3/V 18 ML4**		**BE160L4**	**BX160L4**				88,100	92,800	42,100	478
1.0	1,005,200	2.6	1748	**3/V 18 ML4**		**BE160L4**	**BX160L4**				90,300	95,100	44,500	478
1.0	1,062,700	2.5	1848	**3/V 18 ML4**		**BE160L4**	**BX160L4**				91,000	95,900	45,000	478
2.0	378,300	1.0	720	**3/V 11 ML3**		**BE160L4**	**BX160L4**				23,800	24,800	10,800	388
2.0	389,400	1.0	741	**3/V 13 ML3**		**BE160L4**	**BX160L4**				33,100	41,500	13,400	406
2.0	457,200	1.0	870	**3/V 13 ML3**		**BE160L4**	**BX160L4**				33,900	42,400	14,100	406
2.0	444,000	1.0	794	**3/V 14 ML3**		**BE160L4**	**BX160L4**				32,600	39,800	15,400	424
2.0	469,200	1.0	893	**3/V 14 ML3**		**BE160L4**	**BX160L4**				33,200	40,500	16,000	424
2.0	557,500	1.0	997	**3/V 14 ML3**		**BE160L4**	**BX160L4**				33,700	41,200	16,600	424
2.0	469,700	1.5	840	**3/V 15 ML3**		**BE160L4**	**BX160L4**				32,900	40,200	15,700	440
2.0	557,500	1.4	997	**3/V 15 ML3**		**BE160L4**	**BX160L4**				33,700	41,200	16,600	440
2.0	588,500	1.3	1120	**3/V 15 ML3**		**BE160L4**	**BX160L4**				34,300	41,900	17,300	440
2.0	449,300	2.0	794	**3/V 16 ML3**		**BE160L4**	**BX160L4**				50,800	57,000	25,700	454
2.0	475,300	1.9	893	**3/V 16 ML3**		**BE160L4**	**BX160L4**				51,700	58,000	26,700	454
2.0	563,600	1.8	1059	**3/V 16 ML3**		**BE160L4**	**BX160L4**				53,000	59,400	28,300	454
2.0	469,300	2.5	810	**3/V 17 ML3**		**BE160L4**	**BX160L4**				79,300	84,300	25,800	466
2.0	481,600	2.0	851	**3/V 17 ML3**		**BE160L4**	**BX160L4**				79,900	84,900	26,300	466
2.0	579,500	2.0	1024	**3/V 17 ML3**		**BE160L4**	**BX160L4**				82,000	87,200	27,900	466
2.0	603,500	1.9	1134	**3/V 17 ML3**		**BE160L4**	**BX160L4**				83,200	88,400	28,900	466
3.0	292,000	1.0	510	**3/V 11 ML3**		**BE160L4**	**BX160L4**				22,600	23,600	9,600	388
3.0	315,500	1.1	551	**3/V 11 ML3**		**BE160L4**	**BX160L4**				22,900	23,900	9,850	388
3.0	360,100	1.0	644	**3/V 11 ML3**		**BE160L4**	**BX160L4**				23,400	24,400	10,400	388
3.0	295,500	1.5	516	**3/V 13 ML3**		**BE160L4**	**BX160L4**				31,500	39,400	11,900	406
3.0	324,700	1.3	567	**3/V 13 ML3**		**BE160L4**	**BX160L4**				31,900	39,900	12,200	406
3.0	385,400	1.1	673	**3/V 13 ML3**		**BE160L4**	**BX160L4**				32,700	40,900	13,000	406
3.0	343,300	1.3	579	**3/V 14 ML3**		**BE160L4**	**BX160L4**				31,200	38,100	13,900	424
3.0	380,800	1.6	665	**3/V 14 ML3**		**BE160L4**	**BX160L4**				31,800	38,800	14,500	424
3.0	365,200	1.0	695	**3/V 14 ML3**		**BE160L4**	**BX160L4**				32,000	39,100	14,700	424
3.0	320,700	2.3	560	**3/V 15 ML3**		**BE160L4**	**BX160L4**				31,100	37,900	13,700	440
3.0	380,800	1.9	665	**3/V 15 ML3**		**BE160L4**	**BX160L4**				31,800	38,800	14,500	440
3.0	378,600	2.0	669	**3/V 16 ML3**		**BE160L4**	**BX160L4**				49,600	55,700	24,200	454
4.0	246,700	1.0	436	**3/V 10 ML3**		**BE160L4**	**BX160L4**				17,700	22,900	9,110	370
4.0	246,200	1.4	430	**3/V 11 ML3**		**BE160L4**	**BX160L4**				22,100	23,100	9,060	388
4.0	252,000	1.6	425	**3/V 13 ML3**		**BE160L4**	**BX160L4**				30,600	38,300	11,100	406
4.0	235,400	1.7	397	**3/V 14 ML3**		**BE160L4**	**BX160L4**				29,600	36,100	12,200	424
4.0	255,400	1.7	446	**3/V 14 ML3**		**BE160L4**	**BX160L4**				30,100	36,700	12,700	424
4.0	295,200	1.7	498	**3/V 14 ML3**		**BE160L4**	**BX160L4**				30,500	37,300	13,200	424
4.0	255,400	2.3	446	**3/V 15 ML3**		**BE160L4**	**BX160L4**				30,100	36,700	12,700	440
4.0	295,200	2.4	498	**3/V 15 ML3**		**BE160L4**	**BX160L4**				30,500	37,300	13,200	440
5.0	211,900	1.7	370	**3/V 13 ML3**		**BE160L4**	**BX160L4**				30,000	37,600	10,600	406
5.0	231,400	2.3	386	**3/V 15 ML3**		**BE160L4**	**BX160L4**				29,500	35,900	12,100	440
13.0	91,400	1.1	140		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	13,600	18,500	4,320	338
14.0	84,900	1.2	130		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	13,300	18,100	4,210	338
16.0	71,200	1.1	109		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	12,600	17,200	3,970	338
20.0	58,500	1.0	87.7		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	11,800	16,100	3,690	338
26.0	45,500	1.0	68.3		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	11,000	14,900	3,400	338
29.0	40,100	1.0	60.1		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,450	10,600	2,530	320
31	38,200	1.0	57.3		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	10,400	14,200	3,210	338
34	34,500	1.0	51.7		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,070	10,200	2,410	320
36	32,800	2.0	49.2		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	9,950	13,500	3,050	338
43	27,400	1.2	41.1		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,530	9,500	2,230	320
43	27,700	2.0	41.5		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	9,450	12,900	2,880	338
51	23,300	1.0	34.9		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,180	9,040	2,110	320



A

P_1 = 20 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
54	21,800	1.2	32.7		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	7,040	8,870	2,070	320
55	21,500	2.0	32.3		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,770	11,900	2,650	338
64	18,500	1.2	27.7		**3/A 06 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	6,690	8,440	1,960	320
65	18,100	2.0	27.1		**3/A 07 L2**	**BE160L4**	**BX160L4**	**ME5LA4**	**MX5LA4**	**N250TC**	8,320	11,300	2,500	338

P_1 = 25 hp

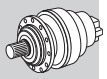
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	3,227,700	1.1	5164		**3/V 19 L4**	**BE180M4**	**BX180M4**				119,500	131,600	45,000	490
0.40	2,917,100	0.9	4386		**3/V 18 ML4**	**BE180M4**	**BX180M4**				103,000	108,500	45,000	478
0.40	2,723,600	1.2	4095		**3/V 19 L4**	**BE180M4**	**BX180M4**				115,600	127,300	45,000	490
0.40	3,035,800	1.0	4457		**3/V 19 L4**	**BE180M4**	**BX180M4**				117,000	128,800	45,000	490
0.40	3,062,700	1.6	4550		**3/V 21 L4**	**BE180M4**	**BX180M4**				166,000	197,600	269,800	502
0.40	3,190,600	1.5	5040		**3/V 21 L4**	**BE180M4**	**BX180M4**				168,400	200,500	269,800	502
0.50	2,324,500	1.1	3495		**3/V 18 ML4**	**BE180M4**	**BX180M4**				99,700	105,000	45,000	478
0.50	2,458,200	1.1	3696		**3/V 18 ML4**	**BE180M4**	**BX180M4**				100,500	105,900	45,000	478
0.50	2,480,900	1.9	3600		**3/V 21 L4**	**BE180M4**	**BX180M4**				160,500	191,100	269,800	502
0.50	2,544,400	1.6	3780		**3/V 21 L4**	**BE180M4**	**BX180M4**				161,700	192,400	269,800	502
0.60	1,958,700	1.2	2945		**3/V 18 ML4**	**BE180M4**	**BX180M4**				97,300	102,500	45,000	478
0.60	2,200,700	1.4	3231		**3/V 19 L4**	**BE180M4**	**BX180M4**				111,700	123,000	45,000	490
0.70	1,678,300	1.6	2464		**3/V 18 ML4**	**BE180M4**	**BX180M4**				94,900	99,900	45,000	478
0.70	1,758,700	1.8	2582		**3/V 19 L4**	**BE180M4**	**BX180M4**				108,200	119,200	45,000	490
0.70	1,736,600	2.6	2520		**3/V 21 L4**	**BE180M4**	**BX180M4**				152,600	181,600	269,800	502
0.70	1,904,000	2.5	2700		**3/V 21 L4**	**BE180M4**	**BX180M4**				154,100	183,400	269,800	502
0.80	1,526,400	1.2	2295		**3/V 18 ML4**	**BE180M4**	**BX180M4**				93,900	98,900	45,000	478
0.90	1,456,200	1.1	2065		**3/V 17 ML4**	**BE180M4**	**BX180M4**				90,700	96,300	33,700	466
1.0	856,400	0.9	1329		**3/V 15 ML3**	**BE180M4**	**BX180M4**				35,100	42,900	18,300	440
1.0	831,300	1.2	1324		**3/V 16 ML3**	**BE180M4**	**BX180M4**				54,700	61,400	30,400	454
1.0	997,600	1.0	1589		**3/V 16 ML3**	**BE180M4**	**BX180M4**				56,100	63,000	32,300	454
1.0	843,100	1.5	1215		**3/V 17 ML3**	**BE180M4**	**BX180M4**				84,100	89,300	29,600	466
1.0	890,800	1.5	1365		**3/V 17 ML3**	**BE180M4**	**BX180M4**				85,500	90,800	30,800	466
1.0	1,212,400	1.3	1780		**3/V 17 ML4**	**BE180M4**	**BX180M4**				88,800	94,300	33,600	466
1.0	878,600	2.8	1232		**3/V 18 ML4**	**BE180M4**	**BX180M4**				85,900	90,500	39,600	478
1.0	1,038,700	2.2	1473		**3/V 18 ML4**	**BE180M4**	**BX180M4**				88,100	92,800	42,100	478
1.0	1,232,600	2.1	1748		**3/V 18 ML4**	**BE180M4**	**BX180M4**				90,300	95,100	44,500	478
1.0	1,303,100	2.0	1848		**3/V 18 ML4**	**BE180M4**	**BX180M4**				91,000	95,900	45,000	478
2.0	576,000	1.2	840		**3/V 15 ML3**	**BE180M4**	**BX180M4**				32,900	40,200	15,700	440
2.0	683,600	1.1	997		**3/V 15 ML3**	**BE180M4**	**BX180M4**				33,700	41,200	16,600	440
2.0	721,700	1.1	1120		**3/V 15 ML3**	**BE180M4**	**BX180M4**				34,300	41,900	17,300	440
2.0	551,000	1.6	794		**3/V 16 ML3**	**BE180M4**	**BX180M4**				50,800	57,000	25,700	454
2.0	582,800	1.5	893		**3/V 16 ML3**	**BE180M4**	**BX180M4**				51,700	58,000	26,700	454
2.0	691,100	1.5	1059		**3/V 16 ML3**	**BE180M4**	**BX180M4**				53,000	59,400	28,300	454
2.0	575,500	2.0	810		**3/V 17 ML3**	**BE180M4**	**BX180M4**				79,300	84,300	25,800	466
2.0	590,500	1.6	851		**3/V 17 ML3**	**BE180M4**	**BX180M4**				79,900	84,900	26,300	466
2.0	710,600	1.6	1024		**3/V 17 ML3**	**BE180M4**	**BX180M4**				82,000	87,200	27,900	466
2.0	740,100	1.5	1134		**3/V 17 ML3**	**BE180M4**	**BX180M4**				83,200	88,400	28,900	466
2.0	830,900	3.0	1165		**3/V 18 ML4**	**BE180M4**	**BX180M4**				85,200	89,800	38,900	478
3.0	386,900	0.9	551		**3/V 11 ML3**	**BE180M4**	**BX180M4**				22,900	23,900	9,850	388
3.0	362,300	1.2	516		**3/V 13 ML3**	**BE180M4**	**BX180M4**				31,500	39,400	11,900	406
3.0	398,100	1.0	567		**3/V 13 ML3**	**BE180M4**	**BX180M4**				31,900	39,900	12,200	406
3.0	472,600	0.9	673		**3/V 13 ML3**	**BE180M4**	**BX180M4**				32,700	40,900	13,000	406
3.0	420,900	1.1	579		**3/V 14 ML3**	**BE180M4**	**BX180M4**				31,200	38,100	13,900	424
3.0	467,000	1.3	665		**3/V 14 ML3**	**BE180M4**	**BX180M4**				31,800	38,800	14,500	424
3.0	393,200	1.8	560		**3/V 15 ML3**	**BE180M4**	**BX180M4**				31,100	37,900	13,700	440

P_1 = 25 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
3.0	467,000	1.6	665	**3/V 15 ML3**		**BE180M4**	**BX180M4**				31,800	38,800	14,500	440
3.0	376,500	2.6	530	**3/V 16 ML3**		**BE180M4**	**BX180M4**				48,000	53,800	22,400	454
3.0	464,200	1.6	669	**3/V 16 ML3**		**BE180M4**	**BX180M4**				49,600	55,700	24,200	454
3.0	402,800	2.6	567	**3/V 17 ML3**		**BE180M4**	**BX180M4**				75,400	80,100	22,900	466
3.0	442,000	2.5	608	**3/V 17 ML3**		**BE180M4**	**BX180M4**				76,100	80,900	23,500	466
3.0	485,200	2.6	683	**3/V 17 ML3**		**BE180M4**	**BX180M4**				77,400	82,200	24,400	466
4.0	301,900	1.1	430	**3/V 11 ML3**		**BE180M4**	**BX180M4**				22,100	23,100	9,060	388
4.0	309,000	1.3	425	**3/V 13 ML3**		**BE180M4**	**BX180M4**				30,600	38,300	11,100	406
4.0	288,600	1.4	397	**3/V 14 ML3**		**BE180M4**	**BX180M4**				29,600	36,100	12,200	424
4.0	313,200	1.3	446	**3/V 14 ML3**		**BE180M4**	**BX180M4**				30,100	36,700	12,700	424
4.0	362,000	1.4	498	**3/V 14 ML3**		**BE180M4**	**BX180M4**				30,500	37,300	13,200	424
4.0	313,200	1.8	446	**3/V 15 ML3**		**BE180M4**	**BX180M4**				30,100	36,700	12,700	440
4.0	362,000	2.0	498	**3/V 15 ML3**		**BE180M4**	**BX180M4**				30,500	37,300	13,200	440
4.0	316,900	2.6	446	**3/V 16 ML3**		**BE180M4**	**BX180M4**				46,800	52,500	21,200	454
5.0	259,800	1.3	370	**3/V 13 ML3**		**BE180M4**	**BX180M4**				30,000	37,600	10,600	406
5.0	283,800	1.9	386	**3/V 15 ML3**		**BE180M4**	**BX180M4**				29,500	35,900	12,100	440
14.0	104,100	0.9	130		**3/A 07 L2**	**BE180M4**	**BX180M4**				13,300	18,100	4,210	338
36	40,200	1.6	49.2		**3/A 07 L2**	**BE180M4**	**BX180M4**				9,950	13,500	3,050	338
43	33,600	1.0	41.1		**3/A 06 L2**	**BE180M4**	**BX180M4**				7,530	9,500	2,230	320
43	33,900	1.6	41.5		**3/A 07 L2**	**BE180M4**	**BX180M4**				9,450	12,900	2,880	338
54	26,700	1.0	32.7		**3/A 06 L2**	**BE180M4**	**BX180M4**				7,040	8,870	2,070	320
55	26,400	1.6	32.3		**3/A 07 L2**	**BE180M4**	**BX180M4**				8,770	11,900	2,650	338
64	22,600	1.0	27.7		**3/A 06 L2**	**BE180M4**	**BX180M4**				6,690	8,440	1,960	320
66	22,200	1.6	27.1		**3/A 07 L2**	**BE180M4**	**BX180M4**				8,320	11,300	2,500	338

P_1 = 30 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.30	3,841,600	0.9	5164	**3/V 19 L4**		**BE180L4**	**BX180L4**				119,500	131,600	45,000	490
0.40	3,241,600	1.0	4095	**3/V 19 L4**		**BE180L4**	**BX180L4**				115,600	127,300	45,000	490
0.40	3,645,200	1.3	4550	**3/V 21 L4**		**BE180L4**	**BX180L4**				166,000	197,600	269,800	502
0.40	3,797,400	1.3	5040	**3/V 21 L4**		**BE180L4**	**BX180L4**				168,400	200,500	269,800	502
0.50	2,766,700	1.0	3495	**3/V 18 ML4**		**BE180L4**	**BX180L4**				99,700	105,000	45,000	478
0.50	2,925,800	0.9	3696	**3/V 18 ML4**		**BE180L4**	**BX180L4**				100,500	105,900	45,000	478
0.50	2,619,300	1.2	3231	**3/V 19 L4**		**BE180L4**	**BX180L4**				111,700	123,000	45,000	490
0.50	2,952,800	1.6	3600	**3/V 21 L4**		**BE180L4**	**BX180L4**				160,500	191,100	269,800	502
0.50	3,028,300	1.3	3780	**3/V 21 L4**		**BE180L4**	**BX180L4**				161,700	192,400	269,800	502
0.60	2,331,300	1.0	2945	**3/V 18 ML4**		**BE180L4**	**BX180L4**				97,300	102,500	45,000	478
0.70	1,997,500	1.3	2464	**3/V 18 ML4**		**BE180L4**	**BX180L4**				94,900	99,900	45,000	478
0.70	2,093,200	1.5	2582	**3/V 19 L4**		**BE180L4**	**BX180L4**				108,200	119,200	45,000	490
0.70	2,067,000	2.2	2520	**3/V 21 L4**		**BE180L4**	**BX180L4**				152,600	181,600	269,800	502
0.70	2,266,100	2.1	2700	**3/V 21 L4**		**BE180L4**	**BX180L4**				154,100	183,400	269,800	502
0.80	1,816,700	1.0	2295	**3/V 18 ML4**		**BE180L4**	**BX180L4**				93,900	98,900	45,000	478
0.80	1,909,400	2.6	2275	**3/V 21 L4**		**BE180L4**	**BX180L4**				150,300	179,000	269,800	502
0.90	1,733,100	0.9	2065	**3/V 17 ML4**		**BE180L4**	**BX180L4**				90,700	96,300	33,700	466
0.90	1,586,300	2.6	1890	**3/V 21 L4**		**BE180L4**	**BX180L4**				146,400	174,300	269,800	502
1.0	989,400	1.0	1324	**3/V 16 ML3**		**BE180L4**	**BX180L4**				54,700	61,400	30,400	454
1.0	1,003,500	1.2	1215	**3/V 17 ML3**		**BE180L4**	**BX180L4**				84,100	89,300	29,600	466
1.0	1,060,300	1.3	1365	**3/V 17 ML3**		**BE180L4**	**BX180L4**				85,500	90,800	30,800	466
1.0	1,443,000	1.1	1780	**3/V 17 ML4**		**BE180L4**	**BX180L4**				88,800	94,300	33,600	466
1.0	1,045,800	2.4	1232	**3/V 18 ML4**		**BE180L4**	**BX180L4**				85,900	90,500	39,600	478



A

P_1 = 30 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
1.0	1,236,300	1.8	1473	**3/V 18 ML4**		**BE180L4**	**BX180L4**				88,100	92,800	42,100	478
1.0	1,467,100	1.8	1748	**3/V 18 ML4**		**BE180L4**	**BX180L4**				90,300	95,100	44,500	478
1.0	1,551,000	1.7	1848	**3/V 18 ML4**		**BE180L4**	**BX180L4**				91,000	95,900	45,000	478
2.0	685,500	1.0	840	**3/V 15 ML3**		**BE180L4**	**BX180L4**				32,900	40,200	15,700	440
2.0	813,600	0.9	997	**3/V 15 ML3**		**BE180L4**	**BX180L4**				33,700	41,200	16,600	440
2.0	859,000	0.9	1120	**3/V 15 ML3**		**BE180L4**	**BX180L4**				34,300	41,900	17,300	440
2.0	655,800	1.3	794	**3/V 16 ML3**		**BE180L4**	**BX180L4**				50,800	57,000	25,700	454
2.0	693,600	1.3	893	**3/V 16 ML3**		**BE180L4**	**BX180L4**				51,700	58,000	26,700	454
2.0	822,600	1.2	1059	**3/V 16 ML3**		**BE180L4**	**BX180L4**				53,000	59,400	28,300	454
2.0	684,900	1.7	810	**3/V 17 ML3**		**BE180L4**	**BX180L4**				79,300	84,300	25,800	466
2.0	702,900	1.3	851	**3/V 17 ML3**		**BE180L4**	**BX180L4**				79,900	84,900	26,300	466
2.0	845,700	1.3	1024	**3/V 17 ML3**		**BE180L4**	**BX180L4**				82,000	87,200	27,900	466
2.0	880,800	1.3	1134	**3/V 17 ML3**		**BE180L4**	**BX180L4**				83,200	88,400	28,900	466
2.0	649,400	2.5	765	**3/V 18 ML4**		**BE180L4**	**BX180L4**				80,300	84,500	33,800	478
2.0	833,600	2.5	982	**3/V 18 ML4**		**BE180L4**	**BX180L4**				83,200	87,600	36,700	478
2.0	988,900	2.5	1165	**3/V 18 ML4**		**BE180L4**	**BX180L4**				85,200	89,800	38,900	478
3.0	431,200	1.0	516	**3/V 13 ML3**		**BE180L4**	**BX180L4**				31,500	39,400	11,900	406
3.0	501,000	0.9	579	**3/V 14 ML3**		**BE180L4**	**BX180L4**				31,200	38,100	13,900	424
3.0	555,800	1.1	665	**3/V 14 ML3**		**BE180L4**	**BX180L4**				31,800	38,800	14,500	424
3.0	468,000	1.5	560	**3/V 15 ML3**		**BE180L4**	**BX180L4**				31,100	37,900	13,700	440
3.0	555,800	1.3	665	**3/V 15 ML3**		**BE180L4**	**BX180L4**				31,800	38,800	14,500	440
3.0	448,200	2.2	530	**3/V 16 ML3**		**BE180L4**	**BX180L4**				48,000	53,800	22,400	454
3.0	552,500	1.3	669	**3/V 16 ML3**		**BE180L4**	**BX180L4**				49,600	55,700	24,200	454
3.0	443,000	2.6	512	**3/V 17 ML3**		**BE180L4**	**BX180L4**				74,300	78,900	22,200	466
3.0	479,400	2.2	567	**3/V 17 ML3**		**BE180L4**	**BX180L4**				75,400	80,100	22,900	466
3.0	526,100	2.1	608	**3/V 17 ML3**		**BE180L4**	**BX180L4**				76,100	80,900	23,500	466
3.0	577,500	2.2	683	**3/V 17 ML3**		**BE180L4**	**BX180L4**				77,400	82,200	24,400	466
4.0	359,400	0.9	430	**3/V 11 ML3**		**BE180L4**	**BX180L4**				22,100	23,100	9,060	388
4.0	367,700	1.1	425	**3/V 13 ML3**		**BE180L4**	**BX180L4**				30,600	38,300	11,100	406
4.0	343,500	1.2	397	**3/V 14 ML3**		**BE180L4**	**BX180L4**				29,600	36,100	12,200	424
4.0	372,700	1.1	446	**3/V 14 ML3**		**BE180L4**	**BX180L4**				30,100	36,700	12,700	424
4.0	430,900	1.2	498	**3/V 14 ML3**		**BE180L4**	**BX180L4**				30,500	37,300	13,200	424
4.0	372,700	1.5	446	**3/V 15 ML3**		**BE180L4**	**BX180L4**				30,100	36,700	12,700	440
4.0	430,900	1.7	498	**3/V 15 ML3**		**BE180L4**	**BX180L4**				30,500	37,300	13,200	440
4.0	343,500	2.6	397	**3/V 16 ML3**		**BE180L4**	**BX180L4**				46,100	51,700	20,400	454
4.0	377,100	2.2	446	**3/V 16 ML3**		**BE180L4**	**BX180L4**				46,800	52,500	21,200	454
4.0	358,400	2.9	405	**3/V 17 ML3**		**BE180L4**	**BX180L4**				71,900	76,300	20,500	466
4.0	367,700	2.6	425	**3/V 17 ML3**		**BE180L4**	**BX180L4**				72,400	76,900	20,800	466
5.0	309,200	1.1	370	**3/V 13 ML3**		**BE180L4**	**BX180L4**				30,000	37,600	10,600	406
5.0	337,800	1.6	386	**3/V 15 ML3**		**BE180L4**	**BX180L4**				29,500	35,900	12,100	440
36	47,900	1.3	49.2		**3/A 07 L2**	**BE180L4**	**BX180L4**			**N280TC**	9,950	13,500	3,050	338
43	40,400	1.3	41.5		**3/A 07 L2**	**BE180L4**	**BX180L4**			**N280TC**	9,450	12,900	2,880	338
55	31,400	1.3	32.3		**3/A 07 L2**	**BE180L4**	**BX180L4**			**N280TC**	8,770	11,900	2,650	338
65	26,400	1.3	27.1		**3/A 07 L2**	**BE180L4**	**BX180L4**			**N280TC**	8,320	11,300	2,500	338

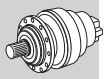
P_1 = 40 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.30	5,210,400	0.9	5040	**3/V 21 L4**		**IEC200L4**					168,400	200,500	269,800	502
0.40	5,001,500	1.0	4550	**3/V 21 L4**		**IEC200L4**					166,000	197,600	269,800	502
0.50	4,051,500	1.2	3600	**3/V 21 L4**		**IEC200L4**					160,500	191,100	269,800	502
0.50	4,155,100	1.0	3780	**3/V 21 L4**		**IEC200L4**					161,700	192,400	269,800	502
0.70	2,740,800	1.0	2464	**3/V 18 ML4**		**IEC200L4**					94,900	99,900	45,000	478
0.70	2,872,000	1.1	2582	**3/V 19 L4**		**IEC200L4**					108,200	119,200	45,000	490
0.70	2,836,000	1.6	2520	**3/V 21 L4**		**IEC200L4**					152,600	181,600	269,800	502
0.70	3,109,300	1.5	2700	**3/V 21 L4**		**IEC200L4**					154,100	183,400	269,800	502
0.80	2,619,800	1.9	2275	**3/V 21 L4**		**IEC200L4**					150,300	179,000	269,800	502
0.90	2,176,500	1.9	1890	**3/V 21 L4**		**IEC200L4**					146,400	174,300	269,800	502
1.0	1,376,900	0.9	1215	**3/V 17 ML3**		**IEC200L4**					84,100	89,300	29,600	466
1.0	1,454,800	0.9	1365	**3/V 17 ML3**		**IEC200L4**					85,500	90,800	30,800	466
1.0	1,434,900	1.7	1232	**3/V 18 ML4**		**IEC200L4**					85,900	90,500	39,600	478
1.0	1,696,300	1.3	1473	**3/V 18 ML4**		**IEC200L4**					88,100	92,800	42,100	478
1.0	2,013,000	1.3	1748	**3/V 18 ML4**		**IEC200L4**					90,300	95,100	44,500	478
1.0	2,128,100	1.2	1848	**3/V 18 ML4**		**IEC200L4**					91,000	95,900	45,000	478
1.0	1,484,000	2.5	1260	**3/V 21 L4**		**IEC200L4**					138,200	164,500	242,400	502
1.0	1,786,600	2.5	1517	**3/V 21 L4**		**IEC200L4**					141,900	168,900	256,300	502
1.0	2,119,900	2.2	1800	**3/V 21 L4**		**IEC200L4**					145,400	173,100	269,800	502
2.0	899,800	1.0	794	**3/V 16 ML3**		**IEC200L4**					50,800	57,000	25,700	454
2.0	951,700	0.9	893	**3/V 16 ML3**		**IEC200L4**					51,700	58,000	26,700	454
2.0	1,128,700	0.9	1059	**3/V 16 ML3**		**IEC200L4**					53,000	59,400	28,300	454
2.0	939,800	1.2	810	**3/V 17 ML3**		**IEC200L4**					79,300	84,300	25,800	466
2.0	964,400	1.0	851	**3/V 17 ML3**		**IEC200L4**					79,900	84,900	26,300	466
2.0	1,160,400	1.0	1024	**3/V 17 ML3**		**IEC200L4**					82,000	87,200	27,900	466
2.0	1,208,600	0.9	1134	**3/V 17 ML3**		**IEC200L4**					83,200	88,400	28,900	466
2.0	891,000	1.8	765	**3/V 18 ML4**		**IEC200L4**					80,300	84,500	33,800	478
2.0	1,143,700	1.8	982	**3/V 18 ML4**		**IEC200L4**					83,200	87,600	36,700	478
2.0	1,356,800	1.8	1165	**3/V 18 ML4**		**IEC200L4**					85,200	89,800	38,900	478
3.0	642,200	1.1	560	**3/V 15 ML3**		**IEC200L4**					31,100	37,900	13,700	440
3.0	762,600	1.0	665	**3/V 15 ML3**		**IEC200L4**					31,800	38,800	14,500	440
3.0	614,900	1.6	530	**3/V 16 ML3**		**IEC200L4**					48,000	53,800	22,400	454
3.0	758,100	1.0	669	**3/V 16 ML3**		**IEC200L4**					49,600	55,700	24,200	454
3.0	607,800	1.9	512	**3/V 17 ML3**		**IEC200L4**					74,300	78,900	22,200	466
3.0	657,800	1.6	567	**3/V 17 ML3**		**IEC200L4**					75,400	80,100	22,900	466
3.0	721,800	1.5	608	**3/V 17 ML3**		**IEC200L4**					76,100	80,900	23,500	466
3.0	792,400	1.6	683	**3/V 17 ML3**		**IEC200L4**					77,400	82,200	24,400	466
4.0	511,400	1.1	446	**3/V 15 ML3**		**IEC200L4**					30,100	36,700	12,700	440
4.0	591,200	1.2	498	**3/V 15 ML3**		**IEC200L4**					30,500	37,300	13,200	440
4.0	471,300	1.9	397	**3/V 16 ML3**		**IEC200L4**					46,100	51,700	20,400	454
4.0	517,500	1.6	446	**3/V 16 ML3**		**IEC200L4**					46,800	52,500	21,200	454
4.0	491,700	2.1	405	**3/V 17 ML3**		**IEC200L4**					71,900	76,300	20,500	466
4.0	504,600	1.9	425	**3/V 17 ML3**		**IEC200L4**					72,400	76,900	20,800	466
5.0	463,500	1.2	386	**3/V 15 ML3**		**IEC200L4**					29,500	35,900	12,100	440

P_1 = 50 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	
0.50	4,989,300	1.0	3600	**3/V 21 L4**		**IEC225S4**					160,500	191,100	269,800	502
0.70	3,536,800	0.9	2582	**3/V 19 L4**		**IEC225S4**					108,200	119,200	45,000	490
0.70	3,492,500	1.3	2520	**3/V 21 L4**		**IEC225S4**					152,600	181,600	269,800	502
0.70	3,829,000	1.2	2700	**3/V 21 L4**		**IEC225S4**					154,100	183,400	269,800	502

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.



A

P_1 = 50 hp

n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.80	3,226,300	1.5	2275	**3/V 21 L4**		**IEC225S4**					150,300	179,000	269,800	502
0.90	2,680,300	1.5	1890	**3/V 21 L4**		**IEC225S4**					146,400	174,300	269,800	502
1.0	1,767,000	1.4	1232	**3/V 18 ML4**		**IEC225S4**					85,900	90,500	39,600	478
1.0	2,088,900	1.1	1473	**3/V 18 ML4**		**IEC225S4**					88,100	92,800	42,100	478
1.0	2,478,900	1.1	1748	**3/V 18 ML4**		**IEC225S4**					90,300	95,100	44,500	478
1.0	2,620,700	1.0	1848	**3/V 18 ML4**		**IEC225S4**					91,000	95,900	45,000	478
1.0	1,827,500	2.1	1260	**3/V 21 L4**		**IEC225S4**					138,200	164,500	242,400	502
1.0	2,200,200	2.1	1517	**3/V 21 L4**		**IEC225S4**					141,900	168,900	256,300	502
1.0	2,610,700	1.8	1800	**3/V 21 L4**		**IEC225S4**					145,400	173,100	269,800	502
2.0	1,157,300	1.0	810	**3/V 17 ML3**		**IEC225S4**					79,300	84,300	25,800	466
2.0	1,097,200	1.5	765	**3/V 18 ML4**		**IEC225S4**					80,300	84,500	33,800	478
2.0	1,408,400	1.5	982	**3/V 18 ML4**		**IEC225S4**					83,200	87,600	36,700	478
2.0	1,670,900	1.5	1165	**3/V 18 ML4**		**IEC225S4**					85,200	89,800	38,900	478
2.0	1,557,400	2.5	1062	**3/V 21 L4**		**IEC225S4**					134,800	160,500	230,300	502
3.0	790,800	0.9	560	**3/V 15 ML3**		**IEC225S4**					31,100	37,900	13,700	440
3.0	757,300	1.3	530	**3/V 16 ML3**		**IEC225S4**					48,000	53,800	22,400	454
3.0	748,500	1.5	512	**3/V 17 ML3**		**IEC225S4**					74,300	78,900	22,200	466
3.0	810,100	1.3	567	**3/V 17 ML3**		**IEC225S4**					75,400	80,100	22,900	466
3.0	888,900	1.2	608	**3/V 17 ML3**		**IEC225S4**					76,100	80,900	23,500	466
3.0	975,900	1.3	683	**3/V 17 ML3**		**IEC225S4**					77,400	82,200	24,400	466
4.0	629,800	0.9	446	**3/V 15 ML3**		**IEC225S4**					30,100	36,700	12,700	440
4.0	728,100	1.0	498	**3/V 15 ML3**		**IEC225S4**					30,500	37,300	13,200	440
4.0	580,400	1.5	397	**3/V 16 ML3**		**IEC225S4**					46,100	51,700	20,400	454
4.0	637,200	1.3	446	**3/V 16 ML3**		**IEC225S4**					46,800	52,500	21,200	454
4.0	605,600	1.7	405	**3/V 17 ML3**		**IEC225S4**					71,900	76,300	20,500	466
4.0	621,400	1.5	425	**3/V 17 ML3**		**IEC225S4**					72,400	76,900	20,800	466
5.0	570,700	0.9	386	**3/V 15 ML3**		**IEC225S4**					29,500	35,900	12,100	440

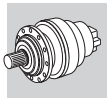
P_1 = 60 hp

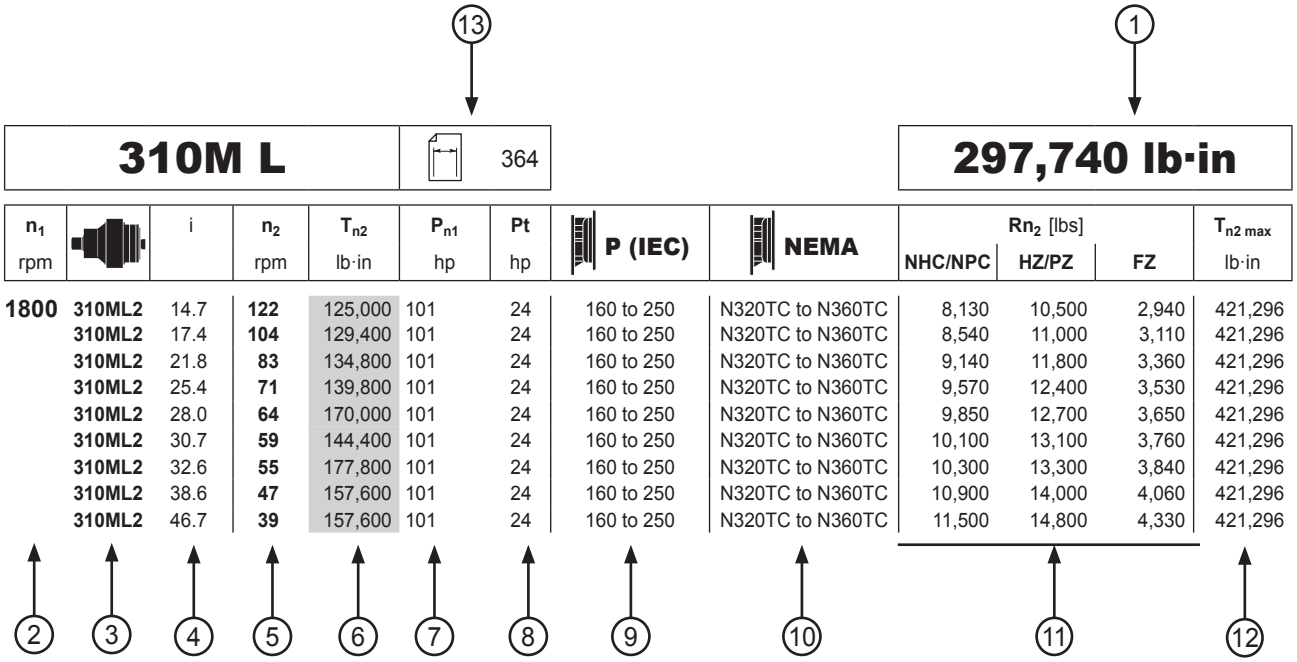
n_2 rpm	T_2 in·bs	S	i			IE2	IE3	IE2	IE3	NEMA	Rn_2 [lbs] NHC/HC NPC/PC	HZ/PZ	FZ	
0.70	4,236,500	1.1	2520	**3/V 21 L4**		**IEC225M4**					152,600	181,600	269,800	502
0.70	4,644,700	1.0	2700	**3/V 21 L4**		**IEC225M4**					154,100	183,400	269,800	502
0.80	3,913,600	1.3	2275	**3/V 21 L4**		**IEC225M4**					150,300	179,000	269,800	502
0.90	3,251,300	1.3	1890	**3/V 21 L4**		**IEC225M4**					146,400	174,300	269,800	502
1.0	2,143,400	1.2	1232	**3/V 18 ML4**		**IEC225M4**					85,900	90,500	39,600	478
1.0	2,216,800	1.7	1260	**3/V 21 L4**		**IEC225M4**					138,200	164,500	242,400	502
1.0	2,668,900	1.7	1517	**3/V 21 L4**		**IEC225M4**					141,900	168,900	256,300	502
1.0	3,166,800	1.5	1800	**3/V 21 L4**		**IEC225M4**					145,400	173,100	269,800	502
2.0	1,331,000	1.2	765	**3/V 18 ML4**		**IEC225M4**					80,300	84,500	33,800	478
2.0	1,708,500	1.2	982	**3/V 18 ML4**		**IEC225M4**					83,200	87,600	36,700	478
2.0	2,026,900	1.2	1165	**3/V 18 ML4**		**IEC225M4**					85,200	89,800	38,900	478
2.0	1,889,200	2.1	1062	**3/V 21 L4**		**IEC225M4**					134,800	160,500	230,300	502
3.0	918,600	1.1	530	**3/V 16 ML3**		**IEC225M4**					48,000	53,800	22,400	454
3.0	908,000	1.3	512	**3/V 17 ML3**		**IEC225M4**					74,300	78,900	22,200	466
3.0	982,700	1.1	567	**3/V 17 ML3**		**IEC225M4**					75,400	80,100	22,900	466
3.0	1,078,300	1.0	608	**3/V 17 ML3**		**IEC225M4**					76,100	80,900	23,500	466
3.0	1,183,700	1.1	683	**3/V 17 ML3**		**IEC225M4**					77,400	82,200	24,400	466
4.0	704,100	1.3	397	**3/V 16 ML3**		**IEC225M4**					46,100	51,700	20,400	454
4.0	773,000	1.1	446	**3/V 16 ML3**		**IEC225M4**					46,800	52,500	21,200	454
4.0	734,600	1.4	405	**3/V 17 ML3**		**IEC225M4**					71,900	76,300	20,500	466
4.0	753,700	1.3	425	**3/V 17 ML3**		**IEC225M4**					72,400	76,900	20,800	466

The technical information shall be considered as indicative, the configurations should be matching the data provided by motors manufacturers on rated powers greater than 30 HP.

25.3 RATING CHARTS FOR INLINE UNITS 300M L

Reading the rating chart.





n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\,max}$ lb·in
1800	**310ML2**	14.7	**122**	125,000	101	24	160 to 250	N320TC to N360TC	8,130	10,500	2,940	421,296
	310ML2	17.4	**104**	129,400	101	24	160 to 250	N320TC to N360TC	8,540	11,000	3,110	421,296
	310ML2	21.8	**83**	134,800	101	24	160 to 250	N320TC to N360TC	9,140	11,800	3,360	421,296
	310ML2	25.4	**71**	139,800	101	24	160 to 250	N320TC to N360TC	9,570	12,400	3,530	421,296
	310ML2	28.0	**64**	170,000	101	24	160 to 250	N320TC to N360TC	9,850	12,700	3,650	421,296
	310ML2	30.7	**59**	144,400	101	24	160 to 250	N320TC to N360TC	10,100	13,100	3,760	421,296
	310ML2	32.6	**55**	177,800	101	24	160 to 250	N320TC to N360TC	10,300	13,300	3,840	421,296
	310ML2	38.6	**47**	157,600	101	24	160 to 250	N320TC to N360TC	10,900	14,000	4,060	421,296
	310ML2	46.7	**39**	157,600	101	24	160 to 250	N320TC to N360TC	11,500	14,800	4,330	421,296

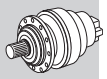
The rated torque of the gearbox, independent of installed mechanical power

1	Reference torque
2	Gearbox drive speed
3	Frame size of the in-line gear unit
4	Gear ratio
5	Gearbox output speed
6	Gearbox rated output torque based on: - service factor f_S=1 - 10000 h theoretical lifetime
7	Gearbox rated input power, based on: - service factor f_S=1 - 10000 h theoretical lifetime
8	Gearbox thermal capacity
9	Frame size of available IEC motor
10	Frame size of available NEMA motor
11	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
12	Maximum torque
13	Dimensions page

300 L

226

11,060 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**300L1**	**3.48**	517	3,950	26.8	8.2	71 to 132	N56C to N280TC	1,360	1,720	220	17,702
	300L1	**4.26**	422	4,140	26.8	8.2	71 to 132	N56C to N280TC	1,450	1,830	240	21,242
	300L1	**5.77**	312	3,960	20.2	8.2	71 to 132	N56C to N280TC	1,590	2,000	270	21,242
	300L1	**7.20**	250	3,430	14.0	8.2	71 to 132	N56C to N280TC	1,690	2,140	290	21,242
	300L1	**9.00**	200	2,660	8.7	8.2	71 to 132	N56C to N280TC	1,810	2,290	310	21,242
	300L2	**12.1**	149	5,740	14.4	8.2	71 to 132	N56C to N280TC	1,980	2,500	340	17,702
	300L2	**14.8**	121	6,010	12.3	8.2	71 to 132	N56C to N280TC	2,110	2,660	360	17,702
	300L2	**18.2**	99	6,390	10.7	8.2	71 to 132	N56C to N280TC	2,240	2,820	390	21,242
	300L2	**20.1**	90	5,600	8.5	8.2	71 to 132	N56C to N280TC	2,310	2,910	400	17,702
	300L2	**24.6**	73	6,830	8.4	8.2	71 to 132	N56C to N280TC	2,450	3,090	430	21,242
	300L2	**30.7**	59	7,180	7.1	8.2	71 to 132	N56C to N280TC	2,620	3,310	460	21,242
	300L2	**33.3**	54	5,730	5.2	8.2	71 to 132	N56C to N280TC	2,680	3,390	480	21,242
	300L2	**38.4**	47	7,440	5.9	8.2	71 to 132	N56C to N280TC	2,800	3,530	500	21,242
	300L2	**41.5**	43	5,750	4.2	8.2	71 to 132	N56C to N280TC	2,870	3,620	510	21,242
	300L2	**51.9**	35	5,750	3.4	8.2	71 to 132	N56C to N280TC	3,070	3,870	550	21,242
	300L2	**64.8**	27.8	4,870	2.3	8.2	71 to 132	N56C to N280TC	3,280	4,140	590	21,242
	300L3	**51.6**	35	7,470	4.5	8.2	71 to 132	N56C to N280TC	3,060	3,860	550	17,702
	300L3	**63.2**	28.5	7,500	3.7	8.2	71 to 132	N56C to N280TC	3,250	4,110	590	21,242
	300L3	**69.9**	25.8	5,750	2.6	8.2	71 to 132	N56C to N280TC	3,350	4,230	610	17,702
	300L3	**77.5**	23.2	7,520	3.0	8.2	71 to 132	N56C to N280TC	3,460	4,360	630	21,242
	300L3	**85.6**	21.0	7,530	2.8	8.2	71 to 132	N56C to N280TC	3,560	4,500	650	21,242
	300L3	**105**	17.2	7,550	2.3	8.2	71 to 132	N56C to N280TC	3,790	4,780	700	21,242
	300L3	**116**	15.5	5,750	1.6	8.2	71 to 132	N56C to N280TC	3,900	4,920	720	21,242
	300L3	**131**	13.8	7,580	1.8	8.2	71 to 132	N56C to N280TC	4,050	5,110	750	21,242
	300L3	**142**	12.7	7,590	1.7	8.2	71 to 132	N56C to N280TC	4,140	5,230	770	21,242
	300L3	**177**	10.2	7,610	1.3	8.2	71 to 132	N56C to N280TC	4,430	5,590	830	21,242
	300L3	**192**	9.4	5,750	0.94	8.2	71 to 132	N56C to N280TC	4,450	5,620	850	21,242
	300L3	**221**	8.1	7,840	1.1	8.2	71 to 132	N56C to N280TC	4,450	5,620	890	21,242
	300L3	**240**	7.5	5,750	0.75	8.2	71 to 132	N56C to N280TC	4,450	5,620	920	21,242
	300L3	**299**	6.0	5,750	0.60	8.2	71 to 132	N56C to N280TC	4,450	5,620	990	21,242
	300L3	**374**	4.8	5,790	0.48	8.2	71 to 132	N56C to N280TC	4,480	5,650	1,070	21,242
	300L4	**330**	5.4	8,300	0.81	6.6	71 to 132	N56C to N280TC	4,450	5,620	1,020	21,242
	300L4	**403**	4.5	5,860	0.47	6.6	71 to 132	N56C to N280TC	4,520	5,710	1,090	21,242
	300L4	**447**	4.0	8,730	0.63	6.6	71 to 132	N56C to N280TC	4,590	5,800	1,130	21,242
	300L4	**494**	3.6	8,880	0.58	6.6	71 to 132	N56C to N280TC	4,660	5,880	1,170	21,242
	300L4	**558**	3.2	9,060	0.52	6.6	71 to 132	N56C to N280TC	4,740	5,980	1,220	21,242
	300L4	**616**	2.9	9,220	0.48	6.6	71 to 132	N56C to N280TC	4,810	6,070	1,260	21,242
	300L4	**755**	2.4	9,550	0.41	6.6	71 to 132	N56C to N280TC	4,950	6,250	1,350	21,242
	300L4	**819**	2.2	9,680	0.38	6.6	71 to 132	N56C to N280TC	5,010	6,320	1,380	21,242
	300L4	**942**	1.9	9,910	0.34	6.6	71 to 132	N56C to N280TC	5,110	6,450	1,450	21,242
	300L4	**1022**	1.8	10,000	0.32	6.6	71 to 132	N56C to N280TC	5,170	6,520	1,490	21,242
	300L4	**1108**	1.6	6,980	0.20	6.6	71 to 132	N56C to N280TC	5,230	6,600	1,530	21,242
	300L4	**1275**	1.4	10,400	0.26	6.6	71 to 132	N56C to N280TC	5,330	6,730	1,600	21,242
	300L4	**1383**	1.3	7,260	0.17	6.6	71 to 132	N56C to N280TC	5,390	6,810	1,650	21,242
	300L4	**1591**	1.1	10,800	0.22	6.6	71 to 132	N56C to N280TC	5,500	6,950	1,730	21,242
	300L4	**1725**	1.0	7,550	0.14	6.6	71 to 132	N56C to N280TC	5,570	7,030	1,770	21,242
	300L4	**2153**	0.84	7,610	0.11	6.6	71 to 132	N56C to N280TC	5,750	7,260	1,800	21,242
	300L4	**2692**	0.67	8,850	0.11	6.6	71 to 132	N56C to N280TC	5,930	7,490	1,800	21,242
1200	**300L1**	**3.48**	345	4,460	25.1	11.3	71 to 132	N56C to N280TC	1,540	1,940	260	17,702
	300L1	**4.26**	281	4,670	21.5	11.3	71 to 132	N56C to N280TC	1,640	2,060	270	21,242
	300L1	**5.77**	208	4,480	15.2	11.3	71 to 132	N56C to N280TC	1,790	2,260	300	21,242
	300L1	**7.20**	167	3,870	10.6	11.3	71 to 132	N56C to N280TC	1,910	2,420	330	21,242
	300L1	**9.00**	133	3,000	6.6	11.3	71 to 132	N56C to N280TC	2,050	2,580	350	21,242
	300L2	**12.1**	99	6,460	10.8	11.3	71 to 132	N56C to N280TC	2,240	2,820	390	17,702
	300L2	**14.8**	81	6,680	9.1	11.3	71 to 132	N56C to N280TC	2,380	3,000	420	17,702
	300L2	**18.2**	66	6,990	7.8	11.3	71 to 132	N56C to N280TC	2,530	3,190	440	21,242
	300L2	**20.1**	60	5,710	5.8	11.3	71 to 132	N56C to N280TC	2,600	3,290	460	17,702
	300L2	**24.6**	49	7,440	6.1	11.3	71 to 132	N56C to N280TC	2,770	3,490	490	21,242
	300L2	**30.7**	39	7,460	4.9	11.3	71 to 132	N56C to N280TC	2,960	3,730	530	21,242
	300L2	**33.3**	36	5,750	3.5	11.3	71 to 132	N56C to N280TC	3,030	3,830	540	21,242
	300L2	**38.4**	31	7,490	3.9	11.3	71 to 132	N56C to N280TC	3,160	3,990	570	21,242

300 L

226

11,060 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\,max}$ lb·in
1200	**300L2**	**41.5**	28.9	5,750	2.8	11.3	71 to 132	N56C to N280TC	3,240	4,090	590	21,242
	300L2	**51.9**	23.1	5,750	2.2	11.3	71 to 132	N56C to N280TC	3,460	4,370	630	21,242
	300L2	**64.8**	18.5	4,870	1.5	11.3	71 to 132	N56C to N280TC	3,700	4,670	680	21,242
	300L3	**51.6**	23.2	7,520	3.0	11.3	71 to 132	N56C to N280TC	3,460	4,360	630	17,702
	300L3	**63.2**	19.0	7,540	2.5	11.3	71 to 132	N56C to N280TC	3,670	4,640	670	21,242
	300L3	**69.9**	17.2	5,750	1.7	11.3	71 to 132	N56C to N280TC	3,780	4,780	700	17,702
	300L3	**77.5**	15.5	7,560	2.0	11.3	71 to 132	N56C to N280TC	3,900	4,930	720	21,242
	300L3	**85.6**	14.0	7,570	1.8	11.3	71 to 132	N56C to N280TC	4,020	5,080	750	21,242
	300L3	**105**	11.4	7,600	1.5	11.3	71 to 132	N56C to N280TC	4,270	5,400	800	21,242
	300L3	**116**	10.4	5,750	1.0	11.3	71 to 132	N56C to N280TC	4,400	5,560	820	21,242
	300L3	**131**	9.2	7,710	1.2	11.3	71 to 132	N56C to N280TC	4,450	5,620	860	21,242
	300L3	**142**	8.5	7,800	1.1	11.3	71 to 132	N56C to N280TC	4,450	5,620	880	21,242
	300L3	**177**	6.8	8,050	0.95	11.3	71 to 132	N56C to N280TC	4,450	5,620	950	21,242
	300L3	**192**	6.2	5,750	0.62	11.3	71 to 132	N56C to N280TC	4,450	5,620	980	21,242
	300L3	**221**	5.4	8,310	0.78	11.3	71 to 132	N56C to N280TC	4,450	5,620	1,020	21,242
	300L3	**240**	5.0	5,750	0.50	11.3	71 to 132	N56C to N280TC	4,450	5,620	1,050	21,242
	300L3	**299**	4.0	5,970	0.42	11.3	71 to 132	N56C to N280TC	4,590	5,800	1,130	21,242
	300L3	**374**	3.2	6,200	0.35	11.3	71 to 132	N56C to N280TC	4,740	5,990	1,220	21,242
	300L4	**330**	3.6	8,880	0.58	9.0	71 to 132	N56C to N280TC	4,660	5,880	1,170	21,242
	300L4	**403**	3.0	6,270	0.33	9.0	71 to 132	N56C to N280TC	4,790	6,050	1,250	21,242
	300L4	**447**	2.7	9,360	0.45	9.0	71 to 132	N56C to N280TC	4,860	6,140	1,290	21,242
	300L4	**494**	2.4	9,520	0.41	9.0	71 to 132	N56C to N280TC	4,930	6,230	1,340	21,242
	300L4	**558**	2.2	9,710	0.37	9.0	71 to 132	N56C to N280TC	5,020	6,340	1,390	21,242
	300L4	**616**	1.9	9,880	0.34	9.0	71 to 132	N56C to N280TC	5,090	6,430	1,440	21,242
	300L4	**755**	1.6	10,200	0.29	9.0	71 to 132	N56C to N280TC	5,240	6,620	1,540	21,242
	300L4	**819**	1.5	10,400	0.27	9.0	71 to 132	N56C to N280TC	5,300	6,700	1,580	21,242
	300L4	**942**	1.3	10,600	0.24	9.0	71 to 132	N56C to N280TC	5,410	6,830	1,660	21,242
	300L4	**1022**	1.2	10,800	0.23	9.0	71 to 132	N56C to N280TC	5,470	6,910	1,700	21,242
	300L4	**1108**	1.1	7,500	0.15	9.0	71 to 132	N56C to N280TC	5,540	6,990	1,750	21,242
	300L4	**1275**	0.94	11,100	0.19	9.0	71 to 132	N56C to N280TC	5,650	7,130	1,800	21,242
	300L4	**1383**	0.87	7,610	0.12	9.0	71 to 132	N56C to N280TC	5,720	7,220	1,800	21,242
	300L4	**1591**	0.75	11,100	0.15	9.0	71 to 132	N56C to N280TC	5,830	7,360	1,800	21,242
	300L4	**1725**	0.70	7,610	0.09	9.0	71 to 132	N56C to N280TC	5,900	7,450	1,800	21,242
	300L4	**2153**	0.56	7,610	0.08	9.0	71 to 132	N56C to N280TC	6,090	7,640	1,800	21,242
	300L4	**2692**	0.45	8,850	0.07	9.0	71 to 132	N56C to N280TC	6,290	7,640	1,800	21,242

301 L

242

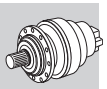
21,770 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\,max}$ lb·in
1800	**301L1**	**3.48**	517	7,030	40	8.2	71 to 132	N56C to N280TC	1,360	1,620	220	30,093
	301L1	**4.26**	422	7,350	40	8.2	71 to 132	N56C to N280TC	1,450	1,720	240	30,093
	301L1	**5.77**	312	7,800	40	8.2	71 to 132	N56C to N280TC	1,590	1,880	270	30,093
	301L1	**7.20**	250	6,320	25.8	8.2	71 to 132	N56C to N280TC	1,690	2,010	290	30,093
	301L1	**9.00**	200	5,250	17.2	8.2	71 to 132	N56C to N280TC	1,810	2,150	310	30,093
	301L2	**12.1**	149	10,200	25.6	8.2	71 to 132	N56C to N280TC	1,980	2,350	340	30,093
	301L2	**14.8**	121	10,700	21.9	8.2	71 to 132	N56C to N280TC	2,110	2,500	360	30,093
	301L2	**18.2**	99	11,400	19.0	8.2	71 to 132	N56C to N280TC	2,240	2,660	390	30,093
	301L2	**20.1**	90	11,100	16.7	8.2	71 to 132	N56C to N280TC	2,310	2,740	400	30,093
	301L2	**24.6**	73	12,500	15.4	8.2	71 to 132	N56C to N280TC	2,450	2,910	430	30,093
	301L2	**30.7**	59	13,300	13.2	8.2	71 to 132	N56C to N280TC	2,620	3,110	460	30,093
	301L2	**33.3**	54	11,400	10.4	8.2	71 to 132	N56C to N280TC	2,680	3,180	480	30,093
	301L2	**38.4**	47	13,600	10.7	8.2	71 to 132	N56C to N280TC	2,800	3,320	500	30,093
	301L2	**41.5**	43	11,500	8.4	8.2	71 to 132	N56C to N280TC	2,870	3,400	510	30,093
	301L2	**51.9**	35	11,500	6.7	8.2	71 to 132	N56C to N280TC	3,070	3,640	550	30,093
	301L2	**64.8**	27.8	10,200	4.8	8.2	71 to 132	N56C to N280TC	3,280	3,890	590	30,093
	301L3	**51.6**	35	14,300	8.6	8.2	71 to 132	N56C to N280TC	3,060	3,630	550	30,093
	301L3	**63.2**	28.5	14,400	7.1	8.2	71 to 132	N56C to N280TC	3,250	3,860	590	30,093

301 L

242

21,770 lb·in

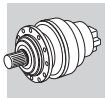


n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**301L3**	**69.9**	25.8	11,500	5.2	8.2	71 to 132	N56C to N280TC	3,350	3,980	610	30,093
	301L3	**77.5**	23.2	14,600	5.9	8.2	71 to 132	N56C to N280TC	3,460	4,100	630	30,093
	301L3	**85.6**	21.0	14,700	5.4	8.2	71 to 132	N56C to N280TC	3,560	4,230	650	30,093
	301L3	**105**	17.2	14,900	4.4	8.2	71 to 132	N56C to N280TC	3,790	4,490	700	30,093
	301L3	**116**	15.5	11,500	3.1	8.2	71 to 132	N56C to N280TC	3,900	4,630	720	30,093
	301L3	**131**	13.8	15,000	3.6	8.2	71 to 132	N56C to N280TC	4,050	4,800	750	30,093
	301L3	**142**	12.7	15,100	3.3	8.2	71 to 132	N56C to N280TC	4,140	4,920	770	30,093
	301L3	**177**	10.2	15,300	2.7	8.2	71 to 132	N56C to N280TC	4,430	5,260	830	30,093
	301L3	**192**	9.4	11,500	1.9	8.2	71 to 132	N56C to N280TC	4,450	5,280	850	30,093
	301L3	**221**	8.1	15,600	2.2	8.2	71 to 132	N56C to N280TC	4,450	5,280	890	30,093
	301L3	**240**	7.5	11,500	1.5	8.2	71 to 132	N56C to N280TC	4,450	5,280	920	30,093
	301L3	**299**	6.0	11,500	1.2	8.2	71 to 132	N56C to N280TC	4,450	5,280	990	30,093
	301L3	**374**	4.8	11,600	0.97	8.2	71 to 132	N56C to N280TC	4,480	5,310	1,070	30,093
	301L4	**330**	5.4	16,500	1.6	6.6	71 to 132	N56C to N280TC	4,450	5,280	1,020	30,093
	301L4	**403**	4.5	11,700	0.94	6.6	71 to 132	N56C to N280TC	4,520	5,370	1,090	30,093
	301L4	**447**	4.0	17,400	1.3	6.6	71 to 132	N56C to N280TC	4,590	5,450	1,130	30,093
	301L4	**494**	3.6	17,700	1.2	6.6	71 to 132	N56C to N280TC	4,660	5,530	1,170	30,093
	301L4	**558**	3.2	18,100	1.0	6.6	71 to 132	N56C to N280TC	4,740	5,620	1,220	30,093
	301L4	**616**	2.9	18,400	0.96	6.6	71 to 132	N56C to N280TC	4,810	5,700	1,260	30,093
	301L4	**755**	2.4	19,100	0.82	6.6	71 to 132	N56C to N280TC	4,950	5,870	1,350	30,093
	301L4	**819**	2.2	19,300	0.76	6.6	71 to 132	N56C to N280TC	5,010	5,940	1,380	30,093
	301L4	**942**	1.9	19,700	0.68	6.6	71 to 132	N56C to N280TC	5,110	6,060	1,450	30,093
	301L4	**1022**	1.8	20,000	0.63	6.6	71 to 132	N56C to N280TC	5,170	6,130	1,490	30,093
	301L4	**1108**	1.6	14,000	0.41	6.6	71 to 132	N56C to N280TC	5,230	6,200	1,530	30,093
	301L4	**1275**	1.4	20,700	0.52	6.6	71 to 132	N56C to N280TC	5,330	6,330	1,600	30,093
	301L4	**1383**	1.3	14,500	0.34	6.6	71 to 132	N56C to N280TC	5,390	6,400	1,650	30,093
	301L4	**1591**	1.1	17,700	0.36	6.6	71 to 132	N56C to N280TC	5,500	6,530	1,730	30,093
	301L4	**1725**	1.0	15,100	0.28	6.6	71 to 132	N56C to N280TC	5,570	6,610	1,770	30,093
	301L4	**2153**	0.84	15,200	0.23	6.6	71 to 132	N56C to N280TC	5,750	6,820	1,800	30,093
	301L4	**2692**	0.67	15,200	0.18	6.6	71 to 132	N56C to N280TC	5,930	7,040	1,800	30,093
1200	**301L1**	**3.48**	345	7,940	40	11.3	71 to 132	N56C to N280TC	1,540	1,830	260	30,093
	301L1	**4.26**	281	8,310	38	11.3	71 to 132	N56C to N280TC	1,640	1,940	270	30,093
	301L1	**5.77**	208	8,810	30	11.3	71 to 132	N56C to N280TC	1,790	2,130	300	30,093
	301L1	**7.20**	167	7,140	19.5	11.3	71 to 132	N56C to N280TC	1,910	2,270	330	30,093
	301L1	**9.00**	133	5,930	12.9	11.3	71 to 132	N56C to N280TC	2,050	2,430	350	30,093
	301L2	**12.1**	99	11,500	19.2	11.3	71 to 132	N56C to N280TC	2,240	2,660	390	30,093
	301L2	**14.8**	81	12,100	16.5	11.3	71 to 132	N56C to N280TC	2,380	2,820	420	30,093
	301L2	**18.2**	66	12,900	14.3	11.3	71 to 132	N56C to N280TC	2,530	3,000	440	30,093
	301L2	**20.1**	60	11,400	11.5	11.3	71 to 132	N56C to N280TC	2,600	3,090	460	30,093
	301L2	**24.6**	49	14,000	11.5	11.3	71 to 132	N56C to N280TC	2,770	3,280	490	30,093
	301L2	**30.7**	39	14,200	9.3	11.3	71 to 132	N56C to N280TC	2,960	3,510	530	30,093
	301L2	**33.3**	36	11,500	7.0	11.3	71 to 132	N56C to N280TC	3,030	3,600	540	30,093
	301L2	**38.4**	31	13,600	7.2	11.3	71 to 132	N56C to N280TC	3,160	3,750	570	30,093
	301L2	**41.5**	28.9	11,500	5.6	11.3	71 to 132	N56C to N280TC	3,240	3,840	590	30,093
	301L2	**51.9**	23.1	11,500	4.5	11.3	71 to 132	N56C to N280TC	3,460	4,110	630	30,093
	301L2	**64.8**	18.5	10,200	3.2	11.3	71 to 132	N56C to N280TC	3,700	4,390	680	30,093
	301L3	**51.6**	23.2	14,600	5.9	11.3	71 to 132	N56C to N280TC	3,460	4,100	630	30,093
	301L3	**63.2**	19.0	14,800	4.9	11.3	71 to 132	N56C to N280TC	3,670	4,360	670	30,093
	301L3	**69.9**	17.2	11,500	3.4	11.3	71 to 132	N56C to N280TC	3,780	4,490	700	30,093
	301L3	**77.5**	15.5	14,900	4.0	11.3	71 to 132	N56C to N280TC	3,900	4,630	720	30,093
	301L3	**85.6**	14.0	15,000	3.7	11.3	71 to 132	N56C to N280TC	4,020	4,770	750	30,093
	301L3	**105**	11.4	15,200	3.0	11.3	71 to 132	N56C to N280TC	4,270	5,070	800	30,093
	301L3	**116**	10.4	11,500	2.1	11.3	71 to 132	N56C to N280TC	4,400	5,230	820	30,093
	301L3	**131**	9.2	15,500	2.5	11.3	71 to 132	N56C to N280TC	4,450	5,280	860	30,093
	301L3	**142**	8.5	15,600	2.3	11.3	71 to 132	N56C to N280TC	4,450	5,280	880	30,093
	301L3	**177**	6.8	16,100	1.9	11.3	71 to 132	N56C to N280TC	4,450	5,280	950	30,093
	301L3	**192**	6.2	11,500	1.2	11.3	71 to 132	N56C to N280TC	4,450	5,280	980	30,093
	301L3	**221**	5.4	16,100	1.5	11.3	71 to 132	N56C to N280TC	4,450	5,280	1,020	30,093
	301L3	**240**	5.0	11,500	1.0	11.3	71 to 132	N56C to N280TC	4,450	5,280	1,050	30,093
	301L3	**299**	4.0	11,900	0.83	11.3	71 to 132	N56C to N280TC	4,590	5,450	1,130	30,093
	301L3	**374**	3.2	12,400	0.69	11.3	71 to 132	N56C to N280TC	4,740	5,630	1,220	30,093

301 L

242

21,770 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**301L4**	**330**	3.6	17,700	1.2	9.0	71 to 132	N56C to N280TC	4,660	5,530	1,170	30,093
	301L4	**403**	3.0	12,500	0.67	9.0	71 to 132	N56C to N280TC	4,790	5,690	1,250	30,093
	301L4	**447**	2.7	18,700	0.90	9.0	71 to 132	N56C to N280TC	4,860	5,770	1,290	30,093
	301L4	**494**	2.4	19,000	0.83	9.0	71 to 132	N56C to N280TC	4,930	5,860	1,340	30,093
	301L4	**558**	2.2	19,400	0.75	9.0	71 to 132	N56C to N280TC	5,020	5,960	1,390	30,093
	301L4	**616**	1.9	19,700	0.69	9.0	71 to 132	N56C to N280TC	5,090	6,040	1,440	30,093
	301L4	**755**	1.6	20,300	0.58	9.0	71 to 132	N56C to N280TC	5,240	6,220	1,540	30,093
	301L4	**819**	1.5	20,500	0.54	9.0	71 to 132	N56C to N280TC	5,300	6,300	1,580	30,093
	301L4	**942**	1.3	21,000	0.48	9.0	71 to 132	N56C to N280TC	5,410	6,420	1,660	30,093
	301L4	**1022**	1.2	21,200	0.45	9.0	71 to 132	N56C to N280TC	5,470	6,500	1,700	30,093
	301L4	**1108**	1.1	15,000	0.29	9.0	71 to 132	N56C to N280TC	5,540	6,570	1,750	30,093
	301L4	**1275**	0.94	21,800	0.37	9.0	71 to 132	N56C to N280TC	5,650	6,710	1,800	30,093
	301L4	**1383**	0.87	15,200	0.24	9.0	71 to 132	N56C to N280TC	5,720	6,780	1,800	30,093
	301L4	**1591**	0.75	17,700	0.24	9.0	71 to 132	N56C to N280TC	5,830	6,920	1,800	30,093
	301L4	**1725**	0.70	15,200	0.19	9.0	71 to 132	N56C to N280TC	5,900	7,000	1,800	30,093
	301L4	**2153**	0.56	15,200	0.15	9.0	71 to 132	N56C to N280TC	6,090	7,230	1,800	30,093
	301L4	**2692**	0.45	15,200	0.12	9.0	71 to 132	N56C to N280TC	6,290	7,460	1,800	30,093

303 L

258

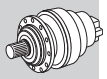
26,290 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**303L1**	**3.60**	500	11,600	54	12.1	132 to 200	N250TC to N280TC	2,640	3,340	680	46,024
	303L1	**4.25**	424	12,000	54	12.1	132 to 200	N250TC to N280TC	2,780	3,510	720	46,024
	303L1	**5.33**	338	12,500	54	12.1	132 to 200	N250TC to N280TC	2,970	3,750	770	46,024
	303L1	**6.20**	290	11,700	54	12.1	132 to 200	N250TC to N280TC	3,110	3,930	810	46,024
	303L1	**7.50**	240	10,200	40	12.1	132 to 200	N250TC to N280TC	3,290	4,160	870	46,024
	303L1	**9.67**	186	6,320	19.2	12.1	132 to 200	N250TC to N280TC	3,550	4,490	940	46,024
	303L2	**12.5**	144	13,700	26.8	9.9	71 to 160	N56C to N280TC	3,840	4,850	1,030	46,024
	303L2	**15.3**	117	14,300	26.8	9.9	71 to 160	N56C to N280TC	4,080	5,160	1,100	46,024
	303L2	**18.1**	99	16,900	26.8	9.9	71 to 160	N56C to N280TC	4,290	5,420	1,160	46,024
	303L2	**20.8**	87	15,200	22.3	9.9	71 to 160	N56C to N280TC	4,470	5,650	1,220	46,024
	303L2	**22.7**	79	18,300	24.4	9.9	71 to 160	N56C to N280TC	4,590	5,800	1,260	46,024
	303L2	**24.5**	73	18,000	22.2	9.9	71 to 160	N56C to N280TC	4,700	5,930	1,290	46,024
	303L2	**26.4**	68	16,100	18.5	9.9	71 to 160	N56C to N280TC	4,800	6,070	1,320	46,024
	303L2	**30.8**	59	18,700	18.5	9.9	71 to 160	N56C to N280TC	5,030	6,350	1,390	46,024
	303L2	**35.8**	50	16,100	13.7	9.9	71 to 160	N56C to N280TC	5,260	6,650	1,460	46,024
	303L2	**38.4**	47	19,000	15.0	9.9	71 to 160	N56C to N280TC	5,370	6,790	1,500	46,024
	303L2	**44.6**	40	16,100	11.0	9.9	71 to 160	N56C to N280TC	5,620	7,100	1,570	46,024
	303L2	**55.8**	32	16,100	8.8	9.9	71 to 160	N56C to N280TC	6,010	7,590	1,690	46,024
	303L3	**53.4**	34	19,000	11.1	8.2	71 to 160	N56C to N280TC	5,930	7,490	1,670	46,024
	303L3	**63.1**	28.5	21,900	10.9	8.2	71 to 160	N56C to N280TC	6,240	7,880	1,770	46,024
	303L3	**72.3**	24.9	19,500	8.5	8.2	71 to 160	N56C to N280TC	6,500	8,210	1,850	46,024
	303L3	**77.2**	23.3	22,000	8.9	8.2	71 to 160	N56C to N280TC	6,630	8,370	1,890	46,024
	303L3	**90.2**	20.0	19,700	6.8	8.2	71 to 160	N56C to N280TC	6,940	8,770	1,990	46,024
	303L3	**105**	17.2	22,500	6.7	8.2	71 to 160	N56C to N280TC	7,260	9,170	2,090	46,024
	303L3	**113**	16.0	16,100	4.5	8.2	71 to 160	N56C to N280TC	7,420	9,380	2,140	46,024
	303L3	**124**	14.5	16,100	4.0	8.2	71 to 160	N56C to N280TC	7,650	9,660	2,210	46,024
	303L3	**141**	12.7	22,700	5.0	8.2	71 to 160	N56C to N280TC	7,950	10,000	2,310	46,024
	303L3	**152**	11.8	16,100	3.3	8.2	71 to 160	N56C to N280TC	8,130	10,300	2,370	46,024
	303L3	**164**	11.0	19,400	3.7	8.2	71 to 160	N56C to N280TC	8,300	10,500	2,430	46,024
	303L3	**178**	10.1	19,500	3.4	8.2	71 to 160	N56C to N280TC	8,510	10,700	2,490	46,024
	303L3	**190**	9.5	16,100	2.7	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,550	46,024
	303L3	**220**	8.2	19,900	2.8	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,680	46,024
	303L3	**258**	7.0	16,200	2.0	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,820	46,024
	303L3	**276**	6.5	19,600	2.2	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,890	46,024
	303L3	**321**	5.6	16,300	1.6	8.2	71 to 160	N56C to N280TC	8,540	10,800	3,040	46,024
	303L3	**389**	4.6	14,700	1.2	8.2	71 to 160	N56C to N280TC	8,640	10,900	3,240	46,024

303 L

258

26,290 lb·in

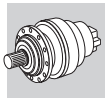


n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**303L3**	**402**	4.5	16,600	1.3	8.2	71 to 160	N56C to N280TC	8,680	11,000	3,270	46,024
	303L4	**413**	4.4	20,200	1.6	6.6	71 to 160	N56C to N280TC	8,710	11,000	3,300	46,024
	303L4	**446**	4.0	24,900	1.8	6.6	71 to 160	N56C to N280TC	8,810	11,100	3,390	46,024
	303L4	**492**	3.7	23,700	1.5	6.6	71 to 160	N56C to N280TC	8,930	11,300	3,500	46,024
	303L4	**556**	3.2	24,900	1.4	6.6	71 to 160	N56C to N280TC	9,090	11,500	3,650	46,024
	303L4	**649**	2.8	20,400	1.0	6.6	71 to 160	N56C to N280TC	9,290	11,700	3,840	46,024
	303L4	**718**	2.5	18,400	0.83	6.6	71 to 160	N56C to N280TC	9,430	11,900	3,970	46,024
	303L4	**816**	2.2	24,000	0.95	6.6	71 to 160	N56C to N280TC	9,600	12,100	4,140	46,024
	303L4	**896**	2.0	19,100	0.69	6.6	71 to 160	N56C to N280TC	9,730	12,300	4,280	46,024
	303L4	**1018**	1.8	24,100	0.76	6.6	71 to 160	N56C to N280TC	9,910	12,500	4,460	46,024
	303L4	**1098**	1.6	19,800	0.58	6.6	71 to 160	N56C to N280TC	10,000	12,700	4,580	46,024
	303L4	**1278**	1.4	24,100	0.61	6.6	71 to 160	N56C to N280TC	10,200	12,900	4,810	46,024
	303L4	**1370**	1.3	20,600	0.48	6.6	71 to 160	N56C to N280TC	10,300	13,100	4,930	46,024
	303L4	**1586**	1.1	19,900	0.40	6.6	71 to 160	N56C to N280TC	10,600	13,300	5,170	46,024
	303L4	**1854**	0.97	21,600	0.38	6.6	71 to 160	N56C to N280TC	10,800	13,600	5,400	46,024
	303L4	**1991**	0.90	25,200	0.41	6.6	71 to 160	N56C to N280TC	10,900	13,800	5,400	46,024
	303L4	**2243**	0.80	17,700	0.25	6.6	71 to 160	N56C to N280TC	11,100	14,000	5,400	46,024
	303L4	**2799**	0.64	17,700	0.20	6.6	71 to 160	N56C to N280TC	11,500	14,500	5,400	46,024
1200	**303L1**	**3.60**	333	13,100	54	16.5	132 to 200	N250TC to N280TC	2,980	3,770	780	46,024
	303L1	**4.25**	282	13,500	54	16.5	132 to 200	N250TC to N280TC	3,140	3,960	820	46,024
	303L1	**5.33**	225	14,100	52	16.5	132 to 200	N250TC to N280TC	3,360	4,240	890	46,024
	303L1	**6.20**	194	13,200	42	16.5	132 to 200	N250TC to N280TC	3,510	4,440	930	46,024
	303L1	**7.50**	160	11,500	30	16.5	132 to 200	N250TC to N280TC	3,720	4,700	990	46,024
	303L1	**9.67**	124	7,130	14.5	16.5	132 to 200	N250TC to N280TC	4,010	5,070	1,080	46,024
	303L2	**12.5**	96	15,500	25.1	13.5	71 to 160	N56C to N280TC	4,340	5,480	1,180	46,024
	303L2	**15.3**	78	16,200	21.4	13.5	71 to 160	N56C to N280TC	4,610	5,820	1,260	46,024
	303L2	**18.1**	66	19,100	21.4	13.5	71 to 160	N56C to N280TC	4,840	6,120	1,330	46,024
	303L2	**20.8**	58	17,200	16.8	13.5	71 to 160	N56C to N280TC	5,050	6,380	1,400	46,024
	303L2	**22.7**	53	18,900	16.8	13.5	71 to 160	N56C to N280TC	5,190	6,550	1,440	46,024
	303L2	**24.5**	49	20,200	16.7	13.5	71 to 160	N56C to N280TC	5,310	6,700	1,480	46,024
	303L2	**26.4**	45	16,100	12.3	13.5	71 to 160	N56C to N280TC	5,430	6,850	1,510	46,024
	303L2	**30.8**	39	19,000	12.5	13.5	71 to 160	N56C to N280TC	5,680	7,170	1,590	46,024
	303L2	**35.8**	34	16,100	9.1	13.5	71 to 160	N56C to N280TC	5,940	7,510	1,670	46,024
	303L2	**38.4**	31	19,100	10.1	13.5	71 to 160	N56C to N280TC	6,070	7,670	1,710	46,024
	303L2	**44.6**	26.9	16,100	7.3	13.5	71 to 160	N56C to N280TC	6,350	8,020	1,800	46,024
	303L2	**55.8**	21.5	16,100	5.8	13.5	71 to 160	N56C to N280TC	6,790	8,580	1,940	46,024
	303L3	**53.4**	22.5	19,500	7.6	11.3	71 to 160	N56C to N280TC	6,700	8,460	1,910	46,024
	303L3	**63.1**	19.0	22,500	7.4	11.3	71 to 160	N56C to N280TC	7,040	8,900	2,020	46,024
	303L3	**72.3**	16.6	19,900	5.8	11.3	71 to 160	N56C to N280TC	7,340	9,270	2,110	46,024
	303L3	**77.2**	15.5	22,700	6.1	11.3	71 to 160	N56C to N280TC	7,490	9,450	2,160	46,024
	303L3	**90.2**	13.3	20,200	4.7	11.3	71 to 160	N56C to N280TC	7,840	9,910	2,280	46,024
	303L3	**105**	11.5	23,200	4.6	11.3	71 to 160	N56C to N280TC	8,200	10,400	2,390	46,024
	303L3	**113**	10.6	16,100	3.0	11.3	71 to 160	N56C to N280TC	8,380	10,600	2,450	46,024
	303L3	**124**	9.6	16,100	2.7	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,540	46,024
	303L3	**141**	8.5	23,300	3.4	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,650	46,024
	303L3	**152**	7.9	16,200	2.2	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,710	46,024
	303L3	**164**	7.3	19,600	2.5	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,780	46,024
	303L3	**178**	6.8	19,600	2.3	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,850	46,024
	303L3	**190**	6.3	16,200	1.8	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,920	46,024
	303L3	**220**	5.4	19,900	1.9	11.3	71 to 160	N56C to N280TC	8,540	10,800	3,070	46,024
	303L3	**258**	4.7	16,500	1.3	11.3	71 to 160	N56C to N280TC	8,630	10,900	3,230	46,024
	303L3	**276**	4.3	20,100	1.5	11.3	71 to 160	N56C to N280TC	8,720	11,000	3,310	46,024
	303L3	**321**	3.7	17,100	1.1	11.3	71 to 160	N56C to N280TC	8,910	11,300	3,480	46,024
	303L3	**389**	3.1	15,200	0.82	11.3	71 to 160	N56C to N280TC	9,150	11,600	3,710	46,024
	303L3	**402**	3.0	17,800	0.93	11.3	71 to 160	N56C to N280TC	9,200	11,600	3,750	46,024
	303L4	**413**	2.9	21,700	1.1	9.0	71 to 160	N56C to N280TC	9,230	11,700	3,780	46,024
	303L4	**446**	2.7	24,900	1.2	9.0	71 to 160	N56C to N280TC	9,330	11,800	3,880	46,024
	303L4	**492**	2.4	23,900	1.0	9.0	71 to 160	N56C to N280TC	9,470	12,000	4,010	46,024
	303L4	**556**	2.2	25,100	0.97	9.0	71 to 160	N56C to N280TC	9,630	12,200	4,180	46,024
	303L4	**649**	1.8	20,700	0.69	9.0	71 to 160	N56C to N280TC	9,850	12,400	4,400	46,024

303 L

258

26,290 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**303L4**	**718**	1.7	19,700	0.59	9.0	71 to 160	N56C to N280TC	9,990	12,600	4,550	46,024
	303L4	**816**	1.5	24,300	0.64	9.0	71 to 160	N56C to N280TC	10,200	12,900	4,740	46,024
	303L4	**896**	1.3	20,500	0.49	9.0	71 to 160	N56C to N280TC	10,300	13,000	4,900	46,024
	303L4	**1018**	1.2	24,400	0.52	9.0	71 to 160	N56C to N280TC	10,500	13,300	5,110	46,024
	303L4	**1098**	1.1	21,300	0.42	9.0	71 to 160	N56C to N280TC	10,600	13,400	5,240	46,024
	303L4	**1278**	0.94	25,200	0.42	9.0	71 to 160	N56C to N280TC	10,800	13,700	5,400	46,024
	303L4	**1370**	0.88	21,600	0.34	9.0	71 to 160	N56C to N280TC	11,000	13,800	5,400	46,024
	303L4	**1586**	0.76	19,900	0.27	9.0	71 to 160	N56C to N280TC	11,200	14,100	5,400	46,024
	303L4	**1854**	0.65	21,600	0.25	9.0	71 to 160	N56C to N280TC	11,400	14,500	5,400	46,024
	303L4	**1991**	0.60	25,200	0.27	9.0	71 to 160	N56C to N280TC	11,600	14,600	5,400	46,024
	303L4	**2243**	0.53	17,700	0.17	9.0	71 to 160	N56C to N280TC	11,800	14,800	5,400	46,024
	303L4	**2799**	0.43	17,700	0.14	9.0	71 to 160	N56C to N280TC	12,100	15,300	5,400	46,024

304 L

276

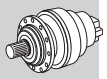
35,050 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**304L1**	**3.60**	500	15,500	67	13.2	132 to 200	N250TC to N280TC	2,640	3,340	680	64,610
	304L1	**4.25**	424	16,000	67	13.2	132 to 200	N250TC to N280TC	2,780	3,510	720	64,610
	304L1	**5.33**	338	16,700	67	13.2	132 to 200	N250TC to N280TC	2,970	3,750	770	64,610
	304L1	**6.57**	274	15,600	67	13.2	132 to 200	N250TC to N280TC	3,160	4,000	830	64,610
	304L2	**12.5**	144	22,500	40	9.9	71 to 160	N56C to N280TC	3,840	4,850	1,030	64,610
	304L2	**15.3**	117	23,900	40	9.9	71 to 160	N56C to N280TC	4,080	5,160	1,100	64,610
	304L2	**18.1**	99	24,700	40	9.9	71 to 160	N56C to N280TC	4,290	5,420	1,160	64,610
	304L2	**20.8**	87	25,600	37	9.9	71 to 160	N56C to N280TC	4,470	5,650	1,220	64,610
	304L2	**22.7**	79	24,400	33	9.9	71 to 160	N56C to N280TC	4,590	5,800	1,260	64,610
	304L2	**24.5**	73	27,000	33	9.9	71 to 160	N56C to N280TC	4,700	5,930	1,290	64,610
	304L2	**30.8**	59	24,900	24.6	9.9	71 to 160	N56C to N280TC	5,030	6,350	1,390	64,610
	304L2	**38.4**	47	25,200	19.9	9.9	71 to 160	N56C to N280TC	5,370	6,790	1,500	64,610
	304L2	**47.3**	38	21,200	13.6	9.9	71 to 160	N56C to N280TC	5,720	7,230	1,600	64,610
	304L2	**59.1**	30	21,200	10.9	9.9	71 to 160	N56C to N280TC	6,120	7,730	1,730	64,610
	304L3	**43.6**	41	27,900	20.1	8.2	71 to 160	N56C to N280TC	5,580	7,050	1,560	64,610
	304L3	**53.4**	34	28,300	16.6	8.2	71 to 160	N56C to N280TC	5,930	7,490	1,670	64,610
	304L3	**63.1**	28.5	30,700	15.2	8.2	71 to 160	N56C to N280TC	6,240	7,880	1,770	64,610
	304L3	**72.3**	24.9	28,800	12.5	8.2	71 to 160	N56C to N280TC	6,500	8,210	1,850	64,610
	304L3	**77.2**	23.3	30,800	12.5	8.2	71 to 160	N56C to N280TC	6,630	8,370	1,890	64,610
	304L3	**90.2**	20.0	29,000	10.1	8.2	71 to 160	N56C to N280TC	6,940	8,770	1,990	64,610
	304L3	**105**	17.2	31,000	9.3	8.2	71 to 160	N56C to N280TC	7,260	9,170	2,090	64,610
	304L3	**111**	16.3	29,600	8.4	8.2	71 to 160	N56C to N280TC	7,380	9,320	2,130	64,610
	304L3	**130**	13.8	31,100	7.5	8.2	71 to 160	N56C to N280TC	7,760	9,800	2,250	64,610
	304L3	**141**	12.7	31,200	6.9	8.2	71 to 160	N56C to N280TC	7,950	10,000	2,310	64,610
	304L3	**150**	12.0	30,100	6.3	8.2	71 to 160	N56C to N280TC	8,080	10,200	2,350	64,610
	304L3	**165**	10.9	21,200	4.0	8.2	71 to 160	N56C to N280TC	8,320	10,500	2,430	64,610
	304L3	**178**	10.1	25,200	4.4	8.2	71 to 160	N56C to N280TC	8,510	10,700	2,490	64,610
	304L3	**202**	8.9	21,200	3.3	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,600	64,610
	304L3	**220**	8.2	31,600	4.5	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,680	64,610
	304L3	**273**	6.6	21,200	2.4	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,880	64,610
	304L3	**341**	5.3	21,200	1.9	8.2	71 to 160	N56C to N280TC	8,540	10,800	3,100	64,610
	304L3	**426**	4.2	21,500	1.6	8.2	71 to 160	N56C to N280TC	8,750	11,100	3,340	64,610
	304L4	**413**	4.4	25,800	2.0	6.6	71 to 160	N56C to N280TC	8,710	11,000	3,300	64,610
	304L4	**446**	4.0	32,800	2.4	6.6	71 to 160	N56C to N280TC	8,810	11,100	3,390	64,610
	304L4	**492**	3.7	32,900	2.2	6.6	71 to 160	N56C to N280TC	8,930	11,300	3,500	64,610
	304L4	**556**	3.2	33,000	1.9	6.6	71 to 160	N56C to N280TC	9,090	11,500	3,650	64,610
	304L4	**649**	2.8	31,100	1.5	6.6	71 to 160	N56C to N280TC	9,290	11,700	3,840	64,610
	304L4	**702**	2.6	22,600	1.0	6.6	71 to 160	N56C to N280TC	9,400	11,900	3,940	64,610
	304L4	**816**	2.2	33,400	1.3	6.6	71 to 160	N56C to N280TC	9,600	12,100	4,140	64,610
	304L4	**1018**	1.8	33,900	1.1	6.6	71 to 160	N56C to N280TC	9,910	12,500	4,460	64,610
	304L4	**1164**	1.5	24,600	0.68	6.6	71 to 160	N56C to N280TC	10,100	12,800	4,670	64,610
	304L4	**1271**	1.4	34,300	0.87	6.6	71 to 160	N56C to N280TC	10,200	12,900	4,800	64,610

304 L

276

35,050 lb·in

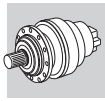


n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**304L4**	**1344**	1.3	32,300	0.78	6.6	71 to 160	N56C to N280TC	10,300	13,000	4,890	64,610
	304L4	**1586**	1.1	34,700	0.71	6.6	71 to 160	N56C to N280TC	10,600	13,300	5,170	64,610
	304L4	**1815**	0.99	26,600	0.47	6.6	71 to 160	N56C to N280TC	10,800	13,600	5,400	64,610
	304L4	**1991**	0.90	33,100	0.54	6.6	71 to 160	N56C to N280TC	10,900	13,800	5,400	64,610
	304L4	**2269**	0.79	26,600	0.38	6.6	71 to 160	N56C to N280TC	11,100	14,000	5,400	64,610
	304L4	**2453**	0.73	26,600	0.35	6.6	71 to 160	N56C to N280TC	11,200	14,200	5,400	64,610
1200	**304L1**	**3.60**	333	17,500	67	18.0	132 to 200	N250TC to N280TC	2,980	3,770	780	64,610
	304L1	**4.25**	282	18,000	67	18.0	132 to 200	N250TC to N280TC	3,140	3,960	820	64,610
	304L1	**5.33**	225	18,800	67	18.0	132 to 200	N250TC to N280TC	3,360	4,240	890	64,610
	304L1	**6.57**	183	17,700	53	18.0	132 to 200	N250TC to N280TC	3,570	4,510	950	64,610
	304L2	**12.5**	96	25,200	40	13.5	71 to 160	N56C to N280TC	4,340	5,480	1,180	64,610
	304L2	**15.3**	78	25,900	34	13.5	71 to 160	N56C to N280TC	4,610	5,820	1,260	64,610
	304L2	**18.1**	66	27,900	31	13.5	71 to 160	N56C to N280TC	4,840	6,120	1,330	64,610
	304L2	**20.8**	58	27,100	26.4	13.5	71 to 160	N56C to N280TC	5,050	6,380	1,400	64,610
	304L2	**22.7**	53	25,100	22.4	13.5	71 to 160	N56C to N280TC	5,190	6,550	1,440	64,610
	304L2	**24.5**	49	30,400	25.1	13.5	71 to 160	N56C to N280TC	5,310	6,700	1,480	64,610
	304L2	**30.8**	39	25,200	16.6	13.5	71 to 160	N56C to N280TC	5,680	7,170	1,590	64,610
	304L2	**38.4**	31	25,200	13.3	13.5	71 to 160	N56C to N280TC	6,070	7,670	1,710	64,610
	304L2	**47.3**	25.4	21,200	9.0	13.5	71 to 160	N56C to N280TC	6,460	8,160	1,840	64,610
	304L2	**59.1**	20.3	21,200	7.2	13.5	71 to 160	N56C to N280TC	6,910	8,730	1,980	64,610
	304L3	**43.6**	27.5	28,600	13.7	11.3	71 to 160	N56C to N280TC	6,300	7,960	1,790	64,610
	304L3	**53.4**	22.5	29,000	11.3	11.3	71 to 160	N56C to N280TC	6,700	8,460	1,910	64,610
	304L3	**63.1**	19.0	30,900	10.2	11.3	71 to 160	N56C to N280TC	7,040	8,900	2,020	64,610
	304L3	**72.3**	16.6	29,500	8.5	11.3	71 to 160	N56C to N280TC	7,340	9,270	2,110	64,610
	304L3	**77.2**	15.5	31,100	8.4	11.3	71 to 160	N56C to N280TC	7,490	9,450	2,160	64,610
	304L3	**90.2**	13.3	29,900	6.9	11.3	71 to 160	N56C to N280TC	7,840	9,910	2,280	64,610
	304L3	**105**	11.5	31,200	6.2	11.3	71 to 160	N56C to N280TC	8,200	10,400	2,390	64,610
	304L3	**111**	10.9	30,300	5.7	11.3	71 to 160	N56C to N280TC	8,330	10,500	2,440	64,610
	304L3	**130**	9.2	31,500	5.0	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,580	64,610
	304L3	**141**	8.5	31,600	4.7	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,650	64,610
	304L3	**150**	8.0	30,600	4.3	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,690	64,610
	304L3	**165**	7.3	21,200	2.7	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,780	64,610
	304L3	**178**	6.8	25,200	3.0	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,850	64,610
	304L3	**202**	5.9	21,200	2.2	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,980	64,610
	304L3	**220**	5.4	32,300	3.1	11.3	71 to 160	N56C to N280TC	8,540	10,800	3,070	64,610
	304L3	**273**	4.4	21,400	1.6	11.3	71 to 160	N56C to N280TC	8,700	11,000	3,290	64,610
	304L3	**341**	3.5	21,900	1.3	11.3	71 to 160	N56C to N280TC	8,980	11,300	3,550	64,610
	304L3	**426**	2.8	22,400	1.1	11.3	71 to 160	N56C to N280TC	9,270	11,700	3,820	64,610
	304L4	**413**	2.9	27,600	1.4	9.0	71 to 160	N56C to N280TC	9,230	11,700	3,780	64,610
	304L4	**446**	2.7	33,100	1.6	9.0	71 to 160	N56C to N280TC	9,330	11,800	3,880	64,610
	304L4	**492**	2.4	33,200	1.5	9.0	71 to 160	N56C to N280TC	9,470	12,000	4,010	64,610
	304L4	**556**	2.2	33,500	1.3	9.0	71 to 160	N56C to N280TC	9,630	12,200	4,180	64,610
	304L4	**649**	1.8	31,700	1.0	9.0	71 to 160	N56C to N280TC	9,850	12,400	4,400	64,610
	304L4	**702**	1.7	24,200	0.74	9.0	71 to 160	N56C to N280TC	9,960	12,600	4,510	64,610
	304L4	**816**	1.5	34,300	0.90	9.0	71 to 160	N56C to N280TC	10,200	12,900	4,740	64,610
	304L4	**1018**	1.2	34,700	0.73	9.0	71 to 160	N56C to N280TC	10,500	13,300	5,110	64,610
	304L4	**1164**	1.0	26,400	0.49	9.0	71 to 160	N56C to N280TC	10,700	13,500	5,340	64,610
	304L4	**1271**	0.94	35,000	0.59	9.0	71 to 160	N56C to N280TC	10,800	13,700	5,400	64,610
	304L4	**1344**	0.89	32,800	0.53	9.0	71 to 160	N56C to N280TC	10,900	13,800	5,400	64,610
	304L4	**1586**	0.76	35,000	0.48	9.0	71 to 160	N56C to N280TC	11,200	14,100	5,400	64,610
	304L4	**1815**	0.66	26,600	0.31	9.0	71 to 160	N56C to N280TC	11,400	14,400	5,400	64,610
	304L4	**1991**	0.60	33,100	0.36	9.0	71 to 160	N56C to N280TC	11,600	14,600	5,400	64,610
	304L4	**2269**	0.53	26,600	0.25	9.0	71 to 160	N56C to N280TC	11,800	14,900	5,400	64,610
	304L4	**2453**	0.49	26,600	0.23	9.0	71 to 160	N56C to N280TC	11,900	15,000	5,400	64,610

305 L

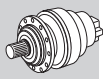
294

51,330 lb·in



B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**305L1**	**3.60**	500	19,900	80	14.3	132 to 200	N250TC to N280TC	2,640	3,340	680	77,887
	305L1	**4.25**	424	20,500	80	14.3	132 to 200	N250TC to N280TC	2,780	3,510	720	77,887
	305L1	**5.33**	338	21,400	80	14.3	132 to 200	N250TC to N280TC	2,970	3,750	770	77,887
	305L1	**6.20**	290	22,200	80	14.3	132 to 200	N250TC to N280TC	3,110	3,930	810	77,887
	305L1	**7.50**	240	19,000	75	14.3	132 to 200	N250TC to N280TC	3,290	4,160	870	77,887
	305L2	**12.5**	144	24,500	40	9.9	71 to 160	N56C to N280TC	3,840	4,850	1,030	77,887
	305L2	**15.3**	117	25,600	40	9.9	71 to 160	N56C to N280TC	4,080	5,160	1,100	77,887
	305L2	**18.1**	99	30,300	40	9.9	71 to 160	N56C to N280TC	4,290	5,420	1,160	77,887
	305L2	**20.8**	87	27,300	40	9.9	71 to 160	N56C to N280TC	4,470	5,650	1,220	77,887
	305L2	**22.7**	79	33,100	40	9.9	71 to 160	N56C to N280TC	4,590	5,800	1,260	77,887
	305L2	**24.5**	73	32,100	40	9.9	71 to 160	N56C to N280TC	4,700	5,930	1,290	77,887
	305L2	**26.4**	68	31,100	36	9.9	71 to 160	N56C to N280TC	4,800	6,070	1,320	77,887
	305L2	**30.8**	59	36,200	36	9.9	71 to 160	N56C to N280TC	5,030	6,350	1,390	77,887
	305L2	**35.8**	50	31,400	26.7	9.9	71 to 160	N56C to N280TC	5,260	6,650	1,460	77,887
	305L2	**38.4**	47	37,900	30	9.9	71 to 160	N56C to N280TC	5,370	6,790	1,500	77,887
	305L2	**44.6**	40	31,500	21.4	9.9	71 to 160	N56C to N280TC	5,620	7,100	1,570	77,887
	305L2	**55.8**	32	31,200	17.0	9.9	71 to 160	N56C to N280TC	6,010	7,590	1,690	77,887
	305L3	**53.4**	34	34,700	20.3	8.2	71 to 160	N56C to N280TC	5,930	7,490	1,670	77,887
	305L3	**63.1**	28.5	40,700	20.2	8.2	71 to 160	N56C to N280TC	6,240	7,880	1,770	77,887
	305L3	**72.3**	24.9	36,200	15.7	8.2	71 to 160	N56C to N280TC	6,500	8,210	1,850	77,887
	305L3	**77.2**	23.3	41,600	16.8	8.2	71 to 160	N56C to N280TC	6,630	8,370	1,890	77,887
	305L3	**90.2**	20.0	37,000	12.8	8.2	71 to 160	N56C to N280TC	6,940	8,770	1,990	77,887
	305L3	**105**	17.2	43,400	13.0	8.2	71 to 160	N56C to N280TC	7,260	9,170	2,090	77,887
	305L3	**113**	16.0	31,700	8.8	8.2	71 to 160	N56C to N280TC	7,420	9,380	2,140	77,887
	305L3	**124**	14.5	31,800	8.0	8.2	71 to 160	N56C to N280TC	7,650	9,660	2,210	77,887
	305L3	**141**	12.7	44,600	9.9	8.2	71 to 160	N56C to N280TC	7,950	10,000	2,310	77,887
	305L3	**152**	11.8	31,800	6.5	8.2	71 to 160	N56C to N280TC	8,130	10,300	2,370	77,887
	305L3	**164**	11.0	38,900	7.4	8.2	71 to 160	N56C to N280TC	8,300	10,500	2,430	77,887
	305L3	**178**	10.1	38,900	6.9	8.2	71 to 160	N56C to N280TC	8,510	10,700	2,490	77,887
	305L3	**190**	9.5	31,900	5.2	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,550	77,887
	305L3	**220**	8.2	42,000	6.0	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,680	77,887
	305L3	**258**	7.0	31,900	3.9	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,820	77,887
	305L3	**276**	6.5	39,300	4.5	8.2	71 to 160	N56C to N280TC	8,540	10,800	2,890	77,887
	305L3	**321**	5.6	31,900	3.1	8.2	71 to 160	N56C to N280TC	8,540	10,800	3,040	77,887
	305L3	**389**	4.6	27,600	2.2	8.2	71 to 160	N56C to N280TC	8,640	10,900	3,240	77,887
	305L3	**402**	4.5	32,400	2.5	6.6	71 to 160	N56C to N280TC	8,680	11,000	3,270	77,887
	305L4	**413**	4.4	40,500	3.2	6.6	71 to 160	N56C to N280TC	8,710	11,000	3,300	77,887
	305L4	**446**	4.0	48,600	3.5	6.6	71 to 160	N56C to N280TC	8,810	11,100	3,390	77,887
	305L4	**492**	3.7	47,100	3.1	6.6	71 to 160	N56C to N280TC	8,930	11,300	3,500	77,887
	305L4	**556**	3.2	48,600	2.8	6.6	71 to 160	N56C to N280TC	9,090	11,500	3,650	77,887
	305L4	**649**	2.8	39,700	2.0	6.6	71 to 160	N56C to N280TC	9,290	11,700	3,840	77,887
	305L4	**718**	2.5	35,400	1.6	6.6	71 to 160	N56C to N280TC	9,430	11,900	3,970	77,887
	305L4	**816**	2.2	47,600	1.9	6.6	71 to 160	N56C to N280TC	9,600	12,100	4,140	77,887
	305L4	**896**	2.0	36,800	1.3	6.6	71 to 160	N56C to N280TC	9,730	12,300	4,280	77,887
	305L4	**1018**	1.8	47,900	1.5	6.6	71 to 160	N56C to N280TC	9,910	12,500	4,460	77,887
	305L4	**1098**	1.6	38,100	1.1	6.6	71 to 160	N56C to N280TC	10,000	12,700	4,580	77,887
	305L4	**1278**	1.4	47,700	1.2	6.6	71 to 160	N56C to N280TC	10,200	12,900	4,810	77,887
	305L4	**1370**	1.3	39,600	0.93	6.6	71 to 160	N56C to N280TC	10,300	13,100	4,930	77,887
	305L4	**1586**	1.1	42,000	0.85	6.6	71 to 160	N56C to N280TC	10,600	13,300	5,170	77,887
	305L4	**1854**	0.97	41,500	0.72	6.6	71 to 160	N56C to N280TC	10,800	13,600	5,400	77,887
	305L4	**1991**	0.90	49,600	0.80	6.6	71 to 160	N56C to N280TC	10,900	13,800	5,400	77,887
	305L4	**2243**	0.80	33,600	0.48	6.6	71 to 160	N56C to N280TC	11,100	14,000	5,400	77,887
	305L4	**2799**	0.64	33,600	0.39	6.6	71 to 160	N56C to N280TC	11,500	14,500	5,400	77,887
1200	**305L1**	**3.60**	333	22,500	80	19.5	132 to 200	N250TC to N280TC	2,980	3,770	780	77,887
	305L1	**4.25**	282	23,200	80	19.5	132 to 200	N250TC to N280TC	3,140	3,960	820	77,887
	305L1	**5.33**	225	24,200	80	19.5	132 to 200	N250TC to N280TC	3,360	4,240	890	77,887
	305L1	**6.20**	194	25,100	80	19.5	132 to 200	N250TC to N280TC	3,510	4,440	930	77,887
	305L1	**7.50**	160	21,400	56	19.5	132 to 200	N250TC to N280TC	3,720	4,700	990	77,887
	305L2	**12.5**	96	27,700	40	13.5	71 to 160	N56C to N280TC	4,340	5,480	1,180	77,887
	305L2	**15.3**	78	29,000	38	13.5	71 to 160	N56C to N280TC	4,610	5,820	1,260	77,887



B

305 L — 294 — 51,330 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**305L2**	**18.1**	66	34,200	38	13.5	71 to 160	N56C to N280TC	4,840	6,120	1,330	77,887
	305L2	**20.8**	58	30,800	30	13.5	71 to 160	N56C to N280TC	5,050	6,380	1,400	77,887
	305L2	**22.7**	53	37,300	33	13.5	71 to 160	N56C to N280TC	5,190	6,550	1,440	77,887
	305L2	**24.5**	49	36,100	29.8	13.5	71 to 160	N56C to N280TC	5,310	6,700	1,480	77,887
	305L2	**26.4**	45	31,400	24.1	13.5	71 to 160	N56C to N280TC	5,430	6,850	1,510	77,887
	305L2	**30.8**	39	38,000	25.0	13.5	71 to 160	N56C to N280TC	5,680	7,170	1,590	77,887
	305L2	**35.8**	34	31,500	17.8	13.5	71 to 160	N56C to N280TC	5,940	7,510	1,670	77,887
	305L2	**38.4**	31	38,200	20.1	13.5	71 to 160	N56C to N280TC	6,070	7,670	1,710	77,887
	305L2	**44.6**	26.9	31,600	14.3	13.5	71 to 160	N56C to N280TC	6,350	8,020	1,800	77,887
	305L2	**55.8**	21.5	31,400	11.4	13.5	71 to 160	N56C to N280TC	6,790	8,580	1,940	77,887
	305L3	**53.4**	22.5	36,300	14.2	11.3	71 to 160	N56C to N280TC	6,700	8,460	1,910	77,887
	305L3	**63.1**	19.0	43,000	14.2	11.3	71 to 160	N56C to N280TC	7,040	8,900	2,020	77,887
	305L3	**72.3**	16.6	37,700	10.9	11.3	71 to 160	N56C to N280TC	7,340	9,270	2,110	77,887
	305L3	**77.2**	15.5	44,000	11.9	11.3	71 to 160	N56C to N280TC	7,490	9,450	2,160	77,887
	305L3	**90.2**	13.3	38,600	8.9	11.3	71 to 160	N56C to N280TC	7,840	9,910	2,280	77,887
	305L3	**105**	11.5	46,000	9.2	11.3	71 to 160	N56C to N280TC	8,200	10,400	2,390	77,887
	305L3	**113**	10.6	31,800	5.9	11.3	71 to 160	N56C to N280TC	8,380	10,600	2,450	77,887
	305L3	**124**	9.6	31,900	5.3	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,540	77,887
	305L3	**141**	8.5	46,400	6.8	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,650	77,887
	305L3	**152**	7.9	31,900	4.4	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,710	77,887
	305L3	**164**	7.3	39,200	5.0	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,780	77,887
	305L3	**178**	6.8	39,300	4.6	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,850	77,887
	305L3	**190**	6.3	31,900	3.5	11.3	71 to 160	N56C to N280TC	8,540	10,800	2,920	77,887
	305L3	**220**	5.4	42,000	4.0	11.3	71 to 160	N56C to N280TC	8,540	10,800	3,070	77,887
	305L3	**258**	4.7	32,200	2.6	11.3	71 to 160	N56C to N280TC	8,630	10,900	3,230	77,887
	305L3	**276**	4.3	40,300	3.0	11.3	71 to 160	N56C to N280TC	8,720	11,000	3,310	77,887
	305L3	**321**	3.7	33,300	2.2	11.3	71 to 160	N56C to N280TC	8,910	11,300	3,480	77,887
	305L3	**389**	3.1	28,700	1.5	11.3	71 to 160	N56C to N280TC	9,150	11,600	3,710	77,887
	305L3	**402**	3.0	34,500	1.8	9.0	71 to 160	N56C to N280TC	9,200	11,600	3,750	77,887
	305L4	**413**	2.9	43,500	2.3	9.0	71 to 160	N56C to N280TC	9,230	11,700	3,780	77,887
	305L4	**446**	2.7	48,700	2.3	9.0	71 to 160	N56C to N280TC	9,330	11,800	3,880	77,887
	305L4	**492**	2.4	47,400	2.1	9.0	71 to 160	N56C to N280TC	9,470	12,000	4,010	77,887
	305L4	**556**	2.2	49,100	1.9	9.0	71 to 160	N56C to N280TC	9,630	12,200	4,180	77,887
	305L4	**649**	1.8	40,300	1.3	9.0	71 to 160	N56C to N280TC	9,850	12,400	4,400	77,887
	305L4	**718**	1.7	38,000	1.1	9.0	71 to 160	N56C to N280TC	9,990	12,600	4,550	77,887
	305L4	**816**	1.5	48,300	1.3	9.0	71 to 160	N56C to N280TC	10,200	12,900	4,740	77,887
	305L4	**896**	1.3	39,500	0.95	9.0	71 to 160	N56C to N280TC	10,300	13,000	4,900	77,887
	305L4	**1018**	1.2	48,700	1.0	9.0	71 to 160	N56C to N280TC	10,500	13,300	5,110	77,887
	305L4	**1098**	1.1	40,900	0.80	9.0	71 to 160	N56C to N280TC	10,600	13,400	5,240	77,887
	305L4	**1278**	0.94	49,600	0.83	9.0	71 to 160	N56C to N280TC	10,800	13,700	5,400	77,887
	305L4	**1370**	0.88	41,500	0.65	9.0	71 to 160	N56C to N280TC	11,000	13,800	5,400	77,887
	305L4	**1586**	0.76	42,000	0.57	9.0	71 to 160	N56C to N280TC	11,200	14,100	5,400	77,887
	305L4	**1854**	0.65	41,500	0.48	9.0	71 to 160	N56C to N280TC	11,400	14,500	5,400	77,887
	305L4	**1991**	0.60	49,600	0.54	9.0	71 to 160	N56C to N280TC	11,600	14,600	5,400	77,887
	305L4	**2243**	0.53	33,600	0.32	9.0	71 to 160	N56C to N280TC	11,800	14,800	5,400	77,887
	305L4	**2799**	0.43	33,600	0.26	9.0	71 to 160	N56C to N280TC	12,100	15,300	5,400	77,887

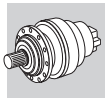
306 L — 312 — 95,940 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**306L1**	**3.60**	500	31,500	101	19.8	160 to 250	N320TC to N360TC	3,630	4,570	990	131,876
	306L1	**4.25**	424	32,600	101	19.8	160 to 250	N320TC to N360TC	3,810	4,810	1,050	131,876
	306L1	**5.33**	338	34,000	101	19.8	160 to 250	N320TC to N360TC	4,080	5,150	1,130	131,876
	306L1	**6.20**	290	35,200	101	19.8	160 to 250	N320TC to N360TC	4,270	5,380	1,190	131,876
	306L1	**7.50**	240	34,300	101	19.8	160 to 250	N320TC to N360TC	4,520	5,700	1,270	131,876
	306L2	**13.0**	139	40,400	54	14.3	132 to 200	N250TC to N280TC	5,330	6,720	1,520	131,876
	306L2	**15.3**	118	41,800	54	14.3	132 to 200	N250TC to N280TC	5,600	7,060	1,610	131,876
	306L2	**18.1**	100	49,400	54	14.3	132 to 200	N250TC to N280TC	5,890	7,420	1,700	131,876

306 L

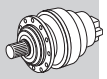
312

95,940 lb·in



B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**306L2**	**22.7**	79	51,500	54	14.3	132 to 200	N250TC to N280TC	6,300	7,940	1,830	131,876
	306L2	**26.4**	68	53,400	54	14.3	132 to 200	N250TC to N280TC	6,590	8,310	1,920	131,876
	306L2	**28.4**	63	56,200	54	14.3	132 to 200	N250TC to N280TC	6,750	8,500	1,970	131,876
	306L2	**33.1**	54	58,800	54	14.3	132 to 200	N250TC to N280TC	7,060	8,900	2,080	131,876
	306L2	**38.4**	47	57,200	45	14.3	132 to 200	N250TC to N280TC	7,380	9,310	2,180	131,876
	306L2	**46.5**	39	57,200	37	14.3	132 to 200	N250TC to N280TC	7,820	9,860	2,330	131,876
	306L2	**56.3**	32	45,700	24.7	14.3	132 to 200	N250TC to N280TC	8,280	10,400	2,480	131,876
	306L2	**72.5**	24.8	46,300	19.4	14.3	132 to 200	N250TC to N280TC	8,930	11,300	2,700	131,876
	306L3	**53.2**	34	59,900	26.8	8.2	71 to 160	N56C to N280TC	8,140	10,300	2,430	131,876
	306L3	**65.2**	27.6	63,200	26.8	8.2	71 to 160	N56C to N280TC	8,650	10,900	2,600	131,876
	306L3	**77.0**	23.4	71,200	26.8	8.2	71 to 160	N56C to N280TC	9,100	11,500	2,750	131,876
	306L3	**81.9**	22.0	59,400	22.7	8.2	71 to 160	N56C to N280TC	9,260	11,700	2,810	131,876
	306L3	**88.3**	20.4	73,100	25.9	8.2	71 to 160	N56C to N280TC	9,480	11,900	2,880	131,876
	306L3	**104**	17.3	75,800	22.8	8.2	71 to 160	N56C to N280TC	9,960	12,600	3,040	131,876
	306L3	**112**	16.0	64,500	18.0	8.2	71 to 160	N56C to N280TC	10,200	12,800	3,120	131,876
	306L3	**121**	14.8	67,700	17.5	8.2	71 to 160	N56C to N280TC	10,400	13,100	3,200	131,876
	306L3	**141**	12.8	68,700	15.3	8.2	71 to 160	N56C to N280TC	10,900	13,700	3,370	131,876
	306L3	**152**	11.8	66,200	13.6	8.2	71 to 160	N56C to N280TC	11,200	14,100	3,450	131,876
	306L3	**190**	9.5	57,500	9.5	8.2	71 to 160	N56C to N280TC	11,700	14,800	3,720	131,876
	306L3	**205**	8.8	70,900	10.8	8.2	71 to 160	N56C to N280TC	11,700	14,800	3,810	131,876
	306L3	**222**	8.1	57,600	8.1	8.2	71 to 160	N56C to N280TC	11,700	14,800	3,920	131,876
	306L3	**238**	7.6	71,600	9.4	8.2	71 to 160	N56C to N280TC	11,700	14,800	4,010	131,876
	306L3	**268**	6.7	48,700	5.7	8.2	71 to 160	N56C to N280TC	11,700	14,800	4,170	131,876
	306L3	**288**	6.3	48,700	5.3	8.2	71 to 160	N56C to N280TC	11,700	14,800	4,270	131,876
	306L3	**325**	5.5	48,700	4.7	8.2	71 to 160	N56C to N280TC	11,700	14,800	4,440	131,876
	306L3	**405**	4.4	49,300	3.8	8.2	71 to 160	N56C to N280TC	11,900	15,000	4,790	131,876
	306L4	**391**	4.6	58,600	4.8	6.6	71 to 160	N56C to N280TC	11,900	15,000	4,730	131,876
	306L4	**444**	4.1	87,200	6.3	6.6	71 to 160	N56C to N280TC	12,100	15,200	4,940	131,876
	306L4	**509**	3.5	83,600	5.3	6.6	71 to 160	N56C to N280TC	12,300	15,500	5,170	131,876
	306L4	**589**	3.1	80,000	4.4	6.6	71 to 160	N56C to N280TC	12,600	15,900	5,420	131,876
	306L4	**636**	2.8	83,600	4.2	6.6	71 to 160	N56C to N280TC	12,700	16,000	5,560	131,876
	306L4	**700**	2.6	82,300	3.8	6.6	71 to 160	N56C to N280TC	12,900	16,300	5,740	131,876
	306L4	**809**	2.2	67,500	2.7	6.6	71 to 160	N56C to N280TC	13,200	16,600	6,030	131,876
	306L4	**877**	2.1	67,700	2.5	6.6	71 to 160	N56C to N280TC	13,300	16,800	6,190	131,876
	306L4	**1015**	1.8	83,400	2.7	6.6	71 to 160	N56C to N280TC	13,600	17,200	6,500	131,876
	306L4	**1095**	1.6	68,400	2.0	6.6	71 to 160	N56C to N280TC	13,800	17,300	6,670	131,876
	306L4	**1279**	1.4	72,000	1.8	6.6	71 to 160	N56C to N280TC	14,100	17,700	7,020	131,876
	306L4	**1475**	1.2	87,800	1.9	6.6	71 to 160	N56C to N280TC	14,400	18,100	7,360	131,876
	306L4	**1597**	1.1	74,800	1.5	6.6	71 to 160	N56C to N280TC	14,500	18,300	7,560	131,876
	306L4	**1843**	0.98	89,200	1.6	6.6	71 to 160	N56C to N280TC	14,800	18,700	7,870	131,876
	306L4	**2074**	0.87	62,000	0.96	6.6	71 to 160	N56C to N280TC	15,100	19,000	7,870	131,876
	306L4	**2337**	0.77	62,000	0.86	6.6	71 to 160	N56C to N280TC	15,300	19,300	7,870	131,876
	306L4	**2916**	0.62	62,000	0.69	6.6	71 to 160	N56C to N280TC	15,800	19,900	7,870	131,876
1200	**306L1**	**3.60**	333	35,600	101	27	160 to 250	N320TC to N360TC	4,100	5,170	1,130	131,876
	306L1	**4.25**	282	36,800	101	27	160 to 250	N320TC to N360TC	4,310	5,430	1,200	131,876
	306L1	**5.33**	225	38,400	101	27	160 to 250	N320TC to N360TC	4,610	5,810	1,290	131,876
	306L1	**6.20**	194	39,800	101	27	160 to 250	N320TC to N360TC	4,820	6,080	1,360	131,876
	306L1	**7.50**	160	38,700	101	27	160 to 250	N320TC to N360TC	5,110	6,440	1,450	131,876
	306L2	**13.0**	93	45,700	54	19.5	132 to 200	N250TC to N280TC	6,020	7,590	1,740	131,876
	306L2	**15.3**	78	47,200	54	19.5	132 to 200	N250TC to N280TC	6,330	7,970	1,840	131,876
	306L2	**18.1**	66	55,700	54	19.5	132 to 200	N250TC to N280TC	6,650	8,380	1,940	131,876
	306L2	**22.7**	53	58,100	52	19.5	132 to 200	N250TC to N280TC	7,120	8,970	2,100	131,876
	306L2	**26.4**	46	59,100	45	19.5	132 to 200	N250TC to N280TC	7,450	9,390	2,200	131,876
	306L2	**28.4**	42	61,300	44	19.5	132 to 200	N250TC to N280TC	7,620	9,600	2,260	131,876
	306L2	**33.1**	36	62,200	38	19.5	132 to 200	N250TC to N280TC	7,970	10,000	2,380	131,876
	306L2	**38.4**	31	57,300	30	19.5	132 to 200	N250TC to N280TC	8,340	10,500	2,500	131,876
	306L2	**46.5**	25.8	57,300	24.9	19.5	132 to 200	N250TC to N280TC	8,830	11,100	2,660	131,876
	306L2	**56.3**	21.3	46,700	16.8	19.5	132 to 200	N250TC to N280TC	9,350	11,800	2,840	131,876
	306L2	**72.5**	16.6	47,400	13.2	19.5	132 to 200	N250TC to N280TC	10,100	12,700	3,090	131,876
	306L3	**53.2**	22.5	66,600	26.1	11.3	71 to 160	N56C to N280TC	9,200	11,600	2,790	131,876



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306 L — 312 — 95,940 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**306L3**	**65.2**	18.4	70,200	22.5	11.3	71 to 160	N56C to N280TC	9,770	12,300	2,980	131,876
	306L3	**77.0**	15.6	77,400	21.0	11.3	71 to 160	N56C to N280TC	10,300	12,900	3,150	131,876
	306L3	**81.9**	14.7	63,000	16.1	11.3	71 to 160	N56C to N280TC	10,500	13,200	3,210	131,876
	306L3	**88.3**	13.6	78,900	18.7	11.3	71 to 160	N56C to N280TC	10,700	13,500	3,300	131,876
	306L3	**104**	11.5	82,500	16.5	11.3	71 to 160	N56C to N280TC	11,200	14,200	3,480	131,876
	306L3	**112**	10.7	66,800	12.4	11.3	71 to 160	N56C to N280TC	11,500	14,500	3,570	131,876
	306L3	**121**	9.9	70,400	12.1	11.3	71 to 160	N56C to N280TC	11,700	14,800	3,660	131,876
	306L3	**141**	8.5	71,100	10.5	11.3	71 to 160	N56C to N280TC	11,700	14,800	3,850	131,876
	306L3	**152**	7.9	67,200	9.2	11.3	71 to 160	N56C to N280TC	11,700	14,800	3,950	131,876
	306L3	**190**	6.3	57,700	6.3	11.3	71 to 160	N56C to N280TC	11,700	14,800	4,250	131,876
	306L3	**205**	5.9	72,700	7.4	11.3	71 to 160	N56C to N280TC	11,700	14,800	4,360	131,876
	306L3	**222**	5.4	57,800	5.4	11.3	71 to 160	N56C to N280TC	11,700	14,800	4,480	131,876
	306L3	**238**	5.0	73,400	6.4	11.3	71 to 160	N56C to N280TC	11,700	14,800	4,590	131,876
	306L3	**268**	4.5	49,200	3.8	11.3	71 to 160	N56C to N280TC	11,900	15,000	4,780	131,876
	306L3	**288**	4.2	49,600	3.6	11.3	71 to 160	N56C to N280TC	12,000	15,200	4,890	131,876
	306L3	**325**	3.7	50,200	3.2	11.3	71 to 160	N56C to N280TC	12,300	15,400	5,090	131,876
	306L3	**405**	3.0	51,300	2.6	11.3	71 to 160	N56C to N280TC	12,600	15,900	5,480	131,876
	306L4	**391**	3.1	62,900	3.5	9.0	71 to 160	N56C to N280TC	12,600	15,900	5,410	131,876
	306L4	**444**	2.7	87,200	4.2	9.0	71 to 160	N56C to N280TC	12,800	16,200	5,650	131,876
	306L4	**509**	2.4	83,600	3.5	9.0	71 to 160	N56C to N280TC	13,100	16,500	5,910	131,876
	306L4	**589**	2.0	84,200	3.1	9.0	71 to 160	N56C to N280TC	13,300	16,800	6,210	131,876
	306L4	**636**	1.9	83,600	2.8	9.0	71 to 160	N56C to N280TC	13,500	17,000	6,370	131,876
	306L4	**700**	1.7	85,400	2.6	9.0	71 to 160	N56C to N280TC	13,700	17,200	6,570	131,876
	306L4	**809**	1.5	68,700	1.8	9.0	71 to 160	N56C to N280TC	14,000	17,600	6,900	131,876
	306L4	**877**	1.4	68,900	1.7	9.0	71 to 160	N56C to N280TC	14,100	17,800	7,090	131,876
	306L4	**1015**	1.2	84,100	1.8	9.0	71 to 160	N56C to N280TC	14,400	18,200	7,440	131,876
	306L4	**1095**	1.1	69,600	1.4	9.0	71 to 160	N56C to N280TC	14,600	18,400	7,630	131,876
	306L4	**1279**	0.94	76,400	1.3	9.0	71 to 160	N56C to N280TC	14,900	18,800	7,870	131,876
	306L4	**1475**	0.81	89,200	1.3	9.0	71 to 160	N56C to N280TC	15,200	19,200	7,870	131,876
	306L4	**1597**	0.75	76,400	1.0	9.0	71 to 160	N56C to N280TC	15,400	19,400	7,870	131,876
	306L4	**1843**	0.65	89,200	1.0	9.0	71 to 160	N56C to N280TC	15,700	19,800	7,870	131,876
	306L4	**2074**	0.58	62,000	0.64	9.0	71 to 160	N56C to N280TC	16,000	20,100	7,870	131,876
	306L4	**2337**	0.51	62,000	0.57	9.0	71 to 160	N56C to N280TC	16,200	20,500	7,870	131,876
	306L4	**2916**	0.41	62,000	0.46	9.0	71 to 160	N56C to N280TC	16,800	21,100	7,870	131,876

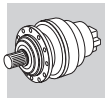
307 L — 330 — 138,780 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**307L1**	**3.43**	525	42,800	154	24	180 to 250	N320TC to N360TC	4,470	6,080	1,250	164,624
	307L1	**4.09**	440	44,100	154	24	180 to 250	N320TC to N360TC	4,720	6,410	1,330	185,866
	307L1	**5.25**	343	46,400	154	24	180 to 250	N320TC to N360TC	5,080	6,910	1,450	185,866
	307L1	**6.23**	289	48,200	154	24	180 to 250	N320TC to N360TC	5,350	7,280	1,530	185,866
	307L2	**12.3**	146	62,900	80	19.8	132 to 200	N250TC to N280TC	6,570	8,930	1,920	164,624
	307L2	**14.7**	122	64,800	80	19.8	132 to 200	N250TC to N280TC	6,930	9,420	2,040	185,866
	307L2	**17.4**	104	68,100	80	19.8	132 to 200	N250TC to N280TC	7,280	9,900	2,150	185,866
	307L2	**21.8**	83	72,800	80	19.8	132 to 200	N250TC to N280TC	7,790	10,600	2,320	185,866
	307L2	**25.4**	71	76,200	80	19.8	132 to 200	N250TC to N280TC	8,150	11,100	2,440	185,866
	307L2	**28.0**	64	76,700	80	19.8	132 to 200	N250TC to N280TC	8,400	11,400	2,530	185,866
	307L2	**30.7**	59	80,700	80	19.8	132 to 200	N250TC to N280TC	8,630	11,700	2,600	185,866
	307L2	**32.6**	55	80,200	75	19.8	132 to 200	N250TC to N280TC	8,790	12,000	2,660	185,866
	307L2	**38.6**	47	73,100	57	19.8	132 to 200	N250TC to N280TC	9,250	12,600	2,810	185,866
	307L2	**46.7**	39	73,600	48	19.8	132 to 200	N250TC to N280TC	9,800	13,300	3,000	185,866
	307L3	**51.3**	35	91,300	40	12.1	71 to 160	N56C to N280TC	10,100	13,700	3,090	185,866
	307L3	**60.5**	29.7	94,600	40	12.1	71 to 160	N56C to N280TC	10,600	14,400	3,260	185,866
	307L3	**74.1**	24.3	98,800	40	12.1	71 to 160	N56C to N280TC	11,200	15,300	3,490	185,866
	307L3	**80.6**	22.3	88,900	35	12.1	71 to 160	N56C to N280TC	11,500	15,700	3,590	185,866
	307L3	**93.0**	19.4	103,800	35	12.1	71 to 160	N56C to N280TC	12,000	16,400	3,770	185,866
	307L3	**100**	17.9	105,500	33	12.1	71 to 160	N56C to N280TC	12,300	16,800	3,860	185,866

307 L

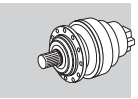
330

138,780 lb·in



B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**307L3**	**113**	15.9	91,600	25.3	12.1	71 to 160	N56C to N280TC	12,800	17,400	4,020	185,866
	307L3	**126**	14.3	110,700	27.5	12.1	71 to 160	N56C to N280TC	13,200	17,900	4,170	185,866
	307L3	**139**	13.0	93,300	21.0	12.1	71 to 160	N56C to N280TC	13,600	18,500	4,310	185,866
	307L3	**146**	12.3	114,400	24.5	12.1	71 to 160	N56C to N280TC	13,800	18,800	4,380	185,866
	307L3	**162**	11.1	94,600	18.3	12.1	71 to 160	N56C to N280TC	14,200	19,300	4,530	185,866
	307L3	**177**	10.2	108,600	19.2	12.1	71 to 160	N56C to N280TC	14,600	19,900	4,670	185,866
	307L3	**202**	8.9	96,200	14.9	12.1	71 to 160	N56C to N280TC	14,700	20,000	4,880	185,866
	307L3	**221**	8.1	111,700	15.8	12.1	71 to 160	N56C to N280TC	14,700	20,000	5,030	185,866
	307L3	**239**	7.5	77,000	10.1	12.1	71 to 160	N56C to N280TC	14,700	20,000	5,160	185,866
	307L3	**284**	6.3	98,400	10.9	12.1	71 to 160	N56C to N280TC	14,700	20,000	5,460	185,866
	307L3	**336**	5.3	77,000	7.2	12.1	71 to 160	N56C to N280TC	14,700	20,000	5,780	185,866
	307L4	**349**	5.2	131,200	12.1	8.2	71 to 160	N56C to N280TC	14,700	20,000	5,860	185,866
	307L4	**406**	4.4	102,000	8.1	8.2	71 to 160	N56C to N280TC	14,900	20,300	6,160	185,866
	307L4	**465**	3.9	104,400	7.2	8.2	71 to 160	N56C to N280TC	15,200	20,700	6,440	185,866
	307L4	**509**	3.5	124,000	7.9	8.2	71 to 160	N56C to N280TC	15,400	21,000	6,640	185,866
	307L4	**579**	3.1	131,800	7.3	8.2	71 to 160	N56C to N280TC	15,700	21,400	6,930	185,866
	307L4	**654**	2.8	110,600	5.5	8.2	71 to 160	N56C to N280TC	16,000	21,700	7,220	185,866
	307L4	**722**	2.5	131,800	5.9	8.2	71 to 160	N56C to N280TC	16,200	22,100	7,460	185,866
	307L4	**801**	2.2	114,400	4.6	8.2	71 to 160	N56C to N280TC	16,500	22,400	7,720	185,866
	307L4	**906**	2.0	133,500	4.8	8.2	71 to 160	N56C to N280TC	16,700	22,800	8,050	185,866
	307L4	**999**	1.8	118,800	3.8	8.2	71 to 160	N56C to N280TC	17,000	23,100	8,310	185,866
	307L4	**1157**	1.6	121,800	3.4	8.2	71 to 160	N56C to N280TC	17,300	23,600	8,730	185,866
	307L4	**1274**	1.4	108,900	2.8	8.2	71 to 160	N56C to N280TC	17,600	23,900	9,020	185,866
	307L4	**1408**	1.3	136,900	3.1	8.2	71 to 160	N56C to N280TC	17,800	24,300	9,320	185,866
	307L4	**1591**	1.1	131,300	2.7	8.2	71 to 160	N56C to N280TC	18,200	24,700	9,710	185,866
	307L4	**1767**	1.0	138,600	2.5	8.2	71 to 160	N56C to N280TC	18,400	25,100	10,100	185,866
	307L4	**2041**	0.88	126,800	2.0	8.2	71 to 160	N56C to N280TC	18,800	25,600	10,100	185,866
	307L4	**2423**	0.74	97,400	1.3	8.2	71 to 160	N56C to N280TC	19,300	26,200	10,100	185,866
1200	**307L1**	**3.43**	350	48,400	154	33	180 to 250	N320TC to N360TC	5,050	6,870	1,440	164,624
	307L1	**4.09**	293	49,800	154	33	180 to 250	N320TC to N360TC	5,330	7,240	1,520	185,866
	307L1	**5.25**	229	52,400	154	33	180 to 250	N320TC to N360TC	5,740	7,810	1,650	185,866
	307L1	**6.23**	193	54,500	154	33	180 to 250	N320TC to N360TC	6,040	8,220	1,750	185,866
	307L2	**12.3**	97	70,600	80	27	132 to 200	N250TC to N280TC	7,420	10,100	2,200	164,624
	307L2	**14.7**	81	73,100	80	27	132 to 200	N250TC to N280TC	7,820	10,600	2,330	185,866
	307L2	**17.4**	69	76,800	80	27	132 to 200	N250TC to N280TC	8,220	11,200	2,470	185,866
	307L2	**21.8**	55	82,200	76	27	132 to 200	N250TC to N280TC	8,800	12,000	2,660	185,866
	307L2	**25.4**	47	85,600	68	27	132 to 200	N250TC to N280TC	9,210	12,500	2,800	185,866
	307L2	**28.0**	43	83,800	61	27	132 to 200	N250TC to N280TC	9,490	12,900	2,890	185,866
	307L2	**30.7**	39	87,900	58	27	132 to 200	N250TC to N280TC	9,750	13,300	2,980	185,866
	307L2	**32.6**	37	85,000	53	27	132 to 200	N250TC to N280TC	9,930	13,500	3,040	185,866
	307L2	**38.6**	31	74,100	39	27	132 to 200	N250TC to N280TC	10,400	14,200	3,220	185,866
	307L2	**46.7**	25.7	74,600	32	27	132 to 200	N250TC to N280TC	11,100	15,000	3,430	185,866
	307L3	**51.3**	23.4	99,600	40	16.5	71 to 160	N56C to N280TC	11,400	15,500	3,540	185,866
	307L3	**60.5**	19.8	103,200	36	16.5	71 to 160	N56C to N280TC	12,000	16,300	3,740	185,866
	307L3	**74.1**	16.2	107,800	30	16.5	71 to 160	N56C to N280TC	12,700	17,300	4,000	185,866
	307L3	**80.6**	14.9	92,100	23.9	16.5	71 to 160	N56C to N280TC	13,000	17,700	4,110	185,866
	307L3	**93.0**	12.9	113,200	25.4	16.5	71 to 160	N56C to N280TC	13,600	18,500	4,310	185,866
	307L3	**100**	12.0	115,100	23.9	16.5	71 to 160	N56C to N280TC	13,900	18,900	4,420	185,866
	307L3	**113**	10.6	95,000	17.5	16.5	71 to 160	N56C to N280TC	14,400	19,600	4,610	185,866
	307L3	**126**	9.5	120,400	19.9	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,770	185,866
	307L3	**139**	8.6	96,400	14.5	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,930	185,866
	307L3	**146**	8.2	120,800	17.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,020	185,866
	307L3	**162**	7.4	97,400	12.6	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,180	185,866
	307L3	**177**	6.8	108,900	12.8	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,350	185,866
	307L3	**202**	6.0	98,900	10.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,580	185,866
	307L3	**221**	5.4	113,700	10.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,750	185,866
	307L3	**239**	5.0	77,000	6.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,910	185,866
	307L3	**284**	4.2	102,900	7.6	16.5	71 to 160	N56C to N280TC	15,000	20,400	6,250	185,866
	307L3	**336**	3.6	80,800	5.0	16.5	71 to 160	N56C to N280TC	15,400	21,000	6,620	185,866
	307L4	**349**	3.4	131,800	8.1	11.3	71 to 160	N56C to N280TC	15,500	21,100	6,700	185,866
	307L4	**406**	3.0	109,300	5.8	11.3	71 to 160	N56C to N280TC	15,800	21,500	7,050	185,866



B

307 L

330

138,780 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**307L4**	**465**	2.6	111,800	5.2	11.3	71 to 160	N56C to N280TC	16,100	21,900	7,370	185,866
	307L4	**509**	2.4	124,500	5.3	11.3	71 to 160	N56C to N280TC	16,300	22,200	7,600	185,866
	307L4	**579**	2.1	133,200	4.9	11.3	71 to 160	N56C to N280TC	16,600	22,600	7,930	185,866
	307L4	**654**	1.8	118,500	3.9	11.3	71 to 160	N56C to N280TC	16,900	23,000	8,260	185,866
	307L4	**722**	1.7	134,900	4.0	11.3	71 to 160	N56C to N280TC	17,200	23,400	8,540	185,866
	307L4	**801**	1.5	122,600	3.3	11.3	71 to 160	N56C to N280TC	17,400	23,700	8,840	185,866
	307L4	**906**	1.3	136,600	3.2	11.3	71 to 160	N56C to N280TC	17,700	24,100	9,210	185,866
	307L4	**999**	1.2	127,300	2.7	11.3	71 to 160	N56C to N280TC	18,000	24,500	9,520	185,866
	307L4	**1157**	1.0	130,500	2.4	11.3	71 to 160	N56C to N280TC	18,400	25,000	9,990	185,866
	307L4	**1274**	0.94	108,900	1.8	11.3	71 to 160	N56C to N280TC	18,600	25,300	10,100	185,866
	307L4	**1408**	0.85	138,800	2.1	11.3	71 to 160	N56C to N280TC	18,900	25,700	10,100	185,866
	307L4	**1591**	0.75	132,800	1.8	11.3	71 to 160	N56C to N280TC	19,200	26,200	10,100	185,866
	307L4	**1767**	0.68	138,800	1.7	11.3	71 to 160	N56C to N280TC	19,500	26,600	10,100	185,866
	307L4	**2041**	0.59	126,800	1.3	11.3	71 to 160	N56C to N280TC	19,900	27,100	10,100	185,866
	307L4	**2423**	0.50	97,400	0.86	11.3	71 to 160	N56C to N280TC	20,400	27,800	10,100	185,866

309 L

348

205,690 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**309L1**	**3.43**	525	58,800	201	28	180 to 250	N320TC to N360TC	4,470	6,080	1,000	246,936
	309L1	**4.09**	440	60,500	201	28	180 to 250	N320TC to N360TC	4,720	6,410	1,060	256,672
	309L1	**5.25**	343	63,700	201	28	180 to 250	N320TC to N360TC	5,080	6,910	1,160	256,672
	309L1	**6.23**	289	66,200	201	28	180 to 250	N320TC to N360TC	5,350	7,280	1,220	256,672
	309L2	**12.3**	146	66,100	80	19.8	132 to 200	N250TC to N280TC	6,570	8,930	1,540	246,936
	309L2	**14.7**	122	78,800	80	19.8	132 to 200	N250TC to N280TC	6,930	9,420	1,630	256,672
	309L2	**17.4**	104	81,500	80	19.8	132 to 200	N250TC to N280TC	7,280	9,900	1,720	256,672
	309L2	**21.8**	83	85,000	80	19.8	132 to 200	N250TC to N280TC	7,790	10,600	1,860	256,672
	309L2	**25.4**	71	88,200	80	19.8	132 to 200	N250TC to N280TC	8,150	11,100	1,950	256,672
	309L2	**28.0**	64	105,200	80	19.8	132 to 200	N250TC to N280TC	8,400	11,400	2,020	256,672
	309L2	**32.6**	55	110,000	80	19.8	132 to 200	N250TC to N280TC	8,790	12,000	2,120	256,672
	309L2	**38.6**	47	109,700	80	19.8	132 to 200	N250TC to N280TC	9,250	12,600	2,250	256,672
	309L2	**46.7**	39	110,400	72	19.8	132 to 200	N250TC to N280TC	9,800	13,300	2,400	256,672
	309L3	**51.3**	35	113,100	40	12.1	71 to 160	N56C to N280TC	10,100	13,700	2,470	256,672
	309L3	**60.5**	29.7	118,500	40	12.1	71 to 160	N56C to N280TC	10,600	14,400	2,610	256,672
	309L3	**74.1**	24.3	126,000	40	12.1	71 to 160	N56C to N280TC	11,200	15,300	2,790	256,672
	309L3	**80.6**	22.3	127,500	40	12.1	71 to 160	N56C to N280TC	11,500	15,700	2,870	256,672
	309L3	**93.0**	19.4	127,200	40	12.1	71 to 160	N56C to N280TC	12,000	16,400	3,010	256,672
	309L3	**100**	17.9	138,000	40	12.1	71 to 160	N56C to N280TC	12,300	16,800	3,090	256,672
	309L3	**113**	15.9	134,000	37	12.1	71 to 160	N56C to N280TC	12,800	17,400	3,220	256,672
	309L3	**126**	14.3	137,900	34	12.1	71 to 160	N56C to N280TC	13,200	17,900	3,330	256,672
	309L3	**139**	13.0	138,000	31	12.1	71 to 160	N56C to N280TC	13,600	18,500	3,440	256,672
	309L3	**162**	11.10	141,100	27.3	12.1	71 to 160	N56C to N280TC	14,200	19,300	3,620	256,672
	309L3	**183**	9.9	126,600	21.7	12.1	71 to 160	N56C to N280TC	14,700	20,000	3,770	256,672
	309L3	**202**	8.9	144,400	22.4	12.1	71 to 160	N56C to N280TC	14,700	20,000	3,900	256,672
	309L3	**223**	8.1	115,100	16.2	12.1	71 to 160	N56C to N280TC	14,700	20,000	4,030	256,672
	309L3	**239**	7.5	115,100	15.0	12.1	71 to 160	N56C to N280TC	14,700	20,000	4,130	256,672
	309L3	**284**	6.3	137,400	15.2	12.1	71 to 160	N56C to N280TC	14,700	20,000	4,370	256,672
	309L3	**336**	5.3	115,100	10.7	12.1	71 to 160	N56C to N280TC	14,700	20,000	4,630	256,672
	309L4	**349**	5.2	187,000	17.3	8.2	71 to 160	N56C to N280TC	14,700	20,000	4,680	256,672
	309L4	**406**	4.4	153,000	12.2	8.2	71 to 160	N56C to N280TC	14,900	20,300	4,920	256,672
	309L4	**465**	3.9	156,600	10.9	8.2	71 to 160	N56C to N280TC	15,200	20,700	5,150	256,672
	309L4	**509**	3.5	126,600	8.0	8.2	71 to 160	N56C to N280TC	15,400	21,000	5,310	256,672
	309L4	**579**	3.1	188,200	10.5	8.2	71 to 160	N56C to N280TC	15,700	21,400	5,540	256,672
	309L4	**654**	2.8	158,700	7.8	8.2	71 to 160	N56C to N280TC	16,000	21,700	5,770	256,672
	309L4	**722**	2.5	188,200	8.4	8.2	71 to 160	N56C to N280TC	16,200	22,100	5,970	256,672
	309L4	**801**	2.2	160,400	6.5	8.2	71 to 160	N56C to N280TC	16,500	22,400	6,180	256,672
	309L4	**906**	2.0	157,100	5.6	8.2	71 to 160	N56C to N280TC	16,700	22,800	6,440	256,672
	309L4	**999**	1.8	160,800	5.2	8.2	71 to 160	N56C to N280TC	17,000	23,100	6,650	256,672
	309L4	**1149**	1.6	138,700	3.9	8.2	71 to 160	N56C to N280TC	17,300	23,600	6,970	256,672
	309L4	**1286**	1.4	141,600	3.6	8.2	71 to 160	N56C to N280TC	17,600	23,900	7,230	256,672

309 L — 348 — 205,690 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**309L4**	**1380**	1.3	143,400	3.4	8.2	71 to 160	N56C to N280TC	17,800	24,200	7,410	256,672
	309L4	**1605**	1.1	147,400	3.0	8.2	71 to 160	N56C to N280TC	18,200	24,700	7,790	256,672
	309L4	**1723**	1.0	149,300	2.8	8.2	71 to 160	N56C to N280TC	18,400	25,000	7,980	256,672
	309L4	**2003**	0.90	150,500	2.4	8.2	71 to 160	N56C to N280TC	18,800	25,500	8,090	256,672
	309L4	**2423**	0.74	150,500	2.0	8.2	71 to 160	N56C to N280TC	19,300	26,200	8,090	256,672
1200	**309L1**	**3.43**	350	66,400	201	38	180 to 250	N320TC to N360TC	5,050	6,870	1,150	246,936
	309L1	**4.09**	293	68,300	201	38	180 to 250	N320TC to N360TC	5,330	7,240	1,220	256,672
	309L1	**5.25**	229	71,900	201	38	180 to 250	N320TC to N360TC	5,740	7,810	1,320	256,672
	309L1	**6.23**	193	74,700	201	38	180 to 250	N320TC to N360TC	6,040	8,220	1,400	256,672
	309L2	**12.3**	97	74,600	80	27	132 to 200	N250TC to N280TC	7,420	10,100	1,760	246,936
	309L2	**14.7**	81	89,000	80	27	132 to 200	N250TC to N280TC	7,820	10,600	1,870	256,672
	309L2	**17.4**	69	92,100	80	27	132 to 200	N250TC to N280TC	8,220	11,200	1,970	256,672
	309L2	**21.8**	55	96,000	80	27	132 to 200	N250TC to N280TC	8,800	12,000	2,130	256,672
	309L2	**25.4**	47	98,800	79	27	132 to 200	N250TC to N280TC	9,210	12,500	2,240	256,672
	309L2	**28.0**	43	115,900	80	27	132 to 200	N250TC to N280TC	9,490	12,900	2,310	256,672
	309L2	**32.6**	37	118,500	74	27	132 to 200	N250TC to N280TC	9,930	13,500	2,430	256,672
	309L2	**38.6**	31	111,100	58	27	132 to 200	N250TC to N280TC	10,400	14,200	2,570	256,672
	309L2	**46.7**	25.7	111,800	48	27	132 to 200	N250TC to N280TC	11,100	15,000	2,740	256,672
	309L3	**51.3**	23.4	125,700	40	16.5	71 to 160	N56C to N280TC	11,400	15,500	2,830	256,672
	309L3	**60.5**	19.8	133,900	40	16.5	71 to 160	N56C to N280TC	12,000	16,300	2,990	256,672
	309L3	**74.1**	16.2	142,300	40	16.5	71 to 160	N56C to N280TC	12,700	17,300	3,200	256,672
	309L3	**80.6**	14.9	135,200	35	16.5	71 to 160	N56C to N280TC	13,000	17,700	3,290	256,672
	309L3	**93.0**	12.9	141,700	32	16.5	71 to 160	N56C to N280TC	13,600	18,500	3,450	256,672
	309L3	**100**	12.0	155,800	32	16.5	71 to 160	N56C to N280TC	13,900	18,900	3,540	256,672
	309L3	**113**	10.6	142,100	26.2	16.5	71 to 160	N56C to N280TC	14,400	19,600	3,680	256,672
	309L3	**126**	9.5	151,900	25.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	3,820	256,672
	309L3	**139**	8.6	144,700	21.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	3,940	256,672
	309L3	**162**	7.4	146,100	18.9	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,150	256,672
	309L3	**183**	6.6	126,600	14.5	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,320	256,672
	309L3	**202**	6.0	148,200	15.3	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,470	256,672
	309L3	**223**	5.4	115,100	10.8	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,620	256,672
	309L3	**239**	5.0	115,100	10.0	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,730	256,672
	309L3	**284**	4.2	139,800	10.3	16.5	71 to 160	N56C to N280TC	15,000	20,400	5,000	256,672
	309L3	**336**	3.6	120,900	7.5	16.5	71 to 160	N56C to N280TC	15,400	21,000	5,300	256,672
	309L4	**349**	3.4	188,200	11.6	11.3	71 to 160	N56C to N280TC	15,500	21,100	5,360	256,672
	309L4	**406**	3.0	163,900	8.7	11.3	71 to 160	N56C to N280TC	15,800	21,500	5,640	256,672
	309L4	**465**	2.6	167,800	7.8	11.3	71 to 160	N56C to N280TC	16,100	21,900	5,900	256,672
	309L4	**509**	2.4	126,800	5.4	11.3	71 to 160	N56C to N280TC	16,300	22,200	6,080	256,672
	309L4	**579**	2.1	188,800	7.0	11.3	71 to 160	N56C to N280TC	16,600	22,600	6,350	256,672
	309L4	**654**	1.8	160,800	5.3	11.3	71 to 160	N56C to N280TC	16,900	23,000	6,610	256,672
	309L4	**722**	1.7	189,600	5.6	11.3	71 to 160	N56C to N280TC	17,200	23,400	6,830	256,672
	309L4	**801**	1.5	161,200	4.3	11.3	71 to 160	N56C to N280TC	17,400	23,700	7,070	256,672
	309L4	**906**	1.3	161,000	3.8	11.3	71 to 160	N56C to N280TC	17,700	24,100	7,370	256,672
	309L4	**999**	1.2	161,600	3.5	11.3	71 to 160	N56C to N280TC	18,000	24,500	7,610	256,672
	309L4	**1149**	1.0	149,300	2.8	11.3	71 to 160	N56C to N280TC	18,400	25,000	7,980	256,672
	309L4	**1286**	0.93	150,500	2.5	11.3	71 to 160	N56C to N280TC	18,700	25,400	8,090	256,672
	309L4	**1380**	0.87	150,500	2.3	11.3	71 to 160	N56C to N280TC	18,800	25,600	8,090	256,672
	309L4	**1605**	0.75	150,500	2.0	11.3	71 to 160	N56C to N280TC	19,300	26,200	8,090	256,672
	309L4	**1723**	0.70	150,500	1.9	11.3	71 to 160	N56C to N280TC	19,500	26,500	8,090	256,672
	309L4	**2003**	0.60	150,500	1.6	11.3	71 to 160	N56C to N280TC	19,900	27,000	8,090	256,672
	309L4	**2423**	0.50	150,500	1.3	11.3	71 to 160	N56C to N280TC	20,400	27,800	8,090	256,672

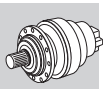
310M L — 364 — 297,740 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**310ML1**	**4.09**	440	97,700	235	39	200 to 250	N320TC to N360TC	5,530	7,140	1,920	421,296
	310ML1	**5.25**	343	102,900	235	39	200 to 250	N320TC to N360TC	5,960	7,700	2,090	421,296
	310ML1	**6.23**	289	107,000	235	39	200 to 250	N320TC to N360TC	6,280	8,110	2,210	421,296

310M L

364

297,740 lb·in

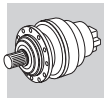


n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**310ML2**	**14.7**	122	125,000	101	24	160 to 250	N320TC to N360TC	8,130	10,500	2,940	421,296
	310ML2	**17.4**	104	129,400	101	24	160 to 250	N320TC to N360TC	8,540	11,000	3,110	421,296
	310ML2	**21.8**	83	134,800	101	24	160 to 250	N320TC to N360TC	9,140	11,800	3,360	421,296
	310ML2	**25.4**	71	139,800	101	24	160 to 250	N320TC to N360TC	9,570	12,400	3,530	421,296
	310ML2	**28.0**	64	170,000	101	24	160 to 250	N320TC to N360TC	9,850	12,700	3,650	421,296
	310ML2	**30.7**	59	144,400	101	24	160 to 250	N320TC to N360TC	10,100	13,100	3,760	421,296
	310ML2	**32.6**	55	177,800	101	24	160 to 250	N320TC to N360TC	10,300	13,300	3,840	421,296
	310ML2	**38.6**	47	157,600	101	24	160 to 250	N320TC to N360TC	10,900	14,000	4,060	421,296
	310ML2	**46.7**	39	157,600	101	24	160 to 250	N320TC to N360TC	11,500	14,800	4,330	421,296
	310ML3	**53.0**	34	160,400	54	19.8	132 to 200	N250TC to N280TC	11,900	15,400	4,510	421,296
	310ML3	**62.6**	28.8	166,000	54	19.8	132 to 200	N250TC to N280TC	12,500	16,200	4,770	421,296
	310ML3	**73.9**	24.4	188,500	54	19.8	132 to 200	N250TC to N280TC	13,200	17,000	5,040	421,296
	310ML3	**80.3**	22.4	179,100	54	19.8	132 to 200	N250TC to N280TC	13,500	17,500	5,180	421,296
	310ML3	**92.7**	19.4	196,000	54	19.8	132 to 200	N250TC to N280TC	14,100	18,200	5,440	421,296
	310ML3	**101**	17.9	180,800	54	19.8	132 to 200	N250TC to N280TC	14,500	18,700	5,590	421,296
	310ML3	**108**	16.7	204,400	54	19.8	132 to 200	N250TC to N280TC	14,800	19,100	5,720	421,296
	310ML3	**119**	15.1	189,500	50	19.8	132 to 200	N250TC to N280TC	15,200	19,600	5,910	421,296
	310ML3	**135**	13.3	218,300	51	19.8	132 to 200	N250TC to N280TC	15,800	20,400	6,170	421,296
	310ML3	**149**	12.1	190,700	40	19.8	132 to 200	N250TC to N280TC	16,300	21,000	6,370	421,296
	310ML3	**164**	11.0	228,900	44	19.8	132 to 200	N250TC to N280TC	16,700	21,600	6,570	421,296
	310ML3	**177**	10.2	157,600	27.8	19.8	132 to 200	N250TC to N280TC	17,100	22,100	6,750	421,296
	310ML3	**202**	8.9	193,200	30	19.8	132 to 200	N250TC to N280TC	17,200	22,200	7,050	421,296
	310ML3	**230**	7.8	171,100	23.3	19.8	132 to 200	N250TC to N280TC	17,200	22,200	7,360	421,296
	310ML3	**249**	7.2	158,400	19.9	19.8	132 to 200	N250TC to N280TC	17,200	22,200	7,560	421,296
	310ML3	**295**	6.1	198,200	21.0	19.8	132 to 200	N250TC to N280TC	17,200	22,200	8,000	421,296
	310ML3	**350**	5.1	159,200	14.2	19.8	132 to 200	N250TC to N280TC	17,200	22,200	8,470	421,296
	310ML4	**392**	4.6	161,700	13.3	12.1	71 to 160	N56C to N280TC	17,400	22,500	8,790	421,296
	310ML4	**453**	4.0	256,200	18.2	12.1	71 to 160	N56C to N280TC	17,800	23,000	9,230	421,296
	310ML4	**507**	3.5	213,400	13.6	12.1	71 to 160	N56C to N280TC	18,100	23,400	9,580	421,296
	310ML4	**590**	3.1	219,100	12.0	12.1	71 to 160	N56C to N280TC	18,500	23,900	10,100	421,296
	310ML4	**637**	2.8	222,100	11.3	12.1	71 to 160	N56C to N280TC	18,700	24,100	10,300	421,296
	310ML4	**726**	2.5	227,300	10.1	12.1	71 to 160	N56C to N280TC	19,000	24,600	10,800	421,296
	310ML4	**798**	2.3	231,100	9.3	12.1	71 to 160	N56C to N280TC	19,300	24,900	11,100	421,296
	310ML4	**974**	1.8	278,400	9.2	12.1	71 to 160	N56C to N280TC	19,900	25,600	11,900	421,296
	310ML4	**1002**	1.8	240,500	7.7	12.1	71 to 160	N56C to N280TC	19,900	25,700	12,000	421,296
	310ML4	**1164**	1.5	246,900	6.8	12.1	71 to 160	N56C to N280TC	20,400	26,300	12,600	421,296
	310ML4	**1259**	1.4	219,700	5.6	12.1	71 to 160	N56C to N280TC	20,600	26,600	13,000	421,296
	310ML4	**1438**	1.3	203,500	4.6	12.1	71 to 160	N56C to N280TC	21,000	27,100	13,600	421,296
	310ML4	**1672**	1.1	209,000	4.0	12.1	71 to 160	N56C to N280TC	21,400	27,700	14,300	421,296
	310ML4	**1794**	1.0	211,700	3.8	12.1	71 to 160	N56C to N280TC	21,700	28,000	14,600	421,296
	310ML4	**2022**	0.89	211,800	3.4	12.1	71 to 160	N56C to N280TC	22,000	28,400	14,600	421,296
	310ML4	**2523**	0.71	211,800	2.7	12.1	71 to 160	N56C to N280TC	22,700	29,400	14,600	421,296
1200	**310ML1**	**4.09**	293	110,400	235	53	200 to 250	N320TC to N360TC	6,250	8,070	2,200	421,296
	310ML1	**5.25**	229	116,200	235	53	200 to 250	N320TC to N360TC	6,730	8,700	2,390	421,296
	310ML1	**6.23**	193	120,800	235	53	200 to 250	N320TC to N360TC	7,090	9,150	2,530	421,296
	310ML2	**14.7**	81	141,200	101	33	160 to 250	N320TC to N360TC	9,180	11,800	3,370	421,296
	310ML2	**17.4**	69	146,100	101	33	160 to 250	N320TC to N360TC	9,650	12,500	3,560	421,296
	310ML2	**21.8**	55	152,200	101	33	160 to 250	N320TC to N360TC	10,300	13,300	3,840	421,296
	310ML2	**25.4**	47	157,100	101	33	160 to 250	N320TC to N360TC	10,800	13,900	4,040	421,296
	310ML2	**28.0**	43	184,100	101	33	160 to 250	N320TC to N360TC	11,100	14,400	4,180	421,296
	310ML2	**30.7**	39	154,400	101	33	160 to 250	N320TC to N360TC	11,400	14,800	4,300	421,296
	310ML2	**32.6**	37	184,900	101	33	160 to 250	N320TC to N360TC	11,600	15,000	4,390	421,296
	310ML2	**38.6**	31	157,600	83	33	160 to 250	N320TC to N360TC	12,300	15,800	4,650	421,296
	310ML2	**46.7**	25.7	157,600	68	33	160 to 250	N320TC to N360TC	13,000	16,800	4,950	421,296
	310ML3	**53.0**	22.6	181,200	54	27	132 to 200	N250TC to N280TC	13,500	17,400	5,170	421,296
	310ML3	**62.6**	19.2	187,500	54	27	132 to 200	N250TC to N280TC	14,200	18,300	5,460	421,296
	310ML3	**73.9**	16.2	208,200	54	27	132 to 200	N250TC to N280TC	14,900	19,200	5,770	421,296
	310ML3	**80.3**	14.9	185,300	48	27	132 to 200	N250TC to N280TC	15,300	19,700	5,930	421,296
	310ML3	**92.7**	12.9	217,500	49	27	132 to 200	N250TC to N280TC	15,900	20,600	6,220	421,296
	310ML3	**101**	11.9	188,400	39	27	132 to 200	N250TC to N280TC	16,300	21,100	6,400	421,296
	310ML3	**108**	11.1	227,900	44	27	132 to 200	N250TC to N280TC	16,700	21,500	6,540	421,296
	310ML3	**119**	10.1	191,700	34	27	132 to 200	N250TC to N280TC	17,200	22,200	6,760	421,296

310M L

364

297,740 lb·in



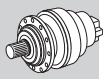
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**310ML3**	**135**	8.9	238,700	37	27	132 to 200	N250TC to N280TC	17,200	22,200	7,060	421,296
	310ML3	**149**	8.0	194,600	27.2	27	132 to 200	N250TC to N280TC	17,200	22,200	7,300	421,296
	310ML3	**164**	7.3	237,100	30	27	132 to 200	N250TC to N280TC	17,200	22,200	7,520	421,296
	310ML3	**177**	6.8	158,600	18.7	27	132 to 200	N250TC to N280TC	17,200	22,200	7,720	421,296
	310ML3	**202**	5.9	198,600	20.5	27	132 to 200	N250TC to N280TC	17,200	22,200	8,070	421,296
	310ML3	**230**	5.2	171,100	15.5	27	132 to 200	N250TC to N280TC	17,200	22,200	8,430	421,296
	310ML3	**249**	4.8	160,400	13.4	27	132 to 200	N250TC to N280TC	17,300	22,400	8,650	421,296
	310ML3	**295**	4.1	206,400	14.6	27	132 to 200	N250TC to N280TC	17,700	22,900	9,160	421,296
	310ML3	**350**	3.4	170,400	10.1	27	132 to 200	N250TC to N280TC	18,200	23,500	9,700	421,296
	310ML4	**392**	3.1	173,700	9.5	16.5	71 to 160	N56C to N280TC	18,500	23,800	10,100	421,296
	310ML4	**453**	2.6	256,200	12.2	16.5	71 to 160	N56C to N280TC	18,900	24,300	10,600	421,296
	310ML4	**507**	2.4	229,100	9.7	16.5	71 to 160	N56C to N280TC	19,200	24,700	11,000	421,296
	310ML4	**590**	2.0	235,300	8.6	16.5	71 to 160	N56C to N280TC	19,600	25,300	11,500	421,296
	310ML4	**637**	1.9	238,500	8.1	16.5	71 to 160	N56C to N280TC	19,800	25,600	11,800	421,296
	310ML4	**726**	1.7	244,000	7.2	16.5	71 to 160	N56C to N280TC	20,200	26,000	12,400	421,296
	310ML4	**798**	1.5	248,100	6.7	16.5	71 to 160	N56C to N280TC	20,400	26,400	12,800	421,296
	310ML4	**974**	1.2	288,300	6.4	16.5	71 to 160	N56C to N280TC	21,000	27,200	13,600	421,296
	310ML4	**1002**	1.2	258,200	5.5	16.5	71 to 160	N56C to N280TC	21,100	27,300	13,800	421,296
	310ML4	**1164**	1.0	265,100	4.9	16.5	71 to 160	N56C to N280TC	21,600	27,900	14,500	421,296
	310ML4	**1259**	0.95	219,700	3.8	16.5	71 to 160	N56C to N280TC	21,800	28,200	14,600	421,296
	310ML4	**1438**	0.83	211,800	3.2	16.5	71 to 160	N56C to N280TC	22,200	28,700	14,600	421,296
	310ML4	**1672**	0.72	211,800	2.7	16.5	71 to 160	N56C to N280TC	22,700	29,300	14,600	421,296
	310ML4	**1794**	0.67	211,800	2.5	16.5	71 to 160	N56C to N280TC	23,000	29,600	14,600	421,296
	310ML4	**2022**	0.59	211,800	2.3	16.5	71 to 160	N56C to N280TC	23,300	30,100	14,600	421,296
	310ML4	**2523**	0.48	211,800	1.8	16.5	71 to 160	N56C to N280TC	24,100	31,100	14,600	421,296

311M L

382

435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**311ML1**	**4.09**	440	139,300	268	39	200 to 250	—	6,920	9,030	1,920	515,999
	311ML1	**5.25**	343	146,500	268	39	200 to 250	—	7,460	9,730	2,090	515,999
	311ML1	**6.23**	289	152,400	268	39	200 to 250	—	7,850	10,200	2,210	515,999
	311ML2	**14.0**	128	170,100	154	29	180 to 250	N320TC to N360TC	10,000	13,100	2,900	515,999
	311ML2	**16.7**	108	174,900	154	29	180 to 250	N320TC to N360TC	10,600	13,800	3,070	515,999
	311ML2	**18.0**	100	212,100	154	29	180 to 250	N320TC to N360TC	10,800	14,100	3,150	515,999
	311ML2	**21.5**	84	174,500	154	29	180 to 250	N320TC to N360TC	11,400	14,900	3,340	515,999
	311ML2	**25.5**	71	191,500	154	29	180 to 250	N320TC to N360TC	12,000	15,600	3,540	515,999
	311ML2	**27.6**	65	236,300	154	29	180 to 250	N320TC to N360TC	12,300	16,000	3,630	515,999
	311ML2	**32.7**	55	245,700	154	29	180 to 250	N320TC to N360TC	12,900	16,800	3,840	515,999
	311ML2	**38.8**	46	240,700	154	29	180 to 250	N320TC to N360TC	13,600	17,700	4,070	515,999
	311ML3	**50.5**	36	237,300	80	19.8	132 to 200	N250TC to N280TC	14,700	19,200	4,440	515,999
	311ML3	**60.2**	29.9	256,900	80	19.8	132 to 200	N250TC to N280TC	15,500	20,200	4,710	515,999
	311ML3	**71.1**	25.3	270,000	80	19.8	132 to 200	N250TC to N280TC	16,300	21,300	4,980	515,999
	311ML3	**77.3**	23.3	283,200	80	19.8	132 to 200	N250TC to N280TC	16,700	21,800	5,120	515,999
	311ML3	**89.3**	20.2	289,100	80	19.8	132 to 200	N250TC to N280TC	17,400	22,500	5,370	515,999
	311ML3	**104**	17.3	302,400	80	19.8	132 to 200	N250TC to N280TC	18,300	22,500	5,640	515,999
	311ML3	**115**	15.7	295,300	80	19.8	132 to 200	N250TC to N280TC	18,800	22,500	5,830	515,999
	311ML3	**133**	13.5	300,100	71	19.8	132 to 200	N250TC to N280TC	19,700	22,500	6,130	515,999
	311ML3	**147**	12.2	302,500	64	19.8	132 to 200	N250TC to N280TC	20,300	22,500	6,340	515,999
	311ML3	**161**	11.2	306,200	59	19.8	132 to 200	N250TC to N280TC	20,800	22,500	6,540	515,999
	311ML3	**171**	10.5	308,000	56	19.8	132 to 200	N250TC to N280TC	21,200	22,500	6,670	515,999
	311ML3	**191**	9.4	283,400	46	19.8	132 to 200	N250TC to N280TC	21,500	22,500	6,920	515,999
	311ML3	**203**	8.9	312,400	48	19.8	132 to 200	N250TC to N280TC	21,500	22,500	7,060	515,999
	311ML3	**245**	7.3	316,400	40	19.8	132 to 200	N250TC to N280TC	21,500	22,500	7,520	515,999
	311ML3	**291**	6.2	242,400	26.1	19.8	132 to 200	N250TC to N280TC	21,500	22,500	7,960	515,999
	311ML4	**348**	5.2	399,500	37	12.1	71 to 160	N56C to N280TC	21,500	22,500	8,450	515,999
	311ML4	**410**	4.4	404,200	32	12.1	71 to 160	N56C to N280TC	21,900	22,900	8,930	515,999
	311ML4	**512**	3.5	407,400	25.7	12.1	71 to 160	N56C to N280TC	22,600	23,600	9,610	515,999



B

311M L — 382 — 435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**311ML4**	**568**	3.2	351,600	20.0	12.1	71 to 160	N56C to N280TC	23,000	24,000	9,950	515,999
	311ML4	**627**	2.9	357,700	18.4	12.1	71 to 160	N56C to N280TC	23,300	24,300	10,300	515,999
	311ML4	**825**	2.2	374,300	14.6	12.1	71 to 160	N56C to N280TC	24,200	25,300	11,300	515,999
	311ML4	**986**	1.8	385,000	12.6	12.1	71 to 160	N56C to N280TC	24,900	26,000	12,000	515,999
	311ML4	**1058**	1.7	389,300	11.9	12.1	71 to 160	N56C to N280TC	25,100	26,200	12,200	515,999
	311ML4	**1230**	1.5	398,600	10.5	12.1	71 to 160	N56C to N280TC	25,700	26,800	12,900	515,999
	311ML4	**1415**	1.3	364,900	8.3	12.1	71 to 160	N56C to N280TC	26,200	27,300	13,500	515,999
	311ML4	**1680**	1.1	318,900	6.1	12.1	71 to 160	N56C to N280TC	26,800	28,000	14,300	515,999
	311ML4	**1766**	1.0	365,100	6.7	12.1	71 to 160	N56C to N280TC	27,000	28,200	14,500	515,999
	311ML4	**2096**	0.86	322,800	5.0	12.1	71 to 160	N56C to N280TC	27,700	28,900	14,600	515,999
1200	**311ML1**	**4.09**	293	157,300	268	53	200 to 250	—	7,820	10,200	2,200	515,999
	311ML1	**5.25**	229	165,500	268	53	200 to 250	—	8,420	11,000	2,390	515,999
	311ML1	**6.23**	193	172,100	268	53	200 to 250	—	8,870	11,600	2,530	515,999
	311ML2	**14.0**	86	192,100	154	39	180 to 250	N320TC to N360TC	11,300	14,800	3,320	515,999
	311ML2	**16.7**	72	197,500	154	39	180 to 250	N320TC to N360TC	11,900	15,600	3,520	515,999
	311ML2	**18.0**	67	239,500	154	39	180 to 250	N320TC to N360TC	12,200	15,900	3,600	515,999
	311ML2	**21.5**	56	197,100	154	39	180 to 250	N320TC to N360TC	12,900	16,800	3,820	515,999
	311ML2	**25.5**	47	214,600	154	39	180 to 250	N320TC to N360TC	13,500	17,700	4,050	515,999
	311ML2	**27.6**	44	260,300	154	39	180 to 250	N320TC to N360TC	13,900	18,100	4,150	515,999
	311ML2	**32.7**	37	263,000	154	39	180 to 250	N320TC to N360TC	14,600	19,000	4,400	515,999
	311ML2	**38.8**	31	240,700	125	39	180 to 250	N320TC to N360TC	15,400	20,000	4,660	515,999
	311ML3	**50.5**	23.8	252,100	80	27	132 to 200	N250TC to N280TC	16,600	21,700	5,080	515,999
	311ML3	**60.2**	19.9	290,100	80	27	132 to 200	N250TC to N280TC	17,500	22,500	5,390	515,999
	311ML3	**71.1**	16.9	305,000	80	27	132 to 200	N250TC to N280TC	18,400	22,500	5,700	515,999
	311ML3	**77.3**	15.5	295,700	80	27	132 to 200	N250TC to N280TC	18,900	22,500	5,860	515,999
	311ML3	**89.3**	13.4	326,500	76	27	132 to 200	N250TC to N280TC	19,700	22,500	6,150	515,999
	311ML3	**104**	11.6	341,500	69	27	132 to 200	N250TC to N280TC	20,600	22,500	6,460	515,999
	311ML3	**115**	10.5	308,300	56	27	132 to 200	N250TC to N280TC	21,200	22,500	6,680	515,999
	311ML3	**133**	9.0	312,100	49	27	132 to 200	N250TC to N280TC	21,500	22,500	7,020	515,999
	311ML3	**147**	8.2	314,100	45	27	132 to 200	N250TC to N280TC	21,500	22,500	7,260	515,999
	311ML3	**161**	7.4	316,100	41	27	132 to 200	N250TC to N280TC	21,500	22,500	7,480	515,999
	311ML3	**171**	7.0	317,400	39	27	132 to 200	N250TC to N280TC	21,500	22,500	7,630	515,999
	311ML3	**191**	6.3	283,400	31	27	132 to 200	N250TC to N280TC	21,500	22,500	7,920	515,999
	311ML3	**203**	5.9	321,100	33	27	132 to 200	N250TC to N280TC	21,500	22,500	8,080	515,999
	311ML3	**245**	4.9	325,900	27.7	27	132 to 200	N250TC to N280TC	21,600	22,600	8,610	515,999
	311ML3	**291**	4.1	251,600	18.0	27	132 to 200	N250TC to N280TC	22,100	23,100	9,110	515,999
	311ML4	**348**	3.5	407,600	25.2	16.5	71 to 160	N56C to N280TC	22,700	23,700	9,670	515,999
	311ML4	**410**	2.9	410,100	21.5	16.5	71 to 160	N56C to N280TC	23,300	24,300	10,200	515,999
	311ML4	**512**	2.3	414,000	17.4	16.5	71 to 160	N56C to N280TC	24,000	25,100	11,000	515,999
	311ML4	**568**	2.1	376,200	14.3	16.5	71 to 160	N56C to N280TC	24,400	25,400	11,400	515,999
	311ML4	**627**	1.9	382,100	13.1	16.5	71 to 160	N56C to N280TC	24,700	25,800	11,800	515,999
	311ML4	**825**	1.5	398,900	10.4	16.5	71 to 160	N56C to N280TC	25,700	26,800	12,900	515,999
	311ML4	**986**	1.2	410,300	8.9	16.5	71 to 160	N56C to N280TC	26,400	27,500	13,700	515,999
	311ML4	**1058**	1.1	414,900	8.4	16.5	71 to 160	N56C to N280TC	26,600	27,800	14,000	515,999
	311ML4	**1230**	0.98	423,200	7.4	16.5	71 to 160	N56C to N280TC	27,200	28,400	14,600	515,999
	311ML4	**1415**	0.85	365,100	5.5	16.5	71 to 160	N56C to N280TC	27,800	29,000	14,600	515,999
	311ML4	**1680**	0.71	322,800	4.1	16.5	71 to 160	N56C to N280TC	28,400	29,700	14,600	515,999
	311ML4	**1766**	0.68	365,100	4.4	16.5	71 to 160	N56C to N280TC	28,600	29,900	14,600	515,999
	311ML4	**2096**	0.57	322,800	3.3	16.5	71 to 160	N56C to N280TC	29,400	30,600	14,600	515,999

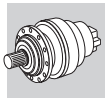
313M L — 400 — 539,360 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**313ML2**	**14.2**	127	236,200	201	33	180 to 250	N320TC to N360TC	13,900	17,500	3,580	929,329
	313ML2	**16.9**	106	243,000	201	33	180 to 250	N320TC to N360TC	14,700	18,400	3,800	929,329
	313ML2	**18.5**	97	297,900	201	33	180 to 250	N320TC to N360TC	15,100	18,900	3,910	929,329
	313ML2	**21.8**	83	255,800	201	33	180 to 250	N320TC to N360TC	15,800	19,800	4,130	929,329
	313ML2	**25.8**	70	266,000	201	33	180 to 250	N320TC to N360TC	16,700	20,900	4,370	929,329

313M L

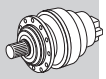
400

539,360 lb·in



B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**313ML2**	**28.4**	63	333,400	201	33	180 to 250	N320TC to N360TC	17,200	21,500	4,510	929,329
	313ML2	**33.6**	53	346,700	201	33	180 to 250	N320TC to N360TC	18,100	22,600	4,770	929,329
	313ML2	**40.5**	44	267,300	200	33	180 to 250	N320TC to N360TC	19,100	23,900	5,080	929,329
	313ML3	**51.1**	35	265,500	80	19.8	132 to 200	N250TC to N280TC	20,500	25,600	5,490	929,329
	313ML3	**61.0**	29.5	316,800	80	19.8	132 to 200	N250TC to N280TC	21,600	27,000	5,820	929,329
	313ML3	**72.0**	25.0	327,800	80	19.8	132 to 200	N250TC to N280TC	22,700	28,400	6,150	929,329
	313ML3	**78.3**	23.0	361,800	80	19.8	132 to 200	N250TC to N280TC	23,300	29,100	6,330	929,329
	313ML3	**92.4**	19.5	377,200	80	19.8	132 to 200	N250TC to N280TC	24,500	30,600	6,680	929,329
	313ML3	**110**	16.4	382,800	80	19.8	132 to 200	N250TC to N280TC	25,800	32,200	7,080	929,329
	313ML3	**120**	14.9	364,500	80	19.8	132 to 200	N250TC to N280TC	26,500	33,200	7,300	929,329
	313ML3	**135**	13.3	414,800	80	19.8	132 to 200	N250TC to N280TC	27,400	34,300	7,580	929,329
	313ML3	**143**	12.6	364,800	80	19.8	132 to 200	N250TC to N280TC	27,900	34,900	7,730	929,329
	313ML3	**151**	11.9	365,800	76	19.8	132 to 200	N250TC to N280TC	28,400	35,500	7,880	929,329
	313ML3	**163**	11.0	435,200	80	19.8	132 to 200	N250TC to N280TC	29,000	36,300	8,080	929,329
	313ML3	**176**	10.2	366,600	65	19.8	132 to 200	N250TC to N280TC	29,700	37,100	8,280	929,329
	313ML3	**182**	9.9	267,300	46	19.8	132 to 200	N250TC to N280TC	29,900	37,400	8,380	929,329
	313ML3	**194**	9.3	430,500	70	19.8	132 to 200	N250TC to N280TC	29,900	37,400	8,550	929,329
	313ML3	**209**	8.6	369,900	55	19.8	132 to 200	N250TC to N280TC	29,900	37,400	8,770	929,329
	313ML3	**252**	7.1	374,000	46	19.8	132 to 200	N250TC to N280TC	29,900	37,400	9,340	929,329
	313ML3	**304**	5.9	267,700	27.6	19.8	132 to 200	N250TC to N280TC	29,900	37,400	9,940	929,329
	313ML4	**394**	4.6	494,700	40	12.1	71 to 160	N56C to N280TC	30,300	37,900	10,800	929,329
	313ML4	**452**	4.0	498,200	36	12.1	71 to 160	N56C to N280TC	30,900	38,600	11,300	929,329
	313ML4	**514**	3.5	406,300	25.5	12.1	71 to 160	N56C to N280TC	31,400	39,400	11,800	929,329
	313ML4	**564**	3.2	480,100	27.5	12.1	71 to 160	N56C to N280TC	31,900	39,900	12,200	929,329
	313ML4	**633**	2.8	430,500	21.9	12.1	71 to 160	N56C to N280TC	32,400	40,500	12,700	929,329
	313ML4	**695**	2.6	428,300	19.9	12.1	71 to 160	N56C to N280TC	32,800	41,100	13,100	929,329
	313ML4	**790**	2.3	432,400	17.7	12.1	71 to 160	N56C to N280TC	33,400	41,900	13,700	929,329
	313ML4	**889**	2.0	447,100	16.2	12.1	71 to 160	N56C to N280TC	34,000	42,600	14,200	929,329
	313ML4	**1014**	1.8	457,500	14.6	12.1	71 to 160	N56C to N280TC	34,600	43,400	14,900	929,329
	313ML4	**1117**	1.6	439,600	12.7	12.1	71 to 160	N56C to N280TC	35,100	44,000	15,300	929,329
	313ML4	**1266**	1.4	475,500	12.1	12.1	71 to 160	N56C to N280TC	35,800	44,800	16,000	929,329
	313ML4	**1394**	1.3	444,300	10.3	12.1	71 to 160	N56C to N280TC	36,300	45,400	16,500	929,329
	313ML4	**1502**	1.2	489,900	10.5	12.1	71 to 160	N56C to N280TC	36,600	45,900	16,900	929,329
	313ML4	**1817**	0.99	505,600	9.0	12.1	71 to 160	N56C to N280TC	37,700	47,100	18,000	929,329
	313ML4	**2187**	0.82	354,900	5.2	12.1	71 to 160	N56C to N280TC	38,700	48,400	18,000	929,329
1200	**313ML1**	**4.14**	290	220,300	335	68	—	—	10,900	13,600	2,720	929,329
	313ML1	**5.40**	222	232,500	335	68	—	—	11,800	14,800	2,970	929,329
	313ML1	**6.50**	185	222,400	335	68	—	—	12,500	15,600	3,160	929,329
	313ML2	**14.2**	84	266,700	201	45	180 to 250	N320TC to N360TC	15,800	19,700	4,100	929,329
	313ML2	**16.9**	71	274,500	201	45	180 to 250	N320TC to N360TC	16,600	20,800	4,350	929,329
	313ML2	**18.5**	65	336,500	201	45	180 to 250	N320TC to N360TC	17,100	21,400	4,480	929,329
	313ML2	**21.8**	55	288,900	201	45	180 to 250	N320TC to N360TC	17,900	22,400	4,720	929,329
	313ML2	**25.8**	46	299,000	201	45	180 to 250	N320TC to N360TC	18,800	23,600	5,000	929,329
	313ML2	**28.4**	42	359,100	201	45	180 to 250	N320TC to N360TC	19,400	24,300	5,160	929,329
	313ML2	**33.6**	36	356,400	201	45	180 to 250	N320TC to N360TC	20,400	25,500	5,460	929,329
	313ML2	**40.5**	29.6	267,300	134	45	180 to 250	N320TC to N360TC	21,600	27,000	5,810	929,329
	313ML3	**51.1**	23.5	299,800	80	27	132 to 200	N250TC to N280TC	23,100	29,000	6,280	929,329
	313ML3	**61.0**	19.7	357,700	80	27	132 to 200	N250TC to N280TC	24,400	30,500	6,660	929,329
	313ML3	**72.0**	16.7	370,200	80	27	132 to 200	N250TC to N280TC	25,600	32,100	7,040	929,329
	313ML3	**78.3**	15.3	400,700	80	27	132 to 200	N250TC to N280TC	26,300	32,900	7,240	929,329
	313ML3	**92.4**	13.0	417,700	80	27	132 to 200	N250TC to N280TC	27,600	34,600	7,650	929,329
	313ML3	**110**	10.9	421,400	80	27	132 to 200	N250TC to N280TC	29,100	36,400	8,100	929,329
	313ML3	**120**	10.0	366,800	64	27	132 to 200	N250TC to N280TC	29,900	37,400	8,360	929,329
	313ML3	**135**	8.9	453,600	70	27	132 to 200	N250TC to N280TC	29,900	37,400	8,680	929,329
	313ML3	**143**	8.4	370,500	54	27	132 to 200	N250TC to N280TC	29,900	37,400	8,850	929,329
	313ML3	**151**	7.9	371,700	51	27	132 to 200	N250TC to N280TC	29,900	37,400	9,020	929,329
	313ML3	**163**	7.4	460,400	59	27	132 to 200	N250TC to N280TC	29,900	37,400	9,250	929,329
	313ML3	**176**	6.8	375,000	45	27	132 to 200	N250TC to N280TC	29,900	37,400	9,480	929,329
	313ML3	**182**	6.6	267,600	31	27	132 to 200	N250TC to N280TC	29,900	37,400	9,590	929,329
	313ML3	**194**	6.2	430,500	46	27	132 to 200	N250TC to N280TC	29,900	37,400	9,790	929,329
	313ML3	**209**	5.8	378,800	38	27	132 to 200	N250TC to N280TC	29,900	37,400	10,000	929,329
	313ML3	**252**	4.8	385,300	32	27	132 to 200	N250TC to N280TC	30,100	37,700	10,700	929,329



B

313M L

400

539,360 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**313ML3**	**304**	4.0	279,100	19.2	27	132 to 200	N250TC to N280TC	30,900	38,700	11,400	929,329
	313ML4	**394**	3.0	505,200	27.6	16.5	71 to 160	N56C to N280TC	32,100	40,200	12,400	929,329
	313ML4	**452**	2.7	508,700	24.2	16.5	71 to 160	N56C to N280TC	32,700	40,900	13,000	929,329
	313ML4	**514**	2.3	436,100	18.3	16.5	71 to 160	N56C to N280TC	33,300	41,700	13,600	929,329
	313ML4	**564**	2.1	480,100	18.3	16.5	71 to 160	N56C to N280TC	33,800	42,300	14,000	929,329
	313ML4	**633**	1.9	436,200	14.8	16.5	71 to 160	N56C to N280TC	34,300	43,000	14,500	929,329
	313ML4	**695**	1.7	459,700	14.2	16.5	71 to 160	N56C to N280TC	34,800	43,500	15,000	929,329
	313ML4	**790**	1.5	440,800	12.0	16.5	71 to 160	N56C to N280TC	35,400	44,300	15,600	929,329
	313ML4	**889**	1.3	479,900	11.6	16.5	71 to 160	N56C to N280TC	36,000	45,100	16,300	929,329
	313ML4	**1014**	1.2	491,000	10.4	16.5	71 to 160	N56C to N280TC	36,700	46,000	17,000	929,329
	313ML4	**1117**	1.1	448,200	8.6	16.5	71 to 160	N56C to N280TC	37,200	46,600	17,600	929,329
	313ML4	**1266**	0.95	505,600	8.6	16.5	71 to 160	N56C to N280TC	37,900	47,400	18,000	929,329
	313ML4	**1394**	0.86	449,700	6.9	16.5	71 to 160	N56C to N280TC	38,400	48,100	18,000	929,329
	313ML4	**1502**	0.80	505,600	7.2	16.5	71 to 160	N56C to N280TC	38,800	48,600	18,000	929,329
	313ML4	**1817**	0.66	505,600	6.0	16.5	71 to 160	N56C to N280TC	39,900	50,000	18,000	929,329
	313ML4	**2187**	0.55	354,900	3.5	16.5	71 to 160	N56C to N280TC	41,000	51,300	18,000	929,329

314M L

418

713,720 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**314ML2**	**17.4**	104	322,200	235	44	200 to 250	—	14,500	17,700	4,310	1,017,836
	314ML2	**22.3**	81	339,200	235	44	200 to 250	—	15,600	19,000	4,680	1,017,836
	314ML2	**26.5**	68	352,800	235	44	200 to 250	—	16,400	20,000	4,960	1,017,836
	314ML2	**28.0**	64	425,700	235	44	200 to 250	—	16,700	20,400	5,050	1,017,836
	314ML2	**33.2**	54	442,700	235	44	200 to 250	—	17,600	21,400	5,350	1,017,836
	314ML2	**38.6**	47	419,500	235	44	200 to 250	—	18,400	22,400	5,620	1,017,836
	314ML3	**62.6**	28.8	412,200	101	28	160 to 250	N320TC to N360TC	21,200	25,900	6,600	1,017,836
	314ML3	**73.9**	24.4	426,500	101	28	160 to 250	N320TC to N360TC	22,300	27,200	6,980	1,017,836
	314ML3	**92.7**	19.4	444,600	101	28	160 to 250	N320TC to N360TC	23,900	29,200	7,530	1,017,836
	314ML3	**108**	16.7	461,000	101	28	160 to 250	N320TC to N360TC	25,000	30,500	7,920	1,017,836
	314ML3	**138**	13.0	582,600	101	28	160 to 250	N320TC to N360TC	26,900	32,900	8,600	1,017,836
	314ML3	**164**	11.0	517,300	99	28	160 to 250	N320TC to N360TC	28,400	34,600	9,110	1,017,836
	314ML3	**174**	10.4	526,800	95	28	160 to 250	N320TC to N360TC	28,800	35,200	9,280	1,017,836
	314ML3	**206**	8.7	532,900	81	28	160 to 250	N320TC to N360TC	29,200	35,600	9,820	1,017,836
	314ML3	**240**	7.5	421,500	55	28	160 to 250	N320TC to N360TC	29,200	35,600	10,300	1,017,836
	314ML4	**314**	5.7	643,700	54	16.5	132 to 200	N250TC to N280TC	29,200	35,600	11,300	1,017,836
	314ML4	**394**	4.6	657,500	54	16.5	132 to 200	N250TC to N280TC	29,500	36,100	12,200	1,017,836
	314ML4	**458**	3.9	656,700	46	16.5	132 to 200	N250TC to N280TC	30,200	36,800	12,800	1,017,836
	314ML4	**495**	3.6	668,800	44	16.5	132 to 200	N250TC to N280TC	30,500	37,200	13,200	1,017,836
	314ML4	**575**	3.1	582,100	33	16.5	132 to 200	N250TC to N280TC	31,200	38,000	13,800	1,017,836
	314ML4	**588**	3.1	641,000	35	16.5	132 to 200	N250TC to N280TC	31,300	38,200	13,900	1,017,836
	314ML4	**668**	2.7	669,000	32	16.5	132 to 200	N250TC to N280TC	31,900	38,900	14,500	1,017,836
	314ML4	**738**	2.4	642,300	28.1	16.5	132 to 200	N250TC to N280TC	32,300	39,400	15,000	1,017,836
	314ML4	**858**	2.1	650,200	24.5	16.5	132 to 200	N250TC to N280TC	33,000	40,300	15,800	1,017,836
	314ML4	**926**	1.9	611,100	21.3	16.5	132 to 200	N250TC to N280TC	33,400	40,700	16,200	1,017,836
	314ML4	**1038**	1.7	660,300	20.5	16.5	132 to 200	N250TC to N280TC	33,900	41,400	16,800	1,017,836
	314ML4	**1099**	1.6	620,600	18.2	16.5	132 to 200	N250TC to N280TC	34,200	41,700	17,200	1,017,836
	314ML4	**1277**	1.4	629,100	15.9	16.5	132 to 200	N250TC to N280TC	34,900	42,600	18,000	1,017,836
	314ML4	**1485**	1.2	541,600	11.8	16.5	132 to 200	N250TC to N280TC	35,700	43,600	19,000	1,017,836
	314ML4	**1796**	1.0	559,700	10.1	16.5	132 to 200	N250TC to N280TC	36,700	44,800	20,200	1,017,836
1200	**314ML2**	**17.4**	69	363,900	235	60	200 to 250	—	16,300	19,900	4,930	1,017,836
	314ML2	**22.3**	54	383,200	235	60	200 to 250	—	17,600	21,500	5,360	1,017,836
	314ML2	**26.5**	45	394,200	235	60	200 to 250	—	18,500	22,600	5,680	1,017,836
	314ML2	**28.0**	43	465,300	235	60	200 to 250	—	18,800	23,000	5,780	1,017,836
	314ML2	**33.2**	36	467,800	235	60	200 to 250	—	19,800	24,200	6,120	1,017,836

314M L

418

713,720 lb·in

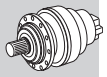
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**314ML2**	**38.6**	31	419,500	220	60	200 to 250		20,800	25,300	6,440	1,017,836
	314ML3	**62.6**	19.2	465,600	101	38	160 to 250	N320TC to N360TC	24,000	29,300	7,560	1,017,836
	314ML3	**73.9**	16.2	481,700	101	38	160 to 250	N320TC to N360TC	25,200	30,800	7,990	1,017,836
	314ML3	**92.7**	12.9	502,100	101	38	160 to 250	N320TC to N360TC	27,000	32,900	8,620	1,017,836
	314ML3	**108**	11.1	520,600	101	38	160 to 250	N320TC to N360TC	28,200	34,500	9,060	1,017,836
	314ML3	**138**	8.7	631,900	95	38	160 to 250	N320TC to N360TC	29,200	35,600	9,850	1,017,836
	314ML3	**164**	7.3	526,500	67	38	160 to 250	N320TC to N360TC	29,200	35,600	10,400	1,017,836
	314ML3	**174**	6.9	540,600	65	38	160 to 250	N320TC to N360TC	29,200	35,600	10,600	1,017,836
	314ML3	**206**	5.8	546,300	55	38	160 to 250	N320TC to N360TC	29,200	35,600	11,200	1,017,836
	314ML3	**240**	5.0	424,300	37	38	160 to 250	N320TC to N360TC	29,200	35,600	11,800	1,017,836
	314ML4	**314**	3.8	669,900	46	23	132 to 200	N250TC to N280TC	30,300	37,000	12,900	1,017,836
	314ML4	**394**	3.0	665,900	36	23	132 to 200	N250TC to N280TC	31,300	38,200	14,000	1,017,836
	314ML4	**458**	2.6	668,500	31	23	132 to 200	N250TC to N280TC	32,000	39,000	14,700	1,017,836
	314ML4	**495**	2.4	671,300	29.2	23	132 to 200	N250TC to N280TC	32,300	39,500	15,100	1,017,836
	314ML4	**575**	2.1	607,200	22.7	23	132 to 200	N250TC to N280TC	33,000	40,300	15,800	1,017,836
	314ML4	**588**	2.0	651,700	23.8	23	132 to 200	N250TC to N280TC	33,100	40,400	16,000	1,017,836
	314ML4	**668**	1.8	685,400	22.1	23	132 to 200	N250TC to N280TC	33,800	41,200	16,600	1,017,836
	314ML4	**738**	1.6	663,800	19.3	23	132 to 200	N250TC to N280TC	34,200	41,800	17,200	1,017,836
	314ML4	**858**	1.4	672,000	16.8	23	132 to 200	N250TC to N280TC	35,000	42,700	18,100	1,017,836
	314ML4	**926**	1.3	633,800	14.7	23	132 to 200	N250TC to N280TC	35,400	43,200	18,600	1,017,836
	314ML4	**1038**	1.2	682,500	14.1	23	132 to 200	N250TC to N280TC	35,900	43,900	19,300	1,017,836
	314ML4	**1099**	1.1	643,700	12.6	23	132 to 200	N250TC to N280TC	36,200	44,200	19,600	1,017,836
	314ML4	**1277**	0.94	648,800	10.9	23	132 to 200	N250TC to N280TC	37,000	45,200	20,200	1,017,836
	314ML4	**1485**	0.81	559,900	8.1	23	132 to 200	N250TC to N280TC	37,800	46,200	20,200	1,017,836
	314ML4	**1796**	0.67	559,900	6.7	23	132 to 200	N250TC to N280TC	38,900	47,400	20,200	1,017,836

315M L

434

892,160 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**315ML2**	**17.4**	104	479,300	268	46	200 to 250	—	14,500	17,700	4,310	1,194,851
	315ML2	**22.3**	81	516,500	268	46	200 to 250	—	15,600	19,000	4,680	1,194,851
	315ML2	**26.5**	68	543,700	268	46	200 to 250	—	16,400	20,000	4,960	1,194,851
	315ML2	**28.0**	64	534,000	268	46	200 to 250	—	16,700	20,400	5,050	1,194,851
	315ML2	**33.2**	54	562,200	268	46	200 to 250	—	17,600	21,400	5,350	1,194,851
	315ML2	**38.6**	47	524,400	268	46	200 to 250	—	18,400	22,400	5,620	1,194,851
	315ML3	**59.6**	30	650,400	154	33	180 to 250	N320TC to N360TC	20,900	25,500	6,500	1,194,851
	315ML3	**71.1**	25.3	665,200	154	33	180 to 250	N320TC to N360TC	22,100	26,900	6,890	1,194,851
	315ML3	**91.3**	19.7	689,000	154	33	180 to 250	N320TC to N360TC	23,800	29,000	7,490	1,194,851
	315ML3	**108**	16.6	709,700	154	33	180 to 250	N320TC to N360TC	25,000	30,600	7,930	1,194,851
	315ML3	**139**	12.9	752,700	154	33	180 to 250	N320TC to N360TC	27,000	32,900	8,620	1,194,851
	315ML3	**165**	10.9	775,300	147	33	180 to 250	N320TC to N360TC	28,400	34,700	9,120	1,194,851
	315ML3	**174**	10.3	658,900	118	33	180 to 250	N320TC to N360TC	28,900	35,300	9,290	1,194,851
	315ML3	**207**	8.7	666,300	101	33	180 to 250	N320TC to N360TC	29,200	35,600	9,840	1,194,851
	315ML3	**241**	7.5	526,900	68	33	180 to 250	N320TC to N360TC	29,200	35,600	10,300	1,194,851
	315ML4	**302**	6.0	824,400	80	19.8	132 to 200	N250TC to N280TC	29,200	35,600	11,200	1,194,851
	315ML4	**370**	4.9	837,400	73	19.8	132 to 200	N250TC to N280TC	29,300	35,700	11,900	1,194,851
	315ML4	**441**	4.1	837,400	61	19.8	132 to 200	N250TC to N280TC	30,000	36,600	12,700	1,194,851
	315ML4	**487**	3.7	837,400	55	19.8	132 to 200	N250TC to N280TC	30,400	37,200	13,100	1,194,851
	315ML4	**533**	3.4	837,400	51	19.8	132 to 200	N250TC to N280TC	30,800	37,600	13,500	1,194,851
	315ML4	**591**	3.0	837,400	46	19.8	132 to 200	N250TC to N280TC	31,300	38,200	14,000	1,194,851
	315ML4	**672**	2.7	837,400	40	19.8	132 to 200	N250TC to N280TC	31,900	38,900	14,600	1,194,851
	315ML4	**741**	2.4	839,100	37	19.8	132 to 200	N250TC to N280TC	32,300	39,500	15,100	1,194,851
	315ML4	**862**	2.1	847,900	32	19.8	132 to 200	N250TC to N280TC	33,000	40,300	15,800	1,194,851
	315ML4	**930**	1.9	764,200	26.5	19.8	132 to 200	N250TC to N280TC	33,400	40,800	16,200	1,194,851



B

315M L

434

892,160 lb·in

n_1		i	n_2	T_{n2}	P_{n1}	Pt	P (IEC)	NEMA	Rn_2 [lbs]			$T_{n2\ max}$
rpm			rpm	lb·in	hp	hp			NHC/NPC	HZ/PZ	FZ	lb·in
1800	**315ML4**	**1043**	1.7	859,100	26.6	19.8	132 to 200	N250TC to N280TC	33,900	41,400	16,900	1,194,851
	315ML4	**1104**	1.6	776,100	22.7	19.8	132 to 200	N250TC to N280TC	34,200	41,800	17,200	1,194,851
	315ML4	**1284**	1.4	786,700	19.8	19.8	132 to 200	N250TC to N280TC	35,000	42,700	18,100	1,194,851
	315ML4	**1492**	1.2	677,600	14.6	19.8	132 to 200	N250TC to N280TC	35,700	43,600	19,000	1,194,851
	315ML4	**1805**	1.0	699,800	12.5	19.8	132 to 200	N250TC to N280TC	36,700	44,800	20,200	1,194,851
1200	**315ML2**	**17.4**	69	541,300	268	63	200 to 250	—	16,300	19,900	4,930	1,194,851
	315ML2	**22.3**	54	583,300	268	63	200 to 250	—	17,600	21,500	5,360	1,194,851
	315ML2	**26.5**	45	606,400	268	63	200 to 250	—	18,500	22,600	5,680	1,194,851
	315ML2	**28.0**	43	583,500	268	63	200 to 250	—	18,800	23,000	5,780	1,194,851
	315ML2	**33.2**	36	592,000	268	63	200 to 250	—	19,800	24,200	6,120	1,194,851
	315ML2	**38.6**	31	524,400	268	63	200 to 250	—	20,800	25,300	6,440	1,194,851
	315ML3	**59.6**	20.1	697,500	154	45	180 to 250	N320TC to N360TC	23,600	28,800	7,440	1,194,851
	315ML3	**71.1**	16.9	715,900	154	45	180 to 250	N320TC to N360TC	24,900	30,400	7,890	1,194,851
	315ML3	**91.3**	13.1	746,000	154	45	180 to 250	N320TC to N360TC	26,900	32,800	8,570	1,194,851
	315ML3	**108**	11.1	770,800	148	45	180 to 250	N320TC to N360TC	28,300	34,500	9,080	1,194,851
	315ML3	**139**	8.6	797,400	120	45	180 to 250	N320TC to N360TC	29,200	35,600	9,860	1,194,851
	315ML3	**165**	7.3	809,800	102	45	180 to 250	N320TC to N360TC	29,200	35,600	10,400	1,194,851
	315ML3	**174**	6.9	676,000	81	45	180 to 250	N320TC to N360TC	29,200	35,600	10,600	1,194,851
	315ML3	**207**	5.8	683,100	69	45	180 to 250	N320TC to N360TC	29,200	35,600	11,300	1,194,851
	315ML3	**241**	5.0	530,700	46	45	180 to 250	N320TC to N360TC	29,200	35,600	11,800	1,194,851
	315ML4	**302**	4.0	837,400	60	27	132 to 200	N250TC to N280TC	30,100	36,800	12,800	1,194,851
	315ML4	**370**	3.2	837,400	49	27	132 to 200	N250TC to N280TC	31,000	37,900	13,700	1,194,851
	315ML4	**441**	2.7	837,400	41	27	132 to 200	N250TC to N280TC	31,800	38,800	14,500	1,194,851
	315ML4	**487**	2.5	838,200	37	27	132 to 200	N250TC to N280TC	32,300	39,400	15,000	1,194,851
	315ML4	**533**	2.2	843,500	34	27	132 to 200	N250TC to N280TC	32,700	39,900	15,400	1,194,851
	315ML4	**591**	2.0	849,500	31	27	132 to 200	N250TC to N280TC	33,200	40,500	16,000	1,194,851
	315ML4	**672**	1.8	857,100	27.4	27	132 to 200	N250TC to N280TC	33,800	41,200	16,700	1,194,851
	315ML4	**741**	1.6	862,900	25.0	27	132 to 200	N250TC to N280TC	34,300	41,800	17,200	1,194,851
	315ML4	**862**	1.4	872,000	21.8	27	132 to 200	N250TC to N280TC	35,000	42,700	18,100	1,194,851
	315ML4	**930**	1.3	792,600	18.3	27	132 to 200	N250TC to N280TC	35,400	43,200	18,600	1,194,851
	315ML4	**1043**	1.2	883,500	18.2	27	132 to 200	N250TC to N280TC	36,000	43,900	19,300	1,194,851
	315ML4	**1104**	1.1	804,900	15.7	27	132 to 200	N250TC to N280TC	36,300	44,300	19,700	1,194,851
	315ML4	**1284**	0.93	811,000	13.6	27	132 to 200	N250TC to N280TC	37,100	45,200	20,200	1,194,851
	315ML4	**1492**	0.80	699,800	10.1	27	132 to 200	N250TC to N280TC	37,900	46,200	20,200	1,194,851
	315ML4	**1805**	0.66	699,800	8.3	27	132 to 200	N250TC to N280TC	38,900	47,500	20,200	1,194,851

316M L

450

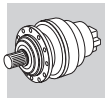
1,189,450 lb·in

n_1		i	n_2	T_{n2}	P_{n1}	Pt	P (IEC)	NEMA	Rn_2 [lbs]			$T_{n2\ max}$
rpm			rpm	lb·in	hp	hp			HC/PC	HZ/PZ	FZ	lb·in
1800	**316ML2**	**17.4**	104	574,000	268	55	200 to 250	—	22,500	25,300	7,180	1,699,344
	316ML2	**21.8**	83	660,700	268	55	200 to 250	—	24,100	27,000	7,750	1,699,344
	316ML2	**22.3**	81	604,100	268	55	200 to 250	—	24,300	27,200	7,800	1,699,344
	316ML2	**26.5**	68	628,100	268	55	200 to 250	—	25,600	28,700	8,260	1,699,344
	316ML2	**28.0**	64	712,000	268	55	200 to 250	—	26,000	29,200	8,420	1,699,344
	316ML2	**33.2**	54	749,600	268	55	200 to 250	—	27,400	30,700	8,910	1,699,344
	316ML3	**59.6**	30	701,000	154	39	180 to 250	N320TC to N360TC	32,600	36,600	10,800	1,699,344
	316ML3	**71.1**	25.3	721,200	154	39	180 to 250	N320TC to N360TC	34,400	38,600	11,500	1,699,344
	316ML3	**76.5**	23.5	844,400	154	39	180 to 250	N320TC to N360TC	35,100	39,400	11,800	1,699,344
	316ML3	**89.3**	20.2	791,500	154	39	180 to 250	N320TC to N360TC	36,800	41,300	12,400	1,699,344
	316ML3	**96.0**	18.8	834,800	154	39	180 to 250	N320TC to N360TC	37,600	42,200	12,700	1,699,344
	316ML3	**114**	15.8	847,100	154	39	180 to 250	N320TC to N360TC	39,600	44,400	13,400	1,699,344
	316ML3	**117**	15.4	936,000	154	39	180 to 250	N320TC to N360TC	39,900	44,800	13,600	1,699,344
	316ML3	**139**	12.9	977,700	154	39	180 to 250	N320TC to N360TC	42,000	47,100	14,400	1,699,344
	316ML3	**165**	10.9	985,400	154	39	180 to 250	N320TC to N360TC	44,200	49,600	15,200	1,699,344

316M L

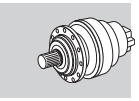
450

1,189,450 lb·in



B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**316ML3**	**174**	10.3	878,500	154	39	180 to 250	N320TC to N360TC	45,000	50,500	15,500	1,699,344
	316ML3	**207**	8.7	880,800	133	39	180 to 250	N320TC to N360TC	45,400	50,900	16,400	1,699,344
	316ML4	**215**	8.4	1,005,300	80	19.8	132 to 200	N250TC to N280TC	45,400	50,900	16,600	1,699,344
	316ML4	**253**	7.1	1,033,200	80	19.8	132 to 200	N250TC to N280TC	45,400	50,900	17,500	1,699,344
	316ML4	**275**	6.5	1,077,000	80	19.8	132 to 200	N250TC to N280TC	45,400	50,900	18,000	1,699,344
	316ML4	**318**	5.7	1,072,600	80	19.8	132 to 200	N250TC to N280TC	45,400	50,900	18,900	1,699,344
	316ML4	**346**	5.2	880,800	80	19.8	132 to 200	N250TC to N280TC	45,400	50,900	19,500	1,699,344
	316ML4	**399**	4.5	895,600	72	19.8	132 to 200	N250TC to N280TC	46,100	51,700	20,400	1,699,344
	316ML4	**447**	4.0	1,101,600	79	19.8	132 to 200	N250TC to N280TC	46,800	52,500	21,200	1,699,344
	316ML4	**500**	3.6	1,105,100	71	19.8	132 to 200	N250TC to N280TC	47,600	53,400	22,000	1,699,344
	316ML4	**563**	3.2	1,005,800	58	19.8	132 to 200	N250TC to N280TC	48,400	54,300	22,900	1,699,344
	316ML4	**628**	2.9	963,600	49	19.8	132 to 200	N250TC to N280TC	49,200	55,200	23,700	1,699,344
	316ML4	**706**	2.5	982,100	45	19.8	132 to 200	N250TC to N280TC	50,000	56,100	24,700	1,699,344
	316ML4	**784**	2.3	993,700	41	19.8	132 to 200	N250TC to N280TC	50,800	56,900	25,600	1,699,344
	316ML4	**880**	2.0	1,014,300	37	19.8	132 to 200	N250TC to N280TC	51,600	57,900	26,600	1,699,344
	316ML4	**1020**	1.8	1,020,600	32	19.8	132 to 200	N250TC to N280TC	52,700	59,100	27,900	1,699,344
	316ML4	**1104**	1.6	1,029,000	30	19.8	132 to 200	N250TC to N280TC	53,300	59,800	28,700	1,699,344
	316ML4	**1237**	1.5	1,029,000	26.8	19.8	132 to 200	N250TC to N280TC	54,200	60,800	29,800	1,699,344
	316ML4	**1308**	1.4	1,046,900	25.8	19.8	132 to 200	N250TC to N280TC	54,600	61,300	30,300	1,699,344
	316ML4	**1553**	1.2	1,065,300	22.1	19.8	132 to 200	N250TC to N280TC	56,000	62,800	32,100	1,699,344
1200	**316ML2**	**17.4**	69	648,200	268	75	200 to 250	—	25,400	28,500	8,220	1,699,344
	316ML2	**21.8**	55	746,200	268	75	200 to 250	—	27,200	30,500	8,870	1,699,344
	316ML2	**22.3**	54	682,300	268	75	200 to 250	—	27,400	30,800	8,930	1,699,344
	316ML2	**26.5**	45	704,900	268	75	200 to 250	—	28,900	32,400	9,460	1,699,344
	316ML2	**28.0**	43	778,000	268	75	200 to 250	—	29,300	32,900	9,640	1,699,344
	316ML2	**33.2**	36	789,400	268	75	200 to 250	—	30,900	34,700	10,200	1,699,344
	316ML3	**59.6**	20.1	791,700	154	53	180 to 250	N320TC to N360TC	36,800	41,300	12,400	1,699,344
	316ML3	**71.1**	16.9	814,500	154	53	180 to 250	N320TC to N360TC	38,800	43,500	13,100	1,699,344
	316ML3	**76.5**	15.7	936,000	154	53	180 to 250	N320TC to N360TC	39,700	44,500	13,500	1,699,344
	316ML3	**89.3**	13.4	842,000	154	53	180 to 250	N320TC to N360TC	41,600	46,600	14,200	1,699,344
	316ML3	**96.0**	12.5	864,200	154	53	180 to 250	N320TC to N360TC	42,500	47,600	14,500	1,699,344
	316ML3	**114**	10.5	876,900	154	53	180 to 250	N320TC to N360TC	44,700	50,200	15,400	1,699,344
	316ML3	**117**	10.2	1,042,600	154	53	180 to 250	N320TC to N360TC	45,100	50,600	15,500	1,699,344
	316ML3	**139**	8.6	1,058,800	154	53	180 to 250	N320TC to N360TC	45,400	50,900	16,400	1,699,344
	316ML3	**165**	7.3	1,005,800	127	53	180 to 250	N320TC to N360TC	45,400	50,900	17,400	1,699,344
	316ML3	**174**	6.9	880,800	105	53	180 to 250	N320TC to N360TC	45,400	50,900	17,700	1,699,344
	316ML3	**207**	5.8	880,800	89	53	180 to 250	N320TC to N360TC	45,400	50,900	18,800	1,699,344
	316ML4	**215**	5.6	1,074,800	80	27	132 to 200	N250TC to N280TC	45,400	50,900	19,000	1,699,344
	316ML4	**253**	4.7	1,096,500	80	27	132 to 200	N250TC to N280TC	45,800	51,300	20,100	1,699,344
	316ML4	**275**	4.4	1,099,100	80	27	132 to 200	N250TC to N280TC	46,300	52,000	20,600	1,699,344
	316ML4	**318**	3.8	1,103,600	75	27	132 to 200	N250TC to N280TC	47,300	53,000	21,700	1,699,344
	316ML4	**346**	3.5	934,200	58	27	132 to 200	N250TC to N280TC	47,800	53,700	22,300	1,699,344
	316ML4	**399**	3.0	956,100	52	27	132 to 200	N250TC to N280TC	48,800	54,800	23,400	1,699,344
	316ML4	**447**	2.7	1,114,300	54	27	132 to 200	N250TC to N280TC	49,600	55,700	24,300	1,699,344
	316ML4	**500**	2.4	1,119,700	48	**27**	132 to 200	N250TC to N280TC	50,400	56,600	25,200	1,699,344
	316ML4	**563**	2.1	1,012,600	39	**27**	132 to 200	N250TC to N280TC	51,300	57,500	26,200	1,699,344
	316ML4	**628**	1.9	1,012,400	35	**27**	132 to 200	N250TC to N280TC	52,100	58,400	27,200	1,699,344
	316ML4	**706**	1.7	1,024,600	31	**27**	132 to 200	N250TC to N280TC	53,000	59,400	28,300	1,699,344
	316ML4	**784**	1.5	1,035,600	28.4	**27**	132 to 200	N250TC to N280TC	53,800	60,300	29,300	1,699,344
	316ML4	**880**	1.4	1,031,800	25.2	**27**	132 to 200	N250TC to N280TC	54,700	61,300	30,400	1,699,344
	316ML4	**1020**	1.2	1,063,700	22.4	**27**	132 to 200	N250TC to N280TC	55,800	62,600	31,900	1,699,344
	316ML4	**1104**	1.1	1,072,400	20.9	**27**	132 to 200	N250TC to N280TC	56,500	63,400	32,800	1,699,344
	316ML4	**1237**	0.97	1,045,400	18.2	**27**	132 to 200	N250TC to N280TC	57,400	64,400	33,700	1,699,344
	316ML4	**1308**	0.92	1,081,500	17.8	**27**	132 to 200	N250TC to N280TC	57,900	64,900	33,700	1,699,344
	316ML4	**1553**	0.77	1,081,500	15.0	**27**	132 to 200	N250TC to N280TC	59,300	66,500	33,700	1,699,344



B

317M L — 462 — 1,836,440 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**317ML3**	**58.1**	31	937,400	201	39	180 to 250	N320TC to N360TC	50,300	53,500	10,700	3,478,345
	317ML3	**69.3**	26.0	964,400	201	39	180 to 250	N320TC to N360TC	53,100	56,400	11,400	3,478,345
	317ML3	**89.0**	20.2	1,015,000	201	39	180 to 250	N320TC to N360TC	57,200	60,800	12,400	3,478,345
	317ML3	**106**	17.0	1,055,300	201	39	180 to 250	N320TC to N360TC	60,200	64,000	13,100	3,478,345
	317ML3	**116**	15.5	1,302,500	201	39	180 to 250	N320TC to N360TC	61,900	65,800	13,500	3,478,345
	317ML3	**138**	13.1	1,365,200	201	39	180 to 250	N320TC to N360TC	65,200	69,300	14,300	3,478,345
	317ML3	**166**	10.9	1,065,000	201	39	180 to 250	N320TC to N360TC	68,900	73,200	15,200	3,478,345
	317ML3	**179**	10.0	1,259,100	201	39	180 to 250	N320TC to N360TC	70,600	75,000	15,600	3,478,345
	317ML3	**213**	8.5	1,273,600	187	39	180 to 250	N320TC to N360TC	70,700	75,100	16,500	3,478,345
	317ML3	**252**	7.1	1,004,800	125	39	180 to 250	N320TC to N360TC	70,700	75,100	17,500	3,478,345
	317ML4	**378**	4.8	1,556,600	80	19.8	132 to 200	N250TC to N280TC	71,200	75,600	20,000	3,478,345
	317ML4	**449**	4	1,582,600	80	19.8	132 to 200	N250TC to N280TC	72,900	77,500	21,200	3,478,345
	317ML4	**493**	3.7	1,477,500	80	19.8	132 to 200	N250TC to N280TC	73,900	78,500	21,900	3,478,345
	317ML4	**552**	3.3	1,659,900	80	19.8	132 to 200	N250TC to N280TC	75,100	79,800	22,700	3,478,345
	317ML4	**619**	2.9	1,477,500	77	19.8	132 to 200	N250TC to N280TC	76,300	81,100	23,600	3,478,345
	317ML4	**719**	2.5	1,477,500	66	19.8	132 to 200	N250TC to N280TC	78,000	82,900	24,800	3,478,345
	317ML4	**792**	2.3	1,714,300	70	19.8	132 to 200	N250TC to N280TC	79,100	84,000	25,600	3,478,345
	317ML4	**904**	2.0	1,380,300	49	19.8	132 to 200	N250TC to N280TC	80,600	85,600	26,800	3,478,345
	317ML4	**1032**	1.7	1,521,300	48	19.8	132 to 200	N250TC to N280TC	82,100	87,300	28,000	3,478,345
	317ML4	**1134**	1.6	1,380,300	39	19.8	132 to 200	N250TC to N280TC	83,200	88,400	28,900	3,478,345
	317ML4	**1318**	1.4	1,380,300	34	19.8	132 to 200	N250TC to N280TC	85,100	90,400	30,400	3,478,345
	317ML4	**1595**	1.1	1,380,300	27.9	19.8	132 to 200	N250TC to N280TC	87,400	92,800	32,400	3,478,345
	317ML4	**1893**	0.95	1,329,900	22.7	19.8	132 to 200	N250TC to N280TC	89,600	95,100	33,700	3,478,345
1200	**317ML2**	**16.9**	71	874,000	335	83	—	—	39,300	41,700	8,150	3,478,345
	317ML2	**22.1**	54	922,600	335	83	—	—	42,500	45,200	8,900	3,478,345
	317ML2	**26.6**	45	928,400	335	83	—	—	45,000	47,800	9,470	3,478,345
	317ML2	**28.4**	42	1,070,200	335	83	—	—	45,800	48,700	9,680	3,478,345
	317ML2	**34.1**	35	1,092,800	335	83	—	—	48,500	51,500	10,300	3,478,345
	317ML2	**40.5**	29.6	999,800	335	83	—	—	51,000	54,200	10,900	3,478,345
	317ML3	**58.1**	20.7	1,058,600	201	53	180 to 250	N320TC to N360TC	56,800	60,400	12,300	3,478,345
	317ML3	**69.3**	17.3	1,089,100	201	53	180 to 250	N320TC to N360TC	59,900	63,700	13,000	3,478,345
	317ML3	**89.0**	13.5	1,146,300	201	53	180 to 250	N320TC to N360TC	64,600	68,600	14,200	3,478,345
	317ML3	**106**	11.4	1,191,800	201	53	180 to 250	N320TC to N360TC	68,000	72,200	15,000	3,478,345
	317ML3	**116**	10.3	1,463,100	201	53	180 to 250	N320TC to N360TC	69,900	74,300	15,500	3,478,345
	317ML3	**138**	8.7	1,477,500	201	53	180 to 250	N320TC to N360TC	70,700	75,100	16,400	3,478,345
	317ML3	**166**	7.2	1,073,600	135	53	180 to 250	N320TC to N360TC	70,700	75,100	17,400	3,478,345
	317ML3	**179**	6.7	1,293,300	151	53	180 to 250	N320TC to N360TC	70,700	75,100	17,900	3,478,345
	317ML3	**213**	5.6	1,307,900	128	53	180 to 250	N320TC to N360TC	70,700	75,100	18,900	3,478,345
	317ML3	**252**	4.8	1,018,800	84	53	180 to 250	N320TC to N360TC	71,200	75,600	20,100	3,478,345
	317ML4	**378**	3.2	1,667,800	80	27	132 to 200	N250TC to N280TC	75,400	80,100	22,900	3,478,345
	317ML4	**449**	2.7	1,694,900	80	27	132 to 200	N250TC to N280TC	77,300	82,100	24,300	3,478,345
	317ML4	**493**	2.4	1,480,600	65	27	132 to 200	N250TC to N280TC	78,300	83,200	25,100	3,478,345
	317ML4	**552**	2.2	1,751,600	68	27	132 to 200	N250TC to N280TC	79,600	84,500	26,000	3,478,345
	317ML4	**619**	1.9	1,508,200	52	27	132 to 200	N250TC to N280TC	80,900	85,900	27,000	3,478,345
	317ML4	**719**	1.7	1,526,700	46	27	132 to 200	N250TC to N280TC	82,600	87,800	28,400	3,478,345
	317ML4	**792**	1.5	1,714,300	47	27	132 to 200	N250TC to N280TC	83,800	89,000	29,400	3,478,345
	317ML4	**904**	1.3	1,380,300	33	27	132 to 200	N250TC to N280TC	85,400	90,700	30,700	3,478,345
	317ML4	**1032**	1.2	1,572,200	33	27	132 to 200	N250TC to N280TC	87,000	92,500	32,100	3,478,345
	317ML4	**1134**	1.1	1,380,300	26.2	27	132 to 200	N250TC to N280TC	88,200	93,700	33,100	3,478,345
	317ML4	**1318**	0.91	1,380,300	22.5	27	132 to 200	N250TC to N280TC	90,100	95,700	33,700	3,478,345
	317ML4	**1595**	0.75	1,380,300	18.6	27	132 to 200	N250TC to N280TC	92,600	98,400	33,700	3,478,345
	317ML4	**1893**	0.63	1,329,900	15.1	27	132 to 200	N250TC to N280TC	94,900	100,800	33,700	3,478,345

318M L — 474 — 2,633,540 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**318ML3**	**76.5**	23.5	1,660,700	268	44	200 to 250	—	55,800	58,700	15,700	4,425,375
	318ML3	**98.2**	18.3	1,748,500	268	44	200 to 250	—	60,100	63,300	17,100	4,425,375
	318ML3	**117**	15.4	1,811,500	268	44	200 to 250	—	63,300	66,600	18,100	4,425,375

318M L

474

2,633,540 lb·in

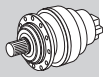
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**318ML3**	**123**	14.6	1,832,400	268	44	200 to 250	—	64,300	67,700	18,400	4,425,375
	318ML3	**146**	12.3	1,898,400	268	44	200 to 250	—	67,700	71,300	19,500	4,425,375
	318ML3	**170**	10.6	1,958,400	268	44	200 to 250	—	70,800	74,600	20,500	4,425,375
	318ML4	**262**	6.9	2,019,000	154	24	180 to 250	N320TC to N360TC	72,100	75,900	23,700	4,425,375
	318ML4	**313**	5.8	2,036,700	154	24	180 to 250	N320TC to N360TC	72,100	75,900	25,100	4,425,375
	318ML4	**337**	5.3	2,044,100	154	24	180 to 250	N320TC to N360TC	72,100	75,900	25,700	4,425,375
	318ML4	**402**	4.5	2,089,200	154	24	180 to 250	N320TC to N360TC	73,200	77,100	27,300	4,425,375
	318ML4	**422**	4.3	2,107,100	154	24	180 to 250	N320TC to N360TC	73,700	77,600	27,700	4,425,375
	318ML4	**477**	3.8	2,150,500	146	24	180 to 250	N320TC to N360TC	75,000	79,000	28,900	4,425,375
	318ML4	**515**	3.5	2,179,100	136	24	180 to 250	N320TC to N360TC	75,900	79,900	29,600	4,425,375
	318ML4	**612**	2.9	2,243,100	118	24	180 to 250	N320TC to N360TC	77,700	81,900	31,400	4,425,375
	318ML4	**647**	2.8	2,264,400	113	24	180 to 250	N320TC to N360TC	78,400	82,500	32,000	4,425,375
	318ML4	**726**	2.5	2,308,600	103	24	180 to 250	N320TC to N360TC	79,700	83,900	33,200	4,425,375
	318ML4	**768**	2.3	2,327,300	98	24	180 to 250	N320TC to N360TC	80,300	84,600	33,800	4,425,375
	318ML4	**911**	2.0	2,385,900	84	24	180 to 250	N320TC to N360TC	82,300	86,700	35,800	4,425,375
	318ML4	**1059**	1.7	2,298,600	70	24	180 to 250	N320TC to N360TC	84,100	88,500	37,700	4,425,375
1200	**318ML3**	**76.5**	15.7	1,805,800	268	60	200 to 250	—	63,000	66,300	18,000	4,425,375
	318ML3	**98.2**	12.2	1,901,200	268	60	200 to 250	—	67,900	71,500	19,500	4,425,375
	318ML3	**117**	10.3	1,969,700	268	60	200 to 250	—	71,400	75,200	20,700	4,425,375
	318ML3	**123**	9.7	1,984,300	268	60	200 to 250	—	72,100	75,900	21,100	4,425,375
	318ML3	**146**	8.2	2,001,200	268	60	200 to 250	—	72,100	75,900	22,300	4,425,375
	318ML3	**170**	7.1	2,016,200	247	60	200 to 250	—	72,100	75,900	23,400	4,425,375
	318ML4	**262**	4.6	2,081,900	154	33	180 to 250	N320TC to N360TC	73,000	76,900	27,100	4,425,375
	318ML4	**313**	3.8	2,145,000	147	33	180 to 250	N320TC to N360TC	74,900	78,800	28,700	4,425,375
	318ML4	**337**	3.6	2,171,600	139	33	180 to 250	N320TC to N360TC	75,600	79,700	29,400	4,425,375
	318ML4	**402**	3.0	2,237,400	120	33	180 to 250	N320TC to N360TC	77,600	81,700	31,200	4,425,375
	318ML4	**422**	2.8	2,256,500	115	33	180 to 250	N320TC to N360TC	78,100	82,300	31,700	4,425,375
	318ML4	**477**	2.5	2,303,100	104	33	180 to 250	N320TC to N360TC	79,500	83,700	33,100	4,425,375
	318ML4	**515**	2.3	2,329,700	97	33	180 to 250	N320TC to N360TC	80,400	84,700	33,900	4,425,375
	318ML4	**612**	2.0	2,388,300	84	33	180 to 250	N320TC to N360TC	82,400	86,700	35,900	4,425,375
	318ML4	**647**	1.9	2,407,700	80	33	180 to 250	N320TC to N360TC	83,000	87,400	36,600	4,425,375
	318ML4	**726**	1.7	2,448,400	73	33	180 to 250	N320TC to N360TC	84,400	88,900	38,000	4,425,375
	318ML4	**768**	1.6	2,468,300	69	33	180 to 250	N320TC to N360TC	85,100	89,600	38,700	4,425,375
	318ML4	**911**	1.3	2,530,400	60	33	180 to 250	N320TC to N360TC	87,200	91,800	41,000	4,425,375
	318ML4	**1059**	1.1	2,332,300	47	33	180 to 250	N320TC to N360TC	89,100	93,800	43,100	4,425,375

319 L

486

4,170,380 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**319L3**	**84.8**	21.2	1,788,300	268	55	200 to 250	—	65,200	71,700	16,200	6,018,510
	319L3	**100**	17.9	1,851,100	268	55	200 to 250	—	68,500	75,500	17,200	6,018,510
	319L3	**109**	16.5	1,927,300	268	55	200 to 250	—	70,200	77,300	17,600	6,018,510
	319L3	**126**	14.3	1,981,600	268	55	200 to 250	—	73,400	80,800	18,500	6,018,510
	319L3	**129**	13.9	2,028,900	268	55	200 to 250	—	73,900	81,400	18,700	6,018,510
	319L3	**137**	13.2	2,063,200	268	55	200 to 250	—	75,200	82,800	19,000	6,018,510
	319L3	**162**	11.1	2,135,500	268	55	200 to 250	—	79,100	87,100	20,100	6,018,510
	319L3	**188**	9.6	2,258,500	268	55	200 to 250	—	81,700	89,900	21,200	6,018,510
	319L3	**192**	9.4	2,223,900	268	55	200 to 250	—	81,700	89,900	21,300	6,018,510
	319L3	**223**	8.1	2,267,300	268	55	200 to 250	—	81,700	89,900	22,400	6,018,510
	319L4	**291**	6.2	2,588,200	154	33	180 to 250	N320TC to N360TC	81,700	89,900	24,500	6,018,510
	319L4	**347**	5.2	2,729,000	154	33	180 to 250	N320TC to N360TC	81,700	89,900	26,000	6,018,510
	319L4	**410**	4.4	2,464,400	154	33	180 to 250	N320TC to N360TC	83,200	91,600	27,500	6,018,510
	319L4	**445**	4.0	2,941,100	154	33	180 to 250	N320TC to N360TC	84,200	92,700	28,200	6,018,510
	319L4	**515**	3.5	2,559,600	154	33	180 to 250	N320TC to N360TC	86,000	94,600	29,600	6,018,510
	319L4	**528**	3.4	3,096,100	154	33	180 to 250	N320TC to N360TC	86,300	95,000	29,900	6,018,510
	319L4	**558**	3.2	3,148,400	154	33	180 to 250	N320TC to N360TC	87,000	95,700	30,400	6,018,510
	319L4	**571**	3.2	3,169,600	154	33	180 to 250	N320TC to N360TC	87,200	96,100	30,700	6,018,510
	319L4	**625**	2.9	2,643,700	136	33	180 to 250	N320TC to N360TC	88,400	97,300	31,600	6,018,510
	319L4	**678**	2.7	3,336,700	154	33	180 to 250	N320TC to N360TC	89,400	98,400	32,500	6,018,510
	319L4	**717**	2.5	3,393,000	153	33	180 to 250	N320TC to N360TC	90,100	99,200	33,100	6,018,510



B

319 L

486

4,170,380 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**319L4**	**802**	2.2	2,755,900	111	33	180 to 250	N320TC to N360TC	91,600	100,800	34,300	6,018,510
	319L4	**850**	2.1	3,481,300	132	33	180 to 250	N320TC to N360TC	92,300	101,700	35,000	6,018,510
	319L4	**912**	2.0	2,774,200	98	33	180 to 250	N320TC to N360TC	93,300	102,700	35,800	6,018,510
	319L4	**1007**	1.8	2,862,200	92	33	180 to 250	N320TC to N360TC	94,600	104,200	37,000	6,018,510
	319L4	**1195**	1.5	2,945,000	80	33	180 to 250	N320TC to N360TC	96,900	106,700	39,200	6,018,510
	319L4	**1389**	1.3	2,898,300	67	33	180 to 250	N320TC to N360TC	99,000	109,100	41,200	6,018,510
1200	**319L3**	**84.8**	14.2	2,019,700	268	75	200 to 250	—	73,600	81,000	18,600	6,018,510
	319L3	**100**	12.0	2,090,500	268	75	200 to 250	—	77,400	85,200	19,700	6,018,510
	319L3	**109**	11.0	2,176,600	268	75	200 to 250	—	79,300	87,300	20,200	6,018,510
	319L3	**126**	9.5	2,219,600	268	75	200 to 250	—	81,700	89,900	21,200	6,018,510
	319L3	**129**	9.3	2,291,400	268	75	200 to 250	—	81,700	89,900	21,400	6,018,510
	319L3	**137**	8.8	2,330,100	268	75	200 to 250	—	81,700	89,900	21,800	6,018,510
	319L3	**162**	7.4	2,291,700	268	75	200 to 250	—	81,700	89,900	23,000	6,018,510
	319L3	**188**	6.4	2,414,900	267	75	200 to 250	—	81,700	89,900	24,300	6,018,510
	319L3	**192**	6.3	2,342,700	255	75	200 to 250	—	81,700	89,900	24,400	6,018,510
	319L3	**223**	5.4	2,388,400	224	75	200 to 250	—	81,700	89,900	25,700	6,018,510
	319L4	**291**	4.1	2,922,900	154	45	180 to 250	N320TC to N360TC	83,900	92,400	28,000	6,018,510
	319L4	**347**	3.5	3,082,000	154	45	180 to 250	N320TC to N360TC	86,100	94,800	29,700	6,018,510
	319L4	**410**	2.9	2,636,900	138	45	180 to 250	N320TC to N360TC	88,200	97,100	31,400	6,018,510
	319L4	**445**	2.7	3,321,500	154	45	180 to 250	N320TC to N360TC	89,200	98,200	32,300	6,018,510
	319L4	**515**	2.3	2,738,700	114	45	180 to 250	N320TC to N360TC	91,100	100,300	33,900	6,018,510
	319L4	**528**	2.3	3,418,100	139	45	180 to 250	N320TC to N360TC	91,400	100,600	34,200	6,018,510
	319L4	**558**	2.1	3,514,700	135	45	180 to 250	N320TC to N360TC	92,100	101,500	34,800	6,018,510
	319L4	**571**	2.1	3,491,300	131	45	180 to 250	N320TC to N360TC	92,400	101,800	35,100	6,018,510
	319L4	**625**	1.9	2,828,500	97	45	180 to 250	N320TC to N360TC	93,600	103,100	36,200	6,018,510
	319L4	**678**	1.8	3,555,400	113	45	180 to 250	N320TC to N360TC	94,700	104,300	37,200	6,018,510
	319L4	**717**	1.7	3,716,300	112	45	180 to 250	N320TC to N360TC	95,500	105,100	37,900	6,018,510
	319L4	**802**	1.5	2,948,500	79	45	180 to 250	N320TC to N360TC	97,000	106,800	39,300	6,018,510
	319L4	**850**	1.4	3,693,200	93	45	180 to 250	N320TC to N360TC	97,900	107,700	40,100	6,018,510
	319L4	**912**	1.3	2,893,700	68	45	180 to 250	N320TC to N360TC	98,800	108,800	41,000	6,018,510
	319L4	**1007**	1.2	3,062,200	65	45	180 to 250	N320TC to N360TC	100,200	110,400	42,400	6,018,510
	319L4	**1195**	1.0	3,150,900	57	45	180 to 250	N320TC to N360TC	102,700	113,100	44,900	6,018,510
	319L4	**1389**	0.86	2,977,700	46	45	180 to 250	N320TC to N360TC	105,000	115,600	45,000	6,018,510

321 L

498

5,803,790 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**321L4**	**258**	7.0	3,366,100	201	39	180 to 250	N320TC to N360TC	115,500	137,500	150,700	8,266,601
	321L4	**308**	5.8	3,549,300	201	39	180 to 250	N320TC to N360TC	115,500	137,500	158,900	8,266,601
	321L4	**395**	4.6	3,825,100	201	39	180 to 250	N320TC to N360TC	117,100	139,400	171,200	8,266,601
	321L4	**469**	3.8	4,026,800	201	39	180 to 250	N320TC to N360TC	120,000	142,800	180,200	8,266,601
	321L4	**515**	3.5	4,141,600	201	39	180 to 250	N320TC to N360TC	121,600	144,800	185,400	8,266,601
	321L4	**612**	2.9	4,360,000	201	39	180 to 250	N320TC to N360TC	124,600	148,300	195,200	8,266,601
	321L4	**736**	2.4	4,605,100	201	39	180 to 250	N320TC to N360TC	128,000	152,300	206,300	8,266,601
	321L4	**796**	2.3	4,699,300	190	39	180 to 250	N320TC to N360TC	129,400	154,000	211,200	8,266,601
	321L4	**945**	1.9	4,912,300	168	39	180 to 250	N320TC to N360TC	132,600	157,800	222,400	8,266,601
	321L4	**1122**	1.6	4,659,200	134	39	180 to 250	N320TC to N360TC	135,900	161,800	234,100	8,266,601
1200	**321L3**	**75.3**	15.9	2,626,800	335	90	—	—	100,500	119,600	117,600	8,266,601
	321L3	**98.2**	12.2	2,844,200	335	90	—	—	108,800	129,500	127,300	8,266,601
	321L3	**118**	10.2	3,006,900	335	90	—	—	115,000	136,900	134,600	8,266,601
	321L3	**126**	9.5	3,065,200	335	90	—	—	115,500	137,500	137,200	8,266,601
	321L3	**152**	7.9	3,240,500	335	90	—	—	115,500	137,500	145,000	8,266,601
	321L3	**180**	6.7	3,411,400	335	90	—	—	115,500	137,500	152,700	8,266,601
	321L4	**258**	4.6	3,801,500	201	53	180 to 250	N320TC to N360TC	116,700	139,000	170,200	8,266,601
	321L4	**308**	3.9	4,008,400	201	53	180 to 250	N320TC to N360TC	119,700	142,500	179,400	8,266,601
	321L4	**395**	3.0	4,319,900	201	53	180 to 250	N320TC to N360TC	124,100	147,700	193,400	8,266,601
	321L4	**469**	2.6	4,547,600	201	53	180 to 250	N320TC to N360TC	127,100	151,300	203,600	8,266,601
	321L4	**515**	2.3	4,663,600	195	53	180 to 250	N320TC to N360TC	128,900	153,400	209,400	8,266,601
	321L4	**612**	2.0	4,875,000	171	53	180 to 250	N320TC to N360TC	132,100	157,200	220,400	8,266,601
	321L4	**736**	1.6	5,114,700	149	53	180 to 250	N320TC to N360TC	135,600	161,400	233,000	8,266,601
	321L4	**796**	1.5	5,219,200	141	53	180 to 250	N320TC to N360TC	137,100	163,200	238,500	8,266,601

321 L

498

5,803,790 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1200	**321L4**	**945**	1.3	5,455,800	124	53	180 to 250	N320TC to N360TC	140,500	167,300	251,100	8,266,601
	321L4	**1122**	1.1	4,734,400	91	53	180 to 250	N320TC to N360TC	144,000	171,400	264,400	8,266,601

323 L

510

7,879,910 lb·in

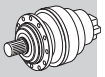
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**323L4**	**341**	5.3	6,461,500	268	55	200 to 250	N400TC	—	—	150,100	13,984,185
	323L4	**390**	4.6	6,652,800	268	55	200 to 250	N400TC	—	—	156,300	13,984,185
	323L4	**438**	4.1	6,777,900	268	55	200 to 250	N400TC	—	—	161,800	13,984,185
	323L4	**500**	3.6	6,926,300	268	55	200 to 250	N400TC	—	—	168,400	13,984,185
	323L4	**569**	3.2	7,071,200	268	55	200 to 250	N400TC	—	—	175,000	13,984,185
	323L4	**628**	2.9	7,185,000	268	55	200 to 250	N400TC	—	—	180,300	13,984,185
	323L4	**703**	2.6	7,316,900	268	55	200 to 250	N400TC	—	—	186,500	13,984,185
	323L4	**758**	2.4	7,374,300	268	55	200 to 250	N400TC	—	—	190,700	13,984,185
	323L4	**882**	2.0	7,460,700	268	55	200 to 250	N400TC	—	—	199,600	13,984,185
	323L4	**1025**	1.8	7,547,200	237	55	200 to 250	N400TC	—	—	208,900	13,984,185
	323L4	**1101**	1.6	7,588,400	222	55	200 to 250	N400TC	—	—	213,400	13,984,185
	323L4	**1279**	1.4	7,676,500	194	55	200 to 250	N400TC	—	—	223,200	13,984,185
1200	**323L4**	**341**	3.5	6,950,900	268	75	200 to 250	N400TC	—	—	169,500	13,984,185
	323L4	**390**	3.1	7,103,000	268	75	200 to 250	N400TC	—	—	176,500	13,984,185
	323L4	**438**	2.7	7,236,600	268	75	200 to 250	N400TC	—	—	182,700	13,984,185
	323L4	**500**	2.4	7,369,000	268	75	200 to 250	N400TC	—	—	190,200	13,984,185
	323L4	**569**	2.1	7,441,700	268	75	200 to 250	N400TC	—	—	197,700	13,984,185
	323L4	**628**	1.9	7,498,400	257	75	200 to 250	N400TC	—	—	203,600	13,984,185
	323L4	**703**	1.7	7,563,300	231	75	200 to 250	N400TC	—	—	210,600	13,984,185
	323L4	**758**	1.6	7,607,000	216	75	200 to 250	N400TC	—	—	215,400	13,984,185
	323L4	**882**	1.4	7,696,100	188	75	200 to 250	N400TC	—	—	225,500	13,984,185
	323L4	**1025**	1.2	7,785,400	163	75	200 to 250	N400TC	—	—	235,900	13,984,185
	323L4	**1101**	1.1	7,827,900	153	75	200 to 250	N400TC	—	—	241,000	13,984,185
	323L4	**1279**	0.94	7,879,900	132	75	200 to 250	N400TC	—	—	247,300	13,984,185

325 L

514

11,388,260 lb·in

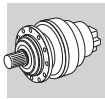
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**325L4**	**341**	5.3	7,808,600	268	72	200 to 250	N400TC	—	—	191,100	17,701,500
	325L4	**390**	4.6	7,979,700	268	72	200 to 250	N400TC	—	—	198,900	17,701,500
	325L4	**438**	4.1	8,415,500	268	72	200 to 250	N400TC	—	—	205,900	17,701,500
	325L4	**500**	3.6	8,599,800	268	72	200 to 250	N400TC	—	—	214,400	17,701,500
	325L4	**569**	3.2	8,936,900	268	72	200 to 250	N400TC	—	—	222,800	17,701,500
	325L4	**628**	2.9	9,206,000	268	72	200 to 250	N400TC	—	—	229,500	17,701,500
	325L4	**703**	2.6	9,370,300	268	72	200 to 250	N400TC	—	—	237,400	17,701,500
	325L4	**758**	2.4	9,855,000	268	72	200 to 250	N400TC	—	—	242,800	17,701,500
	325L4	**882**	2.0	9,839,300	268	72	200 to 250	N400TC	—	—	254,100	17,701,500
	325L4	**1025**	1.8	10,147,600	268	72	200 to 250	N400TC	—	—	265,800	17,701,500
	325L4	**1101**	1.6	8,524,800	250	72	200 to 250	N400TC	—	—	271,500	17,701,500
	325L4	**1279**	1.4	8,524,800	215	72	200 to 250	N400TC	—	—	284,100	17,701,500
1200	**325L4**	**341**	3.5	8,818,700	268	98	200 to 250	N400TC	—	—	215,800	17,701,500
	325L4	**390**	3.1	9,011,900	268	98	200 to 250	N400TC	—	—	224,600	17,701,500
	325L4	**438**	2.7	9,504,000	268	98	200 to 250	N400TC	—	—	232,500	17,701,500
	325L4	**500**	2.4	9,666,800	268	98	200 to 250	N400TC	—	—	242,100	17,701,500
	325L4	**569**	2.1	9,901,800	268	98	200 to 250	N400TC	—	—	251,600	17,701,500
	325L4	**628**	1.9	10,086,900	268	98	200 to 250	N400TC	—	—	259,200	17,701,500
	325L4	**703**	1.7	10,205,600	268	98	200 to 250	N400TC	—	—	268,100	17,701,500
	325L4	**758**	1.6	10,545,400	268	98	200 to 250	N400TC	—	—	274,200	17,701,500
	325L4	**882**	1.4	10,691,700	261	98	200 to 250	N400TC	—	—	287,000	17,701,500
	325L4	**1025**	1.2	11,026,700	231	98	200 to 250	N400TC	—	—	300,200	17,701,500
	325L4	**1101**	1.1	8,524,800	167	98	200 to 250	N400TC	—	—	306,700	17,701,500
	325L4	**1279**	0.94	8,524,800	143	98	200 to 250	N400TC	—	—	314,700	17,701,500

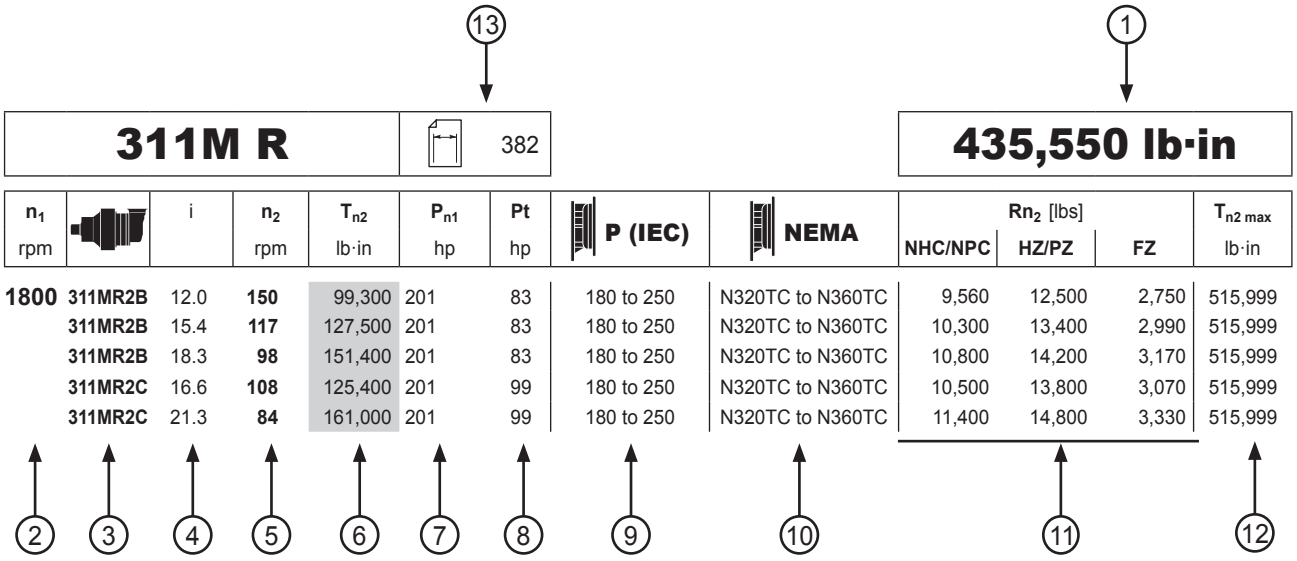


B

25.4 RATING CHARTS FOR RIGHT ANGLE UNITS 300M R

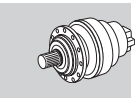
Reading the rating chart.





The rated torque of the gearbox, independent of installed mechanical power

1	Reference torque
2	Gearbox drive speed
3	Frame size of the right-angle gear unit. NOTE: letters (B) (C) near size indication identify different angle reduction dimensions. See dimensions pages.
4	Gear ratio
5	Gearbox output speed
6	Gearbox rated output torque based on: - service factor f_S=1 - 10000 h theoretical lifetime
7	Gearbox rated input power, based on: - service factor f_S=1 - 10000 h theoretical lifetime
8	Gearbox thermal capacity
9	Frame size of available IEC motor
10	Frame size of available NEMA motor
11	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
12	Maximum torque
13	Dimensions page



300 R	226	11,060 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**300R2**	**7.13**	252	4,890	20.1	13.2	71 to 132	N56C to N280TC	1,690	2,130	280	17,702
	300R2	**8.74**	206	5,130	17.8	13.2	71 to 132	N56C to N280TC	1,800	2,270	300	21,242
	300R2	**11.8**	152	4,920	12.6	13.2	71 to 132	N56C to N280TC	1,970	2,480	340	21,242
	300R2	**14.8**	122	4,250	8.7	13.2	71 to 132	N56C to N280TC	2,100	2,650	360	21,242
	300R2	**18.5**	98	3,270	5.4	13.2	71 to 132	N56C to N280TC	2,250	2,840	390	21,242
	300R3	**24.8**	73	6,460	8.1	13.2	71 to 132	N56C to N280TC	2,460	3,100	430	17,702
	300R3	**30.4**	59	7,160	7.4	13.2	71 to 132	N56C to N280TC	2,610	3,300	460	21,242
	300R3	**37.3**	48	7,440	6.2	13.2	71 to 132	N56C to N280TC	2,770	3,500	490	21,242
	300R3	**41.2**	44	5,750	4.4	13.2	71 to 132	N56C to N280TC	2,860	3,610	510	21,242
	300R3	**50.4**	36	7,470	4.6	13.2	71 to 132	N56C to N280TC	3,040	3,840	550	21,242
	300R3	**62.9**	28.6	7,500	3.7	13.2	71 to 132	N56C to N280TC	3,250	4,100	590	21,242
	300R3	**68.2**	26.4	5,750	2.6	13.2	71 to 132	N56C to N280TC	3,330	4,200	600	21,242
	300R3	**78.7**	22.9	7,520	3.0	13.2	71 to 132	N56C to N280TC	3,470	4,380	630	21,242
	300R3	**85.2**	21.1	5,750	2.1	13.2	71 to 132	N56C to N280TC	3,560	4,490	650	21,242
	300R3	**106**	16.9	5,750	1.7	13.2	71 to 132	N56C to N280TC	3,800	4,800	700	21,242
	300R3	**133**	13.6	4,870	1.1	13.2	71 to 132	N56C to N280TC	4,060	5,130	750	21,242
	300R4	**106**	17.0	7,550	2.3	11.0	71 to 132	N56C to N280TC	3,800	4,790	700	21,242
	300R4	**130**	13.9	7,580	1.9	11.0	71 to 132	N56C to N280TC	4,030	5,090	750	21,242
	300R4	**143**	12.6	5,750	1.3	11.0	71 to 132	N56C to N280TC	4,160	5,250	770	21,242
	300R4	**159**	11.3	7,600	1.5	11.0	71 to 132	N56C to N280TC	4,290	5,410	800	21,242
	300R4	**175**	10.3	7,610	1.4	11.0	71 to 132	N56C to N280TC	4,420	5,580	830	21,242
	300R4	**215**	8.4	7,810	1.2	11.0	71 to 132	N56C to N280TC	4,450	5,620	890	21,242
	300R4	**237**	7.6	5,750	0.78	11.0	71 to 132	N56C to N280TC	4,450	5,620	920	21,242
	300R4	**268**	6.7	8,060	0.97	11.0	71 to 132	N56C to N280TC	4,450	5,620	950	21,242
	300R4	**291**	6.2	8,150	0.90	11.0	71 to 132	N56C to N280TC	4,450	5,620	980	21,242
	300R4	**363**	5.0	8,420	0.75	11.0	71 to 132	N56C to N280TC	4,460	5,630	1,050	21,242
	300R4	**394**	4.6	5,840	0.48	11.0	71 to 132	N56C to N280TC	4,510	5,690	1,080	21,242
	300R4	**453**	4.0	8,750	0.62	11.0	71 to 132	N56C to N280TC	4,600	5,810	1,140	21,242
	300R4	**491**	3.7	6,060	0.40	11.0	71 to 132	N56C to N280TC	4,650	5,880	1,170	21,242
	300R4	**613**	2.9	6,290	0.33	11.0	71 to 132	N56C to N280TC	4,800	6,060	1,260	21,242
	300R4	**766**	2.3	6,530	0.28	11.0	71 to 132	N56C to N280TC	4,960	6,260	1,350	21,242
1200	**300R2**	**7.13**	168	5,530	15.7	18.0	71 to 132	N56C to N280TC	1,910	2,410	330	17,702
	300R2	**8.74**	137	5,790	13.4	18.0	71 to 132	N56C to N280TC	2,030	2,560	350	21,242
	300R2	**11.8**	101	5,550	9.5	18.0	71 to 132	N56C to N280TC	2,220	2,800	390	21,242
	300R2	**14.8**	81	4,620	6.3	18.0	71 to 132	N56C to N280TC	2,370	3,000	420	21,242
	300R2	**18.5**	65	3,270	3.6	18.0	71 to 132	N56C to N280TC	2,540	3,200	450	21,242
	300R3	**24.8**	48	6,460	5.4	18.0	71 to 132	N56C to N280TC	2,770	3,500	490	17,702
	300R3	**30.4**	39	7,460	5.1	18.0	71 to 132	N56C to N280TC	2,950	3,720	530	21,242
	300R3	**37.3**	32	7,480	4.2	18.0	71 to 132	N56C to N280TC	3,130	3,960	570	21,242
	300R3	**41.2**	29.2	5,750	2.9	18.0	71 to 132	N56C to N280TC	3,230	4,080	580	21,242
	300R3	**50.4**	23.8	7,520	3.1	18.0	71 to 132	N56C to N280TC	3,430	4,330	630	21,242
	300R3	**62.9**	19.1	7,540	2.5	18.0	71 to 132	N56C to N280TC	3,670	4,630	670	21,242
	300R3	**68.2**	17.6	5,750	1.8	18.0	71 to 132	N56C to N280TC	3,760	4,740	690	21,242
	300R3	**78.7**	15.3	7,560	2.0	18.0	71 to 132	N56C to N280TC	3,920	4,950	730	21,242
	300R3	**85.2**	14.1	5,750	1.4	18.0	71 to 132	N56C to N280TC	4,020	5,070	740	21,242
	300R3	**106**	11.3	5,750	1.1	18.0	71 to 132	N56C to N280TC	4,290	5,420	800	21,242
	300R3	**133**	9.0	4,870	0.76	18.0	71 to 132	N56C to N280TC	4,450	5,620	860	21,242
	300R4	**106**	11.3	7,600	1.5	15.0	71 to 132	N56C to N280TC	4,290	5,410	800	21,242
	300R4	**130**	9.3	7,700	1.3	15.0	71 to 132	N56C to N280TC	4,450	5,620	860	21,242
	300R4	**143**	8.4	5,750	0.86	15.0	71 to 132	N56C to N280TC	4,450	5,620	890	21,242
	300R4	**159**	7.6	7,920	1.1	15.0	71 to 132	N56C to N280TC	4,450	5,620	920	21,242
	300R4	**175**	6.8	8,040	0.99	15.0	71 to 132	N56C to N280TC	4,450	5,620	950	21,242

300 R

226

11,060 lb·in

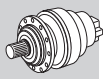
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**300R4**	**215**	5.6	8,280	0.83	15.0	71 to 132	N56C to N280TC	4,450	5,620	1,010	21,242
	300R4	**237**	5.1	5,750	0.52	15.0	71 to 132	N56C to N280TC	4,450	5,620	1,050	21,242
	300R4	**268**	4.5	8,570	0.69	15.0	71 to 132	N56C to N280TC	4,520	5,710	1,090	21,242
	300R4	**291**	4.1	8,690	0.64	15.0	71 to 132	N56C to N280TC	4,580	5,780	1,120	21,242
	300R4	**363**	3.3	9,030	0.53	15.0	71 to 132	N56C to N280TC	4,720	5,960	1,210	21,242
	300R4	**394**	3.0	6,250	0.34	15.0	71 to 132	N56C to N280TC	4,780	6,030	1,240	21,242
	300R4	**453**	2.6	9,380	0.45	15.0	71 to 132	N56C to N280TC	4,870	6,150	1,300	21,242
	300R4	**491**	2.4	6,490	0.28	15.0	71 to 132	N56C to N280TC	4,930	6,230	1,340	21,242
	300R4	**613**	2.0	6,750	0.24	15.0	71 to 132	N56C to N280TC	5,090	6,430	1,440	21,242
	300R4	**766**	1.6	7,030	0.20	15.0	71 to 132	N56C to N280TC	5,250	6,630	1,550	21,242

301 R

242

21,770 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**301R2**	**7.13**	252	8,720	20.1	13.2	71 to 132	N56C to N280TC	1,690	2,010	280	30,093
	301R2	**8.74**	206	9,120	20.1	13.2	71 to 132	N56C to N280TC	1,800	2,130	300	30,093
	301R2	**11.8**	152	9,680	20.1	13.2	71 to 132	N56C to N280TC	1,970	2,330	340	30,093
	301R2	**14.8**	122	7,840	16.1	13.2	71 to 132	N56C to N280TC	2,100	2,490	360	30,093
	301R2	**18.5**	98	6,550	10.8	13.2	71 to 132	N56C to N280TC	2,250	2,670	390	30,093
	301R3	**24.8**	73	12,000	15.2	13.2	71 to 132	N56C to N280TC	2,460	2,920	430	30,093
	301R3	**30.4**	59	13,300	13.7	13.2	71 to 132	N56C to N280TC	2,610	3,100	460	30,093
	301R3	**37.3**	48	14,000	11.8	13.2	71 to 132	N56C to N280TC	2,770	3,290	490	30,093
	301R3	**41.2**	44	11,500	8.7	13.2	71 to 132	N56C to N280TC	2,860	3,390	510	30,093
	301R3	**50.4**	36	14,300	8.8	13.2	71 to 132	N56C to N280TC	3,040	3,610	550	30,093
	301R3	**62.9**	28.6	14,400	7.2	13.2	71 to 132	N56C to N280TC	3,250	3,850	590	30,093
	301R3	**68.2**	26.4	11,500	5.3	13.2	71 to 132	N56C to N280TC	3,330	3,950	600	30,093
	301R3	**78.7**	22.9	13,800	5.5	13.2	71 to 132	N56C to N280TC	3,470	4,120	630	30,093
	301R3	**85.2**	21.1	11,500	4.2	13.2	71 to 132	N56C to N280TC	3,560	4,220	650	30,093
	301R3	**106**	16.9	11,500	3.4	13.2	71 to 132	N56C to N280TC	3,800	4,510	700	30,093
	301R3	**133**	13.6	10,200	2.4	13.2	71 to 132	N56C to N280TC	4,060	4,820	750	30,093
	301R4	**106**	17.0	14,900	4.5	11.0	71 to 132	N56C to N280TC	3,800	4,500	700	30,093
	301R4	**130**	13.9	15,000	3.7	11.0	71 to 132	N56C to N280TC	4,030	4,790	750	30,093
	301R4	**143**	12.6	11,500	2.6	11.0	71 to 132	N56C to N280TC	4,160	4,930	770	30,093
	301R4	**159**	11.3	15,200	3.1	11.0	71 to 132	N56C to N280TC	4,290	5,090	800	30,093
	301R4	**175**	10.3	15,300	2.8	11.0	71 to 132	N56C to N280TC	4,420	5,240	830	30,093
	301R4	**215**	8.4	15,700	2.4	11.0	71 to 132	N56C to N280TC	4,450	5,280	890	30,093
	301R4	**237**	7.6	11,500	1.6	11.0	71 to 132	N56C to N280TC	4,450	5,280	920	30,093
	301R4	**268**	6.7	16,200	1.9	11.0	71 to 132	N56C to N280TC	4,450	5,280	950	30,093
	301R4	**291**	6.2	16,300	1.8	11.0	71 to 132	N56C to N280TC	4,450	5,280	980	30,093
	301R4	**363**	5.0	16,800	1.5	11.0	71 to 132	N56C to N280TC	4,460	5,290	1,050	30,093
	301R4	**394**	4.6	11,700	0.96	11.0	71 to 132	N56C to N280TC	4,510	5,350	1,080	30,093
	301R4	**453**	4.0	16,700	1.2	11.0	71 to 132	N56C to N280TC	4,600	5,460	1,140	30,093
	301R4	**491**	3.7	12,100	0.80	11.0	71 to 132	N56C to N280TC	4,650	5,520	1,170	30,093
	301R4	**613**	2.9	12,600	0.66	11.0	71 to 132	N56C to N280TC	4,800	5,700	1,260	30,093
	301R4	**766**	2.3	13,100	0.55	11.0	71 to 132	N56C to N280TC	4,960	5,890	1,350	30,093
1200	**301R2**	**7.13**	168	9,840	20.1	18.0	71 to 132	N56C to N280TC	1,910	2,270	330	30,093
	301R2	**8.74**	137	10,300	20.1	18.0	71 to 132	N56C to N280TC	2,030	2,410	350	30,093
	301R2	**11.8**	101	10,900	18.7	18.0	71 to 132	N56C to N280TC	2,220	2,640	390	30,093
	301R2	**14.8**	81	8,840	12.1	18.0	71 to 132	N56C to N280TC	2,370	2,820	420	30,093
	301R2	**18.5**	65	6,550	7.2	18.0	71 to 132	N56C to N280TC	2,540	3,010	450	30,093



B

301 R

242

21,770 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**301R3**	**24.8**	48	12,700	10.6	18.0	71 to 132	N56C to N280TC	2,770	3,290	490	30,093
	301R3	**30.4**	39	14,200	9.7	18.0	71 to 132	N56C to N280TC	2,950	3,500	530	30,093
	301R3	**37.3**	32	14,300	8.0	18.0	71 to 132	N56C to N280TC	3,130	3,720	570	30,093
	301R3	**41.2**	29.2	11,500	5.8	18.0	71 to 132	N56C to N280TC	3,230	3,830	580	30,093
	301R3	**50.4**	23.8	14,600	6.0	18.0	71 to 132	N56C to N280TC	3,430	4,070	630	30,093
	301R3	**62.9**	19.1	14,800	4.9	18.0	71 to 132	N56C to N280TC	3,670	4,350	670	30,093
	301R3	**68.2**	17.6	11,500	3.5	18.0	71 to 132	N56C to N280TC	3,760	4,460	690	30,093
	301R3	**78.7**	15.3	14,000	3.7	18.0	71 to 132	N56C to N280TC	3,920	4,650	730	30,093
	301R3	**85.2**	14.1	11,500	2.8	18.0	71 to 132	N56C to N280TC	4,020	4,770	740	30,093
	301R3	**106**	11.3	11,500	2.3	18.0	71 to 132	N56C to N280TC	4,290	5,100	800	30,093
	301R3	**133**	9	10,200	1.6	18.0	71 to 132	N56C to N280TC	4,450	5,280	860	30,093
	301R4	**106**	11.3	15,200	3.1	15.0	71 to 132	N56C to N280TC	4,290	5,090	800	30,093
	301R4	**130**	9.3	15,500	2.6	15.0	71 to 132	N56C to N280TC	4,450	5,280	860	30,093
	301R4	**143**	8.4	11,500	1.7	15.0	71 to 132	N56C to N280TC	4,450	5,280	890	30,093
	301R4	**159**	7.6	15,900	2.2	15.0	71 to 132	N56C to N280TC	4,450	5,280	920	30,093
	301R4	**175**	6.8	16,100	2.0	15.0	71 to 132	N56C to N280TC	4,450	5,280	950	30,093
	301R4	**215**	5.6	16,600	1.7	15.0	71 to 132	N56C to N280TC	4,450	5,280	1,010	30,093
	301R4	**237**	5.1	11,500	1.0	15.0	71 to 132	N56C to N280TC	4,450	5,280	1,050	30,093
	301R4	**268**	4.5	17,100	1.4	15.0	71 to 132	N56C to N280TC	4,520	5,370	1,090	30,093
	301R4	**291**	4.1	17,400	1.3	15.0	71 to 132	N56C to N280TC	4,580	5,430	1,120	30,093
	301R4	**363**	3.3	18,100	1.1	15.0	71 to 132	N56C to N280TC	4,720	5,600	1,210	30,093
	301R4	**394**	3.0	12,500	0.68	15.0	71 to 132	N56C to N280TC	4,780	5,670	1,240	30,093
	301R4	**453**	2.6	17,600	0.83	15.0	71 to 132	N56C to N280TC	4,870	5,780	1,300	30,093
	301R4	**491**	2.4	13,000	0.57	15.0	71 to 132	N56C to N280TC	4,930	5,850	1,340	30,093
	301R4	**613**	2.0	13,500	0.47	15.0	71 to 132	N56C to N280TC	5,090	6,040	1,440	30,093
	301R4	**766**	1.6	14,100	0.39	15.0	71 to 132	N56C to N280TC	5,250	6,240	1,550	30,093

303 R

258

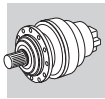
26,290 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**303R2**	**9.23**	195	14,100	46	19.8	71 to 132	N56C to N280TC	3,500	4,430	930	46,024
	303R2	**10.9**	165	15,900	44	19.8	71 to 132	N56C to N280TC	3,680	4,650	980	46,024
	303R2	**13.7**	132	16,500	37	19.8	71 to 132	N56C to N280TC	3,940	4,980	1,060	46,024
	303R2	**15.9**	113	15,500	29.6	19.8	71 to 132	N56C to N280TC	4,120	5,210	1,120	46,024
	303R2	**19.2**	94	13,400	21.2	19.8	71 to 132	N56C to N280TC	4,370	5,520	1,190	46,024
	303R2	**24.8**	73	7,610	9.3	19.8	71 to 132	N56C to N280TC	4,710	5,950	1,290	46,024
	303R3	**25.7**	70	17,000	20.1	15.4	71 to 132	N56C to N280TC	4,760	6,020	1,310	46,024
	303R3	**31.5**	57	17,800	17.7	15.4	71 to 132	N56C to N280TC	5,060	6,390	1,400	46,024
	303R3	**37.1**	48	20,800	17.6	15.4	71 to 132	N56C to N280TC	5,320	6,720	1,480	46,024
	303R3	**42.6**	42	18,100	13.3	15.4	71 to 132	N56C to N280TC	5,540	7,000	1,550	46,024
	303R3	**46.6**	39	19,000	12.8	15.4	71 to 132	N56C to N280TC	5,700	7,190	1,600	46,024
	303R3	**50.3**	36	20,800	12.9	15.4	71 to 132	N56C to N280TC	5,830	7,360	1,640	46,024
	303R3	**54.2**	33	16,100	9.3	15.4	71 to 132	N56C to N280TC	5,960	7,530	1,680	46,024
	303R3	**63.1**	28.5	19,100	9.5	15.4	71 to 132	N56C to N280TC	6,240	7,880	1,770	46,024
	303R3	**73.3**	24.5	16,100	6.9	15.4	71 to 132	N56C to N280TC	6,530	8,240	1,860	46,024
	303R3	**78.7**	22.9	19,200	7.6	15.4	71 to 132	N56C to N280TC	6,670	8,420	1,900	46,024
	303R3	**91.5**	19.7	16,100	5.5	15.4	71 to 132	N56C to N280TC	6,970	8,810	2,000	46,024
	303R3	**114**	15.7	16,100	4.4	15.4	71 to 132	N56C to N280TC	7,460	9,420	2,150	46,024
	303R4	**129**	13.9	23,000	5.7	13.2	71 to 132	N56C to N280TC	7,730	9,770	2,240	46,024
	303R4	**148**	12.1	20,200	4.4	13.2	71 to 132	N56C to N280TC	8,060	10,200	2,350	46,024

303 R

258

26,290 lb·in



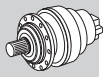
B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**303R4**	**158**	11.4	23,200	4.7	13.2	71 to 132	N56C to N280TC	8,220	10,400	2,400	46,024
	303R4	**185**	9.7	20,400	3.6	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,530	46,024
	303R4	**214**	8.4	23,800	3.6	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,650	46,024
	303R4	**231**	7.8	16,200	2.3	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,720	46,024
	303R4	**255**	7.1	16,200	2.0	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,810	46,024
	303R4	**290**	6.2	23,400	2.6	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,940	46,024
	303R4	**313**	5.8	16,200	1.7	13.2	71 to 132	N56C to N280TC	8,540	10,800	3,010	46,024
	303R4	**336**	5.4	19,700	1.9	13.2	71 to 132	N56C to N280TC	8,540	10,800	3,080	46,024
	303R4	**364**	4.9	19,800	1.8	13.2	71 to 132	N56C to N280TC	8,560	10,800	3,170	46,024
	303R4	**390**	4.6	16,500	1.4	13.2	71 to 132	N56C to N280TC	8,640	10,900	3,240	46,024
	303R4	**452**	4.0	19,900	1.4	13.2	71 to 132	N56C to N280TC	8,820	11,100	3,400	46,024
	303R4	**528**	3.4	17,400	1.1	13.2	71 to 132	N56C to N280TC	9,020	11,400	3,580	46,024
	303R4	**567**	3.2	21,000	1.2	13.2	71 to 132	N56C to N280TC	9,110	11,500	3,670	46,024
	303R4	**659**	2.7	18,100	0.89	13.2	71 to 132	N56C to N280TC	9,310	11,800	3,860	46,024
	303R4	**797**	2.3	15,700	0.64	13.2	71 to 132	N56C to N280TC	9,570	12,100	4,110	46,024
	303R4	**824**	2.2	18,800	0.74	13.2	71 to 132	N56C to N280TC	9,610	12,100	4,160	46,024
1200	**303R2**	**9.23**	130	15,900	35	27	71 to 132	N56C to N280TC	3,960	5,000	1,060	46,024
	303R2	**10.9**	110	18,000	33	27	71 to 132	N56C to N280TC	4,160	5,250	1,130	46,024
	303R2	**13.7**	88	18,100	26.9	27	71 to 132	N56C to N280TC	4,450	5,620	1,210	46,024
	303R2	**15.9**	76	16,100	20.5	27	71 to 132	N56C to N280TC	4,660	5,880	1,280	46,024
	303R2	**19.2**	62	14,200	14.9	27	71 to 132	N56C to N280TC	4,930	6,230	1,360	46,024
	303R2	**24.8**	48	7,610	6.2	27	71 to 132	N56C to N280TC	5,320	6,720	1,480	46,024
	303R3	**25.7**	47	18,900	15.4	21	71 to 132	N56C to N280TC	5,380	6,800	1,500	46,024
	303R3	**31.5**	38	18,900	12.5	21	71 to 132	N56C to N280TC	5,720	7,220	1,600	46,024
	303R3	**37.1**	32	21,500	12.1	21	71 to 132	N56C to N280TC	6,010	7,590	1,690	46,024
	303R3	**42.6**	28.2	18,500	9.1	21	71 to 132	N56C to N280TC	6,260	7,910	1,770	46,024
	303R3	**46.6**	25.7	19,200	8.6	21	71 to 132	N56C to N280TC	6,430	8,130	1,830	46,024
	303R3	**50.3**	23.9	21,500	8.9	21	71 to 132	N56C to N280TC	6,580	8,310	1,870	46,024
	303R3	**54.2**	22.1	16,100	6.2	21	71 to 132	N56C to N280TC	6,730	8,500	1,920	46,024
	303R3	**63.1**	19.0	19,300	6.4	21	71 to 132	N56C to N280TC	7,040	8,900	2,020	46,024
	303R3	**73.3**	16.4	16,100	4.6	21	71 to 132	N56C to N280TC	7,370	9,310	2,130	46,024
	303R3	**78.7**	15.2	19,300	5.1	21	71 to 132	N56C to N280TC	7,530	9,510	2,180	46,024
	303R3	**91.5**	13.1	16,100	3.7	21	71 to 132	N56C to N280TC	7,880	9,950	2,290	46,024
	303R3	**114**	10.5	16,100	2.9	21	71 to 132	N56C to N280TC	8,420	10,600	2,460	46,024
	303R4	**129**	9.3	23,600	3.9	18	71 to 132	N56C to N280TC	8,540	10,800	2,570	46,024
	303R4	**148**	8.1	20,400	3.0	18	71 to 132	N56C to N280TC	8,540	10,800	2,690	46,024
	303R4	**158**	7.6	24,000	3.3	18	71 to 132	N56C to N280TC	8,540	10,800	2,750	46,024
	303R4	**185**	6.5	20,400	2.4	18	71 to 132	N56C to N280TC	8,540	10,800	2,890	46,024
	303R4	**214**	5.6	24,600	2.5	18	71 to 132	N56C to N280TC	8,540	10,800	3,040	46,024
	303R4	**231**	5.2	16,300	1.5	18	71 to 132	N56C to N280TC	8,540	10,800	3,120	46,024
	303R4	**255**	4.7	16,500	1.4	18	71 to 132	N56C to N280TC	8,620	10,900	3,220	46,024
	303R4	**290**	4.1	23,600	1.7	18	71 to 132	N56C to N280TC	8,780	11,100	3,360	46,024
	303R4	**313**	3.8	17,100	1.2	18	71 to 132	N56C to N280TC	8,870	11,200	3,450	46,024
	303R4	**336**	3.6	20,900	1.3	18	71 to 132	N56C to N280TC	8,960	11,300	3,530	46,024
	303R4	**364**	3.3	21,200	1.3	18	71 to 132	N56C to N280TC	9,070	11,500	3,620	46,024
	303R4	**390**	3.1	17,700	0.98	18	71 to 132	N56C to N280TC	9,160	11,600	3,710	46,024
	303R4	**452**	2.7	19,900	0.95	18	71 to 132	N56C to N280TC	9,350	11,800	3,900	46,024
	303R4	**528**	2.3	18,700	0.76	18	71 to 132	N56C to N280TC	9,560	12,100	4,100	46,024
	303R4	**567**	2.1	22,300	0.85	18	71 to 132	N56C to N280TC	9,660	12,200	4,200	46,024
	303R4	**659**	1.8	19,500	0.63	18	71 to 132	N56C to N280TC	9,870	12,500	4,420	46,024
	303R4	**797**	1.5	16,700	0.45	18	71 to 132	N56C to N280TC	10,100	12,800	4,710	46,024
	303R4	**824**	1.5	20,200	0.53	18	71 to 132	N56C to N280TC	10,200	12,900	4,760	46,024

304 R

276

35,050 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**304R2**	**9.23**	195	14,100	46	19.8	71 to 132	N56C to N280TC	3,500	4,430	930	58,415
	304R2	**10.9**	165	16,600	46	19.8	71 to 132	N56C to N280TC	3,680	4,650	980	58,415
	304R2	**13.7**	132	20,900	46	19.8	71 to 132	N56C to N280TC	3,940	4,980	1,060	58,415
	304R2	**16.8**	107	20,700	37	19.8	71 to 132	N56C to N280TC	4,200	5,300	1,140	58,415
	304R3	**25.7**	70	26,200	20.1	15.4	71 to 132	N56C to N280TC	4,760	6,020	1,310	64,610
	304R3	**31.5**	57	26,800	20.1	15.4	71 to 132	N56C to N280TC	5,060	6,390	1,400	64,610
	304R3	**37.1**	48	30,400	20.1	15.4	71 to 132	N56C to N280TC	5,320	6,720	1,480	64,610
	304R3	**42.6**	42	27,900	20.1	15.4	71 to 132	N56C to N280TC	5,540	7,000	1,550	64,610
	304R3	**46.6**	39	25,200	16.9	15.4	71 to 132	N56C to N280TC	5,700	7,190	1,600	64,610
	304R3	**50.3**	36	30,600	19.0	15.4	71 to 132	N56C to N280TC	5,830	7,360	1,640	64,610
	304R3	**63.1**	28.5	25,200	12.5	15.4	71 to 132	N56C to N280TC	6,240	7,880	1,770	64,610
	304R3	**78.7**	22.9	25,200	10.0	15.4	71 to 132	N56C to N280TC	6,670	8,420	1,900	64,610
	304R3	**97**	18.6	21,200	6.8	15.4	71 to 132	N56C to N280TC	7,100	8,960	2,040	64,610
	304R3	**121**	14.8	21,200	5.5	15.4	71 to 132	N56C to N280TC	7,590	9,580	2,200	64,610
	304R4	**89.4**	20.1	29,200	10.5	13.2	71 to 132	N56C to N280TC	6,920	8,750	1,980	64,610
	304R4	**109**	16.4	29,500	8.7	13.2	71 to 132	N56C to N280TC	7,360	9,300	2,120	64,610
	304R4	**129**	13.9	31,100	7.8	13.2	71 to 132	N56C to N280TC	7,730	9,770	2,240	64,610
	304R4	**148**	12.1	30,100	6.6	13.2	71 to 132	N56C to N280TC	8,060	10,200	2,350	64,610
	304R4	**158**	11.4	31,300	6.4	13.2	71 to 132	N56C to N280TC	8,220	10,400	2,400	64,610
	304R4	**185**	9.7	30,500	5.3	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,530	64,610
	304R4	**214**	8.4	31,700	4.8	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,650	64,610
	304R4	**227**	7.9	30,600	4.4	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,700	64,610
	304R4	**267**	6.7	32,100	3.9	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,860	64,610
	304R4	**290**	6.2	32,200	3.6	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,940	64,610
	304R4	**307**	5.9	30,900	3.2	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,990	64,610
	304R4	**338**	5.3	21,200	2.0	13.2	71 to 132	N56C to N280TC	8,540	10,800	3,090	64,610
	304R4	**364**	4.9	25,300	2.2	13.2	71 to 132	N56C to N280TC	8,560	10,800	3,170	64,610
	304R4	**414**	4.4	21,400	1.7	13.2	71 to 132	N56C to N280TC	8,710	11,000	3,300	64,610
	304R4	**452**	4.0	32,500	2.3	13.2	71 to 132	N56C to N280TC	8,820	11,100	3,400	64,610
	304R4	**560**	3.2	22,100	1.3	13.2	71 to 132	N56C to N280TC	9,100	11,500	3,660	64,610
	304R4	**699**	2.6	22,600	1.0	13.2	71 to 132	N56C to N280TC	9,390	11,900	3,940	64,610
1200	**304R2**	**9.23**	130	15,900	35	27.0	71 to 132	N56C to N280TC	3,960	5,000	1,060	58,415
	304R2	**10.9**	110	18,700	35	27.0	71 to 132	N56C to N280TC	4,160	5,250	1,130	58,415
	304R2	**13.7**	88	23,100	34	27.0	71 to 132	N56C to N280TC	4,450	5,620	1,210	58,415
	304R2	**16.8**	71	21,200	25.4	27.0	71 to 132	N56C to N280TC	4,740	5,990	1,300	58,415
	304R3	**25.7**	47	27,400	20.1	21.0	71 to 132	N56C to N280TC	5,380	6,800	1,500	64,610
	304R3	**31.5**	38	27,800	18.4	21.0	71 to 132	N56C to N280TC	5,720	7,220	1,600	64,610
	304R3	**37.1**	32	30,600	17.2	21.0	71 to 132	N56C to N280TC	6,010	7,590	1,690	64,610
	304R3	**42.6**	28.2	28,600	14.0	21.0	71 to 132	N56C to N280TC	6,260	7,910	1,770	64,610
	304R3	**46.6**	25.7	25,200	11.3	21.0	71 to 132	N56C to N280TC	6,430	8,130	1,830	64,610
	304R3	**50.3**	23.9	30,800	12.8	21.0	71 to 132	N56C to N280TC	6,580	8,310	1,870	64,610
	304R3	**63.1**	19.0	25,200	8.3	21.0	71 to 132	N56C to N280TC	7,040	8,900	2,020	64,610
	304R3	**78.7**	15.2	25,200	6.7	21.0	71 to 132	N56C to N280TC	7,530	9,510	2,180	64,610
	304R3	**97**	12.4	21,200	4.5	21.0	71 to 132	N56C to N280TC	8,010	10,100	2,330	64,610
	304R3	**121**	9.9	21,200	3.6	21.0	71 to 132	N56C to N280TC	8,540	10,800	2,510	64,610
	304R4	**89.4**	13.4	29,900	7.2	18.0	71 to 132	N56C to N280TC	7,820	9,880	2,270	64,610
	304R4	**109**	11.0	30,300	5.9	18.0	71 to 132	N56C to N280TC	8,310	10,500	2,430	64,610
	304R4	**129**	9.3	31,500	5.2	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,570	64,610
	304R4	**148**	8.1	30,600	4.4	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,690	64,610
	304R4	**158**	7.6	31,900	4.3	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,750	64,610
	304R4	**185**	6.5	30,800	3.6	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,890	64,610
	304R4	**214**	5.6	32,400	3.3	18.0	71 to 132	N56C to N280TC	8,540	10,800	3,040	64,610

304 R

276

35,050 lb·in

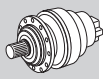
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**304R4**	**227**	5.3	30,900	2.9	18.0	71 to 132	N56C to N280TC	8,540	10,800	3,100	64,610
	304R4	**267**	4.5	32,700	2.6	18.0	71 to 132	N56C to N280TC	8,680	11,000	3,270	64,610
	304R4	**290**	4.1	32,800	2.4	18.0	71 to 132	N56C to N280TC	8,780	11,100	3,360	64,610
	304R4	**307**	3.9	31,000	2.2	18.0	71 to 132	N56C to N280TC	8,850	11,200	3,420	64,610
	304R4	**338**	3.6	21,900	1.4	18.0	71 to 132	N56C to N280TC	8,970	11,300	3,540	64,610
	304R4	**364**	3.3	27,000	1.6	18.0	71 to 132	N56C to N280TC	9,070	11,500	3,620	64,610
	304R4	**414**	2.9	22,300	1.2	18.0	71 to 132	N56C to N280TC	9,230	11,700	3,780	64,610
	304R4	**452**	2.7	32,800	1.6	18.0	71 to 132	N56C to N280TC	9,350	11,800	3,900	64,610
	304R4	**560**	2.1	23,300	0.89	18.0	71 to 132	N56C to N280TC	9,640	12,200	4,180	64,610
	304R4	**699**	1.7	24,200	0.74	18.0	71 to 132	N56C to N280TC	9,950	12,600	4,510	64,610

305 R

294

51,330 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**305R2**	**9.23**	195	14,100	46	19.8	71 to 132	N56C to N280TC	3,500	4,430	930	68,151
	305R2	**10.9**	165	16,600	46	19.8	71 to 132	N56C to N280TC	3,680	4,650	980	68,151
	305R2	**13.7**	132	20,900	46	19.8	71 to 132	N56C to N280TC	3,940	4,980	1,060	68,151
	305R2	**15.9**	113	24,200	46	19.8	71 to 132	N56C to N280TC	4,120	5,210	1,120	68,151
	305R2	**19.2**	94	24,900	39	19.8	71 to 132	N56C to N280TC	4,370	5,520	1,190	68,151
	305R3	**25.7**	70	30,400	20.1	15.4	71 to 132	N56C to N280TC	4,760	6,020	1,310	77,887
	305R3	**31.5**	57	31,900	20.1	15.4	71 to 132	N56C to N280TC	5,060	6,390	1,400	77,887
	305R3	**37.1**	48	37,400	20.1	15.4	71 to 132	N56C to N280TC	5,320	6,720	1,480	77,887
	305R3	**42.6**	42	32,800	20.1	15.4	71 to 132	N56C to N280TC	5,540	7,000	1,550	77,887
	305R3	**46.6**	39	38,000	20.1	15.4	71 to 132	N56C to N280TC	5,700	7,190	1,600	77,887
	305R3	**50.3**	36	37,900	20.1	15.4	71 to 132	N56C to N280TC	5,830	7,360	1,640	77,887
	305R3	**54.2**	33	31,500	18.2	15.4	71 to 132	N56C to N280TC	5,960	7,530	1,680	77,887
	305R3	**63.1**	28.5	38,200	19.0	15.4	71 to 132	N56C to N280TC	6,240	7,880	1,770	77,887
	305R3	**73.3**	24.5	31,600	13.5	15.4	71 to 132	N56C to N280TC	6,530	8,240	1,860	77,887
	305R3	**78.7**	22.9	38,400	15.3	15.4	71 to 132	N56C to N280TC	6,670	8,420	1,900	77,887
	305R3	**91.5**	19.7	31,700	10.8	15.4	71 to 132	N56C to N280TC	6,970	8,810	2,000	77,887
	305R3	**114**	15.7	31,600	8.6	15.4	71 to 132	N56C to N280TC	7,460	9,420	2,150	77,887
	305R4	**129**	13.9	44,900	11.2	13.2	71 to 132	N56C to N280TC	7,730	9,770	2,240	77,887
	305R4	**148**	12.1	38,900	8.5	13.2	71 to 132	N56C to N280TC	8,060	10,200	2,350	77,887
	305R4	**158**	11.4	46,100	9.4	13.2	71 to 132	N56C to N280TC	8,220	10,400	2,400	77,887
	305R4	**185**	9.7	39,700	6.9	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,530	77,887
	305R4	**214**	8.4	47,300	7.1	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,650	77,887
	305R4	**231**	7.8	31,900	4.4	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,720	77,887
	305R4	**255**	7.1	31,900	4.0	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,810	77,887
	305R4	**290**	6.2	46,700	5.2	13.2	71 to 132	N56C to N280TC	8,540	10,800	2,940	77,887
	305R4	**313**	5.8	31,900	3.3	13.2	71 to 132	N56C to N280TC	8,540	10,800	3,010	77,887
	305R4	**336**	5.4	39,500	3.8	13.2	71 to 132	N56C to N280TC	8,540	10,800	3,080	77,887
	305R4	**364**	4.9	39,600	3.5	13.2	71 to 132	N56C to N280TC	8,560	10,800	3,170	77,887
	305R4	**390**	4.6	32,300	2.7	13.2	71 to 132	N56C to N280TC	8,640	10,900	3,240	77,887
	305R4	**452**	4.0	42,000	3.0	13.2	71 to 132	N56C to N280TC	8,820	11,100	3,400	77,887
	305R4	**528**	3.4	33,800	2.1	13.2	71 to 132	N56C to N280TC	9,020	11,400	3,580	77,887
	305R4	**567**	3.2	42,000	2.4	13.2	71 to 132	N56C to N280TC	9,110	11,500	3,670	77,887
	305R4	**659**	2.7	34,900	1.7	13.2	71 to 132	N56C to N280TC	9,310	11,800	3,860	77,887
	305R4	**797**	2.3	29,700	1.2	13.2	71 to 132	N56C to N280TC	9,570	12,100	4,110	77,887
	305R4	**824**	2.2	36,200	1.4	13.2	71 to 132	N56C to N280TC	9,610	12,100	4,160	77,887



B

305 R

294

51,330 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\,max}$ lb·in
1200	**305R2**	**9.23**	130	15,900	35	27	71 to 132	N56C to N280TC	3,960	5,000	1,060	68,151
	305R2	**10.9**	110	18,700	35	27	71 to 132	N56C to N280TC	4,160	5,250	1,130	68,151
	305R2	**13.7**	88	23,600	35	27	71 to 132	N56C to N280TC	4,450	5,620	1,210	68,151
	305R2	**15.9**	76	27,400	35	27	71 to 132	N56C to N280TC	4,660	5,880	1,280	68,151
	305R2	**19.2**	62	25,900	27.3	27	71 to 132	N56C to N280TC	4,930	6,230	1,360	68,151
	305R3	**25.7**	47	33,900	20.1	21	71 to 132	N56C to N280TC	5,380	6,800	1,500	77,887
	305R3	**31.5**	38	34,200	20.1	21	71 to 132	N56C to N280TC	5,720	7,220	1,600	77,887
	305R3	**37.1**	32	39,700	20.1	21	71 to 132	N56C to N280TC	6,010	7,590	1,690	77,887
	305R3	**42.6**	28.2	34,500	16.9	21	71 to 132	N56C to N280TC	6,260	7,910	1,770	77,887
	305R3	**46.6**	25.7	38,300	17.1	21	71 to 132	N56C to N280TC	6,430	8,130	1,830	77,887
	305R3	**50.3**	23.9	40,400	16.8	21	71 to 132	N56C to N280TC	6,580	8,310	1,870	77,887
	305R3	**54.2**	22.1	31,600	12.2	21	71 to 132	N56C to N280TC	6,730	8,500	1,920	77,887
	305R3	**63.1**	19.0	38,500	12.7	21	71 to 132	N56C to N280TC	7,040	8,900	2,020	77,887
	305R3	**73.3**	16.4	31,700	9.0	21	71 to 132	N56C to N280TC	7,370	9,310	2,130	77,887
	305R3	**78.7**	15.2	38,700	10.2	21	71 to 132	N56C to N280TC	7,530	9,510	2,180	77,887
	305R3	**91.5**	13.1	31,800	7.2	21	71 to 132	N56C to N280TC	7,880	9,950	2,290	77,887
	305R3	**114**	10.5	31,800	5.8	21	71 to 132	N56C to N280TC	8,420	10,600	2,460	77,887
	305R4	**129**	9.3	47,100	7.8	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,570	77,887
	305R4	**148**	8.1	39,700	5.8	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,690	77,887
	305R4	**158**	7.6	47,500	6.5	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,750	77,887
	305R4	**185**	6.5	39,700	4.6	18.0	71 to 132	N56C to N280TC	8,540	10,800	2,890	77,887
	305R4	**214**	5.6	48,200	4.8	18.0	71 to 132	N56C to N280TC	8,540	10,800	3,040	77,887
	305R4	**231**	5.2	31,900	3.0	18.0	71 to 132	N56C to N280TC	8,540	10,800	3,120	77,887
	305R4	**255**	4.7	32,200	2.7	18.0	71 to 132	N56C to N280TC	8,620	10,900	3,220	77,887
	305R4	**290**	4.1	47,100	3.5	18.0	71 to 132	N56C to N280TC	8,780	11,100	3,360	77,887
	305R4	**313**	3.8	33,200	2.3	18.0	71 to 132	N56C to N280TC	8,870	11,200	3,450	77,887
	305R4	**336**	3.6	41,900	2.7	18.0	71 to 132	N56C to N280TC	8,960	11,300	3,530	77,887
	305R4	**364**	3.3	42,500	2.5	18.0	71 to 132	N56C to N280TC	9,070	11,500	3,620	77,887
	305R4	**390**	3.1	34,300	1.9	18.0	71 to 132	N56C to N280TC	9,160	11,600	3,710	77,887
	305R4	**452**	2.7	42,000	2.0	18.0	71 to 132	N56C to N280TC	9,350	11,800	3,900	77,887
	305R4	**528**	2.3	36,000	1.5	18.0	71 to 132	N56C to N280TC	9,560	12,100	4,100	77,887
	305R4	**567**	2.1	44,400	1.7	18.0	71 to 132	N56C to N280TC	9,660	12,200	4,200	77,887
	305R4	**659**	1.8	37,400	1.2	18.0	71 to 132	N56C to N280TC	9,870	12,500	4,420	77,887
	305R4	**797**	1.5	31,600	0.85	18.0	71 to 132	N56C to N280TC	10,100	12,800	4,710	77,887
	305R4	**824**	1.5	38,900	1.0	18.0	71 to 132	N56C to N280TC	10,200	12,900	4,760	77,887

306 R

312

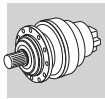
95,940 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\,max}$ lb·in
1800	**306R2**	**9.23**	195	14,100	46	19.8	71 to 160	N56C to N280TC	4,810	6,070	1,360	106,209
	306R2	**10.9**	165	16,600	46	19.8	71 to 160	N56C to N280TC	5,060	6,380	1,430	106,209
	306R2	**13.7**	132	20,900	46	19.8	71 to 160	N56C to N280TC	5,420	6,830	1,550	106,209
	306R2	**15.9**	113	24,200	46	19.8	71 to 160	N56C to N280TC	5,670	7,140	1,630	106,209
	306R2	**19.2**	94	29,200	46	19.8	71 to 160	N56C to N280TC	6,000	7,560	1,730	106,209
	306R3	**33.2**	54	49,100	46	15.4	71 to 160	N56C to N280TC	7,070	8,910	2,080	131,876
	306R3	**39.2**	46	55,300	44	15.4	71 to 160	N56C to N280TC	7,430	9,360	2,200	131,876
	306R3	**46.3**	39	64,000	43	15.4	71 to 160	N56C to N280TC	7,810	9,840	2,320	131,876
	306R3	**58.1**	31	64,800	35	15.4	71 to 160	N56C to N280TC	8,360	10,500	2,510	131,876
	306R3	**67.5**	26.7	61,800	28.6	15.4	71 to 160	N56C to N280TC	8,740	11,000	2,630	131,876
	306R3	**72.9**	24.7	64,500	27.7	15.4	71 to 160	N56C to N280TC	8,950	11,300	2,700	131,876

306 R

312

95,940 lb·in



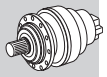
B

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**306R3**	**84.7**	21.2	65,400	24.2	15.4	71 to 160	N56C to N280TC	9,360	11,800	2,840	131,876
	306R3	**98.5**	18.3	57,400	18.2	15.4	71 to 160	N56C to N280TC	9,790	12,300	2,990	131,876
	306R3	**119**	15.1	57,400	15.1	15.4	71 to 160	N56C to N280TC	10,400	13,100	3,180	131,876
	306R3	**144**	12.5	48,100	10.4	15.4	71 to 160	N56C to N280TC	11,000	13,800	3,390	131,876
	306R4	**158**	11.4	82,700	16.9	13.2	71 to 160	N56C to N280TC	11,300	14,200	3,500	131,876
	306R4	**168**	10.7	66,000	12.7	13.2	71 to 160	N56C to N280TC	11,500	14,500	3,570	131,876
	306R4	**181**	9.9	83,600	14.9	13.2	71 to 160	N56C to N280TC	11,700	14,800	3,660	131,876
	306R4	**214**	8.4	85,500	12.9	13.2	71 to 160	N56C to N280TC	11,700	14,800	3,870	131,876
	306R4	**230**	7.8	67,200	9.4	13.2	71 to 160	N56C to N280TC	11,700	14,800	3,960	131,876
	306R4	**249**	7.2	71,800	9.3	13.2	71 to 160	N56C to N280TC	11,700	14,800	4,070	131,876
	306R4	**289**	6.2	72,500	8.1	13.2	71 to 160	N56C to N280TC	11,700	14,800	4,280	131,876
	306R4	**312**	5.8	67,200	7.0	13.2	71 to 160	N56C to N280TC	11,700	14,800	4,390	131,876
	306R4	**389**	4.6	67,200	5.6	13.2	71 to 160	N56C to N280TC	11,900	15,000	4,720	131,876
	306R4	**420**	4.3	75,400	5.8	13.2	71 to 160	N56C to N280TC	12,000	15,100	4,840	131,876
	306R4	**455**	4.0	60,200	4.3	13.2	71 to 160	N56C to N280TC	12,100	15,300	4,970	131,876
	306R4	**488**	3.7	77,400	5.1	13.2	71 to 160	N56C to N280TC	12,300	15,400	5,090	131,876
	306R4	**550**	3.3	62,200	3.7	13.2	71 to 160	N56C to N280TC	12,500	15,700	5,300	131,876
	306R4	**590**	3.0	73,400	4.0	13.2	71 to 160	N56C to N280TC	12,600	15,900	5,430	131,876
	306R4	**665**	2.7	51,800	2.5	13.2	71 to 160	N56C to N280TC	12,800	16,100	5,650	131,876
	306R4	**830**	2.2	53,600	2.1	13.2	71 to 160	N56C to N280TC	13,200	16,700	6,080	131,876
1200	**306R2**	**9.23**	130	15,900	35	27	71 to 160	N56C to N280TC	5,440	6,850	1,550	106,209
	306R2	**10.9**	110	18,700	35	27	71 to 160	N56C to N280TC	5,710	7,200	1,640	106,209
	306R2	**13.7**	88	23,600	35	27	71 to 160	N56C to N280TC	6,120	7,710	1,770	106,209
	306R2	**15.9**	76	27,400	35	27	71 to 160	N56C to N280TC	6,400	8,060	1,860	106,209
	306R2	**19.2**	62	33,000	35	27	71 to 160	N56C to N280TC	6,770	8,540	1,980	106,209
	306R3	**33.2**	36	53,900	34	21	71 to 160	N56C to N280TC	7,980	10,100	2,380	131,876
	306R3	**39.2**	31	61,500	33	21	71 to 160	N56C to N280TC	8,390	10,600	2,520	131,876
	306R3	**46.3**	25.9	69,600	31	21	71 to 160	N56C to N280TC	8,820	11,100	2,660	131,876
	306R3	**58.1**	20.7	70,100	25.2	21	71 to 160	N56C to N280TC	9,440	11,900	2,870	131,876
	306R3	**67.5**	17.8	64,000	19.8	21	71 to 160	N56C to N280TC	9,880	12,400	3,020	131,876
	306R3	**72.9**	16.5	67,100	19.2	21	71 to 160	N56C to N280TC	10,100	12,700	3,090	131,876
	306R3	**84.7**	14.2	68,000	16.8	21	71 to 160	N56C to N280TC	10,600	13,300	3,250	131,876
	306R3	**98.5**	12.2	57,500	12.2	21	71 to 160	N56C to N280TC	11,100	13,900	3,420	131,876
	306R3	**119**	10.1	57,500	10.1	21	71 to 160	N56C to N280TC	11,700	14,800	3,640	131,876
	306R3	**144**	8.3	48,700	7.0	21	71 to 160	N56C to N280TC	11,700	14,800	3,880	131,876
	306R4	**158**	7.6	85,800	11.7	18.0	71 to 160	N56C to N280TC	11,700	14,800	4,000	131,876
	306R4	**168**	7.2	67,400	8.6	18.0	71 to 160	N56C to N280TC	11,700	14,800	4,080	131,876
	306R4	**181**	6.6	83,600	9.9	18.0	71 to 160	N56C to N280TC	11,700	14,800	4,190	131,876
	306R4	**214**	5.6	86,800	8.7	18.0	71 to 160	N56C to N280TC	11,700	14,800	4,430	131,876
	306R4	**230**	5.2	67,200	6.3	18.0	71 to 160	N56C to N280TC	11,700	14,800	4,540	131,876
	306R4	**249**	4.8	73,900	6.4	18.0	71 to 160	N56C to N280TC	11,800	14,900	4,660	131,876
	306R4	**289**	4.2	75,800	5.6	18.0	71 to 160	N56C to N280TC	12,100	15,200	4,900	131,876
	306R4	**312**	3.9	67,200	4.6	18.0	71 to 160	N56C to N280TC	12,200	15,400	5,020	131,876
	306R4	**389**	3.1	67,200	3.7	18.0	71 to 160	N56C to N280TC	12,600	15,800	5,400	131,876
	306R4	**420**	2.9	80,900	4.1	18.0	71 to 160	N56C to N280TC	12,700	16,000	5,540	131,876
	306R4	**455**	2.6	64,600	3.1	18.0	71 to 160	N56C to N280TC	12,900	16,200	5,690	131,876
	306R4	**488**	2.5	82,800	3.6	18.0	71 to 160	N56C to N280TC	13,000	16,400	5,830	131,876
	306R4	**550**	2.2	66,600	2.6	18.0	71 to 160	N56C to N280TC	13,200	16,700	6,070	131,876
	306R4	**590**	2.0	77,100	2.8	18.0	71 to 160	N56C to N280TC	13,300	16,800	6,210	131,876
	306R4	**665**	1.8	55,500	1.8	18.0	71 to 160	N56C to N280TC	13,600	17,100	6,460	131,876
	306R4	**830**	1.4	57,800	1.5	18.0	71 to 160	N56C to N280TC	14,000	17,700	6,960	131,876

307 R

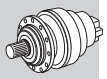
330

138,780 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**307R2**	**13.0**	139	42,800	100	39	132 to 200	N56C to N280TC	6,670	9,060	1,950	164,624
	307R2	**15.5**	116	51,100	100	39	132 to 200	N56C to N280TC	7,030	9,560	2,070	185,866
	307R2	**19.8**	91	65,500	100	39	132 to 200	N56C to N280TC	7,570	10,300	2,250	185,866
	307R2	**23.5**	76	68,800	89	39	132 to 200	N56C to N280TC	7,970	10,800	2,380	185,866
	307R3	**31.6**	57	46,700	46	24	71 to 160	N56C to N280TC	8,710	11,800	2,630	164,624
	307R3	**37.7**	48	55,700	46	24	71 to 160	N56C to N280TC	9,190	12,500	2,790	185,866
	307R3	**44.6**	40	65,900	46	24	71 to 160	N56C to N280TC	9,660	13,100	2,950	185,866
	307R3	**55.9**	32	82,600	46	24	71 to 160	N56C to N280TC	10,300	14,100	3,180	185,866
	307R3	**65.0**	27.7	93,000	45	24	71 to 160	N56C to N280TC	10,800	14,700	3,340	185,866
	307R3	**71.8**	25.1	87,900	38	24	71 to 160	N56C to N280TC	11,100	15,100	3,460	185,866
	307R3	**78.6**	22.9	95,600	38	24	71 to 160	N56C to N280TC	11,500	15,600	3,560	185,866
	307R3	**83.4**	21.6	89,100	33	24	71 to 160	N56C to N280TC	11,700	15,800	3,630	185,866
	307R3	**99.0**	18.2	75,500	23.9	24	71 to 160	N56C to N280TC	12,300	16,700	3,850	185,866
	307R3	**120**	15.0	75,900	19.8	24	71 to 160	N56C to N280TC	13,000	17,700	4,100	185,866
	307R4	**152**	11.8	115,300	20.1	16.5	71 to 160	N56C to N280TC	14,000	19,000	4,440	185,866
	307R4	**165**	10.9	94,800	18.5	16.5	71 to 160	N56C to N280TC	14,300	19,500	4,560	185,866
	307R4	**191**	9.4	120,500	20.1	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,790	185,866
	307R4	**206**	8.8	121,800	19.1	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,910	185,866
	307R4	**232**	7.8	97,100	13.5	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,110	185,866
	307R4	**258**	7.0	125,800	15.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,290	185,866
	307R4	**284**	6.3	98,500	11.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,470	185,866
	307R4	**300**	6.0	122,800	13.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,570	185,866
	307R4	**331**	5.4	99,500	9.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,750	185,866
	307R4	**363**	5.0	108,900	9.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	5,930	185,866
	307R4	**413**	4.4	102,400	8.0	16.5	71 to 160	N56C to N280TC	15,000	20,400	6,190	185,866
	307R4	**453**	4.0	116,800	8.3	16.5	71 to 160	N56C to N280TC	15,200	20,600	6,390	185,866
	307R4	**490**	3.7	80,500	5.3	16.5	71 to 160	N56C to N280TC	15,300	20,900	6,560	185,866
	307R4	**581**	3.1	108,500	6.0	16.5	71 to 160	N56C to N280TC	15,700	21,400	6,940	185,866
	307R4	**690**	2.6	84,500	3.9	16.5	71 to 160	N56C to N280TC	16,100	21,900	7,350	185,866
1200	**307R2**	**13.0**	93	48,400	76	53	132 to 200	N56C to N280TC	7,530	10,200	2,240	164,624
	307R2	**15.5**	78	57,700	76	53	132 to 200	N56C to N280TC	7,940	10,800	2,370	185,866
	307R2	**19.8**	61	74,000	75	53	132 to 200	N56C to N280TC	8,550	11,600	2,580	185,866
	307R2	**23.5**	51	72,700	63	53	132 to 200	N56C to N280TC	9,010	12,200	2,730	185,866
	307R3	**31.6**	38	52,200	34	33	71 to 160	N56C to N280TC	9,840	13,400	3,010	164,624
	307R3	**37.7**	32	63,000	35	33	71 to 160	N56C to N280TC	10,400	14,100	3,190	185,866
	307R3	**44.6**	26.9	74,400	35	33	71 to 160	N56C to N280TC	10,900	14,800	3,370	185,866
	307R3	**55.9**	21.5	93,300	35	33	71 to 160	N56C to N280TC	11,700	15,900	3,640	185,866
	307R3	**65.0**	18.5	102,800	33	33	71 to 160	N56C to N280TC	12,200	16,600	3,830	185,866
	307R3	**71.8**	16.7	91,200	26.5	33	71 to 160	N56C to N280TC	12,600	17,100	3,960	185,866
	307R3	**78.6**	15.3	101,900	27.0	33	71 to 160	N56C to N280TC	12,900	17,600	4,080	185,866
	307R3	**83.4**	14.4	92,400	23.1	33	71 to 160	N56C to N280TC	13,200	17,900	4,160	185,866
	307R3	**99.0**	12.1	76,500	16.1	33	71 to 160	N56C to N280TC	13,900	18,800	4,400	185,866
	307R3	**120**	10.0	77,000	13.4	33	71 to 160	N56C to N280TC	14,700	20,000	4,690	185,866
	307R4	**152**	7.9	123,600	17.5	23	71 to 160	N56C to N280TC	14,700	20,000	5,080	185,866
	307R4	**165**	7.3	97,600	12.7	23	71 to 160	N56C to N280TC	14,700	20,000	5,220	185,866
	307R4	**191**	6.3	127,600	14.4	23	71 to 160	N56C to N280TC	14,700	20,000	5,480	185,866
	307R4	**206**	5.8	129,000	13.5	23	71 to 160	N56C to N280TC	14,700	20,000	5,620	185,866
	307R4	**232**	5.2	99,800	9.2	23	71 to 160	N56C to N280TC	14,700	20,000	5,850	185,866
	307R4	**258**	4.7	131,800	11	23	71 to 160	N56C to N280TC	14,800	20,200	6,060	185,866
	307R4	**284**	4.2	102,900	7.8	23	71 to 160	N56C to N280TC	15,000	20,500	6,260	185,866
	307R4	**300**	4.0	124,000	8.9	23	71 to 160	N56C to N280TC	15,200	20,600	6,370	185,866
	307R4	**331**	3.6	105,600	6.9	23	71 to 160	N56C to N280TC	15,400	20,900	6,590	185,866
	307R4	**363**	3.3	108,900	6.5	23	71 to 160	N56C to N280TC	15,600	21,200	6,790	185,866
	307R4	**413**	2.9	109,600	5.7	23	71 to 160	N56C to N280TC	15,900	21,600	7,090	185,866
	307R4	**453**	2.6	121,500	5.8	23	71 to 160	N56C to N280TC	16,100	21,900	7,310	185,866
	307R4	**490**	2.4	85,200	3.7	23	71 to 160	N56C to N280TC	16,300	22,100	7,510	185,866
	307R4	**581**	2.1	115,300	4.3	23	71 to 160	N56C to N280TC	16,700	22,700	7,940	185,866
	307R4	**690**	1.7	89,700	2.8	23	71 to 160	N56C to N280TC	17,100	23,200	8,410	185,866

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**309R2**	**13.0**	139	42,800	100	39	132 to 200	—	6,670	9,060	1,560	242,511
	309R2	**15.5**	116	51,100	100	39	132 to 200	—	7,030	9,560	1,660	242,511
	309R2	**19.8**	91	65,500	100	39	132 to 200	—	7,570	10,300	1,800	242,511
	309R2	**23.5**	76	77,800	100	39	132 to 200	—	7,970	10,800	1,910	242,511
	309R3	**31.6**	57	46,700	46	24	71 to 160	N250TC to N280TC	8,710	11,800	2,100	246,936
	309R3	**37.7**	48	55,700	46	24	71 to 160	N250TC to N280TC	9,190	12,500	2,230	256,672
	309R3	**44.6**	40	65,900	46	24	71 to 160	N250TC to N280TC	9,660	13,100	2,360	256,672
	309R3	**55.9**	32	82,600	46	24	71 to 160	N250TC to N280TC	10,300	14,100	2,540	256,672
	309R3	**65.0**	27.7	94,300	45	24	71 to 160	N250TC to N280TC	10,800	14,700	2,670	256,672
	309R3	**71.8**	25.1	106,000	46	24	71 to 160	N250TC to N280TC	11,100	15,100	2,760	256,672
	309R3	**83.4**	21.6	118,200	44	24	71 to 160	N250TC to N280TC	11,700	15,800	2,910	256,672
	309R3	**99.0**	18.2	112,400	36	24	71 to 160	N250TC to N280TC	12,300	16,700	3,080	256,672
	309R3	**120**	15.0	113,600	29.7	24	71 to 160	N250TC to N280TC	13,000	17,700	3,280	256,672
	309R4	**152**	11.8	156,300	20.1	16.5	71 to 160	N56C to N280TC	14,000	19,000	3,550	256,672
	309R4	**165**	10.9	141,500	20.1	16.5	71 to 160	N56C to N280TC	14,300	19,500	3,650	256,672
	309R4	**191**	9.4	152,000	20.1	16.5	71 to 160	N56C to N280TC	14,700	20,000	3,830	256,672
	309R4	**206**	8.8	168,800	20.1	16.5	71 to 160	N56C to N280TC	14,700	20,000	3,930	256,672
	309R4	**232**	7.8	145,700	20.1	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,090	256,672
	309R4	**258**	7.0	153,300	19.2	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,240	256,672
	309R4	**284**	6.3	147,600	16.7	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,380	256,672
	309R4	**331**	5.4	149,100	14.5	16.5	71 to 160	N56C to N280TC	14,700	20,000	4,600	256,672
	309R4	**374**	4.8	126,600	10.9	16.5	71 to 160	N56C to N280TC	14,800	20,100	4,800	256,672
	309R4	**413**	4.4	153,500	12.0	16.5	71 to 160	N56C to N280TC	15,000	20,400	4,960	256,672
	309R4	**457**	3.9	119,200	8.4	16.5	71 to 160	N56C to N280TC	15,200	20,700	5,120	256,672
	309R4	**490**	3.7	120,400	7.9	16.5	71 to 160	N56C to N280TC	15,300	20,900	5,250	256,672
	309R4	**581**	3.1	139,800	7.8	16.5	71 to 160	N56C to N280TC	15,700	21,400	5,550	256,672
	309R4	**690**	2.6	126,600	5.9	16.5	71 to 160	N56C to N280TC	16,100	21,900	5,880	256,672
1200	**309R2**	**13.0**	93	48,400	76	53	132 to 200	—	7,530	10,200	1,790	242,511
	309R2	**15.5**	78	57,700	76	53	132 to 200	—	7,940	10,800	1,900	242,511
	309R2	**19.8**	61	74,000	75	53	132 to 200	—	8,550	11,600	2,060	242,511
	309R2	**23.5**	51	87,800	75	53	132 to 200	—	9,010	12,200	2,180	242,511
	309R3	**31.6**	38	52,800	35	33	71 to 160	N250TC to N280TC	9,840	13,400	2,410	246,936
	309R3	**37.7**	32	63,000	35	33	71 to 160	N250TC to N280TC	10,400	14,100	2,550	256,672
	309R3	**44.6**	26.9	74,400	35	33	71 to 160	N250TC to N280TC	10,900	14,800	2,700	256,672
	309R3	**55.9**	21.5	93,300	35	33	71 to 160	N250TC to N280TC	11,700	15,900	2,910	256,672
	309R3	**65.0**	18.5	105,200	34	33	71 to 160	N250TC to N280TC	12,200	16,600	3,060	256,672
	309R3	**71.8**	16.7	119,800	35	33	71 to 160	N250TC to N280TC	12,600	17,100	3,160	256,672
	309R3	**83.4**	14.4	130,800	33	33	71 to 160	N250TC to N280TC	13,200	17,900	3,330	256,672
	309R3	**99.0**	12.1	114,200	24.1	33	71 to 160	N250TC to N280TC	13,900	18,800	3,520	256,672
	309R3	**120**	10.0	115,100	20.0	33	71 to 160	N250TC to N280TC	14,700	20,000	3,750	256,672
	309R4	**152**	7.9	172,200	20.1	23	71 to 160	N56C to N280TC	14,700	20,000	4,060	256,672
	309R4	**165**	7.3	146,300	19.0	23	71 to 160	N56C to N280TC	14,700	20,000	4,180	256,672
	309R4	**191**	6.3	153,800	17.3	23	71 to 160	N56C to N280TC	14,700	20,000	4,380	256,672
	309R4	**206**	5.8	182,600	19.1	23	71 to 160	N56C to N280TC	14,700	20,000	4,500	256,672
	309R4	**232**	5.2	149,600	13.9	23	71 to 160	N56C to N280TC	14,700	20,000	4,680	256,672
	309R4	**258**	4.7	154,900	12.9	23	71 to 160	N56C to N280TC	14,800	20,200	4,850	256,672
	309R4	**284**	4.2	152,400	11.5	23	71 to 160	N56C to N280TC	15,000	20,500	5,010	256,672
	309R4	**331**	3.6	158,400	10.3	23	71 to 160	N56C to N280TC	15,400	20,900	5,270	256,672
	309R4	**374**	3.2	126,600	7.3	23	71 to 160	N56C to N280TC	15,600	21,300	5,490	256,672
	309R4	**413**	2.9	164,500	8.6	23	71 to 160	N56C to N280TC	15,900	21,600	5,670	256,672
	309R4	**457**	2.6	126,500	6.0	23	71 to 160	N56C to N280TC	16,100	21,900	5,870	256,672
	309R4	**490**	2.4	128,000	5.6	23	71 to 160	N56C to N280TC	16,300	22,100	6,010	256,672



309 R

348

205,690 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**309R4**	**581**	2.1	139,800	5.2	23	71 to 160	N56C to N280TC	16,700	22,700	6,360	256,672
	309R4	**690**	1.7	136,100	4.2	23	71 to 160	N56C to N280TC	17,100	23,200	6,730	256,672

310M R

364

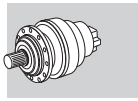
297,740 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**310MR2B**	**12.0**	150	99,300	174	61	160 to 225	N320TC to N360TC	7,650	9,870	2,750	421,296
	310MR2B	**15.4**	117	127,500	174	61	160 to 225	N320TC to N360TC	8,240	10,600	2,990	421,296
	310MR2B	**18.3**	98	147,300	174	61	160 to 225	N320TC to N360TC	8,670	11,200	3,170	421,296
	310MR2C	**16.6**	108	125,400	174	61	160 to 250	N320TC to N360TC	8,430	10,900	3,070	421,296
	310MR2C	**21.3**	84	156,700	174	61	160 to 250	N320TC to N360TC	9,080	11,700	3,330	421,296
	310MR2C	**25.3**	71	152,200	174	61	160 to 250	N320TC to N360TC	9,560	12,300	3,530	421,296
	310MR3	**37.7**	48	54,300	45	24	71 to 160	N56C to N280TC	10,800	13,900	4,030	421,296
	310MR3	**44.6**	40	64,100	45	24	71 to 160	N56C to N280TC	11,300	14,600	4,260	421,296
	310MR3	**55.9**	32	80,400	45	24	71 to 160	N56C to N280TC	12,100	15,700	4,590	421,296
	310MR3	**65.0**	27.7	93,500	45	24	71 to 160	N56C to N280TC	12,700	16,400	4,830	421,296
	310MR3	**71.8**	25.1	103,200	45	24	71 to 160	N56C to N280TC	13,100	16,900	4,990	421,296
	310MR3	**78.6**	22.9	113,100	45	24	71 to 160	N56C to N280TC	13,400	17,300	5,150	421,296
	310MR3	**83.4**	21.6	120,000	45	24	71 to 160	N56C to N280TC	13,700	17,700	5,250	421,296
	310MR3	**99.0**	18.2	135,600	43	24	71 to 160	N56C to N280TC	14,400	18,600	5,560	421,296
	310MR3	**120**	15.0	147,200	38	24	71 to 160	N56C to N280TC	15,200	19,700	5,920	421,296
	310MR4	**136**	13.2	189,600	45	16.5	71 to 160	N56C to N280TC	15,800	20,400	6,180	421,296
	310MR4	**160**	11.2	220,200	44	16.5	71 to 160	N56C to N280TC	16,600	21,500	6,530	421,296
	310MR4	**189**	9.5	236,300	40	16.5	71 to 160	N56C to N280TC	17,200	22,200	6,900	421,296
	310MR4	**206**	8.7	193,500	30	16.5	71 to 160	N56C to N280TC	17,200	22,200	7,090	421,296
	310MR4	**238**	7.6	244,400	33	16.5	71 to 160	N56C to N280TC	17,200	22,200	7,440	421,296
	310MR4	**258**	7.0	196,400	24.5	16.5	71 to 160	N56C to N280TC	17,200	22,200	7,650	421,296
	310MR4	**276**	6.5	243,000	28.4	16.5	71 to 160	N56C to N280TC	17,200	22,200	7,820	421,296
	310MR4	**305**	5.9	198,700	21.0	16.5	71 to 160	N56C to N280TC	17,200	22,200	8,090	421,296
	310MR4	**347**	5.2	258,400	24.0	16.5	71 to 160	N56C to N280TC	17,200	22,200	8,440	421,296
	310MR4	**383**	4.7	203,100	17.1	16.5	71 to 160	N56C to N280TC	17,400	22,400	8,720	421,296
	310MR4	**454**	4.0	166,000	11.8	16.5	71 to 160	N56C to N280TC	17,800	23,000	9,230	421,296
	310MR4	**517**	3.5	214,100	13.4	16.5	71 to 160	N56C to N280TC	18,100	23,400	9,640	421,296
	310MR4	**590**	3.1	171,100	9.4	16.5	71 to 160	N56C to N280TC	18,500	23,900	10,100	421,296
	310MR4	**639**	2.8	176,300	8.9	16.5	71 to 160	N56C to N280TC	18,700	24,100	10,300	421,296
	310MR4	**757**	2.4	219,700	9.4	16.5	71 to 160	N56C to N280TC	19,100	24,700	10,900	421,296
	310MR4	**898**	2.0	187,300	6.7	16.5	71 to 160	N56C to N280TC	19,600	25,300	11,600	421,296
1200	**310MR2B**	**12.0**	100	112,200	174	83	160 to 225	N320TC to N360TC	8,630	11,100	3,150	421,296
	310MR2B	**15.4**	78	144,000	174	83	160 to 225	N320TC to N360TC	9,310	12,000	3,420	421,296
	310MR2B	**18.3**	66	153,400	170	83	160 to 225	N320TC to N360TC	9,800	12,600	3,620	421,296
	310MR2C	**16.6**	72	141,700	172	83	160 to 250	N320TC to N360TC	9,520	12,300	3,510	421,296
	310MR2C	**21.3**	56	177,000	168	83	160 to 250	N320TC to N360TC	10,300	13,200	3,810	421,296
	310MR2C	**25.3**	47	157,600	126	83	160 to 250	N320TC to N360TC	10,800	13,900	4,040	421,296
	310MR3	**37.7**	32	61,300	34	33	71 to 160	N56C to N280TC	12,200	15,700	4,610	421,296
	310MR3	**44.6**	26.9	72,400	34	33	71 to 160	N56C to N280TC	12,800	16,500	4,870	421,296
	310MR3	**55.9**	21.5	90,800	34	33	71 to 160	N56C to N280TC	13,700	17,700	5,260	421,296
	310MR3	**65.0**	18.5	105,600	34	33	71 to 160	N56C to N280TC	14,300	18,500	5,530	421,296
	310MR3	**71.8**	16.7	116,600	34	33	71 to 160	N56C to N280TC	14,800	19,100	5,710	421,296
	310MR3	**78.6**	15.3	127,800	34	33	71 to 160	N56C to N280TC	15,200	19,600	5,890	421,296

310M R

364

297,740 lb·in



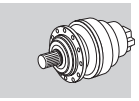
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**310MR3**	**83.4**	14.4	135,500	34	33	71 to 160	N56C to N280TC	15,400	19,900	6,010	421,296
	310MR3	**99.0**	12.1	150,200	32	33	71 to 160	N56C to N280TC	16,300	21,000	6,360	421,296
	310MR3	**120**	10.0	157,600	27.4	33	71 to 160	N56C to N280TC	17,200	22,200	6,780	421,296
	310MR4	**136**	8.8	214,100	34	23	71 to 160	N56C to N280TC	17,200	22,200	7,070	421,296
	310MR4	**160**	7.5	240,800	32	23	71 to 160	N56C to N280TC	17,200	22,200	7,470	421,296
	310MR4	**189**	6.3	250,900	28.5	23	71 to 160	N56C to N280TC	17,200	22,200	7,900	421,296
	310MR4	**206**	5.8	198,800	20.8	23	71 to 160	N56C to N280TC	17,200	22,200	8,120	421,296
	310MR4	**238**	5.1	259,500	23.5	23	71 to 160	N56C to N280TC	17,200	22,200	8,520	421,296
	310MR4	**258**	4.6	203,500	16.9	23	71 to 160	N56C to N280TC	17,400	22,500	8,760	421,296
	310MR4	**276**	4.3	248,400	19.3	23	71 to 160	N56C to N280TC	17,600	22,700	8,960	421,296
	310MR4	**305**	3.9	209,500	14.8	23	71 to 160	N56C to N280TC	17,800	23,000	9,260	421,296
	310MR4	**347**	3.5	265,900	16.5	23	71 to 160	N56C to N280TC	18,100	23,400	9,660	421,296
	310MR4	**383**	3.1	218,100	12.3	23	71 to 160	N56C to N280TC	18,400	23,800	9,980	421,296
	310MR4	**454**	2.6	178,400	8.4	23	71 to 160	N56C to N280TC	18,900	24,400	10,600	421,296
	310MR4	**517**	2.3	229,900	9.6	23	71 to 160	N56C to N280TC	19,200	24,800	11,000	421,296
	310MR4	**590**	2.0	171,400	6.3	23	71 to 160	N56C to N280TC	19,600	25,300	11,500	421,296
	310MR4	**639**	1.9	189,400	6.4	23	71 to 160	N56C to N280TC	19,800	25,600	11,800	421,296
	310MR4	**757**	1.6	219,700	6.2	23	71 to 160	N56C to N280TC	20,300	26,200	12,500	421,296
	310MR4	**898**	1.3	201,200	4.8	23	71 to 160	N56C to N280TC	20,800	26,800	13,300	421,296

311M R

382

435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**311MR2B**	**12.0**	150	99,300	201	83	180 to 250	N320TC to N360TC	9,560	12,500	2,750	515,999
	311MR2B	**15.4**	117	127,500	201	83	180 to 250	N320TC to N360TC	10,300	13,400	2,990	515,999
	311MR2B	**18.3**	98	151,400	201	83	180 to 250	N320TC to N360TC	10,800	14,200	3,170	515,999
	311MR2C	**16.6**	108	125,400	201	99	180 to 250	N320TC to N360TC	10,500	13,800	3,070	515,999
	311MR2C	**21.3**	84	161,000	201	99	180 to 250	N320TC to N360TC	11,400	14,800	3,330	515,999
	311MR2C	**25.3**	71	191,100	201	99	180 to 250	N320TC to N360TC	12,000	15,600	3,530	515,999
	311MR3	**53.0**	34	169,800	100	44	132 to 200	N250TC to N280TC	14,900	19,500	4,510	515,999
	311MR3	**63.2**	28.5	202,700	100	44	132 to 200	N250TC to N280TC	15,700	20,500	4,790	515,999
	311MR3	**68.0**	26.5	218,000	100	44	132 to 200	N250TC to N280TC	16,100	21,000	4,900	515,999
	311MR3	**81.1**	22.2	251,800	97	44	132 to 200	N250TC to N280TC	17,000	22,100	5,200	515,999
	311MR3	**96.3**	18.7	253,300	82	44	132 to 200	N250TC to N280TC	17,900	22,500	5,510	515,999
	311MR3	**104**	17.3	285,200	86	44	132 to 200	N250TC to N280TC	18,300	22,500	5,650	515,999
	311MR3	**124**	14.6	295,500	75	44	132 to 200	N250TC to N280TC	19,200	22,500	5,980	515,999
	311MR3	**147**	12.3	240,700	51	44	132 to 200	N250TC to N280TC	20,300	22,500	6,330	515,999
	311MR4	**154**	11.7	215,500	45	24	71 to 160	N56C to N280TC	20,600	22,500	6,440	515,999
	311MR4	**182**	9.9	254,300	45	24	71 to 160	N56C to N280TC	21,500	22,500	6,810	515,999
	311MR4	**198**	9.1	275,800	45	24	71 to 160	N56C to N280TC	21,500	22,500	7,000	515,999
	311MR4	**229**	7.9	319,300	45	24	71 to 160	N56C to N280TC	21,500	22,500	7,350	515,999
	311MR4	**266**	6.8	369,000	45	24	71 to 160	N56C to N280TC	21,500	22,500	7,720	515,999
	311MR4	**294**	6.1	320,300	35	24	71 to 160	N56C to N280TC	21,500	22,500	7,980	515,999
	311MR4	**341**	5.3	323,600	31	24	71 to 160	N56C to N280TC	21,500	22,500	8,390	515,999
	311MR4	**413**	4.4	332,600	26	24	71 to 160	N56C to N280TC	22,000	22,900	8,940	515,999
	311MR4	**438**	4.1	336,000	24.8	24	71 to 160	N56C to N280TC	22,100	23,100	9,120	515,999
	311MR4	**490**	3.7	283,400	18.7	24	71 to 160	N56C to N280TC	22,500	23,500	9,470	515,999
	311MR4	**520**	3.5	345,200	21.4	24	71 to 160	N56C to N280TC	22,700	23,700	9,660	515,999
	311MR4	**629**	2.9	356,300	18.3	24	71 to 160	N56C to N280TC	23,300	24,300	10,300	515,999
	311MR4	**746**	2.4	276,500	12.0	24	71 to 160	N56C to N280TC	23,900	24,900	10,900	515,999



B

311M R

382

435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**311MR2B**	**12.0**	100	112,200	189	113	180 to 250	N320TC to N360TC	10,800	14,100	3,150	515,999
	311MR2B	**15.4**	78	144,000	189	113	180 to 250	N320TC to N360TC	11,600	15,200	3,420	515,999
	311MR2B	**18.3**	66	171,000	189	113	180 to 250	N320TC to N360TC	12,300	16,000	3,620	515,999
	311MR2C	**16.6**	72	141,700	172	135	180 to 250	N320TC to N360TC	11,900	15,500	3,510	515,999
	311MR2C	**21.3**	56	181,800	172	135	180 to 250	N320TC to N360TC	12,800	16,700	3,810	515,999
	311MR2C	**25.3**	47	213,200	170	135	180 to 250	N320TC to N360TC	13,500	17,600	4,040	515,999
	311MR3	**53.0**	22.6	191,800	76	60	132 to 200	N250TC to N280TC	16,900	22,000	5,160	515,999
	311MR3	**63.2**	19.0	228,900	76	60	132 to 200	N250TC to N280TC	17,800	22,500	5,480	515,999
	311MR3	**68.0**	17.6	246,200	76	60	132 to 200	N250TC to N280TC	18,200	22,500	5,610	515,999
	311MR3	**81.1**	14.8	279,900	72	60	132 to 200	N250TC to N280TC	19,200	22,500	5,950	515,999
	311MR3	**96.3**	12.5	272,400	59	60	132 to 200	N250TC to N280TC	20,200	22,500	6,300	515,999
	311MR3	**104**	11.5	303,300	61	60	132 to 200	N250TC to N280TC	20,600	22,500	6,470	515,999
	311MR3	**124**	9.7	310,500	52	60	132 to 200	N250TC to N280TC	21,500	22,500	6,850	515,999
	311MR3	**147**	8.2	241,400	34	60	132 to 200	N250TC to N280TC	21,500	22,500	7,250	515,999
	311MR4	**154**	7.8	243,300	34	33	71 to 160	N56C to N280TC	21,500	22,500	7,380	515,999
	311MR4	**182**	6.6	287,300	34	33	71 to 160	N56C to N280TC	21,500	22,500	7,800	515,999
	311MR4	**198**	6.1	308,200	33	33	71 to 160	N56C to N280TC	21,500	22,500	8,020	515,999
	311MR4	**229**	5.2	360,600	34	33	71 to 160	N56C to N280TC	21,500	22,500	8,410	515,999
	311MR4	**266**	4.5	403,700	33	33	71 to 160	N56C to N280TC	21,900	22,800	8,840	515,999
	311MR4	**294**	4.1	336,300	24.6	33	71 to 160	N56C to N280TC	22,200	23,100	9,140	515,999
	311MR4	**341**	3.5	345,300	21.8	33	71 to 160	N56C to N280TC	22,600	23,600	9,610	515,999
	311MR4	**413**	2.9	356,900	18.6	33	71 to 160	N56C to N280TC	23,300	24,300	10,200	515,999
	311MR4	**438**	2.7	360,600	17.7	33	71 to 160	N56C to N280TC	23,500	24,500	10,400	515,999
	311MR4	**490**	2.4	283,700	12.5	33	71 to 160	N56C to N280TC	23,800	24,900	10,800	515,999
	311MR4	**520**	2.3	364,400	15.1	33	71 to 160	N56C to N280TC	24,000	25,100	11,100	515,999
	311MR4	**629**	1.9	364,600	12.5	33	71 to 160	N56C to N280TC	24,700	25,800	11,800	515,999
	311MR4	**746**	1.6	296,900	8.6	33	71 to 160	N56C to N280TC	25,300	26,400	12,500	515,999

313M R

400

539,360 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**313MR2B**	**12.2**	148	100,700	201	83	180 to 250	N320TC to N360TC	13,300	16,700	3,400	763,820
	313MR2B	**15.9**	113	131,100	201	83	180 to 250	N320TC to N360TC	14,400	18,100	3,710	763,820
	313MR2B	**19.1**	94	157,900	201	83	180 to 250	N320TC to N360TC	15,200	19,100	3,950	763,820
	313MR2C	**16.8**	107	127,000	201	99	180 to 250	N320TC to N360TC	14,700	18,400	3,790	929,329
	313MR2C	**22.0**	82	165,600	201	99	180 to 250	N320TC to N360TC	15,900	19,900	4,140	929,329
	313MR2C	**26.4**	68	199,300	201	99	180 to 250	N320TC to N360TC	16,800	21,000	4,400	929,329
	313MR3	**53.7**	34	172,000	100	44	132 to 200	N250TC to N280TC	20,800	26,000	5,580	929,329
	313MR3	**64.0**	28.1	205,200	100	44	132 to 200	N250TC to N280TC	21,900	27,400	5,910	929,329
	313MR3	**69.9**	25.7	224,100	100	44	132 to 200	N250TC to N280TC	22,500	28,200	6,090	929,329
	313MR3	**82.2**	21.9	263,400	100	44	132 to 200	N250TC to N280TC	23,600	29,600	6,430	929,329
	313MR3	**97.5**	18.5	312,600	100	44	132 to 200	N250TC to N280TC	24,900	31,100	6,810	929,329
	313MR3	**107**	16.8	323,100	94	44	132 to 200	N250TC to N280TC	25,600	32,000	7,020	929,329
	313MR3	**127**	14.2	345,700	85	44	132 to 200	N250TC to N280TC	26,900	33,700	7,430	929,329
	313MR3	**153**	11.8	267,300	55	44	132 to 200	N250TC to N280TC	28,500	35,600	7,910	929,329
	313MR4	**185**	9.8	257,600	45	24	71 to 160	N56C to N280TC	29,900	37,400	8,420	929,329
	313MR4	**201**	9.0	280,100	45	24	71 to 160	N56C to N280TC	29,900	37,400	8,660	929,329
	313MR4	**237**	7.6	330,600	45	24	71 to 160	N56C to N280TC	29,900	37,400	9,150	929,329
	313MR4	**281**	6.4	392,400	45	24	71 to 160	N56C to N280TC	29,900	37,400	9,690	929,329
	313MR4	**309**	5.8	378,500	40	24	71 to 160	N56C to N280TC	29,900	37,400	9,990	929,329

313M R

400

539,360 lb·in

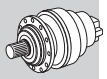
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**313MR4**	**346**	5.2	482,400	45	24	71 to 160	N56C to N280TC	29,900	37,400	10,400	929,329
	313MR4	**387**	4.6	386,800	32	24	71 to 160	N56C to N280TC	30,200	37,800	10,800	929,329
	313MR4	**450**	4.0	397,100	28.4	24	71 to 160	N56C to N280TC	30,800	38,600	11,300	929,329
	313MR4	**496**	3.6	430,500	28.0	24	71 to 160	N56C to N280TC	31,300	39,200	11,700	929,329
	313MR4	**535**	3.4	409,200	24.7	24	71 to 160	N56C to N280TC	31,600	39,600	12,000	929,329
	313MR4	**647**	2.8	423,000	21.1	24	71 to 160	N56C to N280TC	32,500	40,700	12,800	929,329
	313MR4	**778**	2.3	306,500	12.7	24	71 to 160	N56C to N280TC	33,400	41,800	13,600	929,329
1200	**313MR2B**	**12.2**	99	113,700	189	113	180 to 250	N320TC to N360TC	15,000	18,800	3,890	763,820
	313MR2B	**15.9**	76	148,100	189	113	180 to 250	N320TC to N360TC	16,300	20,400	4,250	763,820
	313MR2B	**19.1**	63	178,300	189	113	180 to 250	N320TC to N360TC	17,200	21,600	4,520	763,820
	313MR2C	**16.8**	71	143,500	172	135	180 to 250	N320TC to N360TC	16,600	20,800	4,340	929,329
	313MR2C	**22.0**	55	187,000	172	135	180 to 250	N320TC to N360TC	18,000	22,500	4,740	929,329
	313MR2C	**26.4**	45	221,400	169	135	180 to 250	N320TC to N360TC	19,000	23,800	5,040	929,329
	313MR3	**53.7**	22.4	194,200	76	60	132 to 200	N250TC to N280TC	23,500	29,400	6,380	929,329
	313MR3	**64.0**	18.7	231,800	76	60	132 to 200	N250TC to N280TC	24,700	31,000	6,770	929,329
	313MR3	**69.9**	17.2	253,100	75	60	132 to 200	N250TC to N280TC	25,400	31,800	6,970	929,329
	313MR3	**82.2**	14.6	297,400	76	60	132 to 200	N250TC to N280TC	26,700	33,400	7,360	929,329
	313MR3	**97.5**	12.3	353,000	76	60	132 to 200	N250TC to N280TC	28,100	35,200	7,790	929,329
	313MR3	**107**	11.2	356,700	69	60	132 to 200	N250TC to N280TC	28,900	36,200	8,040	929,329
	313MR3	**127**	9.4	368,000	60	60	132 to 200	N250TC to N280TC	29,900	37,400	8,510	929,329
	313MR3	**153**	7.8	267,500	36	60	132 to 200	N250TC to N280TC	29,900	37,400	9,050	929,329
	313MR4	**185**	6.5	290,900	34	33	71 to 160	N56C to N280TC	29,900	37,400	9,640	929,329
	313MR4	**201**	6.0	316,200	34	33	71 to 160	N56C to N280TC	29,900	37,400	9,910	929,329
	313MR4	**237**	5.1	373,400	34	33	71 to 160	N56C to N280TC	29,900	37,400	10,500	929,329
	313MR4	**281**	4.3	424,500	32	33	71 to 160	N56C to N280TC	30,600	38,300	11,100	929,329
	313MR4	**309**	3.9	399,100	27.8	33	71 to 160	N56C to N280TC	31,000	38,800	11,400	929,329
	313MR4	**346**	3.5	499,800	31	33	71 to 160	N56C to N280TC	31,500	39,400	11,900	929,329
	313MR4	**387**	3.1	415,200	23.0	33	71 to 160	N56C to N280TC	32,000	40,100	12,300	929,329
	313MR4	**450**	2.7	426,300	20.4	33	71 to 160	N56C to N280TC	32,700	40,900	13,000	929,329
	313MR4	**496**	2.4	431,200	18.7	33	71 to 160	N56C to N280TC	33,100	41,500	13,400	929,329
	313MR4	**535**	2.2	439,200	17.7	33	71 to 160	N56C to N280TC	33,500	41,900	13,700	929,329
	313MR4	**647**	1.9	454,000	15.1	33	71 to 160	N56C to N280TC	34,400	43,100	14,600	929,329
	313MR4	**778**	1.5	329,000	9.1	33	71 to 160	N56C to N280TC	35,300	44,300	15,600	929,329

314M R

318

713,720 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**314MR3B**	**51.1**	35	327,800	174	61	180 to 250	N320TC to N360TC	20,000	24,400	6,170	1,017,836
	314MR3B	**65.5**	27.5	420,600	174	61	180 to 250	N320TC to N360TC	21,500	26,300	6,710	1,017,836
	314MR3B	**77.8**	23.1	448,400	174	61	180 to 250	N320TC to N360TC	22,700	27,700	7,100	1,017,836
	314MR3B	**82.3**	21.9	468,200	174	61	180 to 250	N320TC to N360TC	23,100	28,100	7,230	1,017,836
	314MR3B	**97.6**	18.4	498,700	160	61	180 to 250	N320TC to N360TC	24,300	29,600	7,660	1,017,836
	314MR3B	**113**	15.9	419,500	116	61	180 to 250	N320TC to N360TC	25,400	31,000	8,050	1,017,836
	314MR3C	**70.7**	25.5	413,800	174	61	180 to 250	N320TC to N360TC	22,000	26,900	6,880	1,017,836
	314MR3C	**90.7**	19.8	514,400	174	61	180 to 250	N320TC to N360TC	23,700	29,000	7,470	1,017,836
	314MR3C	**108**	16.7	477,200	139	61	180 to 250	N320TC to N360TC	25,000	30,500	7,910	1,017,836
	314MR3C	**114**	15.8	507,800	140	61	180 to 250	N320TC to N360TC	25,400	31,000	8,060	1,017,836
	314MR3C	**135**	13.3	514,300	119	61	180 to 250	N320TC to N360TC	26,800	32,700	8,540	1,017,836
	314MR3C	**157**	11.5	419,500	84	61	180 to 250	N320TC to N360TC	28,000	34,200	8,970	1,017,836
	314MR4	**160**	11.2	223,800	45	24	71 to 160	N250TC to N280TC	28,200	34,400	9,040	1,017,836
	314MR4	**189**	9.5	264,300	45	24	71 to 160	N250TC to N280TC	29,200	35,600	9,550	1,017,836
	314MR4	**238**	7.6	331,600	45	24	71 to 160	N250TC to N280TC	29,200	35,600	10,300	1,017,836



B

314M R

318

713,720 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**314MR4**	**276**	6.5	385,500	45	24	71 to 160	N250TC to N280TC	29,200	35,600	10,800	1,017,836
	314MR4	**354**	5.1	494,800	45	24	71 to 160	N250TC to N280TC	29,200	35,600	11,800	1,017,836
	314MR4	**421**	4.3	581,200	45	24	71 to 160	N250TC to N280TC	29,800	36,400	12,500	1,017,836
	314MR4	**445**	4.0	496,700	36	24	71 to 160	N250TC to N280TC	30,100	36,700	12,700	1,017,836
	314MR4	**528**	3.4	564,200	34	24	71 to 160	N250TC to N280TC	30,800	37,600	13,400	1,017,836
	314MR4	**614**	2.9	465,200	24.4	24	71 to 160	N250TC to N280TC	31,500	38,400	14,100	1,017,836
1200	**314MR3B**	**51.1**	23.5	370,100	151	83	180 to 250	N320TC to N360TC	22,600	27,500	7,060	1,017,836
	314MR3B	**65.5**	18.3	475,000	151	83	180 to 250	N320TC to N360TC	24,300	29,700	7,680	1,017,836
	314MR3B	**77.8**	15.4	484,600	130	83	180 to 250	N320TC to N360TC	25,600	31,200	8,130	1,017,836
	314MR3B	**82.3**	14.6	498,500	126	83	180 to 250	N320TC to N360TC	26,000	31,800	8,280	1,017,836
	314MR3B	**97.6**	12.3	518,300	111	83	180 to 250	N320TC to N360TC	27,400	33,400	8,770	1,017,836
	314MR3B	**113**	10.6	419,500	77	83	180 to 250	N320TC to N360TC	28,700	35,000	9,220	1,017,836
	314MR3C	**70.7**	17.0	467,300	138	83	180 to 250	N320TC to N360TC	24,900	30,400	7,870	1,017,836
	314MR3C	**90.7**	13.2	579,800	133	83	180 to 250	N320TC to N360TC	26,800	32,700	8,560	1,017,836
	314MR3C	**108**	11.1	515,700	100	83	180 to 250	N320TC to N360TC	28,200	34,500	9,060	1,017,836
	314MR3C	**114**	10.5	526,100	96	83	180 to 250	N320TC to N360TC	28,700	35,000	9,230	1,017,836
	314MR3C	**135**	8.9	532,400	82	83	180 to 250	N320TC to N360TC	29,200	35,600	9,770	1,017,836
	314MR3C	**157**	7.6	421,400	56	83	180 to 250	N320TC to N360TC	29,200	35,600	10,300	1,017,836
	314MR4	**160**	7.5	252,800	34	33	71 to 160	N250TC to N280TC	29,200	35,600	10,300	1,017,836
	314MR4	**189**	6.3	298,400	34	33	71 to 160	N250TC to N280TC	29,200	35,600	10,900	1,017,836
	314MR4	**238**	5.1	374,500	34	33	71 to 160	N250TC to N280TC	29,200	35,600	11,800	1,017,836
	314MR4	**276**	4.3	435,400	34	33	71 to 160	N250TC to N280TC	29,700	36,300	12,400	1,017,836
	314MR4	**354**	3.4	558,700	34	33	71 to 160	N250TC to N280TC	30,800	37,600	13,500	1,017,836
	314MR4	**421**	2.9	638,400	33	33	71 to 160	N250TC to N280TC	31,600	38,600	14,300	1,017,836
	314MR4	**445**	2.7	561,100	27.1	33	71 to 160	N250TC to N280TC	31,800	38,900	14,500	1,017,836
	314MR4	**528**	2.3	602,500	24.5	33	71 to 160	N250TC to N280TC	32,600	39,800	15,400	1,017,836
	314MR4	**614**	2.0	498,800	17.5	33	71 to 160	N250TC to N280TC	33,300	40,700	16,200	1,017,836

315M R

434

892,160 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**315MR3B**	**51.1**	35	409,700	201	83	180 to 250	N320TC to N360TC	20,000	24,400	6,170	1,194,851
	315MR3B	**65.5**	27.5	525,800	201	83	180 to 250	N320TC to N360TC	21,500	26,300	6,710	1,194,851
	315MR3B	**77.8**	23.1	618,200	201	83	180 to 250	N320TC to N360TC	22,700	27,700	7,100	1,194,851
	315MR3B	**82.3**	21.9	585,200	201	83	180 to 250	N320TC to N360TC	23,100	28,100	7,230	1,194,851
	315MR3B	**97.6**	18.4	627,100	201	83	180 to 250	N320TC to N360TC	24,300	29,600	7,660	1,194,851
	315MR3B	**113**	15.9	524,400	145	83	180 to 250	N320TC to N360TC	25,400	31,000	8,050	1,194,851
	315MR3C	**70.7**	25.5	517,200	201	99	180 to 250	N320TC to N360TC	22,000	26,900	6,880	1,194,851
	315MR3C	**90.7**	19.8	650,500	201	99	180 to 250	N320TC to N360TC	23,700	29,000	7,470	1,194,851
	315MR3C	**108**	16.7	708,900	201	99	180 to 250	N320TC to N360TC	25,000	30,500	7,910	1,194,851
	315MR3C	**114**	15.8	635,400	175	99	180 to 250	N320TC to N360TC	25,400	31,000	8,060	1,194,851
	315MR3C	**135**	13.3	644,700	149	99	180 to 250	N320TC to N360TC	26,800	32,700	8,540	1,194,851
	315MR3C	**157**	11.5	524,400	104	99	180 to 250	N320TC to N360TC	28,000	34,200	8,970	1,194,851
	315MR4	**225**	8.0	700,200	100	44	132 to 200	N250TC to N280TC	29,200	35,600	10,100	1,194,851
	315MR4	**269**	6.7	795,200	95	44	132 to 200	N250TC to N280TC	29,200	35,600	10,700	1,194,851
	315MR4	**345**	5.2	834,200	78	44	132 to 200	N250TC to N280TC	29,200	35,600	11,700	1,194,851
	315MR4	**409**	4.4	837,500	66	44	132 to 200	N250TC to N280TC	29,700	36,200	12,300	1,194,851
	315MR4	**525**	3.4	837,500	51	44	132 to 200	N250TC to N280TC	30,800	37,600	13,400	1,194,851
	315MR4	**623**	2.9	837,500	43	44	132 to 200	N250TC to N280TC	31,500	38,500	14,200	1,194,851
	315MR4	**659**	2.7	739,200	36	44	132 to 200	N250TC to N280TC	31,800	38,800	14,500	1,194,851
	315MR4	**782**	2.3	752,300	31	44	132 to 200	N250TC to N280TC	32,600	39,800	15,300	1,194,851
	315MR4	**909**	2.0	622,200	22.1	44	132 to 200	N250TC to N280TC	33,300	40,600	16,100	1,194,851
1200	**315MR3B**	**51.1**	23.5	462,700	189	113	180 to 250	N320TC to N360TC	22,600	27,500	7,060	1,194,851

315M R

434

892,160 lb·in

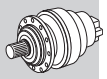
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**315MR3B**	**65.5**	18.3	593,800	189	113	180 to 250	N320TC to N360TC	24,300	29,700	7,680	1,194,851
	315MR3B	**77.8**	15.4	694,700	186	113	180 to 250	N320TC to N360TC	25,600	31,200	8,130	1,194,851
	315MR3B	**82.3**	14.6	623,200	158	113	180 to 250	N320TC to N360TC	26,000	31,800	8,280	1,194,851
	315MR3B	**97.6**	12.3	649,200	139	113	180 to 250	N320TC to N360TC	27,400	33,400	8,770	1,194,851
	315MR3B	**113**	10.6	524,400	96	113	180 to 250	N320TC to N360TC	28,700	35,000	9,220	1,194,851
	315MR3C	**70.7**	17.0	584,200	172	135	180 to 250	N320TC to N360TC	24,900	30,400	7,870	1,194,851
	315MR3C	**90.7**	13.2	728,200	167	135	180 to 250	N320TC to N360TC	26,800	32,700	8,560	1,194,851
	315MR3C	**108**	11.1	769,900	149	135	180 to 250	N320TC to N360TC	28,200	34,500	9,060	1,194,851
	315MR3C	**114**	10.5	657,800	120	135	180 to 250	N320TC to N360TC	28,700	35,000	9,230	1,194,851
	315MR3C	**135**	8.9	665,500	103	135	180 to 250	N320TC to N360TC	29,200	35,600	9,770	1,194,851
	315MR3C	**157**	7.6	526,700	70	135	180 to 250	N320TC to N360TC	29,200	35,600	10,300	1,194,851
	315MR4	**225**	5.3	790,800	76	60	132 to 200	N250TC to N280TC	29,200	35,600	11,600	1,194,851
	315MR4	**269**	4.5	837,500	67	60	132 to 200	N250TC to N280TC	29,600	36,200	12,300	1,194,851
	315MR4	**345**	3.5	837,500	52	60	132 to 200	N250TC to N280TC	30,700	37,500	13,400	1,194,851
	315MR4	**409**	2.9	837,500	44	60	132 to 200	N250TC to N280TC	31,500	38,400	14,100	1,194,851
	315MR4	**525**	2.3	842,700	35	60	132 to 200	N250TC to N280TC	32,600	39,800	15,400	1,194,851
	315MR4	**623**	1.9	852,700	29.4	60	132 to 200	N250TC to N280TC	33,400	40,800	16,300	1,194,851
	315MR4	**659**	1.8	768,400	25.1	60	132 to 200	N250TC to N280TC	33,700	41,100	16,600	1,194,851
	315MR4	**782**	1.5	780,400	21.5	60	132 to 200	N250TC to N280TC	34,500	42,100	17,500	1,194,851
	315MR4	**909**	1.3	667,200	15.8	60	132 to 200	N250TC to N280TC	35,300	43,000	18,400	1,194,851

316M R

450

1,189,450 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**316MR3B**	**51.1**	35	409,700	201	83	180 to 250	N320TC to N360TC	31,100	34,900	10,300	1,699,344
	316MR3B	**64.1**	28.1	514,100	201	83	180 to 250	N320TC to N360TC	33,300	37,400	11,100	1,699,344
	316MR3B	**65.5**	27.5	525,800	201	83	180 to 250	N320TC to N360TC	33,500	37,600	11,200	1,699,344
	316MR3B	**77.8**	23.1	623,900	201	83	180 to 250	N320TC to N360TC	35,300	39,600	11,800	1,699,344
	316MR3B	**82.3**	21.9	659,800	201	83	180 to 250	N320TC to N360TC	35,900	40,300	12,100	1,699,344
	316MR3B	**97.6**	18.4	751,800	201	83	180 to 250	N320TC to N360TC	37,800	42,400	12,800	1,699,344
	316MR3C	**70.7**	25.5	517,200	201	99	180 to 250	N320TC to N360TC	34,300	38,500	11,500	1,699,344
	316MR3C	**88.7**	20.3	649,100	201	99	180 to 250	N320TC to N360TC	36,700	41,200	12,400	1,699,344
	316MR3C	**90.7**	19.8	663,700	201	99	180 to 250	N320TC to N360TC	37,000	41,500	12,500	1,699,344
	316MR3C	**108**	16.7	787,900	201	99	180 to 250	N320TC to N360TC	38,900	43,700	13,200	1,699,344
	316MR3C	**114**	15.8	785,900	201	99	180 to 250	N320TC to N360TC	39,600	44,400	13,400	1,699,344
	316MR3C	**135**	13.3	837,900	194	99	180 to 250	N320TC to N360TC	41,700	46,700	14,200	1,699,344
	316MR4	**225**	8.0	700,200	100	50	132 to 200	N250TC to N280TC	45,400	50,900	16,900	1,699,344
	316MR4	**269**	6.7	835,400	100	50	132 to 200	N250TC to N280TC	45,400	50,900	17,900	1,699,344
	316MR4	**289**	6.2	898,600	100	50	132 to 200	N250TC to N280TC	45,400	50,900	18,300	1,699,344
	316MR4	**337**	5.3	879,700	84	50	132 to 200	N250TC to N280TC	45,400	50,900	19,300	1,699,344
	316MR4	**363**	5.0	882,000	78	50	132 to 200	N250TC to N280TC	45,500	51,000	19,800	1,699,344
	316MR4	**430**	4.2	906,700	68	50	132 to 200	N250TC to N280TC	46,600	52,300	20,900	1,699,344
	316MR4	**443**	4.1	1,101,300	80	50	132 to 200	N250TC to N280TC	46,800	52,500	21,100	1,699,344
	316MR4	**525**	3.4	1,106,600	68	50	132 to 200	N250TC to N280TC	47,900	53,800	22,400	1,699,344
	316MR4	**623**	2.9	1,005,900	52	50	132 to 200	N250TC to N280TC	49,100	55,100	23,700	1,699,344
	316MR4	**659**	2.7	971,100	48	50	132 to 200	N250TC to N280TC	49,500	55,500	24,100	1,699,344
	316MR4	**782**	2.3	993,400	41	50	132 to 200	N250TC to N280TC	50,700	56,900	25,500	1,699,344
1200	**316MR3B**	**51.1**	23.5	462,700	189	113	180 to 250	N320TC to N360TC	35,100	39,400	11,800	1,699,344
	316MR3B	**64.1**	18.7	580,600	189	113	180 to 250	N320TC to N360TC	37,600	42,200	12,700	1,699,344
	316MR3B	**65.5**	18.3	593,800	189	113	180 to 250	N320TC to N360TC	37,900	42,500	12,800	1,699,344
	316MR3B	**77.8**	15.4	704,600	189	113	180 to 250	N320TC to N360TC	39,900	44,700	13,500	1,699,344
	316MR3B	**82.3**	14.6	745,200	189	113	180 to 250	N320TC to N360TC	40,500	45,500	13,800	1,699,344
	316MR3B	**97.6**	12.3	835,000	178	113	180 to 250	N320TC to N360TC	42,700	47,900	14,600	1,699,344



B

316M R

450

1,189,450 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1200	**316MR3C**	**70.7**	17.0	584,100	172	135	180 to 250	N320TC to N360TC	38,700	43,500	13,100	1,699,344
	316MR3C	**88.7**	13.5	733,100	172	135	180 to 250	N320TC to N360TC	41,500	46,500	14,200	1,699,344
	316MR3C	**90.7**	13.2	749,600	172	135	180 to 250	N320TC to N360TC	41,800	46,800	14,300	1,699,344
	316MR3C	**108**	11.1	889,900	172	135	180 to 250	N320TC to N360TC	44,000	49,300	15,100	1,699,344
	316MR3C	**114**	10.5	869,500	159	135	180 to 250	N320TC to N360TC	44,700	50,100	15,400	1,699,344
	316MR3C	**135**	8.9	880,900	136	135	180 to 250	N320TC to N360TC	45,400	50,900	16,300	1,699,344
	316MR4	**225**	5.3	790,700	76	68	132 to 200	N250TC to N280TC	45,400	50,900	19,300	1,699,344
	316MR4	**269**	4.5	942,600	75	68	132 to 200	N250TC to N280TC	46,200	51,800	20,500	1,699,344
	316MR4	**289**	4.2	999,500	74	68	132 to 200	N250TC to N280TC	46,600	52,300	21,000	1,699,344
	316MR4	**337**	3.6	930,600	59	68	132 to 200	N250TC to N280TC	47,700	53,500	22,100	1,699,344
	316MR4	**363**	3.3	941,600	56	68	132 to 200	N250TC to N280TC	48,200	54,000	22,600	1,699,344
	316MR4	**430**	2.8	967,900	48	68	132 to 200	N250TC to N280TC	49,400	55,400	24,000	1,699,344
	316MR4	**443**	2.7	1,114,000	54	68	132 to 200	N250TC to N280TC	49,600	55,600	24,200	1,699,344
	316MR4	**525**	2.3	1,123,600	46	68	132 to 200	N250TC to N280TC	50,800	57,000	25,600	1,699,344
	316MR4	**623**	1.9	1,017,000	35	68	132 to 200	N250TC to N280TC	52,000	58,400	27,100	1,699,344
	316MR4	**659**	1.8	1,017,400	33	68	132 to 200	N250TC to N280TC	52,500	58,900	27,600	1,699,344
	316MR4	**782**	1.5	1,035,300	28.5	68	132 to 200	N250TC to N280TC	53,800	60,300	29,200	1,699,344

317M R

462

1,836,440 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**317MR3B**	**49.8**	36	399,400	201	99	180 to 250	N320TC to N360TC	48,100	51,000	10,200	3,478,345
	317MR3B	**64.9**	27.7	520,500	201	99	180 to 250	N320TC to N360TC	52,000	55,300	11,100	3,478,345
	317MR3B	**78.1**	23.0	626,500	201	99	180 to 250	N320TC to N360TC	55,000	58,400	11,800	3,478,345
	317MR3B	**83.3**	21.6	668,000	201	99	180 to 250	N320TC to N360TC	56,100	59,600	12,100	3,478,345
	317MR3B	**100**	18.0	804,100	201	99	180 to 250	N320TC to N360TC	59,300	63,000	12,900	3,478,345
	317MR3B	**119**	15.1	900,800	201	99	180 to 250	N320TC to N360TC	62,400	66,300	13,600	3,478,345
	317MR3C	**68.9**	26.1	504,200	201	110	180 to 250	N320TC to N360TC	53,000	56,300	11,400	3,478,345
	317MR3C	**89.8**	20.0	657,200	201	110	180 to 250	N320TC to N360TC	57,400	60,900	12,400	3,478,345
	317MR3C	**108**	16.6	791,200	201	110	180 to 250	N320TC to N360TC	60,600	64,400	13,200	3,478,345
	317MR3C	**115**	15.6	843,300	201	110	180 to 250	N320TC to N360TC	61,800	65,700	13,500	3,478,345
	317MR3C	**139**	13.0	1,015,400	201	110	180 to 250	N320TC to N360TC	65,400	69,400	14,400	3,478,345
	317MR3C	**165**	10.9	985,000	187	110	180 to 250	N320TC to N360TC	68,800	73,100	15,200	3,478,345
	317MR4	**220**	8.2	682,500	100	55	132 to 200	N250TC to N280TC	70,700	75,100	16,700	3,478,345
	317MR4	**262**	6.9	814,400	100	55	132 to 200	N250TC to N280TC	70,700	75,100	17,700	3,478,345
	317MR4	**336**	5.4	1,045,100	100	55	132 to 200	N250TC to N280TC	70,700	75,100	19,300	3,478,345
	317MR4	**399**	4.5	1,240,400	100	55	132 to 200	N250TC to N280TC	71,700	76,200	20,400	3,478,345
	317MR4	**438**	4.1	1,336,300	98	55	132 to 200	N250TC to N280TC	72,700	77,200	21,100	3,478,345
	317MR4	**520**	3.5	1,463,500	91	55	132 to 200	N250TC to N280TC	74,500	79,100	22,300	3,478,345
	317MR4	**626**	2.9	1,073,600	55	55	132 to 200	N250TC to N280TC	76,500	81,200	23,700	3,478,345
	317MR4	**677**	2.7	1,374,600	66	55	132 to 200	N250TC to N280TC	77,300	82,100	24,300	3,478,345
	317MR4	**803**	2.2	1,380,300	55	55	132 to 200	N250TC to N280TC	79,200	84,200	25,800	3,478,345
	317MR4	**953**	1.9	1,193,000	40	55	132 to 200	N250TC to N280TC	81,200	86,300	27,300	3,478,345
1200	**317MR3B**	**49.8**	24.1	451,000	189	135	180 to 250	N320TC to N360TC	54,300	57,700	11,700	3,478,345
	317MR3B	**64.9**	18.5	587,800	189	135	180 to 250	N320TC to N360TC	58,800	62,400	12,800	3,478,345
	317MR3B	**78.1**	15.4	707,600	189	135	180 to 250	N320TC to N360TC	62,100	66,000	13,600	3,478,345
	317MR3B	**83.3**	14.4	754,400	189	135	180 to 250	N320TC to N360TC	63,300	67,300	13,900	3,478,345
	317MR3B	**100**	12.0	908,100	189	135	180 to 250	N320TC to N360TC	66,900	71,100	14,700	3,478,345
	317MR3B	**119**	10.1	997,600	175	135	180 to 250	N320TC to N360TC	70,500	74,900	15,600	3,478,345
	317MR3C	**68.9**	17.4	569,400	172	150	180 to 250	N320TC to N360TC	59,800	63,600	13,000	3,478,345
	317MR3C	**89.8**	13.4	742,200	172	150	180 to 250	N320TC to N360TC	64,800	68,800	14,200	3,478,345
	317MR3C	**108**	11.1	893,500	172	150	180 to 250	N320TC to N360TC	68,500	72,800	15,100	3,478,345
	317MR3C	**115**	10.4	952,400	172	150	180 to 250	N320TC to N360TC	69,800	74,200	15,400	3,478,345

317M R

462

1,836,440 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1200	**317MR3C**	**139**	8.6	1,140,800	171	150	180 to 250	N320TC to N360TC	70,700	75,100	16,400	3,478,345
	317MR3C	**165**	7.3	1,004,500	127	150	180 to 250	N320TC to N360TC	70,700	75,100	17,400	3,478,345
	317MR4	**220**	5.5	770,800	76	75	132 to 200	N250TC to N280TC	70,700	75,100	19,100	3,478,345
	317MR4	**262**	4.6	919,700	76	75	132 to 200	N250TC to N280TC	71,500	76,000	20,300	3,478,345
	317MR4	**336**	3.6	1,180,300	76	75	132 to 200	N250TC to N280TC	74,100	78,800	22,100	3,478,345
	317MR4	**399**	3.0	1,400,900	76	75	132 to 200	N250TC to N280TC	76,000	80,700	23,400	3,478,345
	317MR4	**438**	2.7	1,450,500	71	75	132 to 200	N250TC to N280TC	77,000	81,800	24,100	3,478,345
	317MR4	**520**	2.3	1,487,100	62	75	132 to 200	N250TC to N280TC	78,900	83,800	25,500	3,478,345
	317MR4	**626**	1.9	1,085,000	37	75	132 to 200	N250TC to N280TC	81,000	86,100	27,100	3,478,345
	317MR4	**677**	1.8	1,380,300	44	75	132 to 200	N250TC to N280TC	81,900	87,000	27,900	3,478,345
	317MR4	**803**	1.5	1,380,200	37	75	132 to 200	N250TC to N280TC	84,000	89,200	29,500	3,478,345
	317MR4	**953**	1.3	1,278,600	28.8	75	132 to 200	N250TC to N280TC	86,000	91,400	31,200	3,478,345

318M R

474

2,633,540 lb·in

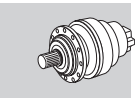
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**318MR4B**	**225**	8.0	1,748,600	201	99	180 to 250	N320TC to N360TC	72,100	75,900	22,500	4,425,375
	318MR4B	**288**	6.2	2,017,600	201	99	180 to 250	N320TC to N360TC	72,100	75,900	24,400	4,425,375
	318MR4B	**342**	5.3	2,045,900	193	99	180 to 250	N320TC to N360TC	72,100	75,900	25,900	4,425,375
	318MR4B	**362**	5.0	2,052,900	183	99	180 to 250	N320TC to N360TC	72,100	76,000	26,300	4,425,375
	318MR4B	**430**	4.2	2,113,200	159	99	180 to 250	N320TC to N360TC	73,900	77,800	27,900	4,425,375
	318MR4B	**499**	3.6	2,150,400	139	99	180 to 250	N320TC to N360TC	75,500	79,500	29,300	4,425,375
	318MR4C	**311**	5.8	2,012,500	201	121	180 to 250	N320TC to N360TC	72,100	75,900	25,000	4,425,375
	318MR4C	**399**	4.5	2,087,300	169	121	180 to 250	N320TC to N360TC	73,100	77,000	27,200	4,425,375
	318MR4C	**474**	3.8	2,148,600	146	121	180 to 250	N320TC to N360TC	75,000	78,900	28,800	4,425,375
	318MR4C	**501**	3.6	2,168,900	140	121	180 to 250	N320TC to N360TC	75,600	79,600	29,400	4,425,375
	318MR4C	**595**	3.0	2,232,600	121	121	180 to 250	N320TC to N360TC	77,400	81,500	31,100	4,425,375
	318MR4C	**691**	2.6	2,253,900	105	121	180 to 250	N320TC to N360TC	79,100	83,300	32,700	4,425,375
1200	**318MR4B**	**225**	5.3	1,974,900	189	135	180 to 250	N320TC to N360TC	72,100	75,900	25,700	4,425,375
	318MR4B	**288**	4.2	2,115,700	158	135	180 to 250	N320TC to N360TC	74,000	77,900	28,000	4,425,375
	318MR4B	**342**	3.5	2,177,900	137	135	180 to 250	N320TC to N360TC	75,800	79,800	29,600	4,425,375
	318MR4B	**362**	3.3	2,198,500	131	135	180 to 250	N320TC to N360TC	76,400	80,500	30,200	4,425,375
	318MR4B	**430**	2.8	2,263,100	113	135	180 to 250	N320TC to N360TC	78,300	82,500	31,900	4,425,375
	318MR4B	**499**	2.4	2,270,400	98	135	180 to 250	N320TC to N360TC	80,000	84,300	33,600	4,425,375
	318MR4C	**311**	3.9	2,143,000	148	165	180 to 250	N320TC to N360TC	74,800	78,800	28,700	4,425,375
	318MR4C	**399**	3.0	2,235,300	120	165	180 to 250	N320TC to N360TC	77,500	81,600	31,200	4,425,375
	318MR4C	**474**	2.5	2,300,900	104	165	180 to 250	N320TC to N360TC	79,400	83,600	33,000	4,425,375
	318MR4C	**501**	2.4	2,320,300	100	165	180 to 250	N320TC to N360TC	80,100	84,300	33,600	4,425,375
	318MR4C	**595**	2.0	2,378,700	86	165	180 to 250	N320TC to N360TC	82,000	86,400	35,600	4,425,375
	318MR4C	**691**	1.7	2,297,000	71	165	180 to 250	N320TC to N360TC	83,800	88,300	37,400	4,425,375

319 R

486

4,170,380 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ	$T_{n2\ max}$ lb·in
1800	**319R4B**	**249**	7.2	1,937,200	201	105	180 to 250	N320TC to N360TC	81,700	89,900	23,300	6,018,510
	319R4B	**320**	5.6	2,486,100	201	105	180 to 250	N320TC to N360TC	81,700	89,900	25,300	6,018,510
	319R4B	**379**	4.7	2,803,300	201	105	180 to 250	N320TC to N360TC	82,300	90,600	26,800	6,018,510
	319R4B	**401**	4.5	2,850,600	201	105	180 to 250	N320TC to N360TC	82,900	91,300	27,300	6,018,510
	319R4B	**475**	3.8	2,524,900	172	105	180 to 250	N320TC to N360TC	85,000	93,500	28,800	6,018,510



B

319 R

486

4,170,380 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**319R4B**	**563**	3.2	2,598,000	149	105	180 to 250	N320TC to N360TC	87,100	95,900	30,500	6,018,510
	319R4B	**655**	2.7	2,664,100	131	105	180 to 250	N320TC to N360TC	89,000	97,900	32,100	6,018,510
	319R4C	**345**	5.2	2,445,800	201	127	180 to 250	N320TC to N360TC	81,700	89,900	25,900	6,018,510
	319R4C	**442**	4.1	2,935,800	201	127	180 to 250	N320TC to N360TC	84,100	92,600	28,200	6,018,510
	319R4C	**525**	3.4	3,090,600	190	127	180 to 250	N320TC to N360TC	86,200	94,900	29,800	6,018,510
	319R4C	**555**	3.2	3,142,800	183	127	180 to 250	N320TC to N360TC	86,900	95,700	30,400	6,018,510
	319R4C	**657**	2.7	2,665,600	131	127	180 to 250	N320TC to N360TC	89,000	98,000	32,100	6,018,510
	319R4C	**780**	2.3	2,742,800	113	127	180 to 250	N320TC to N360TC	91,200	100,400	34,000	6,018,510
	319R4C	**906**	2.0	2,772,300	99	127	180 to 250	N320TC to N360TC	93,200	102,600	35,800	6,018,510
1200	**319R4B**	**249**	4.8	2,187,800	189	143	180 to 250	N320TC to N360TC	82,100	90,400	26,600	6,018,510
	319R4B	**320**	3.8	2,807,600	189	143	180 to 250	N320TC to N360TC	85,100	93,700	28,900	6,018,510
	319R4B	**379**	3.2	3,165,900	180	143	180 to 250	N320TC to N360TC	87,200	96,000	30,600	6,018,510
	319R4B	**401**	3.0	3,219,300	173	143	180 to 250	N320TC to N360TC	87,900	96,800	31,200	6,018,510
	319R4B	**475**	2.5	2,701,500	122	143	180 to 250	N320TC to N360TC	90,000	99,100	33,000	6,018,510
	319R4B	**563**	2.1	2,779,700	106	143	180 to 250	N320TC to N360TC	92,300	101,600	34,900	6,018,510
	319R4B	**655**	1.8	2,795,500	92	143	180 to 250	N320TC to N360TC	94,300	103,800	36,700	6,018,510
	319R4C	**345**	3.5	2,762,100	172	173	180 to 250	N320TC to N360TC	86,000	94,700	29,700	6,018,510
	319R4C	**442**	2.7	3,315,500	161	173	180 to 250	N320TC to N360TC	89,100	98,100	32,200	6,018,510
	319R4C	**525**	2.3	3,445,700	141	173	180 to 250	N320TC to N360TC	91,300	100,600	34,100	6,018,510
	319R4C	**555**	2.2	3,510,100	136	173	180 to 250	N320TC to N360TC	92,100	101,400	34,800	6,018,510
	319R4C	**657**	1.8	2,851,900	93	173	180 to 250	N320TC to N360TC	94,300	103,800	36,800	6,018,510
	319R4C	**780**	1.5	2,934,600	81	173	180 to 250	N320TC to N360TC	96,600	106,400	38,900	6,018,510
	319R4C	**906**	1.3	2,891,800	69	173	180 to 250	N320TC to N360TC	98,700	108,700	40,900	6,018,510

321 R

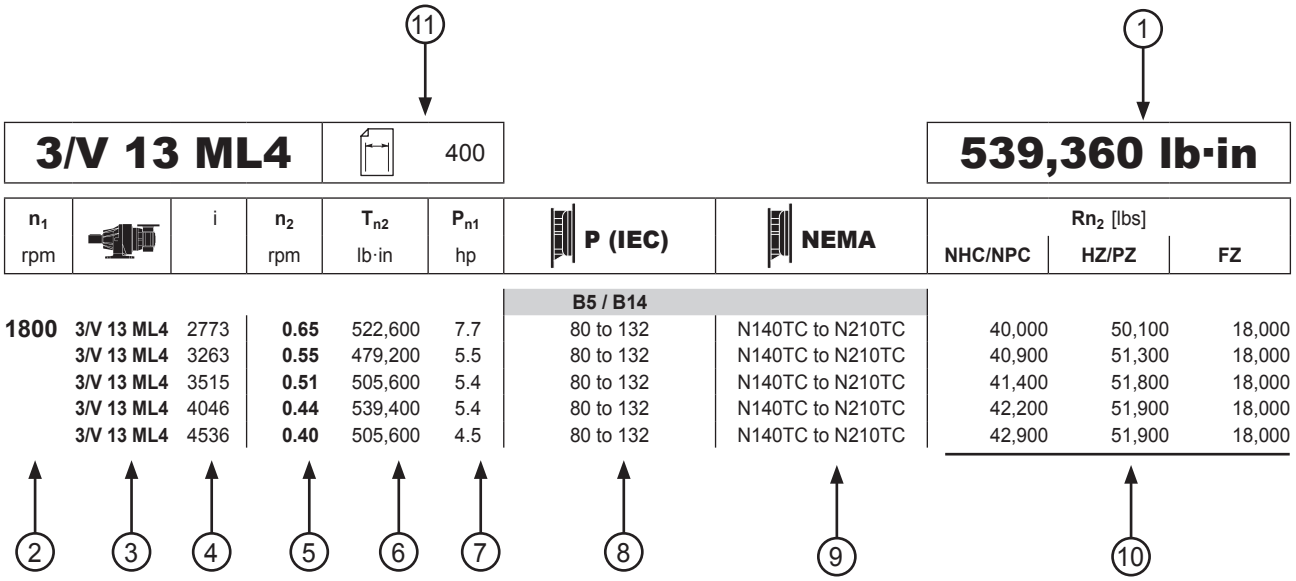
498

5,803,790 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	Pt hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	Rn_2 [lbs] HZ/PZ	Rn_2 [lbs] FZ	$T_{n2\ max}$ lb·in
1800	**321R4B**	**221**	8.1	1,717,700	201	116	180 to 250	N320TC to N360TC	115,500	137,500	143,800	8,266,601
	321R4B	**288**	6.2	2,219,300	201	116	180 to 250	N320TC to N360TC	115,500	137,500	155,700	8,266,601
	321R4B	**347**	5.2	2,686,800	201	116	180 to 250	N320TC to N360TC	115,500	137,500	164,700	8,266,601
	321R4B	**370**	4.9	2,839,400	201	116	180 to 250	N320TC to N360TC	116,000	138,100	167,800	8,266,601
	321R4B	**446**	4.0	3,444,300	201	116	180 to 250	N320TC to N360TC	119,100	141,800	177,400	8,266,601
	321R4B	**529**	3.4	4,065,500	201	116	180 to 250	N320TC to N360TC	122,100	145,300	186,800	8,266,601
	321R4C	**306**	5.9	2,086,800	201	138	180 to 250	N320TC to N360TC	115,500	137,500	158,600	8,266,601
	321R4C	**399**	4.5	2,720,100	201	138	180 to 250	N320TC to N360TC	117,300	139,600	171,700	8,266,601
	321R4C	**481**	3.7	3,274,200	201	138	180 to 250	N320TC to N360TC	120,400	143,300	181,500	8,266,601
	321R4C	**512**	3.5	3,490,800	201	138	180 to 250	N320TC to N360TC	121,500	144,600	185,100	8,266,601
	321R4C	**617**	2.9	4,201,800	201	138	180 to 250	N320TC to N360TC	124,800	148,500	195,600	8,266,601
	321R4C	**732**	2.5	4,581,400	201	138	180 to 250	N320TC to N360TC	127,900	152,200	206,000	8,266,601
1200	**321R4B**	**221**	5.4	1,952,900	190	158	180 to 250	N320TC to N360TC	115,500	137,500	162,400	8,266,601
	321R4B	**288**	4.2	2,530,100	189	158	180 to 250	N320TC to N360TC	118,600	141,200	175,900	8,266,601
	321R4B	**347**	3.5	3,031,700	188	158	180 to 250	N320TC to N360TC	121,800	145,000	186,000	8,266,601
	321R4B	**370**	3.2	3,258,300	189	158	180 to 250	N320TC to N360TC	122,900	146,300	189,600	8,266,601
	321R4B	**446**	2.7	3,860,500	186	158	180 to 250	N320TC to N360TC	126,200	150,200	200,400	8,266,601
	321R4B	**529**	2.3	4,482,500	182	158	180 to 250	N320TC to N360TC	129,300	153,900	211,000	8,266,601
	321R4C	**306**	3.9	2,356,700	165	188	180 to 250	N320TC to N360TC	119,600	142,400	179,100	8,266,601
	321R4C	**399**	3.0	3,071,800	165	188	180 to 250	N320TC to N360TC	124,200	147,900	193,900	8,266,601
	321R4C	**481**	2.5	3,697,500	165	188	180 to 250	N320TC to N360TC	127,600	151,900	205,000	8,266,601
	321R4C	**512**	2.3	3,942,400	165	188	180 to 250	N320TC to N360TC	128,800	153,300	209,000	8,266,601
	321R4C	**617**	1.9	4,746,400	165	188	180 to 250	N320TC to N360TC	132,200	157,400	220,900	8,266,601
	321R4C	**732**	1.6	4,655,400	137	188	180 to 250	N320TC to N360TC	135,500	161,300	232,600	8,266,601

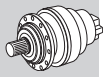
25.5 3/V_M - PLANETARYWORM RATING CHARTS

Reading the rating chart.



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 13 ML4	2773	**0.65**	522,600	7.7	80 to 132	N140TC to N210TC	40,000	50,100	18,000
	3/V 13 ML4	3263	**0.55**	479,200	5.5	80 to 132	N140TC to N210TC	40,900	51,300	18,000
	3/V 13 ML4	3515	**0.51**	505,600	5.4	80 to 132	N140TC to N210TC	41,400	51,800	18,000
	3/V 13 ML4	4046	**0.44**	539,400	5.4	80 to 132	N140TC to N210TC	42,200	51,900	18,000
	3/V 13 ML4	4536	**0.40**	505,600	4.5	80 to 132	N140TC to N210TC	42,900	51,900	18,000

1	Reference torque
2	Gearbox drive speed
3	Frame size of combined worm + planetary gearbox
4	Gear ratio
5	Gearbox output speed
6	Gearbox rated output torque based on: - service factor f_S=1 - 10000 h theoretical lifetime
7	Gearbox rated input power, based on: - service factor f_S=1 - 10000 h theoretical lifetime
8	Frame size of compatible IEC electric motor.
9	Frame size of compatible NEMA electric motor.
10	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
11	Dimensions page



B

3/V 00 L3



226

11,060 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 00 L3	415	4.3	8,620	0.89	63 to 80	N56C	4,540	5,740	1,100
	3/V 00 L3	436	4.1	6,460	0.67	63 to 71	N56C	4,570	5,780	1,120
	3/V 00 L3	509	3.5	8,920	0.75	63 to 80	N56C	4,680	5,910	1,180
	3/V 00 L3	562	3.2	6,200	0.47	63 to 80	N56C	4,740	5,990	1,220
	3/V 00 L3	654	2.8	9,320	0.65	63 to 71	N56C	4,850	6,120	1,280
	3/V 00 L3	689	2.6	9,400	0.58	63 to 80	N56C	4,880	6,170	1,310
	3/V 00 L3	818	2.2	9,680	0.57	63 to 71	N56C	5,000	6,320	1,380
	3/V 00 L3	903	2.0	6,730	0.36	63 to 71	N56C	5,080	6,410	1,430
	3/V 00 L3	997	1.8	6,850	0.28	63 to 80	N56C	5,150	6,500	1,480
	3/V 00 L3	1107	1.6	10,200	0.44	63 to 71	N56C	5,230	6,600	1,530
	3/V 00 L3	1198	1.5	7,080	0.27	63 to 71	N56C	5,290	6,670	1,570
	3/V 00 L3	1381	1.3	10,600	0.37	63 to 71	N56C	5,390	6,810	1,650
	3/V 00 L3	1495	1.2	7,360	0.22	63 to 71	N56C	5,460	6,890	1,690
	3/V 00 L3	1869	0.96	7,610	0.20	63 to 71	N56C	5,630	7,110	1,800
	3/V 00 L3	2337	0.77	7,610	0.16	63 to 71	N56C	5,810	7,340	1,800

3/V 01 L3



242

21,770 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 01 L3	430	4.2	16,600	1.44	63 to 80	N56C	4,570	5,420	1,120
	3/V 01 L3	443	4.1	12,100	1.06	63 to 80	N56C	4,580	5,440	1,130
	3/V 01 L3	509	3.5	11,200	0.94	63 to 80	N56C	4,680	5,550	1,180
	3/V 01 L3	562	3.2	12,400	0.94	63 to 80	N56C	4,740	5,630	1,220
	3/V 01 L3	654	2.8	10,400	0.72	63 to 71	N56C	4,850	5,750	1,280
	3/V 01 L3	689	2.6	15,200	0.94	63 to 80	N56C	4,880	5,800	1,310
	3/V 01 L3	799	2.3	13,200	0.67	63 to 80	N56C	4,990	5,920	1,370
	3/V 01 L3	903	2.0	10,900	0.58	63 to 71	N56C	5,080	6,030	1,430
	3/V 01 L3	997	1.8	13,700	0.56	63 to 80	N56C	5,150	6,110	1,480
	3/V 01 L3	1105	1.6	17,600	0.72	63 to 71	N56C	5,220	6,200	1,530
	3/V 01 L3	1198	1.5	14,200	0.54	63 to 71	N56C	5,290	6,270	1,570
	3/V 01 L3	1381	1.3	16,600	0.58	63 to 71	N56C	5,390	6,400	1,650
	3/V 01 L3	1495	1.2	14,700	0.45	63 to 71	N56C	5,460	6,470	1,690
	3/V 01 L3	1869	0.96	15,200	0.39	63 to 71	N56C	5,630	6,680	1,800
	3/V 01 L3	2337	0.77	15,200	0.31	63 to 71	N56C	5,810	6,900	1,800

3/V 03 L3



258

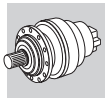
26,290 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 03 L3	395	4.6	19,600	1.9	71 to 90	N56C to N140TC	8,660	10,900	3,250
	3/V 03 L3	460	3.9	20,400	1.8	71 to 90	N56C to N140TC	8,850	11,200	3,420
	3/V 03 L3	502	3.6	17,300	1.3	71 to 90	N56C to N140TC	8,960	11,300	3,530
	3/V 03 L3	544	3.3	24,100	1.8	71 to 90	N56C to N140TC	9,060	11,400	3,620
	3/V 03 L3	623	2.9	19,600	1.3	71 to 90	N56C to N140TC	9,240	11,700	3,790
	3/V 03 L3	736	2.4	23,900	1.3	71 to 90	N56C to N140TC	9,460	12,000	4,000
	3/V 03 L3	793	2.3	18,700	0.97	71 to 90	N56C to N140TC	9,560	12,100	4,110
	3/V 03 L3	923	2.0	23,100	1.0	71 to 90	N56C to N140TC	9,770	12,300	4,320
	3/V 03 L3	1023	1.8	23,400	1.0	71 to 80	N56C	9,920	12,500	4,470
	3/V 03 L3	1189	1.5	20,100	0.77	71 to 80	N56C	10,100	12,800	4,700
	3/V 03 L3	1385	1.3	24,400	0.80	71 to 80	N56C	10,400	13,100	4,940
	3/V 03 L3	1610	1.1	21,200	0.60	71 to 80	N56C	10,600	13,400	5,200
	3/V 03 L3	1728	1.0	25,100	0.66	71 to 80	N56C	10,700	13,500	5,320
	3/V 03 L3	2009	0.90	21,600	0.49	71 to 80	N56C	10,900	13,800	5,400
	3/V 03 L3	2511	0.72	20,400	0.37	71 to 80	N56C	11,300	14,200	5,400

3/V 04 L3

276

35,050 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 04 L3	384	4.7	31,000	3.1	71 to 112	N56C to N180TC	8,620	10,900	3,220
	3/V 04 L3	453	4.0	32,800	2.8	71 to 112	N56C to N180TC	8,830	11,200	3,410
	3/V 04 L3	501	3.6	26,600	2.2	71 to 112	N56C to N180TC	8,960	11,300	3,520
	3/V 04 L3	568	3.2	27,200	1.8	71 to 112	N56C to N180TC	9,120	11,500	3,670
	3/V 04 L3	623	2.9	31,100	2.0	71 to 112	N56C to N180TC	9,240	11,700	3,790
	3/V 04 L3	710	2.5	22,600	1.1	71 to 112	N56C to N180TC	9,410	11,900	3,960
	3/V 04 L3	769	2.3	28,600	1.4	71 to 112	N56C to N180TC	9,520	12,000	4,060
	3/V 04 L3	887	2.0	23,500	0.95	71 to 112	N56C to N180TC	9,720	12,300	4,260
	3/V 04 L3	981	1.8	33,800	1.5	71 to 112	N56C to N180TC	9,860	12,500	4,410
	3/V 04 L3	1152	1.6	30,600	1.0	71 to 112	N56C to N180TC	10,100	12,700	4,650
	3/V 04 L3	1231	1.5	31,000	1.1	71 to 112	N56C to N180TC	10,200	12,900	4,750
	3/V 04 L3	1419	1.3	25,500	0.71	71 to 112	N56C to N180TC	10,400	13,100	4,980
	3/V 04 L3	1536	1.2	32,200	0.88	71 to 112	N56C to N180TC	10,500	13,300	5,120
	3/V 04 L3	1774	1.0	26,500	0.59	71 to 112	N56C to N180TC	10,700	13,600	5,370
	3/V 04 L3	1893	0.95	26,600	0.59	71 to 112	N56C to N180TC	10,800	13,700	5,400
	3/V 04 L3	2366	0.76	26,600	0.47	71 to 112	N56C to N180TC	11,200	14,100	5,400

3/V 05 L3

294

51,330 lb·in

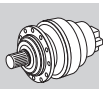
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 05 L3	396	4.5	32,300	2.9	71 to 112	N56C to N180TC	8,660	10,900	3,260
	3/V 05 L3	462	3.9	41,300	3.2	71 to 112	N56C to N180TC	8,850	11,200	3,430
	3/V 05 L3	529	3.4	33,800	2.3	71 to 112	N56C to N180TC	9,020	11,400	3,590
	3/V 05 L3	576	3.1	42,100	2.6	71 to 112	N56C to N180TC	9,140	11,500	3,690
	3/V 05 L3	623	2.9	39,300	2.5	71 to 112	N56C to N180TC	9,240	11,700	3,790
	3/V 05 L3	715	2.5	35,400	1.8	71 to 112	N56C to N180TC	9,420	11,900	3,970
	3/V 05 L3	793	2.3	36,000	1.8	71 to 112	N56C to N180TC	9,560	12,100	4,110
	3/V 05 L3	894	2.0	36,800	1.6	71 to 112	N56C to N180TC	9,730	12,300	4,270
	3/V 05 L3	1057	1.7	37,800	1.5	71 to 112	N56C to N180TC	9,960	12,600	4,520
	3/V 05 L3	1116	1.6	38,200	1.3	71 to 112	N56C to N180TC	10,000	12,700	4,600
	3/V 05 L3	1231	1.5	47,400	1.6	71 to 112	N56C to N180TC	10,200	12,900	4,750
	3/V 05 L3	1431	1.3	39,900	1.2	71 to 112	N56C to N180TC	10,400	13,100	5,000
	3/V 05 L3	1674	1.1	38,900	0.92	71 to 112	N56C to N180TC	10,600	13,400	5,270
	3/V 05 L3	1786	1.0	41,500	0.98	71 to 112	N56C to N180TC	10,700	13,600	5,380
	3/V 05 L3	2232	0.81	39,200	0.74	71 to 112	N56C to N180TC	11,100	14,000	5,400

3/V 06 L3

312

95,940 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 06 L3	395	4.6	67,200	6.1	71 to 112	N56C to N180TC	11,900	15,000	4,750
	3/V 06 L3	427	4.2	75,600	6.3	71 to 112	N56C to N180TC	12,000	15,200	4,870
	3/V 06 L3	527	3.4	67,200	4.6	71 to 112	N56C to N180TC	12,400	15,600	5,220
	3/V 06 L3	569	3.2	75,800	4.8	71 to 112	N56C to N180TC	12,500	15,800	5,360
	3/V 06 L3	661	2.7	81,600	4.5	71 to 112	N56C to N180TC	12,800	16,100	5,640
	3/V 06 L3	698	2.6	64,900	3.3	71 to 112	N56C to N180TC	12,900	16,300	5,740
	3/V 06 L3	791	2.3	67,400	3.4	71 to 112	N56C to N180TC	13,100	16,600	5,980
	3/V 06 L3	930	1.9	67,900	2.6	71 to 112	N56C to N180TC	13,400	16,900	6,310
	3/V 06 L3	992	1.8	83,300	3.4	71 to 112	N56C to N180TC	13,600	17,100	6,450
	3/V 06 L3	1153	1.6	70,700	2.4	71 to 112	N56C to N180TC	13,900	17,500	6,780
	3/V 06 L3	1212	1.5	68,700	2.4	71 to 112	N56C to N180TC	14,000	17,600	6,900
	3/V 06 L3	1395	1.3	72,300	2.1	71 to 112	N56C to N180TC	14,200	18,000	7,230
	3/V 06 L3	1768	1.0	76,100	1.8	71 to 112	N56C to N180TC	14,700	18,600	7,820
	3/V 06 L3	2139	0.84	75,200	1.5	71 to 112	N56C to N180TC	15,100	19,100	7,870
	3/V 06 L3	2588	0.70	62,000	1.0	71 to 112	N56C to N180TC	15,600	19,600	7,870



B

3/V 07 L3

330

138,780 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 07 L3	386	4.7	77,800	7.0	80 to 132	N140TC to N210TC	14,800	20,200	6,060
	3/V 07 L3	460	3.9	108,900	8.5	80 to 132	N140TC to N210TC	15,200	20,700	6,420
	3/V 07 L3	507	3.5	120,400	8.6	80 to 132	N140TC to N210TC	15,400	21,000	6,630
	3/V 07 L3	655	2.8	127,200	7.7	80 to 132	N140TC to N210TC	16,000	21,700	7,220
	3/V 07 L3	761	2.4	124,300	6.4	80 to 132	N140TC to N210TC	16,300	22,200	7,590
	3/V 07 L3	773	2.3	85,900	4.0	80 to 132	N140TC to N210TC	16,400	22,300	7,630
	3/V 07 L3	920	2.0	108,900	4.7	80 to 132	N140TC to N210TC	16,800	22,800	8,090
	3/V 07 L3	1015	1.8	126,200	5.0	80 to 132	N140TC to N210TC	17,000	23,100	8,360
	3/V 07 L3	1159	1.6	91,200	3.1	80 to 132	N140TC to N210TC	17,300	23,600	8,740
	3/V 07 L3	1288	1.4	124,100	4.0	80 to 132	N140TC to N210TC	17,600	24,000	9,050
	3/V 07 L3	1411	1.3	108,900	3.2	80 to 132	N140TC to N210TC	17,800	24,300	9,330
	3/V 07 L3	1545	1.2	95,200	2.5	80 to 132	N140TC to N210TC	18,100	24,600	9,610
	3/V 07 L3	1964	0.92	108,900	2.4	80 to 132	N140TC to N210TC	18,700	25,400	10,100
	3/V 07 L3	2150	0.84	97,400	1.9	80 to 132	N140TC to N210TC	18,900	25,800	10,100
	3/V 07 L3	2472	0.73	97,400	1.7	80 to 132	N140TC to N210TC	19,300	26,300	10,100

3/V 09 L3

348

205,690 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 09 L3	370	4.9	115,100	11.8	100 to 132	—	14,700	20,000	4,780
	3/V 09 L3	442	4.1	156,900	13.5	100 to 132	—	15,100	20,600	5,070
	3/V 09 L3	507	3.5	126,600	9.0	100 to 132	—	15,400	21,000	5,310
	3/V 09 L3	655	2.8	154,900	9.0	100 to 132	—	16,000	21,700	5,780
	3/V 09 L3	761	2.4	126,800	6.3	100 to 132	—	16,300	22,200	6,070
	3/V 09 L3	800	2.3	188,500	9.3	100 to 132	—	16,500	22,400	6,180
	3/V 09 L3	840	2.1	172,800	7.8	100 to 132	—	16,600	22,500	6,280
	3/V 09 L3	1004	1.8	158,100	6.2	100 to 132	—	17,000	23,100	6,660
	3/V 09 L3	1159	1.6	138,900	4.5	100 to 132	—	17,300	23,600	6,990
	3/V 09 L3	1288	1.4	184,700	5.7	100 to 132	—	17,600	24,000	7,240
	3/V 09 L3	1497	1.2	161,600	4.3	100 to 132	—	18,000	24,500	7,610
	3/V 09 L3	1623	1.1	129,500	3.4	100 to 132	—	18,200	24,800	7,820
	3/V 09 L3	1792	1.0	194,400	4.6	100 to 132	—	18,500	25,100	8,080
	3/V 09 L3	2150	0.84	150,500	2.8	100 to 132	—	18,900	25,800	8,090
	3/V 09 L3	2472	0.73	150,500	2.6	100 to 132	—	19,300	26,300	8,090

3/V 10 ML3

364

297,740 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 10 ML3	436	4.1	236,200	19.6	132 to 160	—	17,700	22,900	9,110
	3/V 10 ML3	507	3.5	220,000	15.7	132 to 160	—	18,100	23,400	9,580
	3/V 10 ML3	560	3.2	217,100	14.0	132 to 160	—	18,300	23,700	9,900
	3/V 10 ML3	614	2.9	171,100	10.1	132 to 160	—	18,600	24,000	10,200
	3/V 10 ML3	701	2.6	179,300	8.9	132 to 160	—	18,900	24,500	10,700
	3/V 10 ML3	773	2.3	182,400	8.5	132 to 160	—	19,200	24,800	11,000
	3/V 10 ML3	920	2.0	171,400	7.1	100 to 132	—	19,700	25,400	11,700
	3/V 10 ML3	1004	1.8	279,200	11.0	100 to 132	—	19,900	25,700	12,000
	3/V 10 ML3	1120	1.6	245,200	8.6	100 to 132	—	20,300	26,100	12,500
	3/V 10 ML3	1227	1.5	171,900	5.5	100 to 132	—	20,500	26,500	12,900
	3/V 10 ML3	1411	1.3	172,100	4.8	100 to 132	—	20,900	27,000	13,500

3/V 10 ML4 — 364 — 297,740 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 10 ML4	1617	1.10	248,400	5.7	71 to 112	N56C to N180TC	21,300	27,600	14,100
	3/V 10 ML4	1855	0.97	239,700	4.8	71 to 112	N56C to N180TC	21,800	28,100	14,600
	3/V 10 ML4	2016	0.89	260,500	4.8	71 to 112	N56C to N180TC	22,000	28,400	14,600
	3/V 10 ML4	2156	0.83	248,400	4.3	71 to 112	N56C to N180TC	22,200	28,700	14,600
	3/V 10 ML4	2455	0.73	240,300	3.6	71 to 112	N56C to N180TC	22,700	29,200	14,600
	3/V 10 ML4	2987	0.60	266,500	3.3	71 to 112	N56C to N180TC	23,300	30,100	14,600
	3/V 10 ML4	3273	0.55	240,300	2.7	71 to 112	N56C to N180TC	23,600	30,500	14,600
	3/V 10 ML4	3570	0.50	266,500	3.1	71 to 112	N56C to N180TC	23,900	30,900	14,600
	3/V 10 ML4	4036	0.45	266,500	2.5	71 to 112	N56C to N180TC	24,300	31,400	14,600
	3/V 10 ML4	4637	0.39	266,500	2.5	71 to 112	N56C to N180TC	24,800	32,000	14,600
	3/V 10 ML4	4959	0.36	248,400	2.1	71 to 112	N56C to N180TC	25,000	32,300	14,600

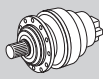
B

3/V 11 ML3 — 382 — 435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 11 ML3	430	4.2	334,900	27.8	160 to 180	—	22,100	23,100	9,060
	3/V 11 ML3	510	3.5	283,400	19.9	160 to 180	—	22,600	23,600	9,600
	3/V 11 ML3	551	3.3	349,800	22.7	160 to 180	—	22,900	23,900	9,850
	3/V 11 ML3	644	2.8	354,100	20.1	132 to 160	—	23,400	24,400	10,400
	3/V 11 ML3	720	2.5	366,400	19.8	132 to 160	—	23,800	24,800	10,800
	3/V 11 ML3	827	2.2	374,500	16.6	132 to 160	—	24,300	25,300	11,300
	3/V 11 ML3	900	2.0	366,600	16.3	100 to 132	—	24,500	25,600	11,600
	3/V 11 ML3	1004	1.8	316,300	12.9	100 to 132	—	24,900	26,000	12,000
	3/V 11 ML3	1103	1.6	391,800	13.8	132 to 160	—	25,300	26,400	12,400
	3/V 11 ML3	1274	1.4	291,600	9.1	100 to 132	—	25,800	26,900	13,000
	3/V 11 ML3	1378	1.3	405,800	11.8	100 to 132	—	26,100	27,200	13,400
	3/V 11 ML3	1636	1.1	365,000	8.9	100 to 132	—	26,700	27,900	14,200
	3/V 11 ML3	1963	0.92	365,100	7.6	100 to 132	—	27,400	28,600	14,600
	3/V 11 ML3	2329	0.77	322,800	5.7	100 to 132	—	28,100	29,400	14,600

3/V 11 ML4 — 382 — 435,550 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 11 ML4	2663	0.68	423,200	5.9	80 to 132	N140TC to N210TC	28,700	29,900	14,600
	3/V 11 ML4	3063	0.59	423,200	5.2	80 to 132	N140TC to N210TC	29,200	30,500	14,600
	3/V 11 ML4	3222	0.56	423,200	4.9	80 to 132	N140TC to N210TC	29,500	30,700	14,600
	3/V 11 ML4	3557	0.51	374,700	4.5	80 to 132	N140TC to N210TC	29,900	31,200	14,600
	3/V 11 ML4	4106	0.44	432,600	4.5	80 to 132	N140TC to N210TC	30,500	31,800	14,600
	3/V 11 ML4	4410	0.41	423,200	3.9	80 to 132	N140TC to N210TC	30,800	32,200	14,600
	3/V 11 ML4	5326	0.34	423,200	3.3	80 to 132	N140TC to N210TC	31,600	33,000	14,600



B

3/V 13 ML3

400

539,360 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 13 ML3	370	4.9	350,000	34	160 to 180	—	30,000	37,600	10,600
	3/V 13 ML3	425	4.2	393,200	32	160 to 180	—	30,600	38,300	11,100
	3/V 13 ML3	516	3.5	430,500	29.8	160 to 180	—	31,500	39,400	11,900
	3/V 13 ML3	567	3.2	413,400	26.0	160 to 180	—	31,900	39,900	12,200
	3/V 13 ML3	673	2.7	425,900	22.6	160 to 180	—	32,700	40,900	13,000
	3/V 13 ML3	741	2.4	405,500	21.3	132 to 160	—	33,100	41,500	13,400
	3/V 13 ML3	810	2.2	308,600	13.6	160 to 180	—	33,500	42,000	13,800
	3/V 13 ML3	870	2.1	476,300	21.3	132 to 160	—	33,900	42,400	14,100
	3/V 13 ML3	1009	1.8	457,100	16.6	132 to 160	—	34,600	43,300	14,800
	3/V 13 ML3	1088	1.7	452,800	16.6	100 to 132	—	35,000	43,800	15,200
	3/V 13 ML3	1291	1.4	442,600	13.7	100 to 132	—	35,900	44,900	16,100
	3/V 13 ML3	1418	1.3	485,000	13.7	100 to 132	—	36,300	45,500	16,600
	3/V 13 ML3	1620	1.1	348,400	8.4	132 to 160	—	37,000	46,400	17,400
	3/V 13 ML3	1682	1.1	499,700	11.9	100 to 132	—	37,200	46,600	17,600
	3/V 13 ML3	2019	0.89	505,600	10.3	100 to 132	—	38,200	47,900	18,000
	3/V 13 ML3	2430	0.74	354,900	6.0	100 to 132	—	39,200	49,100	18,000

3/V 13 ML4

400

539,360 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5 / B14				
1800	3/V 13 ML4	2773	0.65	522,600	7.7	80 to 132	N140TC to N210TC	40,000	50,100	18,000
	3/V 13 ML4	3263	0.55	479,200	5.5	80 to 132	N140TC to N210TC	40,900	51,300	18,000
	3/V 13 ML4	3515	0.51	505,600	5.4	80 to 132	N140TC to N210TC	41,400	51,800	18,000
	3/V 13 ML4	4046	0.44	539,400	5.4	80 to 132	N140TC to N210TC	42,200	51,900	18,000
	3/V 13 ML4	4536	0.40	505,600	4.5	80 to 132	N140TC to N210TC	42,900	51,900	18,000
	3/V 13 ML4	5046	0.36	449,700	3.8	80 to 132	N140TC to N210TC	43,200	51,900	18,000

3/V 14 ML3

418

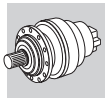
713,720 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 14 ML3	397	4.5	407,900	35	160 to 180	—	29,600	36,100	12,200
	3/V 14 ML3	446	4.0	421,800	34	160 to 180	—	30,100	36,700	12,700
	3/V 14 ML3	498	3.6	511,900	35	160 to 180	—	30,500	37,300	13,200
	3/V 14 ML3	579	3.1	460,600	27.4	160 to 180	—	31,200	38,100	13,900
	3/V 14 ML3	665	2.7	591,900	32	160 to 180	—	31,800	38,800	14,500
	3/V 14 ML3	695	2.6	380,800	21.3	132 to 160	—	32,000	39,100	14,700
	3/V 14 ML3	794	2.3	436,600	20.1	132 to 160	—	32,600	39,800	15,400
	3/V 14 ML3	893	2.0	488,700	21.3	132 to 160	—	33,200	40,500	16,000
	3/V 14 ML3	997	1.8	547,900	20.1	132 to 160	—	33,700	41,200	16,600
	3/V 14 ML3	1116	1.6	464,500	16.6	100 to 132	—	34,300	41,800	17,300
	3/V 14 ML3	1324	1.4	540,300	16.3	100 to 132	—	35,100	42,900	18,300
	3/V 14 ML3	1339	1.3	421,800	12.9	100 to 132	—	35,200	42,900	18,300
	3/V 14 ML3	1589	1.1	500,600	12.9	100 to 132	—	36,000	44,000	19,400
	3/V 14 ML3	1662	1.1	644,100	15.5	100 to 132	—	36,300	44,300	19,700
	3/V 14 ML3	1994	0.90	628,200	12.9	100 to 132	—	37,200	45,400	20,200
	3/V 14 ML3	2318	0.78	559,900	9.9	100 to 132	—	38,000	46,400	20,200

3/V 14 ML4

418

713,720 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 14 ML4	2504	0.72	713,700	11.6	100 to 132	—	38,500	46,900	20,200
	3/V 14 ML4	2782	0.65	713,700	10.0	100 to 132	—	39,000	47,700	20,200
	3/V 14 ML4	3182	0.57	690,600	8.2	100 to 132	—	39,800	48,600	20,200
	3/V 14 ML4	3472	0.52	648,800	7.0	132 to 160	—	40,300	49,200	20,200
	3/V 14 ML4	3993	0.45	648,800	6.1	100 to 132	—	41,100	50,200	20,200
	3/V 14 ML4	4312	0.42	713,700	6.7	100 to 132	—	41,600	50,700	20,200
	3/V 14 ML4	4959	0.36	713,700	5.8	100 to 132	—	42,400	51,800	20,200

B

3/V 15 ML3

434

892,160 lb·in

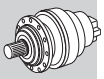
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 15 ML3	386	4.7	536,900	47	132 to 225	—	29,500	35,900	12,100
	3/V 15 ML3	446	4.0	576,000	46	132 to 225	—	30,100	36,700	12,700
	3/V 15 ML3	498	3.6	715,700	50	132 to 225	—	30,500	37,300	13,200
	3/V 15 ML3	560	3.2	722,800	46	132 to 225	—	31,100	37,900	13,700
	3/V 15 ML3	665	2.7	739,900	40	132 to 225	—	31,800	38,800	14,500
	3/V 15 ML3	840	2.1	711,100	31	132 to 225	—	32,900	40,200	15,700
	3/V 15 ML3	997	1.8	769,000	28.2	132 to 225	—	33,700	41,200	16,600
	3/V 15 ML3	1120	1.6	777,100	27.0	132 to 225	—	34,300	41,900	17,300
	3/V 15 ML3	1329	1.4	789,100	23.1	132 to 225	—	35,100	42,900	18,300
	3/V 15 ML3	1400	1.3	769,400	21.9	132 to 225	—	35,400	43,200	18,600
	3/V 15 ML3	1662	1.1	805,200	19.4	132 to 225	—	36,300	44,300	19,700
	3/V 15 ML3	1994	0.90	811,000	16.9	132 to 225	—	37,200	45,400	20,200
	3/V 15 ML3	2318	0.78	699,800	12.6	132 to 225	—	38,000	46,400	20,200

3/V 15 ML4

434

892,160 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
						B5				
1800	3/V 15 ML4	2780	0.65	892,200	12.0	132 to 160	—	39,000	47,700	20,200
	3/V 15 ML4	3300	0.55	892,200	10.1	132 to 160	—	40,000	48,800	20,200
	3/V 15 ML4	3489	0.52	811,000	8.7	132 to 160	—	40,300	49,200	20,200
	3/V 15 ML4	4171	0.43	892,200	8.4	100 to 132	—	41,400	50,500	20,200
	3/V 15 ML4	4950	0.36	892,200	7.0	100 to 132	—	42,400	51,700	20,200
	3/V 15 ML4	5234	0.34	811,000	6.1	100 to 132	—	42,700	52,200	20,200



B

3/V 16 ML3

450

1,189,450 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 16 ML3	**397**	4.5	882,000	77	132 to 225	—	46,100	51,700	20,400
	3/V 16 ML3	**446**	4.0	826,800	65	132 to 225	—	46,800	52,500	21,200
	3/V 16 ML3	**530**	3.4	981,300	65	132 to 225	—	48,000	53,800	22,400
	3/V 16 ML3	**669**	2.7	743,200	40	132 to 225	—	49,600	55,700	24,200
	3/V 16 ML3	**794**	2.3	882,000	40	132 to 225	—	50,800	57,000	25,700
	3/V 16 ML3	**893**	2.0	891,800	38	132 to 225	—	51,700	58,000	26,700
	3/V 16 ML3	**1059**	1.7	1,022,300	37	132 to 225	—	53,000	59,400	28,300
	3/V 16 ML3	**1324**	1.4	992,300	29.9	132 to 225	—	54,700	61,400	30,400
	3/V 16 ML3	**1589**	1.1	992,300	24.9	132 to 225	—	56,100	63,000	32,300

3/V 16 ML4

450

1,189,450 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 16 ML4	**1785**	1.0	937,200	19.6	132 to 160	—	57,100	64,000	33,600
	3/V 16 ML4	**1920**	0.94	1,008,000	19.6	132 to 160	—	57,700	64,700	33,700
	3/V 16 ML4	**2343**	0.77	1,189,500	18.9	132 to 160	—	59,300	66,600	33,700
	3/V 16 ML4	**2678**	0.67	987,700	14.4	100 to 132	—	60,500	67,900	33,700
	3/V 16 ML4	**2880**	0.63	1,062,400	14.4	100 to 132	—	61,100	68,600	33,700
	3/V 16 ML4	**3514**	0.51	1,189,500	13.2	100 to 132	—	62,900	70,500	33,700
	3/V 16 ML4	**4171**	0.43	1,189,500	11.2	100 to 132	—	64,400	72,300	33,700
	3/V 16 ML4	**4950**	0.36	1,045,400	8.3	100 to 132	—	66,000	74,100	33,700

3/V 17 ML3

462

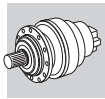
1,836,440 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 17 ML3	**405**	4.4	1,030,700	86	132 to 225	—	71,900	76,300	20,500
	3/V 17 ML3	**425**	4.2	944,300	77	132 to 225	—	72,400	76,900	20,800
	3/V 17 ML3	**512**	3.5	1,136,600	77	132 to 225	—	74,300	78,900	22,200
	3/V 17 ML3	**567**	3.2	1,050,500	65	132 to 225	—	75,400	80,100	22,900
	3/V 17 ML3	**608**	3.0	1,104,600	63	132 to 225	—	76,100	80,900	23,500
	3/V 17 ML3	**683**	2.6	1,264,500	65	132 to 225	—	77,400	82,200	24,400
	3/V 17 ML3	**810**	2.2	1,160,300	51	132 to 225	—	79,300	84,300	25,800
	3/V 17 ML3	**851**	2.1	944,300	40	132 to 225	—	79,900	84,900	26,300
	3/V 17 ML3	**1024**	1.8	1,136,600	40	132 to 225	—	82,000	87,200	27,900
	3/V 17 ML3	**1134**	1.6	1,133,100	38	132 to 225	—	83,200	88,400	28,900
	3/V 17 ML3	**1215**	1.5	1,243,500	37	132 to 225	—	84,100	89,300	29,600
	3/V 17 ML3	**1365**	1.3	1,364,000	38	132 to 225	—	85,500	90,800	30,800

3/V 17 ML4

462

1,836,440 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 17 ML4	1780	1.0	1,631,500	34	132 to 225	—	88,800	94,300	33,600
	3/V 17 ML4	2065	0.87	1,591,500	27.4	132 to 225	—	90,700	96,300	33,700
	3/V 17 ML4	2485	0.72	1,113,300	15.9	132 to 225	—	93,100	98,900	33,700
	3/V 17 ML4	2773	0.65	1,472,900	21.3	132 to 225	—	94,600	100,500	33,700
	3/V 17 ML4	3168	0.57	1,688,800	20.1	132 to 225	—	96,400	102,400	33,700
	3/V 17 ML4	3583	0.50	1,380,300	14.2	132 to 225	—	98,100	104,200	33,700
	3/V 17 ML4	4129	0.44	1,591,500	14.5	132 to 225	—	99,400	105,700	33,700
	3/V 17 ML4	4449	0.40	1,796,700	16.6	132 to 225	—	99,400	105,700	33,700
	3/V 17 ML4	4970	0.36	1,113,300	8.4	132 to 225	—	99,400	105,700	33,700

B

3/V 18 ML4

474

2,633,540 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 18 ML4	765	2.4	1,637,500	75	132 to 225	—	80,300	84,500	33,800
	3/V 18 ML4	982	1.8	2,101,400	75	132 to 225	—	83,200	87,600	36,700
	3/V 18 ML4	1165	1.5	2,472,500	75	132 to 225	—	85,200	89,800	38,900
	3/V 18 ML4	1232	1.5	2,492,600	71	132 to 225	—	85,900	90,500	39,600
	3/V 18 ML4	1473	1.2	2,260,000	55	132 to 225	—	88,100	92,800	42,100
	3/V 18 ML4	1748	1.0	2,622,300	53	132 to 225	—	90,300	95,100	44,500
	3/V 18 ML4	1848	0.97	2,633,500	51	132 to 225	—	91,000	95,900	45,000
	3/V 18 ML4	2295	0.78	1,884,600	31	132 to 225	—	93,900	98,900	45,000
	3/V 18 ML4	2464	0.73	2,633,500	39	132 to 225	—	94,900	99,900	45,000
	3/V 18 ML4	2945	0.61	2,418,600	31	132 to 225	—	97,300	102,500	45,000
	3/V 18 ML4	3495	0.51	2,633,500	28.4	132 to 225	—	99,700	105,000	45,000
	3/V 18 ML4	3696	0.49	2,633,500	26.9	132 to 225	—	100,500	105,900	45,000
	3/V 18 ML4	4386	0.41	2,633,500	22.6	132 to 225	—	103,000	108,500	45,000
	3/V 18 ML4	5099	0.35	2,342,800	17.3	132 to 225	—	105,300	110,800	45,000

3/V 19 L4

486

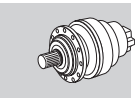
4,170,380 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	3/V 19 L4	2582	0.70	3,232,400	46	132 to 225	—	108,200	119,200	45,000
	3/V 19 L4	3231	0.56	3,153,300	36	132 to 225	—	111,700	123,000	45,000
	3/V 19 L4	4095	0.44	3,362,800	31	132 to 225	—	115,600	127,300	45,000
	3/V 19 L4	4457	0.40	2,977,700	24.6	132 to 225	—	117,000	128,800	45,000
	3/V 19 L4	5164	0.35	3,649,500	28.4	132 to 225	—	119,500	131,600	45,000

3/V 21 L4

498

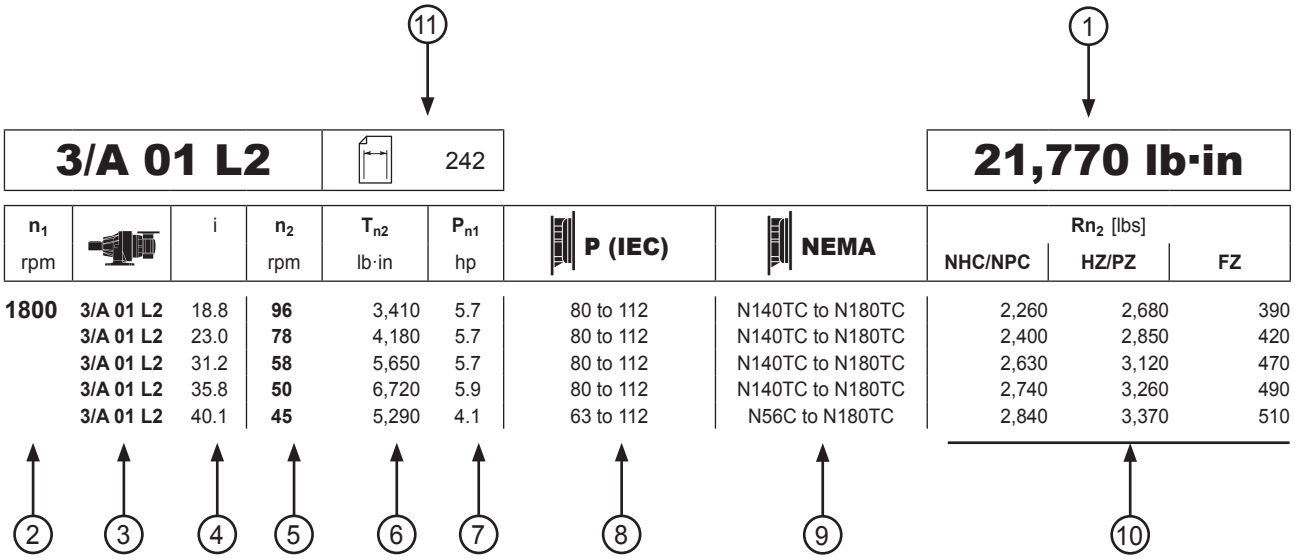
5,803,790 lb·in



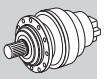
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] HC/PC	HZ/PZ	FZ
						B5				
1800	**3/V 21 L4**	**1062**	1.7	3,920,100	127	132 to 225	—	134,800	160,500	230,300
	3/V 21 L4	**1260**	1.4	3,765,600	104	132 to 225	—	138,200	164,500	242,400
	3/V 21 L4	**1517**	1.2	4,532,600	104	132 to 225	—	141,900	168,900	256,300
	3/V 21 L4	**1800**	1.0	4,747,100	92	132 to 225	—	145,400	173,100	269,800
	3/V 21 L4	**1890**	0.95	4,070,900	77	132 to 225	—	146,400	174,300	269,800
	3/V 21 L4	**2275**	0.79	4,900,100	77	132 to 225	—	150,300	179,000	269,800
	3/V 21 L4	**2520**	0.71	4,528,900	65	132 to 225	—	152,600	181,600	269,800
	3/V 21 L4	**2700**	0.67	4,747,100	63	132 to 225	—	154,100	183,400	269,800
	3/V 21 L4	**3600**	0.50	4,747,100	48	132 to 225	—	160,500	191,100	269,800
	3/V 21 L4	**3780**	0.48	4,070,900	40	132 to 225	—	161,700	192,400	269,800
	3/V 21 L4	**4550**	0.40	4,900,100	40	132 to 225	—	166,000	197,600	269,800
	3/V 21 L4	**5040**	0.36	4,885,100	38	132 to 225	—	168,400	200,500	269,800

25.6 3/A - COMBINED UNITS RATING CHARTS

Reading the rating chart.



1	Reference torque
2	Gearbox drive speed
3	Frame size of combined planetary + bevel helical unit
4	Gear ratio
5	Gearbox output speed
6	Gearbox rated output torque based on: - service factor f_S=1 - 10000 h theoretical lifetime
7	Gearbox rated input power, based on: - service factor f_S=1 - 10000 h theoretical lifetime
8	Frame size of available IEC motor
9	Frame size of available NEMA motor
10	Permitted overhung loading on output shaft, based on: - service factor f_S=1 - 10000 h theoretical lifetime - speed of output n_2 For forces not applied at shaft middlepoint, see diagrams provided in the specific gearbox overall dimensioning pages
11	Dimensions page



B

3/A 00 L2

226

11,060 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	**3/A 00 L2**	**19.1**	94	2,190	3.6	63 to 112	N56C to N180TC	2,270	2,870	400
	3/A 00 L2	**23.4**	77	2,690	3.6	63 to 112	N56C to N180TC	2,420	3,050	420
	3/A 00 L2	**31.7**	57	3,640	3.6	63 to 112	N56C to N180TC	2,640	3,340	470
	3/A 00 L2	**39.6**	45	4,540	3.6	63 to 112	N56C to N180TC	2,830	3,570	500
	3/A 00 L2	**41.5**	43	4,590	3.5	63 to 112	N56C to N180TC	2,870	3,620	510
	3/A 00 L2	**51.8**	35	4,870	2.9	63 to 112	N56C to N180TC	3,060	3,870	550
	3/A 00 L2	**61.2**	29.4	5,750	2.9	63 to 112	N56C to N180TC	3,220	4,070	580
	3/A 00 L2	**71.0**	25.4	5,750	2.5	63 to 112	N56C to N180TC	3,370	4,250	610
	3/A 00 L2	**80.2**	22.4	5,750	2.2	63 to 112	N56C to N180TC	3,490	4,410	640
	3/A 00 L2	**88.6**	20.3	4,870	1.7	63 to 112	N56C to N180TC	3,600	4,540	660
	3/A 00 L2	**100**	18.0	4,870	1.5	63 to 112	N56C to N180TC	3,730	4,710	690
	3/A 00 L2	**107**	16.8	5,750	1.7	63 to 112	N56C to N180TC	3,810	4,810	700
	3/A 00 L2	**134**	13.4	4,870	1.1	63 to 112	N56C to N180TC	4,070	5,140	760
	3/A 00 L2	**171**	10.5	4,870	0.89	63 to 112	N56C to N180TC	4,390	5,540	820
	3/A 00 L2	**203**	8.9	5,750	0.89	63 to 112	N56C to N180TC	4,450	5,620	870
	3/A 00 L2	**219**	8.2	5,500	0.79	63 to 112	N56C to N180TC	4,450	5,620	890
	3/A 00 L2	**253**	7.1	4,870	0.60	63 to 112	N56C to N180TC	4,450	5,620	930
	3/A 00 L2	**296**	6.1	5,750	0.61	63 to 112	N56C to N180TC	4,450	5,620	990
	3/A 00 L2	**319**	5.6	3,880	0.38	63 to 71	N56C	4,450	5,620	1,010
	3/A 00 L2	**369**	4.9	4,880	0.41	63 to 112	N56C to N180TC	4,470	5,640	1,060
	3/A 00 L2	**391**	4.6	4,760	0.38	63 to 71	N56C	4,500	5,690	1,080
	3/A 00 L2	**441**	4.1	5,950	0.42	63 to 71	N56C	4,580	5,790	1,130
	3/A 00 L2	**550**	3.3	5,130	0.29	63 to 71	N56C	4,730	5,970	1,210
	3/A 00 L2	**660**	2.7	5,250	0.25	63 to 71	N56C	4,850	6,130	1,290

3/A 01 L2

242

21,770 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	**3/A 01 L2**	**18.8**	96	3,410	5.7	80 to 112	N140TC to N180TC	2,260	2,680	390
	3/A 01 L2	**23.0**	78	4,180	5.7	80 to 112	N140TC to N180TC	2,400	2,850	420
	3/A 01 L2	**31.2**	58	5,650	5.7	80 to 112	N140TC to N180TC	2,630	3,120	470
	3/A 01 L2	**35.8**	50	6,720	5.9	80 to 112	N140TC to N180TC	2,740	3,260	490
	3/A 01 L2	**40.1**	45	5,290	4.1	63 to 112	N56C to N180TC	2,840	3,370	510
	3/A 01 L2	**43.9**	41	8,230	5.9	80 to 112	N140TC to N180TC	2,920	3,460	520
	3/A 01 L2	**49.1**	37	7,330	4.7	63 to 112	N56C to N180TC	3,010	3,580	540
	3/A 01 L2	**54.2**	33	7,160	4.1	63 to 112	N56C to N180TC	3,110	3,690	560
	3/A 01 L2	**59.4**	30	11,100	5.9	80 to 112	N140TC to N180TC	3,190	3,790	580
	3/A 01 L2	**74.2**	24.3	10,200	4.3	80 to 112	N140TC to N180TC	3,410	4,050	620
	3/A 01 L2	**81.3**	22.1	11,500	4.4	63 to 112	N56C to N180TC	3,510	4,160	640
	3/A 01 L2	**102**	17.7	10,200	3.1	63 to 112	N56C to N180TC	3,750	4,450	690
	3/A 01 L2	**133**	13.5	11,500	2.7	63 to 112	N56C to N180TC	4,070	4,830	760
	3/A 01 L2	**166**	10.8	10,200	1.9	63 to 112	N56C to N180TC	4,350	5,160	810
	3/A 01 L2	**184**	9.8	9,140	1.6	63 to 112	N56C to N180TC	4,450	5,280	840
	3/A 01 L2	**204**	8.8	11,500	1.8	63 to 112	N56C to N180TC	4,450	5,280	870
	3/A 01 L2	**220**	8.2	7,330	1.0	63 to 112	N56C to N180TC	4,450	5,280	890
	3/A 01 L2	**255**	7.1	10,200	1.3	63 to 112	N56C to N180TC	4,450	5,280	940
	3/A 01 L2	**269**	6.7	8,970	1.0	63 to 112	N56C to N180TC	4,450	5,280	950
	3/A 01 L2	**311**	5.8	10,200	1.0	63 to 112	N56C to N180TC	4,450	5,280	1,000
	3/A 01 L2	**364**	4.9	11,500	0.99	63 to 112	N56C to N180TC	4,460	5,290	1,060
	3/A 01 L2	**393**	4.6	7,320	0.58	63 to 71	N56C	4,510	5,350	1,080
	3/A 01 L2	**454**	4.0	10,200	0.70	63 to 112	N56C to N180TC	4,600	5,460	1,140
	3/A 01 L2	**533**	3.4	9,910	0.58	63 to 71	N56C	4,710	5,590	1,200
	3/A 01 L2	**665**	2.7	10,200	0.48	63 to 71	N56C	4,860	5,770	1,290

3/A 03 L2

258

26,290 lb·in

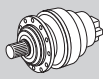
n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	3/A 03 L2	19.4	93	6,810	11.0	80 to 112	N140TC to N180TC	4,380	5,530	1,190
	3/A 03 L2	23.0	78	8,040	11.0	80 to 112	N140TC to N180TC	4,610	5,820	1,260
	3/A 03 L2	28.8	63	10,100	11.0	80 to 112	N140TC to N180TC	4,930	6,230	1,360
	3/A 03 L2	33.5	54	11,700	11.0	80 to 112	N140TC to N180TC	5,160	6,510	1,430
	3/A 03 L2	40.5	44	14,200	11.0	80 to 112	N140TC to N180TC	5,460	6,900	1,520
	3/A 03 L2	43.4	41	13,100	9.4	80 to 112	N140TC to N180TC	5,580	7,040	1,560
	3/A 03 L2	52.5	34	14,600	8.7	80 to 112	N140TC to N180TC	5,900	7,460	1,660
	3/A 03 L2	62.9	28.6	13,300	6.6	63 to 112	N56C to N180TC	6,230	7,870	1,760
	3/A 03 L2	73.2	24.6	15,500	6.6	63 to 112	N56C to N180TC	6,520	8,240	1,860
	3/A 03 L2	88.5	20.3	14,600	5.2	63 to 112	N56C to N180TC	6,900	8,720	1,980
	3/A 03 L2	96.9	18.6	15,000	4.8	63 to 112	N56C to N180TC	7,090	8,960	2,040
	3/A 03 L2	182	9.9	16,100	2.8	63 to 112	N56C to N180TC	8,540	10,800	2,510
	3/A 03 L2	220	8.2	14,600	2.1	63 to 112	N56C to N180TC	8,540	10,800	2,680
	3/A 03 L2	269	6.7	16,200	1.9	63 to 112	N56C to N180TC	8,540	10,800	2,860
	3/A 03 L2	326	5.5	14,600	1.41	63 to 112	N56C to N180TC	8,540	10,800	3,050
	3/A 03 L2	352	5.1	17,800	1.59	63 to 112	N56C to N180TC	8,540	10,800	3,130
	3/A 03 L2	409	4.4	16,700	1.28	63 to 112	N56C to N180TC	8,700	11,000	3,290
	3/A 03 L2	495	3.6	15,000	0.95	63 to 112	N56C to N180TC	8,940	11,300	3,510
	3/A 03 L2	574	3.1	15,200	0.83	63 to 112	N56C to N180TC	9,130	11,500	3,690
	3/A 03 L2	605	3.0	16,000	0.83	63 to 112	N56C to N180TC	9,200	11,600	3,750
	3/A 03 L2	731	2.5	15,500	0.66	63 to 112	N56C to N180TC	9,450	11,900	4,000

3/A 04 L2

276

35,050 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	3/A 04 L2	18.7	96	17,000	28.5	80 to 132	N140TC to N210TC	4,330	5,470	1,180
	3/A 04 L2	22.1	81	20,100	28.5	80 to 132	N140TC to N210TC	4,550	5,750	1,240
	3/A 04 L2	25.6	70	17,000	20.8	80 to 132	N140TC to N210TC	4,760	6,010	1,310
	3/A 04 L2	27.7	65	24,800	28.0	80 to 132	N140TC to N210TC	4,870	6,160	1,340
	3/A 04 L2	30.2	60	20,100	20.8	80 to 132	N140TC to N210TC	5,000	6,310	1,380
	3/A 04 L2	35.3	51	20,100	17.8	80 to 132	N140TC to N210TC	5,240	6,620	1,450
	3/A 04 L2	39.1	46	20,100	16.1	80 to 132	N140TC to N210TC	5,400	6,830	1,510
	3/A 04 L2	44.3	41	20,100	14.2	80 to 132	N140TC to N210TC	5,610	7,080	1,570
	3/A 04 L2	49.7	36	20,100	12.6	63 to 132	N56C to N210TC	5,810	7,340	1,630
	3/A 04 L2	54.5	33	20,100	11.5	80 to 132	N140TC to N210TC	5,970	7,540	1,680
	3/A 04 L2	62.4	28.8	25,200	12.6	63 to 132	N56C to N210TC	6,220	7,850	1,760
	3/A 04 L2	68.4	26.3	25,200	11.5	80 to 132	N56C to N210TC	6,390	8,070	1,810
	3/A 04 L2	81.7	22.0	21,000	8.1	63 to 132	N56C to N210TC	6,740	8,510	1,920
	3/A 04 L2	90.7	19.8	21,200	7.3	80 to 132	N140TC to N210TC	6,950	8,780	1,990
	3/A 04 L2	102	17.7	22,600	6.9	63 to 132	N56C to N210TC	7,200	9,100	2,070
	3/A 04 L2	117	15.4	21,200	5.7	80 to 132	N140TC to N210TC	7,510	9,480	2,170
	3/A 04 L2	129	13.9	24,100	5.8	63 to 132	N56C to N210TC	7,730	9,770	2,240
	3/A 04 L2	149	12.1	21,200	4.4	63 to 132	N56C to N210TC	8,070	10,200	2,350
	3/A 04 L2	162	11.1	25,700	5.0	63 to 132	N56C to N210TC	8,280	10,500	2,420
	3/A 04 L2	174	10.4	25,700	4.6	63 to 132	N56C to N180TC	8,450	10,700	2,480
	3/A 04 L2	205	8.8	25,700	3.9	63 to 132	N56C to N180TC	8,540	10,800	2,620
	3/A 04 L2	226	8.0	31,000	4.3	63 to 132	N56C to N180TC	8,540	10,800	2,700
	3/A 04 L2	250	7.2	31,000	3.9	63 to 132	N56C to N180TC	8,540	10,800	2,790
	3/A 04 L2	283	6.4	25,200	2.8	63 to 132	N56C to N180TC	8,540	10,800	2,910
	3/A 04 L2	317	5.7	21,200	2.1	63 to 132	N56C to N180TC	8,540	10,800	3,030
	3/A 04 L2	349	5.2	21,200	1.9	63 to 132	N56C to N180TC	8,540	10,800	3,120
	3/A 04 L2	386	4.7	21,300	1.7	63 to 132	N56C to N180TC	8,630	10,900	3,230
	3/A 04 L2	469	3.8	21,700	1.5	63 to 132	N56C to N180TC	8,870	11,200	3,440
	3/A 04 L2	520	3.5	21,900	1.3	63 to 132	N56C to N180TC	9,000	11,400	3,570



B

3/A 05 L2

294

51,330 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	**3/A 05L2**	**18.7**	96	17,000	28.5	80 to 132	N140TC to N210TC	4,330	5,470	1,180
	3/A 05L2	**22.1**	81	20,100	28.5	80 to 132	N140TC to N210TC	4,550	5,750	1,240
	3/A 05L2	**27.7**	65	25,200	28.5	80 to 132	N140TC to N210TC	4,870	6,160	1,340
	3/A 05L2	**32.2**	56	29,300	28.5	80 to 132	N140TC to N210TC	5,100	6,440	1,410
	3/A 05L2	**39.0**	46	26,600	21.4	80 to 132	N140TC to N210TC	5,400	6,820	1,500
	3/A 05L2	**44.0**	41	29,300	20.8	80 to 132	N140TC to N210TC	5,600	7,070	1,570
	3/A 05L2	**53.3**	34	26,800	15.7	80 to 132	N140TC to N210TC	5,930	7,490	1,670
	3/A 05L2	**57.0**	32	29,300	16.1	80 to 132	N140TC to N210TC	6,050	7,640	1,710
	3/A 05L2	**62.6**	28.7	28,400	14.2	80 to 132	N140TC to N210TC	6,220	7,860	1,760
	3/A 05L2	**72.5**	24.8	29,300	12.6	63 to 132	N56C to N210TC	6,500	8,220	1,850
	3/A 05L2	**75.8**	23.8	27,000	11.1	80 to 132	N140TC to N210TC	6,590	8,320	1,880
	3/A 05L2	**85.6**	21.0	31,200	11.4	80 to 132	N140TC to N210TC	6,830	8,630	1,950
	3/A 05L2	**104**	17.4	27,100	8.2	80 to 132	N140TC to N210TC	7,240	9,140	2,080
	3/A 05L2	**121**	14.9	31,100	8.1	63 to 132	N56C to N210TC	7,580	9,580	2,190
	3/A 05L2	**141**	12.8	31,800	7.1	63 to 132	N56C to N210TC	7,930	10,000	2,310
	3/A 05L2	**162**	11.1	25,700	5.0	63 to 132	N56C to N210TC	8,280	10,500	2,420
	3/A 05L2	**175**	10.3	31,900	5.7	63 to 132	N56C to N210TC	8,480	10,700	2,480
	3/A 05L2	**212**	8.5	27,400	4.0	63 to 132	N56C to N210TC	8,540	10,800	2,650
	3/A 05L2	**241**	7.5	38,000	5.0	63 to 132	N56C to N210TC	8,540	10,800	2,760
	3/A 05L2	**280**	6.4	31,900	3.6	63 to 132	N56C to N210TC	8,540	10,800	2,900
	3/A 05L2	**329**	5.5	31,900	3.0	63 to 132	N56C to N180TC	8,540	10,800	3,060
	3/A 05L2	**398**	4.5	27,700	2.2	63 to 132	N56C to N180TC	8,670	10,900	3,260
	3/A 05L2	**422**	4.3	36,600	2.7	63 to 132	N56C to N180TC	8,740	11,000	3,330
	3/A 05L2	**491**	3.7	33,400	2.1	63 to 132	N56C to N180TC	8,930	11,300	3,500
	3/A 05L2	**594**	3.0	28,700	1.5	63 to 132	N56C to N180TC	9,180	11,600	3,730

3/A 06 L2

312

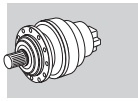
95,940 lb·in

n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	**3/A 06L2**	**27.7**	65	21,700	24.5	80 to 180	N140TC to N280TC	6,690	8,440	1,960
	3/A 06L2	**32.7**	55	25,600	24.5	80 to 180	N140TC to N280TC	7,040	8,870	2,070
	3/A 06L2	**34.9**	52	23,200	20.8	80 to 180	N140TC to N280TC	7,180	9,040	2,110
	3/A 06L2	**41.1**	44	32,100	24.5	80 to 180	N140TC to N280TC	7,530	9,500	2,230
	3/A 06L2	**47.2**	38	23,200	15.4	80 to 180	N140TC to N280TC	7,850	9,900	2,340
	3/A 06L2	**51.7**	35	34,300	20.8	80 to 180	N140TC to N280TC	8,070	10,200	2,410
	3/A 06L2	**55.7**	32	27,400	15.4	80 to 180	N140TC to N280TC	8,250	10,400	2,470
	3/A 06L2	**60.1**	29.9	39,900	20.8	80 to 180	N140TC to N280TC	8,450	10,600	2,530
	3/A 06L2	**69.9**	25.8	34,300	15.4	80 to 180	N140TC to N280TC	8,830	11,100	2,660
	3/A 06L2	**81.2**	22.2	39,900	15.4	80 to 180	N140TC to N280TC	9,240	11,700	2,800
	3/A 06L2	**88.5**	20.3	36,600	13.0	80 to 180	N140TC to N280TC	9,480	12,000	2,880
	3/A 06L2	**98.3**	18.3	47,100	15.0	80 to 180	N140TC to N280TC	9,790	12,300	2,980
	3/A 06L2	**112**	16.0	54,800	15.8	80 to 180	N140TC to N280TC	10,200	12,800	3,120
	3/A 06L2	**125**	14.5	47,700	12.0	80 to 180	N140TC to N280TC	10,500	13,200	3,230
	3/A 06L2	**141**	12.8	68,700	15.8	80 to 180	N140TC to N280TC	10,900	13,700	3,360
	3/A 06L2	**164**	11.0	57,500	11.4	80 to 180	N140TC to N280TC	11,400	14,400	3,540
	3/A 06L2	**190**	9.5	68,800	11.7	80 to 180	N140TC to N280TC	11,700	14,800	3,720
	3/A 06L2	**198**	9.1	48,700	8.0	80 to 180	N140TC to N280TC	11,700	14,800	3,770
	3/A 06L2	**221**	8.2	57,600	8.4	80 to 180	N140TC to N280TC	11,700	14,800	3,910
	3/A 06L2	**267**	6.7	48,700	5.9	80 to 180	N140TC to N280TC	11,700	14,800	4,170
	3/A 06L2	**276**	6.5	68,800	8.1	63 to 180	N56C to N280TC	11,700	14,800	4,210
	3/A 06L2	**321**	5.6	57,800	5.8	63 to 180	N56C to N280TC	11,700	14,800	4,430
	3/A 06L2	**388**	4.6	49,000	4.1	63 to 180	N56C to N280TC	11,900	15,000	4,720
	3/A 06L2	**380**	4.7	54,800	4.7	63 to 180	N56C to N280TC	11,800	14,900	4,690
	3/A 06L2	**435**	4.1	68,800	5.1	63 to 180	N56C to N280TC	12,100	15,200	4,900
	3/A 06L2	**505**	3.6	61,300	3.9	63 to 180	N56C to N280TC	12,300	15,500	5,150
	3/A 06L2	**555**	3.2	62,300	3.6	63 to 180	N56C to N280TC	12,500	15,700	5,320
	3/A 06L2	**611**	2.9	51,400	2.7	63 to 180	N56C to N280TC	12,700	16,000	5,490
	3/A 06L2	**671**	2.7	51,800	2.5	63 to 180	N56C to N280TC	12,800	16,200	5,660

3/A 07 L2

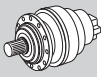
330

138,780 lb·in



n_1 rpm		i	n_2 rpm	T_{n2} lb·in	P_{n1} hp	P (IEC)	NEMA	Rn_2 [lbs] NHC/NPC	HZ/PZ	FZ
1800	**3/A 07L2**	**27.1**	66	35,300	41	132 to 180	N210TC to N280TC	8,320	11,300	2,500
	3/A 07L2	**32.3**	56	42,100	41	132 to 180	N210TC to N280TC	8,770	11,900	2,650
	3/A 07L2	**41.5**	43	54,000	41	132 to 180	N210TC to N280TC	9,450	12,900	2,880
	3/A 07L2	**49.2**	37	64,100	41	132 to 180	N210TC to N280TC	9,950	13,500	3,050
	3/A 07L2	**57.3**	31	38,200	21	80 to 180	N140TC to N280TC	10,400	14,200	3,210
	3/A 07L2	**68.3**	26.3	45,600	21	80 to 180	N140TC to N280TC	11,000	14,900	3,400
	3/A 07L2	**87.7**	20.5	58,600	21	80 to 180	N140TC to N280TC	11,800	16,100	3,690
	3/A 07L2	**109**	16.6	77,700	23.1	80 to 180	N140TC to N280TC	12,600	17,200	3,970
	3/A 07L2	**130**	13.9	98,400	24.6	80 to 180	N140TC to N280TC	13,300	18,100	4,210
	3/A 07L2	**140**	12.8	98,400	22.7	80 to 180	N140TC to N280TC	13,600	18,500	4,320
	3/A 07L2	**155**	11.6	79,100	16.5	80 to 180	N140TC to N280TC	14,000	19,100	4,470
	3/A 07L2	**180**	10.0	95,500	17.2	80 to 180	N140TC to N280TC	14,700	20,000	4,700
	3/A 07L2	**198**	9.1	77,000	12.6	80 to 180	N140TC to N280TC	14,700	20,000	4,840
	3/A 07L2	**223**	8.1	79,700	11.6	80 to 180	N56C to N280TC	14,700	20,000	5,040
	3/A 07L2	**241**	7.5	79,700	10.7	80 to 180	N56C to N280TC	14,700	20,000	5,180
	3/A 07L2	**282**	6.4	77,000	8.8	80 to 180	N140TC to N280TC	14,700	20,000	5,450
	3/A 07L2	**341**	5.3	99,700	9.4	80 to 180	N56C to N280TC	14,700	20,000	5,810
	3/A 07L2	**405**	4.4	78,300	6.3	80 to 180	N56C to N280TC	14,900	20,300	6,150
	3/A 07L2	**439**	4.1	79,200	5.8	80 to 180	N56C to N280TC	15,100	20,500	6,320

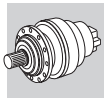
B

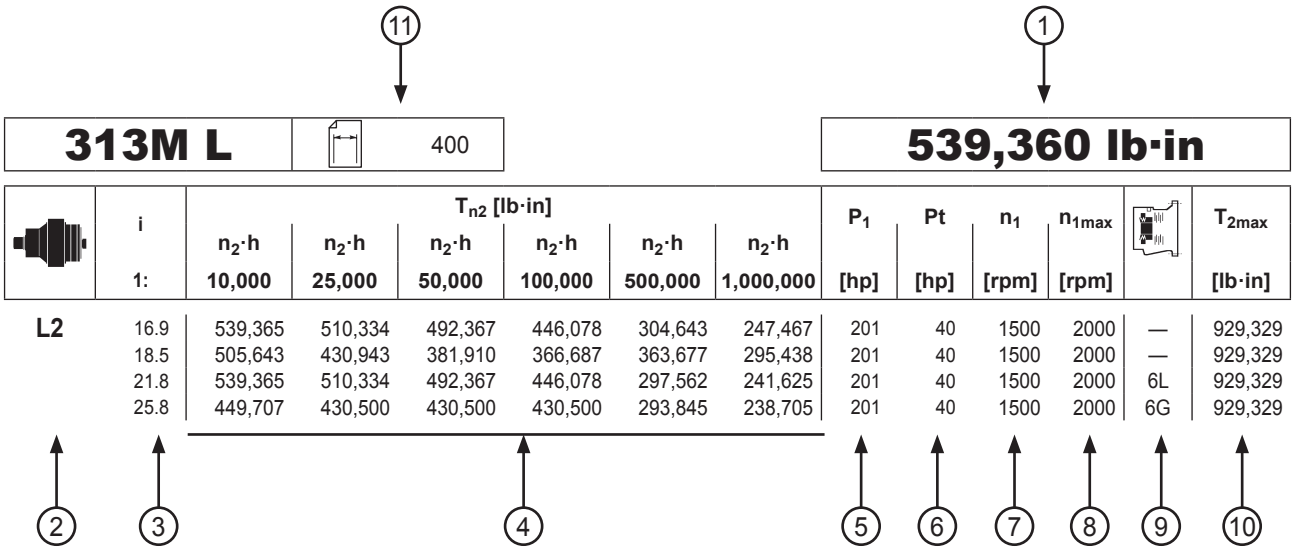


B

25.7 RATING CHARTS FOR INLINE UNITS 300M L

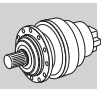
Reading the rating chart.





1	Reference torque
2	Number of reduction stages (in-line gear unit)
3	Gear ratio
4	Gearbox rated output torque based on: - service factor f_S=1 - n_2·h indicated
5	Maximum power transmitted to input shaft
6	Gearbox thermal capacity
7	Input angular velocity
8	Maximum input angular velocity
9	Negative multidisc hydraulic brake
10	Maximum output torque at gearbox
11	Page where dimensions can be sorted from

C



C

300 L

226

11,060 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.48	6,727	6,461	6,461	6,461	6,461	6,461	27	10.1	2000	4000	4F	17,702
	4.26	11,063	9,470	8,408	7,612	7,435	6,373	27	10.1	2000	4000	4H	21,242
	5.77	7,612	6,461	5,753	5,753	5,753	5,576	27	10.1	2000	4000	4F	21,242
	7.20	6,196	5,310	4,868	4,868	4,868	4,514	22	10.1	2000	4000	4D	21,242
	9.00	4,071	3,452	3,275	3,275	3,275	3,275	11.9	10.1	2000	4000	4D	21,242
L2	12.1	6,727	6,461	6,461	6,461	6,461	6,461	16.0	10.1	2000	4000	4B	17,702
	14.8	11,063	9,470	8,408	7,612	7,435	6,373	16.9	10.1	2000	4000	4B	17,702
	18.2	11,063	9,470	8,408	7,612	7,435	6,373	13.9	10.1	2000	4000	4B	21,242
	20.1	7,612	6,461	5,753	5,753	5,753	5,576	9.7	10.1	2000	4000	4B	17,702
	24.6	11,063	9,470	8,408	7,612	7,435	6,373	10.5	10.1	2000	4000	4B	21,242
	30.7	11,063	9,470	8,408	7,612	7,435	6,373	8.5	10.1	2000	4000	4A	21,242
	33.3	7,612	6,461	5,753	5,753	5,753	5,576	5.8	10.1	2000	4000	4A	21,242
	38.4	11,063	9,470	8,408	7,612	7,435	6,373	6.9	10.1	2000	4000	4A	21,242
	41.5	7,612	6,461	5,753	5,753	5,753	5,576	4.7	10.1	2000	4000	4A	21,242
	51.9	7,612	6,461	5,753	5,753	5,753	5,576	3.9	10.1	2000	4000	4A	21,242
	64.8	6,196	5,310	4,868	4,868	4,868	4,514	2.7	10.1	2000	4000	4A	21,242
L3	51.6	11,063	9,470	8,408	7,612	7,435	6,373	5.6	10.1	2000	4000	4A	17,702
	63.2	11,063	9,470	8,408	7,612	7,435	6,373	4.7	10.1	2000	4000	4A	21,242
	69.9	7,612	6,461	5,753	5,753	5,753	5,576	3.2	10.1	2000	4000	4A	17,702
	77.5	11,063	9,470	8,408	7,612	7,435	6,373	4.0	10.1	2000	4000	4A	21,242
	85.6	11,063	9,470	8,408	7,612	7,435	6,373	3.6	10.1	2000	4000	4A	21,242
	105	11,063	9,470	8,408	7,612	7,435	6,373	2.9	10.1	2000	4000	4A	21,242
	116	7,612	6,461	5,753	5,753	5,753	5,576	2.1	10.1	2000	4000	4A	21,242
	131	11,063	9,470	8,408	7,612	7,435	6,373	2.4	10.1	2000	4000	4A	21,242
	142	11,063	9,470	8,408	7,612	7,435	6,373	2.2	10.1	2000	4000	4A	21,242
	177	11,063	9,470	8,408	7,612	7,435	6,373	1.7	10.1	2000	4000	4A	21,242
	192	7,612	6,461	5,753	5,753	5,753	5,576	1.4	10.1	2000	4000	4A	21,242
	221	11,063	9,470	8,408	7,612	7,435	6,373	1.4	10.1	2000	4000	4A	21,242
	240	7,612	6,461	5,753	5,753	5,753	5,576	1.1	10.1	2000	4000	4A	21,242
	299	7,612	6,461	5,753	5,753	5,753	5,576	0.88	10.1	2000	4000	4A	21,242
	374	7,612	6,461	5,753	5,753	5,753	5,576	0.71	10.1	2000	4000	4A	21,242
L4	330	11,063	9,470	8,408	7,612	7,435	6,373	1.0	8.0	2000	4000	4A	21,242
	403	7,612	6,461	5,753	5,753	5,753	5,576	0.68	8.0	2000	4000	4A	21,242
	447	11,063	9,470	8,408	7,612	7,435	6,373	0.71	8.0	2000	4000	4A	21,242
	494	11,063	9,470	8,408	7,612	7,435	6,373	0.64	8.0	2000	4000	4A	21,242
	558	11,063	9,470	8,408	7,612	7,435	6,373	0.57	8.0	2000	4000	4A	21,242
	616	11,063	9,470	8,408	7,612	7,435	6,373	0.51	8.0	2000	4000	4A	21,242
	755	11,063	9,470	8,408	7,612	7,435	6,373	0.42	8.0	2000	4000	4A	21,242
	819	11,063	9,470	8,408	7,612	7,435	6,373	0.39	8.0	2000	4000	4A	21,242
	942	11,063	9,470	8,408	7,612	7,435	6,373	0.34	8.0	2000	4000	4A	21,242
	1022	11,063	9,470	8,408	7,612	7,435	6,373	0.31	8.0	2000	4000	4A	21,242
	1108	7,612	6,461	5,753	5,753	5,753	5,576	0.25	8.0	2000	4000	4A	21,242
	1275	11,063	9,470	8,408	7,612	7,435	6,373	0.25	8.0	2000	4000	4A	21,242
	1383	7,612	6,461	5,753	5,753	5,753	5,576	0.20	8.0	2000	4000	4A	21,242
	1591	11,063	9,470	8,408	7,612	7,435	6,373	0.20	8.0	2000	4000	4A	21,242
	1725	7,612	6,461	5,753	5,753	5,753	5,576	0.16	8.0	2000	4000	4A	21,242
	2153	7,612	6,461	5,753	5,753	5,753	5,576	0.13	8.0	2000	4000	4A	21,242
	2692	8,851	8,851	7,877	7,523	6,727	5,576	0.12	8.0	2000	4000	4A	21,242

301 L

242

21,770 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.48	13,188	12,657	12,657	12,657	12,657	11,506	40	10.1	2000	4000	4L	30,093
	4.26	21,773	18,941	16,728	15,312	13,984	11,329	40	10.1	2000	4000	4L	30,093
	5.77	15,223	12,922	11,506	11,506	11,506	10,975	40	10.1	2000	4000	4K	30,093
	7.20	10,178	10,178	10,178	10,178	10,178	8,320	40	10.1	2000	4000	4F	30,093
	9.00	8,143	6,904	6,461	6,461	6,461	6,461	21	10.1	2000	4000	4F	30,093
L2	12.1	13,188	12,657	12,657	12,657	12,657	11,506	32	10.1	2000	4000	4D	30,093
	14.8	21,773	18,941	16,728	15,312	13,984	11,329	34	10.1	2000	4000	4D	30,093

301 L

242

21,770 lb·in

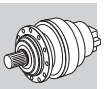
	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L2	18.2	21,773	18,941	16,728	15,312	13,984	11,329	28	10.1	2000	4000	4D	30,093
	20.1	15,223	12,922	11,506	11,506	11,506	10,975	19.3	10.1	2000	4000	4D	30,093
	24.6	21,773	18,941	16,728	15,312	13,984	11,329	21	10.1	2000	4000	4D	30,093
	30.7	17,702	17,702	16,197	15,312	13,984	11,329	16.9	10.1	2000	4000	4B	30,093
	33.3	15,223	12,922	11,506	11,506	11,506	10,975	11.7	10.1	2000	4000	4B	30,093
	38.4	14,161	13,896	13,896	13,896	13,542	11,329	13.6	10.1	2000	4000	4B	30,093
	41.5	15,223	12,922	11,506	11,506	11,506	10,975	9.4	10.1	2000	4000	4B	30,093
	51.9	15,223	12,922	11,506	11,506	11,506	10,975	7.9	10.1	2000	4000	4A	30,093
	64.8	10,178	10,178	10,178	10,178	10,178	8,320	5.3	10.1	2000	4000	4A	30,093
L3	51.6	21,773	18,941	16,728	15,312	13,984	11,329	11.1	10.1	2000	4000	4A	30,093
	63.2	21,773	18,941	16,728	15,312	13,984	11,329	9.4	10.1	2000	4000	4A	30,093
	69.9	15,223	12,922	11,506	11,506	11,506	10,975	6.3	10.1	2000	4000	4A	30,093
	77.5	21,773	18,941	16,728	15,312	13,984	11,329	7.9	10.1	2000	4000	4A	30,093
	85.6	21,773	18,941	16,728	15,312	13,984	11,329	7.2	10.1	2000	4000	4A	30,093
	105	21,773	18,941	16,728	15,312	13,984	11,329	5.9	10.1	2000	4000	4A	30,093
	116	15,223	12,922	11,506	11,506	11,506	10,975	4.2	10.1	2000	4000	4A	30,093
	131	21,773	18,941	16,728	15,312	13,984	11,329	4.7	10.1	2000	4000	4A	30,093
	142	21,773	18,941	16,728	15,312	13,984	11,329	4.3	10.1	2000	4000	4A	30,093
	177	21,773	18,941	16,728	15,312	13,984	11,329	3.5	10.1	2000	4000	4A	30,093
	192	15,223	12,922	11,506	11,506	11,506	10,975	2.7	10.1	2000	4000	4A	30,093
	221	17,702	17,702	16,197	15,312	13,984	11,329	2.8	10.1	2000	4000	4A	30,093
	240	15,223	12,922	11,506	11,506	11,506	10,975	2.2	10.1	2000	4000	4A	30,093
	299	15,223	12,922	11,506	11,506	11,506	10,975	1.7	10.1	2000	4000	4A	30,093
	374	15,223	12,922	11,506	11,506	11,506	10,975	1.4	10.1	2000	4000	4A	30,093
L4	330	21,773	18,941	16,728	15,312	13,984	11,329	1.9	8.0	2000	4000	4A	30,093
	403	15,223	12,922	11,506	11,506	11,506	10,975	1.3	8.0	2000	4000	4A	30,093
	447	21,773	18,941	16,728	15,312	13,984	11,329	1.4	8.0	2000	4000	4A	30,093
	494	21,773	18,941	16,728	15,312	13,984	11,329	1.3	8.0	2000	4000	4A	30,093
	558	21,773	18,941	16,728	15,312	13,984	11,329	1.1	8.0	2000	4000	4A	30,093
	616	21,773	18,941	16,728	15,312	13,984	11,329	1.0	8.0	2000	4000	4A	30,093
	755	21,773	18,941	16,728	15,312	13,984	11,329	0.84	8.0	2000	4000	4A	30,093
	819	21,773	18,941	16,728	15,312	13,984	11,329	0.78	8.0	2000	4000	4A	30,093
	942	21,773	18,941	16,728	15,312	13,984	11,329	0.67	8.0	2000	4000	4A	30,093
	1022	21,773	18,941	16,728	15,312	13,984	11,329	0.62	8.0	2000	4000	4A	30,093
	1108	15,223	12,922	11,506	11,506	11,506	10,975	0.49	8.0	2000	4000	4A	30,093
	1275	21,773	18,941	16,728	15,312	13,984	11,329	0.50	8.0	2000	4000	4A	30,093
	1383	15,223	12,922	11,506	11,506	11,506	10,975	0.39	8.0	2000	4000	4A	30,093
	1591	17,702	17,702	16,197	15,312	13,984	11,329	0.40	8.0	2000	4000	4A	30,093
	1725	15,223	12,922	11,506	11,506	11,506	10,975	0.31	8.0	2000	4000	4A	30,093
	2153	15,223	12,922	11,506	11,506	11,506	10,975	0.25	8.0	2000	4000	4A	30,093
	2692	15,223	12,922	11,506	11,506	11,506	10,975	0.20	8.0	2000	4000	4A	30,093

303 L

258

26,290 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.60	21,330	20,445	20,445	20,445	20,445	18,764	54	14.8	1800	3800	5G	46,024
	4.25	26,287	24,871	24,871	23,454	22,746	18,498	54	14.8	1800	3800	5G	46,024
	5.33	25,225	22,304	19,737	19,472	18,941	17,967	54	14.8	1800	3800	5E	46,024
	6.20	21,596	18,410	16,285	16,108	16,108	16,108	54	14.8	1800	3800	5C	46,024
	7.50	17,702	15,489	14,604	14,604	14,604	13,276	54	14.8	1800	3800	5B	46,024
	9.67	9,293	7,966	7,612	7,612	7,612	7,612	23	14.8	1800	3800	5B	46,024
L2	12.5	21,330	20,445	20,445	20,445	18,852	15,312	27	12.1	2000	4000	4F	46,024
	15.3	21,330	20,445	20,445	20,445	18,587	15,046	27	12.1	2000	4000	4F	46,024
	18.1	26,287	24,871	24,871	23,454	20,799	16,905	27	12.1	2000	4000	4F	46,024
	20.8	21,330	19,560	19,560	19,560	17,967	14,604	27	12.1	2000	4000	4D	46,024
	22.7	25,225	22,304	19,737	19,472	18,941	17,967	27	12.1	2000	4000	4D	46,024
	24.5	24,517	23,897	23,454	23,189	20,180	16,374	27	12.1	2000	4000	4D	46,024
	26.4	21,596	18,410	16,285	16,108	16,108	16,108	20	12.1	2000	4000	4D	46,024
	30.8	25,225	22,304	19,737	19,472	18,941	17,967	21	12.1	2000	4000	4D	46,024



C

303 L

258

26,290 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L2	35.8	21,596	18,410	16,285	16,108	16,108	16,108	15.0	12.1	2000	4000	4B	46,024
	38.4	25,225	21,684	19,737	19,472	18,941	17,967	17.1	12.1	2000	4000	4B	46,024
	44.6	21,596	18,410	16,285	16,108	16,108	16,108	12.3	12.1	2000	4000	4B	46,024
	55.8	20,357	18,410	16,285	16,108	16,108	16,108	10.2	12.1	2000	4000	4B	46,024
L3	53.4	21,330	20,445	20,445	20,445	18,587	15,046	12.5	10.1	2000	4000	4B	46,024
	63.1	26,287	24,871	24,871	23,454	21,153	17,170	13.1	10.1	2000	4000	4B	46,024
	72.3	21,330	20,445	20,445	20,445	18,852	15,312	9.3	10.1	2000	4000	4A	46,024
	77.2	26,287	24,871	24,871	23,454	20,799	16,905	10.9	10.1	2000	4000	4A	46,024
	90.2	21,330	20,445	20,445	20,445	18,852	15,312	7.6	10.1	2000	4000	4A	46,024
	105	26,287	24,871	24,871	23,454	20,799	16,905	8.3	10.1	2000	4000	4A	46,024
	113	21,596	18,410	16,285	16,108	16,108	16,108	5.9	10.1	2000	4000	4A	46,024
	124	21,596	18,410	16,285	16,108	16,108	16,108	5.4	10.1	2000	4000	4A	46,024
	141	24,517	23,897	23,454	23,189	20,180	16,374	6.0	10.1	2000	4000	4A	46,024
	152	21,596	18,410	16,285	16,108	16,108	16,108	4.5	10.1	2000	4000	4A	46,024
	164	25,225	22,304	19,737	19,472	18,941	17,967	5.2	10.1	2000	4000	4A	46,024
	178	25,225	22,304	19,737	19,472	18,941	17,967	4.9	10.1	2000	4000	4A	46,024
	190	21,596	18,410	16,285	16,108	16,108	16,108	3.7	10.1	2000	4000	4A	46,024
	220	19,914	19,472	19,914	19,914	16,197	15,931	3.1	10.1	2000	4000	4A	46,024
	258	21,596	18,410	16,285	16,108	16,108	16,108	2.7	10.1	2000	4000	4A	46,024
	276	25,225	21,684	19,737	19,472	18,941	17,967	3.2	10.1	2000	4000	4A	46,024
	321	21,596	18,410	16,285	16,108	16,108	16,108	2.2	10.1	2000	4000	4A	46,024
	389	17,702	15,489	14,604	14,604	14,604	13,276	1.6	10.1	2000	4000	4A	46,024
	402	21,596	18,410	16,285	16,108	16,108	16,108	1.8	10.1	2000	4000	4A	46,024
L4	413	25,225	22,304	19,737	19,472	18,941	17,967	2.2	8.0	2000	4000	4A	46,024
	446	26,287	24,871	24,871	23,454	20,799	16,905	2.1	8.0	2000	4000	4A	46,024
	492	24,517	23,897	23,454	23,189	20,180	16,374	1.8	8.0	2000	4000	4A	46,024
	556	26,287	24,871	24,871	23,454	20,799	16,905	1.7	8.0	2000	4000	4A	46,024
	649	21,330	20,445	20,445	20,445	18,852	15,312	1.1	8.0	2000	4000	4A	46,024
	718	21,596	18,410	16,285	16,108	16,108	16,108	1.0	8.0	2000	4000	4A	46,024
	816	24,517	23,897	23,454	23,189	20,180	16,374	1.1	8.0	2000	4000	4A	46,024
	896	21,596	18,410	16,285	16,108	16,108	16,108	0.81	8.0	2000	4000	4A	46,024
	1018	24,517	23,897	23,454	23,189	20,180	16,374	0.86	8.0	2000	4000	4A	46,024
	1098	21,596	18,410	16,285	16,108	16,108	16,108	0.66	8.0	2000	4000	4A	46,024
	1278	25,225	22,304	19,737	19,472	18,941	17,967	0.71	8.0	2000	4000	4A	46,024
	1370	21,596	18,410	16,285	16,108	16,108	16,108	0.53	8.0	2000	4000	4A	46,024
	1586	19,914	19,914	19,914	19,914	16,197	15,931	0.45	8.0	2000	4000	4A	46,024
	1854	21,596	18,410	16,285	16,108	16,108	16,108	0.39	8.0	2000	4000	4A	46,024
	1991	25,225	21,684	19,737	19,472	18,941	17,967	0.45	8.0	2000	4000	4A	46,024
	2243	17,702	15,489	14,604	14,604	14,604	13,276	0.28	8.0	2000	4000	4A	46,024
	2799	17,702	15,489	14,604	14,604	14,604	13,276	0.23	8.0	2000	4000	4A	46,024

304 L

276

35,050 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.60	32,836	31,155	30,978	30,447	27,614	25,048	67	16.1	1800	3800	5G	64,610
	4.25	35,049	33,190	32,659	31,332	30,358	24,605	67	16.1	1800	3800	5G	64,610
	5.33	33,102	28,234	25,225	25,225	25,225	23,986	67	16.1	1800	3800	5E	64,610
	6.57	26,552	22,658	21,153	21,153	21,153	21,153	67	16.1	1800	3800	5C	64,610
L2	12.5	32,836	31,155	30,978	30,447	27,614	25,048	40	12.1	2000	4000	4F	64,610
	15.3	32,836	31,155	30,978	30,447	27,614	25,048	40	12.1	2000	4000	4F	64,610
	18.1	35,049	33,190	32,659	31,332	30,358	24,605	40	12.1	2000	4000	4F	64,610
	20.8	32,836	31,155	30,978	30,447	27,614	25,048	40	12.1	2000	4000	4D	64,610
	22.7	33,102	28,234	25,225	25,225	25,225	23,986	37	12.1	2000	4000	4D	64,610
	24.5	35,049	33,190	32,659	31,332	30,358	24,605	40	12.1	2000	4000	4D	64,610
	30.8	33,102	28,234	25,225	25,225	25,225	23,986	27	12.1	2000	4000	4D	64,610
	38.4	33,102	28,234	25,225	25,225	25,225	23,986	22	12.1	2000	4000	4D	64,610
	47.3	26,552	22,658	21,153	21,153	21,153	21,153	14.7	12.1	2000	4000	4B	64,610
	59.1	26,552	22,658	21,153	21,153	21,153	21,153	11.9	12.1	2000	4000	4B	64,610

304 L

276

35,050 lb·in

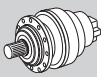
	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	43.6	32,836	31,155	30,978	30,447	27,614	25,048	25	10.1	2000	4000	4A	64,610
	53.4	32,836	31,155	30,978	30,447	27,614	25,048	20	10.1	2000	4000	4A	64,610
	63.1	35,049	33,190	32,659	31,332	30,358	24,605	18.0	10.1	2000	4000	4A	64,610
	72.3	32,836	31,155	30,978	30,447	27,614	25,048	15.0	10.1	2000	4000	4A	64,610
	77.2	35,049	33,190	32,659	31,332	30,358	24,605	14.8	10.1	2000	4000	4A	64,610
	90.2	32,836	31,155	30,978	30,447	27,260	25,048	12.1	10.1	2000	4000	4A	64,610
	105	35,049	33,190	32,659	31,332	30,358	24,605	11.2	10.1	2000	4000	4A	64,610
	111	32,836	31,155	30,978	30,447	27,614	25,048	10.0	10.1	2000	4000	4A	64,610
	130	35,049	33,190	32,659	31,332	30,358	24,605	9.1	10.1	2000	4000	4A	64,610
	141	35,049	33,190	32,659	31,332	30,358	24,605	8.5	10.1	2000	4000	4A	64,610
	150	32,836	31,155	30,978	30,447	27,614	25,048	7.5	10.1	2000	4000	4A	64,610
	165	26,552	22,658	21,153	21,153	21,153	21,153	5.0	10.1	2000	4000	4A	64,610
	178	33,102	28,234	25,225	25,225	25,225	23,986	6.0	10.1	2000	4000	4A	64,610
	202	26,552	22,658	21,153	21,153	21,153	21,153	4.2	10.1	2000	4000	4A	64,610
	220	35,049	32,836	32,394	31,332	30,358	24,605	5.5	10.1	2000	4000	4A	64,610
	273	26,552	22,658	21,153	21,153	21,153	21,153	3.1	10.1	2000	4000	4A	64,610
	341	26,552	22,658	21,153	21,153	21,153	21,153	2.5	10.1	2000	4000	4A	64,610
	426	26,552	22,658	21,153	21,153	21,153	21,153	2.0	10.1	2000	4000	4A	64,610
L4	413	33,102	28,234	25,225	25,225	25,225	23,986	2.7	8.0	2000	4000	4A	64,610
	446	35,049	33,190	32,659	31,332	30,358	24,605	2.8	8.0	2000	4000	4A	64,610
	492	35,049	33,190	32,659	31,332	30,358	24,605	2.6	8.0	2000	4000	4A	64,610
	556	35,049	33,190	32,659	31,332	30,358	24,605	2.3	8.0	2000	4000	4A	64,610
	649	32,836	31,155	30,978	30,447	27,614	25,048	1.8	8.0	2000	4000	4A	64,610
	702	26,552	22,658	21,153	21,153	21,153	21,153	1.2	8.0	2000	4000	4A	64,610
	816	35,049	33,190	32,659	31,332	30,358	24,605	1.5	8.0	2000	4000	4A	64,610
	1018	35,049	33,190	32,659	31,332	30,358	24,605	1.2	8.0	2000	4000	4A	64,610
	1164	26,552	22,658	21,153	21,153	21,153	21,153	0.75	8.0	2000	4000	4A	64,610
	1271	35,049	33,190	32,659	31,332	30,358	24,605	1.0	8.0	2000	4000	4A	64,610
	1344	32,836	31,155	30,978	30,447	27,260	25,048	0.88	8.0	2000	4000	4A	64,610
	1586	35,049	32,836	32,394	31,332	30,358	24,605	0.79	8.0	2000	4000	4A	64,610
	1815	26,552	22,658	21,153	21,153	21,153	21,153	0.48	8.0	2000	4000	4A	64,610
	1991	33,102	28,234	25,225	25,225	25,225	23,986	0.56	8.0	2000	4000	4A	64,610
	2269	26,552	22,658	21,153	21,153	21,153	21,153	0.38	8.0	2000	4000	4A	64,610
	2453	26,552	22,658	21,153	21,153	21,153	21,153	0.36	8.0	2000	4000	4A	64,610

305 L

294

51,330 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.60	41,599	39,740	39,740	39,740	39,651	32,217	80	17.4	1800	3800	5K	77,887
	4.25	51,334	48,679	48,502	46,909	39,032	31,686	80	17.4	1800	3800	5K	77,887
	5.33	49,564	44,608	39,563	38,943	37,881	30,889	80	17.4	1800	3800	5K	77,887
	6.20	41,510	35,403	31,863	31,863	31,420	30,624	80	17.4	1800	3800	5G	77,887
	7.50	33,633	29,207	27,437	27,437	26,552	24,694	80	17.4	1800	3800	5E	77,887
L2	12.5	41,599	39,740	39,740	39,740	33,633	27,349	40	12.1	2000	4000	4K	77,887
	15.3	41,599	39,740	39,740	39,740	33,190	26,906	40	12.1	2000	4000	4H	77,887
	18.1	51,334	48,679	48,502	46,909	37,262	30,270	40	12.1	2000	4000	4K	77,887
	20.8	41,599	39,386	39,209	39,209	32,128	26,110	40	12.1	2000	4000	4F	77,887
	22.7	49,564	44,608	39,563	38,943	37,881	30,889	40	12.1	2000	4000	4H	77,887
	24.5	48,945	47,794	46,909	46,289	36,023	29,296	40	12.1	2000	4000	4H	77,887
	26.4	41,510	35,403	31,863	31,863	31,420	30,624	40	12.1	2000	4000	4F	77,887
	30.8	49,564	44,608	39,563	38,943	37,881	30,889	40	12.1	2000	4000	4F	77,887
	35.8	41,510	35,403	31,863	31,863	31,420	30,624	30	12.1	2000	4000	4D	77,887
	38.4	49,564	43,369	39,563	38,943	37,881	30,889	34	12.1	2000	4000	4D	77,887
	44.6	41,510	35,403	31,863	31,863	31,420	30,624	25	12.1	2000	4000	4D	77,887
	55.8	39,209	35,403	31,863	31,863	30,978	30,624	20	12.1	2000	4000	4D	77,887
L3	53.4	41,599	39,740	39,740	39,740	33,190	26,906	25	10.1	2000	4000	4B	77,887
	63.1	51,334	48,502	48,502	46,909	37,793	30,712	26	10.1	2000	4000	4D	77,887
	72.3	41,599	39,740	39,740	39,740	33,633	27,349	18.9	10.1	2000	4000	4B	77,887
	77.2	51,334	48,679	48,502	46,909	37,262	30,270	22	10.1	2000	4000	4B	77,887



C

305 L

294

51,330 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	90.2	41,599	39,740	39,740	39,740	33,633	27,349	15.3	10.1	2000	4000	4B	77,887
	105	51,334	48,679	48,502	46,909	37,262	30,270	16.5	10.1	2000	4000	4B	77,887
	113	41,510	35,403	31,863	31,863	31,420	30,624	11.6	10.1	2000	4000	4B	77,887
	124	41,510	35,403	31,863	31,863	31,420	30,624	10.7	10.1	2000	4000	4A	77,887
	141	48,945	47,352	46,909	46,289	36,023	29,296	11.9	10.1	2000	4000	4B	77,887
	152	41,510	35,403	31,863	31,863	31,420	30,624	9.0	10.1	2000	4000	4A	77,887
	164	49,564	44,608	39,563	38,943	37,881	30,889	10.3	10.1	2000	4000	4A	77,887
	178	49,564	44,608	39,563	38,943	37,881	30,889	9.6	10.1	2000	4000	4A	77,887
	190	41,510	35,403	31,863	31,863	31,420	30,624	7.4	10.1	2000	4000	4A	77,887
	220	42,041	42,041	42,041	42,041	32,394	28,411	6.6	10.1	2000	4000	4A	77,887
	258	41,510	35,403	31,863	31,863	31,420	30,624	5.5	10.1	2000	4000	4A	77,887
	276	49,564	43,369	39,563	38,943	37,881	30,889	6.2	10.1	2000	4000	4A	77,887
	321	41,510	35,403	31,863	31,863	31,420	30,624	4.4	10.1	2000	4000	4A	77,887
	389	33,633	29,207	27,437	27,437	26,552	24,694	3.0	10.1	2000	4000	4A	77,887
	402	41,510	35,403	31,863	31,863	31,420	30,624	3.5	8.0	2000	4000	4A	77,887
L4	413	49,564	44,608	39,563	38,943	37,881	30,889	4.3	8.0	2000	4000	4A	77,887
	446	51,334	48,679	48,502	46,909	37,262	30,270	4.1	8.0	2000	4000	4A	77,887
	492	48,945	47,352	46,909	46,289	36,023	29,296	3.5	8.0	2000	4000	4A	77,887
	556	51,334	48,679	48,502	46,909	37,262	30,270	3.3	8.0	2000	4000	4A	77,887
	649	41,599	39,740	39,740	39,740	33,633	27,349	2.3	8.0	2000	4000	4A	77,887
	718	41,510	35,403	31,863	31,863	31,420	30,624	2.0	8.0	2000	4000	4A	77,887
	816	48,945	47,352	46,909	46,289	36,023	29,296	2.1	8.0	2000	4000	4A	77,887
	896	41,510	35,403	31,863	31,863	31,420	30,624	1.6	8.0	2000	4000	4A	77,887
	1018	48,945	47,352	46,909	46,289	36,023	29,296	1.7	8.0	2000	4000	4A	77,887
	1098	41,510	35,403	31,863	31,863	31,420	30,624	1.3	8.0	2000	4000	4A	77,887
	1278	49,564	44,608	39,563	38,943	37,881	30,889	1.4	8.0	2000	4000	4A	77,887
	1370	41,510	35,403	31,863	31,863	31,420	30,624	1.1	8.0	2000	4000	4A	77,887
	1586	42,041	42,041	42,041	42,041	32,394	28,411	0.95	8.0	2000	4000	4A	77,887
	1854	41,510	35,403	31,863	31,863	31,420	30,624	0.79	8.0	2000	4000	4A	77,887
	1991	49,564	43,369	39,563	38,943	37,881	30,889	0.89	8.0	2000	4000	4A	77,887
	2243	33,633	29,207	27,437	27,437	26,552	24,694	0.54	8.0	2000	4000	4A	77,887
	2799	33,633	29,207	27,437	27,437	26,552	24,694	0.43	8.0	2000	4000	4A	77,887

306 L

312

95,940 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.60	95,942	91,871	91,871	91,871	62,840	51,069	101	24	1600	3000	6K	131,876
	4.25	92,225	87,180	87,180	84,967	61,867	50,272	101	24	1600	3000	6K	131,876
	5.33	89,216	82,755	73,461	70,363	60,274	48,945	101	24	1600	3000	6G	131,876
	6.20	76,382	65,230	57,795	57,530	57,176	48,502	101	24	1600	3000	6E	131,876
	7.50	61,955	52,219	48,679	48,679	44,608	44,608	101	24	1600	3000	6C	131,876
L2	13.0	70,983	70,983	70,983	70,983	54,963	44,608	54	17.4	1800	3800	5G	131,876
	15.3	86,472	82,666	82,666	82,312	54,078	43,900	54	17.4	1800	3800	5G	131,876
	18.1	92,225	87,180	87,180	84,967	60,716	49,299	54	17.4	1800	3800	5E	131,876
	22.7	84,613	80,542	80,542	80,542	59,123	48,060	54	17.4	1800	3800	5C	131,876
	26.4	69,832	67,177	67,177	67,177	58,592	47,617	54	17.4	1800	3800	5B	131,876
	28.4	89,216	82,755	73,461	70,363	60,274	48,945	54	17.4	1800	3800	5B	131,876
	33.1	84,436	82,755	73,461	70,363	60,274	48,945	54	17.4	1800	3800	5B	131,876
	38.4	76,382	65,230	57,795	57,530	57,176	48,502	46	17.4	1800	3800	5B	131,876
	46.5	75,231	65,230	57,795	57,530	57,176	48,502	39	17.4	1800	3800	5B	131,876
	56.3	61,955	52,219	48,679	48,679	44,608	44,608	28	17.4	1800	3800	5B	131,876
	72.5	56,645	52,219	48,679	48,679	44,608	44,608	22	17.4	1800	3800	5B	131,876
L3	53.2	86,472	82,666	82,666	82,312	54,078	43,900	27	10.1	2000	4000	4F	131,876
	65.2	86,472	82,666	82,666	82,312	54,078	43,900	27	10.1	2000	4000	4D	131,876
	77.0	92,225	87,180	87,180	84,967	60,716	49,299	27	10.1	2000	4000	4D	131,876
	81.9	73,638	68,151	68,151	66,646	52,662	42,749	27	10.1	2000	4000	4D	131,876
	88.3	83,640	83,640	83,640	83,640	61,690	50,095	27	10.1	2000	4000	4D	131,876
	104	92,225	87,180	87,180	84,967	60,716	49,299	27	10.1	2000	4000	4D	131,876
	112	69,832	67,177	67,177	67,177	58,592	47,617	20	10.1	2000	4000	4D	131,876

306 L

312

95,940 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	121	89,216	82,755	73,461	70,363	60,274	48,945	23	10.1	2000	4000	4B	131,876
	141	84,436	82,755	73,461	70,363	60,274	48,945	19.8	10.1	2000	4000	4B	131,876
	152	69,832	67,177	67,177	67,177	58,592	47,617	15.1	10.1	2000	4000	4B	131,876
	190	76,382	65,230	57,795	57,530	57,176	48,502	13.7	10.1	2000	4000	4B	131,876
	205	89,216	82,755	73,461	70,363	60,274	48,945	14.3	10.1	2000	4000	4B	131,876
	222	76,382	65,230	57,795	57,530	57,176	48,502	11.8	10.1	2000	4000	4A	131,876
	238	84,436	82,755	73,461	70,363	60,274	48,945	12.0	10.1	2000	4000	4A	131,876
	268	61,955	52,219	48,679	48,679	44,608	44,608	8.0	10.1	2000	4000	4A	131,876
	288	61,955	52,219	48,679	48,679	44,608	44,608	7.5	10.1	2000	4000	4A	131,876
	325	61,955	52,219	48,679	48,679	44,608	44,608	6.6	10.1	2000	4000	4A	131,876
	405	61,955	52,219	48,679	48,679	44,608	44,608	5.3	10.1	2000	4000	4A	131,876
L4	391	76,382	65,230	57,795	57,530	57,176	48,502	6.9	8.0	2000	4000	4A	131,876
	444	92,225	87,180	87,180	84,967	60,716	49,299	7.1	8.0	2000	4000	4A	131,876
	509	83,640	83,640	83,640	83,640	61,690	50,095	5.5	8.0	2000	4000	4A	131,876
	589	89,216	82,755	73,461	70,363	60,274	48,945	5.1	8.0	2000	4000	4A	131,876
	636	83,640	83,640	83,640	83,640	61,690	50,095	4.4	8.0	2000	4000	4A	131,876
	700	89,216	82,755	73,461	70,363	60,274	48,945	4.3	8.0	2000	4000	4A	131,876
	809	69,832	67,177	67,177	67,177	58,592	47,617	2.9	8.0	2000	4000	4A	131,876
	877	69,832	67,177	67,177	67,177	58,592	47,617	2.7	8.0	2000	4000	4A	131,876
	1015	84,436	82,755	73,461	70,363	60,274	48,945	2.9	8.0	2000	4000	4A	131,876
	1095	69,832	67,177	67,177	67,177	58,592	47,617	2.2	8.0	2000	4000	4A	131,876
	1279	76,382	65,230	57,795	57,530	57,176	48,502	2.1	8.0	2000	4000	4A	131,876
	1475	89,216	82,755	73,461	70,363	60,274	48,945	2.0	8.0	2000	4000	4A	131,876
	1597	76,382	65,230	57,795	57,530	57,176	48,502	1.7	8.0	2000	4000	4A	131,876
	1843	89,216	82,755	73,461	70,363	60,274	48,945	1.6	8.0	2000	4000	4A	131,876
	2074	61,955	52,219	48,679	48,679	44,608	44,608	1.1	8.0	2000	4000	4A	131,876
	2337	61,955	52,219	48,679	48,679	44,608	44,608	1.0	8.0	2000	4000	4A	131,876
	2916	61,955	52,219	48,679	48,679	44,608	44,608	0.76	8.0	2000	4000	4A	131,876

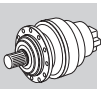
307 L

330

138,780 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.43	79,657	79,657	79,657	79,657	73,461	70,452	154	30	1500	2500	6L	164,624
	4.09	138,780	131,788	131,788	119,574	84,613	68,770	154	30	1500	2500	6L	185,866
	5.25	131,345	112,405	100,013	95,500	82,666	67,177	154	30	1500	2500	6L	185,866
	6.23	97,358	84,967	77,002	77,002	72,930	66,292	154	30	1500	2500	6G	185,866
L2	12.3	79,657	79,657	79,657	79,657	73,461	70,452	80	24	1800	3800	5K	164,624
	14.7	138,780	131,788	131,788	119,574	84,613	68,770	80	24	1800	3800	5G	185,866
	17.4	138,780	131,788	131,788	119,574	84,613	68,770	80	24	1800	3800	5K	185,866
	21.8	138,780	131,788	131,788	119,574	84,613	68,770	80	24	1800	3800	5G	185,866
	25.4	129,841	123,999	123,999	119,574	84,613	68,770	80	24	1800	3800	5E	185,866
	28.0	131,345	112,405	100,013	95,500	82,666	67,177	80	24	1800	3800	5C	185,866
	30.7	108,864	108,864	108,864	108,864	84,613	68,770	80	24	1800	3800	5C	185,866
	32.6	131,345	112,405	100,013	95,500	82,666	67,177	80	24	1800	3800	5C	185,866
	38.6	97,358	84,967	77,002	77,002	72,930	66,292	61	24	1800	3800	5B	185,866
	46.7	97,358	84,967	77,002	77,002	72,930	66,292	52	24	1800	3800	5B	185,866
L3	51.3	138,780	131,788	131,788	119,574	84,613	68,770	40	14.8	2000	4000	4H	185,866
	60.5	138,780	131,788	131,788	119,574	84,613	68,770	40	14.8	2000	4000	4H	185,866
	74.1	138,780	131,788	131,788	119,574	84,613	68,770	40	14.8	2000	4000	4F	185,866
	80.6	131,345	112,405	100,013	95,500	82,666	67,177	40	14.8	2000	4000	4F	185,866
	93.0	138,780	131,788	131,788	119,574	84,613	68,770	40	14.8	2000	4000	4F	185,866
	100	138,780	131,788	131,788	119,574	84,613	68,770	40	14.8	2000	4000	4F	185,866
	113	131,345	112,405	100,013	95,500	82,666	67,177	35	14.8	2000	4000	4D	185,866
	126	138,780	131,788	131,788	119,574	84,613	68,770	36	14.8	2000	4000	4D	185,866
	139	131,345	112,405	100,013	95,500	82,666	67,177	30	14.8	2000	4000	4D	185,866
	146	132,761	123,999	123,999	119,574	84,613	68,770	31	14.8	2000	4000	4D	185,866
	162	131,345	112,405	100,013	95,500	82,666	67,177	26	14.8	2000	4000	4B	185,866
	177	108,864	108,864	108,864	108,864	84,613	68,770	21	14.8	2000	4000	4B	185,866
	202	131,345	112,405	100,013	95,500	82,666	67,177	21	14.8	2000	4000	4B	185,866

C



C

307 L

330

138,780 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	221	132,761	122,140	114,175	110,634	84,613	68,770	21	14.8	2000	4000	4B	185,866
	239	97,358	84,967	77,002	77,002	72,930	66,292	14.1	14.8	2000	4000	4A	185,866
	284	126,831	112,405	100,013	95,500	82,666	67,177	15.2	14.8	2000	4000	4A	185,866
	336	97,358	84,967	77,002	77,002	72,930	66,292	10.1	14.8	2000	4000	4A	185,866
L4	349	138,780	131,788	131,788	119,574	84,613	68,770	13.6	10.1	2000	4000	4A	185,866
	406	131,345	112,405	100,013	95,500	82,666	67,177	11.0	10.1	2000	4000	4A	185,866
	465	131,345	112,405	100,013	95,500	82,666	67,177	9.6	10.1	2000	4000	4A	185,866
	509	132,761	123,999	123,999	119,574	84,613	68,770	9.3	10.1	2000	4000	4A	185,866
	579	138,780	131,788	131,788	119,574	84,613	68,770	8.2	10.1	2000	4000	4A	185,866
	654	131,345	112,405	100,013	95,500	82,666	67,177	6.8	10.1	2000	4000	4A	185,866
	722	138,780	131,788	131,788	119,574	84,613	68,770	6.6	10.1	2000	4000	4A	185,866
	801	131,345	112,405	100,013	95,500	82,666	67,177	5.5	10.1	2000	4000	4A	185,866
	906	138,780	131,788	131,788	119,574	84,613	68,770	5.3	10.1	2000	4000	4A	185,866
	999	131,345	112,405	100,013	95,500	82,666	67,177	4.4	10.1	2000	4000	4A	185,866
	1157	131,345	112,405	100,013	95,500	82,666	67,177	3.8	10.1	2000	4000	4A	185,866
	1274	108,864	108,864	108,864	108,864	84,613	68,770	3.1	10.1	2000	4000	4A	185,866
	1408	138,780	131,788	131,788	119,574	84,613	68,770	3.4	10.1	2000	4000	4A	185,866
	1591	132,761	122,140	114,175	110,634	84,613	68,770	3.0	10.1	2000	4000	4A	185,866
	1767	138,780	131,788	131,788	119,574	84,613	68,770	2.7	10.1	2000	4000	4A	185,866
	2041	126,831	112,405	100,013	95,500	82,666	67,177	2.2	10.1	2000	4000	4A	185,866
	2423	97,358	84,967	77,002	77,002	72,930	66,292	1.4	10.1	2000	4000	4A	185,866

309 L

348

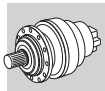
205,690 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	3.43	115,060	115,060	115,060	115,060	108,953	96,650	201	34	1500	2000	6L	246,936
	4.09	205,691	195,336	195,336	179,316	116,122	94,349	201	34	1500	2000	6L	256,672
	5.25	194,539	168,695	149,932	143,294	113,378	92,136	201	34	1500	2000	6L	256,672
	6.23	150,463	127,451	115,060	115,060	109,484	90,986	201	34	1500	2000	6L	256,672
L2	12.3	115,060	115,060	115,060	115,060	91,074	73,992	80	24	1800	3800	5K	246,936
	14.7	156,924	156,924	156,924	156,924	103,111	83,728	80	24	1800	3800	5K	256,672
	17.4	191,353	188,167	188,167	164,447	101,430	82,400	80	24	1800	3800	5K	256,672
	21.8	163,827	154,888	154,888	151,702	98,774	80,276	80	24	1800	3800	5K	256,672
	25.4	129,841	126,566	126,566	126,566	97,889	79,568	80	24	1800	3800	5G	256,672
	28.0	194,539	168,695	149,932	143,294	113,378	92,136	80	24	1800	3800	5G	256,672
	32.6	161,969	160,199	149,932	143,294	113,378	92,136	80	24	1800	3800	5E	256,672
	38.6	150,463	127,451	115,060	115,060	109,484	90,986	80	24	1800	3800	5C	256,672
	46.7	150,463	127,451	115,060	115,060	109,484	90,986	78	24	1800	3800	5B	256,672
L3	51.3	156,924	156,924	156,924	156,924	103,111	83,728	40	14.8	2000	4000	4K	256,672
	60.5	191,353	188,167	188,167	164,447	101,430	82,400	40	14.8	2000	4000	4K	256,672
	74.1	191,353	188,167	188,167	164,447	101,430	82,400	40	14.8	2000	4000	4F	256,672
	80.6	194,539	168,695	149,932	143,294	113,378	92,136	40	14.8	2000	4000	4F	256,672
	93.0	163,827	154,888	154,888	151,702	98,774	80,276	40	14.8	2000	4000	4F	256,672
	100	191,353	188,167	188,167	164,447	101,430	82,400	40	14.8	2000	4000	4F	256,672
	113	161,969	160,199	149,932	143,294	113,378	92,136	40	14.8	2000	4000	4F	256,672
	126	163,827	154,888	154,888	151,702	98,774	80,276	40	14.8	2000	4000	4F	256,672
	139	161,969	160,199	149,932	143,294	113,378	92,136	40	14.8	2000	4000	4D	256,672
	162	194,539	168,695	149,932	143,294	113,378	92,136	39	14.8	2000	4000	4D	256,672
	183	129,841	126,566	126,566	126,566	97,889	79,568	24	14.8	2000	4000	4B	256,672
	202	194,539	168,695	149,932	143,294	113,378	92,136	32	14.8	2000	4000	4B	256,672
	223	150,463	127,451	115,060	115,060	109,484	90,986	23	14.8	2000	4000	4B	256,672
	239	150,463	127,451	115,060	115,060	109,484	90,986	22	14.8	2000	4000	4B	256,672
	284	139,842	139,842	139,842	132,761	113,378	92,136	17.1	14.8	2000	4000	4B	256,672
	336	150,463	127,451	115,060	115,060	109,484	90,986	15.5	14.8	2000	4000	4B	256,672
L4	349	191,353	188,167	188,167	164,447	101,430	82,400	19.4	10.1	2000	4000	4B	256,672
	406	194,539	168,695	149,932	143,294	113,378	92,136	16.4	10.1	2000	4000	4A	256,672
	465	194,539	168,695	149,932	143,294	113,378	92,136	14.3	10.1	2000	4000	4A	256,672
	509	129,841	126,566	126,566	126,566	97,889	79,568	9.0	10.1	2000	4000	4A	256,672
	579	191,353	188,167	188,167	164,447	101,430	82,400	11.7	10.1	2000	4000	4A	256,672

309 L

348

205,690 lb·in



	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L4	654	161,969	160,199	149,932	143,294	113,378	92,136	8.9	10.1	2000	4000	4A	256,672
	722	191,353	188,167	188,167	164,447	101,430	82,400	9.4	10.1	2000	4000	4A	256,672
	801	161,969	160,199	149,932	143,294	113,378	92,136	7.3	10.1	2000	4000	4A	256,672
	906	163,827	154,888	154,888	151,702	98,774	80,276	6.3	10.1	2000	4000	4A	256,672
	999	161,969	160,199	149,932	143,294	113,378	92,136	5.8	10.1	2000	4000	4A	256,672
	1149	150,463	127,451	115,060	115,060	109,484	90,986	4.7	10.1	2000	4000	4A	256,672
	1286	150,463	127,451	115,060	115,060	109,484	90,986	4.2	10.1	2000	4000	4A	256,672
	1380	150,463	127,451	115,060	115,060	109,484	90,986	3.9	10.1	2000	4000	4A	256,672
	1605	150,463	127,451	115,060	115,060	109,484	90,986	3.4	10.1	2000	4000	4A	256,672
	1723	150,463	127,451	115,060	115,060	109,484	90,986	3.1	10.1	2000	4000	4A	256,672
	2003	150,463	127,451	115,060	115,060	109,484	90,986	2.6	10.1	2000	4000	4A	256,672
	2423	150,463	127,451	115,060	115,060	109,484	90,986	2.2	10.1	2000	4000	4A	256,672

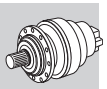
310M L

364

297,740 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.09	297,739	282,339	259,858	234,456	187,547	152,410	235	47	1750	1800	—	421,296
	5.25	266,496	226,933	200,912	191,707	183,299	148,870	235	47	1750	1800	—	421,296
	6.23	211,798	180,113	159,314	157,632	157,632	147,099	235	47	1750	1800	—	421,296
L2	14.7	297,739	282,339	259,858	234,456	163,473	132,761	101	30	1750	3000	6K	421,296
	17.4	297,739	282,339	259,858	234,456	160,907	130,726	101	30	1750	3000	6G	421,296
	21.8	293,579	271,275	259,858	234,456	156,658	127,274	101	30	1750	3000	6G	421,296
	25.4	230,651	220,030	220,030	220,030	155,242	126,123	101	30	1750	3000	6E	421,296
	28.0	266,496	226,933	200,912	191,707	183,299	148,870	101	30	1750	3000	6E	421,296
	30.7	172,413	171,085	171,085	171,085	151,525	123,025	101	30	1750	3000	6C	421,296
	32.6	266,496	226,933	200,912	191,707	183,299	148,870	101	30	1750	3000	6C	421,296
	38.6	211,798	180,113	159,314	157,632	157,632	147,099	101	30	1750	3000	6B	421,296
	46.7	211,798	180,113	159,314	157,632	157,632	147,099	101	30	1750	3000	6B	421,296
L3	53.0	271,984	271,984	259,858	231,536	142,851	116,033	54	24	1800	3800	5E	421,296
	62.6	297,739	282,339	259,858	227,907	140,638	114,263	54	24	1800	3800	5E	421,296
	73.9	297,739	282,339	259,858	234,456	157,986	128,336	54	24	1800	3800	5C	421,296
	80.3	266,496	226,933	200,912	191,707	167,456	136,036	54	24	1800	3800	5B	421,296
	92.7	297,739	282,339	259,770	232,332	153,826	124,884	54	24	1800	3800	5B	421,296
	101	266,496	226,933	200,912	191,707	163,031	132,407	54	24	1800	3800	5B	421,296
	108	248,352	248,352	248,352	234,545	152,410	123,822	54	24	1800	3800	5B	421,296
	119	266,496	226,933	200,912	191,707	183,299	148,870	54	24	1800	3800	5B	421,296
	135	293,579	271,187	259,770	234,545	156,658	127,274	54	24	1800	3800	5B	421,296
	149	266,496	226,933	200,912	191,707	183,299	148,870	54	24	1800	3800	5B	421,296
	164	240,298	240,298	240,298	234,456	156,658	127,274	46	24	1800	3800	5B	421,296
	177	211,798	180,113	159,314	157,632	157,632	147,099	37	24	1800	3800	5B	421,296
	202	266,496	226,933	200,912	191,707	183,299	148,870	41	24	1800	3800	5B	421,296
	230	172,413	171,085	171,085	171,085	151,525	123,025	23	24	1800	3800	5B	421,296
	249	211,798	180,113	159,314	157,632	157,632	147,099	27	24	1800	3800	5B	421,296
	295	219,676	219,676	200,912	191,707	180,378	146,480	23	24	1800	3800	5B	421,296
	350	211,798	180,113	159,314	157,632	157,632	147,099	18.9	24	1800	3800	5B	421,296
L4	392	211,798	180,113	159,314	157,632	157,632	147,099	19.4	14.8	2000	4000	4B	421,296
	453	256,229	256,229	256,229	221,888	136,921	111,254	20	14.8	2000	4000	4B	421,296
	507	266,496	226,933	200,912	191,707	183,299	148,870	18.8	14.8	2000	4000	4B	421,296
	590	266,496	226,933	200,912	191,707	181,529	146,922	16.2	14.8	2000	4000	4B	421,296
	637	266,496	226,933	200,912	191,707	183,299	148,870	15.0	14.8	2000	4000	4B	421,296
	726	266,496	226,933	200,912	191,707	163,031	132,407	13.2	14.8	2000	4000	4A	421,296
	798	266,496	226,933	200,912	191,707	181,529	147,453	12.0	14.8	2000	4000	4A	421,296
	974	293,579	271,187	259,770	234,545	156,658	127,274	10.8	14.8	2000	4000	4A	421,296
	1002	266,496	226,933	200,912	191,707	183,299	148,870	9.5	14.8	2000	4000	4A	421,296
	1164	266,496	226,933	200,912	191,707	183,299	148,870	8.2	14.8	2000	4000	4A	421,296
	1259	219,676	219,676	200,912	191,707	180,378	146,480	6.3	14.8	2000	4000	4A	421,296
	1438	211,798	180,113	159,314	157,632	157,632	147,099	5.3	14.8	2000	4000	4A	421,296
	1672	211,798	180,113	159,314	157,632	157,632	147,099	4.5	14.8	2000	4000	4A	421,296
	1794	211,798	180,113	159,314	157,632	157,632	147,099	4.2	14.8	2000	4000	4A	421,296

C



310M L

364

297,740 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L4	2022	211,798	180,113	159,314	157,632	157,632	147,099	3.8	14.8	2000	4000	4A	421,296
	2523	211,798	180,113	159,314	157,632	157,632	147,099	3.0	14.8	2000	4000	4A	421,296

311M L

382

435,550 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.09	435,545	412,356	402,267	363,323	267,381	217,197	268	47	1500	1800	—	515,999
	5.25	423,154	366,421	324,734	309,865	261,097	212,064	268	47	1500	1800	—	515,999
	6.23	322,787	274,727	243,219	240,652	240,652	209,497	268	47	1500	1800	—	515,999
L2	14.0	286,941	286,941	286,941	286,941	225,606	183,299	154	35	1500	2500	6L	515,999
	16.7	435,545	412,356	402,267	356,774	220,118	178,785	154	35	1500	2500	6L	515,999
	18.0	367,306	366,421	324,734	309,865	261,097	212,064	154	35	1500	2500	6K	515,999
	21.5	423,154	366,421	324,734	309,865	203,833	165,509	154	35	1500	2500	6K	515,999
	25.5	296,677	283,401	283,401	283,401	212,329	172,501	154	35	1500	2500	6E	515,999
	27.6	423,154	366,421	324,734	309,865	256,052	207,904	154	35	1500	2500	6G	515,999
	32.7	365,093	364,385	324,734	309,865	252,866	205,337	154	35	1500	2500	6E	515,999
	38.8	322,787	274,727	243,219	240,652	240,652	209,497	154	35	1500	2500	6E	515,999
L3	50.5	286,941	286,941	286,941	286,941	225,606	183,299	80	24	1800	3800	5G	515,999
	60.2	435,545	412,356	402,267	356,774	220,118	178,785	80	24	1800	3800	5K	515,999
	71.1	435,545	412,356	402,267	356,774	220,118	178,785	80	24	1800	3800	5G	515,999
	77.3	423,154	366,421	324,734	309,865	261,097	212,064	80	24	1800	3800	5G	515,999
	89.3	435,545	412,356	402,267	356,774	220,118	178,785	80	24	1800	3800	5G	515,999
	104	435,545	412,356	402,267	356,774	220,118	178,785	80	24	1800	3800	5G	515,999
	115	423,154	366,421	324,734	309,865	261,097	212,064	80	24	1800	3800	5C	515,999
	133	423,154	366,421	324,734	309,865	261,097	212,064	80	24	1800	3800	5B	515,999
	147	423,154	366,421	324,734	309,865	256,052	207,904	80	24	1800	3800	5B	515,999
	161	423,154	366,421	324,734	309,865	261,097	212,064	80	24	1800	3800	5B	515,999
	171	423,154	366,421	324,734	309,865	256,052	207,904	77	24	1800	3800	5B	515,999
	191	296,677	283,401	283,401	283,401	212,329	172,501	49	24	1800	3800	5B	515,999
	203	365,093	364,385	324,734	309,865	252,866	205,337	56	24	1800	3800	5B	515,999
	245	365,093	364,385	324,734	309,865	252,866	205,337	47	24	1800	3800	5B	515,999
	291	322,787	274,727	243,219	240,652	240,652	209,497	35	24	1800	3800	5B	515,999
L4	348	435,545	412,356	402,267	351,817	217,109	176,307	40	14.8	2000	4000	4D	515,999
	410	435,545	412,356	402,267	356,774	220,118	178,785	38	14.8	2000	4000	4D	515,999
	512	435,545	412,356	402,267	356,774	220,118	178,785	30	14.8	2000	4000	4B	515,999
	568	423,154	366,421	324,734	309,865	261,097	212,064	27	14.8	2000	4000	4B	515,999
	627	423,154	366,421	324,734	309,865	256,052	207,904	24	14.8	2000	4000	4B	515,999
	825	423,154	366,421	324,734	309,865	261,097	212,064	18.4	14.8	2000	4000	4B	515,999
	986	423,154	366,421	324,734	309,865	256,052	207,904	15.4	14.8	2000	4000	4A	515,999
	1058	423,154	366,421	324,734	309,865	256,052	207,904	14.3	14.8	2000	4000	4A	515,999
	1230	423,154	366,421	324,734	309,865	256,052	207,904	12.3	14.8	2000	4000	4A	515,999
	1415	365,093	364,385	324,734	309,865	252,866	205,337	9.2	14.8	2000	4000	4A	515,999
	1680	322,787	274,727	243,219	240,652	240,652	209,497	6.9	14.8	2000	4000	4A	515,999
	1766	365,093	364,385	324,734	309,865	252,866	205,337	7.4	14.8	2000	4000	4A	515,999
	2096	322,787	274,727	243,219	243,219	243,219	209,497	5.5	14.8	2000	4000	4A	515,999

313M L

400

539,360 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.14	539,365	510,334	492,367	446,078	373,059	303,050	335	60	1000	1300	—	929,329
	5.40	505,643	430,943	381,910	366,687	363,677	295,438	335	60	1000	1300	—	929,329
	6.50	354,915	302,342	267,824	267,293	267,293	267,293	335	60	1000	1300	—	929,329
L2	14.2	430,500	430,500	430,500	430,500	312,254	253,574	201	40	1500	2000	—	929,329

313M L

400

539,360 lb·in

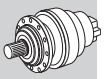
	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L2	16.9	539,365	510,334	492,367	446,078	304,643	247,467	201	40	1500	2000	—	929,329
	18.5	505,643	430,943	381,910	366,687	363,677	295,438	201	40	1500	2000	—	929,329
	21.8	539,365	510,334	492,367	446,078	297,562	241,625	201	40	1500	2000	6L	929,329
	25.8	449,707	430,500	430,500	430,500	293,845	238,705	201	40	1500	2000	6G	929,329
	28.4	505,643	430,943	381,910	366,687	358,190	290,924	201	40	1500	2000	6L	929,329
	33.6	505,643	430,943	381,910	366,687	353,764	287,295	201	40	1500	2000	6G	929,329
	40.5	354,915	302,342	267,824	267,293	267,293	267,293	178	40	1500	2000	6E	929,329
L3	51.1	430,500	430,500	430,500	387,220	238,970	194,097	80	24	1800	3800	—	929,329
	61.0	539,365	510,334	492,367	438,201	270,390	219,676	80	24	1800	3800	—	929,329
	72.0	539,365	510,334	492,367	431,386	266,231	216,224	80	24	1800	3800	5K	929,329
	78.3	539,365	510,334	492,367	446,078	297,562	241,625	80	24	1800	3800	5K	929,329
	92.4	539,365	510,334	492,367	446,078	297,562	241,625	80	24	1800	3800	5G	929,329
	110	449,707	430,500	430,500	430,500	293,845	238,705	80	24	1800	3800	5G	929,329
	120	505,643	430,943	381,910	366,687	358,190	290,924	80	24	1800	3800	5C	929,329
	135	539,365	510,334	492,367	446,078	297,562	241,625	80	24	1800	3800	5C	929,329
	143	505,643	430,943	381,910	366,687	353,764	287,295	80	24	1800	3800	5C	929,329
	151	505,643	430,943	381,910	366,687	358,190	290,924	80	24	1800	3800	5C	929,329
	163	479,180	479,180	479,180	446,078	297,562	241,625	80	24	1800	3800	5B	929,329
	176	505,643	430,943	381,910	366,687	358,190	290,924	80	24	1800	3800	5B	929,329
	182	354,915	302,342	267,824	267,293	267,293	267,293	61	24	1800	3800	5B	929,329
	194	449,707	430,500	430,500	430,500	293,845	238,705	73	24	1800	3800	5B	929,329
	209	505,643	430,943	381,910	366,687	353,764	287,295	76	24	1800	3800	5B	929,329
	252	505,643	430,943	381,910	366,687	353,764	287,295	63	24	1800	3800	5B	929,329
	304	354,915	302,342	267,824	267,293	267,293	267,293	37	24	1800	3800	5B	929,329
L4	394	539,365	510,334	492,367	446,078	297,562	241,625	40	14.8	2000	4000	4F	929,329
	452	539,365	510,334	492,367	422,712	260,832	211,887	40	14.8	2000	4000	4D	929,329
	514	505,643	430,943	381,910	366,687	358,190	290,924	35	14.8	2000	4000	4D	929,329
	564	480,065	480,065	480,065	410,586	253,308	205,780	31	14.8	2000	4000	4D	929,329
	633	449,707	430,500	430,500	430,500	293,845	238,705	25	14.8	2000	4000	4B	929,329
	695	505,643	430,943	381,910	366,687	352,614	286,410	26	14.8	2000	4000	4B	929,329
	790	449,707	430,500	430,500	430,500	293,845	238,705	20	14.8	2000	4000	4B	929,329
	889	505,643	430,943	381,910	366,687	353,764	287,295	20	14.8	2000	4000	4B	929,329
	1014	505,643	430,943	381,910	366,687	358,190	290,924	18	14.8	2000	4000	4B	929,329
	1117	449,707	430,500	430,500	430,500	293,845	238,705	14	14.8	2000	4000	4A	929,329
	1266	505,643	430,943	381,910	366,687	358,190	290,924	14	14.8	2000	4000	4A	929,329
	1394	449,707	430,500	430,500	430,500	293,845	238,705	12	14.8	2000	4000	4A	929,329
	1502	505,643	430,943	381,910	366,687	353,764	287,295	12	14.8	2000	4000	4A	929,329
	1817	505,643	430,943	381,910	366,687	353,764	287,295	10	14.8	2000	4000	4A	929,329
	2187	354,915	302,342	267,824	267,293	267,293	267,293	5.8	14.8	2000	4000	4A	929,329

314M L

418

713,720 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.25	713,724	669,896	669,896	629,607	476,949	387,450	349	74	500	900	—	1,017,836
	5.33	648,795	597,390	551,437	528,496	460,664	374,210	349	74	500	900	—	1,017,836
	6.20	559,863	478,153	424,340	419,526	419,526	369,891	349	74	500	900	—	1,017,836
L2	17.4	713,724	669,896	669,896	629,607	400,833	325,566	235	54	1500	1800	—	1,017,836
	22.3	690,571	641,007	641,007	629,607	391,628	318,061	235	54	1500	1800	—	1,017,836
	26.5	547,401	526,513	526,513	526,513	386,884	314,237	235	54	1500	1800	—	1,017,836
	28.0	648,795	597,390	551,437	528,496	459,035	372,864	235	54	1500	1800	—	1,017,836
	33.2	648,795	597,390	551,437	528,496	453,512	368,333	235	54	1500	1800	—	1,017,836
	38.6	559,863	478,153	424,340	419,526	419,526	369,891	235	54	1500	1800	6G	1,017,836
L3	62.6	713,724	669,896	669,896	565,952	349,215	283,649	101	34	1600	3000	6E	1,017,836
	73.9	713,724	669,896	669,896	557,172	343,763	279,259	101	34	1600	3000	6E	1,017,836
	92.7	713,724	669,896	667,913	542,516	334,771	271,895	101	34	1600	3000	6E	1,017,836
	108	713,724	669,896	661,894	537,630	331,726	269,488	101	34	1600	3000	6E	1,017,836
	138	690,571	641,007	641,007	629,607	391,628	318,061	101	34	1600	3000	6E	1,017,836
	164	547,401	526,513	526,513	526,513	386,884	314,237	93	34	1600	3000	6C	1,017,836
	174	648,795	597,390	551,437	528,496	459,035	372,864	101	34	1600	3000	6C	1,017,836



314M L

418

713,720 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	206	648,795	597,390	551,437	528,496	453,512	368,333	88	34	1600	3000	6B	1,017,836
	240	559,863	478,153	424,340	419,526	419,526	369,891	65	34	1600	3000	6B	1,017,836
L4	314	713,724	669,896	669,896	546,976	337,461	274,161	54	20	1800	3800	5B	1,017,836
	394	713,724	669,966	655,664	532,603	328,611	266,939	54	20	1800	3800	5B	1,017,836
	458	713,724	669,896	649,787	527,788	325,708	264,531	50	20	1800	3800	5B	1,017,836
	495	713,724	669,896	667,913	542,516	334,771	271,895	47	20	1800	3800	5B	1,017,836
	575	648,795	597,390	551,437	528,496	381,786	310,130	36	20	1800	3800	5B	1,017,836
	588	690,571	641,007	641,007	629,607	391,628	318,061	38	20	1800	3800	5B	1,017,836
	668	713,724	669,896	661,894	537,630	331,726	269,488	34	20	1800	3800	5B	1,017,836
	738	690,571	641,007	641,007	629,607	391,628	318,061	30	20	1800	3800	5B	1,017,836
	858	690,571	641,007	641,007	629,607	391,628	318,061	26	20	1800	3800	5B	1,017,836
	926	648,795	597,390	551,437	528,496	459,035	372,864	23	20	1800	3800	5B	1,017,836
	1038	690,571	641,007	641,007	629,607	391,628	318,061	21	20	1800	3800	5B	1,017,836
	1099	648,795	597,390	551,437	528,496	453,512	368,333	19	20	1800	3800	5B	1,017,836
	1277	648,795	597,390	551,437	528,496	453,512	368,333	16	20	1800	3800	5B	1,017,836
	1485	559,863	478,153	424,340	419,526	419,526	369,891	12	20	1800	3800	5B	1,017,836
	1796	559,863	478,153	424,340	419,526	419,526	369,891	10	20	1800	3800	5B	1,017,836

C

315M L

434

892,160 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.25	892,156	837,369	837,369	787,009	596,187	484,313	349	80	500	900	—	135,000
	5.33	810,994	746,738	689,296	660,620	575,830	467,762	349	80	500	900	—	135,000
	6.20	699,829	597,691	530,425	524,407	524,407	462,363	349	80	500	900	—	135,000
L2	17.4	892,156	837,369	837,369	787,009	596,187	484,313	268	56	1500	1800	—	135,000
	22.3	892,156	837,369	837,369	787,009	596,187	484,313	268	56	1500	1800	—	135,000
	26.5	892,156	837,369	837,369	787,009	596,187	484,313	268	56	1500	1800	—	135,000
	28.0	810,994	746,738	689,296	660,620	575,830	467,762	268	56	1500	1800	—	135,000
	33.2	810,994	746,738	689,296	660,620	575,830	467,762	268	56	1500	1800	—	135,000
	38.6	699,829	597,691	530,425	524,407	524,407	462,363	268	56	1500	1800	—	135,000
L3	59.6	892,156	837,369	837,369	787,009	596,187	484,313	154	40	1500	2500	6K	135,000
	71.1	892,156	837,369	837,369	787,009	587,955	477,586	154	40	1500	2500	6G	135,000
	91.3	892,156	837,369	837,369	787,009	574,237	466,435	154	40	1500	2500	6E	135,000
	108	892,156	837,369	837,369	787,009	567,068	460,593	154	40	1500	2500	6C	135,000
	139	892,156	837,369	837,369	787,009	596,187	484,313	154	40	1500	2500	6B	135,000
	165	892,156	837,369	837,369	787,009	596,187	484,313	141	40	1500	2500	6B	135,000
	174	810,994	746,738	689,296	660,620	575,830	467,762	121	40	1500	2500	6B	135,000
	207	810,994	746,738	689,296	660,620	575,830	467,762	102	40	1500	2500	6B	135,000
	241	699,829	597,691	530,425	524,407	524,407	462,363	76	40	1500	2500	6B	135,000
L4	302	892,156	837,369	837,369	787,009	587,955	477,586	80	24	1800	3800	5B	135,000
	370	892,156	837,369	837,369	787,009	596,187	484,313	78	24	1800	3800	5B	135,000
	441	892,156	837,369	837,369	787,009	587,955	477,586	65	24	1800	3800	5B	135,000
	487	892,156	837,369	837,369	787,009	574,237	466,435	59	24	1800	3800	5B	135,000
	533	892,156	837,369	837,369	787,009	587,955	477,586	54	24	1800	3800	5B	135,000
	591	892,156	837,369	837,369	787,009	596,187	484,313	49	24	1800	3800	5B	135,000
	672	892,156	837,369	837,369	787,009	567,068	460,593	43	24	1800	3800	5B	135,000
	741	892,156	837,369	837,369	787,009	596,187	484,313	39	24	1800	3800	5B	135,000
	862	892,156	837,369	837,369	787,009	596,187	484,313	33	24	1800	3800	5B	135,000
	930	810,994	746,738	689,296	660,620	575,830	467,762	28	24	1800	3800	5B	135,000
	1043	892,156	837,369	837,369	787,009	596,187	484,313	28	24	1800	3800	5B	135,000
	1104	810,994	746,738	689,296	660,620	575,830	467,762	24	24	1800	3800	5B	135,000
	1284	810,994	746,738	689,296	660,620	575,830	467,762	20	24	1800	3800	5B	135,000
	1492	699,829	597,691	530,425	524,407	524,407	462,363	15.1	24	1800	3800	5B	135,000
	1805	699,829	597,691	530,425	524,407	524,407	462,363	12.5	24	1800	3800	5B	135,000

316M L



450

1,189,450 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.25	1,189,452	1,116,522	1,094,838	1,049,345	794,974	645,751	375	91	350	500	—	1,699,344
	5.33	1,081,473	985,088	880,827	880,827	767,803	623,624	375	91	350	500	—	1,699,344
L2	17.4	1,189,452	1,116,522	1,094,838	1,049,345	714,079	579,990	268	67	1500	1800	—	1,699,344
	21.8	1,081,473	985,088	880,827	880,827	767,803	623,624	268	67	1500	1800	—	1,699,344
	22.3	1,189,452	1,116,522	1,094,838	1,049,345	697,351	566,448	268	67	1500	1800	—	1,699,344
	26.5	1,045,362	1,005,799	1,005,799	1,005,799	688,765	559,456	268	67	1500	1800	—	1,699,344
	28.0	1,081,473	985,088	880,827	880,827	767,803	623,624	268	67	1500	1800	—	1,699,344
	33.2	1,081,473	985,088	880,827	880,827	767,803	623,624	268	67	1500	1800	—	1,699,344
L3	59.6	1,149,624	1,116,522	1,094,838	976,592	602,559	489,446	154	47	1500	2500	6L	1,699,344
	71.1	1,189,452	1,116,522	1,094,838	952,872	587,955	477,586	154	47	1500	2500	6K	1,699,344
	76.5	1,189,452	1,116,522	1,094,838	1,049,345	697,351	566,448	154	47	1500	2500	6G	1,699,344
	89.3	1,081,473	985,088	880,827	880,827	689,208	559,810	154	47	1500	2500	6G	1,699,344
	96.0	1,081,473	985,088	880,827	880,827	767,803	623,624	154	47	1500	2500	6E	1,699,344
	114	1,081,473	985,088	880,827	880,827	767,803	623,624	154	47	1500	2500	6E	1,699,344
	117	1,189,452	1,116,522	1,094,838	1,049,345	683,720	555,385	154	47	1500	2500	6E	1,699,344
	139	1,189,452	1,116,522	1,094,838	1,049,345	675,312	548,569	154	47	1500	2500	6E	1,699,344
	165	1,045,362	1,005,799	1,005,799	1,005,799	688,765	559,456	154	47	1500	2500	6C	1,699,344
	174	1,081,473	985,088	880,827	880,827	767,803	623,624	154	47	1500	2500	6C	1,699,344
	207	1,081,473	985,088	880,827	880,827	767,803	623,624	136	47	1500	2500	6C	1,699,344
L4	215	1,149,624	1,116,522	1,094,838	976,592	602,559	489,446	80	24	1800	3800	5G	1,699,344
	253	1,149,624	1,116,522	1,094,838	976,592	602,559	489,446	80	24	1800	3800	5G	1,699,344
	275	1,189,452	1,116,522	1,094,838	1,049,345	697,351	566,448	80	24	1800	3800	5E	1,699,344
	318	1,149,624	1,116,522	1,094,838	976,592	602,559	489,446	80	24	1800	3800	5E	1,699,344
	346	1,081,473	985,088	880,827	880,827	767,803	623,624	80	24	1800	3800	5C	1,699,344
	399	1,081,473	985,088	880,827	880,827	706,378	573,794	80	24	1800	3800	5B	1,699,344
	447	1,149,624	1,116,522	1,094,838	950,217	586,274	476,259	80	24	1800	3800	5B	1,699,344
	500	1,189,452	1,116,522	1,094,838	1,049,345	675,312	548,569	77	24	1800	3800	5B	1,699,344
	563	1,045,362	1,005,799	1,005,799	1,005,799	688,765	559,456	60	24	1800	3800	5B	1,699,344
	628	1,081,473	985,088	880,827	880,827	767,803	623,624	56	24	1800	3800	5B	1,699,344
	706	1,081,473	985,088	880,827	880,827	767,803	623,624	49	24	1800	3800	5B	1,699,344
	784	1,081,473	985,088	880,827	880,827	767,803	623,624	44	24	1800	3800	5B	1,699,344
	880	1,045,362	1,005,799	1,005,799	1,005,799	688,765	559,456	38	24	1800	3800	5B	1,699,344
	1020	1,081,473	985,088	880,827	880,827	664,780	539,984	34	24	1800	3800	5B	1,699,344
	1104	1,081,473	985,088	880,827	880,827	767,803	623,624	32	24	1800	3800	5B	1,699,344
	1237	1,045,362	1,005,799	1,005,799	1,005,799	688,765	559,456	27	24	1800	3800	5B	1,699,344
	1308	1,081,473	985,088	880,827	880,827	767,803	623,624	27	24	1800	3800	5B	1,699,344
	1553	1,081,473	985,088	880,827	880,827	767,803	623,624	22	24	1800	3800	5B	1,699,344

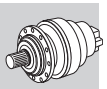
317M L



462

1,836,440 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.09	1,836,442	1,736,871	1,674,827	1,517,107	1,075,366	873,481	402	114	200	300	—	3,478,345
	5.25	1,731,561	1,482,589	1,318,319	1,259,727	1,050,230	853,035	402	114	200	300	—	3,478,345
	6.23	1,329,914	1,137,144	1,010,136	999,781	999,781	842,503	402	114	200	300	—	3,478,345
L2	16.9	1,836,442	1,736,871	1,674,827	1,517,107	970,131	787,982	335	74	1000	1300	—	3,478,345
	22.1	1,591,542	1,477,456	1,477,456	1,477,456	945,791	768,245	335	74	1000	1300	—	3,478,345
	26.6	1,113,336	1,073,596	1,073,596	1,073,596	919,239	746,649	335	74	1000	1300	—	3,478,345
	28.4	1,731,561	1,482,589	1,318,319	1,259,727	1,050,230	853,035	335	74	1000	1300	—	3,478,345
	34.1	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	335	74	1000	1300	—	3,478,345
	40.5	1,329,914	1,137,144	1,010,136	999,781	999,781	842,503	335	74	1000	1300	—	3,478,345
L3	58.1	1,661,817	1,661,817	1,620,041	1,315,841	811,968	659,469	201	47	1500	2000	—	3,478,345
	69.3	1,836,442	1,736,871	1,580,655	1,283,890	792,231	643,450	201	47	1500	2000	—	3,478,345
	89.0	1,836,442	1,736,871	1,543,659	1,253,886	773,644	628,403	201	47	1500	2000	6K	3,478,345
	106	1,714,302	1,714,302	1,524,630	1,238,397	764,174	620,703	201	47	1500	2000	6G	3,478,345
	116	1,591,542	1,477,456	1,477,456	1,477,456	931,364	756,474	201	47	1500	2000	6G	3,478,345
	138	1,591,542	1,477,456	1,477,456	1,477,456	919,858	747,180	201	47	1500	2000	6E	3,478,345
	166	1,113,336	1,073,596	1,073,596	1,073,596	919,239	746,649	175	47	1500	2000	6C	3,478,345
	179	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	201	47	1500	2000	6C	3,478,345
	213	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	169	47	1500	2000	6B	3,478,345



317M L

462

1,836,440 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3	252	1,329,914	1,137,144	1,010,136	999,781	999,781	842,503	137	47	1500	2000	6B	3,478,345
L4	378	1,836,531	1,736,871	1,543,659	1,253,886	773,644	628,403	80	24	1800	3800	5G	3,478,345
	449	1,714,302	1,714,302	1,524,630	1,238,397	764,174	620,703	80	24	1800	3800	5C	3,478,345
	493	1,591,542	1,477,456	1,477,456	1,477,456	931,364	756,474	80	24	1800	3800	5B	3,478,345
	552	1,836,442	1,736,871	1,543,659	1,253,886	773,644	628,403	80	24	1800	3800	5B	3,478,345
	619	1,591,542	1,477,456	1,477,456	1,477,456	931,364	756,474	80	24	1800	3800	5B	3,478,345
	719	1,591,542	1,477,456	1,477,456	1,477,456	931,364	756,474	71	24	1800	3800	5B	3,478,345
	792	1,714,302	1,714,302	1,524,630	1,238,397	764,174	620,703	70	24	1800	3800	5B	3,478,345
	904	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	49	24	1800	3800	5B	3,478,345
	1032	1,591,542	1,477,456	1,477,456	1,477,456	919,858	747,180	50	24	1800	3800	5B	3,478,345
	1134	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	39	24	1800	3800	5B	3,478,345
	1318	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	34	24	1800	3800	5B	3,478,345
	1595	1,380,274	1,380,274	1,318,319	1,259,727	1,050,230	853,035	28	24	1800	3800	5B	3,478,345
	1893	1,329,914	1,137,144	1,010,136	999,781	999,781	842,503	23	24	1800	3800	5B	3,478,345

318M L

474

2,633,540 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.40	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	456	127	200	300	—	4,425,375
L2	18.7	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	349	84	500	900	—	4,425,375
	23.5	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	349	84	500	900	—	4,425,375
	27.3	2,342,794	2,267,031	2,050,896	1,981,683	1,421,342	1,154,492	349	84	500	900	—	4,425,375
L3	76.5	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	—	4,425,375
	98.2	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	—	4,425,375
	117	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	6L	4,425,375
	123	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	6L	4,425,375
	146	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	6K	4,425,375
	170	2,342,794	2,267,031	2,050,896	1,981,683	1,421,342	1,154,492	268	54	1500	1800	6G	4,425,375
L4	262	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	154	30	1500	2500	6E	4,425,375
	313	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	154	30	1500	2500	6C	4,425,375
	337	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	154	30	1500	2500	6C	4,425,375
	402	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	154	30	1500	2500	6B	4,425,375
	422	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	154	30	1500	2500	6B	4,425,375
	477	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	149	30	1500	2500	6B	4,425,375
	515	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	137	30	1500	2500	6B	4,425,375
	612	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	116	30	1500	2500	6B	4,425,375
	647	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	109	30	1500	2500	6B	4,425,375
	726	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	98	30	1500	2500	6B	4,425,375
	768	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	92	30	1500	2500	6B	4,425,375
	911	2,633,541	2,305,797	2,050,896	1,981,683	1,421,342	1,154,492	78	30	1500	2500	6B	4,425,375
	1059	2,342,794	2,267,031	2,050,896	1,981,683	1,421,342	1,154,492	59	30	1500	2500	6B	4,425,375

319 L

486

4,170,380 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.88	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	510	154	200	300	—	6,018,510
	5.77	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	510	154	200	300	—	6,018,510
L2	20.7	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	349	94	500	900	—	6,018,510
	24.5	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	349	94	500	900	—	6,018,510
	26.0	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	349	94	500	900	—	6,018,510
	30.8	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	349	94	500	900	—	6,018,510
	35.8	2,977,658	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	349	94	500	900	—	6,018,510
L3	84.8	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	268	67	1500	1800	—	6,018,510
	100	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	268	67	1500	1800	—	6,018,510

319 L

486

4,170,380 lb·in

i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L3 109	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	268	67	1500	1800	—	6,018,510
126	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	268	67	1500	1800	6L	6,018,510
129	3,921,148	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	268	67	1500	1800	—	6,018,510
137	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	268	67	1500	1800	—	6,018,510
162	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	268	67	1500	1800	6K	6,018,510
188	2,552,733	2,513,613	2,513,524	2,241,718	1,383,195	1,123,514	268	67	1500	1800	6G	6,018,510
192	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	268	67	1500	1800	6G	6,018,510
223	2,977,658	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	268	67	1500	1800	6G	6,018,510
L4 291	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6G	6,018,510
347	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6G	6,018,510
410	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	154	40	1500	2500	6C	6,018,510
445	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6G	6,018,510
515	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	154	40	1500	2500	6B	6,018,510
528	3,597,741	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6B	6,018,510
558	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6B	6,018,510
571	3,921,148	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6B	6,018,510
625	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	136	40	1500	2500	6B	6,018,510
678	3,832,552	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	152	40	1500	2500	6B	6,018,510
717	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	154	40	1500	2500	6B	6,018,510
802	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	106	40	1500	2500	6B	6,018,510
850	3,883,267	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	123	40	1500	2500	6B	6,018,510
912	2,977,658	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	88	40	1500	2500	6B	6,018,510
1007	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	84	40	1500	2500	6B	6,018,510
1195	3,153,257	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	71	40	1500	2500	6B	6,018,510
1389	2,977,658	2,706,825	2,411,210	2,205,961	1,361,157	1,105,547	58	40	1500	2500	6B	6,018,510

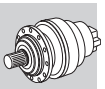
321 L

498

5,803,790 lb·in

i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1 4.44	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	724	154	200	300	—	8,266,601
L2 18.2	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	402	127	200	300	—	8,266,601
23.3	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,522,329	402	127	200	300	—	8,266,601
27.7	4,747,100	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	402	127	200	300	—	8,266,601
L3 75.3	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	335	80	1000	1200	—	8,266,601
98.2	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	335	80	1000	1200	—	8,266,601
118	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	335	80	1000	1200	—	8,266,601
126	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,522,329	335	80	1000	1200	—	8,266,601
152	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,522,329	335	80	1000	1200	—	8,266,601
180	4,747,100	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	335	80	1000	1200	—	8,266,601
L4 258	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6G	8,266,601
308	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6G	8,266,601
395	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6G	8,266,601
469	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6E	8,266,601
515	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6E	8,266,601
612	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	201	47	1500	2000	6C	8,266,601
736	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	174	47	1500	2000	6B	8,266,601
796	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,522,329	161	47	1500	2000	6B	8,266,601
945	5,803,791	4,578,404	3,718,820	3,020,672	1,863,791	1,522,329	136	47	1500	2000	6B	8,266,601
1122	4,747,100	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	106	47	1500	2000	6B	8,266,601

C



C

323 L

510

7,879,910 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.60	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	1140	201	150	250	—	13,984,185
L2	19.6	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	510	174	200	300	—	13,984,185
	22.4	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	510	174	200	300	—	13,984,185
	26.5	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	510	174	200	300	—	13,984,185
	33.1	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	510	174	200	300	—	13,984,185
L3	83.3	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	105	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	113	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	120	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	142	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	165	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	349	121	500	800	—	13,984,185
	205	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	281	121	500	800	—	13,984,185
L4	341	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6L	13,984,185
	390	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6L	13,984,185
	438	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6L	13,984,185
	500	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6L	13,984,185
	569	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6K	13,984,185
	628	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	268	67	1500	1800	6K	13,984,185
	703	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	264	67	1500	1800	6K	13,984,185
	758	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	244	67	1500	1800	6K	13,984,185
	882	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	210	67	1500	1800	6K	13,984,185
	1025	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	181	67	1500	1800	6K	13,984,185
	1101	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	168	67	1500	1800	6K	13,984,185
	1279	7,879,911	7,345,591	6,567,699	5,334,701	3,291,682	2,673,635	145	67	1500	1800	6K	13,984,185

325 L

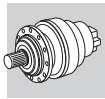
514

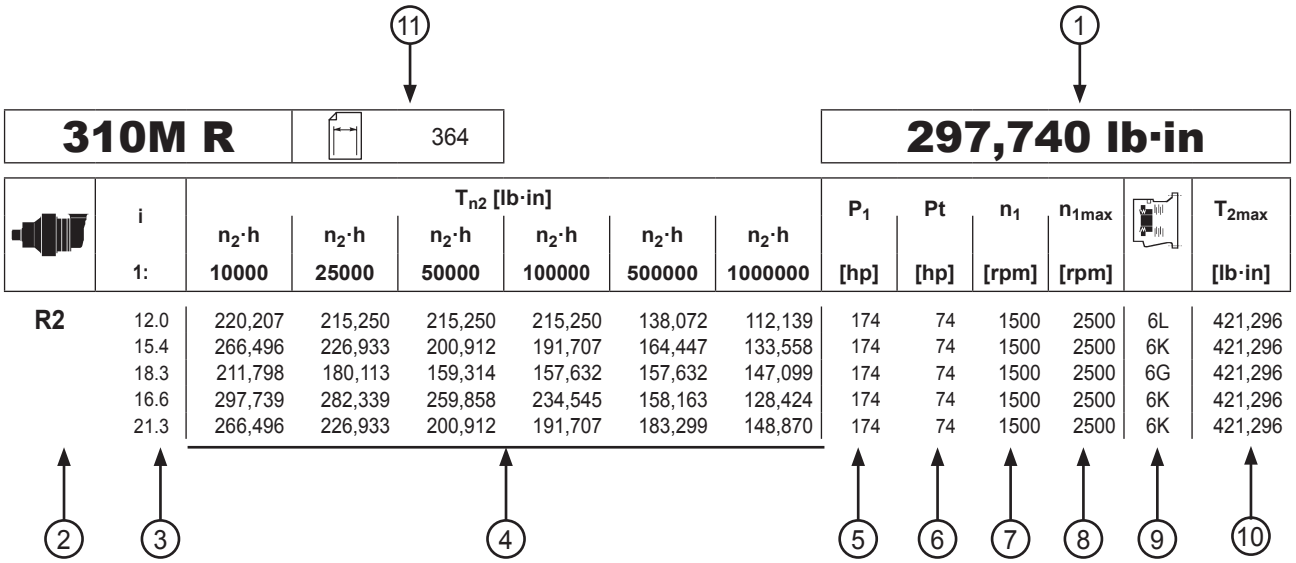
11,388,260 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
L1	4.60	11,388,260	10,328,383	8,389,272	6,814,192	4,204,549	3,415,150	1408	255	120	250	—	17,701,500
L2	19.6	11,387,375	9,771,671	7,936,999	6,452,197	3,977,970	3,231,055	510	215	200	300	—	17,701,500
	22.4	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	510	215	200	300	—	17,701,500
	26.5	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	510	215	200	300	—	17,701,500
	33.1	8,524,777	8,524,777	7,478,884	6,073,031	3,747,231	3,043,684	510	215	200	300	—	17,701,500
L3	83.3	11,387,375	9,771,671	7,936,999	6,446,886	3,977,970	3,231,055	349	154	500	800	—	17,701,500
	105	11,387,375	9,771,671	7,936,999	6,446,886	3,977,970	3,231,055	349	154	500	800	—	17,701,500
	113	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	349	154	500	800	—	17,701,500
	120	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	349	154	500	800	—	17,701,500
	142	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	349	154	500	800	—	17,701,500
	165	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	349	154	500	800	—	17,701,500
	205	8,524,777	8,524,777	7,478,884	6,073,031	3,747,231	3,043,684	303	154	500	800	—	17,701,500
L4	341	11,387,375	9,771,671	7,936,999	6,446,886	3,977,970	3,231,055	268	87	1500	1800	6L	17,701,500
	390	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	268	87	1500	1800	6L	17,701,500
	438	11,387,375	9,771,671	7,936,999	6,446,886	3,977,970	3,231,055	268	87	1500	1800	6L	17,701,500
	500	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	268	87	1500	1800	6L	17,701,500
	569	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	268	87	1500	1800	6L	17,701,500
	628	11,388,260	9,591,912	7,791,050	6,328,286	3,904,774	3,171,666	268	87	1500	1800	6L	17,701,500
	703	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	268	87	1500	1800	6L	17,701,500
	758	11,387,375	9,771,671	7,936,999	6,446,886	3,977,970	3,231,055	268	87	1500	1800	6K	17,701,500
	882	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	268	87	1500	1800	6K	17,701,500
	1025	11,388,260	9,438,705	7,666,608	6,227,211	3,842,376	3,121,040	259	87	1500	1800	6K	17,701,500
	1101	8,524,777	8,524,777	7,479,946	6,074,712	3,748,735	3,043,684	181	87	1500	1800	6K	17,701,500
	1279	8,524,777	8,524,777	7,479,946	6,074,712	3,748,735	3,043,684	156	87	1500	1800	6K	17,701,500

25.8 RATING CHARTS FOR RIGHT ANGLE UNITS 300M R

Reading the rating chart.

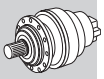




	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10000	25000	50000	100000	500000	1000000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	12.0	220,207	215,250	215,250	215,250	138,072	112,139	174	74	1500	2500	6L	421,296
	15.4	266,496	226,933	200,912	191,707	164,447	133,558	174	74	1500	2500	6K	421,296
	18.3	211,798	180,113	159,314	157,632	157,632	147,099	174	74	1500	2500	6G	421,296
	16.6	297,739	282,339	259,858	234,545	158,163	128,424	174	74	1500	2500	6K	421,296
	21.3	266,496	226,933	200,912	191,707	183,299	148,870	174	74	1500	2500	6K	421,296
		2	3		4			5	6	7	8	9	10

1	Reference torque
2	Number of reduction stages (right-angled gear unit)
3	Gear ratio
4	Gearbox rated output torque based on: - service factor f_S=1 - $n_2 \cdot h$ indicated
5	Maximum power transmitted to the input shaft
6	Gearbox thermal capacity
7	Input angular velocity
8	Maximum input angular velocity
9	Negative multidisc hydraulic brake
10	Maximum output torque at gearbox
11	Page where dimensions can be sorted from

C



C

300 R

226

11,060 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	7.13	6,727	6,461	6,461	6,461	6,461	6,461	20	16.1	2000	4000	4D	17,702
	8.74	11,063	9,470	8,408	7,612	7,435	6,373	20	16.1	2000	4000	4D	21,242
	11.8	7,612	6,461	5,753	5,753	5,753	5,576	16.4	16.1	2000	4000	4B	21,242
	14.8	6,196	5,310	4,868	4,868	4,868	4,514	11.1	16.1	2000	4000	4B	21,242
	18.5	4,071	3,452	3,275	3,275	3,275	3,275	6.0	16.1	2000	4000	4B	21,242
R3	24.8	6,727	6,461	6,461	6,461	6,461	6,461	8.3	16.1	2000	4000	4A	17,702
	30.4	11,063	9,470	8,408	7,612	7,435	6,373	8.9	16.1	2000	4000	4A	21,242
	37.3	11,063	9,470	8,408	7,612	7,435	6,373	7.3	16.1	2000	4000	4A	21,242
	41.2	7,612	6,461	5,753	5,753	5,753	5,576	4.9	16.1	2000	4000	4A	21,242
	50.4	11,063	9,470	8,408	7,612	7,435	6,373	5.7	16.1	2000	4000	4A	21,242
	62.9	11,063	9,470	8,408	7,612	7,435	6,373	4.7	16.1	2000	4000	4A	21,242
	68.2	7,612	6,461	5,753	5,753	5,753	5,576	3.2	16.1	2000	4000	4A	21,242
	78.7	11,063	9,470	8,408	7,612	7,435	6,373	3.9	16.1	2000	4000	4A	21,242
	85.2	7,612	6,461	5,753	5,753	5,753	5,576	2.7	16.1	2000	4000	4A	21,242
	106	7,612	6,461	5,753	5,753	5,753	5,576	2.3	16.1	2000	4000	4A	21,242
	133	6,196	5,310	4,868	4,868	4,868	4,514	1.5	16.1	2000	4000	4A	21,242
R4	106	11,063	9,470	8,408	7,612	7,435	6,373	3.0	13.4	2000	4000	4A	21,242
	130	11,063	9,470	8,408	7,612	7,435	6,373	2.4	13.4	2000	4000	4A	21,242
	143	7,612	6,461	5,753	5,753	5,753	5,576	1.8	13.4	2000	4000	4A	21,242
	159	11,063	9,470	8,408	7,612	7,435	6,373	2.0	13.4	2000	4000	4A	21,242
	175	11,063	9,470	8,408	7,612	7,435	6,373	1.8	13.4	2000	4000	4A	21,242
	215	11,063	9,470	8,408	7,612	7,435	6,373	1.5	13.4	2000	4000	4A	21,242
	237	7,612	6,461	5,753	5,753	5,753	5,576	1.1	13.4	2000	4000	4A	21,242
	268	11,063	9,470	8,408	7,612	7,435	6,373	1.2	13.4	2000	4000	4A	21,242
	291	11,063	9,470	8,408	7,612	7,435	6,373	1.1	13.4	2000	4000	4A	21,242
	363	11,063	9,470	8,408	7,612	7,435	6,373	0.87	13.4	2000	4000	4A	21,242
	394	7,612	6,461	5,753	5,753	5,753	5,576	0.69	13.4	2000	4000	4A	21,242
	453	11,063	9,470	8,408	7,612	7,435	6,373	0.70	13.4	2000	4000	4A	21,242
	491	7,612	6,461	5,753	5,753	5,753	5,576	0.56	13.4	2000	4000	4A	21,242
	613	7,612	6,461	5,753	5,753	5,753	5,576	0.44	13.4	2000	4000	4A	21,242
	766	7,612	6,461	5,753	5,753	5,753	5,576	0.36	13.4	2000	4000	4A	21,242

301 R

242

21,770 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	7.13	13,188	12,657	12,657	12,657	12,657	11,506	20	16.1	2000	4000	4F	30,093
	8.74	18,233	18,233	16,728	15,312	13,984	11,329	20	16.1	2000	4000	4H	30,093
	11.8	15,223	12,922	11,506	11,506	11,506	10,975	20	16.1	2000	4000	4F	30,093
	14.8	10,178	10,178	10,178	10,178	10,178	8,320	20	16.1	2000	4000	4D	30,093
	18.5	8,143	6,904	6,550	6,550	6,550	6,550	10.7	16.1	2000	4000	4D	30,093
R3	24.8	13,188	12,657	12,657	12,657	12,657	11,506	16.6	16.1	2000	4000	4B	30,093
	30.4	21,773	18,941	16,816	15,312	13,984	11,329	17.5	16.1	2000	4000	4B	30,093
	37.3	21,773	18,941	16,816	15,312	13,984	11,329	14.4	16.1	2000	4000	4B	30,093
	41.2	15,223	12,922	11,506	11,506	11,506	10,975	9.8	16.1	2000	4000	4B	30,093
	50.4	21,773	18,941	16,816	15,312	13,984	11,329	11.3	16.1	2000	4000	4B	30,093
	62.9	17,702	17,702	16,197	15,312	13,984	11,329	9.4	16.1	2000	4000	4A	30,093
	68.2	15,223	12,922	11,506	11,506	11,506	10,975	6.4	16.1	2000	4000	4A	30,093
	78.7	14,161	14,161	14,161	14,161	13,542	11,329	7.8	16.1	2000	4000	4A	30,093
	85.2	15,223	12,922	11,506	11,506	11,506	10,975	5.3	16.1	2000	4000	4A	30,093
	106	15,223	12,922	11,506	11,506	11,506	10,975	4.5	16.1	2000	4000	4A	30,093
	133	10,178	10,178	10,178	10,178	10,178	8,320	2.7	16.1	2000	4000	4A	30,093
R4	106	21,773	18,941	16,816	15,312	13,984	11,329	6.0	13.4	2000	4000	4A	30,093
	130	21,773	18,941	16,816	15,312	13,984	11,329	4.9	13.4	2000	4000	4A	30,093
	143	15,223	12,922	11,506	11,506	11,506	10,975	3.6	13.4	2000	4000	4A	30,093
	159	21,773	18,941	16,816	15,312	13,984	11,329	4.0	13.4	2000	4000	4A	30,093
	175	21,773	18,941	16,816	15,312	13,984	11,329	3.6	13.4	2000	4000	4A	30,093
	215	21,773	18,941	16,816	15,312	13,984	11,329	3.0	13.4	2000	4000	4A	30,093
	237	15,223	12,922	11,506	11,506	11,506	10,975	2.3	13.4	2000	4000	4A	30,093
	268	21,773	18,941	16,816	15,312	13,984	11,329	2.4	13.4	2000	4000	4A	30,093

301 R

242

21,770 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	291	21,773	18,941	16,816	15,312	13,984	11,329	2.2	13.4	2000	4000	4A	30,093
	363	21,773	18,941	16,816	15,312	13,984	11,329	1.7	13.4	2000	4000	4A	30,093
	394	15,223	12,922	11,506	11,506	11,506	10,975	1.4	13.4	2000	4000	4A	30,093
	453	17,702	17,702	16,197	15,312	13,984	11,329	1.4	13.4	2000	4000	4A	30,093
	491	15,223	12,922	11,506	11,506	11,506	10,975	1.1	13.4	2000	4000	4A	30,093
	613	15,223	12,922	11,506	11,506	11,506	10,975	0.88	13.4	2000	4000	4A	30,093
	766	15,223	12,922	11,506	11,506	11,506	10,975	0.70	13.4	2000	4000	4A	30,093

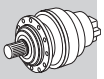
303 R

258

26,290 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	9.23	21,330	20,445	20,445	20,445	20,445	17,170	47	24	1800	3800	4H	46,024
	10.9	26,287	24,871	24,871	23,454	22,746	18,498	47	24	1800	3800	4H	46,024
	13.7	25,225	22,304	19,737	19,472	18,941	17,967	43	24	1800	3800	4F	46,024
	15.9	21,596	18,410	16,285	16,108	16,108	16,108	30	24	1800	3800	4F	46,024
	19.2	17,702	15,489	14,604	14,604	14,604	13,276	23	24	1800	3800	4D	46,024
	24.8	9,293	7,966	7,612	7,612	7,612	7,612	9.3	24	1800	3800	4D	46,024
R3	25.7	21,330	20,445	20,445	20,445	18,852	15,312	20	19	2,000	4,000	4D	46,024
	31.5	21,330	20,445	20,445	20,445	18,587	15,046	20	19	2,000	4,000	4B	46,024
	37.1	26,287	24,871	24,871	23,454	20,799	16,905	20	19	2,000	4,000	4B	46,024
	42.6	21,330	19,560	19,560	19,560	17,967	14,604	15.6	19	2,000	4,000	4B	46,024
	46.6	25,225	22,304	19,737	19,472	18,941	17,967	15.0	19	2,000	4,000	4B	46,024
	50.3	24,517	23,897	23,454	23,189	20,180	16,374	16.3	19	2,000	4,000	4B	46,024
	54.2	21,596	18,410	16,285	16,108	16,108	16,108	10.8	19	2,000	4,000	4B	46,024
	63.1	25,225	22,304	19,737	19,472	18,941	17,967	11.6	19	2,000	4,000	4B	46,024
	73.3	21,596	18,410	16,285	16,108	16,108	16,108	8.3	19	2,000	4,000	4A	46,024
	78.7	25,225	21,684	19,737	19,472	18,941	17,967	9.6	19	2,000	4,000	4A	46,024
	91.5	21,596	18,410	16,285	16,108	16,108	16,108	6.9	19	2,000	4,000	4A	46,024
	114	20,357	18,410	16,285	16,108	16,108	16,108	5.8	19	2,000	4,000	4A	46,024
R4	129	26,287	24,871	24,871	23,454	21,153	17,170	6.9	16	2,000	4,000	4A	46,024
	148	21,330	20,445	20,445	20,445	18,852	15,312	4.9	16	2,000	4,000	4A	46,024
	158	26,287	24,871	24,871	23,454	20,799	16,905	5.8	16	2,000	4,000	4A	46,024
	185	21,330	20,445	20,445	20,445	18,852	15,312	3.9	16	2,000	4,000	4A	46,024
	214	26,287	24,871	24,871	23,454	20,799	16,905	4.3	16	2,000	4,000	4A	46,024
	231	21,596	18,410	16,285	16,108	16,108	16,108	3.2	16	2,000	4,000	4A	46,024
	255	21,596	18,410	16,285	16,108	16,108	16,108	2.9	16	2,000	4,000	4A	46,024
	290	24,517	23,897	23,454	23,189	20,180	16,374	3.0	16	2,000	4,000	4A	46,024
	313	21,596	18,410	16,285	16,108	16,108	16,108	2.3	16	2,000	4,000	4A	46,024
	336	25,225	22,304	19,737	19,472	18,941	17,967	2.7	16	2,000	4,000	4A	46,024
	364	25,225	22,304	19,737	19,472	18,941	17,967	2.5	16	2,000	4,000	4A	46,024
	390	21,596	18,410	16,285	16,108	16,108	16,108	1.9	16	2,000	4,000	4A	46,024
	452	19,914	19,914	19,914	19,914	16,197	15,931	1.6	16	2,000	4,000	4A	46,024
	528	21,596	18,410	16,285	16,108	16,108	16,108	1.4	16	2,000	4,000	4A	46,024
	567	25,225	21,684	19,737	19,472	18,941	17,967	1.6	16	2,000	4,000	4A	46,024
	659	21,596	18,410	16,285	16,108	16,108	16,108	1.1	16	2,000	4,000	4A	46,024
	797	17,702	15,489	14,604	14,604	14,604	13,276	0.80	16	2,000	4,000	4A	46,024
	824	21,596	18,410	16,285	16,108	16,108	16,108	0.89	16	2,000	4,000	4A	46,024

C



C

304 R

276

35,050 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	9.23	32,836	31,155	30,978	28,499	21,153	17,170	47	24	1800	3800	4H	58,415
	10.9	35,049	33,190	32,659	31,332	23,720	19,295	47	24	1800	3800	4H	58,415
	13.7	33,102	28,234	25,225	25,225	25,225	22,658	47	24	1800	3800	4F	58,415
	16.8	26,552	22,658	21,153	21,153	21,153	21,153	37	24	1800	3800	4F	58,415
R3	25.7	32,836	31,155	30,978	30,447	27,260	25,048	20	18.8	2,000	4,000	4D	64,610
	31.5	32,836	31,155	30,978	30,447	27,260	25,048	20	18.8	2,000	4,000	4B	64,610
	37.1	35,049	33,190	32,659	31,332	30,358	24,605	20	18.8	2,000	4,000	4B	64,610
	42.6	32,836	31,155	30,978	30,447	27,614	25,048	20	18.8	2,000	4,000	4B	64,610
	46.6	33,102	28,234	25,225	25,225	25,225	23,986	19.0	18.8	2,000	4,000	4B	64,610
	50.3	35,049	33,190	32,659	31,332	30,358	24,605	20	18.8	2,000	4,000	4B	64,610
	63.1	33,102	28,234	25,225	25,225	25,225	23,986	14.7	18.8	2,000	4,000	4B	64,610
	78.7	33,102	28,234	25,225	25,225	25,225	23,986	12.0	18.8	2,000	4,000	4B	64,610
	97.0	26,641	22,658	21,153	21,153	21,153	21,153	7.9	18.8	2,000	4,000	4A	64,610
	121	26,641	22,658	21,153	21,153	21,153	21,153	6.6	18.8	2,000	4,000	4A	64,610
R4	89.4	32,836	31,155	30,978	30,447	27,614	25,048	12.6	16.1	2,000	4,000	4A	64,610
	109	32,836	31,155	30,978	30,447	27,614	25,048	10.4	16.1	2,000	4,000	4A	64,610
	129	35,049	33,190	32,659	31,332	30,358	24,605	9.5	16.1	2,000	4,000	4A	64,610
	148	32,836	31,155	30,978	30,447	27,614	25,048	7.8	16.1	2,000	4,000	4A	64,610
	158	35,049	33,190	32,659	31,332	30,358	24,605	7.8	16.1	2,000	4,000	4A	64,610
	185	32,836	31,155	30,978	30,447	27,260	25,048	6.3	16.1	2,000	4,000	4A	64,610
	214	35,049	33,190	32,659	31,332	30,358	24,605	5.9	16.1	2,000	4,000	4A	64,610
	227	32,836	31,155	30,978	30,447	27,614	25,048	5.2	16.1	2,000	4,000	4A	64,610
	267	35,049	33,190	32,659	31,332	30,358	24,605	4.7	16.1	2,000	4,000	4A	64,610
	290	35,049	33,190	32,659	31,332	30,358	24,605	4.3	16.1	2,000	4,000	4A	64,610
	307	32,836	31,155	30,978	30,447	27,614	25,048	3.8	16.1	2,000	4,000	4A	64,610
	338	26,641	22,658	21,153	21,153	21,153	21,153	2.6	16.1	2,000	4,000	4A	64,610
	364	33,102	28,234	25,225	25,225	25,225	23,986	3.1	16.1	2,000	4,000	4A	64,610
	414	26,641	22,658	21,153	21,153	21,153	21,153	2.1	16.1	2,000	4,000	4A	64,610
	452	35,049	32,836	32,394	31,332	30,358	24,605	2.8	16.1	2,000	4,000	4A	64,610
	560	26,641	22,658	21,153	21,153	21,153	21,153	1.6	16.1	2,000	4,000	4A	64,610
	699	26,641	22,658	21,153	21,153	21,153	21,153	1.2	16.1	2,000	4,000	4A	64,610

305 R

294

51,330 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	9.23	41,156	35,846	35,403	34,252	21,153	17,170	47	24	1800	3800	4L	68,151
	10.9	46,909	41,776	41,776	38,501	23,720	19,295	47	24	1800	3800	4L	68,151
	13.7	49,564	44,608	39,563	37,881	27,880	22,658	47	24	1800	3800	4L	68,151
	15.9	41,510	35,403	31,863	31,863	30,978	25,136	47	24	1800	3800	4H	68,151
	19.2	33,633	29,207	27,437	27,437	26,552	24,694	43	24	1800	3800	4F	68,151
R3	25.7	41,422	39,740	39,740	39,740	33,633	27,349	20	18.8	2000	4000	4F	77,887
	31.5	41,599	39,740	39,740	39,740	33,190	26,906	20	18.8	2000	4000	4F	77,887
	37.1	51,334	48,679	48,502	46,909	37,262	30,270	20	18.8	2000	4000	4F	77,887
	42.6	41,599	39,386	39,209	39,209	32,128	26,110	20	18.8	2000	4000	4D	77,887
	46.6	49,564	44,608	39,563	38,943	37,881	30,889	20	18.8	2000	4000	4D	77,887
	50.3	48,945	47,352	46,909	46,289	36,023	29,296	20	18.8	2000	4000	4D	77,887
	54.2	41,510	35,403	31,863	31,863	31,420	30,624	20	18.8	2000	4000	4B	77,887
	63.1	49,564	44,608	39,563	38,943	37,881	30,889	20	18.8	2000	4000	4B	77,887
	73.3	41,510	35,403	31,863	31,863	31,420	30,624	16.4	18.8	2000	4000	4B	77,887
	78.7	49,564	43,369	39,563	38,943	37,881	30,889	19.1	18.8	2000	4000	4B	77,887
	91.5	41,510	35,403	31,863	31,863	31,420	30,624	13.7	18.8	2000	4000	4B	77,887
	114	39,209	35,403	31,863	31,863	30,978	30,624	11.5	18.8	2000	4000	4A	77,887
R4	129	51,334	48,502	48,502	46,909	37,793	30,712	13.9	16.1	2000	4000	4A	77,887
	148	41,599	39,740	39,740	39,740	33,633	27,349	9.9	16.1	2000	4000	4A	77,887
	158	51,334	48,679	48,502	46,909	37,262	30,270	11.5	16.1	2000	4000	4A	77,887
	185	41,599	39,740	39,740	39,740	33,633	27,349	8.0	16.1	2000	4000	4A	77,887
	214	51,334	48,679	48,502	46,909	37,262	30,270	8.6	16.1	2000	4000	4A	77,887
	231	41,510	35,403	31,863	31,863	31,420	30,624	6.3	16.1	2000	4000	4A	77,887
	255	41,510	35,403	31,863	31,863	31,420	30,624	5.7	16.1	2000	4000	4A	77,887

305 R

294

51,330 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	290	48,945	47,794	46,909	46,289	36,023	29,296	6.0	16.1	2000	4000	4A	77,887
	313	41,510	35,403	31,863	31,863	31,420	30,624	4.7	16.1	2000	4000	4A	77,887
	336	49,564	44,608	39,563	38,943	37,881	30,889	5.3	16.1	2000	4000	4A	77,887
	364	49,564	44,608	39,563	38,943	37,881	30,889	4.9	16.1	2000	4000	4A	77,887
	390	41,510	35,403	31,863	31,863	31,420	30,624	3.7	16.1	2000	4000	4A	77,887
	452	42,041	42,041	42,041	42,041	32,394	28,411	3.3	16.1	2000	4000	4A	77,887
	528	41,510	35,403	31,863	31,863	31,420	30,624	2.8	16.1	2000	4000	4A	77,887
	567	49,564	43,369	39,563	38,943	37,881	30,889	3.1	16.1	2000	4000	4A	77,887
	659	41,510	35,403	31,863	31,863	31,420	30,624	2.2	16.1	2000	4000	4A	77,887
	797	33,633	29,207	27,437	27,437	26,552	24,694	1.5	16.1	2000	4000	4A	77,887
	824	41,510	35,403	31,863	31,863	31,420	30,624	1.8	16.1	2000	4000	4A	77,887

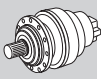
306 R

312

95,940 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	9.23	41,156	35,846	35,403	34,252	21,153	17,170	47	24	1800	3800	4L	106,209
	10.9	46,909	41,776	41,776	38,501	23,720	19,295	47	24	1800	3800	4L	106,209
	13.7	57,530	52,396	52,396	45,139	27,880	22,658	47	24	1800	3800	4L	106,209
	15.9	64,610	60,982	57,795	50,184	30,978	25,136	47	24	1800	3800	4L	106,209
	19.2	61,955	52,219	48,679	47,794	35,314	28,676	47	24	1800	3800	4K	106,209
R3	33.2	70,983	70,983	70,983	70,983	50,272	40,890	47	18.8	2000	4000	4F	131,876
	39.2	86,472	82,666	82,666	82,312	54,078	43,900	47	18.8	2000	4000	4F	131,876
	46.3	92,225	87,180	87,180	84,967	60,716	49,299	47	18.8	2000	4000	4F	131,876
	58.1	84,613	80,542	80,542	80,542	59,123	48,060	47	18.8	2000	4000	4F	131,876
	67.5	69,832	67,177	67,177	67,177	58,592	47,617	34	18.8	2000	4000	4F	131,876
	72.9	89,216	82,755	73,461	70,363	60,274	48,945	36	18.8	2000	4000	4D	131,876
	84.7	84,436	82,755	73,461	70,363	60,274	48,945	31	18.8	2000	4000	4D	131,876
	98.5	76,382	65,230	57,795	57,530	57,176	48,502	24	18.8	2000	4000	4B	131,876
	119	75,231	65,230	57,795	57,530	57,176	48,502	20	18.8	2000	4000	4B	131,876
	144	61,955	52,219	48,679	48,679	44,608	44,608	14.3	18.8	2000	4000	4B	131,876
R4	158	92,225	87,180	87,180	84,967	60,716	49,299	20.0	16.1	2000	4000	4B	131,876
	168	73,638	68,151	68,151	66,646	52,662	42,749	15.2	16.1	2000	4000	4B	131,876
	181	83,640	83,640	83,640	83,640	61,690	50,095	15.6	16.1	2000	4000	4B	131,876
	214	92,225	87,180	87,180	84,967	60,716	49,299	14.8	16.1	2000	4000	4A	131,876
	230	69,832	67,177	67,177	67,177	58,592	47,617	10.3	16.1	2000	4000	4A	131,876
	249	89,216	82,755	73,461	70,363	60,274	48,945	12.1	16.1	2000	4000	4A	131,876
	289	84,436	82,755	73,461	70,363	60,274	48,945	10.2	16.1	2000	4000	4A	131,876
	312	69,832	67,177	67,177	67,177	58,592	47,617	7.6	16.1	2000	4000	4A	131,876
	389	75,231	67,177	67,177	67,177	58,592	47,617	6.9	16.1	2000	4000	4A	131,876
	420	89,216	82,755	73,461	70,363	60,274	48,945	7.2	16.1	2000	4000	4A	131,876
	455	76,382	65,230	57,795	57,530	57,176	48,502	5.9	16.1	2000	4000	4A	131,876
	488	84,436	82,755	73,461	70,363	60,274	48,945	6.0	16.1	2000	4000	4A	131,876
	550	75,231	65,230	57,795	57,530	57,176	48,502	4.9	16.1	2000	4000	4A	131,876
	590	84,082	75,231	69,036	69,036	60,274	48,945	5.1	16.1	2000	4000	4A	131,876
	665	61,955	52,219	48,679	48,679	44,608	44,608	3.3	16.1	2000	4000	4A	131,876
	830	61,955	52,219	48,679	48,679	44,608	44,608	2.7	16.1	2000	4000	4A	131,876

C



C

307 R — 330 — 138,780 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	13.0	79,657	75,231	73,196	70,452	58,149	47,263	114	47	1800	3800	5K	164,624
	15.5	100,899	94,615	85,233	84,259	65,850	53,459	114	47	1800	3800	5K	185,866
	19.8	123,911	112,405	100,013	95,500	78,329	63,637	114	47	1800	3800	5G	185,866
	23.5	97,358	84,967	77,002	77,002	72,930	66,292	99	47	1800	3800	5C	185,866
R3	31.6	79,657	79,657	79,657	73,461	48,591	39,474	47	30	2000	4000	4K	164,624
	37.7	138,780	131,788	109,749	89,127	54,963	44,696	47	30	2000	4000	4L	185,866
	44.6	138,780	131,788	123,291	100,102	61,778	50,184	47	30	2000	4000	4K	185,866
	55.9	138,780	131,788	131,788	117,361	72,399	58,857	47	30	2000	4000	4H	185,866
	65.0	129,841	123,999	123,999	119,574	80,453	65,319	47	30	2000	4000	4F	185,866
	71.8	131,345	112,405	100,013	95,500	82,666	67,177	47	30	2000	4000	4F	185,866
	78.6	108,864	108,864	108,864	108,864	84,613	68,770	47	30	2000	4000	4F	185,866
	83.4	131,345	112,405	100,013	95,500	82,666	67,177	45	30	2000	4000	4F	185,866
	99.0	97,358	84,967	77,002	77,002	72,930	66,292	31	30	2000	4000	4D	185,866
	120	97,358	84,967	77,002	77,002	72,930	66,292	27	30	2000	4000	4D	185,866
R4	152	138,780	131,788	131,788	119,574	84,613	68,770	20	20	2000	4000	4B	185,866
	165	131,345	112,405	100,013	95,500	82,666	67,177	20	20	2000	4000	4B	185,866
	191	138,780	131,788	131,788	119,574	84,613	68,770	20	20	2000	4000	4B	185,866
	206	138,780	131,788	131,788	119,574	84,613	68,770	20	20	2000	4000	4B	185,866
	232	131,345	112,405	100,013	95,500	82,666	67,177	19.1	20	2000	4000	4B	185,866
	258	138,780	131,788	131,788	119,574	84,613	68,770	18.4	20	2000	4000	4B	185,866
	284	131,345	112,405	100,013	95,500	82,666	67,177	15.6	20	2000	4000	4B	185,866
	300	132,761	123,999	123,999	119,574	84,613	68,770	15.9	20	2000	4000	4B	185,866
	331	131,345	112,405	100,013	95,500	82,666	67,177	13.4	20	2000	4000	4A	185,866
	363	108,864	108,864	108,864	108,864	84,613	68,770	10.8	20	2000	4000	4A	185,866
	413	131,345	112,405	100,013	95,500	82,666	67,177	10.7	20	2000	4000	4A	185,866
	453	132,761	122,140	114,175	110,634	84,613	68,770	10.5	20	2000	4000	4A	185,866
	490	97,358	84,967	77,002	77,002	72,930	66,292	7.1	20	2000	4000	4A	185,866
	581	126,831	112,493	100,013	95,500	82,666	67,177	7.6	20	2000	4000	4A	185,866
	690	97,358	84,967	77,002	77,002	72,930	66,292	5.1	20	2000	4000	4A	185,866

309 R — 348 — 205,690 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	13.0	86,737	80,719	73,196	70,452	58,149	47,263	114	47	1800	3800	5K	242,511
	15.5	100,899	94,615	85,233	84,259	65,850	53,459	114	47	1800	3800	5K	242,511
	19.8	123,911	117,449	108,599	108,599	78,329	63,637	114	47	1800	3800	5K	242,511
	23.5	145,683	124,530	110,634	109,484	88,330	71,780	114	47	1800	3800	5G	242,511
R3	31.6	113,290	108,953	97,004	78,772	48,591	39,474	47	30	2000	4000	4L	246,936
	37.7	140,107	135,062	109,749	89,127	54,963	44,696	47	30	2000	4000	4L	256,672
	44.6	165,244	151,790	123,291	100,102	61,778	50,184	47	30	2000	4000	4K	256,672
	55.9	163,827	151,702	144,533	117,361	72,399	58,857	47	30	2000	4000	4K	256,672
	65.0	129,841	126,566	126,566	123,999	80,453	65,319	47	30	2000	4000	4F	256,672
	71.8	194,539	168,695	149,932	139,753	86,206	70,009	47	30	2000	4000	4H	256,672
	83.4	161,969	160,199	149,932	143,294	95,854	77,798	47	30	2000	4000	4F	256,672
	99.0	150,463	127,451	115,060	115,060	108,068	87,711	47	30	2000	4000	4F	256,672
	120	150,463	127,451	115,060	115,060	109,484	90,986	41	30	2000	4000	4D	256,672
R4	152	191,353	188,167	188,167	164,447	101,430	82,400	20	20	2000	4000	4D	256,672
	165	194,539	168,695	149,932	143,294	113,378	92,136	20	20	2000	4000	4D	256,672
	191	163,827	154,888	154,888	151,702	98,774	80,276	20	20	2000	4000	4D	256,672
	206	191,353	188,167	188,167	164,447	101,430	82,400	20	20	2000	4000	4D	256,672
	232	161,969	160,199	149,932	143,294	113,378	92,136	20	20	2000	4000	4B	256,672
	258	163,827	154,888	154,888	151,702	98,774	80,276	20	20	2000	4000	4B	256,672
	284	161,969	160,199	149,932	143,294	113,378	92,136	20	20	2000	4000	4B	256,672
	331	194,539	168,695	149,932	143,294	113,378	92,136	20	20	2000	4000	4B	256,672
	374	129,841	126,566	126,566	123,999	97,889	79,568	12.3	20	2000	4000	4B	256,672
	413	194,539	168,695	149,932	143,294	113,378	92,136	16.1	20	2000	4000	4B	256,672
	457	150,463	127,451	115,060	115,060	109,484	90,986	11.8	20	2000	4000	4A	256,672
	490	150,463	127,451	115,060	115,060	109,484	90,986	11.0	20	2000	4000	4A	256,672
	581	139,842	139,842	139,842	132,761	113,378	92,136	8.6	20	2000	4000	4A	256,672
	690	150,463	127,451	115,060	115,060	109,484	90,986	7.8	20	2000	4000	4A	256,672

310M R

364

297,740 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	12.0	220,207	215,250	215,250	215,250	138,072	112,139	174	74	1500	2500	6L	421,296
	15.4	266,496	226,933	200,912	191,707	164,447	133,558	174	74	1500	2500	6K	421,296
	18.3	211,798	180,113	159,314	157,632	157,632	147,099	174	74	1500	2500	6G	421,296
	16.6	297,739	282,339	259,858	234,545	158,163	128,424	174	74	1500	2500	6K	421,296
	21.3	266,496	226,933	200,912	191,707	183,299	148,870	174	74	1500	2500	6K	421,296
	25.3	211,798	180,113	159,314	157,632	157,632	147,099	159	74	1500	2500	6G	421,296
R3	37.7	139,842	131,522	106,829	86,737	53,547	43,457	47	30	1800	3800	5C	421,296
	44.6	164,978	147,719	119,928	97,447	60,097	48,856	47	30	1800	3800	5C	421,296
	55.9	206,754	173,209	140,638	114,263	70,452	57,264	47	30	1800	3800	5C	421,296
	65.0	230,651	192,415	156,304	126,920	78,329	63,637	47	30	1800	3800	5C	421,296
	71.8	264,903	206,222	167,456	136,036	83,905	68,151	47	30	1800	3800	5C	421,296
	78.6	172,413	171,085	171,085	145,064	89,481	72,665	47	30	1800	3800	4H	421,296
	83.4	266,496	226,933	186,131	151,171	93,287	75,762	47	30	1800	3800	4K	421,296
	99.0	211,798	180,113	159,314	157,632	105,147	85,410	47	30	1800	3800	4H	421,296
	120	211,798	180,113	159,314	157,632	120,193	97,624	47	30	1800	3800	4F	421,296
R4	136	271,984	271,984	254,017	206,311	127,274	103,377	47	20	2000	4000	4F	421,296
	160	297,739	282,339	259,858	227,907	140,638	114,263	47	20	2000	4000	4F	421,296
	189	297,739	282,339	259,858	234,545	157,986	128,336	47	20	2000	4000	4F	421,296
	206	266,496	226,933	200,912	191,707	167,456	136,036	46	20	2000	4000	4F	421,296
	238	297,739	282,339	259,858	234,545	153,826	124,884	45	20	2000	4000	4D	421,296
	258	266,496	226,933	200,912	191,707	163,031	132,407	37	20	2000	4000	4D	421,296
	276	248,352	248,441	248,441	234,545	152,410	123,822	32	20	2000	4000	4D	421,296
	305	266,496	226,933	200,912	191,707	183,299	148,870	31	20	2000	4000	4D	421,296
	347	293,579	271,275	259,858	234,545	156,658	127,274	30	20	2000	4000	4D	421,296
	383	266,496	226,933	200,912	191,707	183,299	148,870	25	20	2000	4000	4B	421,296
	454	211,798	180,113	159,314	157,632	157,632	147,099	16.7	20	2000	4000	4B	421,296
	517	266,496	226,933	200,912	191,707	183,299	148,870	18.5	20	2000	4000	4B	421,296
	590	172,413	171,085	171,085	171,085	151,525	123,025	10.5	20	2000	4000	4A	421,296
	639	211,798	180,113	159,314	157,632	157,632	147,099	11.9	20	2000	4000	4A	421,296
	757	219,676	219,676	200,912	191,707	180,378	146,480	10.4	20	2000	4000	4A	421,296
	898	211,798	180,113	159,314	157,632	157,632	147,099	8.5	20	2000	4000	4A	421,296

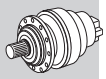
311M R

382

435,550 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	12.0	220,207	215,250	215,250	215,250	138,072	112,139	201	101	1500	2500	6L	515,999
	15.4	276,055	276,055	276,055	266,496	164,447	133,558	201	101	1500	2500	6L	515,999
	18.3	322,787	274,727	243,219	240,652	185,423	150,640	201	101	1500	2500	6K	515,999
	16.6	401,736	388,548	315,529	256,318	158,163	128,424	201	121	1500	2500	6L	515,999
	21.3	423,154	366,421	324,734	305,262	188,344	152,941	201	121	1500	2500	6K	515,999
	25.3	322,787	274,727	243,219	240,652	212,329	172,501	201	121	1500	2500	6G	515,999
R3	53.0	286,853	286,941	286,941	245,077	151,259	122,848	114	54	2000	4000	5G	515,999
	63.2	366,067	351,109	341,462	277,383	171,174	139,045	114	54	2000	4000	5G	515,999
	68.0	367,306	366,421	324,734	291,898	180,113	146,303	114	54	2000	4000	5G	515,999
	81.1	423,154	366,421	324,734	309,865	203,833	165,509	114	54	2000	4000	5G	515,999
	96.3	296,677	283,401	283,401	283,401	212,329	172,501	104	54	2000	4000	5C	515,999
	104	423,154	366,421	324,734	309,865	242,688	197,106	114	54	2000	4000	5C	515,999
	124	365,093	364,385	324,734	309,865	252,866	205,337	103	54	2000	4000	5B	515,999
	147	322,787	274,727	243,219	240,652	240,652	209,497	74	54	2000	4000	5B	515,999
R4	154	435,545	342,081	277,737	225,606	139,222	113,113	47	30	2000	4000	5B	515,999
	182	435,545	384,211	311,989	253,397	156,393	127,008	47	30	2000	4000	4H	515,999
	198	423,154	366,421	324,734	268,709	165,775	134,708	47	30	2000	4000	4F	515,999
	229	435,545	412,356	365,890	297,120	183,299	148,958	47	30	2000	4000	4F	515,999
	266	435,545	412,356	402,267	330,221	203,656	165,509	47	30	2000	4000	4F	515,999
	294	423,154	366,421	324,734	309,865	218,348	177,369	47	30	2000	4000	4D	515,999
	341	423,154	366,421	324,734	309,865	242,599	197,018	44	30	2000	4000	4D	515,999
	413	423,154	366,421	324,734	309,865	261,097	212,064	37	30	2000	4000	4D	515,999

C



311M R

382

435,550 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	438	423,154	366,421	324,734	309,865	256,052	207,904	35	30	2000	4000	4D	515,999
	490	296,677	283,401	283,401	283,401	212,329	172,501	22	30	2000	4000	4B	515,999
	520	365,093	364,385	324,734	309,865	252,866	205,337	25	30	2000	4000	4B	515,999
	629	365,093	364,385	324,734	309,865	252,866	205,337	21	30	2000	4000	4B	515,999
	746	322,787	274,727	243,219	240,652	240,652	209,497	15.5	30	2000	4000	4B	515,999

313M R

400

539,360 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R2	12.2	222,685	217,905	217,905	217,905	139,311	113,201	201	101	1500	2500	6L	763,820
	15.9	283,844	283,844	283,844	271,807	167,722	136,213	201	101	1500	2500	6L	763,820
	19.1	341,462	302,342	267,824	267,293	190,999	155,154	201	101	1500	2500	6L	763,820
	16.8	406,249	392,000	318,361	258,530	159,579	129,575	201	121	1500	2500	6L	929,329
	22.0	505,643	431,032	381,910	311,281	192,061	156,039	201	121	1500	2500	6L	929,329
	26.4	354,915	302,342	267,824	267,293	218,702	177,635	201	121	1500	2500	6K	929,329
R3	53.7	317,122	296,677	296,677	247,290	152,587	123,911	114	54	1800	3800	5G	929,329
	64.0	370,138	355,623	344,560	279,861	172,678	140,284	114	54	1800	3800	5G	929,329
	69.9	399,877	389,433	366,510	297,651	183,653	149,224	114	54	1800	3800	5G	929,329
	82.2	460,505	459,531	410,232	333,231	205,603	167,014	114	54	1800	3800	5G	929,329
	97.5	449,707	430,500	430,500	375,714	231,801	188,255	114	54	1800	3800	5E	929,329
	107	505,643	431,032	381,910	366,775	247,555	201,089	114	54	1800	3800	5E	929,329
	127	505,643	431,032	381,910	366,775	279,064	226,668	114	54	1800	3800	5C	929,329
	153	354,915	302,342	267,824	267,293	267,293	258,088	71	54	1800	3800	5B	929,329
R4	185	510,246	387,486	314,733	255,698	157,720	128,159	47	30	2000	4000	4K	929,329
	201	539,365	410,852	333,673	271,098	167,279	135,859	47	30	2000	4000	4K	929,329
	237	539,365	461,567	374,829	304,466	187,901	152,587	47	30	2000	4000	4F	929,329
	281	449,707	430,500	422,712	343,232	211,798	172,059	47	30	2000	4000	4F	929,329
	309	505,643	431,032	381,910	366,598	226,137	183,742	47	30	2000	4000	4F	929,329
	346	539,365	510,334	488,384	396,602	244,723	198,788	47	30	2000	4000	4F	929,329
	387	505,643	431,032	381,910	366,775	265,257	215,427	47	30	2000	4000	4D	929,329
	450	505,643	431,032	381,910	366,775	294,730	239,324	40	30	2000	4000	4D	929,329
	496	449,707	430,500	430,500	430,500	293,845	238,705	32	30	2000	4000	4D	929,329
	535	505,643	431,032	381,910	366,775	332,257	269,859	34	30	2000	4000	4D	929,329
	647	505,643	431,032	381,910	366,775	353,764	287,295	28	30	2000	4000	4B	929,329
	778	354,915	302,342	267,824	267,293	267,293	267,293	16.3	30	2000	4000	4B	929,329

314M R

418

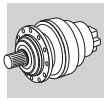
713,720 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R3	51.1	704,661	669,966	588,823	478,224	295,119	239,678	174	74	1500	2500	6G	1,017,836
	65.5	690,571	641,078	641,078	569,563	351,410	285,419	174	74	1500	2500	6G	1,017,836
	77.8	547,401	526,584	526,513	526,513	386,884	314,237	174	74	1500	2500	6G	1,017,836
	82.3	648,866	597,390	551,437	528,567	411,949	334,629	174	74	1500	2500	6G	1,017,836
	97.6	648,795	597,390	551,437	528,567	453,512	368,333	168	74	1500	2500	6G	1,017,836
	113	559,863	478,153	424,340	419,526	419,526	369,891	125	74	1500	2500	6G	1,017,836
	70.7	713,724	669,966	669,966	547,755	337,886	274,515	174	74	1500	2500	6G	1,017,836
	90.7	690,500	641,078	641,078	629,607	391,628	318,061	174	74	1500	2500	6L	1,017,836
	108	547,401	526,584	526,513	526,513	386,884	314,237	131	74	1500	2500	6K	1,017,836
	114	648,866	597,390	551,437	528,567	459,035	372,864	146	74	1500	2500	6K	1,017,836
	135	648,795	597,390	551,437	528,567	453,512	368,333	124	74	1500	2500	6G	1,017,836
	157	559,863	478,153	424,340	419,526	419,526	369,891	93	74	1500	2500	6G	1,017,836
R4	160	462,452	351,198	285,260	231,713	143,028	116,122	47	30	1800	3800	4L	1,017,836

314M R

418

713,720 lb·in



	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	189	519,451	394,478	320,397	260,301	160,641	130,460	47	30	1800	3800	4L	1,017,836
	238	609,020	462,452	375,626	305,085	188,255	152,941	47	30	1800	3800	4K	1,017,836
	276	676,728	513,875	417,401	339,072	209,232	169,934	47	30	1800	3800	4K	1,017,836
	354	805,861	611,852	497,058	403,771	249,149	202,417	47	30	1800	3800	4K	1,017,836
	421	684,251	658,230	560,607	455,194	280,834	228,172	42	30	1800	3800	4H	1,017,836
	445	648,866	574,095	466,116	378,670	233,660	189,831	47	30	1800	3800	4K	1,017,836
	528	648,866	597,390	525,735	426,889	263,398	213,976	40	30	1800	3800	4H	1,017,836
	614	559,863	478,153	424,340	419,526	292,783	237,767	29	30	1800	3800	4F	1,017,836

315M R

434

892,160 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R3	51.1	880,738	837,458	736,028	597,780	368,899	299,598	201	101	1500	2500	6K	1,194,851
	65.5	892,156	837,458	837,458	711,954	439,263	356,774	201	101	1500	2500	6G	1,194,851
	77.8	892,156	837,458	837,458	787,009	495,288	402,267	201	101	1500	2500	6G	1,194,851
	82.3	811,083	746,738	689,296	660,708	514,937	418,286	201	101	1500	2500	6E	1,194,851
	97.6	811,083	746,738	689,296	660,708	575,830	467,762	201	101	1500	2500	6E	1,194,851
	113	699,829	597,691	530,425	524,407	524,407	462,363	156	101	1500	2500	6B	1,194,851
	70.7	892,156	837,458	837,458	684,694	422,358	343,144	201	121	1500	2500	6G	1,194,851
	90.7	892,156	837,458	837,458	787,009	503,077	408,639	201	121	1500	2500	6E	1,194,851
	108	892,156	837,458	837,458	787,009	567,245	460,682	201	121	1500	2500	6E	1,194,851
	114	810,994	746,738	689,296	660,708	575,830	467,762	183	121	1500	2500	6C	1,194,851
	135	810,994	746,738	689,296	660,708	575,830	467,762	156	121	1500	2500	6C	1,194,851
	157	699,829	597,691	530,425	524,407	524,407	462,363	116	121	1500	2500	6B	1,194,851
R4	225	892,156	837,458	806,038	654,690	403,948	328,097	121	54	1800	3800	5E	1,194,851
	269	892,156	837,458	837,458	740,808	457,141	371,289	107	54	1800	3800	5C	1,194,851
	345	892,156	837,458	837,458	787,009	544,321	442,183	83	54	1800	3800	5B	1,194,851
	409	892,156	837,458	837,458	787,009	567,068	460,593	70	54	1800	3800	5B	1,194,851
	525	892,156	837,458	837,458	787,009	596,187	484,313	55	54	1800	3800	5B	1,194,851
	623	892,156	837,458	837,458	787,009	596,187	484,313	46	54	1800	3800	5B	1,194,851
	659	811,083	746,738	689,296	660,708	575,830	467,762	40	54	1800	3800	5B	1,194,851
	782	811,083	746,738	689,296	660,708	575,830	467,762	33	54	1800	3800	5B	1,194,851
	909	699,829	597,691	530,425	524,407	524,407	462,363	25	54	1800	3800	5B	1,194,851

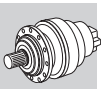
316M R

450

1,189,450 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R3	51.1	880,827	880,827	736,028	597,780	368,899	299,598	201	101	1500	2500	6K	1,699,344
	64.1	1,081,473	985,088	862,860	700,802	432,448	351,286	201	101	1500	2500	6K	1,699,344
	65.5	1,127,320	1,079,083	876,401	711,866	439,263	356,774	201	101	1500	2500	6K	1,699,344
	77.8	1,045,362	1,005,888	988,098	802,498	495,199	402,267	201	101	1500	2500	6G	1,699,344
	82.3	1,081,385	985,088	880,915	834,626	514,937	418,286	201	101	1500	2500	6G	1,699,344
	97.6	1,081,385	985,088	880,915	880,915	580,609	471,568	201	101	1500	2500	6G	1,699,344
	70.7	1,189,541	1,037,839	842,768	684,517	422,358	343,144	201	121	1500	2500	6G	1,699,344
	88.7	1,081,473	985,088	880,915	802,675	495,199	402,267	201	121	1500	2500	6G	1,699,344
	90.7	1,189,541	1,116,611	1,003,852	815,154	502,988	408,639	201	121	1500	2500	6G	1,699,344
	108	1,045,362	1,005,888	1,005,799	919,239	567,068	460,682	201	121	1500	2500	6E	1,699,344
	114	1,081,473	985,088	880,915	880,915	589,814	479,003	201	121	1500	2500	6E	1,699,344
	135	1,081,473	985,088	880,915	880,915	664,957	540,073	201	121	1500	2500	6E	1,699,344
R4	225	1,149,624	992,346	805,949	654,690	403,948	328,097	114	60	1800	3800	5G	1,699,344
	269	1,189,541	1,116,611	912,070	740,808	457,141	371,289	114	60	1800	3800	5E	1,699,344
	289	1,189,541	1,116,611	959,775	779,574	481,038	390,761	114	60	1800	3800	5E	1,699,344
	337	1,081,385	985,088	880,915	868,436	535,824	435,280	103	60	1800	3800	5C	1,699,344

C



C

316M R — 450 — 1,189,450 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	363	1,081,473	985,088	880,915	880,915	563,881	458,026	96	60	1800	3800	5B	1,699,344
	430	1,081,473	985,088	880,915	880,915	635,749	516,353	81	60	1800	3800	5B	1,699,344
	443	1,189,541	1,116,611	1,094,838	1,049,522	648,229	526,531	87	60	1800	3800	5B	1,699,344
	525	1,189,541	1,116,611	1,094,838	1,049,522	675,312	548,569	73	60	1800	3800	5B	1,699,344
	623	1,045,362	1,005,888	1,005,799	1,005,799	688,765	559,456	54	60	1800	3800	5B	1,699,344
	659	1,081,385	985,088	880,915	880,915	767,803	623,624	53	60	1800	3800	5B	1,699,344
	782	1,081,473	985,088	880,915	880,915	767,803	623,624	45	60	1800	3800	5B	1,699,344

317M R — 462 — 1,836,440 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R3	49.8	858,788	858,788	723,018	587,159	362,350	294,287	201	121	1500	2500	6K	3,478,345
	64.9	1,116,257	1,071,560	870,294	706,909	436,165	354,296	201	121	1500	2500	6K	3,478,345
	78.1	1,113,424	1,073,596	991,018	804,887	496,616	403,417	201	121	1500	2500	6K	3,478,345
	83.3	1,427,626	1,276,013	1,036,334	841,795	519,451	421,915	201	121	1500	2500	6K	3,478,345
	100	1,380,274	1,380,274	1,180,159	958,448	591,407	480,419	201	121	1500	2500	6G	3,478,345
	119	1,329,914	1,137,144	1,010,136	999,781	666,816	541,577	201	121	1500	2500	6E	3,478,345
	68.9	1,341,951	1,019,164	827,811	672,391	414,923	337,037	201	134	1500	2500	6K	3,478,345
	89.8	1,591,630	1,227,245	996,594	809,490	499,536	405,807	201	134	1500	2500	6K	3,478,345
	108	1,113,336	1,073,596	1,073,596	921,894	568,749	462,009	201	134	1500	2500	6G	3,478,345
	115	1,731,561	1,461,436	1,186,709	963,935	594,770	483,251	201	134	1500	2500	6G	3,478,345
	139	1,380,186	1,380,274	1,318,319	1,097,847	677,259	550,163	201	134	1500	2500	6E	3,478,345
	165	1,329,914	1,137,144	1,010,136	999,781	763,731	620,261	201	134	1500	2500	6C	3,478,345
R4	220	1,229,015	974,733	791,700	643,095	396,779	322,344	121	67	1800	3800	5G	3,478,345
	262	1,451,966	1,102,980	895,873	727,709	448,999	364,739	121	67	1800	3800	5G	3,478,345
	336	1,729,083	1,313,451	1,066,869	866,577	534,674	434,306	121	67	1800	3800	5G	3,478,345
	399	1,714,213	1,480,819	1,202,728	976,946	602,825	489,623	121	67	1800	3800	5E	3,478,345
	438	1,591,630	1,477,456	1,284,332	1,043,149	643,715	522,814	117	67	1800	3800	5C	3,478,345
	520	1,591,630	1,477,456	1,447,983	1,175,999	725,673	589,460	99	67	1800	3800	5B	3,478,345
	626	1,113,336	1,073,596	1,073,596	1,073,596	826,306	671,152	57	67	1800	3800	5B	3,478,345
	677	1,380,274	1,380,274	1,318,319	1,259,904	872,772	708,857	66	67	1800	3800	5B	3,478,345
	803	1,380,186	1,380,274	1,318,319	1,259,904	983,938	799,223	55	67	1800	3800	5B	3,478,345
	953	1,329,914	1,137,144	1,010,136	999,781	999,781	842,503	45	67	1800	3800	5B	3,478,345

318M R — 474 — 2,622,540 lb·in

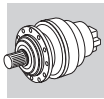
	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$	$n_2 \cdot h$						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	225	2,633,541	2,305,974	2,014,342	1,635,884	1,009,428	820,022	201	121	1500	2500	6E	4,425,375
	288	2,633,541	2,305,974	2,051,073	1,948,404	1,202,020	976,415	201	121	1500	2500	6E	4,425,375
	342	2,633,452	2,305,974	2,051,073	1,981,860	1,355,404	1,100,856	201	121	1500	2500	6C	4,425,375
	362	2,633,541	2,305,974	2,051,073	1,981,860	1,409,393	1,144,667	196	121	1500	2500	6C	4,425,375
	430	2,633,541	2,305,974	2,051,073	1,981,860	1,421,342	1,154,492	165	121	1500	2500	6B	4,425,375
	499	2,342,882	2,267,208	2,051,073	1,981,860	1,421,342	1,154,492	126	121	1500	2500	6B	4,425,375
	311	2,633,541	2,305,974	2,051,073	1,874,058	1,155,996	939,153	201	148	1500	2500	6C	4,425,375
	399	2,633,364	2,305,974	2,051,073	1,981,860	1,377,088	1,118,381	177	148	1500	2500	6B	4,425,375
	474	2,633,541	2,305,974	2,051,073	1,981,860	1,421,342	1,154,492	149	148	1500	2500	6B	4,425,375
	501	2,633,541	2,305,974	2,051,073	1,981,860	1,421,342	1,154,492	141	148	1500	2500	6B	4,425,375
	595	2,633,541	2,305,974	2,051,073	1,981,860	1,421,342	1,154,492	119	148	1500	2500	6B	4,425,375
	691	2,342,882	2,267,208	2,051,073	1,981,860	1,421,342	1,154,492	91	148	1500	2500	6B	4,425,375

319 R



486

4,170,380 lb·in



	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	249	3,507,464	2,663,899	2,163,831	1,757,582	1,084,571	881,004	201	127	1500	2500	6G	6,018,510
	320	4,170,385	3,172,197	2,576,630	2,092,937	1,291,501	1,049,079	201	127	1500	2500	6G	6,018,510
	379	3,921,148	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	201	127	1500	2500	6E	6,018,510
	401	4,170,296	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	201	127	1500	2500	6E	6,018,510
	475	3,153,080	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	179	127	1500	2500	6C	6,018,510
	563	3,153,345	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	151	127	1500	2500	6B	6,018,510
	655	2,977,481	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	122	127	1500	2500	6B	6,018,510
	345	4,017,621	3,050,499	2,477,944	2,012,749	1,242,026	1,009,074	201	154	1500	2500	6E	6,018,510
	442	4,170,119	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	201	154	1500	2500	6E	6,018,510
	525	3,921,148	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	201	154	1500	2500	6C	6,018,510
	555	4,170,385	3,397,803	2,759,929	2,241,718	1,383,195	1,123,514	201	154	1500	2500	6B	6,018,510
	657	3,153,080	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	129	154	1500	2500	6B	6,018,510
	780	3,153,345	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	109	154	1500	2500	6B	6,018,510
	906	2,977,481	2,706,648	2,411,210	2,205,961	1,361,157	1,105,547	88	154	1500	2500	6B	6,018,510

321 R



498

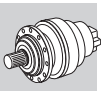
5,803,790 lb·in

	i	T_{n2} [lb·in]						P_1	Pt	n_1	n_{1max}		T_{2max}
		n_2·h	n_2·h	n_2·h	n_2·h	n_2·h	n_2·h						
	1:	10,000	25,000	50,000	100,000	500,000	1,000,000	[hp]	[hp]	[rpm]	[rpm]		[lb·in]
R4	221	3,310,181	2,489,716	2,003,810	1,609,066	983,584	799,400	201	141	1500	2000	6K	8,266,601
	288	3,960,711	3,010,140	2,376,426	1,918,843	1,184,142	962,431	201	141	1500	2000	6G	8,266,601
	347	4,481,135	3,337,618	2,717,180	2,193,216	1,348,323	1,096,608	201	141	1500	2000	6G	8,266,601
	370	4,677,621	3,558,887	2,812,768	2,338,368	1,410,190	1,146,172	201	141	1500	2000	6G	8,266,601
	446	5,198,134	3,942,301	3,243,800	2,601,855	1,605,792	1,305,132	201	141	1500	2000	6G	8,266,601
	529	4,747,100	4,452,281	3,630,578	2,933,404	1,810,421	1,471,526	201	141	1500	2000	6E	8,266,601
	306	3,552,160	2,696,469	2,190,384	1,779,266	1,097,936	892,067	201	168	1500	2000	6G	8,266,601
	399	4,276,505	3,246,190	2,636,904	2,142,059	1,321,860	1,074,039	201	168	1500	2000	6G	8,266,601
	481	4,869,417	3,696,073	3,002,440	2,438,913	1,505,070	1,222,908	178	168	1500	2000	6C	8,266,601
	512	5,092,810	3,865,654	3,140,158	2,550,786	1,574,106	1,279,022	168	168	1500	2000	6C	8,266,601
	617	5,799,011	4,401,389	3,575,349	2,904,374	1,792,277	1,456,302	160	168	1500	2000	6C	8,266,601
	732	4,747,188	4,578,404	3,718,820	3,020,672	1,863,791	1,513,921	151	168	1500	2000	6B	8,266,601

C

26 DIMENSIONS

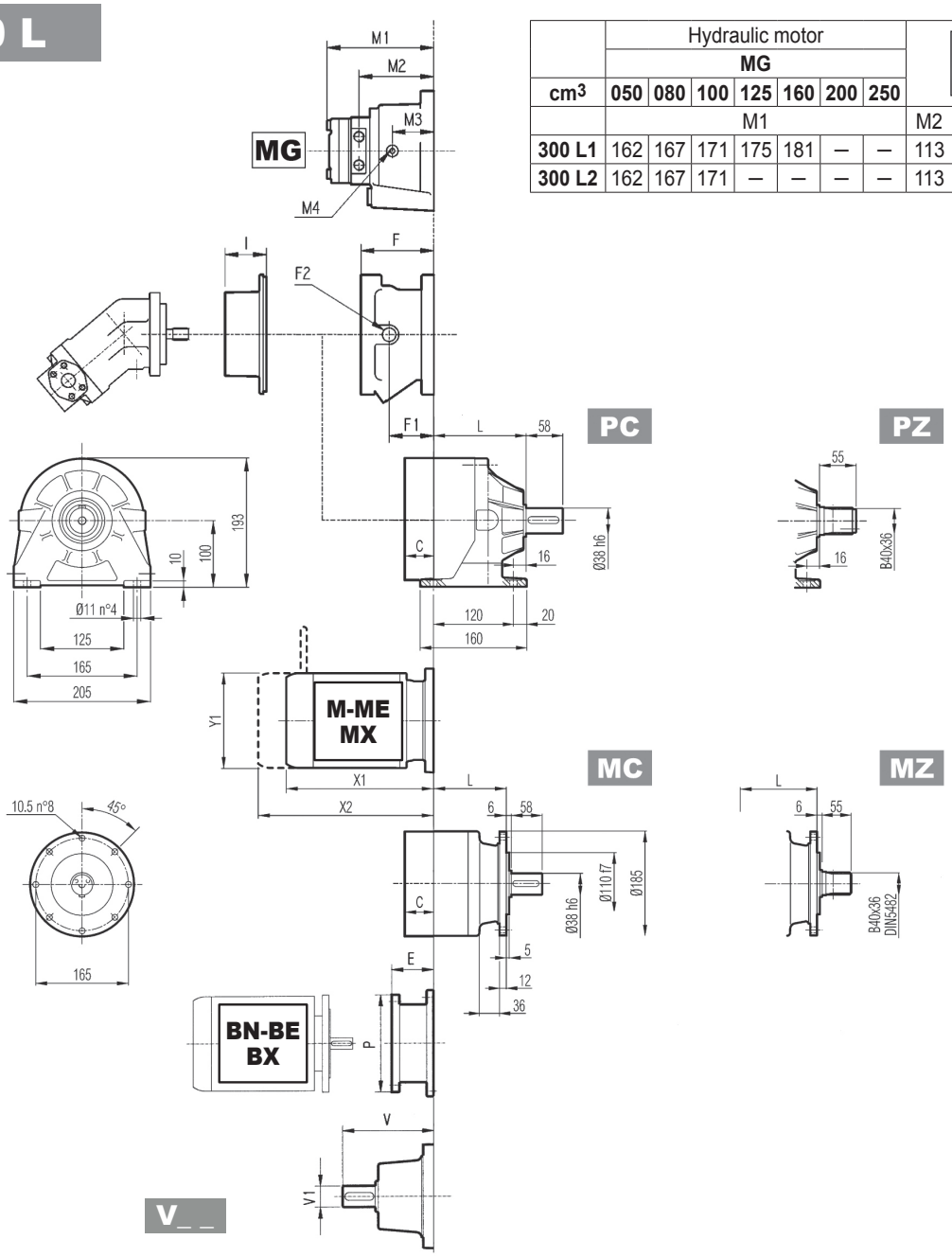
Metric output versions are available also in combination with NEMA motor adaptor or inches solid input and viceversa.



Metric

300 L

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
300 L1	162	167	171	175	181	—	—	113	60	1/4G	14
300 L2	162	167	171	—	—	—	—	113	60	1/4G	14

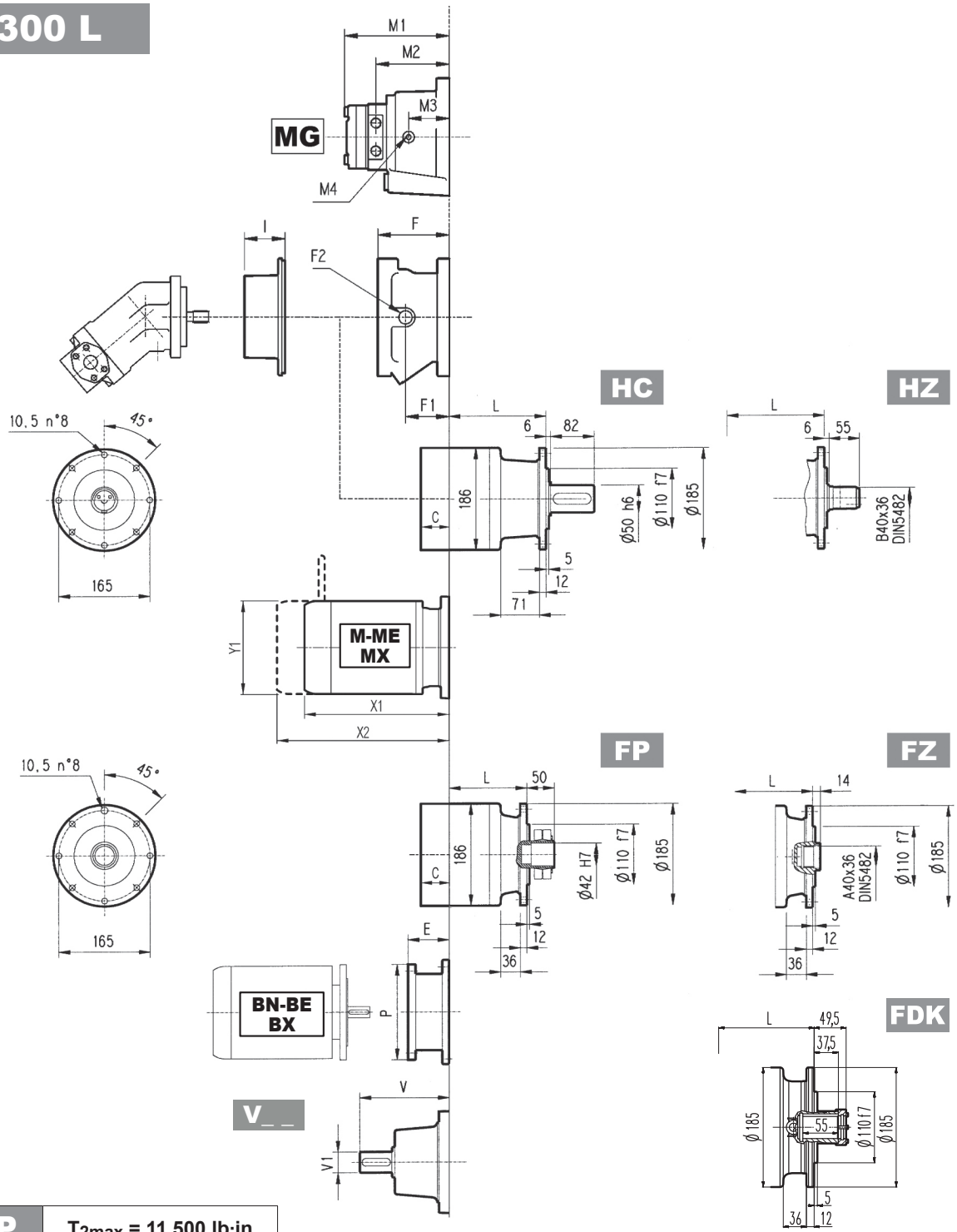


Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
300 L1	80	86	115	80	18	23	20	16
300 L2	133	139	168	133	22	27	24	20
300 L3	186	192	221	186	26	31	28	24
300 L4	239	245	274	239	30	35	32	28

	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
300 L1	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
300 L2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
300 L3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
300 L4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

300 L



FP — T_{2max} = 11,500 lb·in

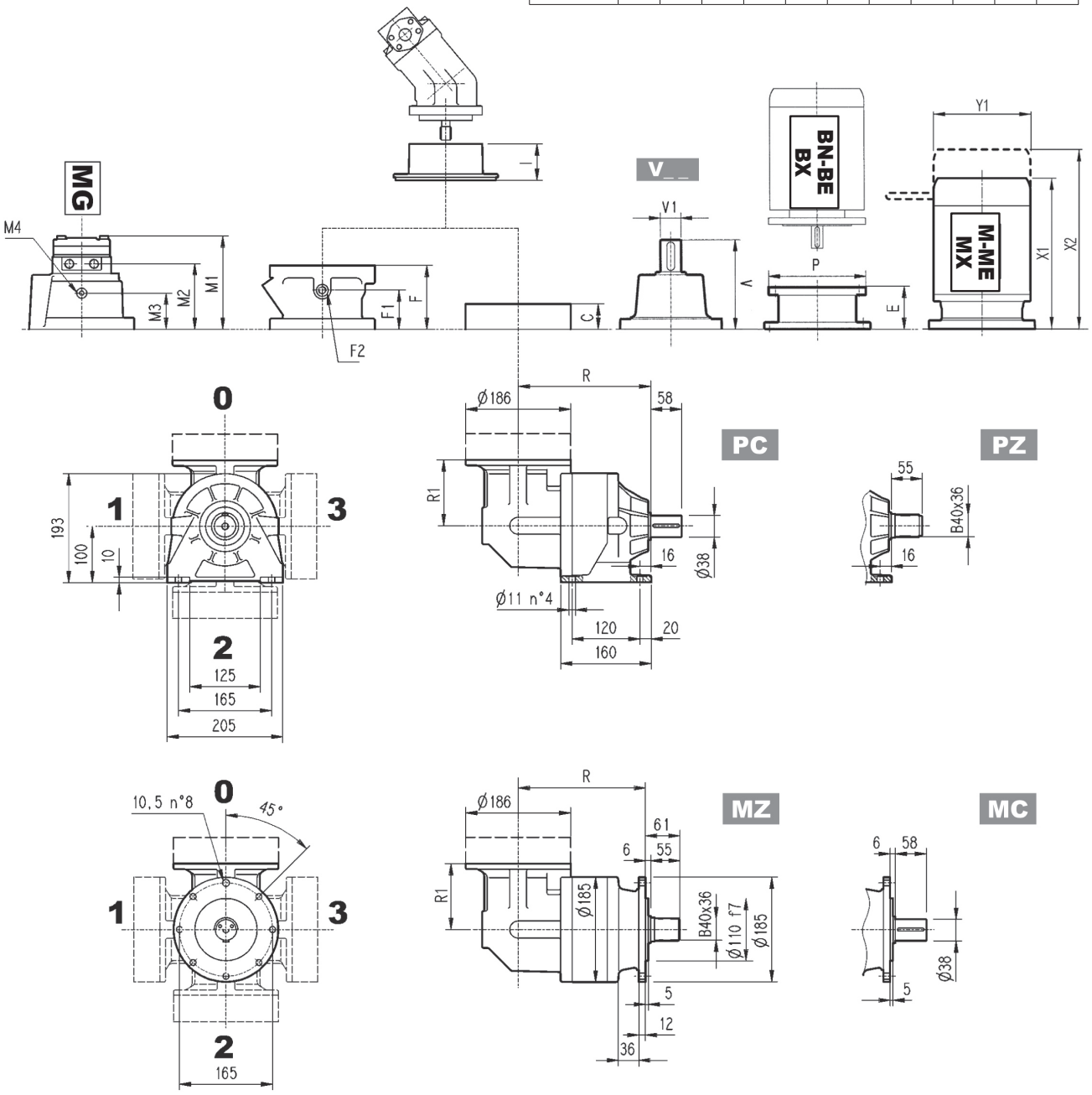
Dimensions are in mm

	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
300 L1	65	160	84	200	84	200	94	250	94	250	114	300
300 L2	65	160	84	200	84	200	94	250	94	250	114	300
300 L3	65	160	84	200	84	200	94	250	94	250	114	300
300 L4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
300 L1	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
300 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
300 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
300 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258

300 R

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
300 R2	162	167	171	–	–	–	–	113	60	1/4G	14

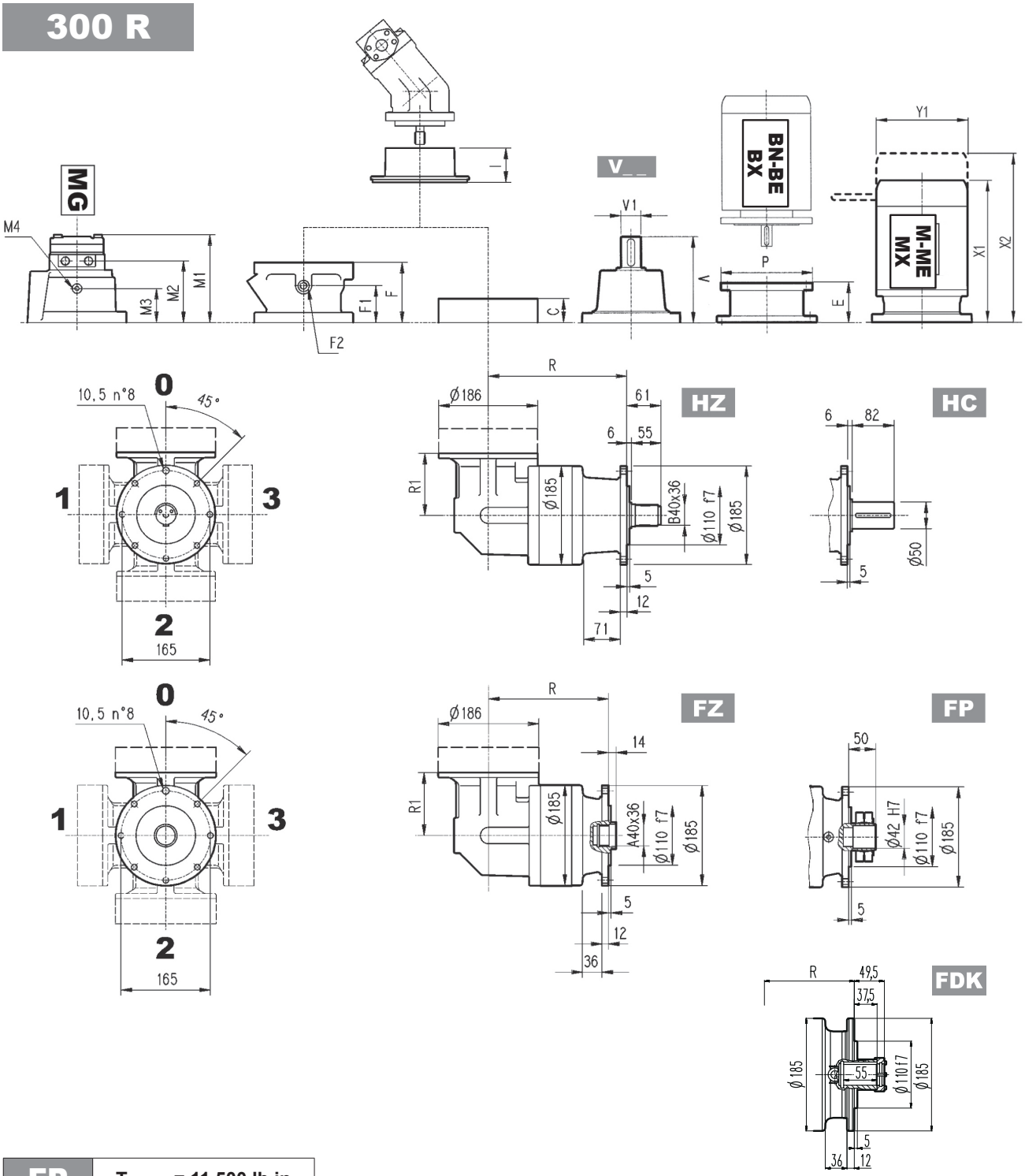


Dimensions are in mm

	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
300 R2	172	178	207	172	122	32	37	34	30
300 R3	225	231	260	225	122	36	41	38	34
300 R4	278	284	313	278	122	40	45	42	38

	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
300 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
300 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
300 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

300 R



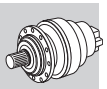
FP T_{2max} = 11,500 lb·in

Dimensions are in mm

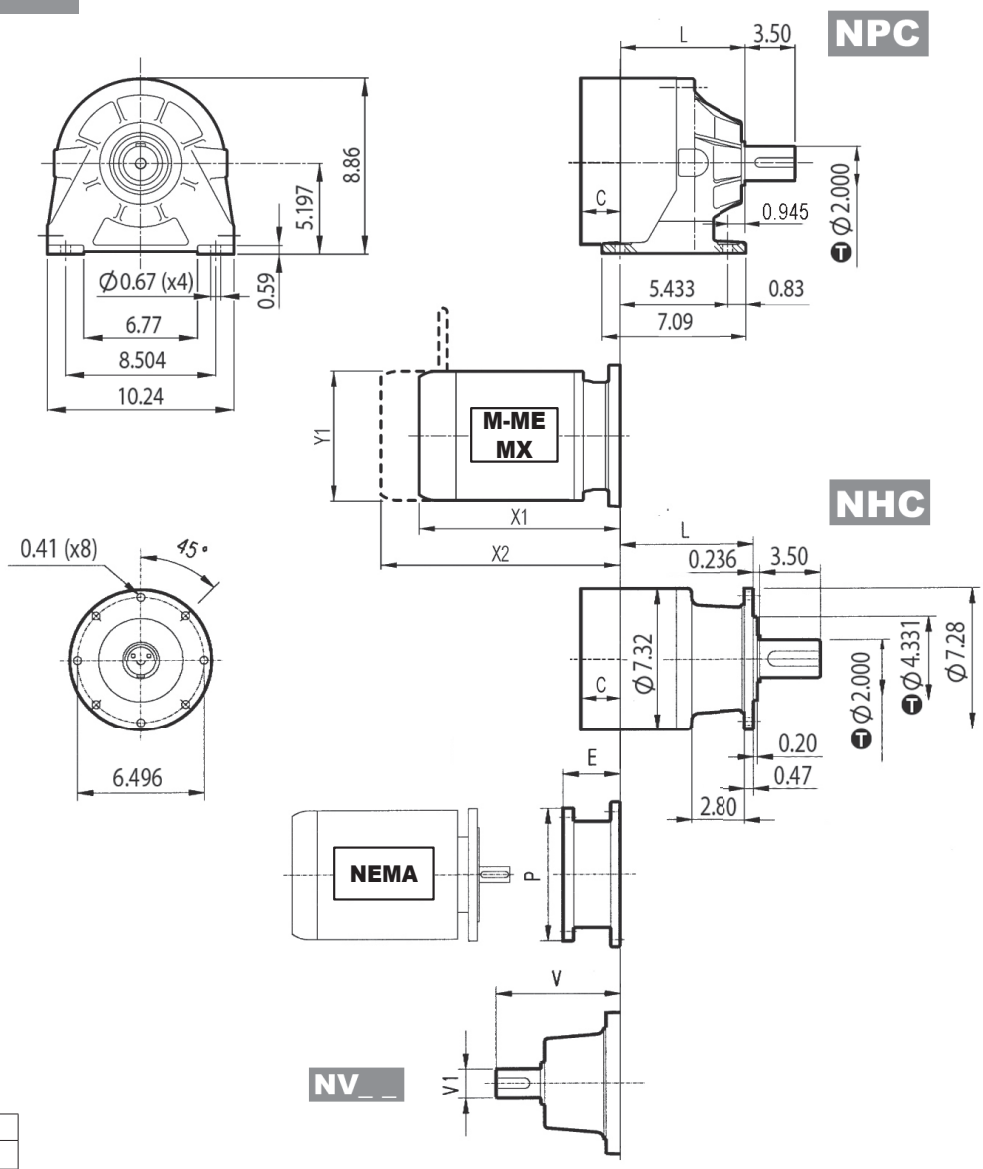
	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
300 R2	65	160	84	200	84	200	94	250	94	250	114	300
300 R3	65	160	84	200	84	200	94	250	94	250	114	300
300 R4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
300 R2	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
300 R3	253	314	138	328	—	156	373	—	195	405	—	195	–	–	–
300 R4	253	314	138	328	—	156	373	—	195	–	–	–	–	–	–

300 L



Imperial



inch	Ⓣ
4.331	-0.00142 -0.00280
2.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

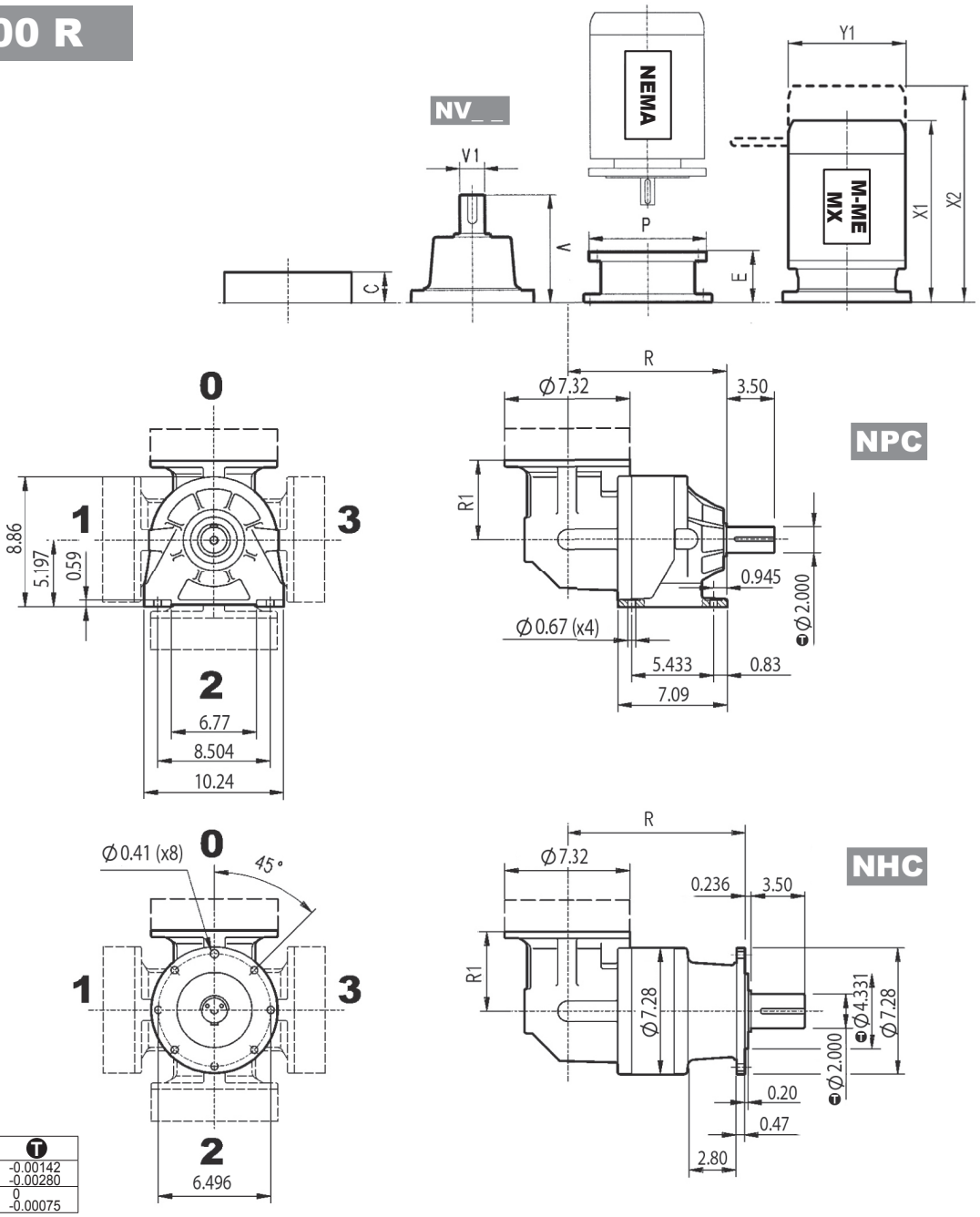
	L		lbs	
	NPC	NHC	NPC	NHC
300 L1	4.77	4.53	50.7	44.1
300 L2	6.85	6.61	59.5	52.9
300 L3	8.94	8.70	68.4	61.7
300 L4	11.03	10.79	77.2	70.6

	V	V1	lbs	V	V1	lbs	C	Input
300 L1	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
300 L2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
300 L3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
300 L4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
300 L1	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
300 L2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
300 L3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
300 L4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
300 L1	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.67	14.06	—	7.67	18.11	—	10.15
300 L2	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.67	14.06	—	7.67	18.11	—	10.15
300 L3	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.67	14.06	—	7.67	18.11	—	10.15
300 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.67	14.06	—	7.67	18.11	—	10.15

300 R



inch	Ⓣ
4.331	-0.00142 -0.00280
2.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

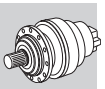
	R		R1	lbs	
	NPC	NHC		NPC	NHC
300 R2	7.00	8.15	4.80	81.6	75.0
300 R3	9.09	10.24	4.80	90.4	83.8
300 R4	11.18	12.32	4.80	99.2	92.6

	V	V1	lbs	V	V1	lbs	C	Input
300 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
300 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
300 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

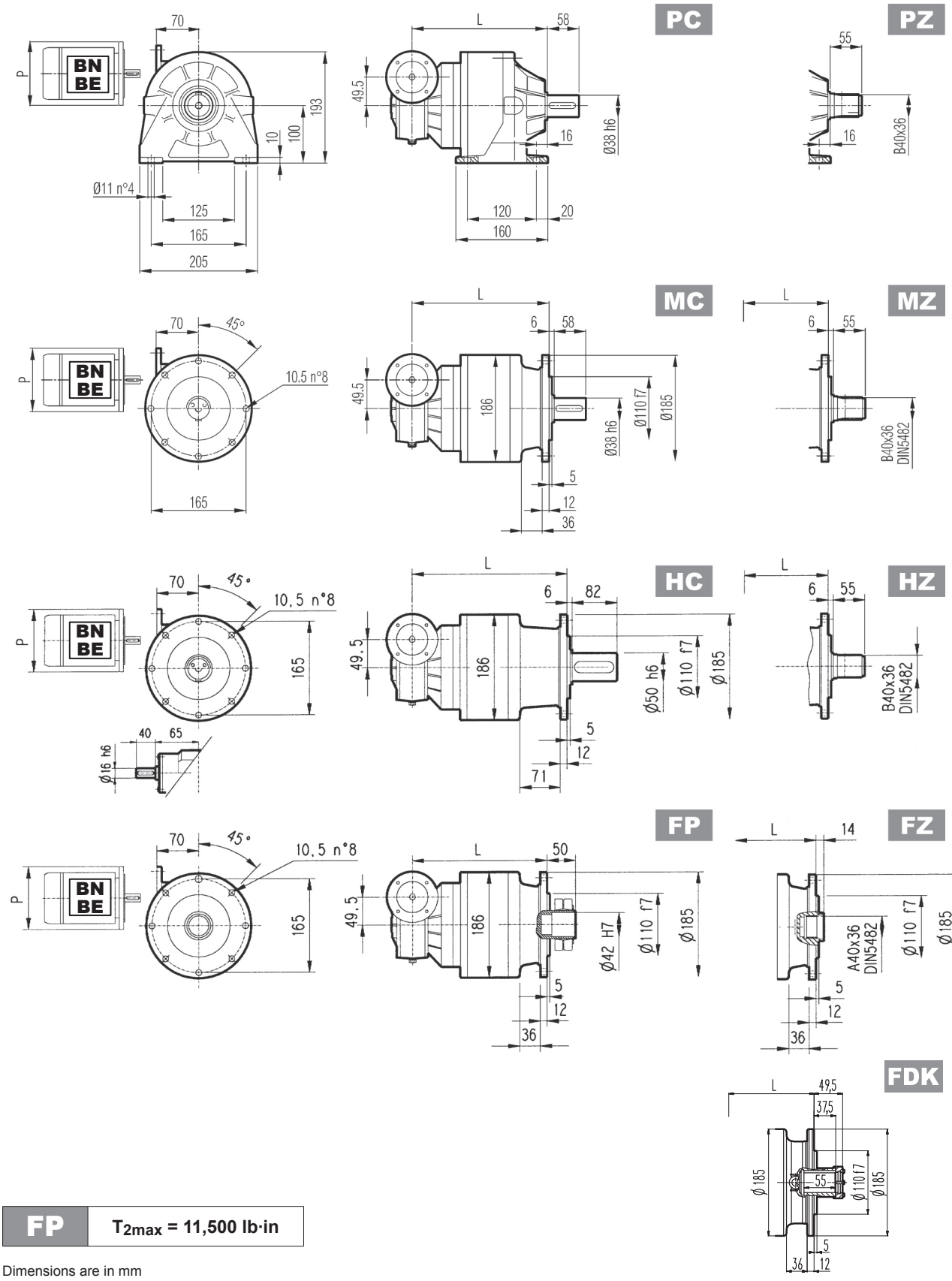
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
300 R2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
300 R3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
300 R4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
300 R2	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	15.94	—	7.67	20	—	10.15
300 R3	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	15.94	—	7.67	—	—	—
300 R4	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	—	—	—	—	—	—

3/V 00 L3



Metric



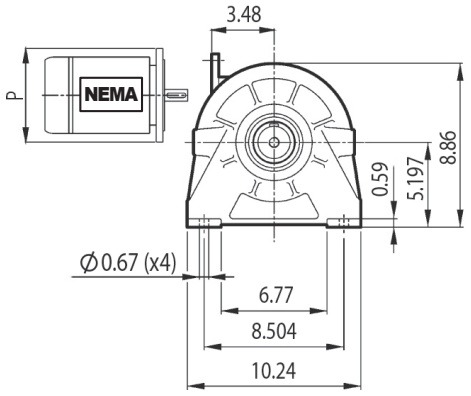
FP T_{2max} = 11,500 lb·in

Dimensions are in mm

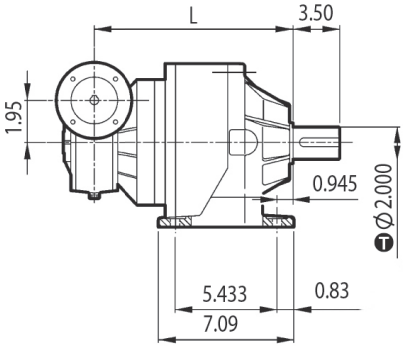
	L				Kg				P63	P71	P80
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P
3/V 00 L3	255	261	290	255	25	30	27	23	140	160	200

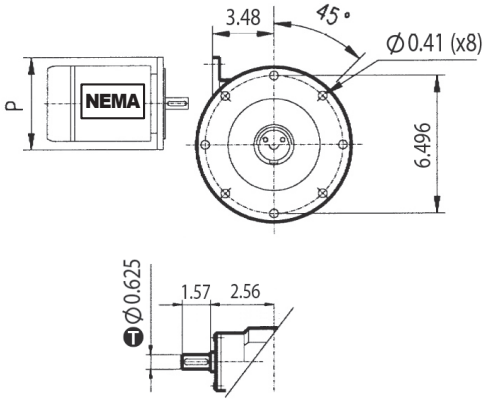
Bonfiglioli Riduttori

3/V 00 L3

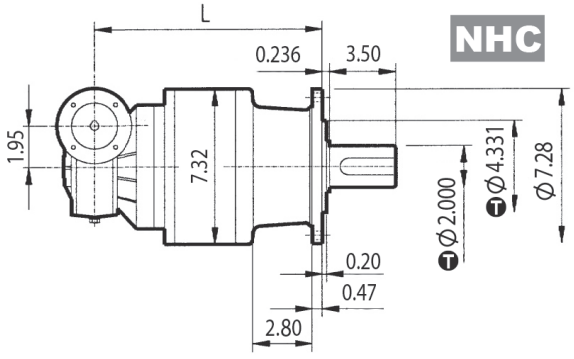


NPC





NHC

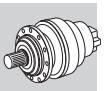


inch	T
4.331	-0.00142 -0.00280
2.000	0 -0.00075
0.625	0 -0.00043

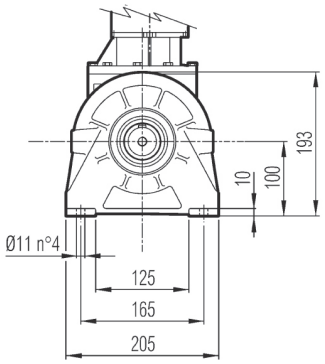
Dimensions are in Inch except when shown in *italic [mm]*

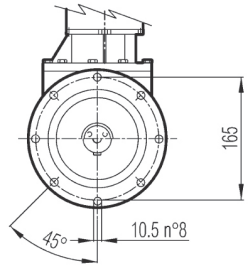
	L		lbs		N56C
	NPC - PZ	NHC - HZ	NPC	NHC	P
3/V 00 L3	10.27	11.42	66.2	59.5	6.54

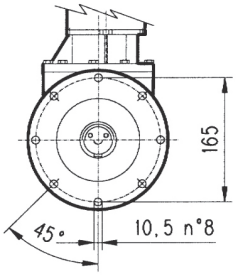
3/A 00 L2

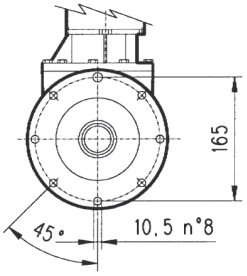


Metric

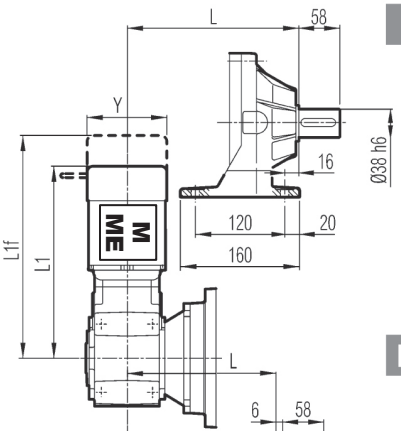




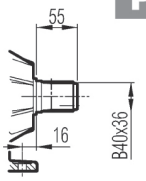




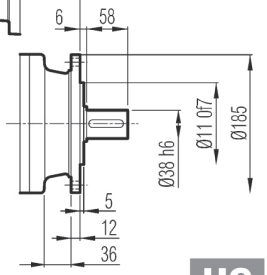
PC



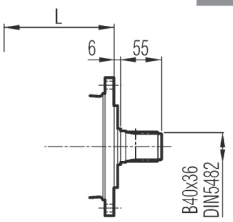
PZ



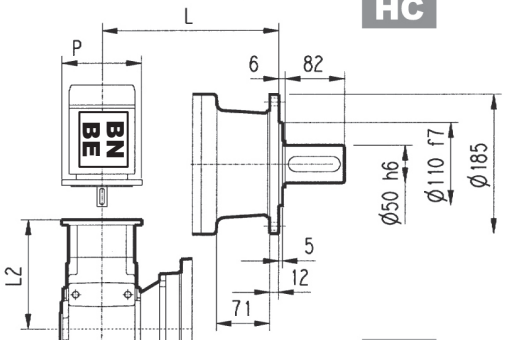
MC



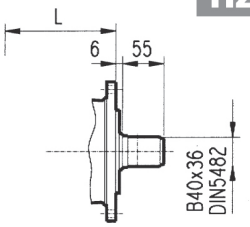
MZ



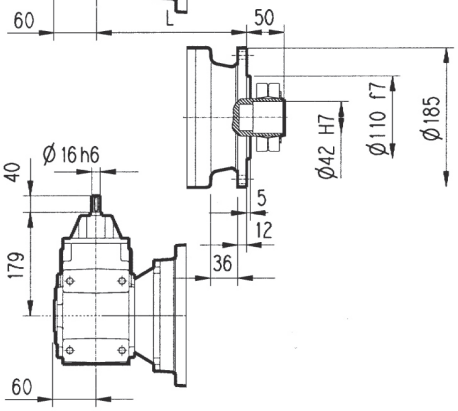
HC



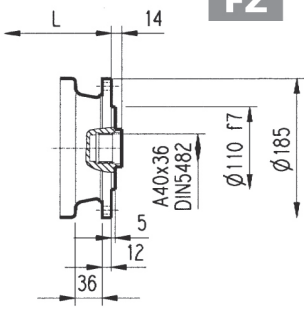
HZ



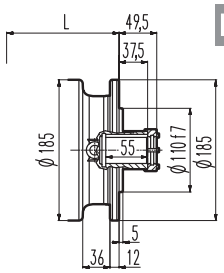
FP



FZ



FDK



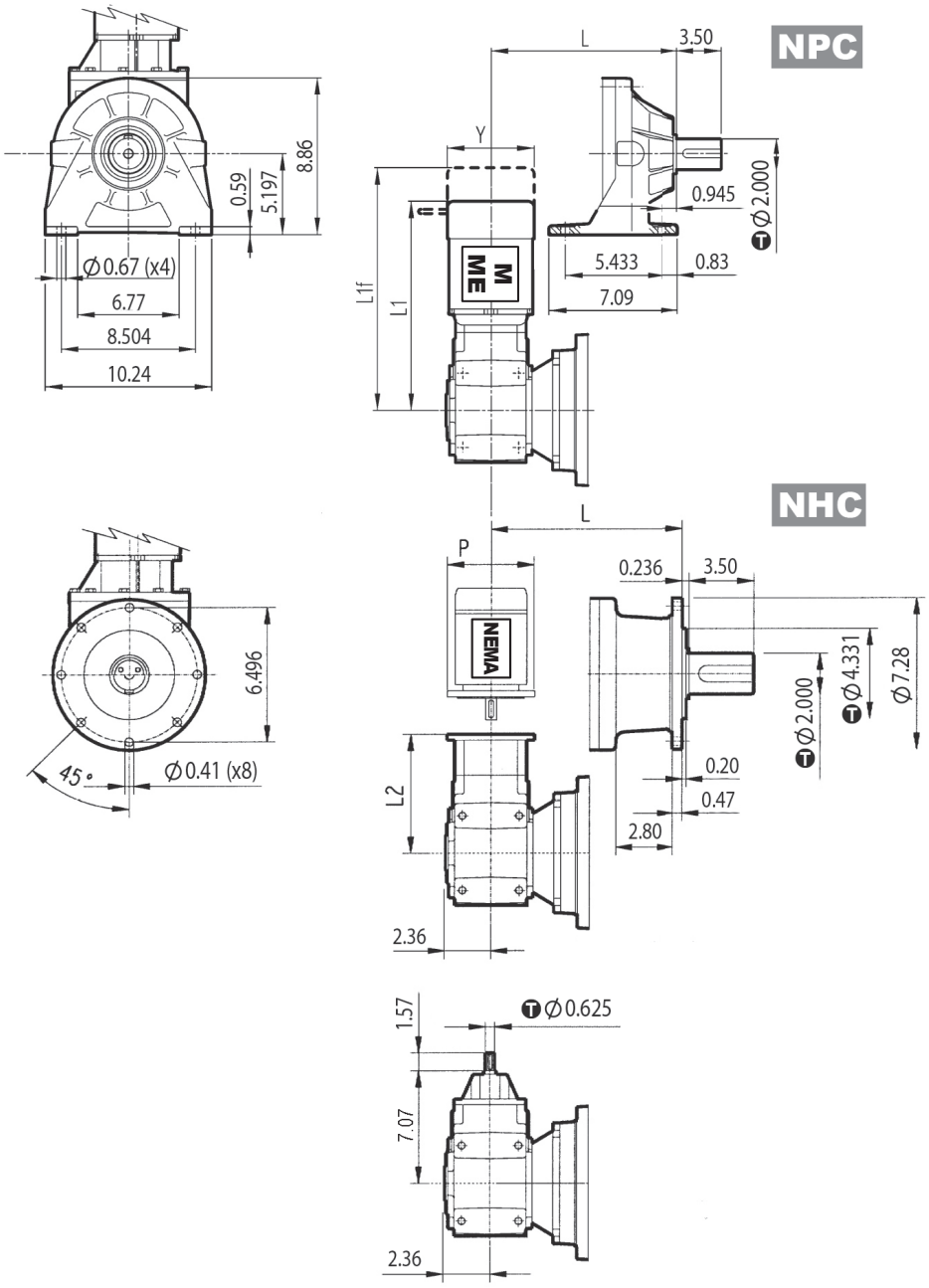
FP T_{2max} = 11,500 lb·in

Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 00 L2	193	199	228	193	38	43	40	36

	P63		P71		P80		P90		P100		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 00 L2	212.5	140	212.5	160	232	200	232	200	242	250	368	428	138	394	—	156	439	—	195	470	—	195

3/A 00 L2

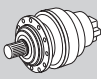


inch	Ⓣ
4.331	-0.00142 -0.00280
2.000	0 -0.00075
0.625	0 -0.00043

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs	
	NPC	NHC	NPC	NHC
3/A 00 L2	7.83	8.98	94.8	88.2

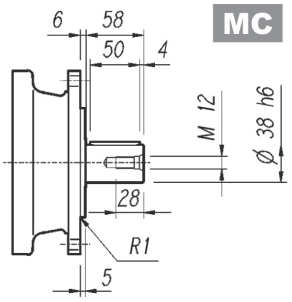
	N56C		N140TC		N180TC		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 00 L2	9.15	6.50	9.15	6.50	9.90	9.00	14.49	16.85	5.43	15.51	—	6.14	17.28	—	7.68	18.50	—	7.68



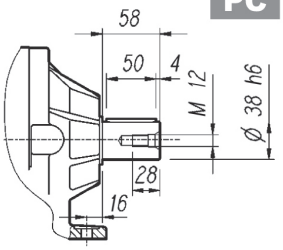
Metric

Imperial

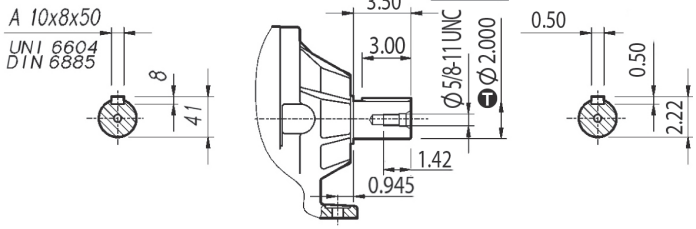
MC



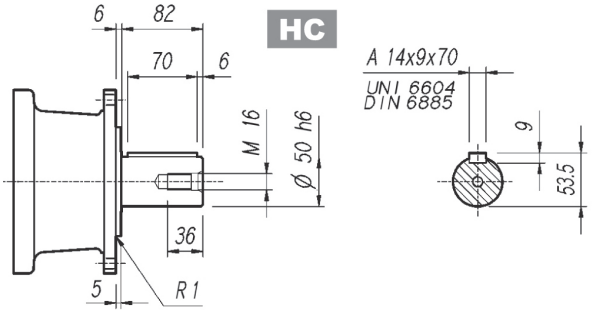
PC



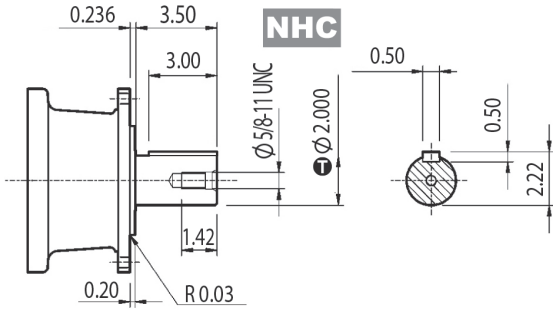
NPC



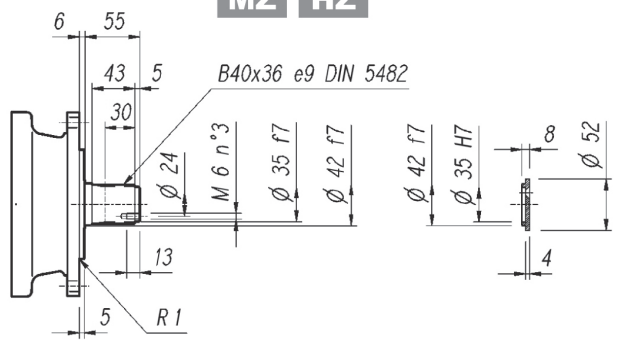
HC



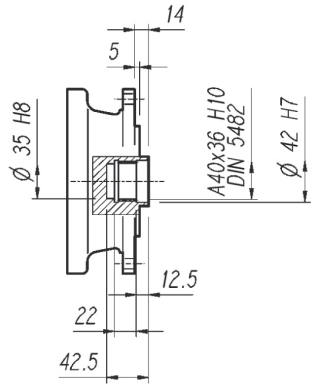
NHC



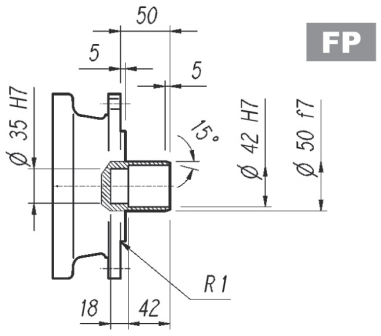
MZ **HZ**

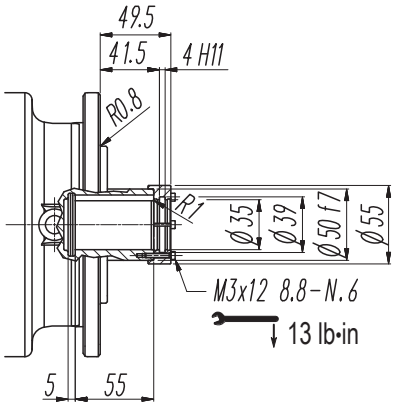


FZ

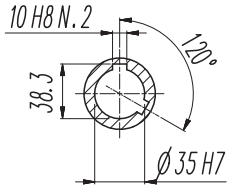


FP





FDK



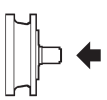
FP | T_{2max} = 11,500 lb·in

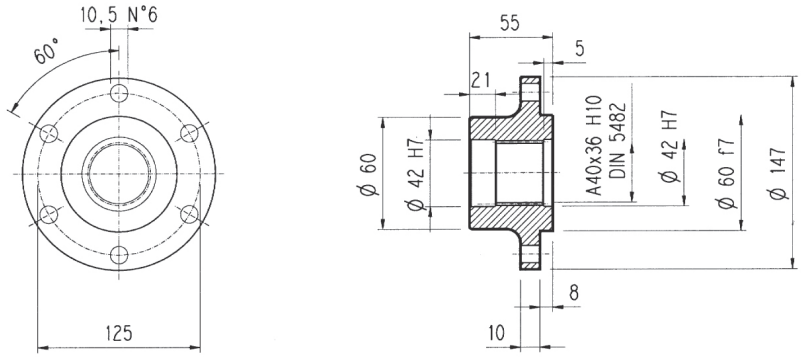
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

inch	T
2.000	0 -0.00075

Flange

W0A



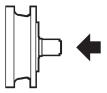


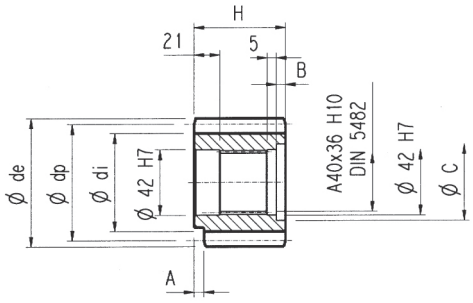
Material: Steel C40

Dimensions are in mm

Pinions

P...





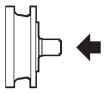
Dimensions are in mm

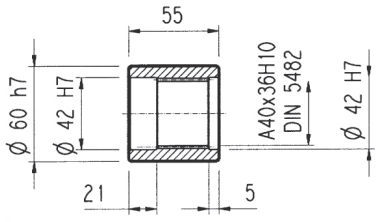
$\alpha = 20°$

	m	z	x	dp	di	de	H	A	B	C	Material
PBE	4.5	14	0.507	63	56	75.5	55	—	—	—	Steel 39NiCrMo3 hardened and tempered
PCE	5	14	0.500	70	62.5	84.8	65	—	10	53	
PDC	6	12	0.250	72	61	84.8	59	14	4	54	
PDE	6	14	0.500	84	73	99.6	65	—	10	54	

Sleeve coupling

M0A





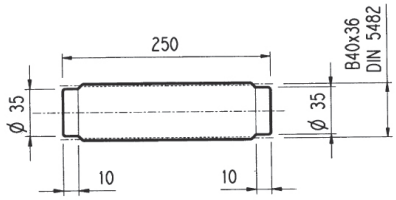
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

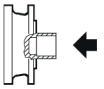


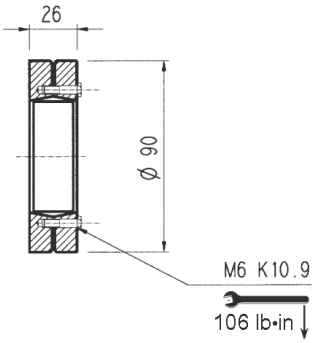


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

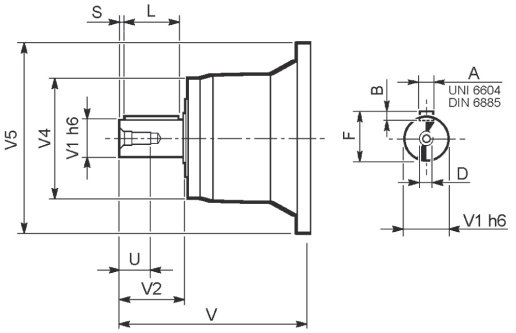




Dimensions are in mm

300 L 300 R



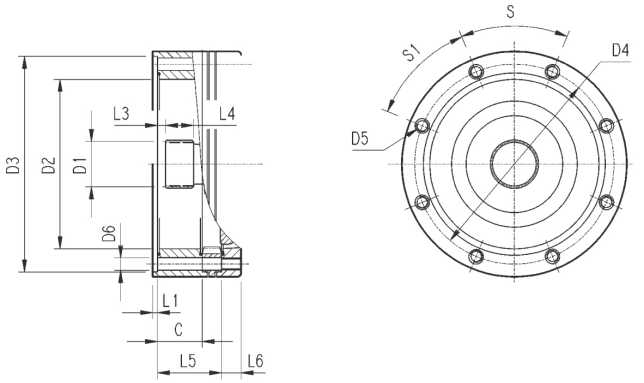


Dimensions are in mm

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
300 L1	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
300 L2	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
300 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
300 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
300 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

300 L 300 R

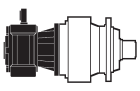


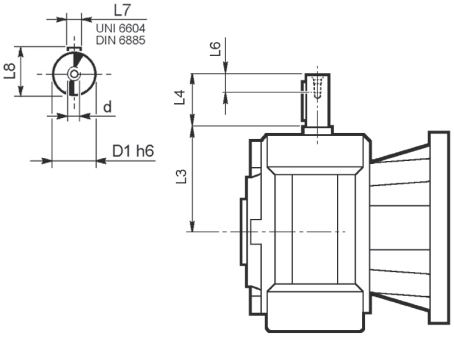


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
300 L1	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	53	18	45°	45°	A
300 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	106	18	45°	45°	A
300 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	159	18	45°	45°	A
300 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	212	18	45°	45°	A
300 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 00 L3

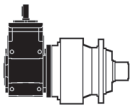


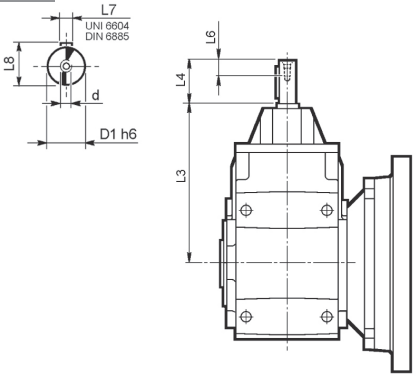


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 00 L3_HS	16	65	40	16	5	18	M6

3/A 00 L2



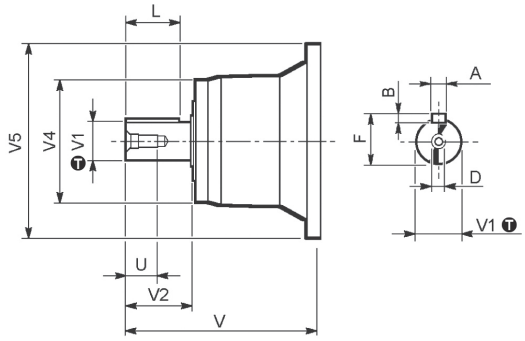


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/A 00 L2_HS	16	179	40	16	5	18	M6

300 L 300 R





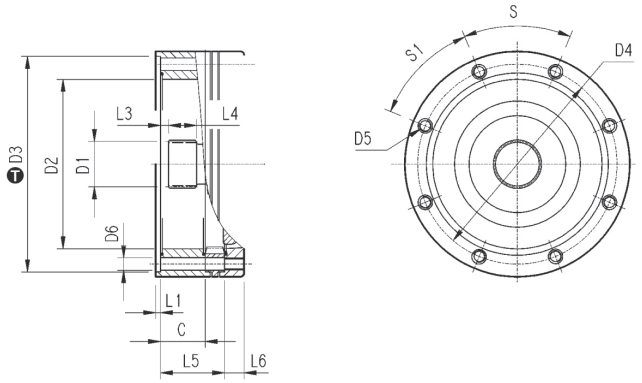
inch	T
1.125	0 -0.00051
1.625	0 -0.00053

Dimensions are in Inch except when shown in *italic [mm]*

		V	V1	V2	V4	V5	A	B	F	L	D	U
300 L1	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
300 L2	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
300 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
300 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
300 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

300 L 300 R



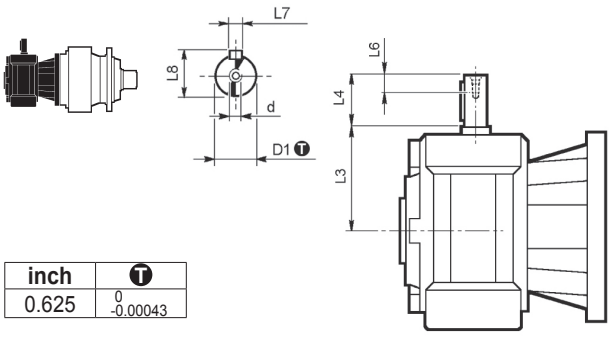


inch	T
7.01	+0.00157 0

Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
300 L1	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	5.51	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.09	0.71	45°	45°	A
300 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	5.51	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.17	0.71	45°	45°	A
300 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	5.51	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.26	0.71	45°	45°	A
300 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	5.51	*M10 n°8*	0.43	0.16	—	0.35	0.71	8.35	0.71	45°	45°	A
300 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	5.51	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 00 L3

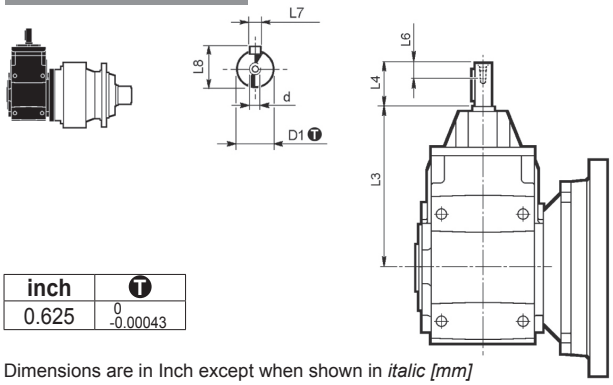


inch	T
0.625	0 -0.00043

Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 00 L3_NHS	0.625	2.57	1.575	0.63	0.188	0.705	1/4-20UNC

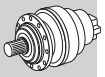
3/A 00 L2



inch	T
0.625	0 -0.00043

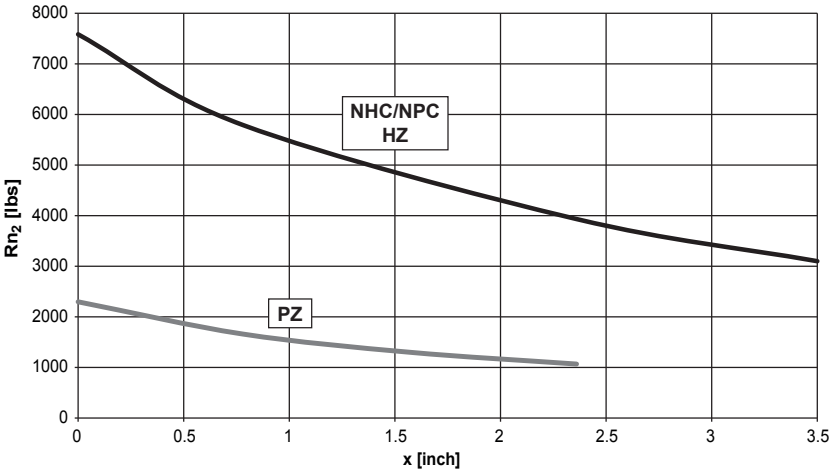
Dimensions are in Inch except when shown in *italic [mm]*

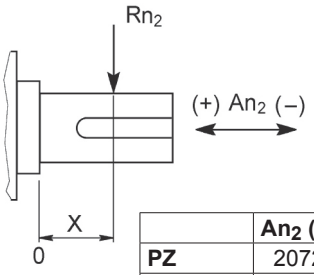
	D1	L3	L4	L6	L7	L8	d
3/A 00 L2_NHS	0.625	7.07	1.575	0.63	0.188	0.705	1/4-20UNC



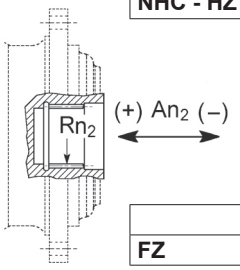
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





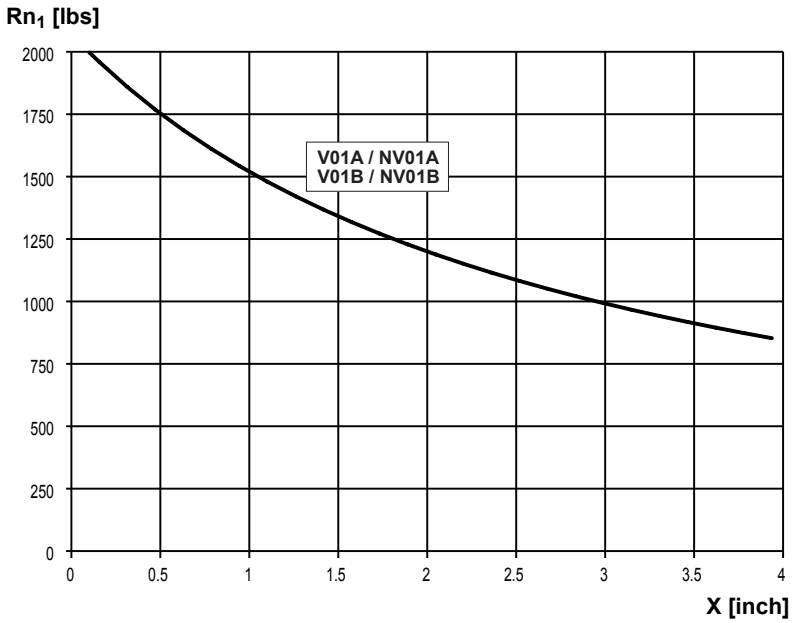
	An2 (+)	An2 (-)
PZ	2072	1554
NPC NHC - HZ	4504	4504

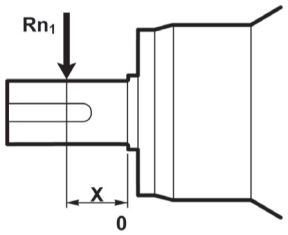


	Rn2	An2 (+/-)
FZ	836	836

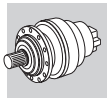
	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
Load corrective factor fh_2 on shafts	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		PZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ	**1.27**	**1.27**	**1.26**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





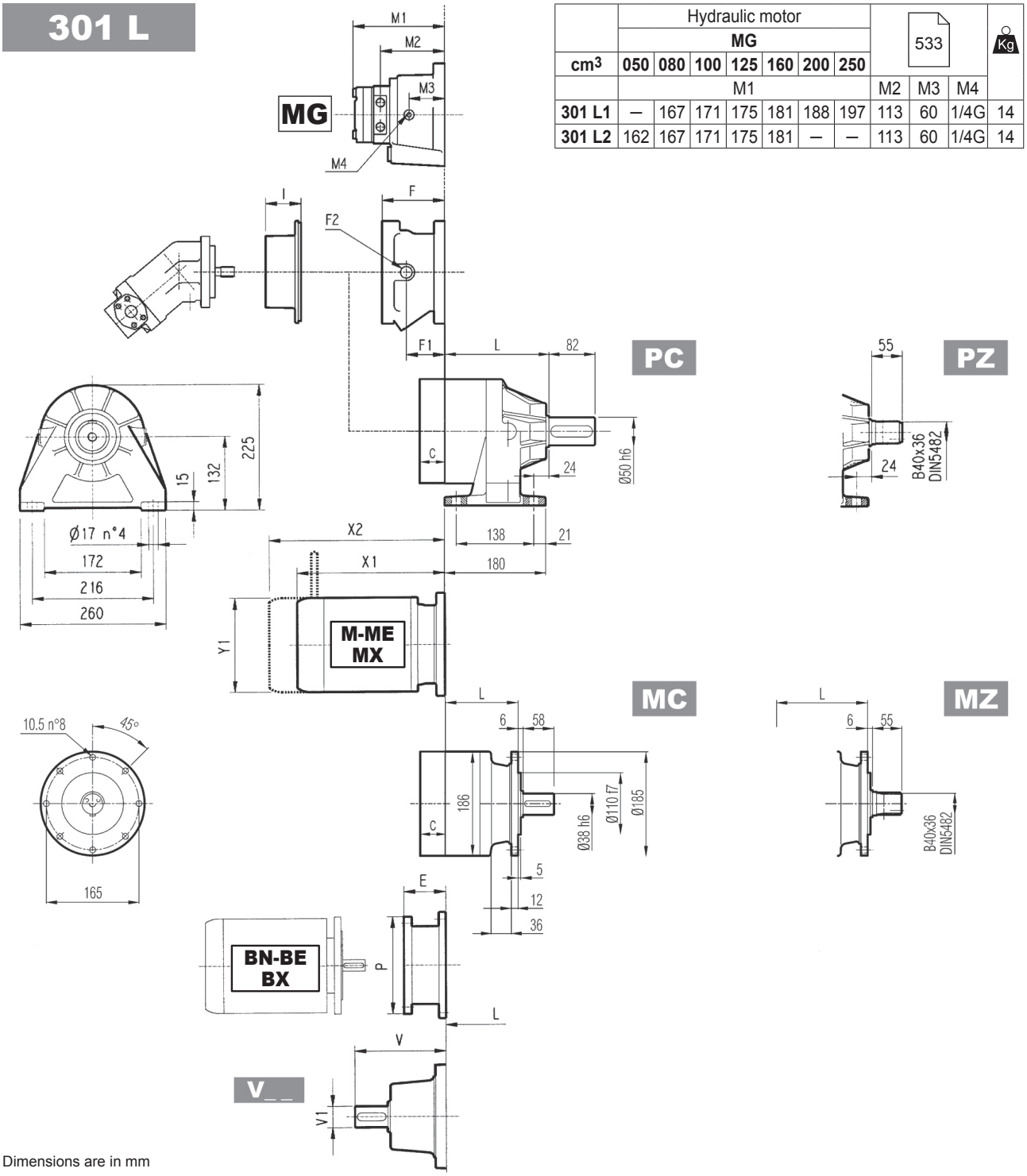
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



301 L

Metric

	Hydraulic motor							533			Kg
	MG										
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
301 L1	–	167	171	175	181	188	197	113	60	1/4G	14
301 L2	162	167	171	175	181	–	–	113	60	1/4G	14

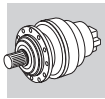


Dimensions are in mm

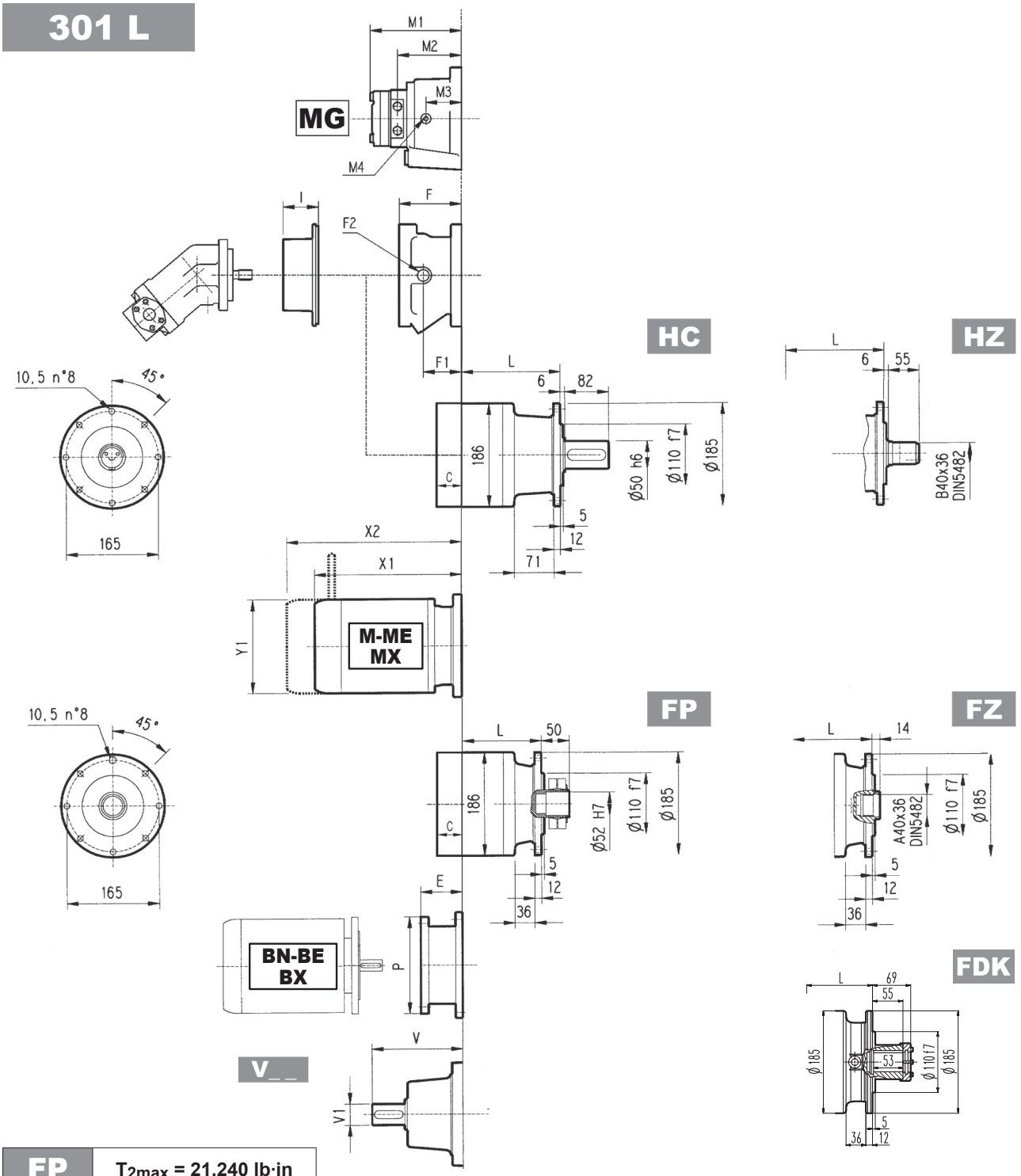
	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
301 L1	92	132	126	92	21	26	23	19
301 L2	145	185	176	145	25	30	27	23
301 L3	198	238	232	198	29	34	31	27
301 L4	251	291	285	251	33	38	35	31

	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
301 L1	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10
301 L2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
301 L3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
301 L4	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10

301 L



Metric



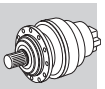
FP T_{2max} = 21,240 lb·in

Dimensions are in mm

	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
301 L1	65	160	84	200	84	200	94	250	94	250	114	300
301 L2	65	160	84	200	84	200	94	250	94	250	114	300
301 L3	65	160	84	200	84	200	94	250	94	250	114	300
301 L4	65	160	84	200	84	200	94	250	94	250	114	300

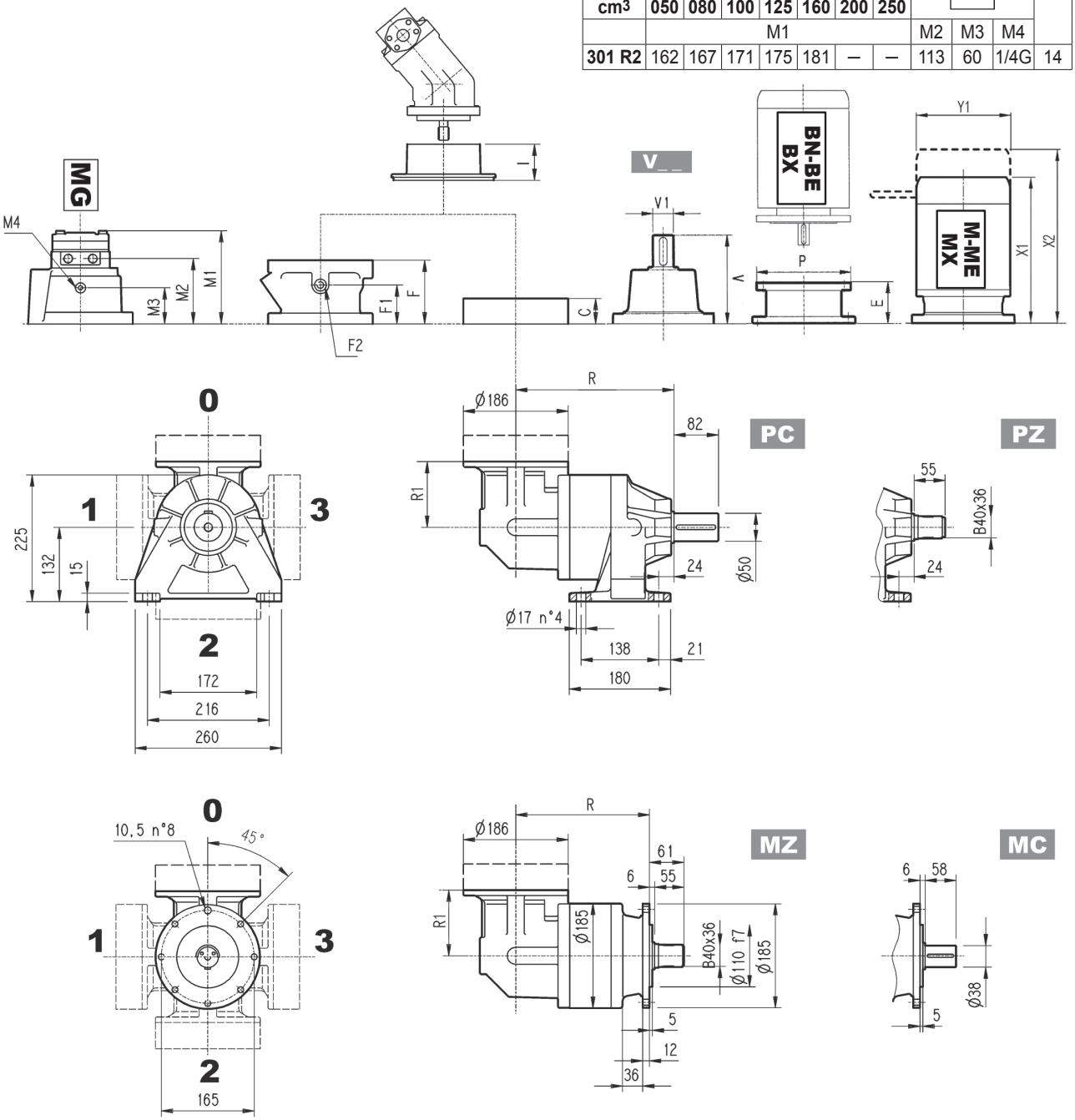
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
301 L1	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
301 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
301 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258
301 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258

301 R



Metric

	Hydraulic motor							533			Kg
	MG										
cm3	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
301 R2	162	167	171	175	181	–	–	113	60	1/4G	14



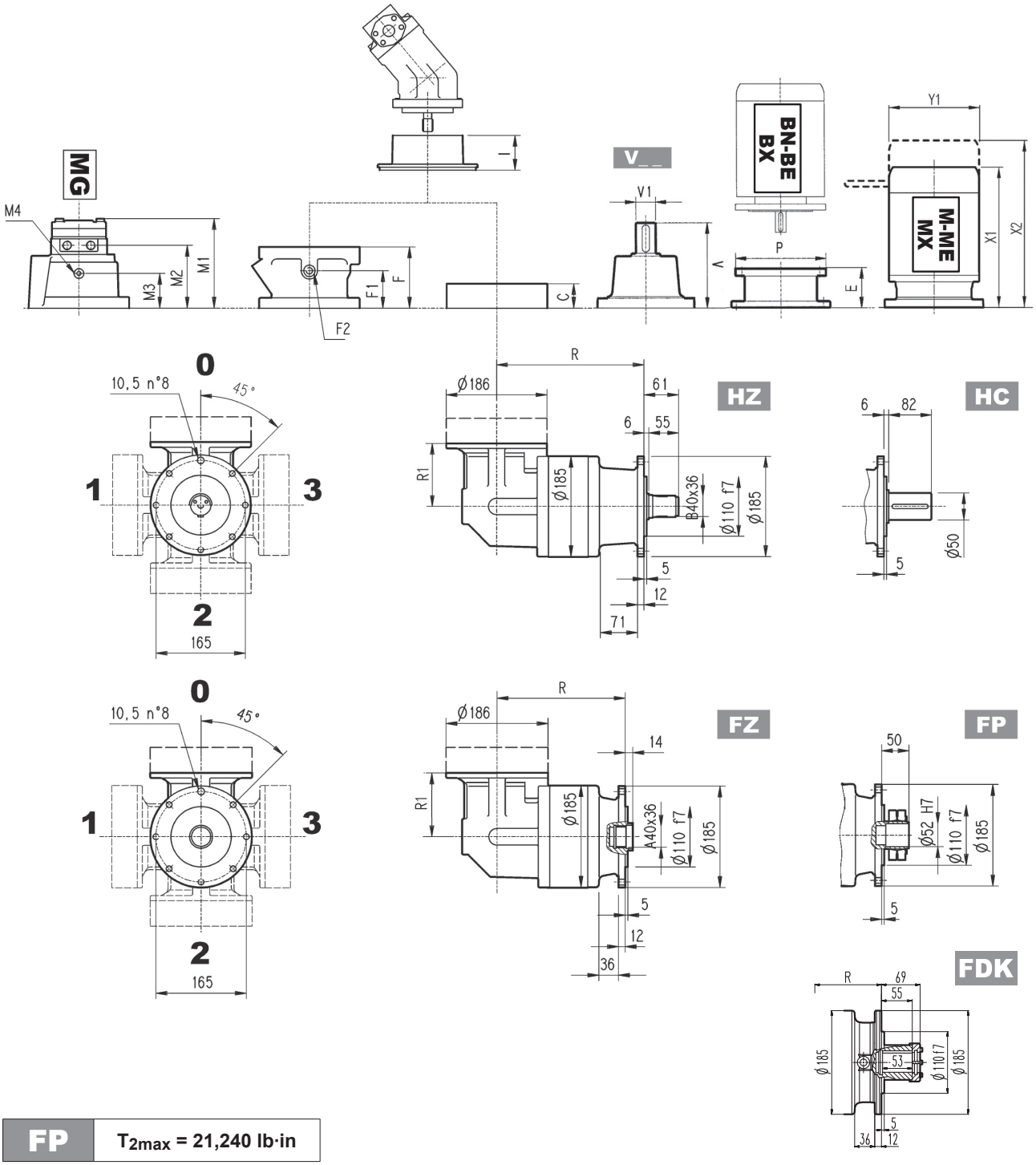
Dimensions are in mm

	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
301 R2	184	225	219	184	122	35	42	37	33
301 R3	237	278	272	237	122	39	46	41	37
301 R4	290	331	325	290	122	43	50	45	41

	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
301 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
301 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
301 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

Bonfiglioli Riduttori

301 R



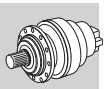
FP T_{2max} = 21,240 lb·in

Dimensions are in mm

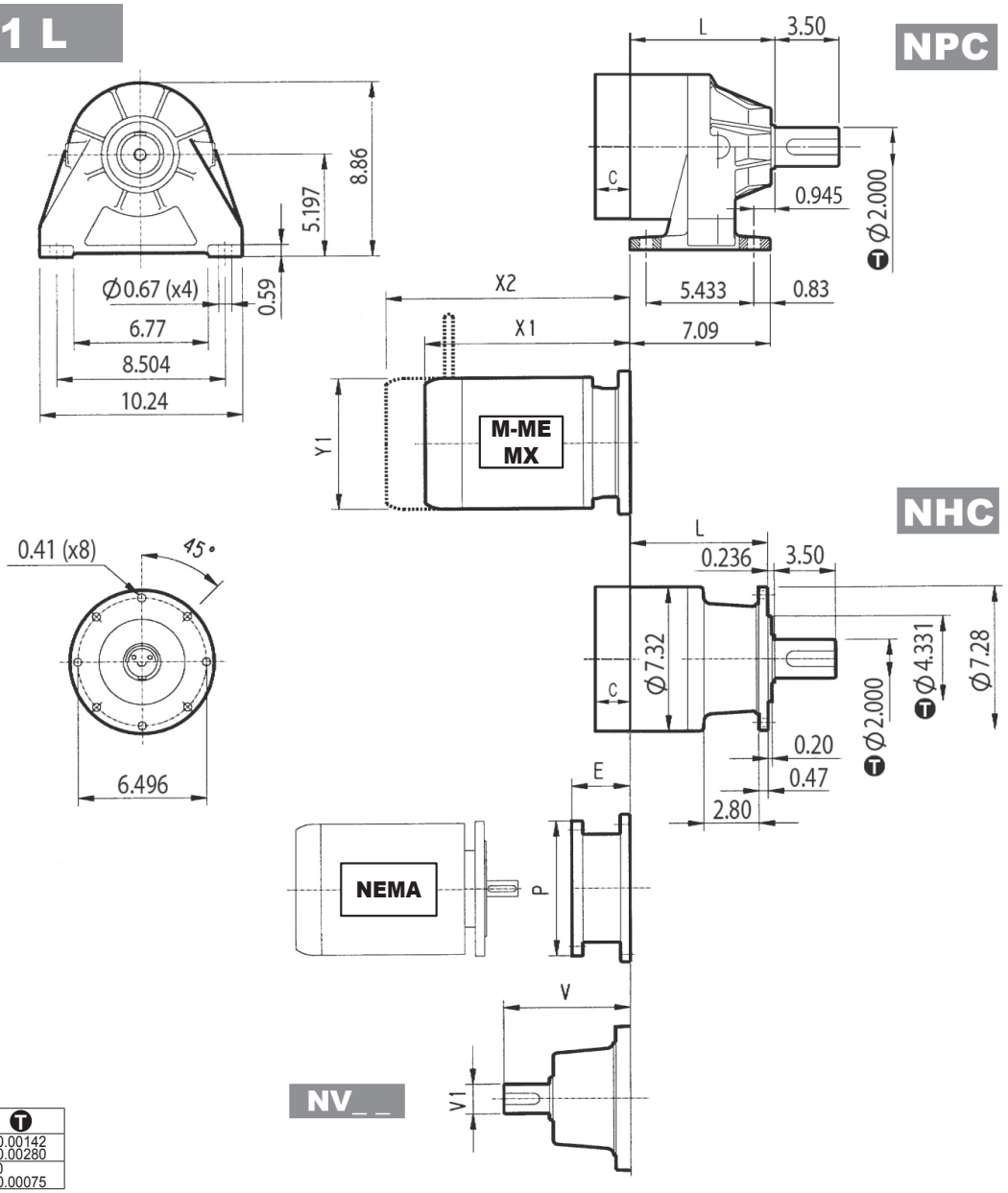
	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
301 R2	65	160	84	200	84	200	94	250	94	250	114	300
301 R3	65	160	84	200	84	200	94	250	94	250	114	300
301 R4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
301 R2	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
301 R3	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—
301 R4	253	314	138	328	—	156	373	—	195	—	—	—	—	—	—

301 L



Imperial



inch	T
4.331	-0.00142 -0.00280
2.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

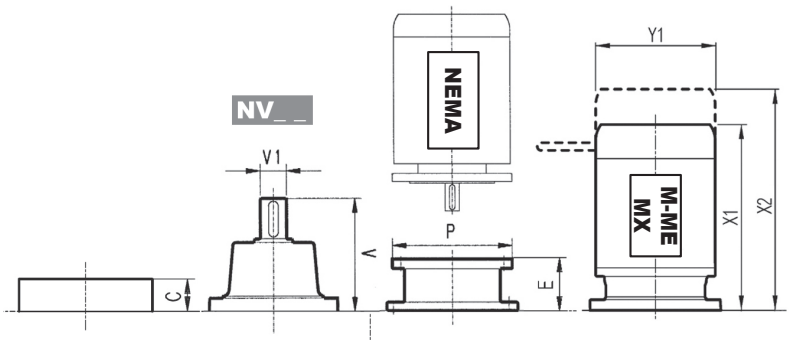
	L		lbs	
	NPC	NHC	NPC	NHC
301 L1	5.20	4.96	57.3	50.7
301 L2	7.28	6.93	66.2	59.5
301 L3	9.37	9.13	75.0	68.4
301 L4	11.46	11.22	83.8	77.2

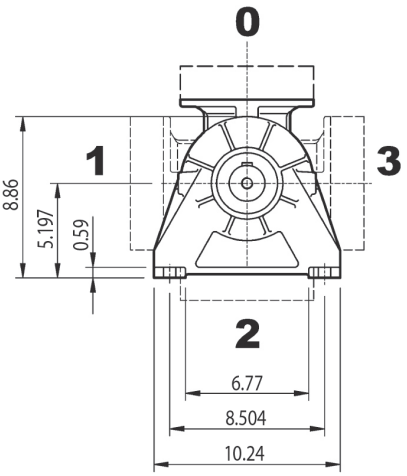
	V	V1	lbs	V	V1	lbs	C	Input
301 L1	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
301 L2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
301 L3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
301 L4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

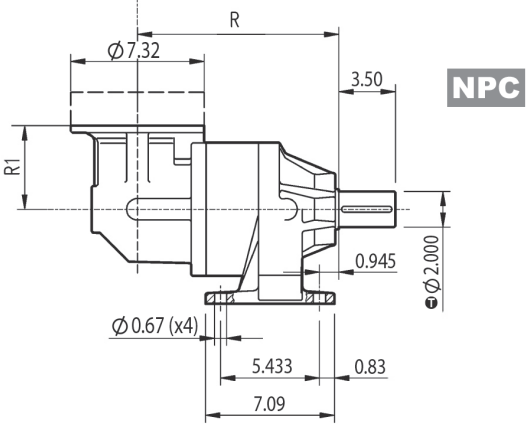
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
301 L1	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
301 L2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
301 L3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
301 L4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

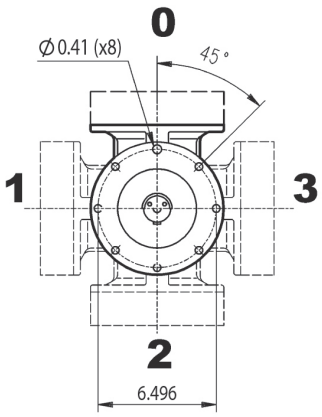
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
301 L1	9.96	12.36	5.43	11.02	—	6.14	12.8	—	7.67	14.06	—	7.67	18.11	—	10.15
301 L2	9.96	12.36	5.43	11.02	—	6.14	12.8	—	7.67	14.06	—	7.67	18.11	—	10.15
301 L3	9.96	12.36	5.43	11.02	—	6.14	12.8	—	7.67	14.06	—	7.67	18.11	—	10.15
301 L4	9.96	12.36	5.43	11.02	—	6.14	12.8	—	7.67	14.06	—	7.67	18.11	—	10.15

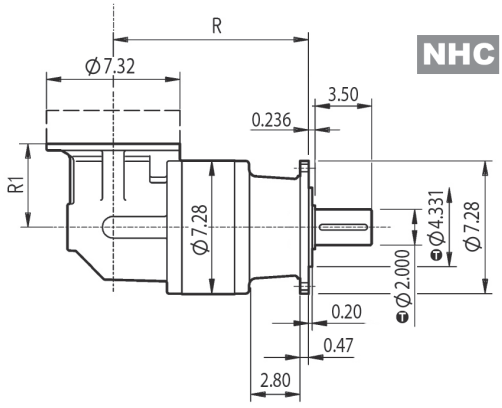
301 R











inch	T
4.331	-0.00142 -0.00280
2.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

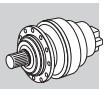
	R		R1	lbs	
	NPC	NHC		NPC	NHC
301 R2	8.86	8.62	4.80	92.6	81.6
301 R3	10.94	10.71	4.80	101.4	90.4
301 R4	13.03	12.80	4.80	110.3	99.2

	V	V1	lbs	V	V1	lbs	C	Input
301 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
301 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
301 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

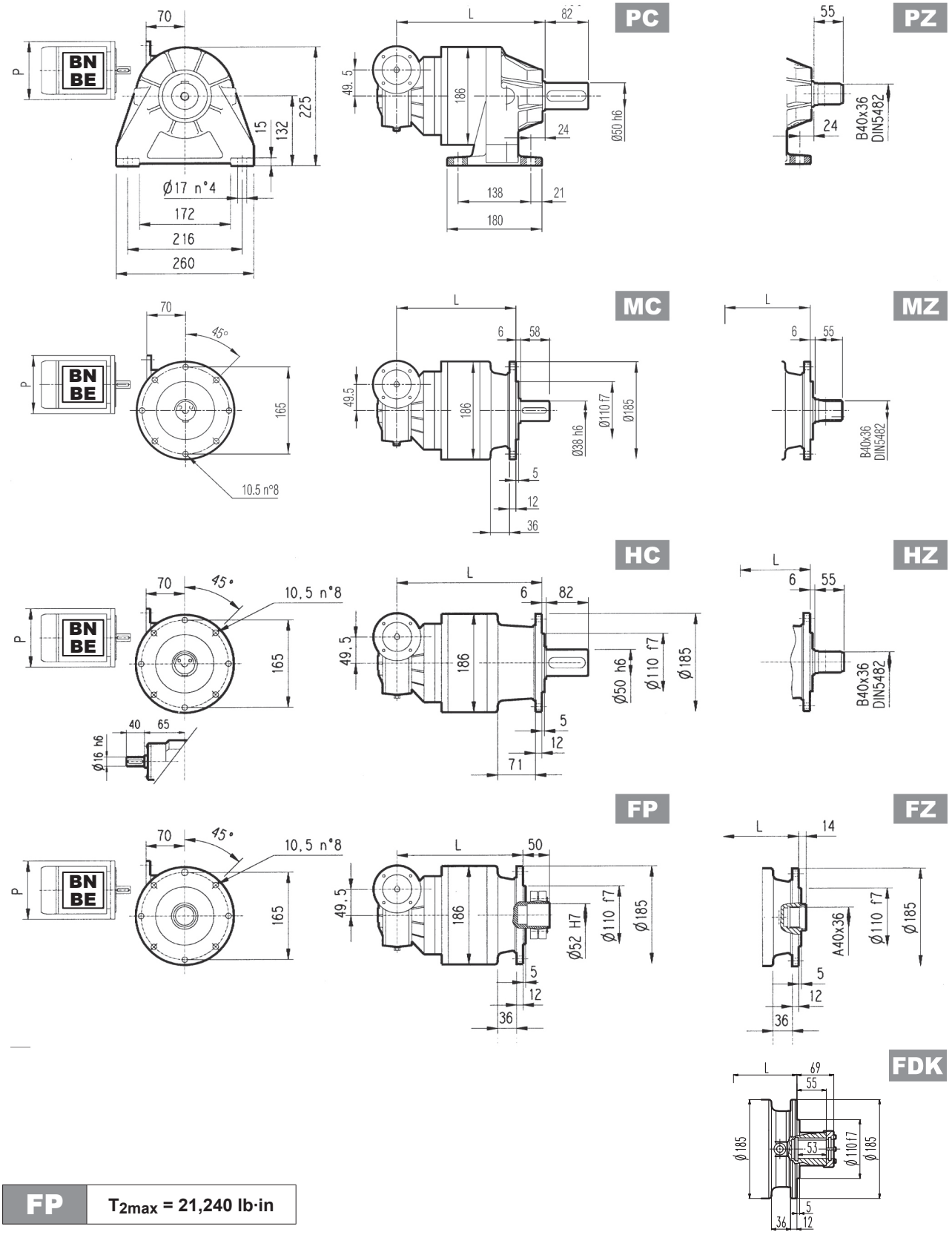
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
301 R2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
301 R3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
301 R4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
301 R2	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	15.94	—	7.67	20	—	10.15
301 R3	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	15.94	—	7.67	—	—	—
301 R4	9.96	12.36	5.43	12.91	—	6.14	14.69	—	7.67	—	—	—	—	—	—

3/V 01 L3



Metric



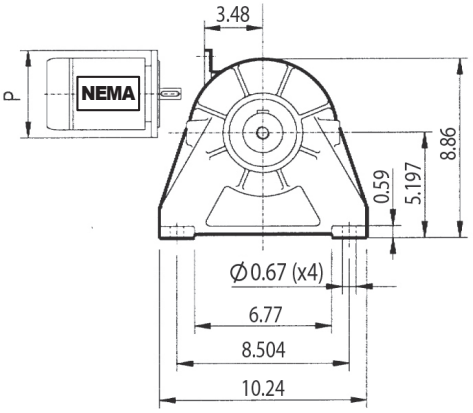
FP T_{2max} = 21,240 lb·in

Dimensions are in mm

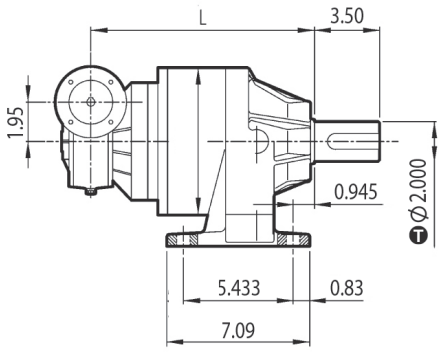
	L				Kg				P63	P71	P80
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P
3/V 01 L3	267	308	302	267	28	35	30	26	140	160	200

Bonfiglioli Riduttori

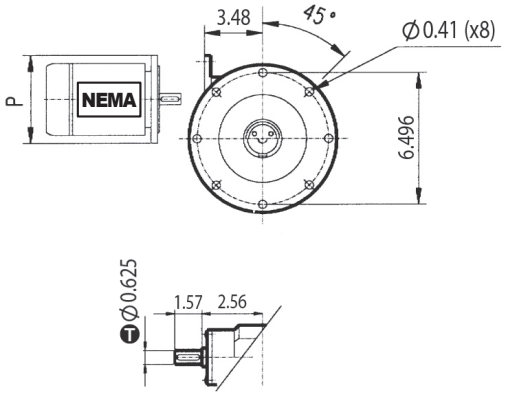
3/V 01 L3

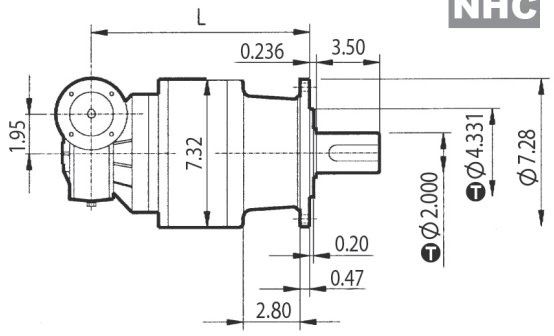


NPC



NHC



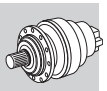


inch	T
4.331	-0.00142 -0.00280
2.000	0 -0.00075
0.625	0 -0.00043

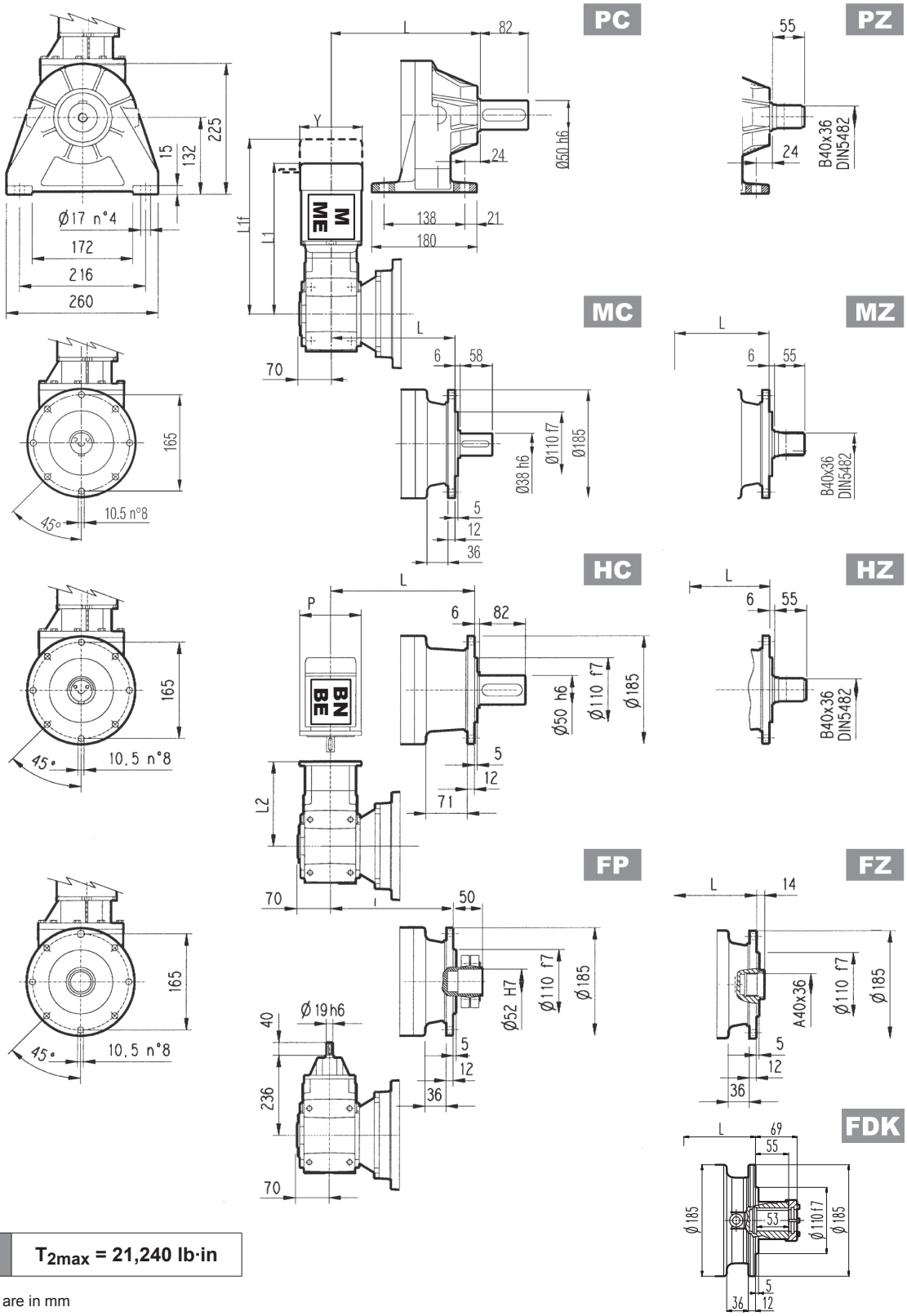
Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N56C
	NPC	NHC	NPC	NHC	P
3/V 01 L3	12.12	11.89	77.16	66.14	6.54

3/A 01 L2



Metric



FP T_{2max} = 21,240 lb·in

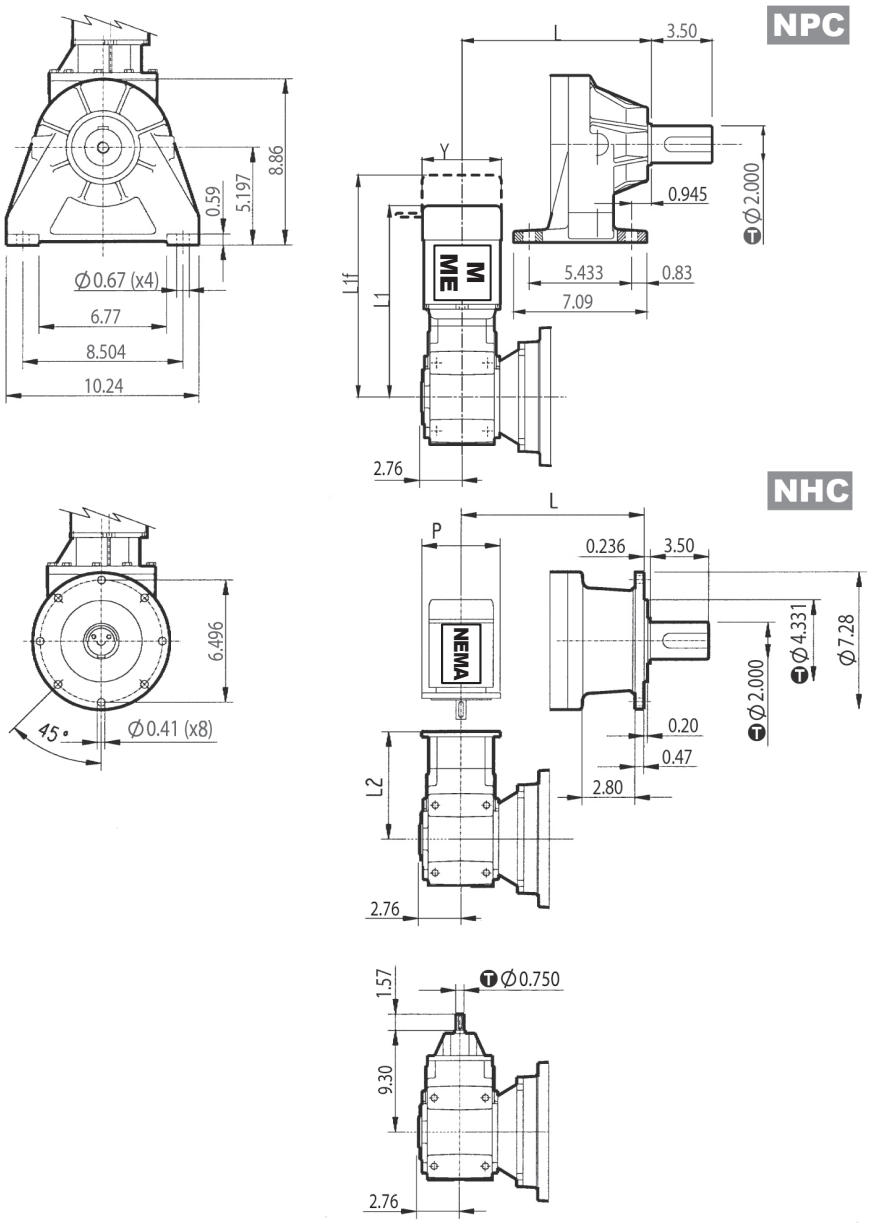
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 01 L2	202	208	237	202	40	46	43	40

	P63		P71		P80		P90		P100		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 01 L2	226	140	226	160	245.5	200	245.5	200	255.5	250	382	442	138	408	—	156	453	—	195	484	—	195

Bonfiglioli Riduttori

3/A 01 L2



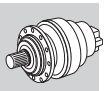
inch	T
4.331	-0.00142 -0.00280
2.000	0 -0.00075
0.750	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs	
	NPC	NHC	NPC	NHC
3/A 01 L2	8.19	9.33	101.4	94.8

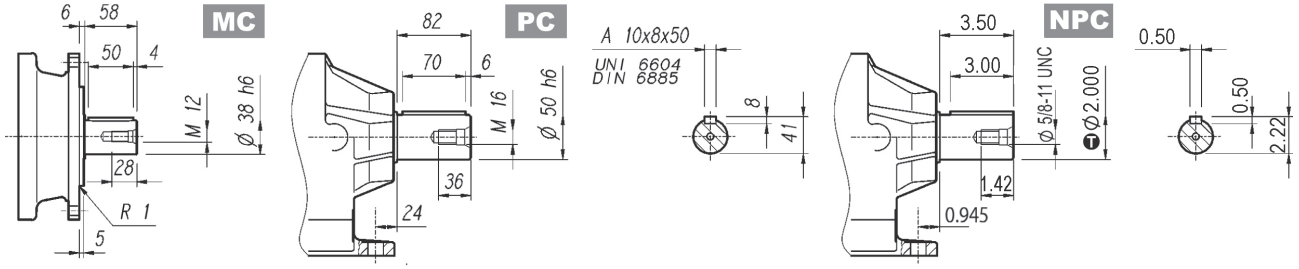
	N56C		N140TC		N180TC		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 01 L2	9.69	6.50	9.69	6.50	10.43	9.00	15.04	17.40	5.43	16.06	-	6.14	17.83	-	7.68	19.05	-	7.68

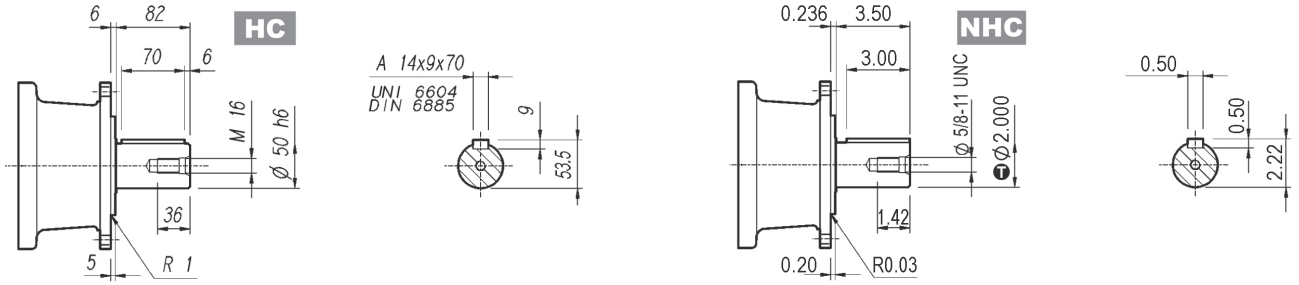
301 L | 301 R | 3/V 01 L3 | 3/A 01 L2

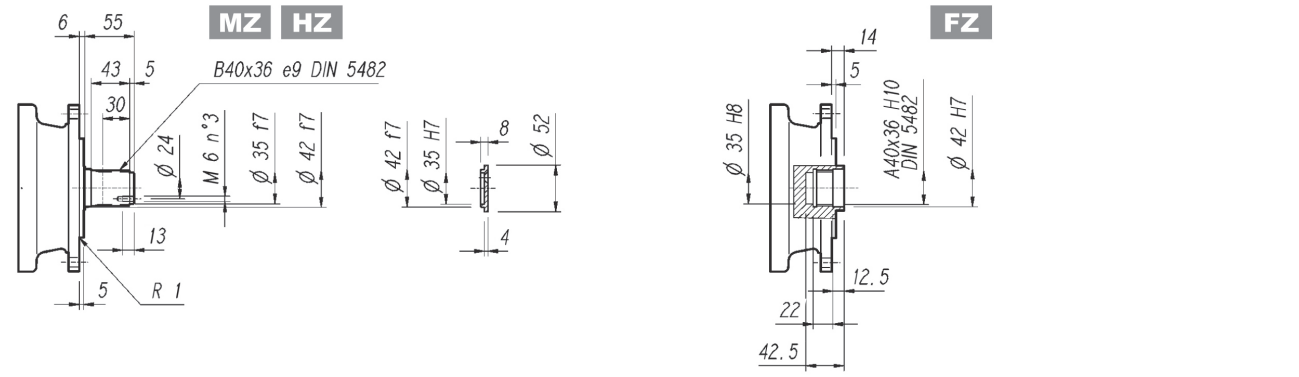


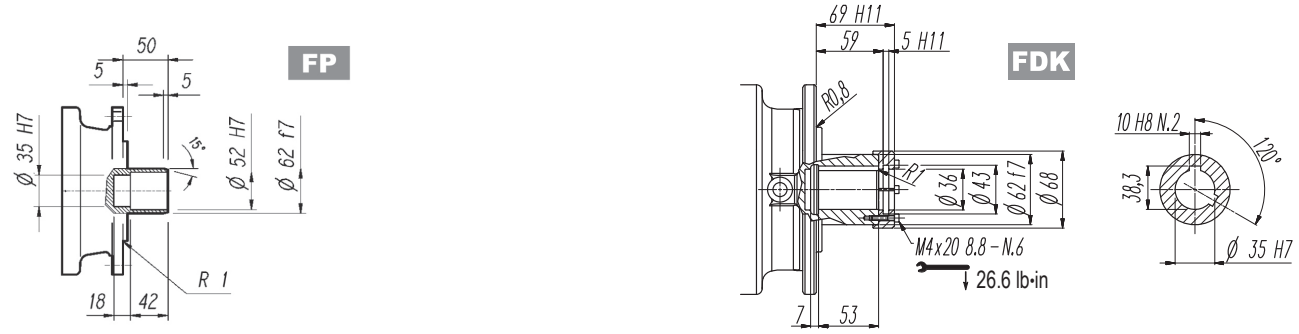
Metric

Imperial









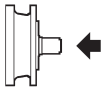
FP | **T_{2max} = 21,240 lb·in**

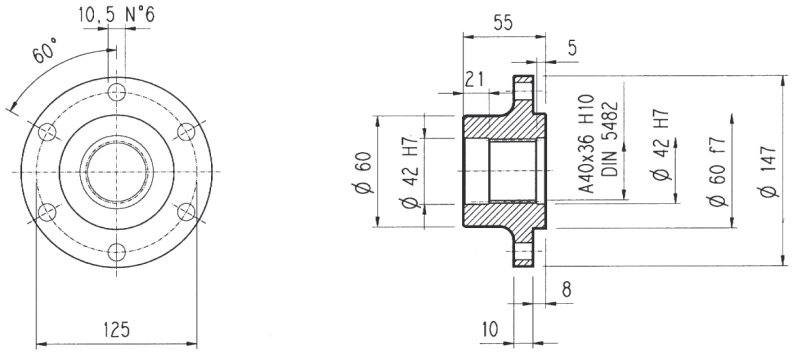
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

inch	T
2.000	0 -0.00075

Flange

W0A



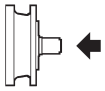


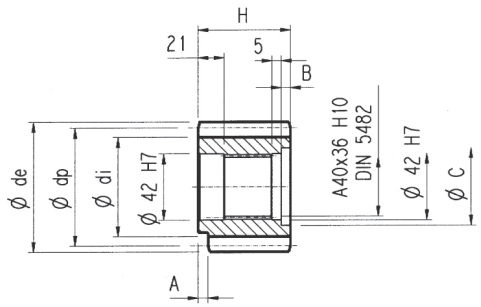
Material: Steel C40

Dimensions are in mm

Pinions

P...





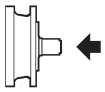
Dimensions are in mm

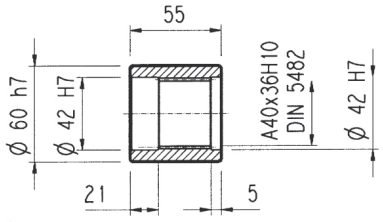
α = 20°

	m	z	x	dp	di	de	H	A	B	C	Material
PBE	4.5	14	0.507	63	56	75.5	55	—	—	—	Steel 39NiCrMo3 hardened and tempered
PCE	5	14	0.500	70	62.5	84.8	65	—	10	53	
PDC	6	12	0.250	72	61	84.8	59	14	4	54	
PDE	6	14	0.500	84	73	99.6	65	—	10	54	

Sleeve coupling

M0A





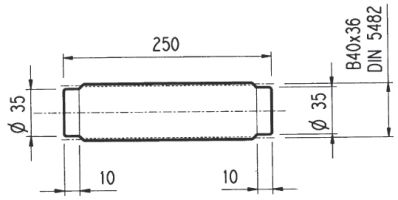
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

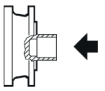


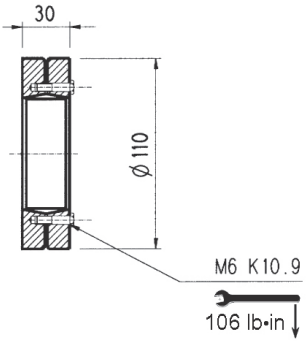


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

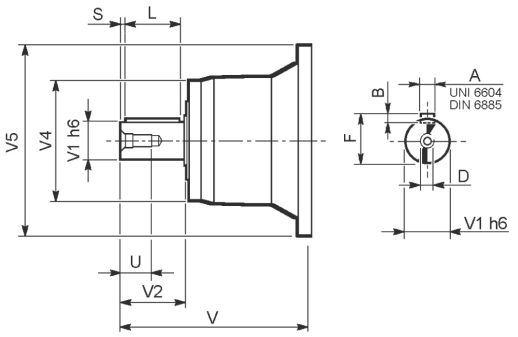




Dimensions are in mm

301 L 301 R



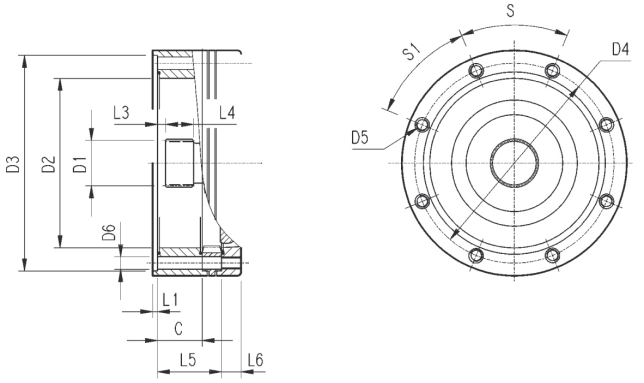


Dimensions are in mm

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
301 L1	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
301 L2	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
301 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
301 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
301 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

301 L 301 R

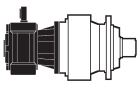


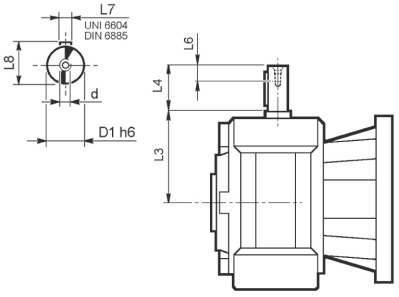


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
301 L1	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
301 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	118	18	45°	45°	A
301 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	171	18	45°	45°	A
301 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	224	18	45°	45°	A
301 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 01 L3

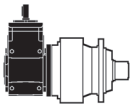


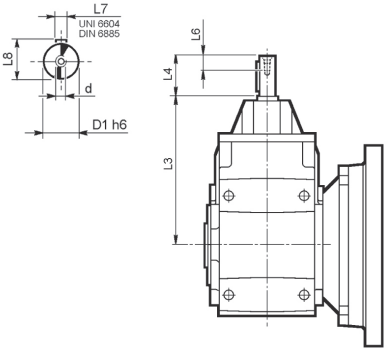


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 01 L3_HS	16	65	40	16	5	18	M6

3/A 01 L2



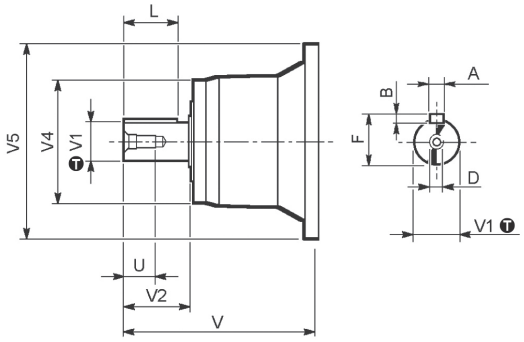


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/A 01 L2_HS	19	235.5	40	16	6	21.5	M6

301 L 301 R





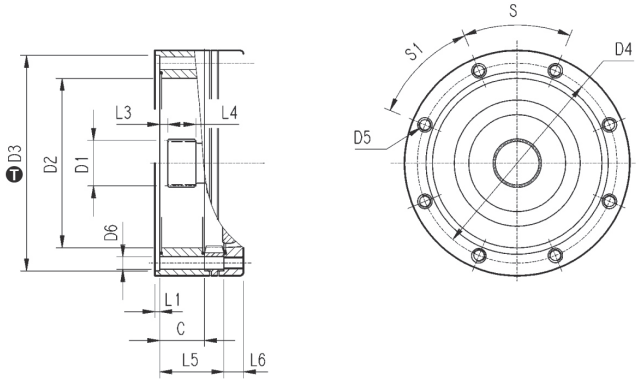
inch	T
1.125	0 -0.00051
1.625	0 -0.00053

Dimensions are in Inch except when shown in *italic [mm]*

		V	V1	V2	V4	V5	A	B	F	L	D	U
301 L1	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
301 L2	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
301 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
301 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
301 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

301 L 301 R



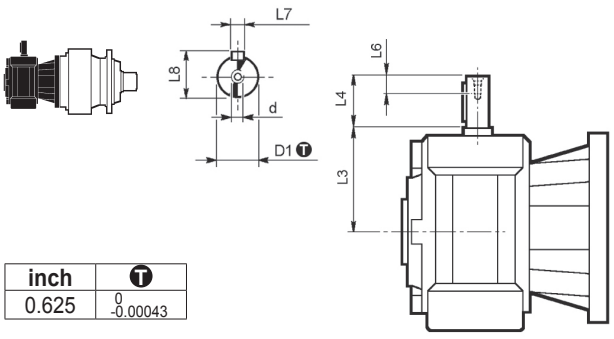


inch	T
7.01	+0.00157 0

Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
301 L1	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.56	0.71	45°	45°	A
301 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
301 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
301 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	8.82	0.71	45°	45°	A
301 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 01 L3

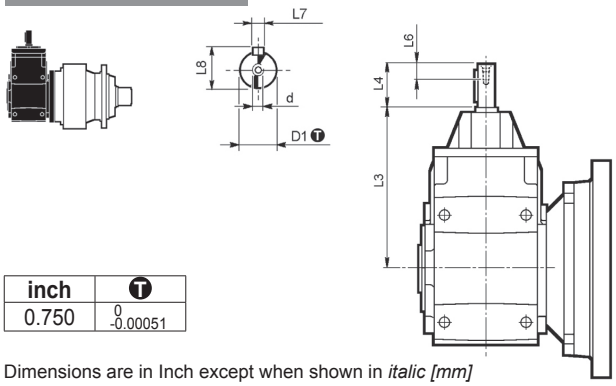


inch	T
0.625	0 -0.00043

Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 01 L3_NHS	0.625	2.57	1.575	0.63	0.188	0.705	1/4-20UNC

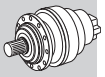
3/A 01 L2



inch	T
0.750	0 -0.00051

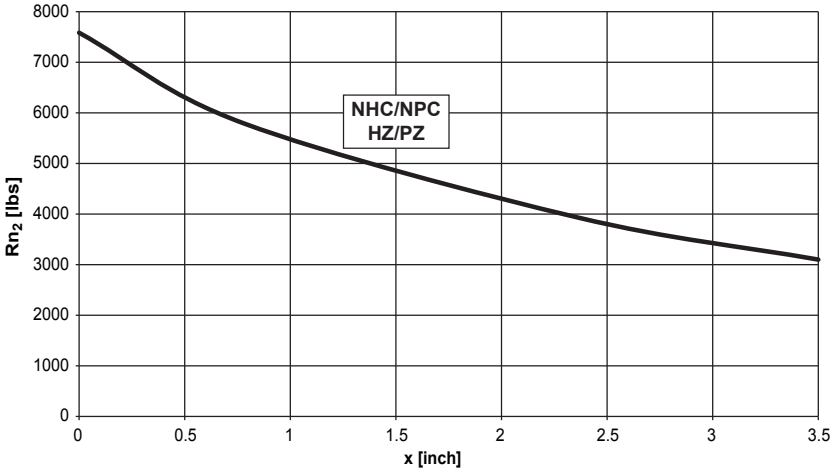
Dimensions are in Inch except when shown in *italic [mm]*

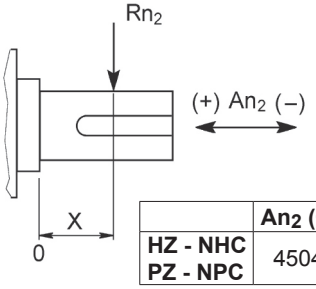
	D1	L3	L4	L6	L7	L8	d
3/A 01 L2_NHS	0.750	9.30	1.575	0.63	0.188	0.832	1/4-20UNC



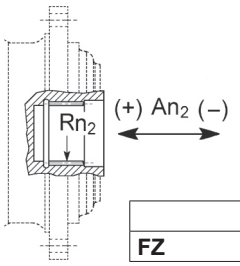
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





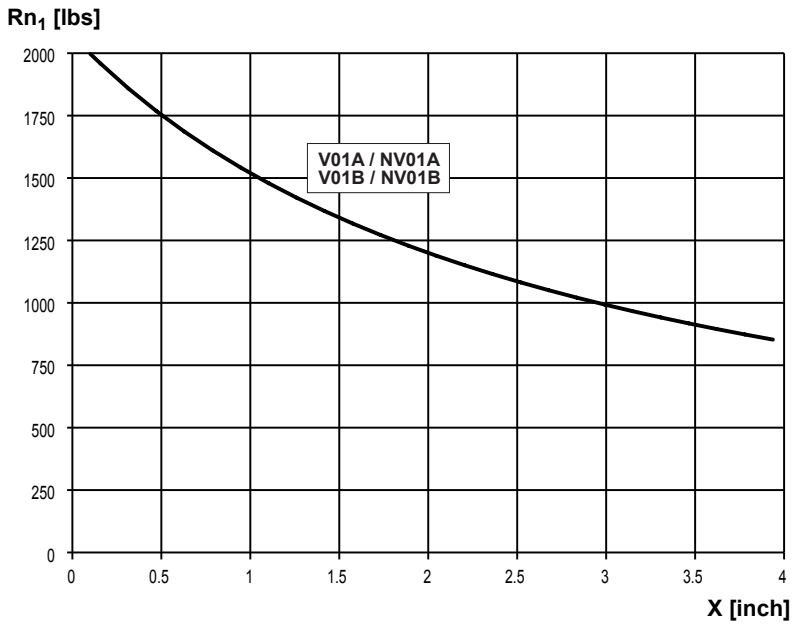
	An2 (+)	An2 (-)
HZ - NHC PZ - NPC	4504	4504

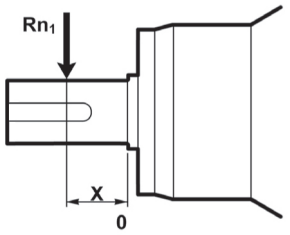


	Rn2	An2 (+/-)
FZ	836	836

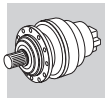
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.27**	**1.27**	**1.26**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





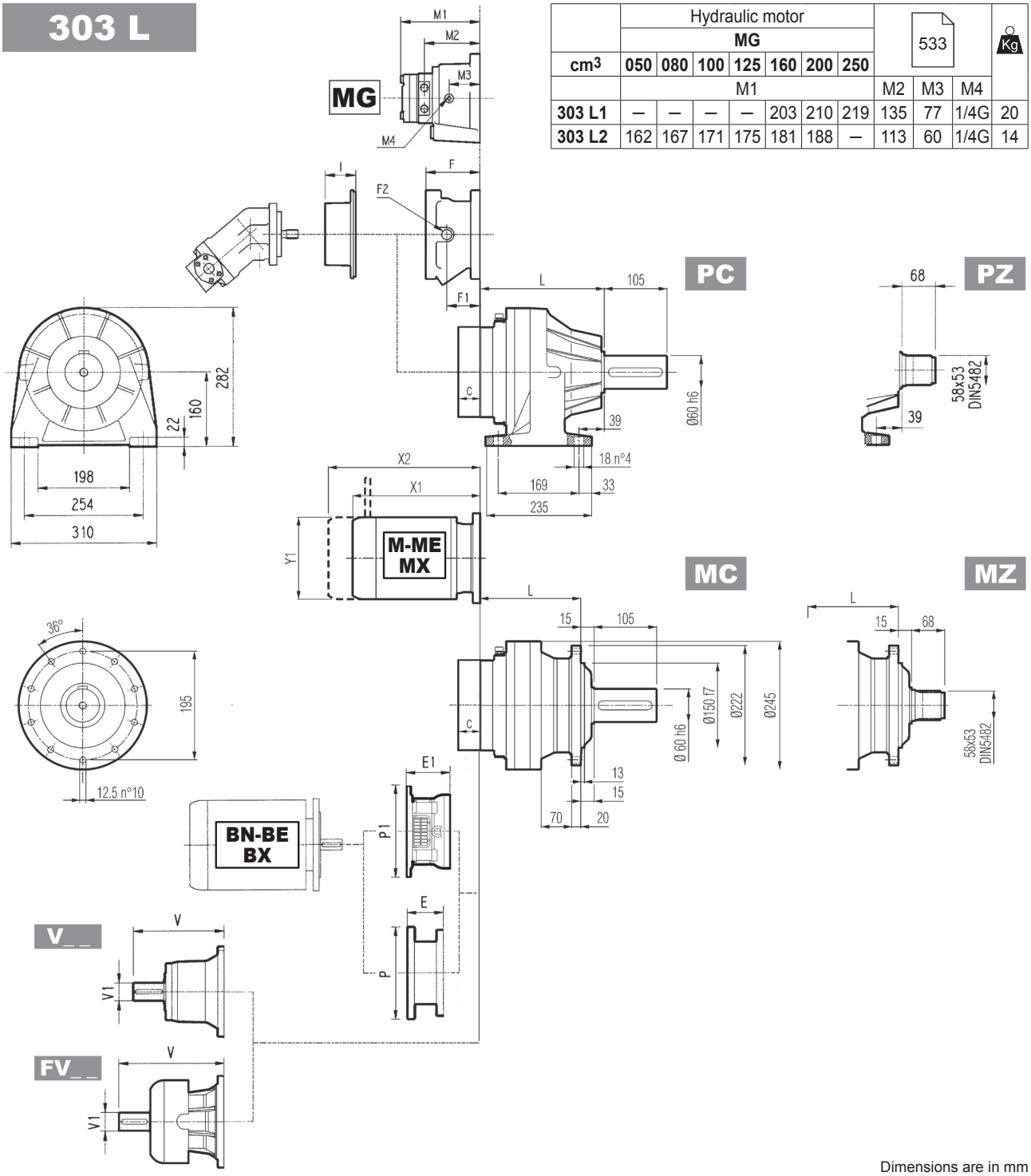
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



303 L

Metric

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
303 L1	–	–	–	–	203	210	219	135	77	1/4G	20
303 L2	162	167	171	175	181	188	–	113	60	1/4G	14



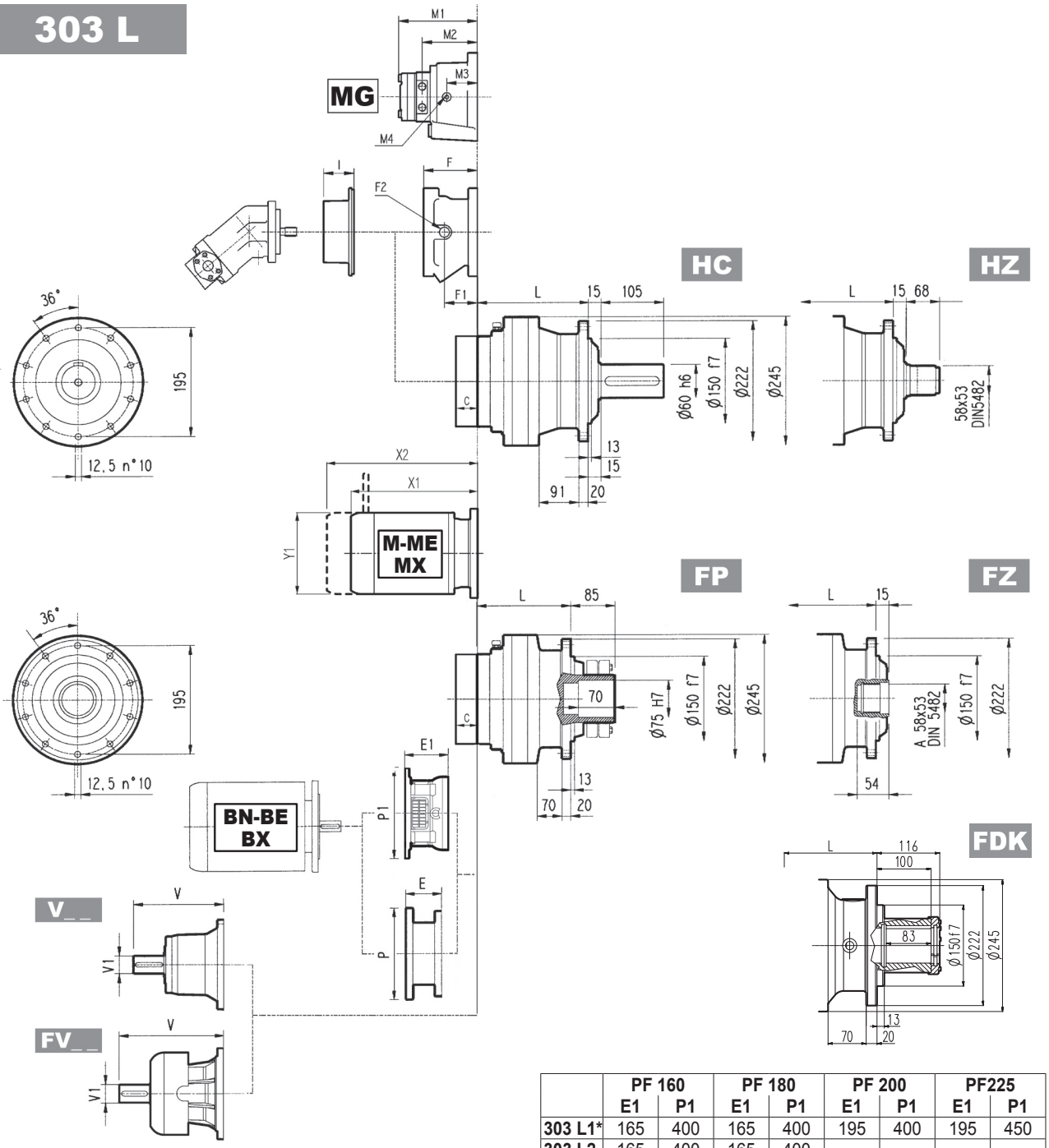
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
303 L1	125	165	150	125	31	40	35	31
303 L2	178	218	203	178	35	44	39	35
303 L3	231	271	256	231	39	48	43	39
303 L4	284	324	309	284	43	52	47	43

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
303 L1	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
303 L2	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
303 L3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
303 L4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

Bonfiglioli Riduttori

303 L



	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
303 L1*	165	400	165	400	195	400	195	450
303 L2	165	400	165	400	—	—	—	—
303 L3	165	400	165	400	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli technical service
NOTE: For R design contact Bonfiglioli Technical service

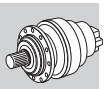
FP T_{2max} = 46,020 lb·in

Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
303 L1	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
303 L2	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
303 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
303 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

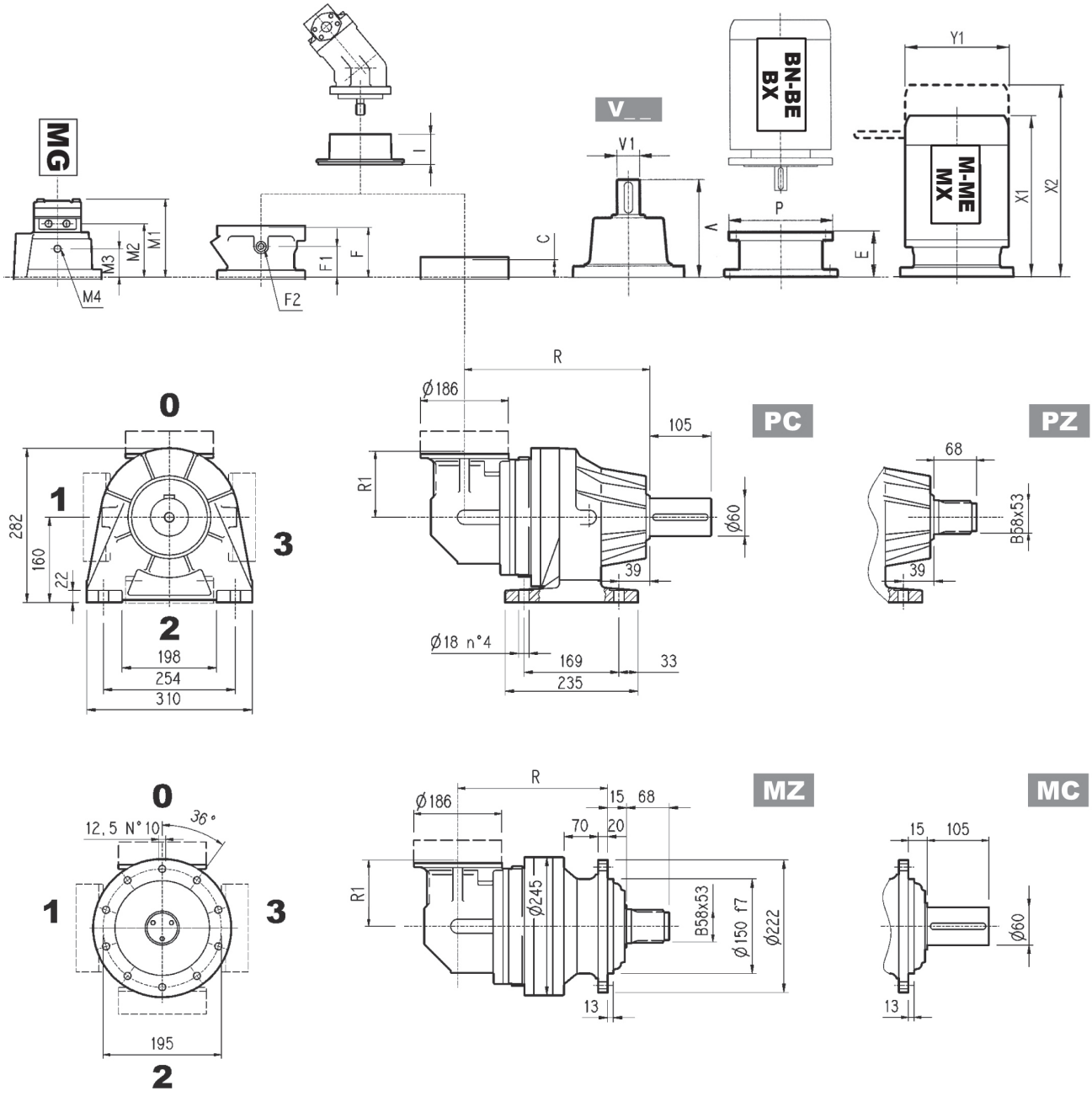
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
303 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
303 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
303 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

303 R



Metric

	Hydraulic motor							533			Kg
	MG										
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
303 R2	162	167	171	175	181	188	–	113	60	1/4G	14



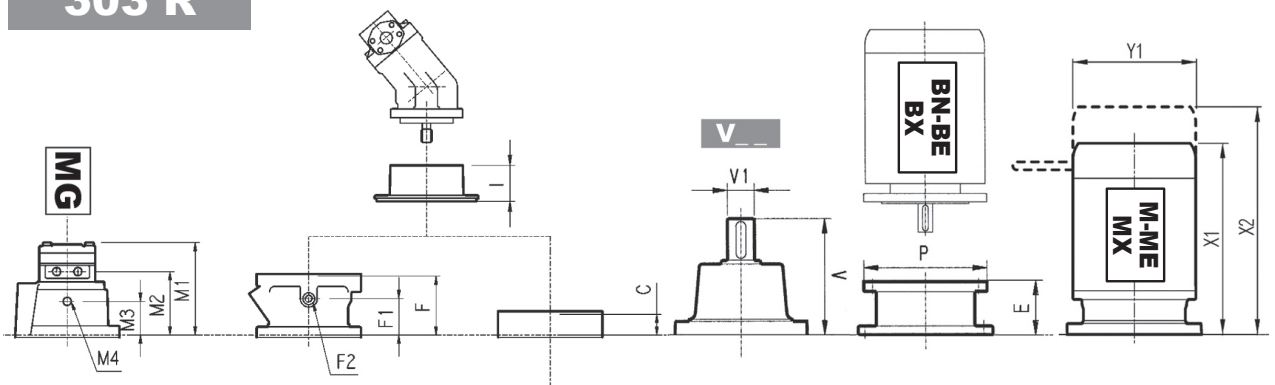
Dimensions are in mm

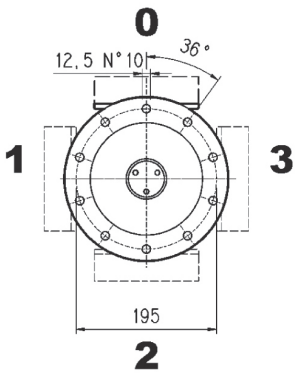
	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
303 R2	217	257	242	217	140	51	60	55	51
303 R3	270	310	295	270	122	49	58	53	49
303 R4	323	363	348	323	122	53	62	57	53

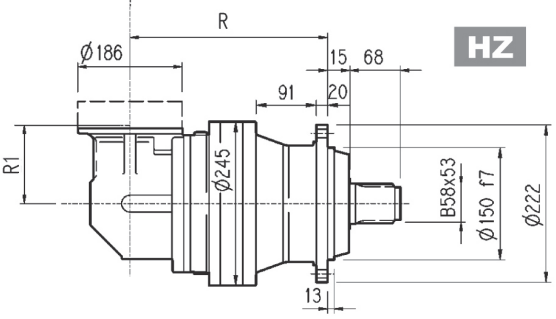
	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
303 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
303 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
303 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

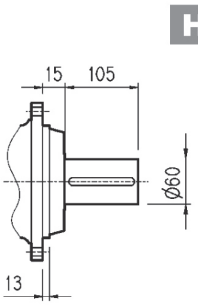
Bonfiglioli Riduttori

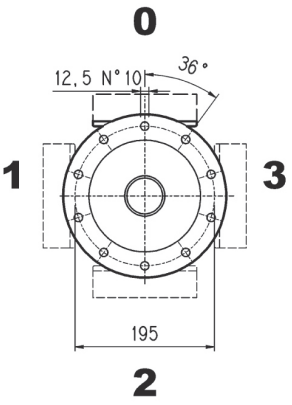
303 R

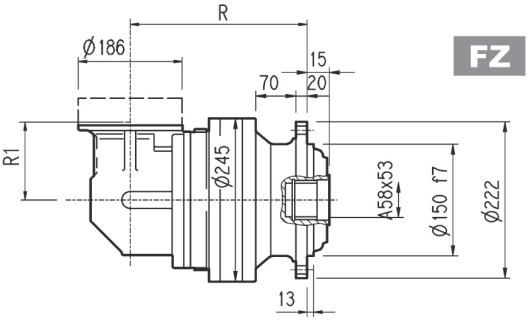


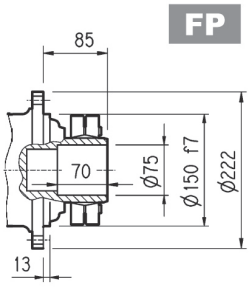


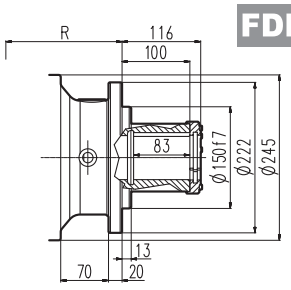












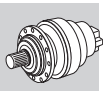
FP | T_{2max} = 46,020 lb·in

Dimensions are in mm

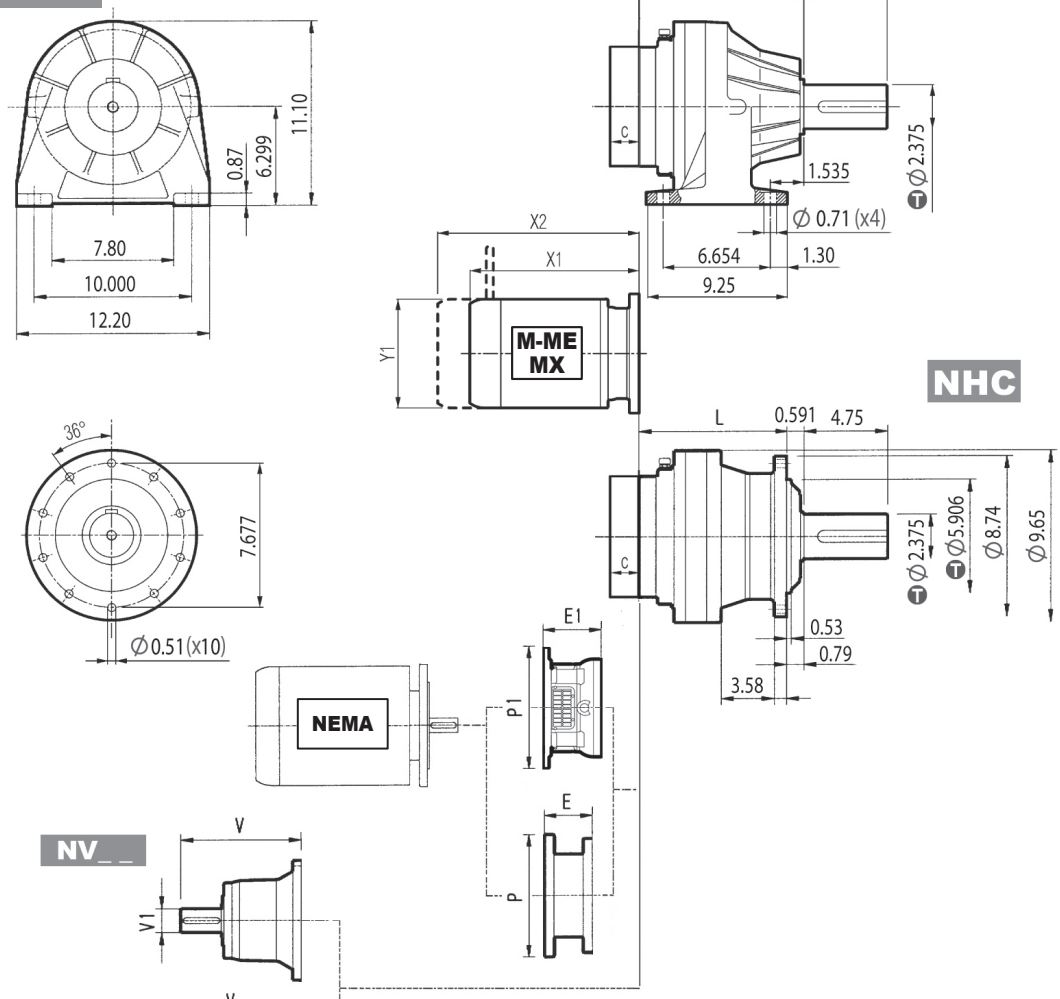
	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
303 R2	65	160	84	200	84	200	94	250	94	250	114	300
303 R3	65	160	84	200	84	200	94	250	94	250	114	300
303 R4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
303 R3	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—
303 R4	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—

303 L



Imperial



inch	Ⓣ
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
303 L1*	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
303 L2	8.661	15.748	8.661	15.748	—	—	—	—
303 L3	8.661	15.748	8.661	15.748	—	—	—	—

(*): for NPC versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

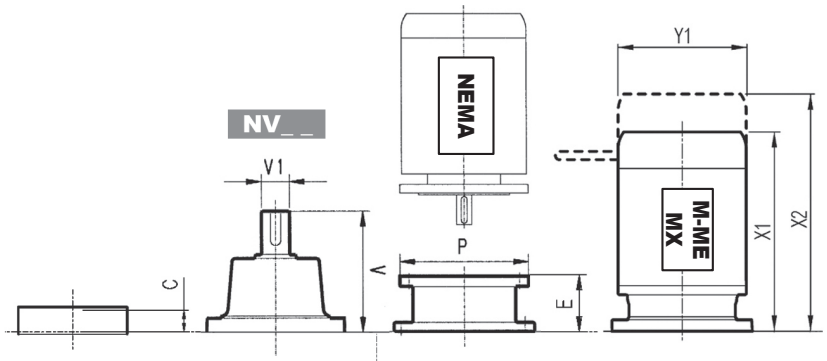
	L		lbs	
	NPC	NHC	NPC	NHC
303 L1	6.50	5.91	88.2	77.2
303 L2	8.58	7.99	97.0	86.0
303 L3	10.67	10.08	105.8	94.8
303 L4	12.76	12.17	114.7	103.6

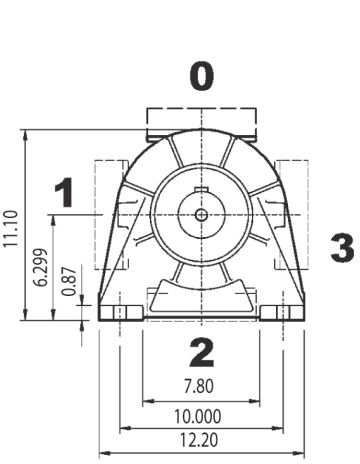
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
303 L1	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
303 L2	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
303 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
303 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

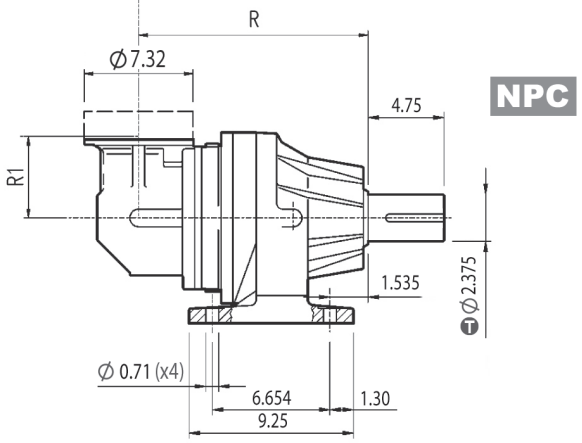
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
303 L1	—	—	—	—	—	—	—	—	5.22	11.81	6.22	13.78
303 L2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
303 L3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
303 L4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

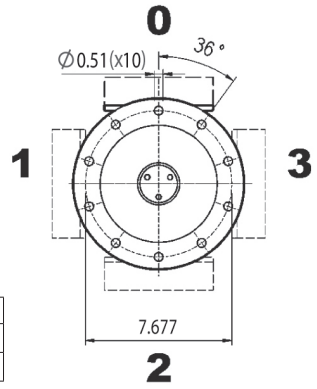
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 L1	—	—	—	—	—	—	—	—	—	—	—	—	18.11	—	10.16	21.73		12.20	23.46	—	12.20
303 L2	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
303 L3	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
303 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—

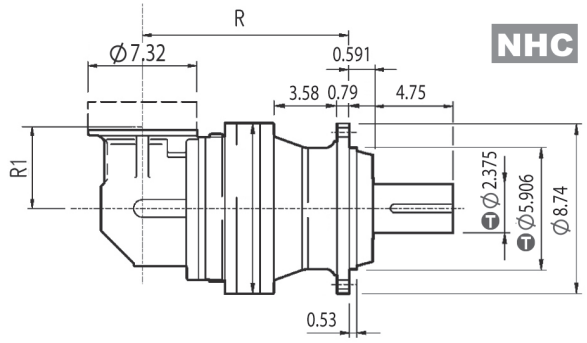
303 R











inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

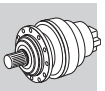
	R		R1	lbs	
	NPC	NHC		NPC	NHC
303 R2	10.12	9.53	5.51	132.3	121.3
303 R3	12.20	11.61	4.80	127.9	116.9
303 R4	14.29	13.70	4.80	136.7	125.7

	V	V1	lbs	V	V1	lbs	C	Input
303 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
303 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
303 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

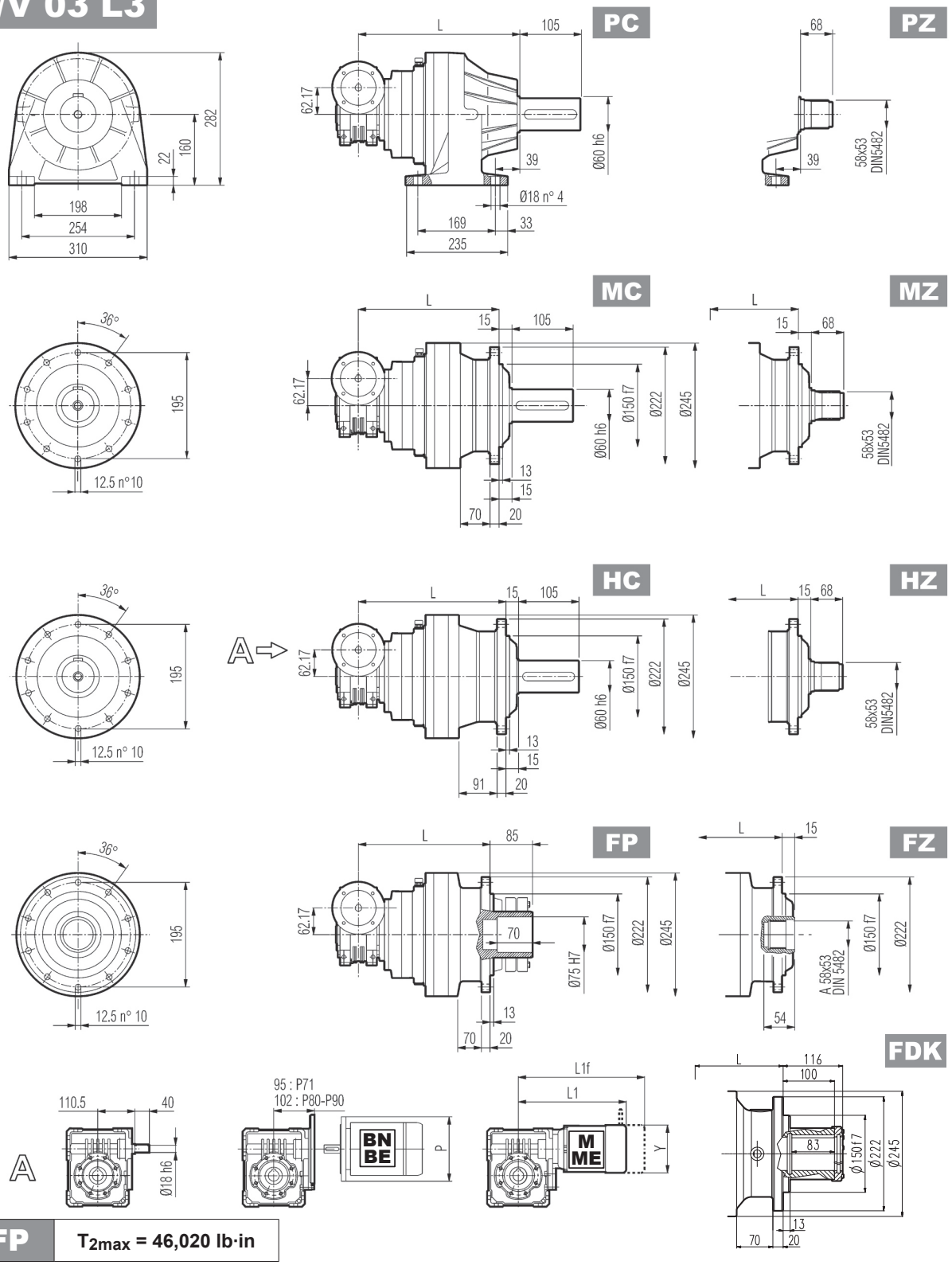
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
303 R2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
303 R3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
303 R4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 R2	—	—	—	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
303 R3	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	—	—	—
303 R4	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	—	—	—

3/V 03 L3



Metric



FP | T_{2max} = 46,020 lb·in

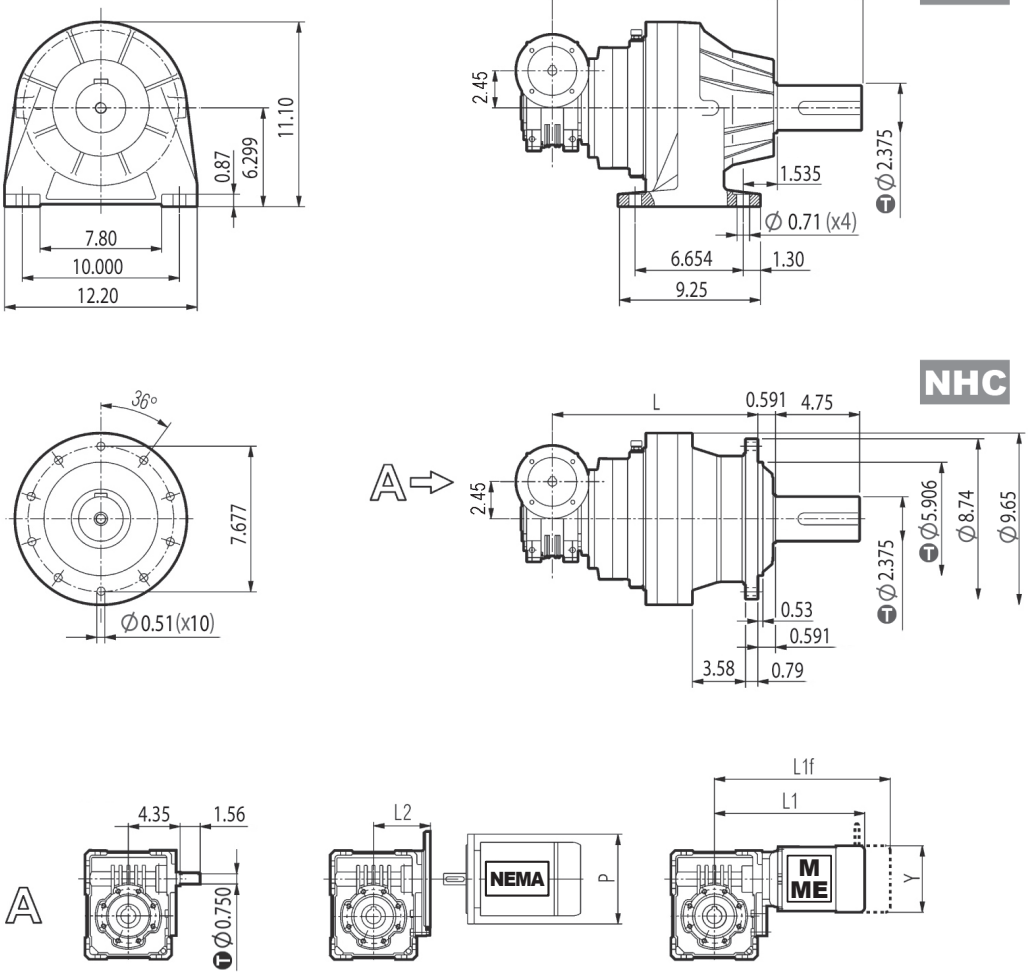
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/V 03 L3	270	330	315	270	43	51	45	41

	P71	P80	P90	S1 + M1			S2 + ME2S		
	P	P	P	L1	L1f	Y	L1	L1f	Y
3/V 03 L3	160	200	200	289	350	138	317	—	156

Bonfiglioli Riduttori

3/V 03 L3

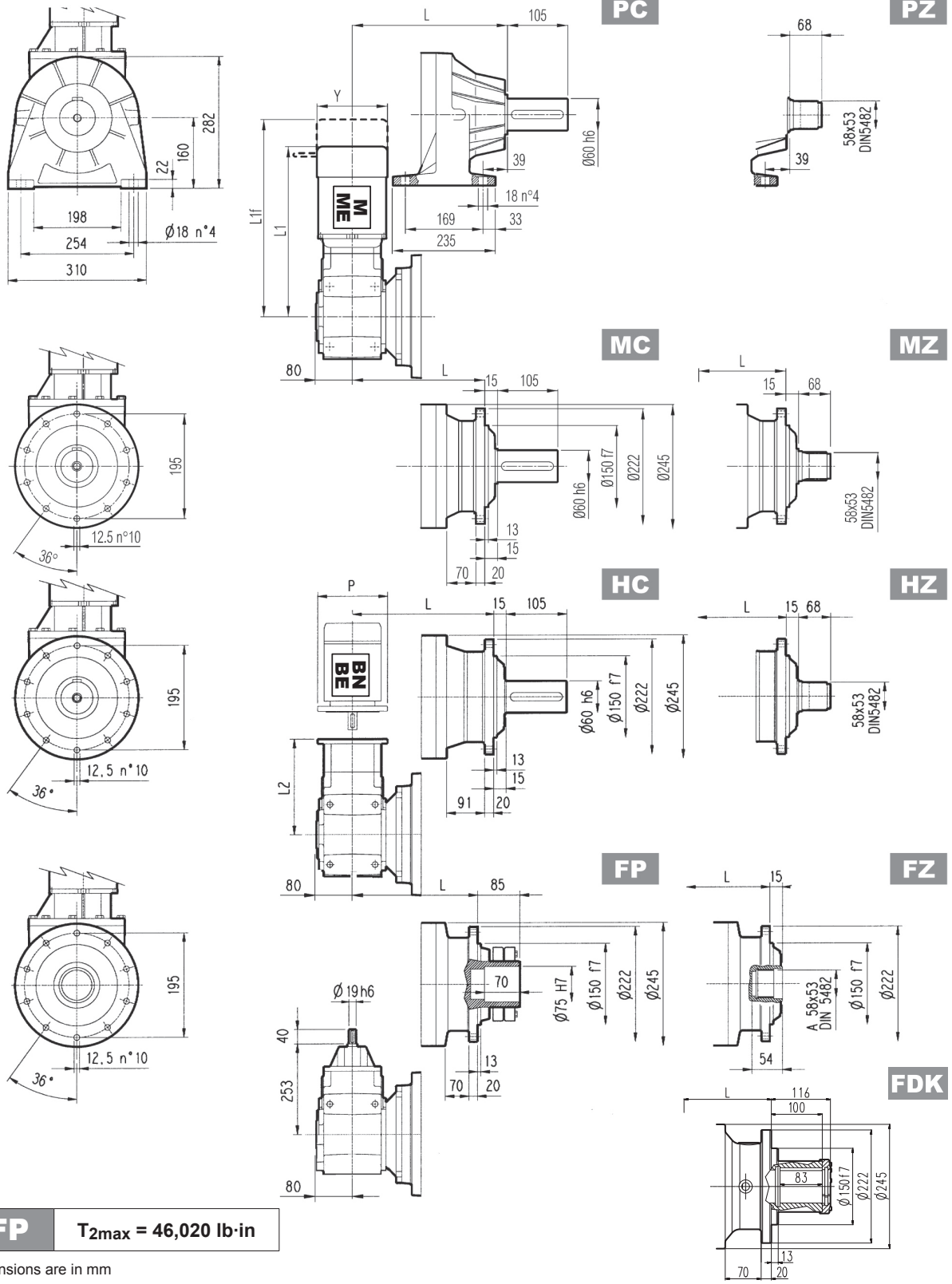


inch	Ⓣ
5.906	-0.00169 -0.00327
2.375	0 -0.00075
0.750	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N56C	N140TC	S1 + M1			S2 + ME2S		
	NPC	NHC	NPC	NHC	P	P	L1	L1f	Y	L1	L1f	Y
3/V 03 L3	12.99	12.40	112.5	99.2	6.54	6.54	11.38	13.78	5.43	12.48	—	6.14

3/A 03 L2



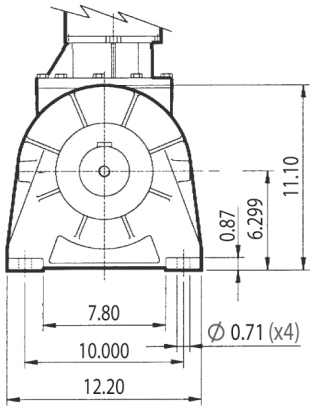
FP | T_{2max} = 46,020 lb·in

Dimensions are in mm

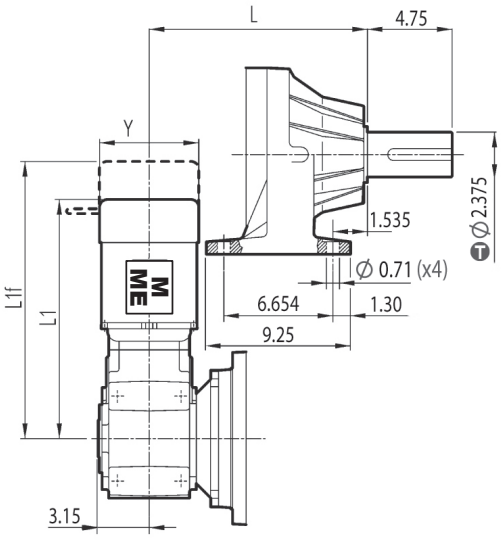
	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 03 L2	225	285	270	225	63	71	65	60

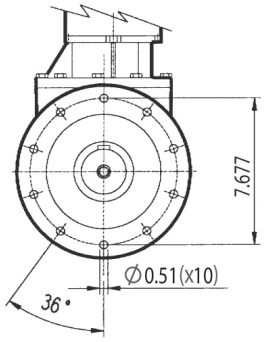
	P63		P71		P80		P90		P100		P112		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 03 L2	243	140	243	160	262	200	262	200	272	250	272	250	399	416	138	425	—	156	470	—	195	501	—	195

3/A 03 L2

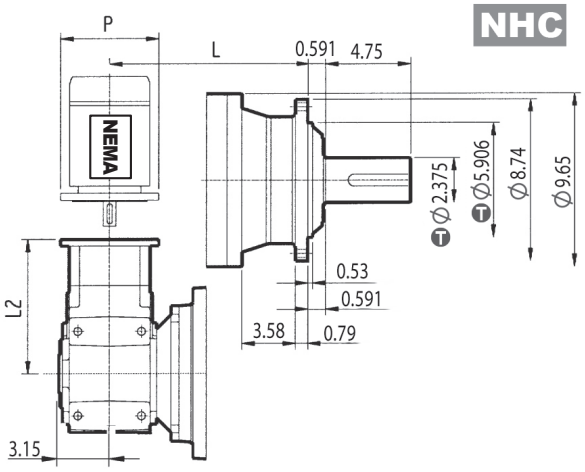


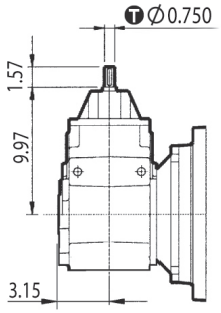
NPC





NHC





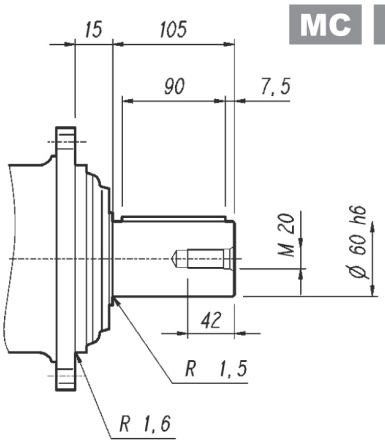
inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075
0.750	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

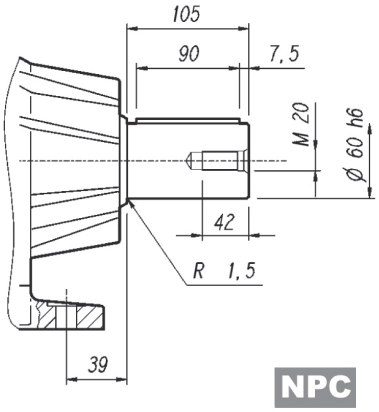
	L		lbs	
	NPC	NHC	NPC	NHC
3/A 03 L2	11.22	10.63	156.5	143.3

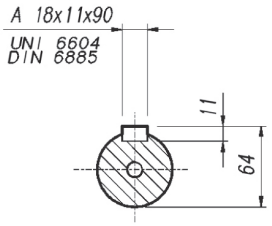
	N56C		N140TC		N180TC		S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L2	P	L2	P	L2	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 03 L2	10.35	6.50	10.35	6.50	11.10	8.98	15.70	16.38	5.43	16.73	—	6.14	18.50	—	7.68	19.72	—	7.68

MC HC

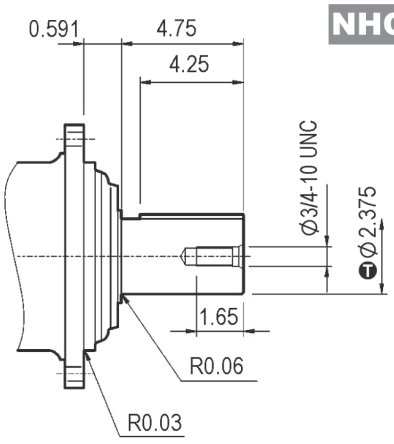


PC

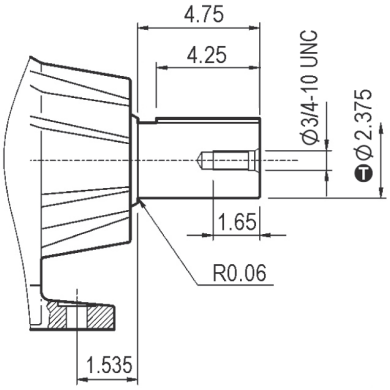


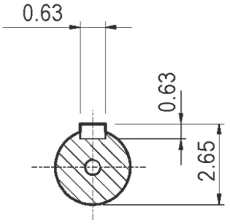


NHC

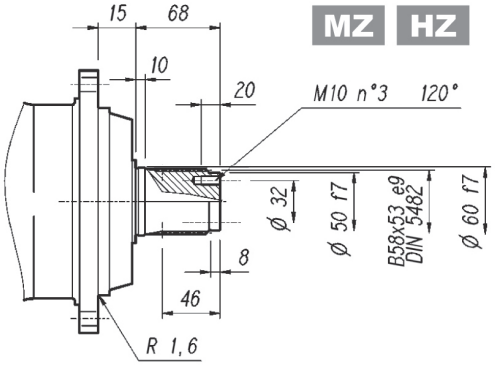


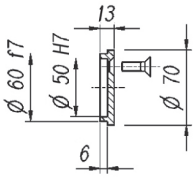
NPC



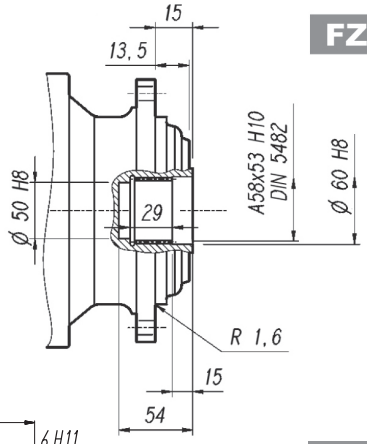


MZ HZ

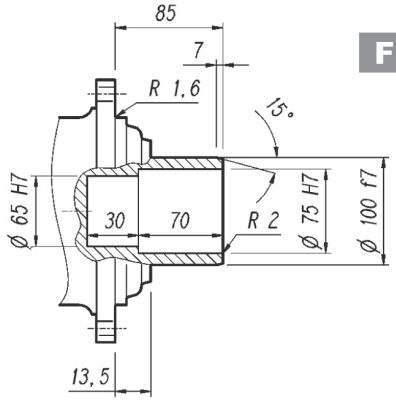


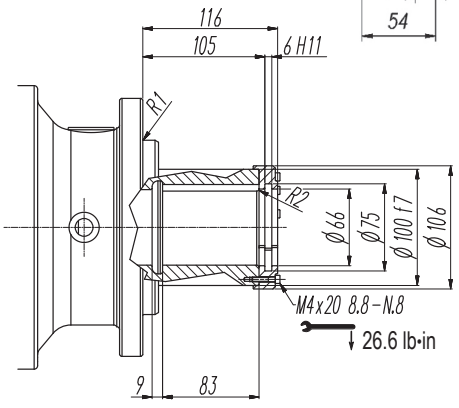


FZ

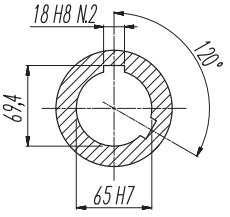


FP





FDK

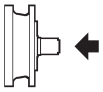


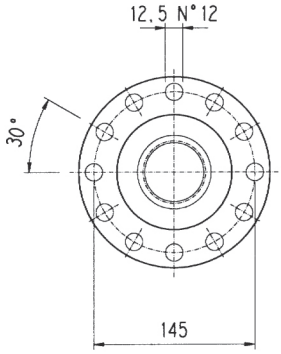
FP | T_{2max} = 46,020 lb·in

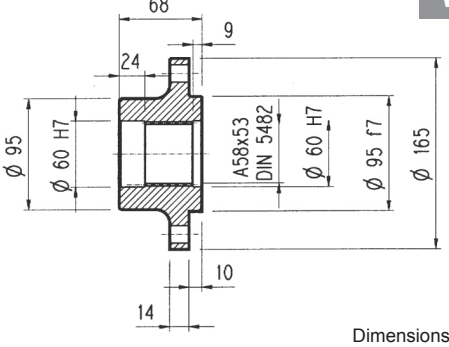
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

inch	Ⓣ
2.375	0 -0.00075

Flange





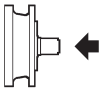


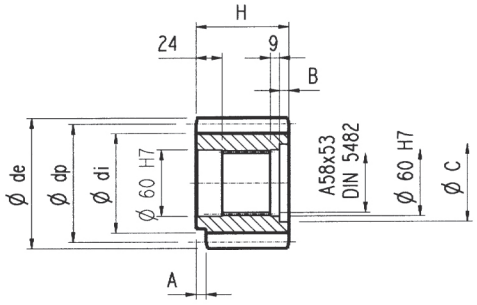
W0A

Material: Steel C40

Dimensions are in mm

Pinions





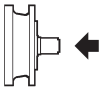
P...

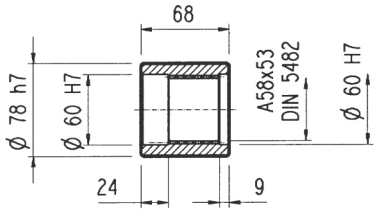
α = 20°

Dimensions are in mm

	m	z	x	dp	di	de	H	A	B	C	Material
PCL1	5	19	—	95	82	104	77	12	9	72	Steel 39NiCrMo3 hardened and tempered
PCL2	5	19	—	95	82	104	68	—	—	—	
PCM	5	20	—	100	87.5	110	68	18	—	—	Steel 18NiCrMo5 case hardened
PCP	5	22	—	110	97.5	120	68	18	—	—	
PDE	6	14	0.500	84	75	99.6	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PDI	6	18	0.500	108	99	123.6	68	—	—	—	
PDM	6	20	0.833	120	115	140	68	—	—	—	
PFD	8	13	0.675	104	95	127.6	68	—	—	—	Steel 18NiCrMo5 case hardened
PFE1	8	14	—	112	92	126	68	—	—	—	
PFE2	8	14	—	112	92	126	80	—	12	72	
PFF	8	15	—	120	100	136	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PFP	8	22	—	176	156	190	77	12	10	71	
PHG	10	16	0.500	160	145	188	75	—	7	72	

Sleeve coupling





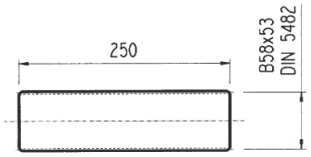
M0A

Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

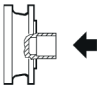


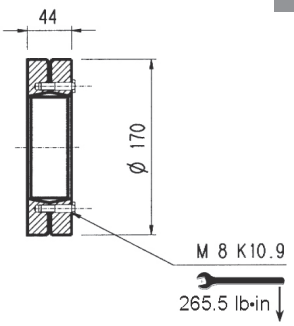


B0A

Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc



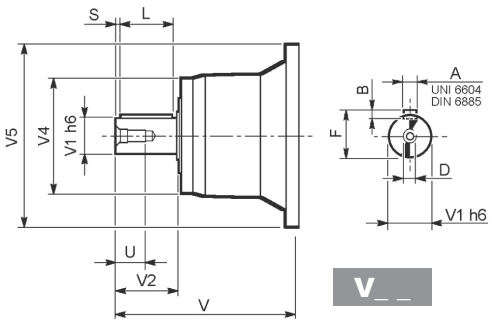


G0A

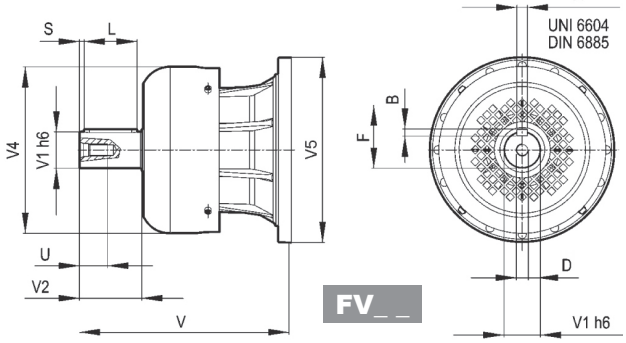
Dimensions are in mm

303 L 303 R





V_ _



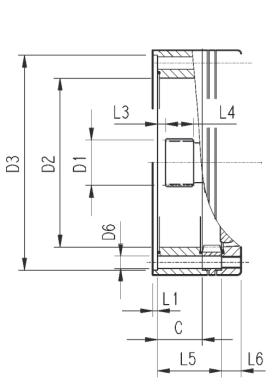
FV_ _

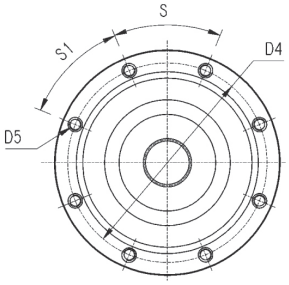
Dimensions are in mm

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
303 L1	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
303 L2	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
303 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
303 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
303 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

303 L 303 R



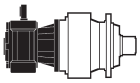


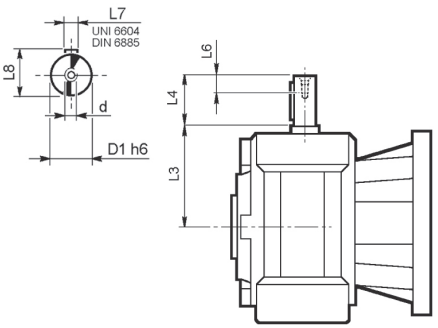


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
303 L1	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	—	18	45°	45°	A
303 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	53	18	45°	45°	A
303 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	106	18	45°	45°	A
303 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	159	18	45°	45°	A
303 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 03 L3

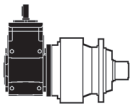


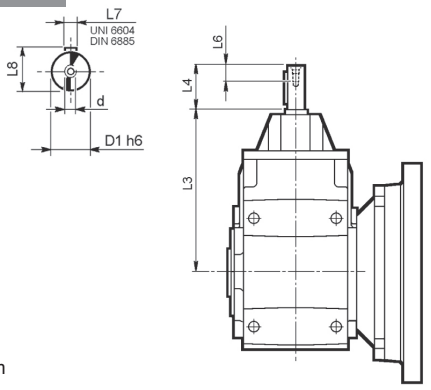


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 03 L3_HS	18	110.5	40	16	6	20.5	M6

3/A 03 L2

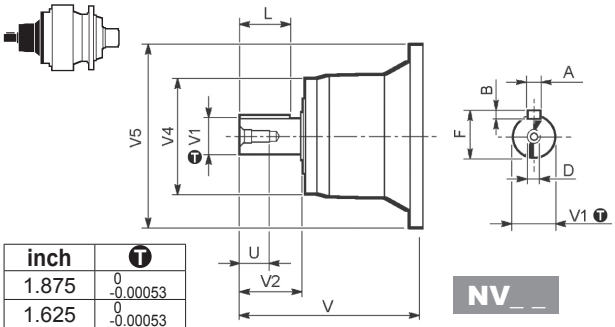




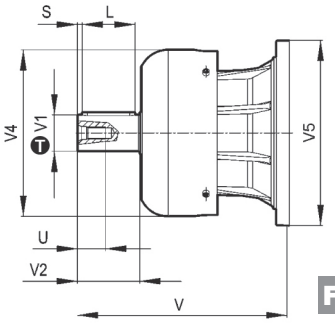
Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/A 03 L2_HS	19	252.5	40	16	6	21.5	M6

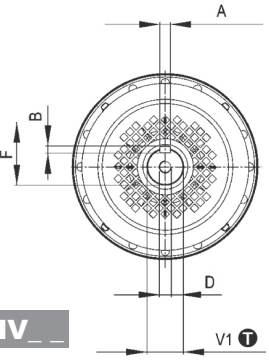
303 L 303 R



NV_ _



FNV_ _



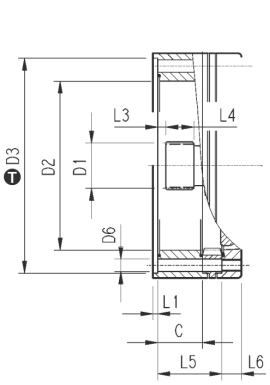
inch	T
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

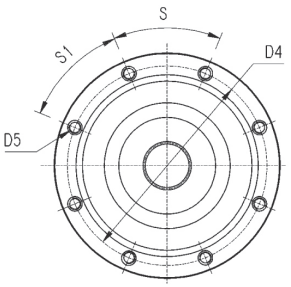
Dimensions are in Inch except when shown in *italic [mm]*

		V	V1	V2	V4	V5	A	B	F	L	D	U
303 L1	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
303 L2	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
303 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
303 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
303 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

303 L 303 R





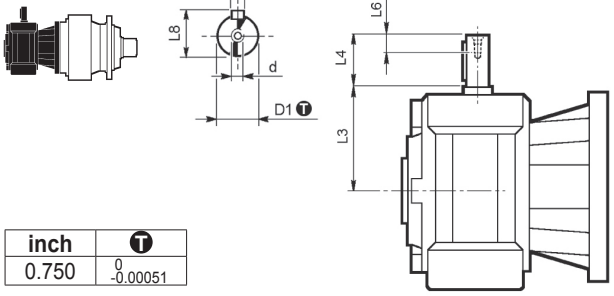


inch	T
7.01	+0.00157 0

Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
303 L1	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	—	0.71	45°	45°	A
303 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.09	0.71	45°	45°	A
303 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.17	0.71	45°	45°	A
303 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.26	0.71	45°	45°	A
303 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 03 L3

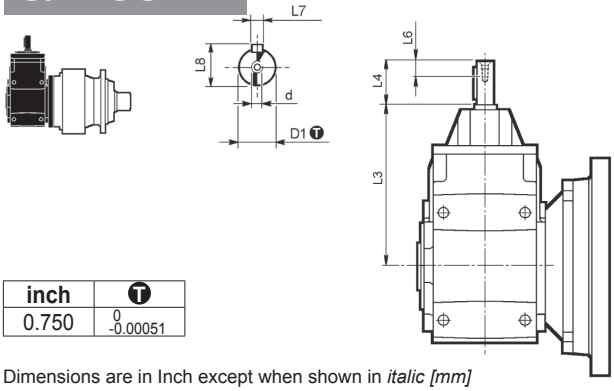


inch	T
0.750	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 03 L3_NHS	0.750	4.35	1.575	0.63	0.188	0.832	1/4-20UNC

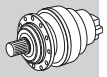
3/A 03 L2



inch	T
0.750	0 -0.00051

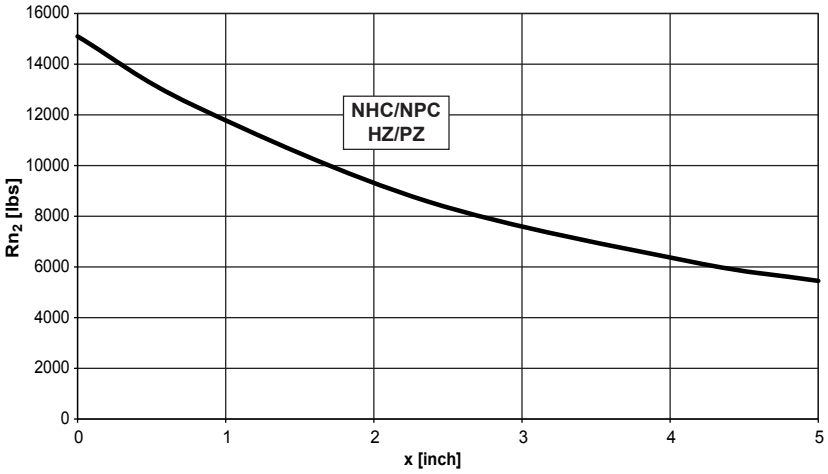
Dimensions are in Inch except when shown in *italic [mm]*

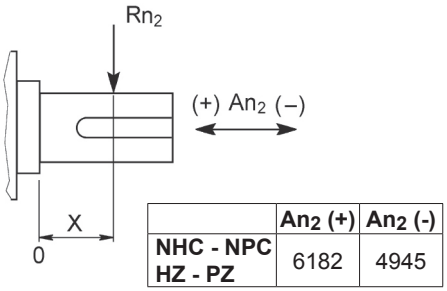
	D1	L3	L4	L6	L7	L8	d
3/A 03 L2_NHS	0.750	9.97	1.575	0.63	0.188	0.832	1/4-20UNC



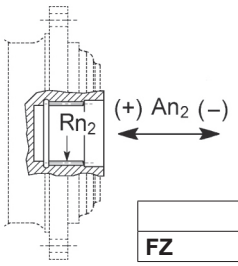
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





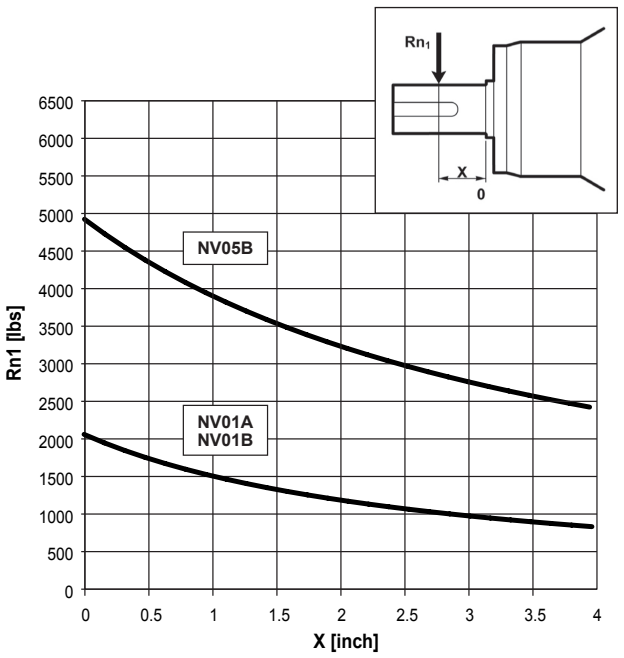
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	6182	4945

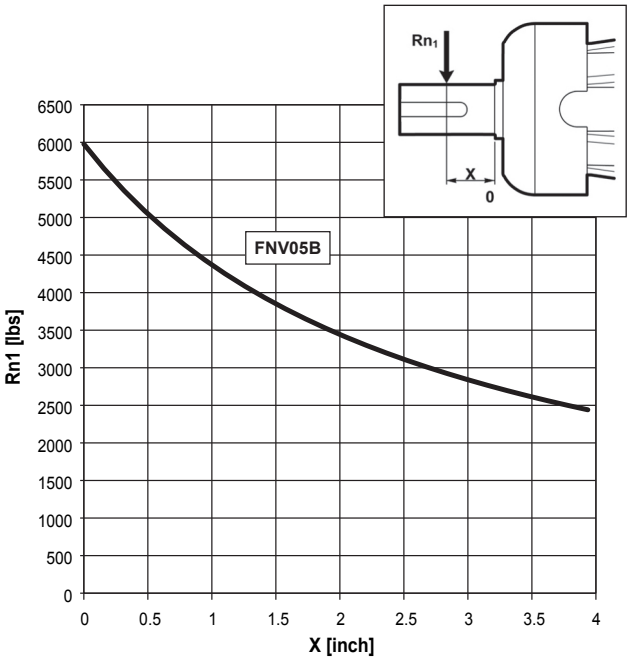


	Rn2	An2 (+/-)
FZ	2504	2609

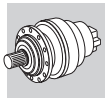
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.48**	**1.48**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

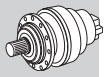




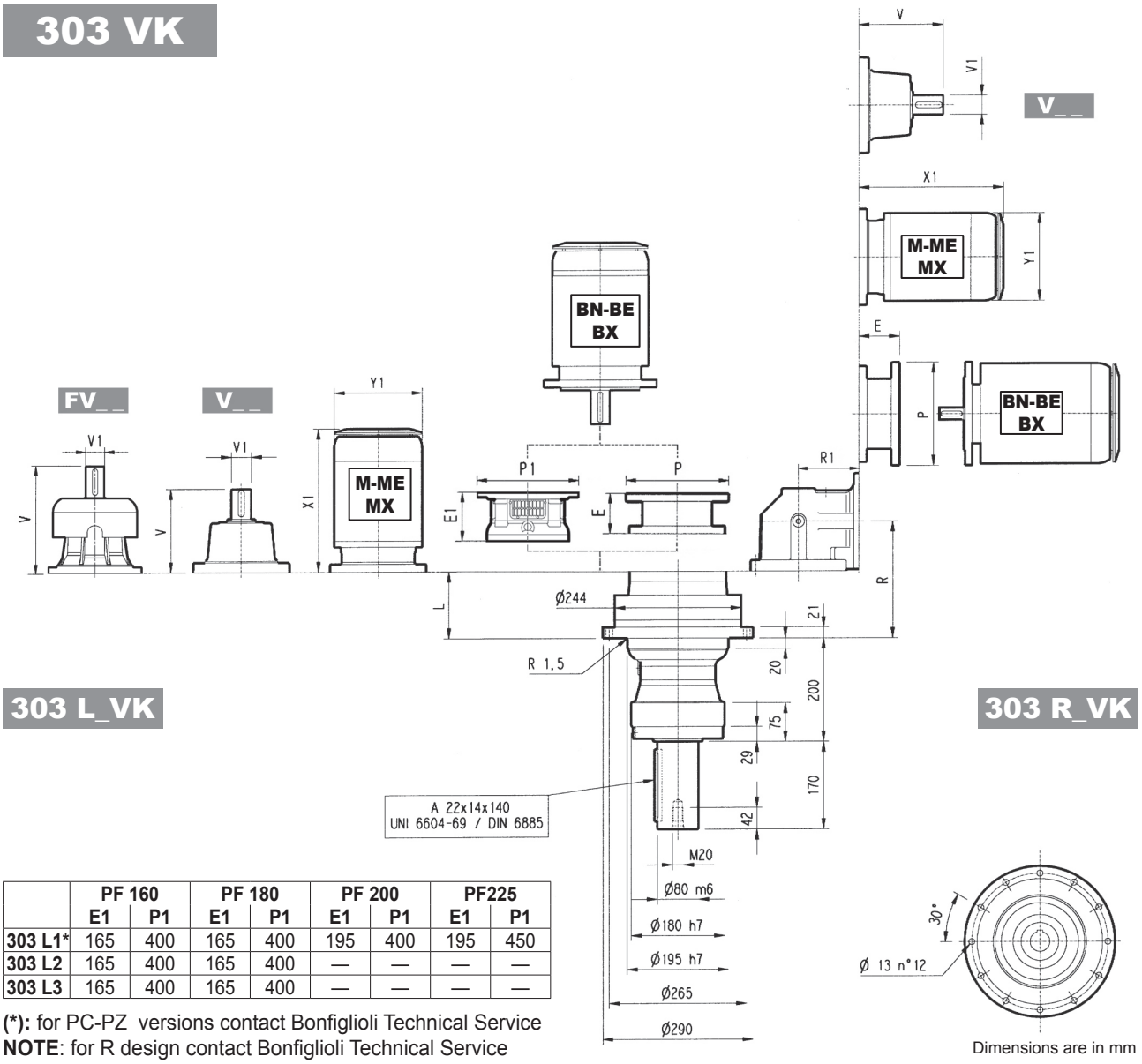
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



303 VK



Metric



303 L_VK

303 R_VK

	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
303 L1*	165	400	165	400	195	400	195	450
303 L2	165	400	165	400	—	—	—	—
303 L3	165	400	165	400	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

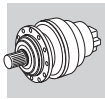
	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200	
															E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
303 L1	51	65	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
303 L2	104	70	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
303 L3	157	73	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
303 L4	210	77	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
303 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
303 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
303 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

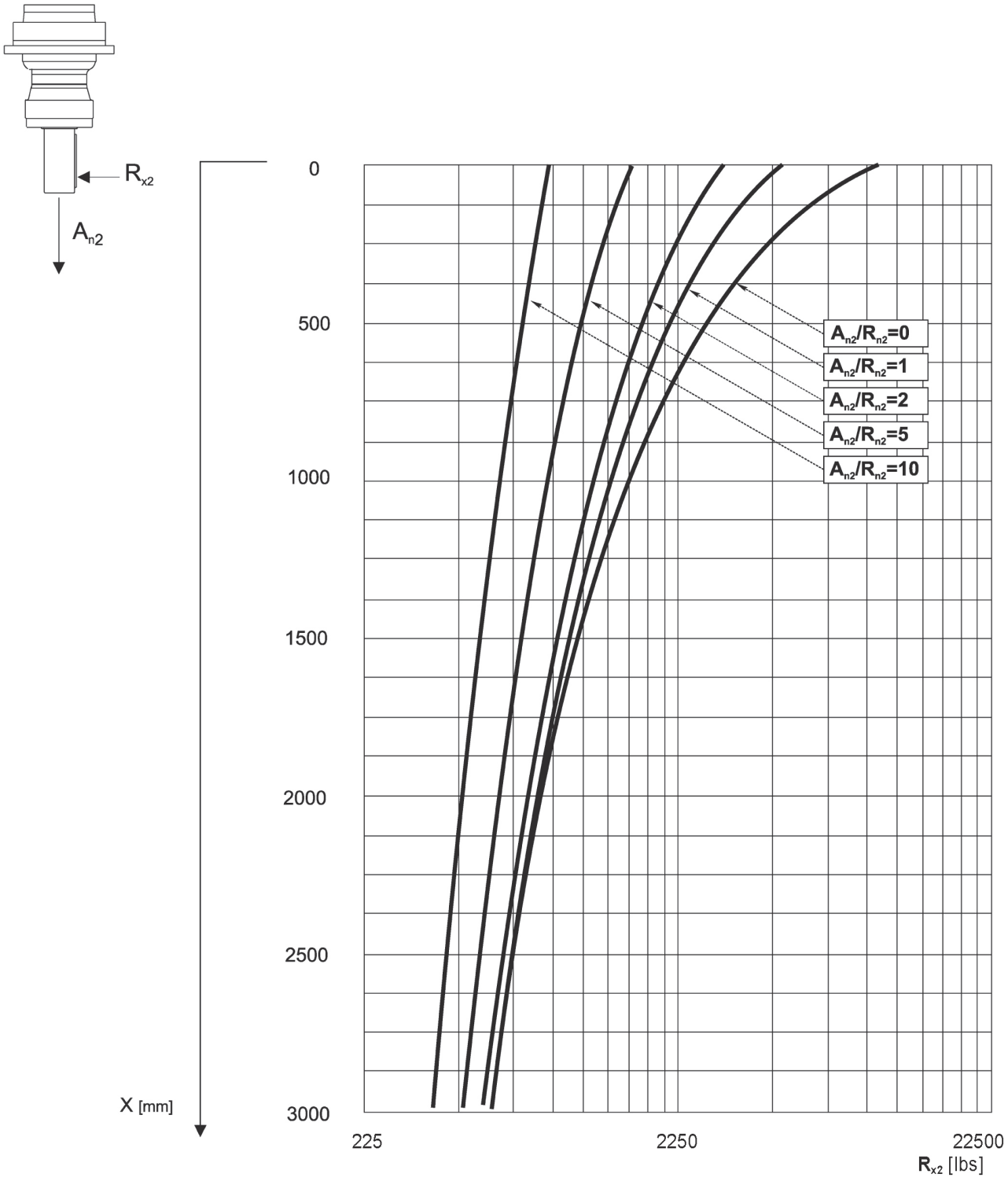
	R	R1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132	
										E	P	E	P	E	P	E	P	E	P	E	P
303 R2	143	140	85	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
303 R3	196	122	83	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
303 R4	249	122	87	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
303 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
303 R3	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—
303 R4	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—

Bonfiglioli Riduttori



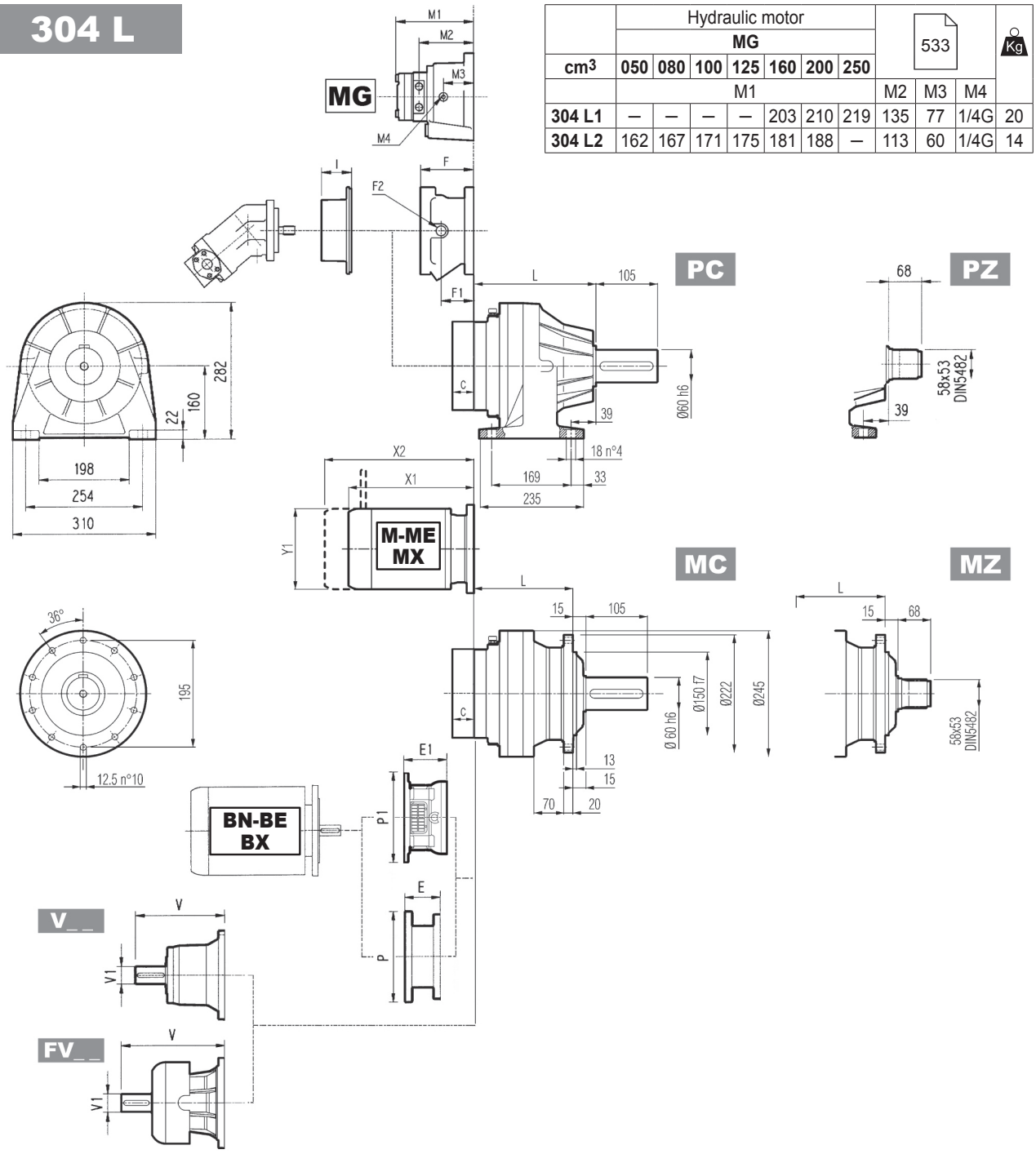
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



304 L

Metric

	Hydraulic motor							533			Kg
	MG										
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
304 L1	–	–	–	–	203	210	219	135	77	1/4G	20
304 L2	162	167	171	175	181	188	–	113	60	1/4G	14



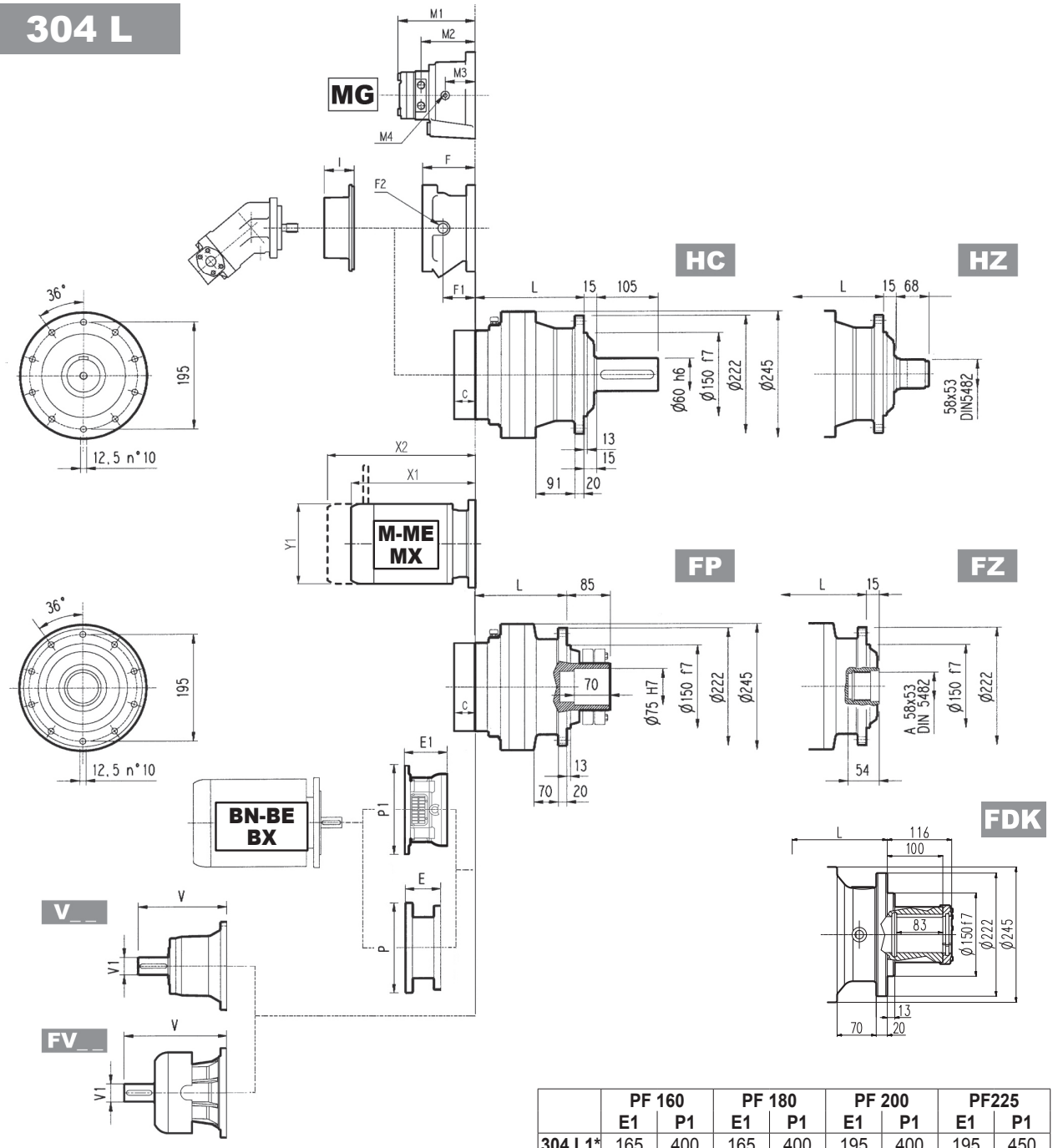
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
304 L1	125	165	150	125	31	40	35	31
304 L2	190	230	215	190	38	47	42	38
304 L3	243	283	268	243	42	51	46	42
304 L4	296	336	321	296	46	55	50	46

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
304 L1	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
304 L2	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
304 L3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
304 L4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

Bonfiglioli Riduttori

304 L



	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
304 L1*	165	400	165	400	195	400	195	450
304 L2	165	400	165	400	—	—	—	—
304 L3	165	400	165	400	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli technical service
NOTE: For R design contact Bonfiglioli Technical service

FP T_{2max} = 64,600 lb·in

Dimensions are in mm

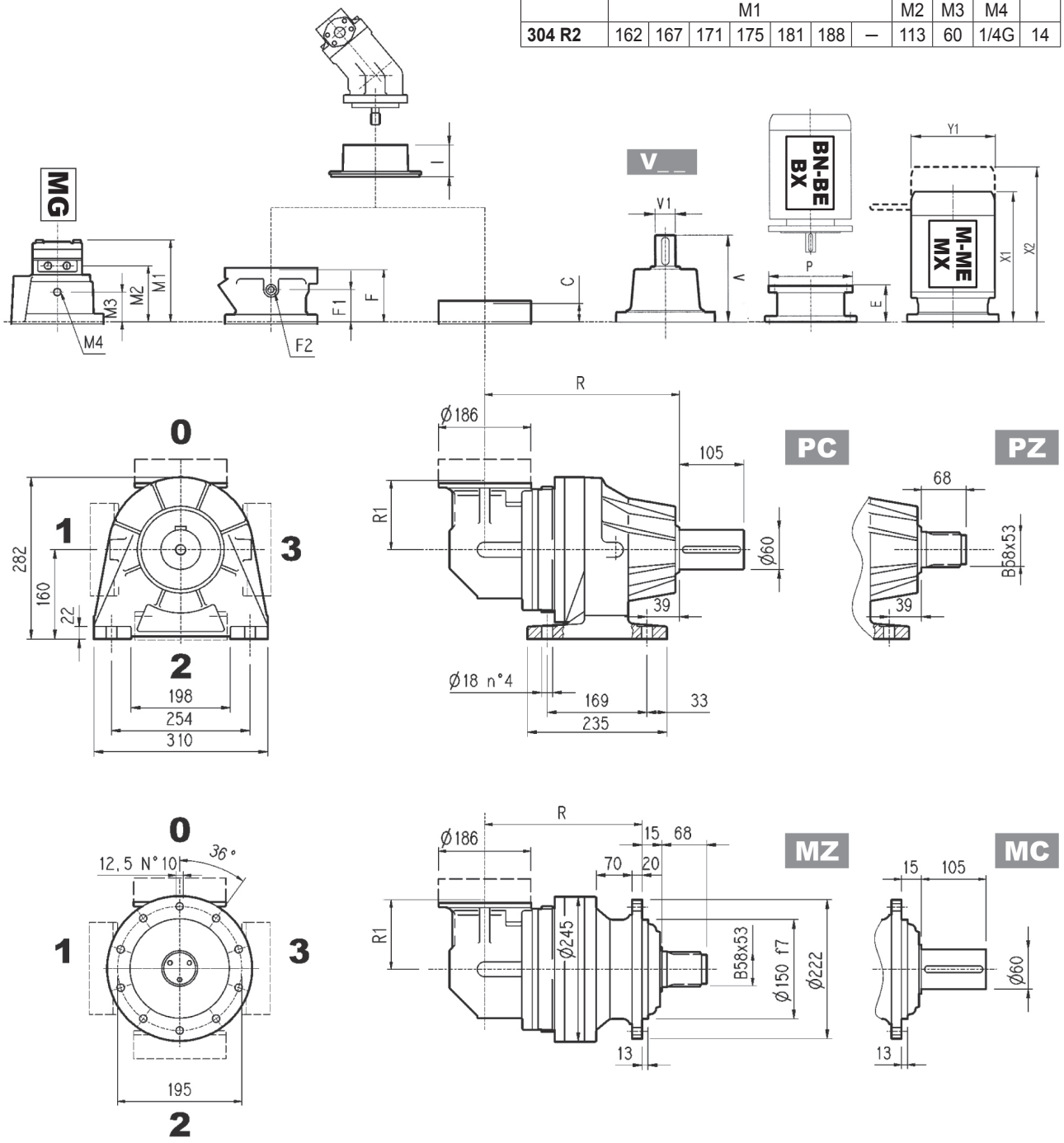
	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
304 L1	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
304 L2	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
304 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
304 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
304 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
304 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
304 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

304 R

Metric

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
304 R2	162	167	171	175	181	188	–	113	60	1/4G	14

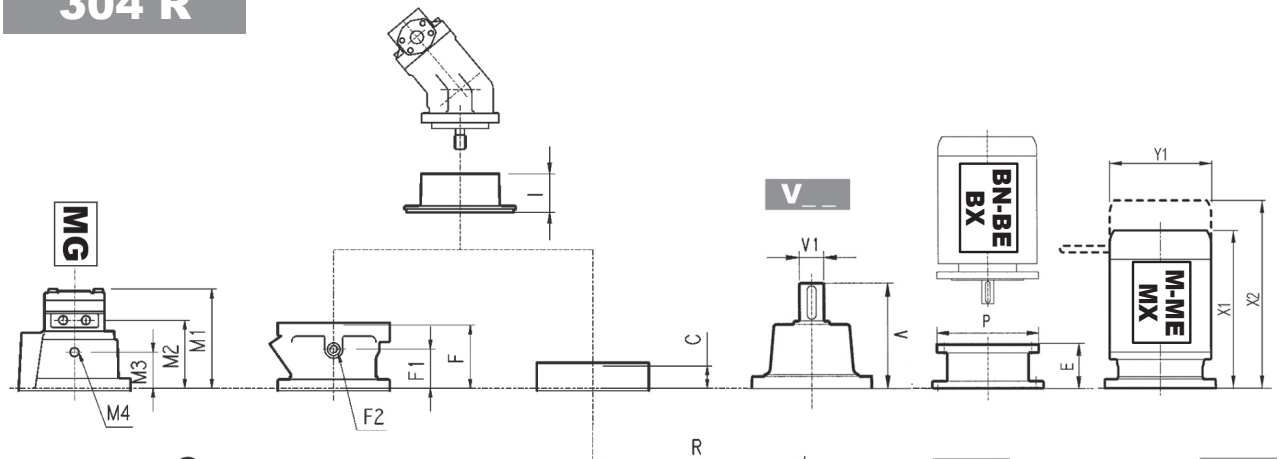


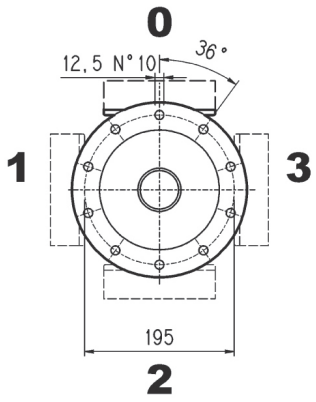
Dimensions are in mm

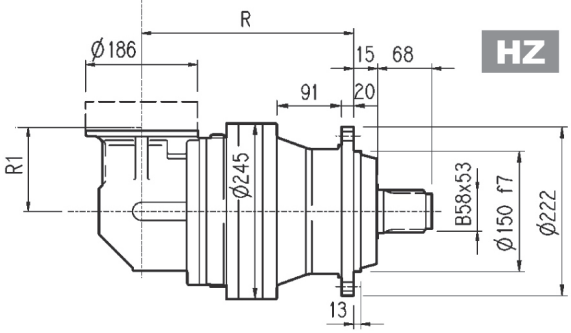
	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
304 R2	217	257	242	217	140	51	60	55	51
304 R3	282	322	307	282	122	52	61	56	52
304 R4	335	375	360	335	122	56	65	60	56

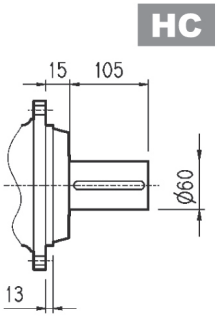
	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
304 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
304 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
304 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

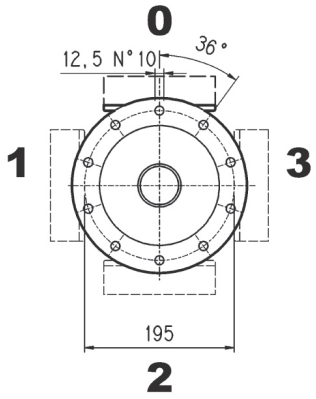
304 R

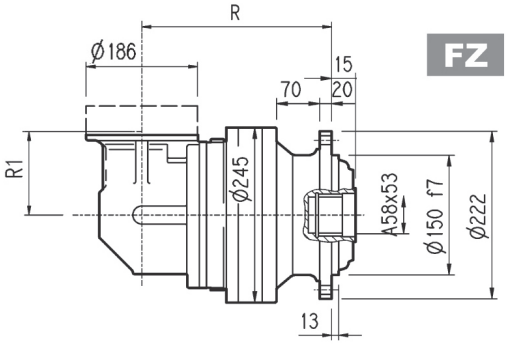


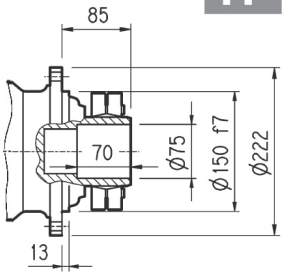


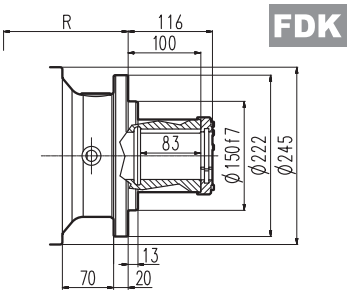












FP T_{2max} = 64,600 lb·in

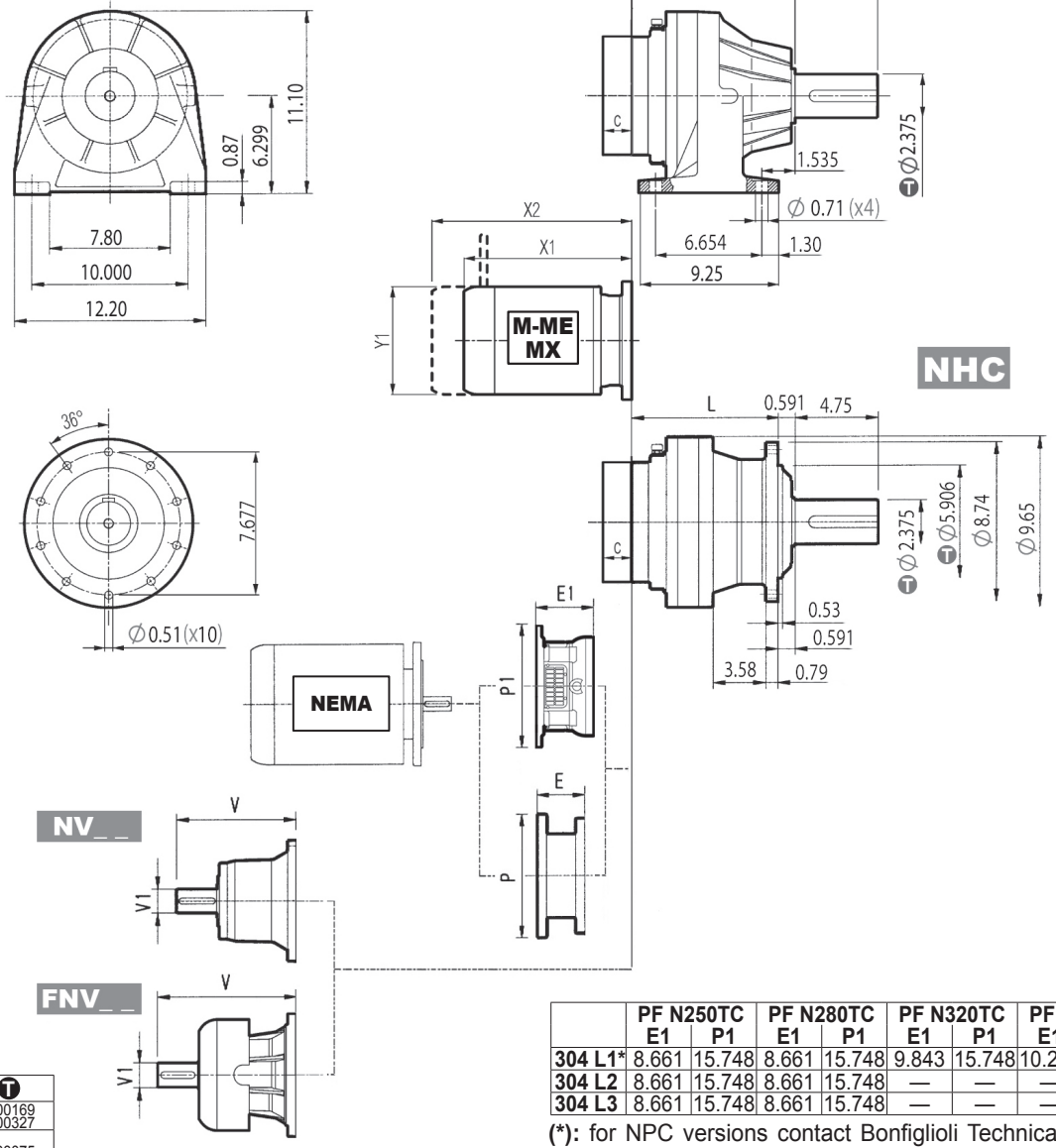
Dimensions are in mm

	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
304 R2	65	160	84	200	84	200	94	250	94	250	114	300
304 R3	65	160	84	200	84	200	94	250	94	250	114	300
304 R4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 R2	-	-	-	328	—	156	373	—	195	405	—	195	508	—	258
304 R3	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—
304 R4	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—

304 L

Imperial



inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
304 L1*	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
304 L2	8.661	15.748	8.661	15.748	—	—	—	—
304 L3	8.661	15.748	8.661	15.748	—	—	—	—

(*): for NPC versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

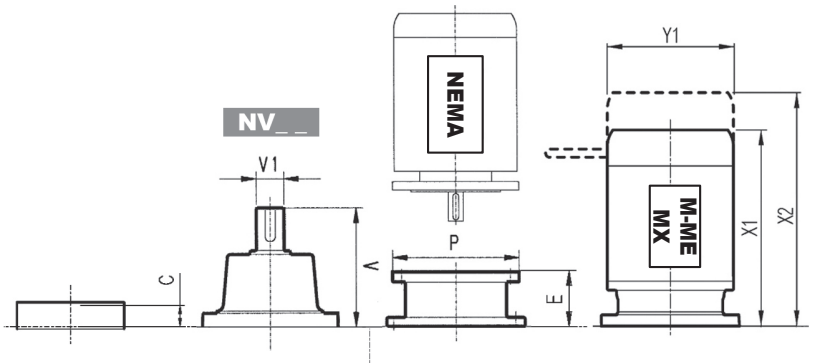
	L		lbs	
	NPC	NHC	NPC	NHC
304 L1	6.50	5.91	88.2	77.2
304 L2	9.05	8.46	103.6	92.6
304 L3	11.14	10.55	112.4	101.4
304 L4	13.23	12.64	121.3	110.2

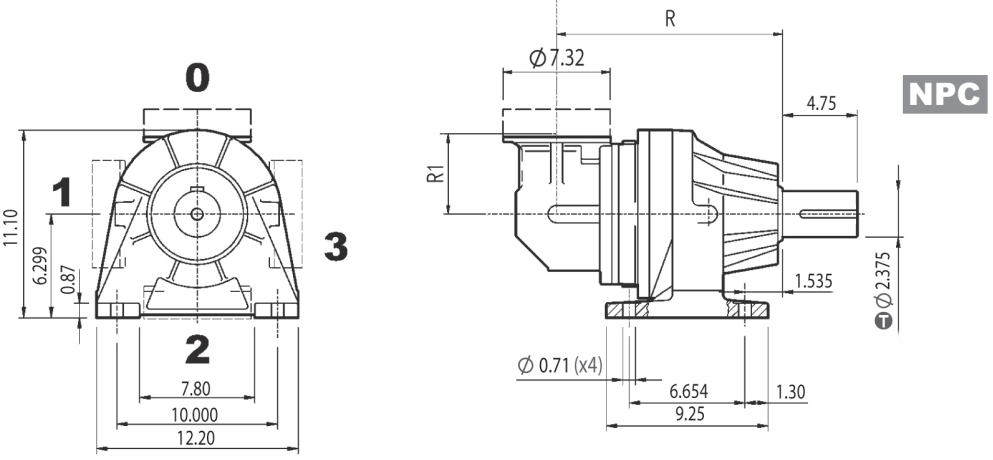
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
304 L1	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
304 L2	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
304 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
304 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

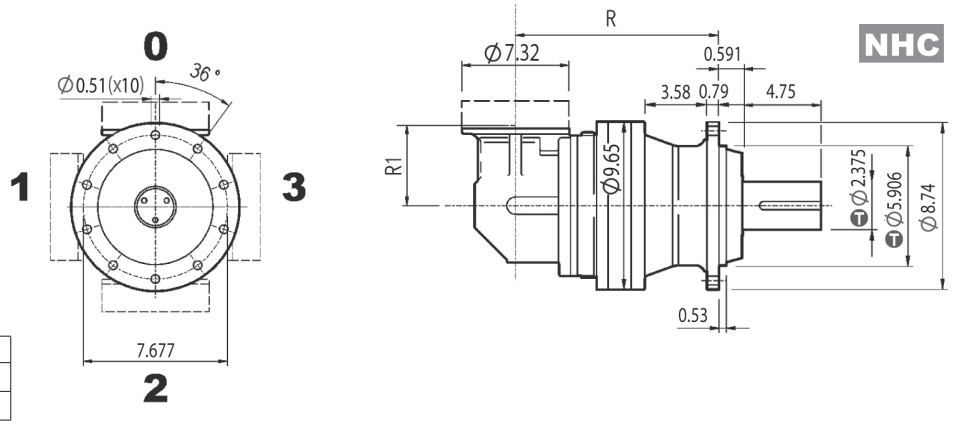
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
304 L1	—	—	—	—	—	—	—	—	5.22	11.81	6.22	13.78
304 L2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
304 L3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
304 L4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 L1	—	—	—	—	—	—	—	—	—	—	—	—	18.11	—	10.16	21.73	—	12.20	23.46	—	12.20
304 L2	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
304 L3	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
304 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—

304 R







inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

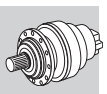
	R		R1	lbs	
	NPC	NHC		NPC	NHC
304 R2	10.12	9.53	5.51	132.3	121.3
304 R3	12.68	12.09	4.80	134.5	123.5
304 R4	14.76	14.17	4.80	143.3	132.3

	V	V1	lbs	V	V1	lbs	C	Input
304 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
304 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
304 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

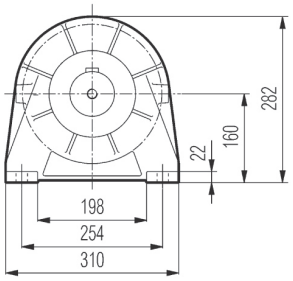
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
304 R2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
304 R3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
304 R4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

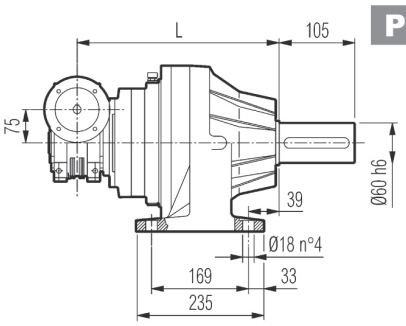
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 R2	—	—	—	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
304 R3	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	—	—	—
304 R4	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	—	—	—

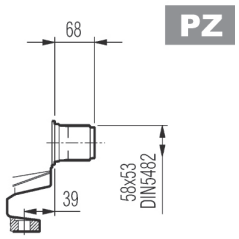
3/V 04 L3

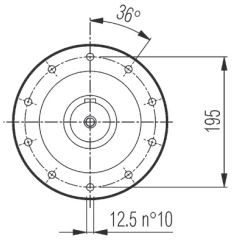


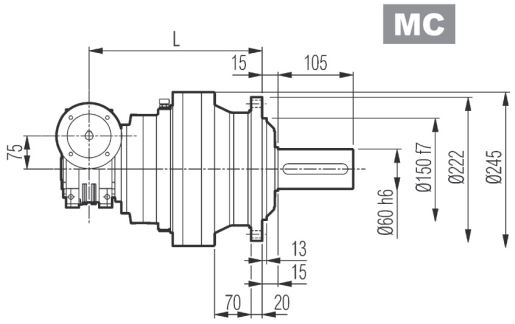
Metric

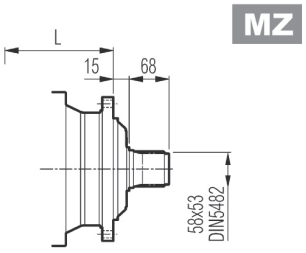


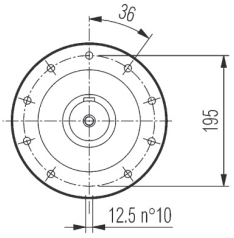


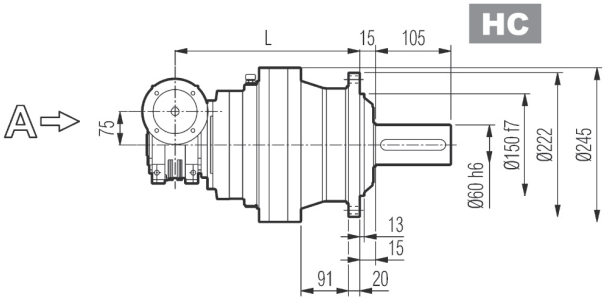


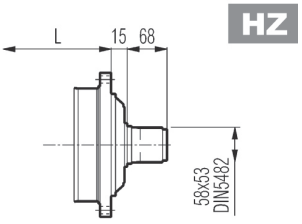


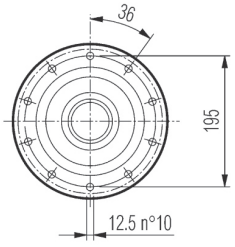


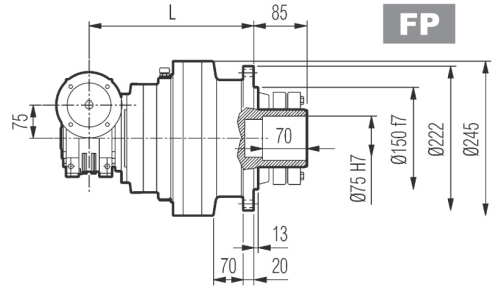


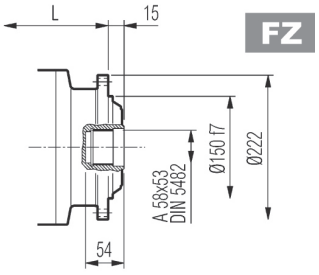


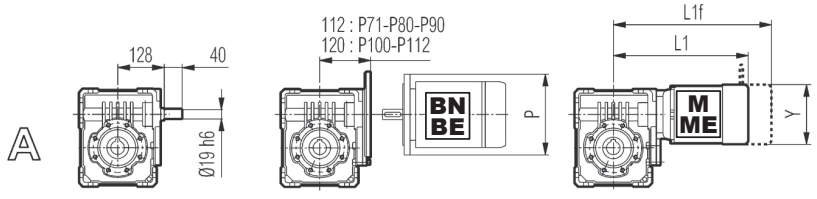


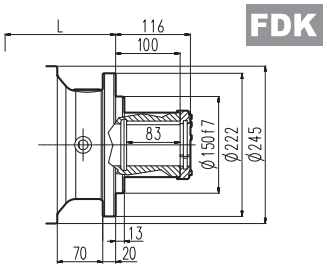












FP | **T_{2max} = 64,600 lb·in**

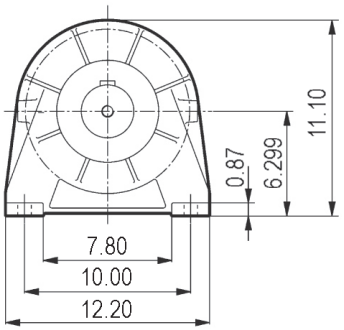
Dimensions are in mm

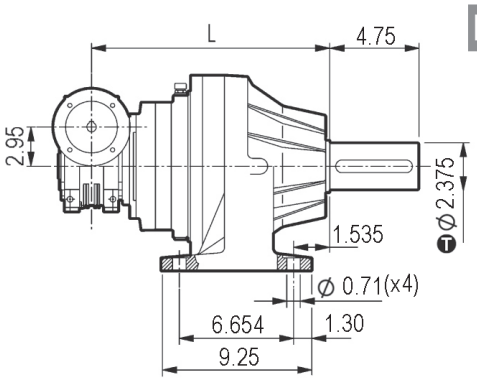
	L				Kg				P71	P80	P90	P100	P112
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P	P	P
3/V 04 L3	305	345	330	305	47	56	51	47	160	200	200	250	250

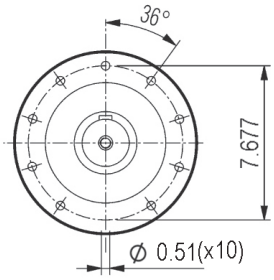
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 04 L3	308	369	138	333	—	156	376	—	193	408	—	193

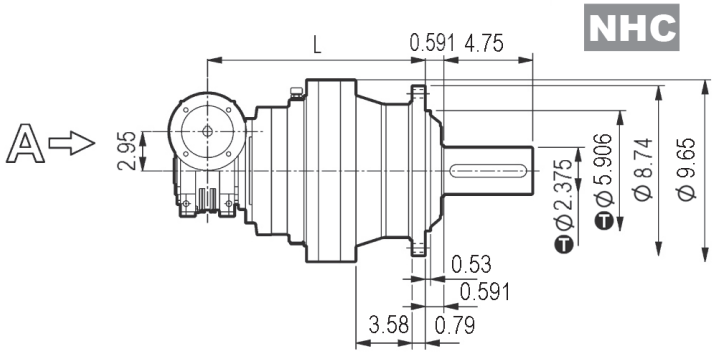
Bonfiglioli Riduttori

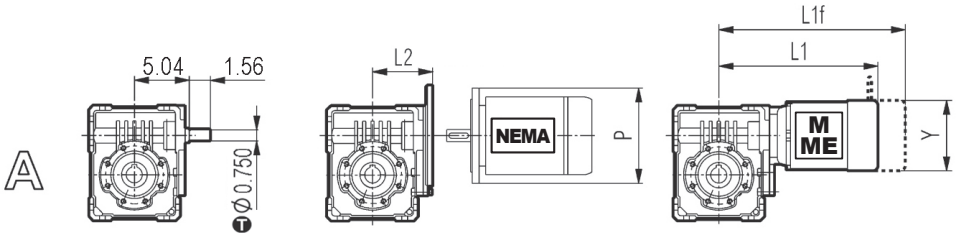
3/V 04 L3











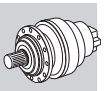
inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075
0.750	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

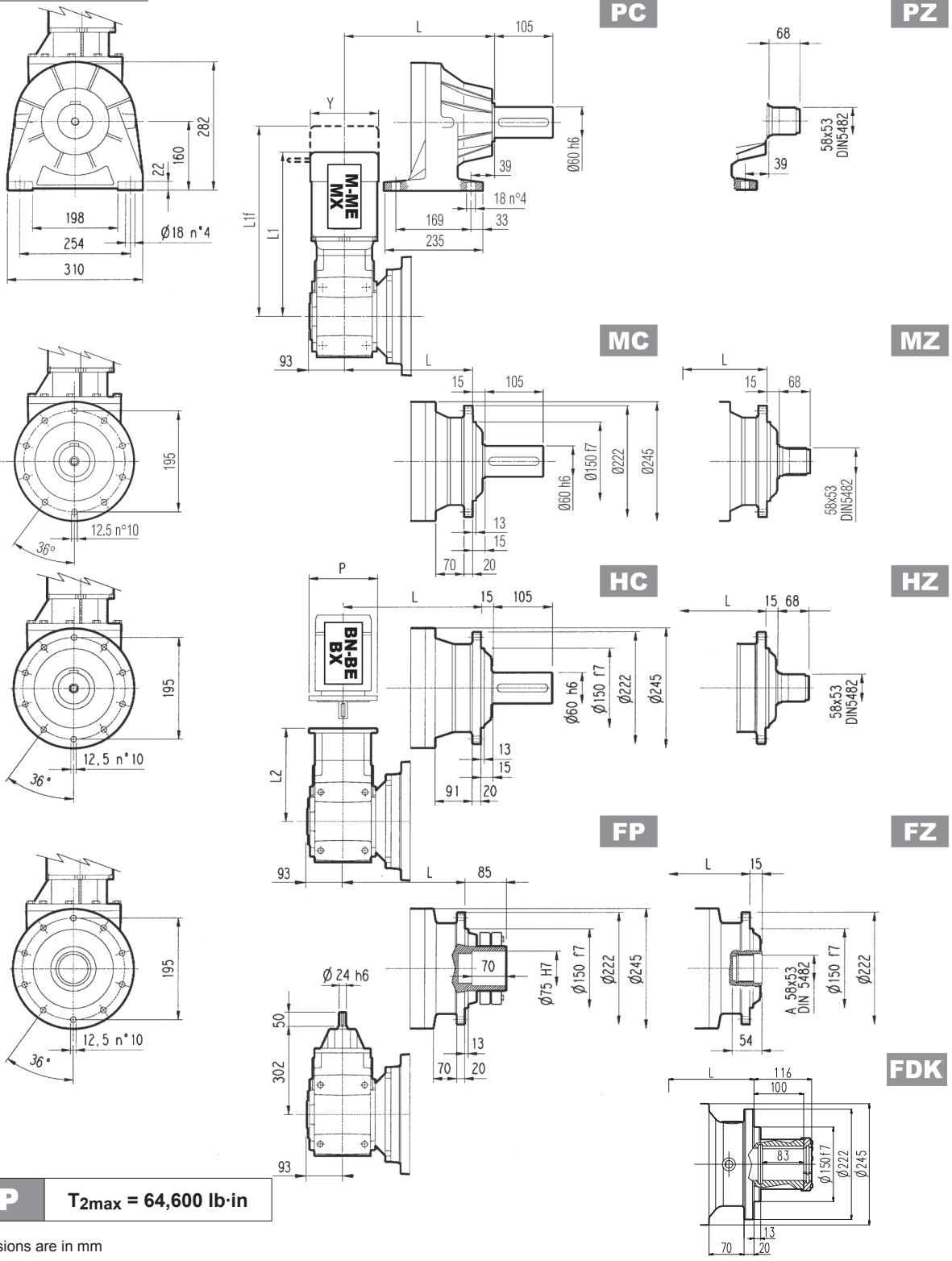
	L		lbs		N56C	N140TC	N180TC
	NPC	NHC	NPC	NHC	P	P	P
3/V 04 L3	13.58	12.99	123.5	112.4	6.54	6.54	9.02

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 04 L3	12.12	14.53	5.43	13.11	—	6.14	14.80	—	7.60	16.06	—	7.60

3/A 04 L2



Metric



FP T_{2max} = 64,600 lb·in

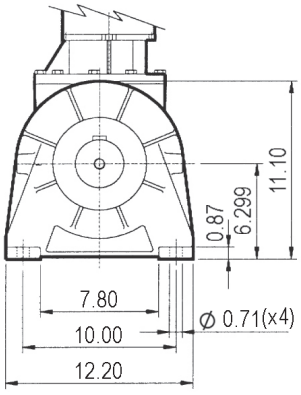
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 04 L2	258	298	283	258	80	95	90	80

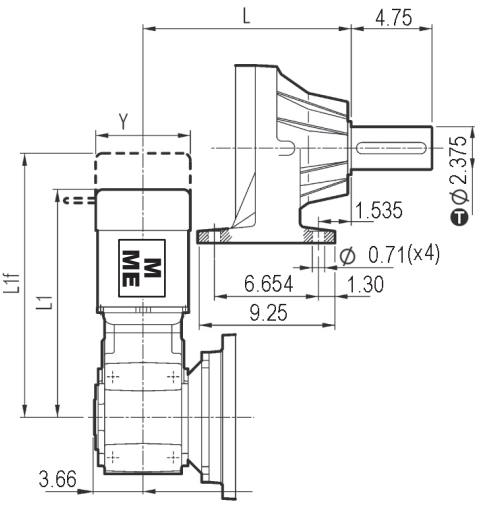
	P63		P71		P80		P90		P100		P112		P132	
	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/A 04 L2	263	140	263	160	282.5	200	282.5	200	292.5	250	292.5	250	329	457

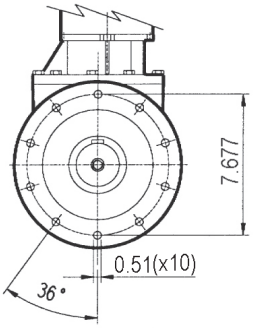
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 04 L2	418	439	138	447	—	156	490	—	195	522	—	195	630	—	258

3/A 04 L2

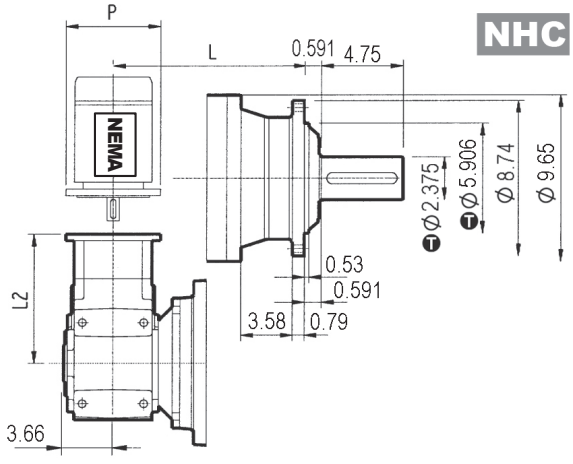


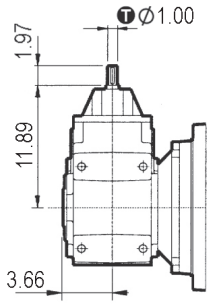
NPC





NHC



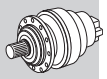


inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075
1.000	0 -0.00051

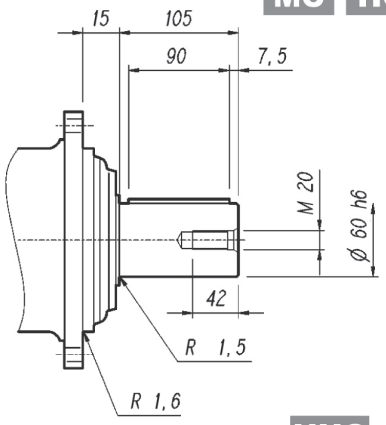
Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N56C		N140TC		N180TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P
3/A 04 L2	11.73	11.14	210	200	10.35	6.50	10.35	6.50	11.10	6.50

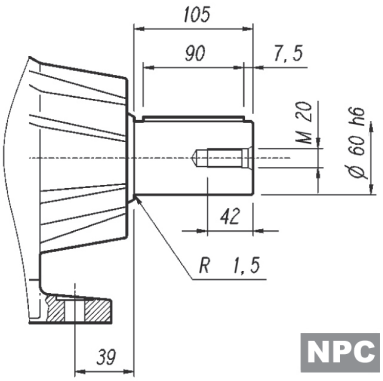
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 04 L2	16.46	17.28	5.43	17.60	—	6.14	19.29	—	7.68	20.55	—	7.68	24.80	—	10.16

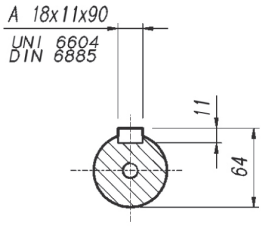


MC HC

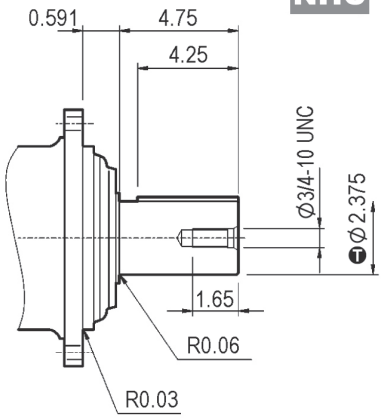


PC

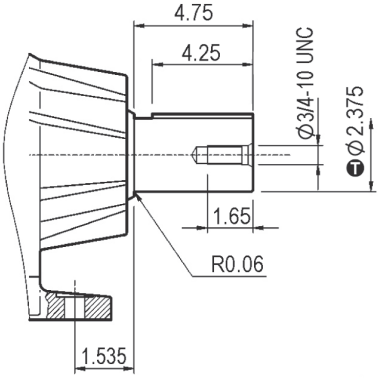


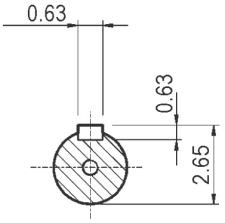


NHC

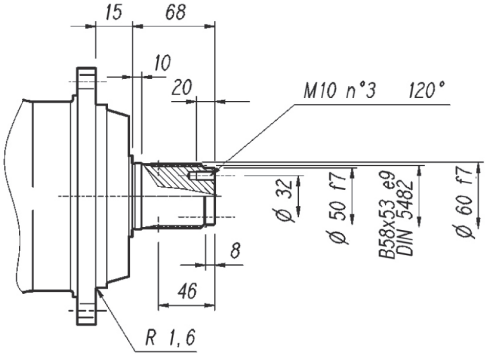


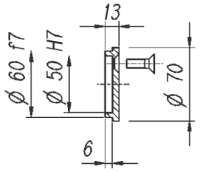
NPC



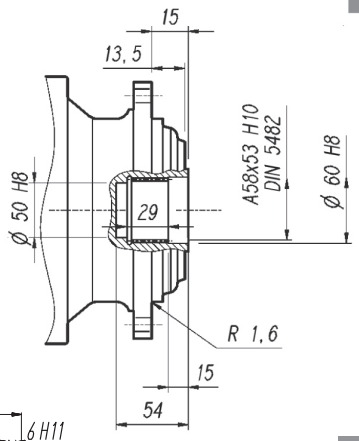


MZ HZ

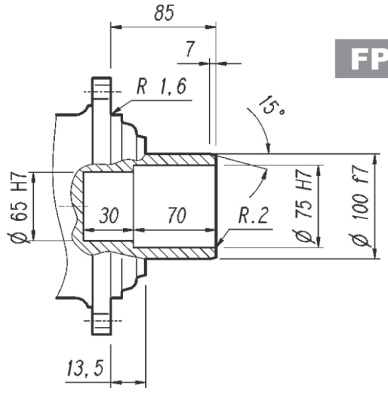


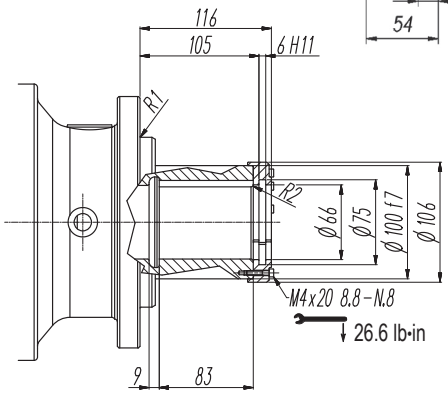


FZ

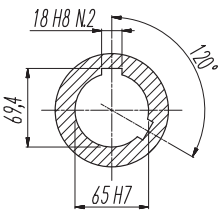


FP





FDK



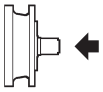
FP | T_{2max} = 64,600 lb·in

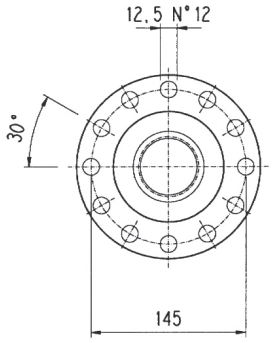
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

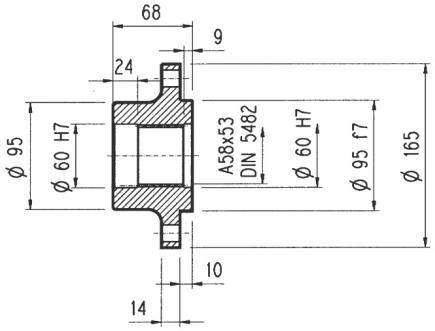
inch	Ⓣ
2.375	$^{0}_{-0.00075}$

Flange

W0A





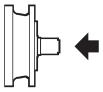


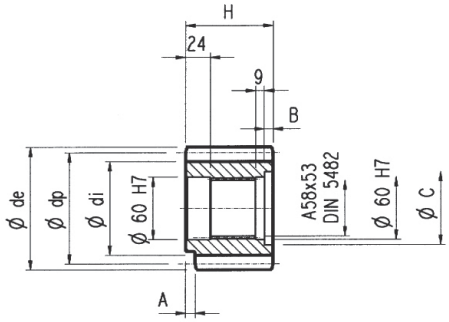
Material: Steel C40

Dimensions are in mm

Pinions

P...





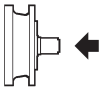
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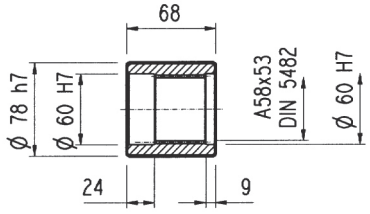
Dimensions are in mm

	m	z	x	dp	di	de	H	A	B	C	Material
PCL1	5	19	—	95	82	104	77	12	9	72	Steel 39NiCrMo3 hardened and tempered
PCL2	5	19	—	95	82	104	68	—	—	—	
PCM	5	20	—	100	87.5	110	68	18	—	—	Steel 18NiCrMo5 case hardened
PCP	5	22	—	110	97.5	120	68	18	—	—	
PDE	6	14	0.500	84	75	99.6	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PDI	6	18	0.500	108	99	123.6	68	—	—	—	
PDM	6	20	0.833	120	115	140	68	—	—	—	
PFD	8	13	0.675	104	95	127.6	68	—	—	—	Steel 18NiCrMo5 case hardened
PFE1	8	14	—	112	92	126	68	—	—	—	
PFE2	8	14	—	112	92	126	80	—	12	72	
PFF	8	15	—	120	100	136	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PFP	8	22	—	176	156	190	77	12	10	71	
PHG	10	16	0.500	160	145	188	75	—	7	72	

Sleeve coupling

M0A





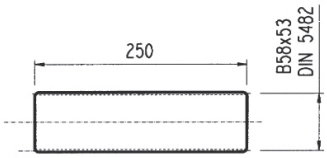
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

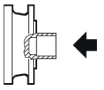


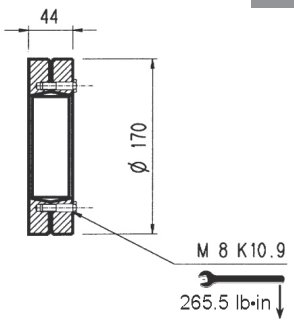


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

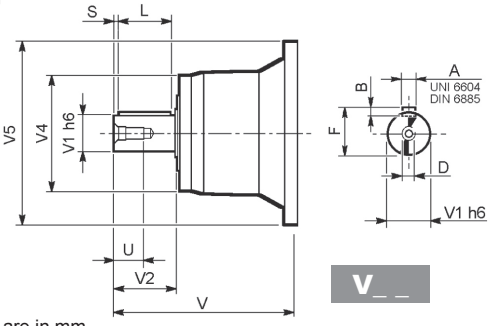




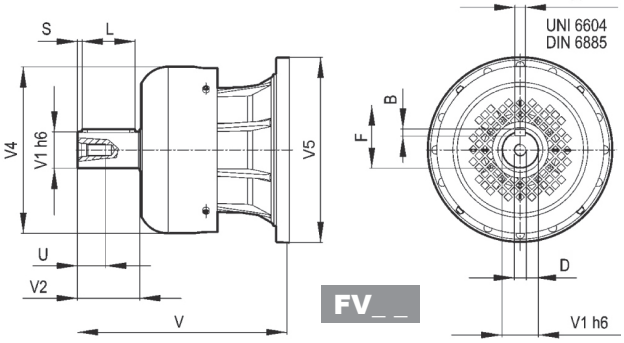
Dimensions are in mm

304 L 304 R





V_ _



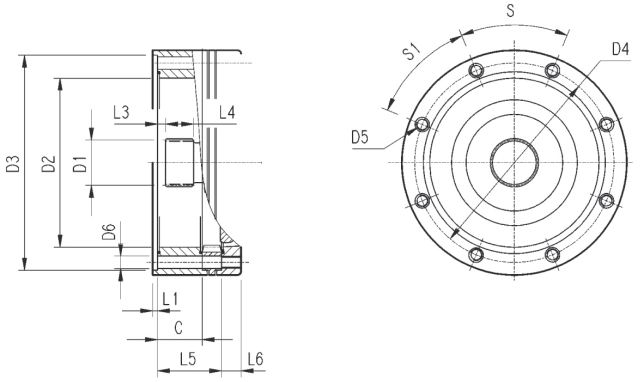
FV_ _

Dimensions are in mm

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
304 L1	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
304 L2	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
304 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
304 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
304 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

304 L 304 R

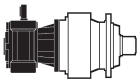


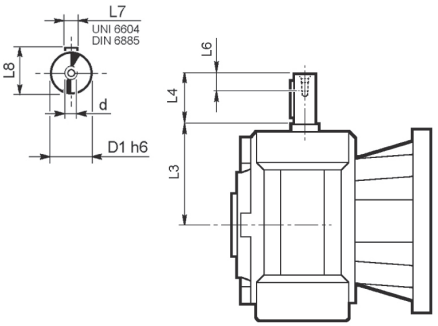


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
304 L1	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	—	18	45°	45°	A
304 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
304 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	118	18	45°	45°	A
304 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	171	18	45°	45°	A
304 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 04 L3

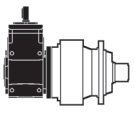


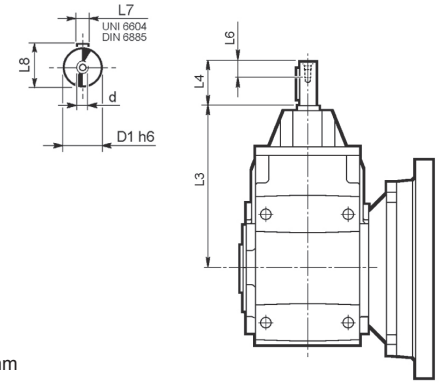


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 04 L3_HS	19	128	40	16	6	21.5	M6

3/A 04 L2

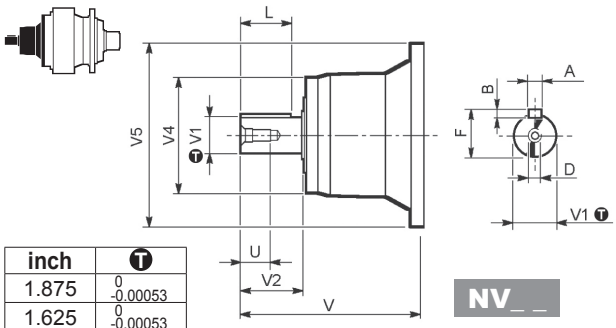




Dimensions are in mm

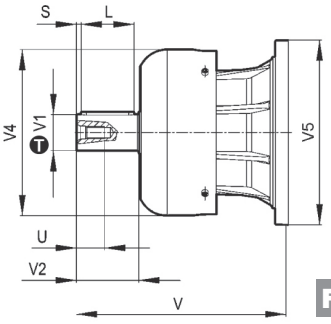
	D1 h6	L3	L4	L6	L7	L8	d
3/A 04 L2_HS	24	302	50	19	8	27	M8

304 L 304 R

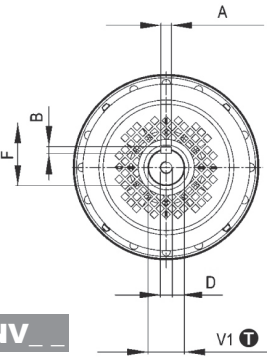


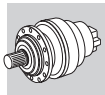
inch	T
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

NV_ _



FNV_ _





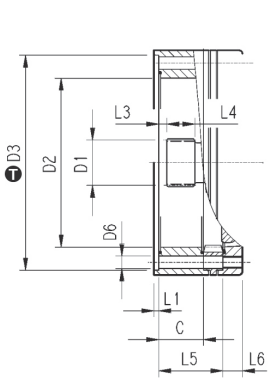
Imperial

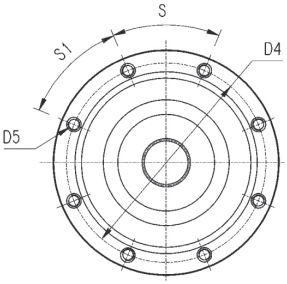
Dimensions are in Inch except when shown in *italic [mm]*

		V	V1	V2	V4	V5	A	B	F	L	D	U
304 L1	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
304 L2	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
304 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
304 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
304 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

304 L 304 R





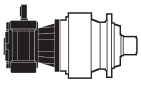


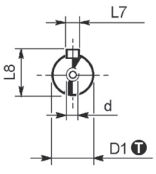
inch	T
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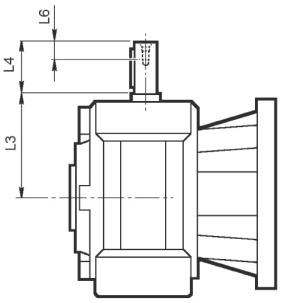
Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
304 L1	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	—	0.71	45°	45°	A
304 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.56	0.71	45°	45°	A
304 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
304 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
304 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 04 L3





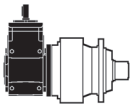


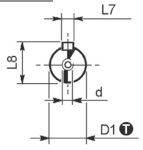
inch	T
0.750	0 -0.00051

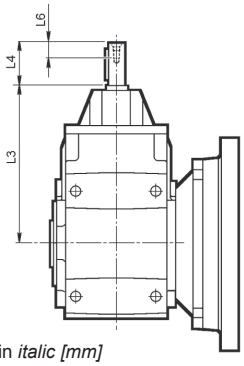
Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 04 L3_NHS	0.750	5.04	1.575	0.63	0.188	0.832	1/4-20UNC

3/A 04 L2



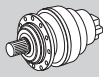




inch	T
1.000	0 -0.00051

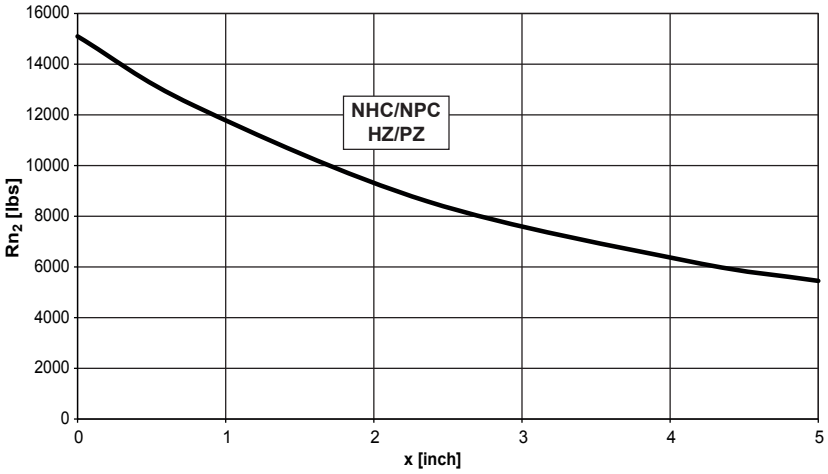
Dimensions are in Inch except when shown in *italic [mm]*

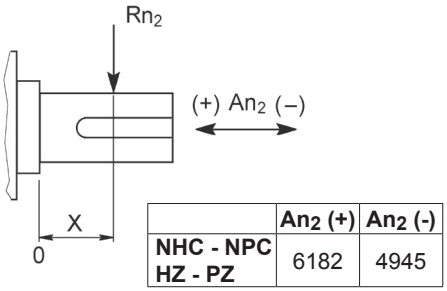
	D1	L3	L4	L6	L7	L8	d
3/A 04 L2_NHS	1.000	11.89	1.969	0.75	0.250	1.109	3/8-16UNC



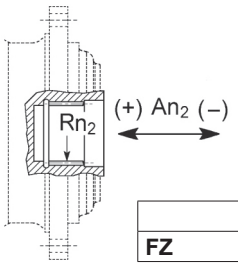
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





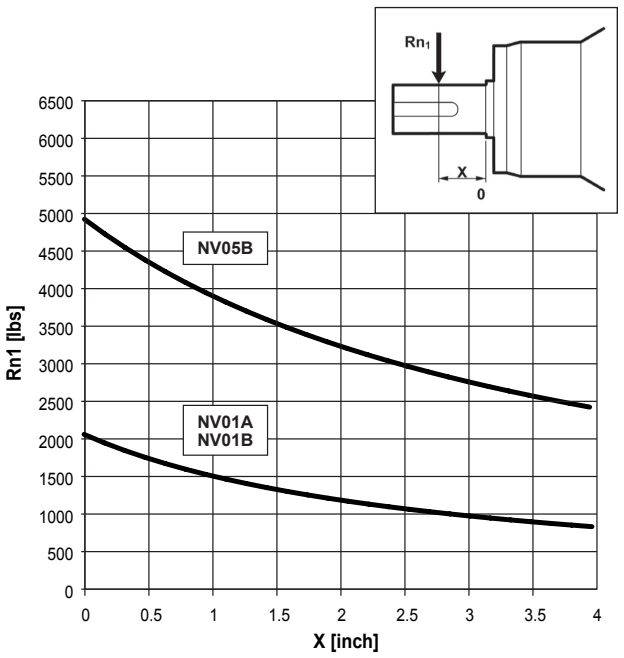
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	6182	4945

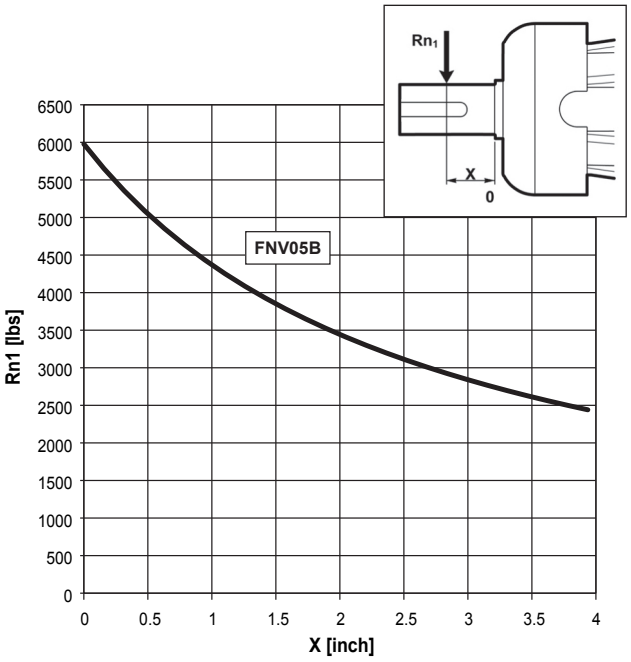


	Rn2	An2 (+/-)
FZ	2504	2609

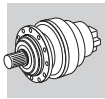
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.48**	**1.48**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

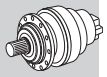




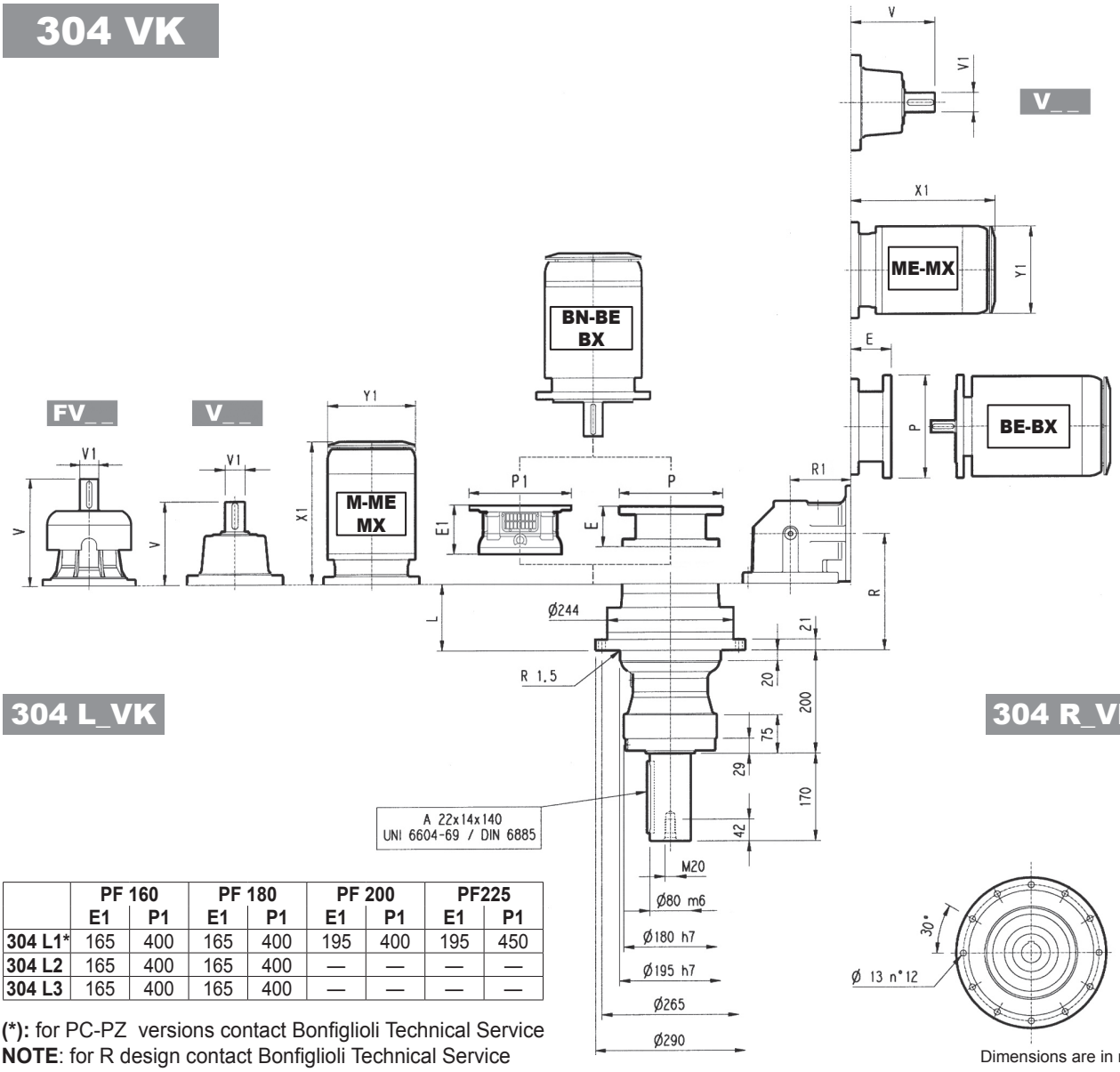
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



304 VK



Metric



304 L_VK

304 R_VK

	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
304 L1*	165	400	165	400	195	400	195	450
304 L2	165	400	165	400	—	—	—	—
304 L3	165	400	165	400	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200	
															E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
304 L1	51	65	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
304 L2	116	73	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
304 L3	169	76	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
304 L4	222	80	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

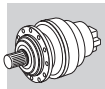
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
304 L2	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
304 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
304 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132	
										E	P	E	P	E	P	E	P	E	P	E	P
304 R2	143	140	85	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
304 R3	208	122	86	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
304 R4	261	122	90	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + ME1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
304 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
304 R3	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—
304 R4	253	314	138	328	—	156	373	—	195	405	—	195	—	—	—

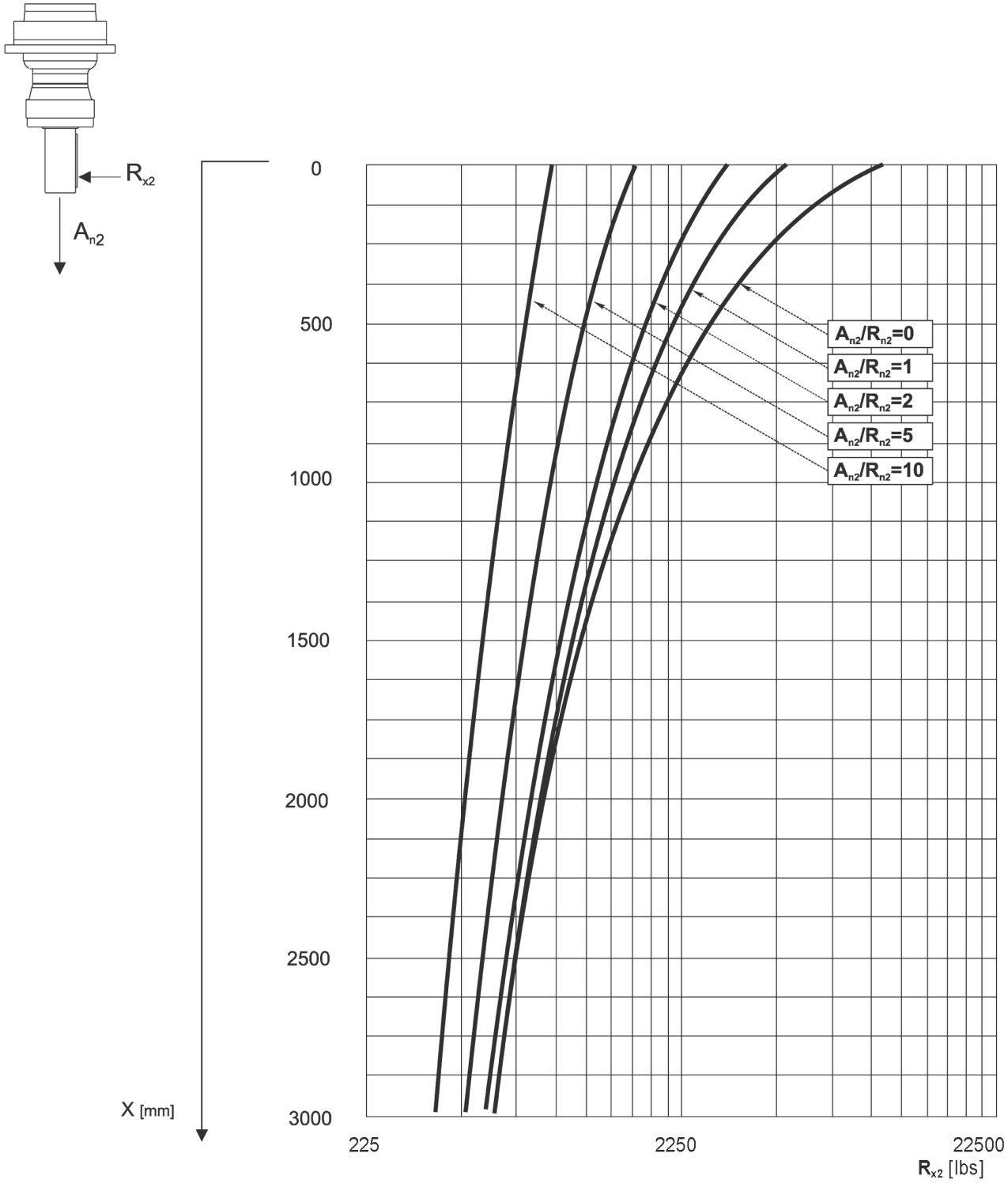
Bonfiglioli Riduttori

304 VK



Metric

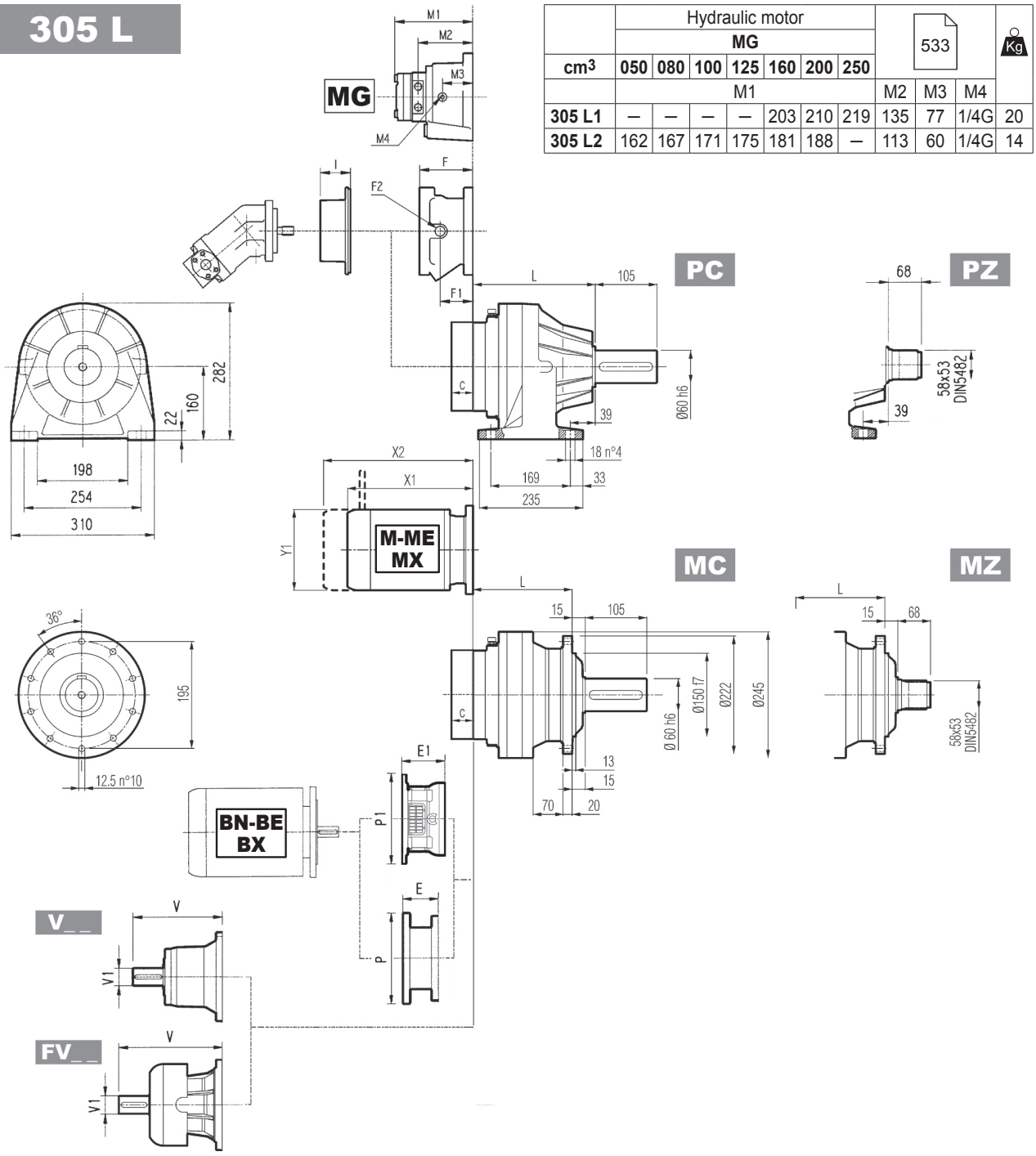
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



305 L

Metric

	Hydraulic motor							533			Kg
	MG										
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
305 L1	–	–	–	–	203	210	219	135	77	1/4G	20
305 L2	162	167	171	175	181	188	–	113	60	1/4G	14

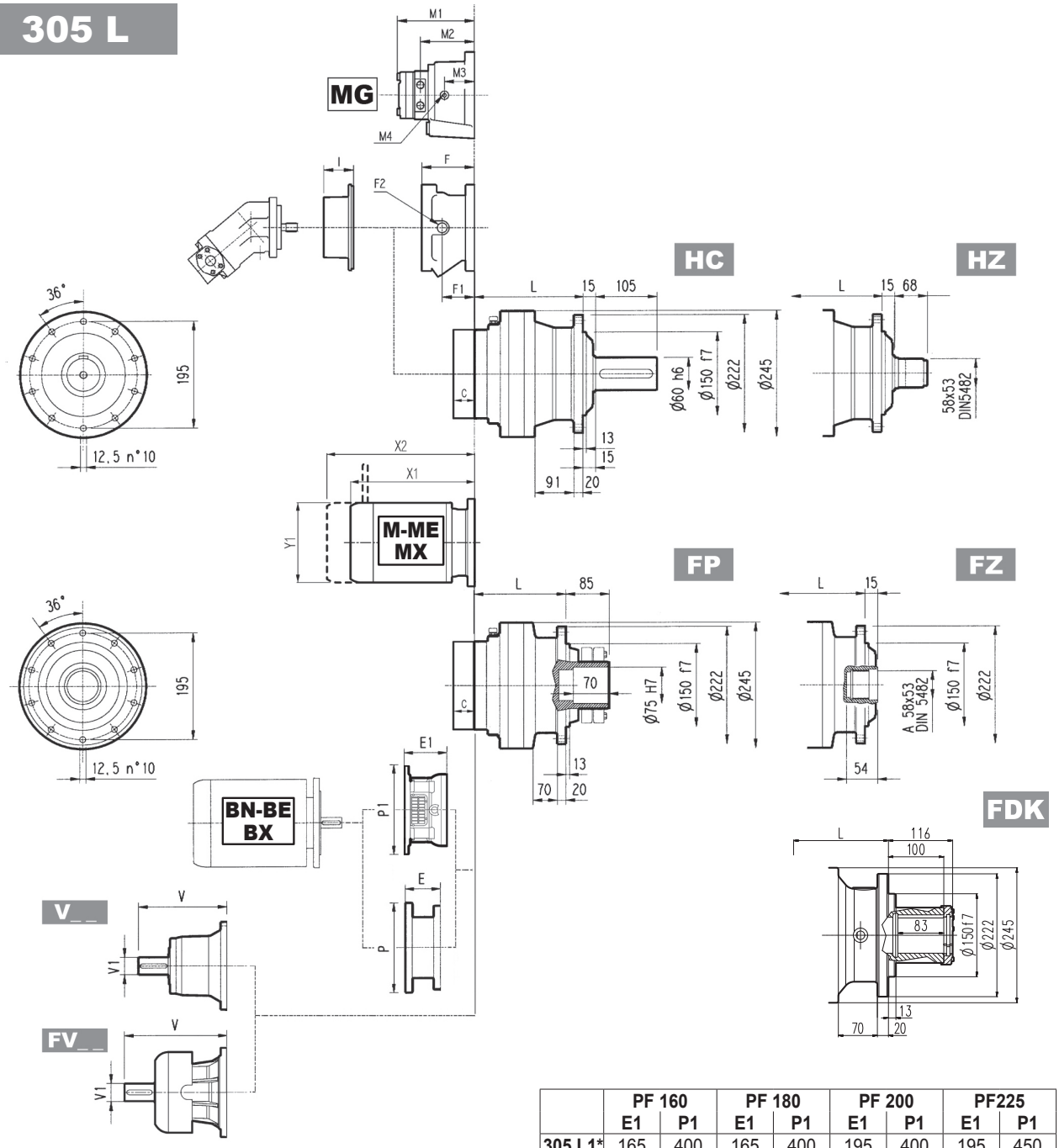


Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
305 L1	143	183	168	143	36	45	40	36
305 L2	208	248	233	208	43	52	47	43
305 L3	261	301	286	261	47	56	51	47
305 L4	314	354	339	314	51	60	55	51

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
305 L1	239	48	15	—	—	—	276	48	17	37	A	522	145	95	1/4 G	5	A	16
305 L2	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
305 L3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
305 L4	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10

305 L



	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
305 L1*	165	400	165	400	195	400	195	450
305 L2	165	400	165	400	—	—	—	—
305 L3	165	400	165	400	—	—	—	—

FP T_{2max} = 66,380 lb·in

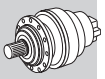
(*): for PC-PZ versions contact Bonfiglioli technical service
NOTE: For R design contact Bonfiglioli Technical service

Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
305 L1	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
305 L2	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
305 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
305 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

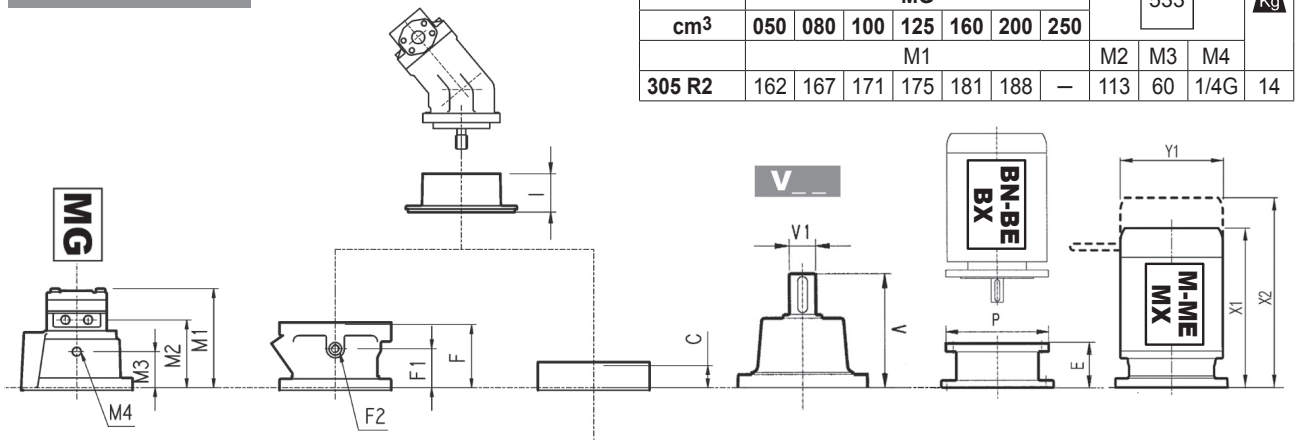
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	574	—	310	552	—	310
305 L2	—	—	—	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
305 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
305 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

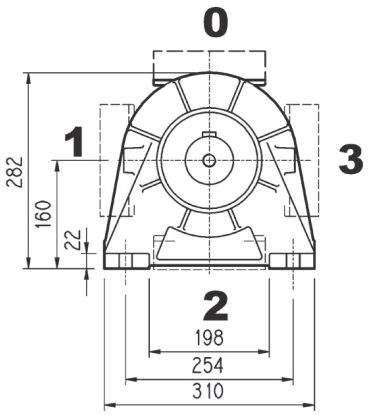
305 R

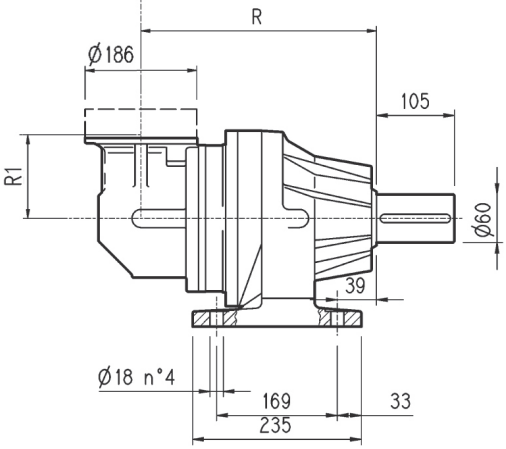


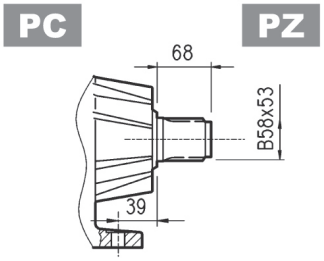
Metric

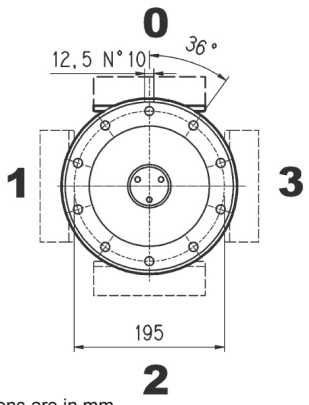
	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
305 R2	162	167	171	175	181	188	–	113	60	1/4G	14

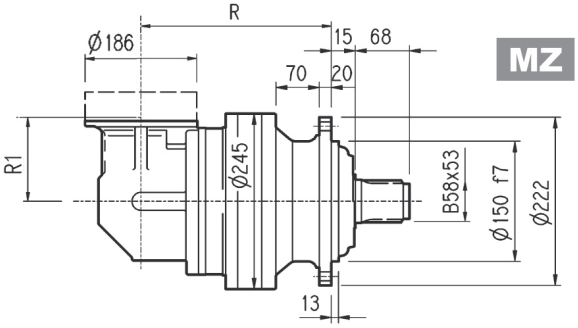


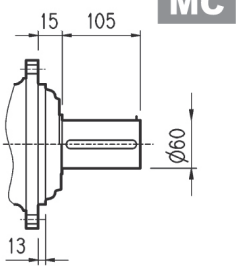












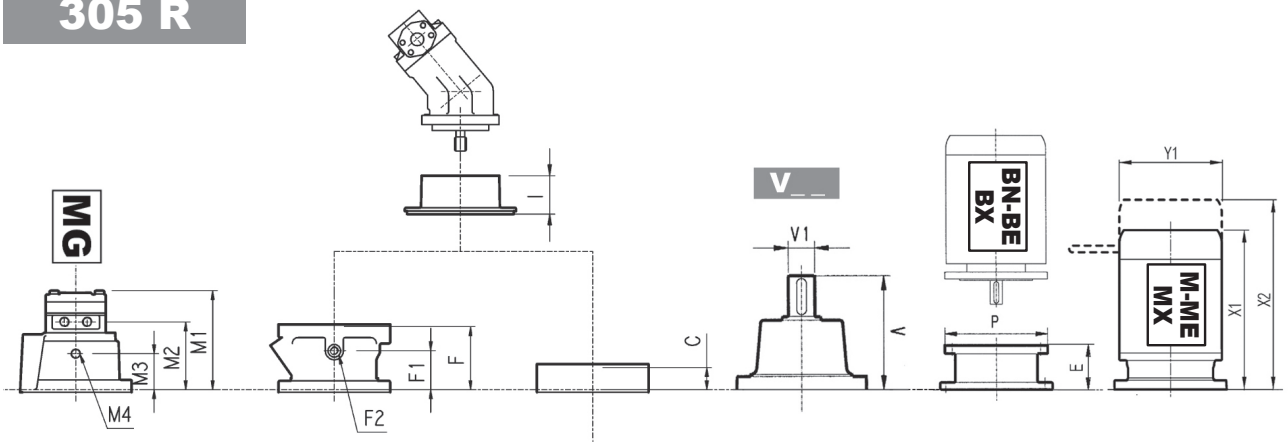
Dimensions are in mm

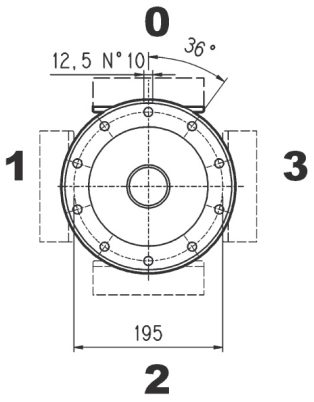
	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
305 R2	235	375	260	235	140	56	65	60	56
305 R3	300	340	325	300	122	57	66	61	57
305 R4	353	393	378	353	122	61	70	65	61

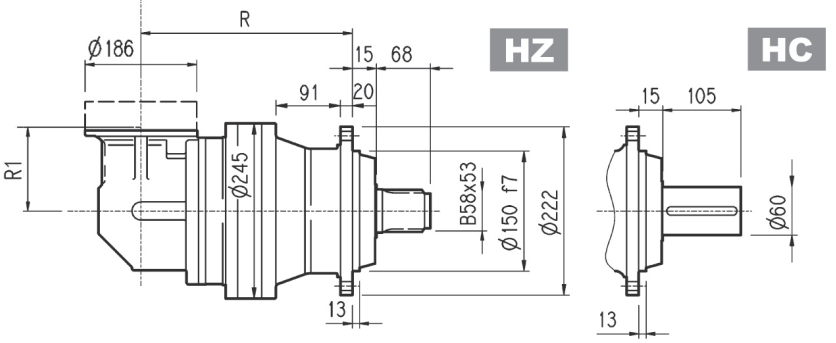
	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
305 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
305 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
305 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

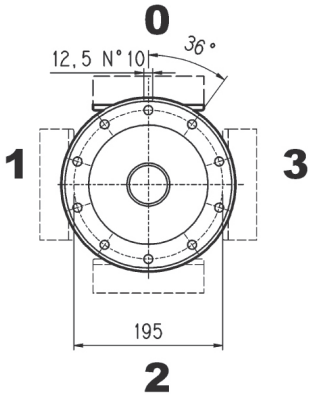
Bonfiglioli Riduttori

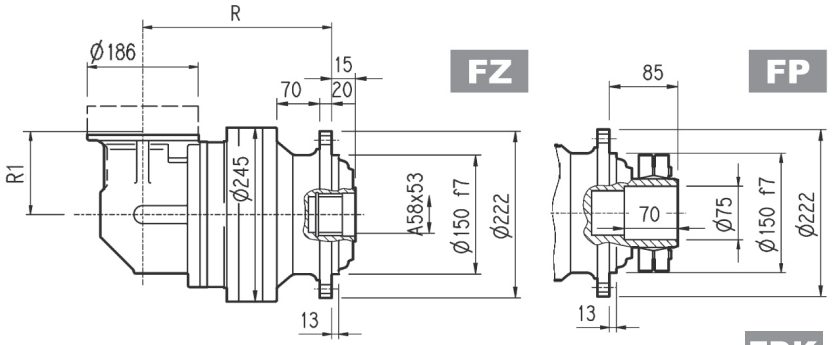
305 R

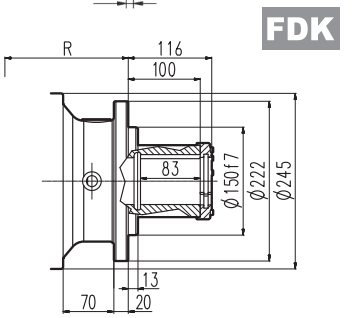












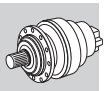
FP T_{2max} = 66,380 lb·in

Dimensions are in mm

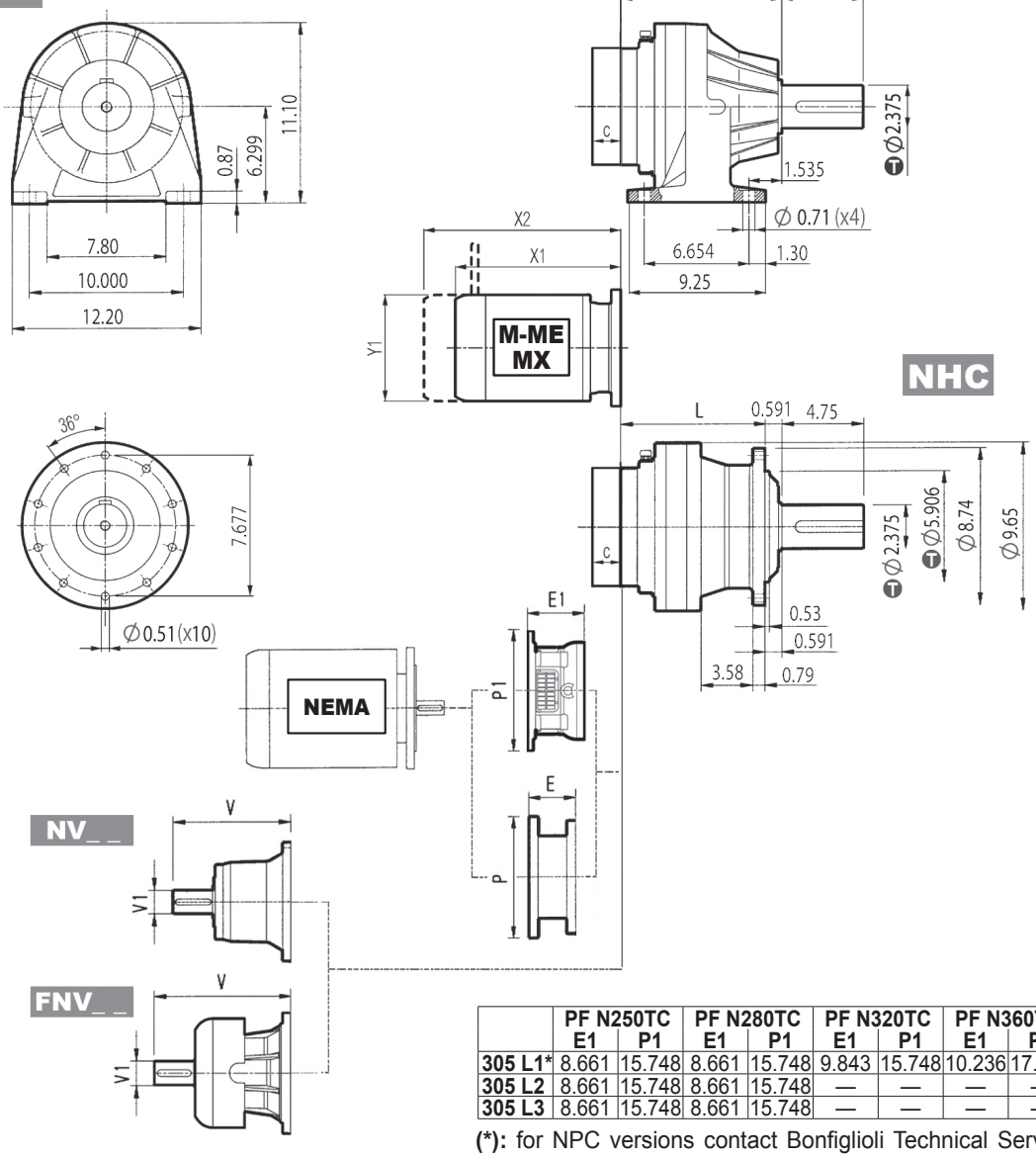
	P71		P80		P90		P100		P112		P132	
	E	P	E	P	E	P	E	P	E	P	E	P
305 R2	65	160	84	200	84	200	94	250	94	250	114	300
305 R3	65	160	84	200	84	200	94	250	94	250	114	300
305 R4	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
305 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
305 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258

305 L



Imperial



inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
305 L1*	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
305 L2	8.661	15.748	8.661	15.748	—	—	—	—
305 L3	8.661	15.748	8.661	15.748	—	—	—	—

(*): for NPC versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

	L		lbs	
	NPC	NHC	NPC	NHC
305 L1	7.20	6.61	99.2	88.2
305 L2	9.76	9.17	114.7	103.6
305 L3	11.85	11.26	123.5	112.5
305 L4	13.94	13.35	132.3	121.3

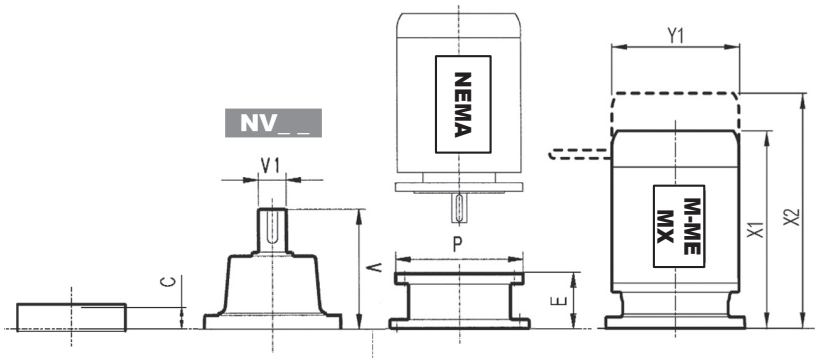
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
305 L1	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
305 L2	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
305 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
305 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

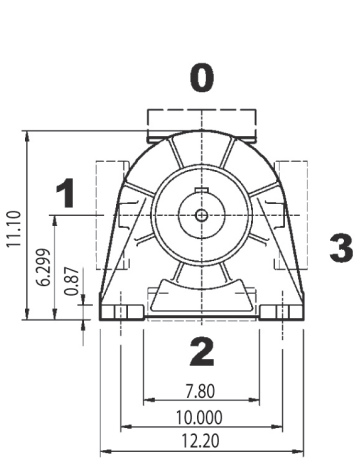
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
305 L1	—	—	—	—	—	—	—	—	5.22	11.81	6.22	13.78
305 L2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
305 L3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
305 L4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

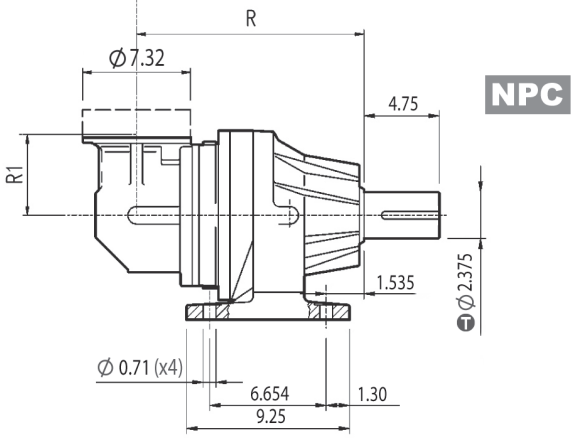
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 L1	—	—	—	—	—	—	—	—	—	—	—	—	18.11	—	10.16	22.60	—	12.20	21.73	—	12.20
305 L2	—	—	—	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
305 L3	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
305 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—

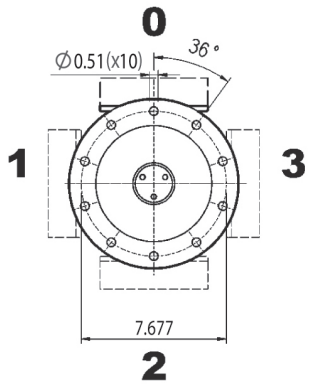
Bonfiglioli Riduttori

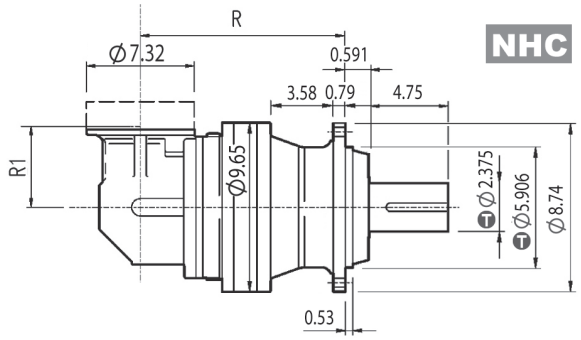
305 R











inch	Ⓣ
5.906	-0.00169 -0.00327
2.375	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

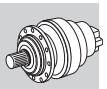
	R		R1	lbs	
	NPC	NHC		NPC	NHC
305 R2	14.76	10.24	5.51	143.3	132.3
305 R3	13.39	12.80	4.80	145.5	134.5
305 R4	15.47	14.88	4.80	154.4	143.3

	V	V1	lbs	V	V1	lbs	C	Input
305 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
305 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
305 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

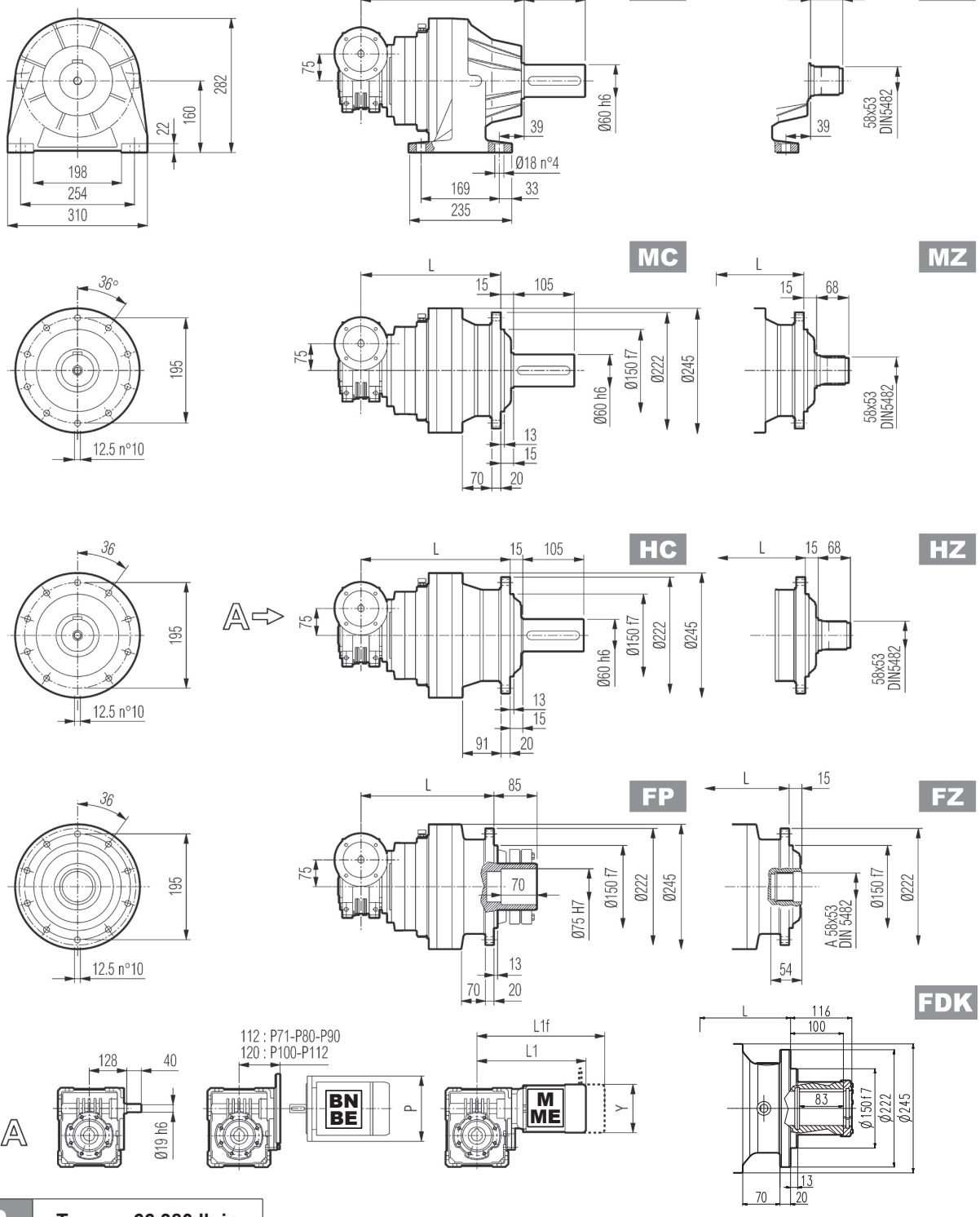
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
305 R2	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
305 R3	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
305 R4	4.51	6.70	4.51	6.70	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 R2	—	—	—	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
305 R3	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
305 R4	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16

3/V 05 L3



Metric



FP | T_{2max} = 66,380 lb·in

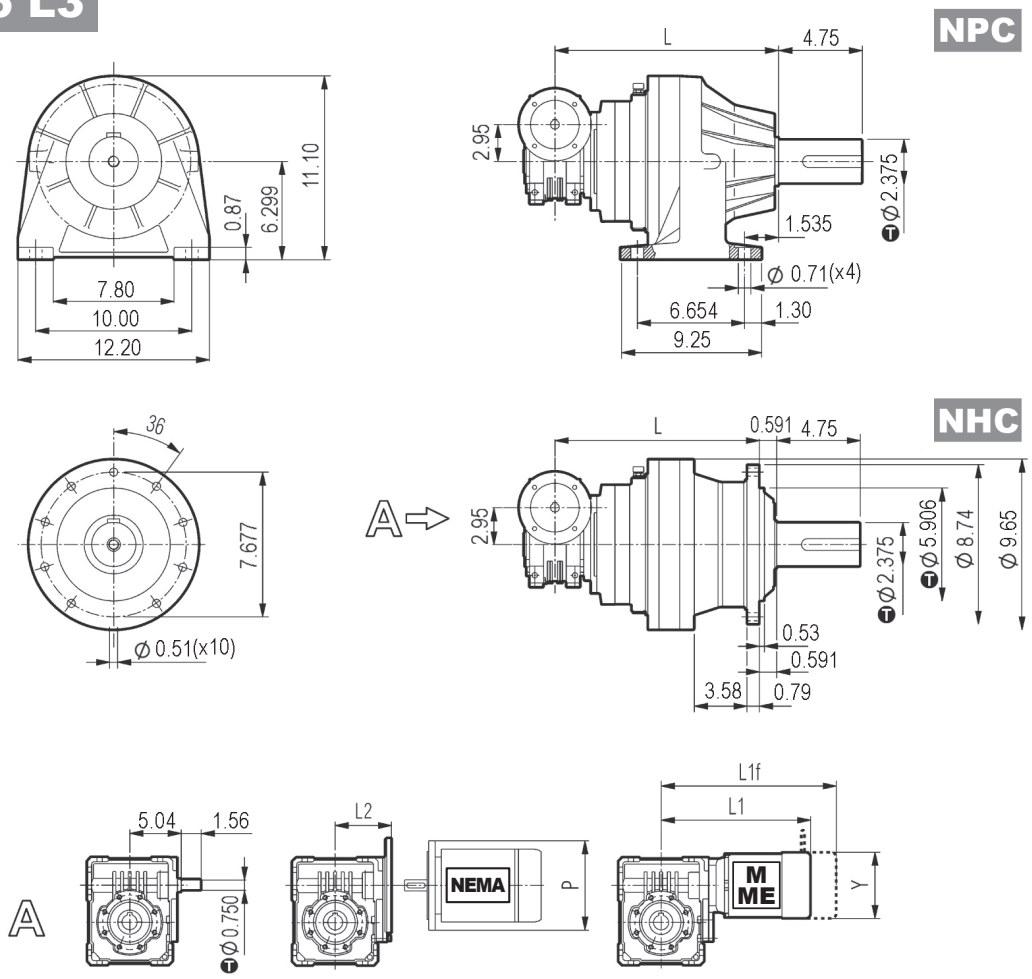
Dimensions are in mm

	L				Kg				P71	P80	P90	P100
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P	P
3/V 05 L3	323	363	348	323	51	60	55	51	160	200	200	250

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 05 L3	308	369	138	333	—	156	376	—	193	408	—	193

Bonfiglioli Riduttori

3/V 05 L3



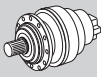
inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075
1.000	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

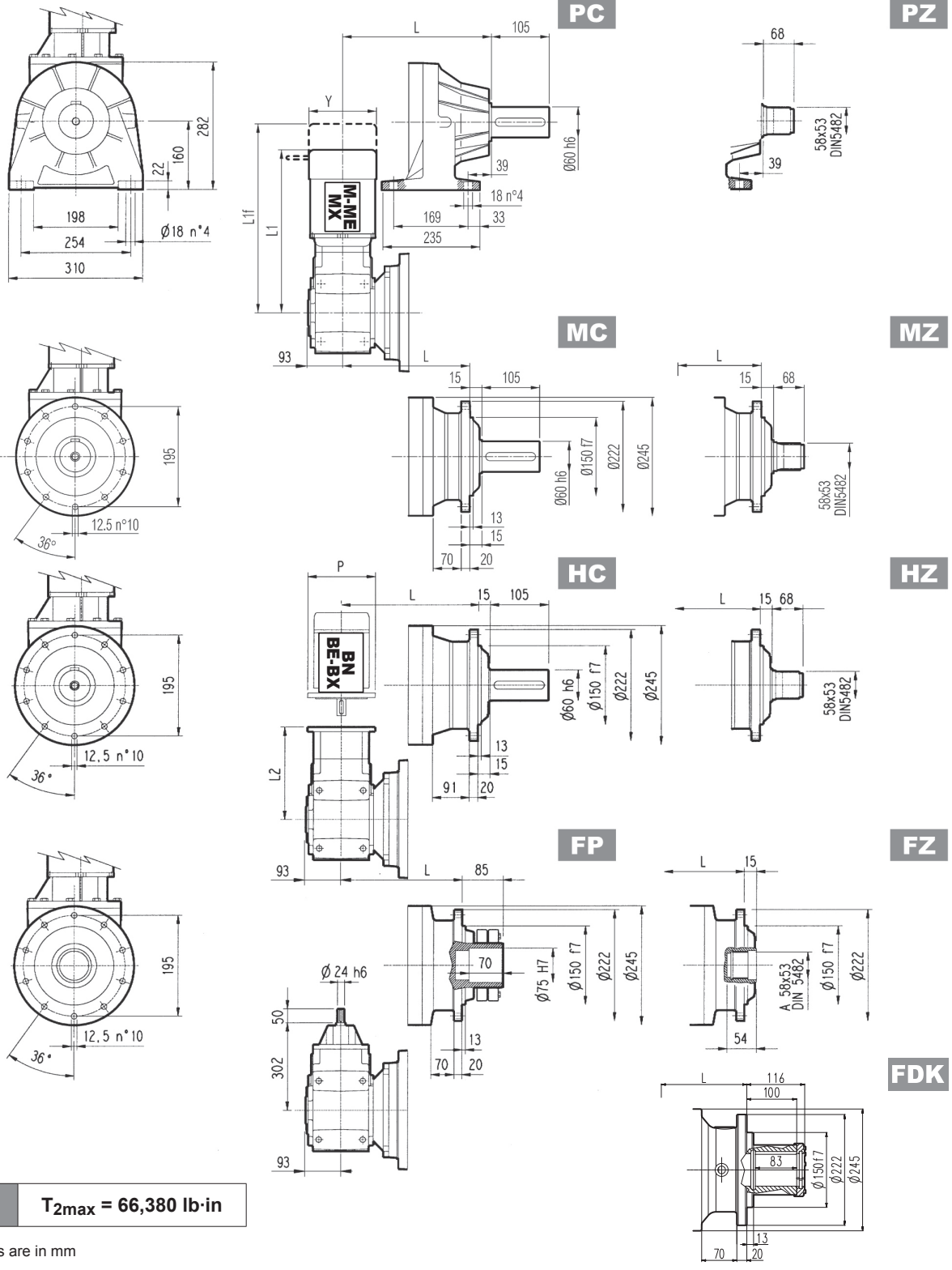
	L		lbs		N56 C	N140TC	N180TC
	NPC	NHC	NPC	NHC	P	P	P
3/V 05 L3	14.29	13.70	132.3	121.3	6.54	6.54	9.02

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 05 L3	12.12	14.53	5.43	13.11	—	6.14	14.80	—	7.60	16.06	—	7.60

3/A 05 L2



Metric



FP | **T_{2max} = 66,380 lb·in**

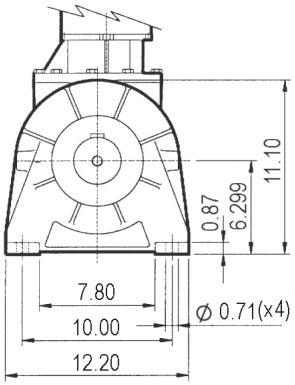
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 05 L2	276	316	301	276	90	105	100	90

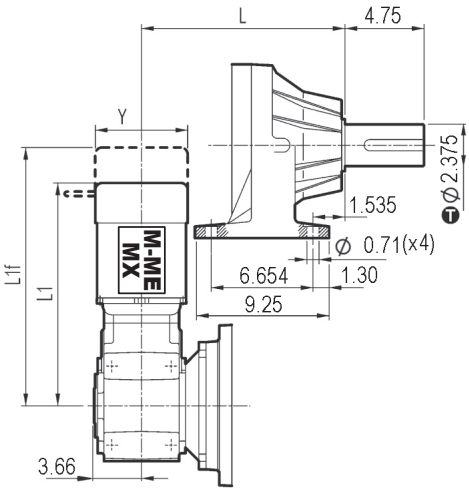
	P63		P71		P80		P90		P100		P112		P132	
	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/A 05 L2	263	140	263	160	282.5	200	282.5	200	292.5	250	292.5	250	329	457

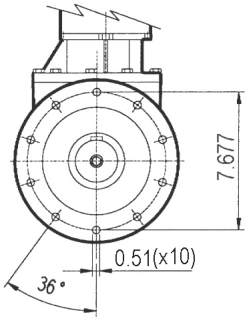
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 05 L2	418	439	138	447	—	156	490	—	195	522	—	195	630	—	258

3/A 05 L2

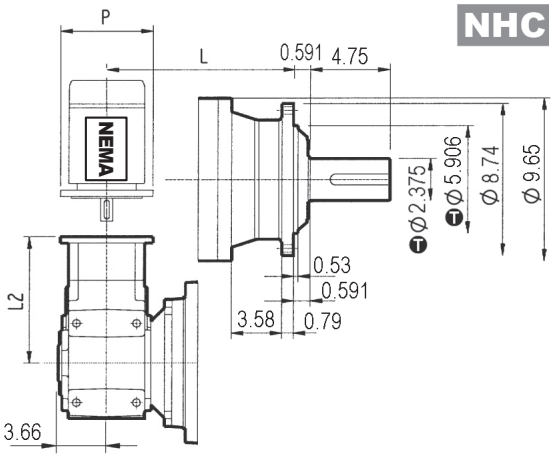


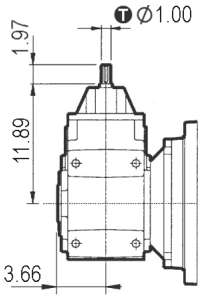
NPC





NHC





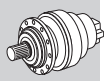
inch	T
5.906	-0.00169 -0.00327
2.375	0 -0.00075
1.000	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

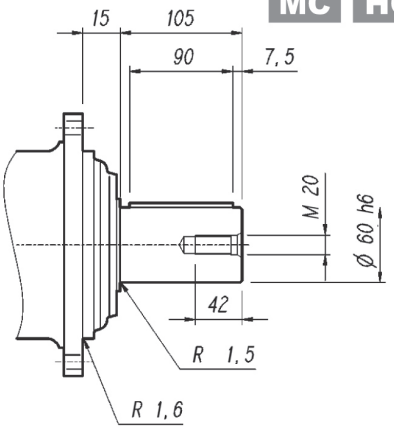
	L		lbs		N56C		N140TC		N180TC		N210TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P	L2	P
3/A 05 L2	12.44	11.85	231.5	220.5	11.14	6.50	11.14	6.50	11.89	9.00	13.13	9.00

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 05 L2	16.46	17.28	5.43	17.60	—	6.14	19.29	—	7.68	20.55	—	7.68	24.80	—	10.16

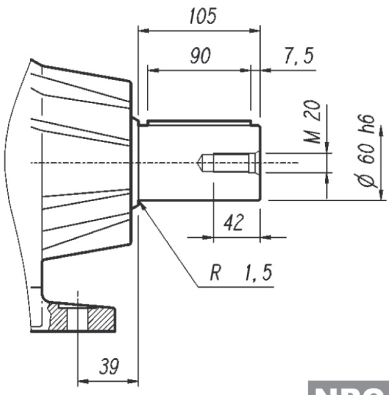
305 L | 305 R | 3/V 05 L3 | 3/A 05 L2

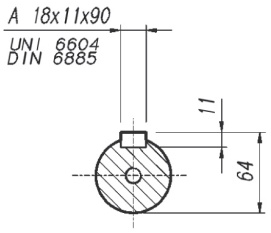


MC HC

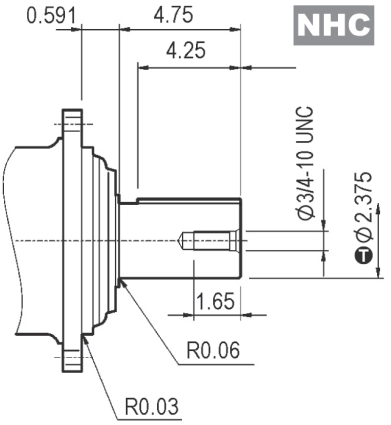


PC

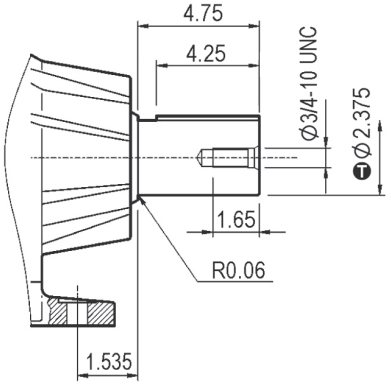


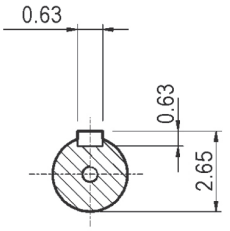


NHC

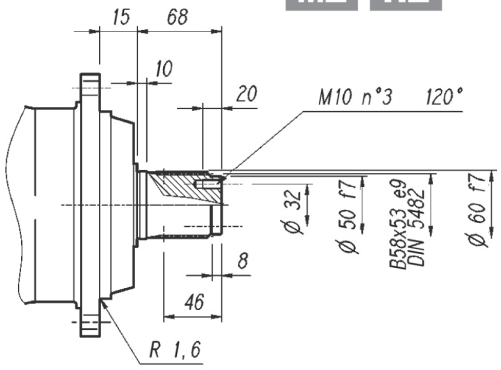


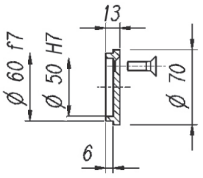
NPC



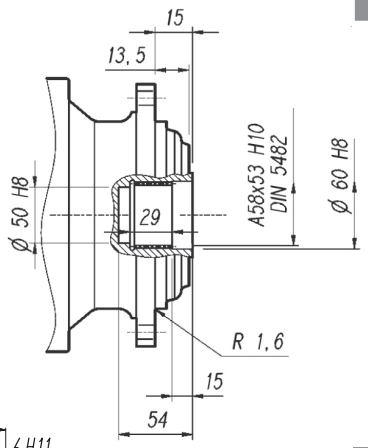


MZ HZ

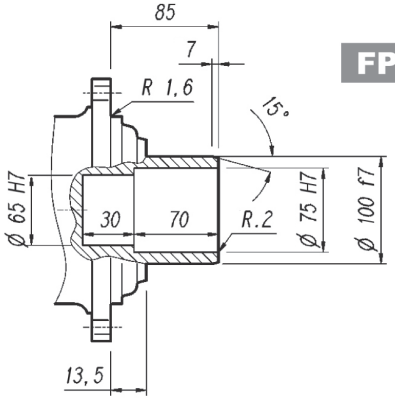


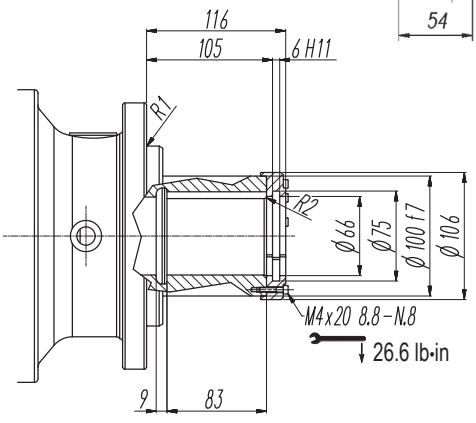


FZ

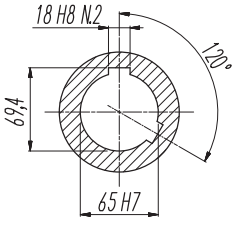


FP





FDK



FP	T_{2max} = 66,380 lb·in

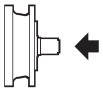
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

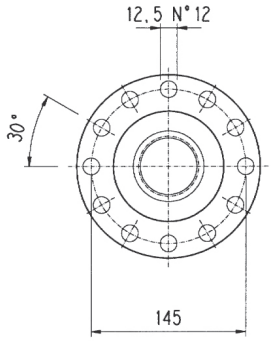
inch	Ⓣ
2.375	$^{0}_{-0.00075}$

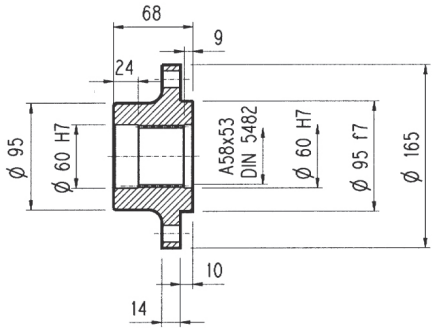
Bonfiglioli Riduttori

Flange

W0A





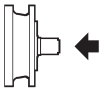


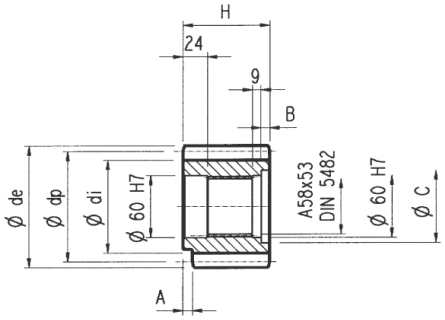
Material: Steel C40

Dimensions are in mm

Pinions

P...





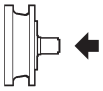
Dimensions are in mm

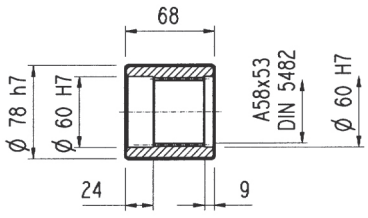
$\alpha = 20°$

	m	z	x	dp	di	de	H	A	B	C	Material
PCL1	5	19	—	95	82	104	77	12	9	72	Steel 39NiCrMo3 hardened and tempered
PCL2	5	19	—	95	82	104	68	—	—	—	
PCM	5	20	—	100	87.5	110	68	18	—	—	Steel 18NiCrMo5 case hardened
PCP	5	22	—	110	97.5	120	68	18	—	—	
PDE	6	14	0.500	84	75	99.6	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PDI	6	18	0.500	108	99	123.6	68	—	—	—	
PDM	6	20	0.833	120	115	140	68	—	—	—	
PFD	8	13	0.675	104	95	127.6	68	—	—	—	Steel 18NiCrMo5 case hardened
PFE1	8	14	—	112	92	126	68	—	—	—	
PFE2	8	14	—	112	92	126	80	—	12	72	
PFF	8	15	—	120	100	136	68	—	—	—	Steel 39NiCrMo3 hardened and tempered
PFP	8	22	—	176	156	190	77	12	10	71	
PHG	10	16	0.500	160	145	188	75	—	7	72	

Sleeve coupling

M0A





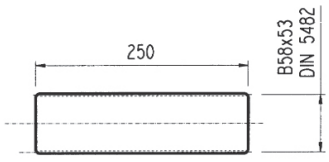
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

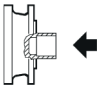


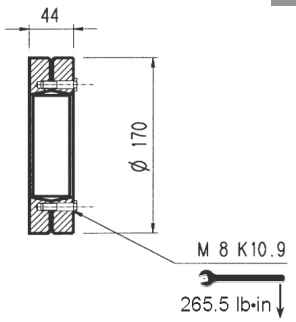


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

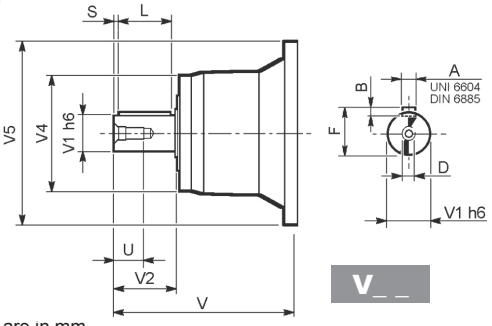




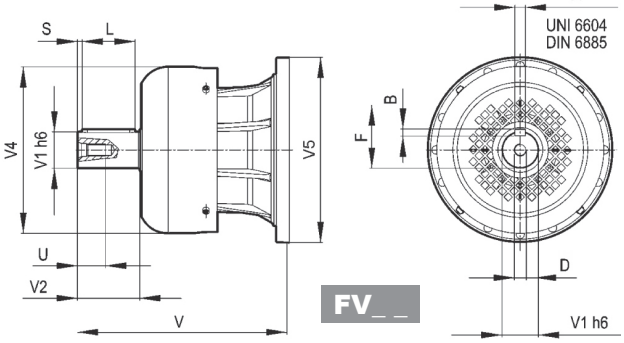
Dimensions are in mm

305 L 305 R





V_ _



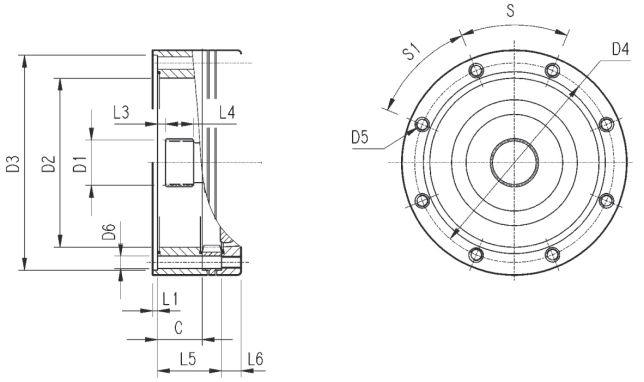
FV_ _

Dimensions are in mm

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
305 L1	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
305 L2	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
305 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
305 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
305 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

305 L 305 R

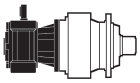


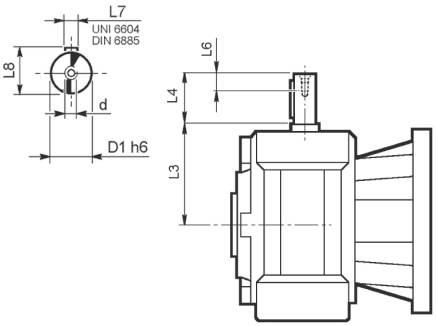


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
305 L1	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	—	18	45°	45°	A
305 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
305 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	118	18	45°	45°	A
305 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	171	18	45°	45°	A
305 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 05 L3

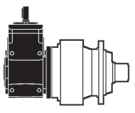


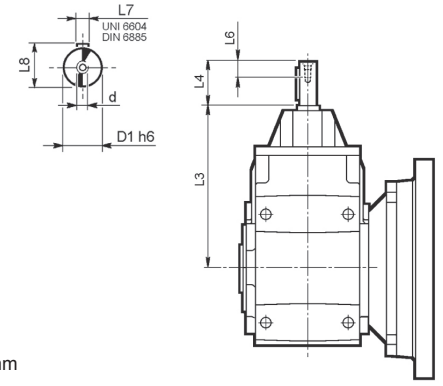


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 05 L3_HS	19	128	40	16	6	21.5	M6

3/A 05 L2

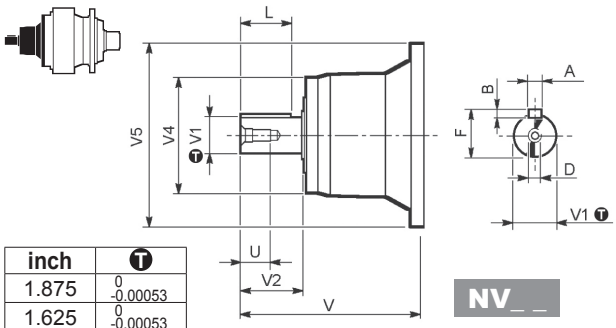




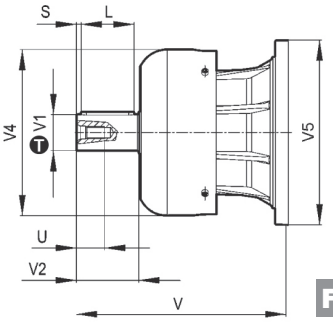
Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/A 05 L2_HS	24	302	50	19	8	27	M8

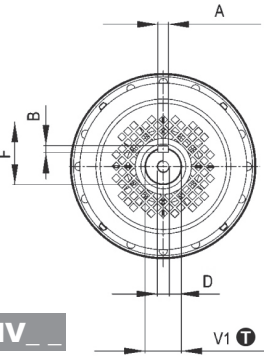
305 L 305 R



NV_ _



FNV_ _



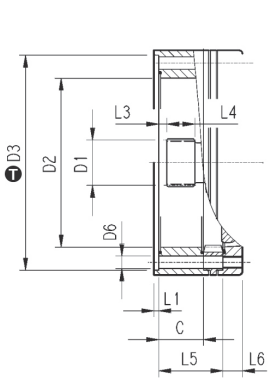
inch	T
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

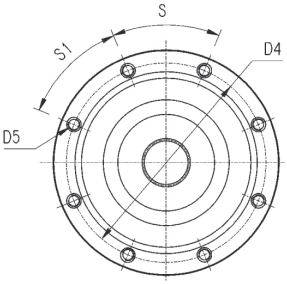
Dimensions are in Inch except when shown in *italic [mm]*

		V	V1	V2	V4	V5	A	B	F	L	D	U
305 L1	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
305 L2	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
305 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
305 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
305 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

305 L 305 R





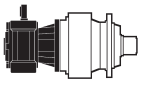


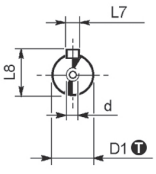
inch	T
7.01	+0.00157 0

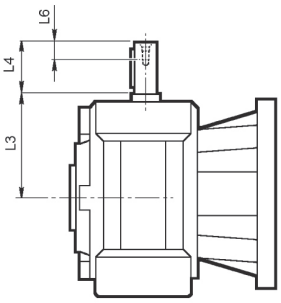
Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
305 L1	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	—	0.71	45°	45°	A
305 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.56	0.71	45°	45°	A
305 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
305 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
305 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 05 L3





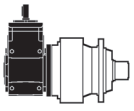


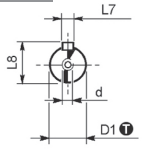
inch	T
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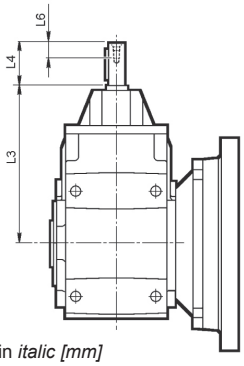
Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 05 L3_NHS	0.750	5.04	1.575	0.63	0.188	0.832	1/4-20UNC

3/A 05 L2



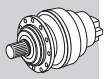




inch	T
1.000	0 -0.00051

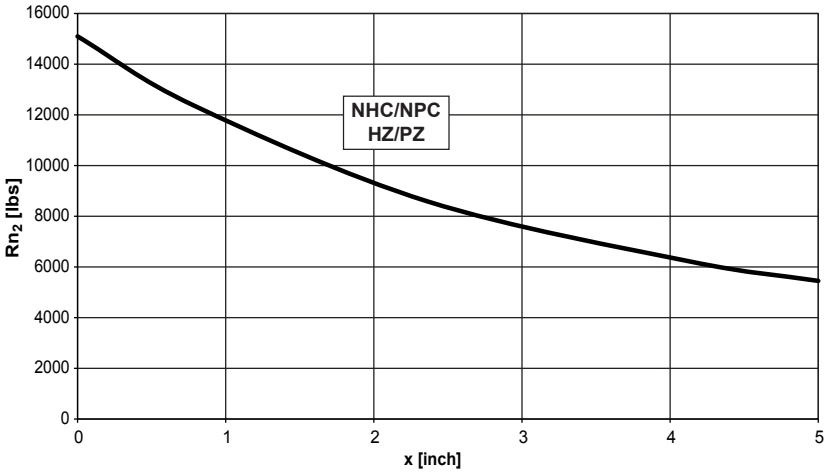
Dimensions are in Inch except when shown in *italic [mm]*

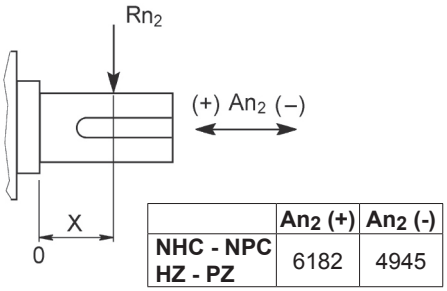
	D1	L3	L4	L6	L7	L8	d
3/A 05 L2_NHS	1.000	11.89	1.969	0.75	0.250	1.109	3/8-16UNC



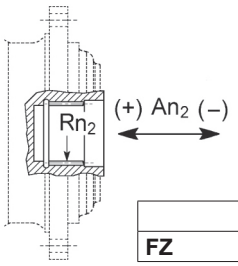
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





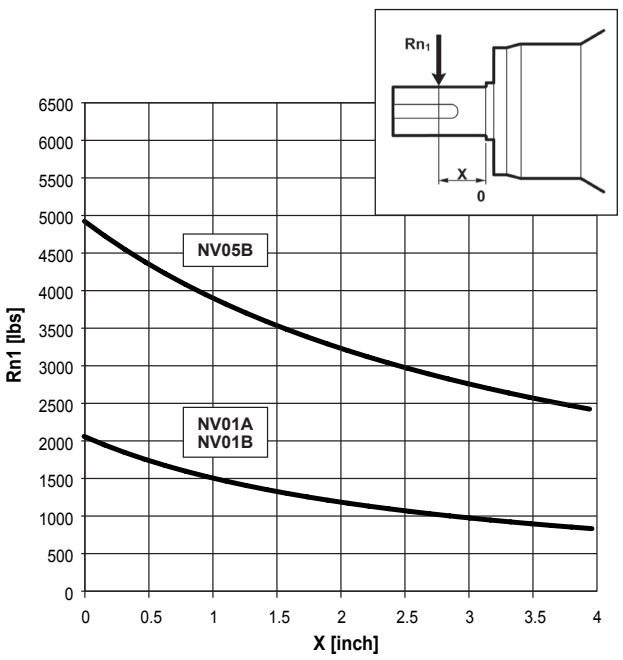
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	6182	4945

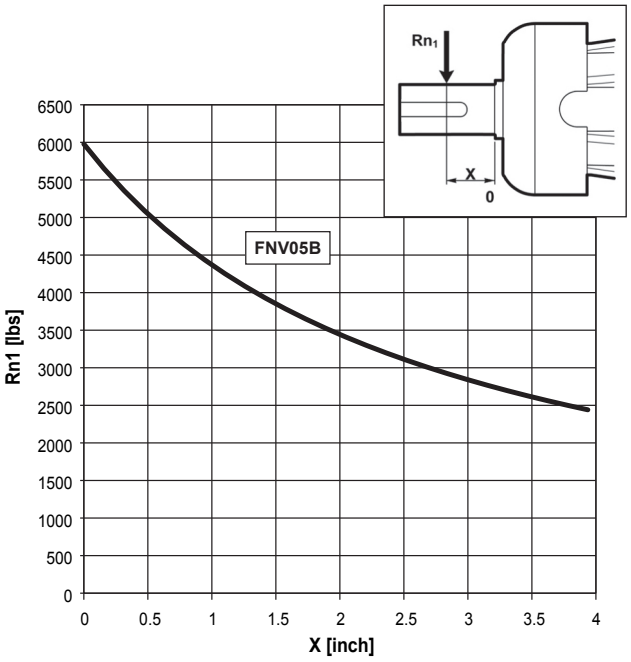


	Rn2	An2 (+/-)
FZ	2504	2609

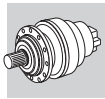
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.48**	**1.48**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

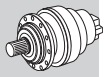




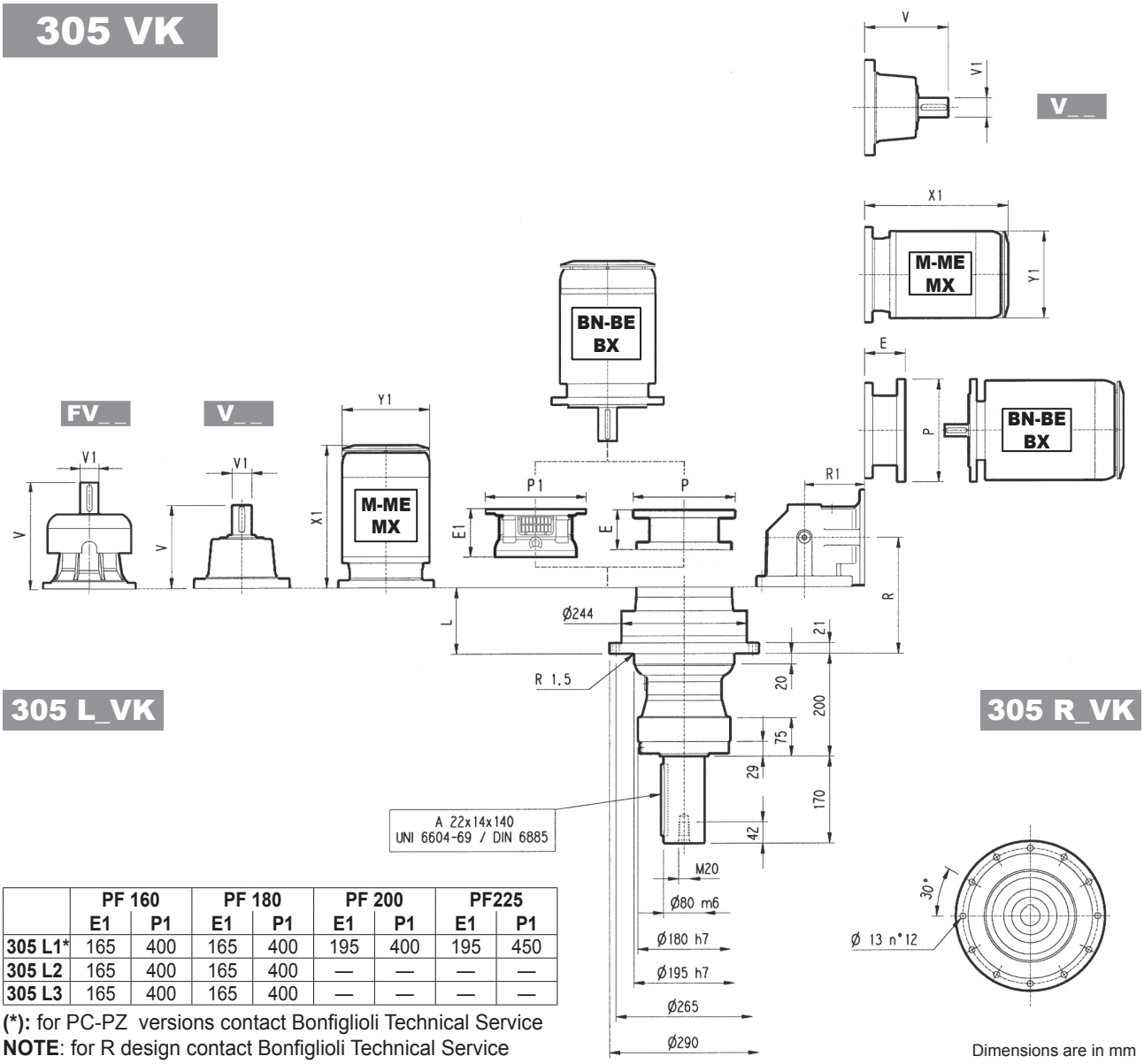
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



305 VK



Metric



305 L_VK

305 R_VK

	PF 160		PF 180		PF 200		PF225	
	E1	P1	E1	P1	E1	P1	E1	P1
305 L1*	165	400	165	400	195	400	195	450
305 L2	165	400	165	400	—	—	—	—
305 L3	165	400	165	400	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200	
															E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
305 L1	69	70	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
305 L2	134	77	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
305 L3	187	81	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
305 L4	240	85	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

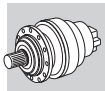
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 L1	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
305 L2	—	—	—	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
305 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
305 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132	
										E	P	E	P	E	P	E	P	E	P	E	P
305 R2	161	140	90	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
305 R3	226	122	92	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300
305 R4	279	122	95	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
305 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
305 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
305 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258

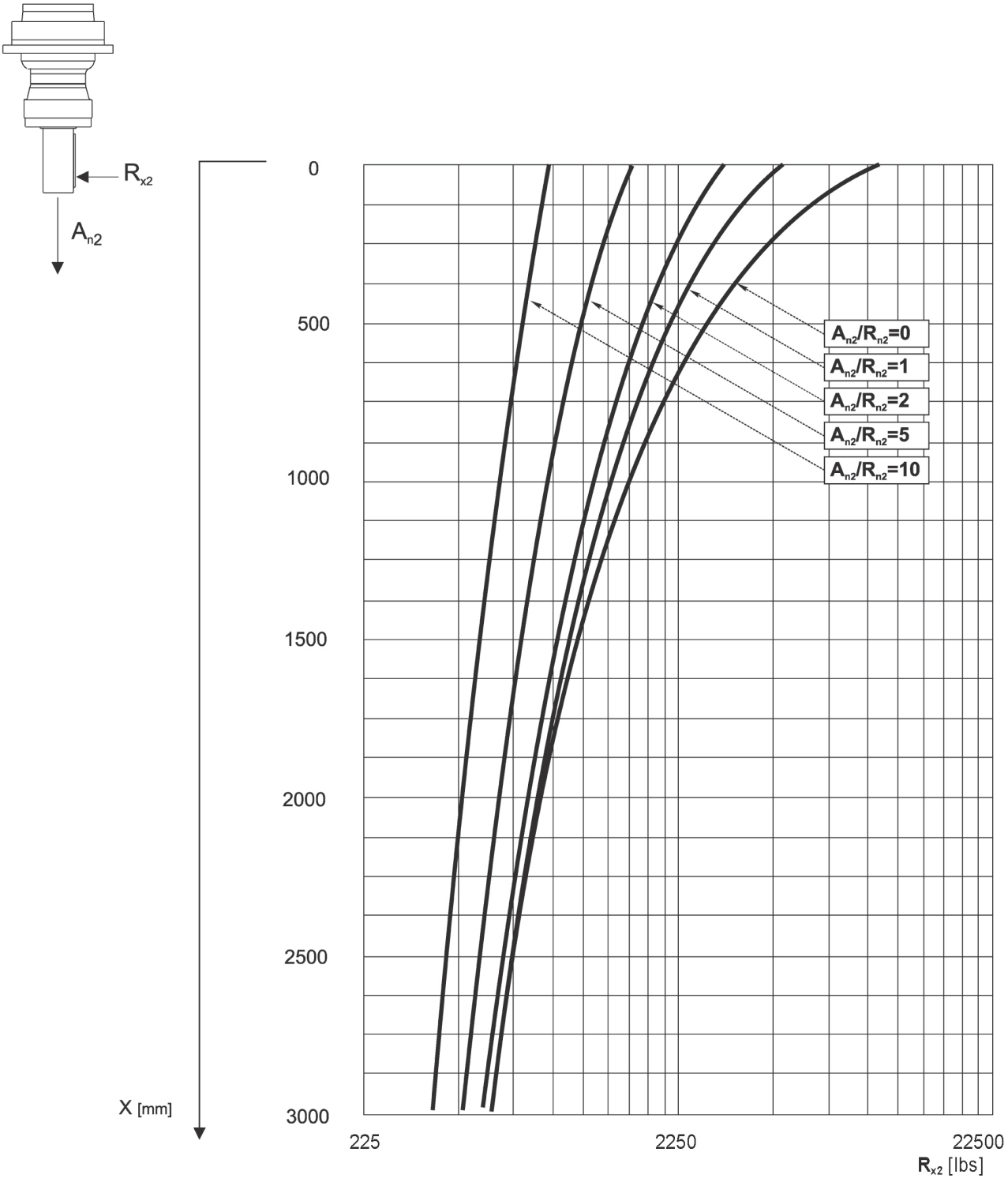
Bonfiglioli Riduttori

305 VK



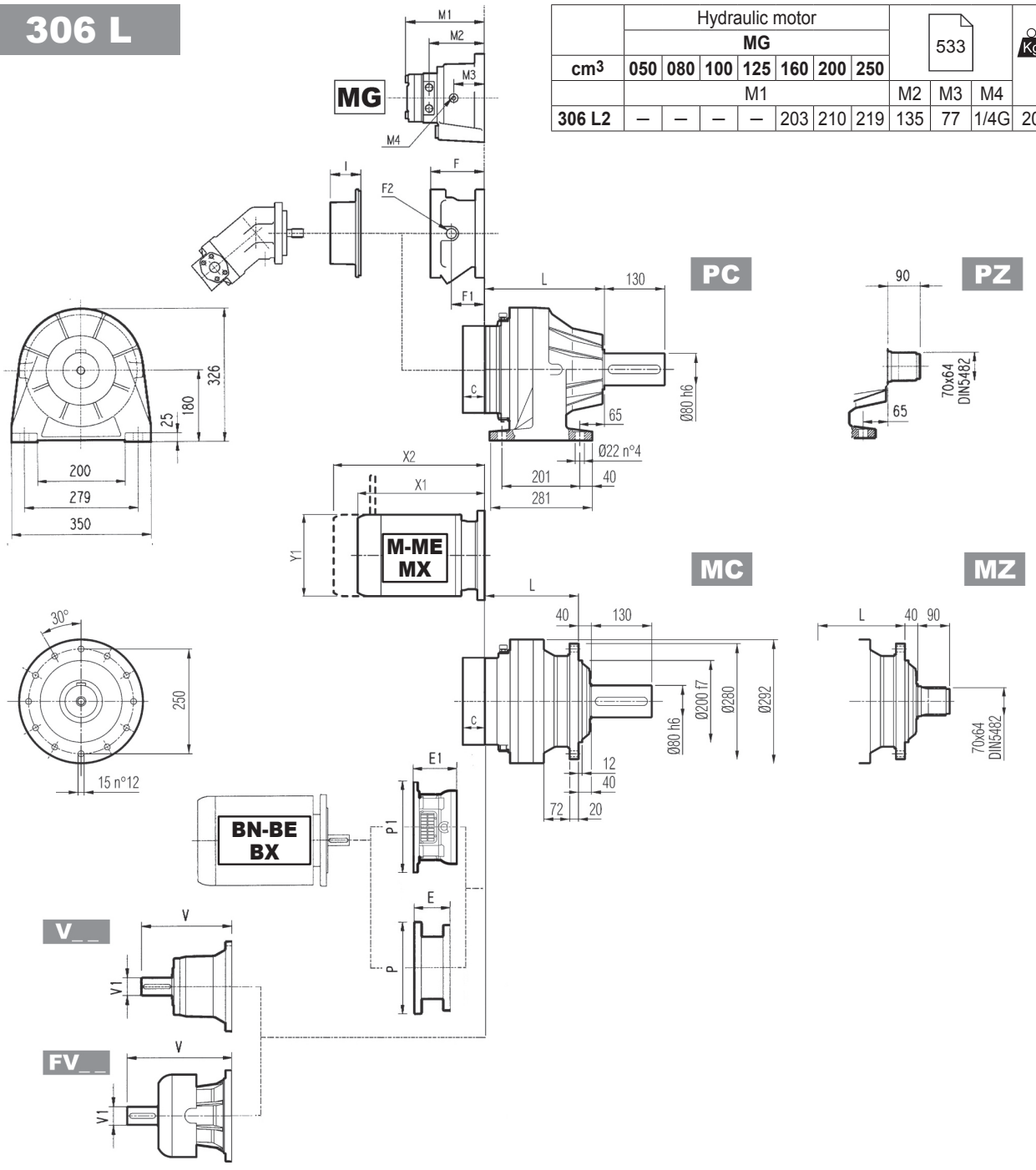
Metric

The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



306 L

Metric



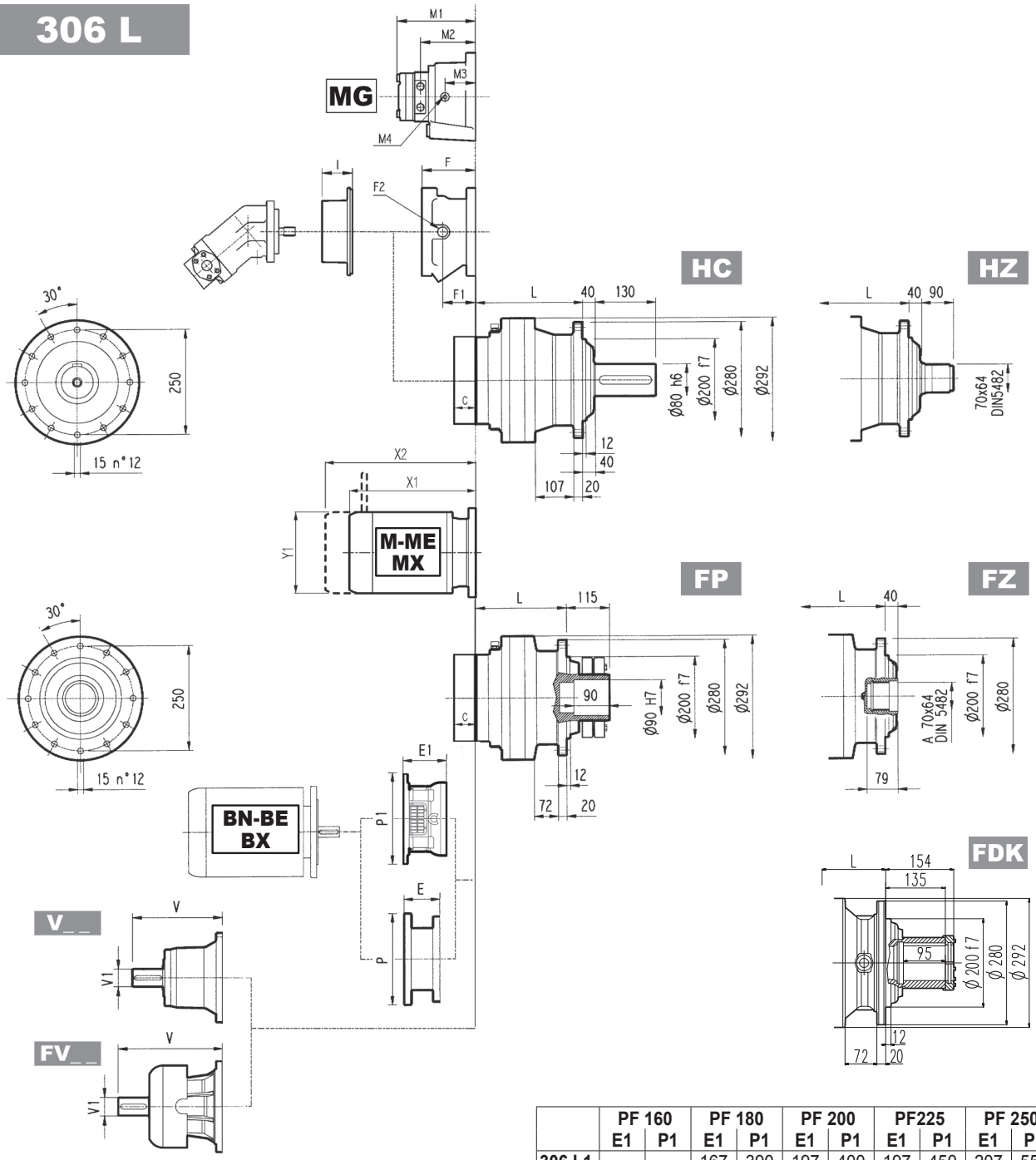
	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
306 L2	–	–	–	–	203	210	219	135	77	1/4G	20

Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
306 L1	160	235	195	160	65	85	70	65
306 L2	225	300	260	225	74	95	79	74
306 L3	278	353	313	278	78	98	83	78
306 L4	331	406	366	331	82	103	87	82

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
306 L1	307	60	23	—	—	—	357	60	28	45	B	522	195	147	1/4 G	6	B	28
306 L2	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
306 L3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
306 L4	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10

306 L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
306 L1	—	—	167	390	197	400	197	450	207	550
306 L2	165	400	165	400	195	400	195	450	—	—
306 L3	165	400	165	400	—	—	—	—	—	—

FP T_{2max} = 106,210 lb·in

Dimensions are in mm

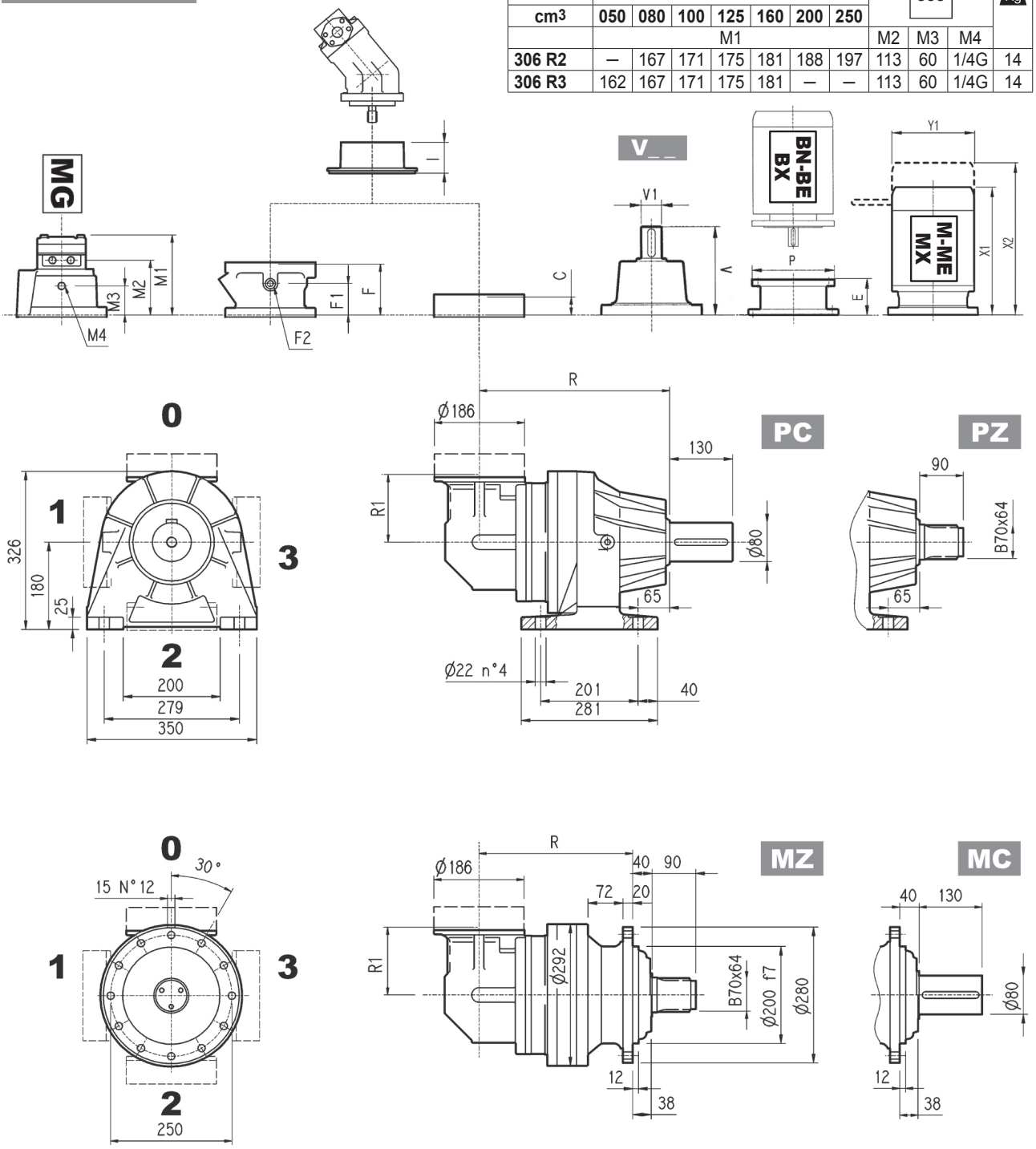
NOTE: For R design contact Bonfiglioli Technical service

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
306 L1	—	—	—	—	—	—	—	—	—	—	—	—	144	350	153	350	183	400	212	450	193	550
306 L2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
306 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
306 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
306 L2	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
306 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
306 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

306 R

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
306 R2	–	167	171	175	181	188	197	113	60	1/4G	14
306 R3	162	167	171	175	181	–	–	113	60	1/4G	14

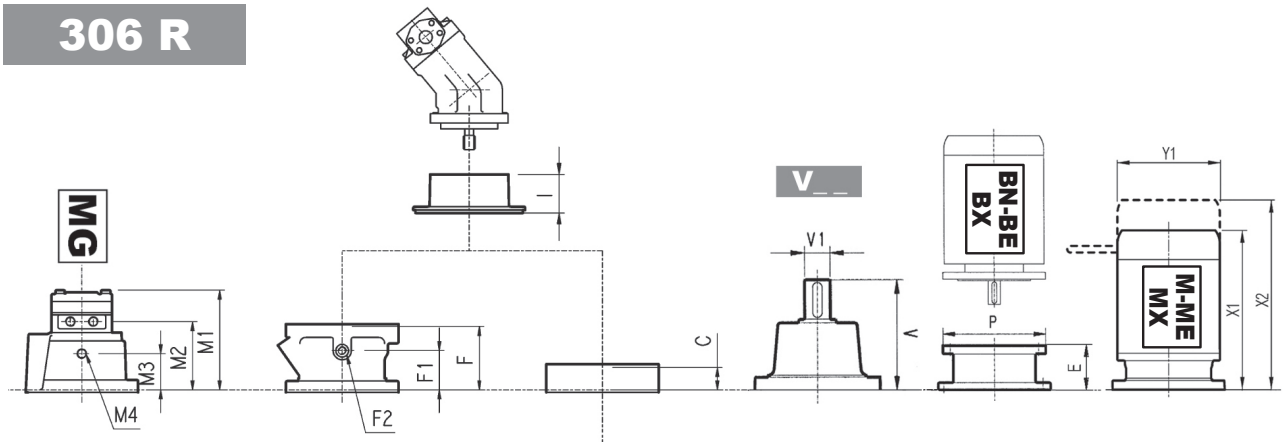


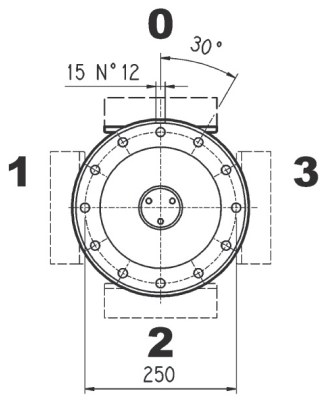
Dimensions are in mm

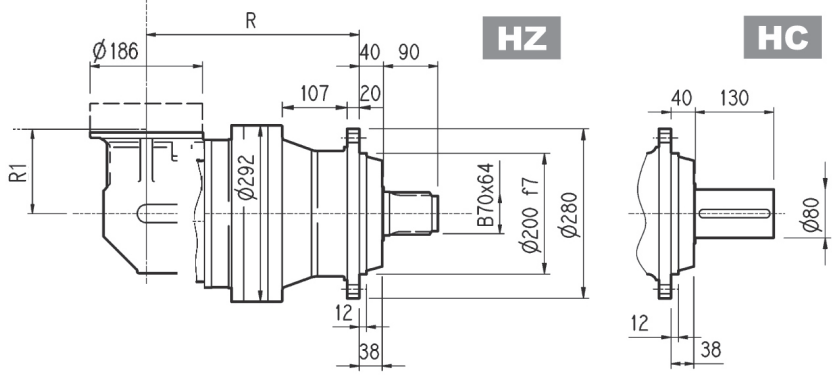
	R				R1	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK		MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
306 R2	297	372	332	297	140	89	105	94	89
306 R3	317	392	352	317	140	85	100	90	85
306 R4	370	445	405	370	122	79	95	84	79

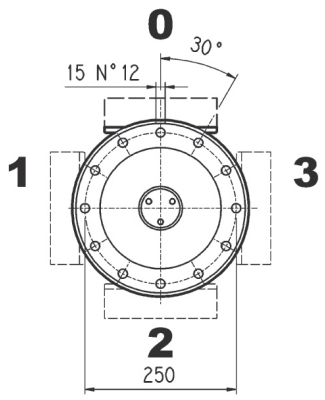
	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
306 R2	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
306 R3	137.5	24	6	158	38	7	37	A		105	65	1/4 G	4	A	10
306 R4	137.5	24	6	158	38	7	37	A	522	105	65	1/4 G	4	A	10

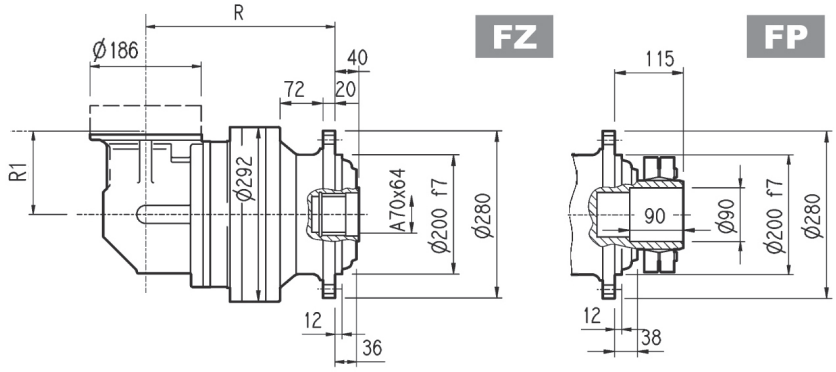
306 R

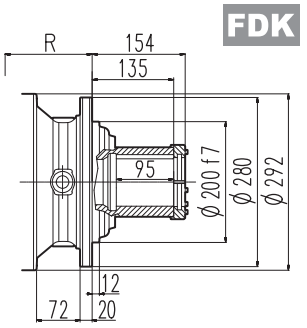












FP T_{2max} = 106,210 lb·in

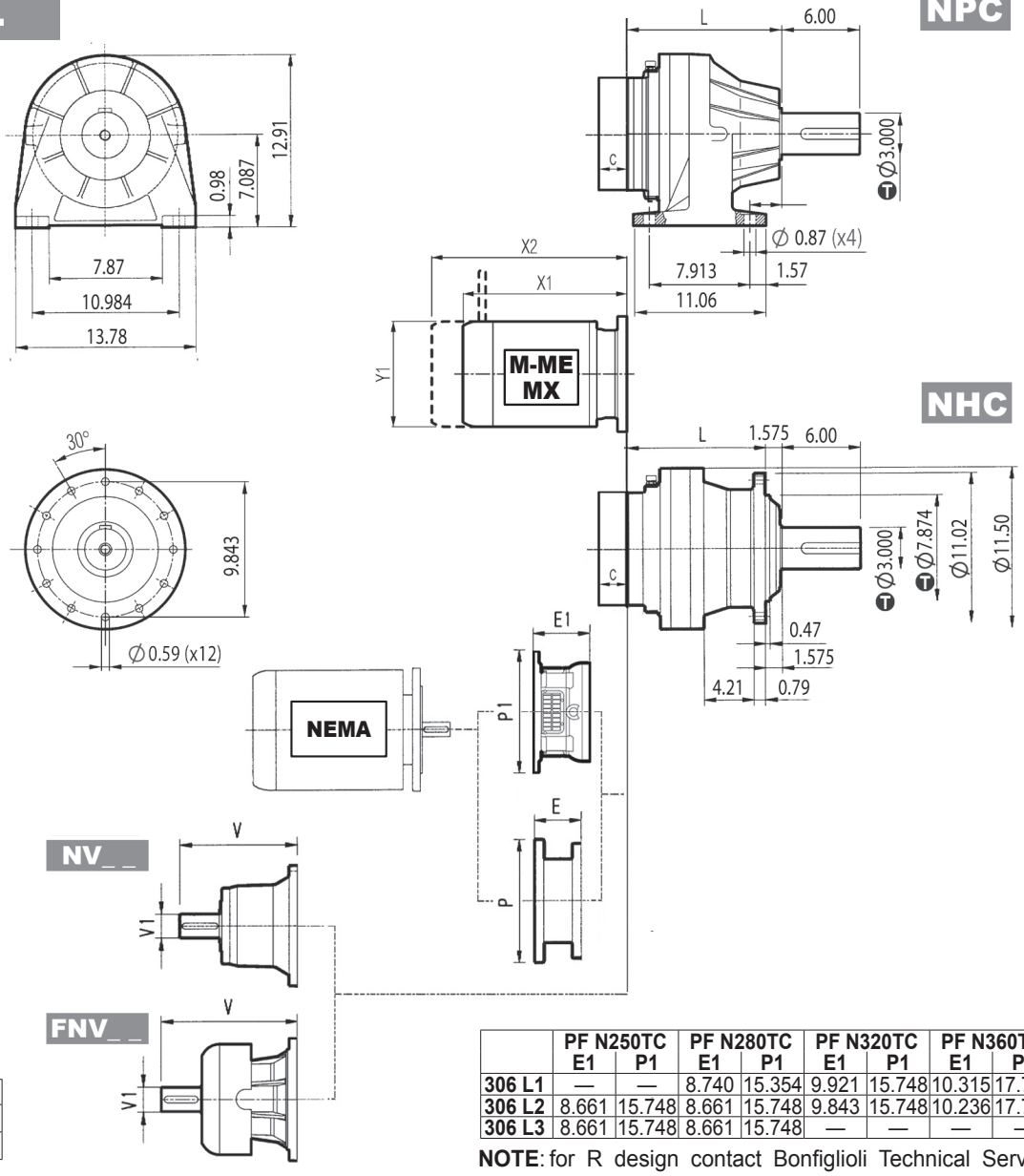
Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P
306 R2	65	160	84	200	84	200	94	250	94	250	114	300	144	350
306 R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350
306 R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
306 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
306 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258

306 L

Imperial



inch	T
7.874	-0.00197 -0.00378
3.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
306 L1	—	—	8.740	15.354	9.921	15.748	10.315	17.717
306 L2	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
306 L3	8.661	15.748	8.661	15.748	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

	L		lbs	
	NPC	NHC	NPC	NHC
306 L1	9.25	7.68	187.4	154.4
306 L2	11.81	10.24	209.5	174.2
306 L3	13.90	12.32	216.1	183.0
306 L4	15.98	14.41	227.1	191.8

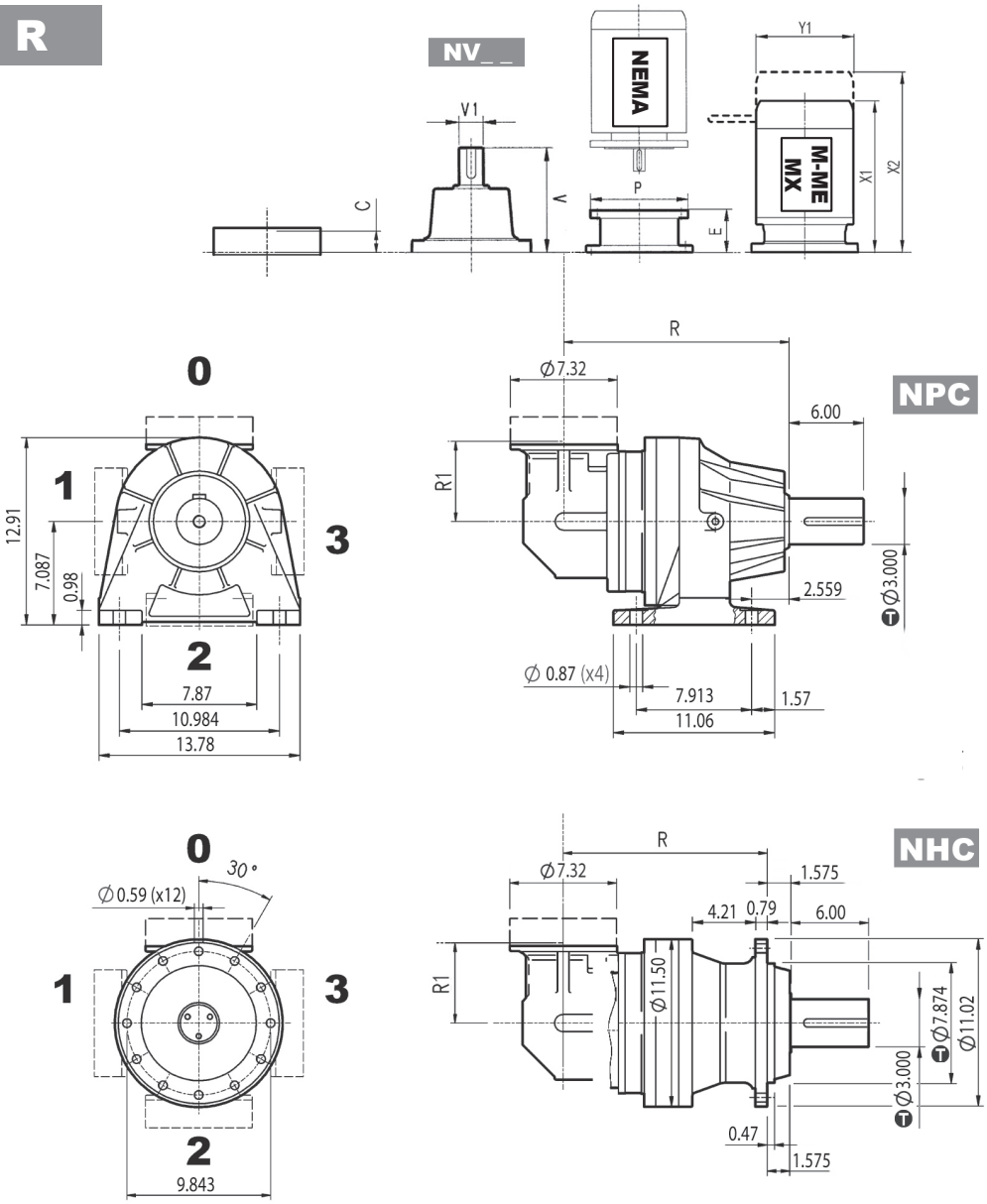
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
306 L1	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
306 L2	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
306 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
306 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
306 L1	—	—	—	—	—	—	—	—	—	—	—	—	7.78	13.78	7.78	13.78
306 L2	—	—	—	—	—	—	—	—	5.22	11.81	6.22	13.78	—	—	—	—
306 L3	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81	—	—	—	—
306 L4	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
306 L2	—	—	—	—	—	—	—	—	—	—	—	—	18.11	—	10.16	21.73	—	12.20	23.46	—	12.20
306 L3	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
306 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—

Bonfiglioli Riduttori

306 R



inch	T
7.874	-0.00197 -0.00378
3.000	0 -0.00075

Dimensions are in Inch except when shown in *italic [mm]*

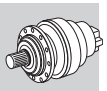
	R		R1	lbs	
	NPC	NHC		NPC	NHC
306 R2	14.65	13.07	5.51	231.5	207.3
306 R3	15.43	13.86	5.51	220.5	198.5
306 R4	17.52	15.94	4.80	209.5	185.2

	V	V1	lbs	V	V1	lbs	C	Input
306 R2	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
306 R3	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A
306 R4	5.996	1.125	13.2	6.437	1.625	15.4	1.457	A

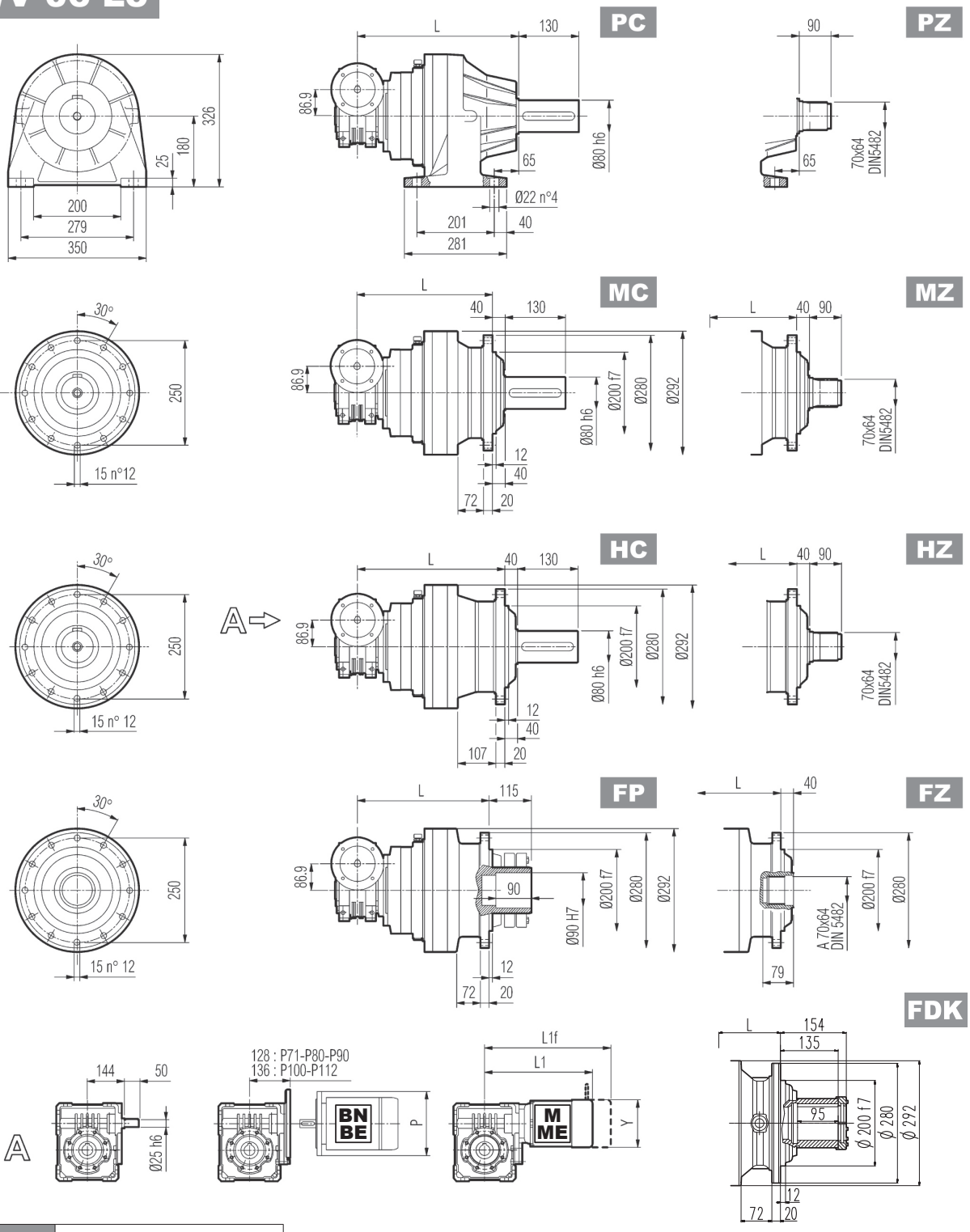
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
306 R2	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
306 R3	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
306 R4	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 R2	—	—	—	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
306 R3	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16
306 R4	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16

3/V 06 L3



Metric



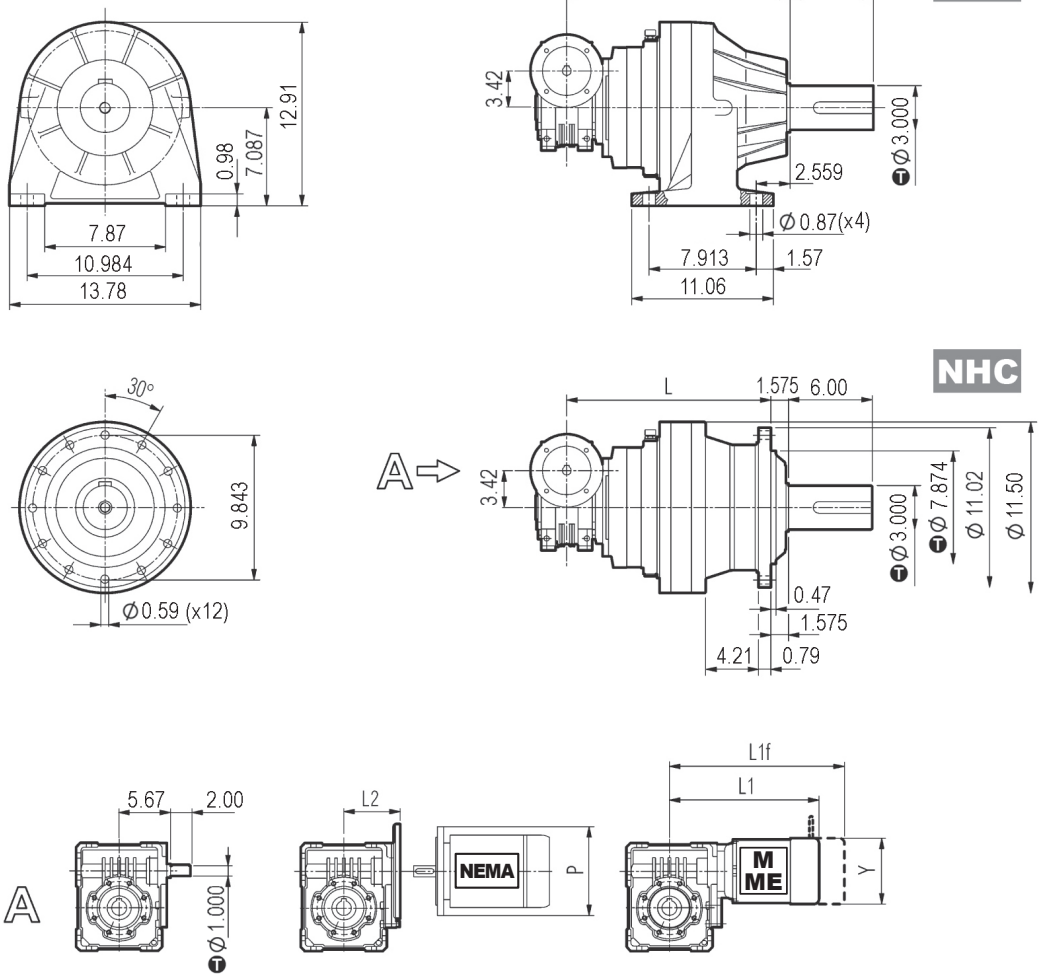
FP | **T_{2max} = 106,210 lb·in**

Dimensions are in mm

	L				Kg				P71	P80	P90	P100	P112
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P	P	P
3/V 06 L3	370	445	405	370	80	111	95	80	160	200	200	250	250

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 06 L3	324	385	138	349	—	156	392	—	193	424	—	193

3/V 06 L3



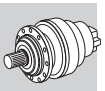
inch	T
7.874	-0.00197 -0.00378
3.000	0 -0.00075
1.000	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

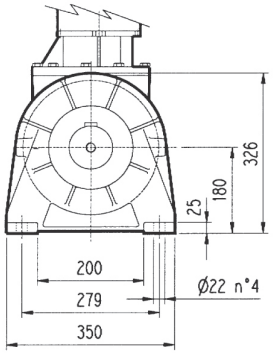
	L		lbs		N56 C		N140TC		N180TC		N210TC	
	NPC	NHC	NPC	NHC	P	L2	P	L2	P	L2	P	L2
3/V 06 L3	17.52	15.94	244.8	209.5	6.54	5.37	6.54	5.37	9.02	5.37	9.02	6.08

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 06 L3	12.76	15.16	5.43	13.74	—	6.14	15.43	—	7.60	16.69	—	7.60

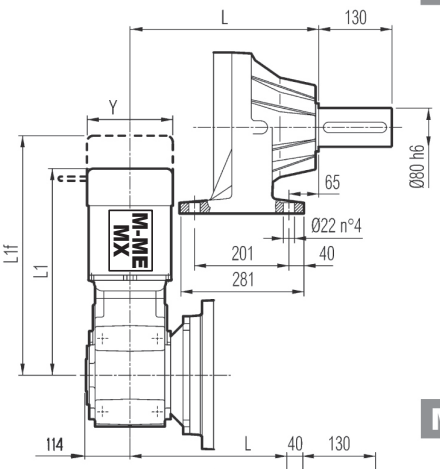
3/A 06 L2



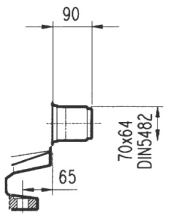
Metric

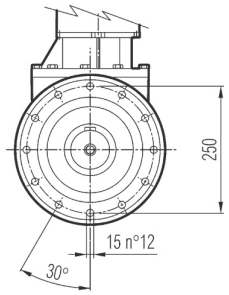


PC

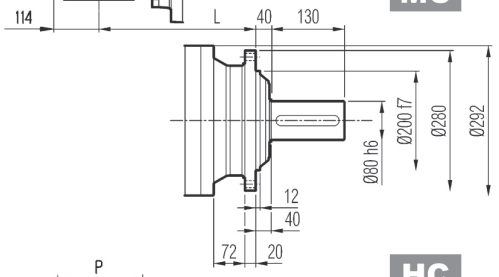


PZ

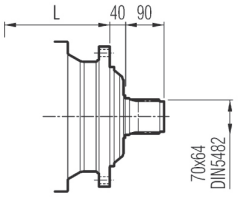


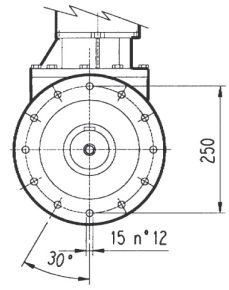


MC

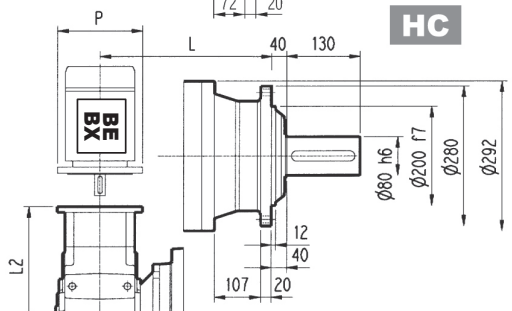


MZ

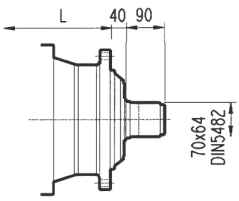


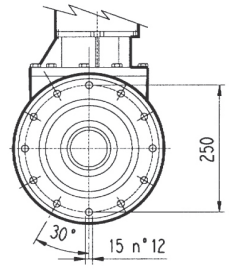


HC

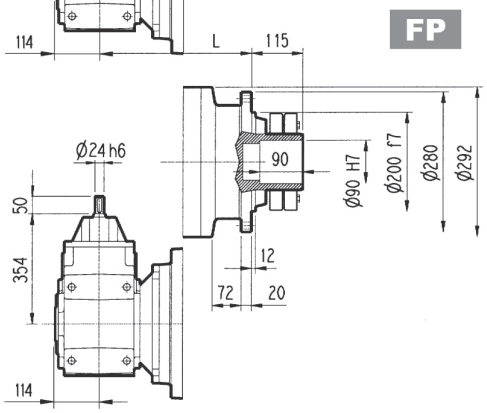


HZ

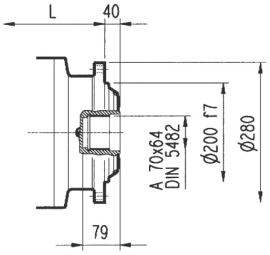




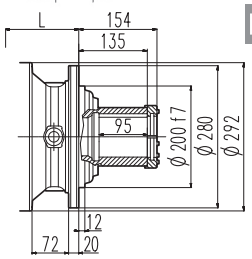
FP



FZ



FDK



FP | **T_{2max} = 106,210 lb·in**

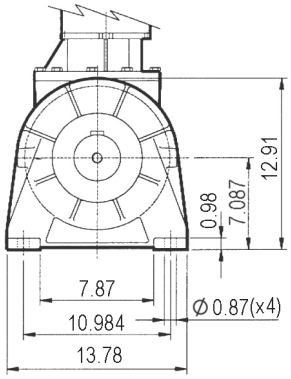
Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
3/A 06 L2	340	415	375	340	140	170	150	140

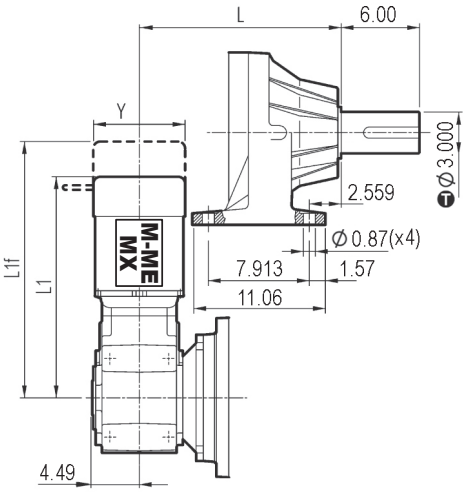
	P63		P71		P80		P90		P100		P112		P132		P160		P180	
	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/A 06 L2	314.5	140	314.5	160	334	200	334	200	344	250	344	250	380.5	300	431	350	431	350

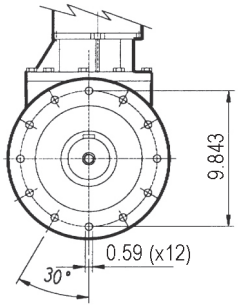
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 06 L2	445	508	138	568	—	156	541	—	195	572	—	195	678	—	258

3/A 06 L2

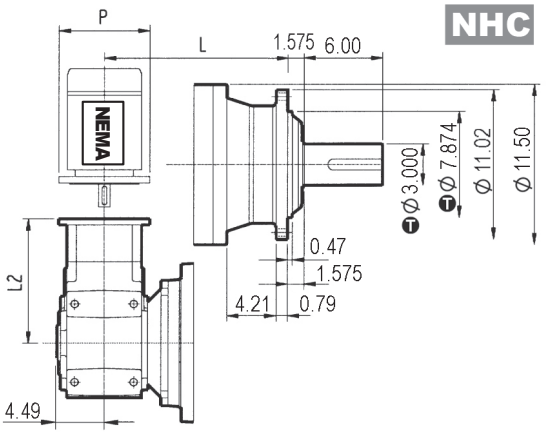


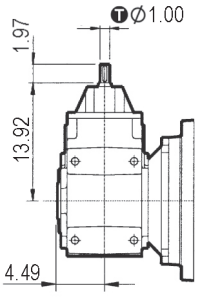
NPC





NHC





inch	T
7.874	-0.00197 -0.00378
3.000	0 -0.00075
1.000	0 -0.00051

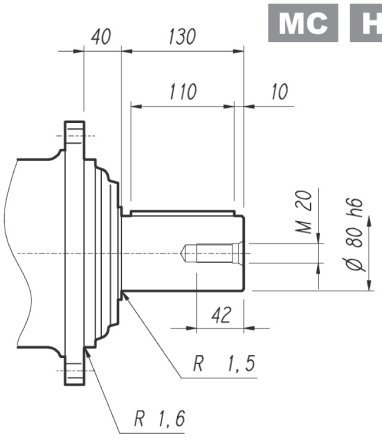
Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/A 06 L2	16.34	14.76	374.9	330.8	13.17	6.50	13.17	6.50	13.92	9.00	15.16	9.00	17.95	13.78	18.15	13.78

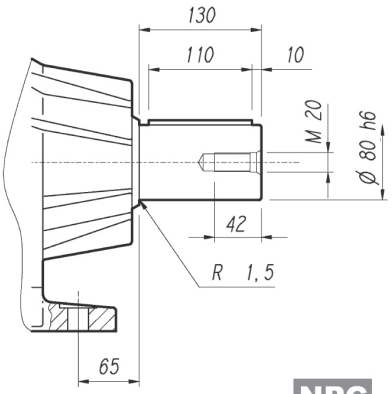
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 06 L2	17.52	20	5.43	22.36	—	6.14	21.30	—	7.68	22.52	—	7.68	26.69	—	10.16

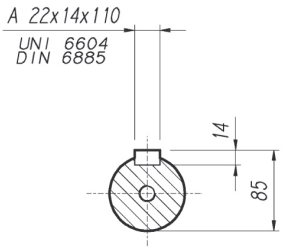
306 L | 306 R | 3/V 06 L3 | 3/A 06 L2

MC HC

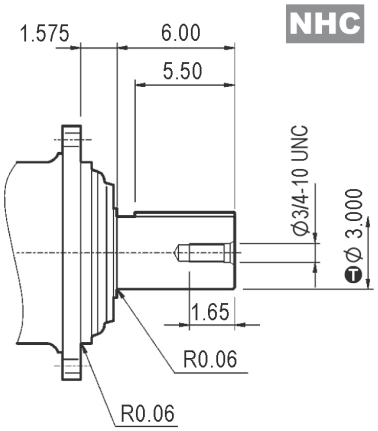


PC

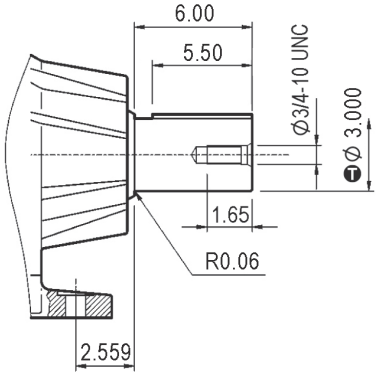


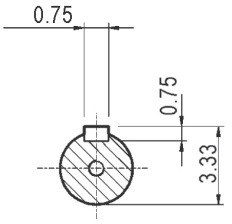


NHC

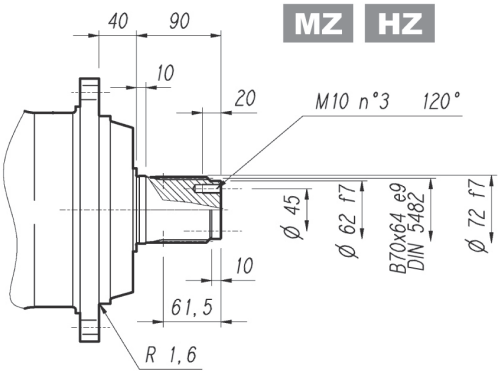


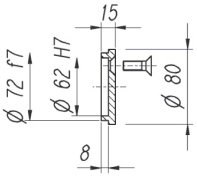
NPC



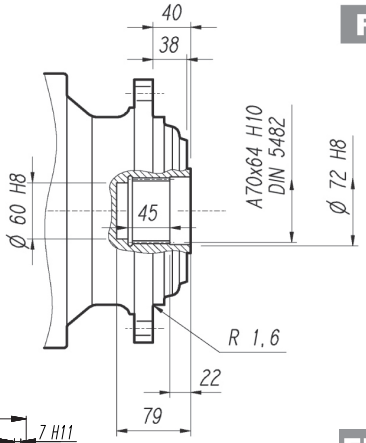


MZ HZ

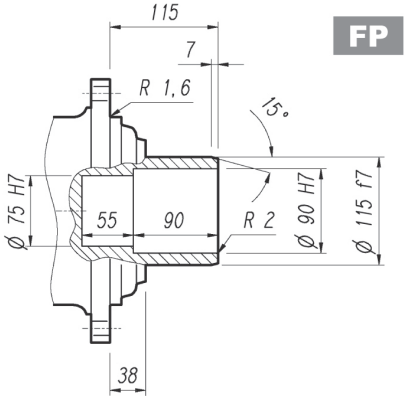




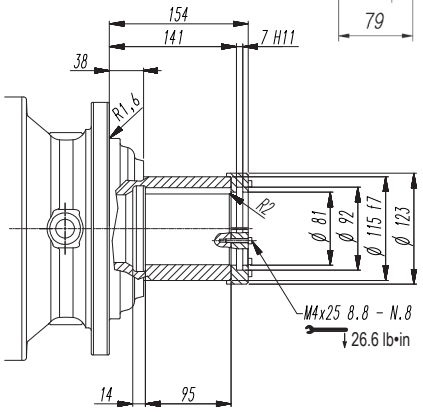
FZ

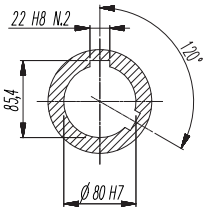


FP



FDK





FP | **T_{2max} = 106,210 lb·in**

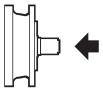
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

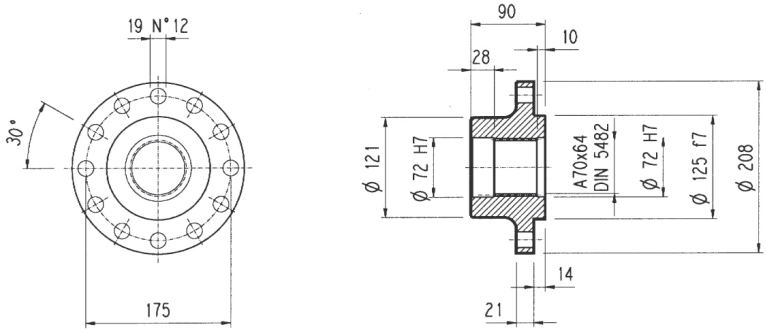
inch	T
3.000	$^{0}_{-0.00075}$

Bonfiglioli Riduttori

Flange

W0A



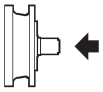


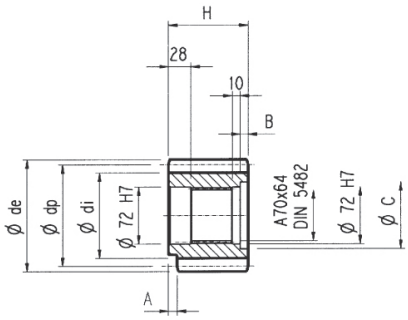
Material: Steel C40

Dimensions are in mm

Pinions

P...





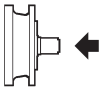
$\alpha = 20°$

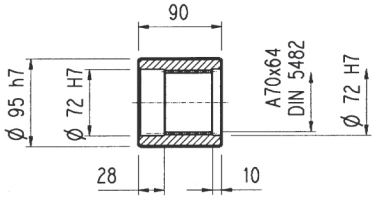
Dimensions are in mm

	m	z	x	dp	di	de	H	A	B	C	Material
PFF1	8	15	—	120	100	134	90	—	—	—	Steel 39NiCrMo3 hardened and tempered
PFF2	8	15	0.500	120	108	141	90	—	—	—	
PHB	10	11	0.500	110	95	136	90	10	—	—	
PHC1	10	12	0.450	120	104	145	90	—	—	—	
PHC2	10	12	0.320	120	100	144.2	90	—	—	—	
PHC3	10	12	0.350	120	101	144	90	—	—	—	
PHD1	10	13	0.950	130	124	165	90	—	—	—	
PHD2	10	13	0.500	130	115	159	90	—	—	—	
PHE1	10	14	—	140	115	160	90	—	—	—	
PHE2	10	14	0.500	140	125	166	90	—	—	—	Steel 18NiCrMo5 case hardened
PHF	10	15	—	150	127	167	90	24	—	—	Steel 39NiCrMo3 hardened and tempered
PHH	10	17	0.480	170	154	197.5	90	10	—	—	
PHM	10	20	—	200	175	220	90	10	—	—	Steel 18NiCrMo5 case hardened

Sleeve coupling

M0A





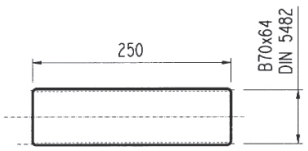
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

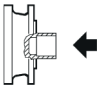


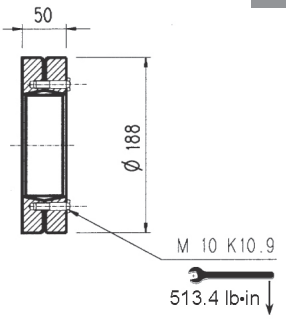


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

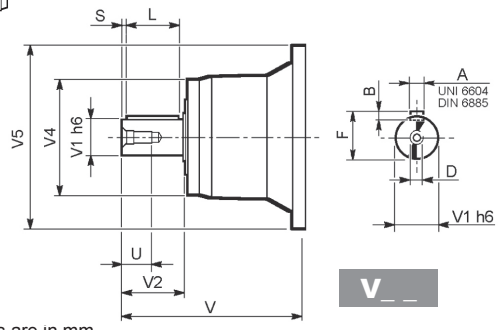




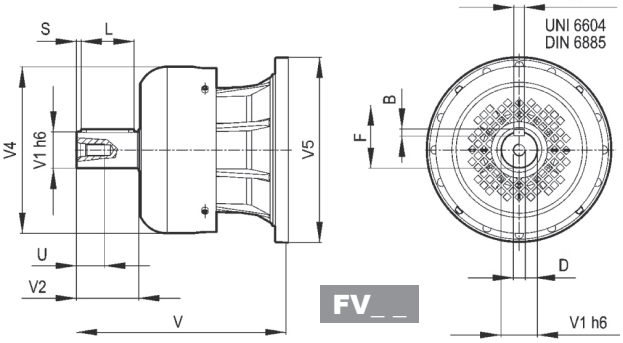
Dimensions are in mm

306 L 306 R





V_ _



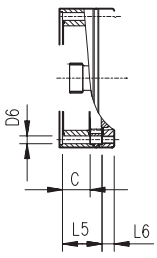
FV_ _

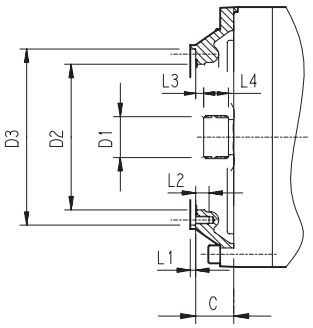
Dimensions are in mm

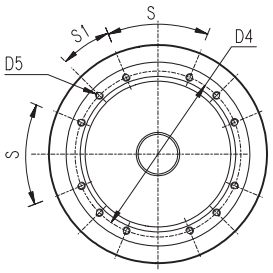
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
306 L1	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
306 L2	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
306 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
306 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
306 R2-R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

306 L 306 R





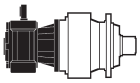


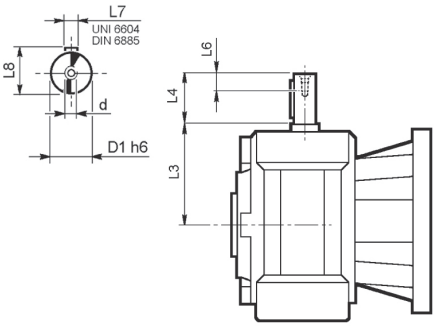


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
306 L1	**V9AB**	45	58x53 DIN5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
306 L2	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
306 L3	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	53	18	45°	45°	A
306 L4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	106	18	45°	45°	A
306 R2-R3-R4	**V9AA**	37	40x36 DIN5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 06 L3

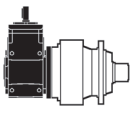


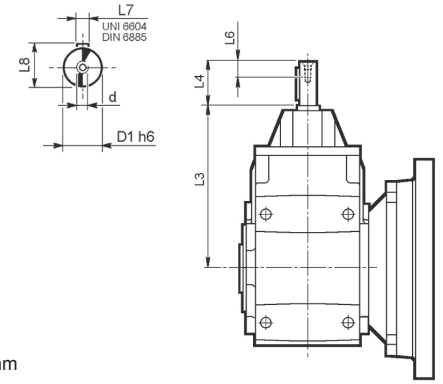


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 06 L3_HS	25	144	50	19	8	28	M8

3/A 06 L2

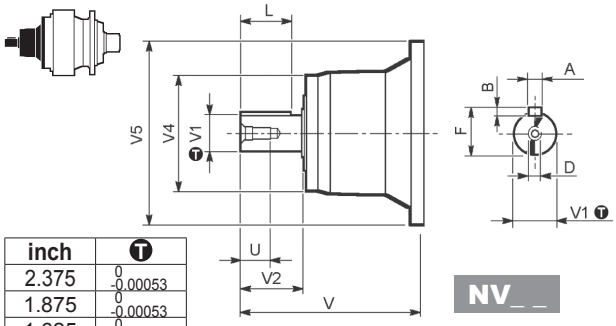




Dimensions are in mm

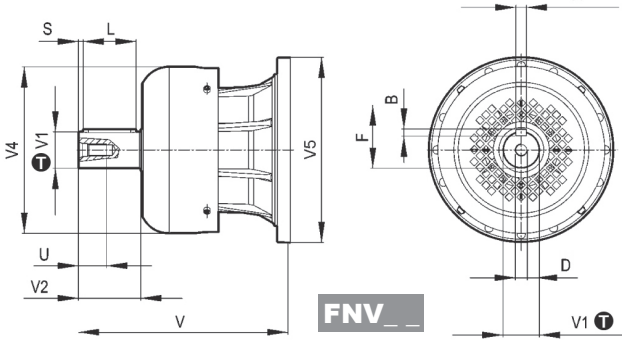
	D1 h6	L3	L4	L6	L7	L8	d
3/A 06 L2_HS	24	354	50	19	8	27	M8

306 L 306 R

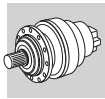


inch	T
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

NV_ _



FNV_ _

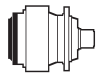


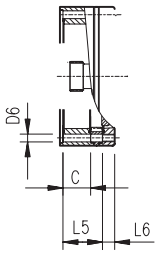
Imperial

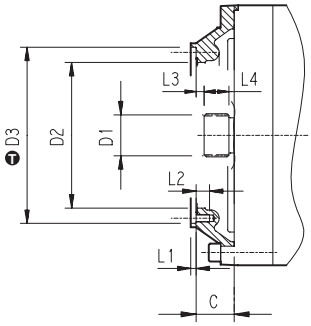
Dimensions are in Inch except when shown in *italic [mm]*

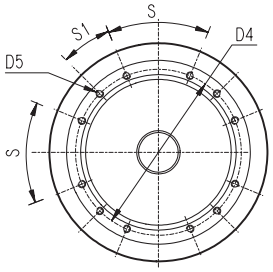
		V	V1	V2	V4	V5	A	B	F	L	D	U
306 L1	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
306 L2	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
306 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
306 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
306 R2-R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

306 L 306 R







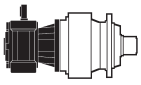


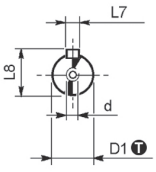
inch	T
9.29	+0.00181 0
7.01	+0.00157 0

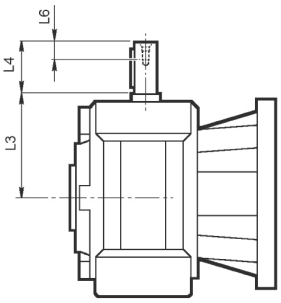
Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
306 L1	**V9AB**	1.77	*58x53 DIN5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
306 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
306 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
306 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
306 R2-R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 06 L3





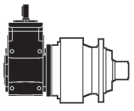


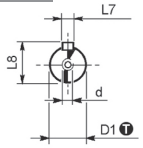
inch	T
1.000	0 -0.00051

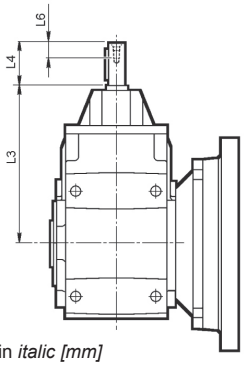
Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 06 L3_NHS	1.000	5.67	1.969	0.75	0.250	1.109	3/8-16UNC

3/A 06 L2



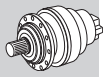




inch	T
1.000	0 -0.00051

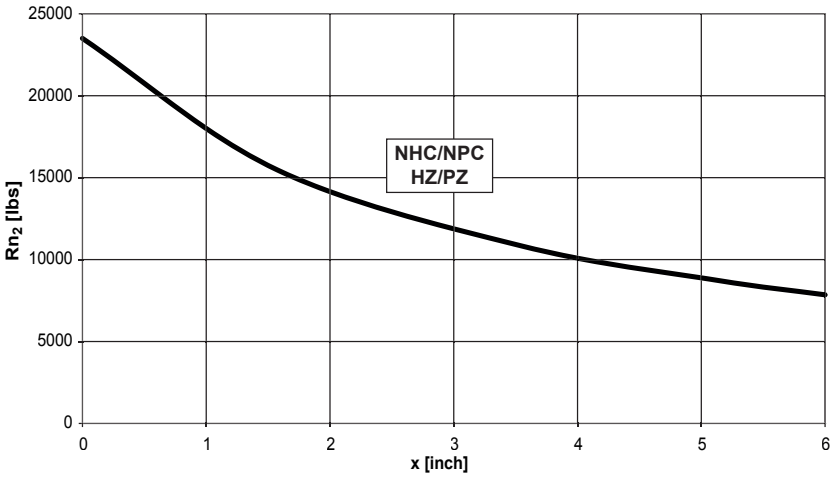
Dimensions are in Inch except when shown in *italic [mm]*

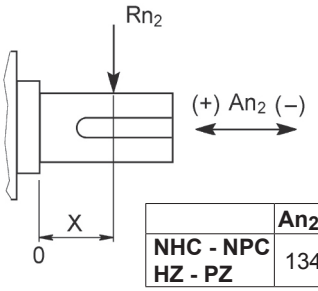
	D1	L3	L4	L6	L7	L8	d
3/A 06 L2_NHS	1.000	13.92	1.969	0.75	0.250	1.109	3/8-16UNC



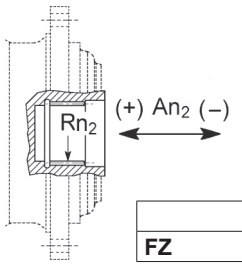
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





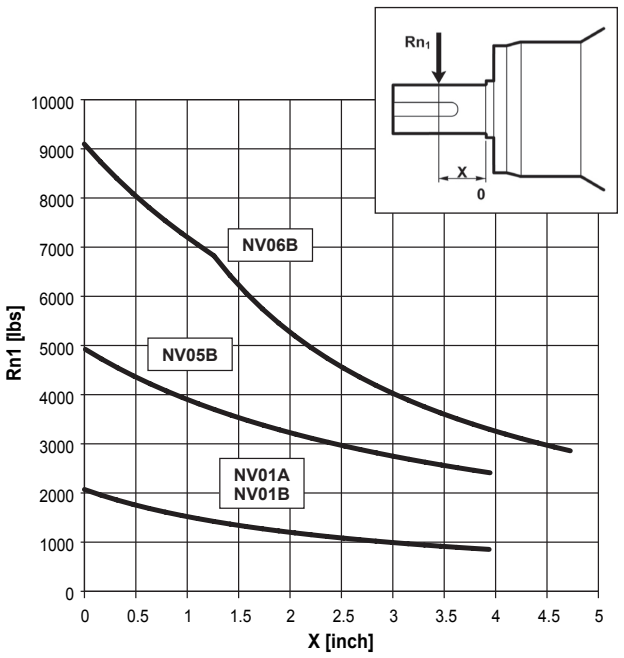
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	13488	6744

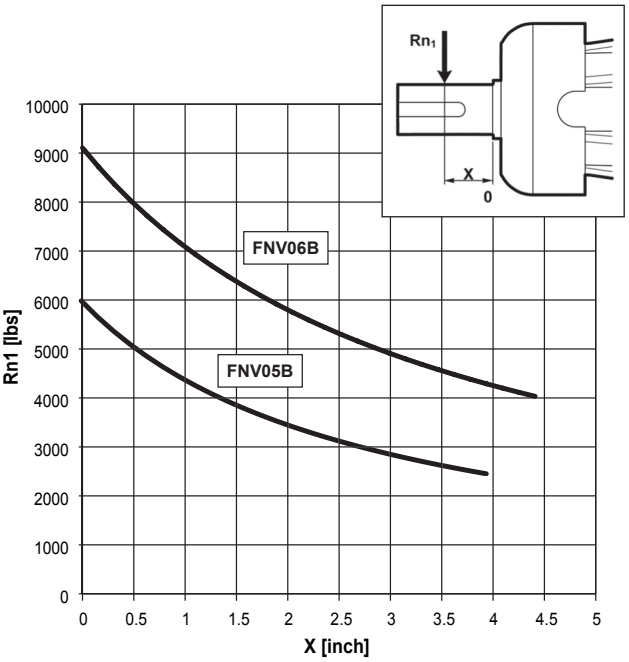


	Rn2	An2 (+/-)
FZ	3652	3652

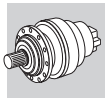
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.34**	**1.34**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

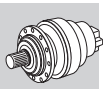




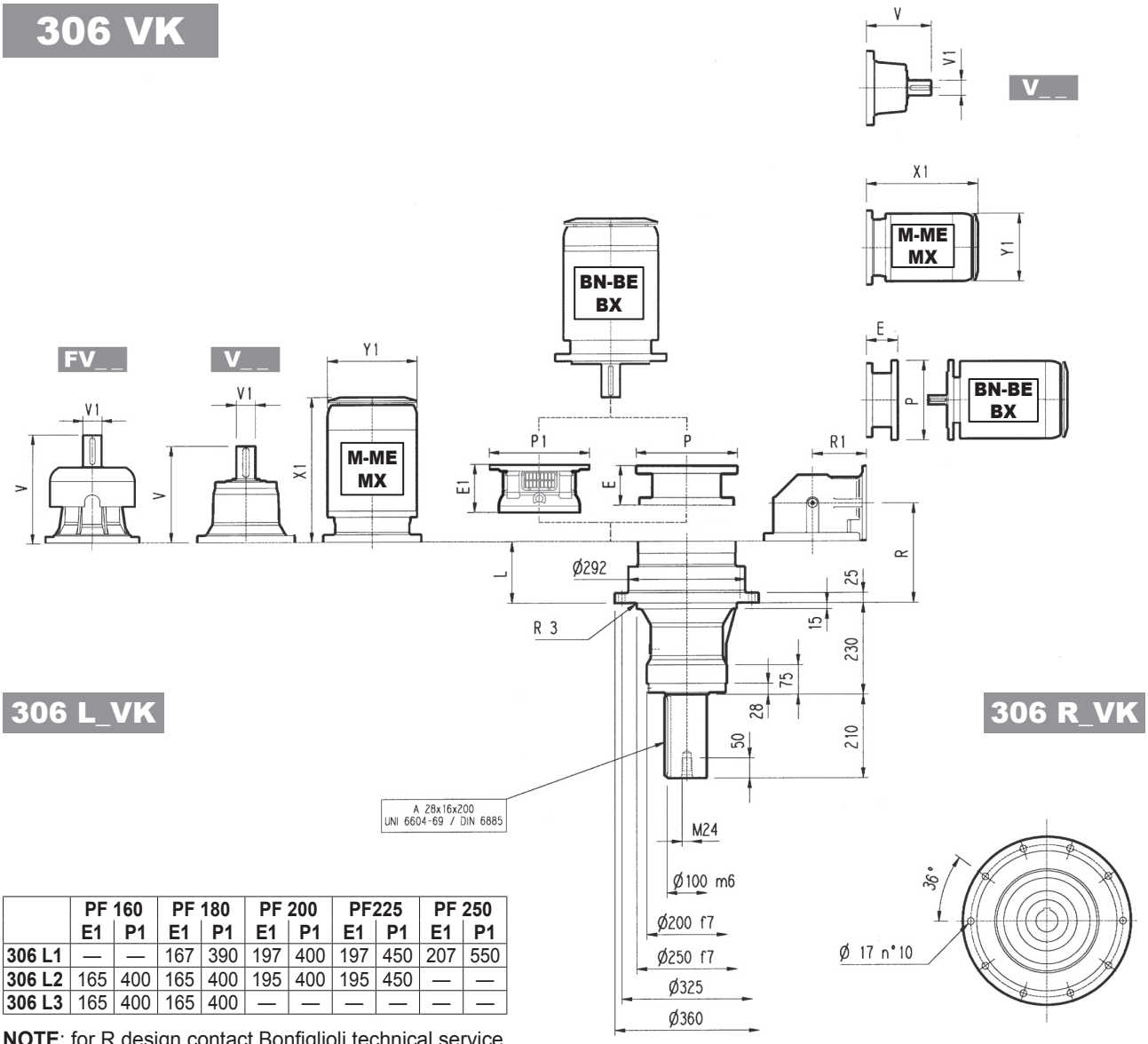
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



306 VK



Metric



306 L_VK

306 R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
306 L1	—	—	167	390	197	400	197	450	207	550
306 L2	165	400	165	400	195	400	195	450	—	—
306 L3	165	400	165	400	—	—	—	—	—	—

NOTE: for R design contact Bonfiglioli technical service

Dimensions are in mm

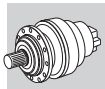
	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
															E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
306 L1	75	110	307	60	23	—	—	—	357	60	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	144	350	153	350	183	400	212	450	193	550
306 L2	140	120	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
306 L3	193	125	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
306 L4	246	130	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
306 L2	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
306 L3	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
306 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160	
										E	P	E	P	E	P	E	P	E	P	E	P	E	P
306 R2	212	140	90	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300	144	350
306 R3	232	140	92	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300	144	350
306 R4	285	122	95	137.5	24	6	158	38	7	65	160	84	200	84	200	94	250	94	250	114	300	144	350

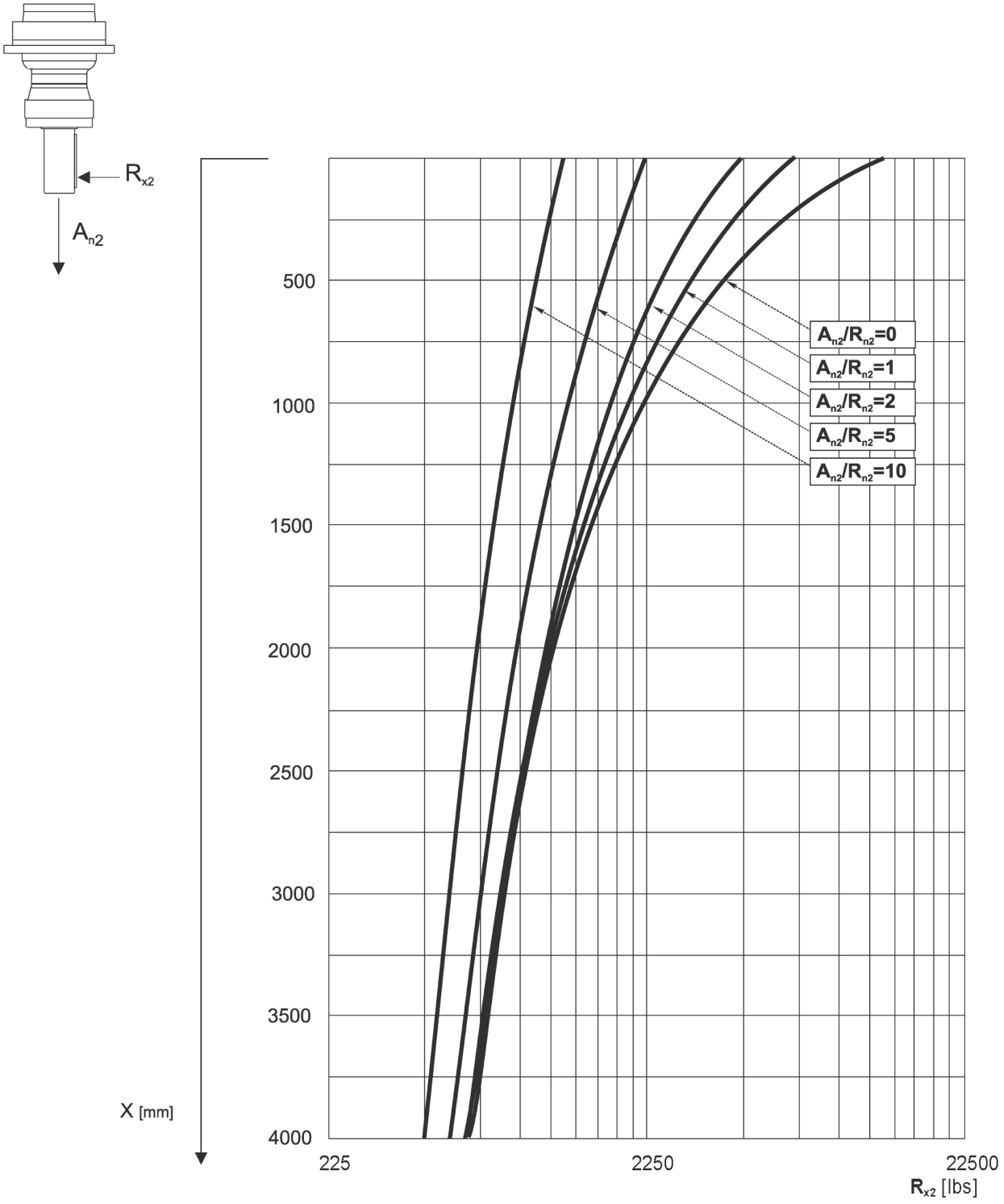
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
306 R2	—	—	—	328	—	156	373	—	195	405	—	195	508	—	258
306 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258
306 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258

306 VK

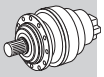


Metric

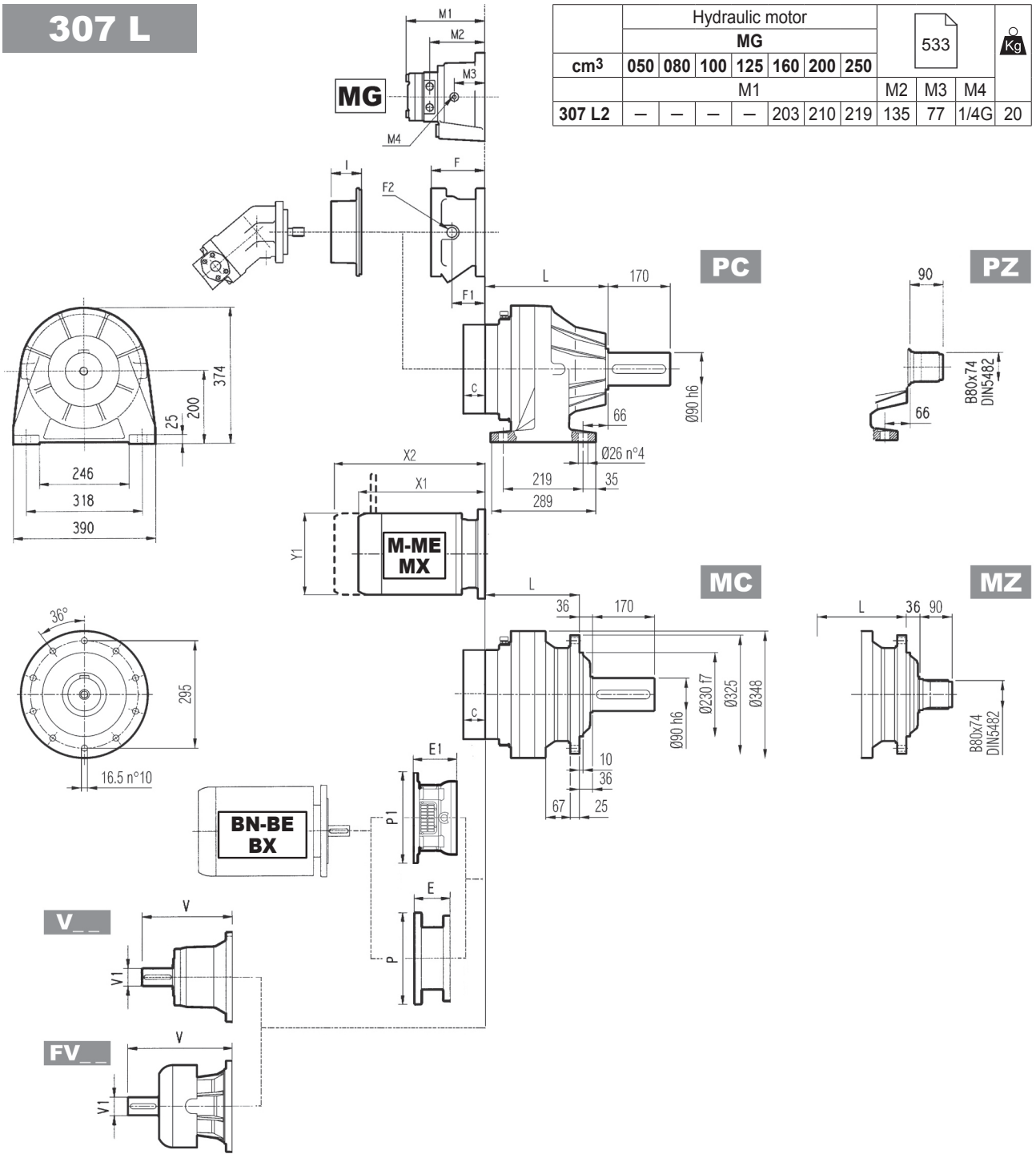
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



307 L



Metric



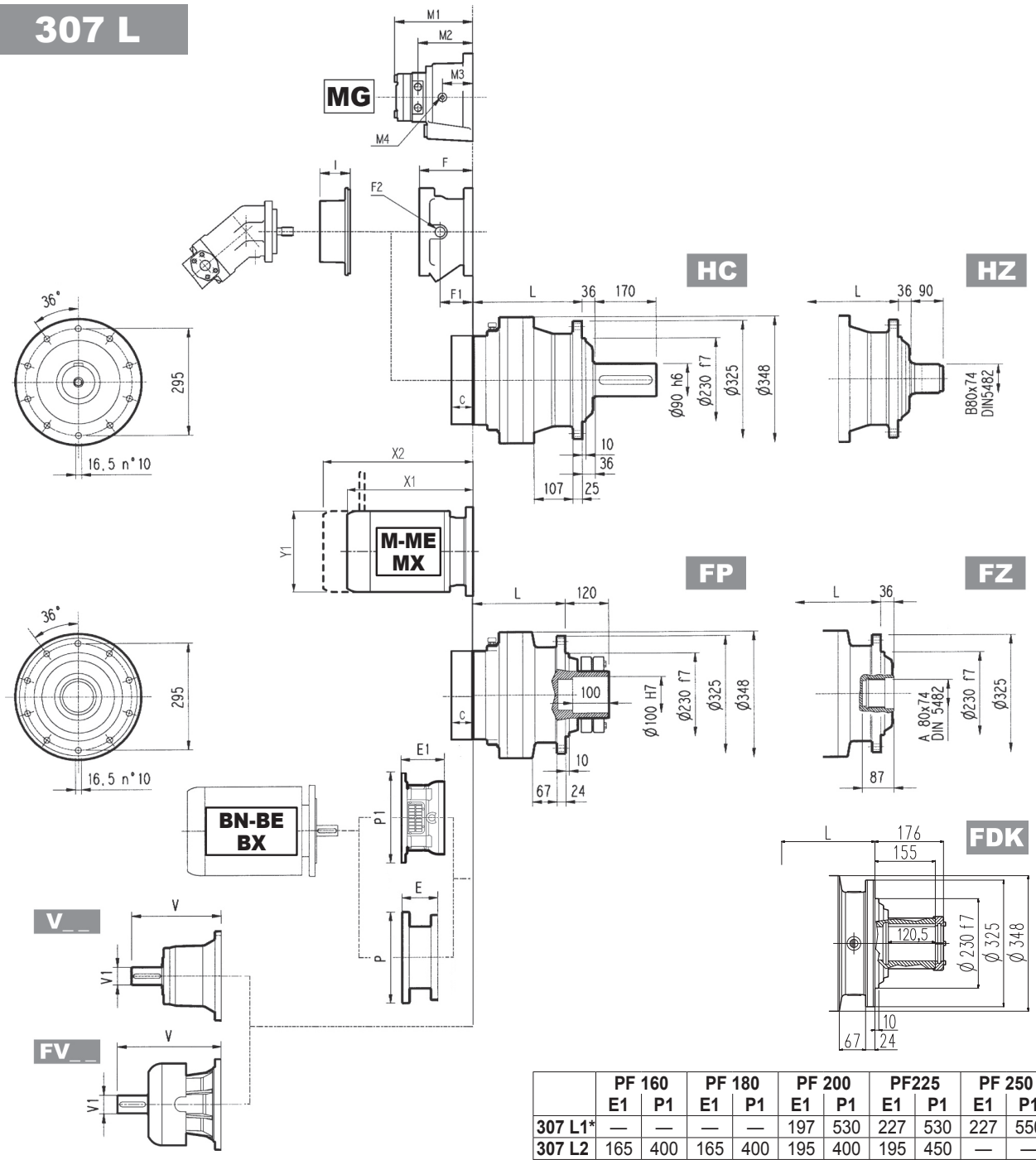
	Hydraulic motor							533			Kg
	MG										
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
307 L2	–	–	–	–	203	210	219	135	77	1/4G	20

Dimensions are in mm

	L				Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
307 L1	165	246	210	165	85	120	105	85
307 L2	254	335	299	254	97	132	117	97
307 L3	319	400	364	319	104	139	124	104
307 L4	372	453	417	372	108	143	128	108

	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
307 L1	315	80	35	313	60	28	375	80	48	363	60	34	51	B	522	201	153	1/4 G	6	B	28
307 L2	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16
307 L3	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10
307 L4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10

307 L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
307 L1*	—	—	—	—	197	530	227	530	227	550
307 L2	165	400	165	400	195	400	195	450	—	—
307 L3	165	400	165	400	—	—	—	—	—	—
307 L4	165	400	165	400	—	—	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli technical service
NOTE: for R design contact Bonfiglioli technical service

FP T_{2max} = 161,080 lb·in

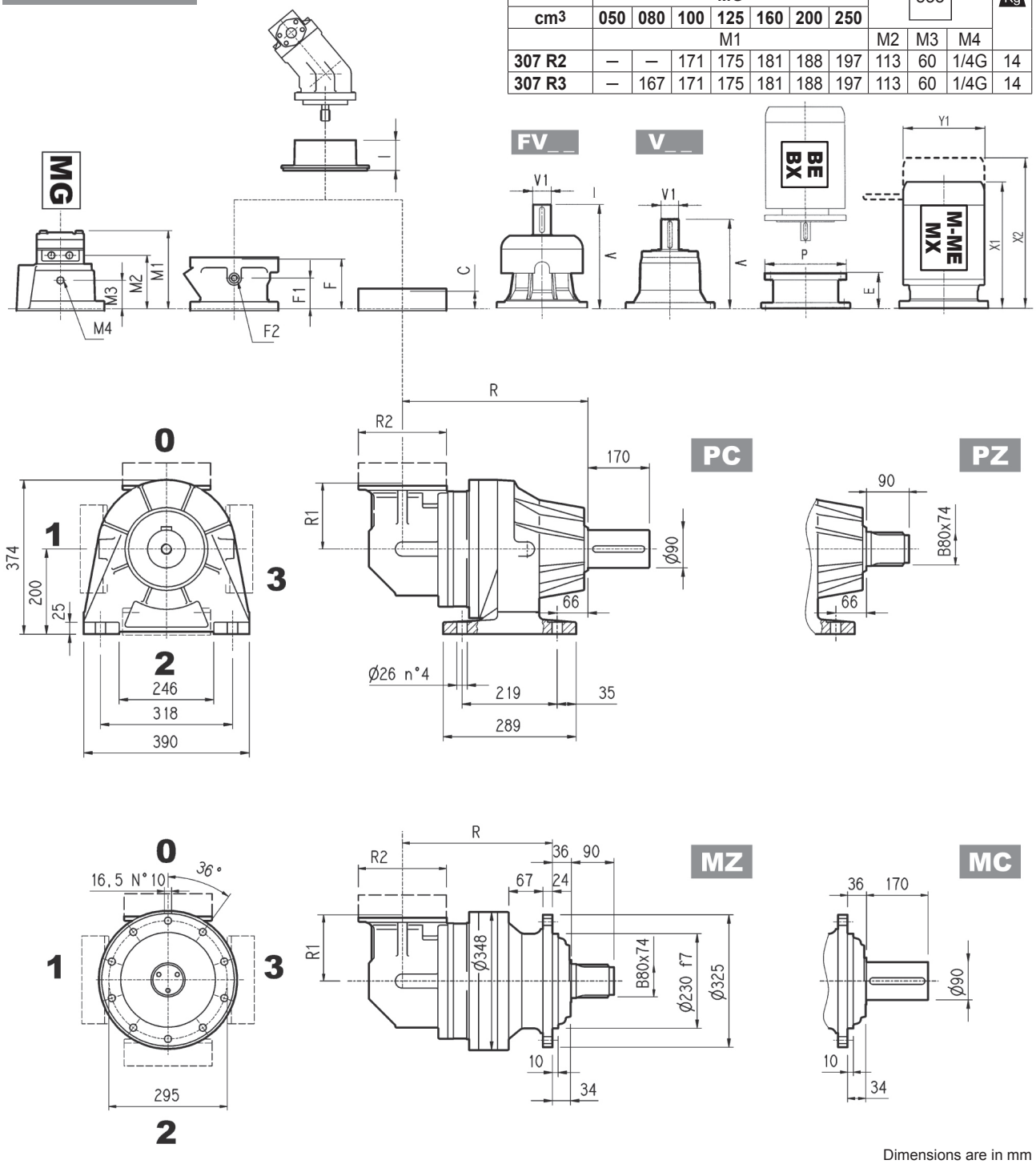
Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
307 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	215	550
307 L2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
307 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
307 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
307 L2	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
307 L3	—	—	—	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
307 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

307 R

	Hydraulic motor MG							533			Kg
cm³	050	080	100	125	160	200	250				
	M1							M2	M3	M4	
307 R2	—	—	171	175	181	188	197	113	60	1/4G	14
307 R3	—	167	171	175	181	188	197	113	60	1/4G	14

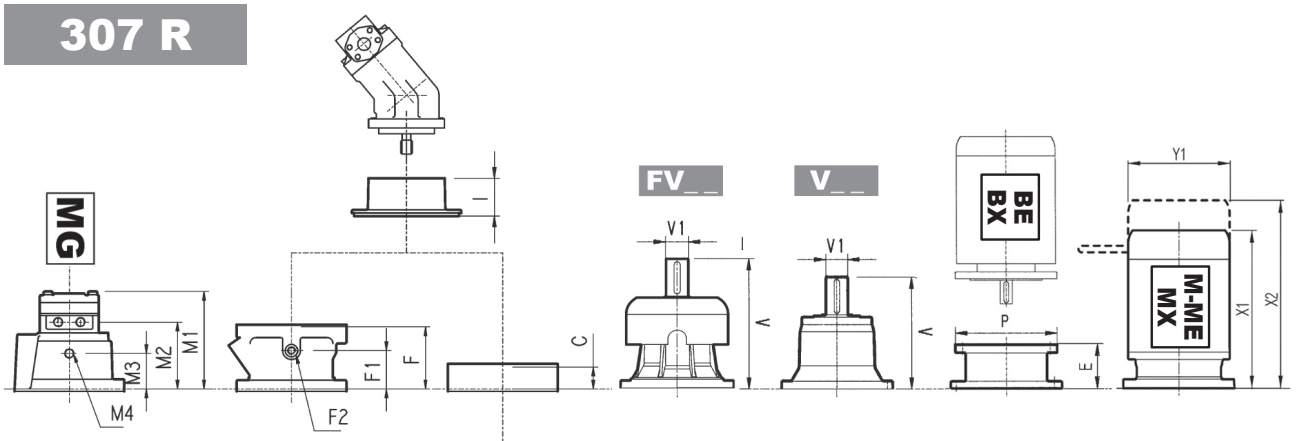


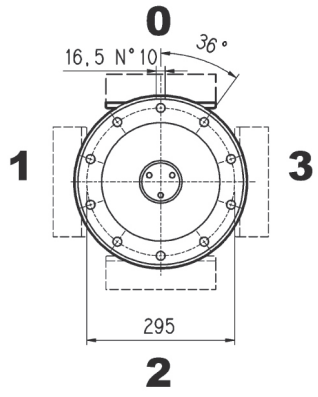
Dimensions are in mm

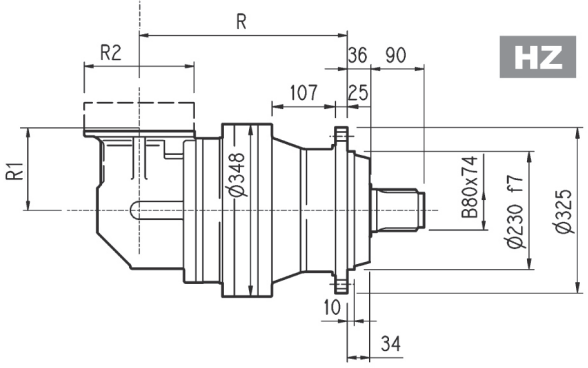
	R				R1	R2	Kg			
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK			MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK
307 R2	284	365	329	284	225	245	135	170	155	135
307 R3	346	427	391	346	140	186	117	152	137	117
307 R4	411	492	456	411	122	186	118	153	138	118

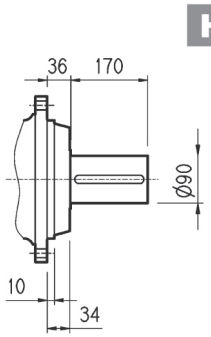
	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
307 R2	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
307 R3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
307 R4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

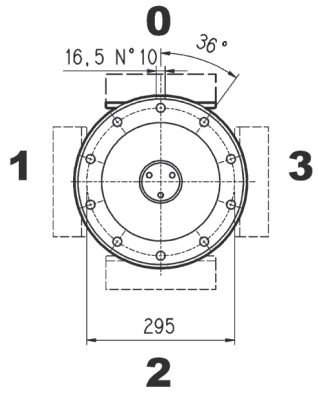
307 R

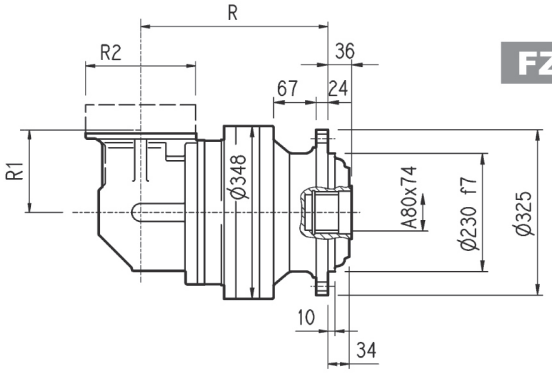


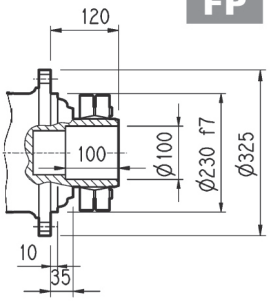


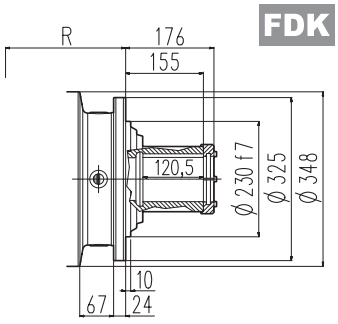












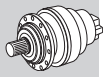
FP | **T_{2max} = 161,080 lb·in**

Dimensions are in mm

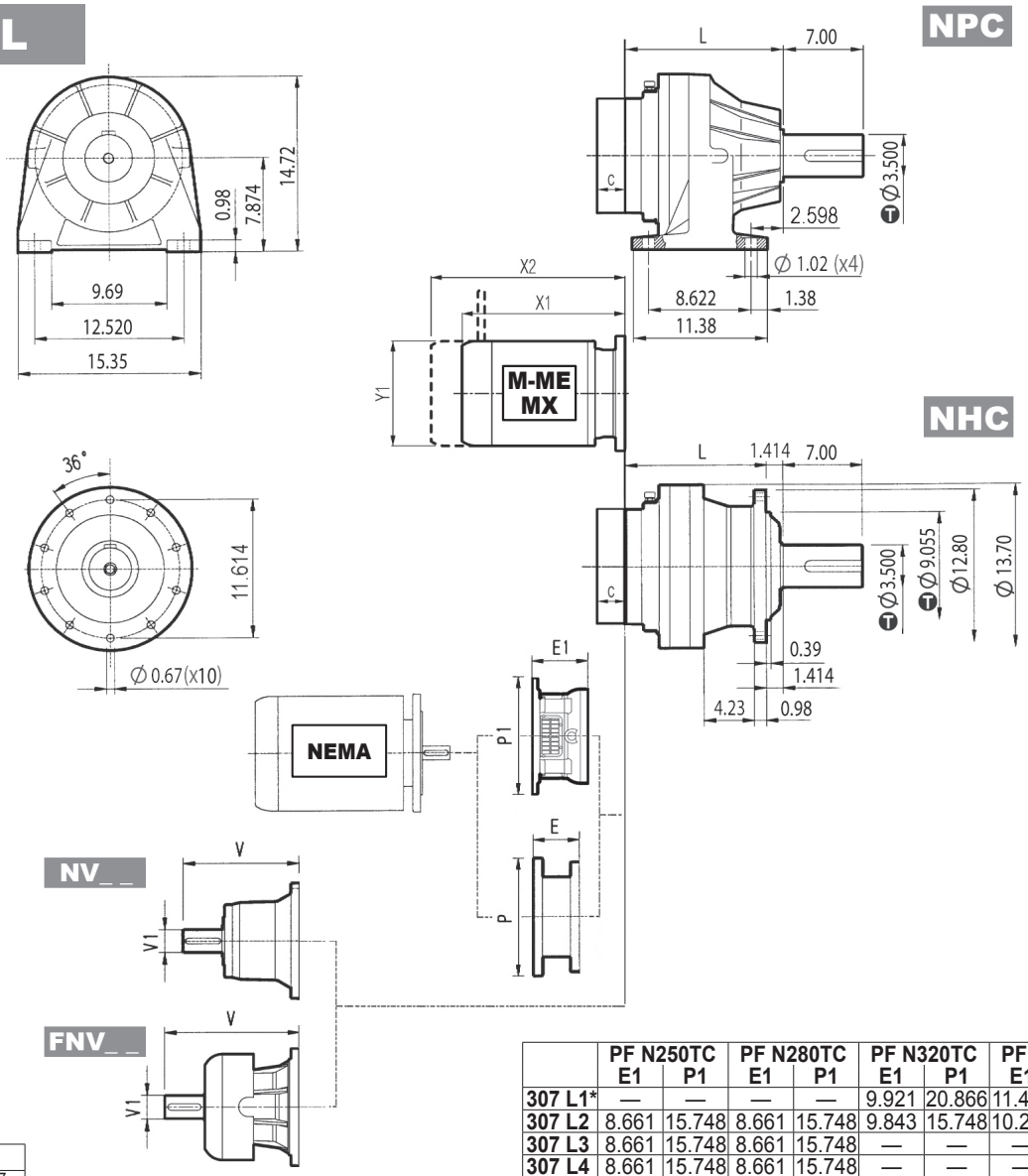
	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
307 R2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
307 R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
307 R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 R2	—	—	—	—	—	—	—	—	—	—	—	—	508	—	258	552	—	310	596	—	310
307 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258	—	—	—	—	—	—
307 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258	—	—	—	—	—	—

307 L



Imperial



inch	T
9.055	-0.00197 -0.00378
3.500	0 -0.00087

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
307 L1*	—	—	—	—	9.921	20.866	11.496	20.866
307 L2	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
307 L3	8.661	15.748	8.661	15.748	—	—	—	—
307 L4	8.661	15.748	8.661	15.748	—	—	—	—

(*): for NPC versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs	
	NPC	NHC	NPC	NHC
307 L1	9.67	8.27	264.6	231.5
307 L2	13.19	11.77	291.1	258.0
307 L3	15.75	14.33	306.5	273.4
307 L4	17.83	16.42	315.3	282.2

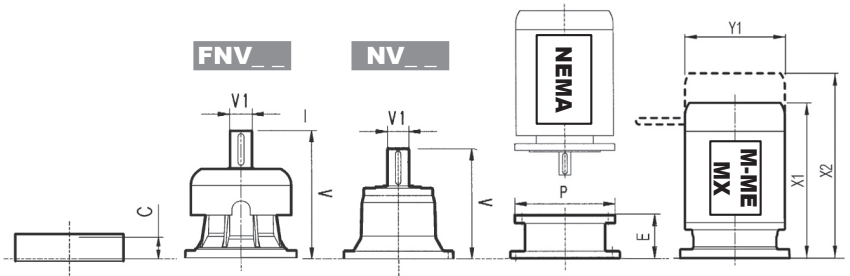
	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
307 L1	12.283	3.000	77.2	13.130	2.375	29.8	14.646	3.000	90.0	15.104	2.375	38.0	1.772	B
307 L2	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—	1.457	A
307 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A
307 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A

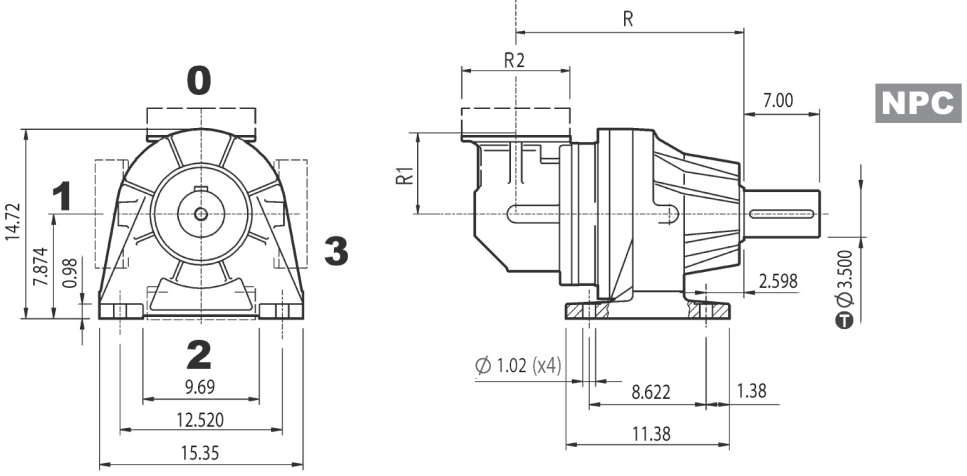
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
307 L1	—	—	—	—	—	—	—	—	—	—	—	—	7.78	13.78	7.78	13.78
307 L2	—	—	—	—	—	—	—	—	5.22	11.81	6.22	13.78	—	—	—	—
307 L3	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81	—	—	—	—
307 L4	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81	—	—	—	—

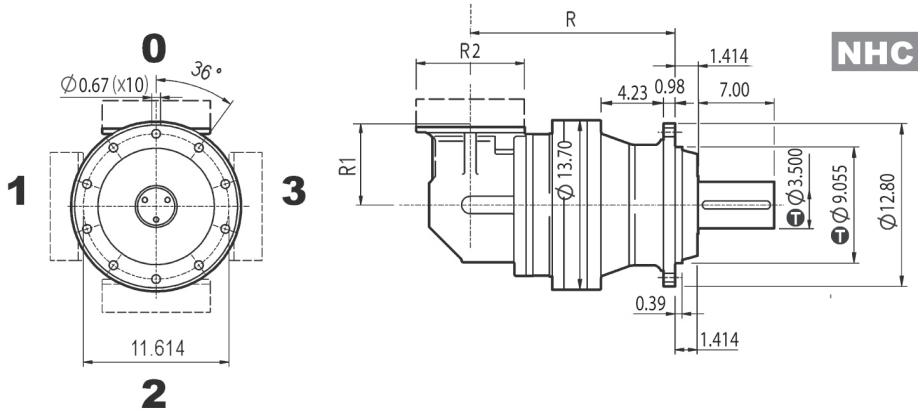
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
307 L2	—	—	—	—	—	—	—	—	—	—	—	—	18.11	—	10.16	21.73	—	12.20	23.46	—	12.20
307 L3	—	—	—	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—
307 L4	9.96	12.36	5.43	11.02	—	6.14	12.80	—	7.68	14.06	—	7.68	18.11	—	10.16	—	—	—	—	—	—

Bonfiglioli Riduttori

307 R







inch	T
9.055	-0.00197 -0.00378
3.500	0 -0.00087

Dimensions are in Inch except when shown in *italic [mm]*

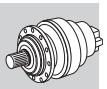
	R		R1	R2	lbs	
	NPC	NHC			NPC	NHC
307 R2	14.37	12.95	8.86	9.65	374.9	341.8
307 R3	16.81	15.39	5.51	7.32	335.2	302.1
307 R4	19.37	17.95	4.80	7.32	337.4	304.3

	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
307 R2	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
307 R3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
307 R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

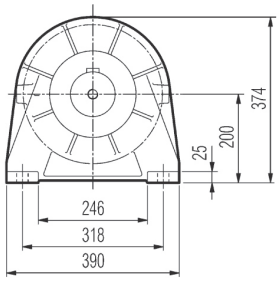
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
307 R2	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
307 R3	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81
307 R4	4.67	6.69	4.67	6.69	5.22	8.82	5.22	8.82	5.22	8.82	6.12	11.81

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 R2	—	—	—	—	—	—	—	—	—	—	—	—	20	—	10.16	21.73	—	12.20	23.46	—	12.20
307 R3	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16	—	—	—	—	—	—
307 R4	9.96	12.36	5.43	12.91	—	6.14	14.68	—	7.68	15.94	—	7.68	20	—	10.16	—	—	—	—	—	—

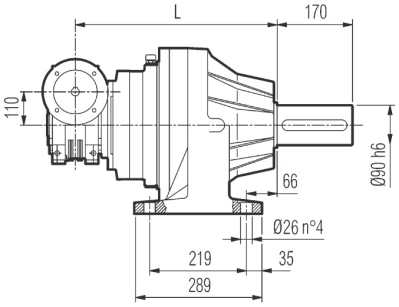
3/V 07 L3



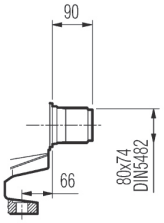
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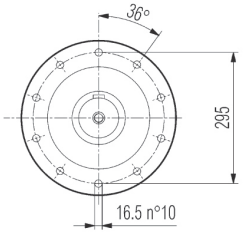


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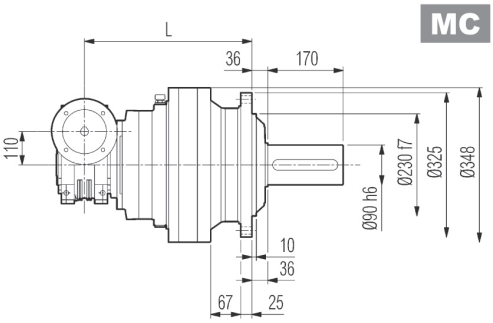


PZ

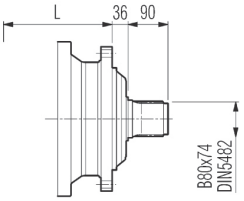


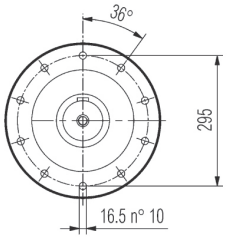


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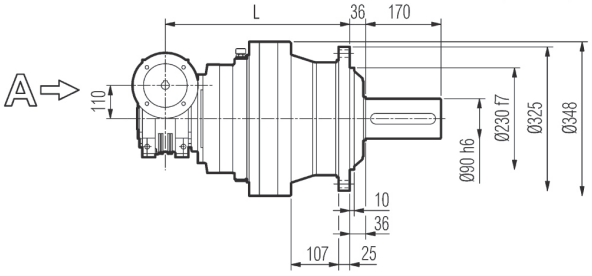


MZ

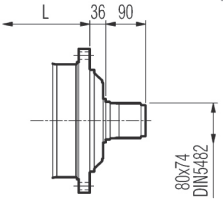


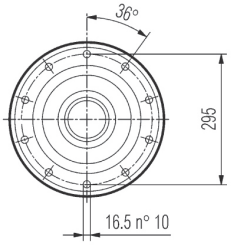


HC

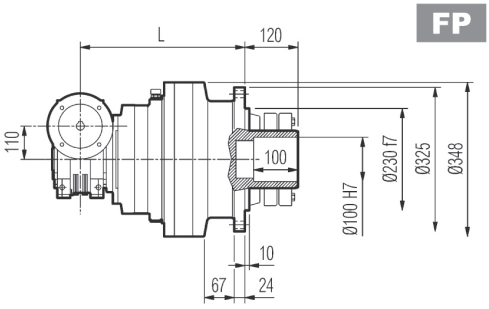


HZ

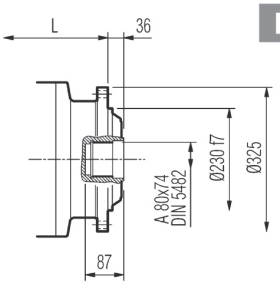




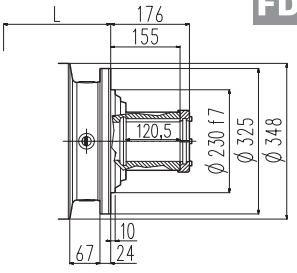
FP

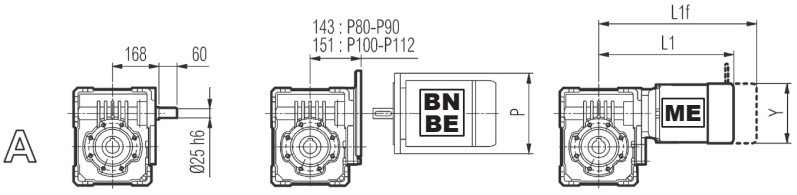


FZ



FDK





FP T_{2max} = 161,080 lb·in

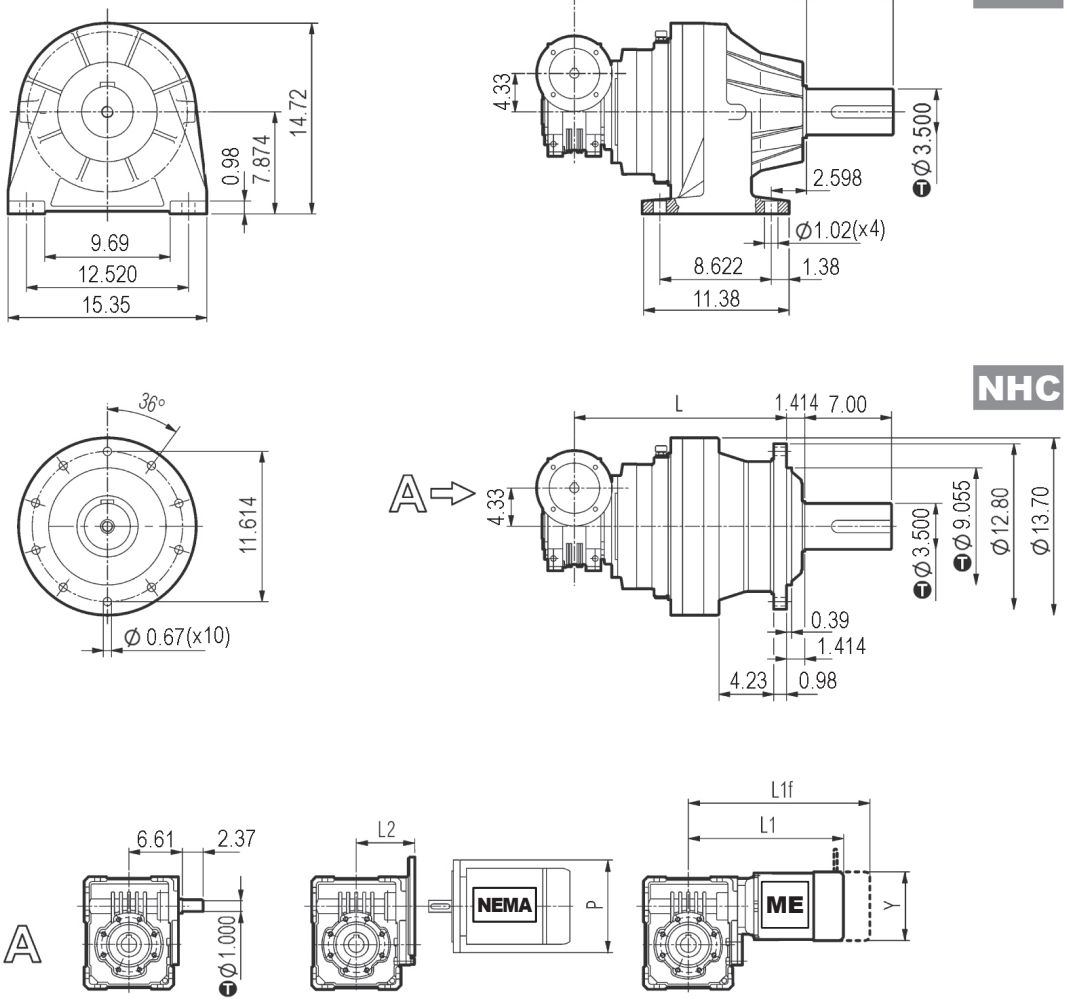
Dimensions are in mm

	L				Kg				P80	P90	P100	P112
	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	MC - MZ	PC - PZ	HC - HZ	FP - FZ - FDK	P	P	P	P
3/V 07 L3	414	495	459	414	130	165	150	130	200	200	250	250

	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 07 L3	364	—	156	407	—	193	439	—	193

Bonfiglioli Riduttori

3/V 07 L3



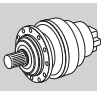
inch	T
9.055	-0.00197 -0.00378
3.500	0 -0.00087
1.000	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

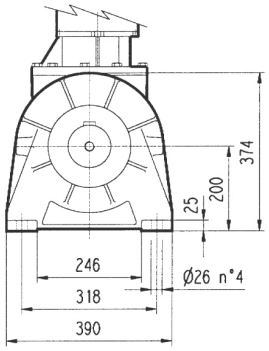
	L		lbs		N140TC		N180TC		N210TC	
	NPC	NHC	NPC	NHC	P	L2	P	L2	P	L2
3/V 07 L3	19.49	18.07	363.8	330.8	6.54	5.96	9.02	6.67	9.02	9.17

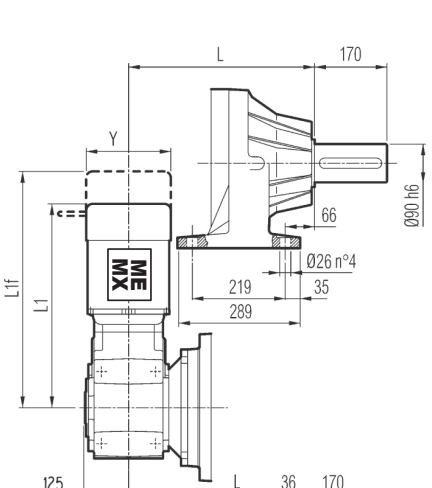
	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 07 L3	14.33	—	6.14	16.024	—	7.59	17.28	—	7.59

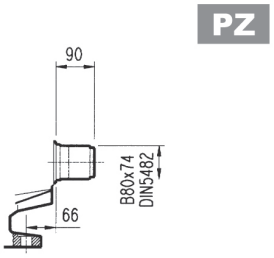
3/A 07 L2

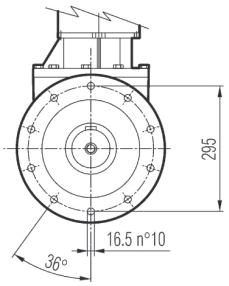


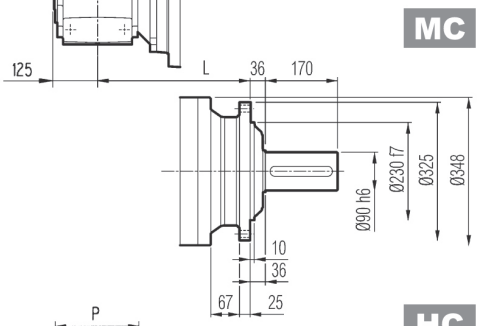
Metric

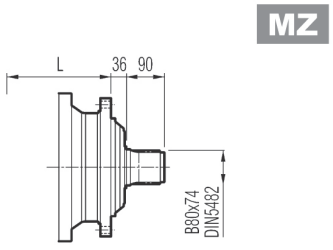


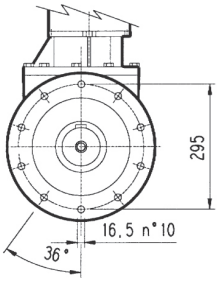


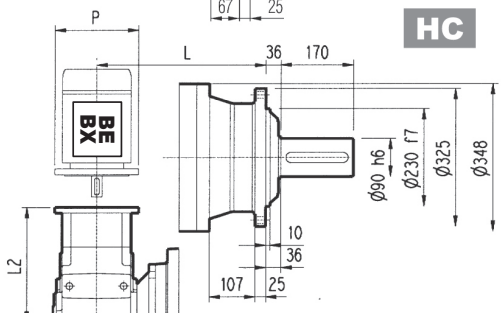


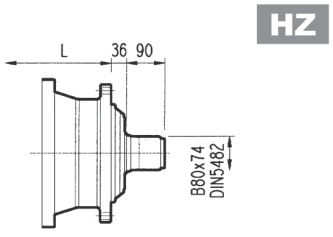


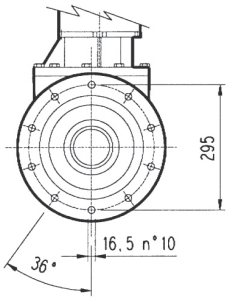


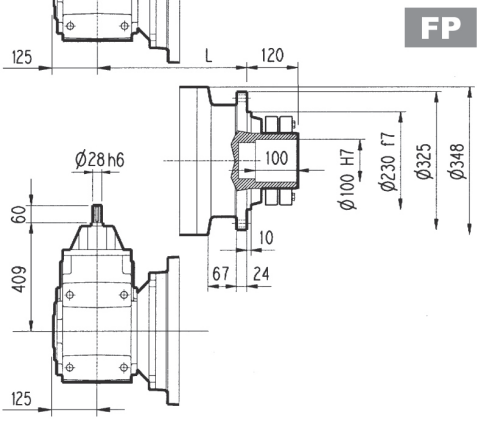


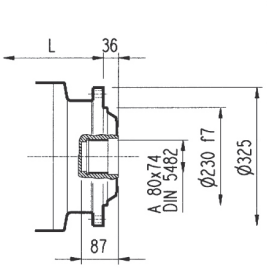


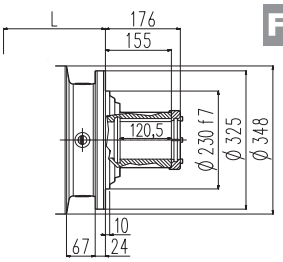












FP | **T_{2max} = 161,080 lb·in**

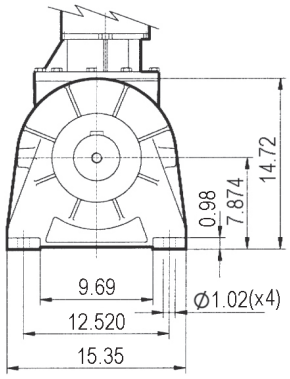
Dimensions are in mm

	L				Kg			
	MC - MZ	**PC - PZ**	**HC - HZ**	**FP - FZ - FDK**	**MC - MZ**	**PC - PZ**	**HC - HZ**	**FP - FZ - FDK**
3/A 07 L2	336	417	381	336	200	230	210	200

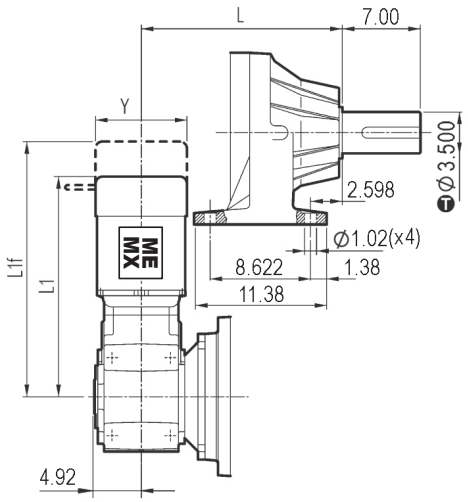
	P80		P90		P100		P112		P132		P160		P180	
	L2	**P**	**L2**	**P**	**L2**	**P**	**L2**	**P**	**L2**	**P**	**L2**	**P**	**L2**	**P**
3/A 07 L2	371	200	371	200	381	250	381	250	416.5	300	468	350	468	350

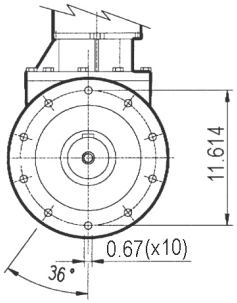
	S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	L1	**L1f**	**Y**	**L1**	**L1f**	**Y**	**L1**	**L1f**	**Y**	**L1**	**L1f**	**Y**	**L1**	**L1f**	**Y**	**L1**	**L1f**	**Y**
3/A 07 L2	535	—	156	578.5	—	195	610.5	—	195	718.5	—	258	970	—	—	1014	—	—

3/A 07 L2

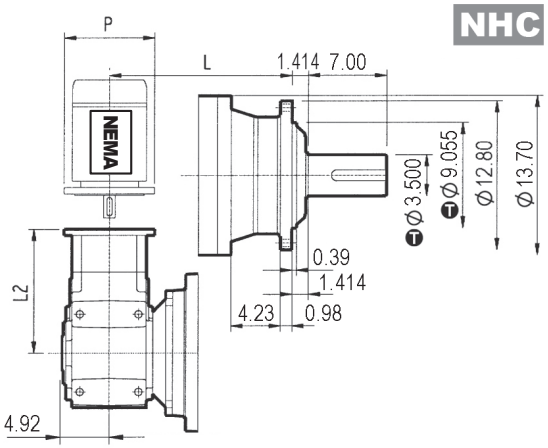


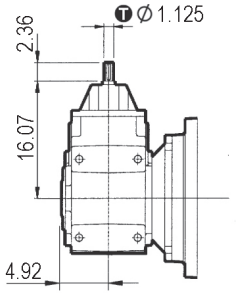
NPC





NHC





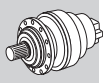
inch	T
9.055	-0.00197 -0.00378
3.500	0 -0.00087
1.125	0 -0.00051

Dimensions are in Inch except when shown in *italic [mm]*

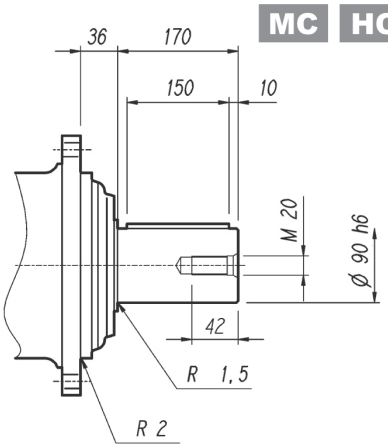
	L		lbs		N140TC		N180TC		N210TC		N250TC		N280TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P	L2	P	L2	P
3/A 07 L2	16.42	15.00	507.2	463.1	14.63	6.50	15.37	9.00	16.61	9.00	19.41	13.78	19.61	13.78

	S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/A 07 L2	21.06	—	6.14	22.78	—	7.68	24.04	—	7.68	28.29	—	10.16	38.19	—	—	39.92	—	—

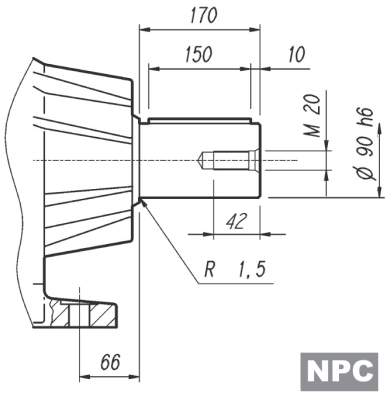
307 L | 307 R | 3/V 07 L3 | 3/A 07 L2

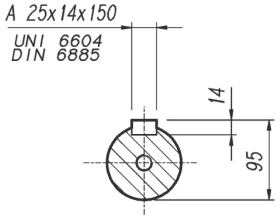


MC HC

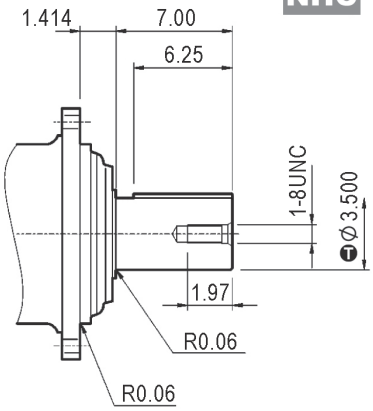


PC

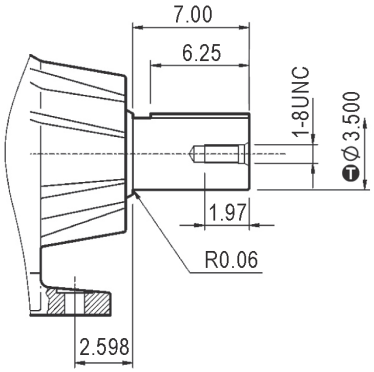


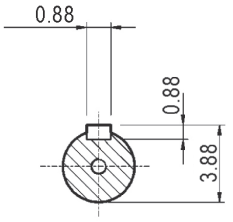


NHC

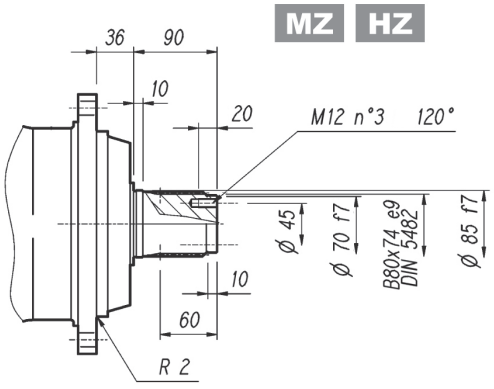


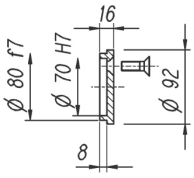
NPC



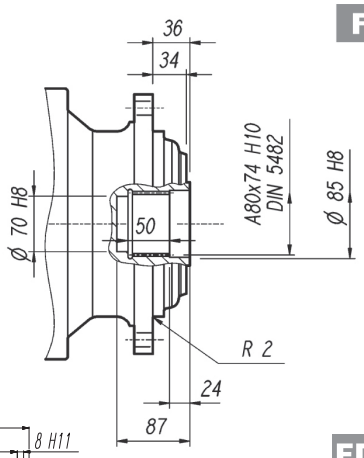


MZ HZ

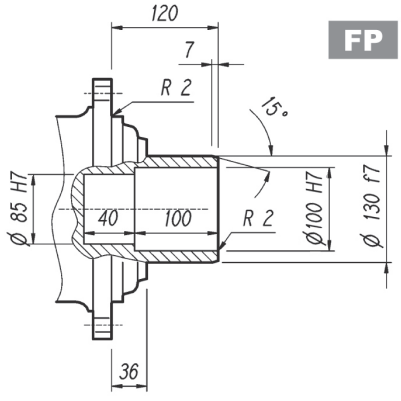




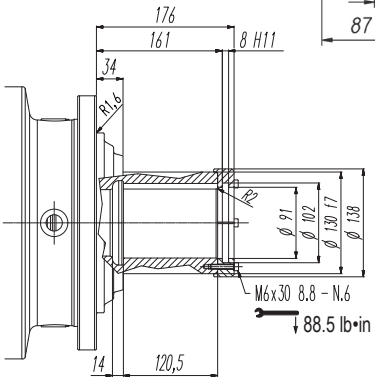
FZ

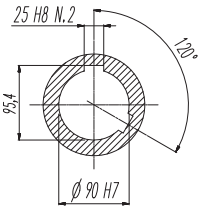


FP



FDK





FP | T_{2max} = 161,080 lb·in

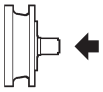
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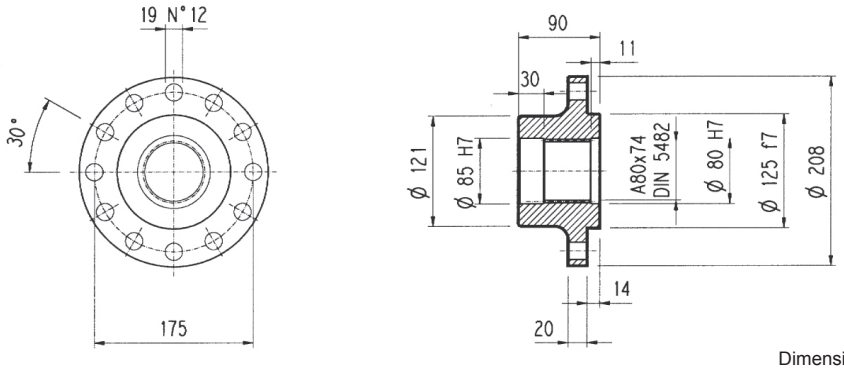
inch	T
3.500	0 -0.00087

Bonfiglioli Riduttori

Flange

W0A



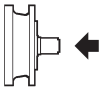


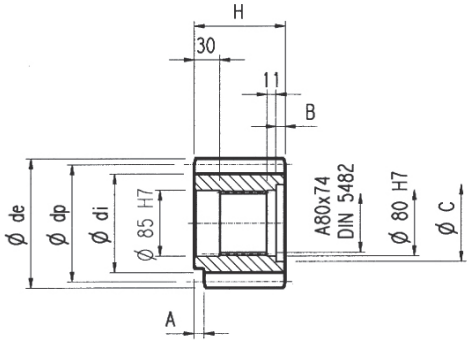
Material: Steel C40

Dimensions are in mm

Pinions

P...





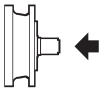
Dimensions are in mm

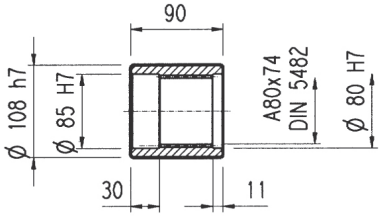
$\alpha = 20°$

	m	z	x	dp	di	de	H	A	B	C	Material
PFG	8	16	0.500	128	117	149.5	90	—	—	—	Steel 39NiCrMo3 hardened and tempered
PHC	10	12	0.450	120	104	145	90	—	—	—	
PHE	10	14	0.320	140	121	165	116	13	26	95	
PHF	10	15	0.150	150	130	171.5	107	20	17	100	
PHG	10	16	0.500	160	145	186	90	—	—	—	Steel 18NiCrMo5 case hardened
PHH1	10	17	—	170	145	189	90	—	—	—	
PHH2	10	17	0.500	170	154	198	90	—	—	—	
PLD	12	13	0.500	156	138	192	102	—	12	95	Steel 39NiCrMo3 hardened and tempered
PLE	12	14	0.500	168	150	199.2	90	—	—	—	
PLI	12	18	0.500	216	198	249.6	107	7	17	95	
PLT	12	26	—	312	282	336	90	10	—	—	Steel 18NiCrMo5 case hardened

Sleeve coupling

M0A





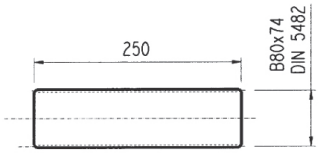
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

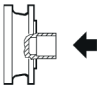


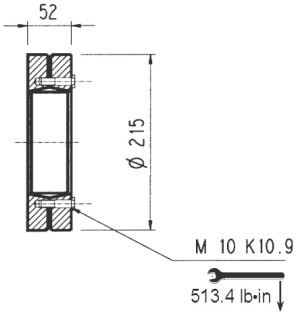


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

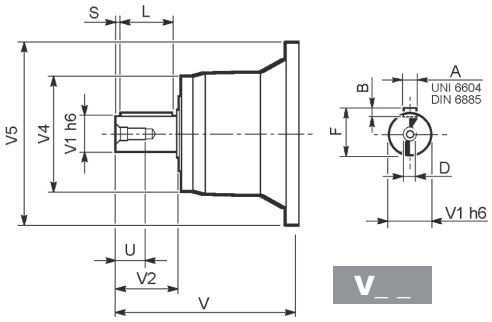




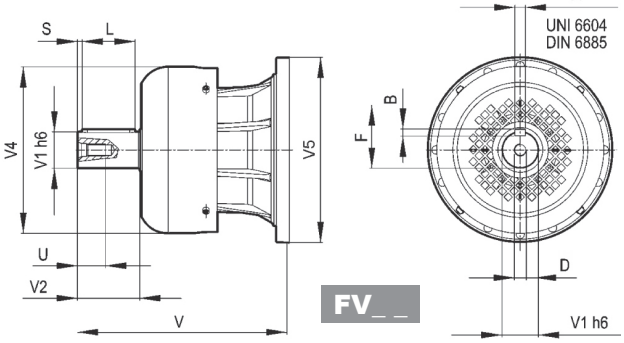
Dimensions are in mm

307 L 307 R





V_ _



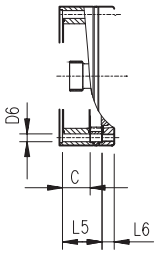
FV_ _

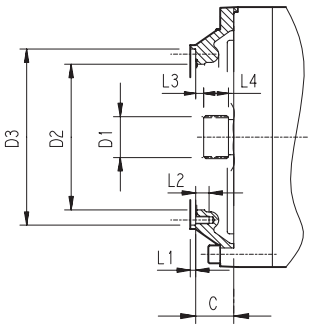
Dimensions are in mm

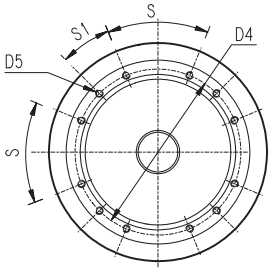
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
307 L1	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
307 L2	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
307 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
307 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
307 R2	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
307 R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

307 L 307 R





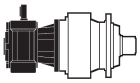


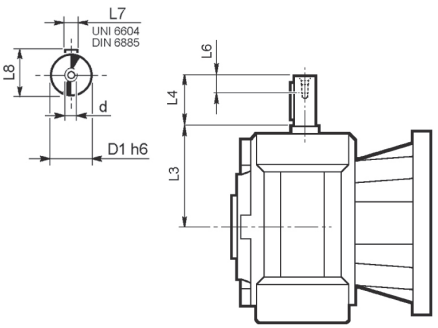


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
307 L1	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
307 L2	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
307 L3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
307 L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	118	18	45°	45°	A
307 R2	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
307 R3-R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 07 L3

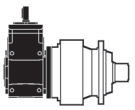


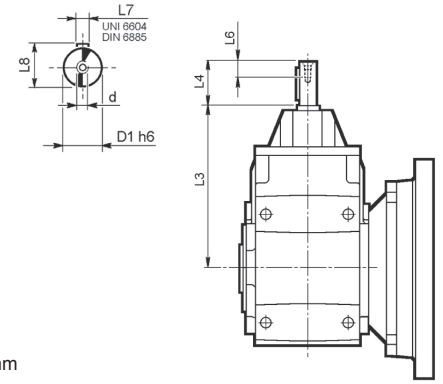


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 07 L3_HS	25	168	60	19	8	28	M8

3/A 07 L2



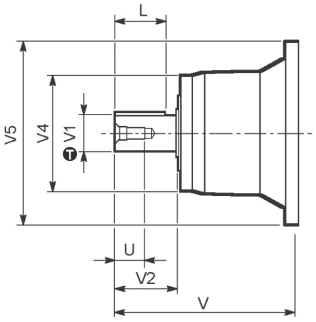


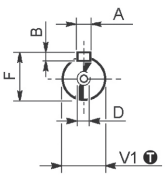
Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/A 07 L2_HS	28	409	60	22	8	31	M10

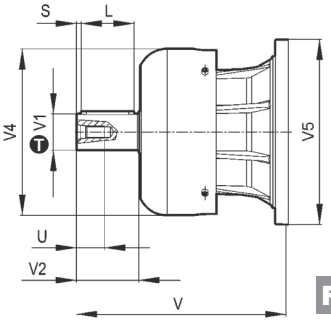
307 L 307 R



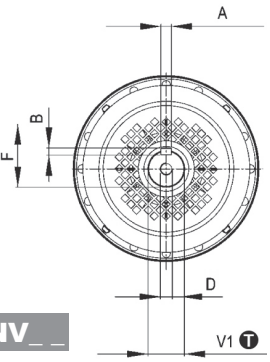




NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

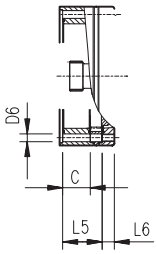
Imperial

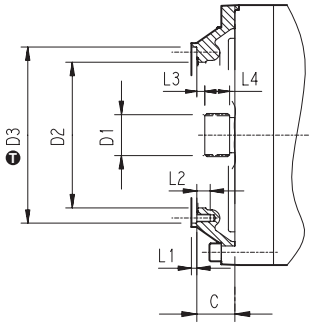
Dimensions are in Inch except when shown in *italic [mm]*

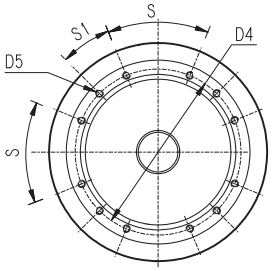
		V	V1	V2	V4	V5	A	B	F	L	D	U
307 L1	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4 -10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4 -10 UNC	1.654
307 L2	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
307 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
307 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
307 R2	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
307 R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

307 L 307 R







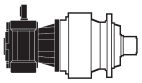


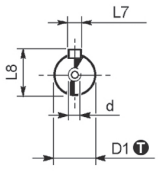
inch	T
9.29	+0.00181 0
7.01	+0.00157 0

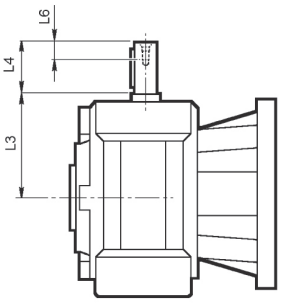
Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
307 L1	**V9AB**	1.77	*58x53 DIN5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
307 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
307 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
307 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
307 R2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
307 R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 07 L3





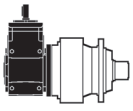


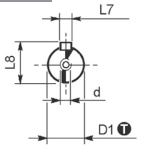
inch	T
1.000	0 -0.00051

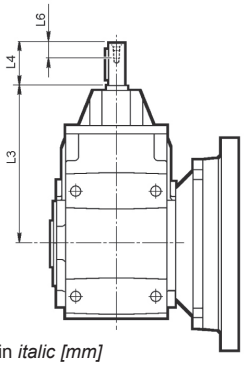
Dimensions are in Inch except when shown in *italic [mm]*

	D1	L3	L4	L6	L7	L8	d
3/V 07 L3_NHS	1.000	6.61	1.969	0.75	0.250	1.109	3/8-16UNC

3/A 07 L2



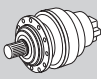




inch	T
1.125	0 -0.00051

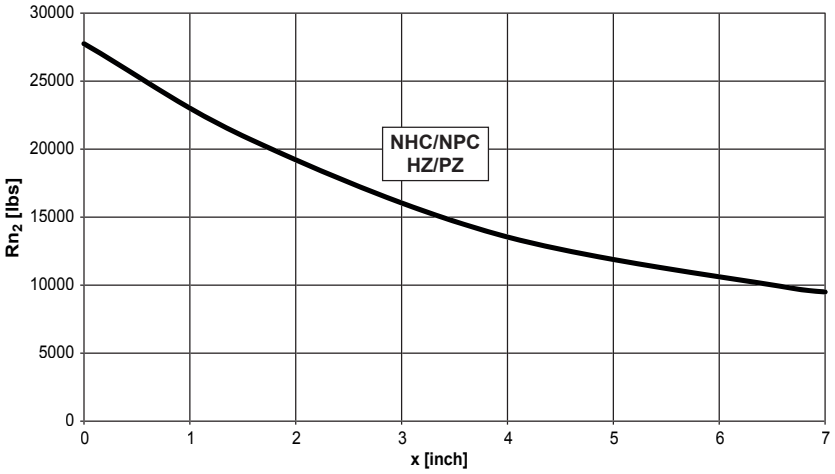
Dimensions are in Inch except when shown in *italic [mm]*

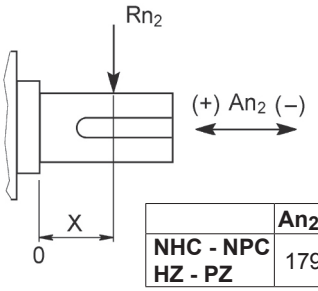
	D1	L3	L4	L6	L7	L8	d
3/A 07 L2_NHS	1.125	16.07	2.362	0.866	0.250	1.236	3/8-16UNC



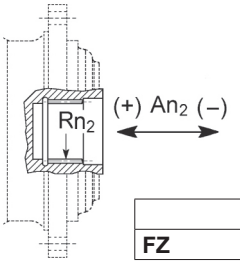
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





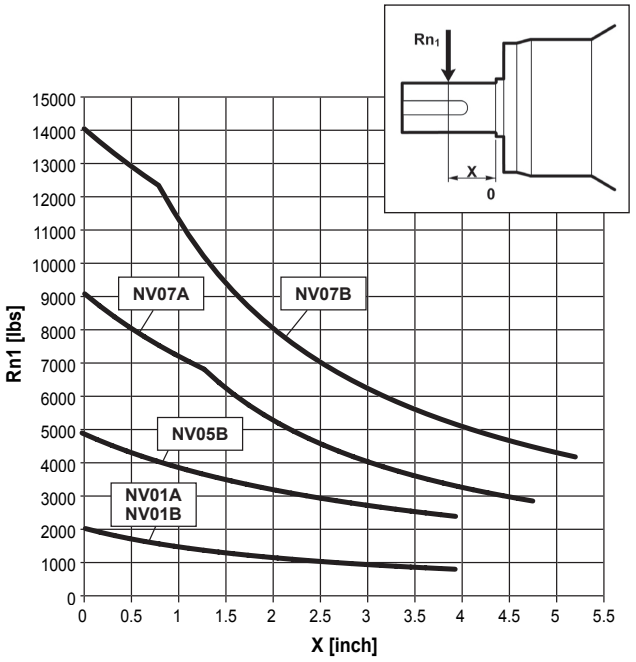
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	17984	8992

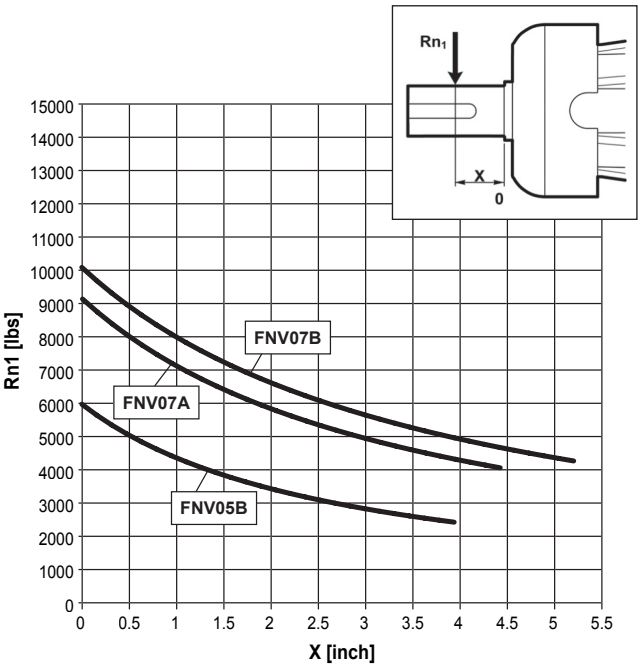


	Rn2	An2 (+/-)
FZ	4695	4695

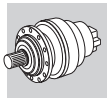
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.49**	**1.49**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$



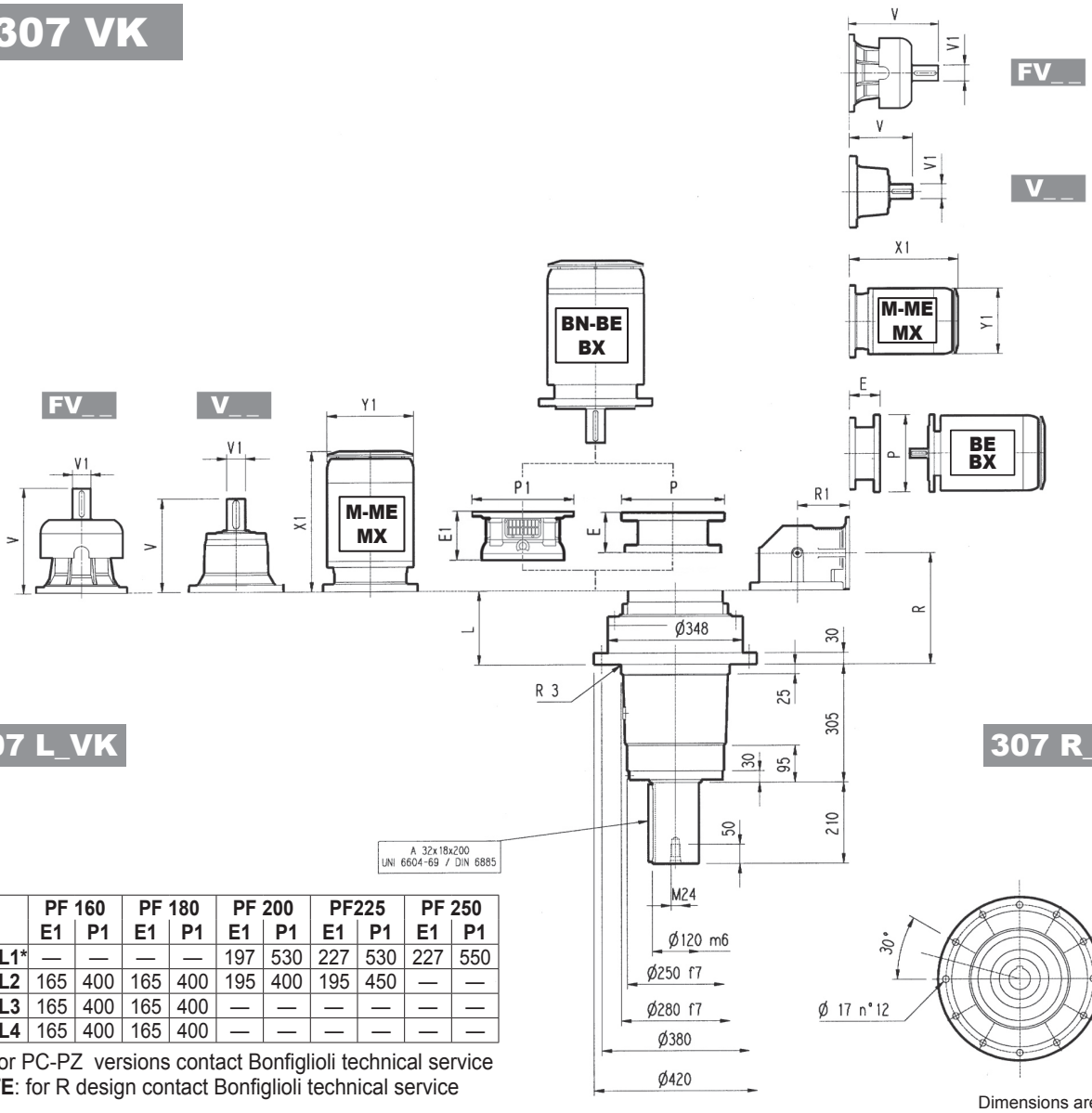


Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



307 VK

Metric



307 L_VK

307 R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
307 L1*	—	—	—	—	197	530	227	530	227	550
307 L2	165	400	165	400	195	400	195	450	—	—
307 L3	165	400	165	400	—	—	—	—	—	—
307 L4	165	400	165	400	—	—	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli technical service
NOTE: for R design contact Bonfiglioli technical service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
															E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
307 L1	80	145	315	80	35	313	60	28	375	80	48	363	60	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	215	550
307 L2	169	160	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
307 L3	234	170	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
307 L4	287	175	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

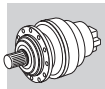
	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
307 L2	—	—	—	—	—	—	—	—	—	—	—	—	460	—	258	552	—	310	596	—	310
307 L3	—	—	—	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—
307 L4	253	314	138	280	—	156	325	—	195	357	—	195	460	—	258	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P71		P80		P90		P100		P112		P132		P160		P180		P200	
																E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
307 R2	199	225	180	239	48	15	—	—	—	276	48	17	—	—	—	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
307 R3	261	140	170	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
307 R4	326	122	175	137.5	24	6	158	38	7	—	—	—	—	—	—	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L			S4 + ME4/MX4			S5 + ME5S/MX5S			S5 + ME5L/MX5L		
	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1	X1	X2	Y1
307 R2	—	—	—	—	—	—	—	—	—	—	—	—	508	—	258	552	—	310	596	—	310
307 R3	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258	—	—	—	—	—	—
307 R4	253	314	138	328	—	156	373	—	195	405	—	195	508	—	258	—	—	—	—	—	—

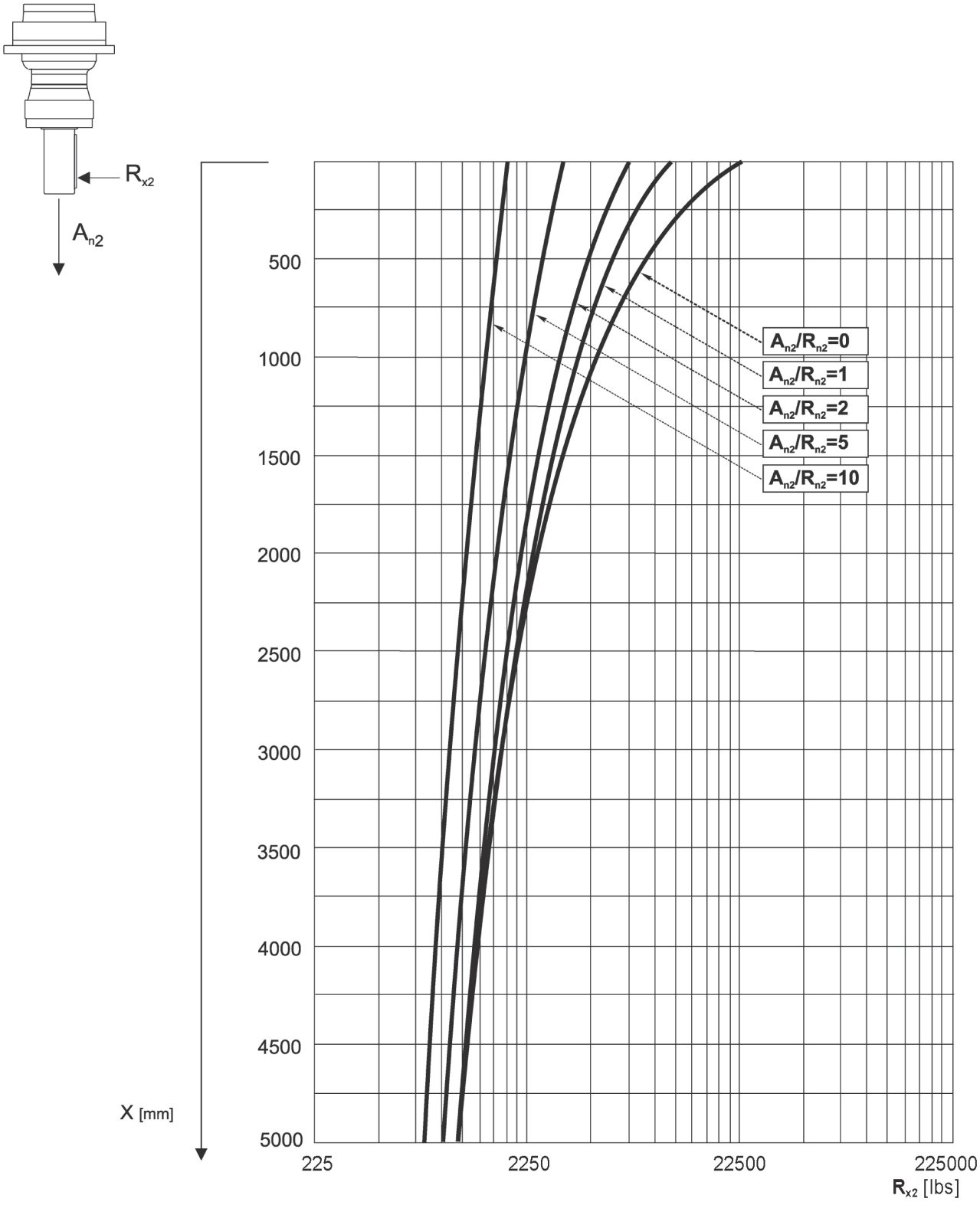
Bonfiglioli Riduttori

307 VK

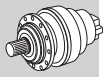


Metric

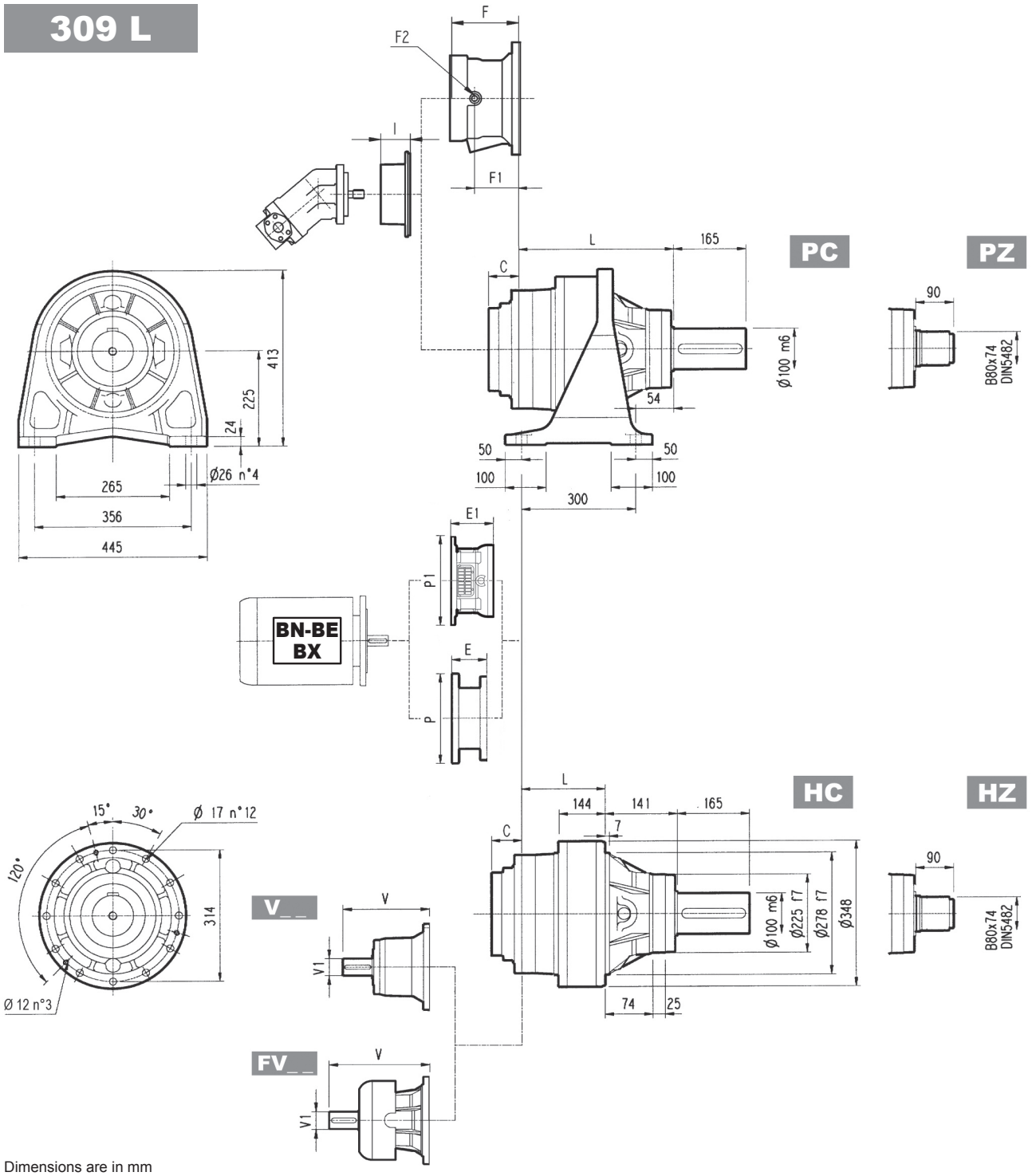
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



309 L



Metric

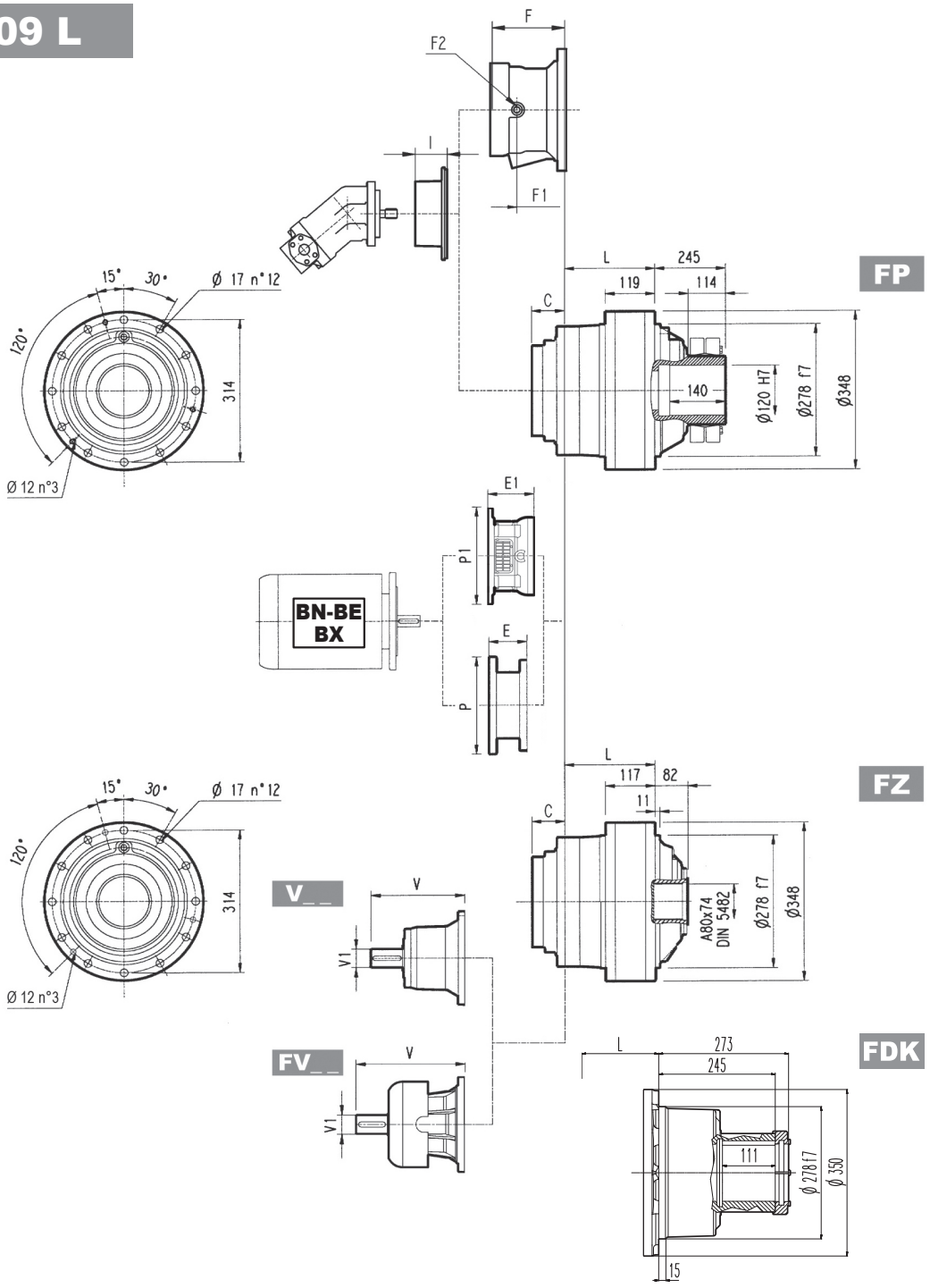


Dimensions are in mm

	L				Kg			
	PC - PZ	HC - HZ	FZ	FP - FDK	PC - PZ	HC - HZ	FZ	FP - FDK
309 L1	267	126	99	101	130	115	95	100
309 L2	356	215	188	190	142	127	107	112
309 L3	421	280	253	255	149	134	114	119
309 L4	474	333	306	308	153	138	118	123

	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
309 L1	315	80	35	313	60	28	375	80	48	363	60	34	51	B	522	201	153	1/4 G	6	B	28
309 L2	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16
309 L3	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10
309 L4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10

309 L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
309 L1*	—	—	—	—	197	530	227	530	227	550
309 L2	165	400	165	400	195	400	195	450	—	—
309 L3	165	400	165	400	—	—	—	—	—	—
309 L4	165	400	165	400	—	—	—	—	—	—

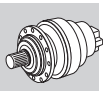
FP T_{2max} = 256,670 lb·in

(*): for PC-PZ versions contact Bonfiglioli Technical Service
NOTE: For R design contact Bonfiglioli Technical Service

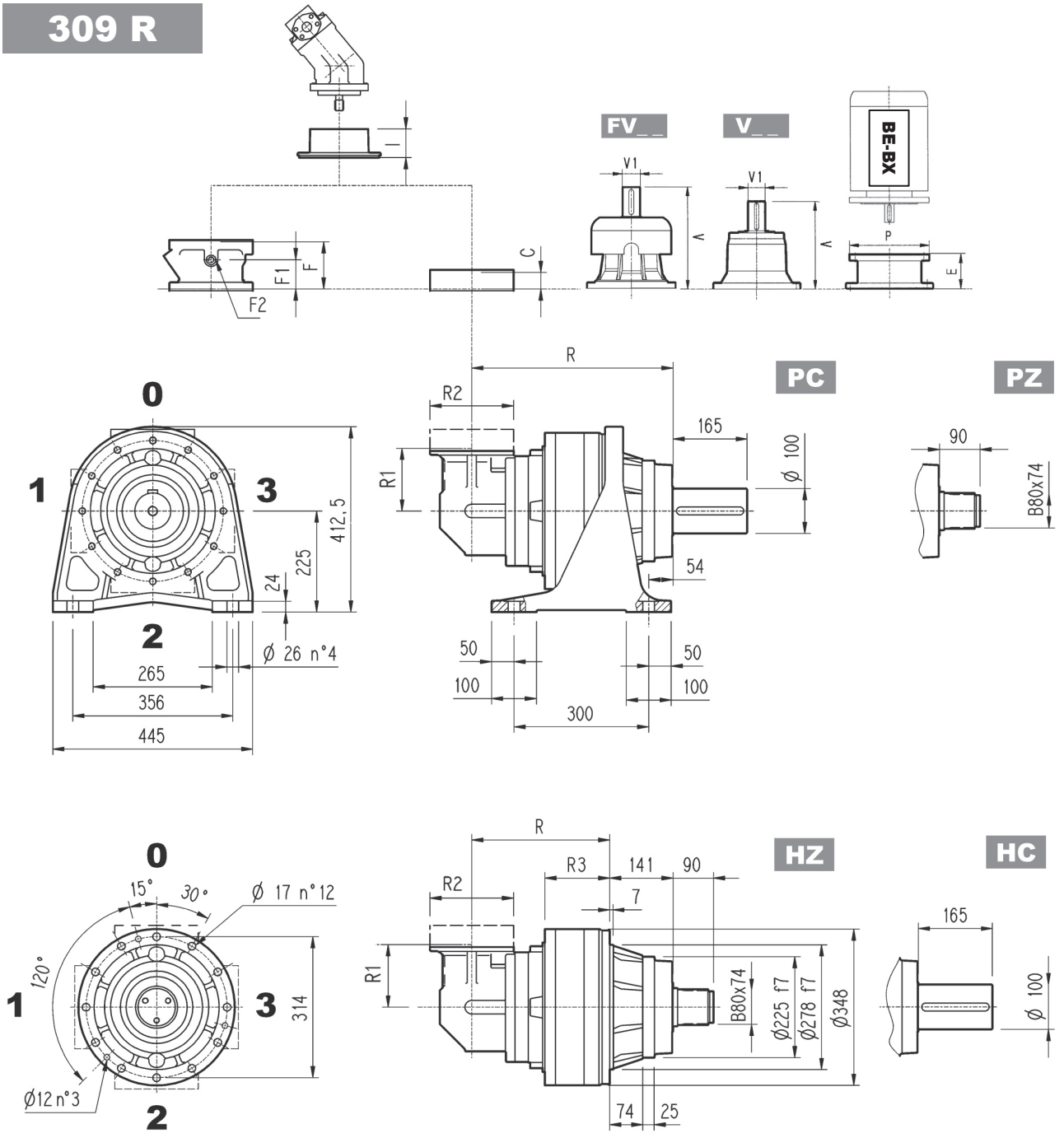
Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
309 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	550
309 L2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
309 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
309 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

309 R



Metric

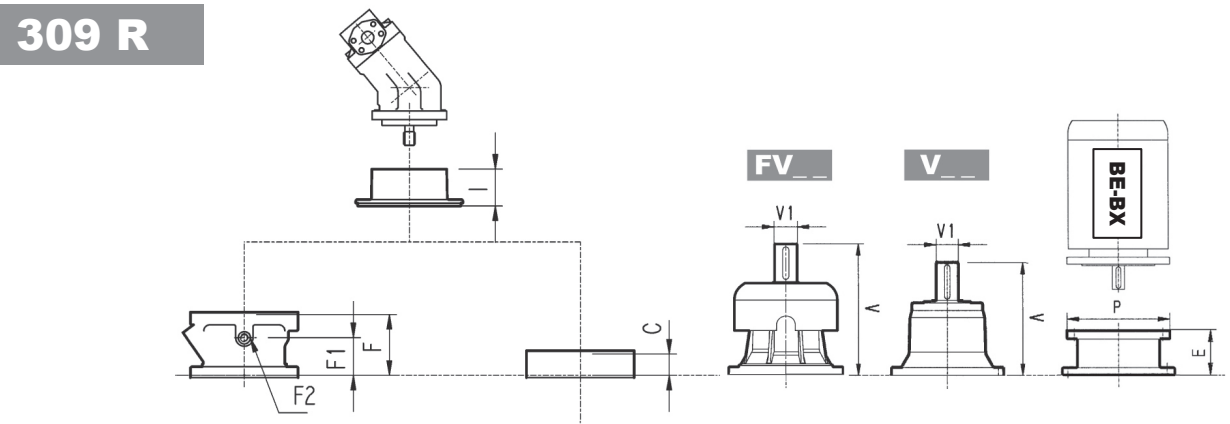


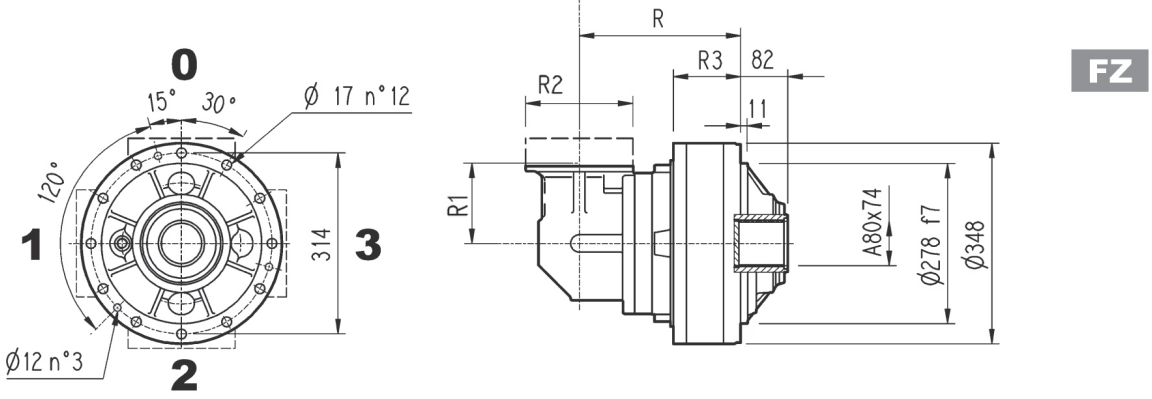
Dimensions are in mm

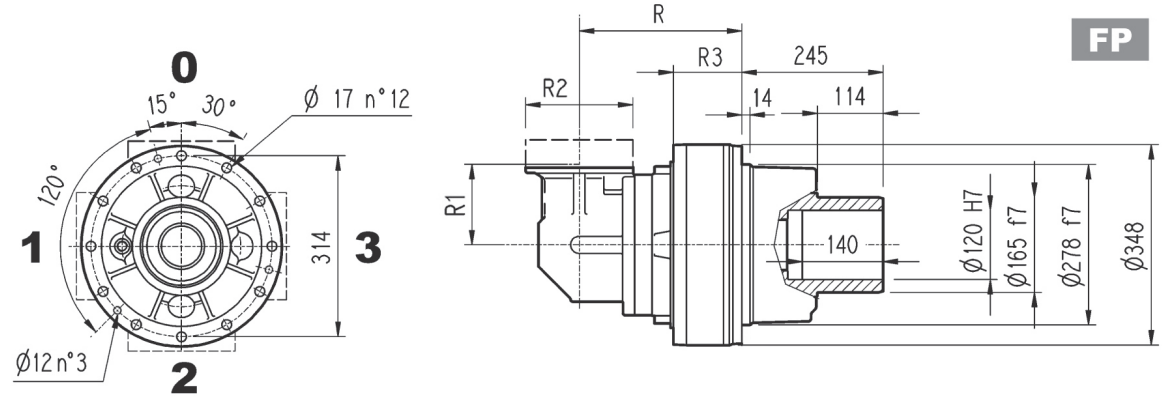
	R				R1	R2	R3			Kg			
	PC-PZ	HC-HZ	FZ	FP - FDK			HC-HZ	FZ	FP	PC-PZ	HC-HZ	FZ	FP - FDK
309 R2	386	245	218	220	225	245	168	141	143	180	165	145	150
309 R3	448	307	280	282	140	186	144	117	119	162	147	127	132
309 R4	513	372	345	347	122	186	144	117	119	163	148	128	133

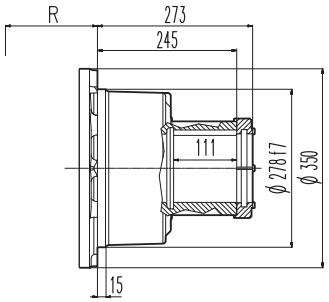
	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
309 R2	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
309 R3	137.5	24	6	158	38	7	—	—	—	37	A		105	65	1/4 G	4	A	10
309 R4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

309 R







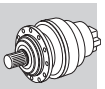


FP T_{2max} = 256,670 lb·in

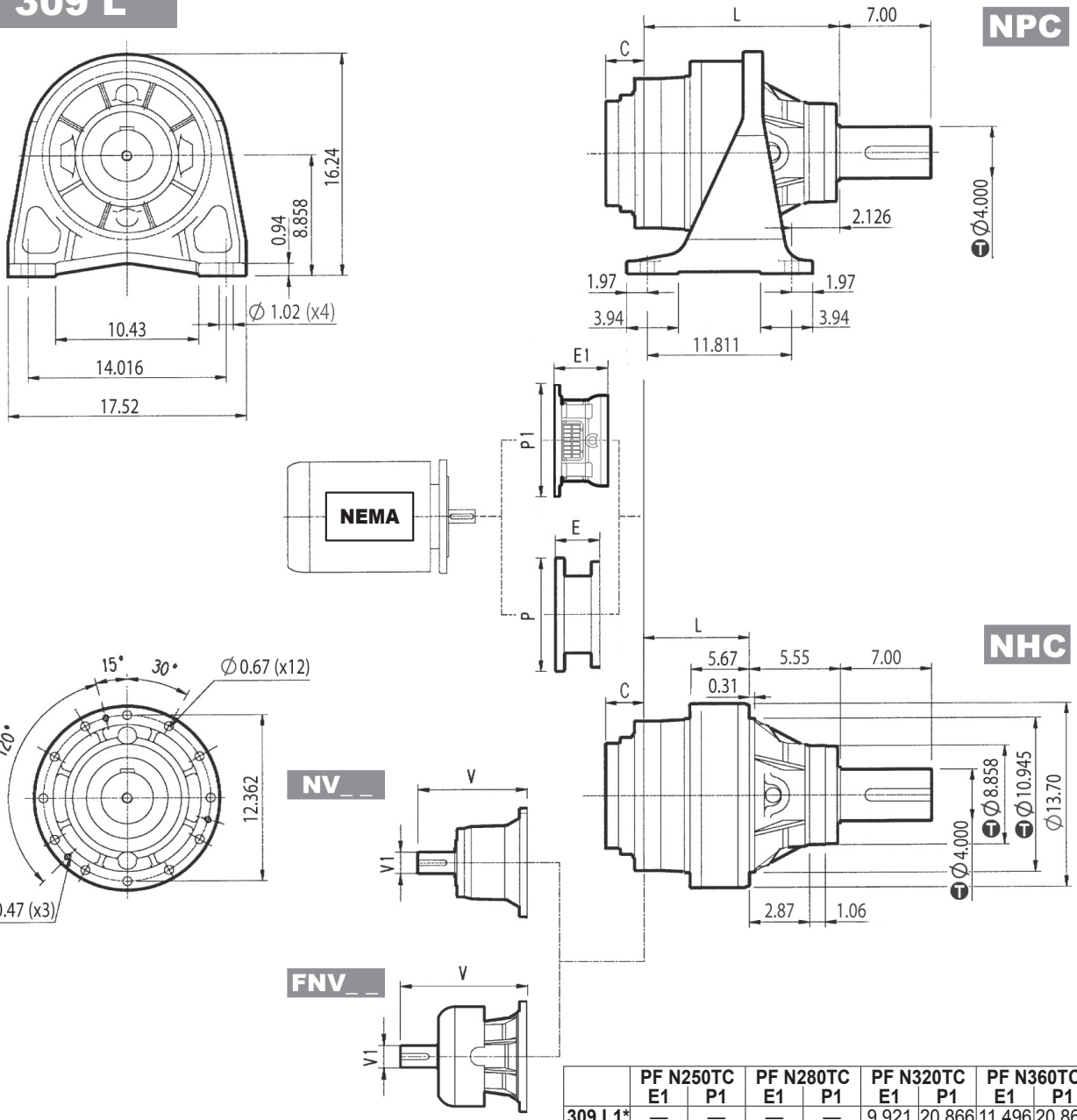
Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
309 R2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
309 R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
309 R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

309 L



Imperial



	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
309 L1*	—	—	—	—	9.921	20.866	11.496	20.866
309 L2	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
309 L3	8.661	15.748	8.661	15.748	—	—	—	—
309 L4	8.661	15.748	8.661	15.748	—	—	—	—

(*): for NPC versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

inch	T
10.945	-0.00220 -0.00425
8.858	-0.00197 -0.00378
4.000	+0.00138 -0.00051

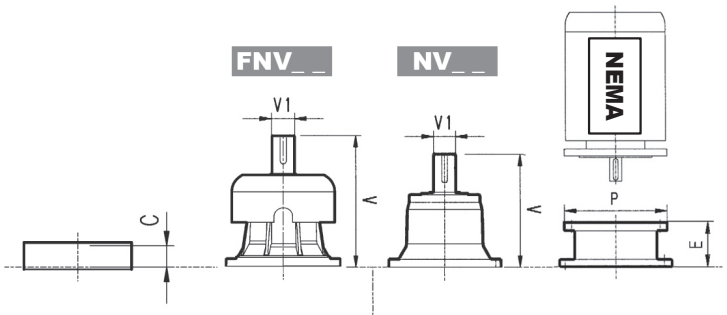
Dimensions are in Inch except when shown in *italic [mm]*

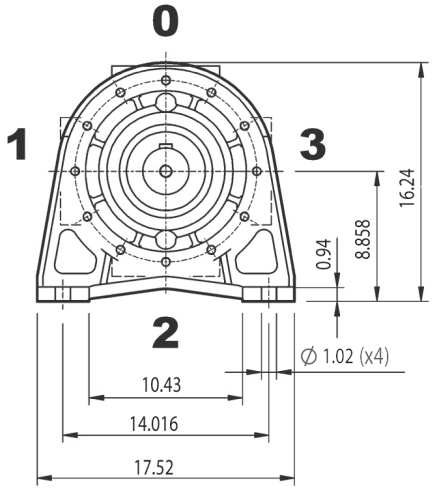
	L		lbs	
	NPC	NHC	NPC	NHC
309 L1	10.51	4.96	286.7	253.6
309 L2	14.02	8.46	313.1	280.0
309 L3	16.57	11.02	328.5	295.5
309 L4	18.66	13.11	337.4	304.3

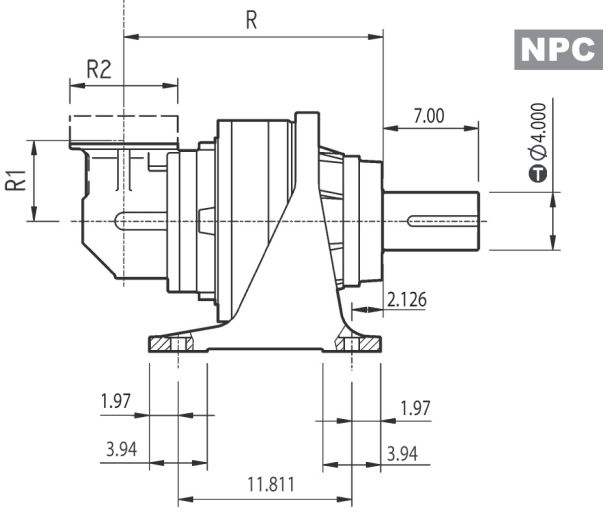
	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
309 L1	12.283	3.000	77.2	13.130	2.375	29.8	14.646	3.000	90.0	15.104	2.375	38.0	1.772	B
309 L2	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—	1.457	A
309 L3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A
309 L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A

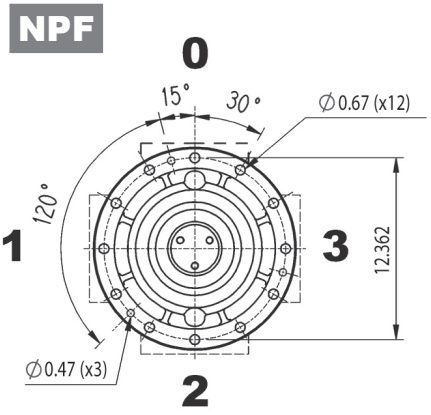
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
309 L1	—	—	—	—	—	—	—	—	—	—	—	—	8.64	15.75	8.64	15.75
309 L2	—	—	—	—	—	—	—	—	5.41	11.81	6.42	13.78	—	—	—	—
309 L3	4.51	6.70	4.51	6.70	5.37	8.82	5.37	8.82	5.37	8.82	6.32	11.81	—	—	—	—
309 L4	4.51	6.70	4.51	6.70	5.37	8.82	5.37	8.82	5.37	8.82	6.32	11.81	—	—	—	—

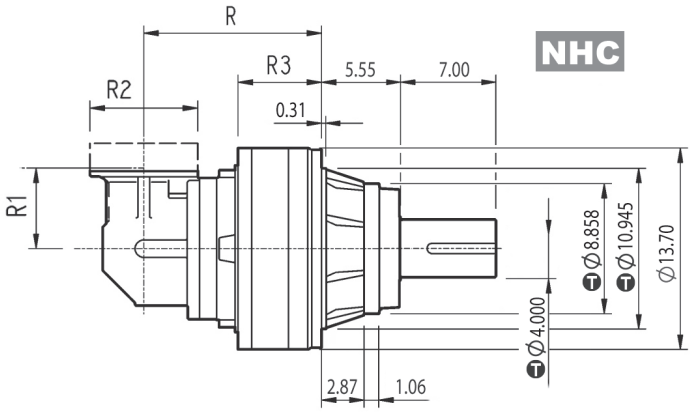
309 R











inch	T
10.945	-0.00220 -0.00425
8.858	-0.00197 -0.00378
4.000	+0.00138 -0.00051

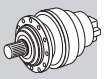
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R3	lbs	
	NPC	NHC			NHC	NPC	NHC
309 R2	15.20	9.65	8.86	9.65	6.61	396.9	363.8
309 R3	17.64	12.09	5.51	7.32	5.57	357.2	324.1
309 R4	20.20	14.65	4.80	7.32	5.57	359.4	326.3

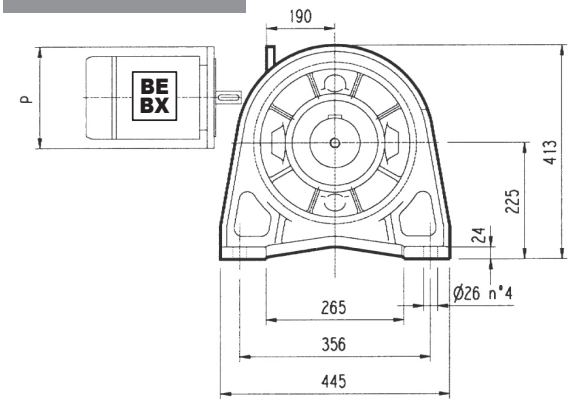
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
309 R2	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
309 R3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
309 R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

	N56C		N140TC		N180TC		N210TC		N250TC		N280TC	
	E	P	E	P	E	P	E	P	E	P	E	P
309 R2	—	—	—	—	—	—	—	—	—	—	—	—
309 R3	—	—	—	—	—	—	—	—	5.41	11.81	6.42	13.78
309 R4	4.51	6.70	4.51	6.70	5.37	8.82	5.37	8.82	5.37	8.82	6.32	11.81

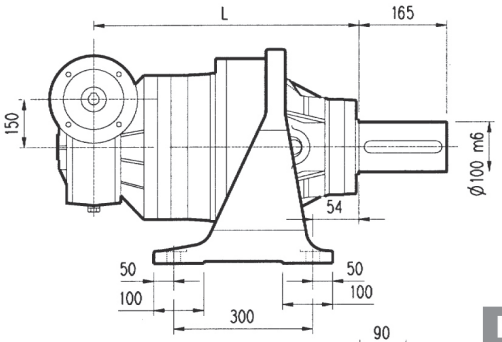
3/V 09 L3



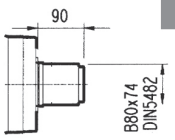
Metric

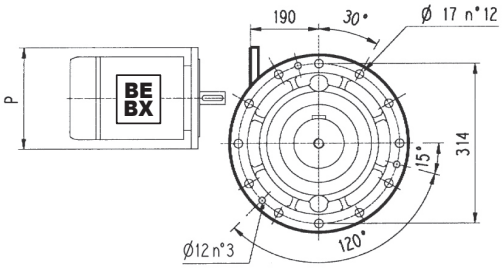


PC

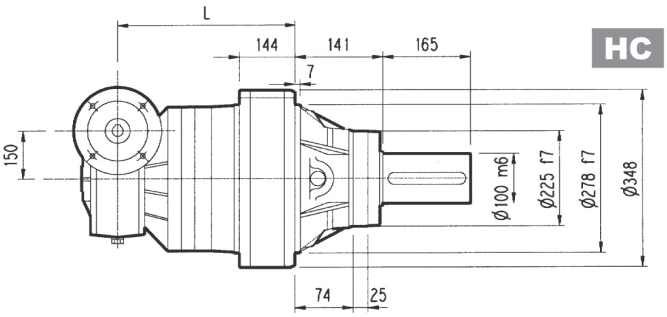


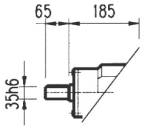
HZ PZ

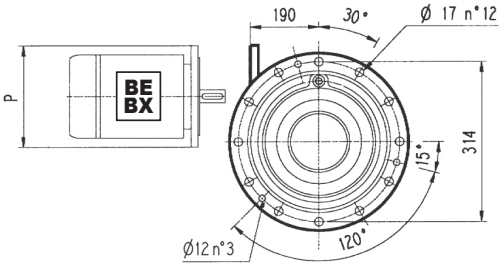




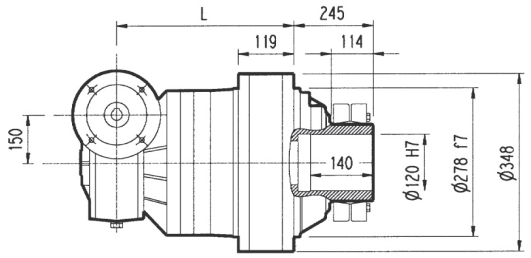
HC

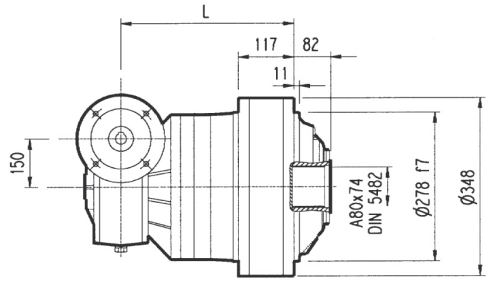






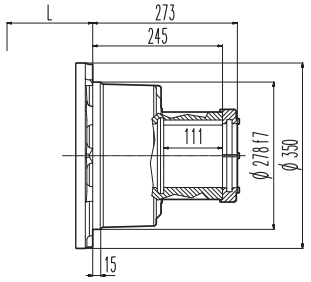
FP





FZ

FDK



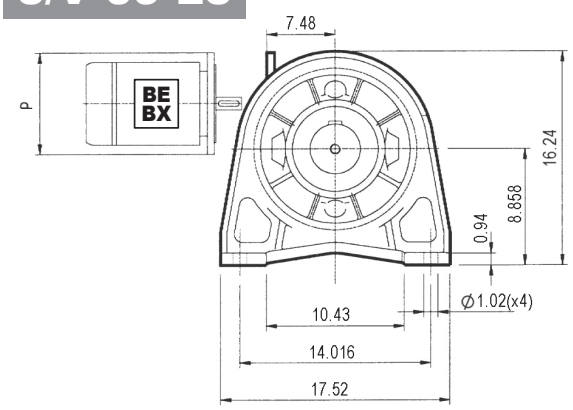
FP | **T_{2max} = 256,670 lb·in**

Dimensions are in mm

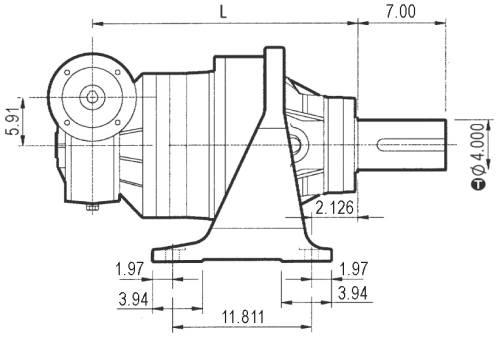
	L				Kg				P100	P112	P132	P160
	PC - PZ	HC - HZ	FZ	FP - FDK	PC - PZ	HC - HZ	FZ	FP - FDK	P	P	P	P
3/V 09 L3	530	389	362	364	202	187	167	172	250	250	300	350

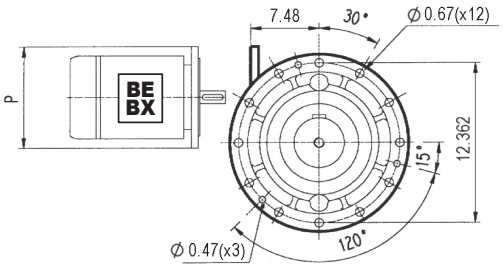
Bonfiglioli Riduttori

3/V 09 L3

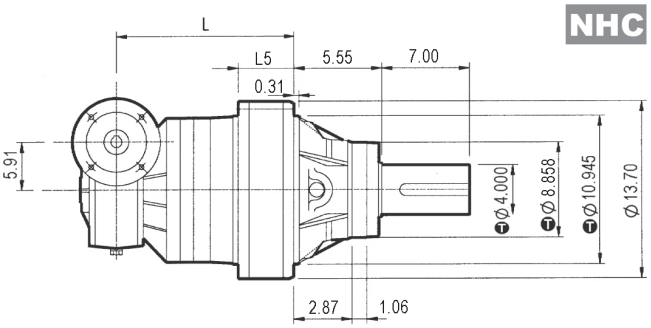


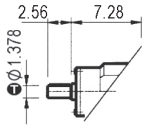
NPC





NHC

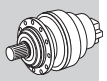




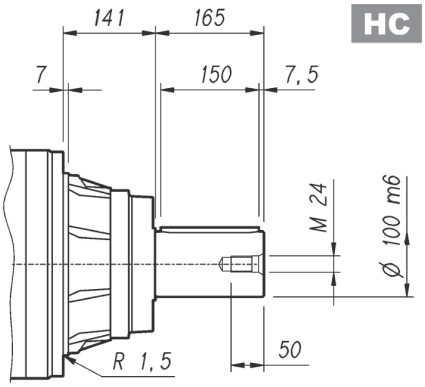
inch	T
10.945	-0.00220 -0.00425
8.858	-0.00197 -0.00378
4.000	+0.00138 -0.00051
1.378	0 -0.00063

Dimensions are in Inch except when shown in *italic [mm]*

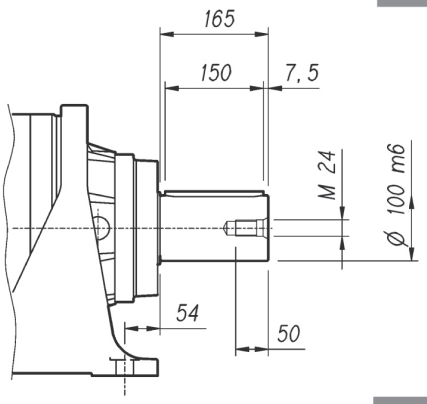
	L		lbs		P100	P112	P132	P160
	NPC	NHC	NPC	NHC	P	P	P	P
3/V 09 L3	20.87	15.31	445.4	412.3	9.84	9.84	11.81	13.78

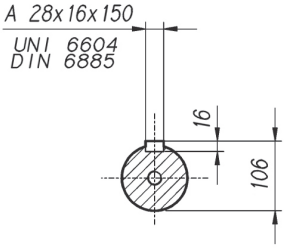


HC

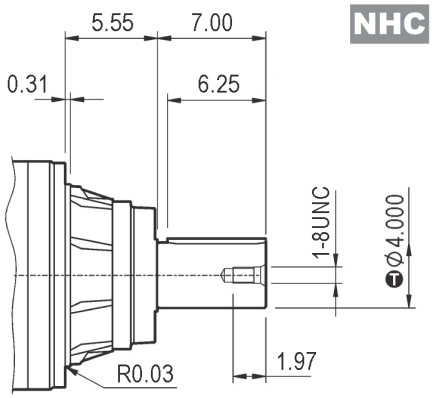


PC

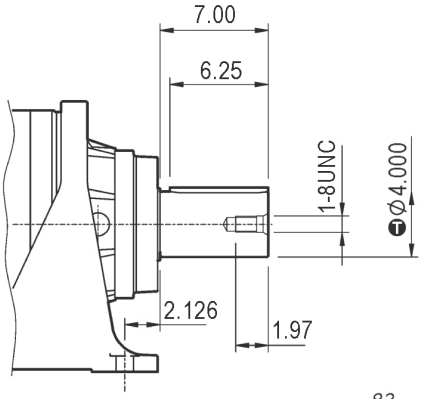


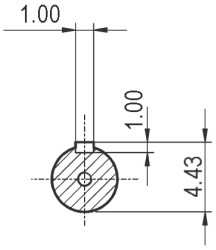


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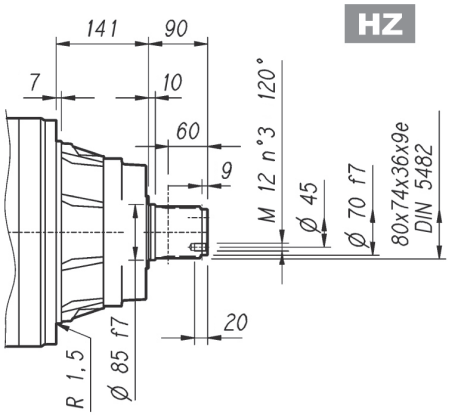


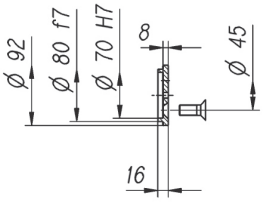
NPC



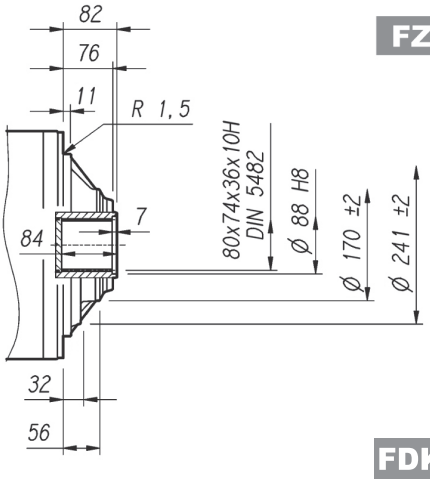


HZ

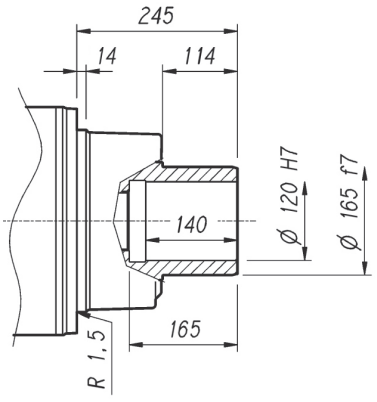




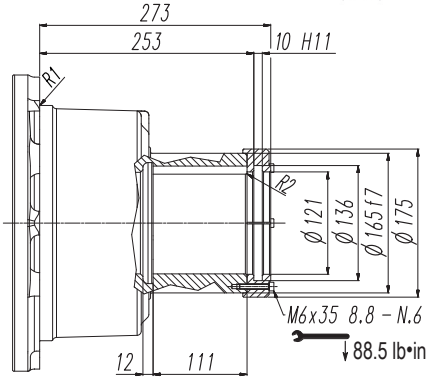
FZ

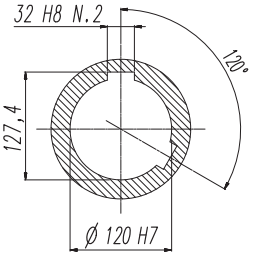


FP



FDK





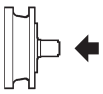
FP | T_{2max} = 256,670 lb·in

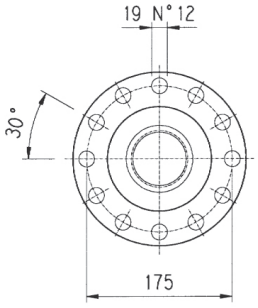
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

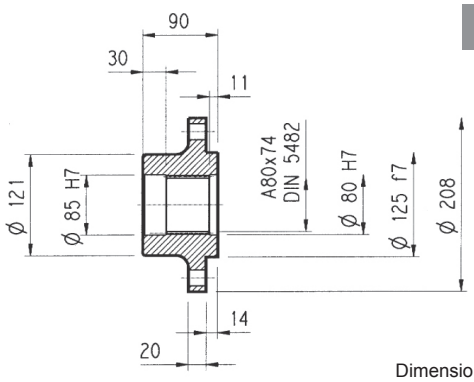
inch	T
4.000	+0.00138 -0.00051

Flange

W0A





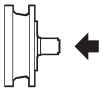


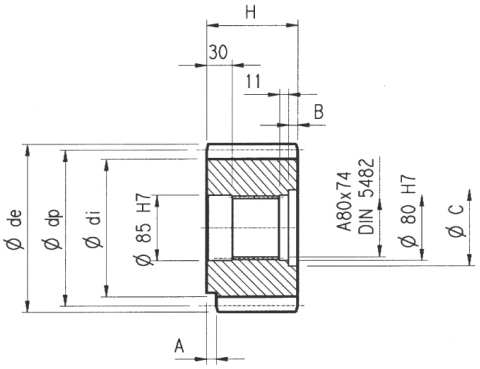
Material: Steel C40

Dimensions are in mm

Pinions

P...





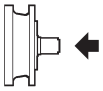
Dimensions are in mm

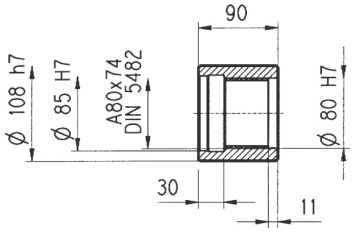
$\alpha = 20°$

	m	z	x	dp	di	de	H	A	B	C	Material
PFG	8	16	0.500	128	117	149.5	90	—	—	—	Steel 39NiCrMo3 hardened and tempered
PHC	10	12	0.450	120	104	145	90	—	—	—	
PHE	10	14	0.320	140	121	165	116	13	26	95	
PHF	10	15	0.150	150	130	171.5	107	20	17	100	
PHG	10	16	0.500	160	145	186	90	—	—	—	Steel 18NiCrMo5 case hardened
PHH1	10	17	—	170	145	189	90	—	—	—	
PHH2	10	17	0.500	170	154	198	90	—	—	—	
PLD	12	13	0.500	156	138	192	102	—	12	95	Steel 39NiCrMo3 hardened and tempered
PLE	12	14	0.500	168	150	199.2	90	—	—	—	
PLI	12	18	0.500	216	198	249.6	107	7	17	95	
PLT	12	26	—	312	282	336	90	10	—	—	Steel 18NiCrMo5 case hardened

Sleeve coupling

M0A





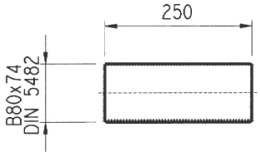
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

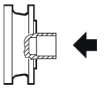


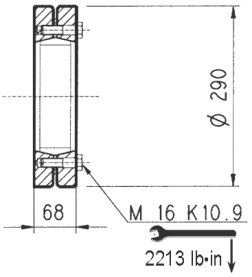


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

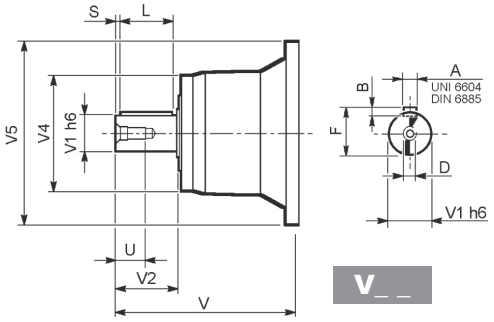




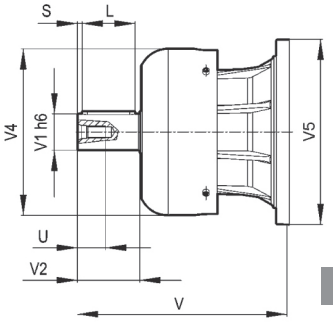
Dimensions are in mm

309 L 309 R

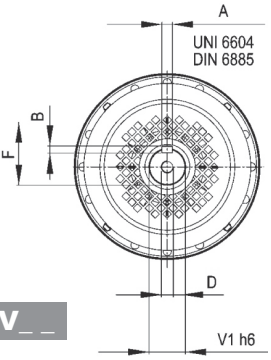




V_ _



FV_ _

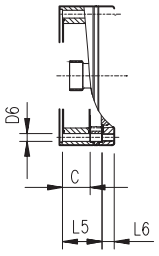


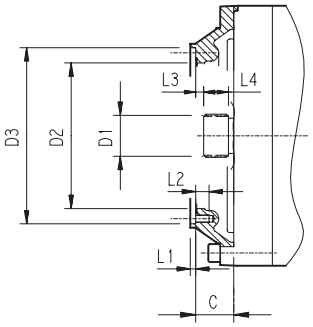
Dimensions are in mm

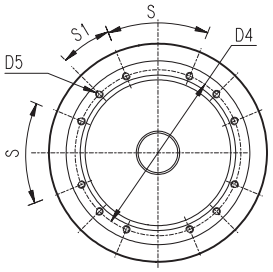
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
309 L1	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
309 L2	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
309 L3	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
309 L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
309 R2	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
309 R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

309 L 309 R





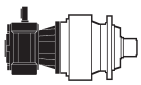


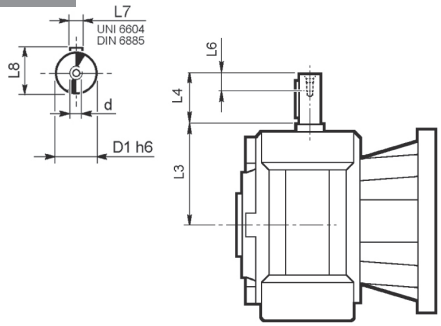


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
309 L1	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
309 L2	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
309 L3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
309 L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	118	18	45°	45°	A
309 R2	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
309 R3-R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 09 L3





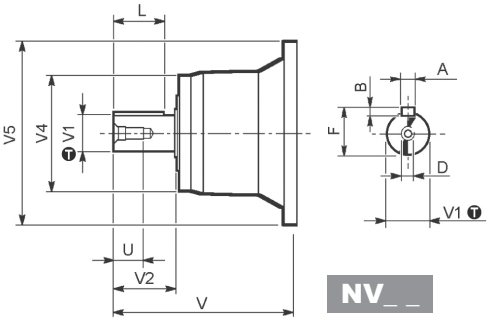
Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 09 L3_HS	35	185	65	20	10	38	M8

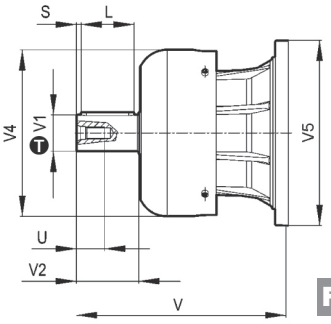
309 L 309 R



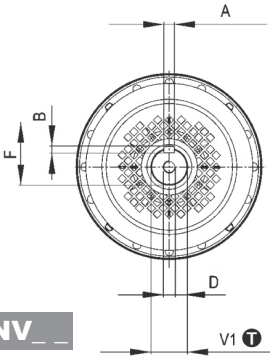
inch	Ⓣ
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

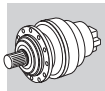


NV_ _



FNV_ _





Metric

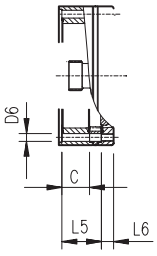
Dimensions are in Inch except when shown in *italic [mm]*

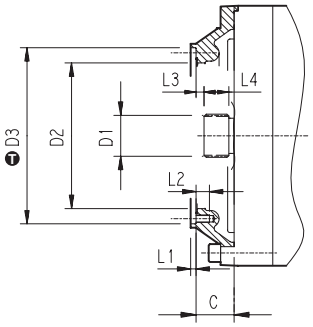
		V	V1	V2	V4	V5	A	B	F	L	D	U
309 L1	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4 -10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4 -10 UNC	1.654
309 L2	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
309 L3	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
309 L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
309 R2	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
309 R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

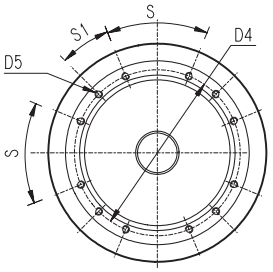
309 L 309 R



inch	Ⓣ
9.29	+0.00181 0
7.01	+0.00157 0



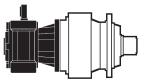


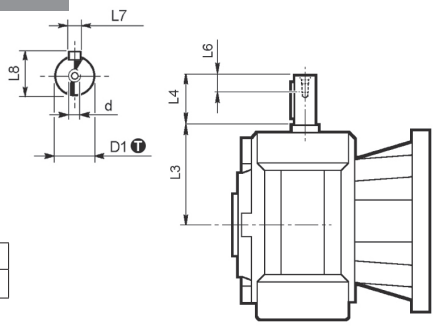


Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
309 L1	**V9AB**	1.77	*58x53 DIN5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
309 L2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
309 L3	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	4.65	0.71	45°	45°	A
309 L4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	6.73	0.71	45°	45°	A
309 R2	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
309 R3-R4	**V9AA**	1.46	*40x36 DIN5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 09 L3

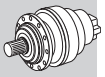




inch	Ⓣ
1.378	0 -0.00063

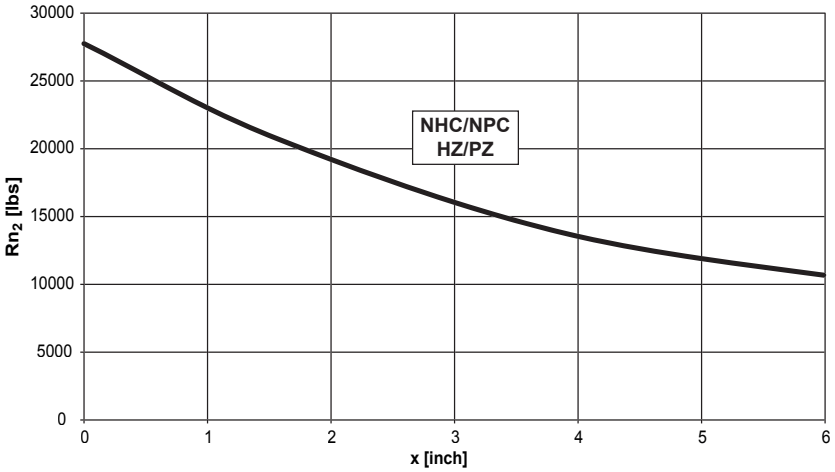
Dimensions are in Inch except when shown in *italic [mm]*

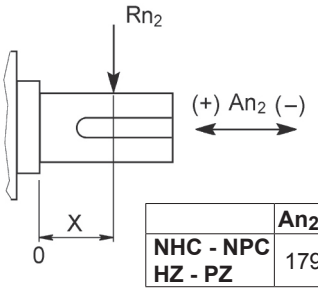
	D1	L3	L4	L6	L7	L8	d
3/V 09 L3_HS	1.378	7.28	2.56	0.787	0.394	1.496	*M8*



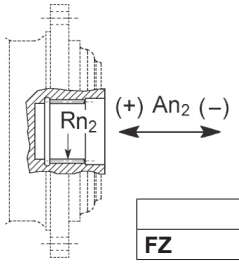
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





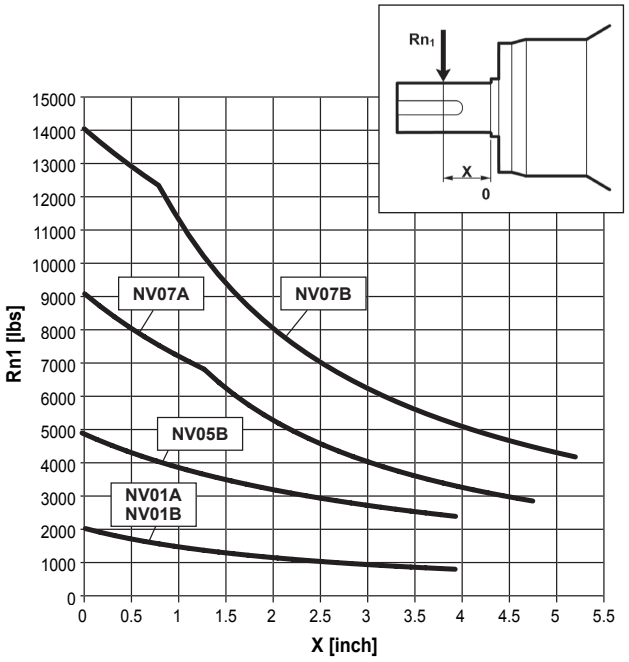
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	17984	8992

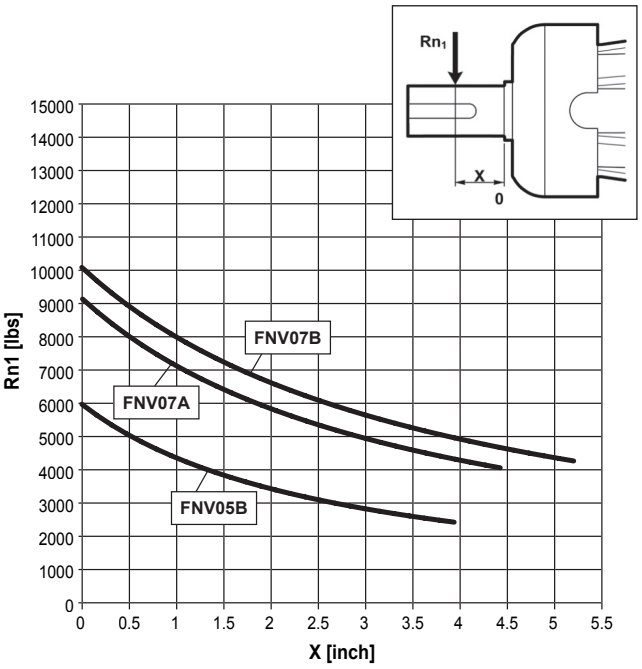


	Rn2	An2 (+/-)
FZ	3756	3861

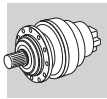
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.49**	**1.49**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

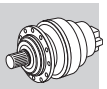




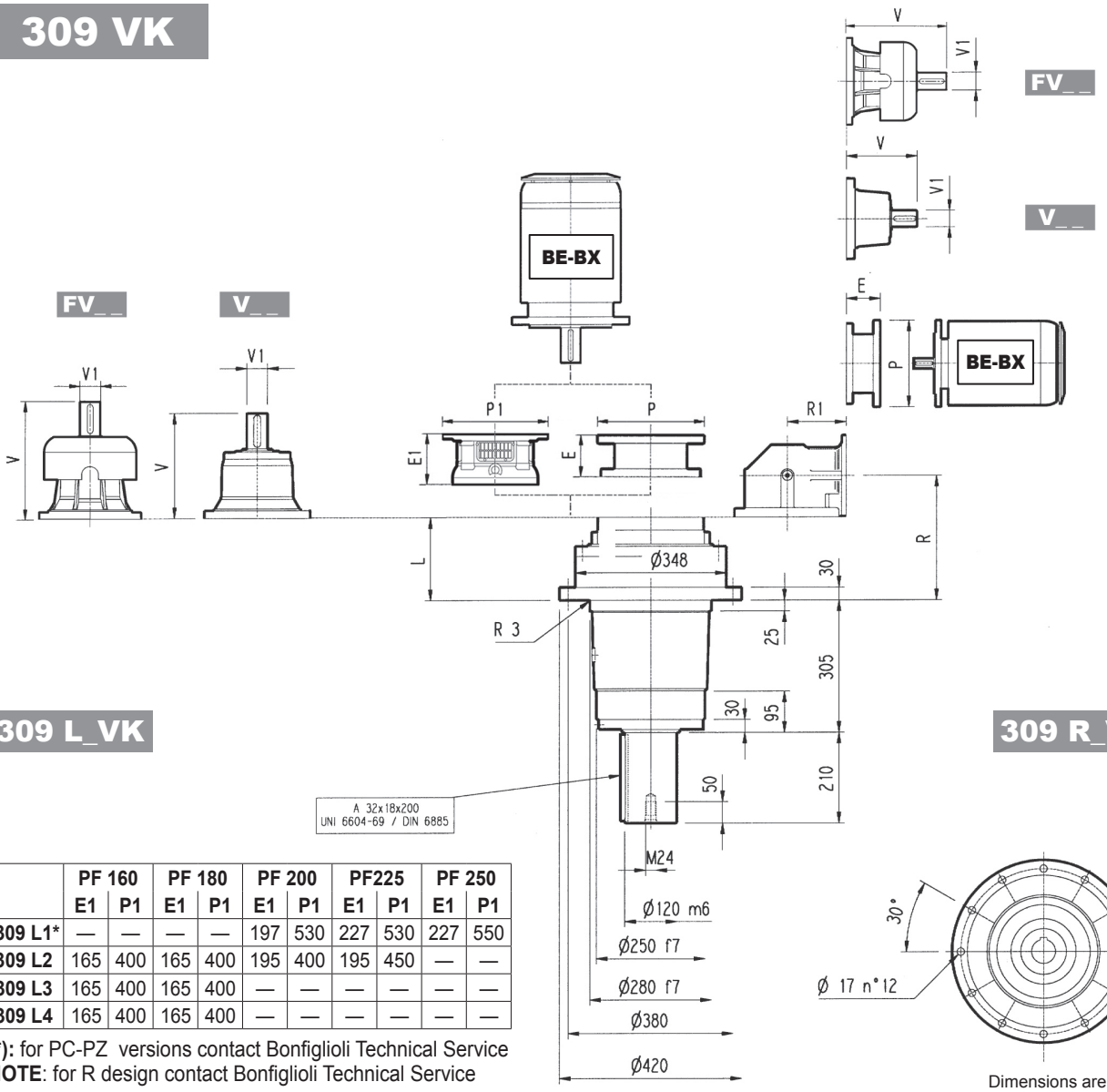
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



309 VK



Metric



309 L_VK

309 R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
309 L1*	—	—	—	—	197	530	227	530	227	550
309 L2	165	400	165	400	195	400	195	450	—	—
309 L3	165	400	165	400	—	—	—	—	—	—
309 L4	165	400	165	400	—	—	—	—	—	—

(*): for PC-PZ versions contact Bonfiglioli Technical Service
NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
309 L1	102	165	315	80	35	313	60	28	375	80	48	363	60	34
309 L2	191	180	239	48	15	—	—	—	276	48	17	—	—	—
309 L3	256	190	137.5	24	6	158	38	7	—	—	—	—	—	—
309 L4	309	195	137.5	24	6	158	38	7	—	—	—	—	—	—

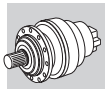
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
309 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	450
309 L2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
309 L3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—
309 L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
309 R2	221	225	200	239	48	15	—	—	—	276	48	17	—	—	—
309 R3	283	140	190	137.5	24	6	158	38	7	—	—	—	—	—	—
309 R4	348	122	195	137.5	24	6	158	38	7	—	—	—	—	—	—

	P71		P80		P90		P100		P112		P132		P160		P180		P200	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
309 R2	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400
309 R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—
309 R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—

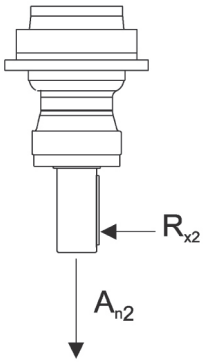
Bonfiglioli Riduttori

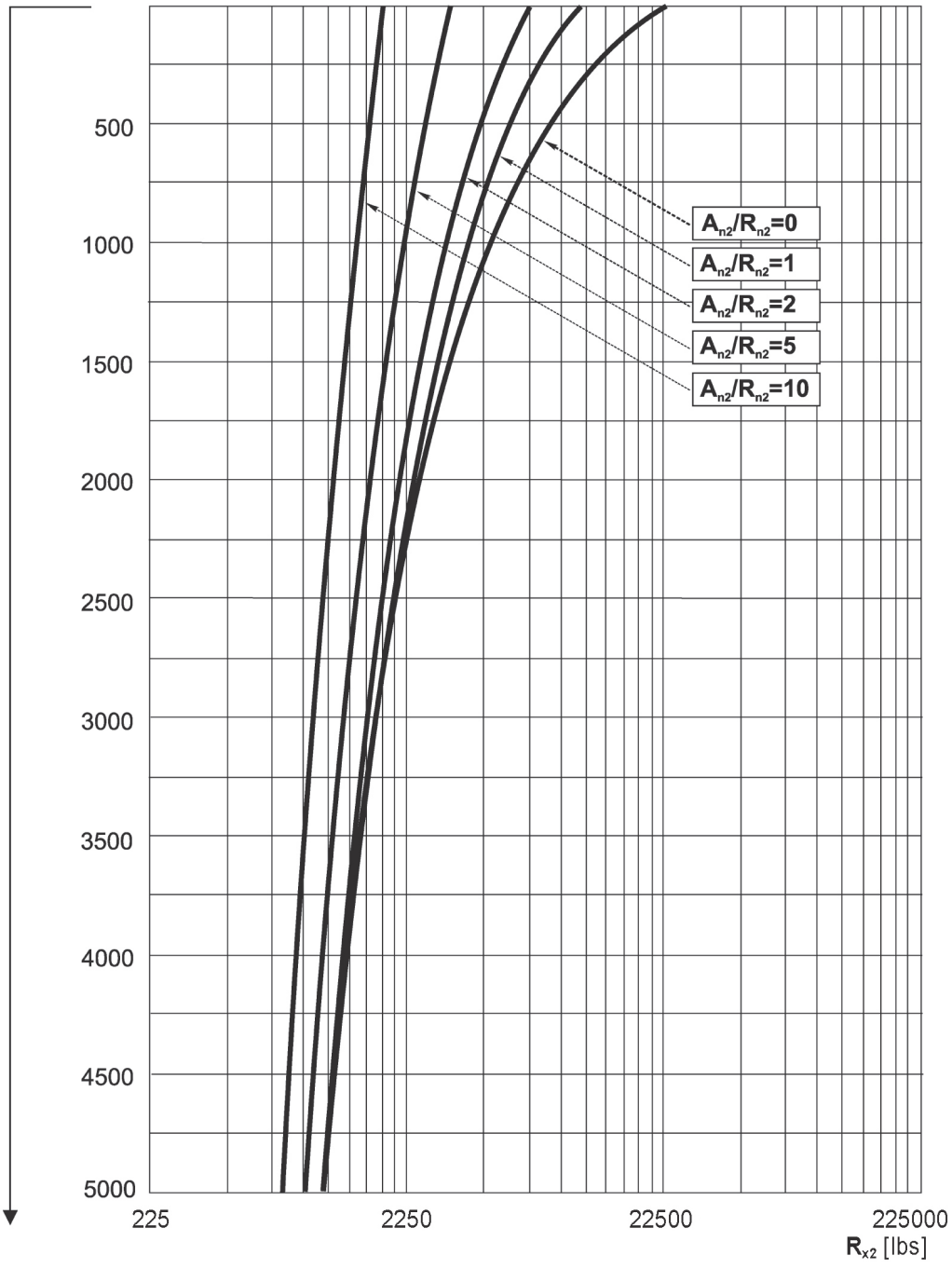
309 VK



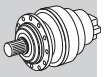
Metric

The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.

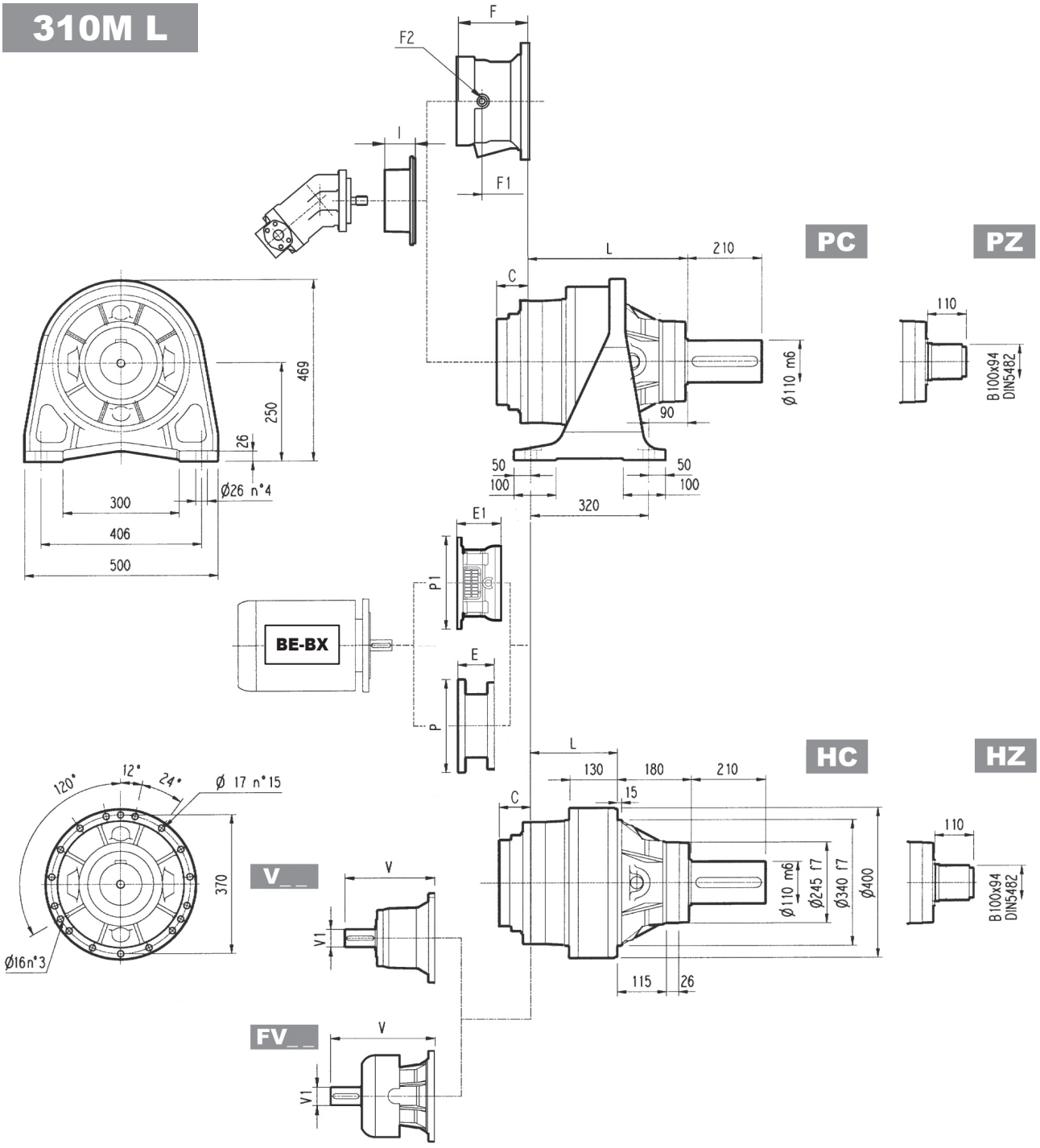




310M L



Metric

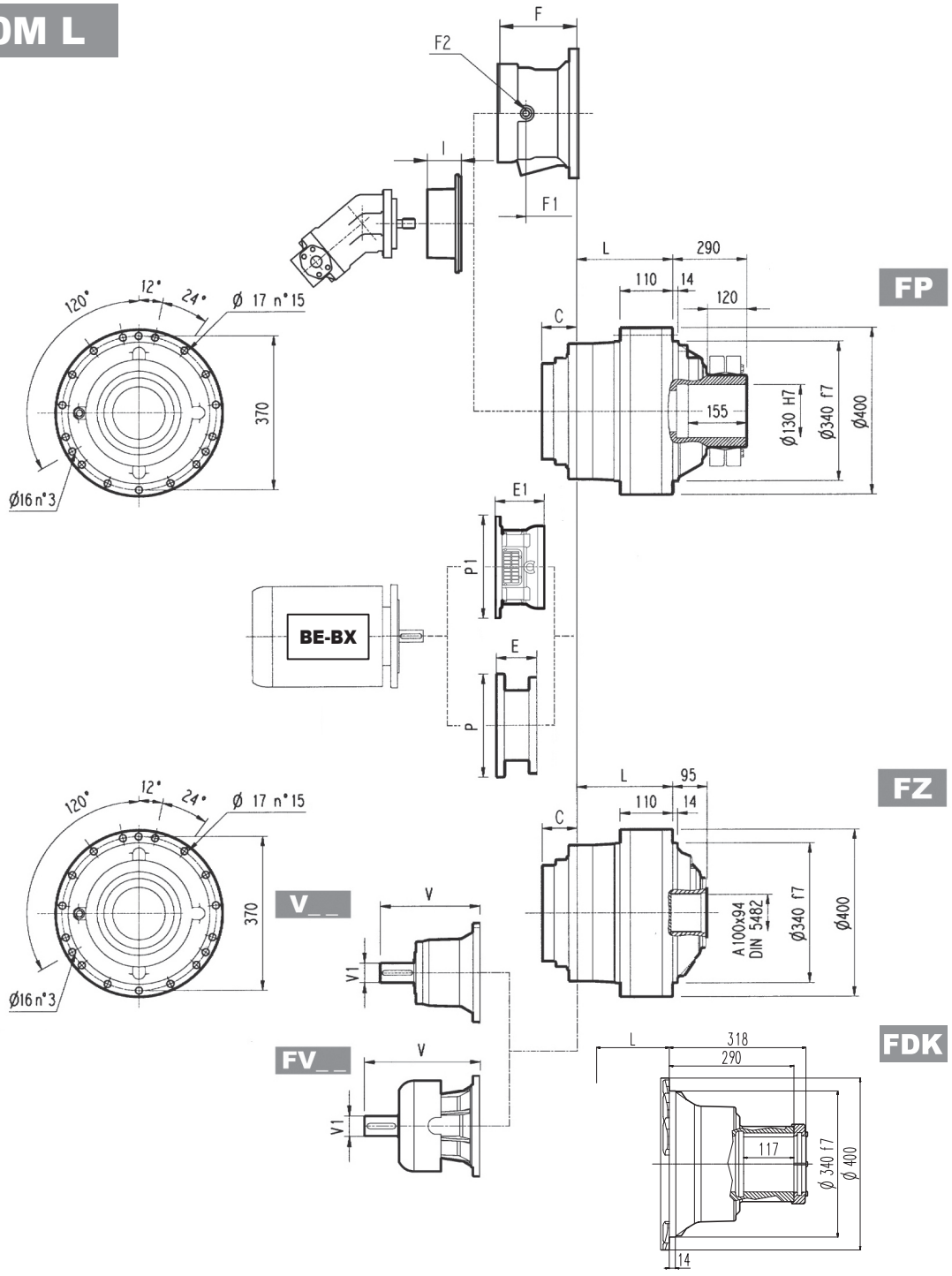


Dimensions are in mm

	L				Kg			
	PC - PZ	HC - HZ	FZ	FP - FDK	PC - PZ	HC - HZ	FZ	FP - FDK
310M L1	288	108	88	88	155	135	110	115
310M L2	424	244	224	224	185	165	140	145
310M L3	489	309	289	289	194	174	149	154
310M L4	542	362	342	342	198	178	153	158

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
310M L1	377	80	50	—	—	—	457	80	63	88	C		—	—	—	—	—	—
310M L2	307	60	23	—	—	—	357	60	28	45	B		195	147	1/4 G	6	B	28
310M L3	239	48	15	—	—	—	276	48	17	37	A		145	95	1/4 G	5	A	16
310M L4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

310M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
310M L1	—	—	—	—	—	—	254	550	254	550
310M L2	—	—	167	390	197	400	197	450	207	550
310M L3	165	400	165	400	195	400	195	450	—	—
310M L4	165	400	165	400	—	—	—	—	—	—

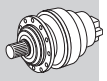
FP T_{2max} = 389,430 lb·in

Dimensions are in mm

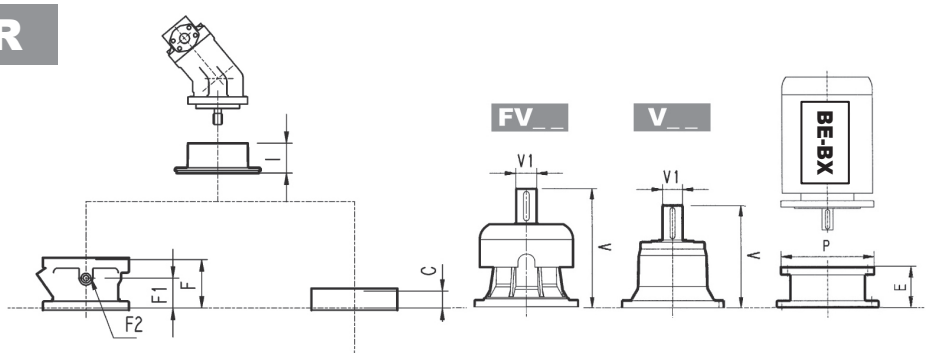
NOTE: for R design contact Bonfiglioli Technical Service

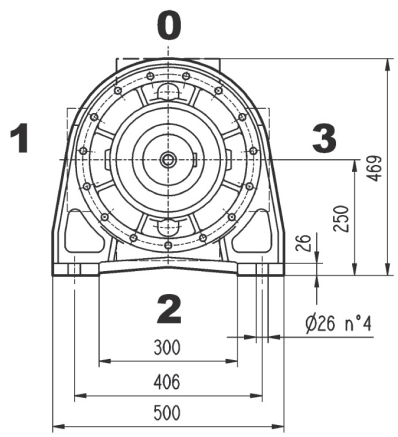
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	271	400	301	450	281	550
310M L2	—	—	—	—	—	—	—	—	—	—	—	—	152	350	153	350	183	400	212	450	193	550
310M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
310M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

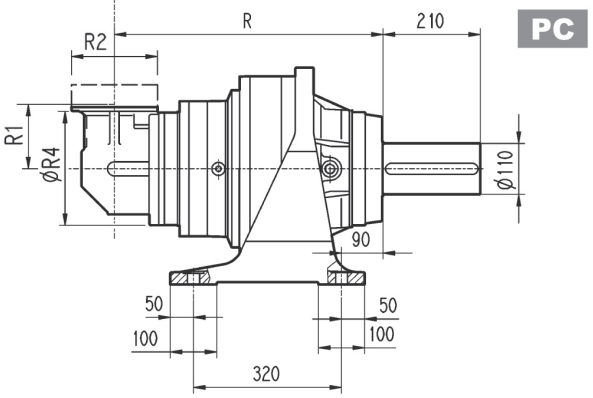
310M R

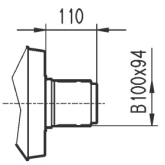


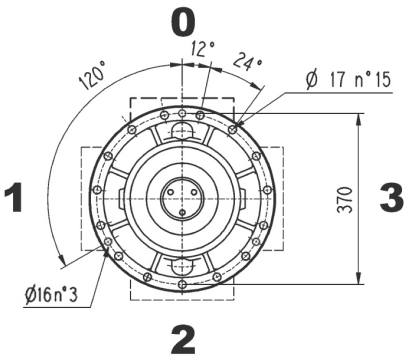
Metric

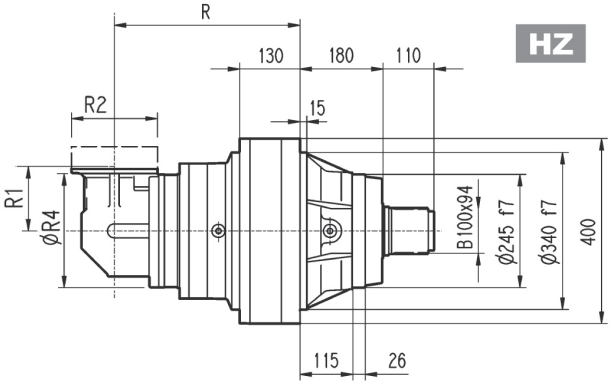


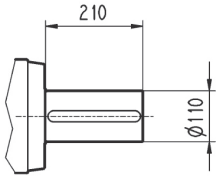










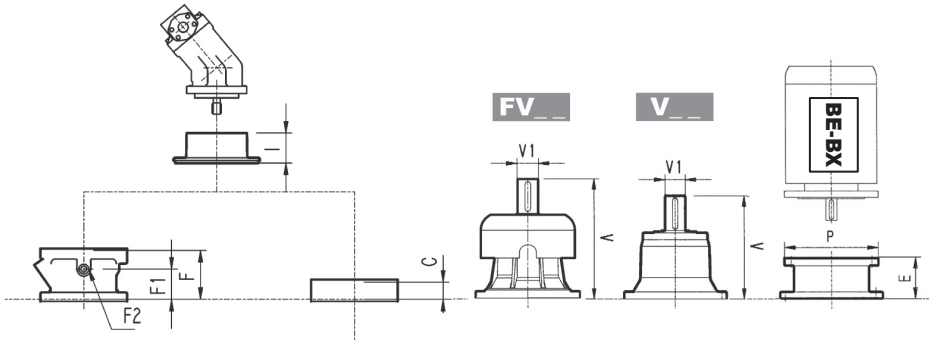


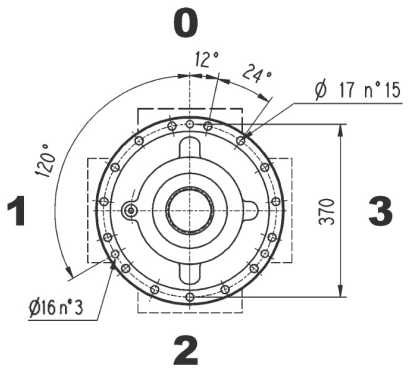
Dimensions are in mm

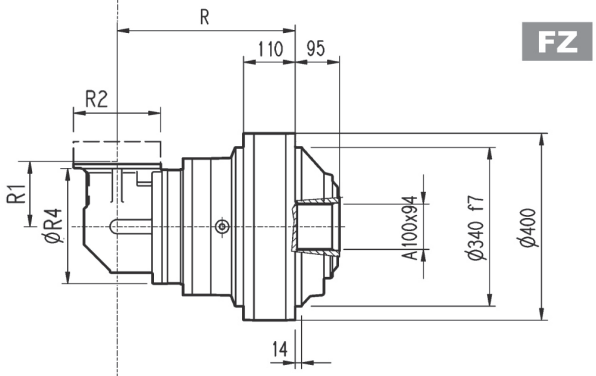
	R				R1	R2	R4	Kg			
	PC-PZ	HC-HZ	FZ	FP - FDK				PC-PZ	HC-HZ	FZ	FP - FDK
310M R2 (B)	495	315	295	295	345	292	400	280	260	240	250
310M R2 (C)	513	333	313	313	390	292	480	300	280	260	270
310M R3	561	381	361	361	140	186	244	209	189	164	169
310M R4	581	401	381	381	140	186	244	214	194	169	174

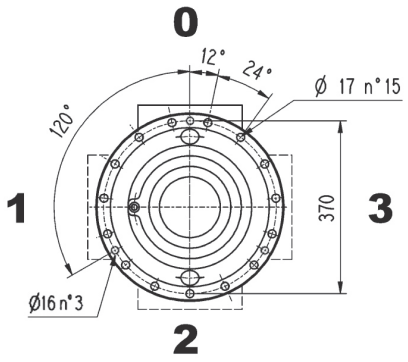
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
310M R2 (B)	307	60	23	—	—	—	357	60	28	—	—	—	45	B	522	195	147	1/4 G	6	B	28
310M R2 (C)	307	60	23	—	—	—	357	60	28	—	—	—	45	B		195	147	1/4 G	6	B	28
310M R3	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		145	95	1/4 G	5	A	16
310M R4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10

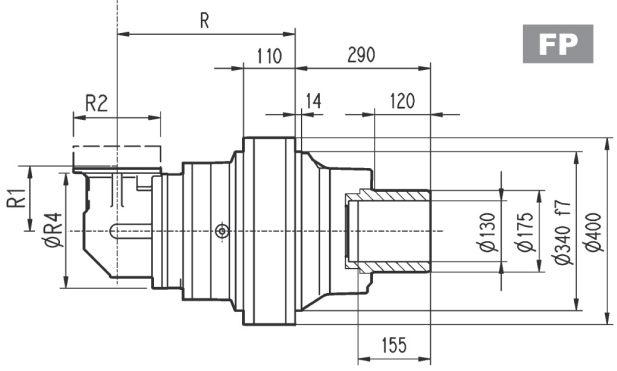
310M R



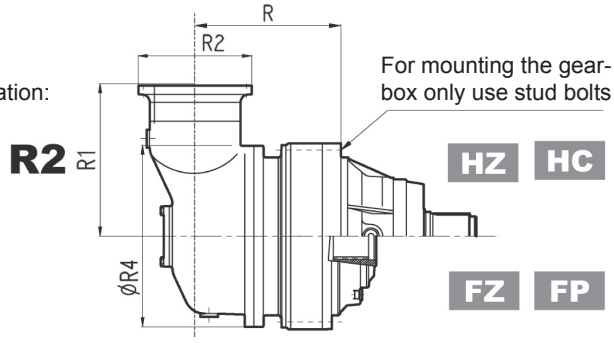


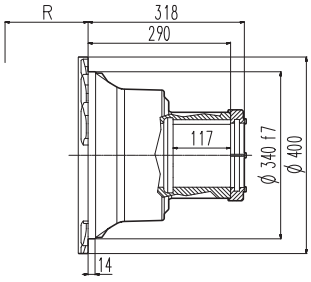






Only for configuration:





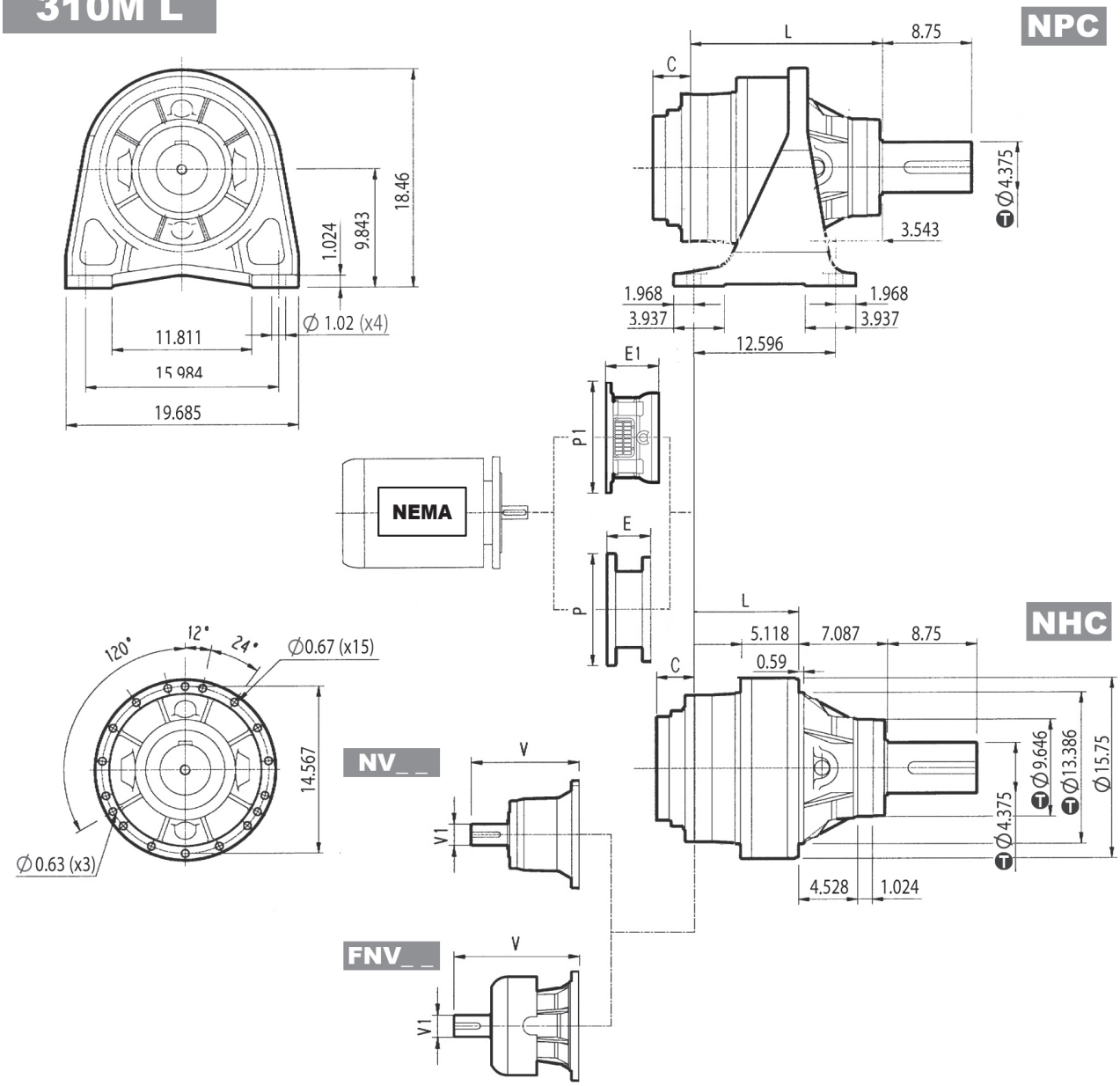
FP T_{2max} = 389,430 lb·in

Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	152	350	152	350	182	400	212	450
310M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	152	350	152	350	182	400	212	450
310M R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—
310M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—

310M L

Imperial



inch	T
13.386	-0.00244 -0.00469
9.646	-0.00197 -0.00378
4.375	-0.00142 -0.00280

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
310M L1	—	—	—	—	—	—	12.598	21.654
310M L2	—	—	8.740	15.354	9.921	15.748	10.315	17.717
310M L3	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
310M L4	8.661	15.748	8.661	15.748	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in Inch except when shown in *italic [mm]*

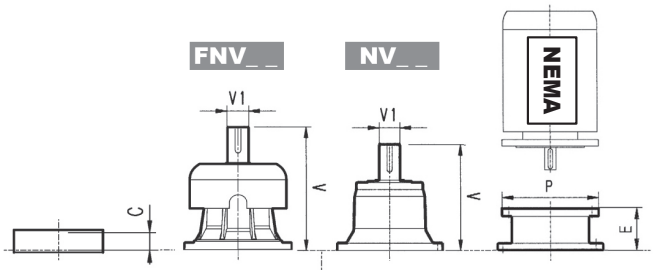
	L		lbs	
	NPC	NHC	NPC	NHC
310M L1	11.339	4.252	341.8	297.7
310M L2	16.693	9.606	407.9	363.8
310M L3	19.252	12.165	427.8	383.7
310M L4	21.339	14.252	436.6	392.5

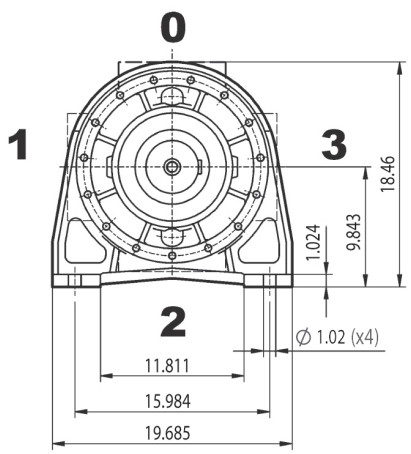
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
310M L1	14.724	3.000	110.3	—	—	—	17.874	3.000	130.0	3.465	C
310M L2	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
310M L3	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
310M L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

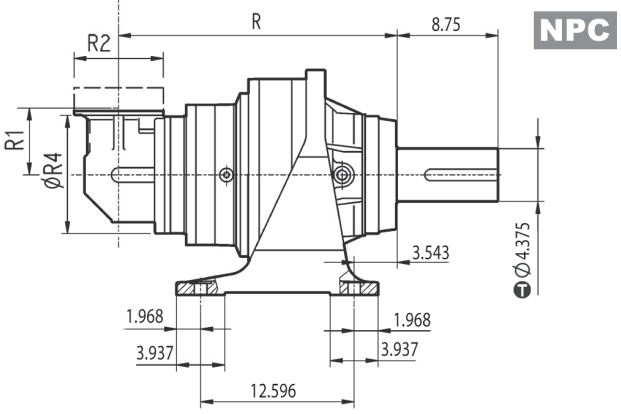
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M L1	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.779	7.776	13.779
310M L2	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.779	7.776	13.779
310M L3	—	—	—	—	—	—	—	—	5.216	11.811	6.221	13.780	—	—	—	—
310M L4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

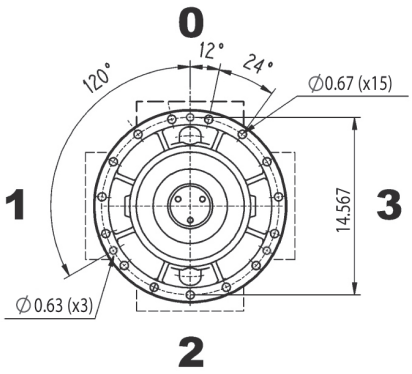
Bonfiglioli Riduttori

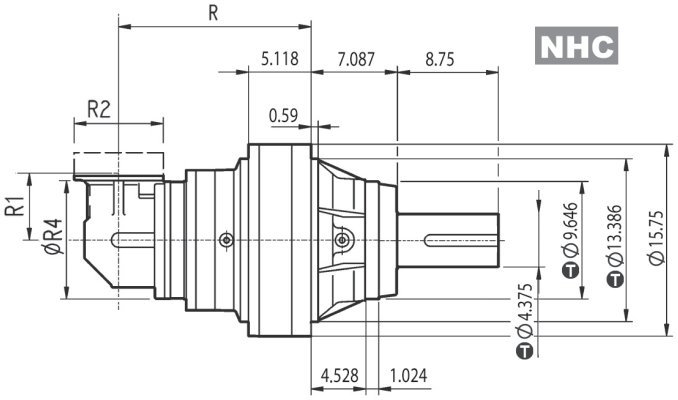
310M R





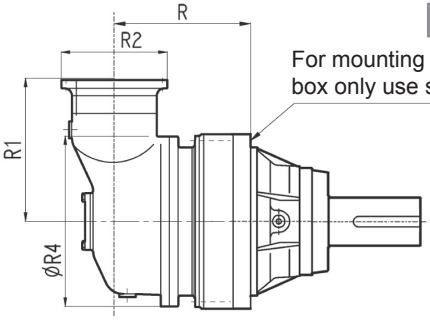






Only for configuration:

R2



NHC

For mounting the gear-box only use stud bolts

inch	T
13.386	-0.00244 -0.00469
9.646	-0.00197 -0.00378
4.375	-0.00142 -0.00280

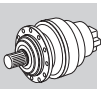
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R4	lbs	
	NPC	NHC				NPC	NHC
310M R2 (B)	19.488	12.402	13.583	11.496	15.748	680.0	573.3
310M R2 (C)	20.197	13.110	15.354	11.496	18.898	617.4	680.0
310M R3	22.087	15.000	5.512	7.323	9.606	460.8	416.7
310M R4	22.087	15.787	5.512	7.323	9.606	471.9	427.8

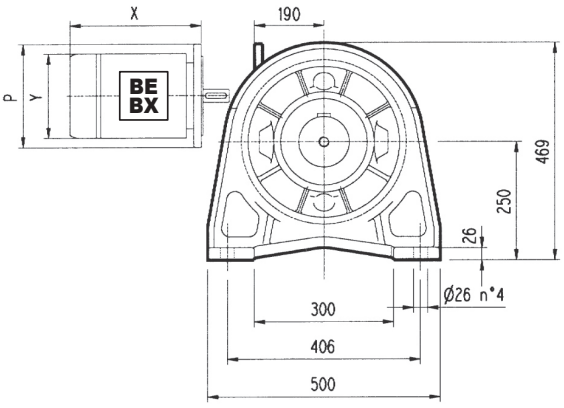
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
310M R2 (B)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
310M R2 (C)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
310M R3	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A
310M R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.779	7.776	13.779
310M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.779	7.776	13.779
310M R3	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—
310M R4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

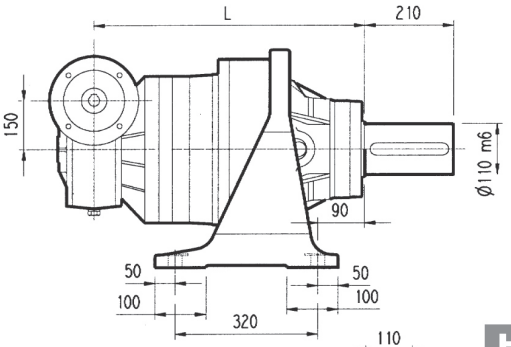
3/V 10M L3



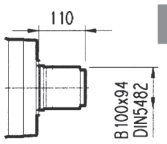
Metric

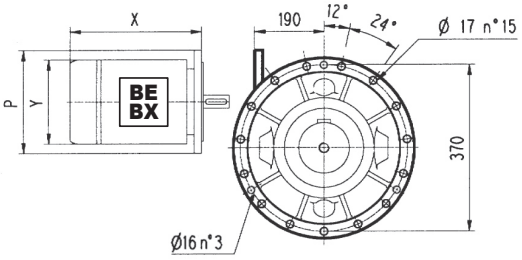


PC

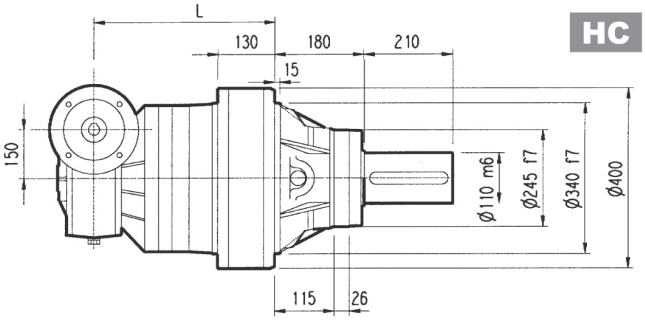


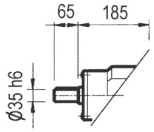
HZ PZ

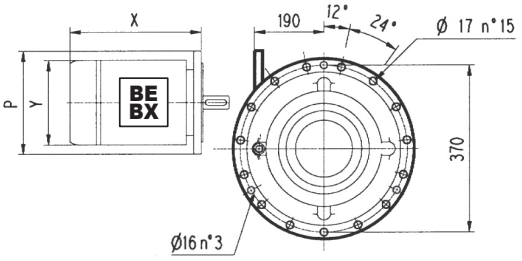




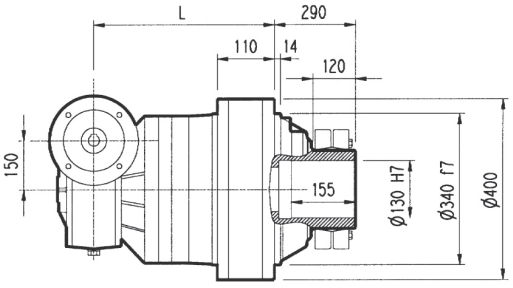
HC



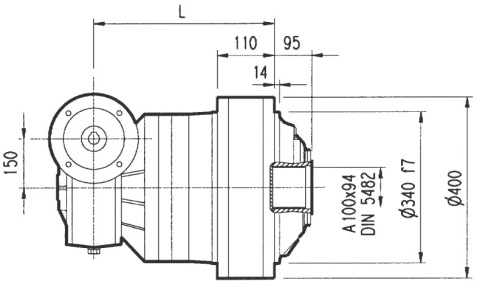




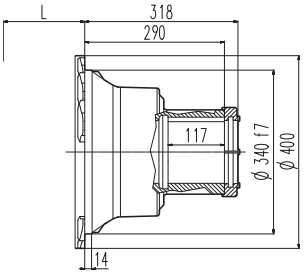
FP



FZ



FDK



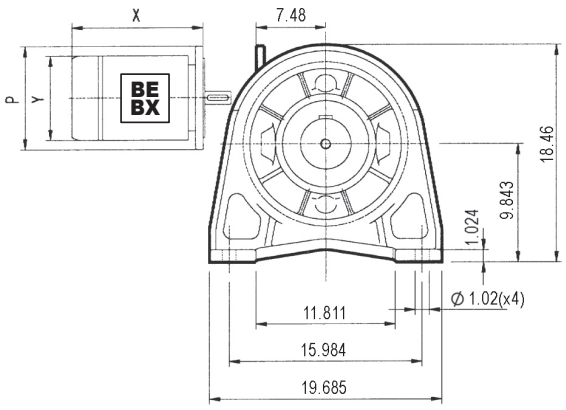
FP | T_{2max} = 389,430 lb·in

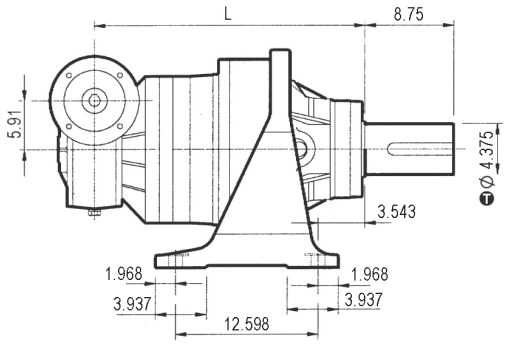
Dimensions are in mm

	L				Kg				P100	P112	P132	P160
	PC - PZ	HC - HZ	FZ	FP - FDK	PC - PZ	HC - HZ	FZ	FP - FDK	P	P	P	P
3/V 10M L3	608	428	408	408	245	225	200	205	250	250	300	300

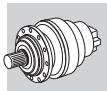
Bonfiglioli Riduttori

3/V 10M L3

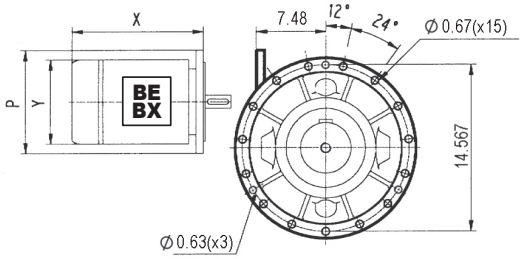


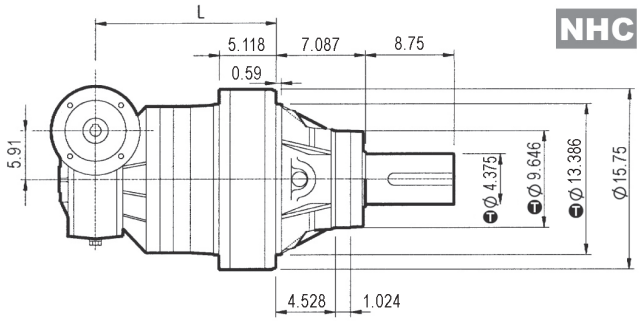


NPC

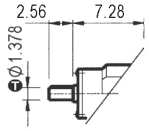


Imperial





NHC

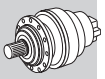


inch	T
13.386	-0.00244 -0.00469
9.646	-0.00197 -0.00378
4.375	-0.00142 -0.00280

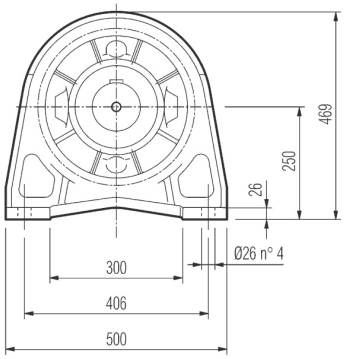
Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		P100	P112	P132	P160
	NPC	NHC	NPC	NHC	P	P	P	P
3/V 10M L3	23.94	16.85	540.2	496.1	9.84	9.84	11.81	11.81

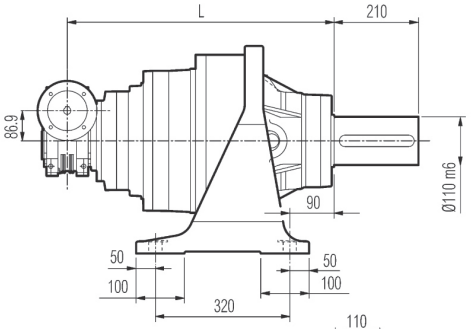
3/V 10M L4



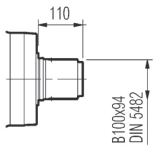
Metric

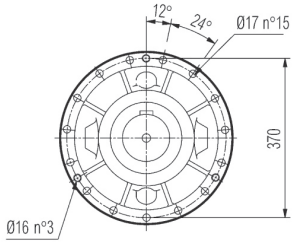


PC

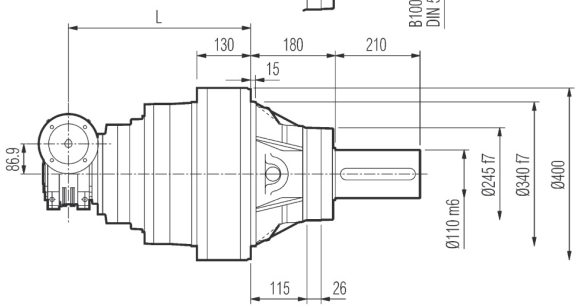


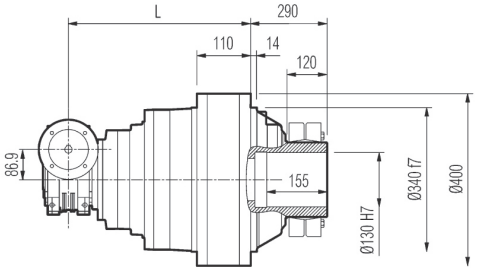
HZ PZ



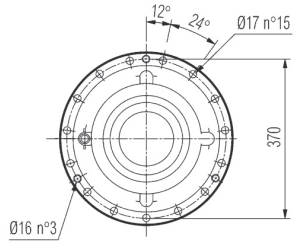


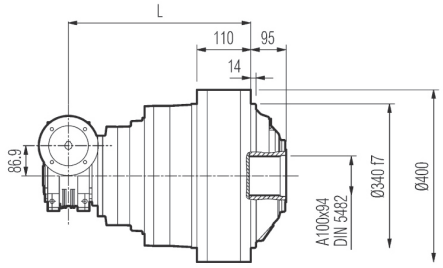
HC



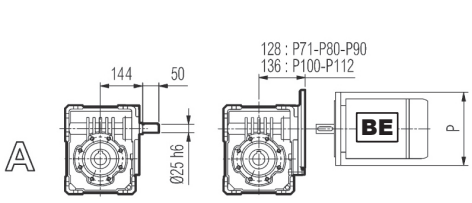


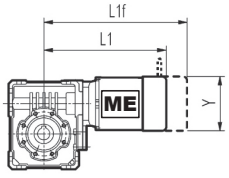
FP

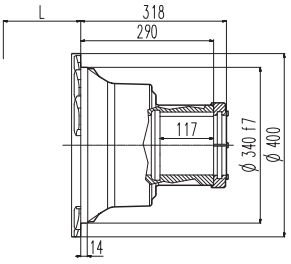




FZ







FDK

FP T_{2max} = 389,430 lb·in

Dimensions are in mm

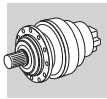
	L				Kg			
	PC - PZ	HC - HZ	FZ	FP	PC - PZ	HC - HZ	FZ	FP - FDK
3/V 10M L4	634	454	434	434	210	190	165	170

	P71	P80	P90	P100	P112	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	P	P	P	P	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 10M L4	160	200	200	250	250	324	385	138	349	—	156	392	—	193	424	—	193

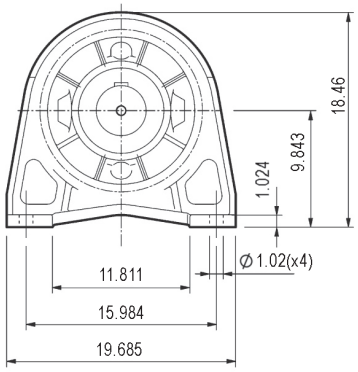
Bonfiglioli Riduttori

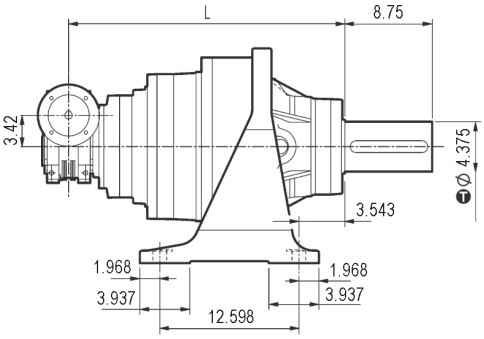
3/V 10M L4

NPC

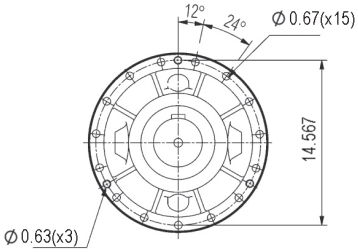


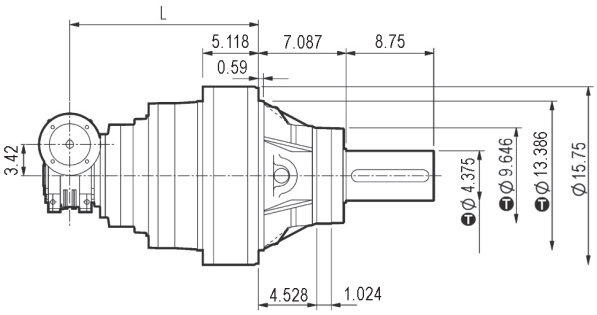
Imperial

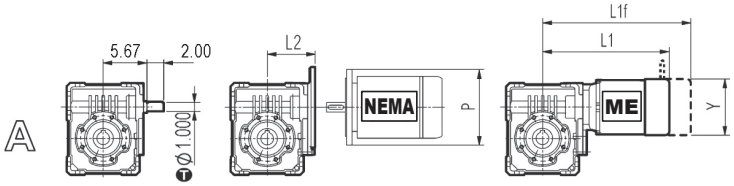




NHC







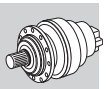
inch	Ⓣ
13.386	-0.00244 -0.00469
9.646	-0.00197 -0.00378
4.375	-0.00142 -0.00280

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N56C		N140TC		N180TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P
3/V 10M L4	24.96	17.87	463.1	419	4.74	6.54	4.74	6.54	5.45	9.02

	S1 + M1			S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 10M L4	12.756	15.157	5.433	13.740	—	6.142	15.433	—	7.598	16.693	—	7.598

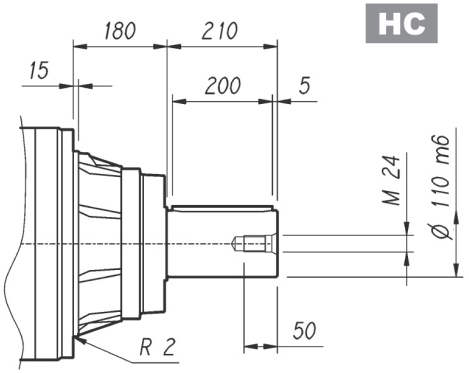
310M L | 310M R | 3/V 10M L



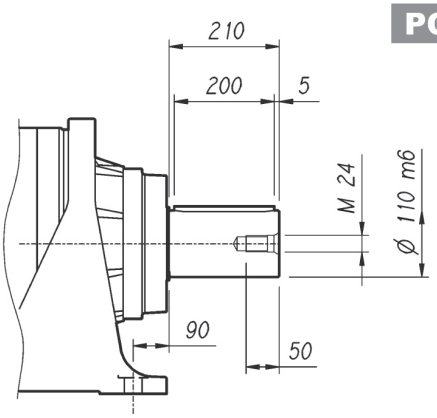
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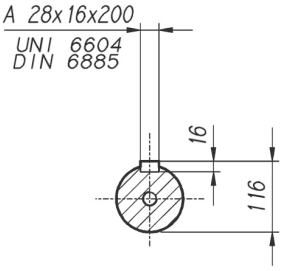
Imperial

HC

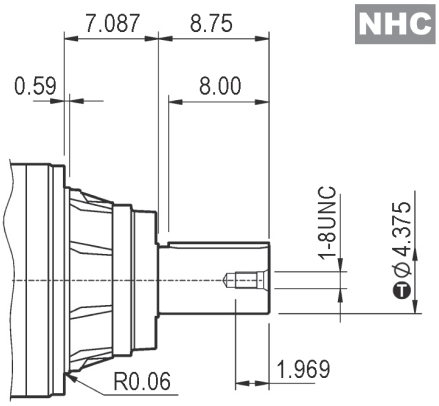


PC

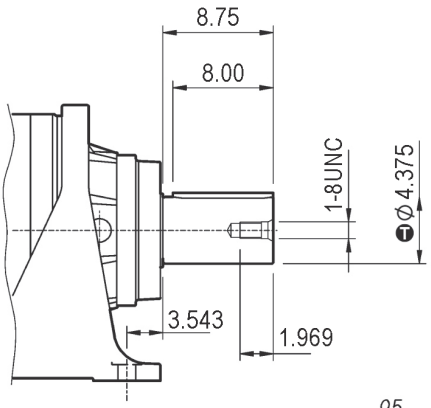


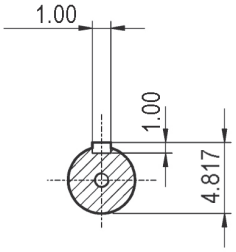


NHC

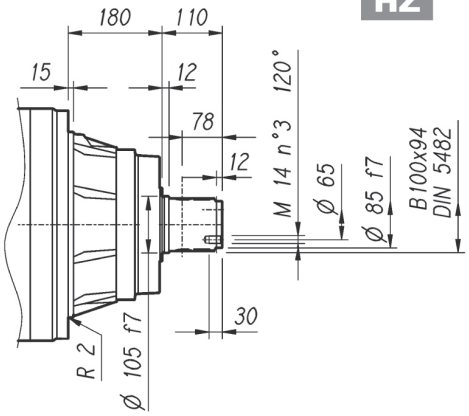


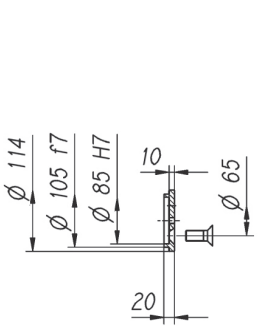
NPC



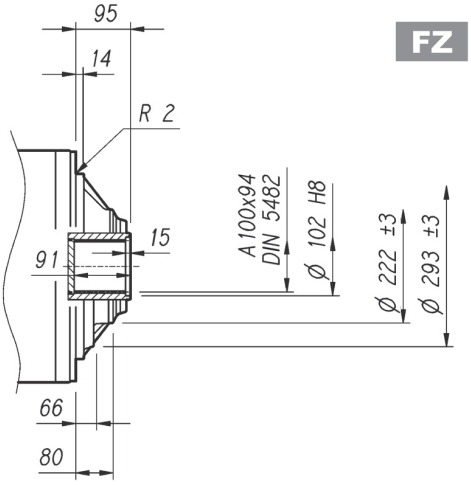


HZ

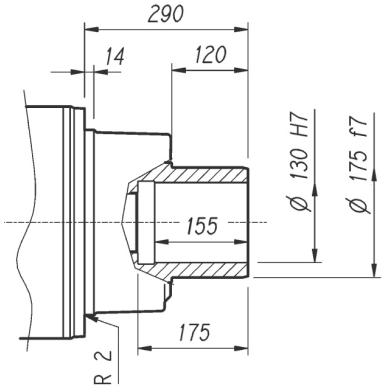




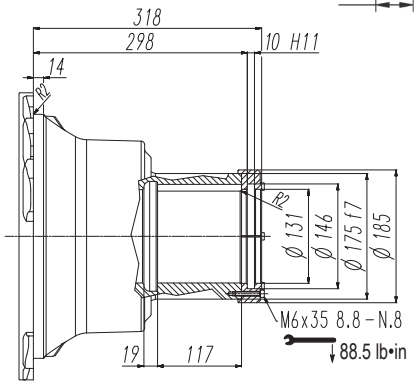
FZ

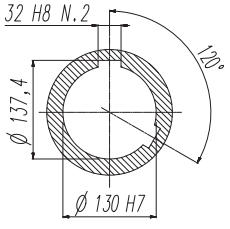


FP



FDK





FP | **T_{2max} = 389,430 lb·in**

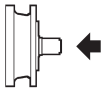
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

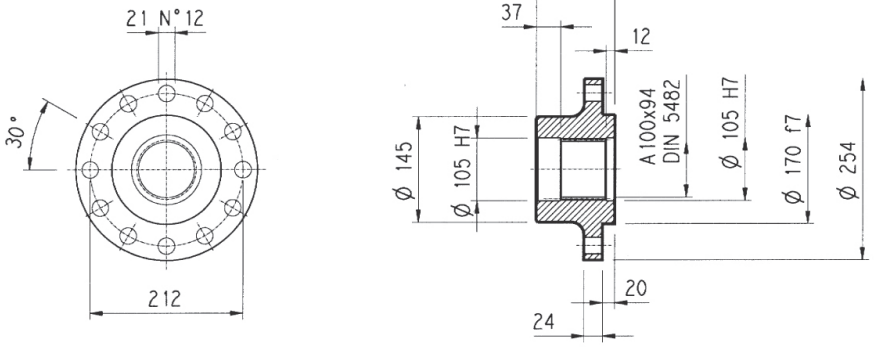
inch	T
4.375	-0.00142 -0.00280

Bonfiglioli Riduttori

Flange

W0A



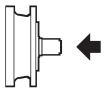


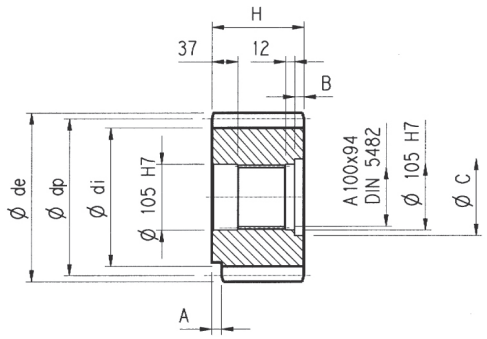
Material: Steel C40

Dimensions are in mm

Pinions

P...





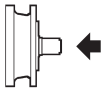
$\alpha = 20°$

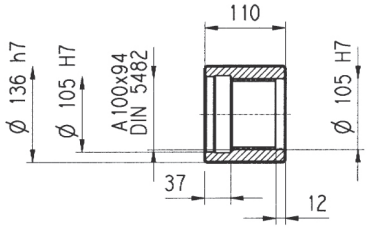
Dimensions are in mm

	m	z	x	dp	di	de	H	A	B	C	Material
PLQ	12	23	—	276	246	300	110	—	—	—	Steel 18NiCrMo5 case hardened
PPD	16	13	0.500	208	184	252.5	145	—	35	116	Steel 39NiCrMo3 hardened and tempered
PPF	16	15	0.450	240	215	280	125	—	15	120	

Sleeve coupling

M0A





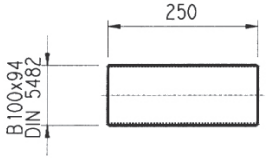
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

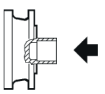


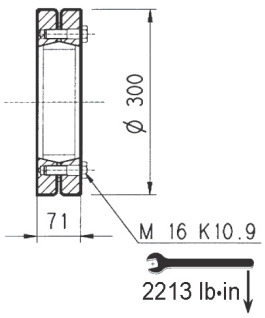


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

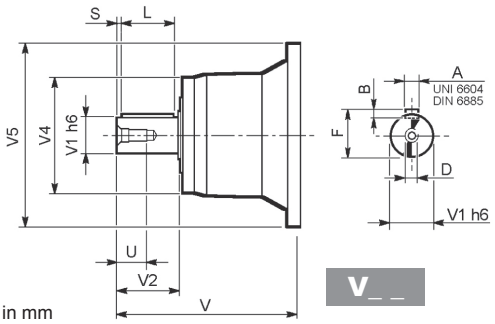




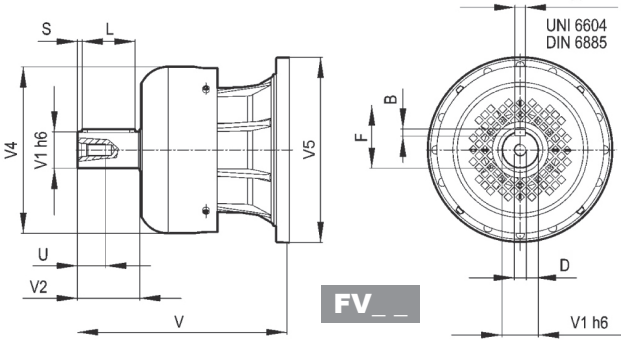
Dimensions are in mm

310M L 310M R





V_ _



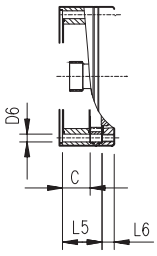
FV_ _

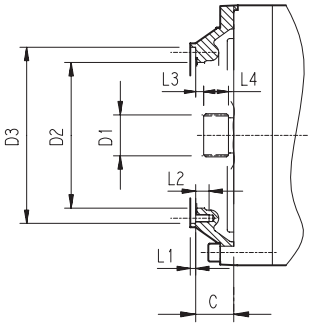
Dimensions are in mm

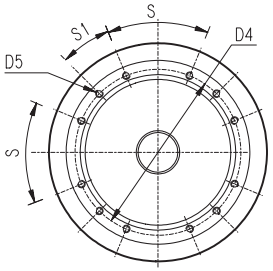
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
310M L1	**V10B**	377	80	130	200	400	22	14	85	110	10	M16	36
	FV10B	457	80	130	347.5	400	22	14	85	110	10	M16	36
310M L2	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
310M L3	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
310M L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
310M R2 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
310M R3-R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

310M L 310M R





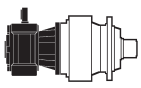


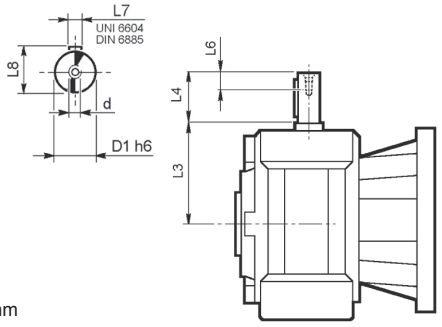


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
310M L1	**V9AC**	88	70x64 DIN 5482	200	282 H7	266	M12 n°12	—	4	22	11	32	—	—	45°	45°	C
310M L2	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
310M L3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
310M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	53	18	45°	45°	A
310M R2 (B) (C)	**V9AA**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
310M R3-R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 10M L





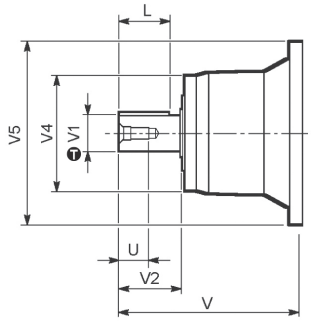
Dimensions are in mm

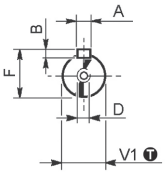
	D1 h6	L3	L4	L6	L7	L8	d
3/V 10M L3_HS	35	185	65	20	10	38	M8
3/V 10M L4_HS	25	144	50	19	8	28	M8

310M L 310M R

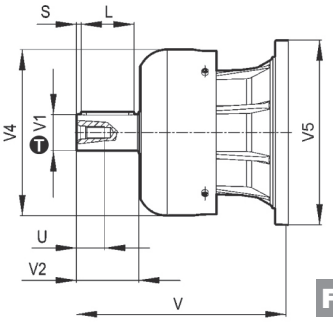


inch	Ⓣ
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

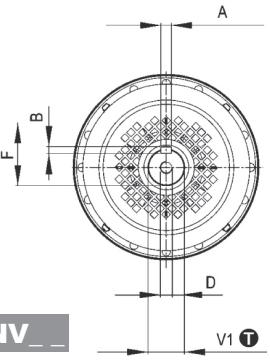


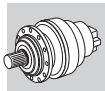


NV_ _



FNV_ _





Imperial

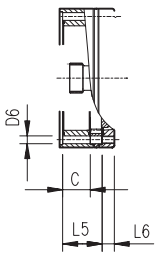
Dimensions are in Inch except when shown in *italic [mm]*

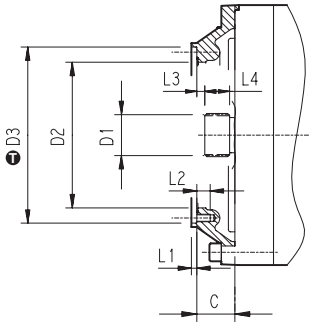
		V	V1	V2	V4	V5	A	B	F	L	D	U
310M L1	**NV10B**	14.724	3.000	5.000	7.165	15.748	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
	FNV10B	17.874	3.000	5.000	13.677	15.748	0.750	0.750	3.328	4.374	3/4 -10 UNC	1.654
310M L2	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
310M L3	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
310M L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
310M R2 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4 -10 UNC	1.654
310M R3-R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

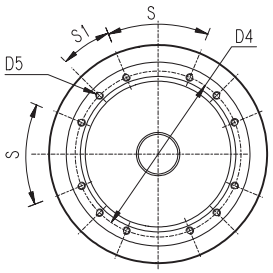
310M L 310M R



inch	Ⓣ
11.10	+0.00204 0
9.29	+0.00181 0
7.01	+0.00157 0



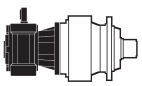


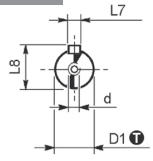


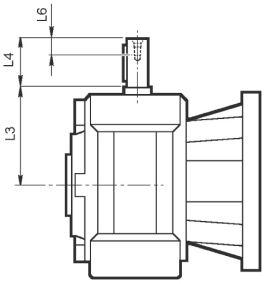
Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
310M L1	**V9AC**	3.46	*70x64 DIN 5482*	7.87	11.10	10.47	*M12 n°12*	—	0.16	0.87	0.43	1.26	—	—	45°	45°	C
310M L2	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
310M L3	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
310M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.09	0.71	45°	45°	A
310M R2 (B) (C)	**V9AA**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
310M R3-R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 10M L



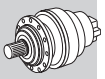




inch	Ⓣ
1.378	0 -0.00063
1.000	0 -0.00051

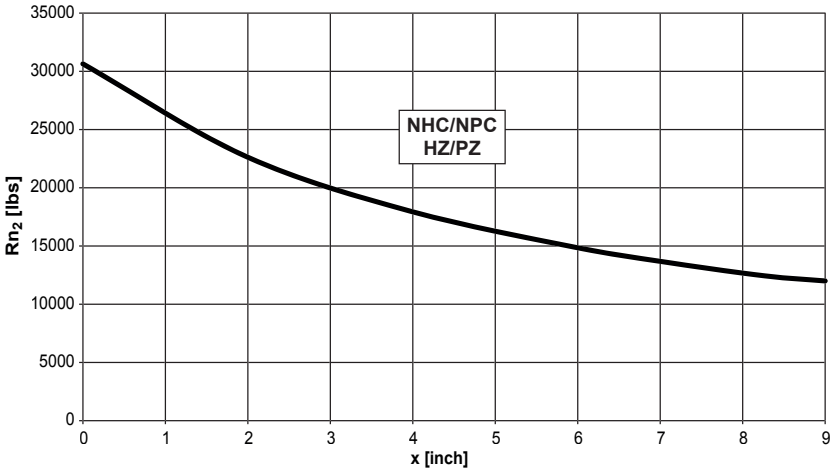
Dimensions are in Inch except when shown in *italic [mm]*

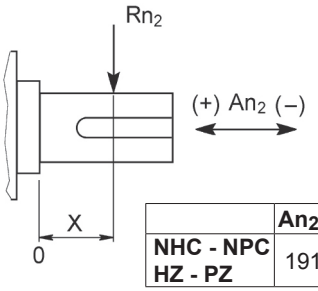
	D1	L3	L4	L6	L7	L8	d
3/V 10M L3_HS	1.378	7.28	2.56	0.787	0.394	1.496	*M8*
3/V 10M L4_NHS	1.000	11.89	1.969	0.75	0.250	1.109	3/8-16UNC



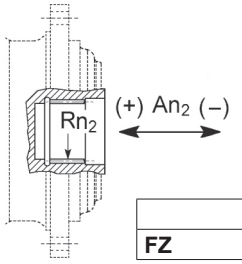
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





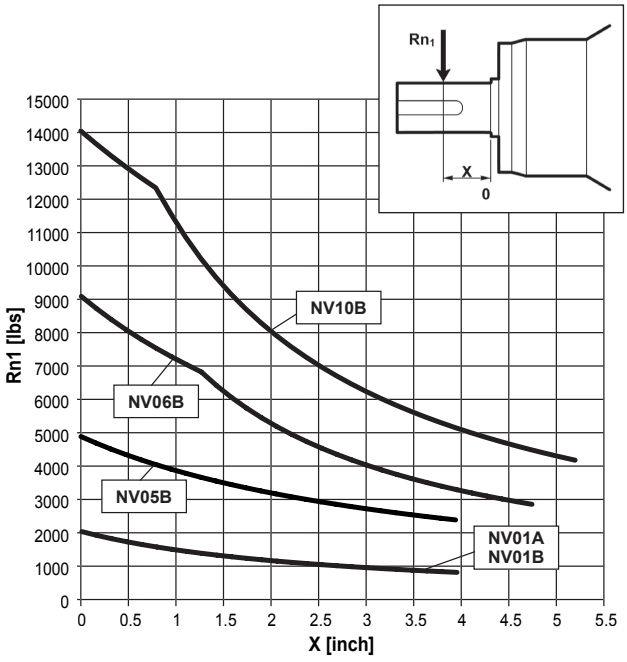
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	19108	11240

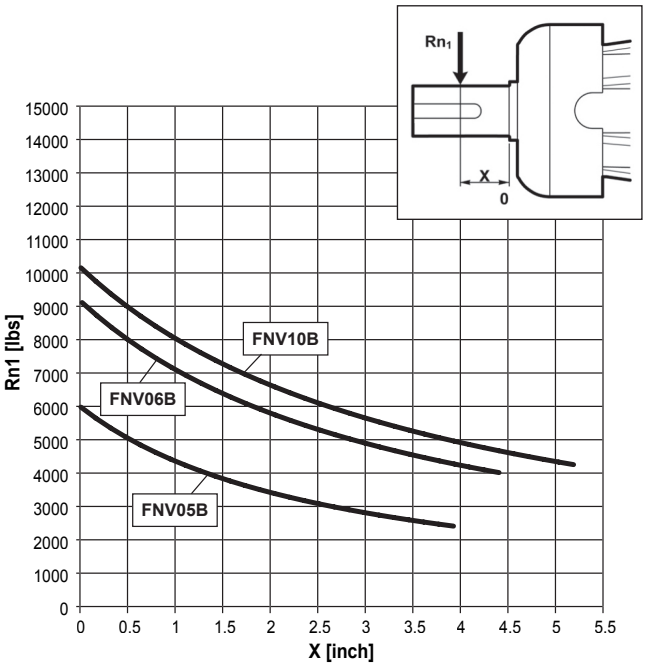


	Rn2	An2 (+/-)
FZ	6782	5426

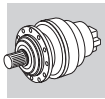
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.27**	**1.27**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

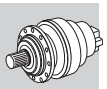




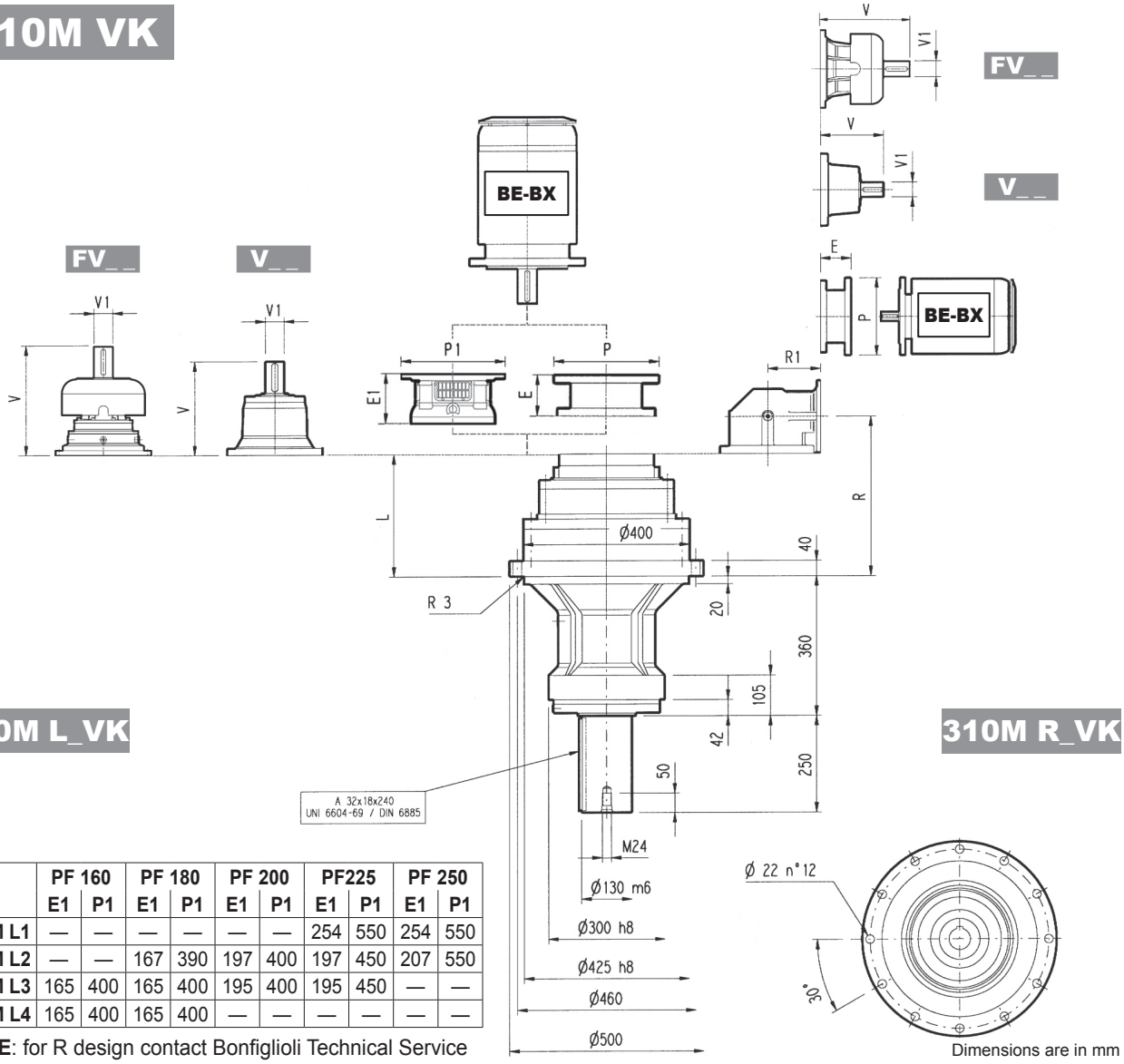
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



310M VK



Metric



310M L_VK

310M R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
310M L1	—	—	—	—	—	—	254	550	254	550
310M L2	—	—	167	390	197	400	197	450	207	550
310M L3	165	400	165	400	195	400	195	450	—	—
310M L4	165	400	165	400	—	—	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
310M L1	107	200	377	80	50	—	—	—	457	80	63	—	—	—
310M L2	243	230	307	60	23	—	—	—	357	60	28	—	—	—
310M L3	308	240	239	48	15	—	—	—	276	48	17	—	—	—
310M L4	361	245	137.5	24	6	158	38	7	—	—	—	—	—	—

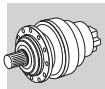
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	271	400	301	450	281	550
310M L2	—	—	—	—	—	—	—	—	—	—	—	—	152	350	153	350	183	400	212	450	193	550
310M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
310M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
310M R2 (B)	315	345	320	307	60	23	—	—	—	357	60	28	—	—	—
310M R2 (C)	333	390	340	307	60	23	—	—	—	357	60	28	—	—	—
310M R3	380	140	250	137.5	24	6	158	38	7	—	—	—	—	—	—
310M R4	400	140	260	137.5	24	6	158	38	7	—	—	—	—	—	—

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
310M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450
310M R2 (C)	—	—	—	—	—	—	—	—	—	—	114	300	152	350	152	350	182	400	212	450
310M R3	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—
310M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—

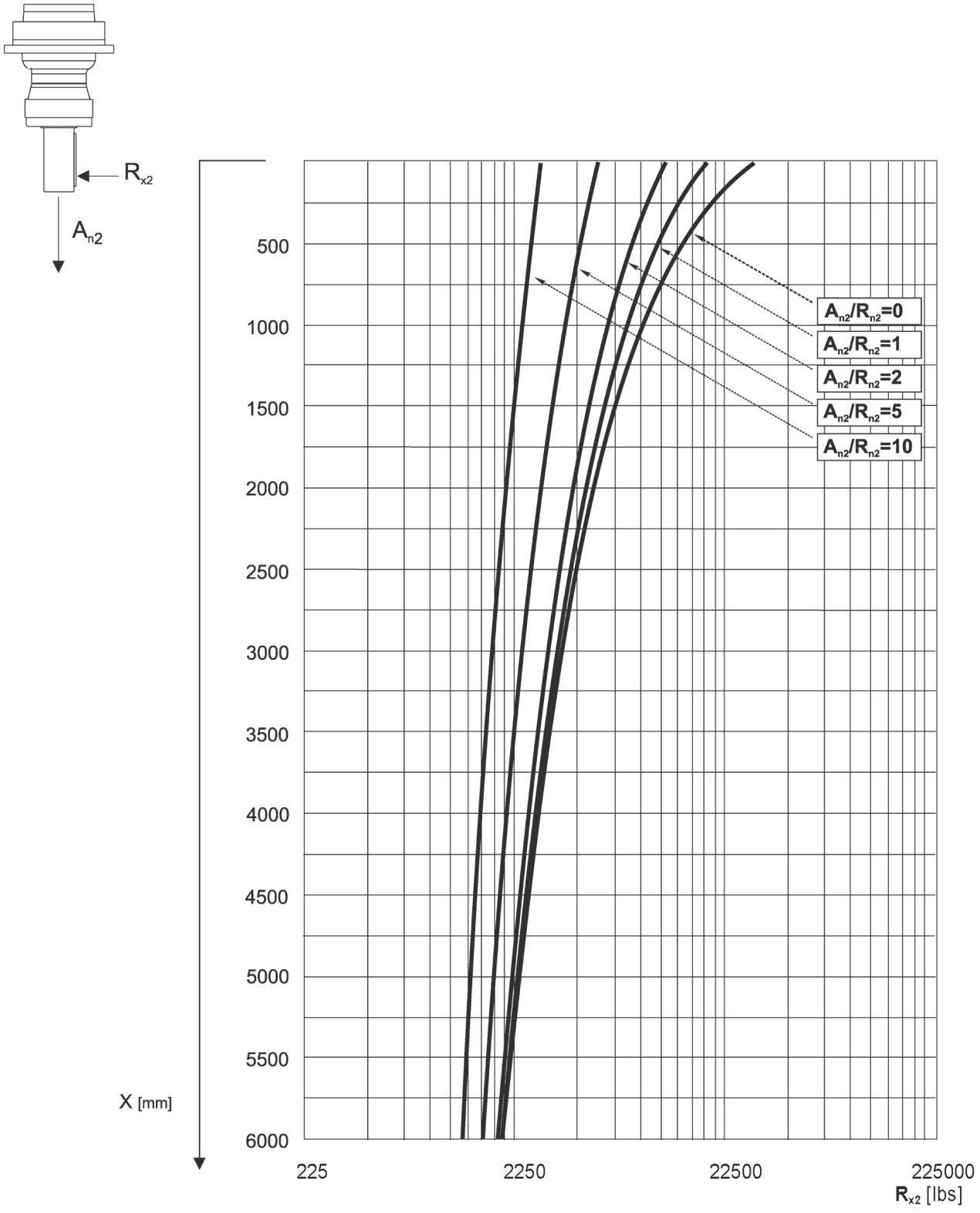
Bonfiglioli Riduttori

310M VK

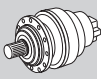


Metric

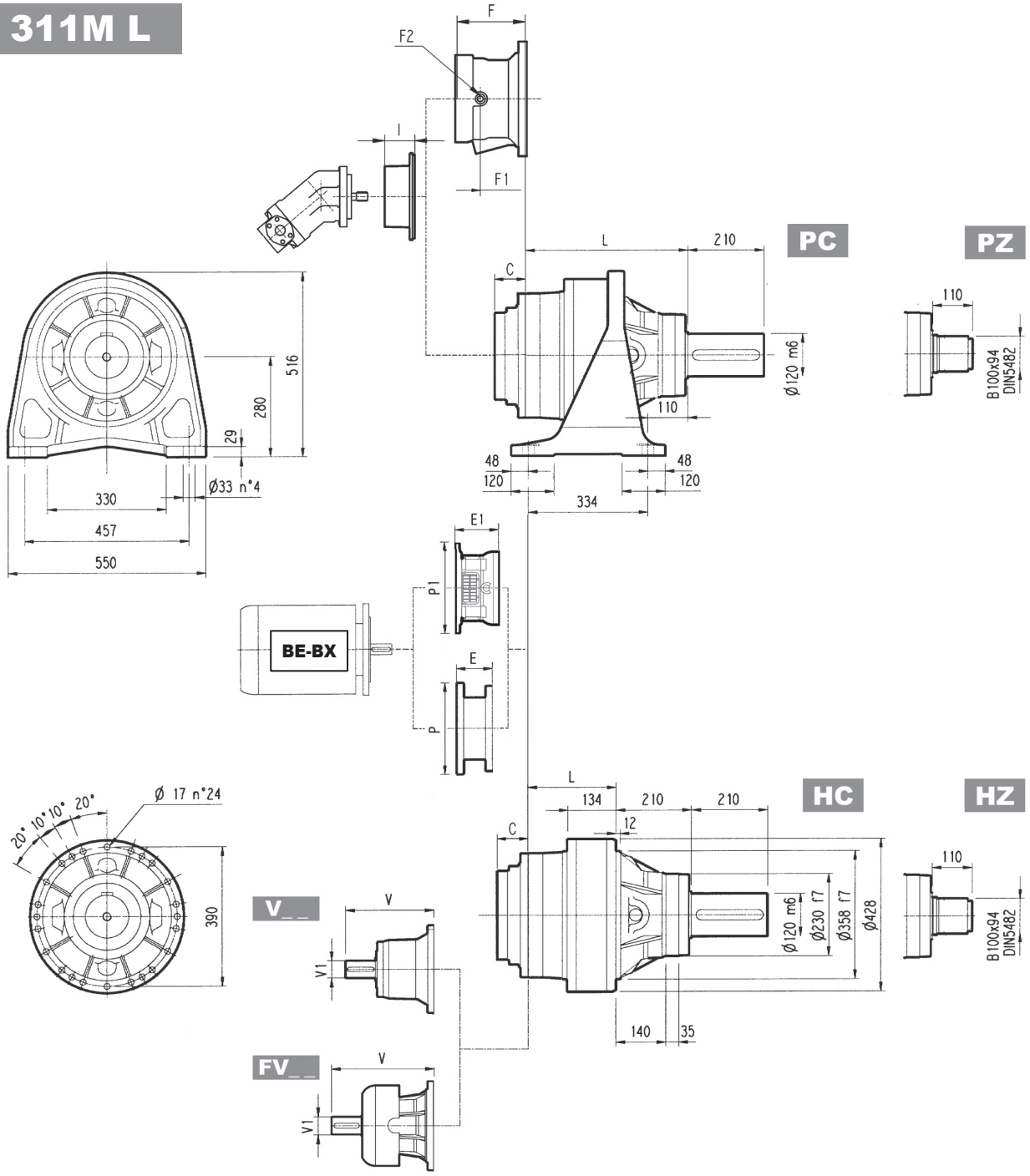
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



311M L



Metric



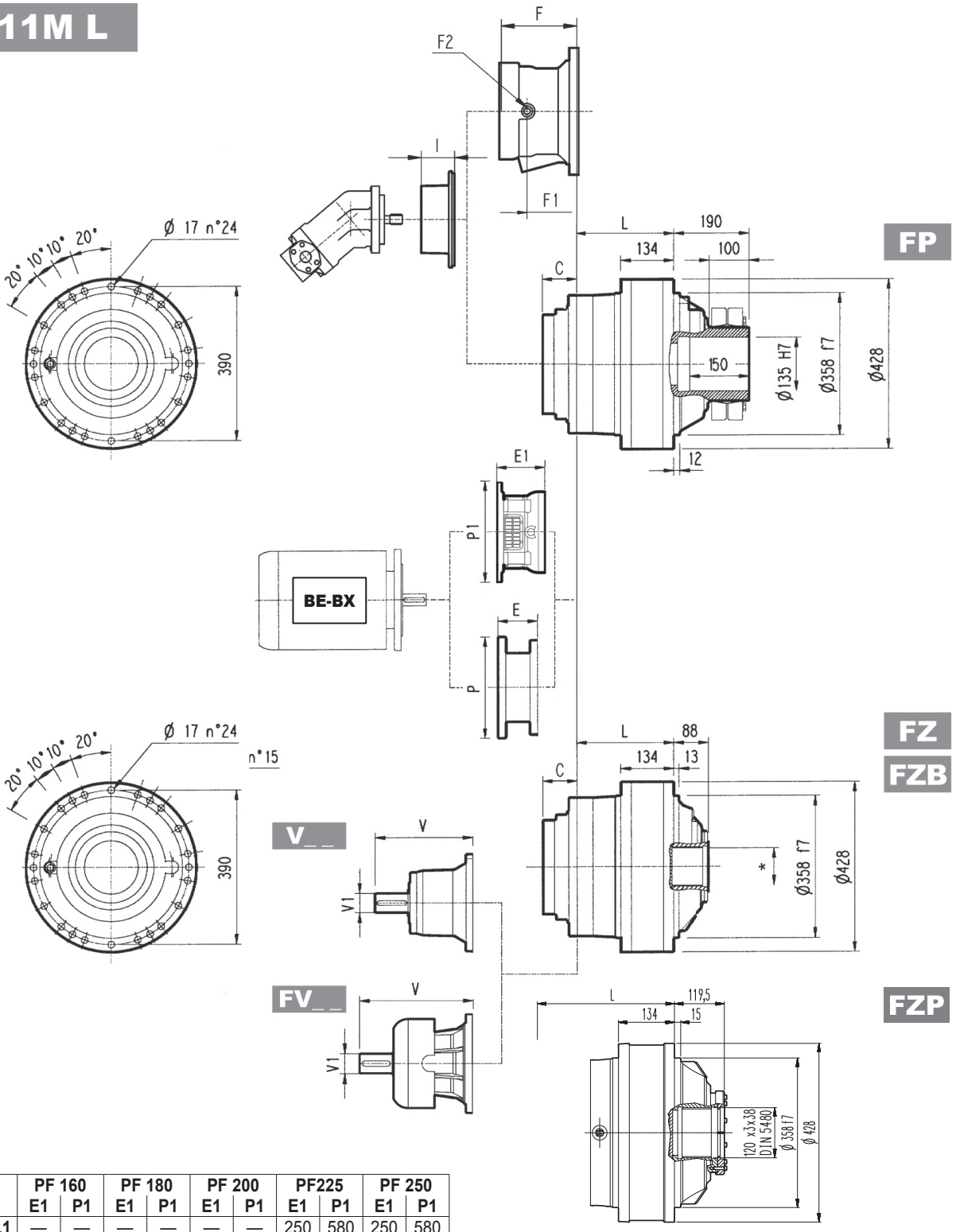
Dimensions are in mm

	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
311M L1	325	115	115	115	250	180	160	170
311M L2	458	248	248	248	295	225	205	215
311M L3	547	337	337	337	307	237	217	227
311M L4	612	402	402	402	314	244	224	234

	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
311M L1	348	80	55	—	—	—	456	80	85	—	—	—	81	D		—	—	—	—	—	—
311M L2	315	80	35	313	60	28	375	80	48	363	60	34	51	B		201	153	1/4 G	6	B	28
311M L3	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16
311M L4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A	522	105	65	1/4 G	4	A	10

Bonfiglioli Riduttori

311M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
311M L1	—	—	—	—	—	—	250	580	250	580
311M L2	—	—	—	—	197	530	227	530	227	550
311M L3	165	400	165	400	195	400	195	450	—	—
311M L4	165	400	165	400	—	—	—	—	—	—

NOTE: For R design contact Bonfiglioli Technical service

FZB T_{2max} = 592,110 lb·in

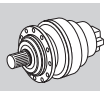
FP T_{2max} = 486,790 lb·in

Dimensions are in mm

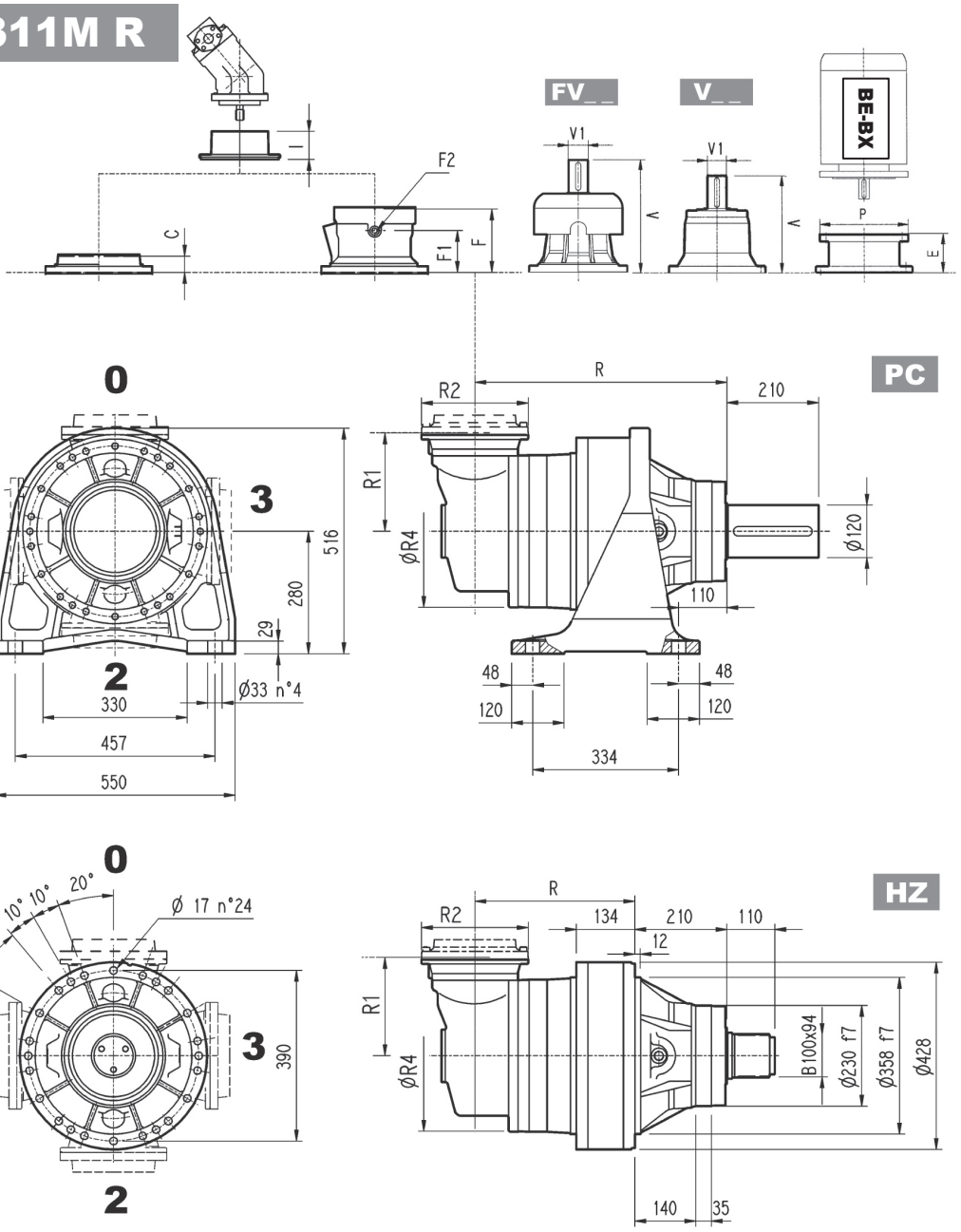
* For dimensions refer to page 392

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	267	400	297	450	297	550
311M L2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	550
311M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
311M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

311M R



Metric

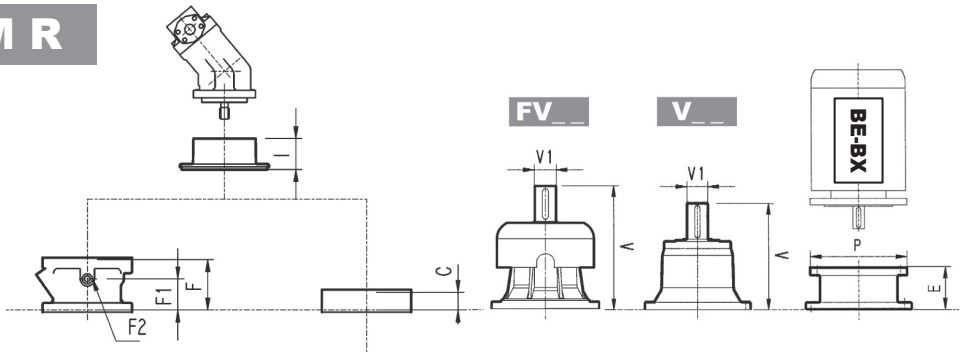


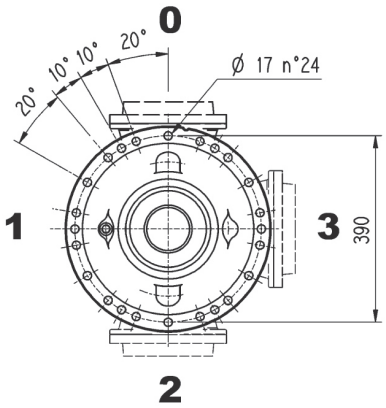
Dimensions are in mm

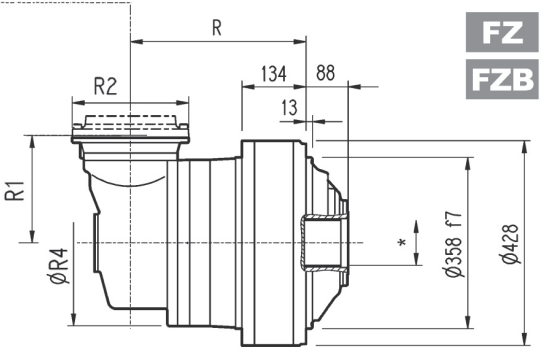
	R				R1	R2	R4	Kg			
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP
311M R2 (B)	550	340	340	340	345	292	400	380	310	290	300
311M R2 (C)	550	340	340	340	390	292	480	390	320	300	310
311M R3	577	367	367	367	225	245	375	345	275	255	265
311M R4	639	429	429	429	140	186	244	327	257	237	247

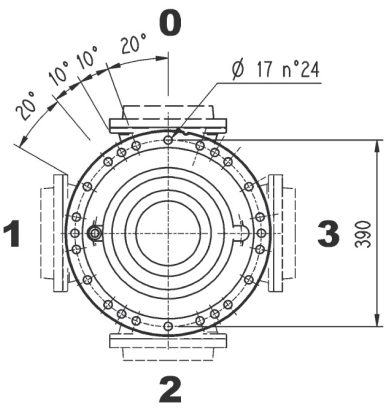
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
311M R2 (B)	307	60	23	—	—	—	357	60	28	—	—	—	45	B		195	147	1/4 G	6	B	28
311M R2 (C)	307	60	23	—	—	—	357	60	28	—	—	—	45	B		195	147	1/4 G	6	B	28
311M R3	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16
311M R4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A	522	105	65	1/4 G	4	A	10

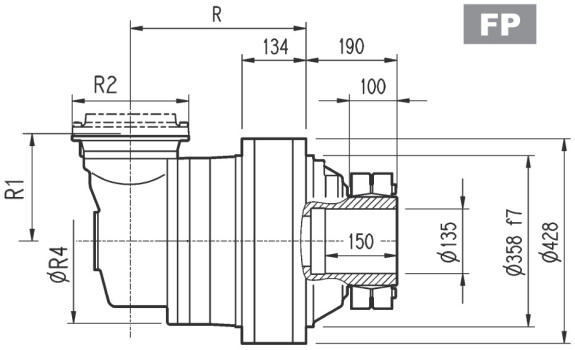
311M R





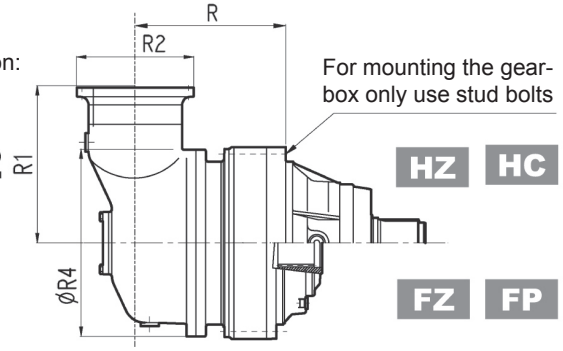


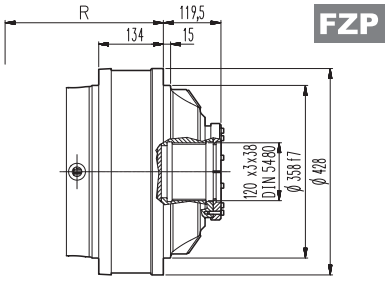




Only for configuration:

R2





FZB	T_{2max} = 592,110 lb·in
FP	T_{2max} = 486,790 lb·in

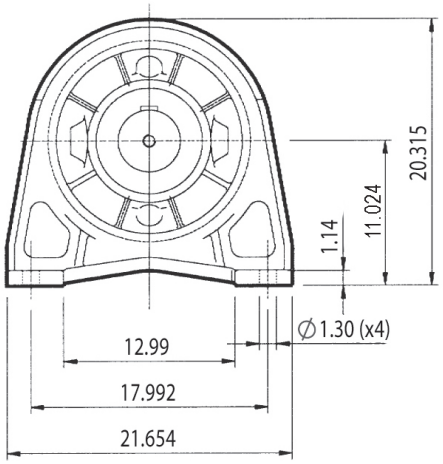
Dimensions are in mm

* For dimensions refer to page 392

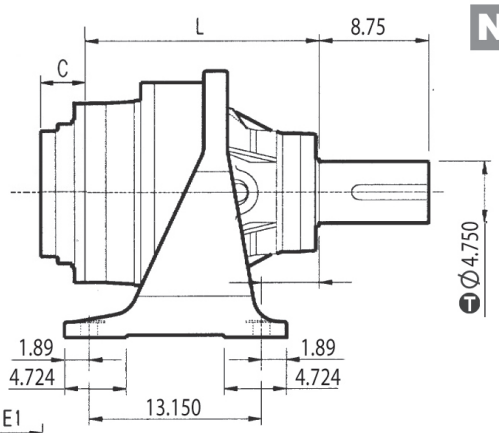
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
311M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
311M R3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
311M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

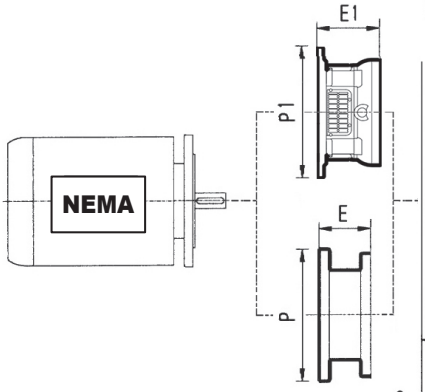
311M L

Imperial

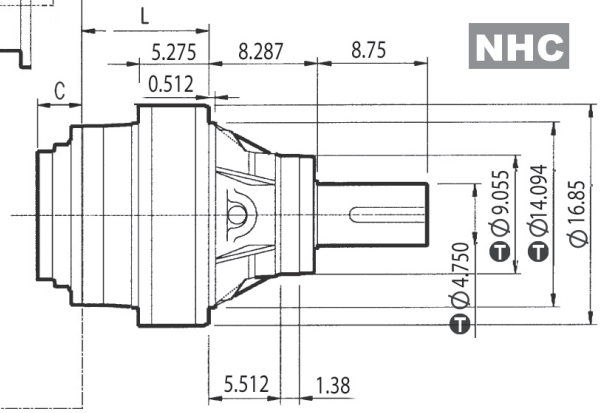


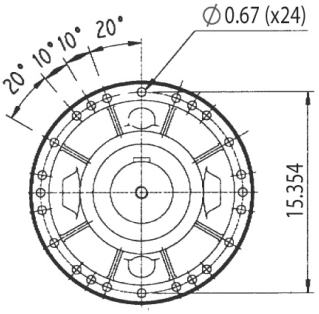
NPC



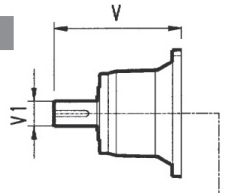


NHC

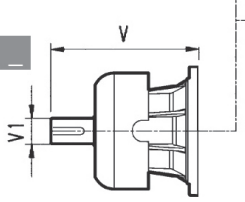




NV_ _



FNV_ _



inch	Ⓣ
14.094	-0.00244 -0.00469
9.055	-0.00197 -0.00378
4.750	+0.00157 +0.00059

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
311M L1	—	—	—	—	—	—	12.402	22.835
311M L2	—	—	6.496	15.748	9.921	20.866	11.496	20.866
311M L3	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
311M L4	8.661	15.748	8.661	15.748	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in Inch except when shown in *italic [mm]*

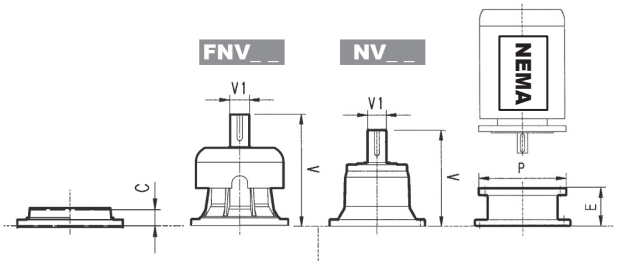
	L		lbs	
	NPC	NHC	NPC	NHC
311M L1	12.795	4.528	551.3	396.9
311M L2	18.031	9.764	650.5	496.1
311M L3	21.535	13.268	676.9	522.6
311M L4	24.094	15.827	692.4	538.0

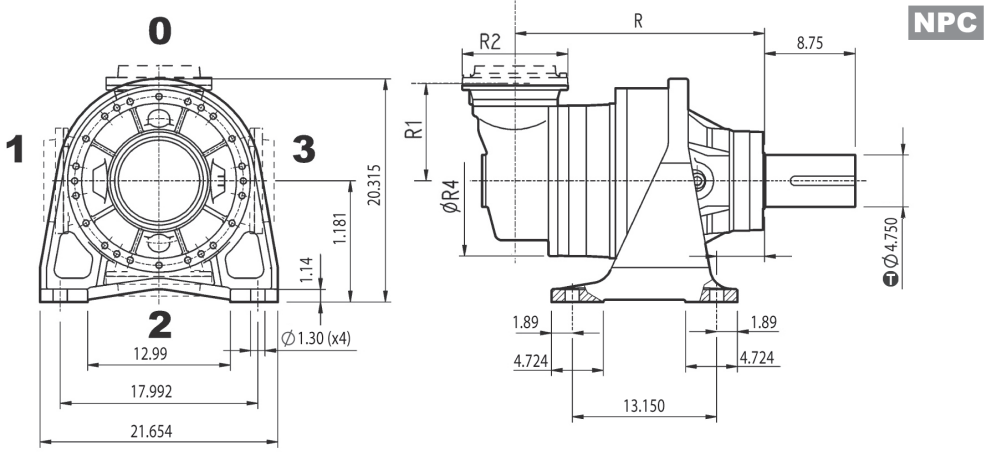
	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
311M L1	13.563	3.000	121.3	—	—	—	—	—	—	17.835	3.000	140.0	3.189	D
311M L2	13.130	2.375	29.8	12.283	3.000	77.2	14.646	3.000	90.0	15.104	2.375	38.0	2.008	B
311M L3	9.681	1.875	33.1	—	—	—	—	—	—	11.138	1.875	38.0	1.457	A
311M L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A

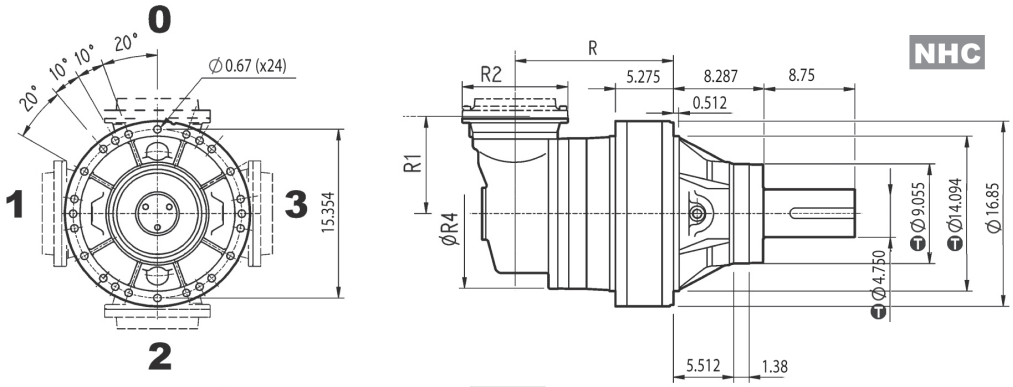
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M L2	—	—	—	—	—	—	—	—	—	—	—	—	7.776	15.748	7.776	15.748
311M L3	—	—	—	—	—	—	—	—	5.216	11.811	6.221	13.780	—	—	—	—
311M L4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

Bonfiglioli Riduttori

311M R

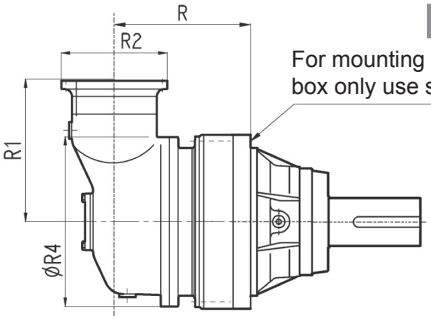






Only for configuration:

R2



NHC

For mounting the gear-box only use stud bolts

inch	T
14.094	-0.00244 -0.00469
9.055	-0.00197 -0.00378
4.750	+0.00157 +0.00059

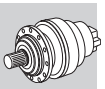
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R4	lbs	
	NPC	NHC				NPC	NHC
311M R2 (B)	21.654	13.386	13.583	11.496	15.748	837.9	705.6
311M R2 (C)	21.654	13.386	15.354	11.496	18.898	860.0	606.4
311M R3	22.717	14.449	8.858	9.646	14.764	760.7	606.4
311M R4	25.157	16.890	5.512	7.323	9.606	721.0	566.7

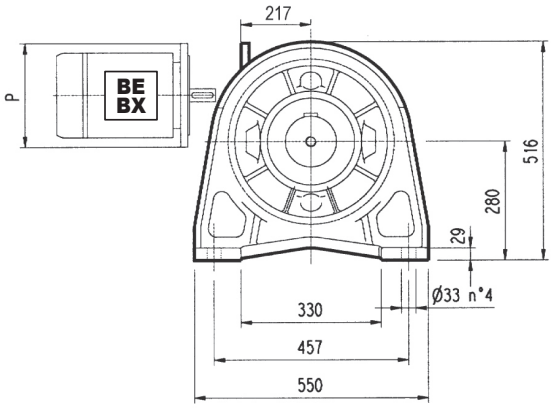
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
311M R2 (B)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
311M R2 (C)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
311M R3	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
311M R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

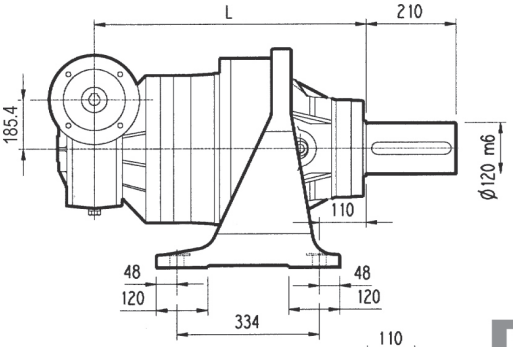
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.780	7.776	13.780
311M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.780	7.776	13.780
311M R3	—	—	—	—	—	—	—	—	5.216	11.811	6.221	13.780	—	—	—	—
311M R4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

3/V 11M L3

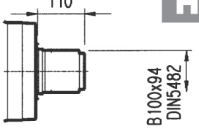


Metric

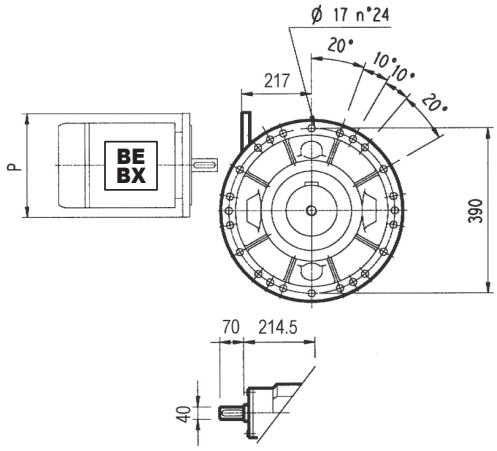


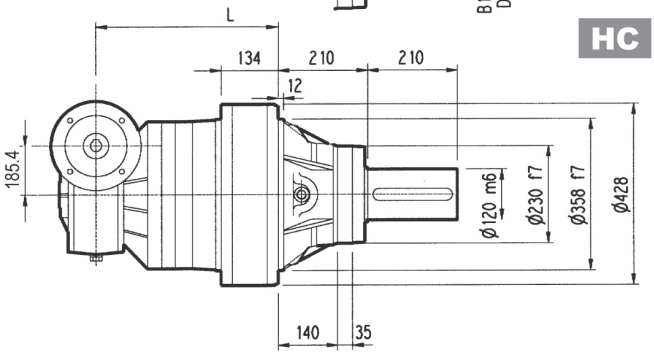


PC

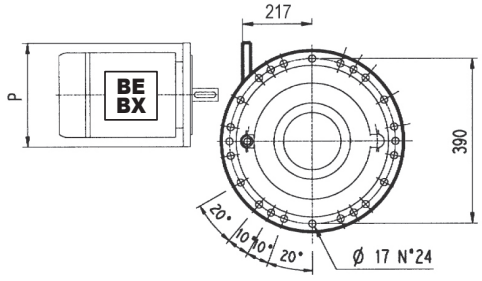


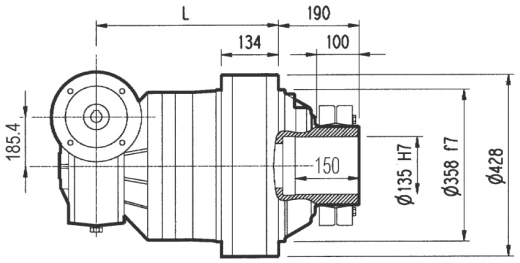
HZ PZ



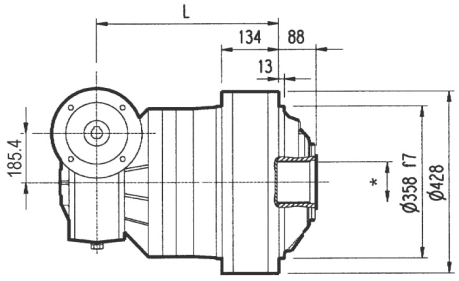


HC

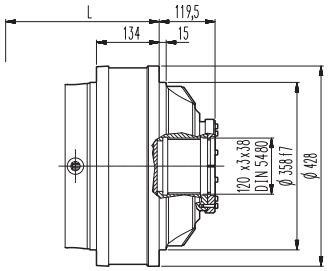




FP



FZ
FZB



FZP

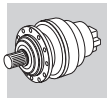
FZB	**T_{2max} = 592,110 lb·in**
FP	**T_{2max} = 486,790 lb·in**

Dimensions are in mm

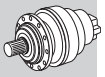
* For dimensions refer to page 392

	L				Kg				P80	P90	P100	P112	P132	P160	P180
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	P	P	P	P	P	P	P
3/V 11M L3	659	449	449	449	390	320	300	310	—	—	250	250	300	350	350

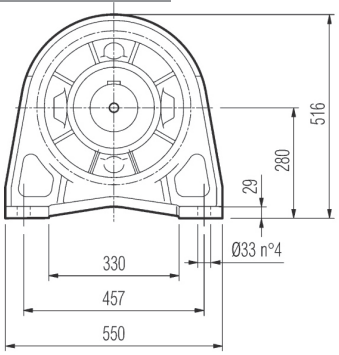
Bonfiglioli Riduttori

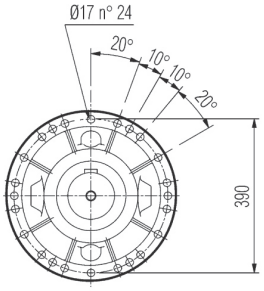


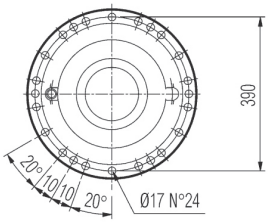
3/V 11M L4



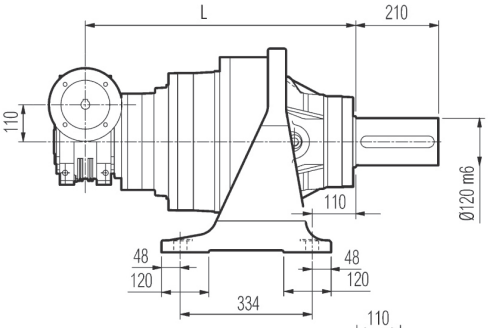
Metric



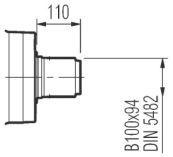




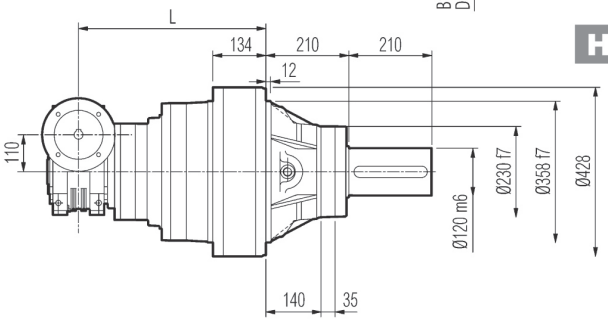
PC



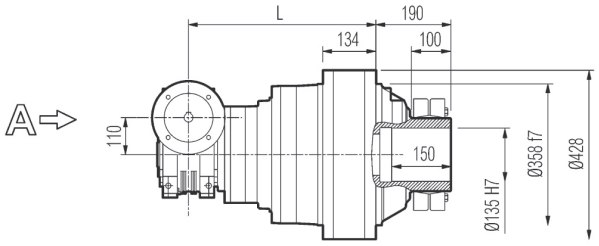
HZ **PZ**



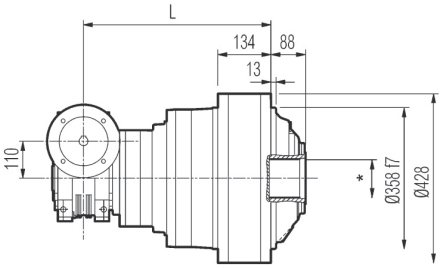
HC



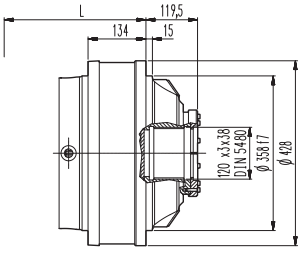
FP

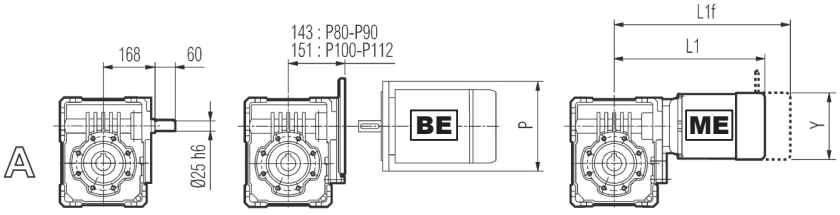


FZ
FZB



FZP





FZB T_{2max} = 592,110 lb·in

FP T_{2max} = 486,790 lb·in

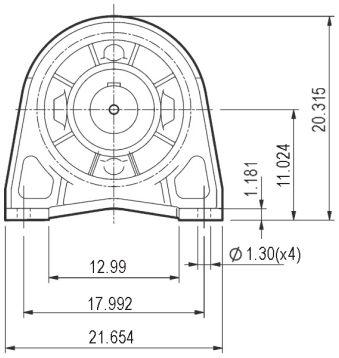
Dimensions are in mm

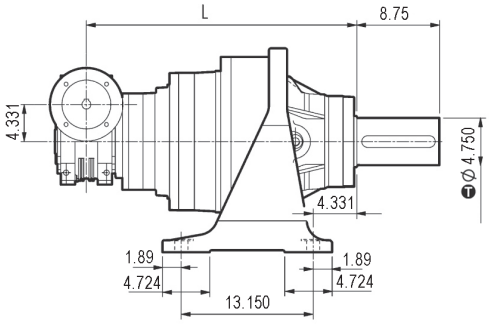
* For dimensions refer to page 392

	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
3/V 11M L4	707	497	497	497	340	270	250	260

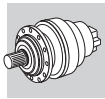
	P80	P90	P100	P112	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	P	P	P	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 11M L4	200	200	250	250	364	—	156	407	—	193	439	—	193

3/V 11M L4

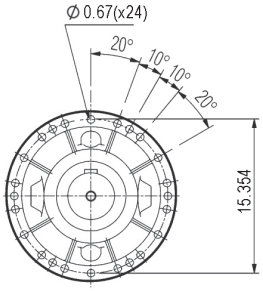


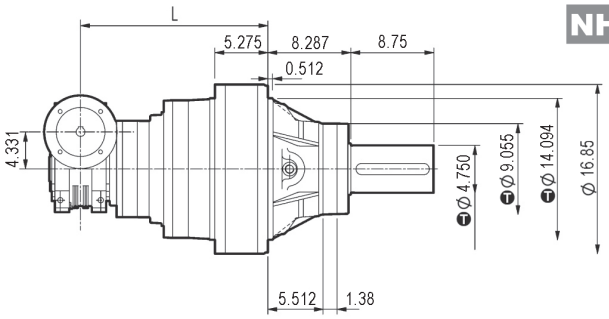


NPC



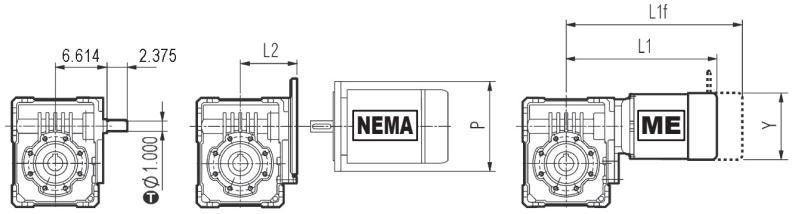
Imperial





NHC

A



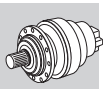
inch	Ⓣ
14.094	-0.00244 -0.00469
9.055	-0.00197 -0.00378
4.750	+0.00157 +0.00059

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N140TC		N180TC		N210TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P
3/V 11M L4	27.835	19.567	749.7	595.4	5.866	6.535	6.280	9.016	8.780	9.016

	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 11M L4	14.331	—	6.142	16.024	—	7.598	17.283	—	7.598

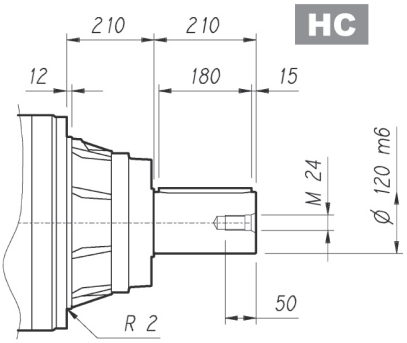
311M L | 311M R | 3/V 11M L



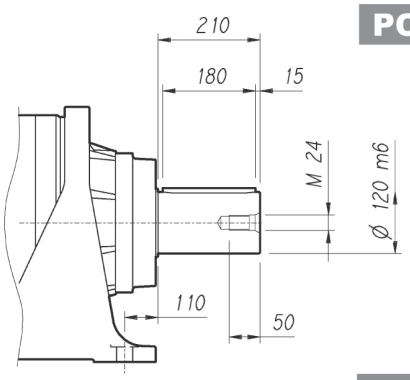
Metric

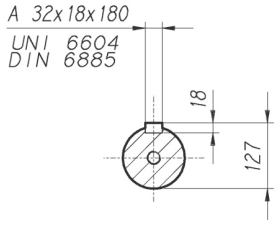
Imperial

HC

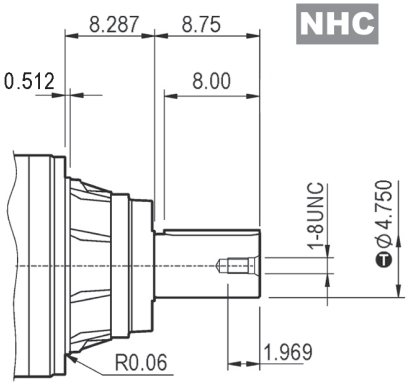


PC

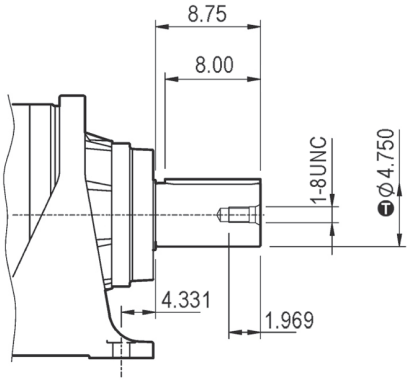


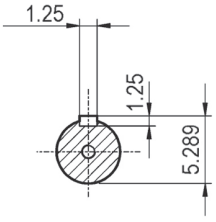


NHC

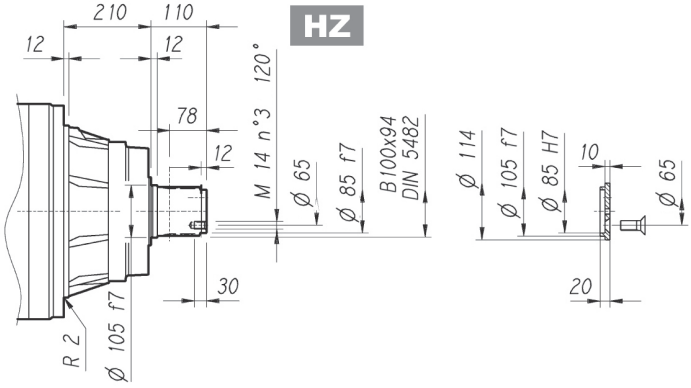


NPC

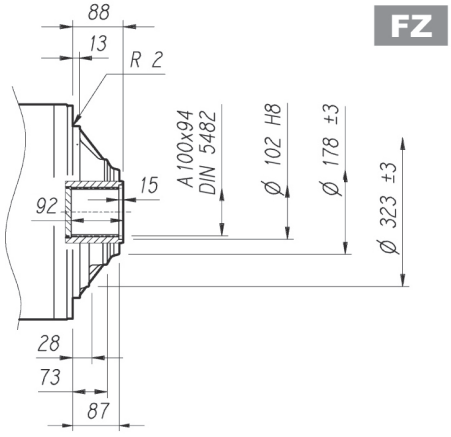




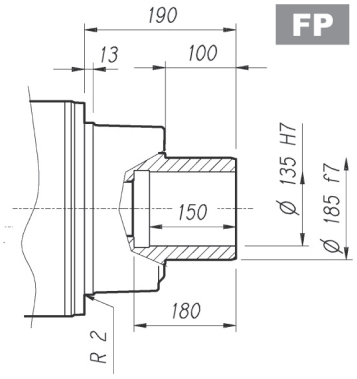
HZ



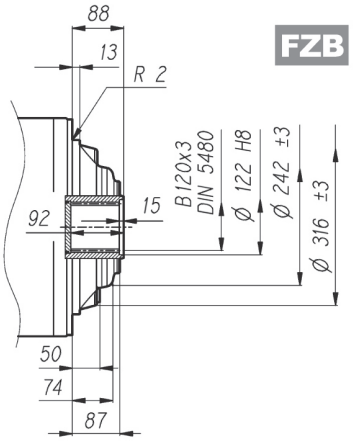
FZ



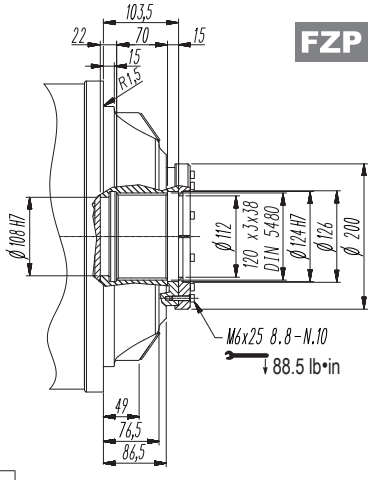
FP



FZB



FZP



FZB	**T_{2max} = 592,110 lb·in**
FP	**T_{2max} = 486,790 lb·in**

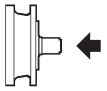
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

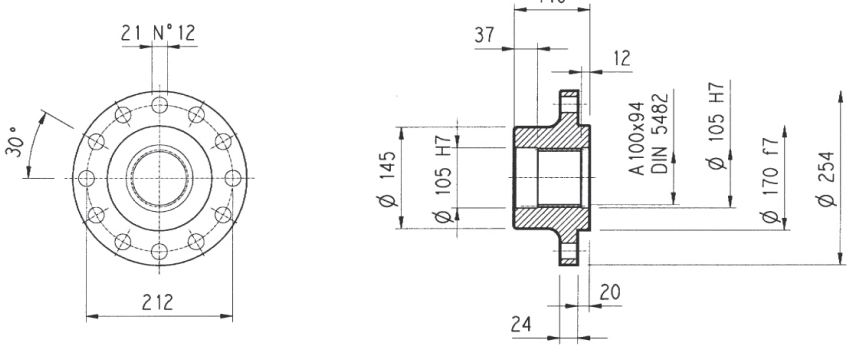
inch	T
4.750	+0.00157 +0.00059

Bonfiglioli Riduttori

Flange

W0A



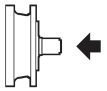


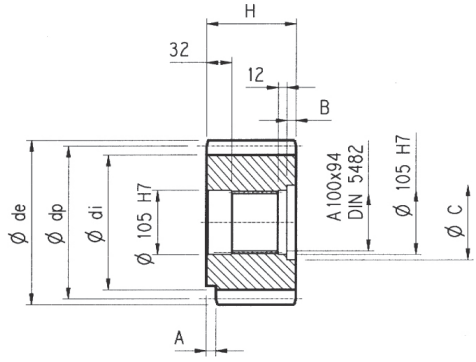
Material: Steel C40

Dimensions are in mm

Pinions

P...





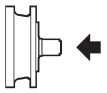
Dimensions are in mm

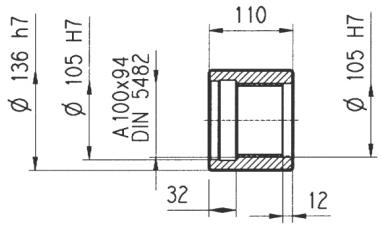
α = 20°

	m	z	x	dp	di	de	H	A	B	C	Material
PLQ	12	23	—	276	246	300	110	—	—	—	Steel 18NiCrMo5 case hardened
PPD	16	13	0.500	208	184	252.5	145	—	35	116	Steel 39NiCrMo3 hardened and tempered
PPF	16	15	0.450	240	215	280	125	—	15	120	

Sleeve coupling

M0A





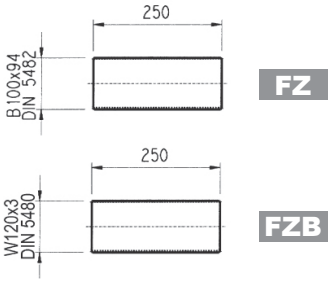
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

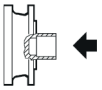


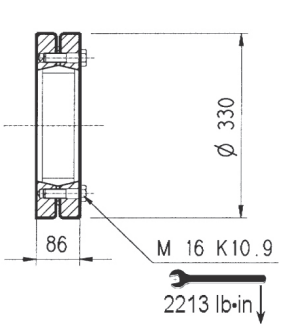


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

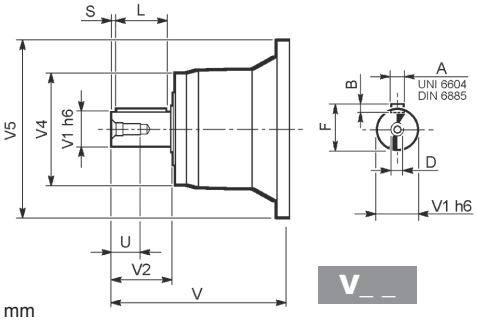




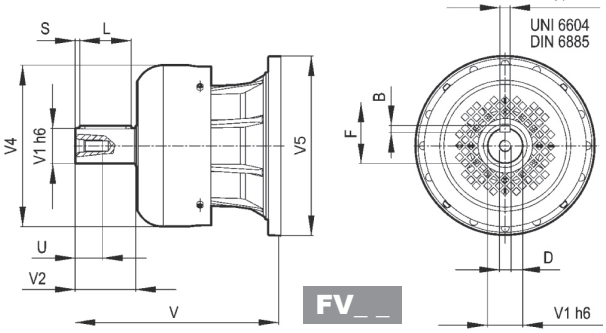
Dimensions are in mm

311M L 311M R





V_ _



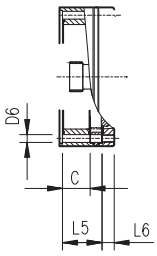
FV_ _

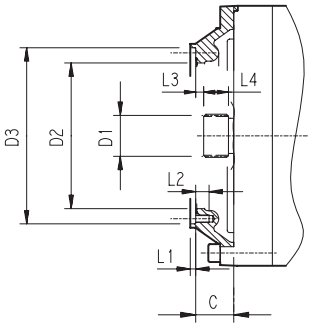
Dimensions are in mm

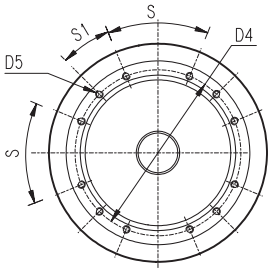
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
311M L1	**V11B**	348	80	130	200	428	22	14	85	110	10	M16	36
	FV11B	456	80	130	347.5	428	22	14	85	110	10	M16	36
311M L2	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
311M L3	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
311M L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
311M R2 (B)(C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
311M R3	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
311M R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

311M L 311M R





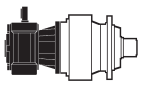


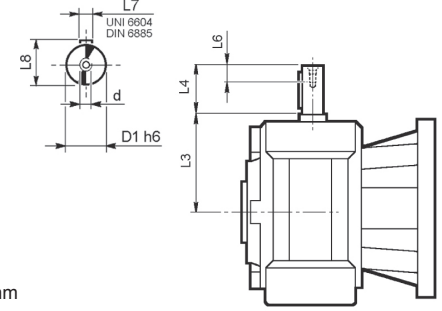


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
311M L1	**V9AD**	81	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	8.5	40	—	—	60°	30°	D
311M L2	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
311M L3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
311M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
311M R3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
311M R2 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
311M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 11M L



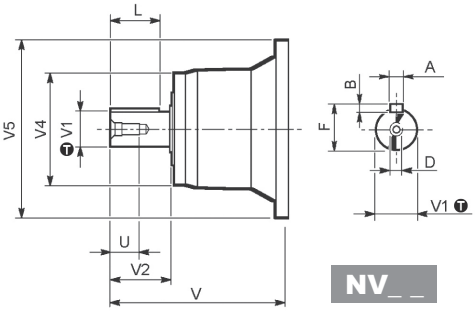


Dimensions are in mm

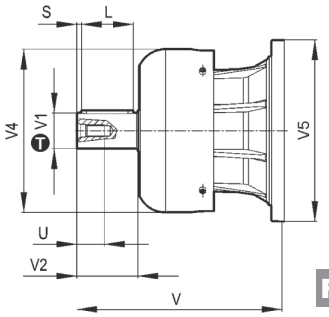
	D1 h6	L3	L4	L6	L7	L8	d
3/V 11M L3_HS	40	214.5	70	20	12	43	M8
3/V 11M L4_HS	25	168	60	19	8	28	M8

311M L 311M R

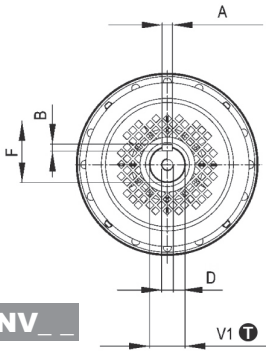




NV_ _



FNV_ _



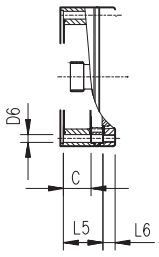
inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

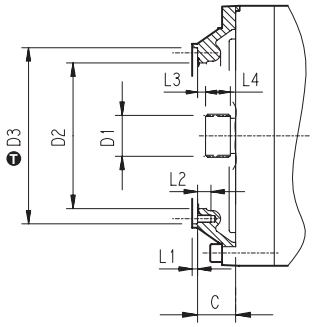
Dimensions are in Inch except when shown in *italic [mm]*

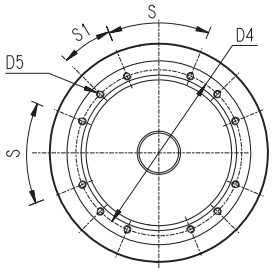
		V	V1	V2	V4	V5	A	B	F	L	D	U
311M L1	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
311M L2	**NV07A**	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	NV07B	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
311M L3	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
311M L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
311M R2 (B)(C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
311M R3	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
311M R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

311M L 311M R







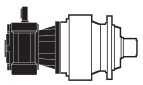


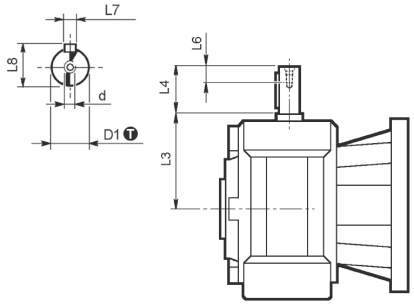
inch	T
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0

Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
311M L1	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
311M L2	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
311M L3	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
311M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.56	0.71	45°	45°	A
311M R3	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A
311M R2 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
311M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 11M L

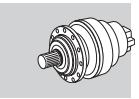




inch	T
1.000	0 -0.00051

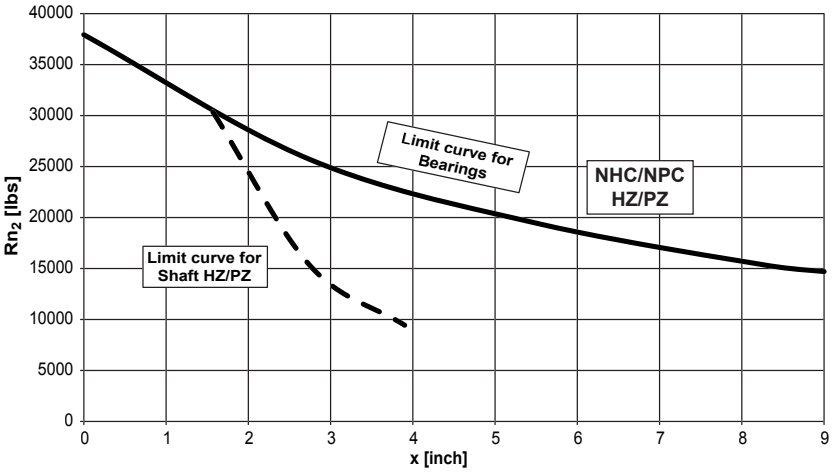
Dimensions are in Inch except when shown in *italic [mm]*

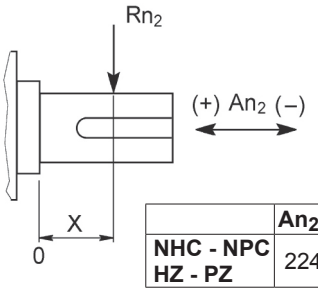
	D1	L3	L4	L6	L7	L8	d
3/V 11M L4_NHS	1.000	11.89	1.969	0.75	0.250	1.109	3/8-16UNC



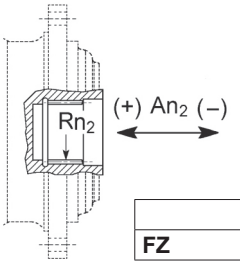
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





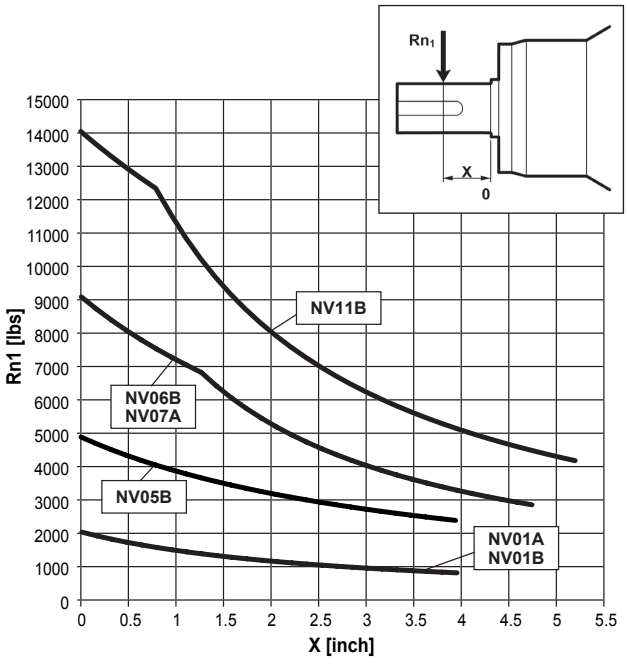
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	22480	15739

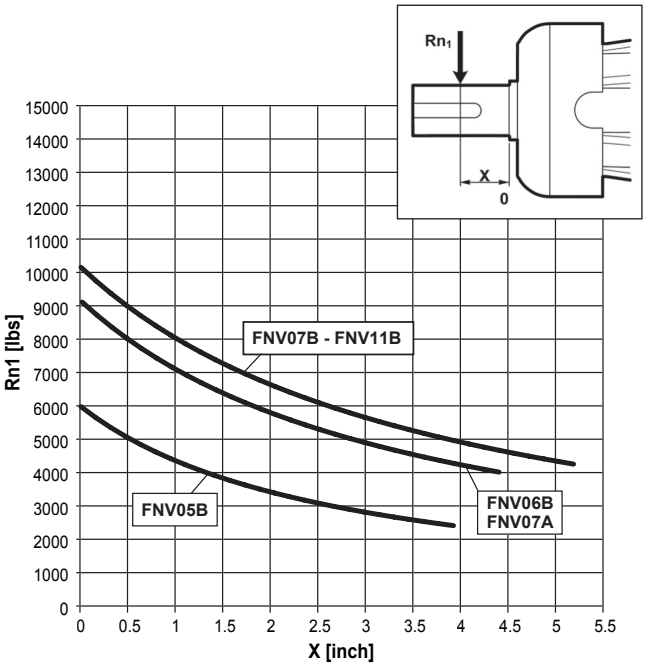


	Rn2	An2 (+/-)
FZ	6782	6261

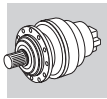
	$Fh_2 = n_2 \cdot h$	10000	25000	50000	100000	500000	1000000
Load corrective factor fh_2 on shafts	**FZ**	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
	fh_2 NHC - NPC	**1.93**	**1.52**	**1.23**	**1.00**	**0.62**	**0.50**
	HZ - PZ	**1.24**	**1.00**	**1.00**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

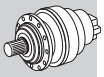




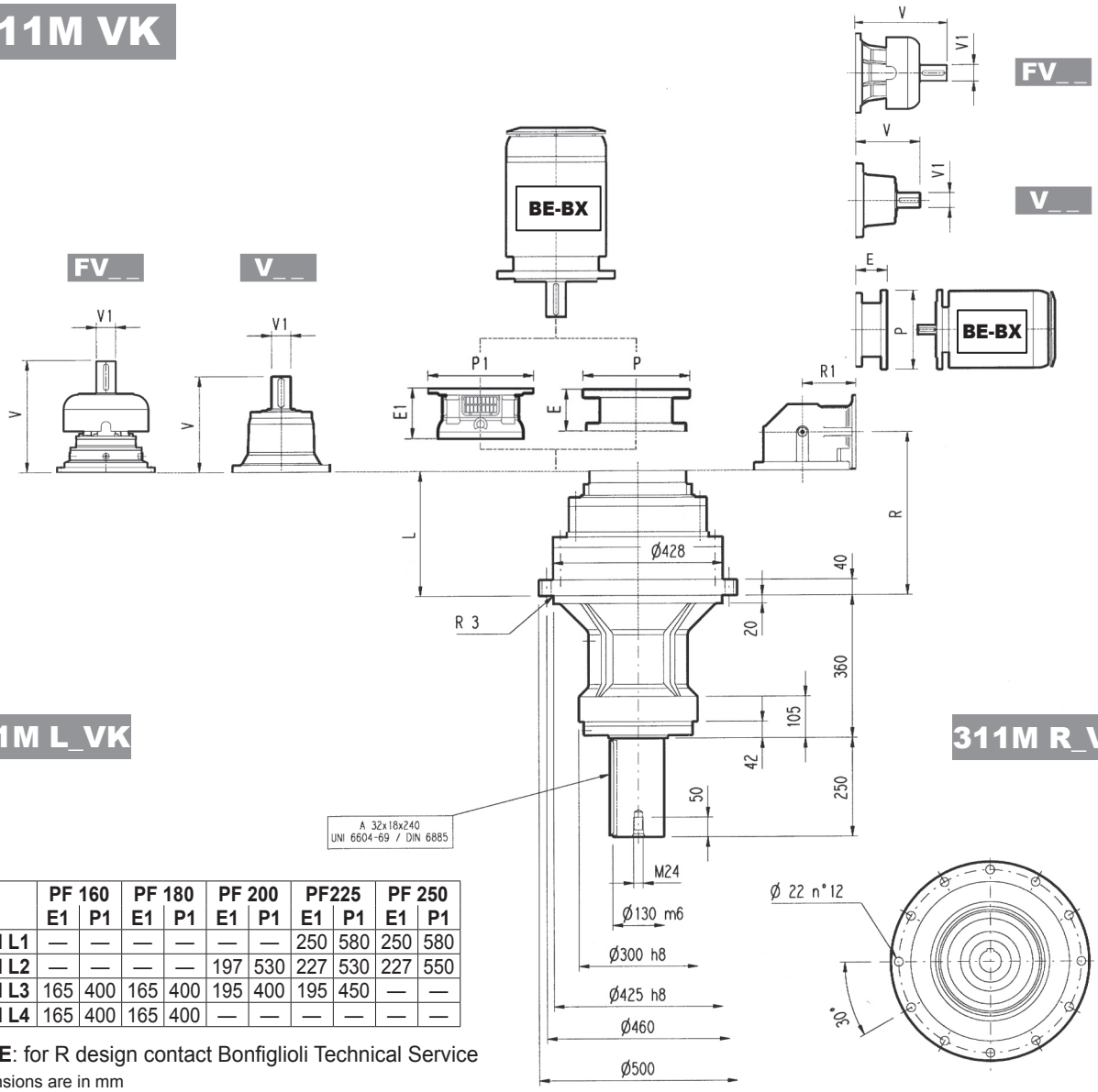
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



311M VK



Metric



311M L_VK

311M R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
311M L1	—	—	—	—	—	—	250	580	250	580
311M L2	—	—	—	—	197	530	227	530	227	550
311M L3	165	400	165	400	195	400	195	450	—	—
311M L4	165	400	165	400	—	—	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

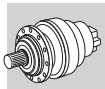
	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
311M L1	129	295	348	80	55	—	—	—	456	80	85	—	—	—
311M L2	262	340	315	80	35	313	60	28	375	80	48	363	60	34
311M L3	351	350	239	48	15	—	—	—	276	48	17	—	—	—
311M L4	416	360	137.5	24	6	158	38	7	—	—	—	—	—	—

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M L2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	550
311M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
311M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
311M R2 (B)	354	345	420	307	60	23	—	—	—	357	60	28	—	—	—
311M R2 (C)	354	390	430	307	60	23	—	—	—	357	60	28	—	—	—
311M R3	381	225	385	239	48	15	—	—	—	276	48	17	—	—	—
311M R4	443	140	360	137.5	24	6	158	38	7	—	—	—	—	—	—

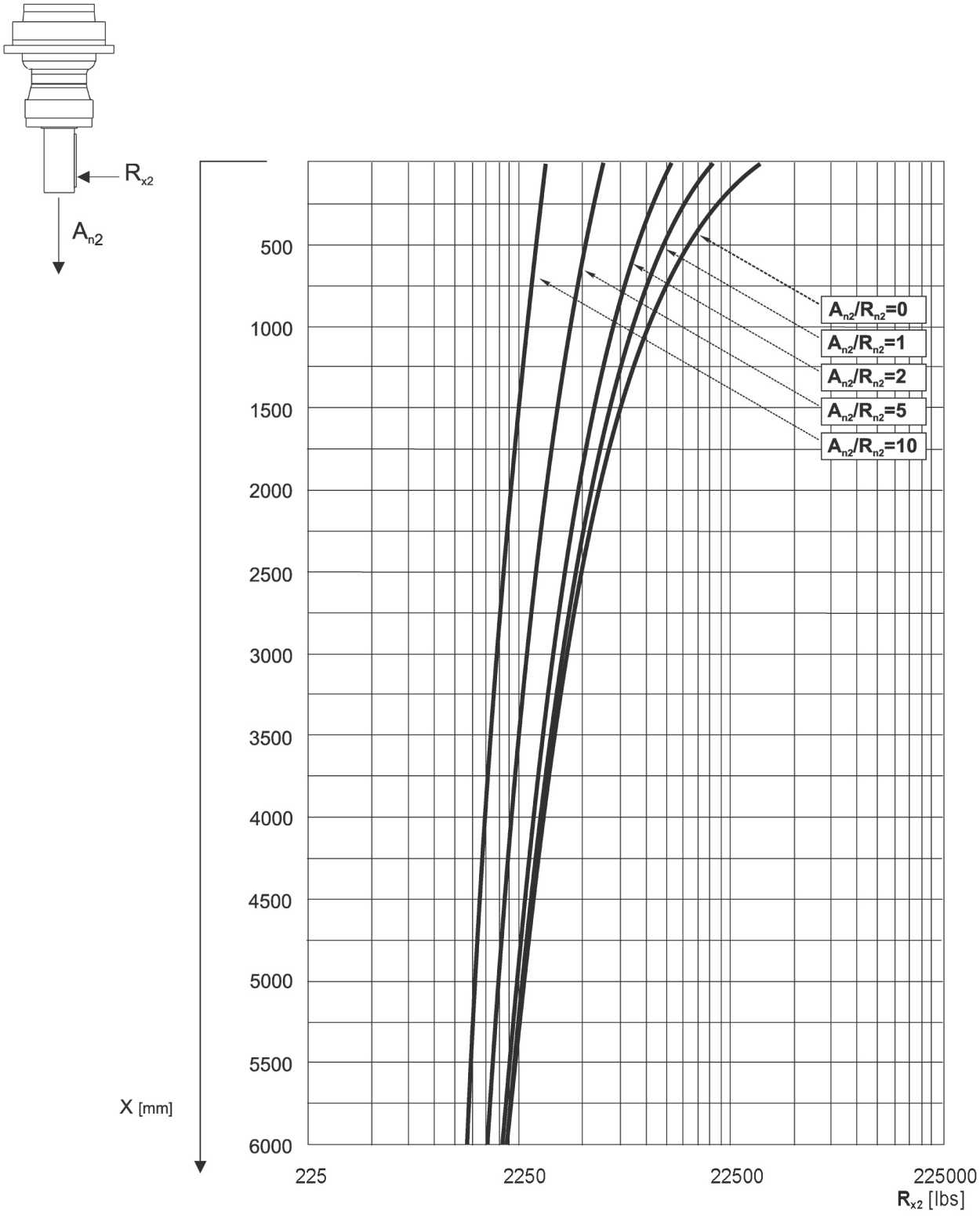
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
311M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
311M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
311M R3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
311M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

311M VK

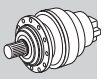


Metric

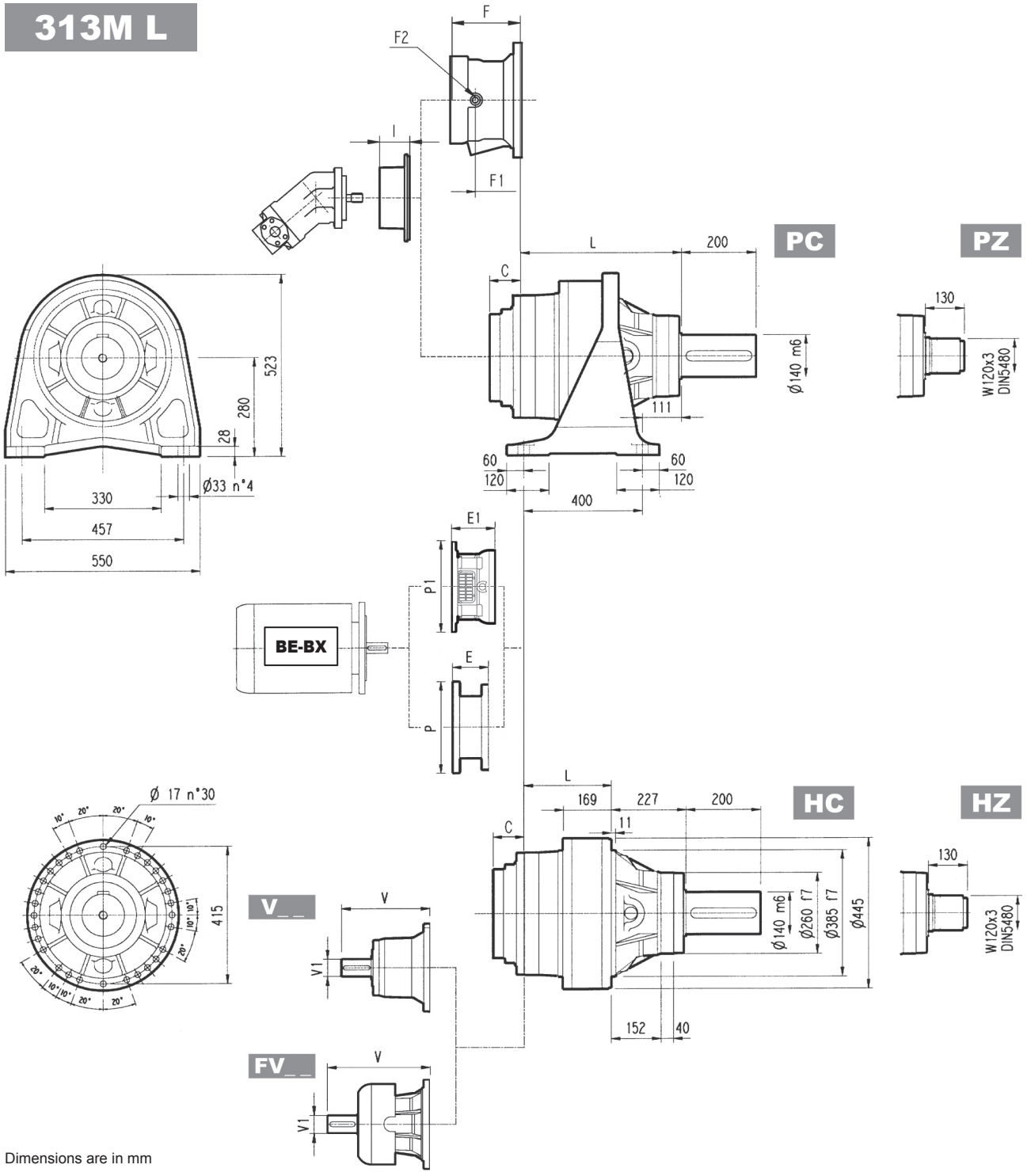
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



313M L



Metric



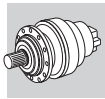
Dimensions are in mm

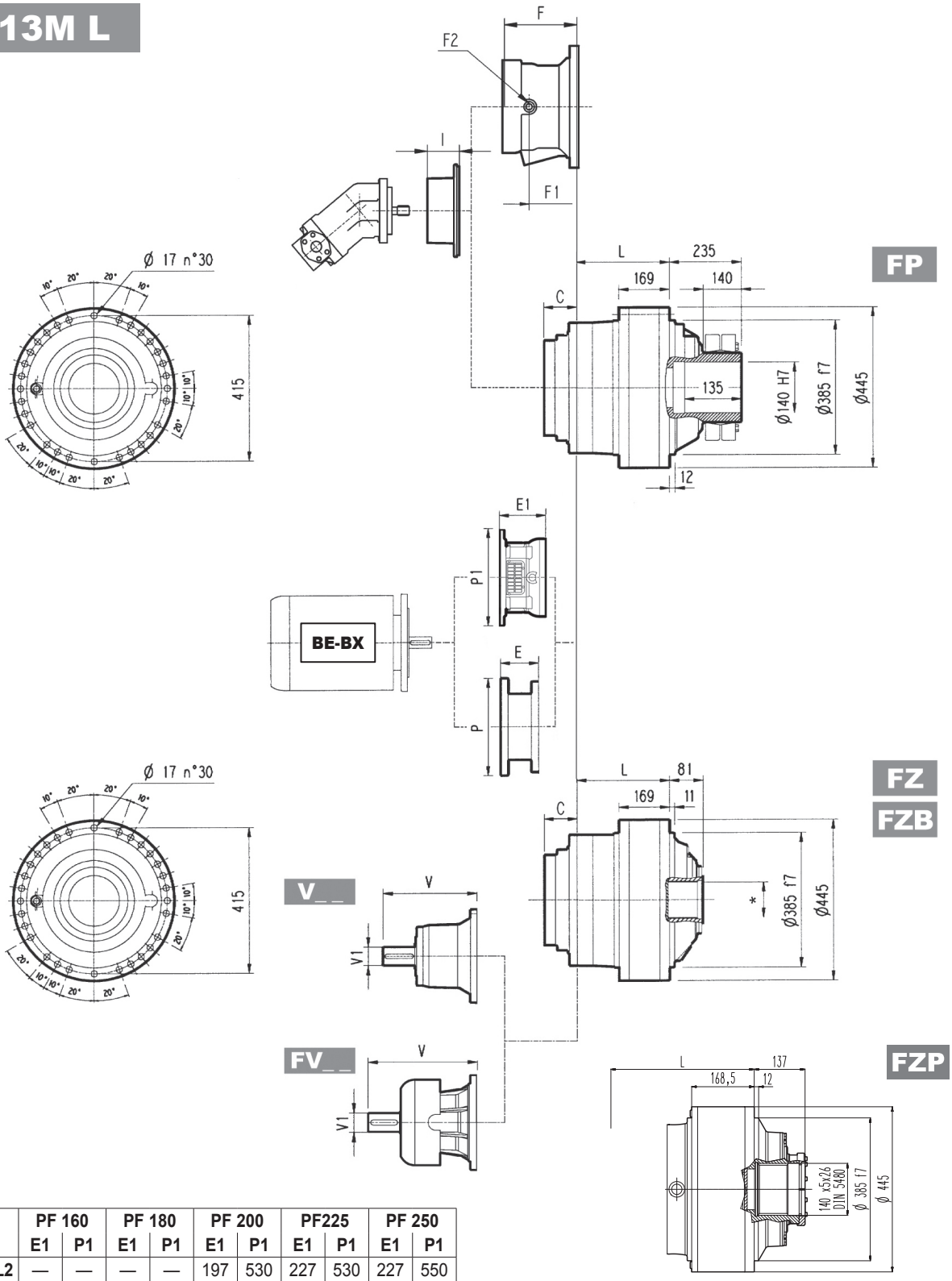
	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
313M L1	381	154	154	154	320	230	200	200
313M L2	531	304	304	304	380	290	260	280
313M L3	620	393	393	393	392	302	272	292
313M L4	685	458	458	458	399	309	279	299

	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
313M L1	343	80	55	—	—	—	451	80	71	—	—	—	76	D		—	—	—	—	—	—
313M L2	315	80	35	313	60	28	375	80	48	363	60	34	51	B		201	153	1/4 G	6	B	28
313M L3	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16
313M L4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A	522	105	65	1/4 G	4	A	10

Bonfiglioli Riduttori

313M L





	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
313M L2	—	—	—	—	197	530	227	530	227	550
313M L3	165	400	165	400	195	400	195	450	—	—
313M L4	165	400	165	400	—	—	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service

FP T_{2max} = 699,210 lb·in

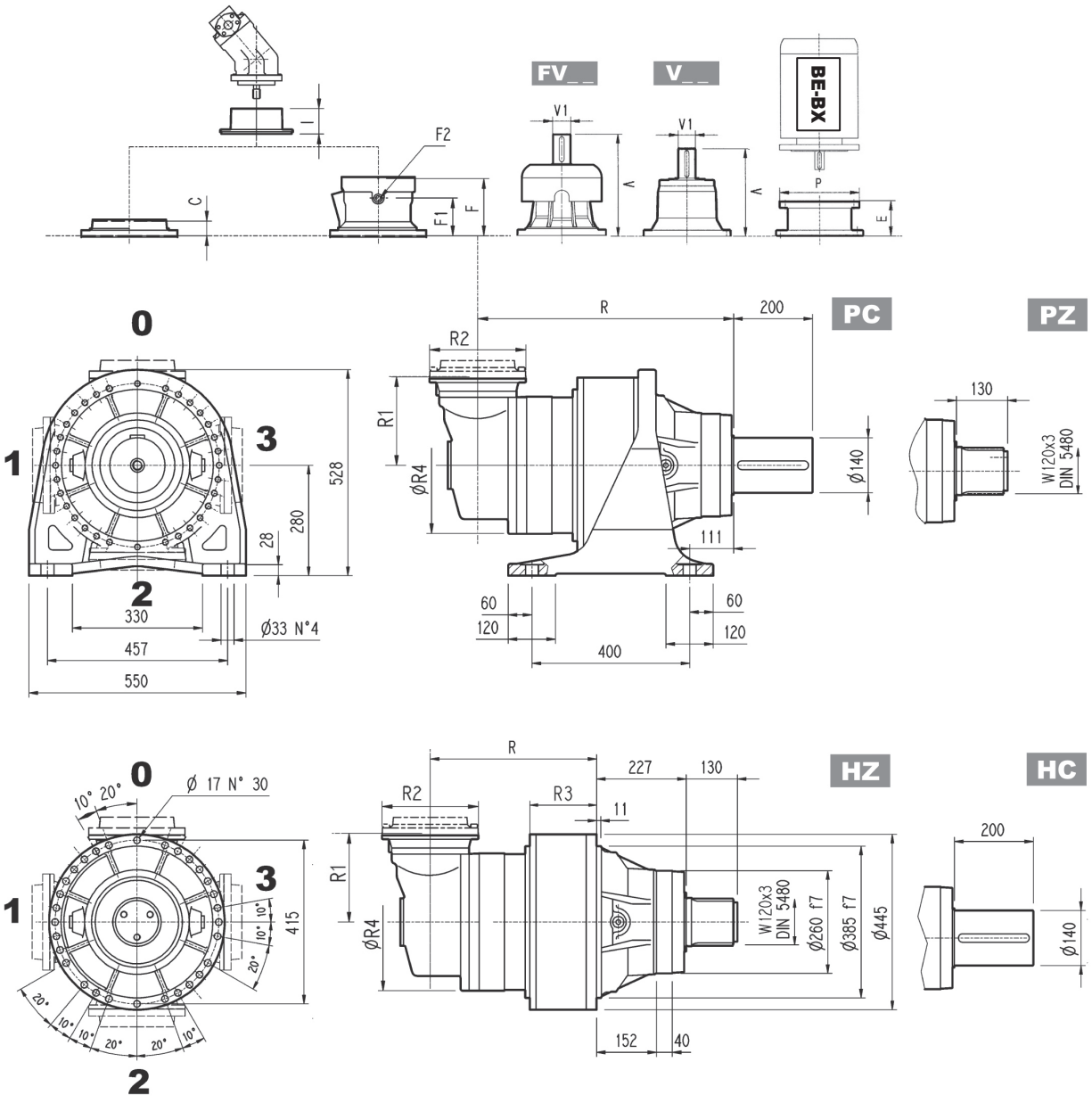
Dimensions are in mm

* For dimensions refer to page 410

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M L2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	550
313M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
313M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

313M R

Metric



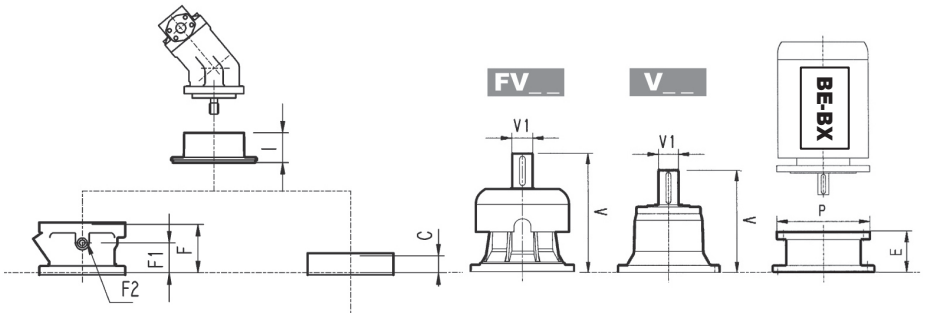
Dimensions are in mm

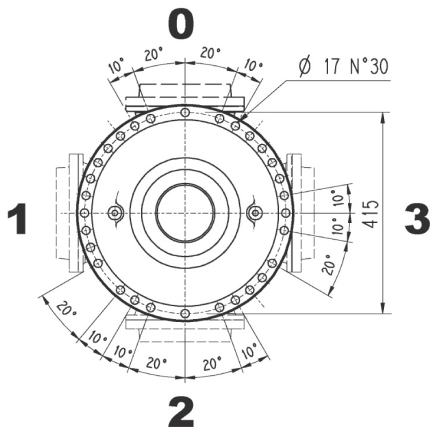
	R				R1	R2	R3			R4	Kg			
	PC-PZ	HC-HZ	FZ - FZP	FP			HC-HZ	FZ	FP		PC-PZ	HC-HZ	FZ - FZP	FP
313M R2 (B)	611	384	384	384	345	292	199	199	199	400	450	360	330	350
313M R2 (C)	611	384	384	384	390	292	168	168	168	480	460	370	340	360
313M R3	650	423	423	423	225	245	169	169	169	345	430	340	310	330
313M R4	712	485	485	485	140	186	169	169	169	244	412	322	292	312

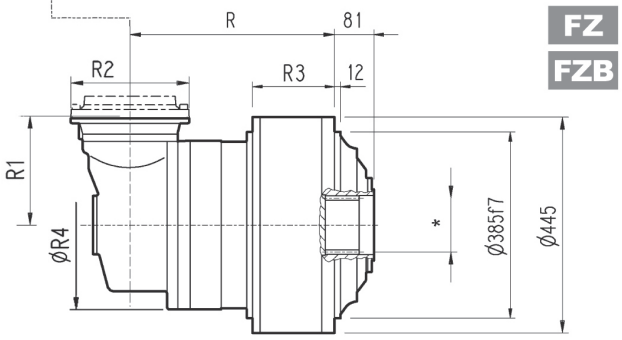
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
313M R2 (B)	307	60	23	—	—	—	357	60	28	—	—	—	45	B		195	147	1/4 G	6	B	28
313M R2 (C)	307	60	23	—	—	—	357	60	28	—	—	—	45	B		195	147	1/4 G	6	B	28
313M R3	239	48	15	—	—	—	276	48	17	—	—	—	37	A	522	145	95	1/4 G	5	A	16
313M R4	137.5	24	6	158	38	7	—	—	—	—	—	—	37	A		105	65	1/4 G	4	A	10

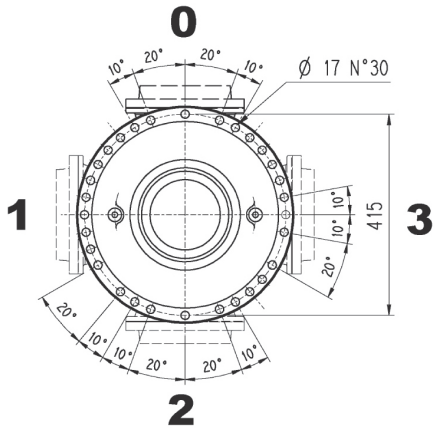
Bonfiglioli Riduttori

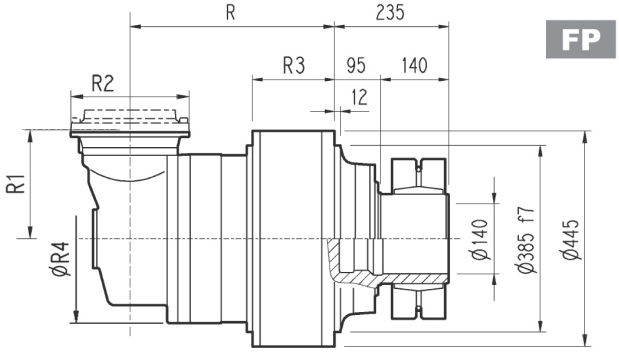
313M R



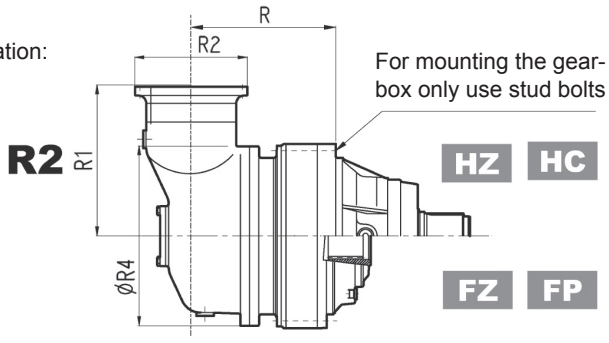


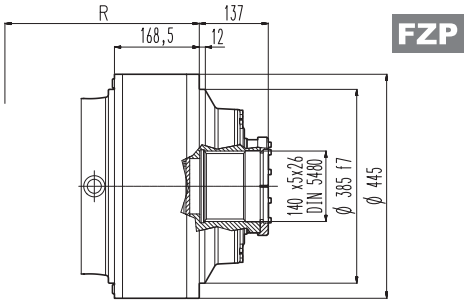






Only for configuration:





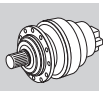
FP T_{2max} = 699,210 lb·in

Dimensions are in mm

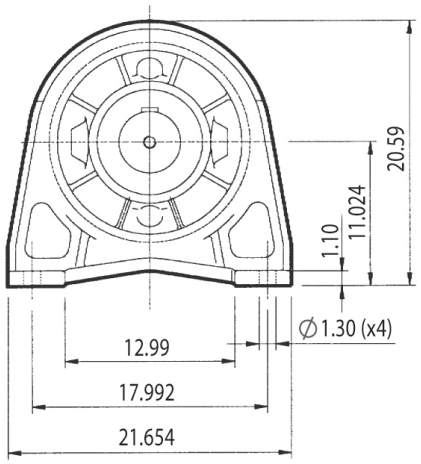
* For dimensions refer to page 410

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
313M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
313M R3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
313M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

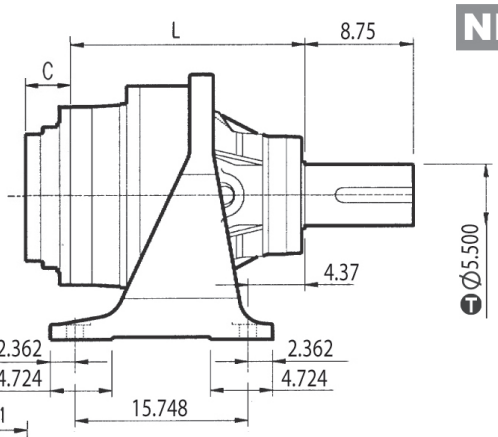
313M L

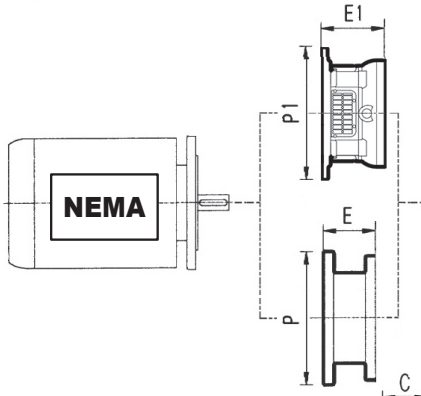


Imperial

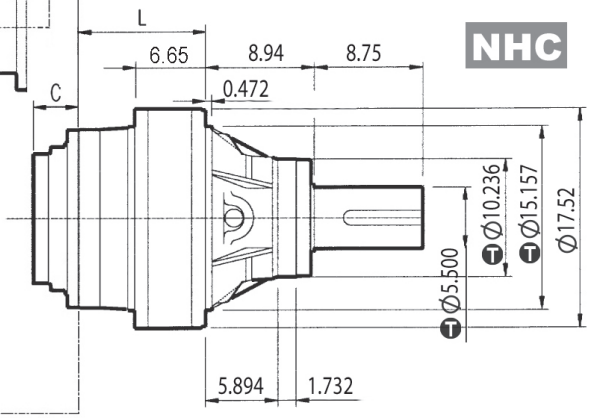


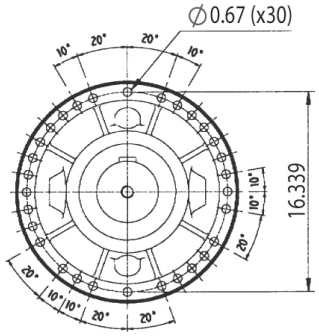
NPC



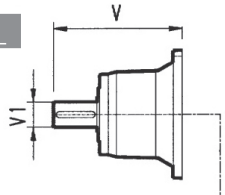


NHC

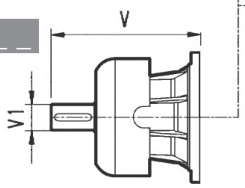




NV_ _



FNV_ _



inch	T
15.157	-0.00244 -0.00469
10.236	-0.00220 -0.00425
5.500	+0.00157 +0.00059

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
313M L2	—	—	—	—	9.921	20.866	11.496	20.866
313M L3	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717
313M L4	8.661	15.748	8.661	15.748	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in Inch except when shown in *italic [mm]*

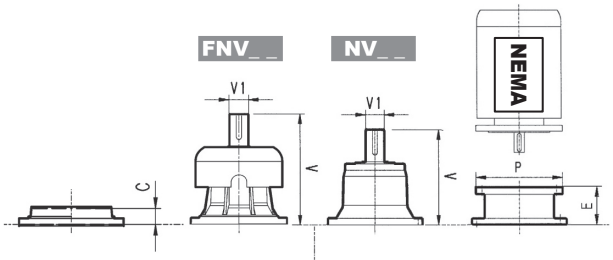
	L		lbs	
	NPC	NHC	NPC	NHC
313M L1	15.000	6.063	705.6	507.2
313M L2	20.906	11.969	837.9	639.5
313M L3	24.409	15.472	864.4	665.9
313M L4	26.969	18.031	879.8	681.3

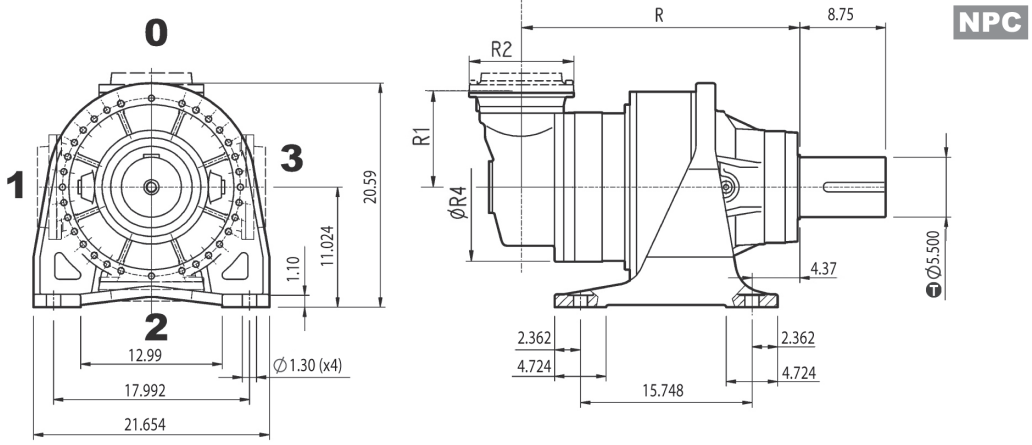
	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
313M L1	13.563	3.000	121.3	—	—	—	17.835	3.000	140.0	—	—	—	2.992	D
313M L2	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0	2.008	B
313M L3	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—	1.457	A
313M L4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	—	—	—	1.457	A

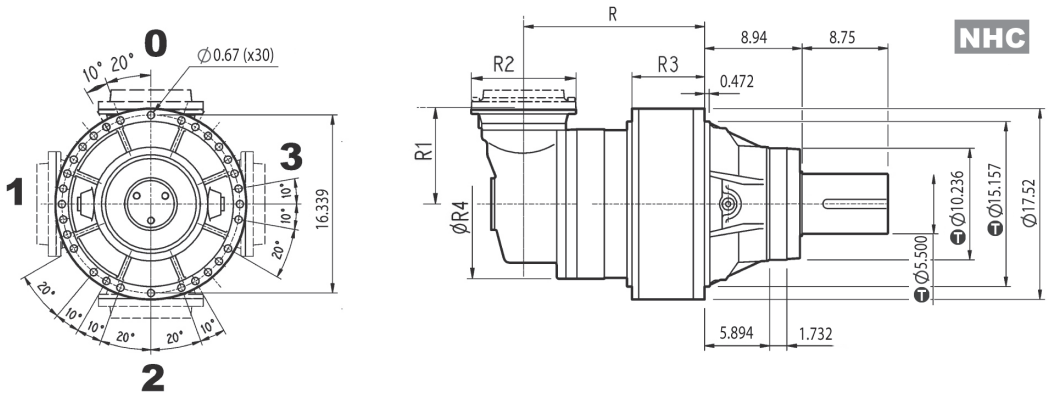
	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M L2	—	—	—	—	—	—	—	—	—	—	—	—	7.776	15.748	7.776	15.748
313M L3	—	—	—	—	—	—	—	—	5.216	11.811	6.221	13.780	—	—	—	—
313M L4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

Bonfiglioli Riduttori

313M R

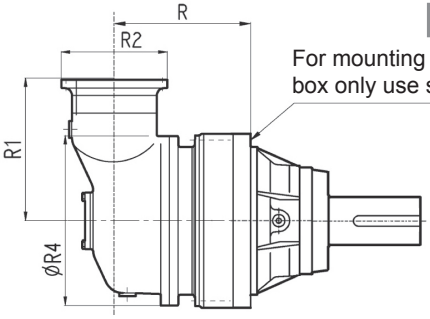






Only for configuration:

R2



NHC

For mounting the gear-box only use stud bolts

inch	Ⓣ
15.157	-0.00244 -0.00469
10.236	-0.00220 -0.00425
5.500	+0.00157 +0.00059

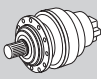
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R3	R4	lbs	
	NPC	NHC			NHC		NPC	NHC
313M R2 (B)	24.055	15.118	13.583	11.496	7.835	15.748	992.3	793.8
313M R2 (C)	24.055	15.118	15.354	11.496	6.614	18.898	1014.3	815.9
313M R3	25.591	16.654	8.858	9.646	6.654	13.583	948.2	749.7
313M R4	28.031	19.094	5.512	7.323	6.654	9.606	908.5	710.0

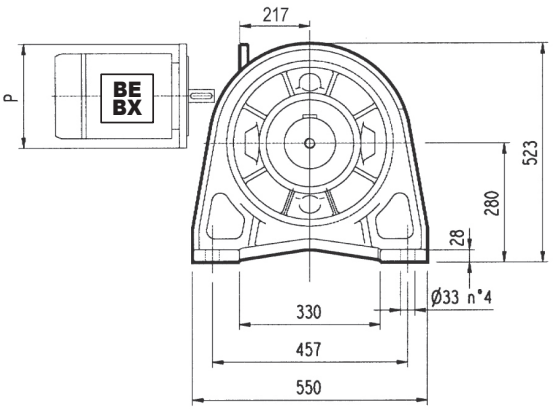
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
313M R2 (B)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
313M R2 (C)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
313M R3	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	1.457	A
313M R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

	N56C		N140TC		N180TC		N210TC		N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.780	7.776	13.780
313M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	7.776	13.780	7.776	13.780
313M R3	—	—	—	—	—	—	—	—	5.216	11.811	6.221	13.780	—	—	—	—
313M R4	4.508	6.693	4.508	6.693	5.216	8.819	5.216	8.819	5.216	8.819	6.122	11.811	—	—	—	—

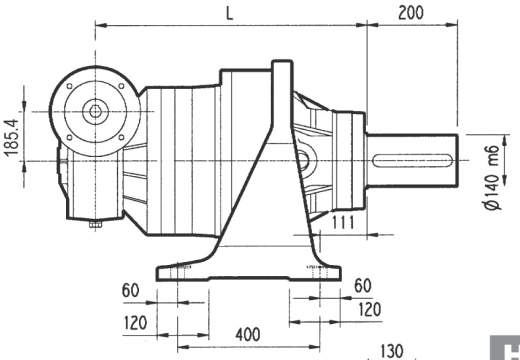
3/V 13M L3



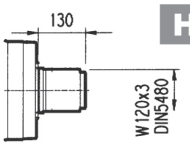
Metric

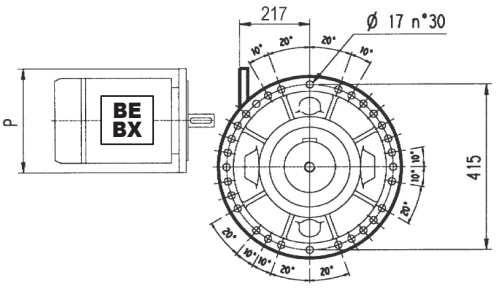


PC

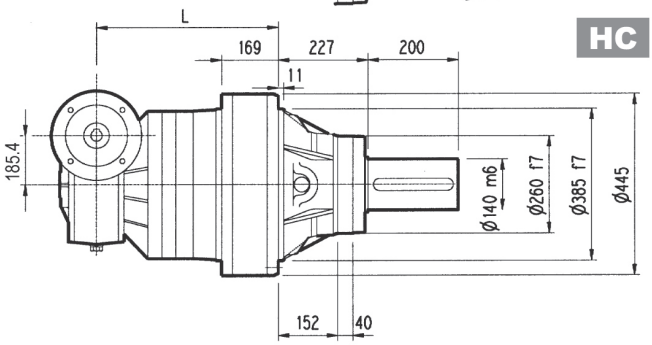


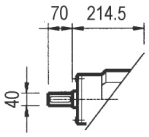
HZ PZ



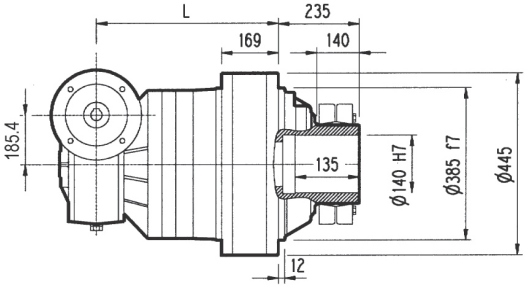


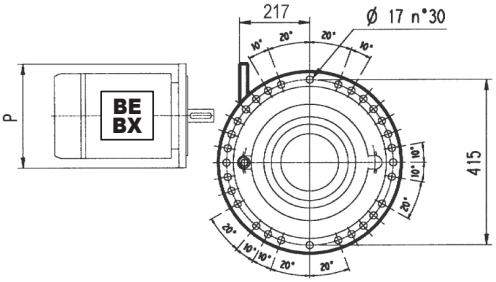
HC

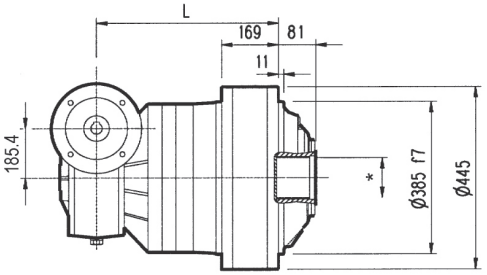




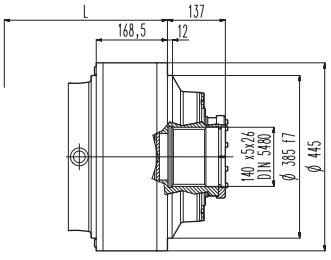
FP







FZ
FZB



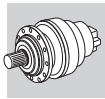
FZP

FP | T_{2max} = 699,210 lb·in

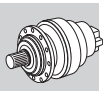
Dimensions are in mm

* For dimensions refer to page 410

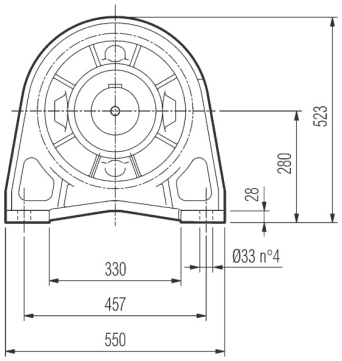
	L				Kg				P80	P90	P100	P112	P132	P160	P180
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	P	P	P	P	P	P	P
3/V 13M L3	732	505	505	505	475	385	355	375	—	—	250	250	300	350	350



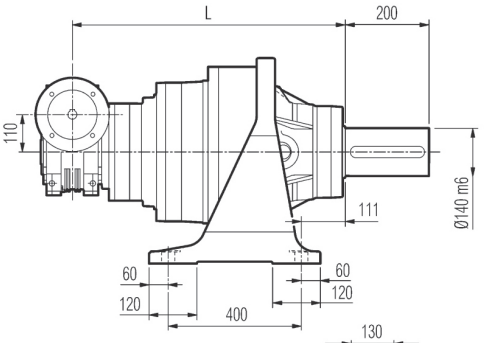
3/V 13M L4



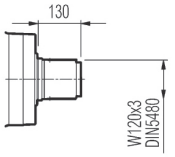
Metric

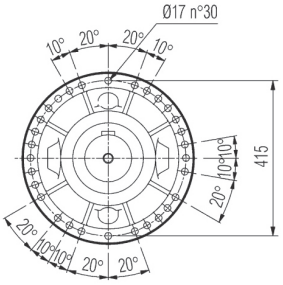


PC

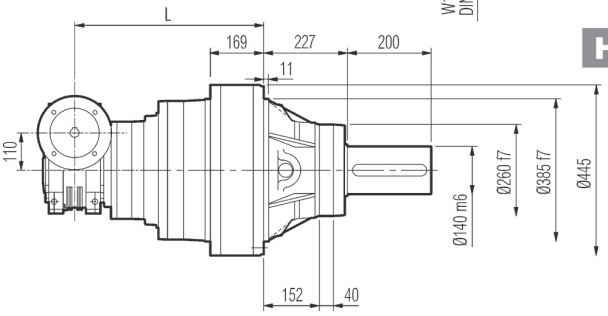


HZ PZ

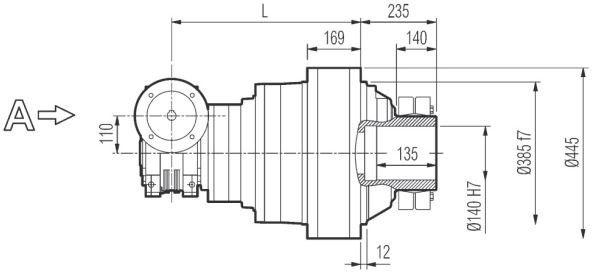


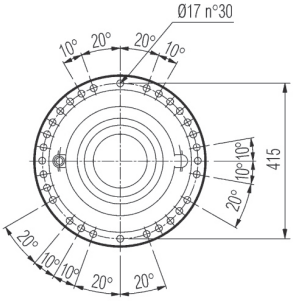


HC

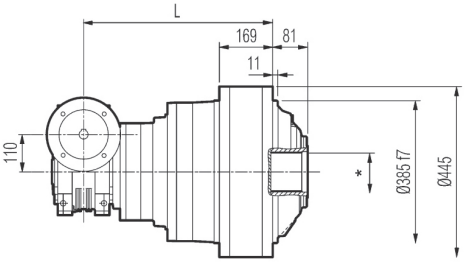


FP

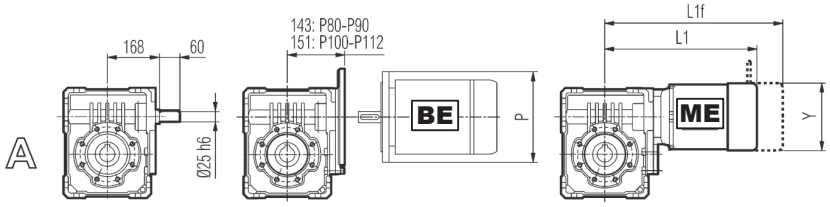


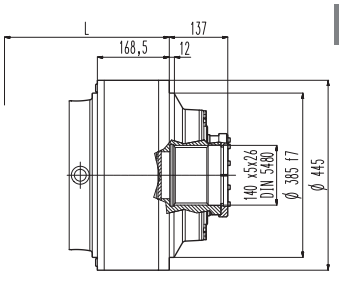


FZ
FZB



FZP





FP | **T_{2max} = 699,210 lb·in**

Dimensions are in mm

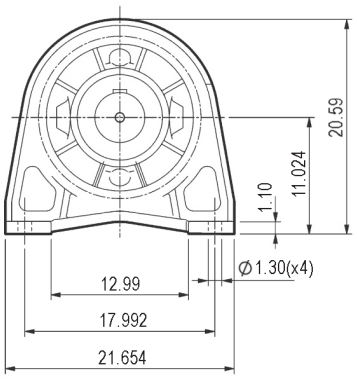
* For dimensions refer to page 410

	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
3/V 13M L4	780	553	553	553	425	335	305	325

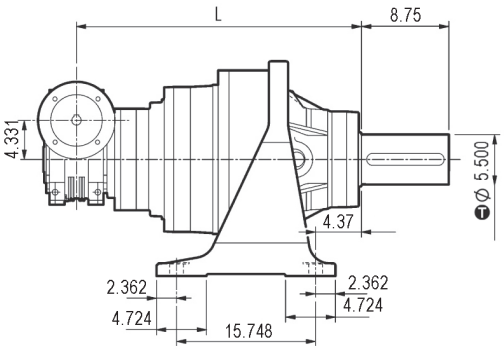
	P80	P90	P100	P112	P132	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	P	P	P	P	P	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 13M L4	200	200	250	250	300	364	—	156	407	—	193	439	—	193

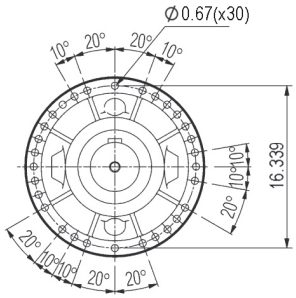
Bonfiglioli Riduttori

3/V 13M L4

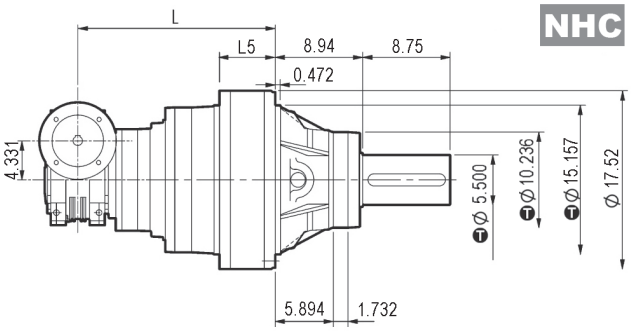


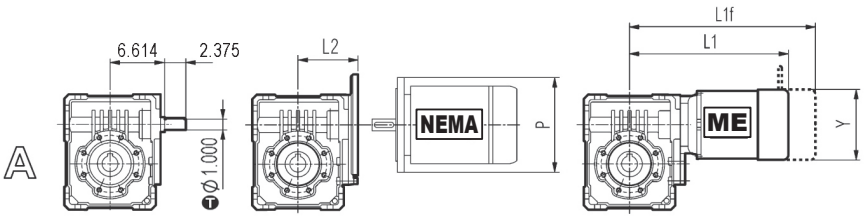
NPC





NHC





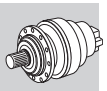
inch	Ⓣ
15.157	-0.00244 -0.00469
10.236	-0.00220 -0.00425
5.500	+0.00157 +0.00059

Dimensions are in Inch except when shown in *italic [mm]*

	L		lbs		N140TC		N180TC		N210TC	
	NPC	NHC	NPC	NHC	L2	P	L2	P	L2	P
3/V 13M L4	30.709	21.772	937.1	738.7	5.866	6.535	6.280	9.016	8.780	9.016

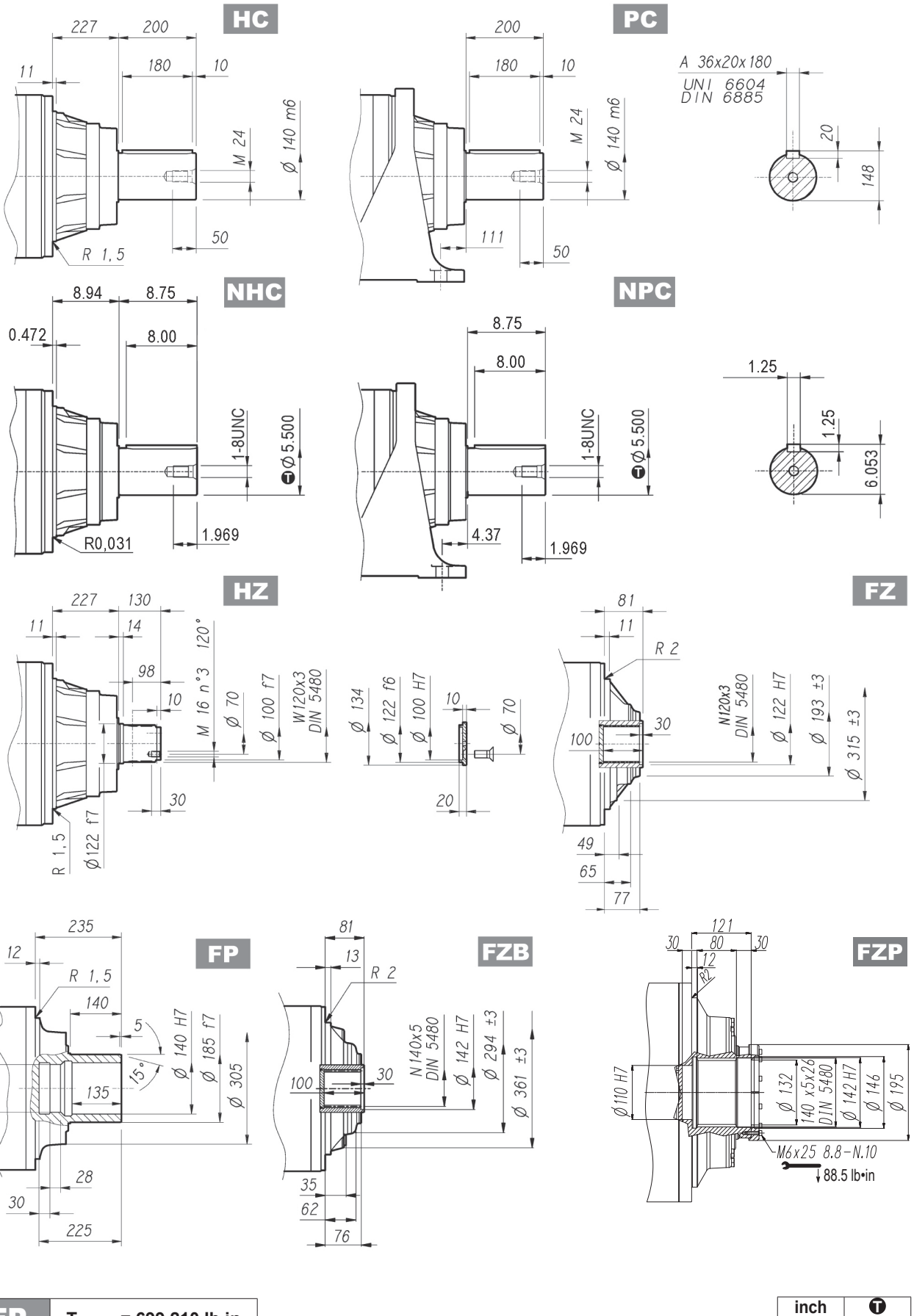
	S2 + ME2S			S3 + ME3S			S3 + ME3L		
	L1	L1f	Y	L1	L1f	Y	L1	L1f	Y
3/V 13M L4	14.331	—	6.142	16.024	—	7.598	17.283	—	7.598

313M L | 313M R | 3/V 13M L



Metric

Imperial



FP | **T_{2max} = 699,210 lb·in**

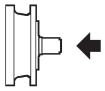
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

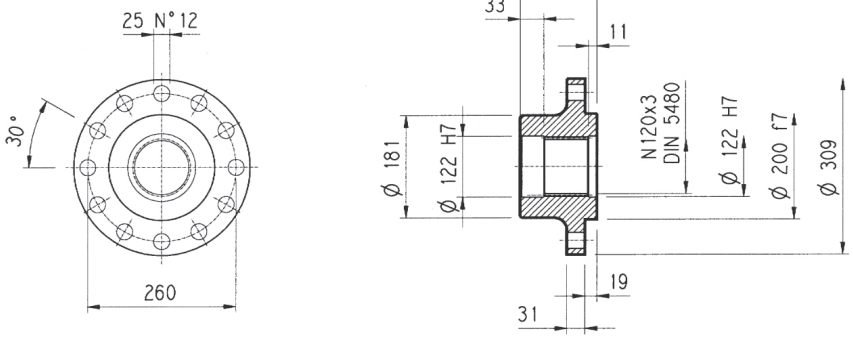
inch	T
5.500	+0.00157 +0.00059

Bonfiglioli Riduttori

Flange

W0A



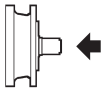


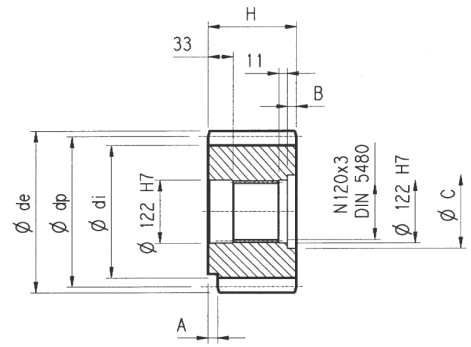
Material: Steel C40

Dimensions are in mm

Pinions

P...





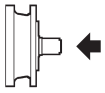
Dimensions are in mm

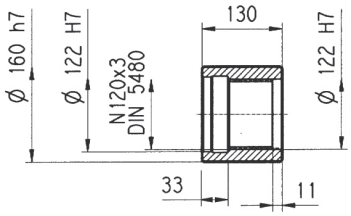
α = 20°

	m	z	x	dp	di	de	H	A	B	C	Material
PPH	16	17	0.500	272	247	315	135	—	5	136	Steel 39NiCrMo3 hardened and tempered
PRI	18	18	0.333	324	294	365	140	—	10	140	

Sleeve coupling

M0A





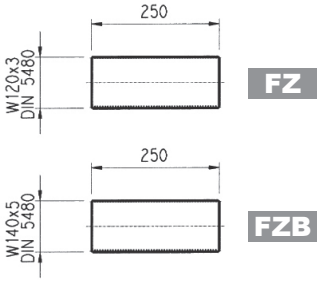
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

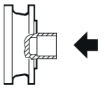


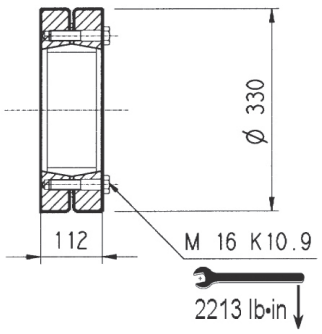


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

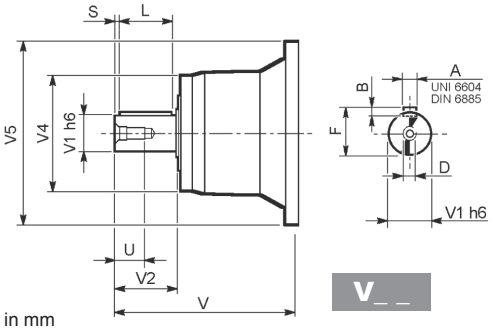




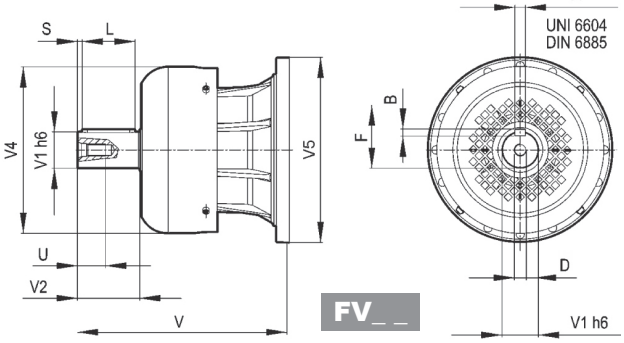
Dimensions are in mm

313M L 313M R





V_ _



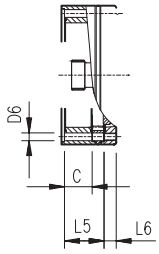
FV_ _

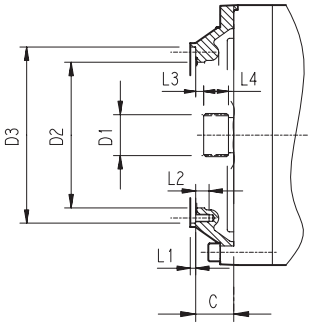
Dimensions are in mm

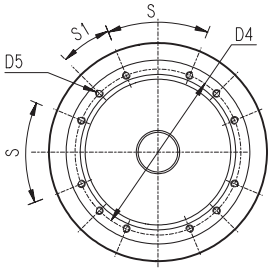
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
313M L1	**V11B**	343	80	130	200	445	22	14	85	110	10	M16	36
	FV11B	451	80	130	347.5	445	22	14	85	110	10	M16	36
313M L2	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
313M L3	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
313M L4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28
313M R2 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
313M R3	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
313M R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

313M L 313M R





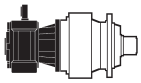


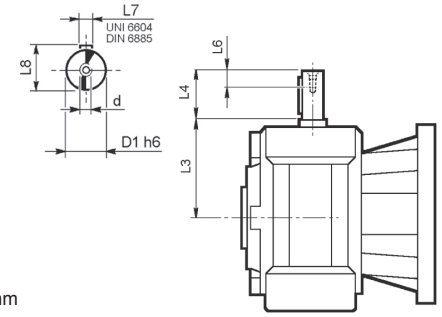


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
313M L1	**V9AD**	75	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	9.5	40	—	—	60°	30°	D
313M L2	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
313M L3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
313M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	65	18	45°	45°	A
313M R3	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
313M R2 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
313M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 13M L





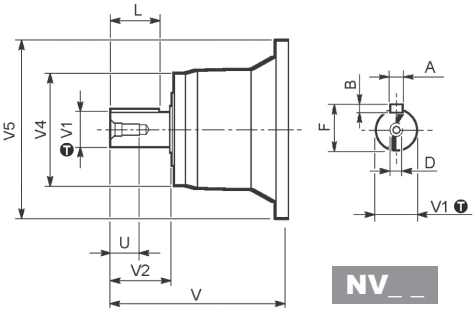
Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 13M L3_HS	40	214.5	70	20	12	43	M8
3/V 13M L4_HS	25	168	60	19	8	28	M8

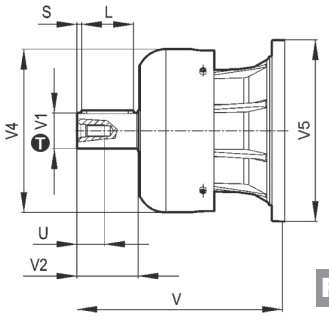
313M L 313M R



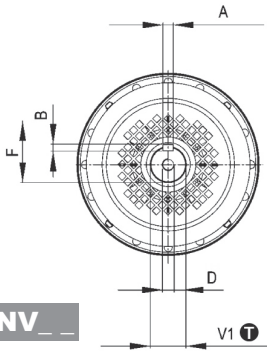
inch	Ⓣ
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

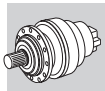


NV_ _



FNV_ _





Imperial

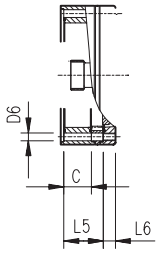
Dimensions are in Inch except when shown in *italic [mm]*

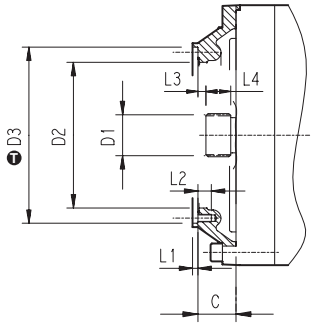
		V	V1	V2	V4	V5	A	B	F	L	D	U
313M L1	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
313M L2	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
313M L3	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
313M L4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102
313M R2 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
313M R3	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
313M R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

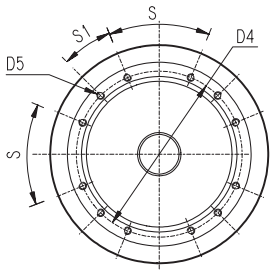
313M L 313M R



inch	Ⓣ
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0



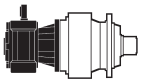


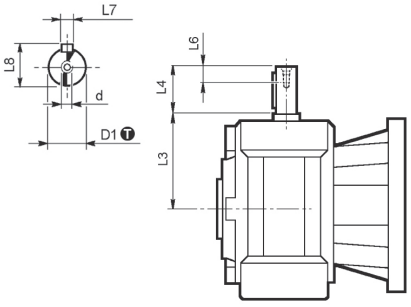


Dimensions are in Inch except when shown in *italic [mm]*

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
313M L1	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
313M L2	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
313M L3	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
313M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	2.56	0.71	45°	45°	A
313M R3	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A
313M R2 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
313M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A

3/V 13M L

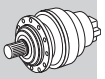




inch	Ⓣ
1.000	0 -0.00051

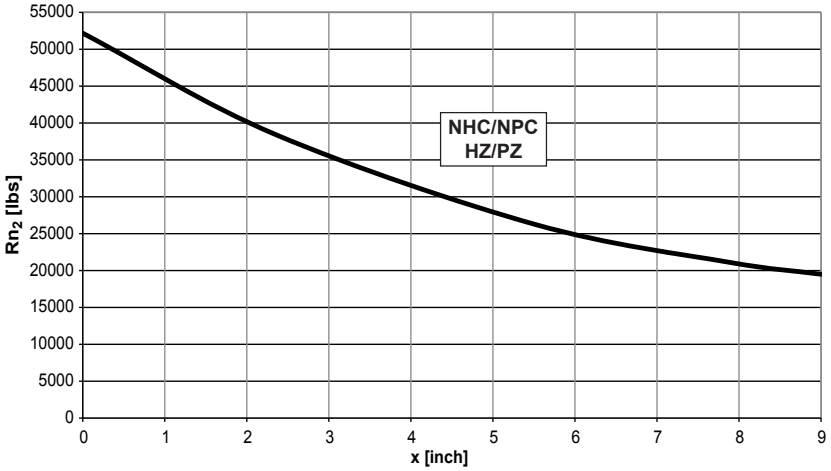
Dimensions are in Inch except when shown in *italic [mm]*

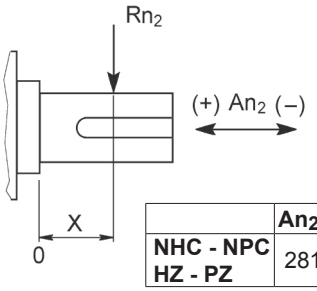
	D1	L3	L4	L6	L7	L8	d
3/V 13M L4_HS	1.000	11.89	1.969	0.75	0.250	1.109	3/8-16UNC



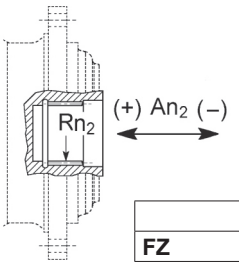
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





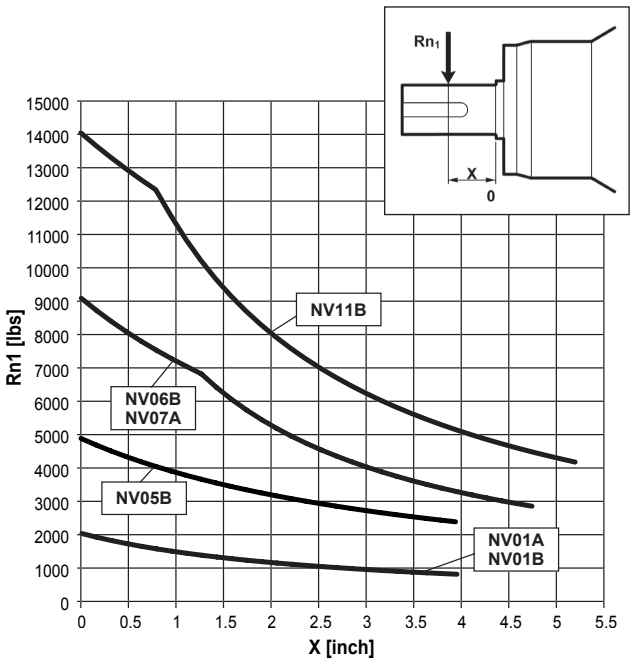
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	28100	17984

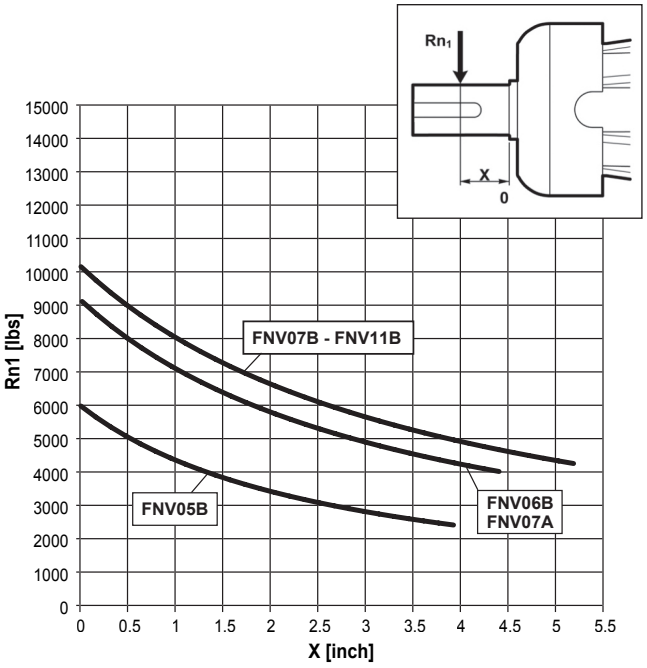


	Rn2	An2 (+/-)
FZ	8347	7826

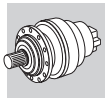
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**1.32**	**1.20**	**1.20**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

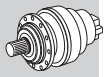




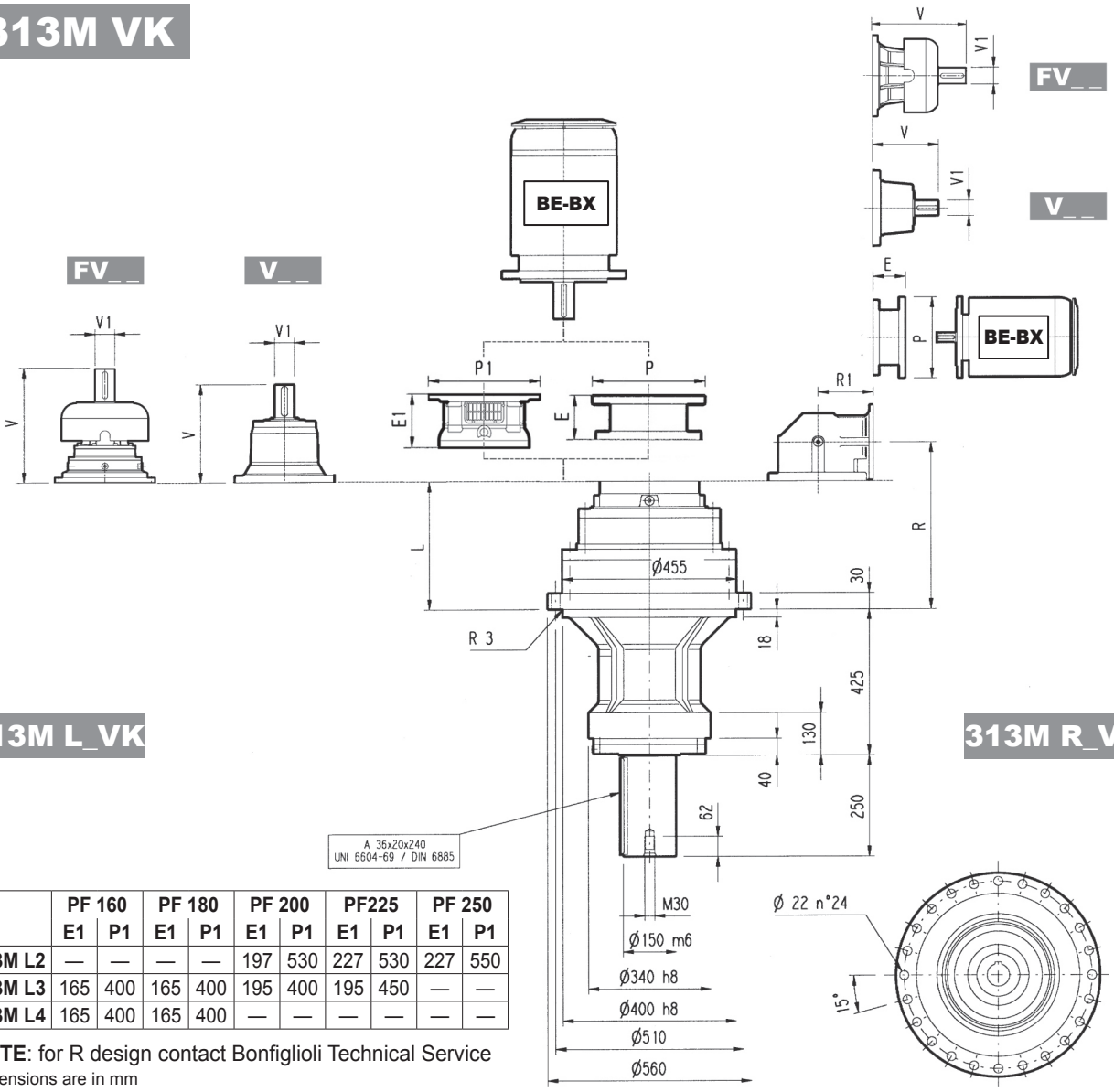
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



313M VK



Metric



313M L_VK

313M R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
313M L2	—	—	—	—	197	530	227	530	227	550
313M L3	165	400	165	400	195	400	195	450	—	—
313M L4	165	400	165	400	—	—	—	—	—	—

NOTE: for R design contact Bonfiglioli Technical Service

Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
313M L1	158	380	343	80	55	—	—	—	451	80	71	—	—	—
313M L2	308	440	315	80	35	313	60	28	375	80	48	363	60	34
313M L3	397	450	239	48	15	—	—	—	276	48	17	—	—	—
313M L4	462	460	137.5	24	6	158	38	7	—	—	—	—	—	—

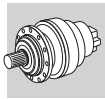
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M L2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	195	350	186	400	216	450	216	550
313M L3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
313M L4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
313M R2 (B)	388	345	510	307	60	23	—	—	—	357	60	28	—	—	—
313M R2 (C)	388	390	520	307	60	23	—	—	—	357	60	28	—	—	—
313M R3	427	225	490	239	48	15	—	—	—	—	—	—	—	—	—
313M R4	489	140	470	137.5	24	6	158	38	7	—	—	—	—	—	—

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
313M R2 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
313M R2 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
313M R3	—	—	—	—	—	—	—	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—
313M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

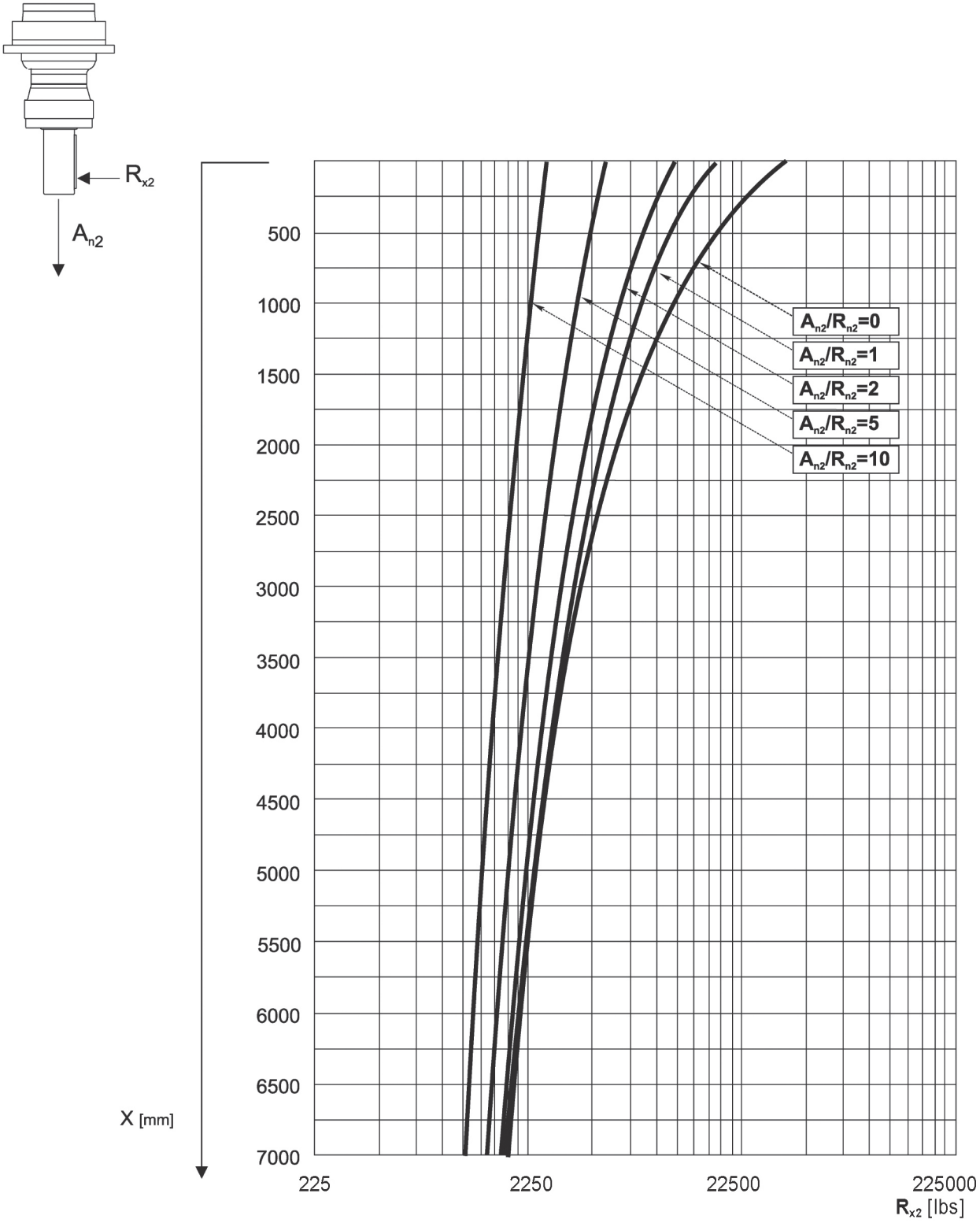
Bonfiglioli Riduttori

313M VK

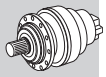


Metric

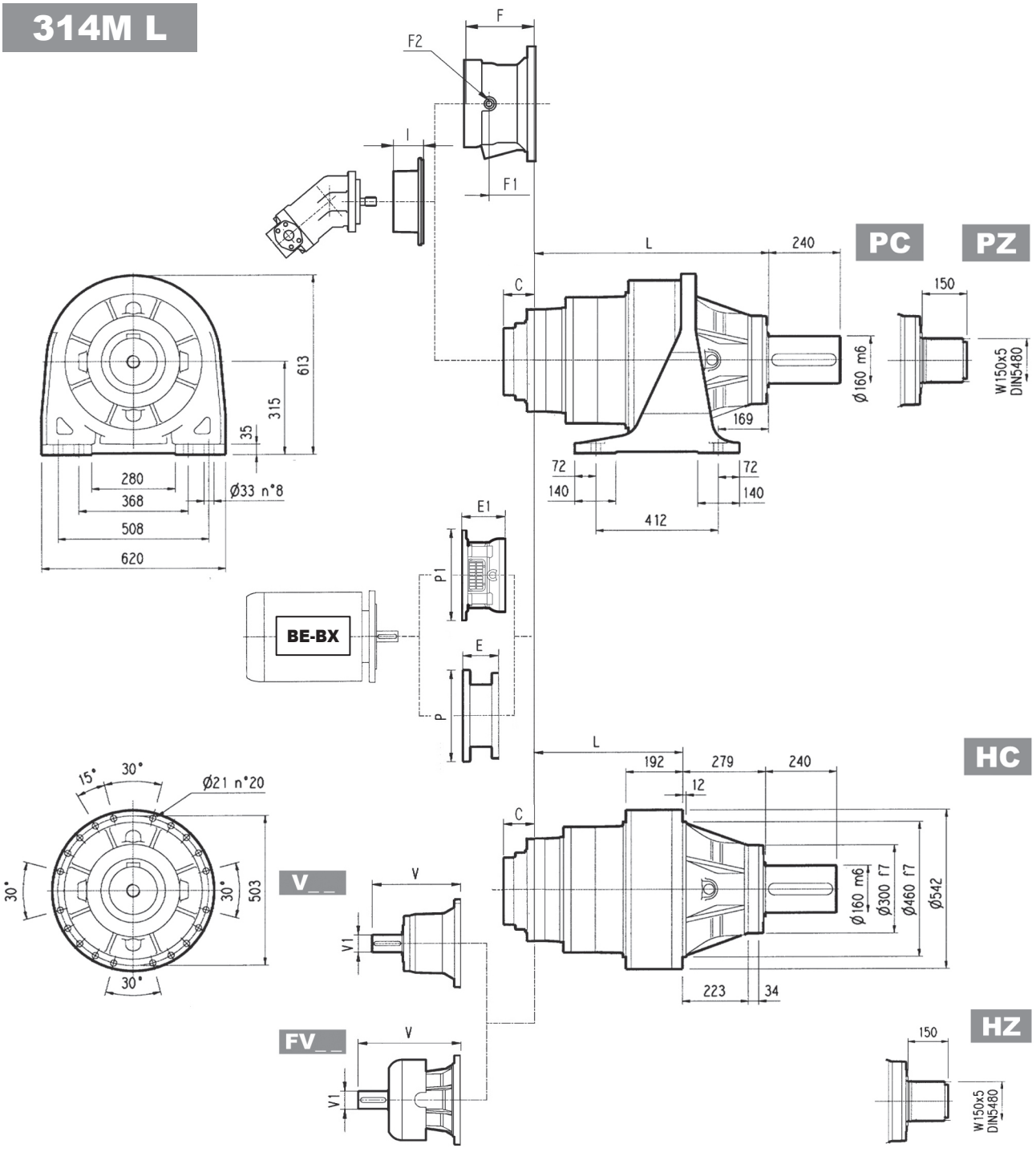
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



314M L



Metric

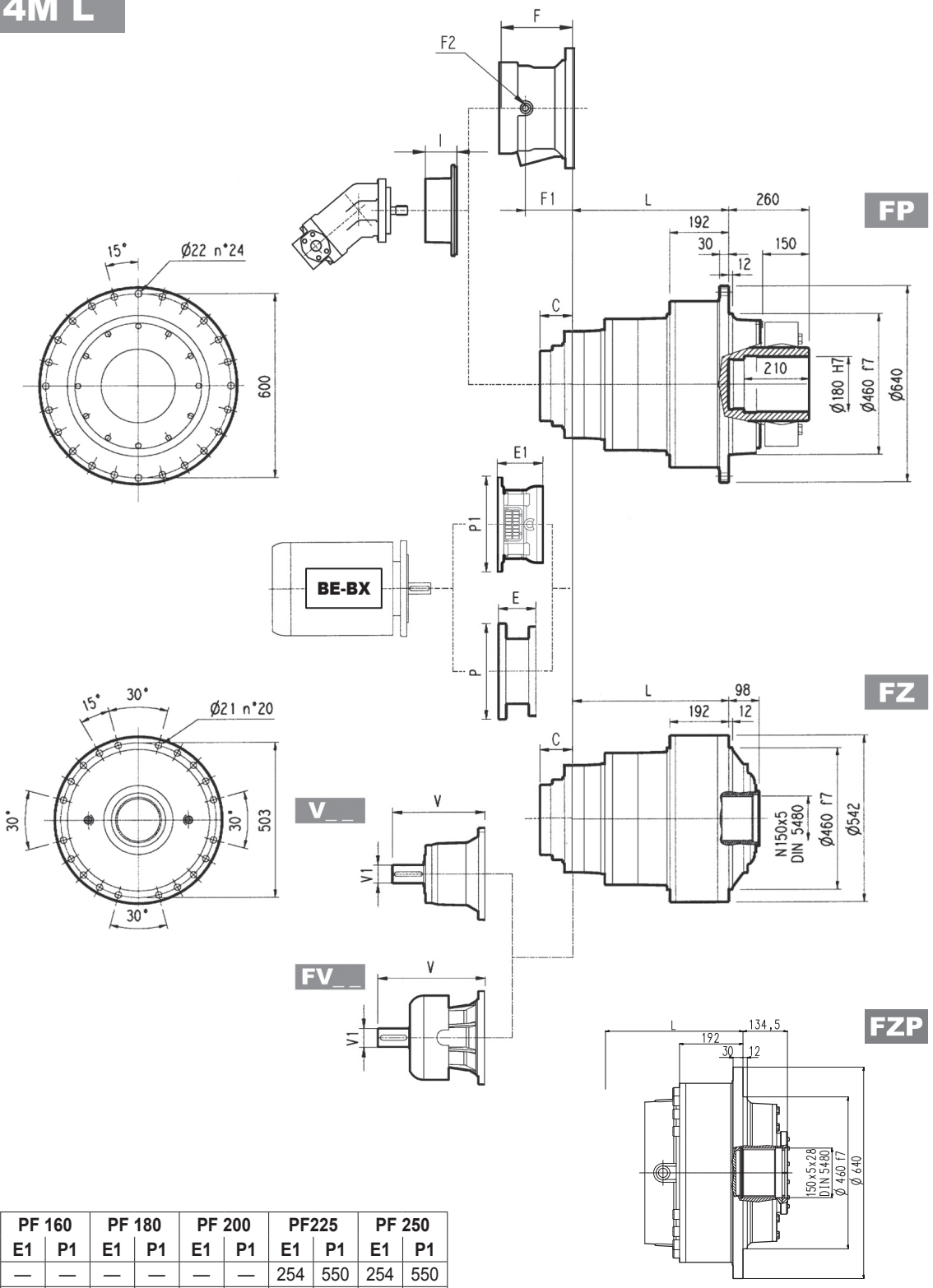


Dimensions are in mm

	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
314M L1	453	174	174	174	500	370	280	330
314M L2	641	362	362	362	545	415	325	375
314M L3	777	498	498	498	590	460	370	420
314M L4	842	563	563	563	600	470	380	430

	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
314M L1	—	—	—	—	—	—	120	L		—	—	—	—	—	—
314M L2	377	80	50	457	80	63	88	C		195	147	1/4 G	6	B	28
314M L3	307	60	23	357	60	28	45	B		145	95	1/4 G	5	B	16
314M L4	239	48	15	276	48	17	37	A	522	105	65	1/4 G	5	A	10

314M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
314M L2	—	—	—	—	—	—	254	550	254	550
314M L3	—	—	167	390	197	400	197	450	207	550
314M L4	165	400	165	400	195	400	197	450	—	—

NOTE: for R design contact Bonfiglioli Technical Service

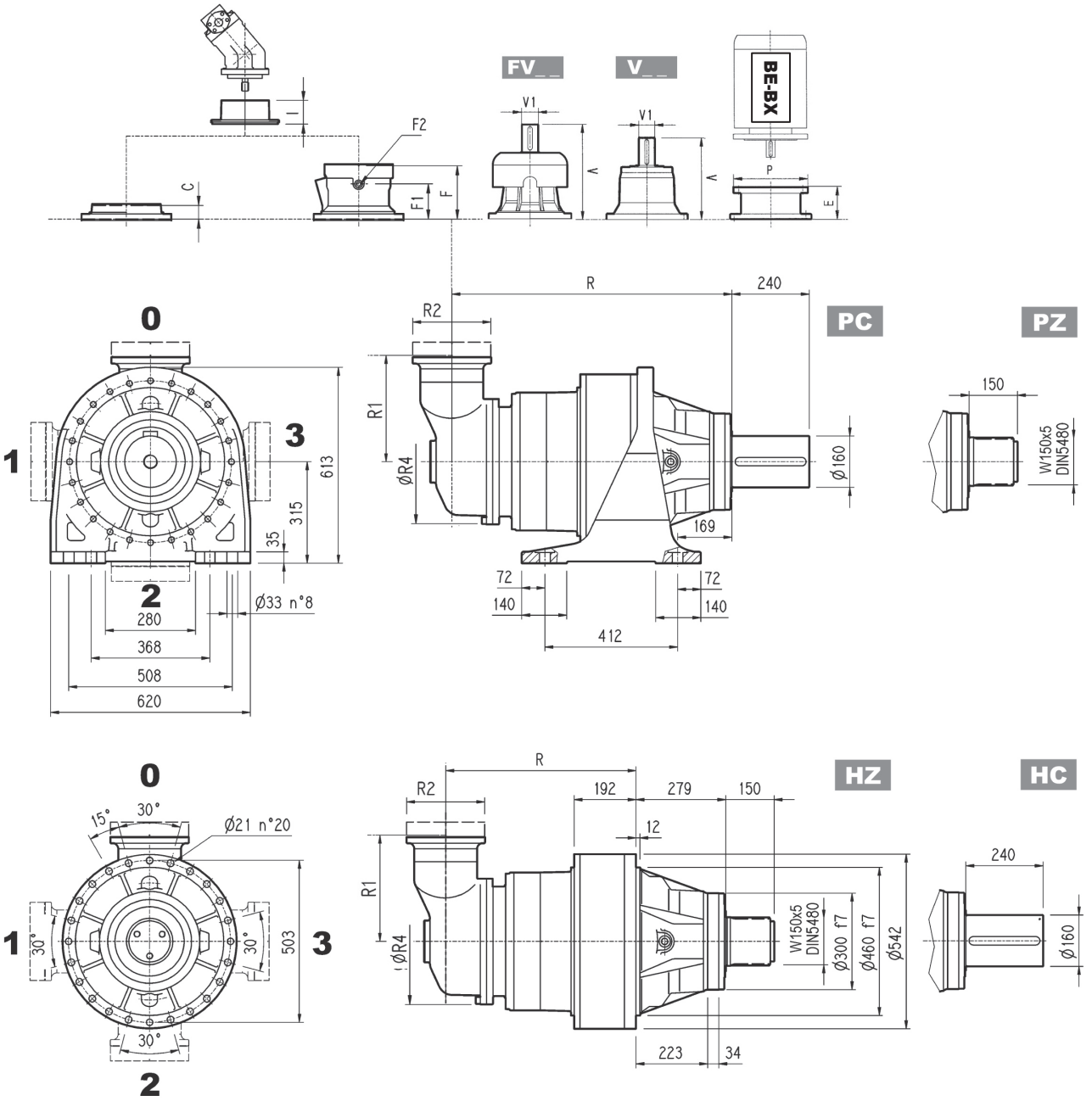
FP T_{2max} = 1,017,840 lb·in

Dimensions are in mm

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
314M L2	—	—	—	—	—	—	271	400	301	450	281	550
314M L3	—	—	153	350	153	350	183	400	213	450	193	550
314M L4	114	300	144	350	144	350	174	400	—	—	—	—

314M R

Metric



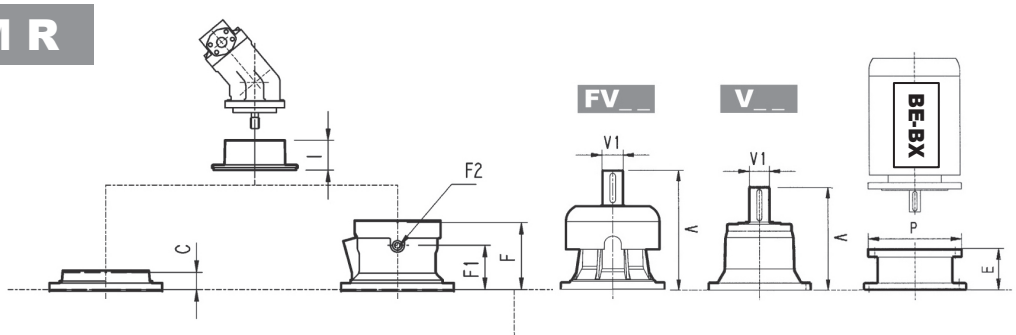
Dimensions are in mm

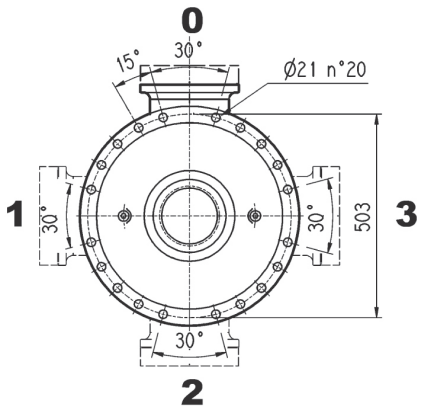
	R				R1	R2	R4	Kg			
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP
314M R3 (B)	848	569	569	569	345	292	400	720	590	500	550
314M R3 (C)	856	587	587	587	390	292	480	730	600	510	560
314M R4	914	635	635	635	140	186	244	680	550	460	510

	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
314M R3 (B)	307	60	23	—	—	—	357	60	28	45	B		195	147	1/4 G	6	B	28
314M R3 (C)	307	60	23	—	—	—	357	60	28	45	B		195	147	1/4 G	6	B	28
314M R4	137.5	24	6	158	38	7	—	—	—	37	A	522	105	65	1/4 G	4	A	10

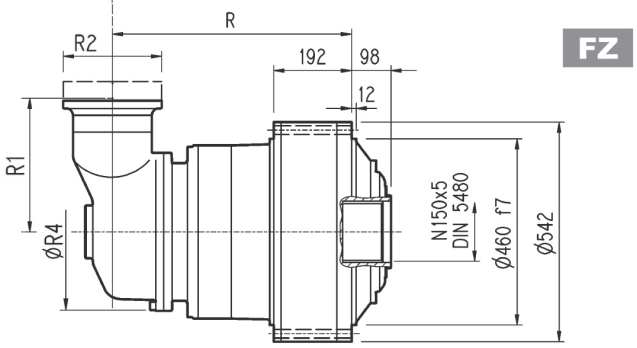
Bonfiglioli Riduttori

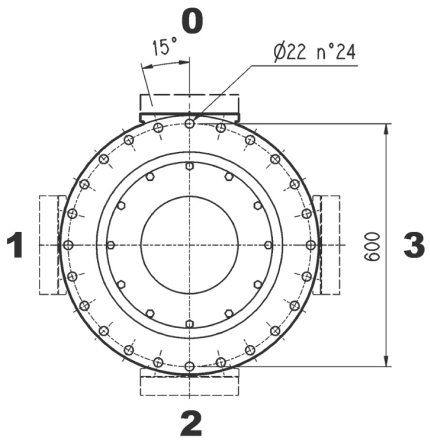
314M R



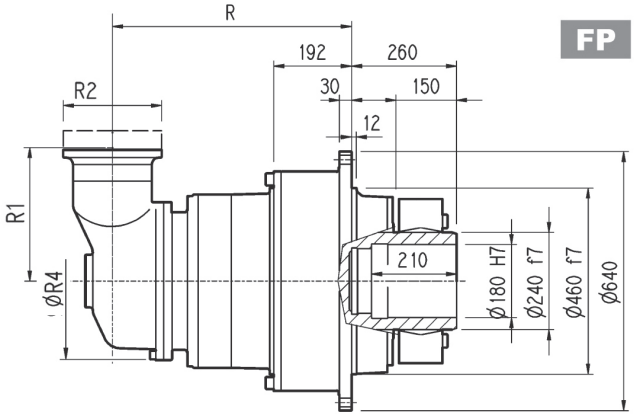


FZ

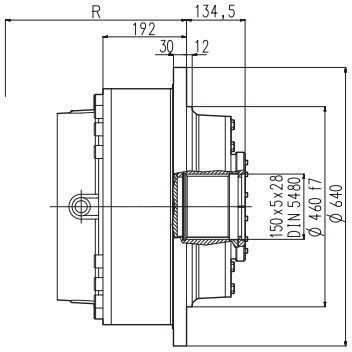




FP



FZP



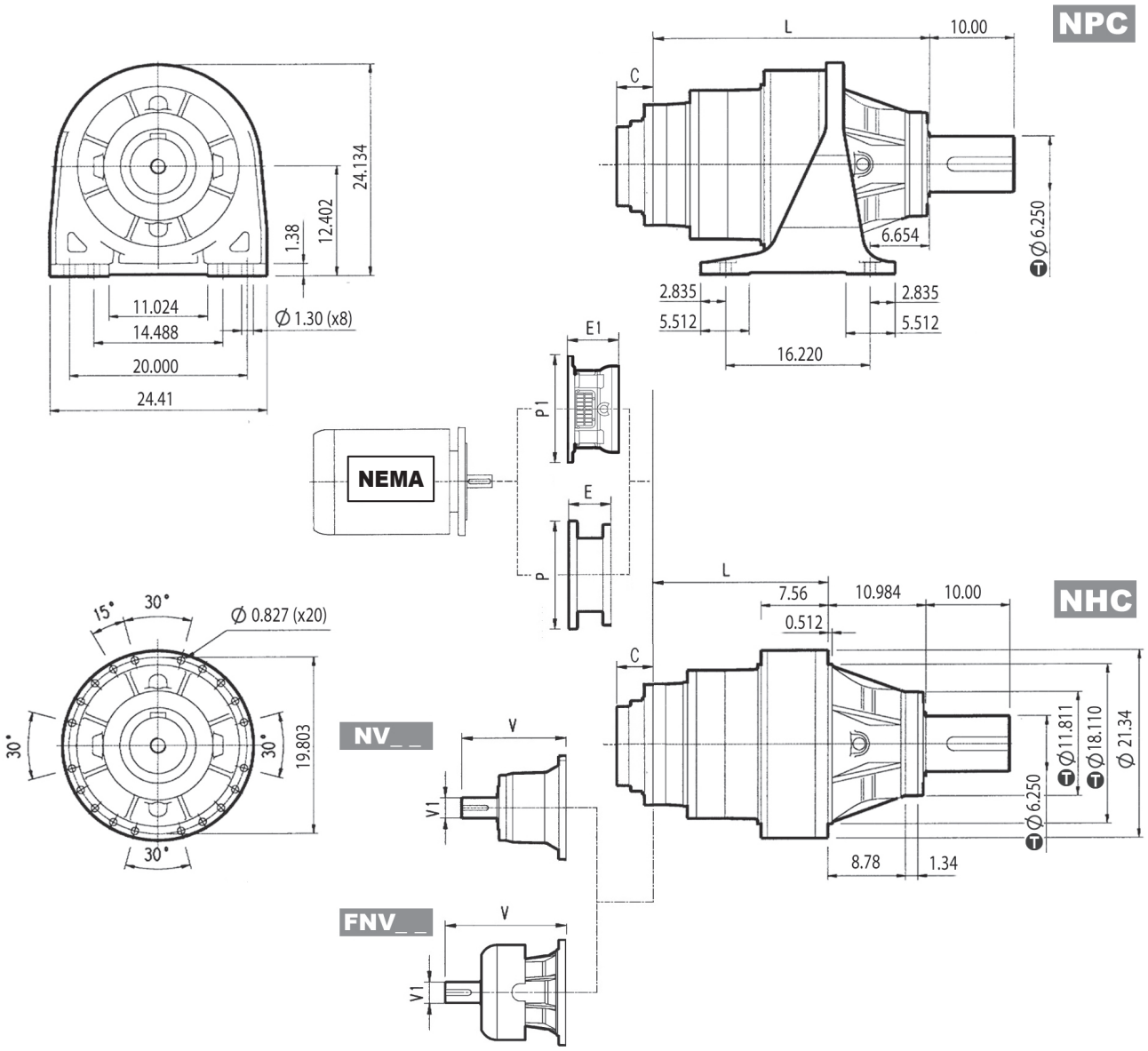
FP T_{2max} = 1,017,840 lb·in

Dimensions are in mm

	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
314M R3 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
314M R3 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
314M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

314M L

Imperial



inch	Ⓣ
18.110	-0.00268 -0.00516
11.811	-0.00220 -0.00425
6.250	+0.00157 +0.00059

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
314M L2	—	—	—	—	—	—	12.598	21.654
314M L3	—	—	8.740	15.354	9.921	15.748	10.315	17.717
314M L4	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in Inch except when shown in *italic [mm]*

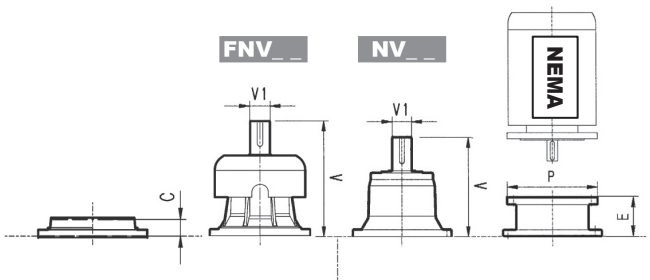
	L		lbs	
	NPC	NHC	NPC	NHC
314M L1	—	—	—	—
314M L2	25.236	14.252	1225	930
314M L3	30.591	19.606	1326	1030
314M L4	33.150	22.165	1348	1050

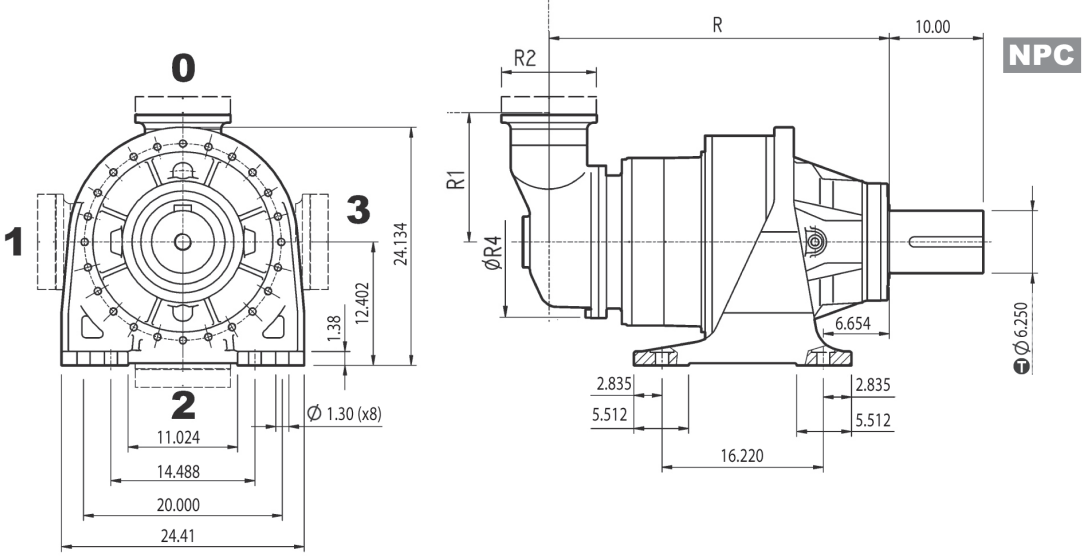
	V	V1	lbs	V	V1	lbs	C	Input
314M L1	—	—	—	—	—	—	4.724	L
314M L2	14.724	3.000	110.3	17.874	3.000	130.0	3.465	C
314M L3	12.703	2.375	50.7	14.652	2.375	58.0	1.772	B
314M L4	9.681	1.875	33.1	11.138	1.875	38.0	1.457	A

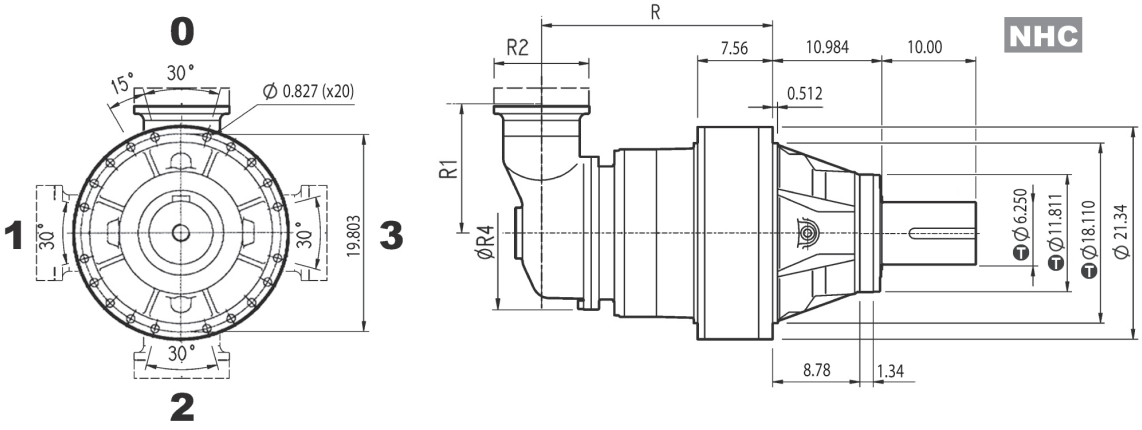
	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
314M L3	—	—	—	—	7.776	15.748	7.776	15.748
314M L4	5.216	11.811	6.221	13.780	—	—	—	—

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314M R







inch	T
18.110	-0.00268 -0.00516
11.811	-0.00220 -0.00425
6.250	+0.00157 +0.00059

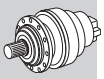
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R4	lbs	
	NPC	NHC				NPC	NHC
314M R3 (B)	33.386	22.402	13.583	11.496	15.748	1500	1210
314M R3 (C)	33.701	23.110	15.354	11.496	18.898	1530	1240
314M R4	35.984	25.000	5.512	7.323	9.606	1420	1125

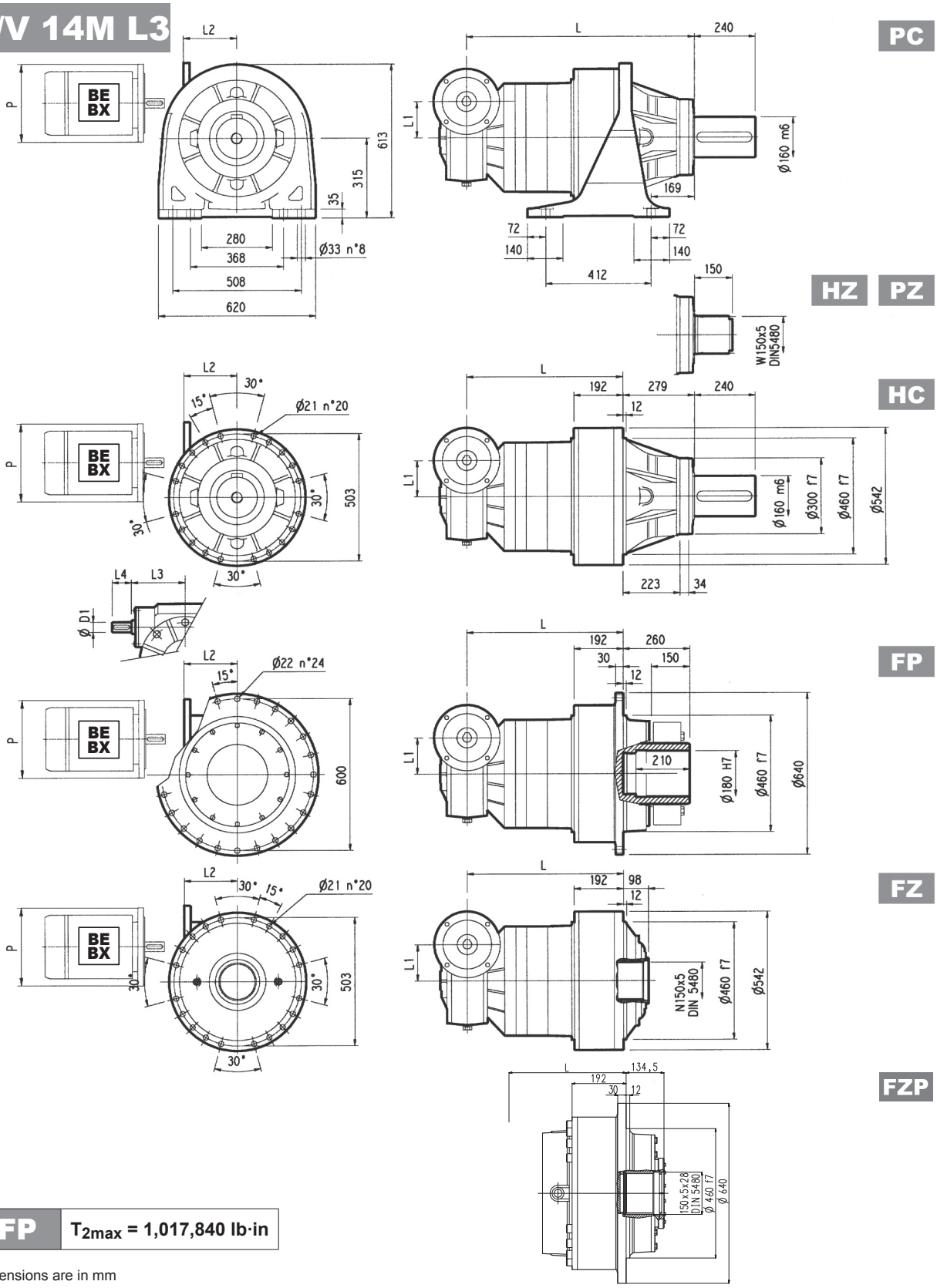
	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
314M R3 (B)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
314M R3 (C)	12.703	2.375	50.7	—	—	—	14.652	2.375	58.0	1.772	B
314M R4	5.996	1.125	13.2	6.437	1.625	15.4	—	—	—	1.457	A

	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
314M R3 (B)	—	—	—	—	7.776	13.780	7.776	13.780
314M R3 (C)	—	—	—	—	7.776	13.780	7.776	13.780
314M R4	5.216	8.819	6.122	11.811	—	—	—	—

3/V 14M L3



Metric



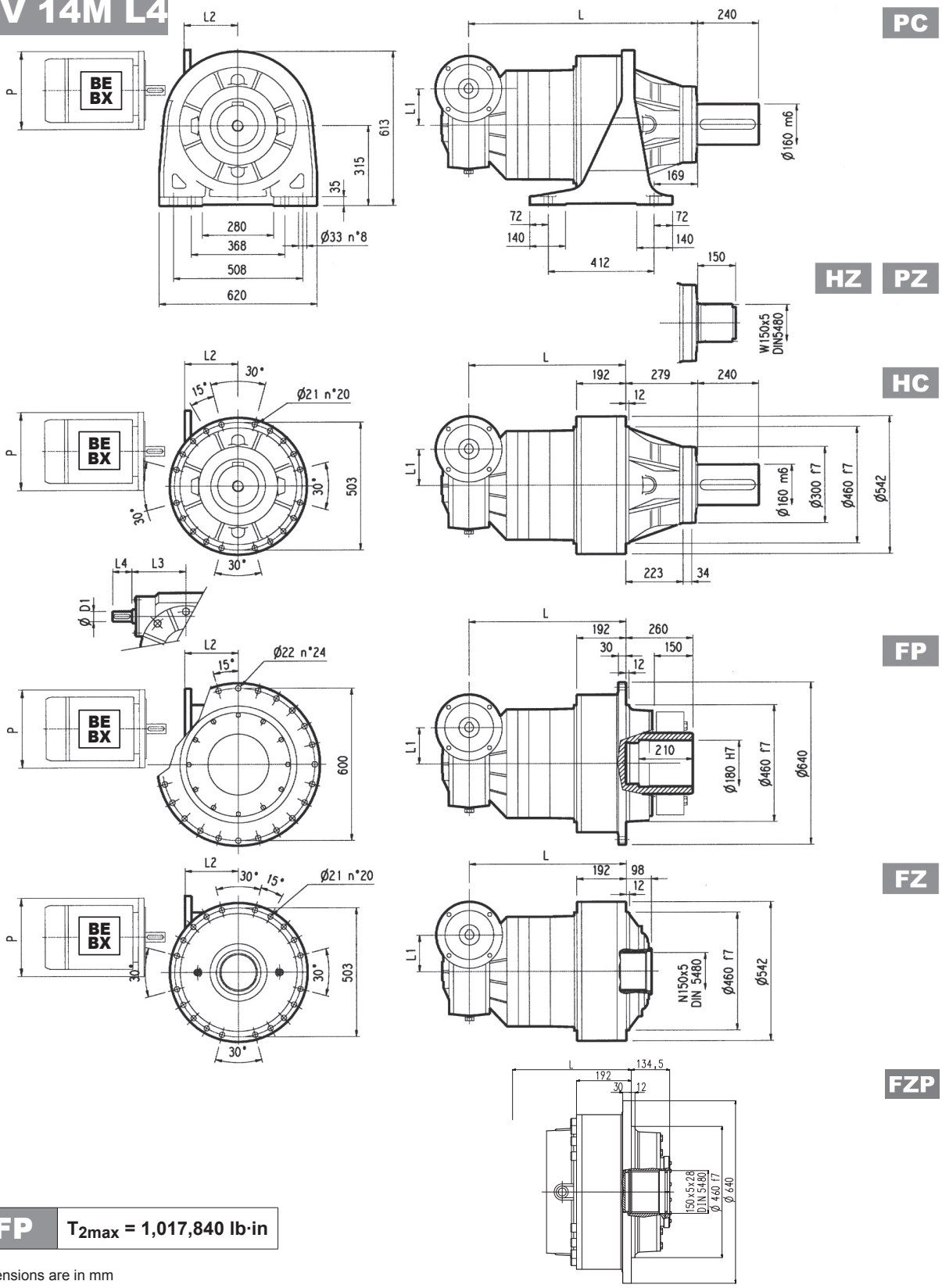
FP T_{2max} = 1,017,840 lb·in

Dimensions are in mm

	L				L1	L2	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP						PC - PZ	HC - HZ	FZ - FZP	FP
3/V 14M L3	920	641	641	641	185	217	40	214.5	70	665	535	445	495

	P100	P112	P132		P160		P180	
	P	P	L2	P	L2	P	L2	P
3/V 14M L3	250	250	—	300	—	350	—	350

3/V 14M L4



FP T_{2max} = 1,017,840 lb·in

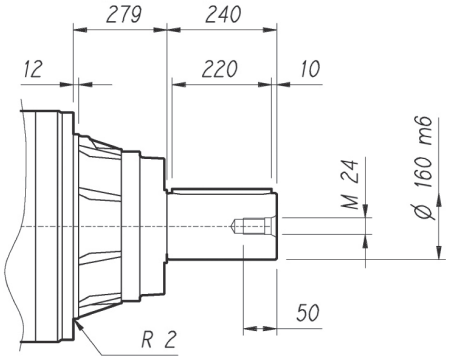
Dimensions are in mm

	L				L1	L2	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP						PC - PZ	HC - HZ	FZ - FZP	FP
3/V 14M L4	961	682	682	682	150	190	35	185	65	690	560	470	520

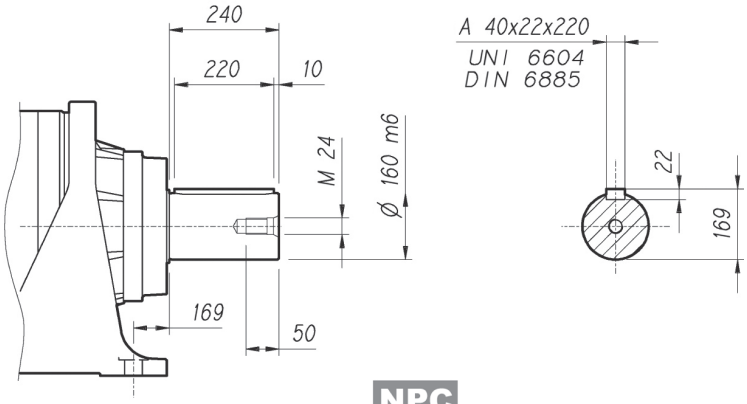
	P100	P112	P132		P160		P180	
	P	P	L2	P	L2	P	L2	P
3/V 14M L4	250	250	—	300	—	350	—	—

314M L 314M R 3/V 14M L

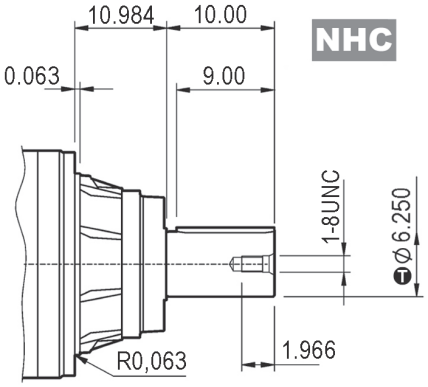
HC



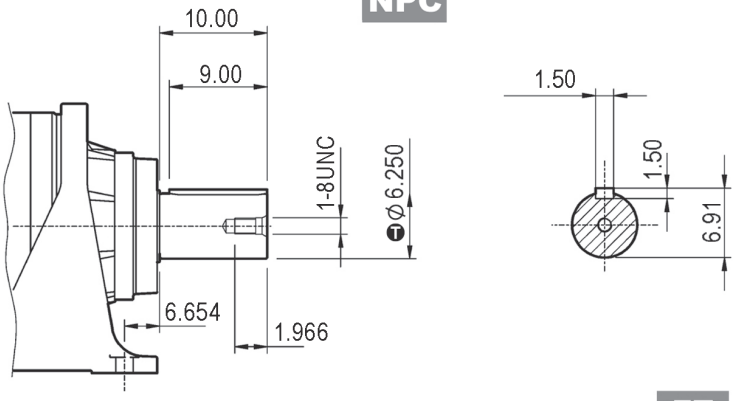
PC



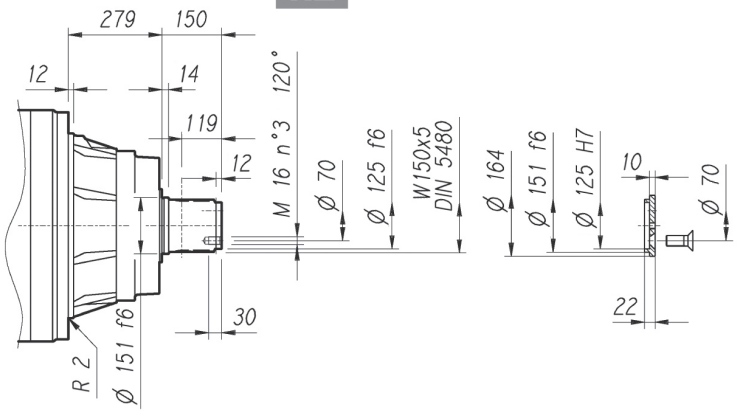
NHC



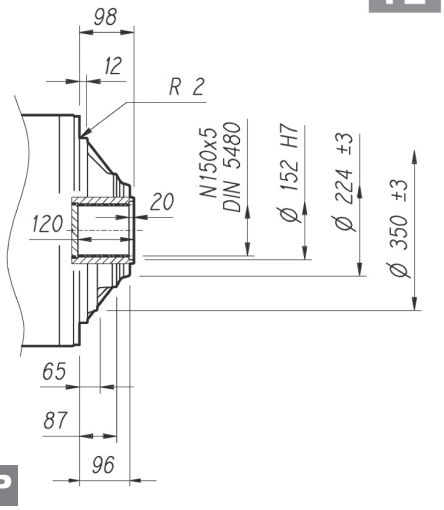
NPC



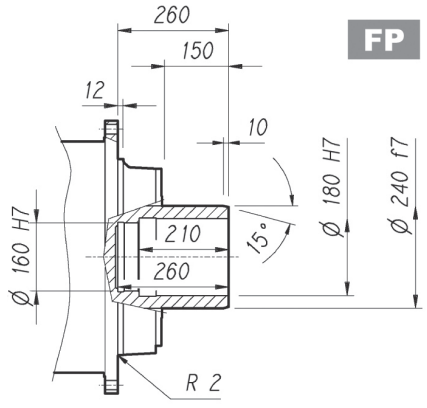
HZ



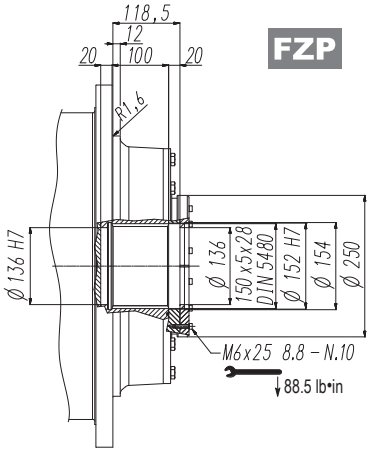
FZ



FP



FZP



FP T_{2max} = 1,017,840 lb·in

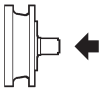
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

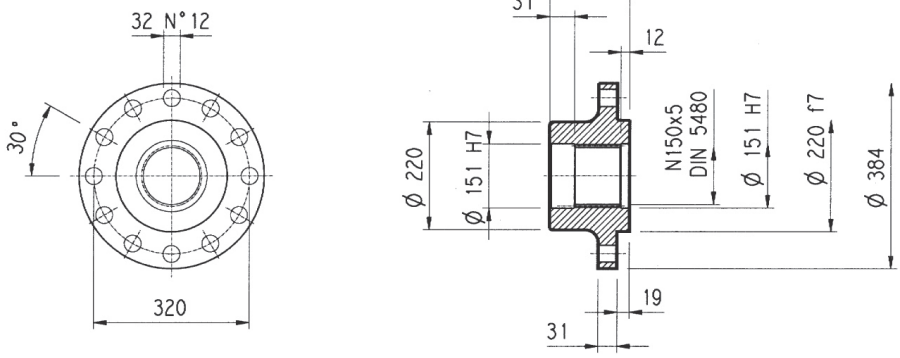
inch	T
6.250	+0.00157 +0.00059

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Flange

W0A



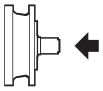


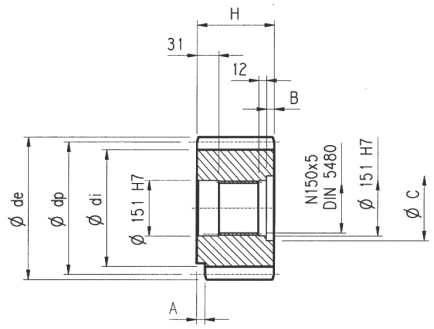
Material: Steel C40

Dimensions are in mm

Pinions

P...





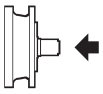
α = 20°

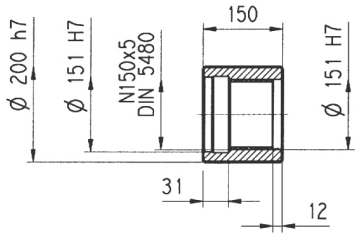
Dimensions are in mm

	m	z	x	dp	di	de	H	A	B	C	Material
PRG1	18	16	0.500	288	261	342	160	—	10	166	Steel 18NiCrMo5 case hardened
PRG2	18	16	0.617	288	271	339	150	30	—	—	Steel 39NiCrMo3 hardened and tempered

Sleeve coupling

M0A





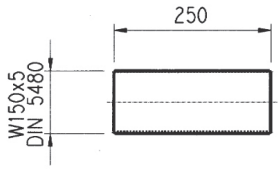
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

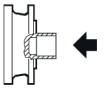


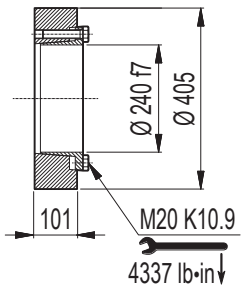


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

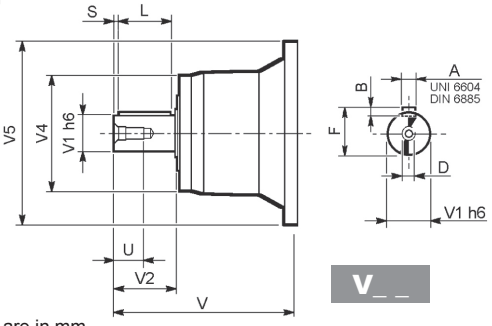




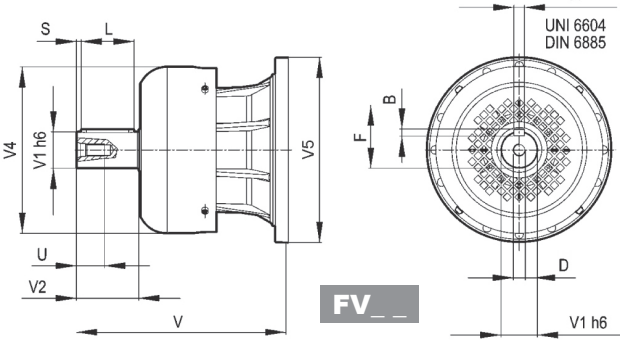
Dimensions are in mm

314M L 314M R





V_ _



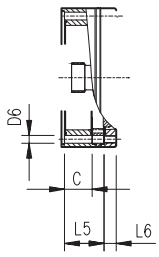
FV_ _

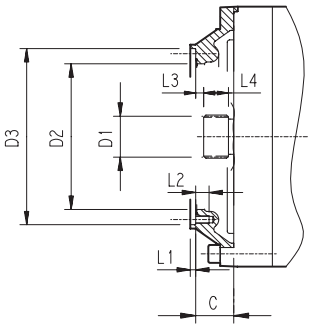
Dimensions are in mm

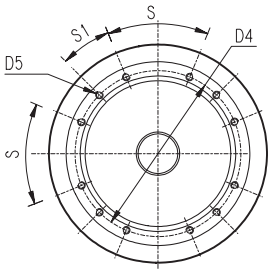
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
314M L2	**V10B**	377	80	130	200	400	22	14	85	110	10	M16	36
	FV10B	457	80	130	347.5	400	22	14	85	110	10	M16	36
314M L3	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
314M L4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
314M R3 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
314M R4	**V01A**	137.5	24	36	120	186	8	7	27	30	3	M8	19
	V01B	158	38	58	120	186	10	8	41	50	4	M12	28

314M L 314M R





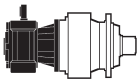


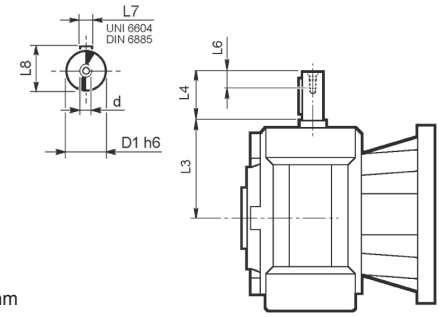


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
314M L1	**V9AL**	120	100x94 DIN 5482	295	336 H7	370	M16 n°15	—	8	21	13	55	—	—	24°	24°	L
314M L2	**V9AC**	88	70x64 DIN 5482	200	282 H7	266	M12 n°12	—	4	22	11	32	—	—	45°	45°	C
314M L3	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
314M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
314M R3 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
314M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	—	9	18	37	18	45°	45°	A

3/V 14M L



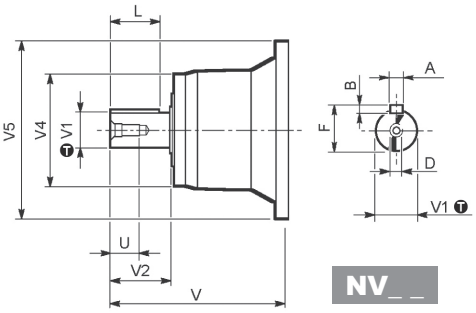


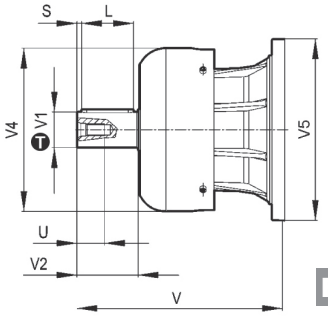
Dimensions are in mm

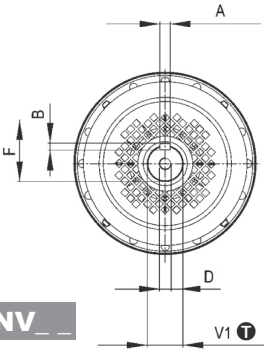
	D1 h6	L3	L4	L6	L7	L8	d
3/V 14M L3_HS	40	214.5	70	20	12	43	M8
3/V 14M L4_HS	35	185	65	20	10	38	M8

314M L 314M R









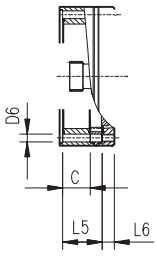
inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053
1.625	0 -0.00053
1.125	0 -0.00051

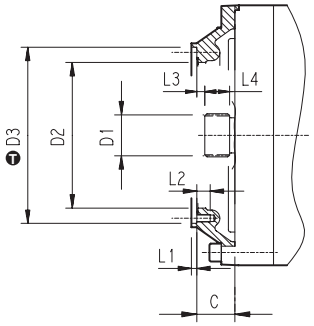
Dimensions are in Inch except when shown in *italic [mm]*

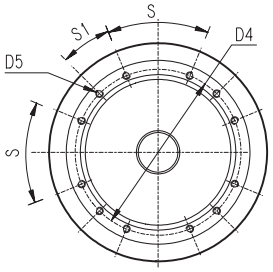
		V	V1	V2	V4	V5	A	B	F	L	D	U
314M L2	**NV10B**	14.724	3.000	5.000	7.165	15.748	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV10B	17.874	3.000	5.000	13.677	15.748	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
314M L3	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
314M L4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
314M R3 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
314M R4	**NV01A**	5.996	1.125	2.000	4.980	7.323	0.250	0.250	1.236	1.752	3/8-16 UNC	0.866
	NV01B	6.437	1.625	2.500	4.980	7.323	0.375	0.375	1.791	2.000	1/2-13 UNC	1.102

314M L 314M R





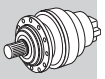




inch	T
13.23	+0.00224 0
11.10	+0.00204 0
9.29	+0.00181 0
7.01	+0.00157 0

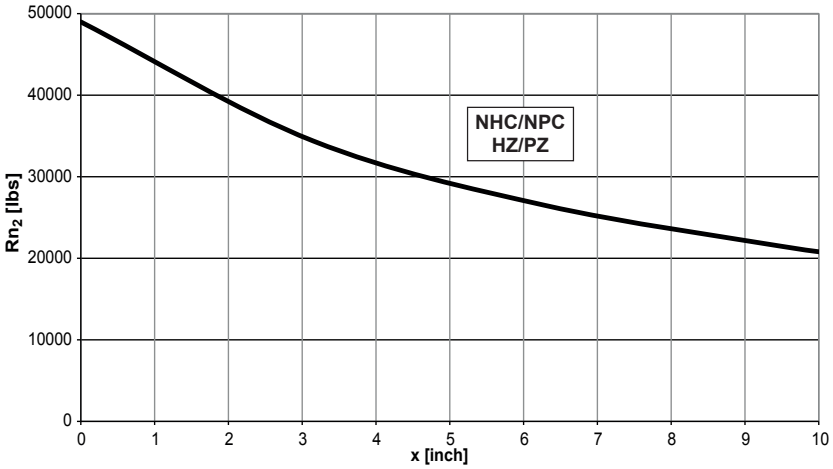
Dimensions are in Inch except when shown in *italic [mm]*

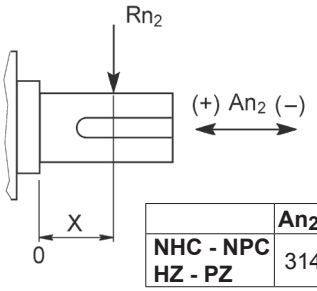
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
314M L1	**V9AL**	4.72	*100x94 DIN 5482*	11.61	13.23	14.57	*M16 n°15*	—	0.31	0.83	0.51	2.17	—	—	24°	24°	L
314M L2	**V9AC**	3.46	*70x64 DIN 5482*	7.87	11.10	10.47	*M12 n°12*	—	0.16	0.87	0.43	1.26	—	—	45°	45°	C
314M L3	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
314M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
314M R3 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
314M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	—	0.35	0.71	1.46	0.71	45°	45°	A



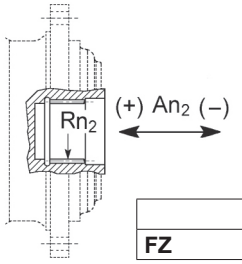
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





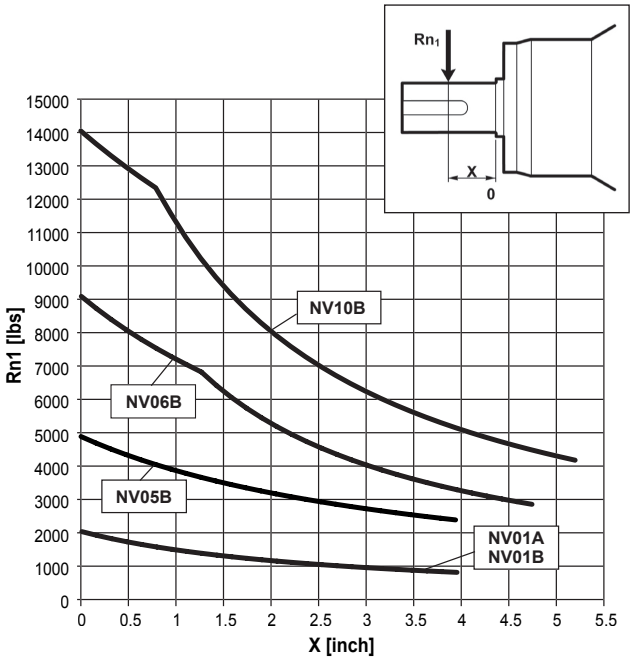
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	31472	23604

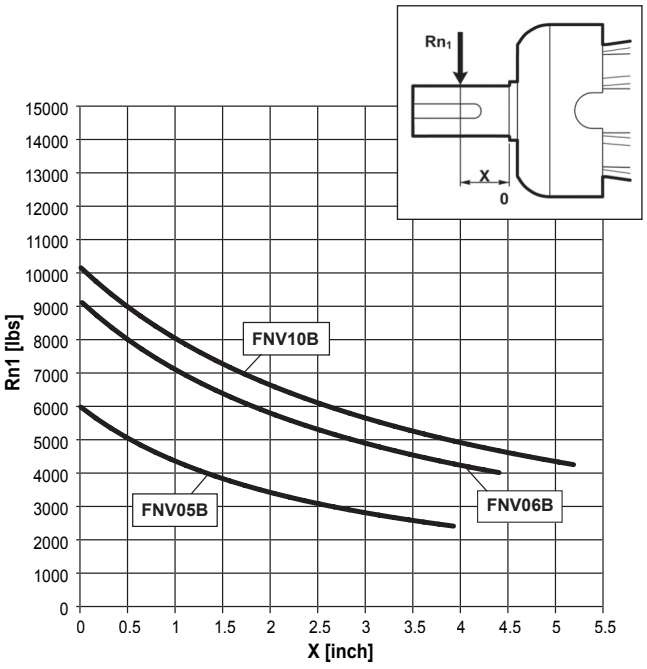


	Rn2	An2 (+/-)
FZ	9391	9391

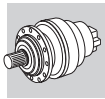
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**2.00**	**1.52**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

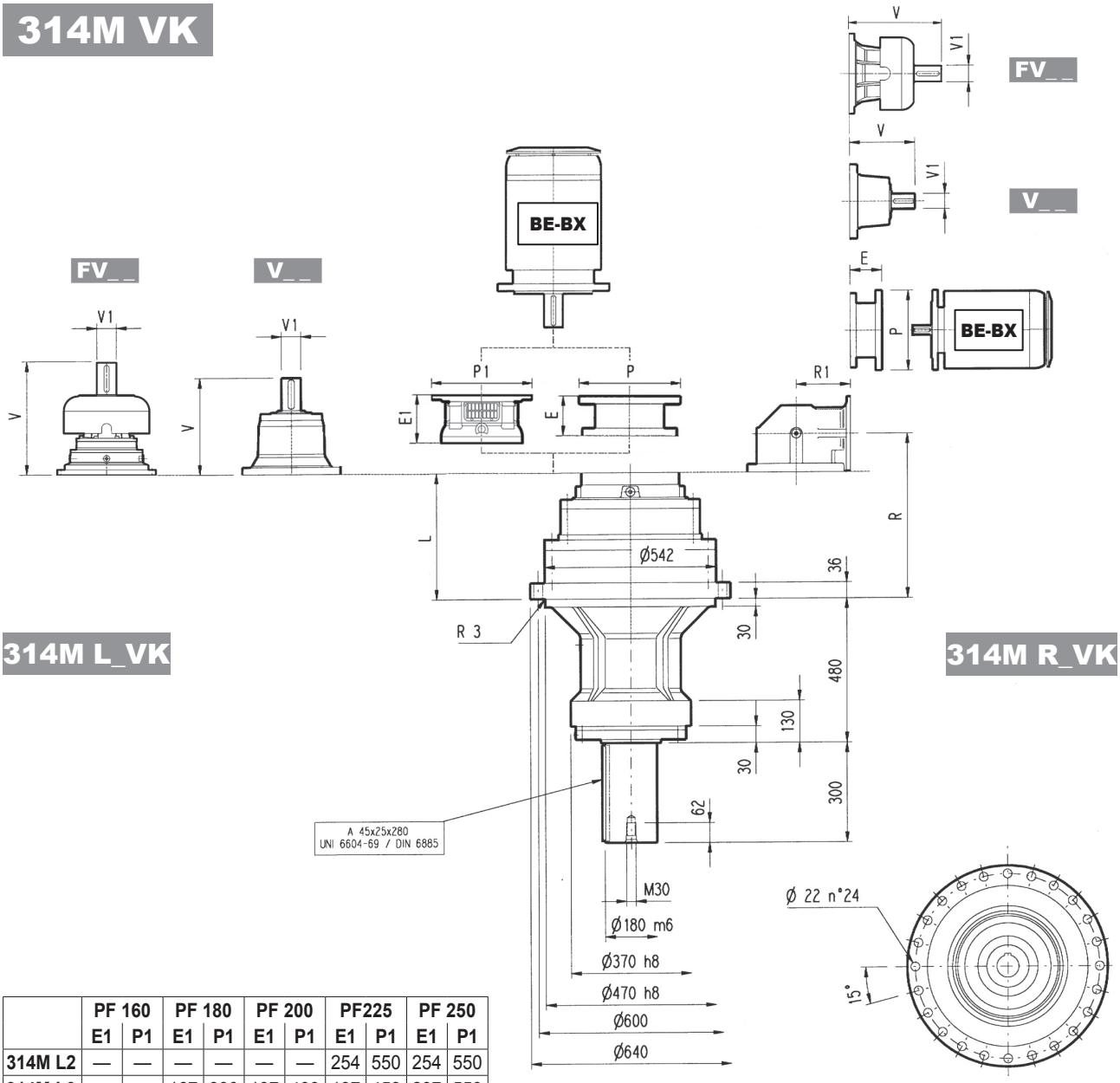




Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



314M VK



314M L_VK

314M R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
314M L2	—	—	—	—	—	—	254	550	254	550
314M L3	—	—	167	390	197	400	197	450	207	550
314M L4	165	400	165	400	195	400	197	450	—	—

NOTE: for R design contact Bonfiglioli Technical Service

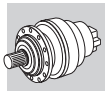
Dimensions are in mm

	L	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	P132		P160		P180		P200		P225		P250	
															E	P	E	P	E	P	E	P	E	P	E	P
314M L2	386	650	348	80	55	—	—	—	457	80	63	—	—	—	—	—	—	—	—	—	271	400	301	450	281	550
314M L3	519	700	315	80	35	313	60	28	357	60	28	—	—	—	—	—	153	350	153	350	183	400	213	450	193	550
314M L4	608	710	239	48	15	—	—	—	276	48	17	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—

	R	R1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg
314M R3 (B)	611	345	720	307	60	23	—	—	—	357	60	28	—	—	—
314M R3 (C)	611	390	730	307	60	23	—	—	—	357	60	28	—	—	—
314M R4	638	225	690	137.5	24	6	158	38	7	—	—	—	—	—	—

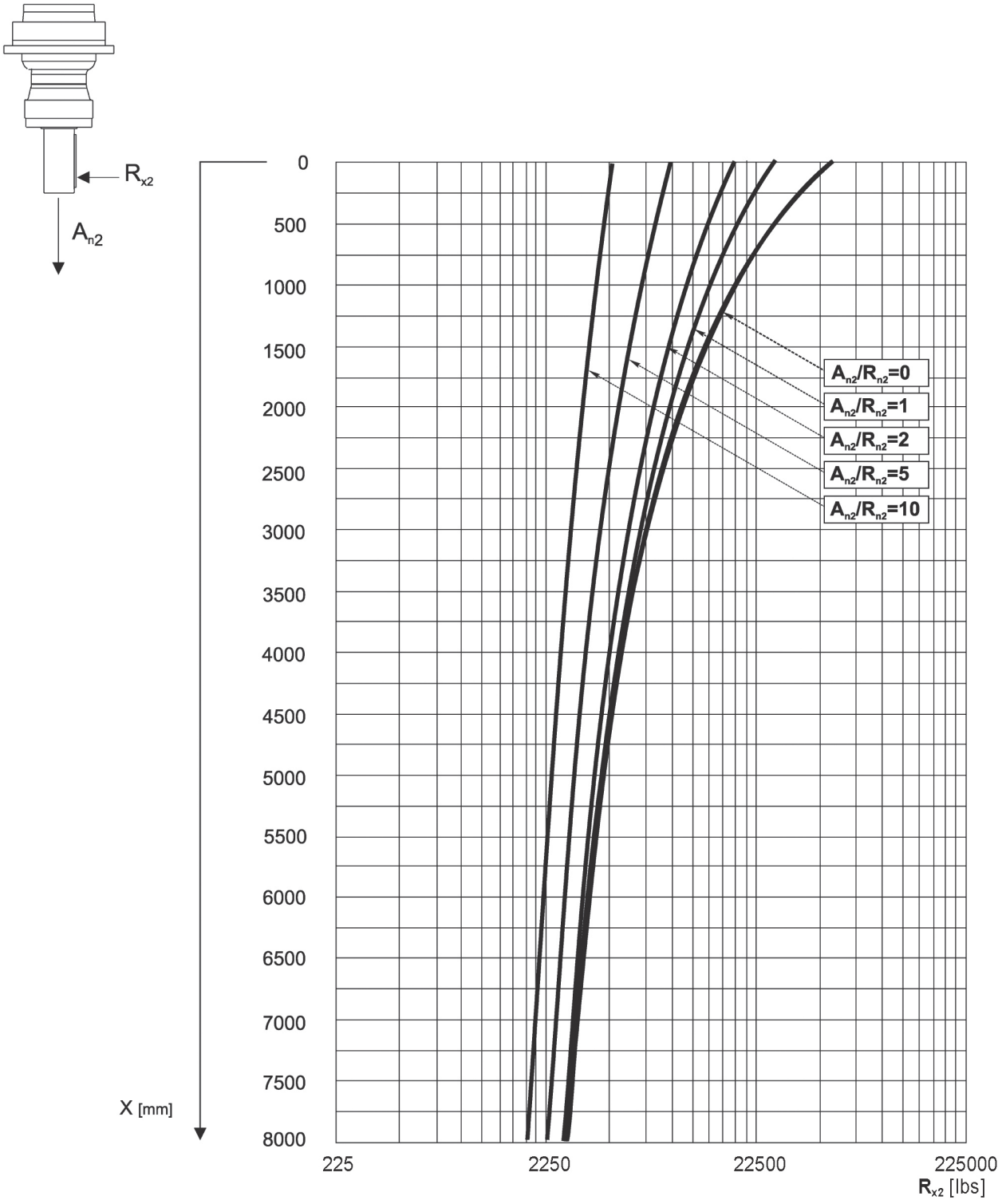
	P71		P80		P90		P100		P112		P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P	E	P
314M R3 (B)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
314M R3 (C)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
314M R4	65	160	84	200	84	200	94	250	94	250	114	300	144	350	—	—	—	—	—	—	—	—

314M VK

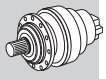


Metric

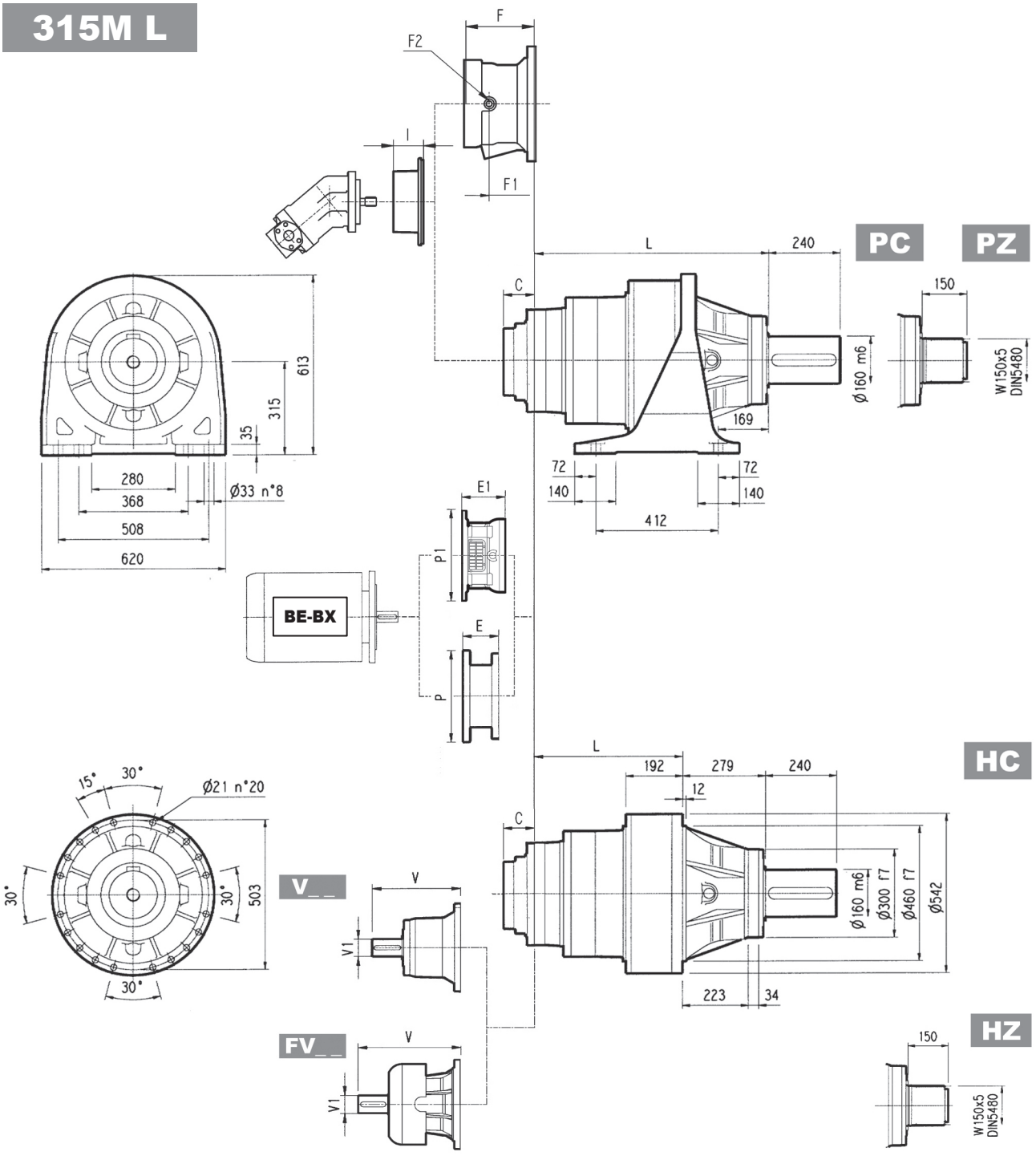
The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.



315M L



Metric



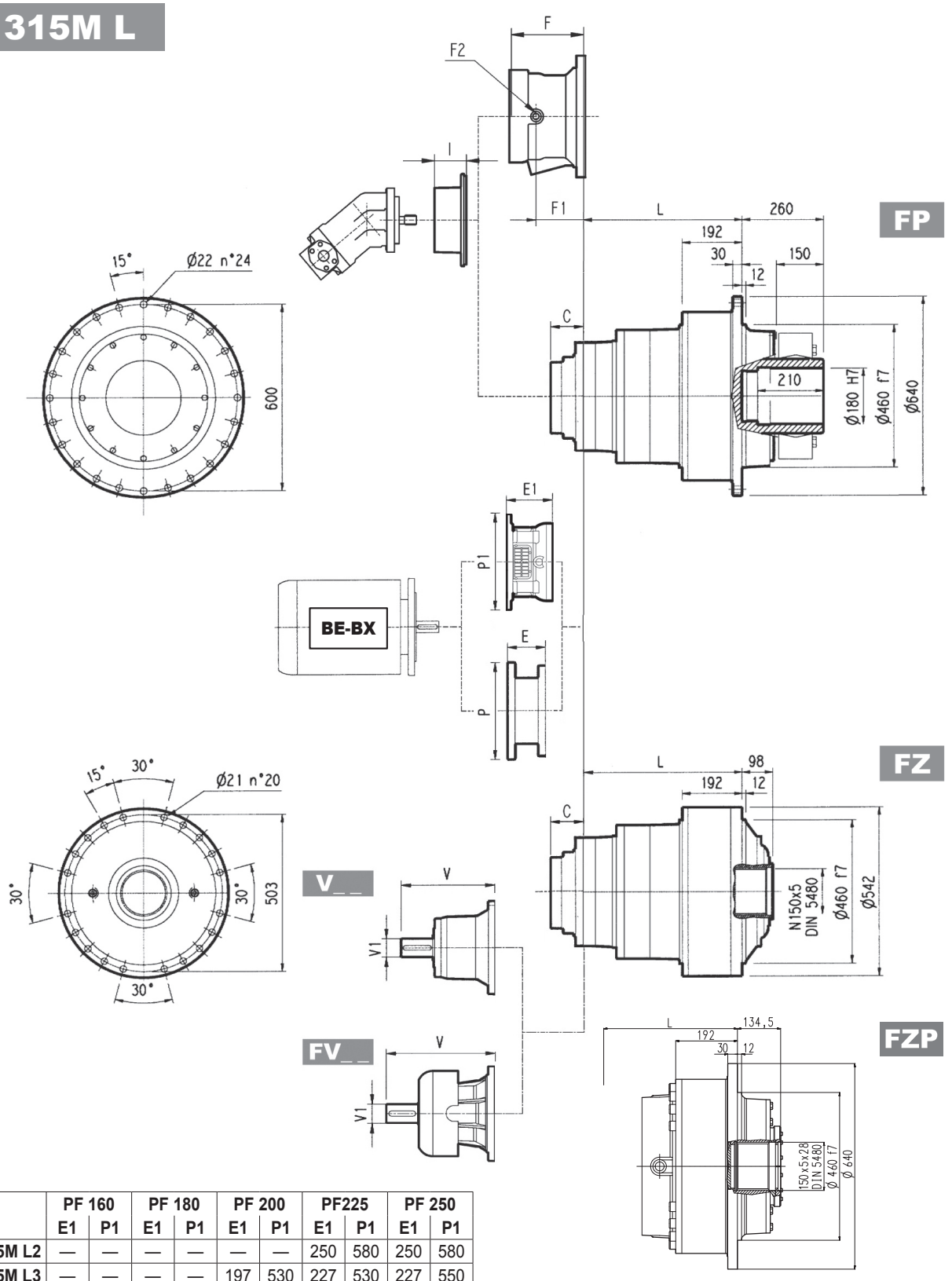
Dimensions are in mm

	L				Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP
315M L1	453	174	174	174	500	370	280	330
315M L2	665	386	386	386	585	455	365	415
315M L3	798	519	519	519	630	500	410	460
315M L4	887	608	608	608	642	512	422	472

	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
315M L1	556	120	125	—	—	—	—	—	—	—	—	—	116	E		—	—	—	—	—	—
315M L2	348	80	55	—	—	—	456	80	85	—	—	—	81	D		232	185	1/4 G	6	B	35
315M L3	315	80	35	313	60	28	375	80	48	363	60	34	51	B	522	201	153	1/4 G	5	B	28
315M L4	239	48	15	—	—	—	276	48	17	—	—	—	37	A		145	95	1/4 G	5	A	16

Bonfiglioli Riduttori

315M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
315M L2	—	—	—	—	—	—	250	580	250	580
315M L3	—	—	—	—	197	530	227	530	227	550
315M L4	165	400	165	400	195	400	195	450	—	—

NOTE: for R design contact Bonfiglioli Technical Service

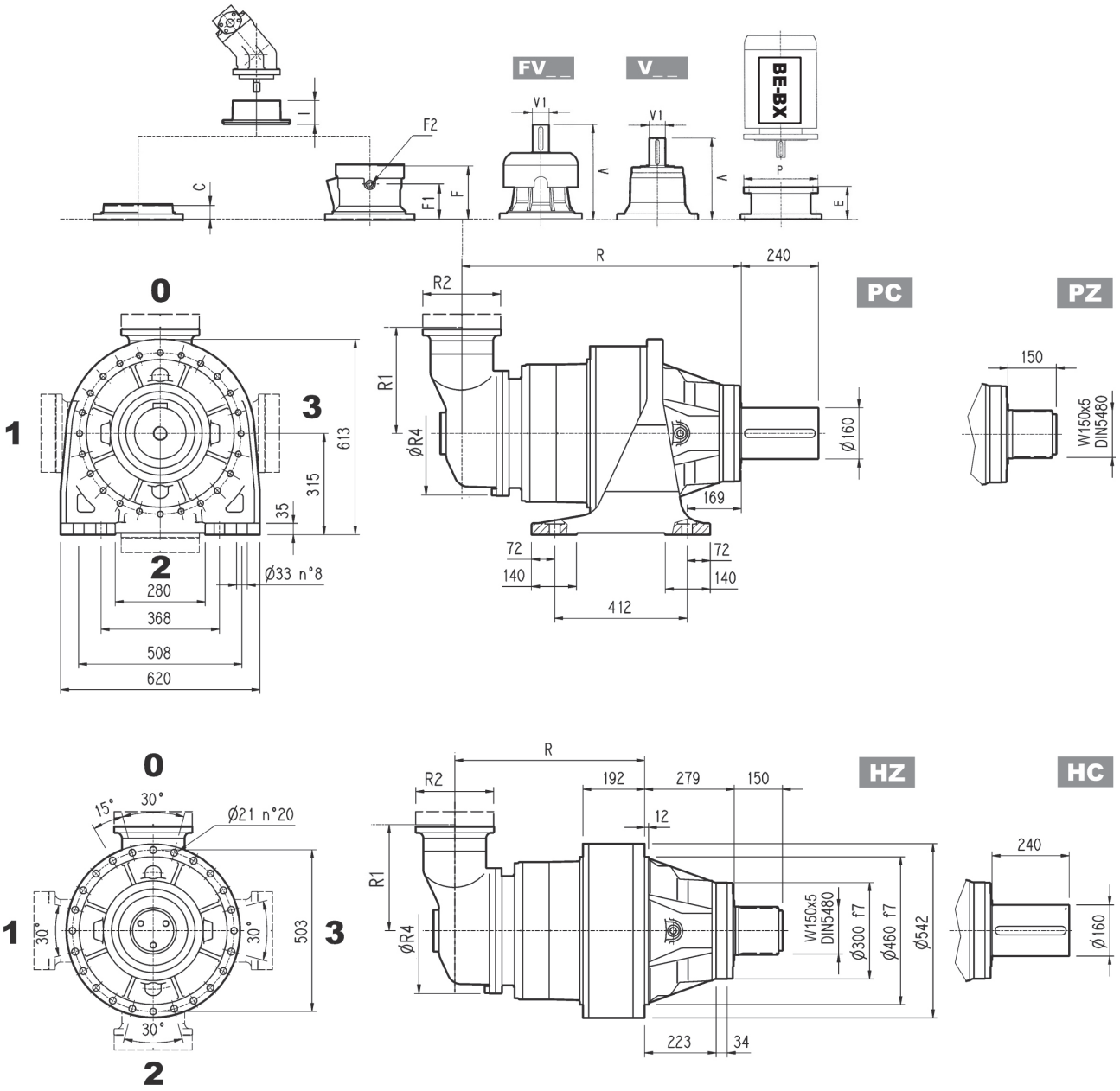
FP T_{2max} = 1,194,850 lb·in

Dimensions are in mm

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
315M L2	—	—	—	—	—	—	267	400	297	450	297	550
315M L3	—	—	—	—	195	350	186	400	216	450	215	550
315M L4	114	300	144	350	144	350	174	400	—	—	—	—

315M R

Metric



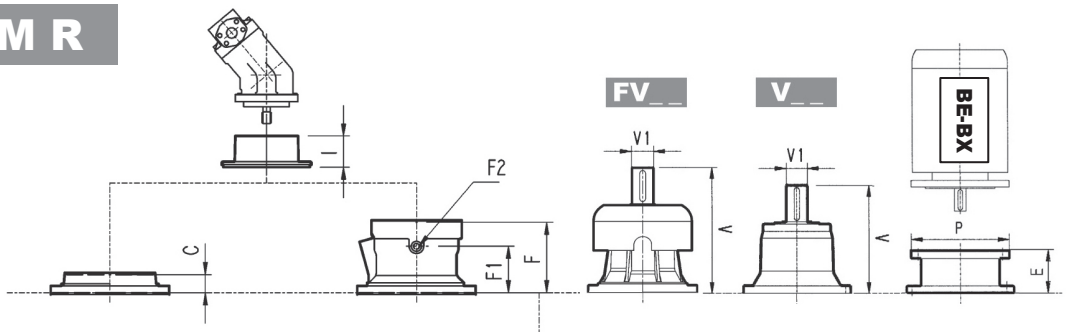
Dimensions are in mm

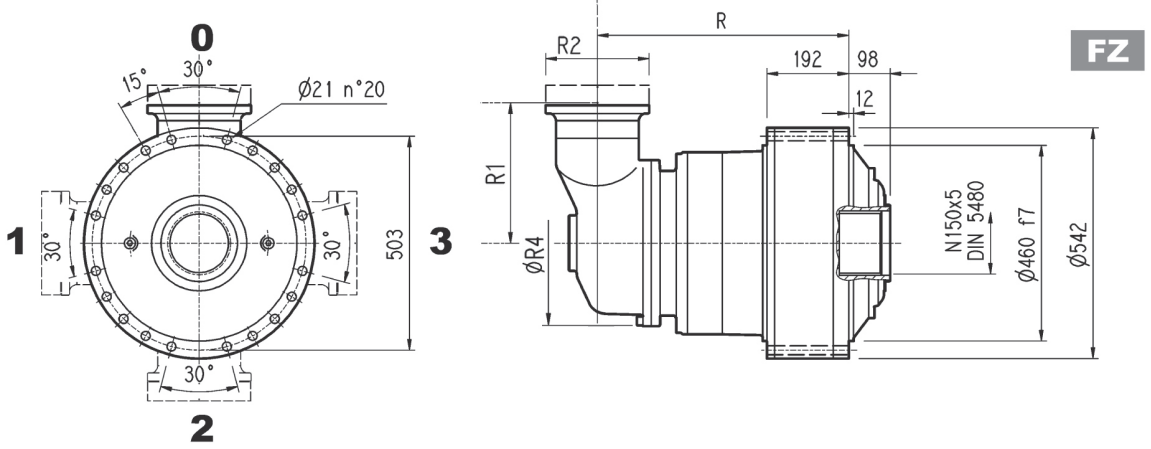
	R				R1	R2	R4	Kg			
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP
315M R3 (B)	890	611	611	611	345	292	400	720	590	500	550
315M R3 (C)	890	611	611	611	390	292	480	730	600	510	560
315M R4	917	638	638	638	225	245	345	680	550	460	510

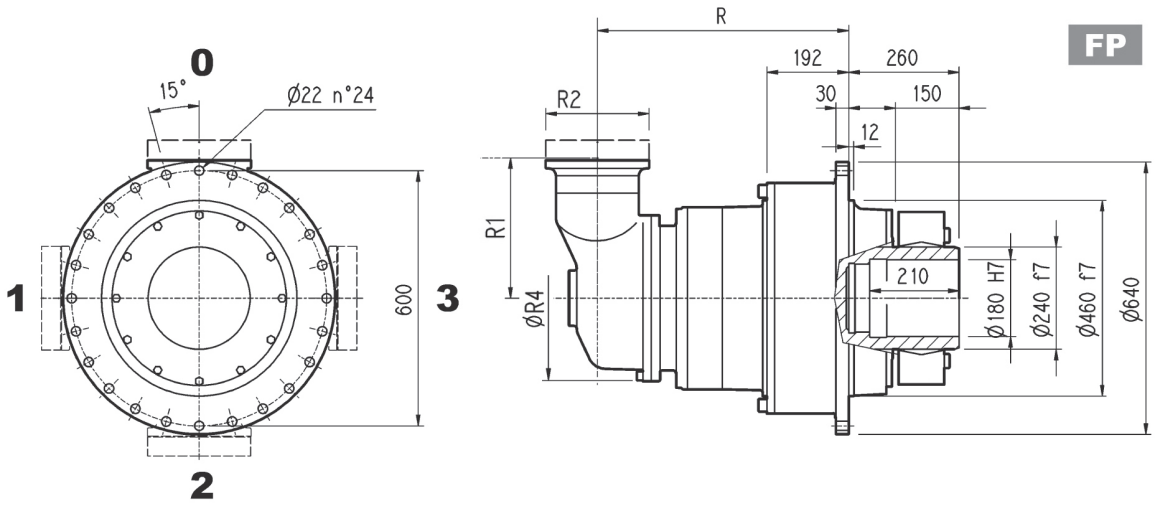
	V	V1	Kg	V	V1	Kg	C	Input	I	F	F1	F2	Type	Input	Kg
315M R3 (B)	307	60	23	357	60	28	45	B		195	147	1/4 G	6	B	28
315M R3 (C)	307	60	23	357	60	28	45	B		195	147	1/4 G	6	B	28
315M R4	239	48	15	276	48	17	37	A	522	145	95	1/4 G	5	A	16

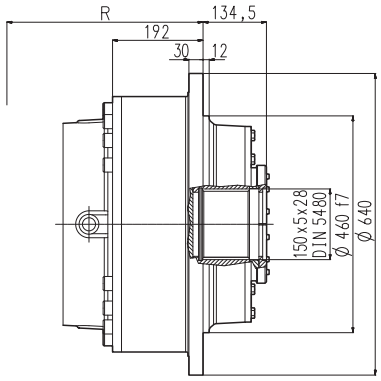
Bonfiglioli Riduttori

315M R







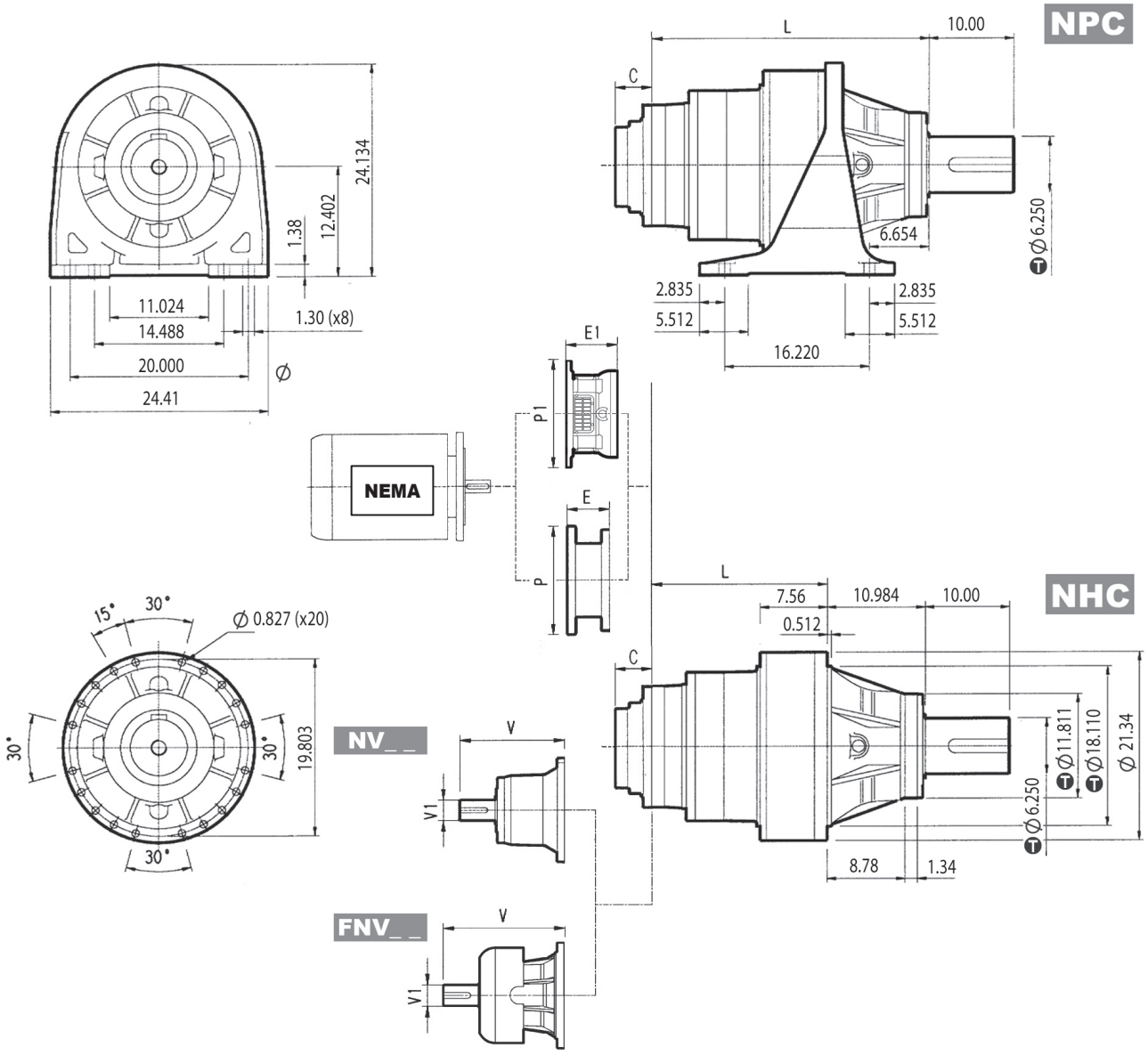


FP T_{2max} = 1,194,850 lb·in

Dimensions are in mm

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
315M R3 (B)	—	—	—	—	152	350	182	400	212	450	193	550
315M R3 (C)	—	—	—	—	152	350	182	400	212	450	193	550
315M R4	114	300	144	350	144	350	174	400	—	—	—	—

315M L



inch	Ⓣ
18.110	-0.00268 -0.00516
11.811	-0.00220 -0.00425
6.250	+0.00157 +0.00059

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
315M L2	—	—	—	—	—	—	12.402	22.835
315M L3	—	—	—	—	9.921	20.866	11.496	20.866
315M L4	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

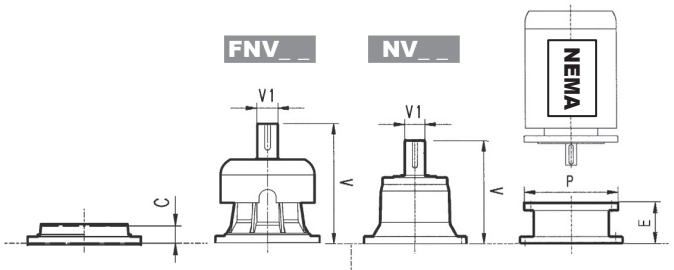
Dimensions are in Inch except when shown in *italic [mm]*

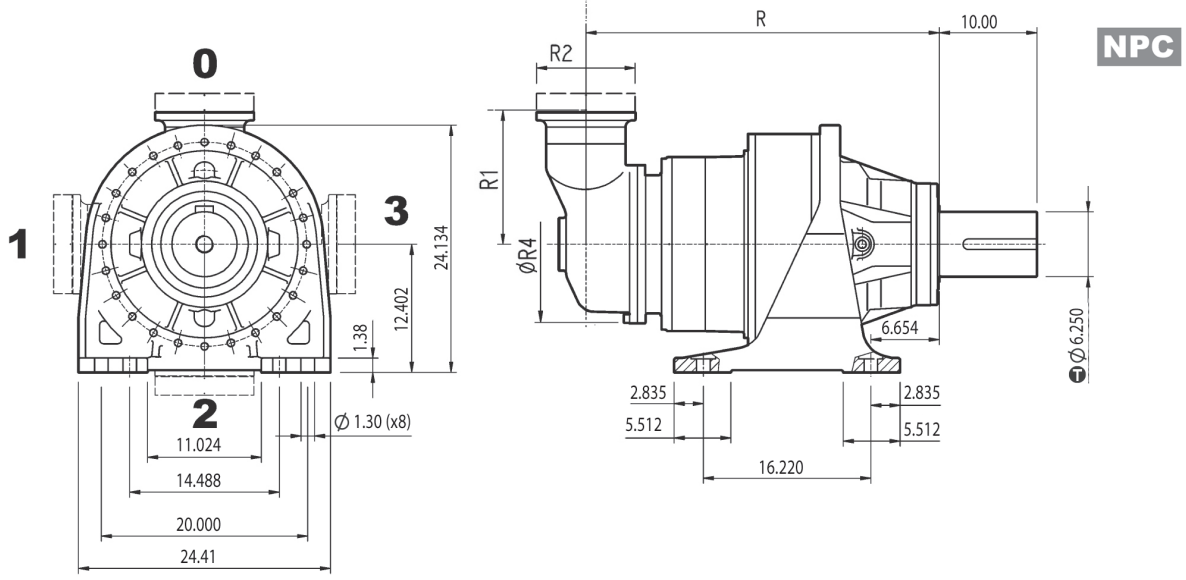
	L		lbs	
	NPC	NHC	NPC	NHC
315M L1	—	—	—	—
315M L2	26.181	15.197	1290	1003
315M L3	31.417	20.433	1389	1103
315M L4	34.921	23.937	1416	1129

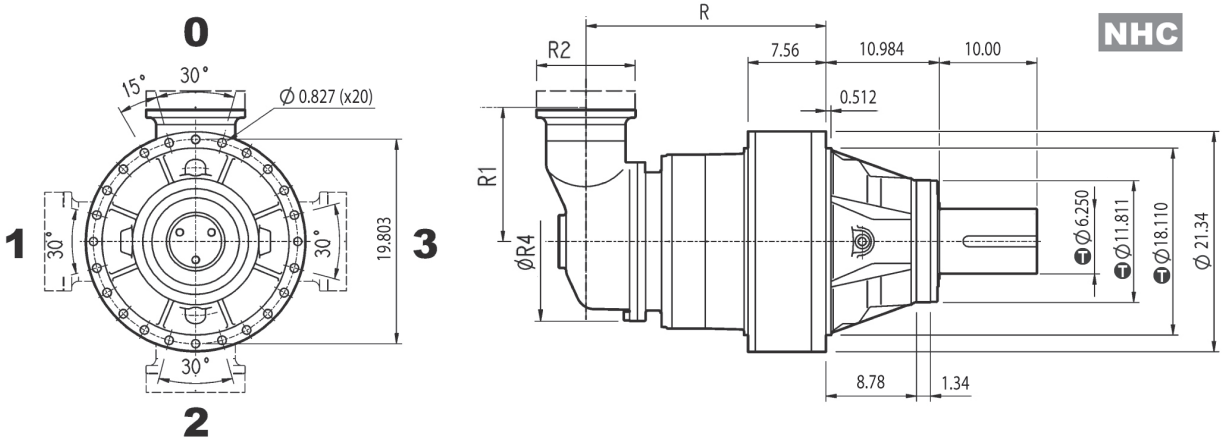
	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs	C	Input
315M L1	—	—	—	—	—	—	—	—	—	—	—	—	4.567	E
315M L2	13.563	3.000	121.3	—	—	—	17.835	3.000	140.0	—	—	—	3.189	D
315M L3	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0	2.008	B
315M L4	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—	1.457	A

	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
315M L3	—	—	—	—	8.445	15.748	8.445	15.748
315M L4	5.216	11.811	6.221	13.780	—	—	—	—

315M R







inch	Ⓣ
18.110	-0.00268 -0.00516
11.811	-0.00220 -0.00425
6.250	+0.00157 +0.00059

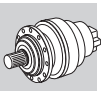
Dimensions are in Inch except when shown in *italic [mm]*

	R		R1	R2	R4	lbs	
	NPC	NHC				NPC	NHC
315M R3 (B)	35.039	24.055	13.583	11.496	15.748	1588	1301
315M R3 (C)	35.039	24.055	15.354	11.496	18.898	1610	1323
315M R4	36.102	25.118	8.858	9.646	13.583	1499	1213

	V	V1	lbs	V	V1	lbs	C	Input
315M R3 (B)	12.703	2.375	50.7	14.652	2.375	58.0	1.772	B
315M R3 (C)	12.703	2.375	50.7	14.652	2.375	58.0	1.772	B
315M R4	9.681	1.875	33.1	11.138	1.875	38.0	1.457	A

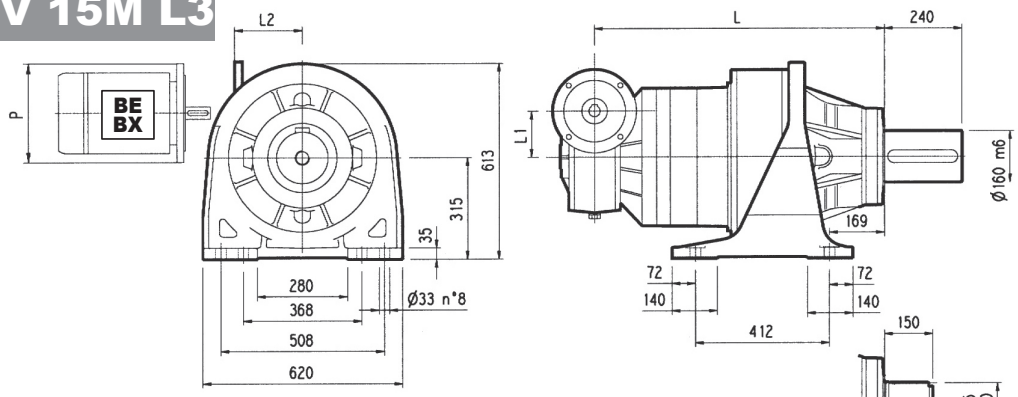
	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
315M R3 (B)	—	—	—	—	7.776	13.780	7.776	13.780
315M R3 (C)	—	—	—	—	7.776	13.780	7.776	13.780
315M R4	5.216	11.811	6.221	13.780	—	—	—	—

3/V 15M L3



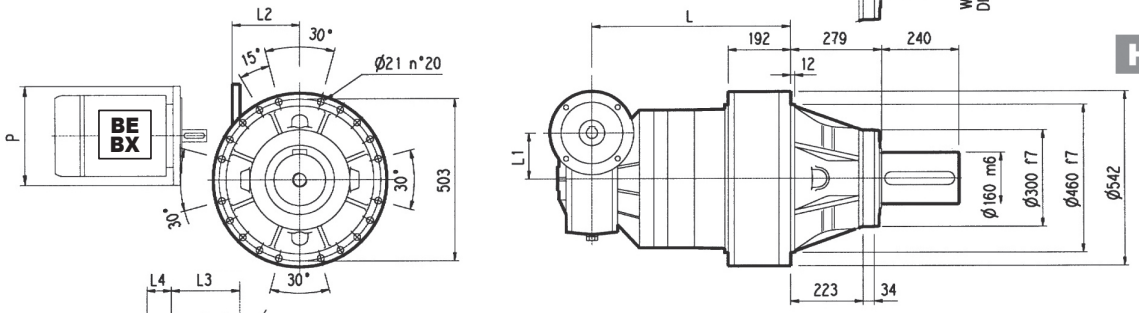
Metric

PC

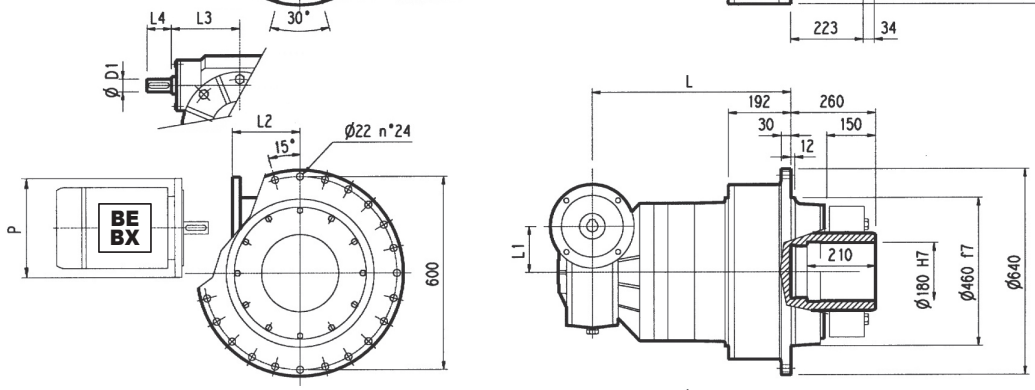


HZ PZ

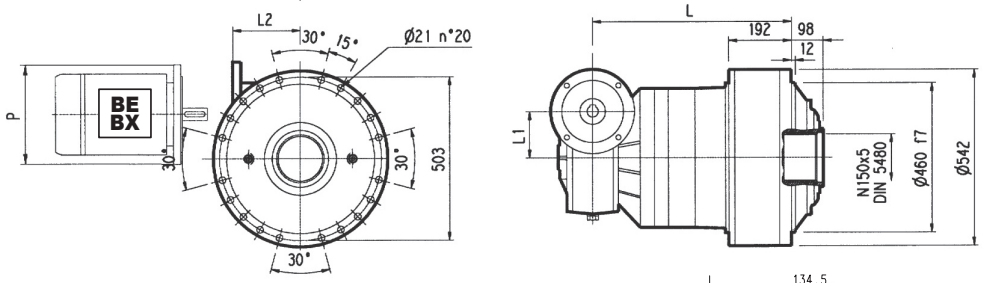
HC



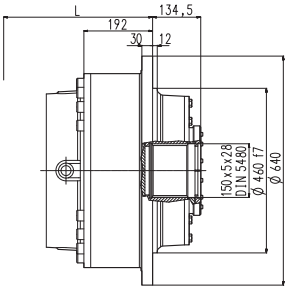
FP



FZ



FZP



FP T_{2max} = 1,194,850 lb·in

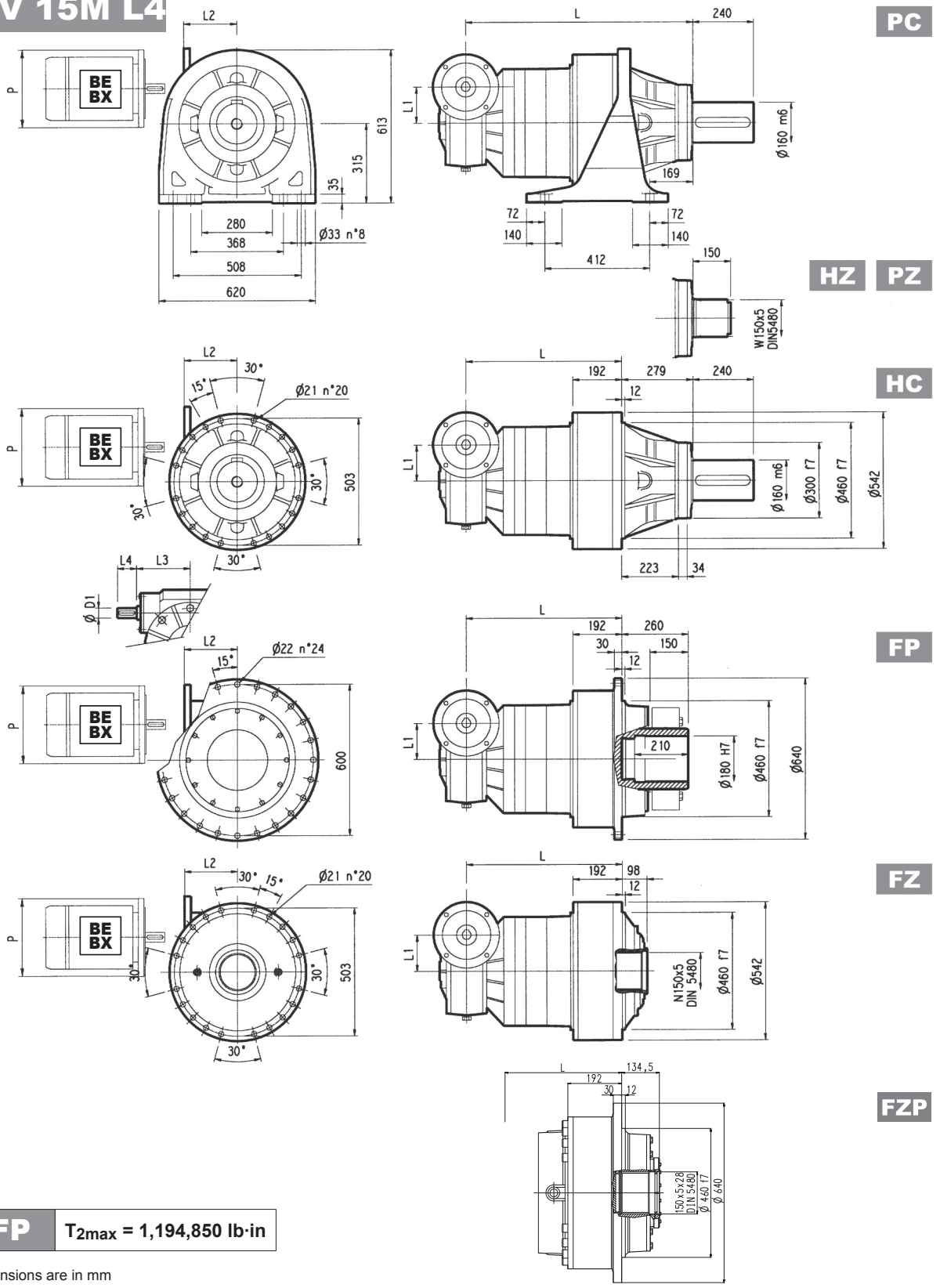
Dimensions are in mm

	L				L1	L2	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP						PC - PZ	HC - HZ	FZ - FZP	FP
3/V 15M L3	885	606	606	606	210	—	48	230	110	800	670	575	625

	P100	P112	P132		P160		P180		P200		P225	
	P	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 15M L3	—	—	485	300	460	350	460	350	485	400	490	450

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3/V 15M L4

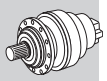


FP T_{2max} = 1,194,850 lb·in

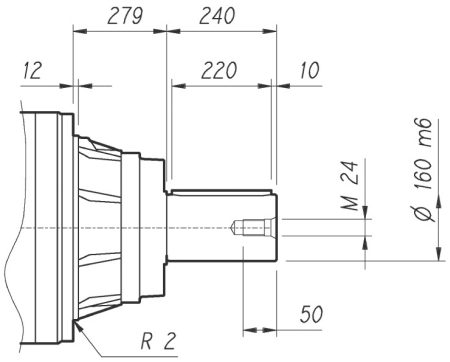
Dimensions are in mm

	L				L1	L2	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP						PC - PZ	HC - HZ	FZ - FZP	FP
3/V 15M L4	989	710	710	710	150	190	35	185	65	690	560	470	520

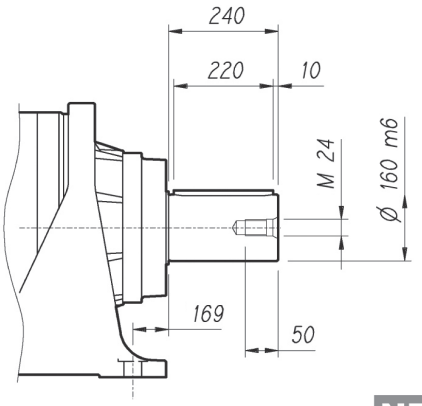
	P100	P112	P132		P160		P180		P200		P225	
	P	P	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 15M L4	250	250	—	300	—	350	—	—	—	—	—	—

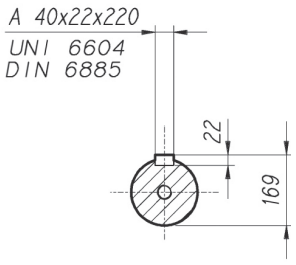


HC

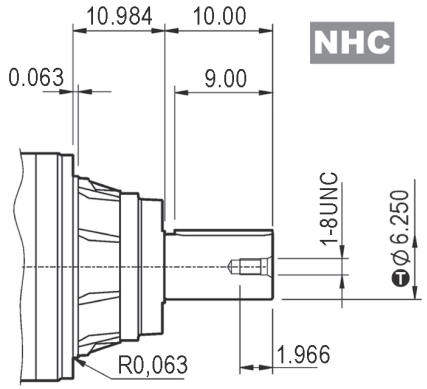


PC

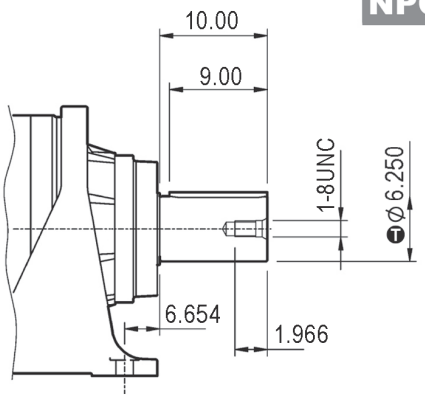


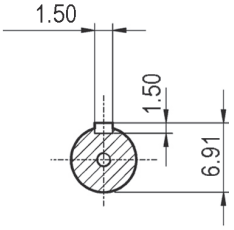


NHC

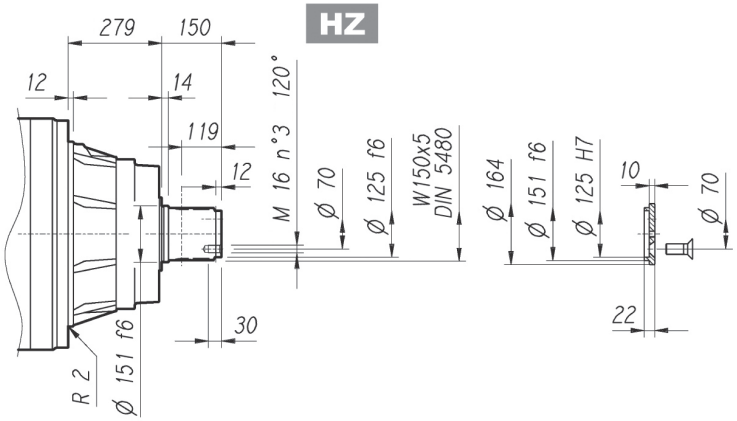


NPC

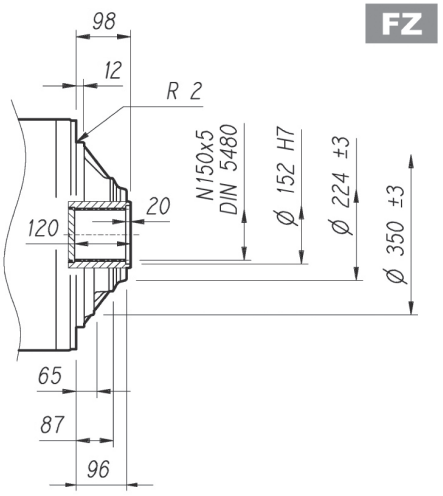




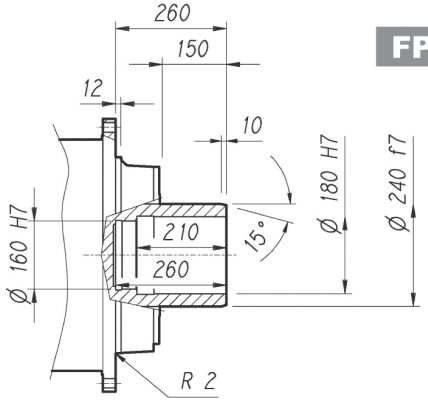
HZ



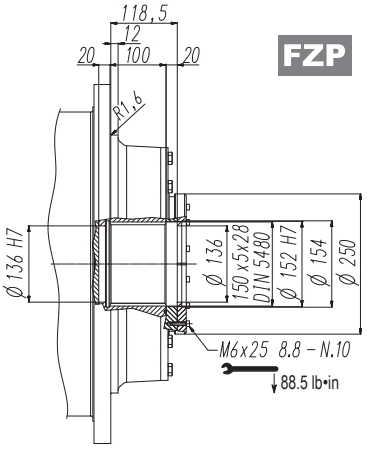
FZ



FP



FZP



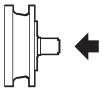
FP | **T_{2max} = 1,194,850 lb·in**

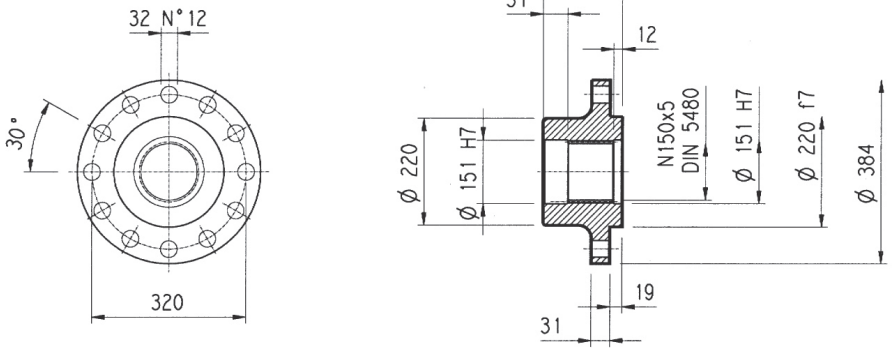
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

inch	T
6.250	+0.00157 +0.00059

Flange

W0A



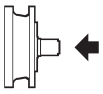


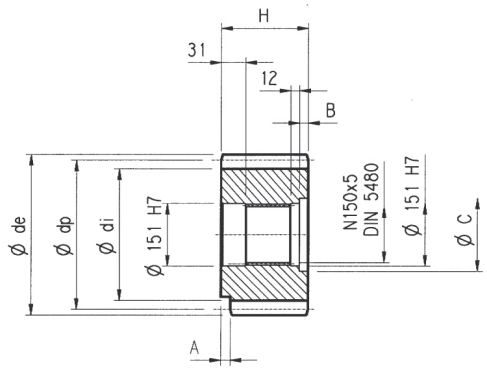
Material: Steel C40

Dimensions are in mm

Pinions

P...





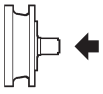
Dimensions are in mm

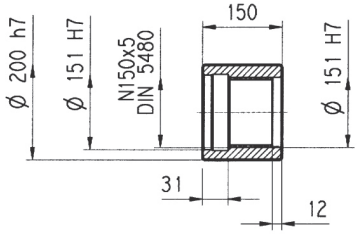
α = 20°

	m	z	x	dp	di	de	H	A	B	C	Material
PRG1	18	16	0.500	288	261	342	160	—	10	166	Steel 18NiCrMo5 case hardened
PRG2	18	16	0.617	288	271	339	150	30	—	—	Steel 39NiCrMo3 hardened and tempered

Sleeve coupling

M0A





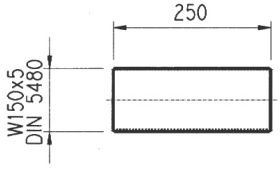
Material: Steel 16CrNi4

Dimensions are in mm

Splined bars

B0A

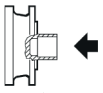


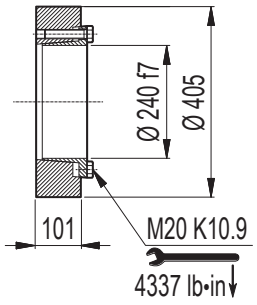


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

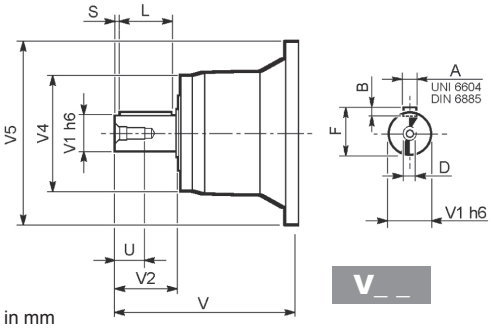




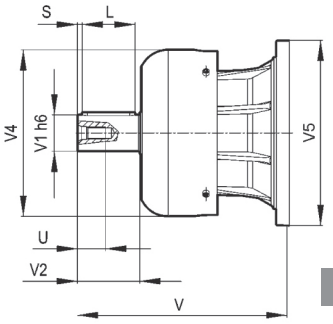
Dimensions are in mm

315M L 315M R

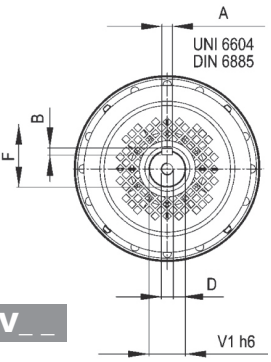




V_ _



FV_ _

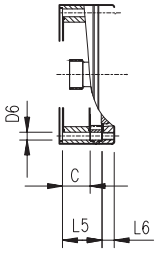


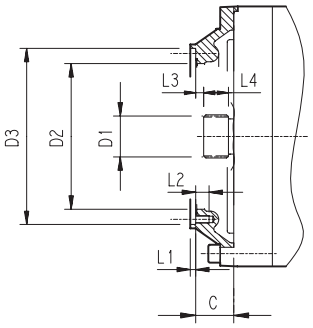
Dimensions are in mm

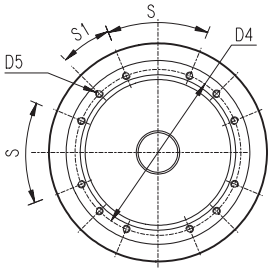
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
315M L1	**V15B**	556	120	210	230	542	32	18	127	180	15	M24	50
315M L2	**V11B**	348	80	130	200	428	22	14	85	110	10	M16	36
	FV11B	456	80	130	347.5	428	22	14	85	110	10	M16	36
315M L3	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
315M L4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
315M R3 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
315M R4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36

315M L 315M R





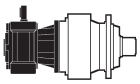


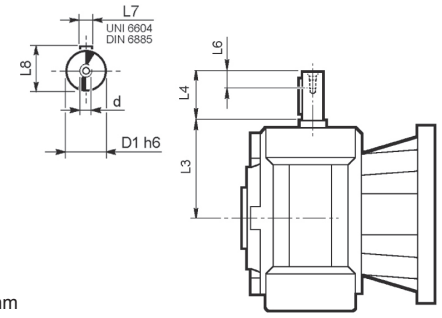


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
315M L1	**V9AE**	116	100x94 DIN 5482	340	412 H7	390	M16 n°18	—	7	30	8	55	—	—	20°	20°	E
315M L2	**V9AD**	81	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	8.5	40	—	—	60°	30°	D
315M L3	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
315M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
315M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
315M R3 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B

3/V 15M L



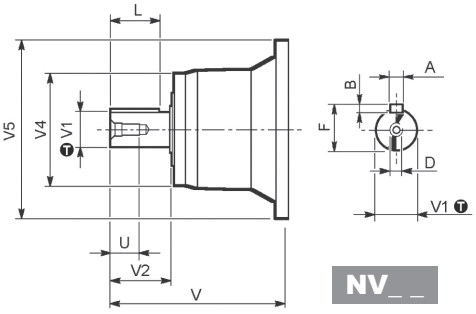


Dimensions are in mm

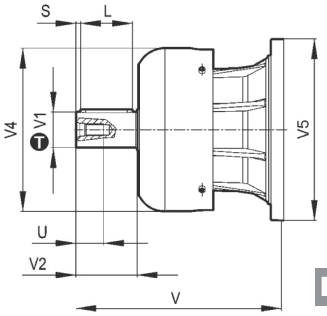
	D1 h6	L3	L4	L6	L7	L8	d
3/V 15M L3_HS	48	230	110	40	14	51.5	M16
3/V 15M L4_HS	35	185	65	20	10	38	M8

315M L 315M R

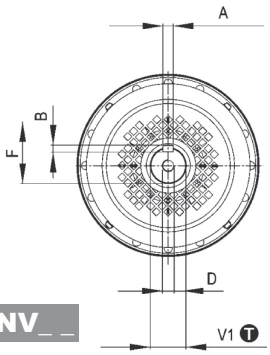




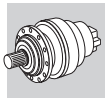
NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053



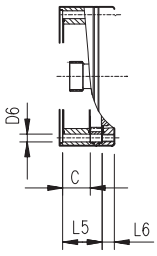
Imperial

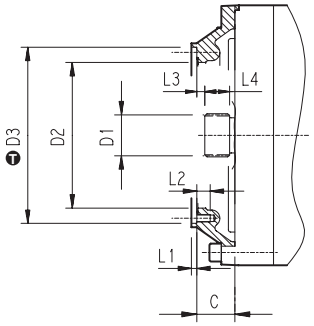
Dimensions are in Inch except when shown in *italic [mm]*

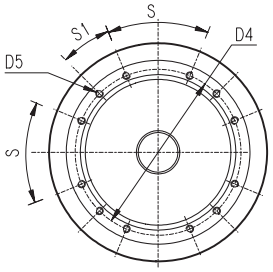
		V	V1	V2	V4	V5	A	B	F	L	D	U
315M L2	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
315M L3	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
315M L4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
315M R3 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
315M R4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417

315M L 315M R





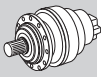




inch	T
16.22	+0.00248 0
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0

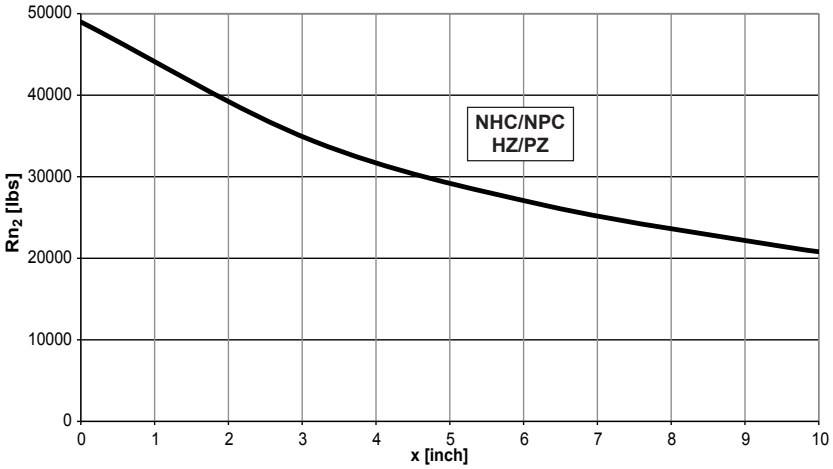
Dimensions are in Inch except when shown in *italic [mm]*

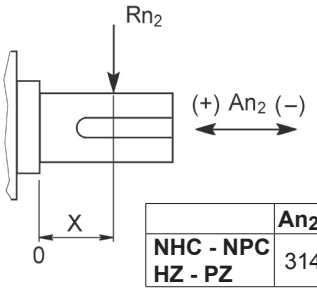
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
315M L1	**V9AE**	4.57	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n°18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
315M L2	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
315M L3	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
315M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
315M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A
315M R3 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B



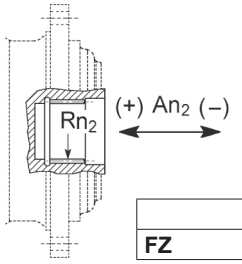
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





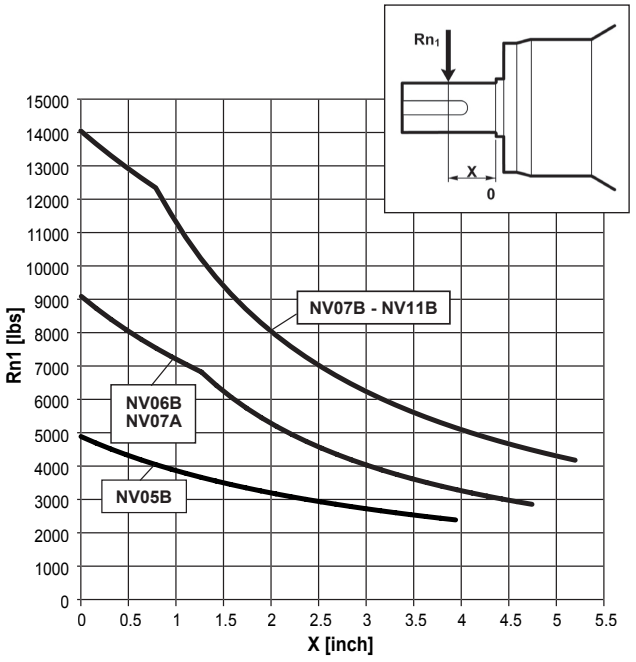
	An2 (+)	An2 (-)
NHC - NPC HZ - PZ	31472	23604

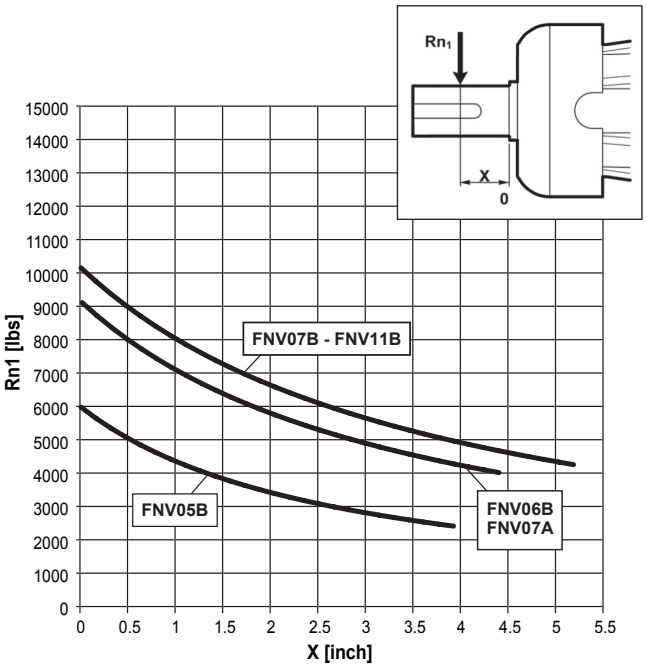


	Rn2	An2 (+/-)
FZ	9391	9391

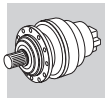
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		NHC - NPC - HZ -PZ	**2.00**	**1.52**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

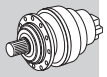




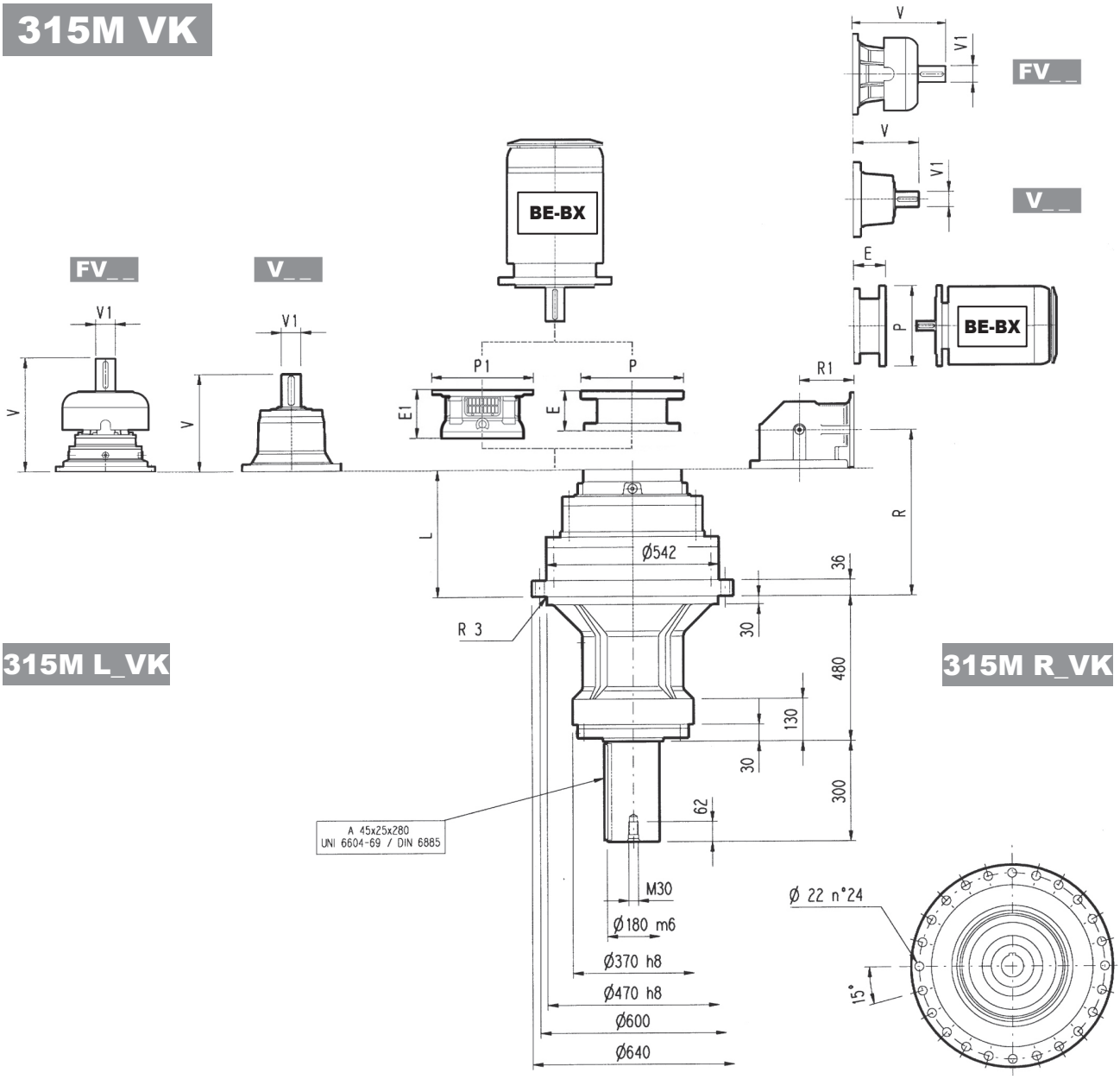
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



315M VK



Metric



315M L_VK

315M R_VK

	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
315M L2	—	—	—	—	—	—	250	580	250	580
315M L3	—	—	—	—	197	530	227	530	227	550
315M L4	165	400	165	400	195	400	195	450	—	—

NOTE: for R design contact Bonfiglioli Technical Service

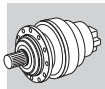
Dimensions are in mm

	L	Kg													P132		P160		P180		P200		P225		P250	
			V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	E	P	E	P	E	P	E	P	E	P	E	P
315M L2	386	650	348	80	55	—	—	—	456	80	85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
315M L3	519	700	315	80	35	313	60	28	375	80	48	363	60	34	—	—	—	—	195	350	186	400	216	450	215	550
315M L4	608	710	239	48	15	—	—	—	276	48	17	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—

	R	R1	Kg														P132		P160		P180		P200		P225		P250	
				V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	E	P	E	P	E	P	E	P	E	P	E	P
315M R3 (B)	611	345	720	307	60	23	—	—	—	357	60	28	—	—	—	—	—	—	—	—	152	350	182	400	212	450	193	550
315M R3 (C)	611	390	730	307	60	23	—	—	—	357	60	28	—	—	—		—	—	—	—	152	350	182	400	212	450	193	550
315M R4	638	225	690	239	48	15	—	—	—	276	48	17	—	—	—	114	300	144	350	144	350	174	400	—	—	—	—

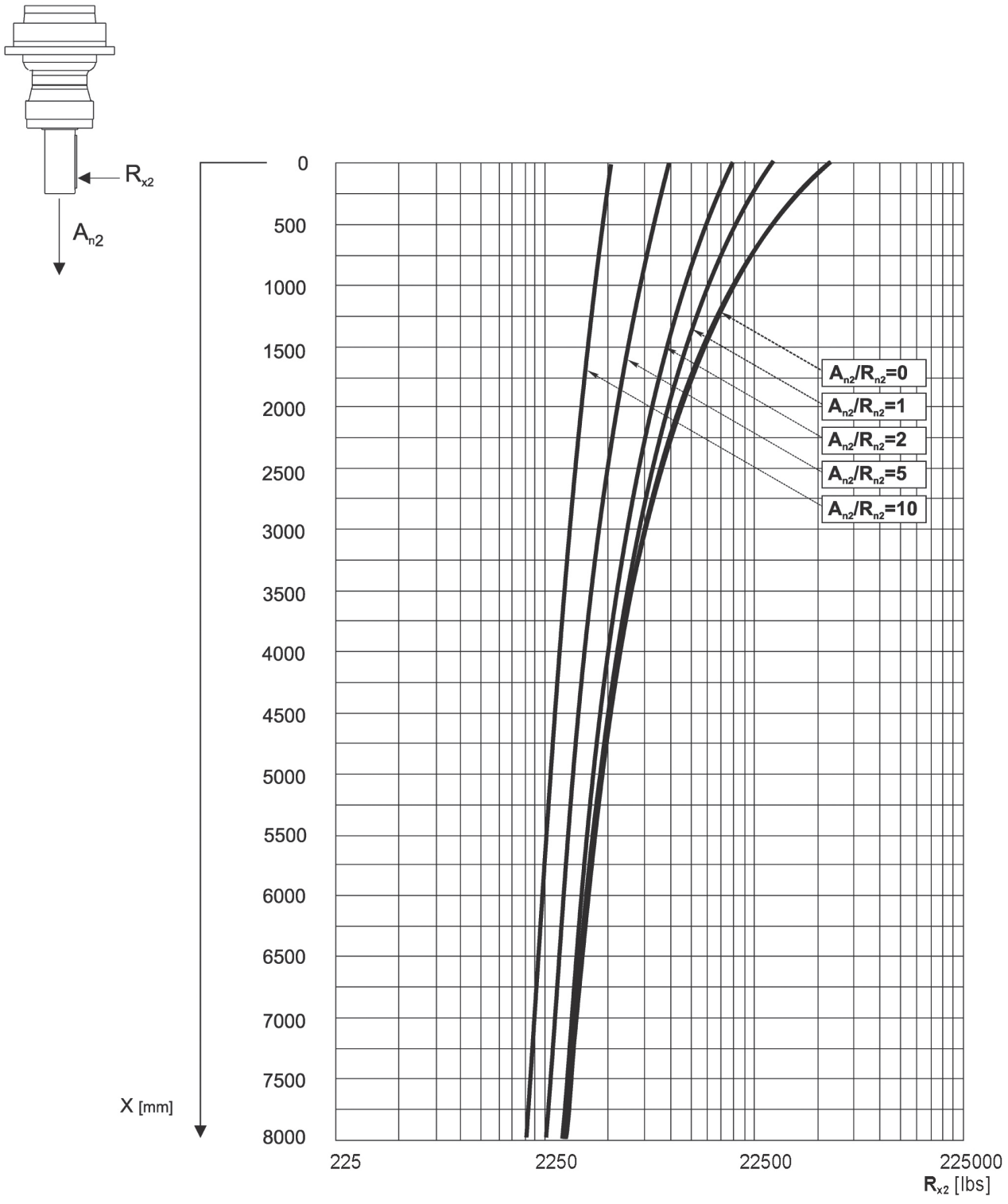
Bonfiglioli Riduttori

315M VK

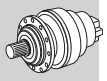


Metric

The diagram below allows the calculation of permitted overhung load R_{x2} on the output shaft of gearbox, with radial force applying at a distance x from shaft shoulder.
The curves are relevant to value resulting from the relationship of trust load A_{n2} to radial load R_{n2}, based on n_2 = 10 rpm and 10000 hrs theoretical lifetime.

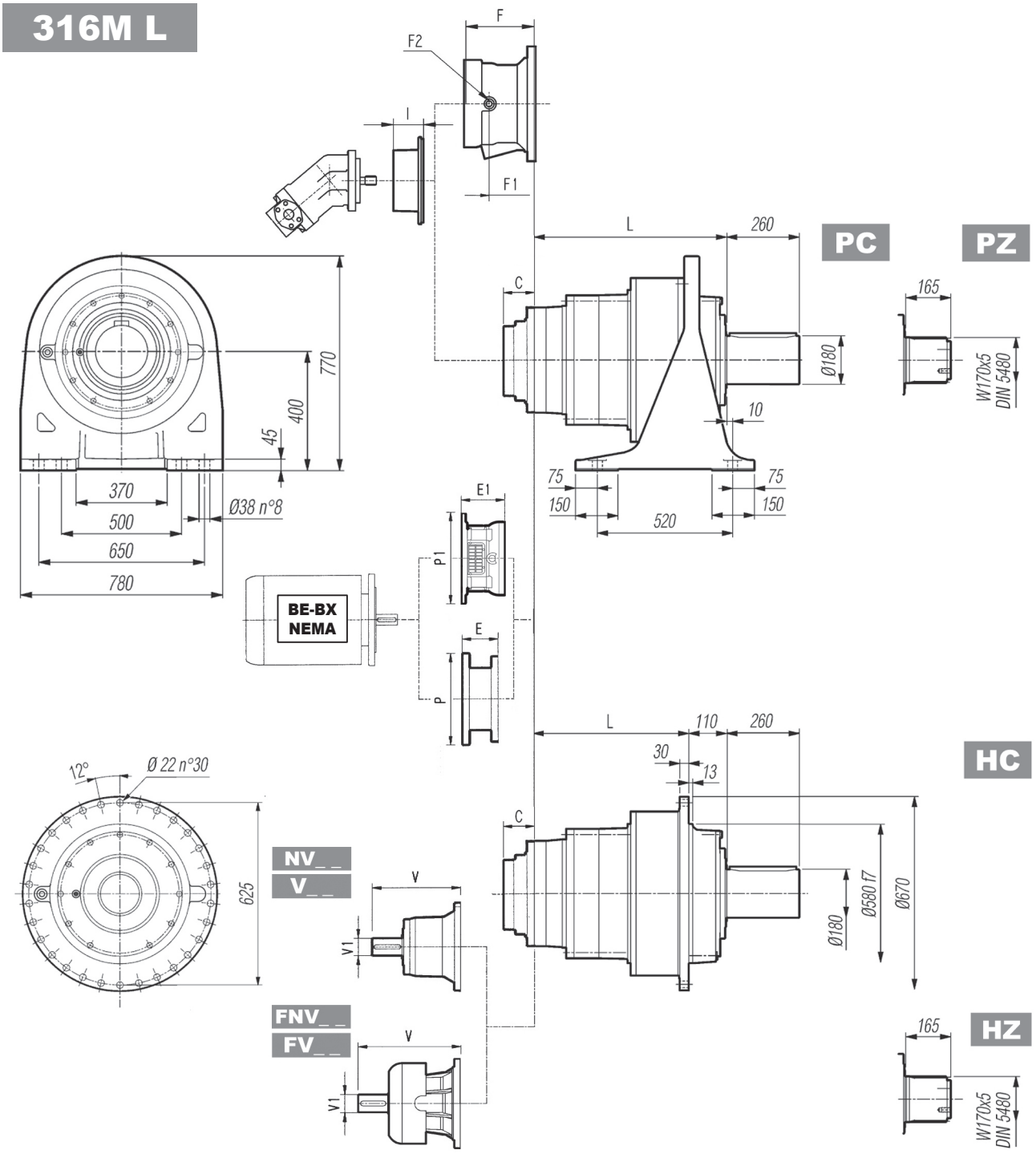


316M L



Metric

Imperial

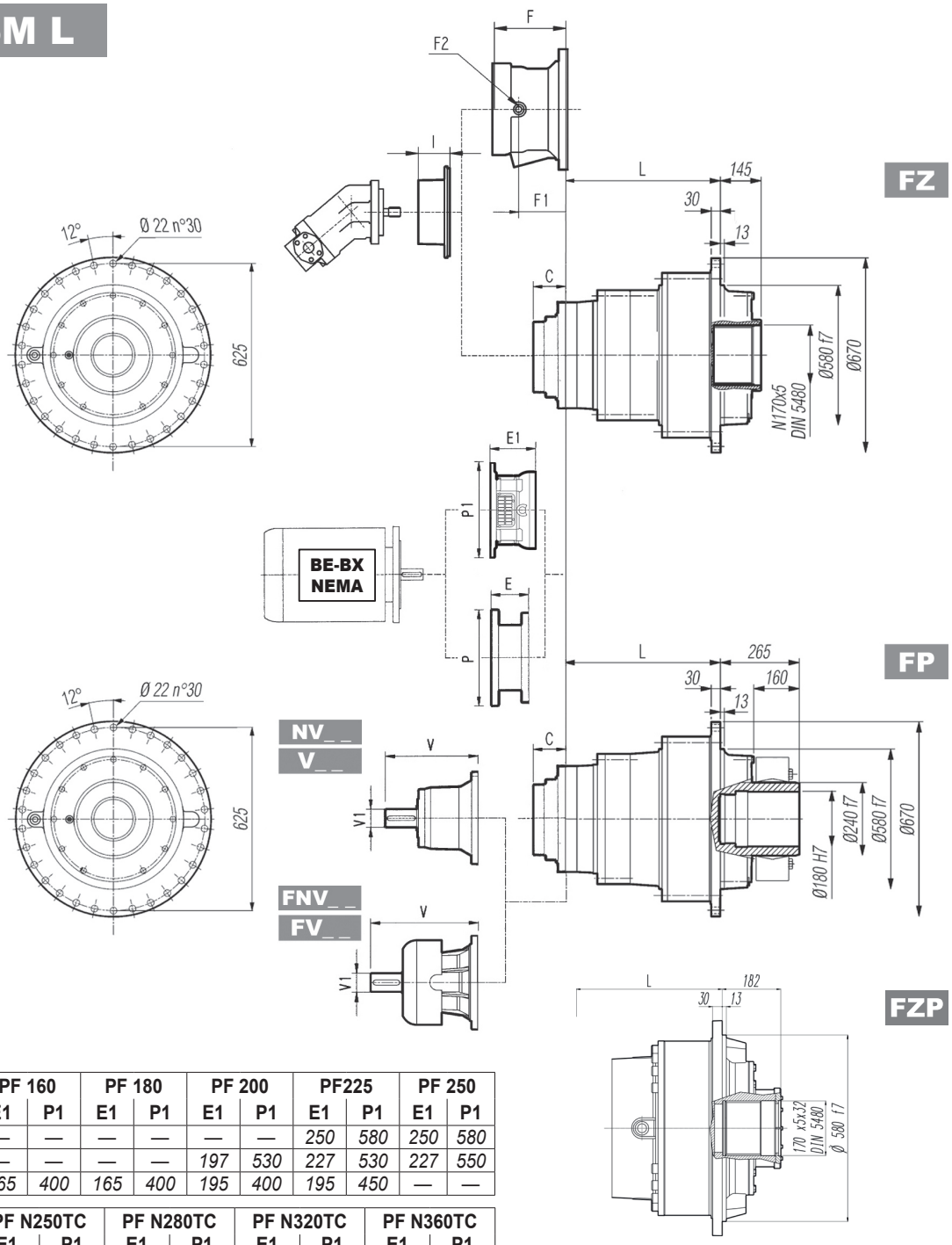


Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L				Kg							I	F	F1	F2	Type	Input	Kg
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	C	C	Input							
316M L1	*289*	*179*	*179*	*179*	*700*	*500*	*430*	*450*	*156*	6.142	E		—	—	—	—	—	—
316M L2	*541*	*431*	*431*	*431*	*790*	*590*	*520*	*540*	*81*	3.189	D		—	—	—	—	—	—
316M L3	*674*	*564*	*564*	*564*	*840*	*640*	*570*	*590*	*51*	2.008	B	522	*201*	*153*	1/4 G	6	B	*28*
316M L4	*763*	*653*	*653*	*653*	*860*	*660*	*590*	*610*	*37*	1.457	A		*145*	*95*	1/4 G	5	A	*16*

	V_ _						FV_ _						NV_ _						FNV_ _					
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs
316M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
316M L2	*348*	*80*	*55*	—	—	—	*456*	*80*	*85*	—	—	—	13.563	3.000	121.3	—	—	—	17.835	3.000	140.0	—	—	—
316M L3	*315*	*80*	*35*	*313*	*60*	*28*	*375*	*80*	*48*	*363*	*60*	*34*	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0
316M L4	*239*	*48*	*15*	—	—	—	*276*	*48*	*17*	—	—	—	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—

316M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
316M L2	—	—	—	—	—	—	*250*	*580*	*250*	*580*
316M L3	—	—	—	—	*197*	*530*	*227*	*530*	*227*	*550*
316M L4	*165*	*400*	*165*	*400*	*195*	*400*	*195*	*450*	—	—

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
316M L2	—	—	—	—	—	—	12.402	22.835
316M L3	—	—	—	—	9.921	20.866	11.496	20.866
316M L4	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

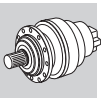
FP	T_{2max} = 1,575,430 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
316M L2	—	—	—	—	—	—	*267*	*400*	*297*	*450*	*297*	*550*
316M L3	—	—	—	—	*195*	*350*	*186*	*400*	*216*	*450*	*215*	*550*
316M L4	*114*	*300*	*144*	*350*	*144*	*350*	*174*	*400*	—	—	—	—

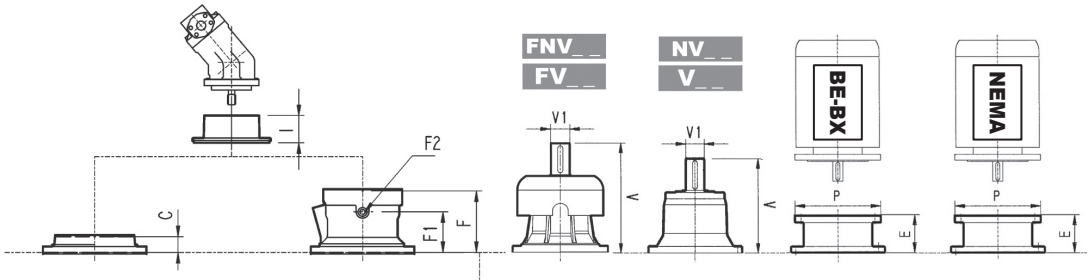
	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
316M L2	—	—	—	—	—	—	—	—
316M L3	—	—	—	—	8.445	15.748	8.445	15.748
316M L4	5.216	11.811	6.221	13.780	—	—	—	—

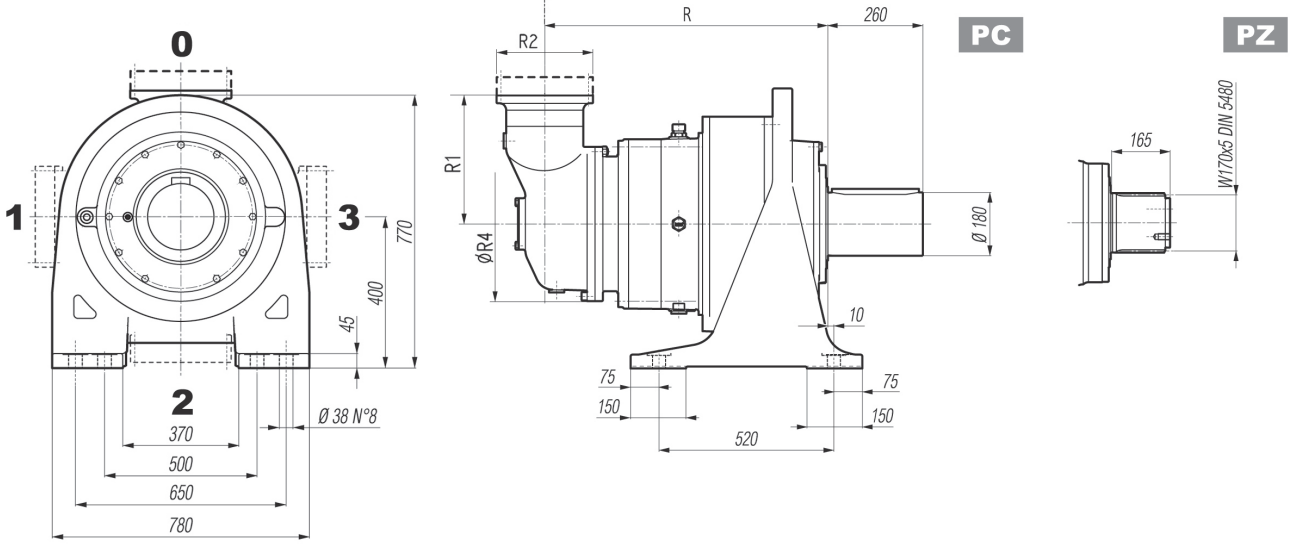
316M R

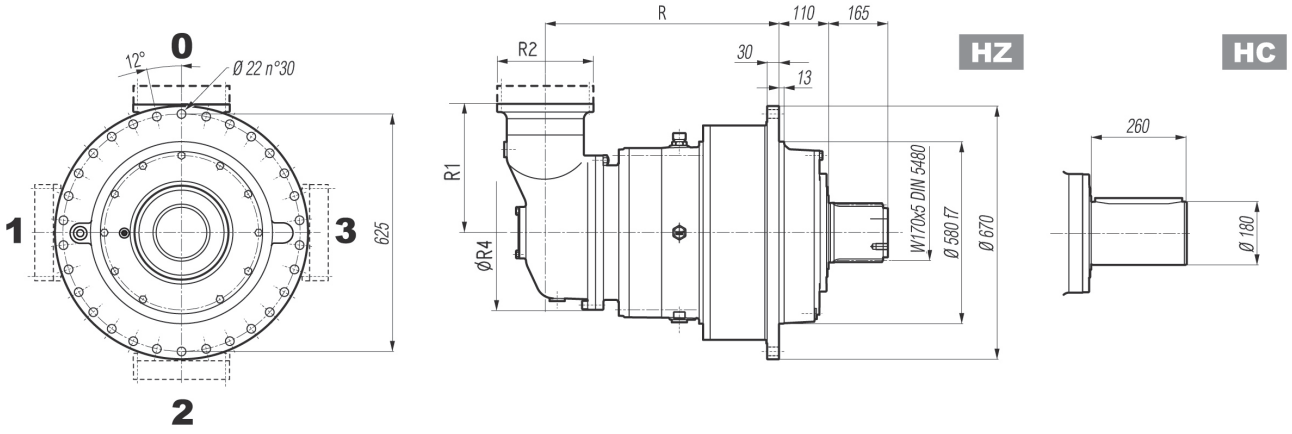


Metric

Imperial







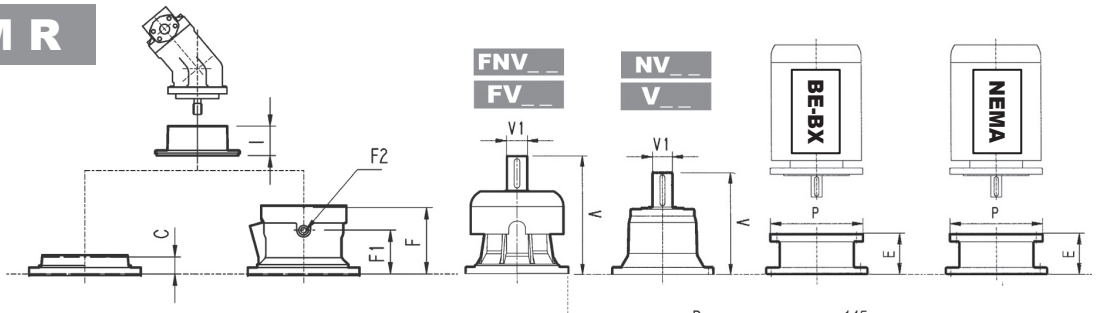
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

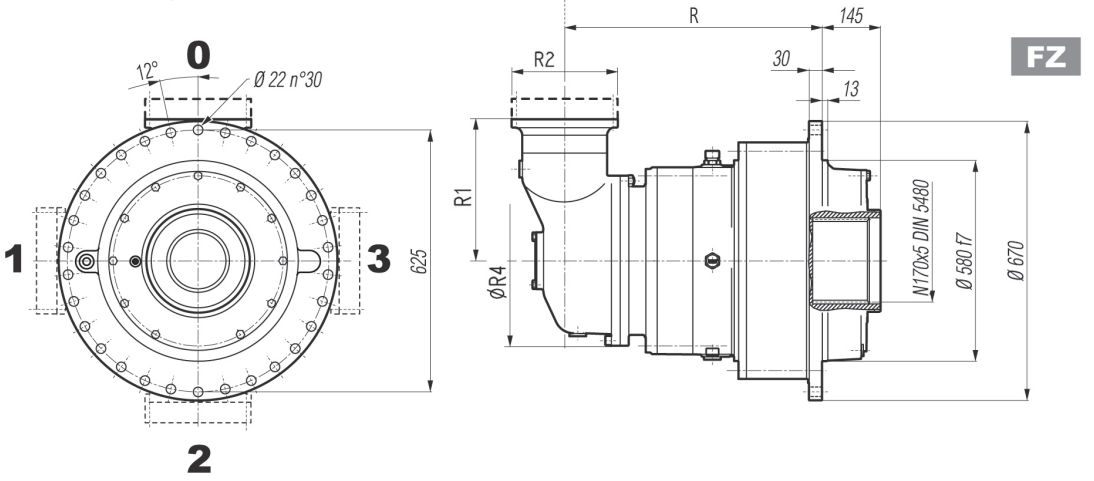
	R				R1	R2	R4	Kg				C	C	Input	I	F	F1	F2	Type	Input	Kg
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP										
316M R3 (B)	*766*	*656*	*656*	*656*	*345*	*292*	*400*	*910*	*710*	*640*	*660*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
316M R3 (C)	*766*	*656*	*656*	*656*	*390*	*292*	*480*	*920*	*720*	*650*	*670*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
316M R4	*793*	*683*	*683*	*683*	*225*	*245*	*345*	*890*	*690*	*620*	*640*	*37*	1.457	A	522	*145*	*95*	1/4 G	5	A	*16*

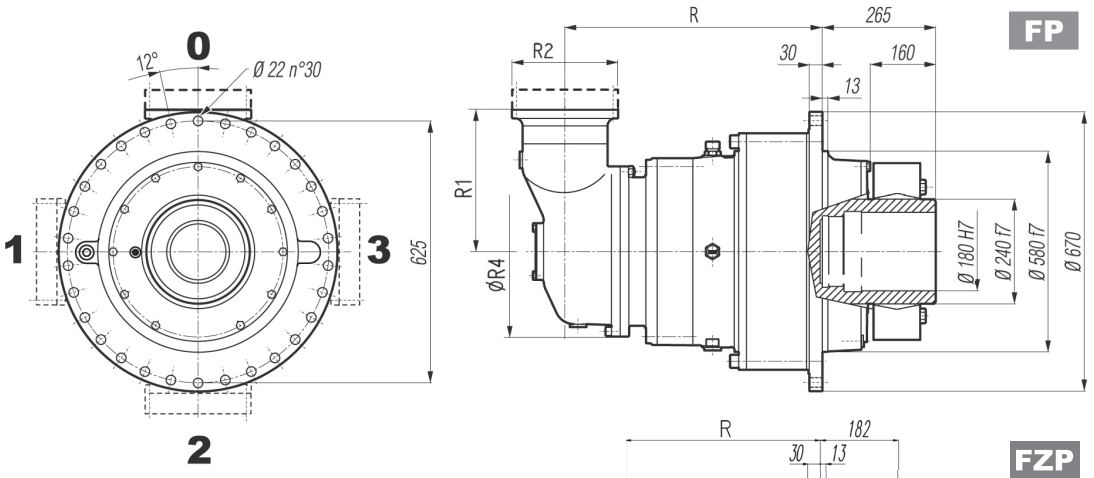
	V_ _			FV_ _			NV_ _			FNV_ _		
	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
316M R3 (B)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
316M R3 (C)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
316M R4	*239*	*48*	*15*	*276*	*48*	*17*	9.681	1.875	33.1	11.138	1.875	38.0

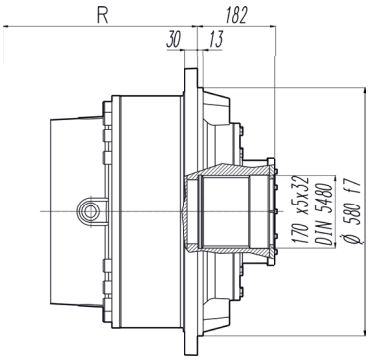
Bonfiglioli Riduttori

316M R









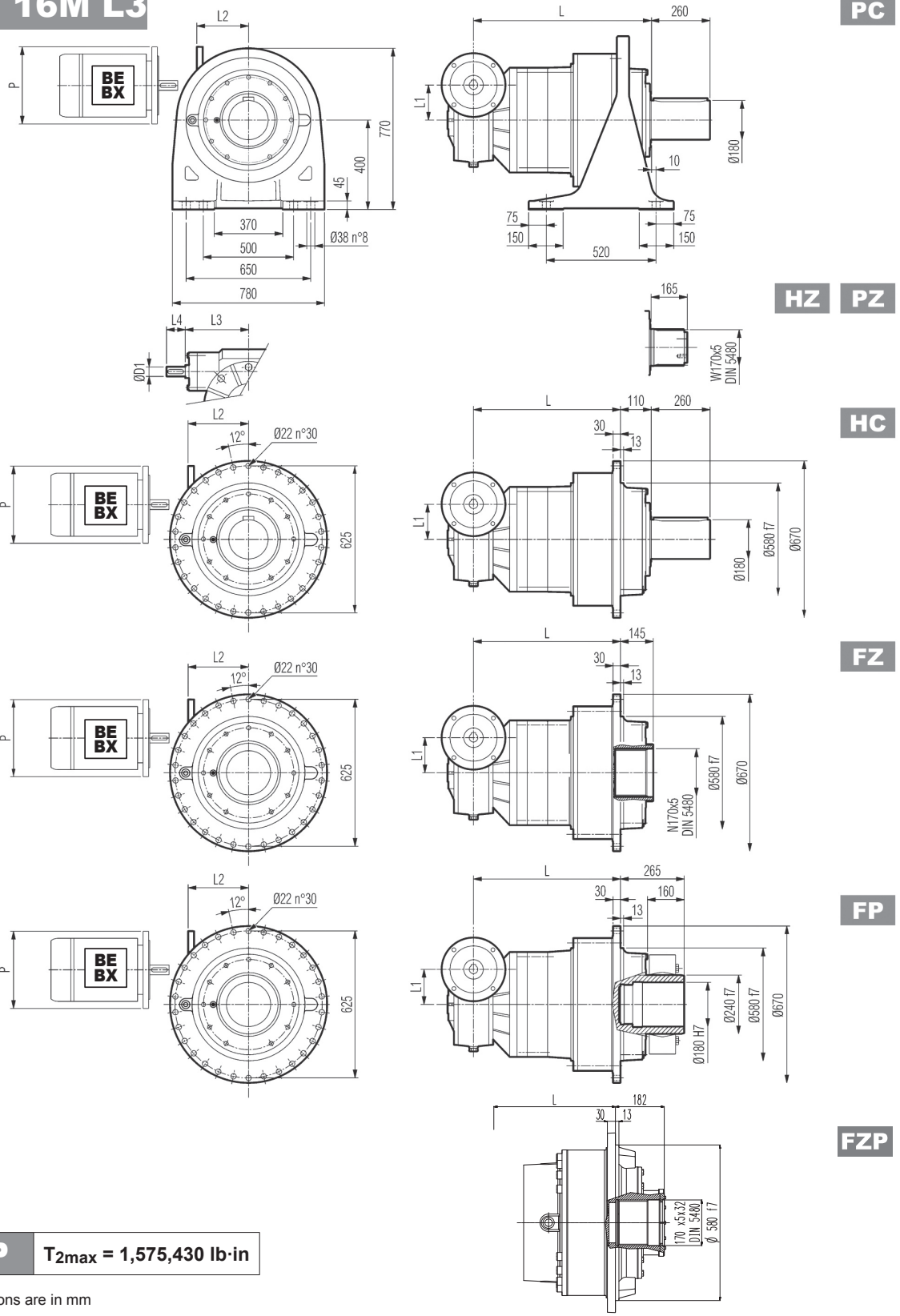
FP T_{2max} = 1,575,430 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
316M R3 (B)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
316M R3 (C)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
316M R4	*114*	*300*	*144*	*350*	*144*	*350*	*174*	*400*	—	—	—	—

	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
316M R3 (B)	—	—	—	—	7.776	13.780	7.776	13.780
316M R3 (C)	—	—	—	—	7.776	13.780	7.776	13.780
316M R4	5.216	11.811	6.221	13.780	—	—	—	—

3/V 16M L3



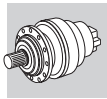
FP T_{2max} = 1,575,430 lb·in

Dimensions are in mm

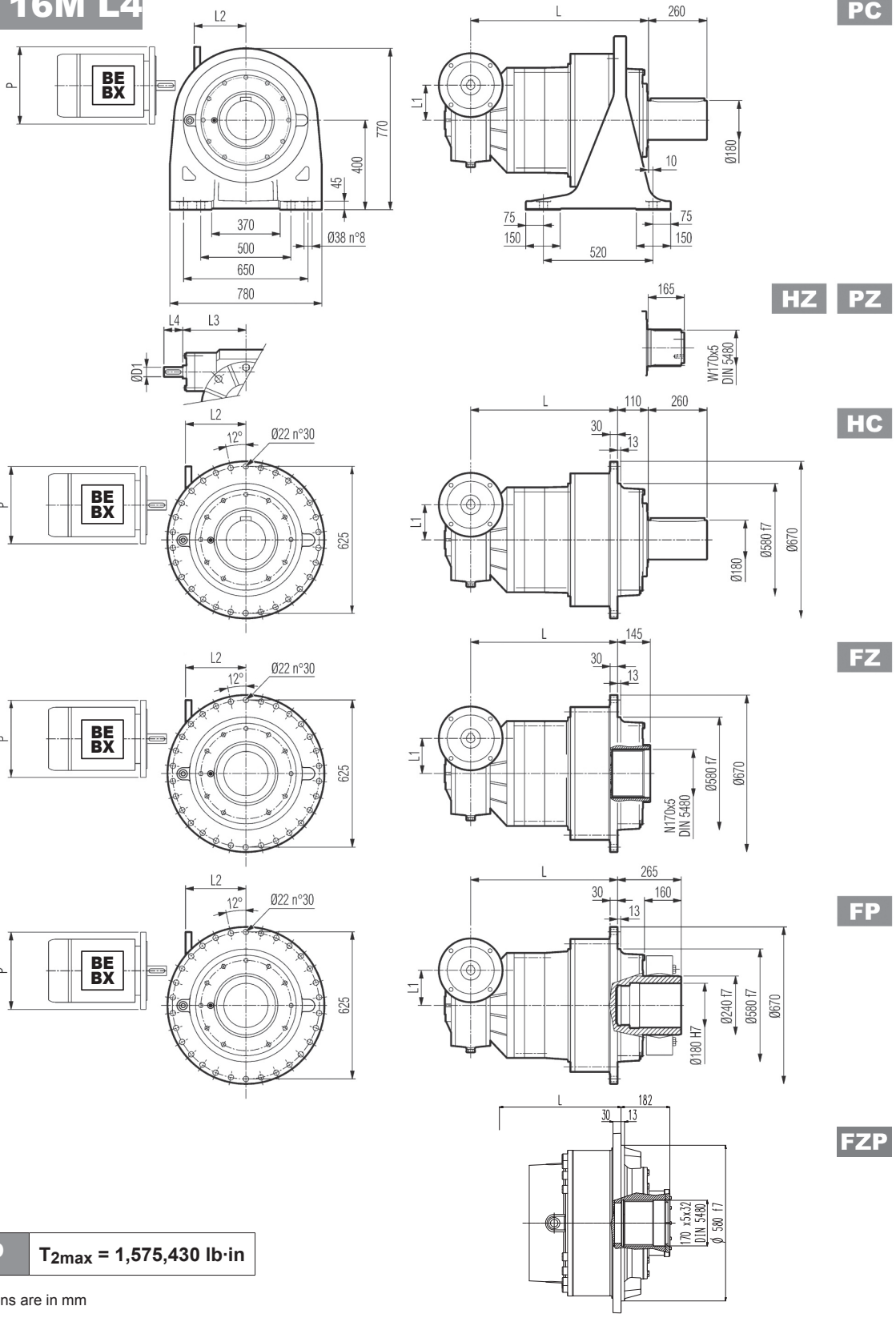
	L				L1	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP					PC - PZ	HC - HZ	FZ - FZP	FP
3/V 16M L3	812	702	702	702	250	55	274	110	1100	900	830	850

	P132		P160		P180		P200		P225	
	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 16M L3	531	300	506	350	506	350	531	400	536	450

3/V 16M L4



Metric

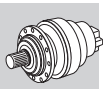


FP T_{2max} = 1,575,430 lb·in

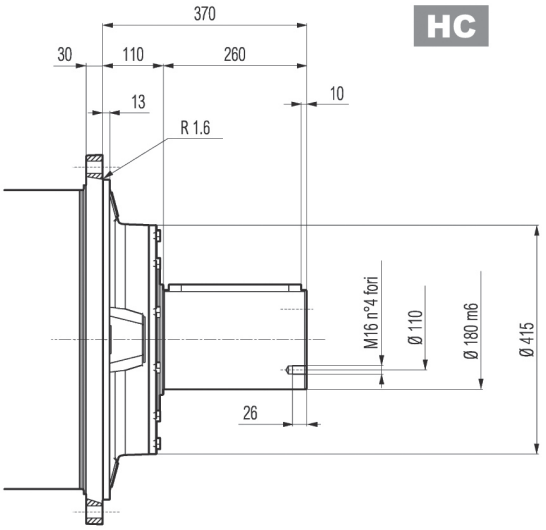
Dimensions are in mm

	L				L1	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP					PC - PZ	HC - HZ	FZ - FZP	FP
3/V 16M L4	865	755	755	755	150	35	185	65	900	700	630	650

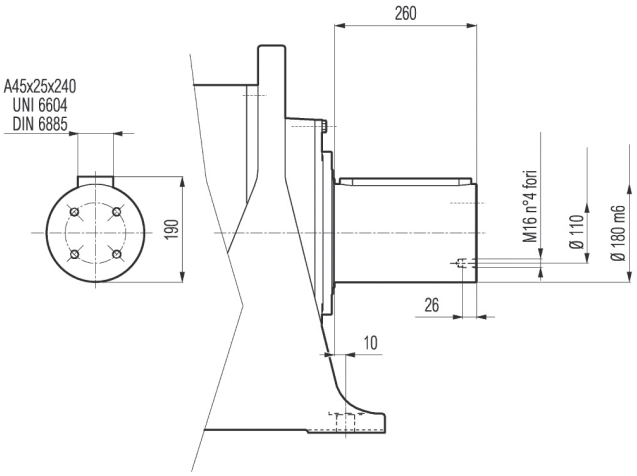
	P100		P112		P132		P160	
	L2	P	L2	P	L2	P	L2	P
3/V 16M L4	190	250	190	250	190	300	190	350



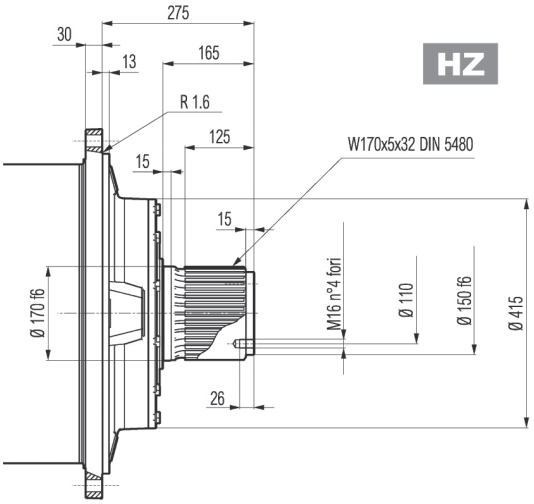
HC



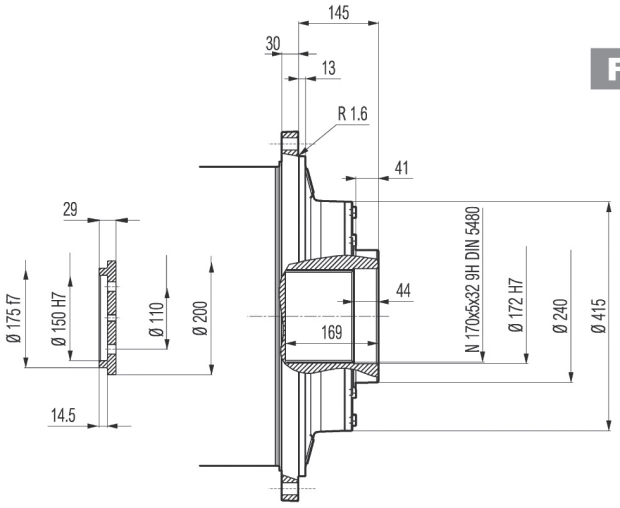
PC



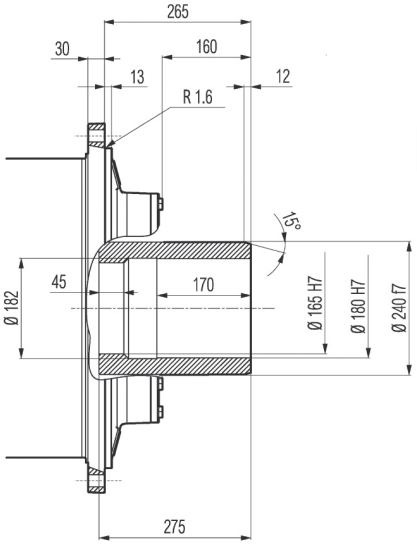
HZ



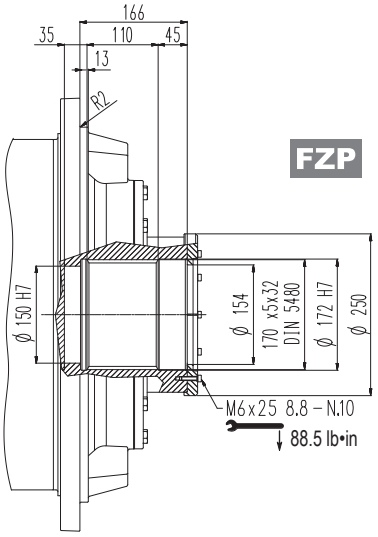
FZ



FP

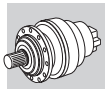


FZP



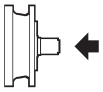
FP | **T_{2max} = 1,575,430 lb·in**

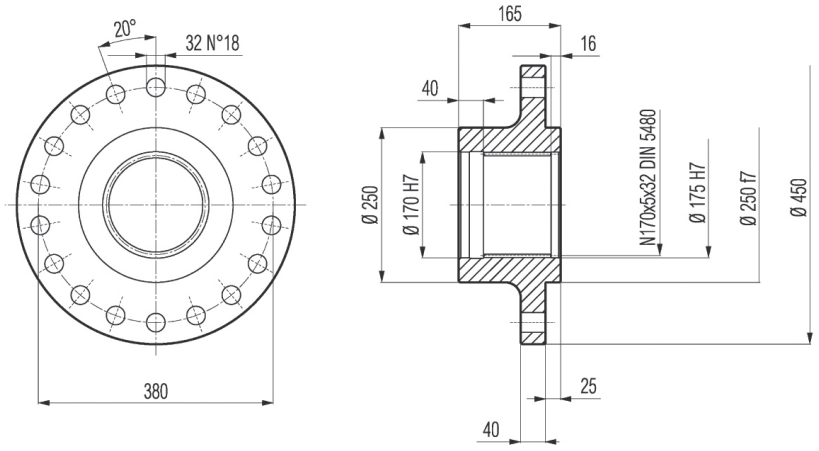
Dimensions are in mm



Flange

W0A



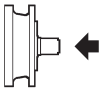


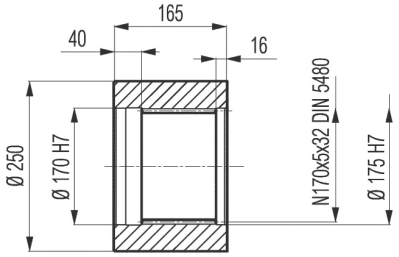
Material: Steel C40

Dimensions are in mm

Sleeve coupling

M0A





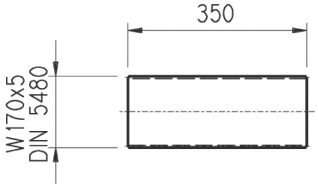
Material: Steel C40

Dimensions are in mm

Splined bars

B0A

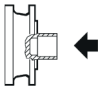


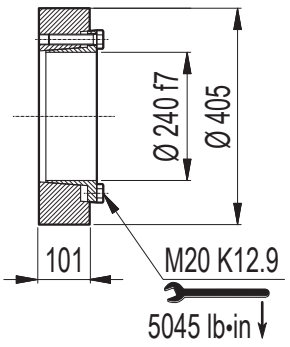


Material: Case hardening steel 18NiCrMo5 UNI 5331
must be case hardened 50-55 HRC

Shrink disc

G0A

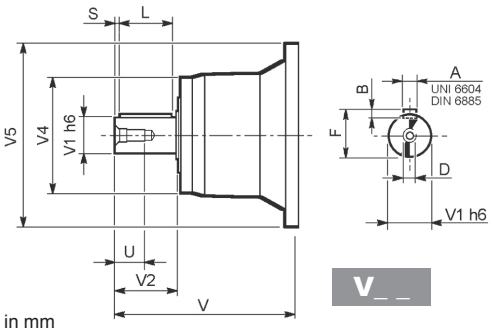




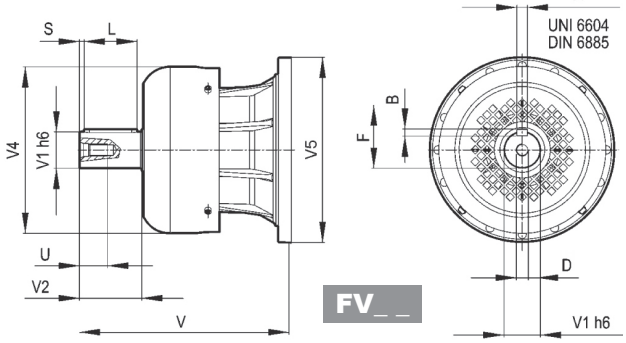
Dimensions are in mm

316M L 316M R





V_ _



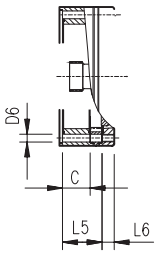
FV_ _

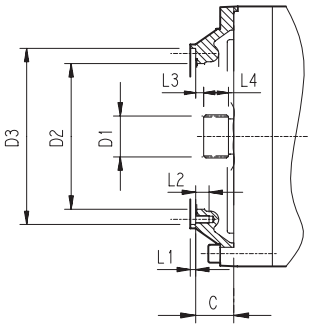
Dimensions are in mm

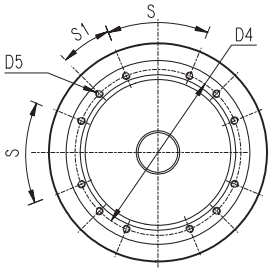
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
316M L2	**V11B**	348	80	130	200	428	22	14	85	110	10	M16	36
	FV11B	456	80	130	347.5	428	22	14	85	110	10	M16	36
316M L3	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
316M L4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
316M R3 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
316M R4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36

316M L 316M R





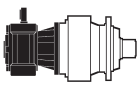


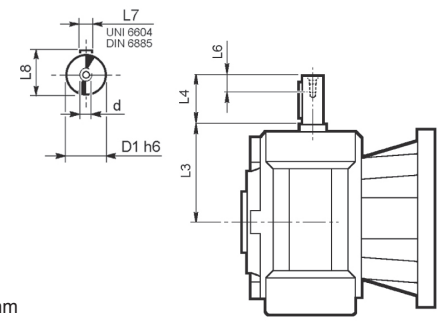


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
316M L1	**V9AE**	156	100x94 DIN 5482	340	412 H7	390	M16 n° 18	—	7	30	8	55	—	—	20°	20°	E
316M L2	**V9AD**	81	80x74 DIN 5482	270	335 H7	314	M16 n° 8	—	5	30	8.5	40	—	—	60°	30°	D
316M L3	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n° 12	—	4	18	11	22	—	—	45°	22.5°	B
316M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n° 8	—	4	18	9	18	—	—	45°	45°	A
316M R3 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10° 12	—	4	18	11	22	—	—	45°	22.5°	B
316M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n° 8	11	4	18	9	18	—	—	45°	45°	A

3/V 16M L



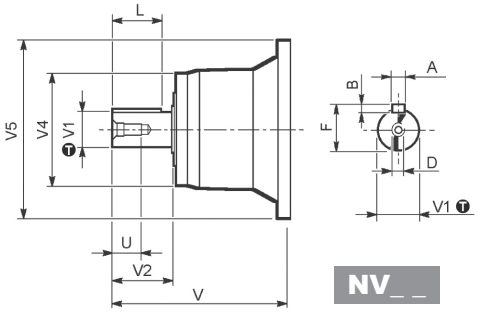


Dimensions are in mm

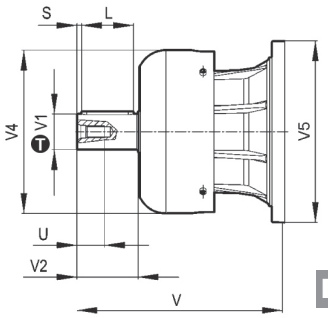
	D1 h6	L3	L4	L6	L7	L8	d
3/V 16M L3_HS	55	274	110	40	16	59	M16
3/V 16M L4_HS	35	185	65	20	10	38	M8

316M L 316M R

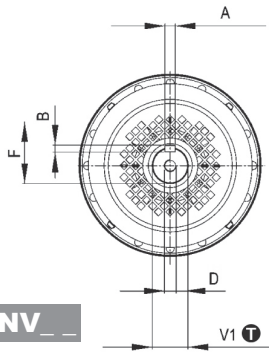




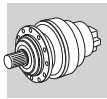
NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053



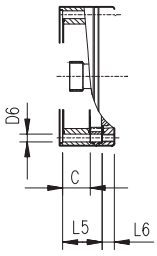
Imperial

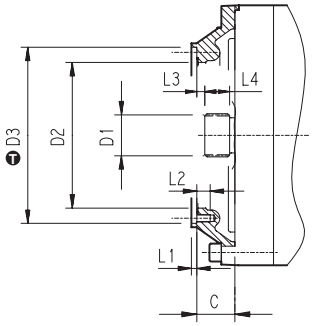
Dimensions are in Inch except when shown in *italic [mm]*

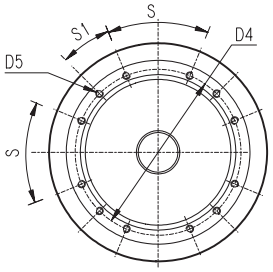
		V	V1	V2	V4	V5	A	B	F	L	D	U
316M L2	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
316M L3	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
316M L4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
316M R3 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
316M R4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417

316M L 316M R





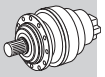




inch	T
16.22	+0.00248 0
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0

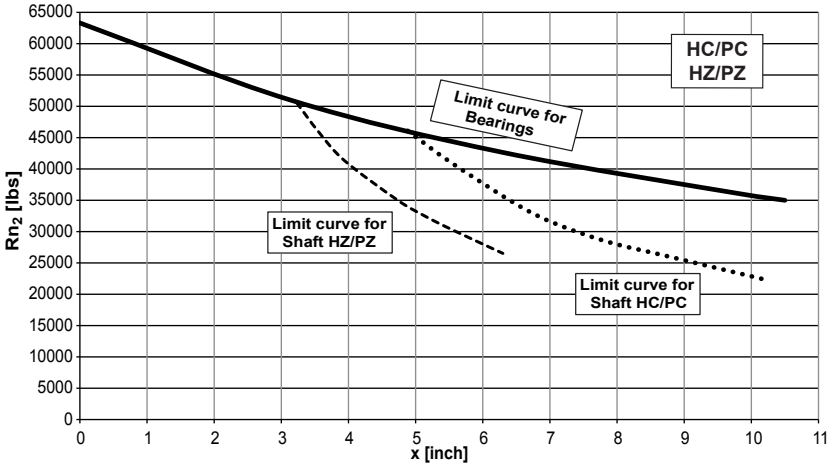
Dimensions are in Inch except when shown in *italic [mm]*

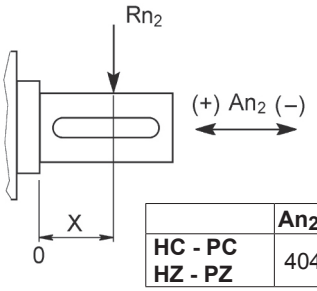
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
316M L1	**V9AE**	6.14	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n° 18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
316M L2	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n° 8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
316M L3	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n° 12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
316M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n° 8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
316M R3 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10° 12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
316M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n° 8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A



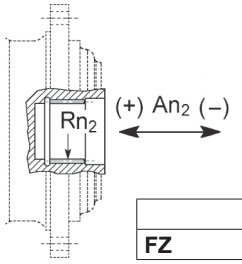
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





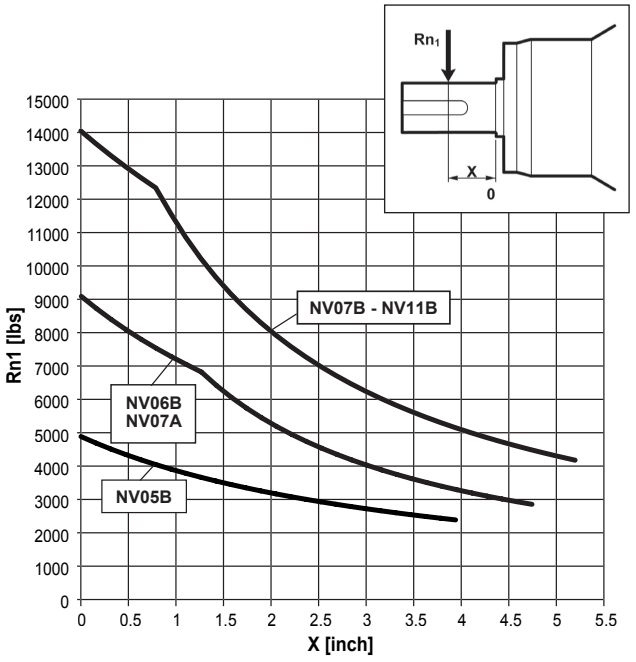
	An2 (+)	An2 (-)
HC - PC HZ - PZ	40464	33720

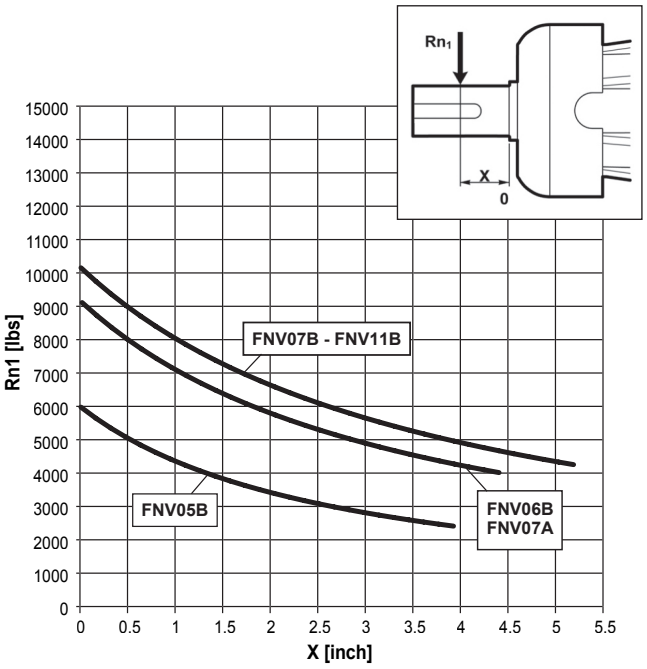


	Rn2	An2 (+/-)
FZ	15651	15651

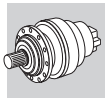
	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
Load corrective factor fh_2 on shafts	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		HC - PC	**1.16**	**1.00**	**1.00**	**1.00**	**0.62**	**0.50**
		HZ - PZ	**1.19**	**1.02**	**1.02**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





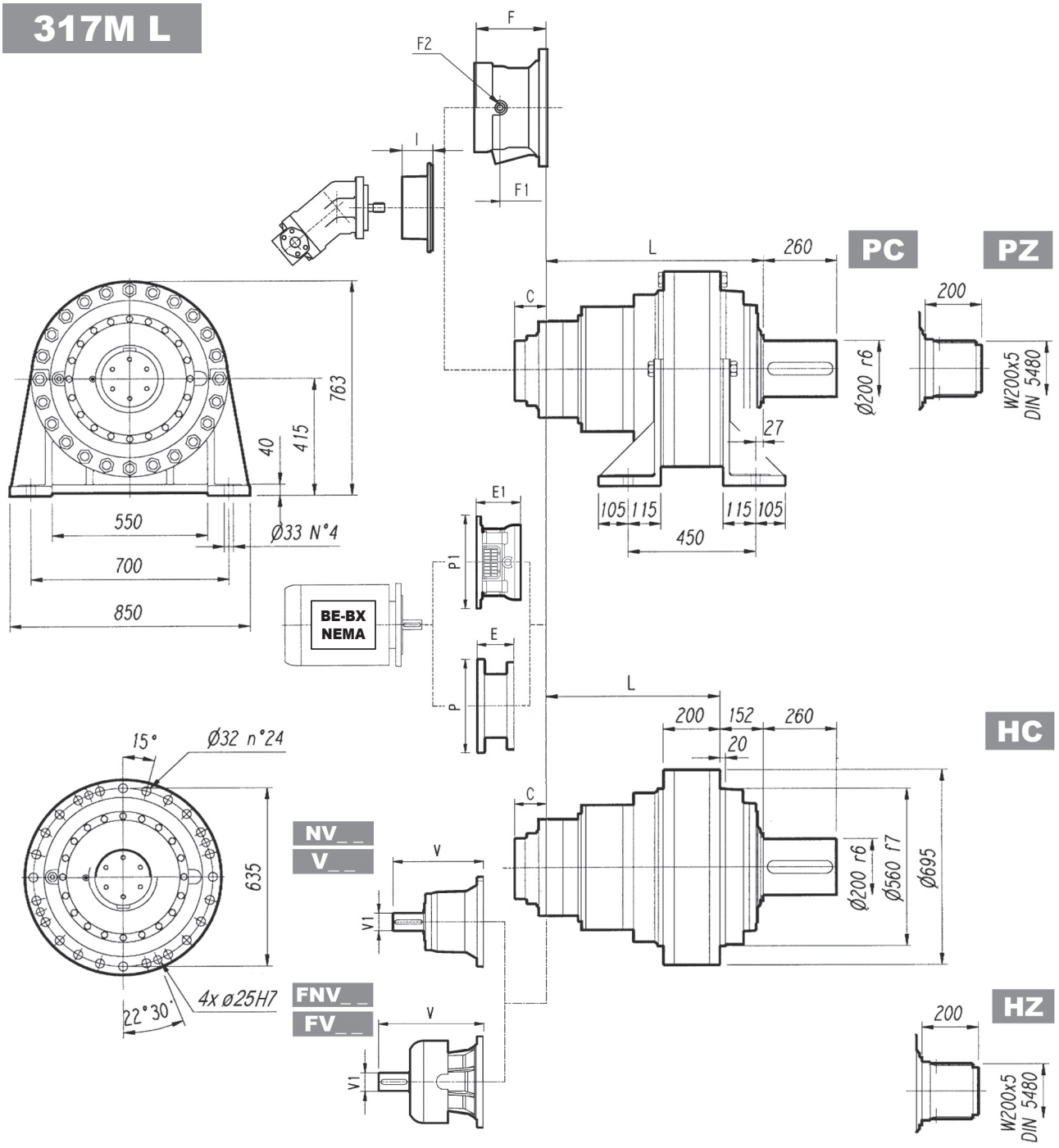
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



317M L

Metric

Imperial

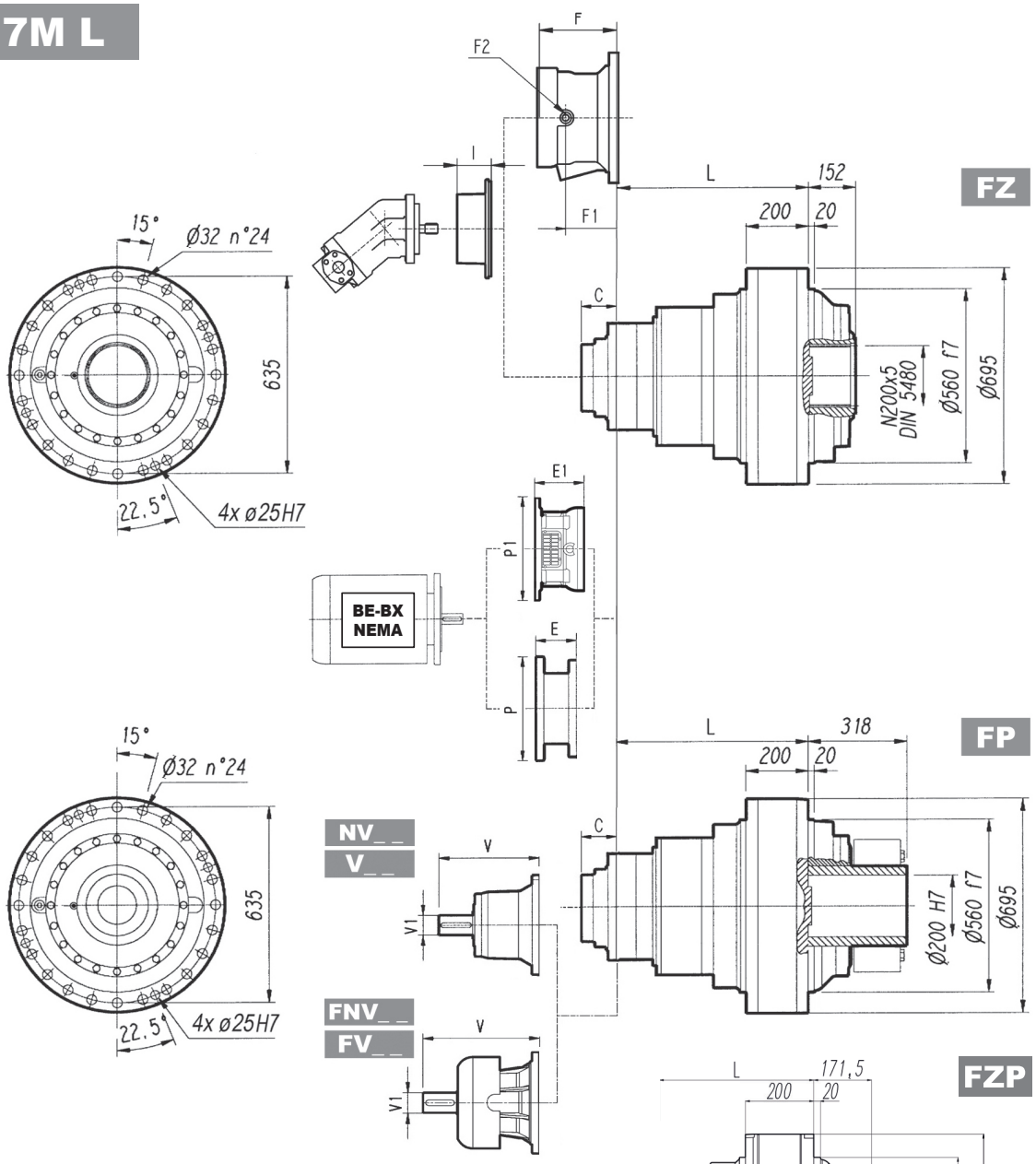


Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L				Kg							I	F	F1	F2	Type	Input	Kg
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	C	C	Input							
317M L1	*315*	*163*	*163*	*163*	*950*	*800*	*750*	*800*	*181*	7.126	F	522	—	—	—	—	—	—
317M L2	*624*	*472*	*472*	*472*	*1080*	*930*	*880*	*930*	*75*	2.953	D		—	—	—	—	—	—
317M L3	*774*	*622*	*622*	*622*	*1140*	*990*	*940*	*990*	*51*	2.008	B		*201*	*153*	1/4 G	6	B	*28*
317M L4	*862*	*710*	*710*	*710*	*1152*	*1000*	*952*	*1000*	*37*	1.457	A		*145*	*95*	1/4 G	5	A	*16*

	V_ _			FV_ _			NV_ _						FNV_ _					
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs
317M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
317M L2	343	80	55	—	—	—	451	80	71	—	—	—	13.563	3.000	121.3	—	—	—	17.835	3.00	140.0	—	—	—
317M L3	315	80	35	313	60	28	375	80	48	363	60	34	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.00	90.0
317M L4	239	48	15	—	—	—	276	48	17	—	—	—	9.681	1.875	33.1	—	—	—	11.138	1.875	38.0	—	—	—

317M L



	PF 160		PF 180		PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1	E1	P1	E1	P1
317M L3	—	—	—	—	*197*	*530*	*227*	*530*	*227*	*550*
317M L4	*165*	*400*	*165*	*400*	*195*	*400*	*195*	*450*	—	—

	PF N250TC		PF N280TC		PF N320TC		PF N360TC	
	E1	P1	E1	P1	E1	P1	E1	P1
317M L3	—	—	—	—	9.921	20.866	11.496	20.866
317M L4	8.661	15.748	8.661	15.748	9.843	15.748	10.236	17.717

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

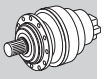
FP T_{2max} = 2,141,880 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
317M L3	—	—	—	—	*196*	*350*	*186*	*400*	*216*	*450*	*216*	*550*
317M L4	*114*	*300*	*144*	*350*	*144*	*350*	*174*	*400*	—	—	—	—

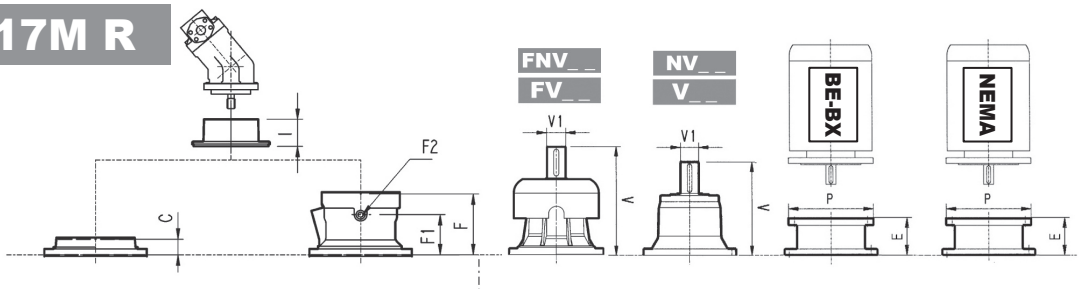
	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
317M L3	—	—	—	—	8.445	15.748	8.445	15.748
317M L4	5.216	11.811	6.221	13.780	—	—	—	—

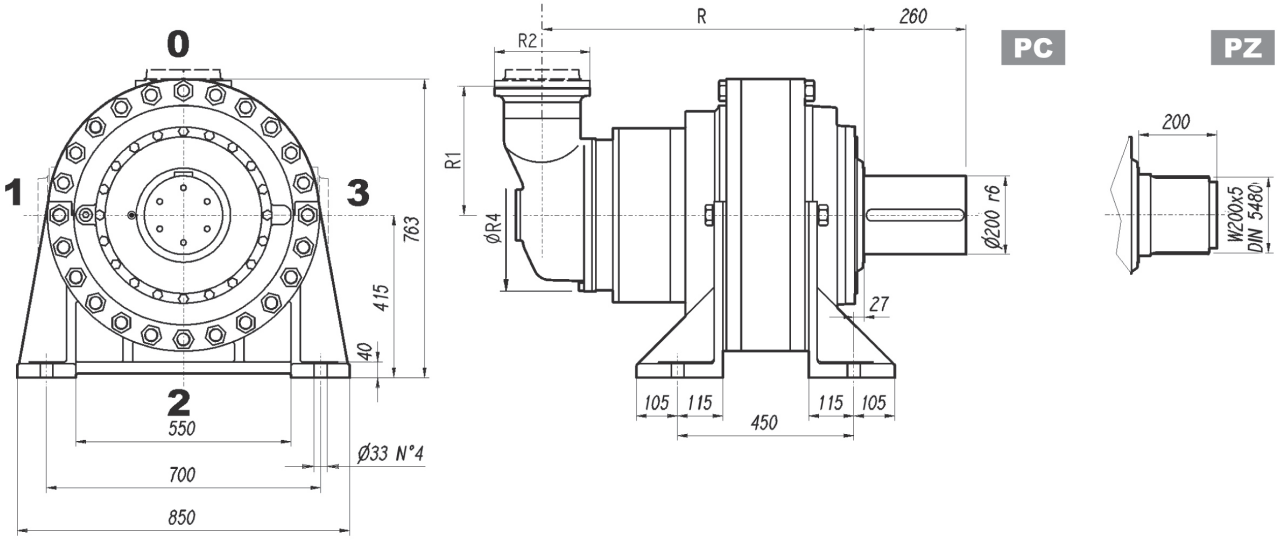
317M R

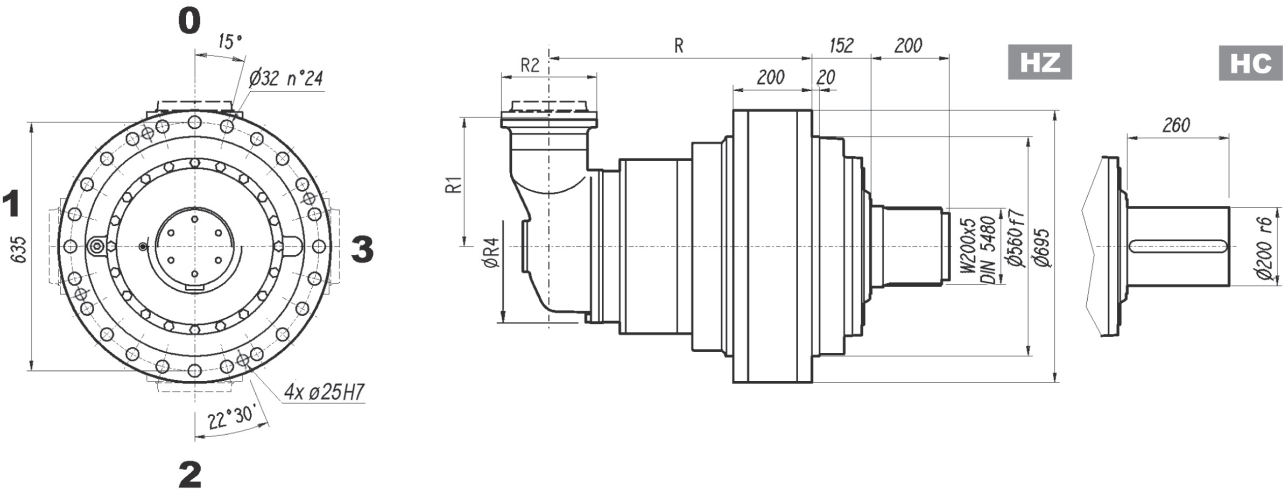


Metric

Imperial







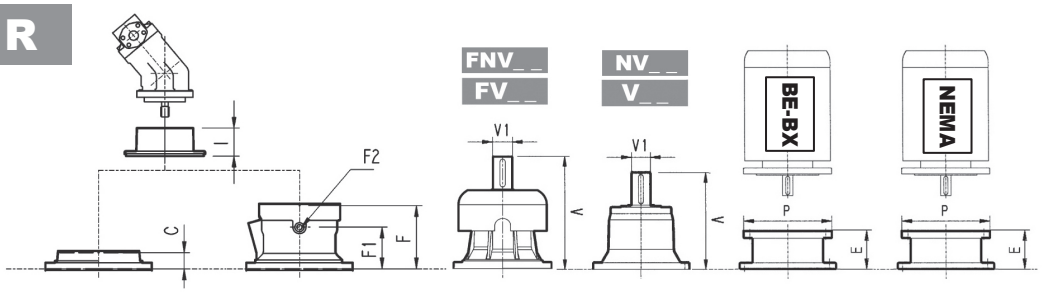
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

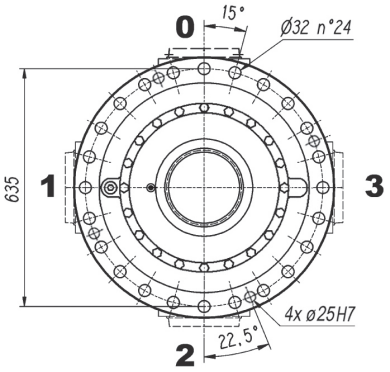
	R				R1	R2	R4	Kg				C	C	Input	I	F	F1	F2	Type	Input	Kg
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP										
317M R3 (B)	*853*	*701*	*701*	*701*	*345*	*292*	*400*	*1210*	*1060*	*1010*	*1060*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
317M R3 (C)	*853*	*701*	*701*	*701*	*390*	*292*	*480*	*1220*	*1070*	*1020*	*1070*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
317M R4	*892*	*740*	*740*	*740*	*225*	*245*	*345*	*1190*	*1040*	*990*	*1040*	*37*	1.457	A	522	*105*	*65*	1/4 G	4	A	*10*

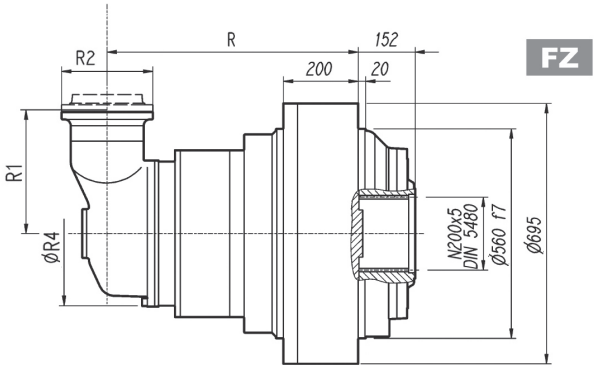
	V_ _			FV_ _			NV_ _			FNV_ _		
	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
317M R3 (B)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
317M R3 (C)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
317M R4	*239*	*48*	*15*	*276*	*48*	*17*	9.681	1.875	33.1	11.138	1.875	38.0

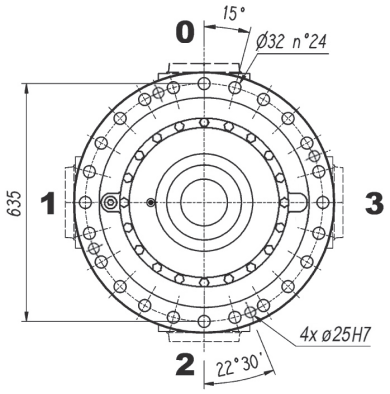
Bonfiglioli Riduttori

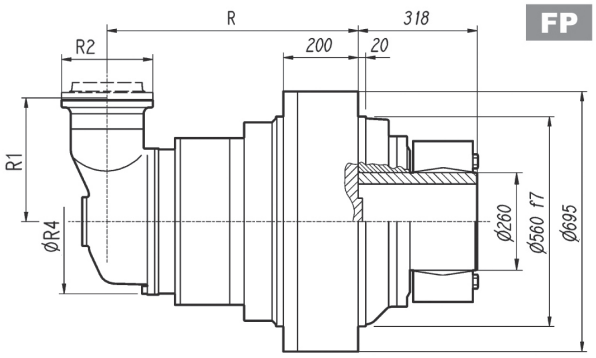
317M R

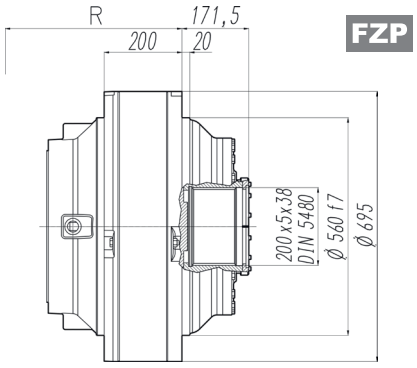












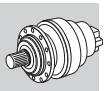
FP | T_{2max} = 2,141,880 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

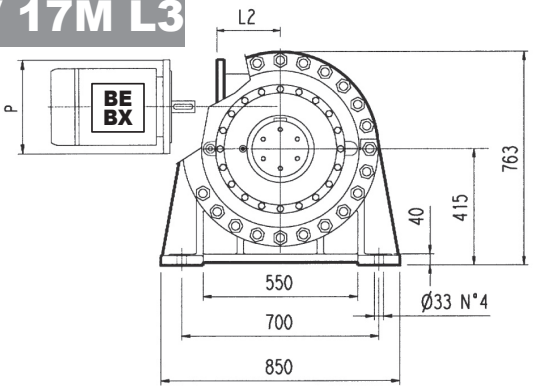
	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
317M R3 (B)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
317M R3 (C)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
317M R4	*114*	*300*	*144*	*350*	*144*	*350*	*174*	*400*	—	—	—	—

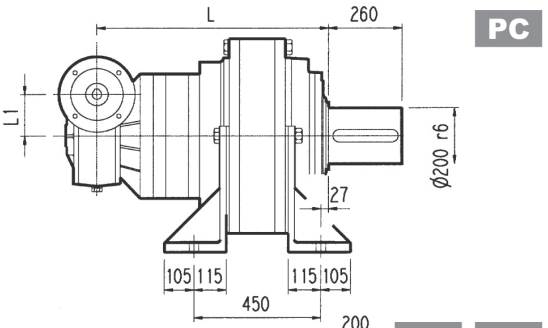
	N250TC		N280TC		N320TC		N360TC	
	E	P	E	P	E	P	E	P
317M R3 (B)	—	—	—	—	7.776	13.780	7.776	13.780
317M R3 (C)	—	—	—	—	7.776	13.780	7.776	13.780
317M R4	5.216	11.811	6.221	13.780	—	—	—	—

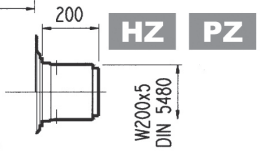
3/V 17M L3

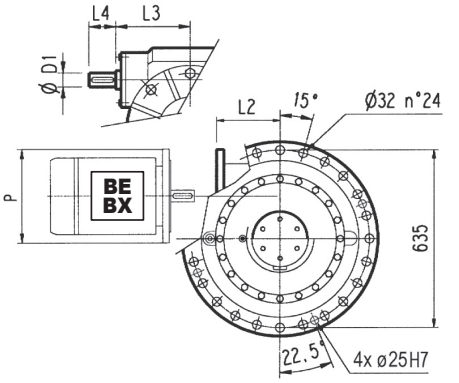


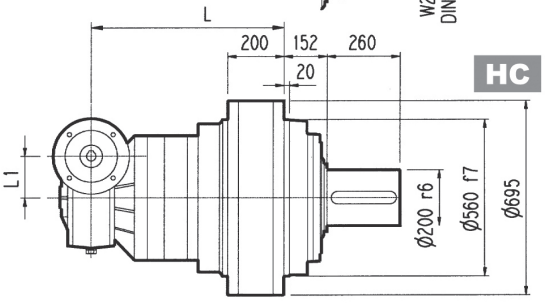
Metric

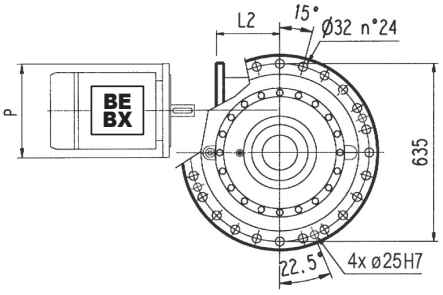


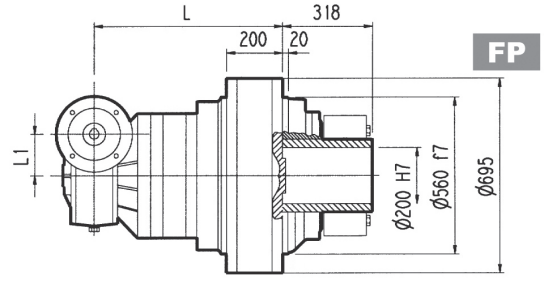


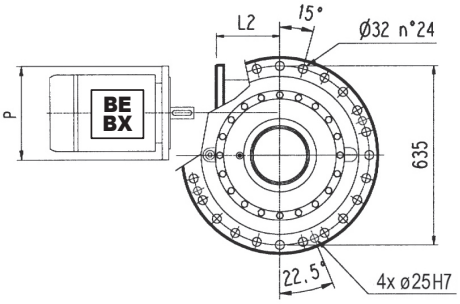


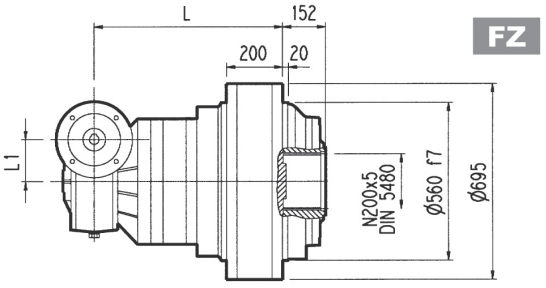


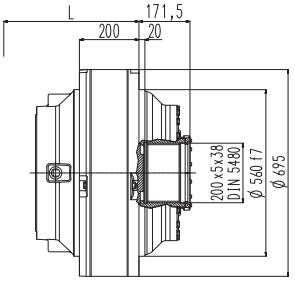












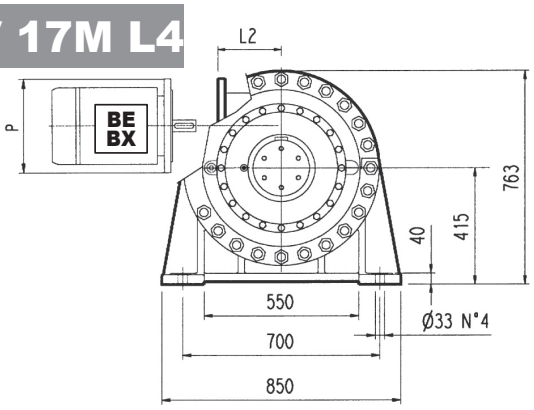
FP | **T_{2max} = 2,141,880 lb·in**

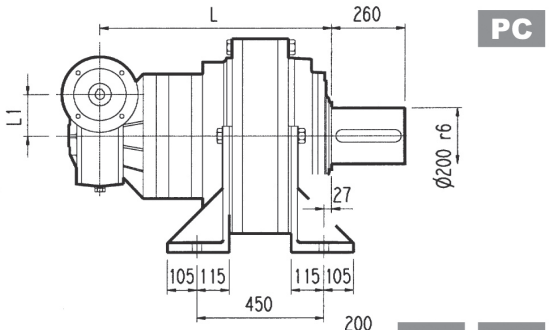
Dimensions are in mm

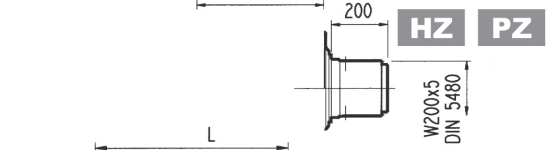
	L				L1	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP					PC - PZ	HC - HZ	FZ - FZP	FP
3/V 17M L3	894	745	745	745	250	55	276	110	1400	1250	1200	1250

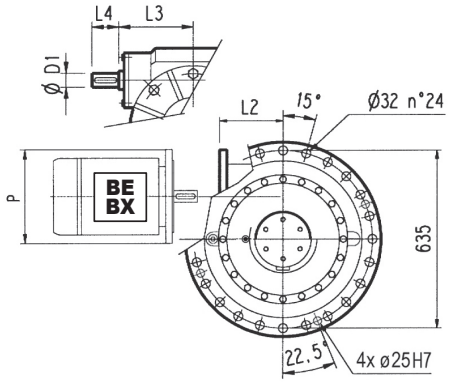
	P132		P160		P180		P200		P225	
	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 17M L3	531	300	506	350	506	350	531	400	536	450

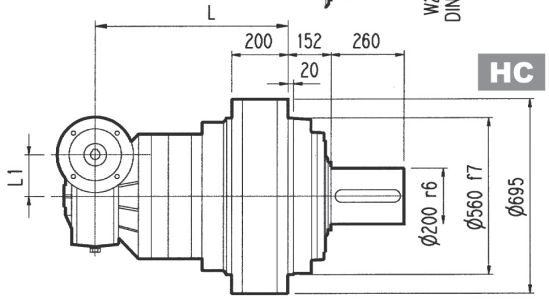
3/V 17M L4

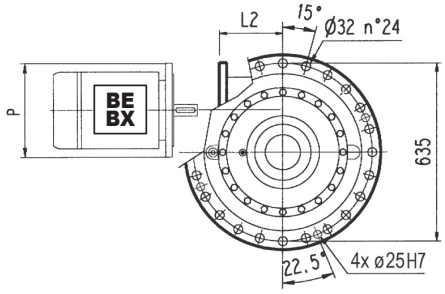


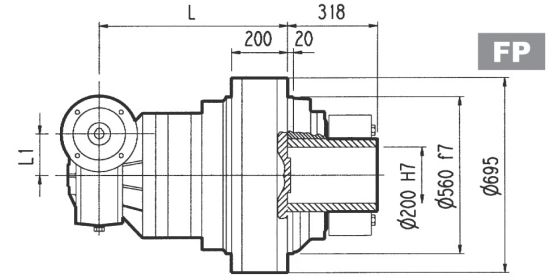


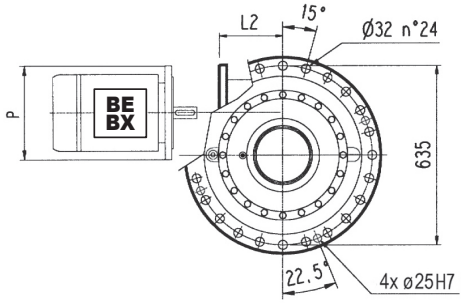


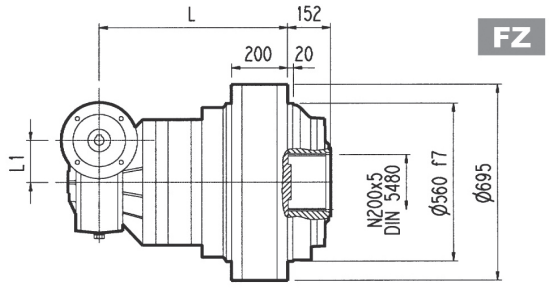


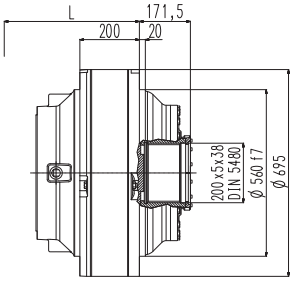










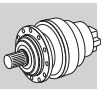


FP T_{2max} = 2,141,880 lb·in

Dimensions are in mm

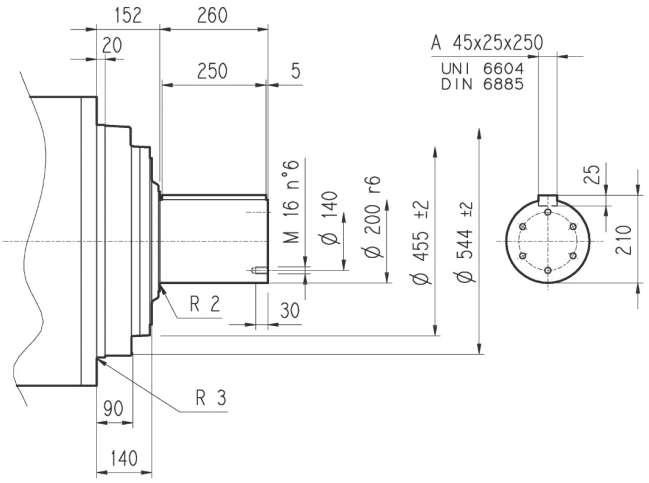
	L				L1	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP					PC - PZ	HC - HZ	FZ - FZP	FP
3/V 17M L4	975	823	823	823	185.4	40	214.5	70	1250	1090	1040	1090

	P100	P112	P132		P160		P180	
	P	P	L2	P	L2	P	L2	P
3/V 17M L4	250	250	217	300	217	350	217	350

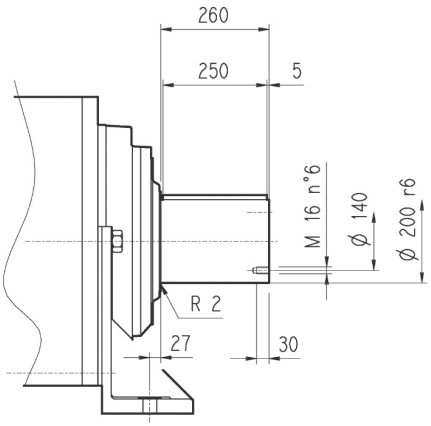


Metric

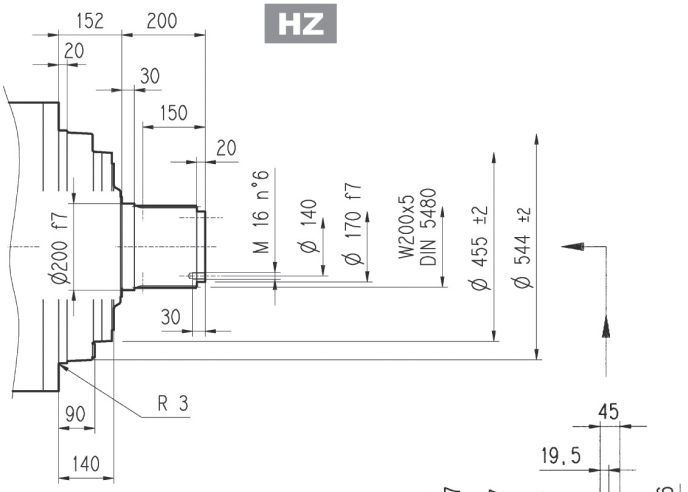
HC

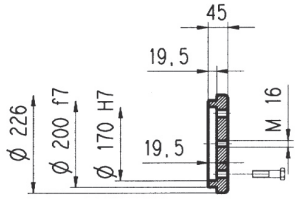


PC

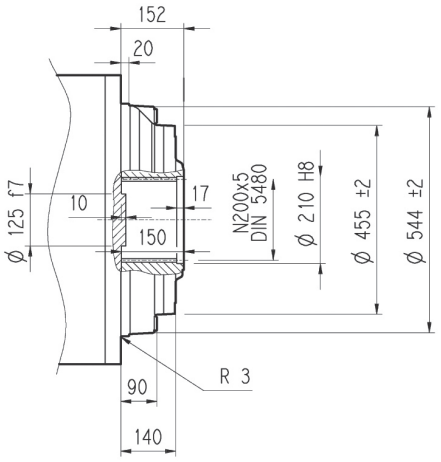


HZ

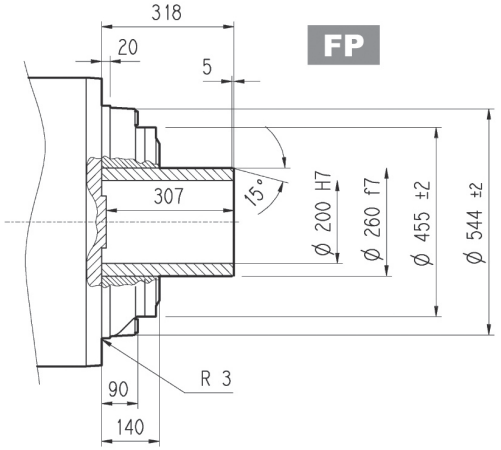




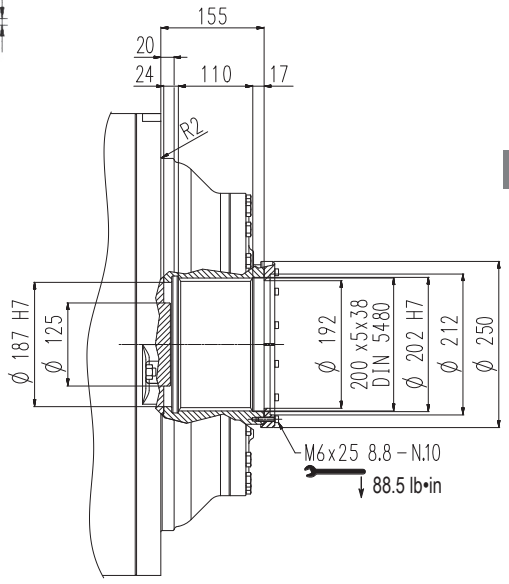
FZ



FP

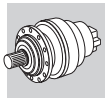


FZP



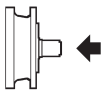
FP T_{2max} = 2,141,880 lb·in

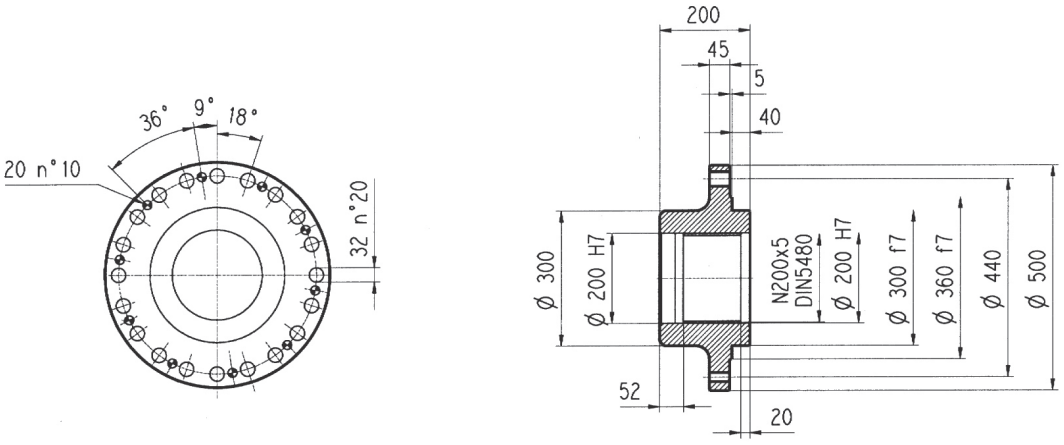
Dimensions are in mm



Flange

W0A



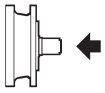


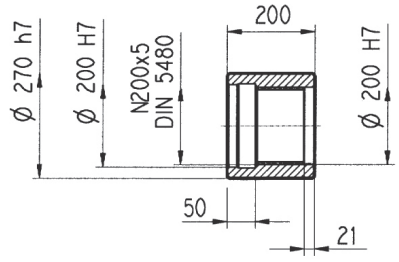
Material: Steel C40

Dimensions are in mm

Sleeve coupling

M0A



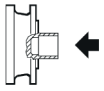


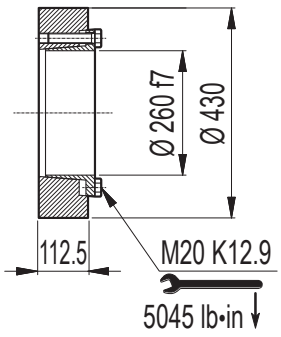
Material: Steel 16CrNi4

Dimensions are in mm

Shrink disc

G0A

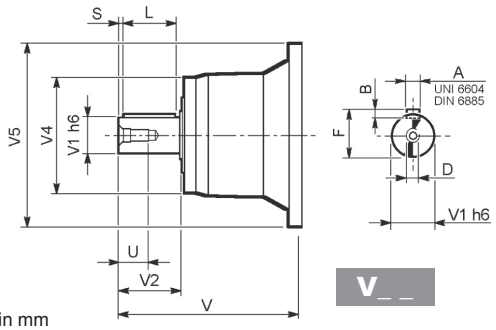




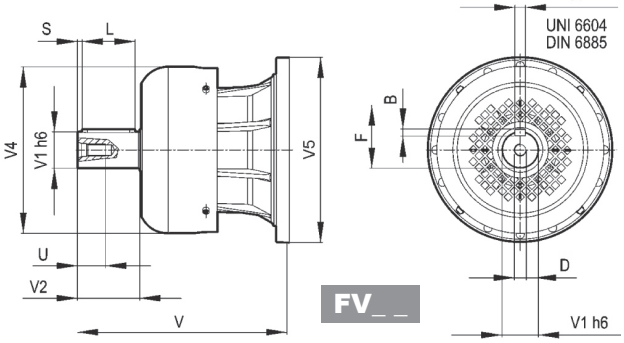
Dimensions are in mm

317M L 317M R





V_ _



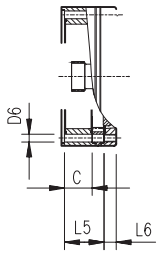
FV_ _

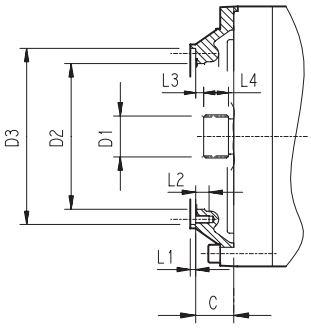
Dimensions are in mm

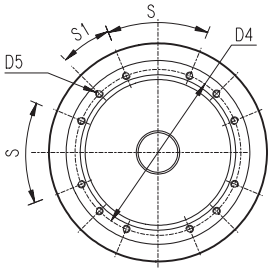
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
317M L2	**V11B**	343	80	130	200	445	22	14	85	110	10	M16	36
	FV11B	451	80	130	347.5	445	22	14	85	110	10	M16	36
317M L3	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
317M L4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36
317M R3 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	40
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36
317M R4	**V05B**	239	48	82	155	245	14	9	51.5	70	6	M16	36
	FV05B	276	48	82	219.5	244	14	9	51.5	70	6	M16	36

317M L 317M R





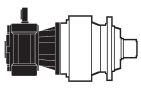


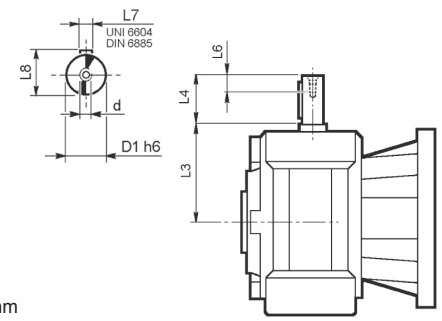


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
317M L1	**V9AF**	181	120x3 DIN 5480	365	390 g7	415	M16 n°18	—	4	30	3	65	—	—	20°	20°	F
317M L2	**V9AD**	75	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	9.5	40	—	—	60°	30°	D
317M L3	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
317M L4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	—	4	18	9	18	—	—	45°	45°	A
317M R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M10 n°8	11	4	18	9	18	—	—	45°	45°	A
317M R3 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B

3/V 17M L



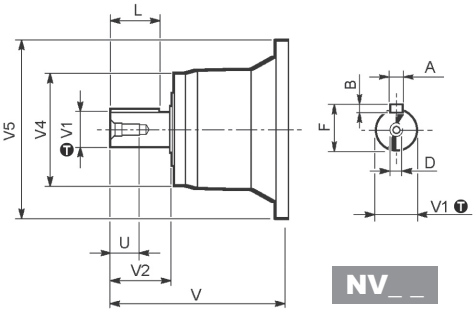


Dimensions are in mm

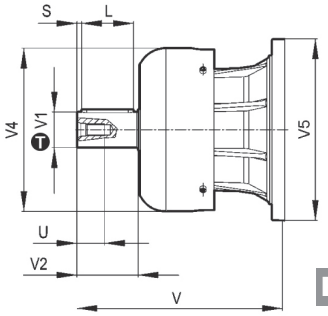
	D1 h6	L3	L4	L6	L7	L8	d
3/V 17M L3_HS	55	276	110	40	16	59	M16
3/V 17M L4_HS	40	214.5	70	20	12	43	M8

317M L 317M R

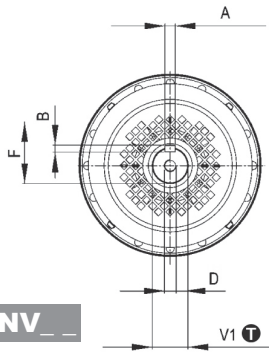




NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053

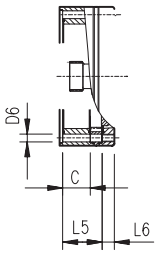
Imperial

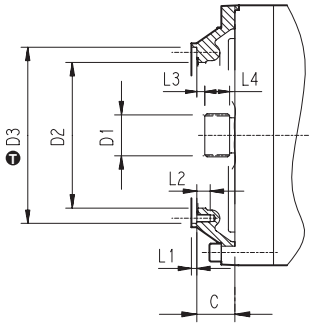
Dimensions are in Inch except when shown in *italic [mm]*

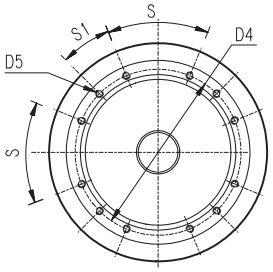
		V	V1	V2	V4	V5	A	B	F	L	D	U
317M L2	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
317M L3	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
317M L4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
317M R3 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
317M R4	**NV05B**	9.681	1.875	3.500	6.417	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417
	FNV05B	11.138	1.875	3.500	8.641	9.606	0.500	0.500	2.091	3.000	5/8-11 UNC	1.417

317M L 317M R





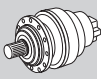




inch	T
15.35	-0.000708 -0.00295
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0

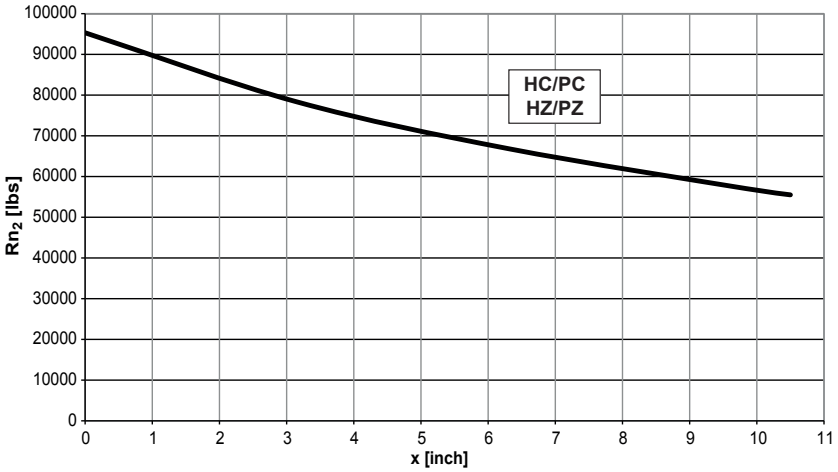
Dimensions are in Inch except when shown in *italic [mm]*

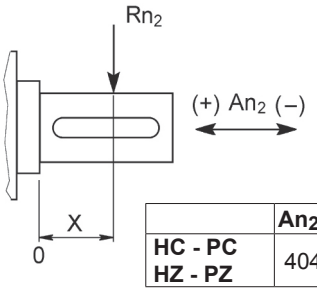
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
317M L1	**V9AF**	7.13	*120x3 DIN 5480*	14.37	15.35	16.34	*M16 n°18*	—	0.16	1.18	0.12	2.56	—	—	20°	20°	F
317M L2	**V9AD**	2.95	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.37	1.57	—	—	60°	30°	D
317M L3	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
317M L4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	—	0.16	0.71	0.35	0.71	—	—	45°	45°	A
317M R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M10 n°8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A
317M R3 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B



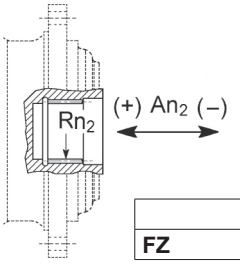
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





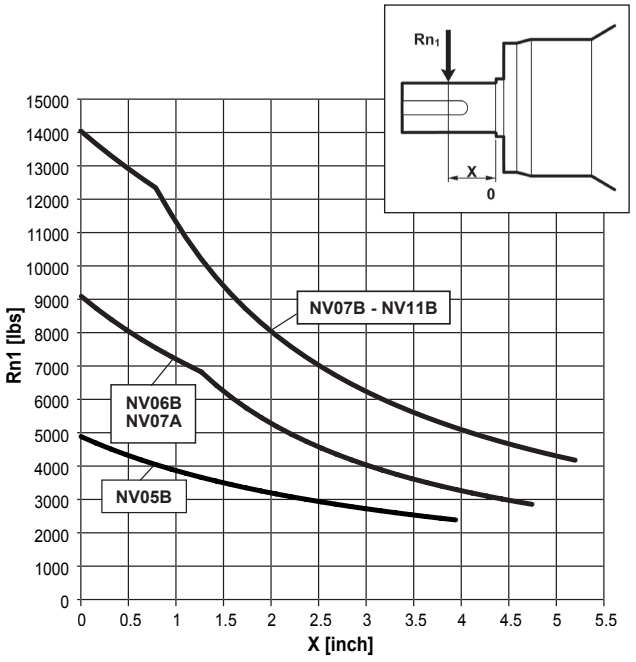
	An2 (+)	An2 (-)
HC - PC HZ - PZ	40464	33720

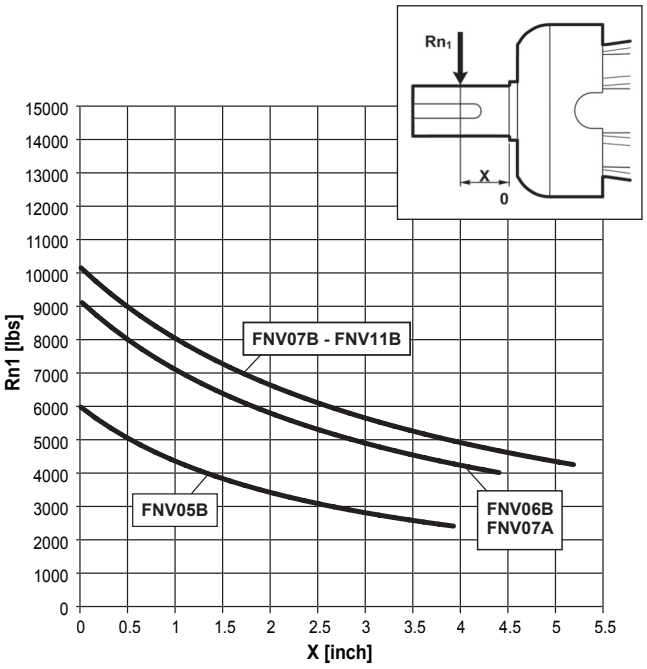


	Rn2	An2 (+/-)
FZ	15651	15651

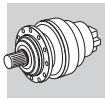
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		HZ - HC - PZ - PC	**1.50**	**1.50**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





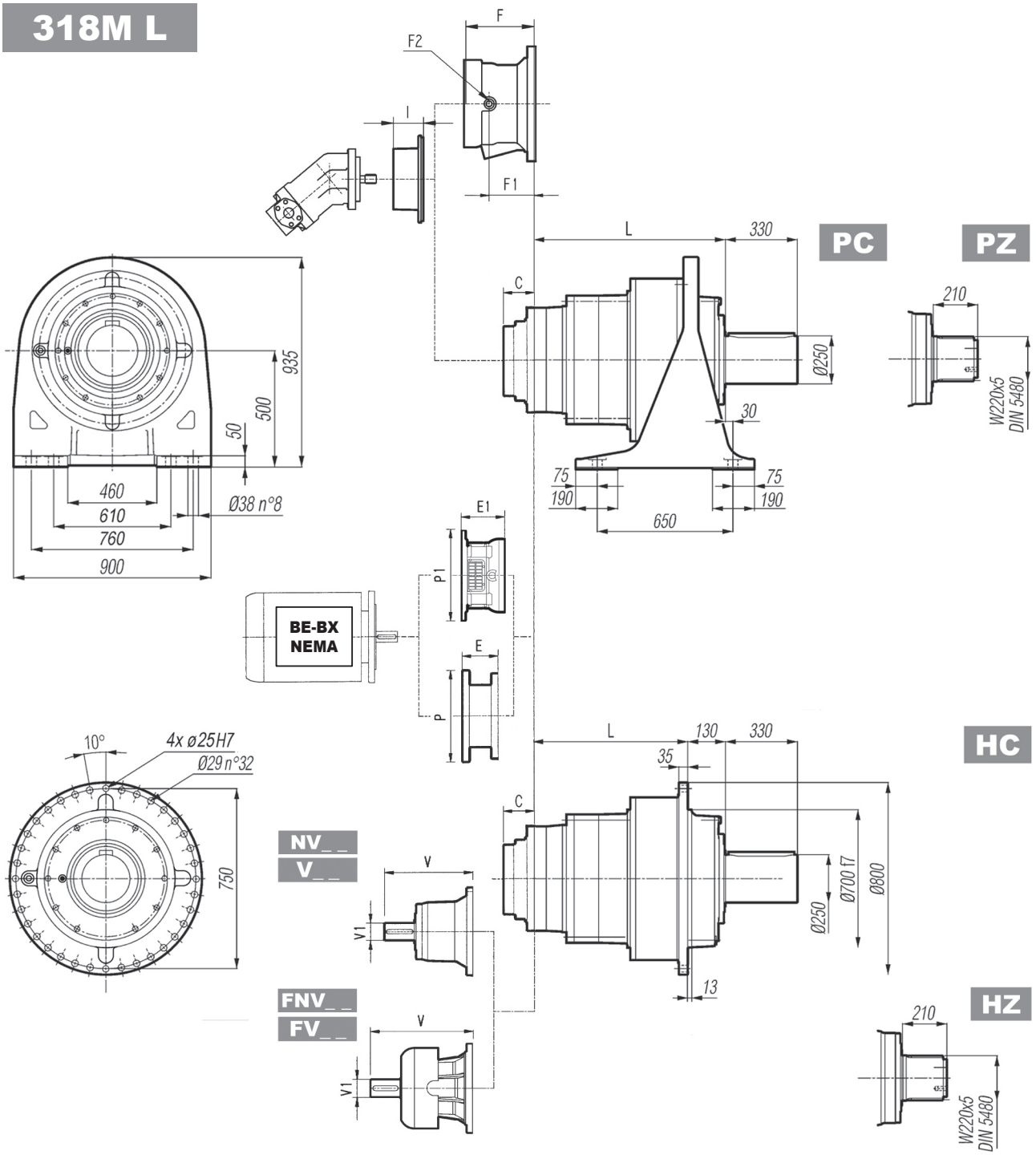
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



318M L

Metric

Imperial



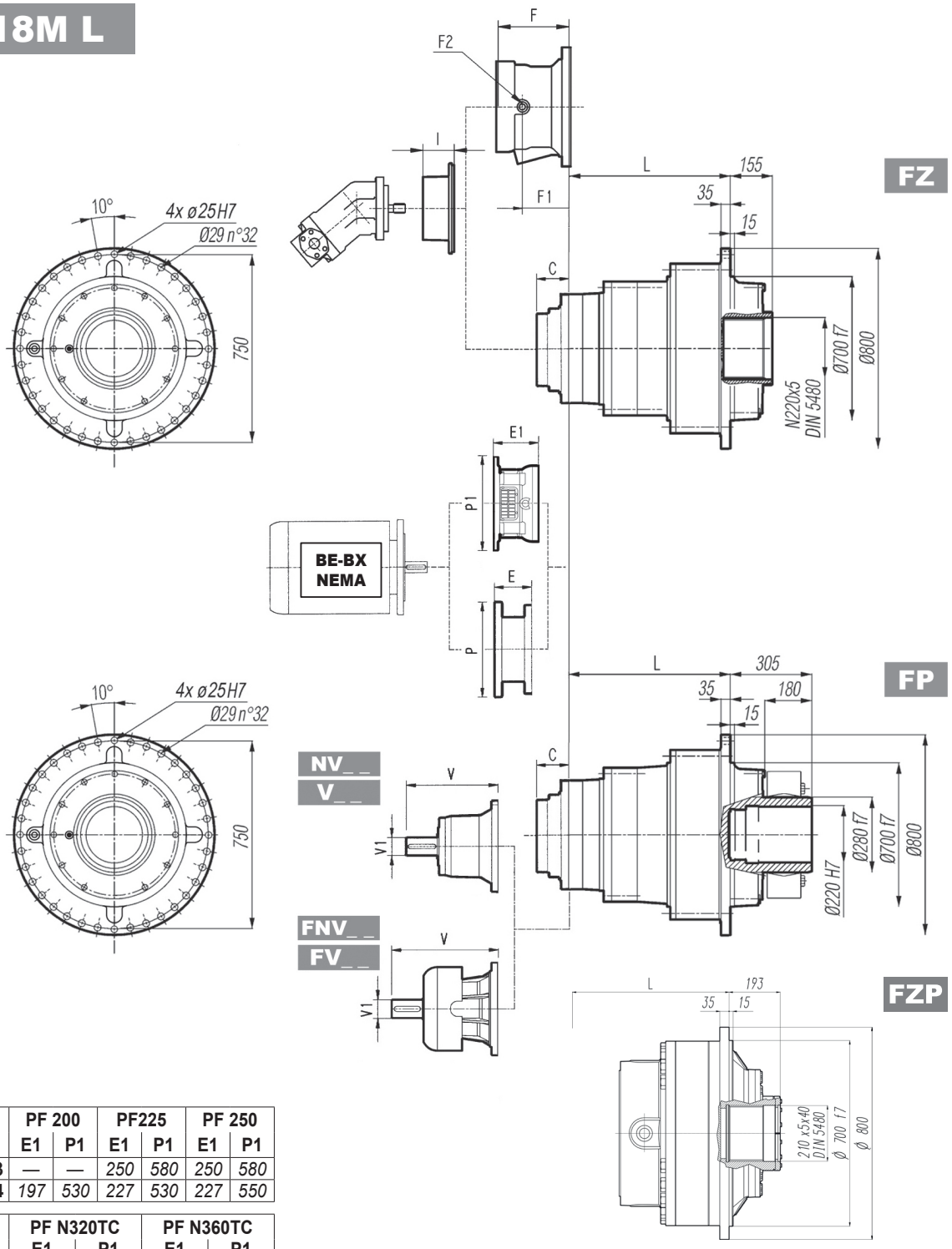
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L				Kg							I	F	F1	F2	Type	Input	Kg
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	C	C	Input							
318M L1	*332*	*202*	*202*	*202*	*1250*	*950*	*800*	*830*	*208*	8.189	G		—	—	—	—	—	—
318M L2	*677*	*547*	*547*	*547*	*1500*	*1200*	*1050*	*1080*	*116*	4.567	E		—	—	—	—	—	—
318M L3	*889*	*759*	*759*	*759*	*1600*	*1300*	*1150*	*1180*	*81*	3.189	D	522	*232*	*185*	1/4 G	6	B	*28*
318M L4	*1022*	*892*	*892*	*892*	*1650*	*1350*	*1200*	*1230*	*51*	2.008	B		*201*	*153*	1/4 G	6	B	*28*

	V_ _			FV_ _			NV_ _						FNV_ _					
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs
318M L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
318M L2	556	120	125	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
318M L3	348	80	55	—	—	—	456	80	85	—	—	—	13.563	3.000	121.3	—	—	—	17.835	3.000	140.0	—	—	—
318M L4	315	80	35	313	60	28	375	80	48	363	60	34	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0

Bonfiglioli Riduttori

318M L



	PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1
318M L3	—	—	*250*	*580*	*250*	*580*
318M L4	*197*	*530*	*227*	*530*	*227*	*550*

	PF N320TC		PF N360TC	
	E1	P1	E1	P1
318M L3	—	—	12.402	22.835
318M L4	9.921	20.866	11.496	20.866

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

FP T_{2max} = 2,849,940 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

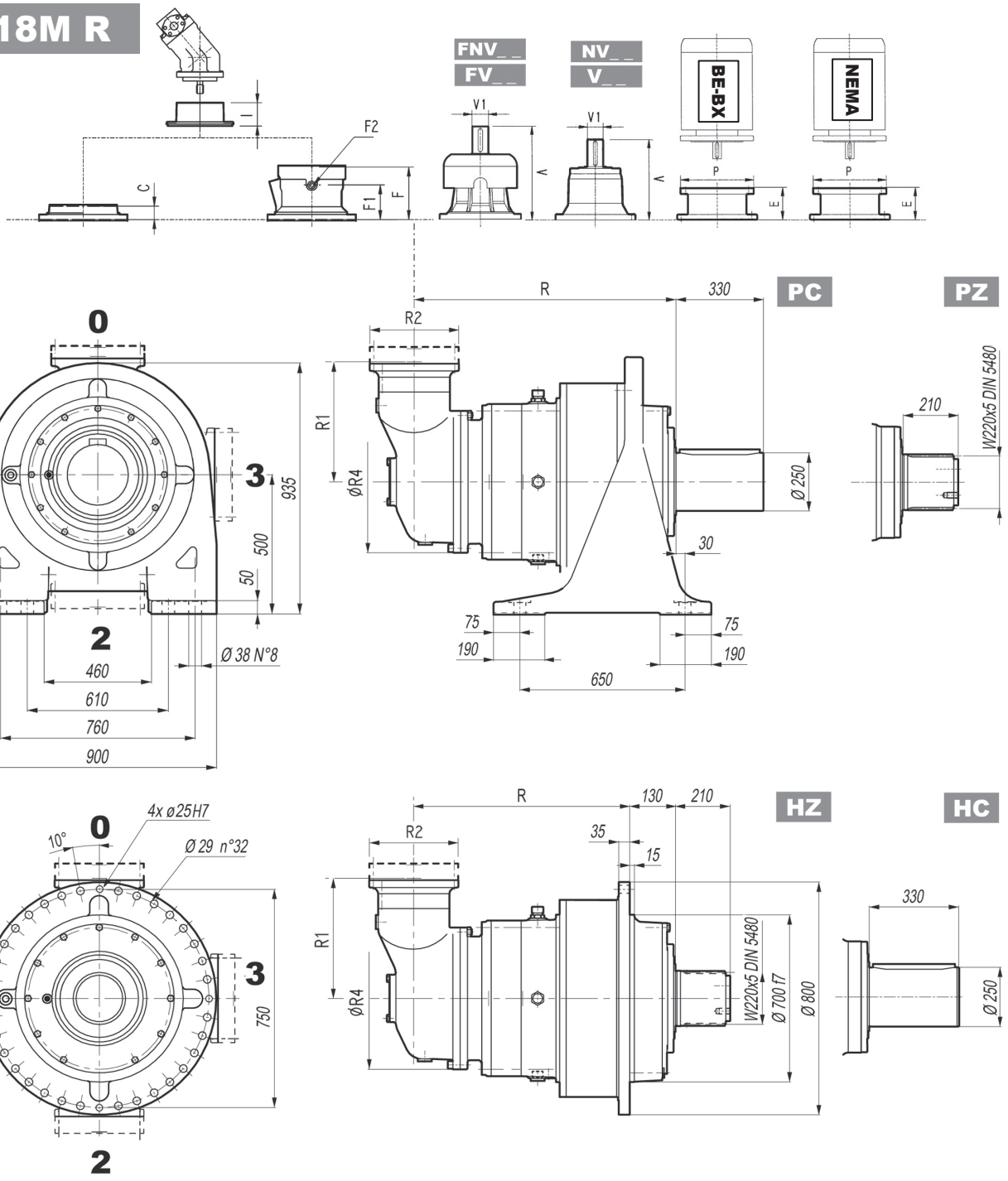
	P180		P200		P225		P250	
	E	P	E	P	E	P	E	P
318M L3	—	—	*267*	*400*	*297*	*450*	*297*	*550*
318M L4	*195*	*350*	*186*	*400*	*216*	*450*	*215*	*550*

	N320TC		N360TC	
	E	P	E	P
318M L3	—	—	—	—
318M L4	8.445	15.748	8.445	15.748

318M R

Metric

Imperial



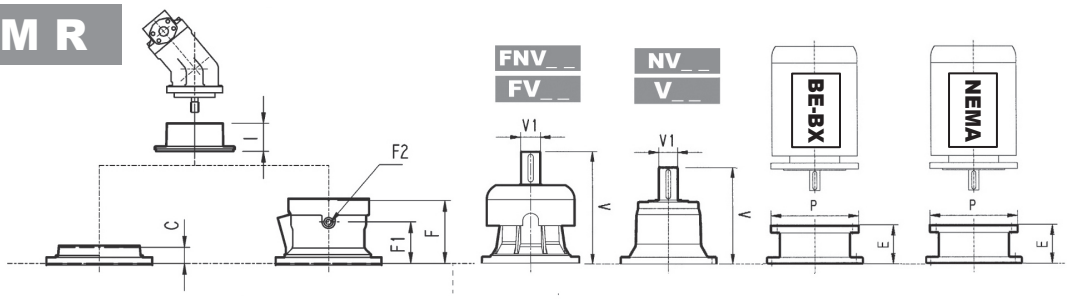
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

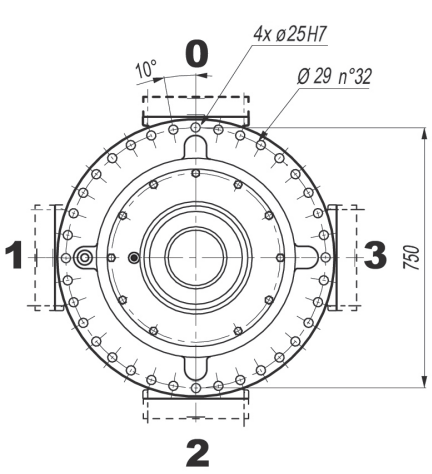
	R				R1	R2	R4	Kg				C	C	Input	I	F	F1	F2	Type	Input	Kg
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP										
318M R4 (B)	*1115*	*985*	*985*	*985*	*345*	*292*	*400*	*1720*	*1420*	*1270*	*1300*	*45*	1.772	B	522	*195*	*147*	1/4 G	6	B	*28*
318M R4 (C)	*1115*	*985*	*985*	*985*	*390*	*292*	*480*	*1730*	*1430*	*1280*	*1310*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*

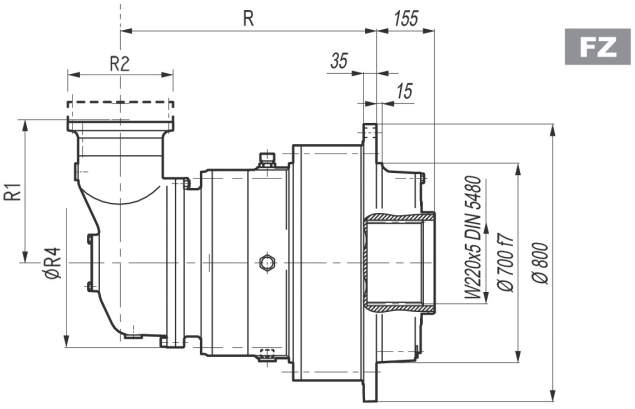
	V_ _			FV_ _			NV_ _			FNV_ _		
	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
318M R4 (B)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
318M R4 (C)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0

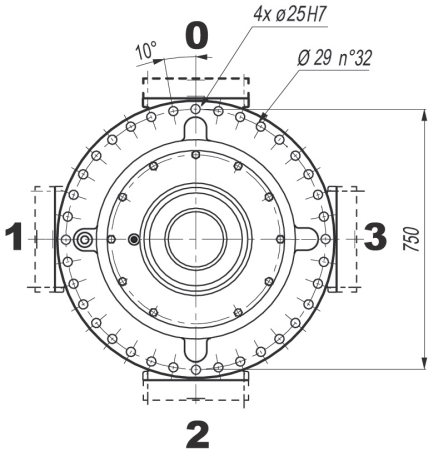
Bonfiglioli Riduttori

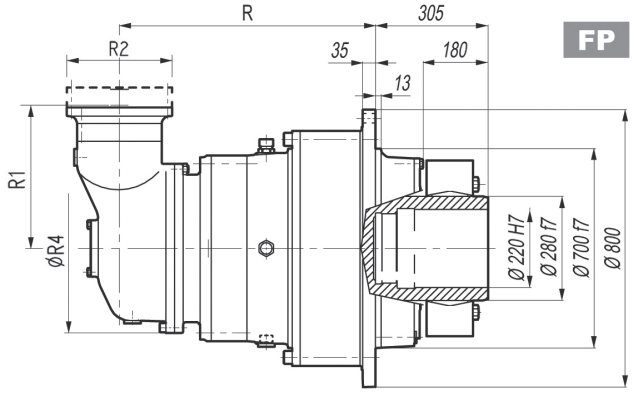
318M R

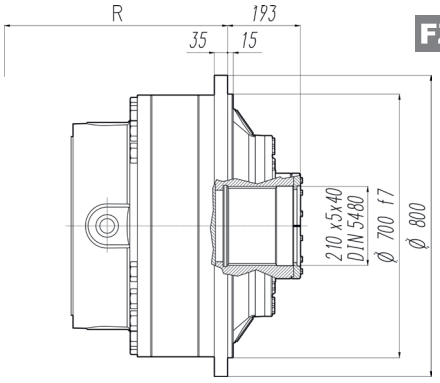












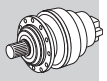
FP | T_{2max} = 2,849,940 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

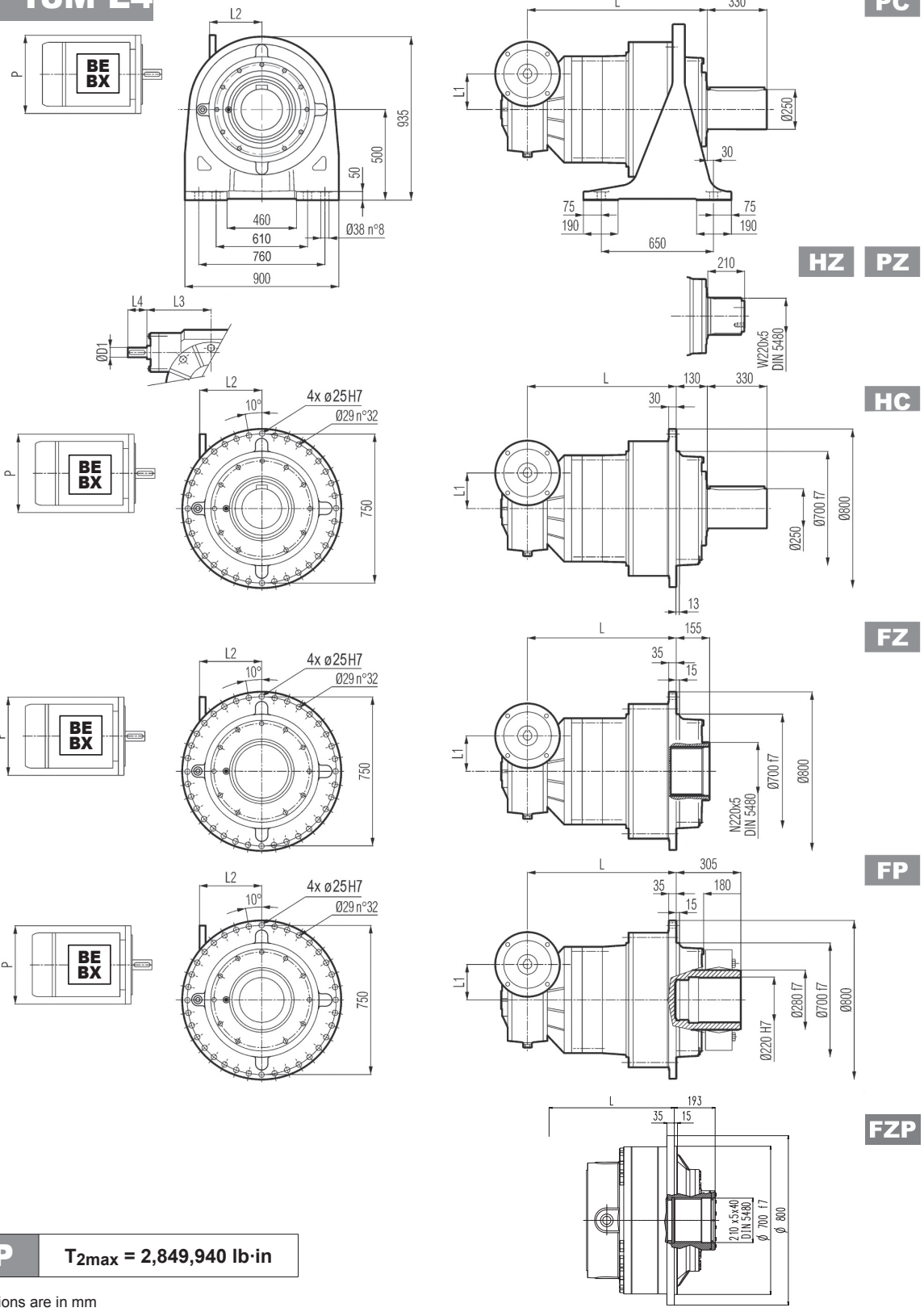
	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
318M R4 (B)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
318M R4 (C)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*

	N320TC		N360TC	
	E	P	E	P
318M R4 (B)	7.776	13.780	7.776	13.780
318M R4 (C)	7.776	13.780	7.776	13.780

3/V 18M L4



Metric



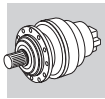
FP T_{2max} = 2,849,940 lb·in

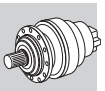
Dimensions are in mm

	L				L1	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP					PC - PZ	HC - HZ	FZ - FZP	FP
3/V 18M L4	1114	984	984	984	210	48	230	110	1810	1510	1360	1390

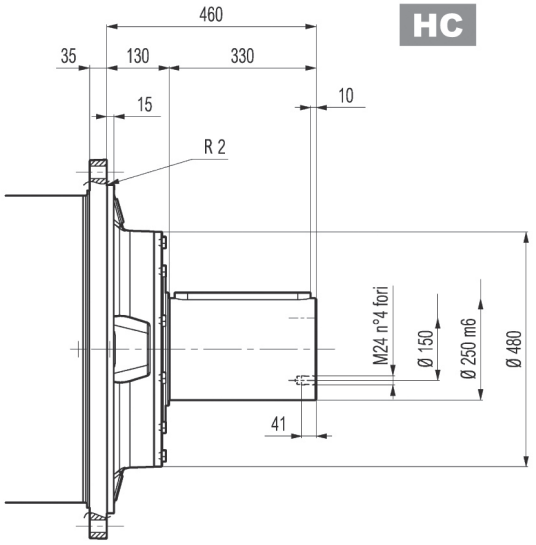
	P132		P160		P180		P200		P225	
	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 18M L4	485	300	460	350	460	350	485	400	490	450

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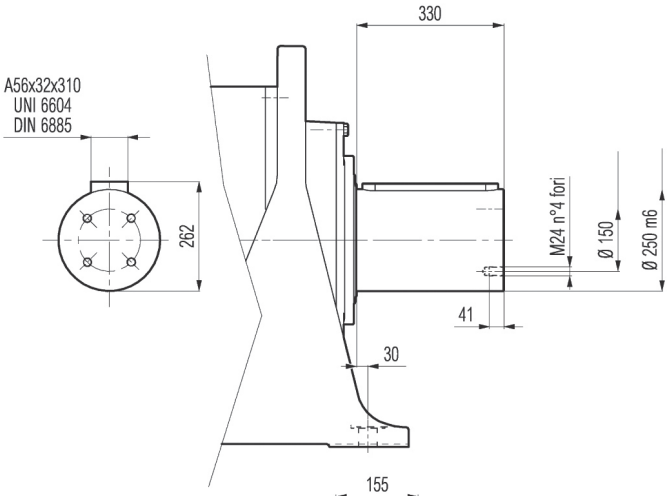




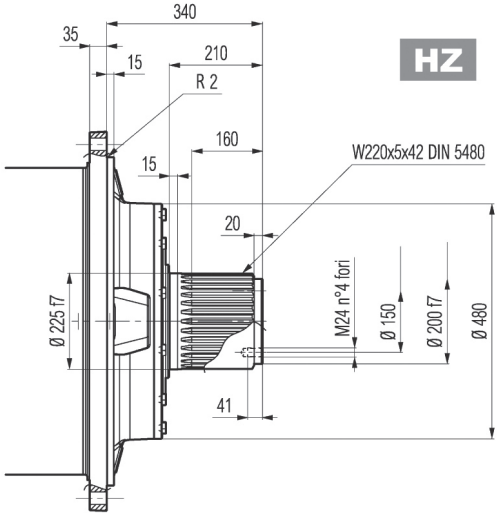
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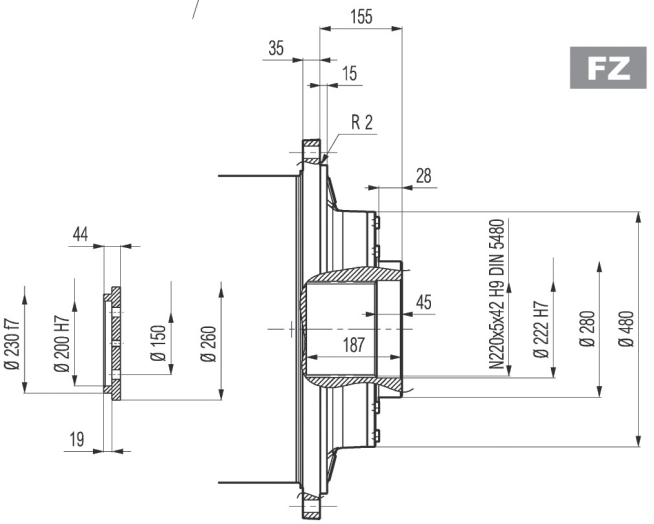
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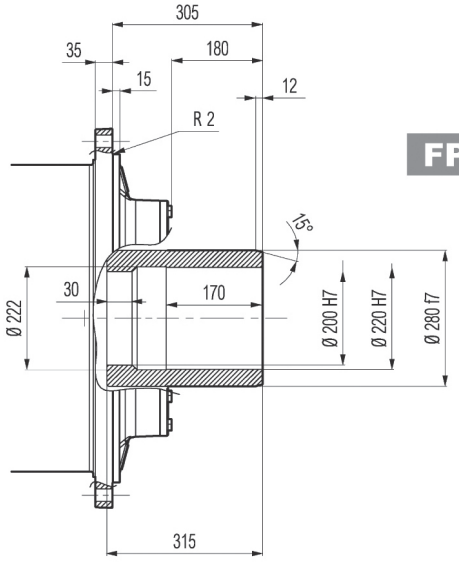
HZ



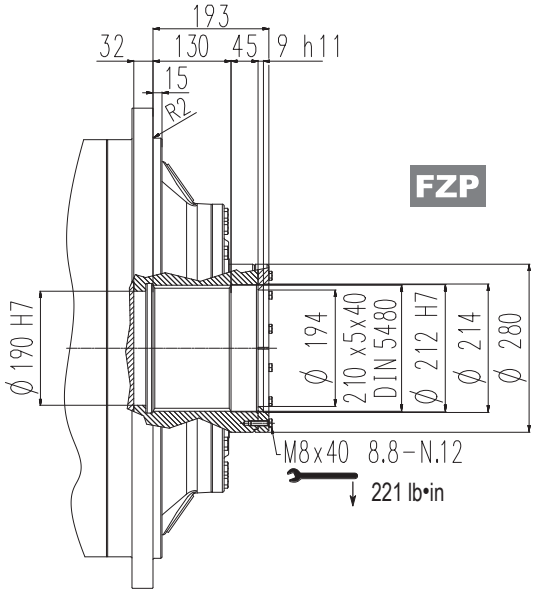
FZ



FP

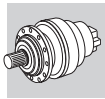


FZP



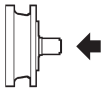
FP | **T_{2max} = 2,849,940 lb·in**

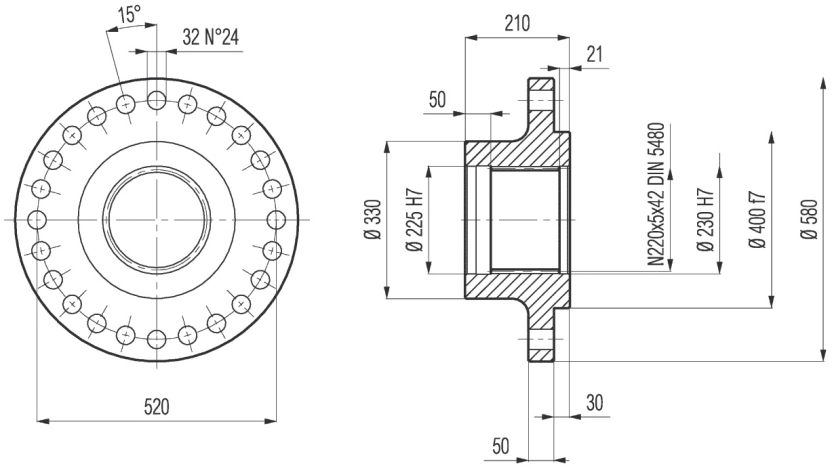
Dimensions are in mm



Flange

W0A



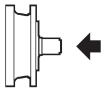


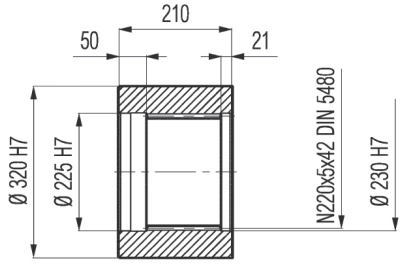
Material: Steel C40

Dimensions are in mm

Sleeve coupling

M0A



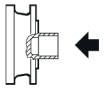


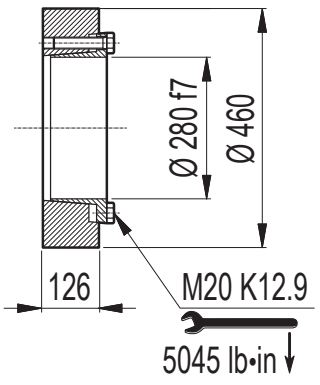
Material: Steel C40

Dimensions are in mm

Shrink disc

G0A

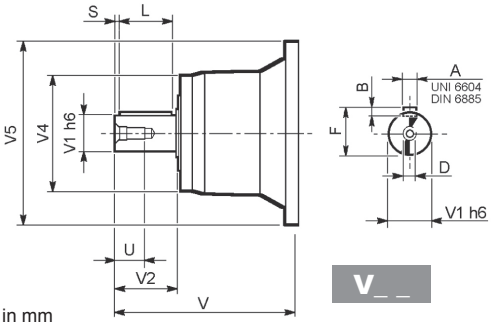




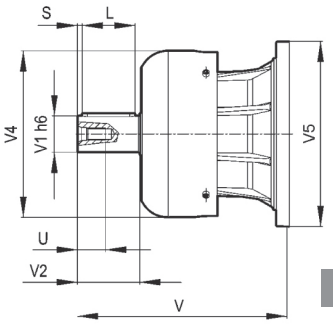
Dimensions are in mm

318M L 318M R

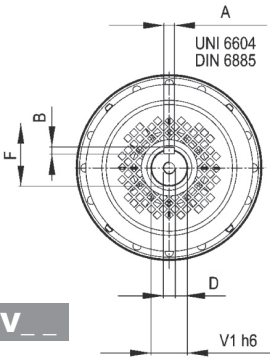




V_ _



FV_ _

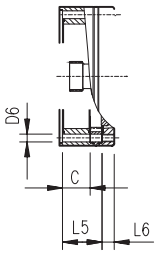


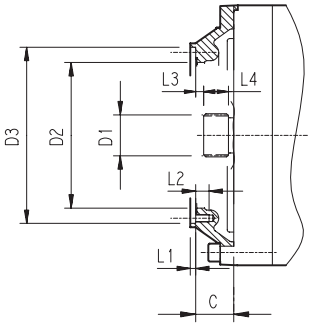
Dimensions are in mm

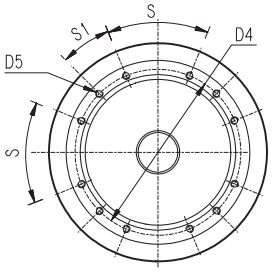
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
318M L2	**V15B**	556	120	210	230	542	32	18	127	180	15	M24	50
318M L3	**V11B**	348	80	130	200	428	22	14	85	110	10	M16	36
	FV11B	456	80	130	347.5	428	22	14	85	110	10	M16	36
318M L4	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
318M R4 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36

318M L 318M R





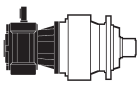


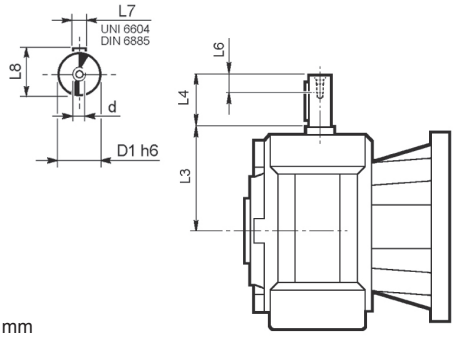


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
318M L1	Please consult Bonfiglioli Technical Service																
318M L2	**V9AE**	116	100x94 DIN 5482	340	412 H7	390	M16 n° 18	—	7	30	8	55	—	—	20°	20°	E
318M L3	**V9AD**	81	80x74 DIN 5482	270	335 H7	314	M16 n° 8	—	5	30	8.5	40	—	—	60°	30°	D
318M L4	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M16 n° 12	—	4	18	11	22	—	—	45°	22.5°	B
318M R4 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n° 10	—	4	18	11	22	—	—	45°	22.5°	B

3/V 18M L4



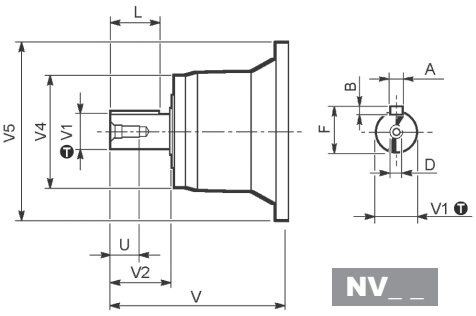


Dimensions are in mm

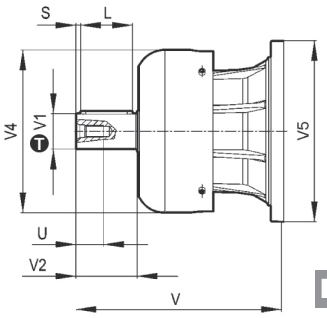
	D1 h6	L3	L4	L6	L7	L8	d
3/V 18M L4_HS	48	230	110	40	14	51.5	M16

318M L 318M R

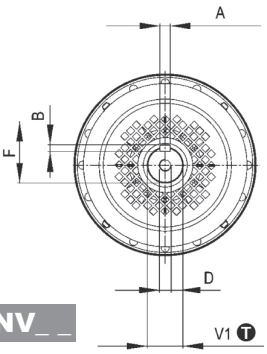




NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053
1.875	0 -0.00053

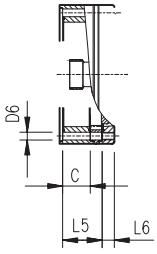
Dimensions are in Inch except when shown in *italic [mm]*

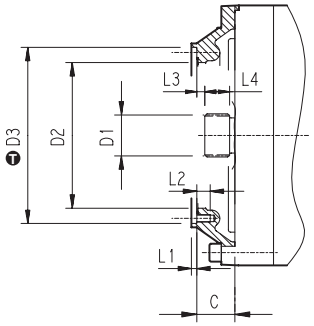
		V	V1	V2	V4	V5	A	B	F	L	D	U
318M L3	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
318M L4	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
318M R4 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654

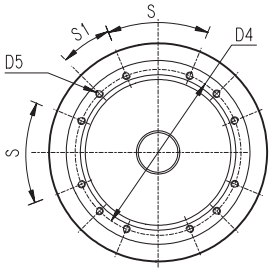
318M L 318M R



inch	T
16.22	+0.00248 0
13.19	+0.00224 0
9.29	+0.00181 0

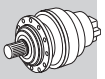






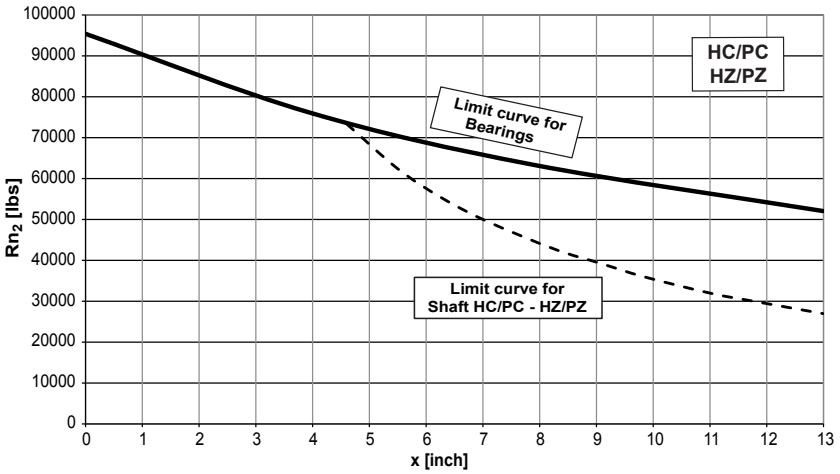
Dimensions are in Inch except when shown in *italic [mm]*

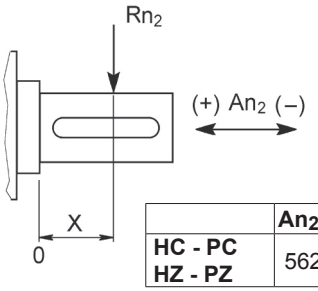
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
318M L1	Please consult Bonfiglioli Technical Service																
318M L2	**V9AE**	4.57	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n° 18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
318M L3	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n° 8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
318M L4	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M16 n° 12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
318M R4 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n° 10*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B



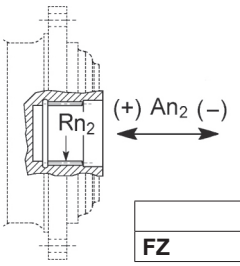
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





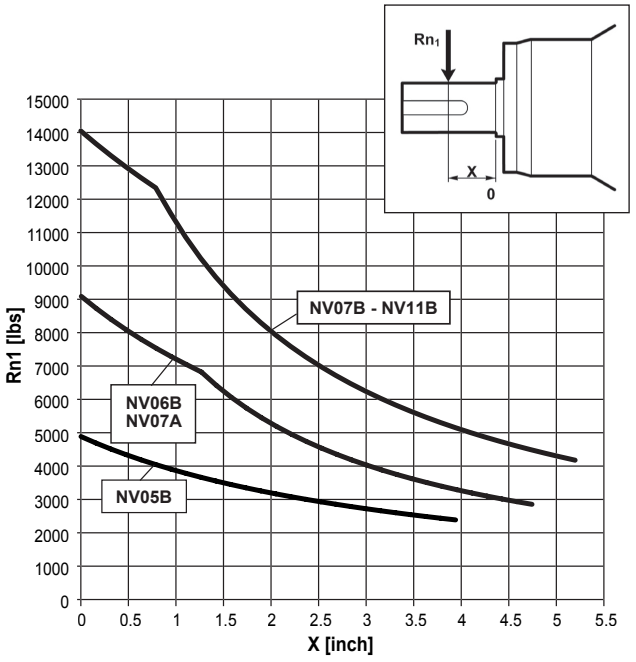
	An2 (+)	An2 (-)
HC - PC HZ - PZ	56200	50580

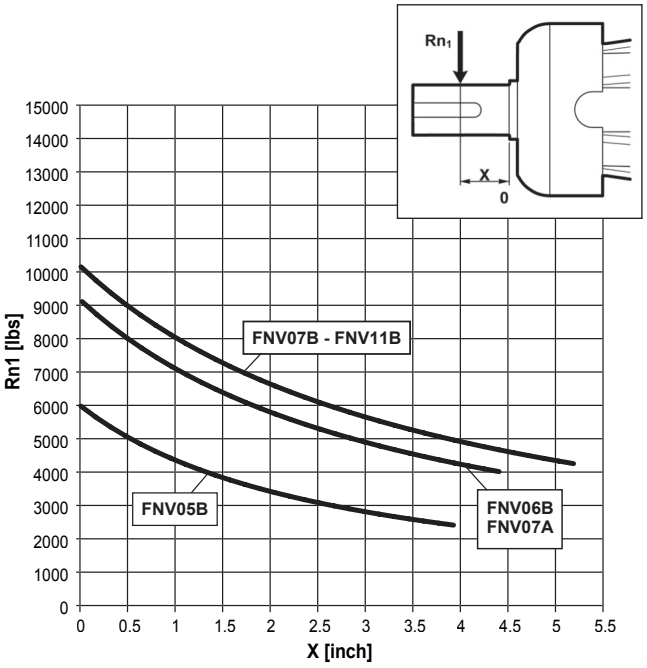


	Rn2	An2 (+/-)
FZ	20869	20869

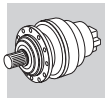
	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
Load corrective factor fh_2 on shafts	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		HC - PC	**1.96**	**1.52**	**1.23**	**1.00**	**0.62**	**0.50**
		HZ - PZ	**1.15**	**1.00**	**1.00**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

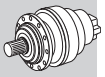




Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**

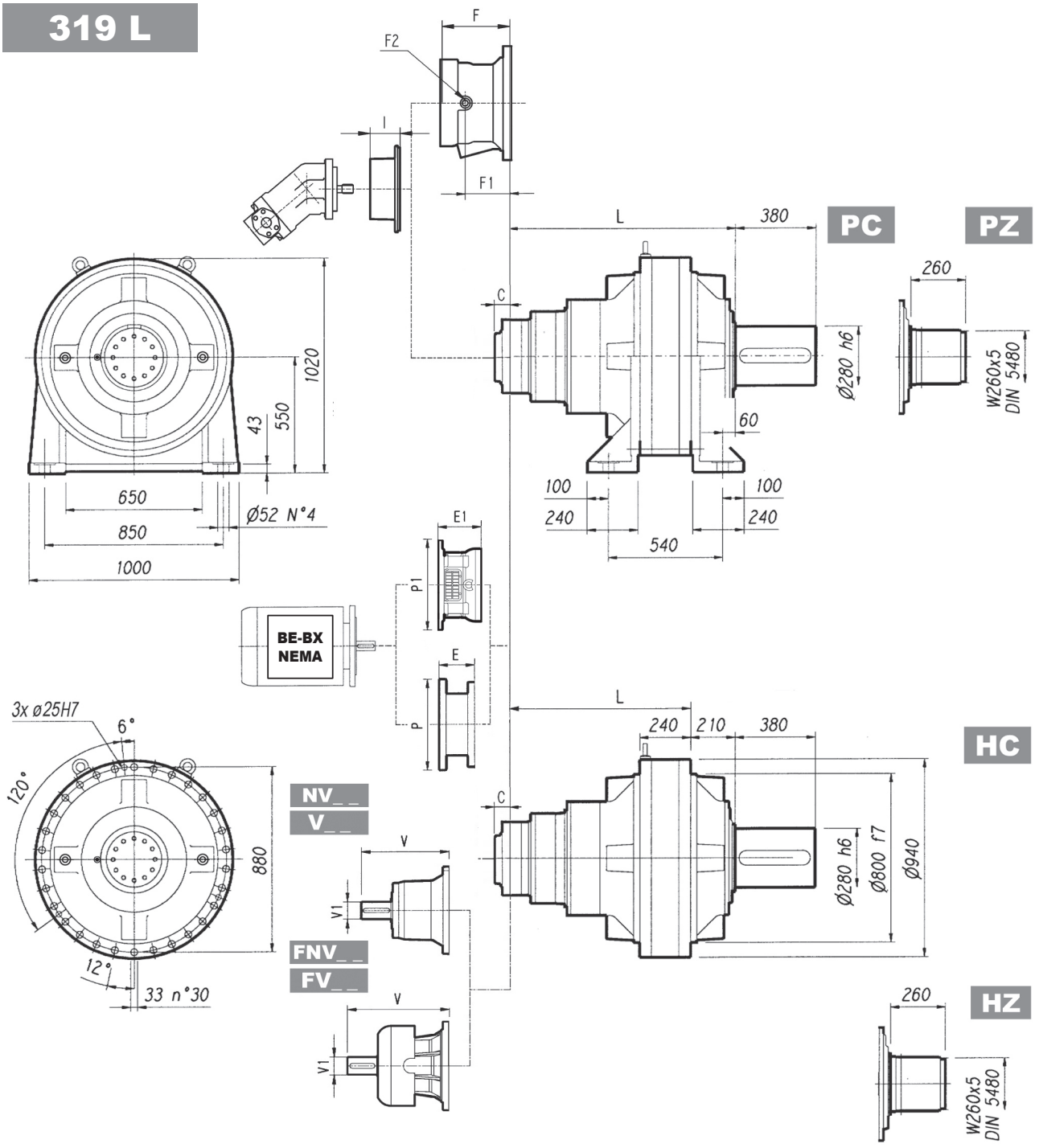


319 L



Metric

Imperial



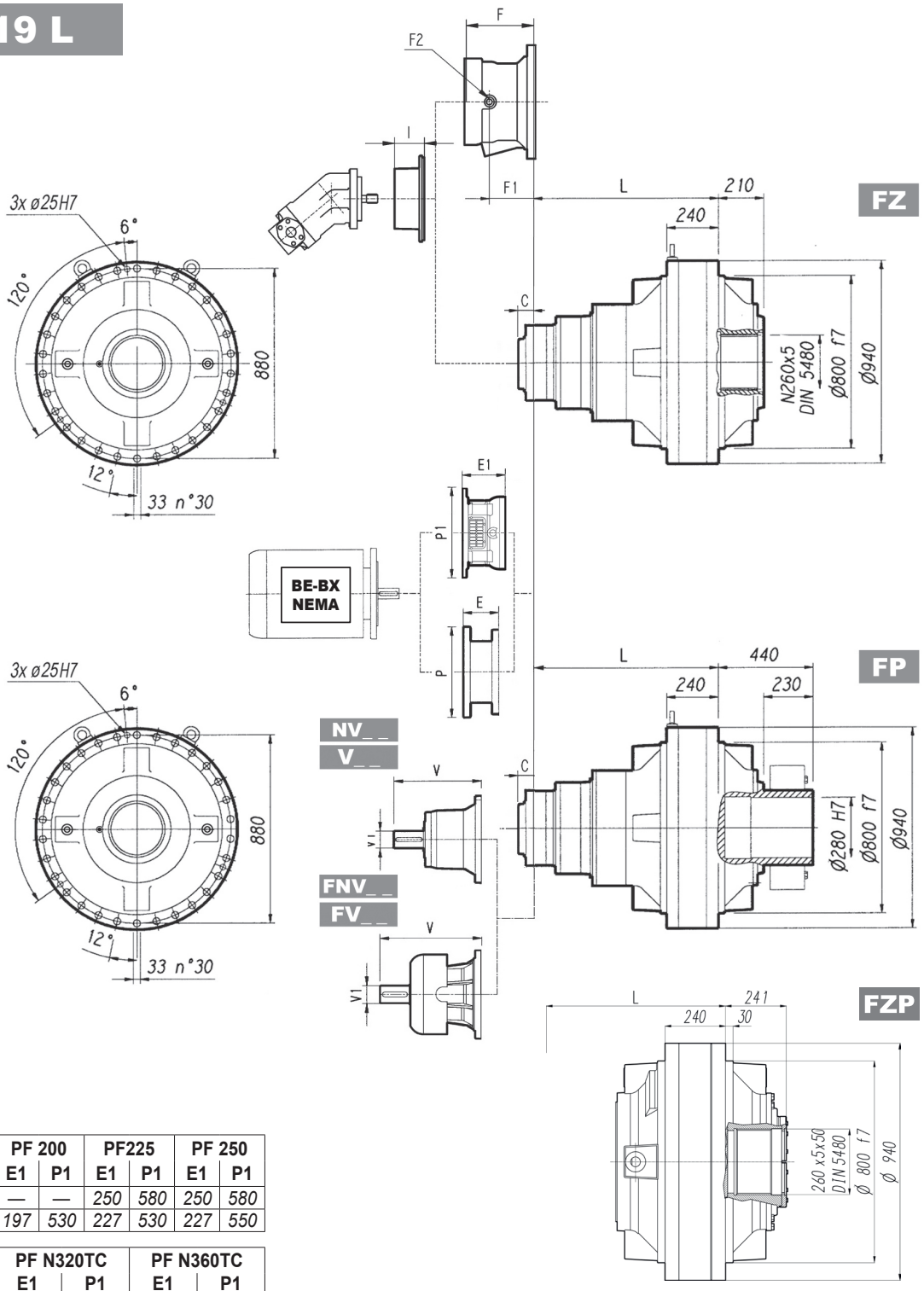
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L				Kg							I						Kg
	PC-PZ	HC-HZ	FZ-FZP	FP	PC-PZ	HC-HZ	FZ-FZP	FP	C	C	Input		F	F1	F2	Type	Input	
319 L1	*395*	*185*	*185*	*185*	*2100*	*1800*	*1700*	*1700*	*245*	9.646	G		—	—	—	—	—	—
319 L2	*778÷818*	*568÷608*	*568÷608*	*568÷608*	*2350*	*2050*	*1950*	*1950*	*116*	4.567	E		—	—	—	—	—	—
319 L3	*990÷1030*	*780÷820*	*780÷820*	*780÷820*	*2435*	*2135*	*2035*	*2035*	*81*	3.189	D		*232*	*185*	1/4 G	6	B	*28*
319 L4	*1123÷1163*	*913÷953*	*913÷953*	*913÷953*	*2480*	*2180*	*2080*	*2080*	*51*	2.008	B	522	*201*	*153*	1/4 G	6	B	*28*

	V_ _						FV_ _						NV_ _						FNV_ _					
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs
319 L1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
319 L2	*556*	*120*	*125*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
319 L3	*348*	*80*	*55*	—	—	—	*456*	*80*	*85*	—	—	—	13.563	3.000	121.3	—	—	—	17.835	3.000	140.0	—	—	—
319 L4	*315*	*80*	*35*	*313*	*60*	*28*	*375*	*80*	*48*	*363*	*60*	*34*	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0

Bonfiglioli Riduttori

319 L



	PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1
319 L3	—	—	*250*	*580*	*250*	*580*
319 L4	*197*	*530*	*227*	*530*	*227*	*550*

	PF N320TC		PF N360TC	
	E1	P1	E1	P1
319 L3	—	—	12.402	22.835
319 L4	9.921	20.866	11.496	20.866

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

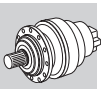
FP T_{2max} = 4,248,360 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	P180		P200		P225		P250	
	E	P	E	P	E	P	E	P
319 L3	—	—	*267*	*400*	*297*	*450*	*297*	*550*
319 L4	*195*	*350*	*186*	*400*	*216*	*450*	*216*	*550*

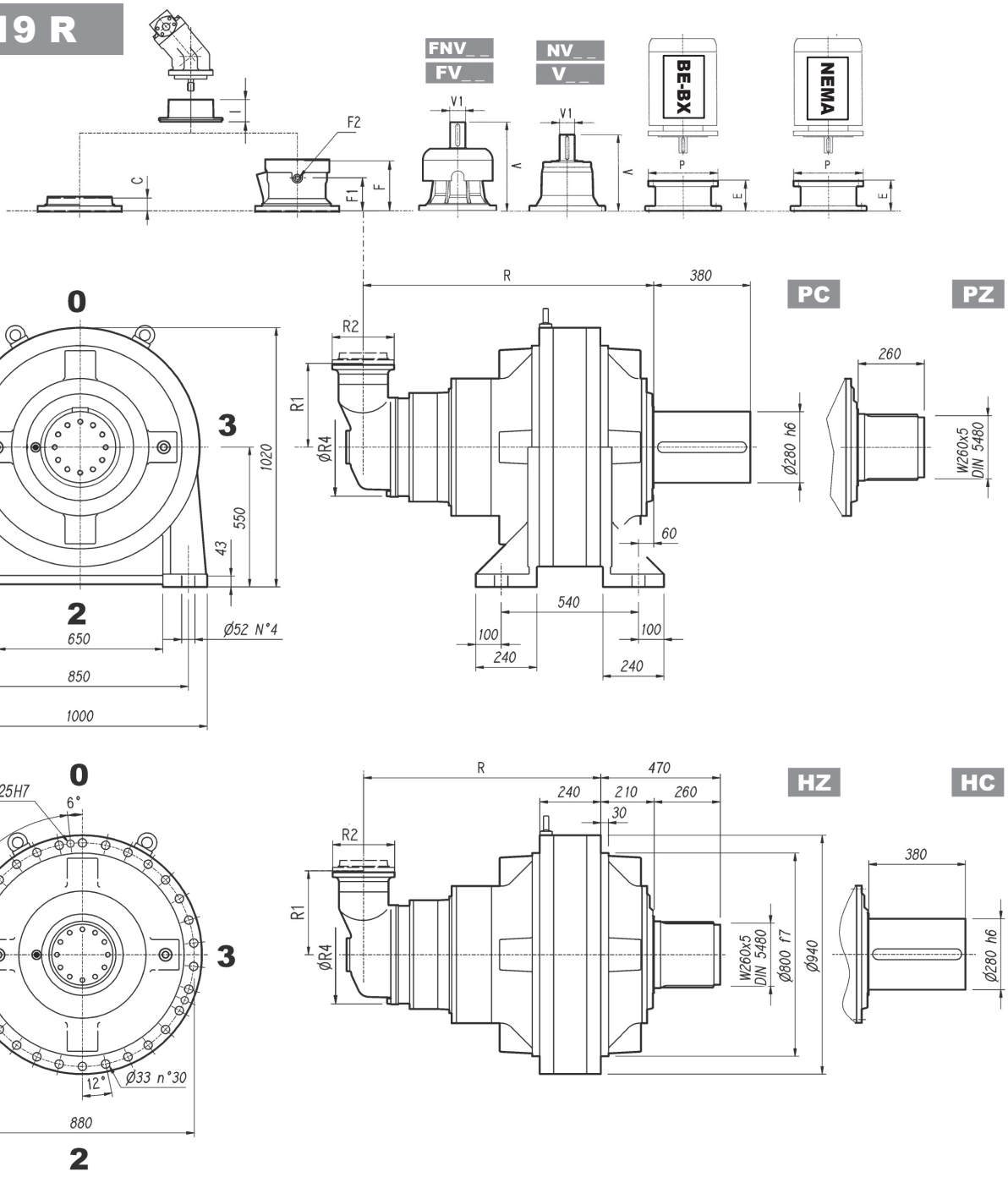
	N320TC		N360TC	
	E	P	E	P
319 L3	—	—	—	—
319 L4	8.445	15.748	8.445	15.748

319 R



Metric

Imperial



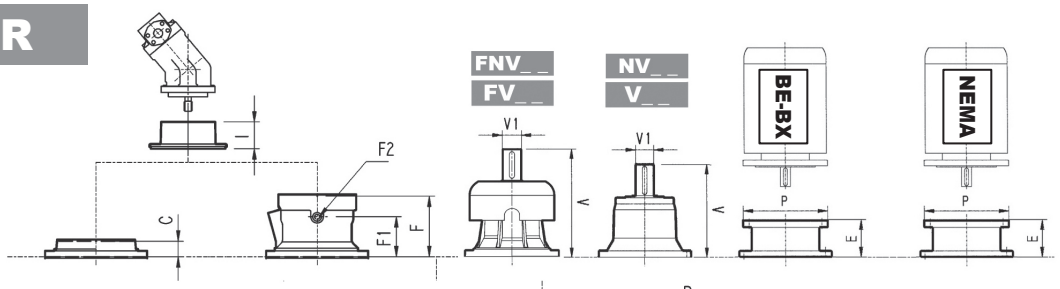
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	R				R1	R2	R4	Kg							I						
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ-FZP	FP	C	C	Input		F	F1	F2	Type	Input	Kg
319 R4 (B)	*1215÷1255*	*1005÷1045*	*1005÷1045*	*1005÷1045*	*345*	*292*	*400*	*2560*	*2260*	*2160*	*2160*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
319 R4 (C)	*1215÷1255*	*1005÷1045*	*1005÷1045*	*1005÷1045*	*390*	*292*	*480*	*2580*	*2280*	*2180*	*2180*	*45*	1.772	B	522	*195*	*147*	1/4 G	6	B	*28*

	V_ _			FV_ _			NV_ _			FNV_ _		
	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
319 R4 (B)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
319 R4 (C)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0

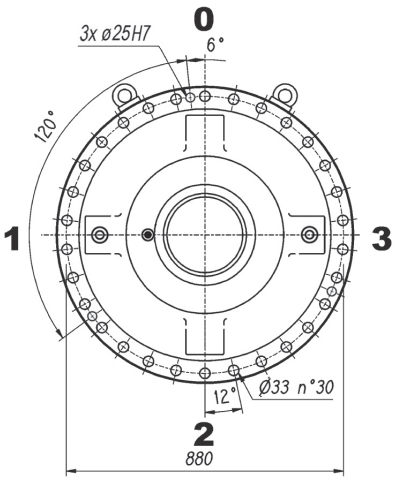
Bonfiglioli Riduttori

319 R

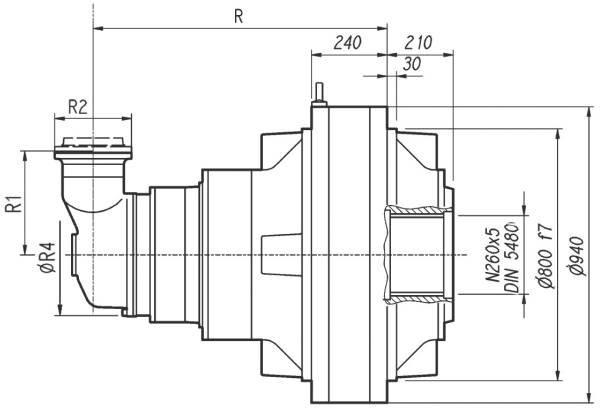


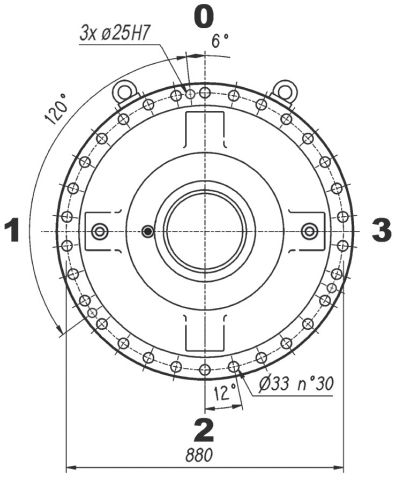
Metric

Imperial

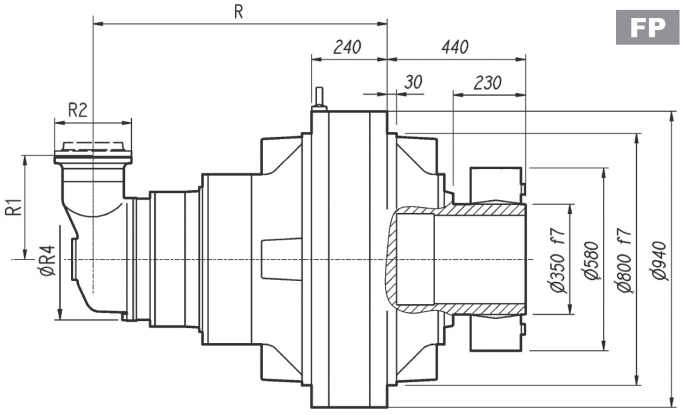


FZ

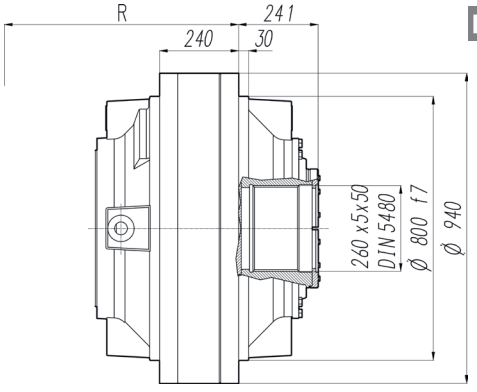




FP



FZP



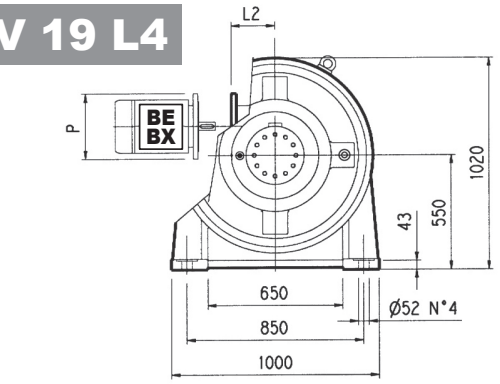
FP T_{2max} = 4,248,360 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

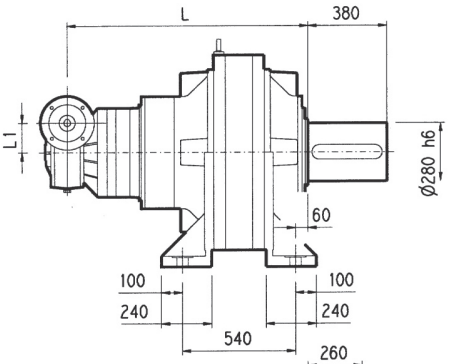
	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
319 R4 (B)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
319 R4 (C)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*

	N320TC		N360TC	
	E	P	E	P
319 R4 (B)	7.776	13.780	7.776	13.780
319 R4 (C)	7.776	13.780	7.776	13.780

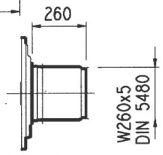
3/V 19 L4

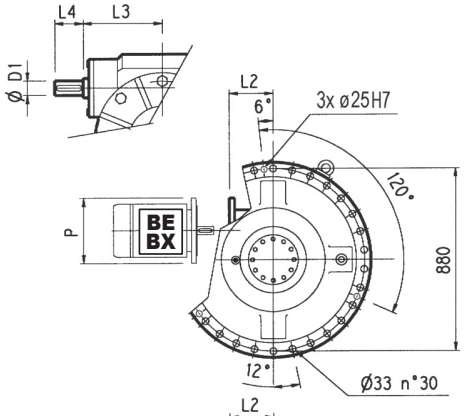


PC

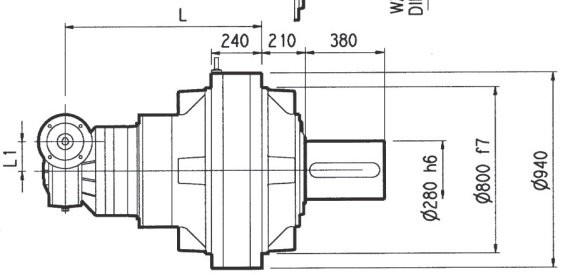


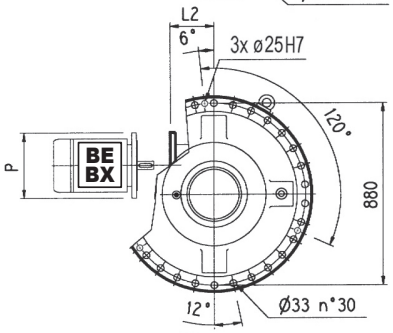
HZ PZ



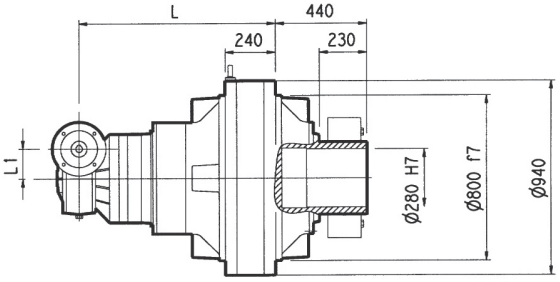


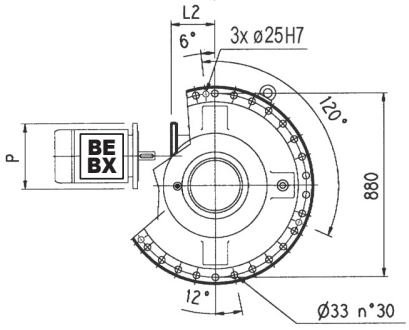
HC



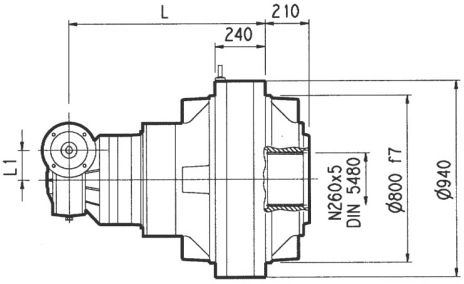


FP

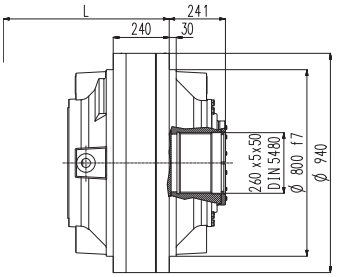




FZ



FZP

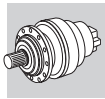


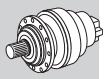
FP T_{2max} = 4,248,360 lb·in

Dimensions are in mm

	L				L1	D1	L3	L4	Kg			
	PC-PZ	HC-HZ	FZ-FZP	FP					PC-PZ	HC-HZ	FZ-FZP	FP
3/V 19 L4	1210÷1250	1000÷1040	1000÷1040	1000÷1040	210	48	230	110	2650	2350	2250	2250

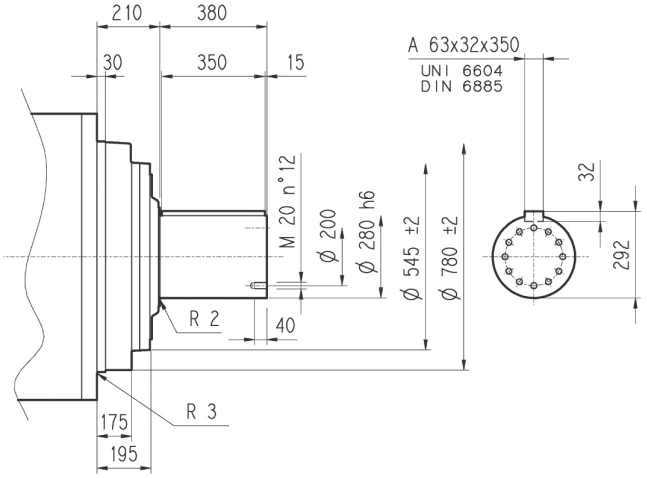
	P132		P160		P180		P200		P225	
	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 19 L4	485	300	460	350	460	350	485	400	490	450



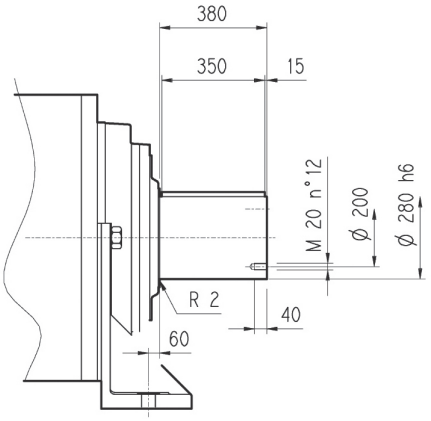


Metric

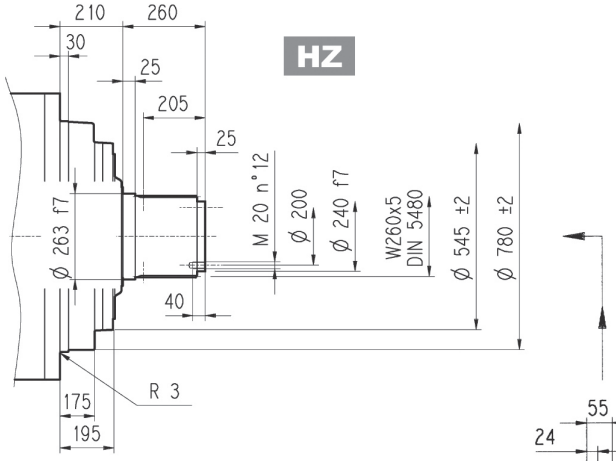
HC

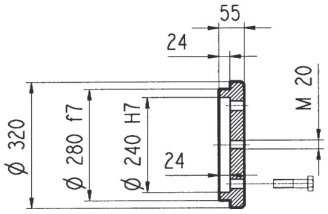


PC

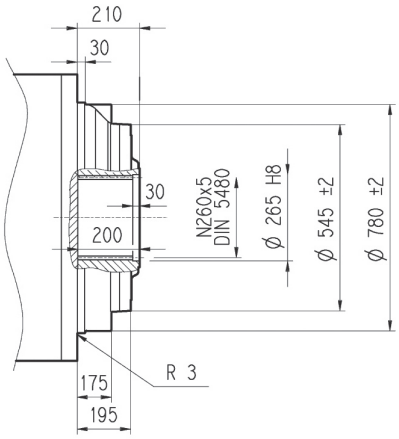


HZ

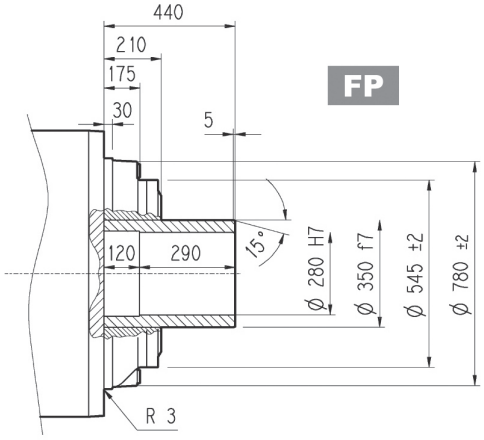




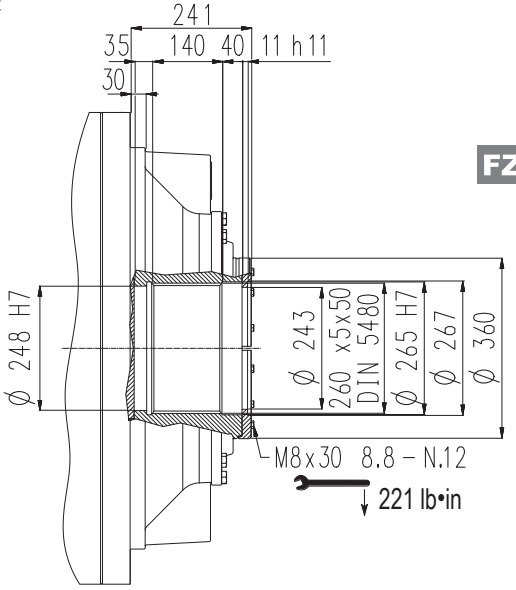
FZ



FP



FZP



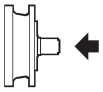
FP | T_{2max} = 4,248,360 lb·in

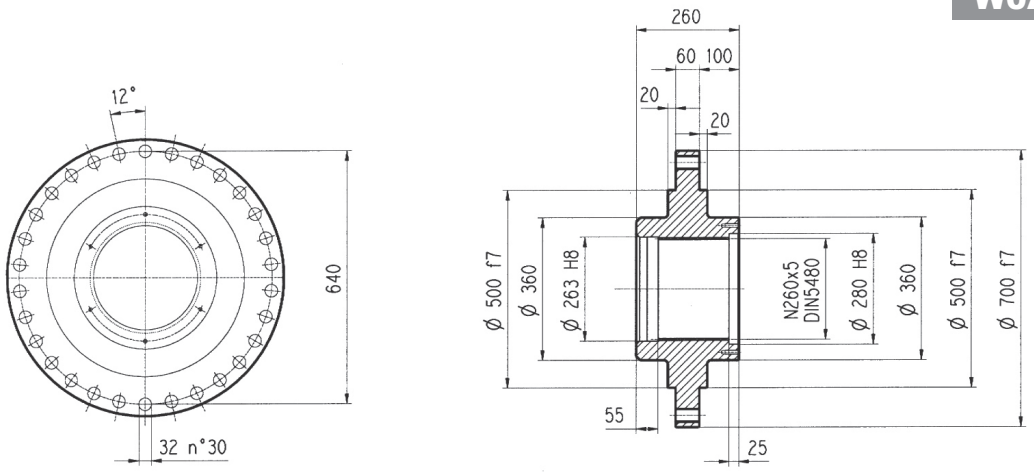
Dimensions are in mm

Bonfiglioli Riduttori

Flange

W0A



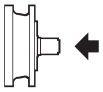


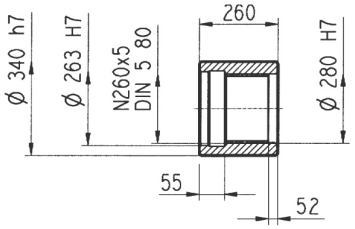
Material: Steel C40

Dimensions are in mm

Sleeve coupling

M0A



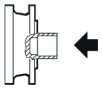


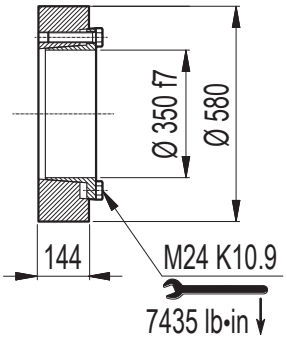
Material: Steel 16CrNi4

Dimensions are in mm

Shrink disc

G0A

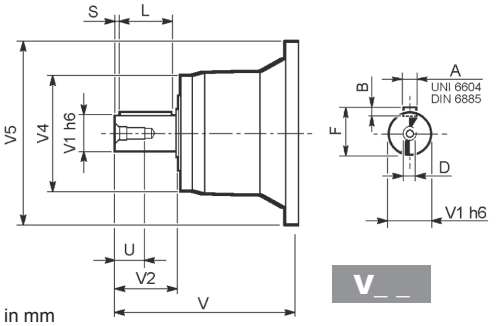




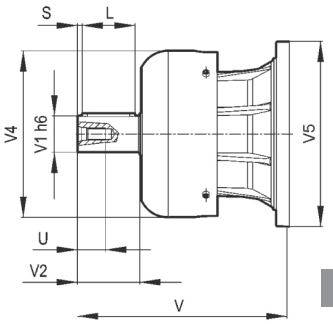
Dimensions are in mm

319 L 319 R

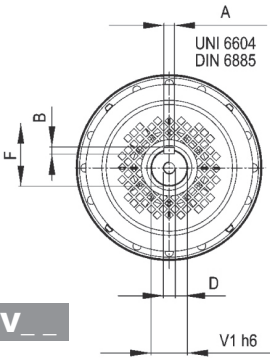




V_ _



FV_ _

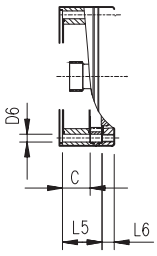


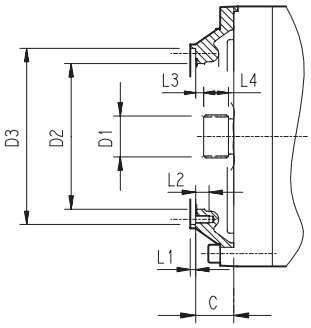
Dimensions are in mm

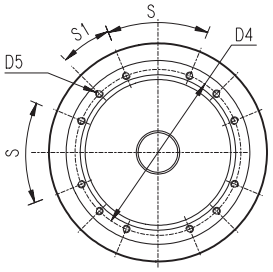
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
319 L2	**V15B**	556	120	210	230	542	32	18	127	180	15	M24	50
319 L3	**V11B**	348	80	130	200	428	22	14	85	110	10	M16	36
	FV11B	456	80	130	347.5	428	22	14	85	110	10	M16	36
319 L4	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
319 R4 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36

319 L 319 R





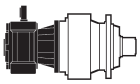


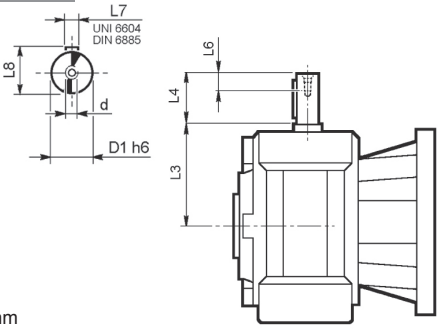


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
319 L1	**V9AG**	245	150x5x28 DIN 5480	444	474 g7	503	M20 n°20	20	5	40	20	82	—	—	30°	15°	G
319 L2	**V9AE**	116÷156	100x94 DIN 5482	340	412 H7	390	M16 n°18	—	7	30	8	55	—	—	20°	20°	E
319 L3	**V9AD**	81	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	8.5	40	—	—	60°	30°	D
319 L4	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
319 R4	**V9AA**	37	40x36 DIN 5482	140	178 H7	165	M12 n°8	11	4	18	9	18	—	—	45°	45°	A
319 R4 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B

3/V 19 L4



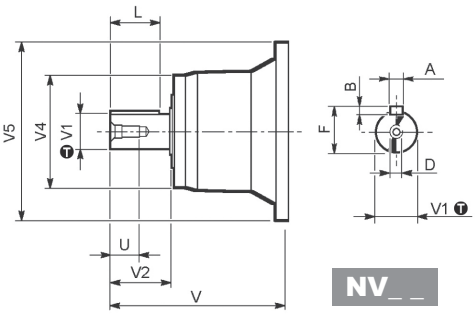


Dimensions are in mm

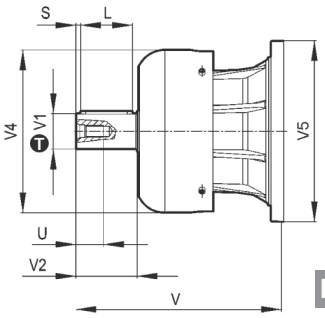
	D1 h6	L3	L4	L6	L7	L8	d
3/V 19 L4_HS	48	230	110	40	14	51.5	M16

319 L 319 R

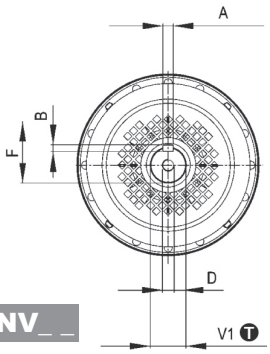




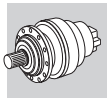
NV_ _



FNV_ _



inch	T
3.000	0 -0.00075
2.375	0 -0.00053



Imperial

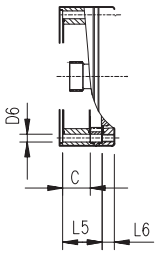
Dimensions are in Inch except when shown in *italic [mm]*

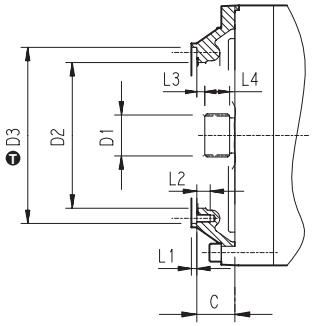
		V	V1	V2	V4	V5	A	B	F	L	D	U
319 L3	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
319 L4	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
319 R4 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654

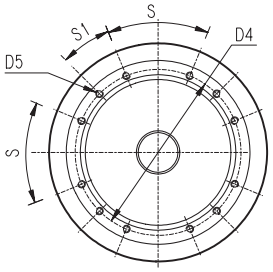
319 L 319 R



inch	T
18.66	-0.000787 -0.00326
16.22	+0.00248 0
13.19	+0.00224 0
9.29	+0.00181 0
7.01	+0.00157 0

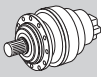






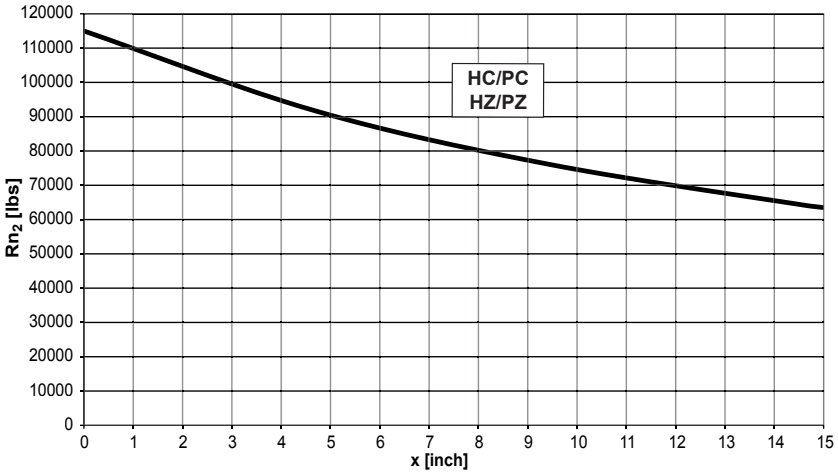
Dimensions are in Inch except when shown in *italic [mm]*

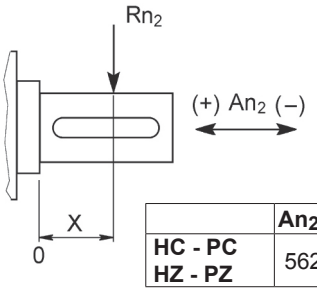
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
319 L1	**V9AG**	9.65	*150x5x28 DIN 5480*	17.48	18.66	19.80	*M20 n°20*	0.79	0.20	1.57	0.79	3.23	—	—	30°	15°	G
319 L2	**V9AE**	4.57÷6.14	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n°18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
319 L3	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D
319 L4	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
319 R4	**V9AA**	1.46	*40x36 DIN 5482*	5.51	7.01	6.50	*M12 n°8*	0.43	0.16	0.71	0.35	0.71	—	—	45°	45°	A
319 R4 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B



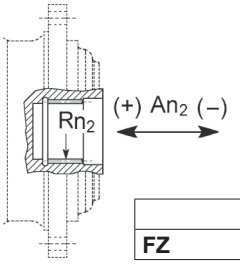
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





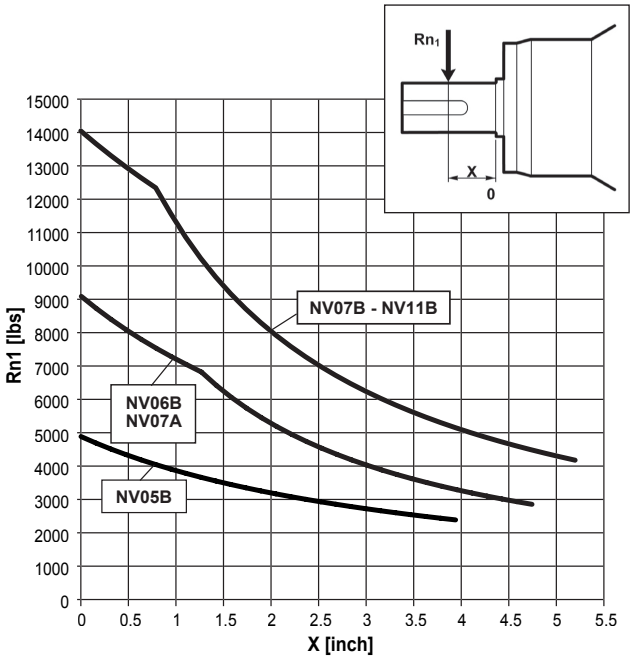
	An2 (+)	An2 (-)
HC - PC HZ - PZ	56200	50580

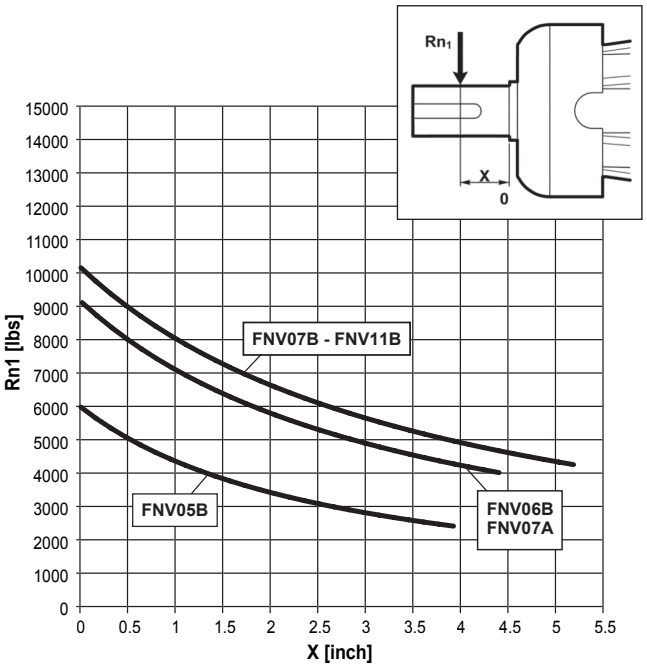


	Rn2	An2 (+/-)
FZ	20869	20869

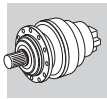
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		HZ - HC - PZ - PC	**1.75**	**1.52**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

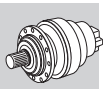




Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**

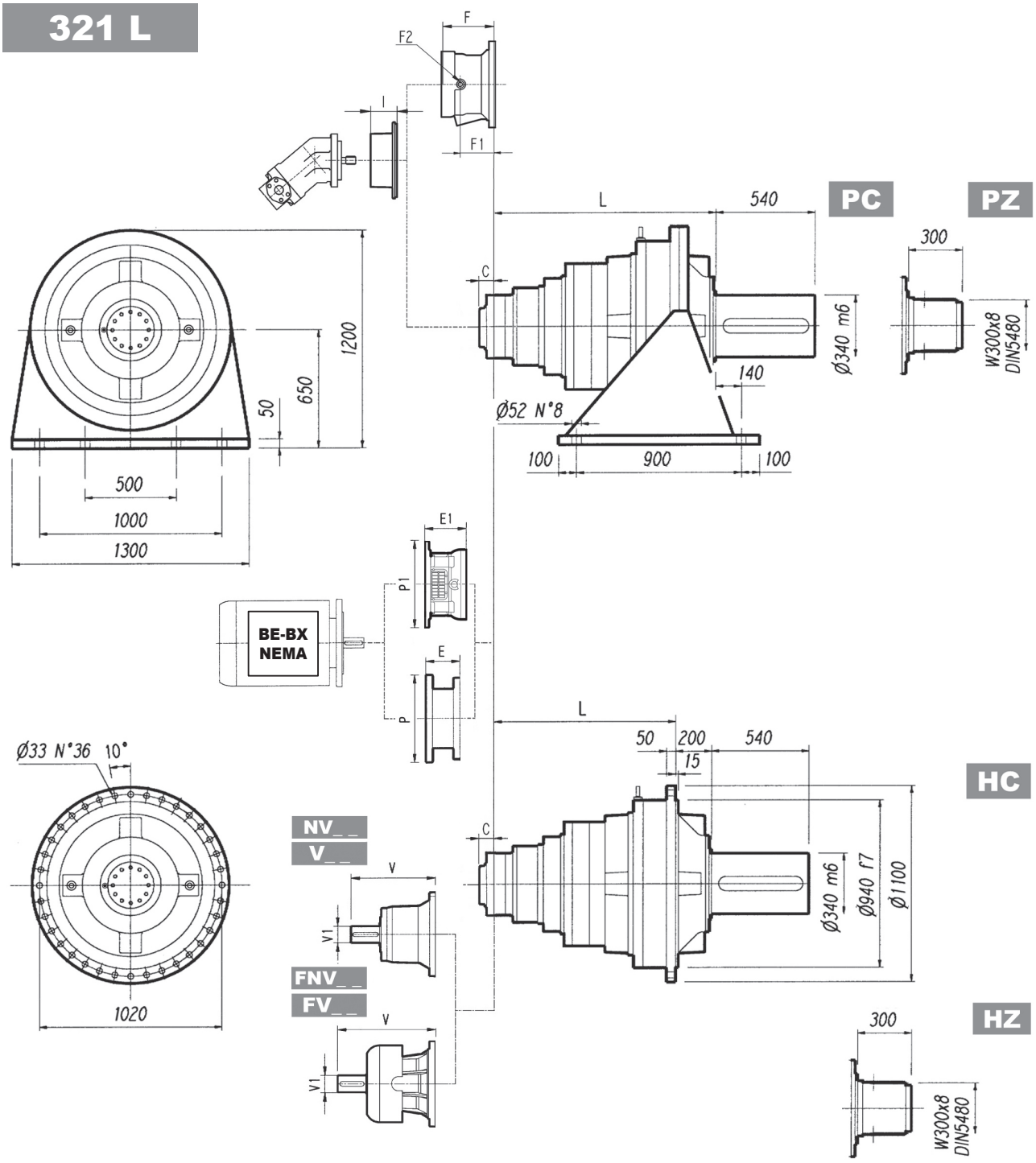


321 L



Metric

Imperial

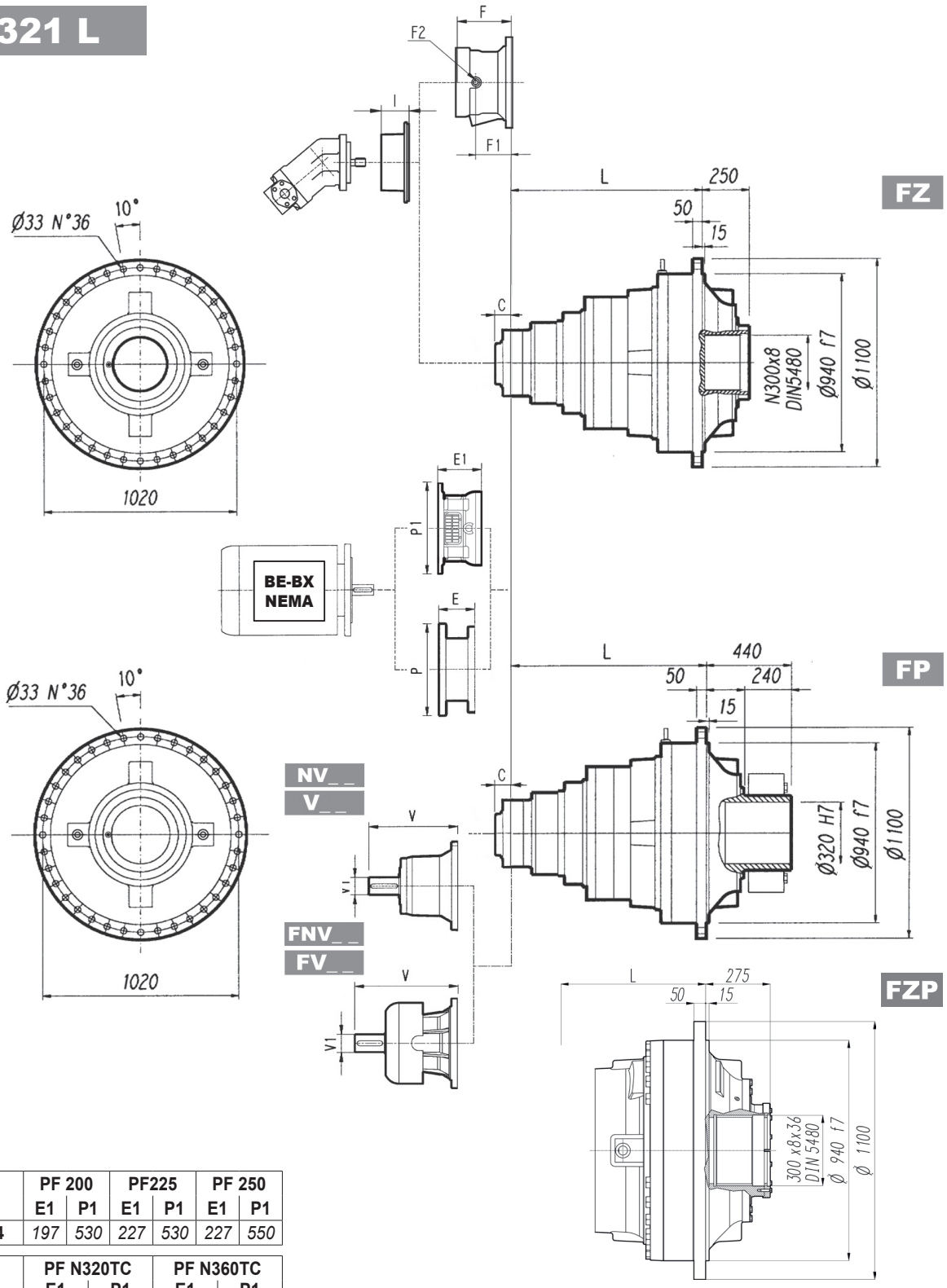


Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L				Kg							I						
	PC - PZ	HC - HZ	FZ - FZP	FP	PC - PZ	HC - HZ	FZ - FZP	FP	C	C	Input		F	F1	F2	Type	Input	Kg
321 L2	*795*	*595*	*595*	*595*	*3000*	*2700*	*2600*	*2600*	*7.126*	181	F		—	—	—	—	—	—
321 L3	*1104*	*904*	*904*	*904*	*3120*	*2820*	*2720*	*2720*	*2.953*	75	D		—	—	—	—	—	—
321 L4	*1253*	*1053*	*1053*	*1053*	*3180*	*2880*	*2780*	*2780*	*2.008*	51	B	522	*201*	*153*	1/4 G	6	B	*28*

	V _ _						FV _ _						NV_ _						FNV_ _					
	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs	V	V1	lbs	V	V1	lbs
321 L2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
321 L3	*343*	*80*	*55*	—	—	—	*451*	*80*	*71*	—	—	—	13.563	3.000	121.3	—	—	—	17.835	3.000	140	—	—	—
321 L4	*315*	*80*	*35*	*313*	*60*	*28*	*375*	*80*	*48*	*363*	*60*	*34*	13.130	2.375	29.8	12.283	3.000	77.2	15.104	2.375	38.0	14.646	3.000	90.0

321 L



	PF 200		PF225		PF 250	
	E1	P1	E1	P1	E1	P1
321 L4	*197*	*530*	*227*	*530*	*227*	*550*

	PF N320TC		PF N360TC	
	E1	P1	E1	P1
321 L4	9.921	20.866	11.496	20.866

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

FP T_{2max} = 6,372,540 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

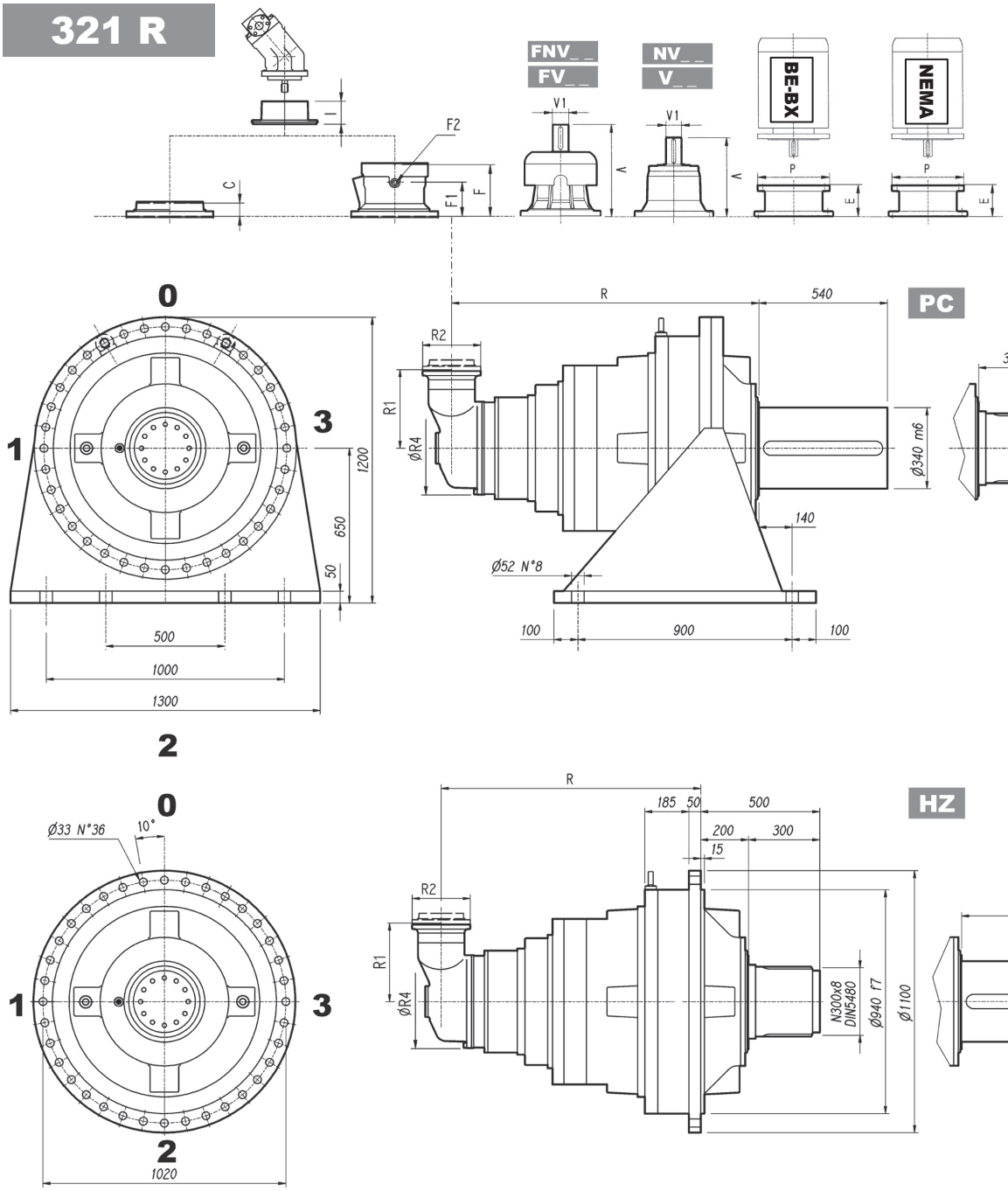
	P180		P200		P225		P250	
	E	P	E	P	E	P	E	P
321 L4	*195*	*350*	*186*	*400*	*216*	*450*	*216*	*550*

	N320TC		N360TC	
	E	P	E	P
321 L4	8.445	15.748	8.445	15.748

321 R

Metric

Imperial



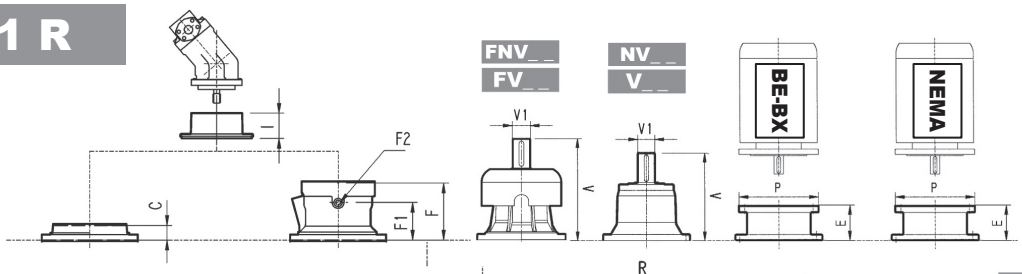
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

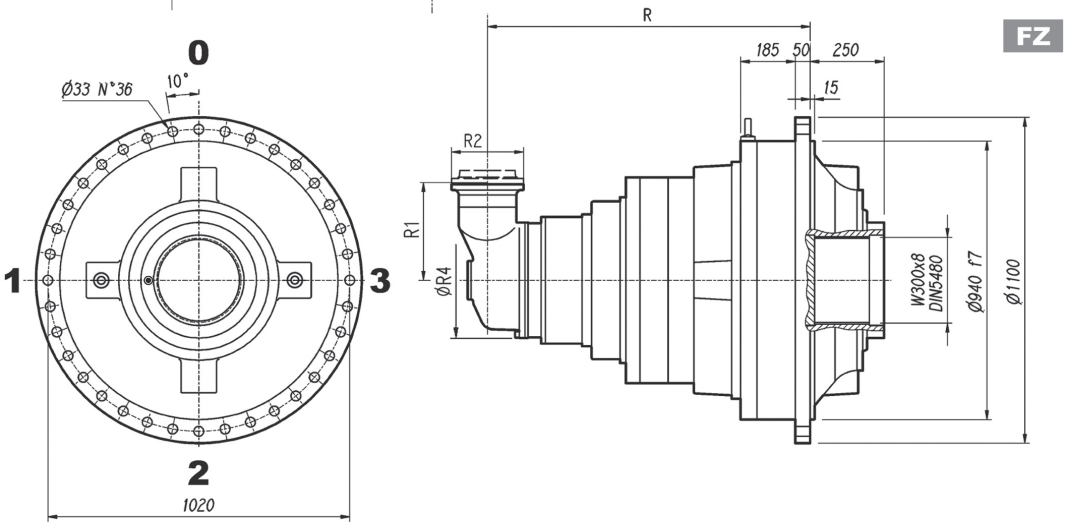
	R				R1	R2	R4	Kg							I						Kg
	PC-PZ	HC-HZ	FZ - FZP	FP				PC-PZ	HC-HZ	FZ - FZP	FP	C	C	Input		F	F1	F2	Type	Input	
321 R4 (B)	*1334*	*1134*	*1134*	*1134*	*345*	*292*	*400*	*3250*	*2950*	*2850*	*2850*	*45*	1.772	B		*195*	*147*	1/4 G	6	B	*28*
321 R4 (C)	*1334*	*1134*	*1134*	*1134*	*390*	*292*	*480*	*3260*	*2960*	*2860*	*2860*	*45*	1.772	B	522	*195*	*147*	1/4 G	6	B	*28*

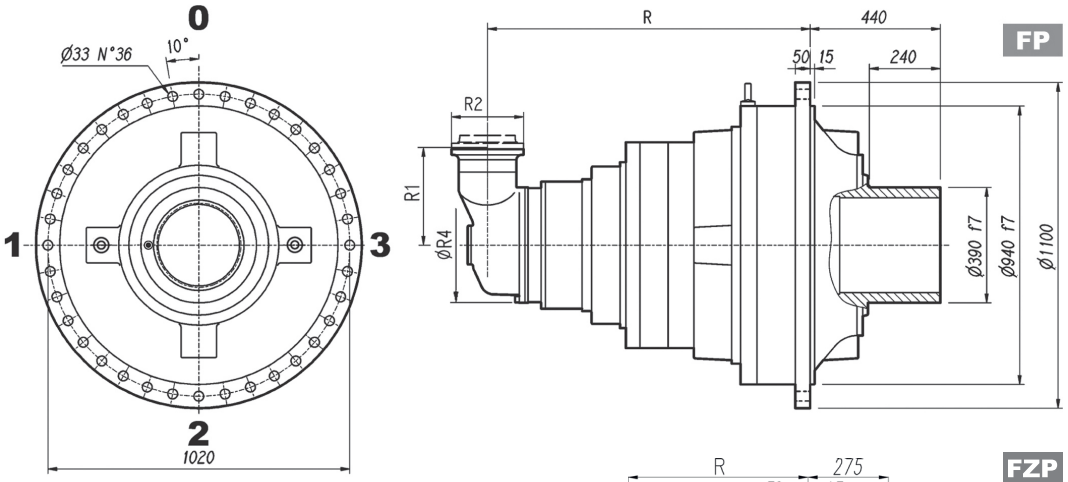
	V_ _			FV_ _			NV_ _			FNV_ _		
	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
321 R4 (B)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0
321 R4 (C)	*307*	*60*	*23*	*357*	*60*	*28*	12.703	2.375	50.7	14.652	2.375	58.0

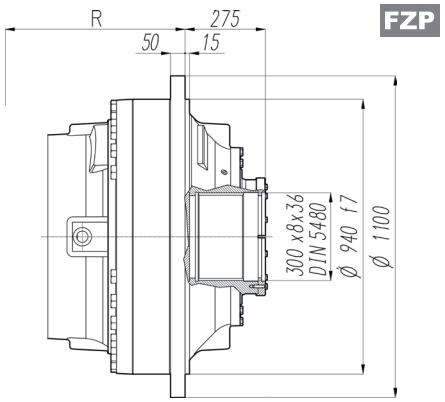
Bonfiglioli Riduttori

321 R









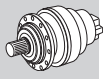
FP | T_{2max} = 6,372,540 lb·in

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	P132		P160		P180		P200		P225		P250	
	E	P	E	P	E	P	E	P	E	P	E	P
321 R4 (B)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*
321 R4 (C)	—	—	—	—	*152*	*350*	*182*	*400*	*212*	*450*	*193*	*550*

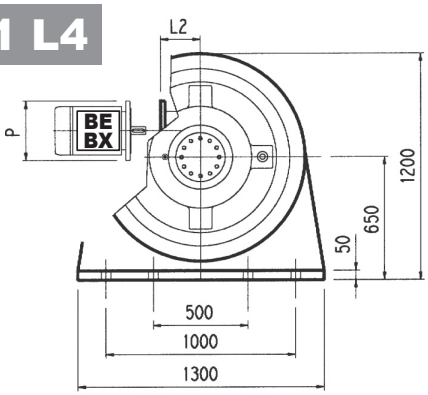
	N320TC		N360TC	
	E	P	E	P
321 R4 (B)	7.776	13.780	7.776	13.780
321 R4 (C)	7.776	13.780	7.776	13.780

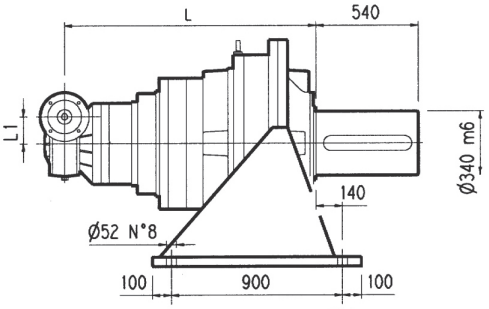
3/V 21 L4



Metric

PC

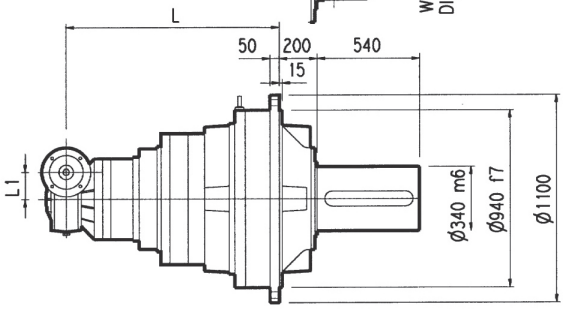


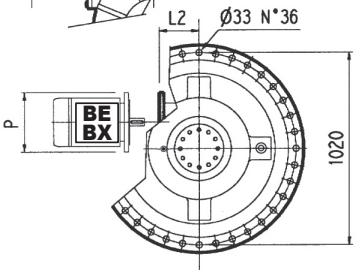


HZ PZ

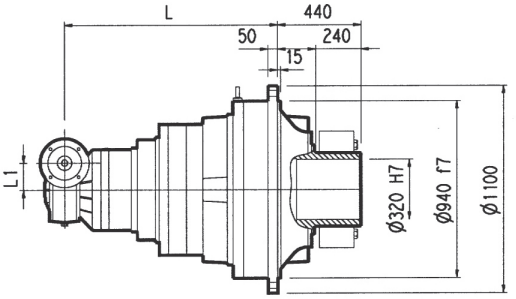


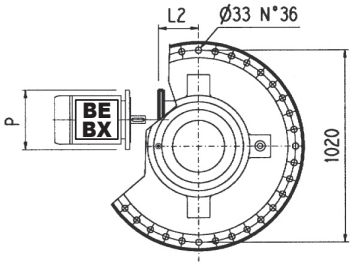
HC



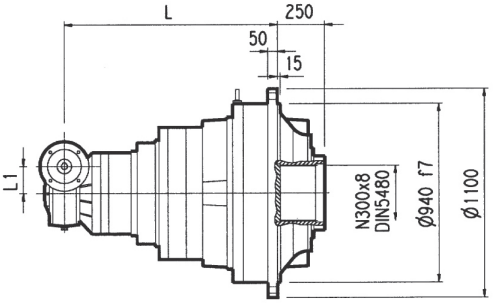


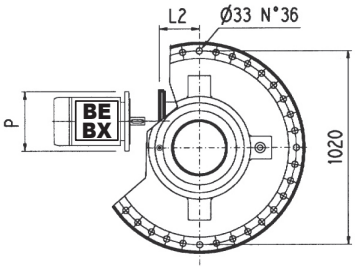
FP



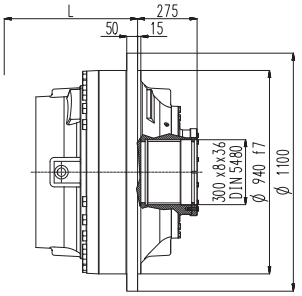


FZ





FZP

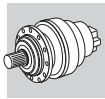


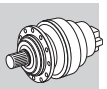
FP | T_{2max} = 6,372,540 lb·in

Dimensions are in mm

	L				L1	L2	D1	L3	L4	Kg			
	PC - PZ	HC - HZ	FZ - FZP	FP						PC - PZ	HC - HZ	FZ - FZP	FP
3/V 21 L4	1374	1174	1174	1174	250	—	55	276	110	3430	3130	3030	3030

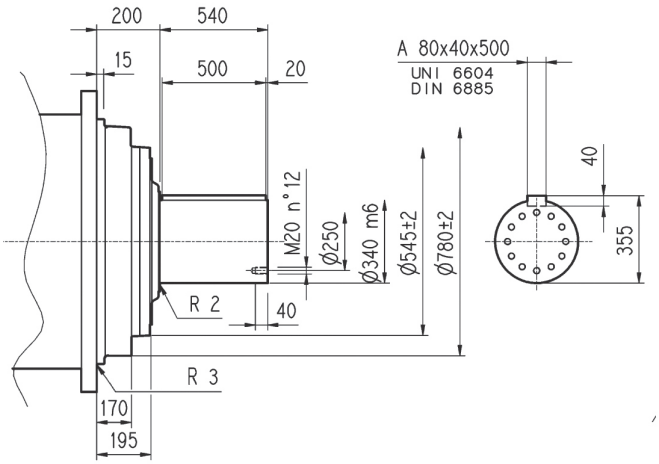
	P132		P160		P180		P200		P225	
	L2	P	L2	P	L2	P	L2	P	L2	P
3/V 21 L4	531	300	506	350	506	350	531	400	536	450



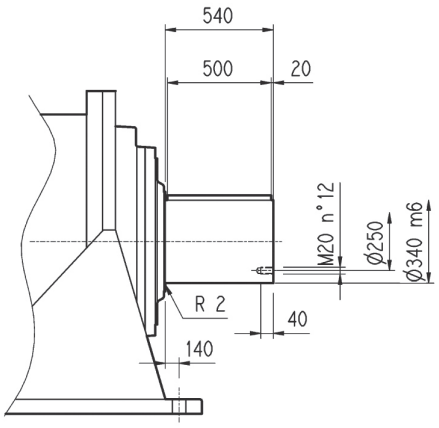


Metric

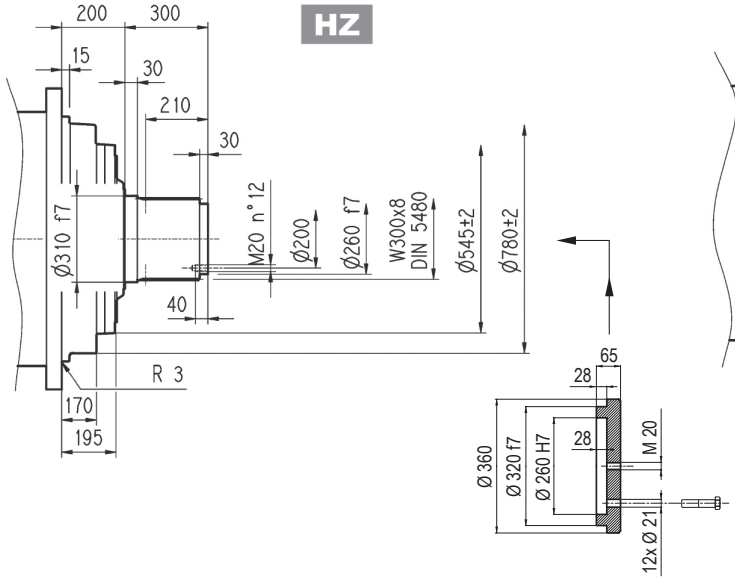
HC



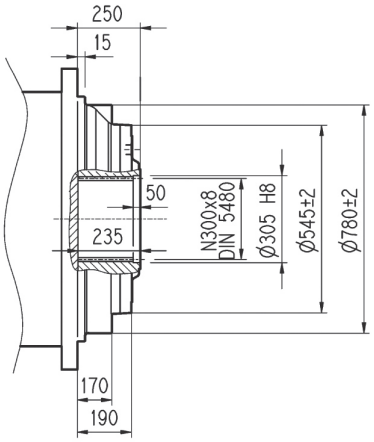
PC



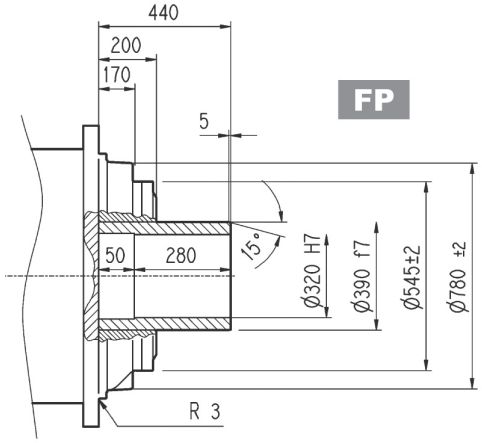
HZ



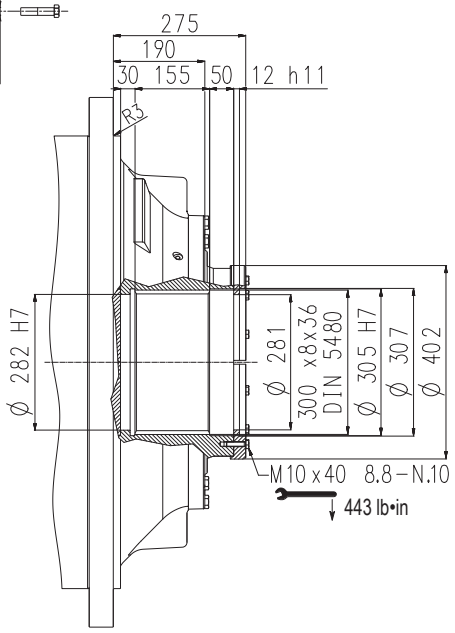
FZ



FP

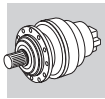


FZP



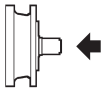
FP | T_{2max} = 6,372,540 lb·in

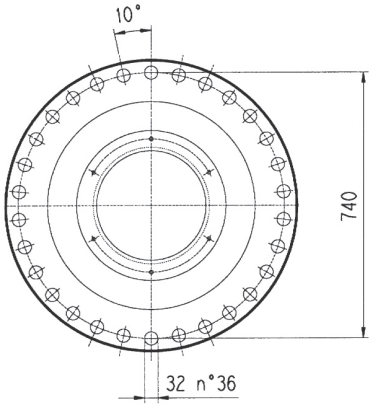
Dimensions are in mm

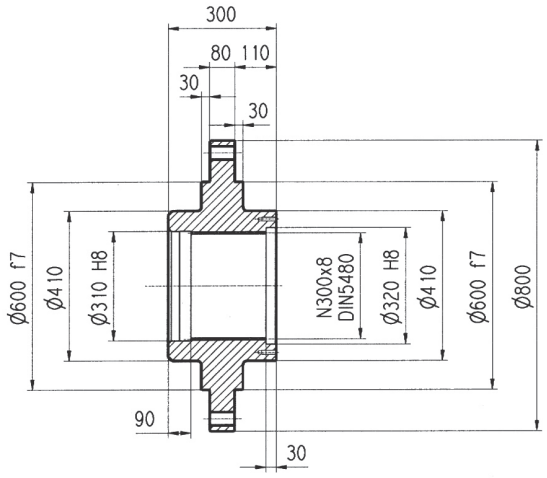


Flange

W0A





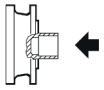


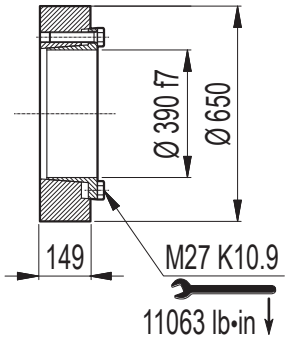
Material: Steel C40

Dimensions are in mm

Shrink disc

G0A

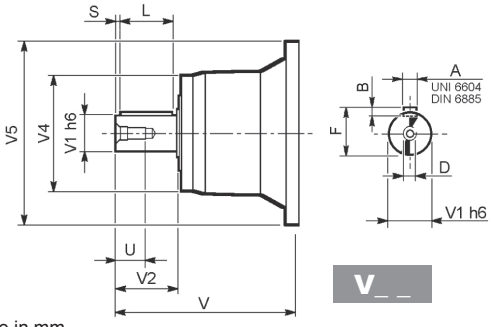




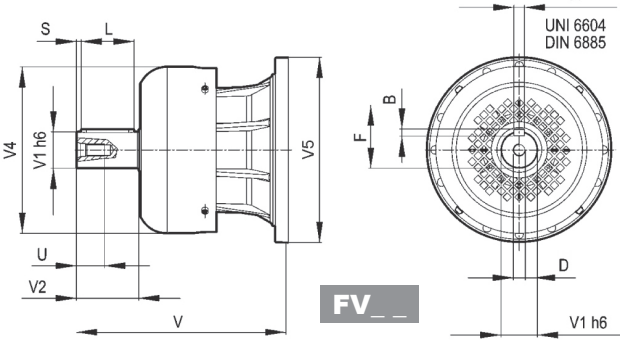
Dimensions are in mm

321 L 321 R





V_ _



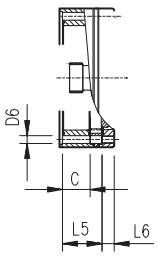
FV_ _

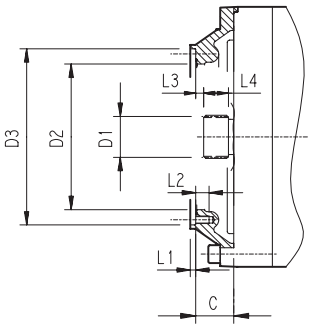
Dimensions are in mm

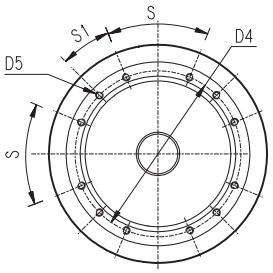
		V	V1	V2	V4	V5	A	B	F	L	S	D	U
321 L3	**V11B**	343	80	130	200	445	22	14	85	110	10	M16	36
	FV11B	451	80	130	347.5	445	22	14	85	110	10	M16	36
321 L4	**V07B**	315	80	130	200	345	22	14	85	110	10	M16	36
	FV07B	375	80	130	347.5	348	22	14	85	110	10	M16	36
	V07A	313	60	105	155	345	18	11	64	90	7.5	M16	36
	FV07A	363	60	105	309	348	18	11	64	90	7.5	M16	36
321 R4 (B) (C)	**V06B**	307	60	105	155	292	18	11	64	90	7.5	M16	36
	FV06B	357	60	105	309	292	18	11	64	90	7.5	M16	36

321 L 321 R





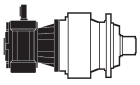


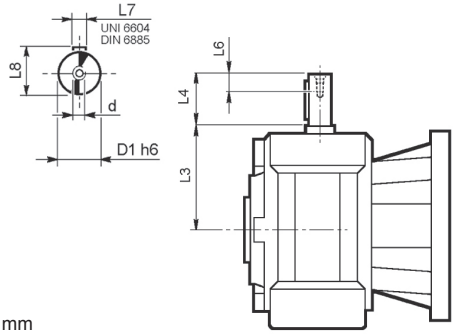


Dimensions are in mm

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
321 L1	Please consult Bonfiglioli Technical Service																
321 L2	**V9AF**	181	120x3 DIN 5480	365	390 f7	415	M16 n°18	—	4	30	3	65	—	—	20°	20°	F
321 L3	**V9AD**	75	80x74 DIN 5482	270	335 H7	314	M16 n°8	—	5	30	9.5	40	—	—	60°	30°	D
321 L4	**V9AB**	51	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B
321 R4 (B) (C)	**V9AB**	45	58x53 DIN 5482	195	236 H7	222	M10 n°12	—	4	18	11	22	—	—	45°	22.5°	B

3/V 21 L4



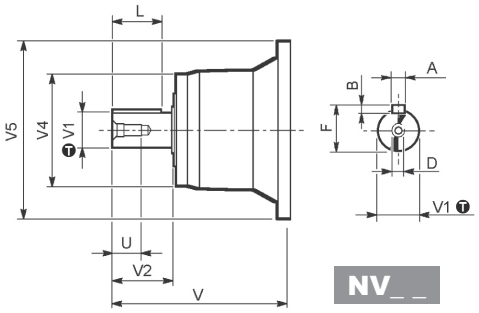


Dimensions are in mm

	D1 h6	L3	L4	L6	L7	L8	d
3/V 21 L4_HS	55	276	110	40	16	59	M16

321 L 321 R





inch	T
3.000	0 -0.00075
2.375	0 -0.00053

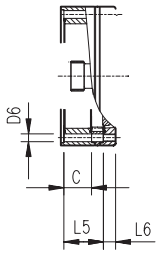
Imperial

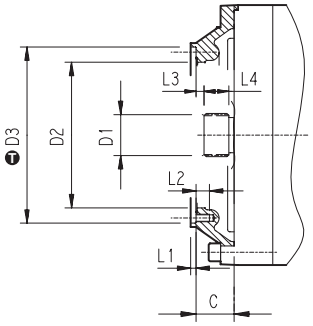
Dimensions are in Inch except when shown in *italic [mm]*

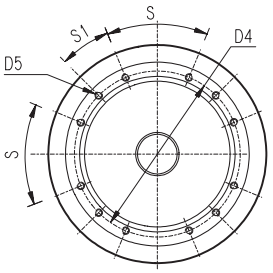
		V	V1	V2	V4	V5	A	B	F	L	D	U
321 L3	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
321 L4	**NV07B**	12.283	3.000	5.000	7.165	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV07B	14.646	3.000	5.000	13.677	13.699	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	NV07A	13.130	2.375	4.750	6.024	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
	FNV07A	15.104	2.375	4.750	6.811	13.700	0.625	0.625	2.645	4.250	3/4-10 UNC	1.654
321 R4 (B) (C)	**NV06B**	12.703	2.375	4.750	6.417	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654
	FNV06B	14.652	2.375	4.750	12.165	11.496	0.625	0.625	2.646	4.252	3/4-10 UNC	1.654

321 L 321 R





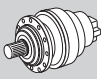




inch	T
15.35	-0.000708 -0.00295
13.19	+0.00224 0
9.29	+0.00181 0

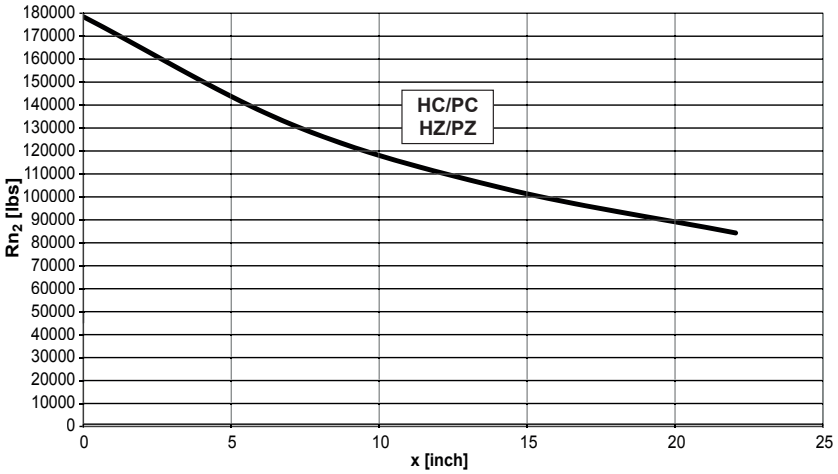
Dimensions are in Inch except when shown in *italic [mm]*

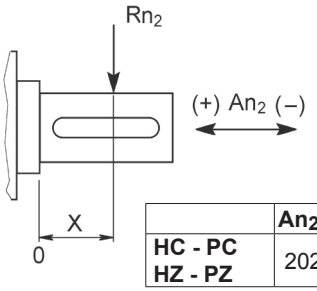
		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
321 L1	Please consult Bonfiglioli Technical Service																
321 L2	**V9AF**	7.13	*120x3 DIN 5480*	14.37	15.35	16.34	*M16 n°18*	—	0.16	1.18	0.12	2.56	—	—	20°	20°	F
321 L3	**V9AD**	2.95	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.37	1.57	—	—	60°	30°	D
321 L4	**V9AB**	2.01	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B
321 R4 (B) (C)	**V9AB**	1.77	*58x53 DIN 5482*	7.68	9.29	8.74	*M10 n°12*	—	0.16	0.71	0.43	0.87	—	—	45°	22.5°	B



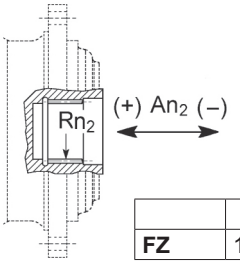
Imperial

Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$





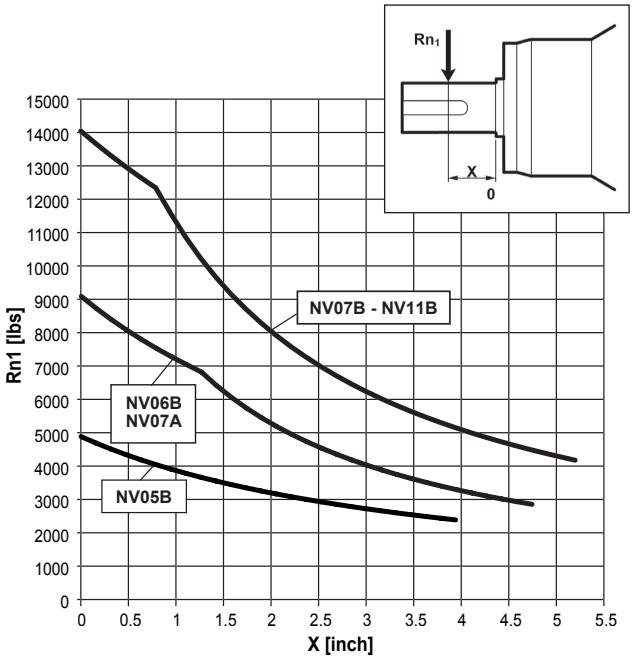
	An2 (+)	An2 (-)
HC - PC HZ - PZ	20232	26976

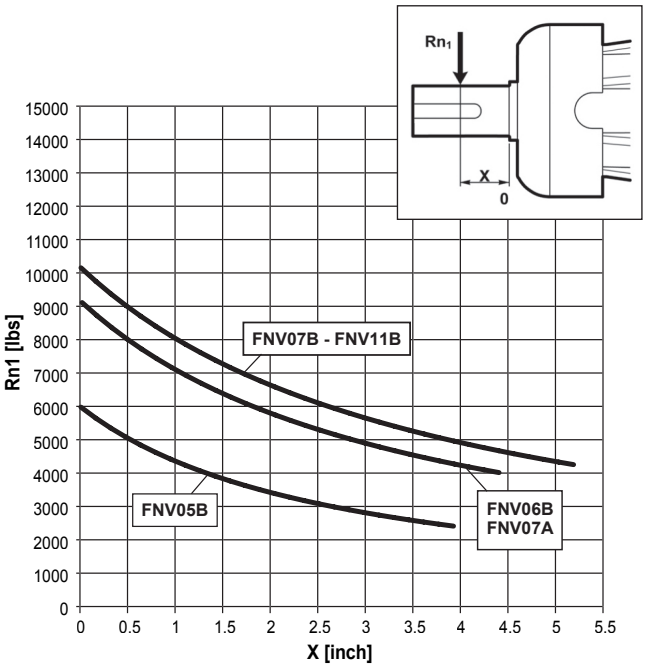


	Rn2	An2 (+/-)
FZ	125212	18782

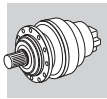
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	FZ	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**
		HZ - HC - PZ - PC	**1.54**	**1.35**	**1.23**	**1.00**	**0.62**	**0.50**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





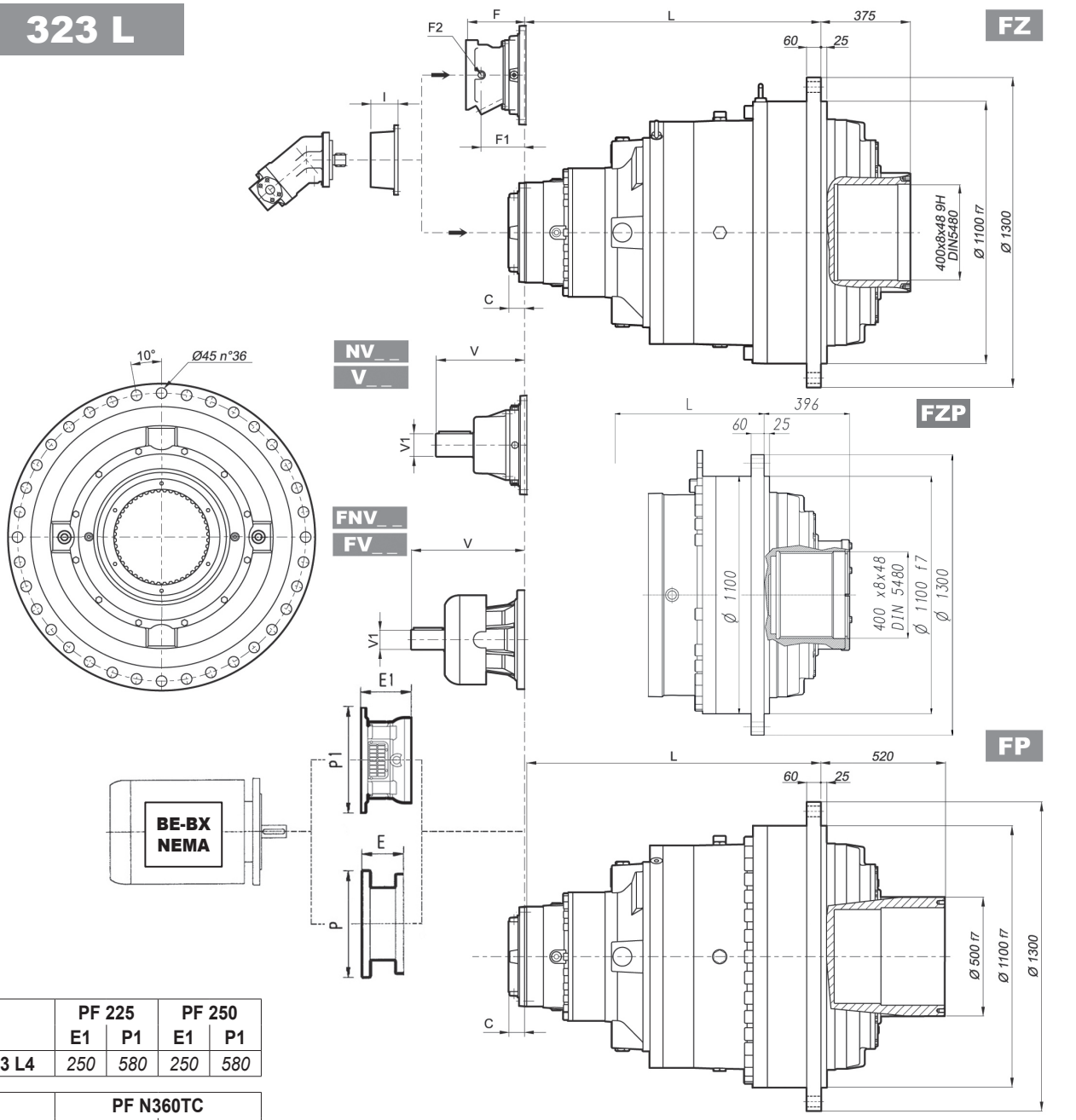
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



323 L

Metric

Imperial



	PF 225		PF 250	
	E1	P1	E1	P1
323 L4	*250*	*580*	*250*	*580*

	PF N360TC	
	E1	P1
323 L4	12.402	22.835

FP T_{2max} = 13,984,180 lb·in

NOTE: for R design contact Bonfiglioli Technical Service
for PF N400TC contact Bonfiglioli Technical Service

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L		Kg		V_ _			FV_ _			NV_ _			FNV_ _		
	FZ-FZP	FP	FZ-FZP	FP	V	V1	Kg	V	V1	Kg	V	V1	lbs	V	V1	lbs
323 L1	Please consult Bonfiglioli Technical Service															
323 L2	*666*	*666*	*4450*	*4550*	—	—	—	—	—	—	—	—	—	—	—	—
323 L3	*1049*	*1049*	*4750*	*4850*	*556*	*120*	*125*	—	—	—	—	—	—	—	—	—
323 L4	*1261*	*1261*	*4900*	*5000*	*315*	*80*	*35*	*456*	*80*	*85*	13.563	3.000	121.3	17.835	3.000	140.0

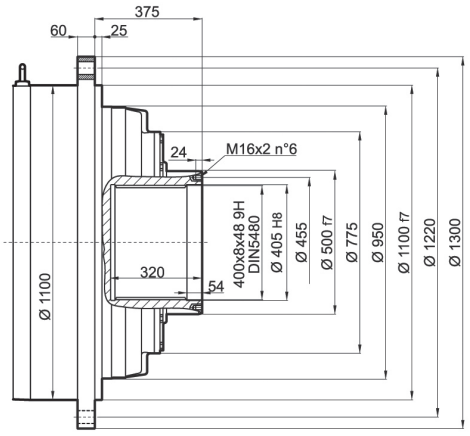
				P200		P225		P250		N400TC								
	C	C	Input	E	P	E	P	E	P	E	P	I	F	F1	F2	Type	Input	Kg
323 L1	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—
323 L2	*245*	9.646	G	—	—	—	—	—	—	—	—		—	—	—	—	—	—
323 L3	*116*	4.567	E	—	—	—	—	—	—	—	—		—	—	—	—	—	—
323 L4	*81*	3.189	D	*267*	*400*	*297*	*450*	*297*	*550*	11.339	17.480	522	*201*	*48*	1/4 G	6	B	*22*

Bonfiglioli Riduttori

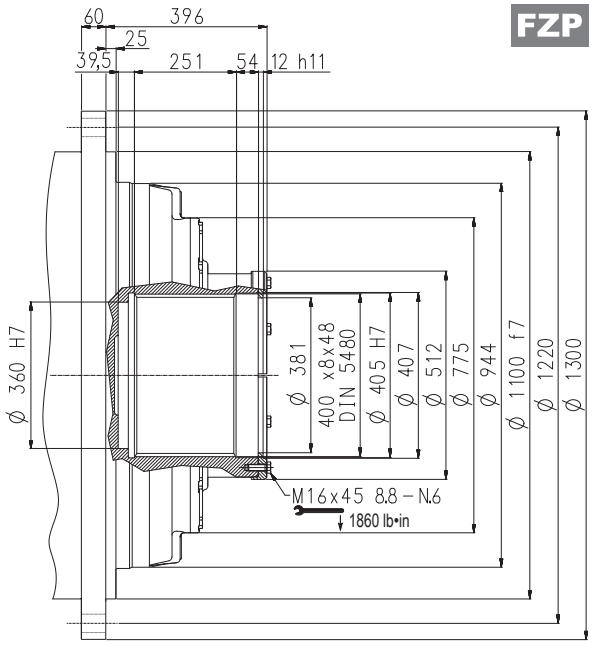
323 L

Metric

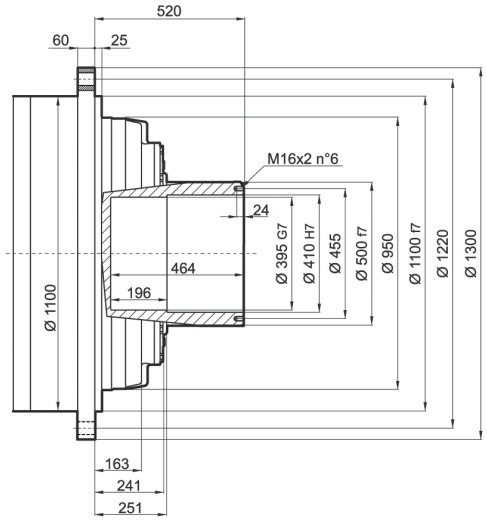
FZ



FZP

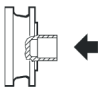


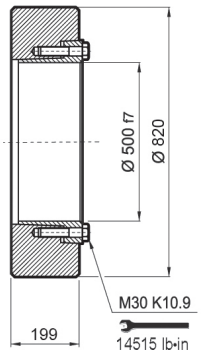
FP



Shrink disc

G0A





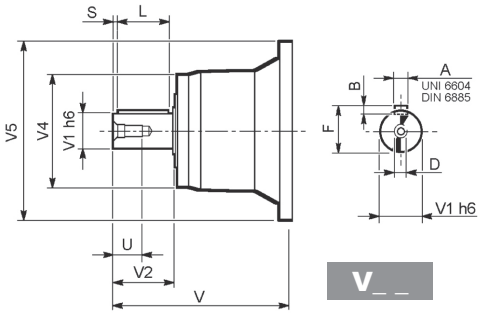
Dimensions are in mm

FP T_{2max} = 13,984,180 lb·in

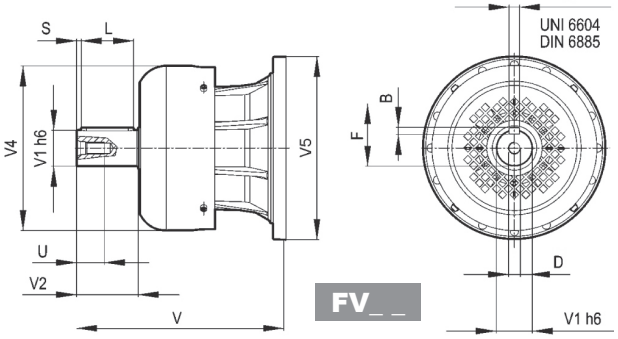
Dimensions are in mm

323 L





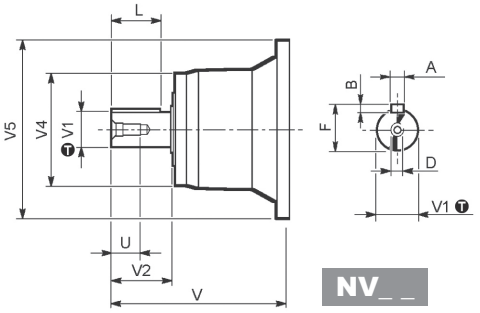
V_ _



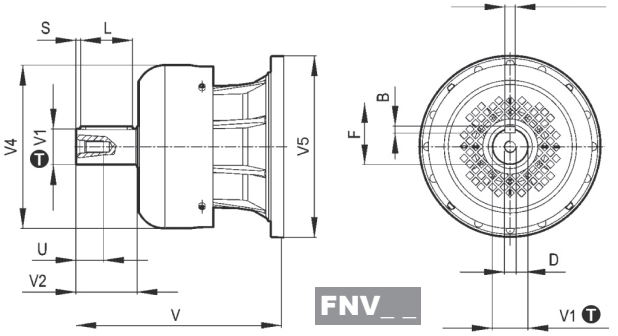
FV_ _

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
323 L3	***V15B***	*556*	*120*	*210*	*230*	*542*	*32*	*18*	*127*	*180*	*15*	*M24*	*50*
323 L4	***V11B***	*348*	*80*	*130*	*200*	*428*	*22*	*14*	*85*	*110*	*10*	*M16*	*36*
	FV11B	*456*	*80*	*130*	*347.5*	*428*	*22*	*14*	*85*	*110*	*10*	*M16*	*36*



NV_ _



FNV_ _

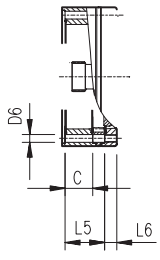
inch	T
3.000	0 -0.00075

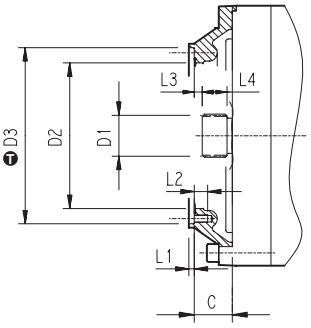
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

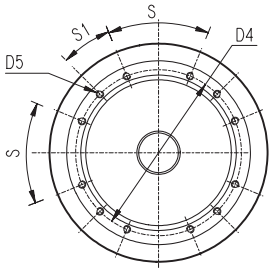
		V	V1	V2	V4	V5	A	B	F	L	D	U
323 L4	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654

323 L









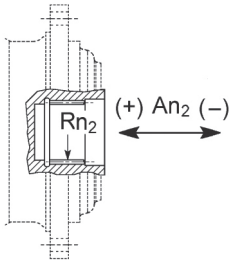
inch	T
18.66	-0.000787 -0.00326
16.22	+0.00248 0
13.19	+0.00224 0

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
323 L1	Please consult Bonfiglioli Technical Service																
323 L2	**V9AG**	*245*	*150x5x28 DIN 5480*	*444*	*474 g7*	*503*	*M20 n°20*	*20*	*5*	*40*	*20*	*82*	—	—	*30°*	*15°*	G
323 L3	**V9AE**	*116*	*100x94 DIN 5482*	*340*	*412 H7*	*390*	*M16 n°18*	—	*7*	*30*	*8*	*55*	—	—	*20°*	*20°*	E
323 L4	**V9AD**	*81*	*80x74 DIN 5482*	*270*	*335 H7*	*314*	*M16 n°8*	—	*5*	*30*	*8.5*	*40*	—	—	*60°*	*30°*	D

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
323 L1	Please consult Bonfiglioli Technical Service																
323 L2	**V9AG**	9.65	*150x5x28 DIN 5480*	17.48	18.66	19.80	*M20 n°20*	0.79	0.20	1.57	0.79	3.23	—	—	30°	15°	G
323 L3	**V9AE**	4.57	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n°18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
323 L4	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D

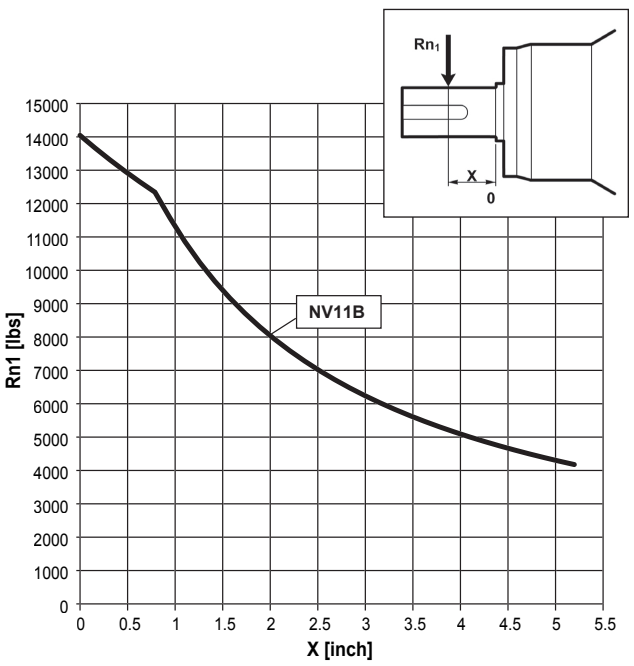
Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$

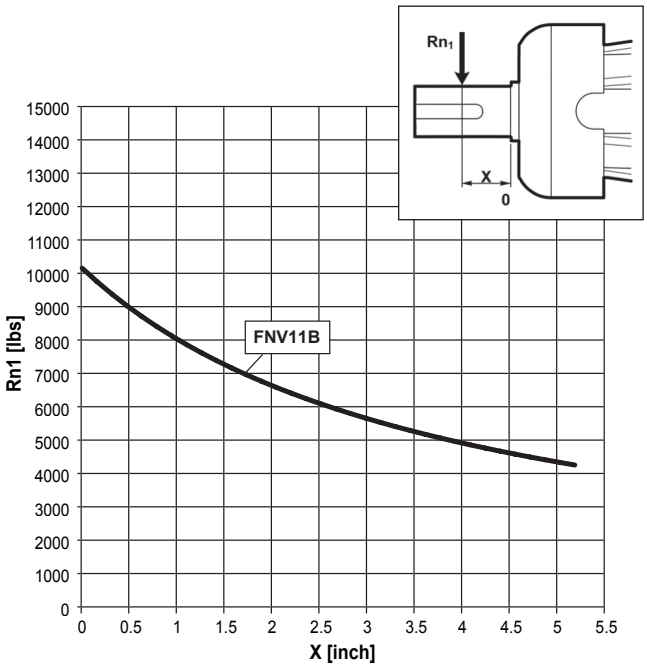


	Rn_2	An_2 (+)	An_2 (-)
FZ	114777	39129	15651

Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	**FZ**	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**

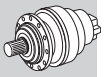
Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$





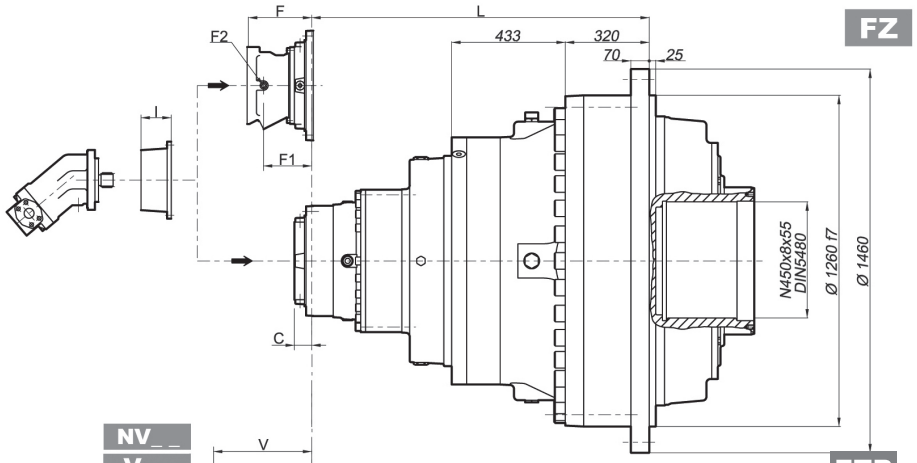
Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**

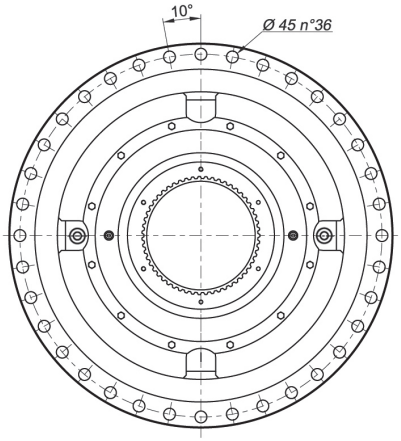
325 L

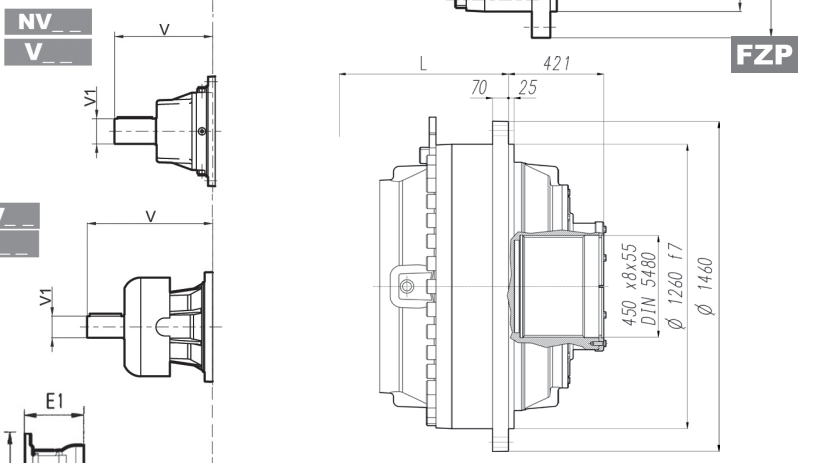


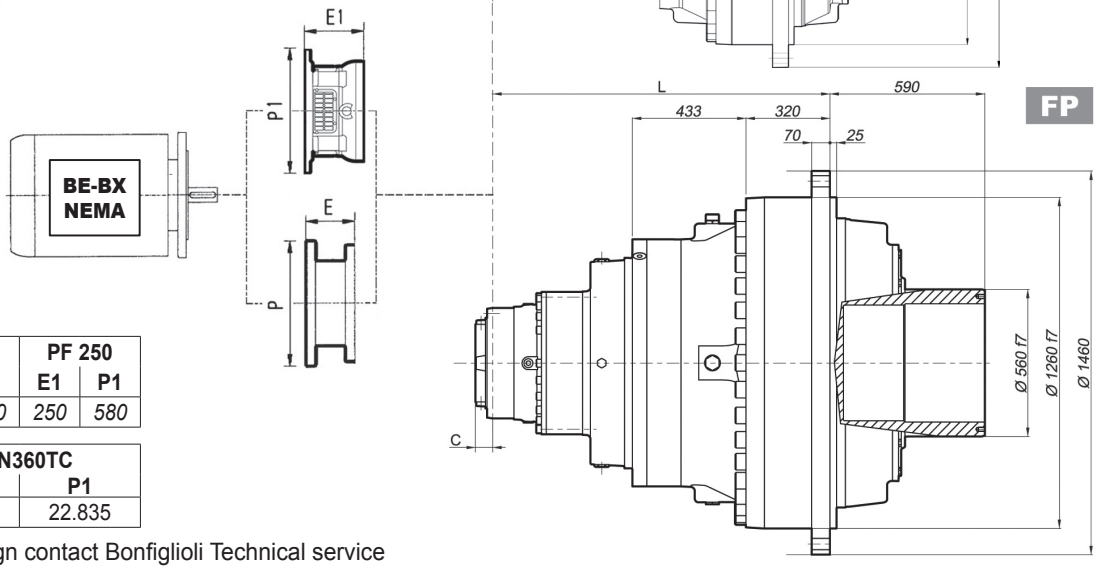
Metric

Imperial









	PF 225		PF 250	
	E1	P1	E1	P1
325 L4	*250*	*580*	*250*	*580*

	PF N360TC	
	E1	P1
325 L4	12.402	22.835

NOTE: For R design contact Bonfiglioli Technical service
For PF N400TC contact Bonfiglioli Technical service

FP T_{2max} = 17,701,490 lb·in

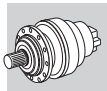
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

	L		Kg		V_ _		Kg	FV_ _		Kg	NV_ _		lbs	FNV_ _		lbs
	FZ-FZP	FP	FZ-FZP	FP	V	V1		V	V1		V	V1		V	V1	
325 L1	Please consult Bonfiglioli Technical Service															
325 L2	*698*	*698*	*5700*	*5900*	—	—	—	—	—	—	—	—	—	—	—	—
325 L3	*1081*	*1081*	*6000*	*6200*	*556*	*120*	*125*	—	—	—	—	—	—	—	—	—
325 L4	*1293*	*1293*	*6150*	*6350*	*315*	*80*	*35*	*456*	*80*	*85*	13.563	3.000	121.3	17.835	3.000	140.0

				P200		P225		P250		N400TC									
	C	C	Input	E	P	E	P	E	P	E	P	I	F	F1	F2	Type	Input	Kg
325 L1	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—
325 L2	*245*	9.646	G	—	—	—	—	—	—	—	—		—	—	—	—	—	—
325 L3	*116*	4.567	E	—	—	—	—	—	—	—	—		—	—	—	—	—	—
325 L4	*81*	3.189	D	*267*	*400*	*297*	*450*	*297*	*550*	11.339	17.480	522	*201*	*48*	1/4 G	6	B	*22*

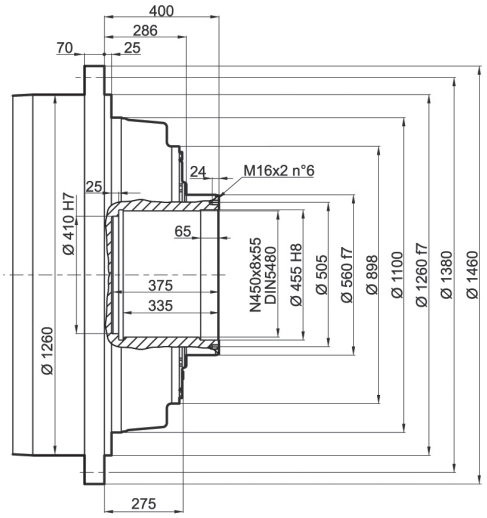
Bonfiglioli Riduttori

325 L

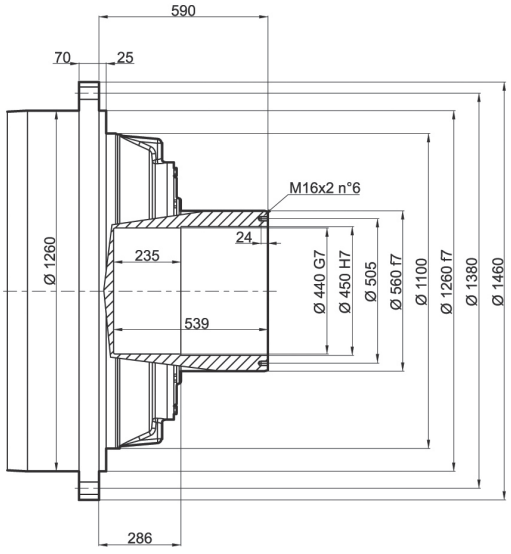


Metric

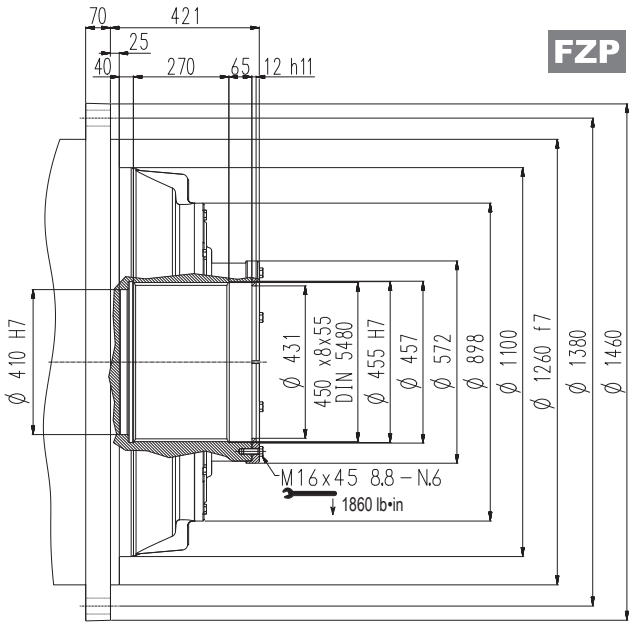
FZ



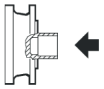
FP



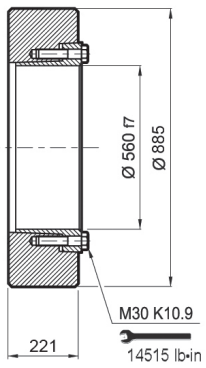
FZP



Shrink disc



G0A



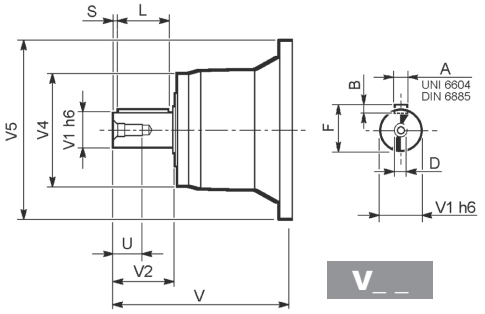
Dimensions are in mm

FP T_{2max} = 17,701,490 lb·in

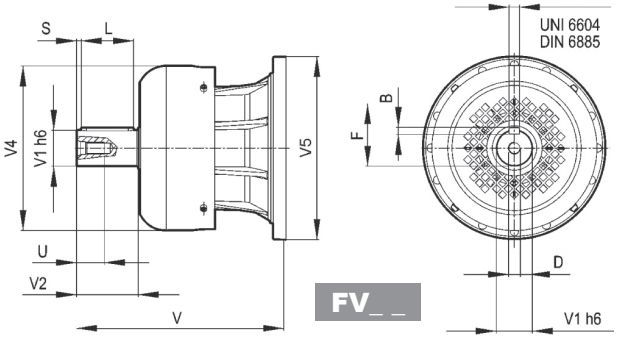
Dimensions are in mm

325 L





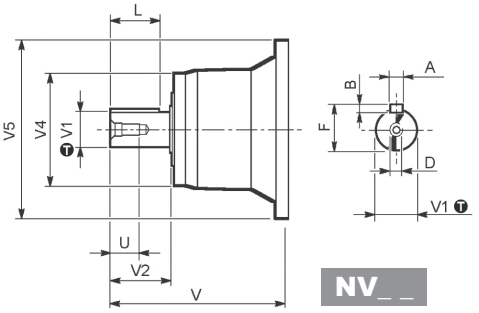
V_ _



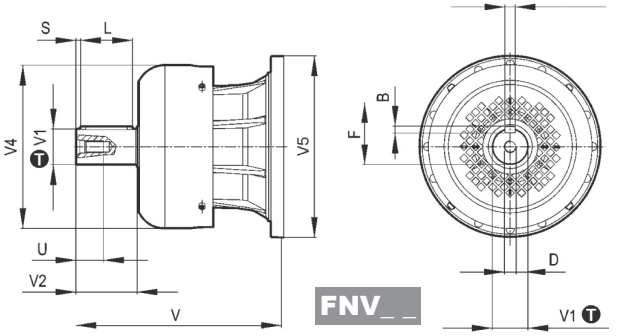
FV_ _

Dimensions are in mm when shown in italic, otherwise dimensions are in inches

		V	V1	V2	V4	V5	A	B	F	L	S	D	U
325 L3	***V15B***	*556*	*120*	*210*	*230*	*542*	*32*	*18*	*127*	*180*	*15*	*M24*	*50*
325 L4	***V11B***	*348*	*80*	*130*	*200*	*428*	*22*	*14*	*85*	*110*	*10*	*M16*	*36*
	FV11B	*456*	*80*	*130*	*347.5*	*428*	*22*	*14*	*85*	*110*	*10*	*M16*	*36*



NV_ _



FNV_ _

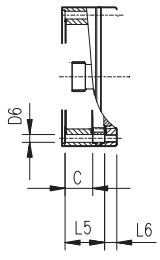
inch	T
3.000	0 -0.00075

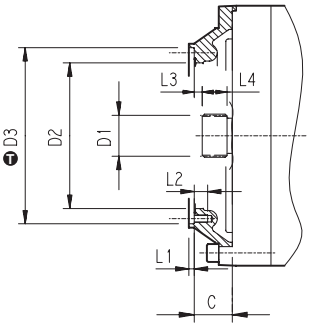
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

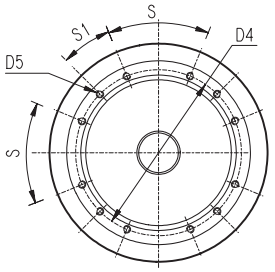
		V	V1	V2	V4	V5	A	B	F	L	D	U
325 L4	**NV11B**	13.563	3.000	5.000	8.160	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654
	FNV11B	17.835	3.000	5.000	13.678	16.850	0.750	0.750	3.328	4.374	3/4-10 UNC	1.654

325 L







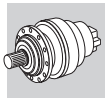


inch	T
18.66	-0.000787 -0.00326
16.22	+0.00248 0
13.19	+0.00224 0

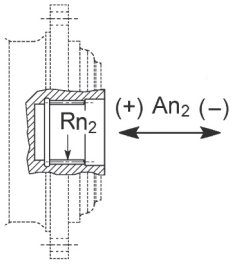
Dimensions are in mm when shown in italic, otherwise dimensions are in inches

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
325 L1	Please consult Bonfiglioli Technical Service																
325 L2	**V9AG**	*245*	*150x5x28 DIN 5480*	*444*	*474 g7*	*503*	*M20 n°20*	*20*	*5*	*40*	*20*	*82*	—	—	*30°*	*15°*	G
325 L3	**V9AE**	*116*	*100x94 DIN 5482*	*340*	*412 H7*	*390*	*M16 n°18*	—	*7*	*30*	*8*	*55*	—	—	*20°*	*20°*	E
325 L4	**V9AD**	*81*	*80x74 DIN 5482*	*270*	*335 H7*	*314*	*M16 n°8*	—	*5*	*30*	*8.5*	*40*	—	—	*60°*	*30°*	D

		C	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5	L6	S	S1	Input
325 L1	Please consult Bonfiglioli Technical Service																
325 L2	**V9AG**	9.65	*150x5x28 DIN 5480*	17.48	18.66	19.80	*M20 n°20*	0.79	0.20	1.57	0.79	3.23	—	—	30°	15°	G
325 L3	**V9AE**	4.57	*100x94 DIN 5482*	13.39	16.22	15.35	*M16 n°18*	—	0.28	1.18	0.31	2.17	—	—	20°	20°	E
325 L4	**V9AD**	3.19	*80x74 DIN 5482*	10.63	13.19	12.36	*M16 n°8*	—	0.20	1.18	0.33	1.57	—	—	60°	30°	D



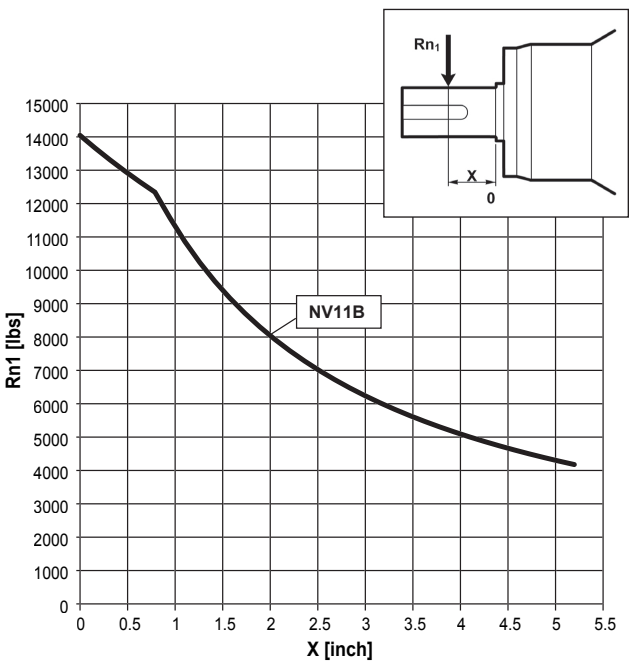
Permissible radial and axial loads on output shaft with $Fh_2 : n_2 \cdot h = 100000$

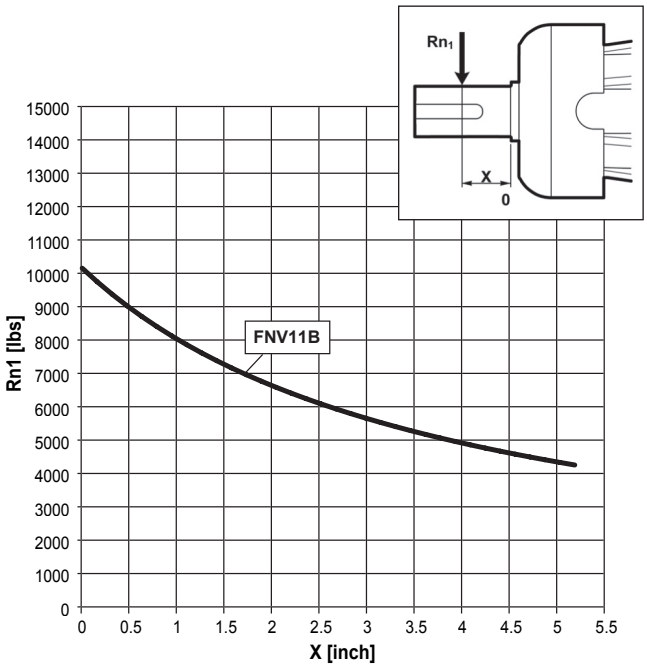


	Rn_2	An_2 (+)	An_2 (-)
FZ	114777	39129	15651

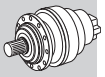
Load corrective factor fh_2 on shafts	$Fh_2 = n_2 \cdot h$		10000	25000	50000	100000	500000	1000000
	fh_2	**FZ**	**2.15**	**1.59**	**1.26**	**1.00**	**0.58**	**0.46**

Permissible radial loads on input shaft with $Fh_1 : n_1 \cdot h = 250000$

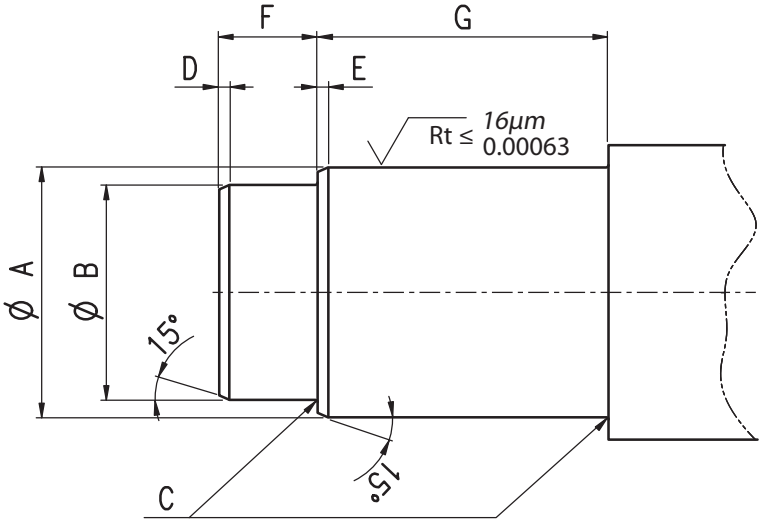




Load corrective factor fh_1 on shafts	$Fh_1 = n_1 \cdot h$	250000	500000	1000000	2000000	5000000	10000000
	fh_1	**1**	**0.79**	**0.63**	**0.50**	**0.37**	**0.29**



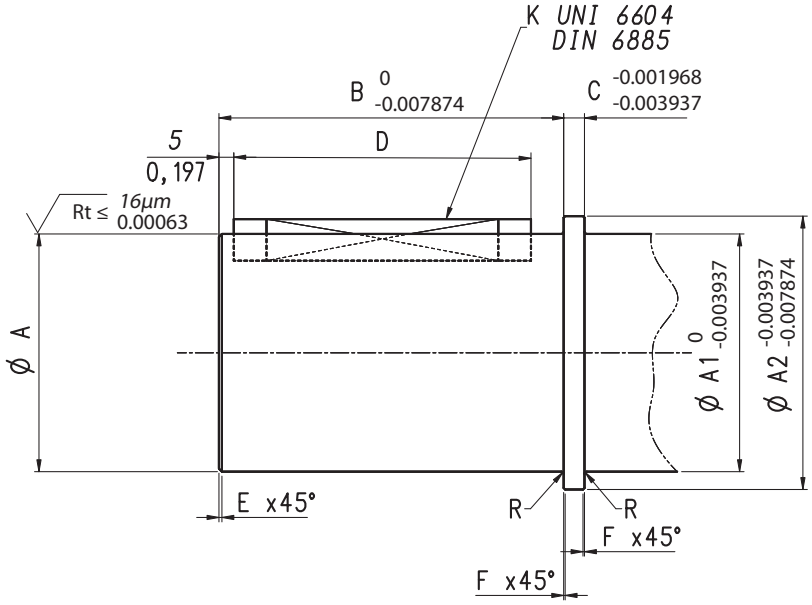
FP

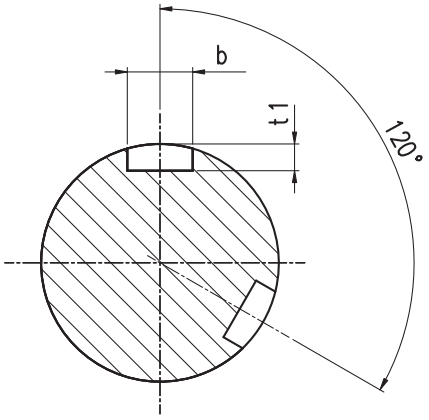


Dimensions are in Inch except when shown in *italic [mm]*

	A	B	C	D	E	F	G	Shaft material
	[*mm*] [in]							
300	*42* g6 -0.0035 -0.0010 1.653	*35* g6 -0.0035 -0.0010 1.377	*1.6* 0.062	*2* 0.078	*2* 0.078	*18* 0.708	*38* 1.496	Suggested material: Steel with tensile strength $\sigma_R \geq 101{,}526.39$ lbs/in²
301	*52* g6 -0.0004 -0.0011 2.047	*35* g6 -0.0035 -0.0010 1.377	*1.6* 0.062	*2* 0.078	*2* 0.078	*18* 0.708	*38* 1.496	
303 **304** **305**	*75* g6 -0.0004 -0.0011 2.952	*65* g6 -0.0004 -0.0011 2.559	*1.6* 0.062	*2* 0.078	*2* 0.078	*30* 1.181	*65* 2.559	
306	*90* g6 -0.0005 -0.0013 3.543	*75* g6 -0.0004 -0.0011 2.952	*1.6* 0.062	*3* 0.118	*3* 0.118	*55* 2.165	*85* 3.346	
307	*100* g6 -0.0005 -0.0013 3.937	*85* g6 -0.0005 -0.0013 3.346	*1.6* 0.062	*3* 0.118	*3* 0.118	*40* 1.574	*95* 3.740	
309	*120* g6 -0.0005 -0.0013 4.724	— —	*1.6* 0.062	—	*3* 0.118	—	*140* 5.511	
310M	*130* g6 -0.0006 -0.0015 5.118	— —	*1.6* 0.062	—	*3* 0.118	—	*155* 6.102	
311M	*135* g6 -0.0006 -0.0015 5.314	— —	*1.6* 0.062	—	*3* 0.118	—	*150* 5.905	
313M	*140* g6 -0.0006 -0.0015 5.511	*130* g6 -0.0006 -0.0015 5.118	*2* 0.078	*3* 0.118	*3* 0.118	*45* 1.771	*150* 5.905	
314M	*180* g6 -0.0006 -0.0015 7.086	*160* g6 -0.0006 -0.0015 6.299	*1.6* 0.062	*3* 0.118	*3* 0.118	*50* 1.968	*200* 7.874	
315M	*180* g6 -0.0006 -0.0015 7.086	*160* g6 -0.0006 -0.0015 6.299	*1.6* 0.062	*3* 0.118	*3* 0.118	*50* 1.968	*200* 7.874	
316M	*180* g6 -0.0006 -0.0015 7.086	*165* g6 -0.0006 -0.0015 6.496	*1.6* 0.062	*3* 0.118	*3* 0.118	*90* 3.543	*180* 7.086	
317M	*200* g6 -0.0006 -0.0017 7.874	— —	*1.6* 0.062	—	*3* 0.118	—	*250* 9.842	
318M	*220* g6 -0.0006 -0.0017 8.661	*200* g6 -0.0006 -0.0017 7.874	*2* 0.078	*3* 0.118	*3* 0.118	*130* 5.118	*180* 7.086	
319	*280* g6 -0.0007 -0.0019 11.023	— —	*2* 0.078	—	*3* 0.118	—	*300* 11.811	
321	*320* g6 -0.0007 -0.0021 12.598	— —	*2* 0.078	—	*3* 0.118	—	*300* 11.811	
323	*410* g6 -0.0008 -0.0024 16.141	— —	*2* 0.078	—	*3* 0.118	—	*250* 9.842	
325	*450* g6 -0.0008 -0.0024 17.716	— —	*2* 0.078	—	*3* 0.118	—	*300* 11.811	

FDK



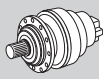


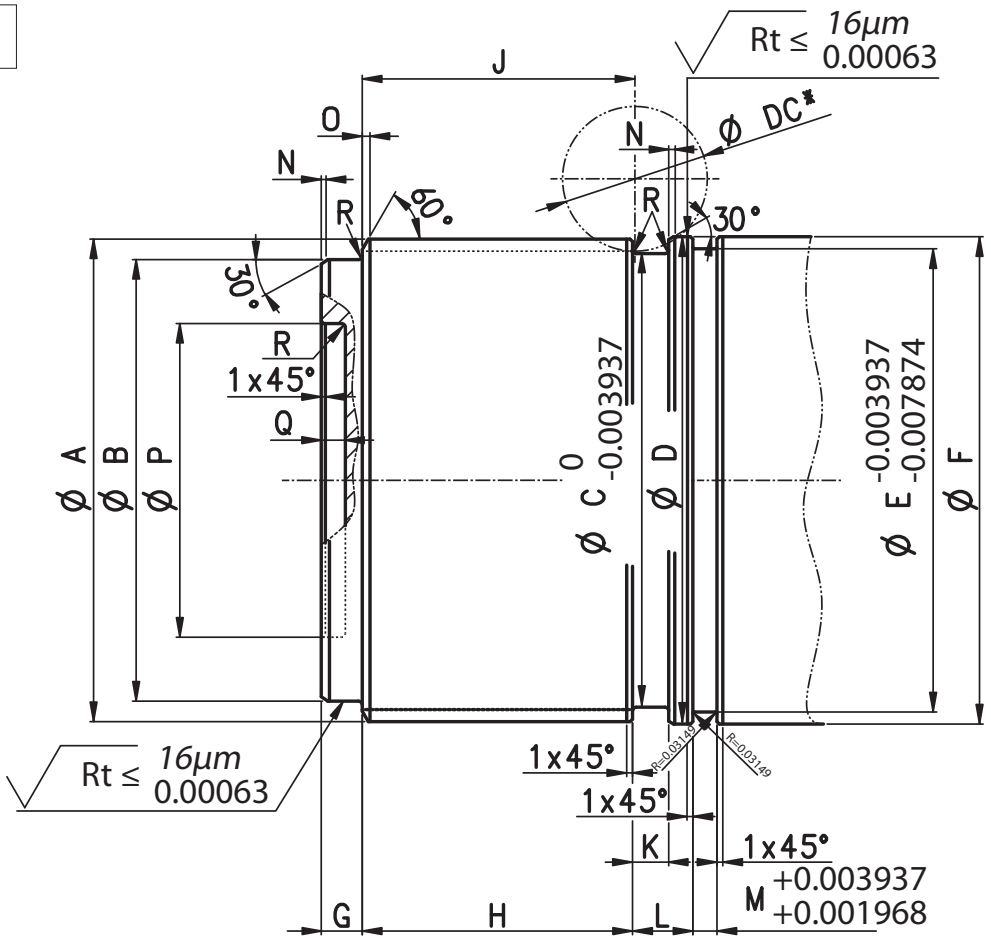
Dimensions are in Inch except when shown in *italic [mm]*

	A	B	A1	A2	C	Shaft material	Keyways dimensions Keyways UNI 6604 / DIN 6885		b	t_1	E Chamfer dimensions		F Chamfer dimensions		R Fillets
	[*mm*] [in]					Suggested material: Steel with tensile strength $\sigma_R \geq 130,533.93$ lbs/in2	—	[*mm*]	[*mm*] [in]	Dimension according to UNI6604 DIN 6885 standard.					
300	*35* g6 -0.0004 -0.0010 1.377	*64* 2.520	*35* 1.378	*39* 1.535	*4* 0.157		N°2 x 120°	*10x8x50*	*10* H8 +0.0009 0 0.394		*1* 0.039	x 45°	*0.5* 0.020	x 45°	(*)
301	*35* g6 -0.0004 -0.0010 1.377	*64* 2.520	*35* 1.378	*43* 1.693	*5* 0.197		N°2 x 120°	*10x8x50*	*10* H8 +0.0009 0 0.394		*1* 0.039	x 45°	*0.5* 0.020	x 45°	*0.5* 0.020
303 304 305	*65* g6 -0.0004 -0.0011 2.559	*95* 3.740	*65* 2.559	*75* 2.953	*6* 0.236		N°2 x 120°	*18x11x80*	*18* H8 +0.0011 0 0.709		*1* 0.039	x 45°	*0.5* 0.020	x 45°	*0.8* 0.031
306	*80* g6 -0.0004 -0.0011 3.150	*116* 4.567	*80* 3.150	*92* 3.622	*7* 0.276		N°2 x 120°	*22x14x100*	*22* H8 +0.0013 0 0.866		*1* 0.039	x 45°	*0.5* 0.020	x 45°	*0.8* 0.031
307	*90* g6 -0.0005 -0.0013 3.543	*141* 5.551	*90* 3.543	*102* 4.016	*8* 0.315		N°2 x 120°	*25x14x125*	*25* H8 +0.0013 0 0.984		*2* 0.079	x 45°	*1* 0.039	x 45°	*0.8* 0.031
309	*120* g6 -0.0005 -0.0013 4.724	*128* 5.039	*120* 4.724	*136* 5.354	*10* 0.394		N°2 x 120°	*32x18x110*	*32* H8 +0.0015 0 1.260		*2* 0.079	x 45°	*1* 0.039	x 45°	*1.6* 0.063
310M	*130* g6 -0.0006 -0.0015 5.118	*138* 5.433	*130* 5.118	*146* 5.748	*10* 0.394		N°2 x 120°	*32x18x120*	*32* H8 +0.0015 0 1.260		*2* 0.079	x 45°	*1* 0.039	x 45°	*1.6* 0.063

(*) Relief groove (UNI 4386 - 75 E0.6x0.3)

FZP





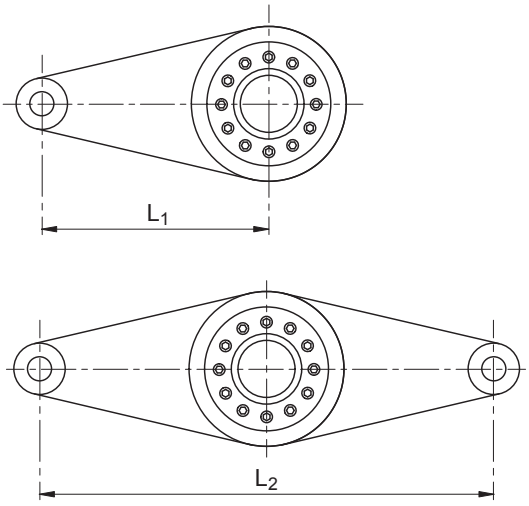
Dimensions are in Inch except when shown in *italic [mm]*

	A Splined shaft DIN 5480	B	C Relief groove diameter	Shaft material	D	E	F	G	H	K	J	L	M	N	O	P	Q	R	DC*
	[*mm*]	[*mm*] [in]			[*mm*] [in]														
311M	*120x3x38*	*108* g6 -0.0005 -0.0013 4.252	*112* 4.409	Suggested material: Steel with tensile strength $\sigma_R \geq 130,533.93$ lbs/in2	*124* g6 -0.0006 -0.0015 4.882	*112* 4.409	*124* 4.882	*19* *0.748*	*69* 2.716	*9* 0.354	*70* 2.755	*18.5* 0.728	*6* 0.236	*1* 0.039	*1.6* 0.062	—	—	*1.6* 0.062	*60* 2.362
313M	*140x5x26*	*110* g6 -0.0005 -0.0013 4.331	*132* 5.197		*142* g6 -0.0006 -0.0015 5.591	*132* 5.197	*142* 5.591	*26* 1.023	*83* 3.267	*18* 0.708	*84* 3.307	*30* 1.181	*6* 0.236	*1* 0.039	*2* 0.078	—	—	*3* 0.118	*60* 2.362
314M	*150x5x28*	*136* g6 -0.0006 -0.0015 5.354	*136* 5.354		*152* g6 -0.0006 -0.0015 5.984	*136* 5.354	*152* 5.984	*16* 0.629	*103* 4.055	*8* 0.314	*104* 4.094	*20* 0.787	*8* 0.314	*1* 0.039	*2* 0.078	—	—	*1.6* 0.062	*60* 2.362
315M	*150x5x28*	*136* g6 -0.0006 -0.0015 5.354	*136* 5.354		*152* g6 -0.0006 -0.0015 5.984	*136* 5.354	*152* 5.984	*16* 0.629	*103* 4.055	*8* 0.314	*104* 4.094	*20* 0.787	*8* 0.314	*1* 0.039	*2* 0.078	—	—	*1.6* 0.062	*60* 2.362
316M	*170x5x32*	*150* g6 -0.0006 -0.0015 5.906	*154* 6.063		*172* g6 -0.0006 -0.0015 6.772	*154* 6.063	*172* 6.772	*30* 1.181	*113* 4.448	*20* 0.787	*114* 4.488	*45* 1.771	*9* 0.354	*1* 0.039	*3* 0.118	—	—	*3* 0.118	*60* 2.362
317M	*200x5x38*	*187* g6 -0.0006 -0.0017 7.362	*186* 7.323		*202* g6 -0.0006 -0.0017 7.953	*192* 7.559	*202* 7.953	*16* 0.629	*100* 3.937	*19* 0.748	*101* 3.976	*33* 1.299	*9* 0.354	*1* 0.039	3.5 0.137	*130* 5.118	*10* 0.393	*1.6* 0.062	*60* 2.362
318M	*210x5x40*	*190* g6 -0.0006 -0.0017 7.480	*194* 7.638		*212* g6 -0.0006 -0.0017 8.346	*194* 7.638	*212* 8.346	*27* 1.062	*133* 5.236	*20* 0.787	*134* 5.275	*45* 1.771	*9* 0.354	*2* 0.078	*3* 0.118	—	—	*3* 0.118	*60* 2.362
319	*260x5x50*	*248* g6 -0.0006 -0.0017 9.764	*243* 9.567		*265* g6 -0.0007 -0.0019 10.433	*243* 9.567	*265* 10.433	*29* 1.141	*144* 5.669	*20* 0.787	*145* 5.708	*40* 1.574	*11* 0.433	*2* 0.078	*3* 0.118	—	—	*3* 0.118	*60* 2.362
321	*300x8x36*	*282* g6 -0.0007 -0.0019 11.102	*281* 11.063		*305* g6 -0.0007 -0.0019 12.008	*281* 11.063	*305* 12.008	*25* 0.984	*158* 6.22	*25* 0.984	*159* 6.259	*50* 1.968	*12* 0.472	*2* 0.078	*3* 0.118	—	—	*3* 0.118	*70* 2.755
323	*400x8x48*	*360* g6 -0.0007 -0.0021 14.173	*381* 15.000		*405* g6 -0.0008 -0.0024 15.945	*381* 15.000	*405* 15.945	*35* 1.377	*254* 10	*26* 1.023	*256* 10.078	*53.5* 2.106	*12* 0.472	*2* 0.078	*4* 0.157	—	—	*5* 0.196	*70* 2.755
325	*450x8x55*	*410* g6 -0.0008 -0.0024 16.142	*431* 16.969		*455* g6 -0.0008 -0.0024 17.913	*431* 16.969	*455* 17.913	*34* 1.338	*272* 10.708	*24* 0.944	*274* 10.787	*66* 2.598	*12* 0.472	*2* 0.078	*4* 0.157	—	—	*5* 0.196	*70* 2.755

* Max cutter diameter

TORQUE ARM

	L1 [*mm* / in]	L2 [*mm* / in]
300	*300* / 11.811	*450* / 17.716
301	*580* / 22.834	
303	*350* / 13.779	*500* / 19.685
304		
305	*370* / 14.566	
306	*410* / 16.141	*600* / 23.622
307	*490* / 19.291	*700* / 27.559
309	*600* / 23.622	*900* / 35.433
310M	*1030* / 40.551	*1000* / 39.37
311M	*800* / 31.496	*1100* / 43.307
313M	*900* / 35.433	*1200* / 47.244
314M	*1100 / 43.307*	*1400* / 55.118
315M		
316M	*1280 / 50.393*	*1500* / 59.055
317M	*1300* / 51.181	*1600* / 62.992
318M	*1900* / 74.803	*1800* / 70.866
319	*1500* / 59.055	*2000* / 78.74
321	*1500* / 59.055	
323	*1750* / 68.897	*3000* / 118.11
325	*2050* / 80.708	*3200* / 125.984



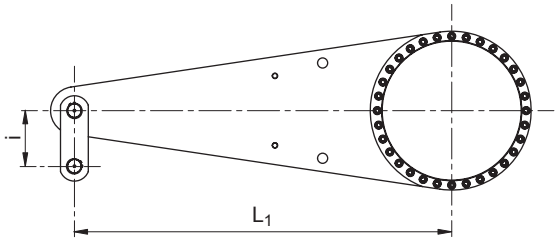
NOTE: Drawings for illustration purpose only

Suggested material: S275JR - UNI EN 10025 or S355JR - UNI EN 10025.

TORQUE ARM KIT FOR FP VERSIONS

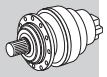
If requested, it's possible to install a specific "Torque arm" Kit on 300 series geraboxes. For detailed information please contact our Technical Service .

	L1 [*mm* / in]	i [*mm* / in]
300	*300* / 11.811	*55* / 2.165
301	*580* / 22.834	
303	*350* / 13.779	*80* / 3.149
304		
305	*370* / 14.566	
306	*410* / 16.141	*115* / 4.527
307	*490* / 19.291	
309	*600* / 23.622	
310M	*1030* / 40.551	*135* / 5.314
311M	*800* / 31.496	*155* / 6.102
313M	*900* / 35.433	*160* / 6.299
314M	*1100* / 43.307	*200* / 7.874
315M		
316M	*1280* / 50.393	*210* / 8.267
317M	*1300* / 51.181	*240* / 9.448
318M	*1900* / 74.803	*280* / 11.023
319	*1500* / 59.055	*320* / 12.598
321	*1500* / 59.055	*360* / 14.173
323	*1750* / 68.897	*400* / 15.748
325	*2050* / 80.708	*440* / 17.322



NOTE: Draw for illustration purpose only

Suggested material: S275JR - UNI EN 10025 or S355JR - UNI EN 10025.



H1 SYMBOLS AND UNITS OF MEASURE

Symbols	Units of Measure	Description
V	[cm³]	Rot. displacement
p	[bar]	Pressure
pA. pB	[bar]	Pressure in A and B connections
Q	[l/min]	Flow rate
ηt		Efficiency
ηmh		Hydraulic-mechanical efficiency

Symbols	Units of Measure	Description
ηv		Volumetric efficiency
n	[rpm]	Angular speed
T	[lb·in]	Actual torque onto the motor shaft
cont		General value, for continuous duty
int		General value, intermittent duty

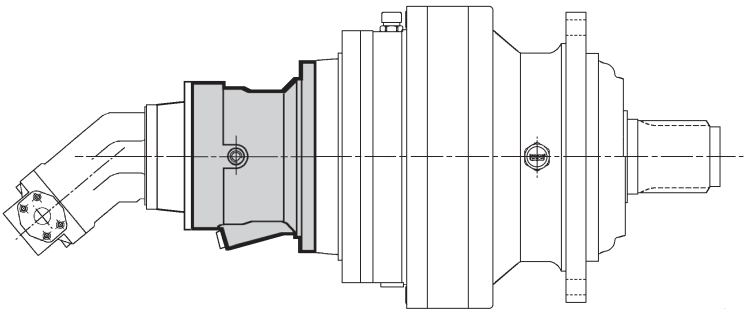
H2 NEGATIVE MULTIDISC BRAKE

DESCRIPTION

TRASMITAL's fail-safe parking brake is an oil immersed multidisc unit on the input side of the gearbox. The brake is operated when there is no hydraulic pressure and is released when the minimum release pressure is applied.
Use of parking brake is necessary whenever the driven system must be kept at standstill even under external forces and/or torques.

Applications:

- winches
- slewing drives
- parking brake on mobile equipment
- general industrial applications



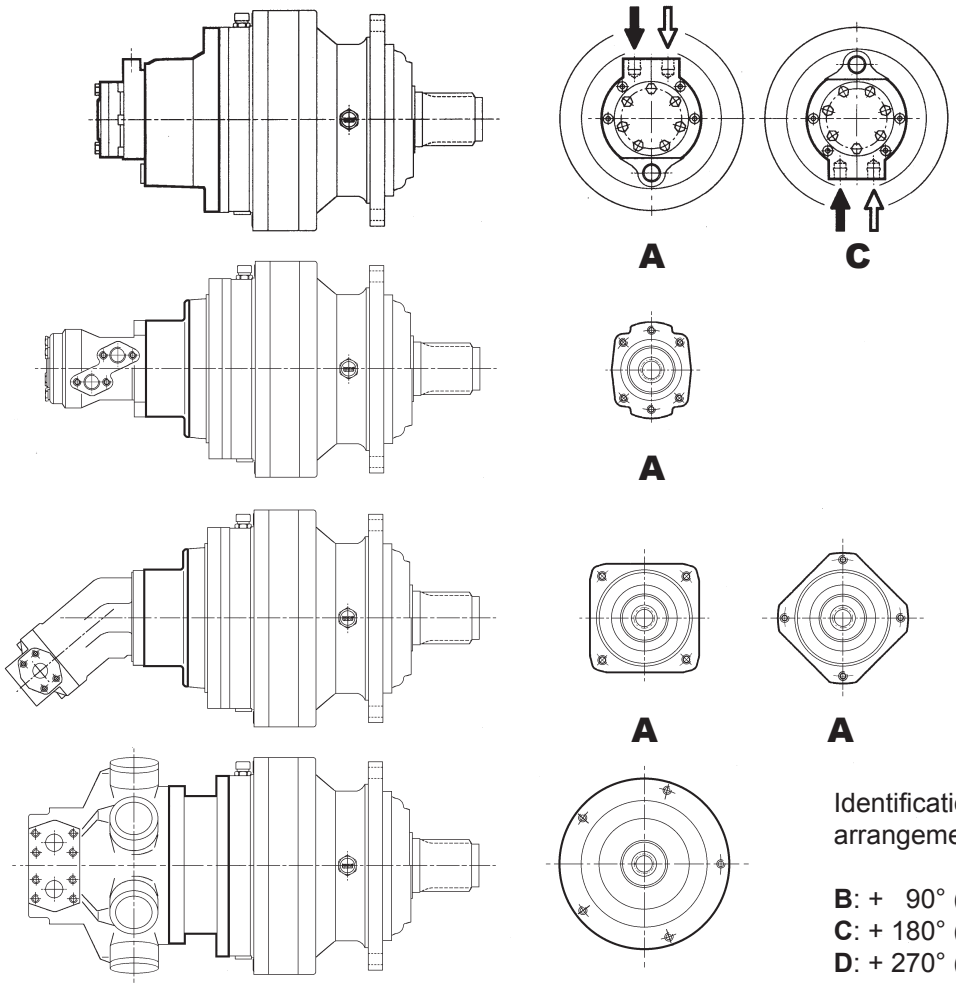
H2.1 Brake technical data

(A 22)

		Type																	
		4.							5.					6.					
		A	B	D	F	H	K	L	B	C	E	G	K	B	C	E	G	K	L
Static braking torque Tb	Nm ±10%	50	100	160	260	330	400	440	400	500	630	800	1000	900	1200	1600	2200	2750	3300
Min. opening pressure	bar	10	20	30	20	25	30	34	20	27	20	26	32	14	19	25	19	24	29
Max. operating pressure	bar	320																	
Oil volume for brake release	cm^3	6.65	6.65	6.65	6.65	6.65	6.65	6.65	13.96	13.96	13.96	13.96	13.96	37.2	37.2	37.2	37.2	37.2	37.2

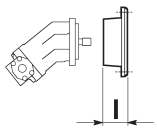
H3 INPUTS FOR HYDRAULIC MOTORS

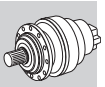
The available motor adaptors and motor sizes are shown in the following pages.
The standard orientations (A) of the motor flanges are shown in the following scheme, taking into consideration the input side of the gearbox.



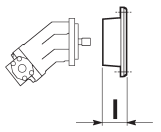
Identification codes of other arrangements:

B: + 90° (clockwise)
C: + 180° (clockwise)
D: + 270° (clockwise)

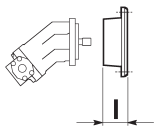


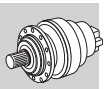


		SAE Standard J744c											
		SAE A 16/32 z9	SAE A ø15,875	SAE B 16/32 z13	SAE B ø22,2	SAE BB 16/32 z15	SAE BB ø25,4	SAE C 12/24 z14	SAE C ø31,7	SAE CC 12/24 z17	SAE C ø38,1	SAE D 8/16 z13	SAE E 8/16 z13
	CODE	S5AM	S5AN	S5BA	S5BB	S5BM	S5BN	S5CA	S5CB	S5CP	S5CQ	S5DA	S5EA
		I											
300	L1-L2-L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
301	L1-L2-L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
303	L1	42	42	52	52	52	52	64	64	80	80	81	
	L2-L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
304	L1	42	42	52	52	52	52	64	64	80	80	81	
	L2-L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
305	L1	42	42	52	52	52	52	64	64	80	80	81	
	L2-L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
306	L1											101	113
	L2	42	42	52	52	52	52	64	64	80	80	81	
	L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2-R3-R4	42	42	52	52	52	52	64	64	80	80	81	
307	L1											101	113
	L2	42	42	52	52	52	52	64	64	80	80	81	
	L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2	42	42	52	52	52	52	64	64	80	80	81	
	R3-R4	42	42	52	52	52	52	64	64	80	80	81	
309	L1											101	113
	L2	42	42	52	52	52	52	64	64	80	80	81	
	L3-L4	42	42	52	52	52	52	64	64	80	80	81	
	R2	42	42	52	52	52	52	64	64	80	80	81	
	R3-R4	42	42	52	52	52	52	64	64	80	80	81	
310M	L1											146	158
	L2											101	113
	L3	42	42	52	52	52	52	64	64	80	80	81	
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R2(B)-R2(C)											101	113
	R3-R4	42	42	52	52	52	52	64	64	80	80	81	
311M	L1												
	L2											101	113
	L3	42	42	52	52	52	52	64	64	80	80	81	
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R2(B)-R2(C)											101	113
	R3-R4	42	42	52	52	52	52	64	64	80	80	81	
313M	L1												
	L2											101	113
	L3	42	42	52	52	52	52	64	64	80	80	81	
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R2(B)-R2(C)											101	113
	R3-R4	42	42	52	52	52	52	64	64	80	80	81	
314M	L1												
	L2											146	113
	L3	42	42	52	52	52	52	64	64	80	80	81	
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R3(B)-R3(C)											101	113
	R4	42	42	52	52	52	52	64	64	80	80	81	
315M	L1												
	L2												
	L3											101	113
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R3(B)-R3(C)											101	113
	R4	42	42	52	52	52	52	64	64	80	80	81	
316M	L1												
	L2												
	L3											101	113
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R3(B)-R3(C)											101	113
	R4	42	42	52	52	52	52	64	64	80	80	81	
317M	L1												
	L2												
	L3											101	113
	L4	42	42	52	52	52	52	64	64	80	80	81	
	R3(B)-R3(C)											101	113
	R4	42	42	52	52	52	52	64	64	80	80	81	
318M	L1												
	L2												
	L3												
	L4											101	113
	R4(B)-R4(C)											101	113
319	L1												
	L2												
	L3												
	L4											101	113
	R4(B)-R4(C)											101	113
321	L1												
	L2												
	L3												
	L4											101	113
	R4(B)-R4(C)											101	113

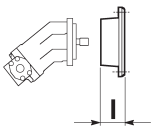


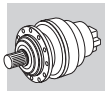
		CALZONI								CHAR-LYNN (EATON)								
		CALZONI MR190 N z8	CALZONI MR300 N z8	CALZONI MRP300 N z8	CALZONI MR450 N z8	CALZONI MR700 N z8	CALZONI MR1100 N z8	CALZONI MR1800 N z10	CALZONI MR2800 N z10	SERIE 2000 SAE A 1" 6B	SERIE 2000 SAE A ø25,4	SERIE 2000 SAE A ø32	SERIE 2000 SAE A 12/24 z14	SERIE 2000 BEARINGLESS 12/24 z12	SERIE 4000 SAE B ø31,75	SERIE 4000 SAE C 12/24 z17	SERIE 6000 SAE C ø38,1	SERIE 6000 SAE C 12/24 z17
	CODE	C0AA	C0AD	C0BL	C0AG	C0AL	C0AP	C0AS	C0AV	S5AQ	S5AS	D0AG	D0AH	E2AA	S5BP	S5CP	S5CQ	S5CP
										I								
300	L1-L2-L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
301	L1-L2-L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
303	L1	64	78	78						42	42	64	64	52	68	80	80	80
	L2-L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
304	L1	64	78	78						42	42	64	64	52	68	80	80	80
	L2-L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
305	L1	64	78	78						42	42	64	64	52	68	80	80	80
	L2-L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
306	L1				98	102	133											
	L2	64	78	78						42	42	64	64	52	68	80	80	80
	L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2-R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
307	L1				98	102	133											
	L2	64	78	78						42	42	64	64	52	68	80	80	80
	L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2	64	78	78						42	42	64	64	52	68	80	80	80
	R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
309	L1				98	102	133											
	L2	64	78	78						42	42	64	64	52	68	80	80	80
	L3-L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2	64	78	78						42	42	64	64	52	68	80	80	80
	R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
310M	L1				143	147	178											
	L2				98	102	133											
	L3	64	78	78						42	42	64	64	52	68	80	80	80
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2(B)-R2(C)				98	102	133											
	R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
311M	L1					130	130	165	200									
	L2				98	102	133											
	L3	64	78	78						42	42	64	64	52	68	80	80	80
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2(B)-R2(C)				98	102	133											
	R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
313M	L1					130	130	165	200									
	L2				98	102	133											
	L3	64	78	78						42	42	64	64	52	68	80	80	80
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R2(B)-R2(C)				98	102	133											
	R3-R4	64	78	78						42	42	64	64	52	68	80	80	80
314M	L1																	
	L2				98	102	133											
	L3	64	78	78						42	42	64	64	52	68	80	80	80
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R3(B)-R3(C)				98	102	133											
	R4	64	78	78						42	42	64	64	52	68	80	80	80
315M	L1																	
	L2					130	130	165	200									
	L3				98	102	133											
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R3(B)-R3(C)				98	102	133											
	R4	64	78	78						42	42	64	64	52	68	80	80	80
316M	L1																	
	L2					130	130	165	200									
	L3				98	102	133											
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R3(B)-R3(C)				98	102	133											
	R4	64	78	78						42	42	64	64	52	68	80	80	80
317M	L1																	
	L2					130	130	165	200									
	L3				98	102	133											
	L4	64	78	78						42	42	64	64	52	68	80	80	80
	R3(B)-R3(C)				98	102	133											
	R4	64	78	78						42	42	64	64	52	68	80	80	80
318M	L1																	
	L2																	
	L3					130	130	165	200									
	L4				98	102	133											
	R4(B)-R4(C)				98	102	133											
319	L1																	
	L2																	
	L3					130	130	165	200									
	L4				98	102	133											
	R4(B)-R4(C)				98	102	133											
321	L1																	
	L2																	
	L3					130	130	165	200									
	L4				98	102	133											
	R4(B)-R4(C)				98	102	133											



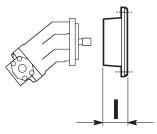


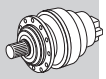
		SAUER DANFOSS (orbit)									DENISON Hydraulics							
		OMP-OMR 50/315 ø25	OMP-OMR 50/315 SAE 1" 6B	OMS 80/315 ø32	OMS 80/315 12/24 z14	OMSS 80/315 12/24 z12	OMT 160/400 ø40	OMT 160/400 12/24 z17	OMTS 160/400 12/24 z16	OMVS 315/800 10/20 z16	M6-M7-M8 *3** 12/24 z14	M11-M14 *3** 8/16 z13	M3 B 16/32 z9	M4C-M4SC 16/32 z13	M4D-M4SD 12/24 z14	M4DC-M4S DC 12/24 z14	M4E-M4SE 12/24 z14	M5BS 16/32 z13
	CODE	S5AP	S5AQ	D0AG	D0AH	D0AL	D0AM	D0AN	D0AQ	D0AU	S5CA	S5EA	S5AM	S5BA	S5CA	S5CA	S5CA	S5BA
										I								
300	L1-L2-L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
301	L1-L2-L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
303	L1	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L2-L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
304	L1	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L2-L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
305	L1	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L2-L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
306	L1									70		113						
	L2	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2-R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
307	L1									70		113						
	L2	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
309	L1									70		113						
	L2	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L3-L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
310M	L1									115		158						
	L2									70		113						
	L3	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2(B)-R2(C)									70		113						
	R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
311M	L1																	
	L2									70		113						
	L3	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2(B)-R2(C)									70		113						
	R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
313M	L1																	
	L2									70		113						
	L3	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R2(B)-R2(C)									70		113						
	R3-R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
314M	L1																	
	L2									70		113						
	L3	42	42	64	64	37		112	57		64		42	52	64	64	64	52
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3(B)-R3(C)									70		113						
	R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
315M	L1																	
	L2																	
	L3									70		113						
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3(B)-R3(C)									70		113						
	R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
316M	L1																	
	L2																	
	L3									70		113						
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3(B)-R3(C)									70		113						
	R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
317M	L1																	
	L2																	
	L3									70		113						
	L4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
	R3(B)-R3(C)									70		113						
	R4	42	42	64	64	37	112	112	57		64		42	52	64	64	64	52
318M	L1																	
	L2																	
	L3																	
	L4									70		113						
	R4(B)-R4(C)									70		113						
319	L1																	
	L2																	
	L3																	
	L4									70		113						
	R4(B)-R4(C)									70		113						
321	L1																	
	L2																	
	L3																	
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	R4(B)-R4(C)									70		113						



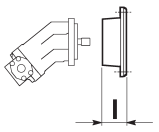


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		MMF 43 16/32 z15	MMF 63 12/24 z14	HMF 28-35-02 16/32 z15	HMF 50-02 16/32 z21	HMF-HMV 75-02 16/32 z21	HMF-HMV 105-02 16/32 z23	HMF-HMV 135-02 16/32 z27	BMF-BMV 186 50x2 Z24
		S5BM	S5CA	S5BM	S5CE	S5CE	S5CD	S5DC	I5AF
		I							
300	L1-L2-L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
301	L1-L2-L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
303	L1	52	64	52	64	64	64	81	
	L2-L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
304	L1	52	64	52	64	64	64	81	
	L2-L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
305	L1	52	64	52	64	64	64	81	
	L2-L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
306	L1							101	121
	L2	52	64	52	64	64	64	81	
	L3-L4	52	64	52	64	64	64	81	
	R2-R3-R4	52	64	52	64	64	64	81	
307	L1							101	121
	L2	52	64	52	64	64	64	81	
	L3-L4	52	64	52	64	64	64	81	
	R2	52	64	52	64	64	64	81	
	R3-R4	52	64	52	64	64	64	81	
309	L1							101	121
	L2	52	64	52	64	64	64	81	
	L3-L4	52	64	52	64	64	64	81	
	R2	52	64	52	64	64	64	81	
	R3-R4	52	64	52	64	64	64	81	
310M	L1							146	166
	L2							101	121
	L3	52	64	52	64	64	64	81	
	L4	52	64	52	64	64	64	81	
	R2(B)-R2(C)							101	121
	R3-R4	52	64	52	64	64	64	81	
311M	L1								
	L2							101	121
	L3	52	64	52	64	64	64	81	
	L4	52	64	52	64	64	64	81	
	R2(B)-R2(C)							101	121
	R3-R4	52	64	52	64	64	64	81	
313M	L1								
	L2							101	121
	L3	52	64	52	64	64	64	81	
	L4	52	64	52	64	64	64	81	
	R2(B)-R2(C)							101	121
	R3-R4	52	64	52	64	64	64	81	
314M	L1								
	L2							101	121
	L3	52	64	52	64	64	64	81	
	L4	52	64	52	64	64	64	81	
	R3(B)-R3(C)							101	121
	R4	52	64	52	64	64	64	81	
315M	L1								
	L2								
	L3							101	121
	L4	52	64	52	64	64	64	81	
	R3(B)-R3(C)							101	121
	R4	52	64	52	64	64	64	81	
316M	L1								
	L2								
	L3							101	121
	L4	52	64	52	64	64	64	81	
	R3(B)-R3(C)							101	121
	R4	52	64	52	64	64	64	81	
317M	L1								
	L2								
	L3							101	121
	L4	52	64	52	64	64	64	81	
	R3(B)-R3(C)							101	121
	R4	52	64	52	64	64	64	81	
318M	L1								
	L2								
	L3								
	L4							101	121
	R4(B)-R4(C)							101	121
319	L1								
	L2								
	L3								
	L4							101	121
	R4(B)-R4(C)							101	121
321	L1								
	L2								
	L3								
	L4							101	121
	R4(B)-R4(C)							101	121

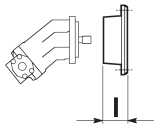


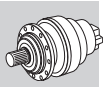


		BRUENINGHAUS HYDROMATIK (BOSCH REXROTH)																
		A2FM10-12-16 25x1.25 z18	A2FM23-28-32 A6VM 28 30x2 z14	A2FM23-28 ø25	A2FM45 32x2 z14	A2FM45-56 30x2 z14	A2FM56-63 A6VM55 35x2 z16	A2FM80-90 A6VM80 40x2 z18	A2FM80 35x2 z16	A2FM107-125 A6VM107 45x2 z21	A2FM107 A6VM107 40x2 z18	A2FM160-180 A6VM160 50x2 z24	A2FM160 A6VM160 45x2 z21	A2FM200 A6VM200 50x2 z24	A6VM250 50x2 z24	A2FM250 50x2 z24	A10FM45.30W A10VM63 16/32 z15	
	CODE	H0AA	H0AE	H0AH	H0AI	H0BA	H0BC	H0BG	H0BI	H0CA	H0CC	H0CE	H0CG	H0CI	H0DA	H0DE	S5BM	
		I																
300	L1-L2-L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
301	L1-L2-L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
303	L1	42	52	52	64	64	64	75	75	101	101		101				52	
	L2-L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
304	L1	42	52	52	64	64	64	75	75	101	101		101				52	
	L2-L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
305	L1	42	52	52	64	64	64	75	75	101	101		101				52	
	L2-L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
306	L1											101	101	101	113	113		
	L2	42	52	52	64	64	64	75	75	101	101		101				52	
	L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2-R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
307	L1											101	101	101	113	113		
	L2	42	52	52	64	64	64	75	75	101	101		101				52	
	L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2	42	52	52	64	64	64	75	75	101	101		101				52	
	R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
309	L1											101	101	101	113	113		
	L2	42	52	52	64	64	64	75	75	101	101		101				52	
	L3-L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2	42	52	52	64	64	64	75	75	101	101		101				52	
	R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
310M	L1											146	146	146	158	158		
	L2											101	101	101	113	113		
	L3	42	52	52	64	64	64	75	75	101	101		101				52	
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2(B)-R2(C)											101	101	101	113	113		
	R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
311M	L1																	
	L2											101	101	101	113	113		
	L3	42	52	52	64	64	64	75	75	101	101		101				52	
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2(B)-R2(C)											101	101	101	113	113		
	R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
313M	L1																	
	L2											101	101	101	113	113		
	L3	42	52	52	64	64	64	75	75	101	101		101				52	
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R2(B)-R2(C)											101	101	101	113	113		
	R3-R4	42	52	52	64	64	64	75	75	101	101		101				52	
314M	L1																	
	L2											101	101	101	113	113		
	L3	42	52	52	64	64	64	75	75	101	101		101		113		52	
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R3(B)-R3(C)											101	101	101	113	113		
	R4	42	52	52	64	64	64	75	75	101	101		101				52	
315M	L1																	
	L2																	
	L3											101	101	101	113	113		
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R3(B)-R3(C)											101	101	101	113	113		
	R4	42	52	52	64	64	64	75	75	101	101		101				52	
316M	L1																	
	L2																	
	L3											101	101	101	113	113		
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R3(B)-R3(C)											101	101	101	113	113		
	R4	42	52	52	64	64	64	75	75	101	101		101				52	
317M	L1																	
	L2																	
	L3											101	101	101	113	113		
	L4	42	52	52	64	64	64	75	75	101	101		101				52	
	R3(B)-R3(C)											101	101	101	113	113		
	R4	42	52	52	64	64	64	75	75	101	101		101				52	
318M	L1																	
	L2																	
	L3																	
	L4											101	101	101	113	113		
	R4(B)-R4(C)											101	101	101	113	113		
319	L1																	
	L2																	
	L3																	
	L4											101	101	101	113	113		
	R4(B)-R4(C)											101	101	101	113	113		
321	L1																	
	L2																	
	L3																	
	L4											101	101	101	113	113		
	R4(B)-R4(C)											101	101	101	113	113		

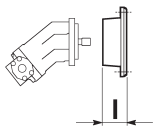


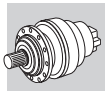
		SAI							KAWASAKI STAFFA		
		GM05 UNI 8953	GM1 UNI 8953	GM1/P1/S1 35x2 z16	GM2 UNI 8953	GM3 UNI 8953	GM4/GM5 UNI 8953	SAI L7 (9) N80x3 z25	B030 z17	B045 z17	HM (HD)B150 HM (HD)B200 5/10 z16
	CODE	S2BA	S2AB	S2CE	S2AF	S2DN	S2BF	S2BH	S1AB	S1AC	S1AL
		I									
300	L1-L2-L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
301	L1-L2-L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
303	L1	73	37	57							
	L2-L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
304	L1	73	37	57							
	L2-L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
305	L1	73	37	57							
	L2-L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
306	L1		74		98	98	105		135	140	
	L2	73	37	57							
	L3-L4	73	37	57							
	R2-R3-R4	73	37	57							
307	L1		74		98	98	105		135	140	
	L2	73	37	57							
	L3-L4	73	37	57							
	R2	73	37	57							
	R3-R4	73	37	57							
309	L1		74		98	98	105		135	140	
	L2	73	37	57							
	L3-L4	73	37	57							
	R2	73	37	57							
	R3-R4	73	37	57							
310M	L1		119		143	143	150		180	185	
	L2		74		98	98	105		135	140	
	L3	73	37	57							
	L4	73	37	57							
	R2(B)-R2(C)		74		98	98	105		135	140	
	R3-R4	73	37	57							
311M	L1				135		150	90			187
	L2		74		98	98	105		135	140	
	L3	73	37	57							
	L4	73	37	57							
	R2(B)-R2(C)		74		98	98	105		135	140	
	R3-R4	73	37	57							
313M	L1				135		150	90			187
	L2		74		98	98	105		135	140	
	L3	73	37	57							
	L4	73	37	57							
	R2(B)-R2(C)		74		98	98	105		135	140	
	R3-R4	73	37	57							
314M	L1										
	L2		74		98	98	105		135	140	
	L3	73	37	57							
	L4	73	37	57							
	R3(B)-R3(C)		74		98	98	105		135	140	
	R4	73	37	57							
315M	L1										
	L2				135		150	90			187
	L3		74		98	98	105		135	140	
	L4	73	37	57							
	R3(B)-R3(C)		74		98	98	105		135	140	
	R4	73	37	57							
316M	L1										
	L2				135		150	90			187
	L3		74		98	98	105		135	140	
	L4	73	37	57							
	R3(B)-R3(C)		74		98	98	105		135	140	
	R4	73	37	57							
317M	L1										
	L2				135		150	90			187
	L3		74		98	98	105		135	140	
	L4	73	37	57							
	R3(B)-R3(C)		74		98	98	105		135	140	
	R4	73	37	57							
318M	L1										
	L2										
	L3				135		150	90			187
	L4		74		98	98	105		135	140	
	R4(B)-R4(C)		74		98	98	105		135	140	
319	L1										
	L2										
	L3				135		150	90			187
	L4		74		98	98	105		135	140	
	R4(B)-R4(C)		74		98	98	105		135	140	
321	L1										
	L2										
	L3				135		150	90			187
	L4		74		98	98	105		135	140	
	R4(B)-R4(C)		74		98	98	105		135	140	



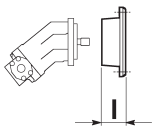


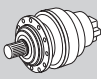
		SAUER DANFOSS (piston)														
		OMF-SMF-OMV - SMV 1-038 16/32 z13	SMF 2/033-052-070 16/32 z21	SMF 2/089 16/32 z23	SMF 2/119 16/32 z27	SMF 2/166-227 16/32 z27	SMF 4/023 90M042 16/32 z13	SMF 4/046 90M042 16/32 z15	90 M055 16/32 z21	90 M075-M100 16/32 z23	90 M130 16/32 z27	51 V 060 12/24 z14	51 V 080 12/24 z14	51 V 110 8/16 z13	51 V 160 8/16 z13	51 V 250 8/16 z15
	CODE	S5BA	S5CE	S5CD	S5DC	S5EC	S5BA	S5BM	S5CE	S5CD	S5DC	S5CA	S5CA	S5DA	S5DA	S5ED
									I							
300	L1-L2-L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
301	L1-L2-L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
303	L1	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L2-L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
304	L1	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L2-L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
305	L1	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L2-L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
306	L1				101	113					101			101	101	113
	L2	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2-R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
307	L1				101	113					101			101	101	113
	L2	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
309	L1				101	113					101			101	101	113
	L2	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L3-L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
310M	L1				146	158					146			146	146	158
	L2				101	113					101			101	101	113
	L3	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2(B)-R2(C)				101	113					101			101	101	113
	R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
311M	L1															
	L2				101	113					101			101	101	113
	L3	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2(B)-R2(C)				101	113					101			101	101	113
	R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
313M	L1															
	L2				101	113					101			101	101	113
	L3	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R2(B)-R2(C)				101	113					101			101	101	113
	R3-R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
314M	L1															
	L2				101	113					101			101	101	113
	L3	52	64	64	81		52	52	64	64	81	64	64	81	81	
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3(B)-R3(C)				101	113					101			101	101	113
	R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
315M	L1															
	L2															
	L3				101	113					101			101	101	113
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3(B)-R3(C)				101	113					101			101	101	113
	R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
316M	L1															
	L2															
	L3				101	113					101			101	101	113
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3(B)-R3(C)				101	113					101			101	101	113
	R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
317M	L1															
	L2															
	L3				101	113					101			101	101	113
	L4	52	64	64	81		52	52	64	64	81	64	64	81	81	
	R3(B)-R3(C)				101	113					101			101	101	113
	R4	52	64	64	81		52	52	64	64	81	64	64	81	81	
318M	L1															
	L2															
	L3															
	L4				101	113					101			101	101	113
	R4(B)-R4(C)				101	113					101			101	101	113
319	L1															
	L2															
	L3															
	L4				101	113					101			101	101	113
	R4(B)-R4(C)				101	113					101			101	101	113
321	L1															
	L2															
	L3															
	L4				101	113					101			101	101	113
	R4(B)-R4(C)				101	113					101			101	101	113





		TRW-TORQMOTOR (PARKER)					VICKERS (EATON)				WHITE				
		MAG 04-32 SAE 1" 6B	MAF 06-40 SAE 1" 6B	MAB 06-32 SAE 1" 6B	MAB 06-32 SAE A ø25	MAE 10-68 SAE 1" 6B	MFE 19 16/32 z15	25M**A11 16/32 z13	35-45 M**A11 12/24 z14	50 M**A11 8/16 z13	HS 02-15 SAE A ø25	HS 02-15 SAE A 1" 6B	RS 08-24 SAE A ø25	RS 08-24 SAE A 1" 6B	REO 06-45 SAE A 1" 6B
	CODE	S5AQ	S5AQ	S5AQ	S5AP	S5AQ	S5BM	S5BA	S5CA	S5DA	S5AP	S5AQ	S5AP	S5AQ	S5AP
		I													
300	L1-L2-L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
301	L1-L2-L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
303	L1	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L2-L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
304	L1	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L2-L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
305	L1	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L2-L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
306	L1									101					
	L2	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2-R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
307	L1									101					
	L2	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
309	L1									101					
	L2	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L3-L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
310M	L1									146					
	L2									101					
	L3	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2(B)-R2(C)									101					
	R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
311M	L1														
	L2									101					
	L3	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2(B)-R2(C)									101					
	R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
313M	L1														
	L2									101					
	L3	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R2(B)-R2(C)									101					
	R3-R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
314M	L1														
	L2									101					
	L3	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3(B)-R3(C)									101					
	R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
315M	L1														
	L2														
	L3									101					
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3(B)-R3(C)									101					
	R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
316M	L1														
	L2														
	L3									101					
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3(B)-R3(C)									101					
	R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
317M	L1														
	L2														
	L3									101					
	L4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
	R3(B)-R3(C)									101					
	R4	42	42	42	42	42	52	52	64	81	42	42	42	42	42
318M	L1														
	L2														
	L3														
	L4									101					
	R4(B)-R4(C)									101					
319	L1														
	L2														
	L3														
	L4									101					
	R4(B)-R4(C)									101					
321	L1														
	L2														
	L3														
	L4									101					
	R4(B)-R4(C)									101					



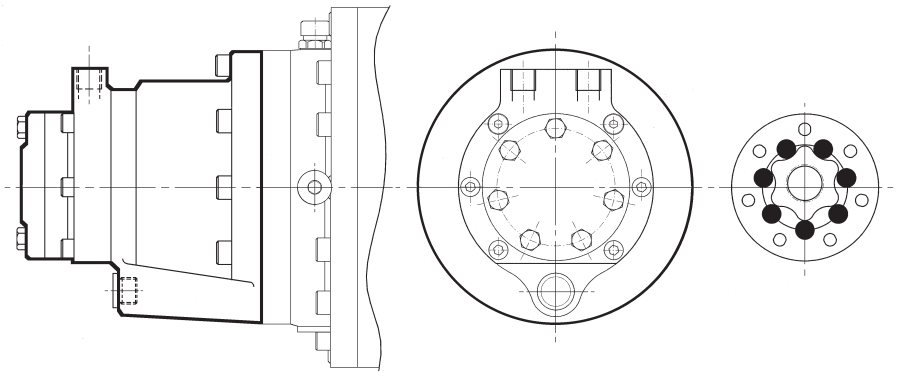


		VOAC (PARKER)																	
		F11-5 CK ø18	F11-10 CK ø20	F11-19 CK ø25	F11-19 CD 25x1.25 z18	F12-30 MF*I*D 30x2 z14	F12-40 MF*I*D 32x2 z14	F12-60 MF*I*D 35x2 z16	F12-80 MF*I*D 40x2 z18	F12-110 MF*I*D 45x2 z21	F11-150/250 S+S 8/16 z13	V12 060 I*D 35x2 z16	V12 060 S*S 12/24 z14	V12 080 N*D 40x2 z18	V12 080 S*S 12/24 z14	V12 110 I*D 45x2 z21	V12 110 S*S 8/16 z13	V12 160 S*S 8/16 z13	V12 160 N*C 45x2 z21
	CODE	V0AA	V0AC	V0AE	V0AG	H0AE	H0AI	H0BC	H0BG	H0CA	S5DA	H0BC	S5CA	H0BG	S5CA	H0CA	S5DA	S5DA	H0CG
		I																	
300	L1-L2-L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
301	L1-L2-L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
303	L1	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L2-L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
304	L1	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L2-L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
305	L1	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L2-L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
306	L1										101						101	101	
	L2	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2-R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
307	L1										101						101	101	
	L2	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
309	L1										101						101	101	
	L2	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L3-L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
310M	L1										146						146	146	
	L2										101						101	101	
	L3	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2(B)-R2(C)										101						101	101	
	R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
311M	L1																		
	L2										101						101	101	
	L3	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2(B)-R2(C)										101						101	101	
	R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
313M	L1																		
	L2										101						101	101	
	L3	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R2(B)-R2(C)										101						101	101	
	R3-R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
314M	L1																		
	L2										101						101	101	
	L3	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3(B)-R3(C)										101						101	101	
	R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
315M	L1																		
	L2																		
	L3										101						101	101	
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3(B)-R3(C)										101						101	101	
	R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
316M	L1																		
	L2																		
	L3										101						101	101	
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3(B)-R3(C)										101						101	101	
	R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
317M	L1																		
	L2																		
	L3										101						101	101	
	L4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
	R3(B)-R3(C)										101						101	101	
	R4	64	52	53	53	52	64	64	75	101	81	64	64	75	64	101	81	81	101
318M	L1																		
	L2																		
	L3																		
	L4										101						101	101	
	R4(B)-R4(C)										101						101	101	
319	L1																		
	L2																		
	L3																		
	L4										101						101	101	
	R4(B)-R4(C)										101						101	101	
321	L1																		
	L2																		
	L3																		
	L4										101						101	101	
	R4(B)-R4(C)										101						101	101	

H4 HYDRAULIC MOTORS

GENERAL FEATURES

Gearboxes belonging to the series 300M can be supplied complete with MG hydraulic motors manufactured by BONFIGLIOLI TRASMITAL. These motors were designed to provide compact and energy efficient gearmotors.
Before ordering, you should consult with the Technical Service Bonfiglioli.



H4.1 MG hydraulic motors

Design characteristics:

- Orbit system with GEROLER® rollers between rotor and stator
- Distributor on output shaft
- Displacements from 50 to 250 cm^3
- Max. pressure 175 bar
- Max. flow rate 48 lt/min
- High efficiency
- Hydraulic brake can be included in the motor overall dimensions
- Inner brake directly controlled by the motor with no valves or outer circuits required.

H5 TECHNICAL FEATURES

H5.1 Displacement V [cm^3]

Geometrical volume produced as a result of each motor rotation corresponding to the theoretical volume of hydraulic oil necessary for a rotation of the driving shaft

H5.2 Pressure p [bar]

Hydraulic pressure applied to the motor when running.

H5.3 Flow rate Q [l / min]

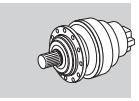
Hydraulic oil flow through the motor when running.

H5.4 Efficiency η_t

Total efficiency of the hydraulic motor given by:

$$\eta_t = \eta mh \times \eta v \quad (38)$$

H5.5 Mechanical-hydraulic efficiency ηmh



This is the ratio of actual torque to theoretical torque at the driving shaft. Value depending on inner losses due to mechanical friction as well as hydraulic fluid pressure losses, calculated as follows:

$$\eta mh = \frac{2\pi \times 10 \times T}{(pA - pB) \times V} \quad (39)$$

H5.6 Hydraulic efficiency ηv

This is the ratio of motor actual speed to motor theoretical speed. Value depending on the motor inner blow-by between high and low pressure volumes. This value is given by the following formula:

$$\eta v = \frac{n \times V}{Q \times 1000} \quad (40)$$

H5.7 Angular speed n [min-1]

Hydraulic motor rotation speed. Value resulting from the following formula:

$$n = \frac{Q \times 1000}{V} \times \eta v \quad (41)$$

H5.8 Torque T [Nm]

Actual torque transmitted by the hydraulic motor. Value given by the following formula:

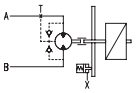
$$T = \frac{(p\,A - p\,B) \times V}{2\pi \times 10} \times \eta mh \quad (42)$$

H6 DESIGNATION

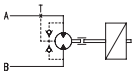
MG 050 SD_R P010

PORTS

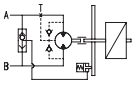
P010 = oil ports on motor housing direct — with brake



without brake



B02P = oil ports with valve brake pilot — with brake



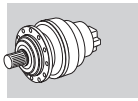
CONSTRUCTIVE SERIES

DISPLACEMENT

050	51.60	cm³	**160**	159.60	cm³
080	80.30	cm³	**200**	199.80	cm³
100	99.80	cm³	**250**	249.30	cm³
125	125.70	cm³			

ORBIT MOTOR TYPE MG

H7 DISPLACEMENT SELECTION



Displacement V of the hydraulic motor should be selected together with the gearbox.

Once the output torque and speed n_2 for the gearbox T_{r2} is known, proceed as follows:

Define the control pressure value pA-pB ≤ 175 bar for the motor.

Calculate the gearbox displacement value called Veq with the following formula:

$$Veq = \frac{2\pi \times 10 \times T_{r2}}{(pA - pB) \times \eta mh \times \eta d} \ [cm^3] \quad (43)$$

where ηmh, for example, is equal to 0.85;
η_d: gearbox dynamic efficiency, consider 0.94.

Calculate the value for flow rate Q, necessary for feeding the hydraulic motor, with the following formula:

$$Q = \frac{n_2 \times Veq}{1000 \times \eta v} \quad [l/min] \quad (44)$$

where ηv, for example, is equal to 0.90.

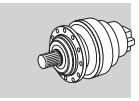
− Select the gearbox size with T_{r2} and n_2.

− Look up the diagram (A23) for the gearmotor with equivalent displacement value Veq and select:
- a motor that fulfils the p int. and Q requirements and at the same time.
- the indicative value of reduction ratio i. Please consider that ratio should be obtained with as few reduction stages as possible, to save on gearmotor costs and contain dimensions.

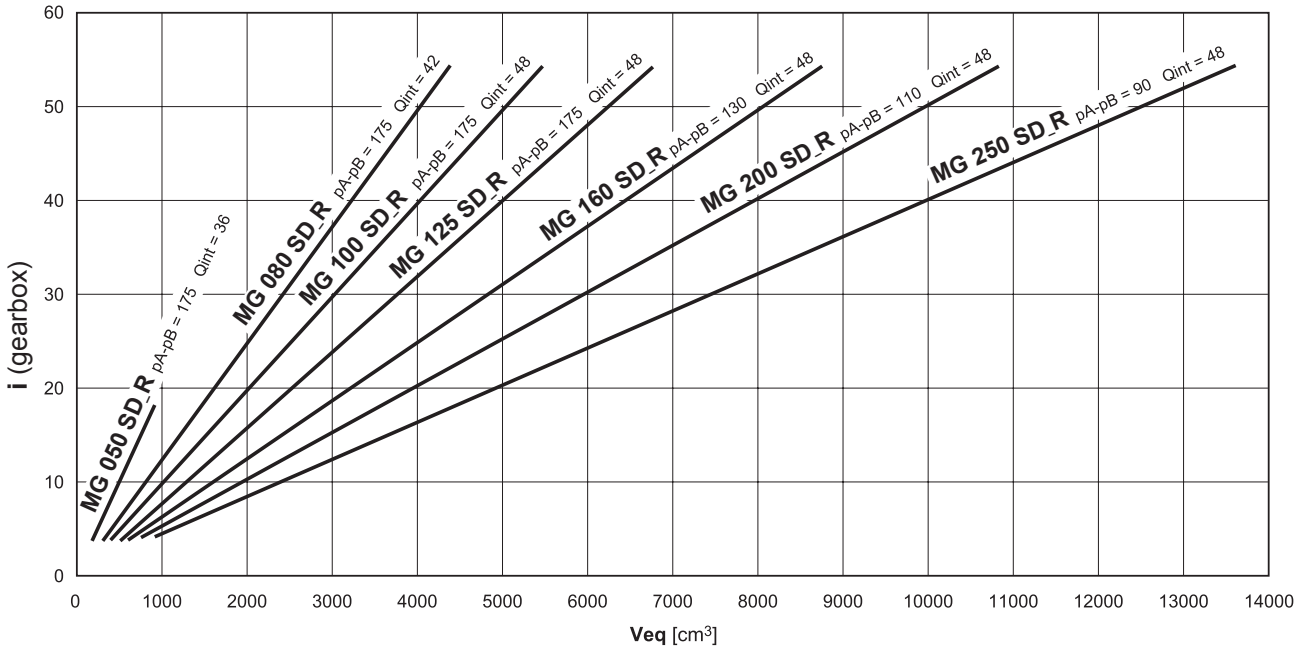
Once you have determined the value of T_2 and the indicative value of i, select the gearbox and check your selection as indicated in chapt. 14.5.

H8 CHECKING

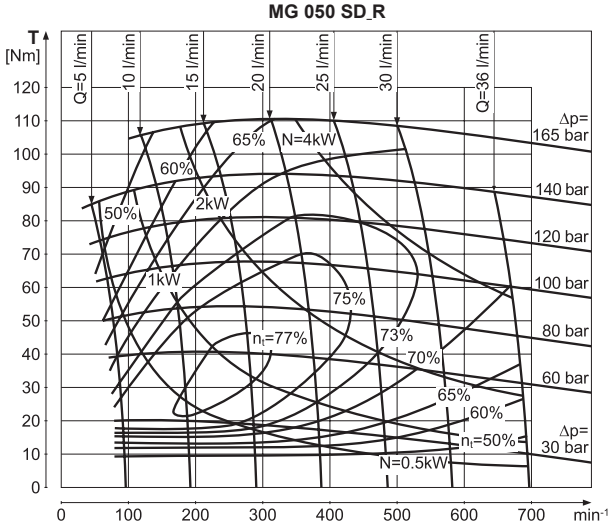
Check that pressure, efficiency and flow rate values correspond with values indicated in Table (A24 and A25) on motor technical features.

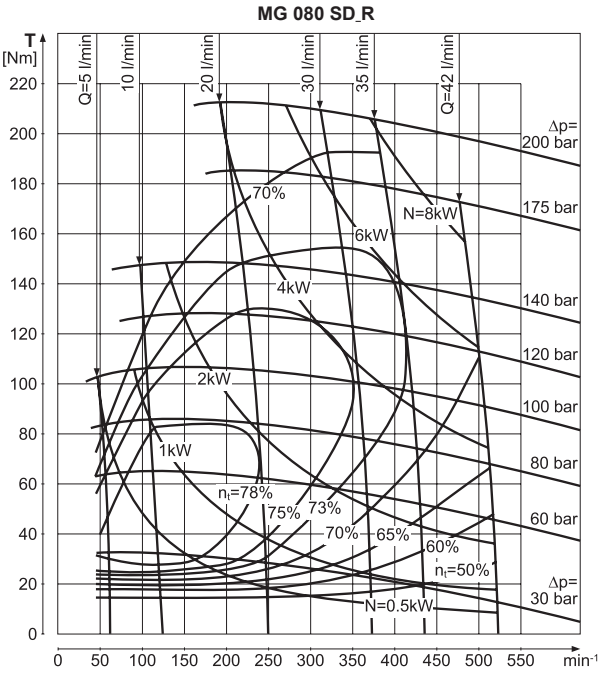


(A 23)

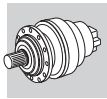

i (gearbox)
Veq [cm3]
MG 050 SD_R pA-pB = 175 Qint = 36
MG 080 SD_R pA-pB = 175 Qint = 42
MG 100 SD_R pA-pB = 175 Qint = 48
MG 125 SD_R pA-pB = 175 Qint = 48
MG 160 SD_R pA-pB = 130 Qint = 48
MG 200 SD_R pA-pB = 110 Qint = 48
MG 250 SD_R pA-pB = 90 Qint = 48

(A 24)

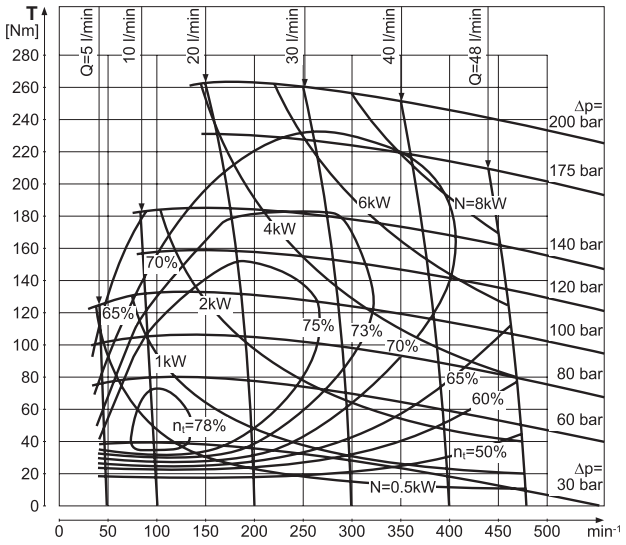

MG 050 SD_R
T [Nm]
Q=5 l/min
10 l/min
15 l/min
20 l/min
25 l/min
30 l/min
Q=36 l/min
Δp= 165 bar
140 bar
120 bar
100 bar
80 bar
60 bar
Δp= 30 bar
65%
N=4kW
60%
2kW
50%
1kW
75%
73%
70%
65%
60%
ηt=77%
ηt=50%
N=0.5kW
min-1


MG 080 SD_R
T [Nm]
Q=5 l/min
10 l/min
20 l/min
30 l/min
35 l/min
Q=42 l/min
Δp= 200 bar
175 bar
140 bar
120 bar
100 bar
80 bar
60 bar
Δp= 30 bar
70%
N=8kW
6kW
4kW
2kW
1kW
ηt=78%
75%
73%
70%
65%
60%
ηt=50%
N=0.5kW
min-1

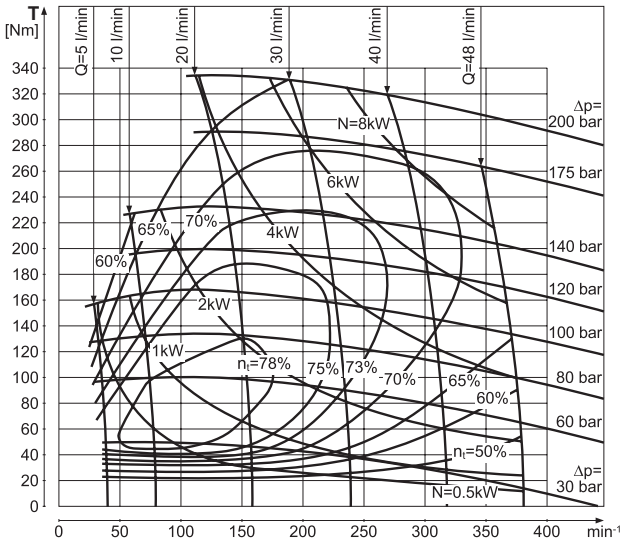
(A 25)



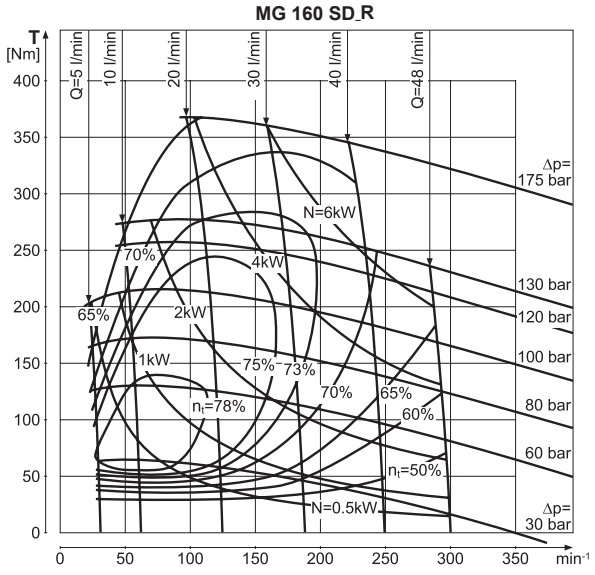
MG 100 SD_R



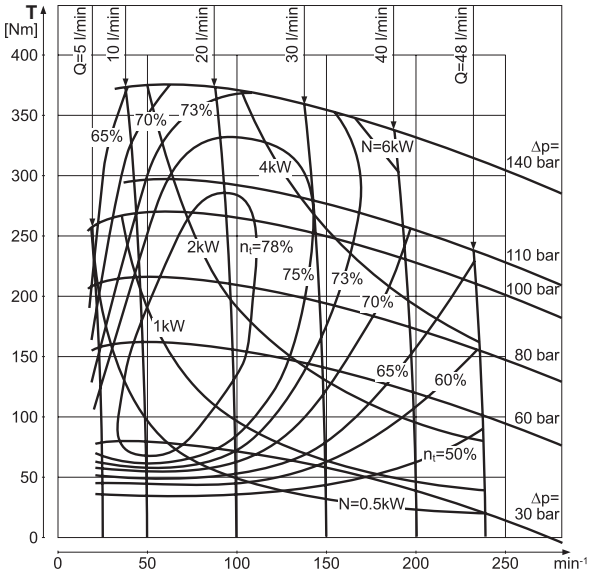
MG 125 SD_R



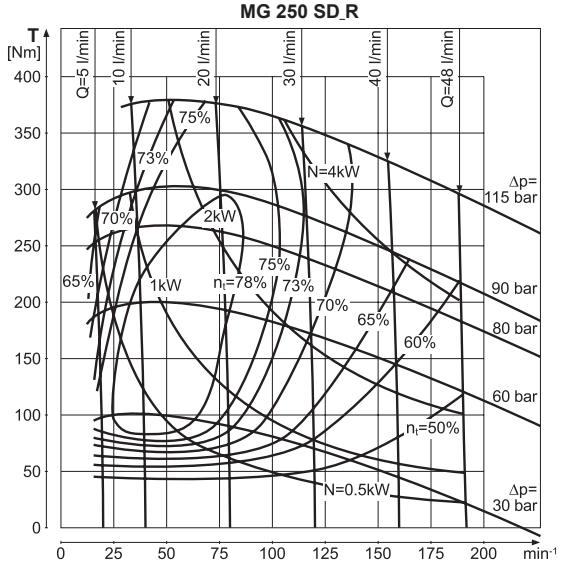
MG 160 SD_R

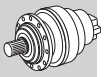


MG 200 SD_R

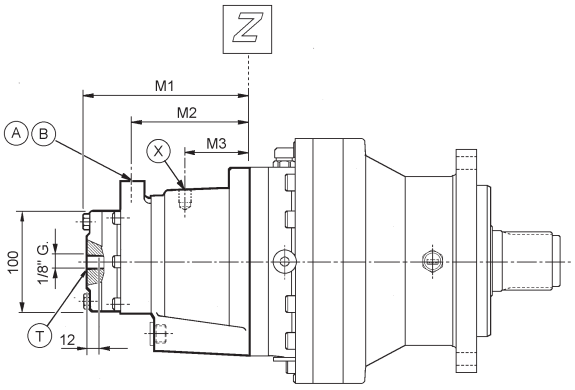


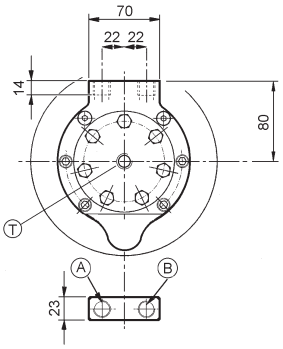
MG 250 SD_R

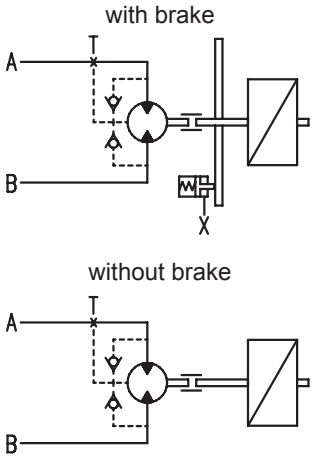




MG-**P010



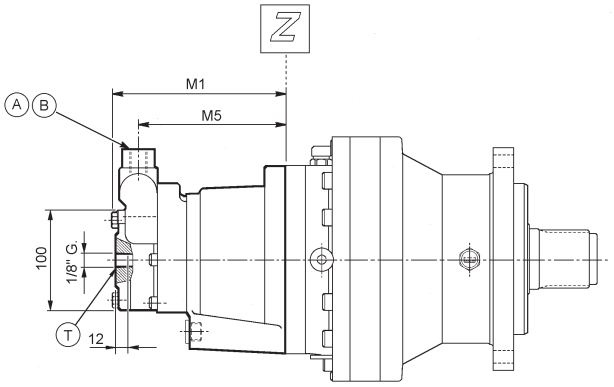


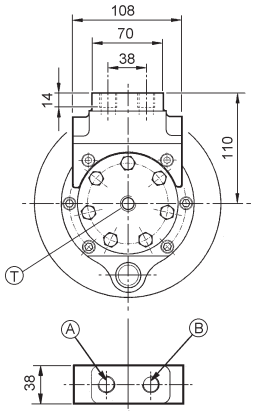


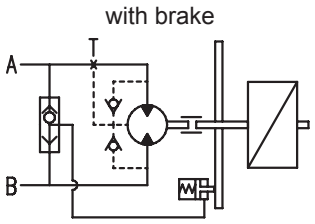
PORTS

A - B = 3/8" G 19TPI
T = 1/8" G 28TPI
X = 1/4 G 19TPI

MG-**B02P



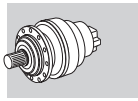




(A 26)

Suitable gearbox	Motor							Execution		
	MG 050	**MG 080**	**MG 100**	**MG 125**	**MG 160**	**MG 200**	**MG 250**	**P010**		**B02P**
	M1							M2	M3	M5
300 L1 - L2 - R2	162	167	171	175	181			113	60	143
301 L1 - L2 - R2	162	167	171	175	181	188	197	113	60	143
303 L1					203	210	219	135	77	165
303 L2 - R2	162	167	171	175	181	188	197	113	60	143
304 L1				197	203	210	219	135	77	165
304 L2 - R2	162	167	171	175	181	188	197	113	60	143
305 L1					203	210	219	135	77	165
305 L2 - R2	162	167	171	175	181	188	197	113	60	143
306 L2					203	210	219	135	77	165
306 R2 - R3	162	167	171	175	181	188	197	113	60	143
307 L2					203	210	219	135	77	165
307 R2 - R3	162	167	171	175	181	188	197	113	60	143

H11 TECHNICAL DATABRAKES FOR MG MOTORS



(A 27)

		Brake TYPE 3				Brake TYPE 4			
		3E	**3I**	**3L**	**3N**	**4K**	**4N**	**4R**	**4U**
Brake torque Tf	[Nm]	120	200	280	350	260	320	430	620
Min. opening pressure	[bar]	16	28	28	35	25	30	24	34
Max. operating pressure	[bar]	200							
Oil volume for brake release	[cc]	6.43	6.43	6.43	6.43	6.65	6.65	6.65	6.65

(A 28)

Suitable gearbox	Motor													
	MG 050		**MG 080**		**MG 100**		**MG 125**		**MG 160**		**MG 200**		**MG 250**	
	Tf [Nm]		Tf [Nm]		Tf [Nm]		Tf [Nm]		Tf [Nm]		Tf [Nm]		Tf [Nm]	
300 L1 - L2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**				
300 R2	120	**3E**	200	**3I**	280	**3L**								
301 L1 - L2			200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**	350	**3N**
301 R2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**				
303 L1									430	**4R**	430	**4R**	430	**4R**
303 L2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
303 R2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
304 L1							350	**3N**	430	**4R**	430	**4R**	430	**4R**
304 L2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
304 R2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
305 L1									430	**4R**	430	**4R**	430	**4R**
305 L2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
305 R2	120	**3E**	200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
306 L2			260	**4K**	260	**4K**	430	**4R**	430	**4R**	430	**4R**	430	**4R**
306 R2 - R3			200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**		
307 L2					260	**4K**	430	**4R**	430	**4R**	430	**4R**	430	**4R**
307 R2 - R3			200	**3I**	280	**3L**	350	**3N**	350	**3N**	350	**3N**	350	**3N**

H12 INSTALLATION

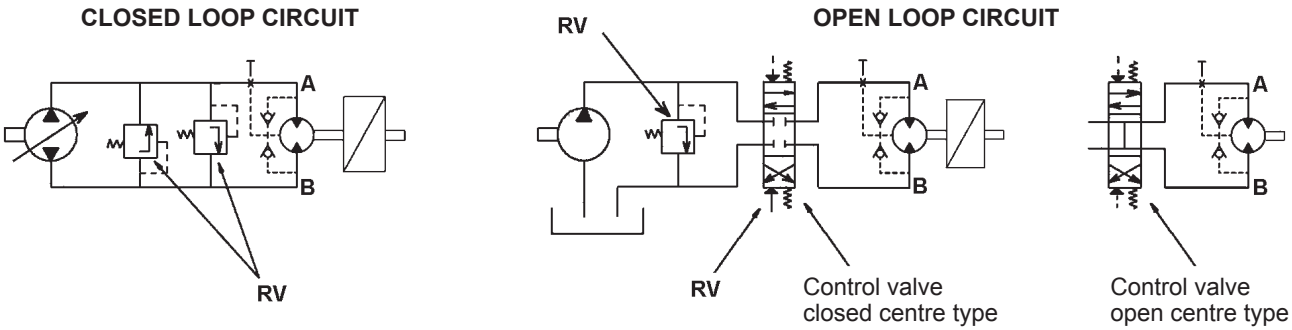
Further to standards on gearbox installation, refer to chapter 15, comply with the following hydraulic motor installation instructions.

a) Connection to the hydraulic circuit

Motors can be connected either to closed or open circuits.
In case of an open circuit, solenoid valve or control distributor can be of the closed or open center type.

The hydraulic motor delivery side should always have a max. pressure valve set to a value not exceeding the p_{int} value allowed for the hydraulic motor. See hydraulic diagrams (A29).

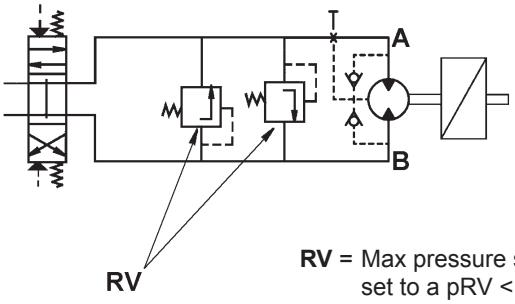
(A 29)



RV = Max pressure valve set to a pRV < pmax

If not possible, because the circuits control other devices needing a higher pressure and/or a closed center control valve is fitted and the motor controls parts with a high moment of inertia, max. pressure secondary valves should be as close as possible to the motor. See diagram (A30).

(A 30)

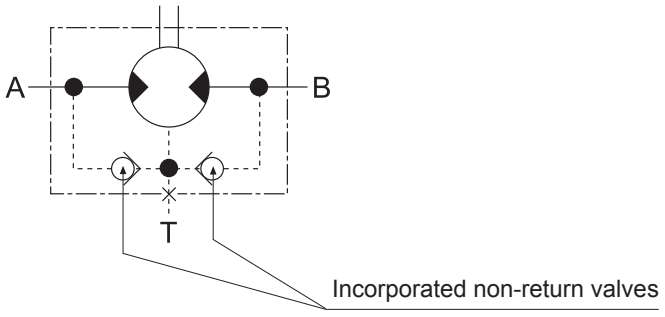


RV = Max pressure secondary valve set to a pRV < pmax

b) Connecting drain port T

These motors have a 1/8" G drain hole in the centre of the cover. The motor is supplied with the port closed by a metal plug (see figure below).
Two non-return valves are incorporated in the motor casing to maintain internal pressure at the same level as the low pressure line A or B if the drain port is not connected to the tank.

(A 31)

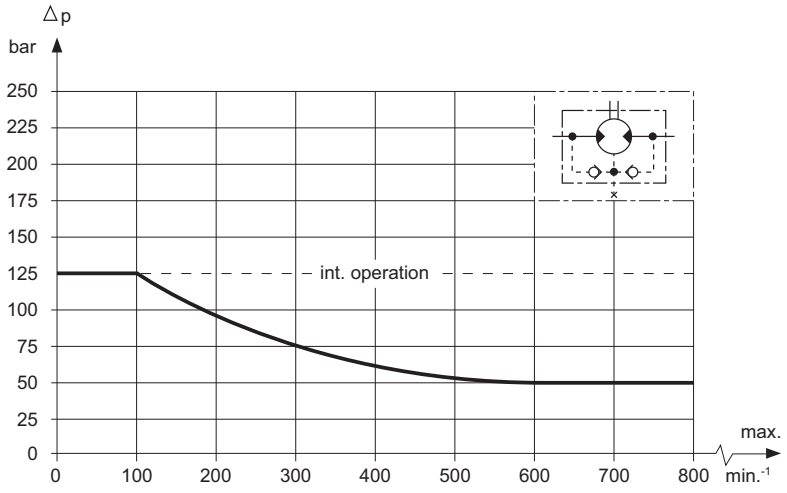


1) If the drain port is connected up, pressure at the shaft seal is always equal to the pressure in the drain line.

2) If the drain port is closed off, pressure at the shaft seal never exceeds pressure in the return line.

The maximum values for pressure in the drain line (case 1) or return line (case 2) are given in the following figure (for continuous and intermittent operating conditions).

(A 32)



The drain port must always be connected up when more motors are operated in series.

c) Brake control

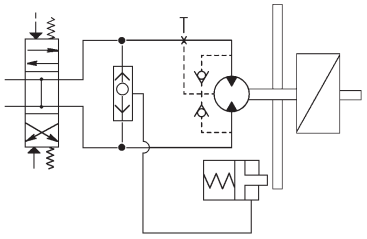
For gearmotors equipped with brakes, there are two motor versions available, i.e. the B02P or P010 executions.
In the B02P version, the motor has an in-built, direct brake control system. In the P010 version, an auxiliary branching is required to control the brake. See the following diagram.

(A 33)

OPEN LOOP CIRCUIT

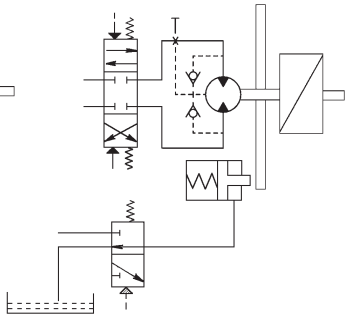
Control valve open centre type

Motor execution **B02P**



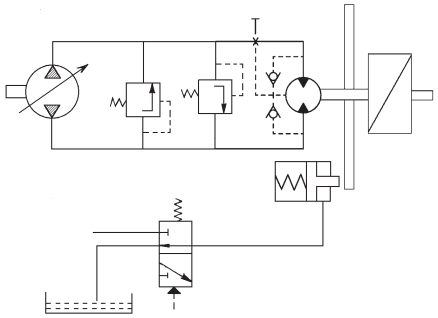
Control valve closed centre type

Motor execution **P010**



CLOSED LOOP CIRCUIT

Motor execution **P010**



d) Hydraulic oil

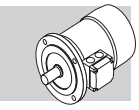
Use hydraulic mineral oil with viscosity ISO VG 46 (46 Cst at t = 40°C/104°F).
It is recommended the oil temperature should be between +30°C [86°F] and +70°C [158°F].

e) Oil filtering

For reliable motor operation and long life, it is important that the hydraulic circuit has a filter for a proper oil filtering according to the following degree:

degree 9 NAS 1638
degree 6 SAE
degree 18/15 SO DIS 4406

M1 SYMBOLS AND UNITS OF MEASUREMENT

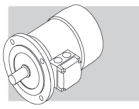


Symbols	Units of Measure	Description
$\cos\varphi$	–	Power factor
η	–	Efficiency
f_m	–	Power adjusting factor
I	–	Cyclic duration factor
I_N	[A]	Rated current
I_S	[A]	Locked rotor current
J_C	[lb•ft^2]	Load moment of inertia
J_M	[lb•ft^2]	Moment of inertia
K_c	–	Torque factor
K_d	–	Load factor
K_J	–	Inertia factor
T_A	[lb•in]	Mean breakaway torque
T_B	[lb•in]	Brake torque
T_N	[lb•in]	Rated torque
T_L	[lb•in]	Counter-torque during acceleration
T_S	[lb•in]	Starting torque

Symbols	Units of Measure	Description
n	[rpm]	Rated speed
P_B	[W]	Power drawn by the brake at 20°C
P_n	[kW/hp]	Motor rated power
P_r	[kW/hp]	Required power
t_1	[ms]	Brake response time with one-way rectifier
t_{1s}	[ms]	Brake response time with electronic-controlled rectifier
t_2	[ms]	Brake reaction time with a.c. disconnect
t_{2c}	[ms]	Brake reaction time with a.c. and d.c. disconnect
t_a	[°F]	Ambient temperature
t_f	[min]	Work time at constant load
t_r	[min]	Rest time
W	[lb•ft]	Braking work between service interval
W_{max}	[lb•ft]	Maximum brake work for each braking
Z	[1/h]	Permissible starting frequency, loaded
Z_0	[1/h]	Max. permissible unloaded starting frequency (I = 50%)

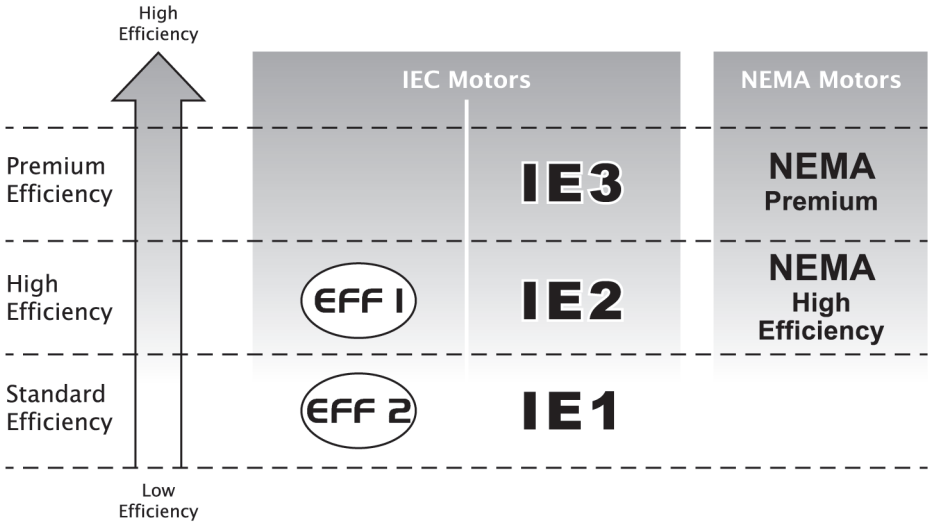
Efficiency classes and test methods

Efficiency classes characterise the efficiency with which an electric motor converts electrical energy into mechanical energy. In Europe, the energy efficiency of low voltage electric motors used to be classified using the voluntary Eff1/Eff2/Eff3 system. Outside Europe, other countries used to apply their own national systems, often very different to the European system. This uncertainty in standards led manufacturers to develop a harmonised international standard, and push for the issue of IEC (International Electrotechnical Commission) standard IEC 60034-30-1, “Efficiency classes of single-speed, three-phase, cage-induction motors (IE code)”.
In the USA, the reference standard is NEMA MG1.



These new standards:
- defines new classes of efficiency
- IE1 (standard efficiency)
- IE2 (NEMA high efficiency)
- IE3 (NEMA premium efficiency)
- provides a common, international reference system for the classification of electric motors and for national legislation
- introduces a new efficiency measurement method in conformity with standard IEC 60034-1-2:2007

The following table shows the correspondence among the main classes.



European Commission regulation 640/2009

IEC standard 60034-30-1 establishes technical guidelines for efficiency classification but does not impose any legal requirements for the adoption of any particular efficiency class. These are laid down by European Directives and national laws.

The EC Regulation applying Directive 2005/32/EC was adopted on the 22nd July 2009. This establishes the legal requirements and eco-compatible design criteria for electric motors, and imposes minimum efficiency limits according to the following schedule:

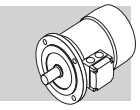
▪ **16/06/2011:** Electric motors must have a minimum efficiency level equivalent to class **IE2**

▪ **01/01/2015**: Electric motors with a rated power output between 10 HP (7.5 kW) and 500 HP (375 kW) must have

▪ a minimum efficiency level corresponding to **IE3**, or to **IE2** if controlled by an inverter.

▪ **01/01/2017:** Electric motors with a rated power output between 1 HP (0.75 kW) and 500 HP (375 kW) must have

▪ a minimum efficiency level corresponding to **IE3**, or to **IE2** if controlled by an inverter.



Scope and exclusions

EC Regulation 640/2009 applies to 2, 4, and 6 pole, single-speed, three-phase, 50 Hz or 60 Hz, cage-induction motors with rated outputs of 1 HP (0.75 kW) to 500 HP (375 kW), and rated voltage up to 1000 V, designed for continuous duty (S1).

The regulation does not apply to:

- brakemotors
- motors designed to function immersed in liquid
- motors that are fully integrated in a product (like a gearbox, pump, fan), so that it is not possible
- to test the performance of the motor independently of that of the product.
- motors expressly designed to function:

▪ at altitudes above 13.100 ft (4000 metres) a.s.l.;

▪ in ambient temperatures above 140 °F (60 °C);

▪ at maximum operating temperatures above 750 °F (400 °C);

▪ in ambient temperatures below -20 °F (-30 °C) (all motors) or below 32 °F (0 °C) (water-cooled motors);

▪ with incoming liquid coolants at temperatures below 32 °F (0 °C) or above 90 °F (32 °C);

▪ in potentially explosive atmospheres as defined by Directive 2014/34/EU.

DOE (the U.S. Department of Energy)

According to the Electronic Code of Federal Regulations (eCFR) of the United States of America, part 431 (ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT), subpart B (Electric Motors), the TEFC (totally enclosed fan cover) electric induction motors, whether equipped with a brake or not, may be placed onto the USA market according to the following prescriptions:

- **IE1 / Standard** motors can be sold in USA only if one or more of the following conditions apply:

▪ their rated power is Pn < 1 HP (0.75 kW)

▪ they are rated for a non-continuous duty (all duties, except S1)

▪ they are labelled for inverter (VFD) only operation

▪ they are multi speed motors

- **IE2 / High Efficiency** motors can be sold in USA **until June 1st 2016**, only if:

▪ have performance in accordance with NEMA design C characteristics, as described in MG1 or an equivalent IEC design(s) such as IEC Design H

- Any motors manufactured **as of June 1st 2016 onwards** shall be **IE3 / Premium Efficient**, unless the following relevant exemptions apply:

▪ their rated power os Pn < 1 HP (0.75 kW)

▪ motors rated for a non-continuous duty (all duties, except S1)

▪ motors labelled for inverter (VFD) only operation

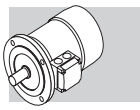
▪ multi speed motors

M3 GENERAL CHARACTERISTICS

M3.1 Production range

The asynchronous three-phase electric motors BX, BE, BN, MX, ME and M of BONFIGLIOLI RIDUTTORI's production, are available in basic designs IMB5 and derived versions, with the following polarities: 2, 4, 6 at 50Hz and 60Hz (BX, BE / MX, ME motors are available at 60 Hz in 4 pole configuration only). For requests concerning other polarities (e.g. double speed motors), please contact the Technical Department.
Motors are provided as totally enclosed fan cooled (TEFC) according to NEMA MG1.

M3.2 Standards



The motors described in this catalogue are manufactured to the applicable standards shown in the following table.

(F01)

Title	CEI	IEC
General requirements for rotating electrical machines	**CEI EN 60034-1**	**IEC 60034-1**
Terminal markings and direction of rotation of rotating machines	**CEI 2-8**	**IEC 60034-8**
Methods of cooling for electrical machines	**CEI EN 60034-6**	**IEC 60034-6**
Dimensions and output ratings for rotating electrical machines	**EN 50347**	**IEC 60072**
Classification of degree of protection provided by enclosures for rotating machines	**CEI EN 60034-5**	**IEC 60034-5**
Noise limits	**CEI EN 60034-9**	**IEC 60034-9**
Classification of type of construction and mounting arrangements	**CEI EN 60034-7**	**IEC 60034-7**
Rated voltage for low voltage mains power	**CEI 8-6**	**IEC 60038**
Vibration level of electric machines	**CEI EN 60034-14**	**IEC 60034-14**
Efficiency classes of single-speed, three-phase, cage-induction motors (IE code)	**CEI EN 60034-30-1**	**IEC 60034-30-1**
Standard method for determining losses and efficiency from tests	**CEI EN 60034-2-1**	**IEC 60034-2-1**

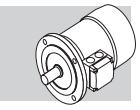
The motors also comply with foreign standards adapted to IEC 60034-1 as shown here below.

(F02)

NEMA MG1	USA
DIN VDE 0530	Germany
BS5000 / BS4999	Great Britain
AS 1359	Australia
NBNC 51 - 101	Belgium
NEK - IEC 34	Norway
NF C 51	France
OEVE M 10	Austria
SEV 3009	Switzerland
NEN 3173	Netherlands
SS 426 01 01	Sweden

M3.3 Directives 2006/95/EC (LVD) and 2004/108/EC (EMC)

BX, BE, BN, MX, ME and M motors meet the requirements of Directives 2006/95/EC (Low Voltage Directive) and 2004/108/EC (Electromagnetic Compatibility Directive) and their name plates bear the CE mark.
As for the EMC Directive, construction is in accordance with standards CEI EN 60034-1, EN 61000-6-2, EN 61000-6-4.
Motors with FD brakes, when fitted with the suitable capacitive filter at rectifier input (option **CF**), meet the emission limits required by Standard EN 61000-6-3:2007 “Electromagnetic compatibility - Generic Emission Standard - Part 6-3 Residential, commercial and light industrial environment”.
Motors also meet the requirements of standard CEI EN 60204-1 “Electrical equipment of machines”.
The responsibility for final product safety and compliance with applicable directives rests with the manufacturer or the assembler who incorporate the motors as component parts.



M3.4 Tolerances

As per the Norms CEI EN 60034-1, applicable the tolerances here below apply to the following quantities.

(F03)

-0.15 (1 - η) P ≤ 75 hp	Efficiency
-(1 - cosφ)/6 min 0.02 max 0.07	Power factor
±20% *	Slip
+20%	Locked rotor current
-15% +25%	Locked rotor torque
-10%	Max. torque

(*) ± 30% for motors with Pn < 0.75 hp

M4 MOTOR DESIGNATION

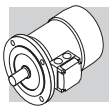
MOTOR | BRAKE

BX 132SB 4 230/400-50 IP55 CLF B5 **W** **FD** 7.5 R SB 220SA .....

OPTIONS

BRAKE SUPPLY

RECTIFIER TYPE
AC/DC
NB, **SB**, **NBR**, **SBR**



BRAKE HAND RELEASE
R, **RM**

BRAKE TORQUE

BRAKE TYPE
FD (d.c. brake)
FA (a.c. brake)

TERMINAL BOX POSITION
(compact motor only)
W (default), **N**, **E**, **S**

MOTOR MOUNTING
− compact motor
IM B5 - IEC motor

INSULATION CLASS
CL F standard
CL H option

DEGREE OF PROTECTION
IP55 standard (IP56 - option)
IP54, **IP55** brake motor

VOLTAGE - FREQUENCY

50Hz	60Hz
230/400 VΔ/Y - 50Hz (BX 80 ... 132 - MX2 ... MX4)	**230/460 VY/Y - 60Hz** (BX 90 ... 132 - MX3, MX4)
290/500 VΔ/Y - 50Hz (BX 80 ... 132 - MX2 ... MX4)	**230/460 VΔΔ/Δ - 60Hz** (BX 160 ... 180 - MX5)
400/690 VΔ/Y - 50Hz (BX 160 ... 180 - MX5)	**330/575 VΔ/Y - 60Hz** (BX 90 ... 180 - MX3 ... MX5)
290/500 VΔ/Y - 50Hz (BX 160 ... 180 - MX5)	**265/460 VΔ/Y - 60Hz** (BX 90 ... 132 - MX3, MX4)
	460/800 VΔ/Y - 60Hz (BX 160 ... 180 - MX5)

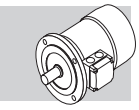
POLE NUMBER
4

MOTOR SIZE
80B ... 180L (IEC motor)
2SB ... 5LA (compact motor)

MOTOR TYPE
BX = IEC 3-phase, class IE3 **MX** = compact 3-phase, class IE3

MOTOR

BE **90LA** **4** 230/400-50 IP55 CLF B5 **W** .....



OPTIONS

TERMINAL BOX POSITION
(compact motor only)
W (default), **N**, **E**, **S**

MOTOR MOUNTING
− compact motor
IM B5 - IEC motor

INSULATION CLASS
CL F standard
CL H option

DEGREE OF PROTECTION
IP55 standard (IP56 - option)

VOLTAGE - FREQUENCY

POLE NUMBER
2, **4**, **6**

MOTOR SIZE
80B ... 180L (IEC motor)
2SA ... 5LA (compact motor)

MOTOR TYPE
BE = IEC 3-phase, class IE2 **ME** = compact 3-phase, class IE2

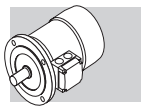
MOTOR BRAKE

BN 90LA 4 230/400-50 IP55 CLF B5 **W** **FD** 7.5 R SB 220SA .....

OPTIONS

BRAKE SUPPLY

RECTIFIER TYPE
AC/DC
NB, **SB**, **NBR**, **SBR**



BRAKE HAND RELEASE
R, **RM**

BRAKE TORQUE

BRAKE TYPE
FD (d.c. brake)
FA (a.c. brake)

TERMINAL BOX POSITION
(compact motor only)
W (default), **N**, **E**, **S**

MOTOR MOUNTING
− compact motor
IM B5 - IEC motor

INSULATION CLASS
CL F standard
CL H option

DEGREE OF PROTECTION
IP55 standard (IP56 - option)
IP54, **IP55** brake motor

VOLTAGE - FREQUENCY

POLE NUMBER
2, **4**, **6**, **2/4**, **2/6**, **2/8**, **2/12**, **4/6**, **4/8**

MOTOR SIZE
56A ... 200LA (IEC motor)
0B ... 5SB (compact motor)

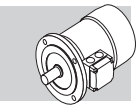
MOTOR TYPE
BN = IEC 3-phase **M** = IEC compact 3-phase

M5 VARIANTS AND OPTIONS

M5.1 Variants

(F04)

Description		Default	Option	Page
Voltage		230/400/50		556
Protection class	BX - BE - BN - MX - ME - M	IP 55	IP 56	553
	BX_FD - BX_FA - BN_FD - BN_FA MX_FD - MX_FA - M_FD - M_FA	IP 54	IP 55	
Insulation class		CLF	CLH	560
Design version	BX - BE - BN	**B5 B5 R**		552



Default values.

M5.2 Options

(F05)

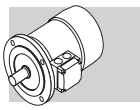
Description	Catalogue numbers						Availability	Page
Thermal protective devices	**D3**	**K1**	**E3**				BX - BE - BN MX - ME - M	576 577
50 Hz normalized power	**PN**						BN M	558
Feedback devices	**EN1**	**EN2**	**EN3**	**EN4**	**EN5**	**EN6**	BX - BE - BN MX - ME - M	585
Anti-condensate heaters	**H1**	**NH1**					BX - BE - BN MX - ME - M	580
Tropicalized windings	**TP**						BX - BE - BN MX - ME - M	581
Double-extended shaft	**PS**						BX - BE - BN MX - ME - M	581
Rotor balancing grade B	**RV**						BX - BE - BN MX - ME - M	582
External mechanical protections	**RC**	**TC**					BX - BE - BN MX - ME - M	584 585
Forced ventilation	**U1**	**U2***					BX - BE - BN MX - ME - M	583 584
Certification	**CUS**						BX - BE - BN MX - ME - M	558
China Compulsory Certification	**CCC**						BE - BN ME - M	560
Plug connector	**CON**						BX - BE - BN MX - ME - M	577
Surface protection	**C_**						BX - BE - BN MX - ME - M	587
Painting	**RAL**						BX - BE - BN MX - ME - M	587
Certificates	**ACM**						BX - BE - BN MX - ME - M	588
Inspection certificate	**CC**						BX - BE - BN MX - ME - M	588
Backstop device	**AL**	**AR**					MX - ME - M	581
Type of duty	**S2**	**S3**	**S9**				BN M	561

* Only for motors BN and M

M5.3 Brake-related options

(F06)

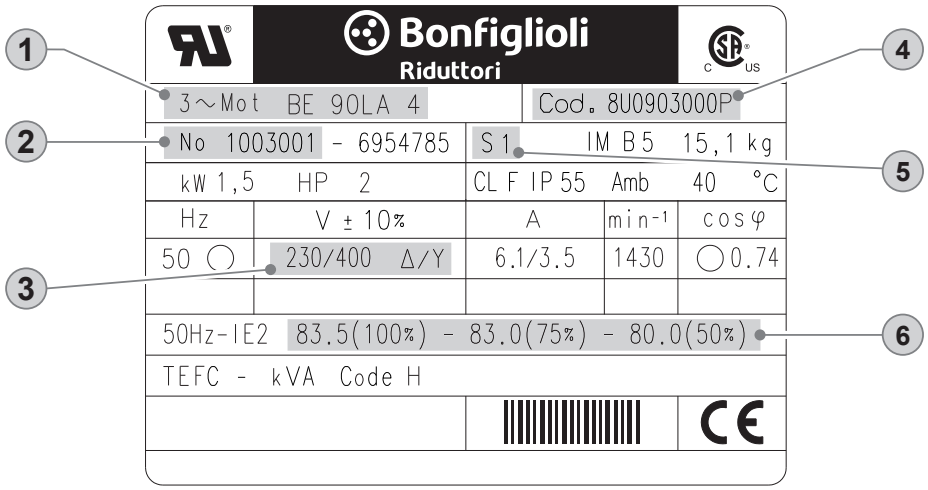
Description	Catalogue numbers				Availability	Page
Brake torque	Refer to the specific brake type					569 572
Manual release lever	**R**	**RM**			BX - BN MX - M	574
Release lever orientation	**AB**	**AA**	**AC**	**AD**	BX - BN MX - M	575
DC brake rectifier	**NB**	**NBR**	**SB**	**SBR**	BX - BN MX - M	568
Soft-start flywheel	**F1**				BN M	576
Capacitive filter	**CF**				BX - BN MX - M	576
Brake separate power supply (*)	**...SA**	**...SD**			BX - BN MX - M	575
Brake functionality check	**MSW**				BX - BN MX - M	580
Additional cable entry for brake motors	**IC**				BX - BN MX - M	580



(*) Specify voltage.

Default values.

M5.4 Example of identification nameplate



① BONFIGLIOLI Motor type
② Serial number
③ Rated voltage
④ Motor code
⑤ Type of duty: S1 Continuous duty
⑥ IE Class, Efficiency at: 4/4 - 3/4 - 2/4 load

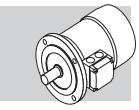
M6 MECHANICAL FEATURES

M6.1 Versions

EC-normalised BX, BE and BN motors are available in the design versions as indicated in the table below here after as per Standards EN 60034-7 (BX, BE), CEI EN 60034-14 (BN).

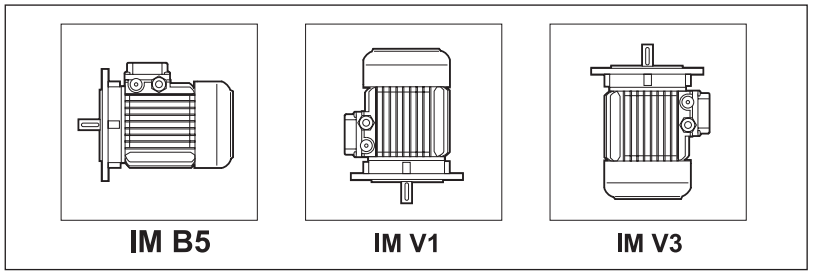
Mounting versions are:

IM B5 (basic)
IM V1, IM V3 (derived)



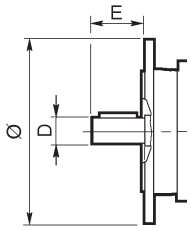
IM B5 design motors can be installed in positions IM V1 and IM V3. In such cases, the basic design IM B5 is indicated on the motor name plate.
In design versions with a vertically located motor and shaft downwards, it is recommended to request the drip cover (always necessary for brake motors). This facility, included in the option list should be specified when ordering as it does not come as a standard device

(F07)



Flange output motors are also available with reduced coupling dimensions, as indicated in the table below - executions **B5R**. Their use in combination with gearboxes must be however coherent with the maximum installable power on gearboxes themselves (see chapters “Motors availability”). In case this condition is not met need to contact the Technical Service for the checking of the combination.

(F08)



		BN 71	BX/BE/BN 80	BX/BE/BN 90	BX/BE/BN 100	BX/BE/BN 112	BX/BE/BN 132
		DxE - Ø					
B5R	*[mm]*	*11x23 - 140*	*14x30 - 160*	*19x40 - 200*	*24x50 - 200*	*24x50 - 200*	*28x60 - 250*
	[in]	0.433x0.905 - 5.511	0.551x1.181 - 6.299	0.748x1.574 - 7.874	0.944x1.968 - 7.874	0.944x1.968 - 7.874	1.102x2.362 - 9.842

B5R flange is provided with through holes

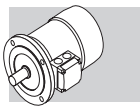
M6.2 Degree of protection

IP..

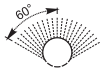
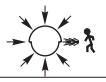
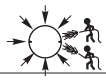
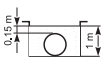
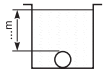
The following chart provides an overview of the degrees of protection available.
In addition to the degree of protection specified when ordering, motors to be installed outdoors require protection against direct sunlight and also – when they are to be installed vertically down – a drip cover to prevent the ingress of water and solid particles (option **RC**).

(F09)

		IP 54	IP 55	IP 56
BX - BE - BN	**MX - ME - M**	⛔	standard	
BX_FD **BX_FA** **BN_FD** **BN_FA**	**MX_FD** **MX_FA** **M_FD** **M_FA**	standard		⛔



IP 55

0		Not protected
1		Protected against vertical water drips
2		Protected against vertical water drips inclined up to 15°
3		Protected against rain
4		Protected against water splashes
5		Protected against jets of water
6		Protected against powerful jets of water
7		Protected against the effects of temporary immersion
8		Protected against the effects of continuous immersion

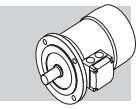
IP 54

0		Not protected
1		Protected against extraneous solid bodies having Ø ≥ 50 mm
2		Protected against extraneous solid bodies having Ø ≥ 12.5 mm
3		Protected against extraneous solid bodies having Ø ≥ 2.5 mm
4		Protected against extraneous solid bodies having Ø ≥ 1.0 mm
5		Protected against dust
6		No dust ingress

M6.3 Cooling

The motors are externally ventilated (IEC 411 / NEMA MG1-6 - CEI EN 60034-6) and are equipped with a plastic fan working in both directions.
The motors must be installed allowing sufficient space between fan cowl and the nearest wall to ensure free air intake and allow access for maintenance purposes on motor and brake, if supplied.
Independent, forced air ventilation (IC 416) can be supplied on request (option U1).
This solution enables to increase the motor duty factor when driven by an inverter and operating at reduced speed.

M6.4 Direction of rotation



Rotation is possible in both directions. If terminals U1, V1 and W1 are connected to line phases L1,L2 and L3, clockwise rotation (looking from drive end) is obtained. For counterclockwise rotation, switch two phases.

M6.5 Noise

Noise levels, measured using the method prescribed by ISO 1680 Standards, are within the maximum levels specified by Standards CEI EN 60034-9.

M6.6 Vibrations and balancing

Rotor shafts are balanced with half key fitted and fall within the vibration class N, as per Standard CEI EN 60034-14.

M6.7 Terminal box

Terminal board features 6 studs for eyelet terminal connection (9 studs execution for US voltage “Dual Voltage”). A ground terminal is also supplied for earthing of the equipment.
Terminals number and type are shown in the following table.
For brake power supply, please read par. M9 (brake FD), M10 (brake FA).
Brakemotors house the a.c./d.c. rectifier (factory pre-wired) inside the terminal box.
Wiring instructions are provided either in the box or in the user manual.

(F10)

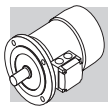
		No. of terminals	Terminal threads [*mm*]	Wire max cross section area [mm^2 / in^2]
BX 80, BX 90 **BE 80, BE 90** **BN 56 ... BN 90**	**MX2, MX3** **ME2** **M05 ... M2**	6	*M4*	*2.5* / 0.098
BX 100 ... BX 132 **BE 100 ... BE 132** **BN 100 ... BN 160MR**	**MX3, MX4** **ME3, ME4** **M3 ... M4**	6	*M5*	*6* / 0.236
BX 160 - BE 160 ... BE 180M **BN 160M ... BN 180M**	**ME5** **MX5 - M5**	6	*M6*	*16* / 0.629
BX 180 - BE 180L **BN 180L ... BN 200L**	**–** **–**	6	*M8*	*25* / 0.984
BX 80 ... BX 132 **BE 80 ... BE 132** **BN 63 ... BN 160MR**	**MX2 ... MX4** **ME2 ... ME4** **M05 ... M4**	9	*M4*	*6* / 0.236
BX 160 ... BX 180 **BE 160 ... BE 180** **BN 160M ... BN 200L**	**MX5** **ME5** **M5**	9	*M6*	*16* / 0.629

M6.8 Cable entry

The holes used to bring cables to terminal boxes use metric threads in accordance with standard EN 50262 as indicated in the table here after.

(F11)

		Cable gland and dimensions		Maximum cable diameter allowed [*mm* / inch]
BN 63	**M05**	2 x *M20* x 1.5	1 Hole on each side	*13* / 0.512
BN 71	**M1**	2 x *M25* x 1.5		*17* / 0.669
BX 80, BX 90 - BE 80, BE 90 **BN 80, BN 90**	**MX2, MX3 - ME2** **M2**	2 x *M25* x 1.5		*17* / 0.669
BX 100, BX 112 - BE 100, BE 112 **BN 100**	**MX3, MX4 - ME3** **M3**	2 x *M32* x 1.5	2 Holes on each side	*21* / 0.827
		2 x *M25* x 1.5		*17* / 0.669
BN 112	**–**	2 x *M32* x 1.5		*21* / 0.827
		2 x *M25* x 1.5		*17* / 0.669
BX 132 - BE 132 **BN 132...BN 160MR**	**MX4 - ME4** **M4**	4 x *M32* x 1.5		*21* / 0.827
BX 160 - BE 160, BX 180 - BE 180 **BN 160M...BN 200L**	**MX5 - ME5** **M5**	2 x *M40* x 1.5	Pivoting, 4 x 90°	*28* / 1.102



M6.9 Bearings

Life lubricated preloaded radial ball bearings are used, types are shown in the chart here under.
Calculated endurance lifetime L_{10h}, as per ISO 281, in unloaded condition, exceeds 40,000 hrs.
DE = drive end **NDE** = non drive end

(F12)

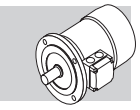
	**DE**	**NDE**	
	M, M_FD, M_FA	**M**	**M_FD, M_FA**
M05	6004 2Z C3	6201 2Z C3	6201 2RS C3
M1	6004 2Z C3	6202 2Z C3	6202 2RS C3
MX2 - ME2 - M2	6007 2Z C3	6204 2Z C3	6204 2RS C3
MX3 - ME3 - M3	6207 2Z C3	6206 2Z C3	6206 2RS C3
MX4 - ME4 - M4	6309 2Z C3	6308 2Z C3	6308 2RS C3
MX5 - ME5 - M5	6309 2Z C3	6309 2Z C3	6309 2RS C3

	**DE**	**NDE**	
	BX, BE, BN	**BX, BE, BN**	**BN_FD** **BN_FA**
BN 56	6201 2Z C3	6201 2Z C3	–
BN 63	6201 2Z C3	6201 2Z C3	6201 2RS C3
BN 71	6202 2Z C3	6202 2Z C3	6202 2RS C3
BX 80 - BE 80 **BN 80**	6204 2Z C3	6204 2Z C3	6204 2RS C3
BX 90 - BE 90 **BN 90**	6205 2Z C3	6205 2Z C3	6305 2RS C3
BX 100 - BE 100 **BN 100**	6206 2Z C3	6206 2Z C3	6206 2RS C3
BX 112 - BE 112 **BN 112**	6306 2Z C3	6306 2Z C3	6306 2RS C3
BX 132 - BE 132 **BN 132**	6308 2Z C3	6308 2Z C3	6308 2RS C3
BN 160MR	6309 2Z C3	6308 2Z C3	6308 2RS C3
BX 160M/L **BE 160M/L** **BN 160M/L**	6309 2Z C3	6309 2Z C3	6309 2RS C3
BN 180M	6310 2Z C3	6309 2Z C3	6309 2RS C3
BX 180M/L **BE 180M/L** **BN 180L**	6310 2Z C3	6310 2Z C3	6310 2RS C3
BN 200L	6312 2Z C3	6310 2Z C3	6310 2RS C3

M7 ELECTRICAL CHARACTERISTICS

M7.1 Voltage

Single speed motors are provided in standard execution either for nominal voltage 230 / 400 V, 50 Hz, or 400 / 690 V, 50 Hz, or 230 / 460 V, 60 Hz with a voltage tolerance of ± 10%, according to what is specified on the below table.
On all the motors BN and M, for which the voltage / frequency configuration is not included on the below table, the voltage tolerance is reduced down to ± 5%.
For the operation out of the tolerance boundaries, the temperature may exceed by 10 K the limit provided by the adopted insulation class.
The motors are suitable for operation on distribution European grid with voltage complying with the pubblication IEC 60038.



(F13)

Efficiency class			V_{mot} ± 10 % 3 ~	Configuration
IE3	**BX 80 ... BX 132**	**MX2 ... MX4**	230 / 400 V - Δ/Y - 50 Hz	standard
	BX 160, BX 180	**MX 5**	400 / 690 V - Δ/Y - 50 Hz	standard
IE2	**BE 80 … 132**	**ME2 … ME4**	230 / 400 V - Δ/Y - 50 Hz	standard
			460 V Y - 60 Hz[1]	standard
			400 / 690 V - Δ/Y - 50 Hz	At request, carries no extra charge
	BE 160, BE 180	**ME5**	400 / 690 V - Δ/Y - 50 Hz	standard
			460 V Δ - 60 Hz[1]	standard
IE1	**BN 56 ... BN 132**	**M0 … M4**	230 / 400 V - Δ/Y - 50 Hz	standard
			400 / 690 V - Δ/Y - 50 Hz	At request, carries no extra charge
			460 V Y - 60 Hz	standard
	BN 160 ... BN 200	**M5**	400 / 690 V - Δ/Y - 50 Hz	standard
			460 V Δ - 60 Hz	standard

[1] 4 pole motor only

The only rated voltage for motors type at 50 Hz and all double speed motors is 400 V.
Applicable tolerances as per CEI EN 60034-1.

The table below shows the wiring options available.

(F14)

Number of poles		Winding connection
2	**BE 80 … BE 160, BN 63 … BN 200**	Δ / Y ([2])
4	**BX 80 ... BX 180** **BE 80 … BE 180, BN 56 … BN 200**	
6	**BE 90 … BE 160, BN 63 … BN 200**	
8	**BN 71 … BN 132**	
2/4	**BN 63 … BN 132**	Δ / YY (Dahlander)
2/6	**BN 71 … BN 132**	Y / Y (Two windings)
2/8	**BN 71 … BN 132**	
2/12	**BN 80 … BN 132**	
4/6	**BN 71 … BN 132**	
4/8	**BN 80 … BN 132**	Δ / YY (Dahlander)

([2]) Motors with voltage in ratio 2 (ex. 230/460 - 60) will be equipped with a 9 pin terminal box with winding connection either Δ Δ/ Δ or YY / Y (except 6 pole BN 63 Δ / Y)

M7.2 Frequency

Rated output power BN / M for 60 Hz operation is shown in the following diagram.

(F15)

		P_n [*kW*/HP]			
		2P	**4P**	**6P**	**8P (*)**
BN 56A	**–**	–	*0.07* / 0.09	–	–
BN 56B	**M0B**	–	*0.10* / 0.13	–	–
BN 63A	**M05A**	*0.21* / 0.28	*0.14* / 0.19	*0.10* / 0.13	–
BN 63B	**M05B**	*0.30* / 0.40	*0.21* / 0.28	*0.14* / 0.19	–
BN 63C	**M05C**	*0.45* / 0.60	*0.30* / 0.40	–	–
BN 71A	**–**	*0.45* / 0.60	*0.30* / 0.40	*0.21* / 0.28	*0.10* / 0.13
–	**M1SC**	–	–	*0.21* / 0.28	–
BN 71B	**M05SD**	*0.65* / 0.87	*0.45* / 0.60	*0.30* / 0.40	*0.14* / 0.19
BN 71C	**M1LA**	*0.90* / 1.21	*0.65* / 0.87	*0.45* / 0.60	–
BN 80A	**–**	*0.90* / 1.21	*0.65* / 0.87	*0.45* / 0.60	*0.21* / 0.28
BN 80B	**M2SA**	*1.30* / 1.74	*0.90* / 1.21	*0.65* / 0.87	*0.30* / 0.40
BN 80C	**M2SB**	*1.8* / 2.41	*1.30* / 1.74	*0.90* / 1.21	–
BN 90S		–	*1.30* / 1.74	*0.90* / 1.21	*0.45* / 0.60
BN 90SA	**–**	*1.8* / 2.41	–	–	–
BN 90SB		*2.2* / *2.95*	–	–	–
BN 90L	**M3SA**	*2.5* / 3.35	–	*1.30* / 1.74	*0.65* / 0.87
BN 90LA		–	*1.8* / 2.41	–	–
BN 90LB	**–**	–	*2.2* / *2.95*	–	–

		P_n [*kW*/HP]			
		2P	**4P**	**6P**	**8P (*)**
BN 100L	**M3LA**	*3.5* / 4.69	–	–	–
BN 100LA		–	*2.5* / 3.35	*1.8* / 2.41	*0.90* / 1.21
BN 100LB	**M3LB**	*4.7* / 6.30	*3.5* / 4.69	*2.2* / *2.95*	*1.30* / 1.74
BN 112M	**–**	*4.7* / 6.30	*4.7* / 6.30	*2.5* / 3.35	*1.8* / 2.41
–	**M3LC**	–	*4.7* / 6.30	*2.5* / 3.35	–
BN 132S	**M4SA**	–	*6.5* / 8.62	*3.5* / 4.69	*2.5* / 3.35
BN 132SA		*6.5* / 8.62	–	–	–
BN 132SB	**M4SB**	*8.7* / 11.67	–	–	–
BN 132M	**M4LA**	*11* / 14.75	–	–	*3.5* / 4.69
BN 132MA		–	*8.7* / 11.67	*4.6* / 6.17	–
BN 132MB	**M4LB**	–	*11* / 14.75	*6.5* / 8.62	–
BN 160MR	**M4LC**	*12.5* / 16.76	*12.5* / 16.76	–	–
BN 160M	**M5SA**	–	–	*8.6* / 11.53	–
BN 160MB	**–**	*17.5* / 23.47	–	–	–
–	**M5SB**	*17.5* / 23.47	*17.5* / 23.47	–	–
BN 160L	**–**	*21.5* / 28.83	*17.5* / 23.47	*12.6* / 16.9	–
–	**M5SC**	*21.5* / 28.83	–	–	–
BN 180M	**M5LA**	*24.5* / 32.85	*21.5* / 28.83	–	–
BN 180L	**–**	–	*25.3* / 33.93	*17.5*/ 23.47	–
BN 200L	**–**	–	*34* / 45.59	–	–
BN 200LA	**–**	*34* / 45.59	–	*22* / 29.50	–

(*) Excluded M_ motors

BX, BE / MX, ME motors are available at 60 Hz on a 4 pole configuration only, and their power rating is the same as their 50 Hz counterpart. Double speed BN / M motors supplied at 60 Hz will have an increase of nominal power, referred to 50 Hz, equal to 15%, whereas double speed BX / BE / MX / ME motors are not available. If a nominal power rating, equal to the normalised nominal power rating at 50 Hz, was requested to be on a nameplate of a motor meant to be voltage supplied at 60 Hz, the PN option shall be specified on the motor designation.
Motors normally designed for a 50 Hz frequency may be used on a 60 Hz operating grid, but the related data shall be updated according to the following table. Motors designated for 50 Hz operation show on the nameplate also the values for 60 Hz operation
(excluding motors in CUS execution and brake motors). See the following table.

(F16)

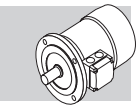
	50 Hz	**60 Hz**			
	V - 50 Hz	**V** - 60 Hz	**Pn** - 60 Hz	T_n, T_a/T_n - 60 Hz	**n** [rpm] - 60 Hz
BX/MX BE/ME	**230/400 Δ/Y**	265 - 460 Δ Y	1	0.83	1.2
	400/690 Δ/Y	460 Δ			
BN/M	**230/400 Δ/Y**	220 - 240 Δ			
		380 - 415 Y			
	400/690 Δ/Y	380 - 415 Δ			
BN/M	**230/400 Δ/Y**	265 - 280 Δ	1.15	1	1.2
		440 - 480 Y			
	400/690 Δ/Y	440 - 480 Δ			

M7.3 Ambient temperature

Catalogue rating values are calculated for standard ambient conditions (temperature 104 °F / 40 °C; elevation ≤ 3300 ft / 1000 m a.s.l.) as per the CEI EN 60034-1 Standards.
The motors can be used within the 104 -140 °F / 40 - 60 °C temperature range with rated power output adjusted by factors given in the table below.

(F17)

Ambient temperature [°F]	100°	115°	120°	130°	140°
Permitted power as a % of rated power	100%	95%	90%	85%	80%



Should a derating factor higher than 15% apply please consult factory.

M7.4 50 HZ normalized power

PN

With this option, motor name plate includes 50 Hz normalized power information even when motor is designated for operation with 60 Hz power mains. For 60 Hz supplies along with voltages 230/460V and 575V the PN option is applied by default.

M7.5 Motors for USA and Canada

CUS

CUS option is available in NEMA Design C execution for BN, BE, M, ME motors, and NEMA Design B for BX motors, with regards to the electrical features. Motors are certified in compliance with CSA (Canadian Standard) C22.2 N° 100 and UL (Underwriters Laboratory) UL 1004-1 standards, as stated on UL file E308649.
BN, BE, M, ME motors nameplates show the below marks:

C US

BX, MX motors nameplates show the below marks and are certified in compliance with the energy efficiency standards in effect in the USA and Canada, respectively provided by DOE (10 CFR Part 431) and NRCan (Energy Efficiency Regulations), tested according to CSA C390 standard.

ENERGY
C US

CC320B

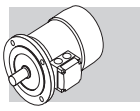
NOTES:

1. Starting from **June, 1st 2016**, CUS motors whose efficiency is below IE3 (i.e. “Premium Efficiency”) cannot be any longer sold in the USA and Canada, unless one or more of the following conditions apply:
   - Double speed motors;
   - Motors plated for a non - continuous duty (<80%);
   - Motors intended to be operated through variable frequency drive only (properly equipped with “Inverter Duty Only” label, or similar).

2. BX 100, MX3LA and MX3LB motors are available for the USA only and not for Canada, and the related marks reported on the nameplates are the following:

ENERGY

CC320B



The CUS option does not apply to servo-ventilated motors.
US power mains voltages and the corresponding rated voltages to be specified for the motor are indicated in the following table:

(F18)

Frequency	Mains voltage	V_{mot}
60 Hz	208 V	**200 V**
	240 V	**230 V**
	480 V	**460 V**
	600 V	**575 V**

CUS option is applicable onto 50 Hz operating motors as well (motors BX, MX excluded).

Motors with voltage in ratio 2 (e.g. 230/460-60; 220/440-60) feature, as standard, a 9-stud terminal board. For same executions, as well as for 575V-60Hz supply, the nominal rating is coincident with the correspondent 50Hz rating.
For DC brake motors type FD, the rectifier is connected to a single-phase 230 VAC supply voltage in the motor terminal box.
Brake power supply for brake motors is as follows:

(F19)

BX_FD - BN_FD MX_FD - M_FD
Connected to terminal box 1~230V c.a.

BX_FA - BN_FA MX_FA - M_FA		Power supply
Separate power supply	230V Δ	230SA
Separate power supplya	460V Y	460SA

M7.6 China Compulsory Certification

CCC

Electric motors destined to be sold in the People's Republic of China have to be certified under the CCC (China Compulsory Certification) system. BN motors of up to 62 lb·in in rated torque are available with CCC certification and a special nameplate bearing the mark shown below:

CCC option is not currently available for IE3 motors.
CCC option is not currently available for servo - ventilated motors.

M7.7 Insulation class

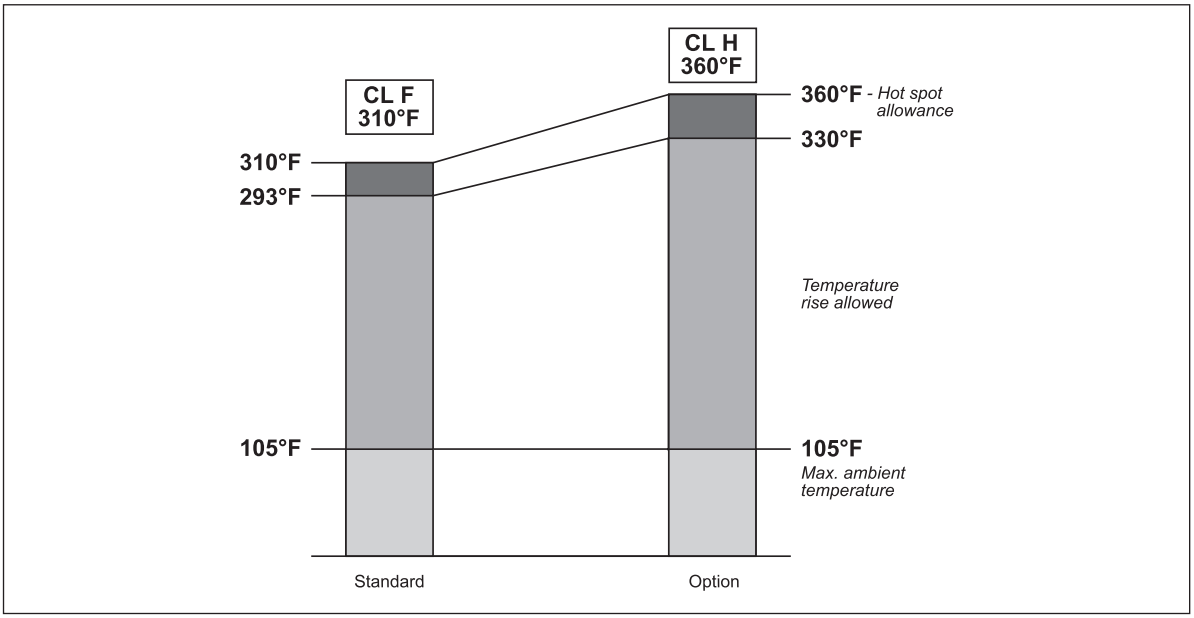
CL F

Bonfiglioli motors use class **F** insulating materials (enamelled wire, insulators, impregnation resins) as compare to the standard motor.
In standard motors, stator windings over temperature normally stays below the 80 K limit corresponding to class B over temperature. A careful selection of insulating components makes the motors compatible with tropical climates and normal vibration.
For applications involving the presence of aggressive chemicals or high humidity, contact Bonfiglioli Engineering for assistance with product selection.

CL H

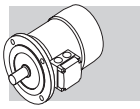
Motors manufactured in insulation class **H** are available at request.
Not available for motors in compliance with CSA e UL standards (CUS option).

(F20)



M7.8 Type of duty

Unless otherwise specified, catalogue motor power refers to continuous duty S1.
Any operating conditions other than S1 duty must be identified in accordance with duty cycle definitions laid down in standards CEI EN 60034-1.
For duty cycles S2 and S3, the power increase co-efficient reported in the following table may be used. Please note that the table provided below applies to single-speed motors.
As an alternative to S1 continuous duty, one of the following values can be specified at the product configuration stage: S2, S3 or S9. The motor nameplate will be marked with an increased power rating to suit the type of duty, and with specific electrical data and a duty type of S2-30 min, S3-70% or S9 respectively.
For further details, contact Bonfiglioli's Technical Service.
Please contact Bonfiglioli Engineering for the power increase coefficients applicable to switch-pole motors.



(F21)

	Type of duty						
	S2			**S3 ***			**S4 - S9**
	Duration (min)			Intermittence (I)			
	10	**30 (*)**	**60**	**25%**	**40%**	**70% (*)**	Contact us
f_m	1.35	1.15	1.05	1.25	1.15	1.1	

* Cycle duration must, in any event, be equal to or less than 10 minutes; if this time is exceeded, please contact our Technical Service.
(*) Default values from options (tab. F05).

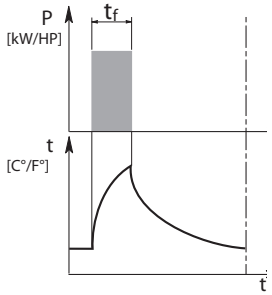
M7.8.1 Cyclic duration factor:

$$I = \frac{t_f}{t_f + t_r} \cdot 100 \qquad (01)$$

t_f = work time under constant load
t_r = rest time

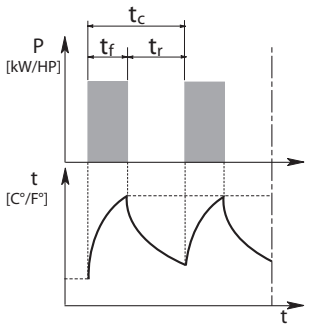
M7.8.2 Limited duration duty S2

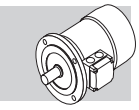
This type of duty is characterized by operation at constant load for a limited time, which is shorter than the time required to reach thermal equilibrium, followed by a rest period of sufficient duration to restore ambient temperature in the motor.



M7.8.3 Periodical intermittent duty S3:

This type of duty is characterized by a sequence of identical operation cycles, each including a constant load operation period and a rest period.
For this type of duty, the starting current does not significantly influence overtemperature.





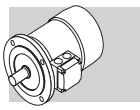
M7.9 Inverter-controlled motors

The Bonfiglioli electric motors may be used in combination with PWM inverters with rated voltage at a transformer input up to 500 V. Standard motors use a phase insulating system with separators, class 2 enameled wire and class H impregnation resins (1600V peak-to-peak voltage pulse capacity and rise edge ts > 0.1µs at motor terminals are allowed).
The Bonfiglioli electric motors may be continuously operated (S1 duty) in “turn - down” mode, i.e. at frequencies lower than the rated frequency, hereafter also called “base frequency” - fb, in ratios fb / f up to 10 : 1, according to the below reported tables.

(F22)

INVERTER OPERATION - BE MOTORS TURN-DOWN DATA

4 pole 1800 min^{-1} S1	Inverter operation Motor data 10:1 (60-6Hz) CONSTANT TORQUE				Inverter operation Motor data 5:1 (60-12Hz) CONSTANT TORQUE				60HZ grid supply - Motor data										
Type	T_6	N_6	P_6		T_{12}	n_{12}	P_{12}		P_n		n	η	T_n	In 230V	In 460V	cosφ	Is/In	Jm	kVA Code Letter
	[lb·in]	[rpm]	[HP]	[kW]	[lb·in]	[rpm]	[HP]	[kW]	[HP]	[kW]	[rpm]	%	[lb·in]	[A]	[A]		p.u.	[lb·ft^2]	
BE 80B 4	36.3	125	0.072	0.054	36.3	305	0.176	0.131	1	0.75	1745	82.5	36.3	2.92	1.46	0.78	7.6	0.066	K
BE 90S 4	53.4	120	0.102	0.076	53.4	300	0.254	0.190	1.5	1.1	1740	84	53.4	4.50	2.25	0.73	7.7	0.066	L
BE 90LA 4	65.5	120	0.125	0.093	72.9	300	0.347	0.259	2	1.5	1740	84.5	72.9	6.20	3.10	0.73	7.1	0.081	K
BE 100LA 4	99.0	125	0.196	0.146	106.6	305	0.516	0.385	3	2.2	1745	87.5	106.6	8.40	4.20	0.76	7	0.128	J
BE 100LB 4	120.9	115	0.221	0.165	146.1	295	0.684	0.510	4	3	1735	87.5	146.1	11.80	5.90	0.76	7	0.145	K
BE 112M 4	145.8	130	0.301	0.224	178.7	310	0.879	0.655	5	3.7	1750	87.5	178.7	13.20	6.60	0.80	7.8	0.249	K
BE 132S 4	228.5	140	0.507	0.378	264.1	320	1.341	1.000	7.5	5.5	1760	89.5	264.1	18.60	9.30	0.83	8.7	0.641	K
BE 132MA 4	301.9	140	0.671	0.500	360.2	320	1.829	1.364	10	7.5	1760	89.5	360.2	25.40	12.70	0.83	8	0.757	K
BE 132MB 4	370.9	140	0.824	0.614	441.8	320	2.243	1.673	12.5	9.2	1760	90	441.8	31.20	15.60	0.82	8.3	0.854	K
BE 160M 4	451.1	145	1.038	0.774	526.7	325	2.716	2.025	15	11	1765	91	526.7	37.40	19	0.81	7.7	1.542	J
BE 160L 4	543.1	150	1.292	0.964	645.8	330	3.381	2.522	20	15	1770	90.5	716.3	51.00	25.5	0.81	7.1	1.875	J
BE 180M 4	663.6	145	1.527	1.139	789.2	325	4.070	3.035	25	18.5	1765	91.9	885.9	60.60	30.3	0.83	7.3	2.966	H
BE 180L 4	757.8	150	1.803	1.345	901.2	330	4.718	3.519	30	22	1770	92.5	1050.5	72.00	36.0	0.83	8.1	3.916	J



(F23)

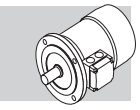
INVERTER OPERATION - BN MOTORS TURN-DOWN DATA

4 pole 1800 min^{-1} S1	Inverter operation Motor data 10:1 (60-6Hz) CONSTANT TORQUE				Inverter operation Motor data 5:1 (60-12Hz) CONSTANT TORQUE				60HZ grid supply - Motor data										
Type	T_6	N_6	P_6		T_{12}	n_{12}	P_{12}		P_n		n	η	T_n	In 230V	In 460V	cosφ	Is/In	Jm	kVA Code Letter
	[lb·in]	[rpm]	[HP]	[kW]	[lb·in]	[rpm]	[HP]	[kW]	[HP]	[kW]	[rpm]	%	[lb·in]	[A]	[A]		p.u.	[lb·ft^2]	
BN 56A 4	3.0	50	0.0024	0.0018	3.0	230	0.011	0.008	0.08	0.06	1670	53	3.0	0.52	0.26	0.55	2.9	0.0036	J
BN 56B 4	4.1	50	0.0033	0.0024	4.5	230	0.017	0.012	0.12	0.09	1670	59	4.5	0.74	0.37	0.52	2.8	0.0036	H
BN 63A 4	5.1	30	0.0024	0.0018	6.1	210	0.020	0.015	0.16	0.12	1650	55	6.1	0.86	0.43	0.64	3.1	0.0048	H
BN 63B 4	7.2	50	0.0057	0.0043	9.4	230	0.034	0.026	0.25	0.18	1670	58	9.4	1.36	0.68	0.59	3.1	0.0055	H
BN 71A 4	9.5	80	0.012	0.009	12.2	260	0.050	0.038	0.33	0.25	1700	64	12.2	1.30	0.65	0.74	4.3	0.0138	H
BN 71B 4	14.3	80	0.018	0.014	18.5	260	0.076	0.057	0.5	0.37	1700	66	18.5	1.94	0.97	0.73	4.5	0.0164	H
BN 80A 4	21.7	90	0.031	0.023	27.6	270	0.12	0.088	0.75	0.55	1710	73	27.6	2.56	1.28	0.75	4.9	0.0356	H
BN 80B 4	28.8	100	0.046	0.03	36.6	280	0.16	0.12	1	0.75	1720	78	36.6	3.20	1.60	0.75	6.2	0.0482	J
BN 90S 4	40	100	0.063	0.05	47	280	0.21	0.16	1.5	1.1	1720	78	55	4.86	2.43	0.74	5.7	0.0499	J
BN 90LA 4	55	100	0.087	0.06	65	280	0.29	0.22	2	1.5	1720	81	73	6.24	3.12	0.74	6.6	0.0665	K
BN 90LB 4	65	100	0.103	0.08	77	280	0.34	0.26	2.5	1.85	1720	80.4	92	7.60	3.80	0.76	6.5	0.0712	K
BN 100LA 4	76	100	0.120	0.09	90	280	0.40	0.30	3	2.2	1720	81	110	9.6	4.8	0.73	5.5	0.096	H
BN 100LC 4	104	110	0.182	0.14	124	290	0.57	0.43	5	3.7	1730	84	182	15	7.5	0.74	5.6	0.145	K
BN 112M 4	147	110	0.257	0.19	175	290	0.81	0.60	5.5	4	1730	85	200	16	8	0.76	7.0	0.233	K
BN 132S 4	195	110	0.340	0.25	232	290	1.07	0.80	7.5	5.5	1730	84	273	20	10	0.84	6.3	0.506	H
BN 132MA 4	253	120	0.481	0.36	300	300	1.43	1.07	10	7.5	1740	85	362	26.2	13.1	0.84	6.1	0.641	H
BN 132MB 4	297	130	0.612	0.46	353	310	1.74	1.29	12.3	9.2	1750	86.4	443	33.0	16.5	0.81	6.8	0.757	J
BN 160MR 4	350	120	0.667	0.50	416	300	1.98	1.48	15	11	1740	88	543	38.8	19.4	0.81	6.5	0.855	H
BN 160L 4	488	130	1.007	0.75	581	310	2.86	2.13	20	15	1750	90	720	49.6	24.8	0.84	5.8	1.544	G
BN 180M 4	604	140	1.342	1.00	718	320	3.65	2.72	25	18.5	1760	90	895	62.6	31.3	0.83	5.8	1.88	G
BN 180L 4	699	140	1.552	1.16	831	320	4.22	3.15	30	22	1760	89.6	1074	78.0	39.0	0.79	6.8	2.97	H
BN 200L 4	879	140	1.954	1.46	1046	320	5.31	3.96	40	30	1760	90.5	1432	104.0	52.0	0.80	8.4	3.92	K

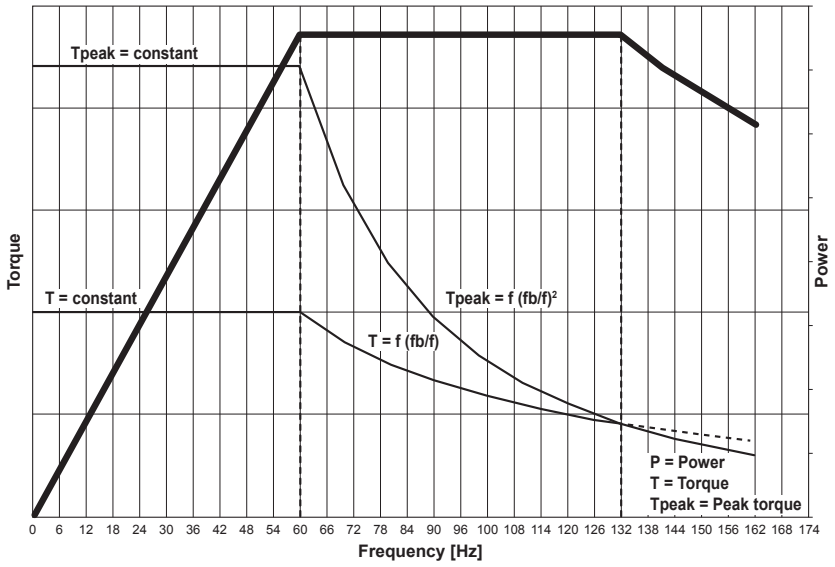
Key: T_6 Torque at 6 Hz — n_6 Speed at 6 Hz — P_6 Output power at 6 Hz
T_{12} Torque at 12 Hz — n_{12} Speed at 12 Hz — P_{12} Output power at 12 Hz

For information on turn-down data for BX motors please contact Bonfiglioli Technical Department

On self - ventilated motors (IC411) the cooling capacity may be impaired at frequencies lower than 60 Hz due to the lower speed, thus the allowed torque is decreased accordingly, as per the above tables. The use of thermal protective devices (see the options section in this catalogue) is strongly recommended when a 5:1 (or higher, up to 10:1) turn down is operated, in order to guarantee the motor safety in case of accidental overheating. For a more effective cooling, even at the lowest frequencies, motors equipped with a forced ventilation system (i.e. servo fan) may be also available - please contact the Bonfiglioli Technical Department for more details. For the operation above the base frequency fb, upon reaching the maximum output voltage of the inverter, the motor enters a constant - power field of operation also called “field weakening” range, and the shaft torque drops with ratio f / fb. As the motor peak torque decreases with a ratio $(f / fb)^2$, the allowed overload capacity of the motor must be reduced progressively above a certain speed, depending on the motor.
The following Torque / Power Vs Frequency curves are for reference:



• Solid lines - theoretical curves (Torque: thin line; Power: thick line);
• Dashed lines - depending on the motor size, below the base frequency fb = 60 Hz, the torque capacity, as well as the motor power, may significantly decrease (see the above turn - down tables) due to the reduced cooling.
• Dotted line - theoretical torque values beyond the peak torque curve



IMPORTANT NOTE: the reported turn - down data has been worked out on empirical basis and shall be considered as indicative, please contact Bonfiglioli Technical Department for more details.
The following table reports the mechanical speed limit for motors operating above the rated frequency:

(F24)

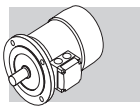
		**n** [rpm]		
		2p	**4p**	**6p**
≤ BE 112 - BN 112	**ME2, ME3 M05 ... M3**	5200	4000	3000
≥ BE 132 - BN 132	**ME4, ME5 M4, M5**	4500	4000	3000
BX 80 ... BX 180	**MX2 ... MX5**		4000	

Above the rated speed, mechanical vibrations and noise might occur on the rotating parts of the motor. Class B rotor balancing is highly recommended for these applications. A separate supply fan cooling may also be advisable. Remote-controlled fan and brake (if fitted) must always be connected directly to mains power supply.

M7.10 Permissible starts per hour, Z

The rating charts of brakemotors lend the permitted number of starts Z_0, based on 50% intermittence and for unloaded operation.
The catalogue value represents the maximum number of starts per hour for the motor without exceeding the rated temperature for the insulation class F.
To give a practical example for an application characterized by inertia J_c, drawing power P_r and requiring mean torque at start-up M_L the actual number of starts per hour for the motor can be calculated approximately through the following equation:

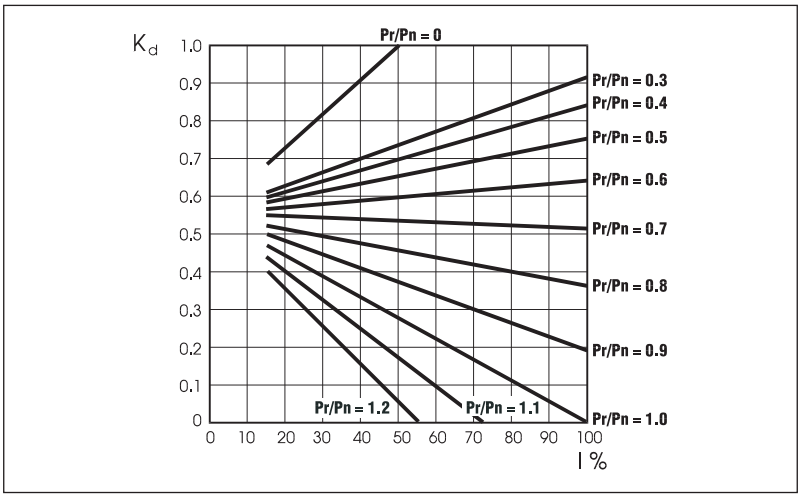
$$Z = \frac{Z_0 \cdot K_c \cdot K_d}{K_J} \qquad (02)$$



where:

$K_J = \frac{J_m + J_c}{J_m}$	inertia factor
$K_c = \frac{T_a - T_L}{T_a}$	torque factor
$K_d =$	load factor, see the following table

(F25)

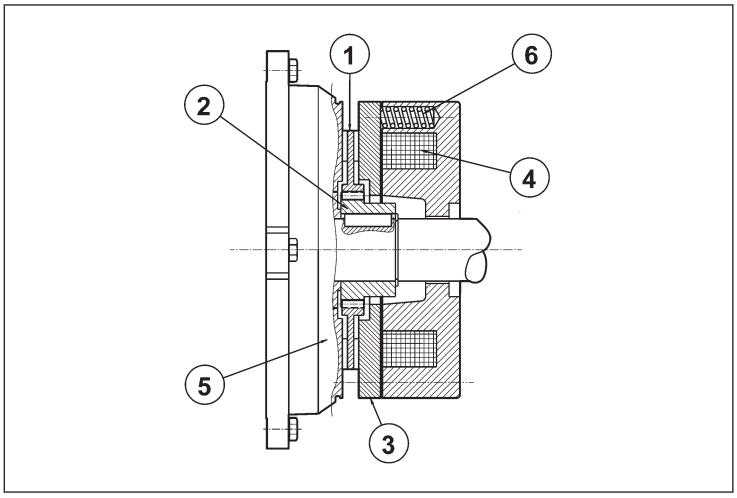


If actual starts per hour is within permitted value (Z) it may be worth checking that braking work is compatible with brake (thermal) capacity W_{max} also given in tables (F31), (F39) and dependent on the number of switches (c/h).

M8.1 Operation

Versions with incorporated brake use spring-applied DC (FD option) or AC (FA options) brakes.
All brakes are designed to provide fail-safe operation, meaning that they are applied by spring-action in the event of power failure.

(F26)



Key:
① brake disc
② disc carrier
③ pressure plate
④ brake coil
⑤ motor rear shield
⑥ brake springs

When voltage is interrupted, pressure springs push the armature plate against the brake disc. The disc becomes trapped between the armature plate and motor shield and stops the shaft from rotation.
When the coil is energized, a magnetic field strong enough to overcome spring action attracts the armature plate, so that the brake disc – which is integral with the motor shaft – is released.

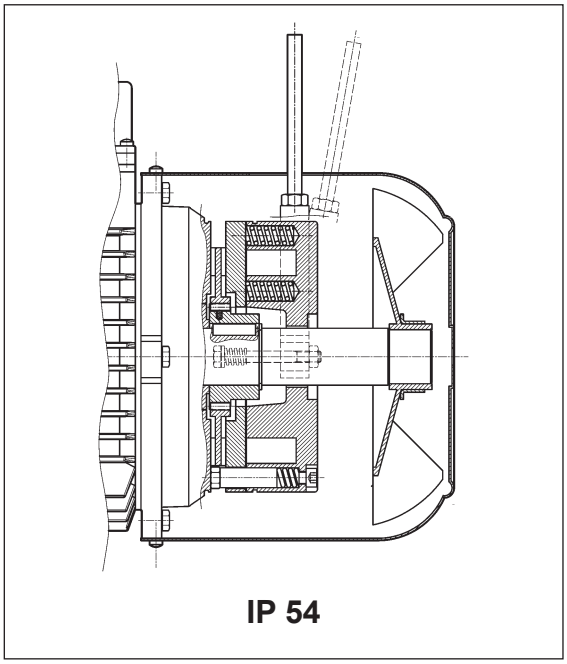
M8.2 Most significant features

- High braking torques (normally $T_b \approx 2\ T_n$), braking torque adjustment.
- Steel brake disc with double friction lining (low-wear, asbestos-free lining).
- Hexagonal seat on motor shaft fan end (N.D.E.) for manual rotation (not compatible with options PS, RC, TC, EN1, EN2, EN3, EN4, EN5, EN6).
- Manual release lever (options R and RM for BN_FD; option R for BN_FA).
- Corrosion-proof treatment on all brake surfaces.
- Insulation class F.

M9 DC BRAKE MOTORS TYPE BX_FD, BN_FD, MX_FD and M_FD

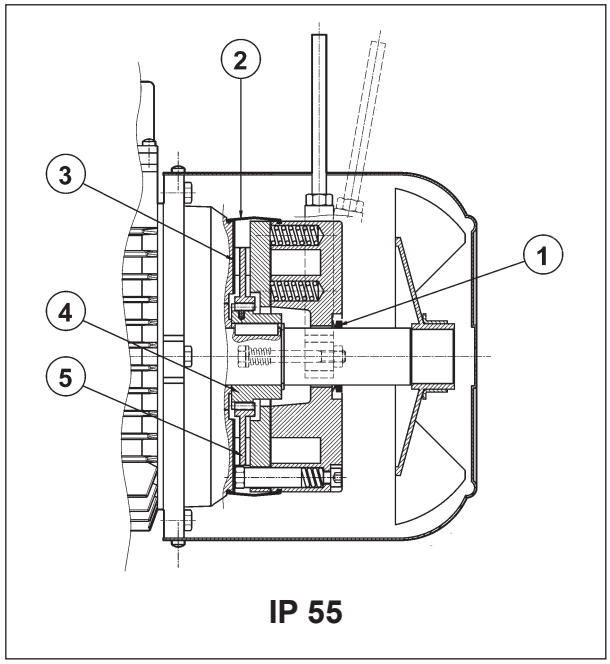
Frame sizes: BX 80 ... BX 180L - BN 63 … BN 200L / MX2SB ... MX5LA - M05 ... M5
BE/ME motors may be available equipped with the FD brake, for further information please contact our Technical Department.

(F27)



IP 54

(F28)



IP 55

Direct current toroidal-coil electromagnetic brake bolted onto motor shield. Preloading springs provide axial positioning of magnet body.
Brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device.
Brake torque factory setting is indicated in the corresponding motor rating charts. Braking torque may be modified by changing the type and/or number of springs.
At request, motors may be equipped with manual release lever with automatic return (**R**) or system for holding brake in the released position (**RM**).
See variant at paragraph “BRAKE RELEASE SYSTEMS” for available release lever locations.
FD brakes ensure excellent dynamic performance with low noise. DC brake operating characteristics may be optimized to meet application requirements by choosing from the various rectifier/power supply and wiring connection options available.
For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli’s Technical Service.

M9.1 Degree of protection

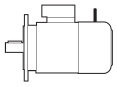
Standard protection class is IP54.
Brake motor FD is also available in protection class **IP55**, which mandates the following variants:

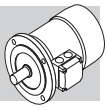
① V-ring at N.D.E. of motor shaft
② dust and water-proof rubber boot
③ stainless steel ring placed between motor shieldand brake disc
④ stainless steel hub
⑤ stainless steel brake disc

M9.2 FD brake power supply

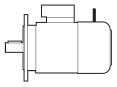
A rectifier accommodated inside the terminal box feeds the DC brake coil. Wiring connection across rectifier and brake coil is performed at the factory. On all single-pole motors, rectifier is connected to the motor terminal board. Rectifier standard power supply voltage VB is as indicated in the following table, regardless of mains frequency:

(F29)

2, 4, 6 P					**1 speed**
		**_FD** V_{mot} ± 10% 3 ~	V_B ± 10% 1 ~	brake connected to terminal board power supply	separate power supply
BX 80…BX 132 **BN 63…BN 132**	**MX2...MX4** **M05...M4LB**	230/400 V – 50 Hz	230 V	standard	specify **V_B SA** or **V_B SD**
BX 160…BX 180 **BN 160…BN 200**	**MX5** **M4LC...M5**	400/690 V – 50 Hz	400 V	standard	specify **V_B SA** or **V_B SD**

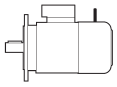
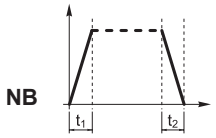
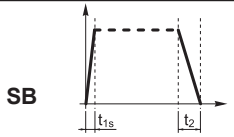
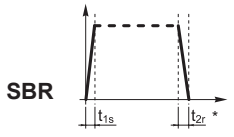
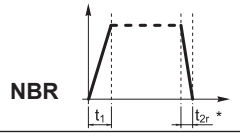
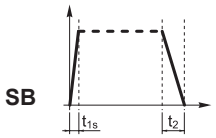
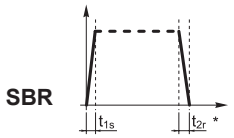


Switch-pole motors feature a separate power supply line for the brake with rectifier input voltage VB as indicated in the table below:

2/4, 2/6, 2/8, 2/12, 4/6, 4/8 P					**2 speed**
		**_FD** V_{mot} ± 10% 3 ~	V_B ± 10% 1 ~	brake connected to terminal board power supply	separate power supply
BN 63…BN 132	**M05...M4LB**	400 V – 50 Hz	230 V	⛔	specify **V_B SA** or **V_B SD**

The diode half-wave rectifier (VDC ≈ 0,45 x VAC) is available in versions **NB, SB, NBR** e **SBR**, as detailed in the table below:

(F30)

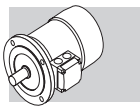
		**brake**	**standard**	~/= **at request**
BN 63	**M05**	**FD 02**		
BN 71	**M1**	**FD 03** **FD 53**		
BX 80 - BN 80	**MX2 - M2**	**FD 04**		
BX 90S - BN 90S	**—**	**FD 14**		
BX 90L - BN 90L	**—**	**FD 05**		
BX 100 - BN 100	**MX3 - M3**	**FD 15**		
—		**FD 55**		
BX 112 - BN 112	**—**	**FD 06S**		
BX 132 - BN 132 - BN 160MR	**MX4 - M4**	**FD 56** **FD 06** **FD 07**		
BX 160 - BN 160L - BN 180M	**MX5 - M5**	**FD 08**		
BX 180 - BN 180L - BN 200M	**—**	**FD 09**		

(*) $t_{2c} < t_{2r} < t_2$

Rectifier **SB** with electronic energizing control over-energizes the electromagnet upon power-up to cut brake release response time and then switches to normal half-wave operation once the brake has been released.

Use of the **SB** rectifier is mandatory in the event of:
- high number of operations per hour
- reduced brake release response time
- brake is exposed to extreme thermal stress

Rectifiers **NBR** or **SBR** are available for applications requiring quick brake intervention (braking condition reinstatement) response.
These rectifiers complement the **NB** and **SB** types as their electronic circuit incorporates a static switch that de-energizes the brake quickly in the event voltage is missing.
This arrangement ensures short brake release response time with no need for additional external wiring and contacts.
Optimum performance of rectifiers **NBR** and **SBR** is achieved with separate brake power supply.
Versions available: 230Vac ±10%, 400Vac ± 10%, 50/60 Hz (with power supply); 100Vdc ±10%, 180Vdc ± 10% (with SD option).



M9.3 FD brake technical specifications

The table below reports the technical specifications of DC brakes FD.

(F31)

Brake	Brake torque T_b [lb•in] springs			Release		Braking		W_{max} per brake operation [lb•ft]			W	P
				t_1	$t_{1\,s}$	t_2	t_{2c}					
	6	4	2	[ms]	[ms]	[ms]	[ms]	10 s/h	100 s/h	1000 s/h	[lb•ft x10^6]	[W]
FD02	–	31	16	30	15	80	9	3320	1030	130	11	17
FD03	44	31	16	50	20	100	12	5160	1400	170	18	24
FD53	66	44	22	60	30	100	12					
FD04	133	89	44	80	35	140	15	7380	2290	260	22	33
FD14												
FD05	354	230	115	130	65	170	20	13300	3320	370	37	45
FD15	354	230	115	130	65	170	20					
FD55	487	328	159	–	65	170	20					
FD06S	531	354	177	–	80	220	25	14800	3540	410	52	55
FD56	–	664	328	–	90	250	20	21400	5460	590	59	65
FD06		886	443		100	250	20					
FD07	1329	886	443	–	120	200	25	29500	6860	740	96	65
FD08*	2210	1770	1510	–	140	350	30	44300	10300	1110	170	100
FD09**	3540	2660	1770	–	200	450	40	51600	11100	1250	170	120

* brake torque values obtained with 9, 7 and 6 springs, respectively

** brake torque values obtained with 12, 9 and 6 springs, respectively

t_1 = brake release time with half-wave rectifier
t_{1s} = brake release time with over-energizing rectifier
t_2 = brake engagement time with AC line interruption and separate power supply
t_{2c} = brake engagement time with AC and DC line interruption – Values for t_1, t_{1s}, t_2, t_{2c} indicated in the tab. (F30) are referred to brake set at maximum torque, medium air gap and rated voltage
W_{max} = max energy per brake operation
W = braking energy between two successive air gap adjustments
P_b = brake power absorption at 70 °F
T_b = static braking torque (±15%)
s/h = starts per hour

The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

M9.4 FD brake connections

On standard single-pole motors, the rectifier is connected to the motor terminal board at the factory. For switch-pole motors and where a separate brake power supply is required, connection to rectifier must comply with brake voltage VB stated in motor name plate.
Because the load is of the inductive type, brake control and DC line interruption must use contacts from the usage class AC-3 to IEC 60947-4-1.

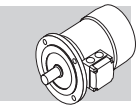
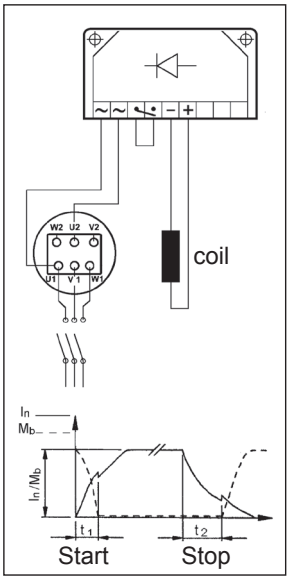


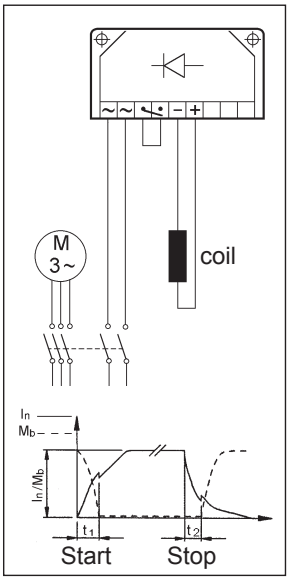
Table (F32) – Brake power supply from motor terminals and AC line interruption
Delayed stop time t_2 and function of motor time constants.
Mandatory when soft-start/stops are required.
Table (F33) – Brake coil with separate power supply and AC line interruption
Normal stop time independent of motor.
Achieved stop times t_2 are indicated in the table (F31).
Table (F34) – Brake coil power supply from motor terminals and AC/DC line interruption.
Quick stop with operation times t_{2c} as per table (F31).
Table (F35) – Brake coil with separate power supply and AC/DC line interruption.
Stop time decreases by values t_{2c} indicated in the table (F31).

The brake may be voltage supplied directly from the motor terminal box (from tab. F32 to tab. F35) only if the nominal voltage of the brake is the same as the smaller voltage of the motor.

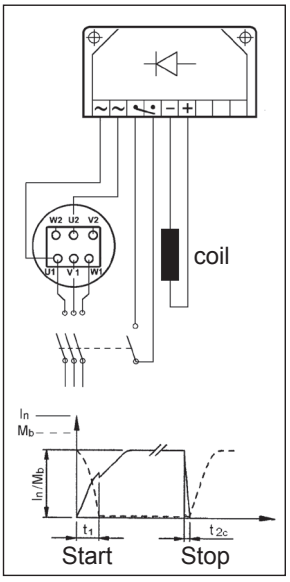
(F32)



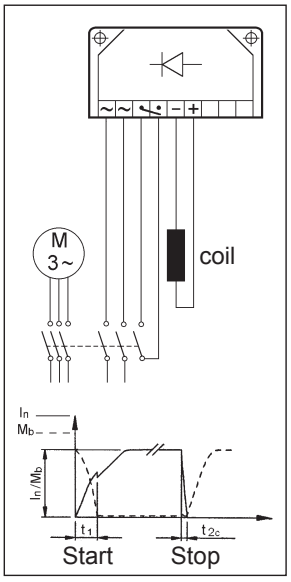
(F33)



(F34)



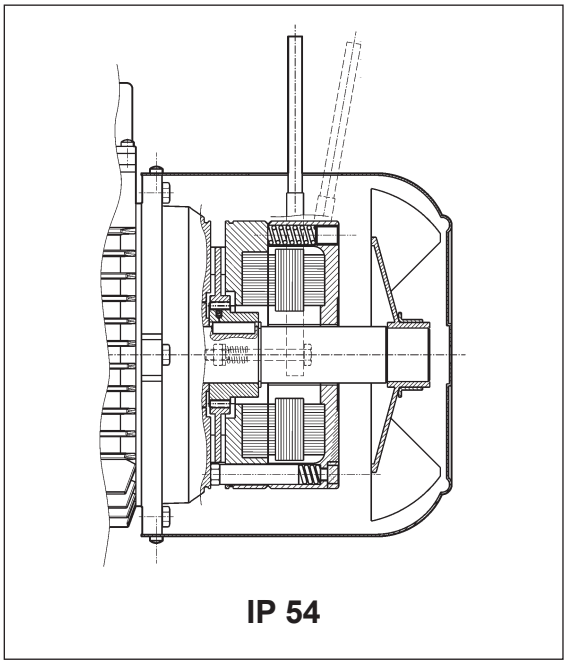
(F35)



M10 AC BRAKE MOTORS TYPE BX_FA, BN_FA, MX_FA and M_FA

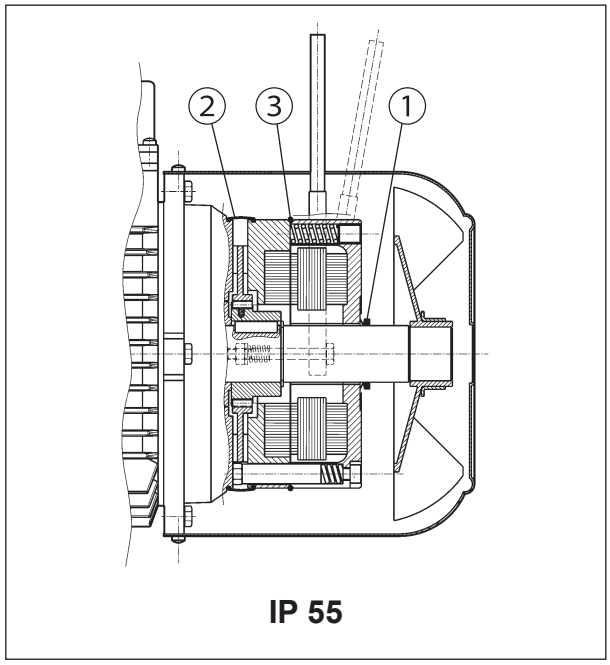
Frame sizes: BX 80 ... BX 160L - BN 63 … BN 180M / MX2SB ... MX5LA - M05 ... M5

(F36)

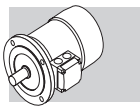


IP 54

(F37)



IP 55



Electromagnetic brake operates from three-phase alternated current power supply and is bolted onto conveyor shield. Preloading springs provide axial positioning of magnet body.
Steel brake disc slides axially on steel hub shrunk onto motor shaft with anti-vibration device.
Brake torque factory setting is indicated in the corresponding motor rating charts.
Spring preloading screws provide stepless braking torque adjustment.
Torque adjustment range is 30% $T_{bMAX} < T_b < T_{bMAX}$ (where T_{bMAX} is maximum braking torque as shown in tab. (F39).
Thanks to their high dynamic characteristics, FA brakes are ideal for heavy-duty applications as well as applications requiring frequent stop/starts and very fast response time.
Motors may be equipped with manual release lever with automatic return (R) at request. See variant at paragraph “BRAKE RELEASE SYSTEMS” for available release lever locations.
For applications involving lifting and/or high hourly energy dissipation, contact Bonfiglioli’s Technical Service.

M10.1 Degree of protection

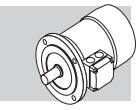
Standard protection class is IP54.
Brake motor _FA is also available in protection class **IP55**, which mandates the following variants:

① V-ring at N.D.E. of motor shaft
② dust and water-proof rubber boot
③ O-ring

M10.2 FA brake power supply

In single speed motors, power supply is brought to the brake coil direct from the motor terminal box. As a result, brake voltage and motor voltage are the same. In this case, brake voltage indication may be omitted in the designation.
Switch-pole motors and motors with separate brake power supply feature an auxiliary terminal board with 6 terminals for connection to brake line. In both cases, brake voltage indication in the designation is mandatory.
The following table reports standard AC brake power supply ratings for single-pole motors:

(F38)



	BX 80…BX 132 BN 63…BN 132	BX 160 BN 160…BN 180
single-pole motor	230Δ / 400Y V ±10% – 50 Hz	400Δ/ 690Y V ±10% – 50 Hz
	265Δ / 460Y ±10% - 60 Hz	460Y – 60 Hz

	BN 63…BN 132
switch-pole motors (separate power supply line)	230Δ / 400Y V ±10% – 50 Hz
	460Y - 60 Hz

Unless otherwise specified, standard brake power supply is 230Δ /400Y V - 50 Hz.
Special voltages in the 24…690 V, 50-60 Hz range are available at request.

M10.3 Technical specifications of FA brakes

(F39)

Brake	Brake torque T_b [lb•in]	Release t_1 [ms]	Braking t_2 [ms]	W_{max} [lb•ft] 10 s/h	W_{max} [lb•ft] 100 s/h	W_{max} [lb•ft] 1000 s/h	W [lb•ft x10^6]	P [VA]
FA 02	31	4	20	3320	1030	130	11	60
FA 03	66	4	40	5160	1400	170	18	80
FA 04	133	6	60	7380	2290	260	22	110
FA 14								
FA 05	354	8	90	13300	3320	370	37	250
FA 15								
FA 06S	531	16	120	14800	3540	410	52	470
FA 06	664	16	140	21400	5460	590	59	550
FA 07	1329	16	180	29500	6860	740	96	600
FA 08	2210	20	200	44300	10300	1110	170	1200

T_b = max static braking torque (±15%)
t_1 = brake release time
t_2 = brake engagement time
W_{max} = max energy per brake operation (brake thermal capacity)
W = braking energy between two successive air gap adjustments
P_b = power drawn by brake at 20° (50 Hz)
s/h = starts per hour

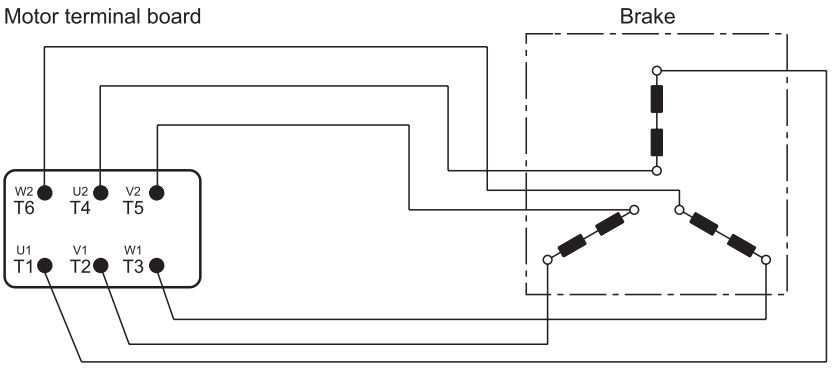
NOTE
Values t_1 and t_2 in the table refer to a brake set at rated torque, medium air gap and rated voltage.

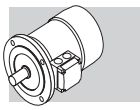
The brake pad wear depends on the operating/ambient conditions (temperature, humidity, angular speed, specific pressure); Therefore the declared wear rate must be considered as indicative.

M10.4 FA brake connections

The following diagram shows the wiring when brake is connected directly to same power supply of the motor:

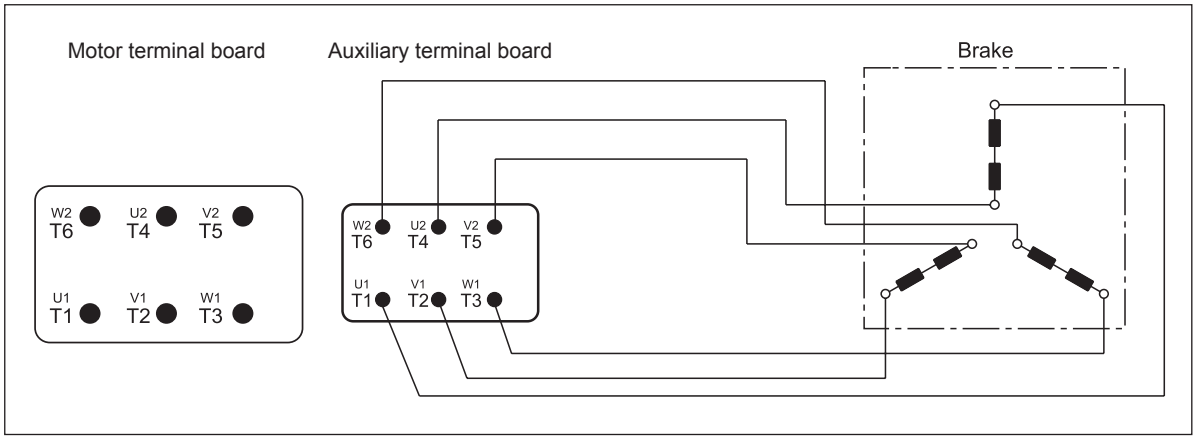
(F40)



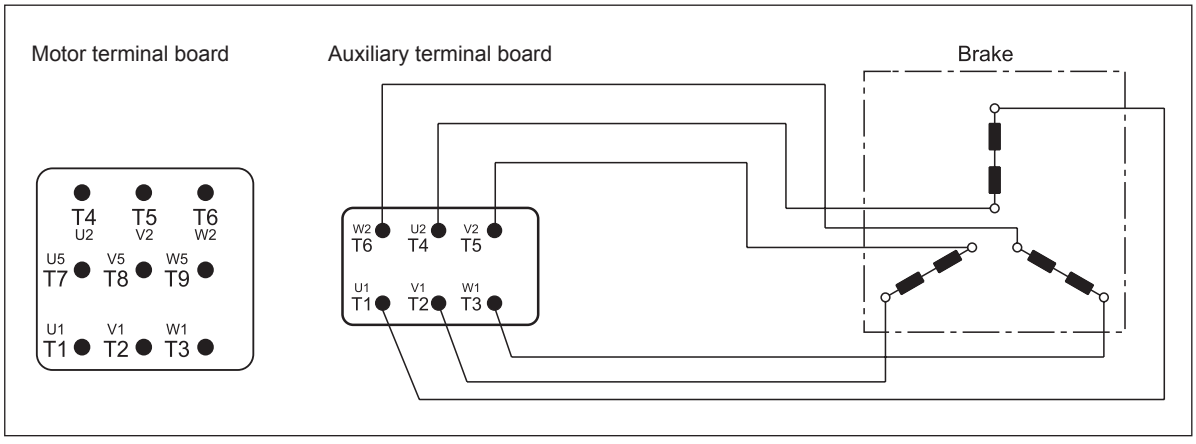


Switch-pole motors and, at request, single-pole motors with separate power supply are equipped with an auxiliary terminal board with 6 terminals for brake connection.
In this version, motors feature a larger terminal box. See diagram below:

(F41)

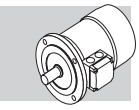


(F42)



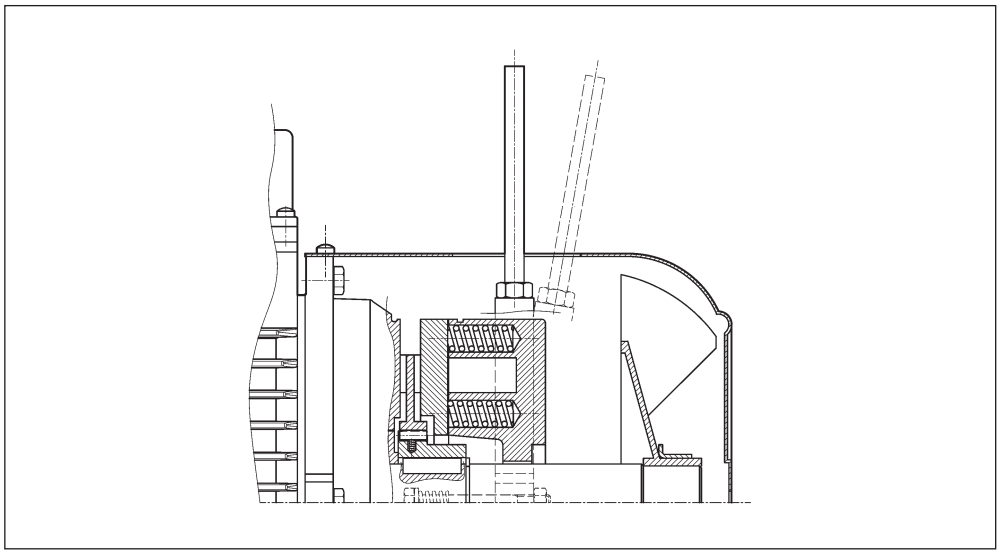
M11 BRAKE RELEASE SYSTEMS

Spring-applied brakes type FD and FA may be equipped with optional manual release devices. These are typically used for manually releasing the brake before servicing any machine or plant parts operated by the motor.



R

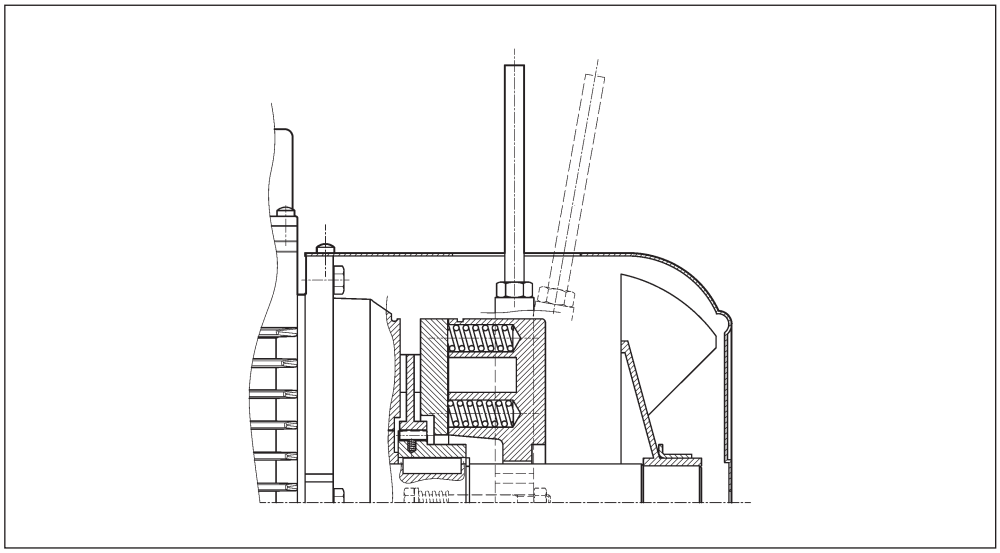
(F43)



A return spring brings the release lever back in the original position.

RM

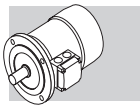
(F44)



On motors type _FD, if the option RM is specified, the release device may be locked in the ”release” position by tightening the lever until its end becomes engaged with a brake housing projection.
The availability for the various disengagement devices is charted here below:

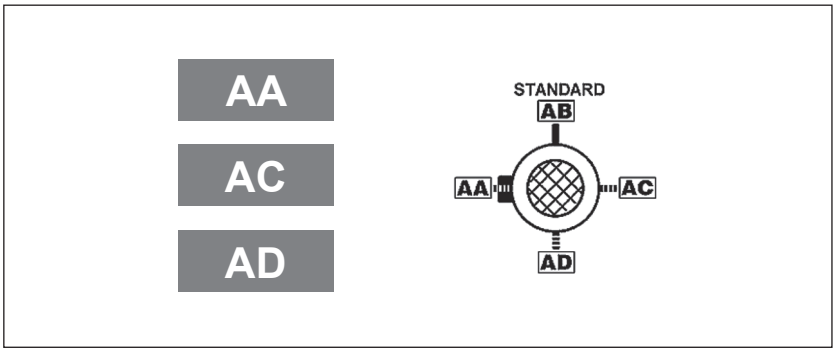
(F45)

	R	RM
BX_FD BN_FD	BX 80 ... BX 180 BN 63 ... BN 200	BX 80 ... BX 132 BN 63 ... BN 132 ⛔ FD07
MX_FD M_FD	MX2 ... MX5 M05 ... M5	MX2 ... MX4 M05 ... M4LA
BX_FA BN_FA	BX 80 ... BX 160 BN 63 ... BN 180M	⛔
MX_FA M_FA	MX2 ... MX5 M05 ... M5	⛔



M11.1 Release lever orientation

Unless otherwise specified, the release lever is located 90° away from the terminal box – identified by letters [**AB**] in the diagram below – in a clockwise direction on both options **R** and **RM**.
Alternative lever positions [**AA**], [**AC**] and [**AD**] are also possible when the corresponding option is specified:



M11.2 Separate brake supply

...SA

The brake coil is directly fed through an independent line, separately from the motor.
In this case the rated voltage for the coil must be specified, e.g.230SA. The option is applicable to all motors with brake type FD and FA.

...SD

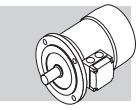
The brake coil is directly fed with DC current and the rectifier is out of the scope for supply.
The rated voltage for the coil must be specified, e.g. 24SD.

M12 OPTIONS

M12.1 Soft-start / stop

F1

An optional flywheel - option F1 - is available for applications requiring soft starting or stopping. The flywheel's added inertia uses up kinetic energy during starting and returns it back during braking, thus catering for more progressive and gradual shock loads. The optional flywheel is available for brake motors type BN_FD with specific characteristics as detailed in the table below:



Main data for flywheel of motore type: BN_FD, M_FD			
		**Fly-wheel weight** [lbs]	**Fly-wheel inertia** [lb•ft^2] x 10^{-5}
BN 63	**M05**	0.31	2.7
BN 71	**M1**	0.51	5.7
BN 80	**M2**	0.76	11.4
BN 90 S - BN 90 L	**–**	1.14	22.3
BN 100	**M3**	1.58	35.4
BN 112	**–**	2.19	62.4
BN 132 S - BN 132 M	**M4**	2.81	108.6

M12.2 Capacitive filter

CF

An optional capacitive filter is available for DC brake motors type BN_FD only. When the suitable capacitive filter is installed upstream of the rectifier (option CF), motors comply with the emission limits required by standard EN61000-6-3:2007“ Electromagnetic Compatibility – Generic Emission Standard – Part 6-3: Residential, commercial and light industrial environment”.

M12.3 Thermal protective devices

In addition to the standard protection provided by the magneto-thermal device, motors can be supplied with built-in thermal probes to protect the winding against overheating caused, by insufficient ventilation or by an intermittent duty.
This additional protection should always be specified for servoventilated motors (IC416).

M12.4 Thermistors

E3

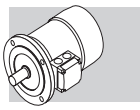
These are semi-conductors having rapid resistance variation when they are close to the rated switch off temperature 302 °F (150 °C). Variations of the R = f(T) characteristic are specified under DIN 44081, IEC 34-11 Standards. Positive temperature coefficient thermistors are normally used (also known as PTC “cold conductor resistors”). Thermistors cannot control relays directly and must be connected to a suitable disconnect device. Thus protected, three PTCs connected in series are installed in the winding, the terminals of which are located on the auxiliary terminal-board.

K1

The design characteristics of this sub-group of PTC thermistors allow them to be used as positive temperature coefficient sensors with variable resistance.
Functioning temperature range: 32 °F ... +500 °F (0°C ... +260°C).
Thermistors cannot control relays directly and must be connected to a suitable disconnect device.
Terminals (polarised) for 1 x KTY 84-130 are provided on an auxiliary terminal strip.

M12.5 Bimetallic thermostates

D3



These types of protective devices house a bimetal disk. When the rated switch off temperature 302 °F (150 °C) is reached, the disk switches the contacts from their initial rest position.
As temperature falls, the disk and the contacts automatically return to rest position.
Three bimetallic thermostates connected in series are usually employed, with normally closed contacts. The terminals are located on an auxiliary terminal-board.

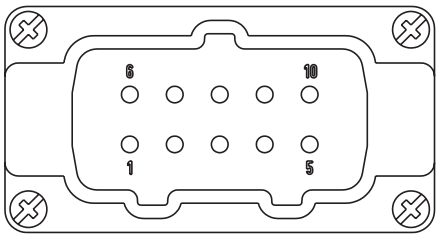
M12.6 Plug connector

CON

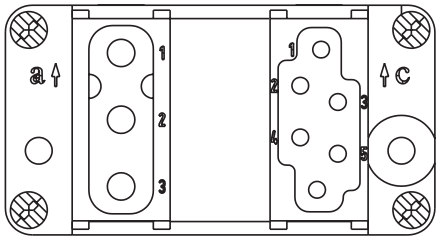
Three types of connectors (CON 1, CON 2, CON 3) are provided; they can be mounted in two different positions: right side of terminal box cover (C1D, C2D, C3D); left side of terminal box cover (C1S, C2S, C3S).
The option CON is applicable to single speed BN and M motors (2, 4, 6, 8 poles), and BX / BE and MX / ME motors on the sizes specified on the following table. All double speed motors are excluded.
The connectors CON 1 / CON 2 are available for BX-BE/MX-ME and BN/M motors without brake and for brakemotors equipped with DC brake type FD, for the motor sizes listed below.
The male connector (with pins) is mounted on the motor, the female connector is not provided.
With CON option, the winding connection is always Y.
With option U1 “forced ventilation”, the fan unit supply is available inside the separate terminal box fixed to fan cover.
With options EN1...EN6, the encoder connection is made by a cable not connected to the motor plug connector.
The CON option is not applicable to brakemotors equipped with AC brake type FA.
The CON option is not available when at least one of the next options are selected: the U2, CUS, IC.

Specifications

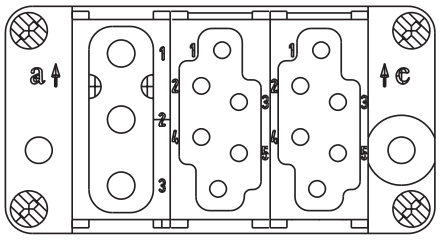
(F47)

Option	CON 1
Motor size	**BX 80 ... BX 112 / MX2, MX3 / BE 80 ... BE 112 / ME2, ME3** **BN 63 … BN 112 / M05 ... M3**
Connector view	
Type of connector	Harting Han 10ES
Housing	Han EMC 10B with 2 levers
Numbers of pins - nominal current	10 x 16A
Voltage	500 Vac
Contact connection	Screw terminals

(F48)

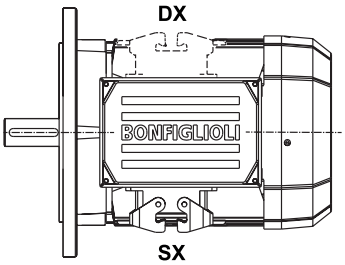
Option	CON 2
Motor size	**BX 80 ... BX 132 / MX2, MX3 / BE 80 ... BE 132 / ME2 ... ME4** **BN 63 … BN 160MR / M05 ... M4**
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

(F49)

Option	CON 3
Motor size	**BX 80 ... BX 132M / MX2, MX3 / BN 63 … BN 160MR / M05 ... M4**
Connector view	
Type of connector	Harting Han Modular
Housing	Han EMC 10B with 2 levers
Module type	Module C + Module E + Module E
Numbers of pins - nominal current	3 x 36A / 6 + 6 x 16A
Voltage	500 Vac
Contact connection	Crimping contacts

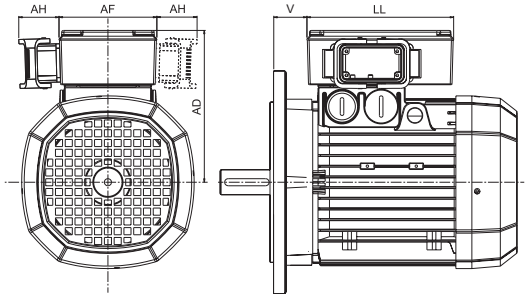
(F50)

Connector orientation



(F51)

Motors without brake dimensions

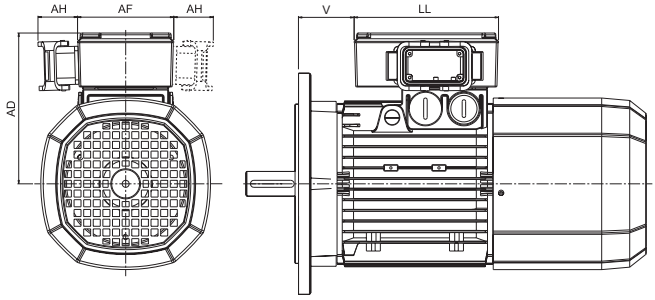


		AD [*mm* / inch]	AF [*mm* / inch]	AH [*mm* / inch]	LL [*mm* / inch]	V(*) [*mm* / inch]
BN 63	**M05**	*136* / 5.354	*110* / 4.330	*45* / 1.771	*165* / 6.496	*4.5* / 0.177
BN 71	**M1**	*149* / 5.866	*110* / 4.330	*45* / 1.771	*165* / 6.496	*15.5* / 0.610
BX 80 - BE 80 - BN 80	**MX2 - ME2 - M2**	*160* / 6.299	*110* / 4.330	*45* / 1.771	*165* / 6.496	*16.5* / 0.649
BX 90 - BE 90 - BN 90	**MX3**	*162* / 6.377	*110* / 4.330	*45* / 1.771	*165* / 6.496	*31.5* / 1.240
BX 100 - BE 100 - BN 100	**MX3 - ME3 - M3**	*171* / 6.732	*110* / 4.330	*45* / 1.771	*165* / 6.496	*37.5* / 1.476
BX 112 - BE 112 - BN 112	**MX4**	*186* / 7.322	*110* / 4.330	*45* / 1.771	*165* / 6.496	*39* / 1.535
BX 132 - BE 132 - BN 132	**MX4 - ME4 - M4**	*210* / 8.267	*140* / 5.511	*45* / 1.771	*188* / 7.401	*45.5* / 1.791
BN 160MR	**–**	*210* / 8.267	*140* / 5.511	*45* / 1.771	*188* / 7.401	*161* / 6.338

(*) Dimension valid only for motors BX, BE and BN.

(F52)

Motors with FD brake dimensions



		AD [*mm* / inch]	AF [*mm* / inch]	AH [*mm* / inch]	LL [*mm* / inch]	V(*) [*mm* / inch]
BN 63	**M05**	*136* / 5.354	*110* / 4.330	*45* / 1.771	*165* / 6.496	*4.5* / 0.177
BN 71	**M1**	*149* / 5.866	*110* / 4.330	*45* / 1.771	*165* / 6.496	*1.5* / 0.059
BX 80 - BN 80	**MX2 - M2**	*160* / 6.299	*110* / 4.330	*45* / 1.771	*165* / 6.496	*18.5* / 0.728
BX 90 - BN 90	**—**	*162* / 6.377	*110* / 4.330	*45* / 1.771	*165* / 6.496	*39.5* / 1.555
BX 100 - BN 100	**MX3 - M3**	*171* / 6.732	*110* / 4.330	*45* / 1.771	*165* / 6.496	*63.5* / 2.500
BX 112 - BN 112	**—**	*186* / 7.322	*110* / 4.330	*45* / 1.771	*165* / 6.496	*75* / 2.952
BX 132 - BN 132	**MX4 - M4**	*210* / 8.267	*140* / 5.511	*45* / 1.771	*188* / 7.401	*122* / 4.803
BN 160MR	**—**	*210* / 8.267	*140* / 5.511	*45* / 1.771	*188* / 7.401	*161* / 6.338

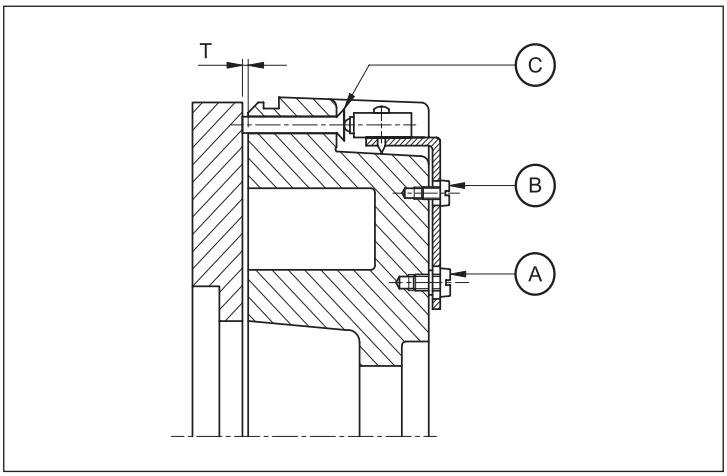
(*) Dimension valid only for motors BN.and BX

M12.7 Control of brake operation

MSW

The microswitch can be set in order to obtain from it a signal related to the attraction/release of anchor plate, or it can be set in order to give feedback when the air gap reaches the maximum value.
MSW option is available for brakes FD03...FD09.
The microswitch is provided with three lead wires (NC, NO, COM). The next figure shown the main components of the brake equipped with microswitch.

(F53)



A: Plate fixing screws
B: Setting screws
C: Actuator control pin

M12.8 Additional cable entry for brakemotors

IC

The terminal box cover of brakemotors BN63...BN160MR / M05...M4 is provided with two additional cable entry M16 x 1.5 (one cable entry per side).
The terminal box cover of brakemotors BN160...BN200 / M5 is provided with an additional cable entry M16 x 1.5 next to the cable entry used for the brake.

M12.9 Anti-condensation heaters

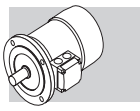
NH1 **H1**

Where an application involves high humidity or extreme temperature fluctuation, motors may be equipped with an anti-condensate heater.
A single-phase power supply is available in the auxiliary terminal board inside the main terminal box.
Values for the absorbed power are listed here below:

(F54)

	H1 1~ 230V ± 10% P [W]	NH1 1~ 115V ± 10% P [W]
BX 80 **BE 80** **BN 56 ... BN 80**	10	10
BX 90 ... BX 132 **BE 90 ... BE 132MB** **BN 90 ... BN 160MR**	25	25
BX 160, BX 180 **BE 160, BE 180** **BN 160, BN 200**	50	50

Warning!
Always remove power supply to the anti-condensante heater before operating the motor.



M12.10 Tropicalization

TP

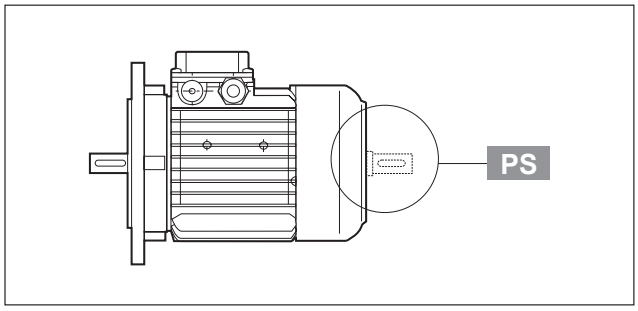
When option **TP** is specified, motor windings receive additional protection for operation in high humidity and temperature conditions.

M12.11 Second shaft extension

PS

This option is not compatible with variants RC, TC, EN1, EN2, EN3, EN4, EN5, EN6.
For shaft dimensions please see motor dimensions tables.

(F55)



M12.12 Backstop device

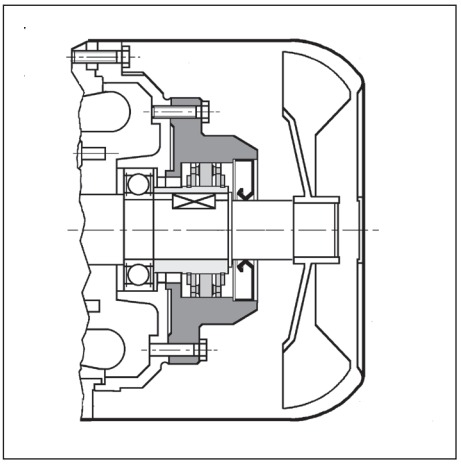
AL **AR**

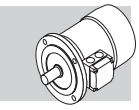
For applications where backdriving must be avoided, motors equipped with an anti run-back device can be used (available for the MX, ME and M series only). While allowing rotation in the direction required, this device operates instantaneously in case of a power failure, preventing the shaft from running back. The anti run-back device is life lubricated with special grease for this specific application. When ordering, customers should indicate the required rotation direction, AL or AR.
Never use the anti run-back device to prevent reverse rotation caused by faulty electrical connection. Table (F56) shows rated and maximum locking torques for the anti run-back devices. A diagram of the device can be seen in Table (F57). Overall dimensis are same as the corresponding brake motor. The direction of free rotation is described in the “MOTOR OPTIONS” section of specifically dedicated sections to gear units.

(F56)

	Rated locking torque [lb•in]	Max. locking torque [lb•in]	Release speed [rpm]
M1	53	90	750
ME2 M2	140	240	650
ME3 M3	480	815	520
MX4 - ME4 M4	970	1815	430

(F57)





M12.13 Rotor balancing

RV

Where low noise is a priority requirement, the option RV ensures reduced vibration in accordance with vibration class B.
The table below reports effective velocity of vibration for normal (A) and B grade balancing.

(F58)

Vibration level	Angular velocity n [rpm]	Limits of the vibration velocity (mm/s) **BX 80 ≤ H ≤ BX 180L BE 80 ≤ H ≤ BE 180L BN 56 ≤ H ≤ BN 200**
A	600 < n < 3600	1.6
B	600 < n < 3600	0.70

Values are obtained from measurements on freely suspended motor during noload operation; tolerance ±10%.

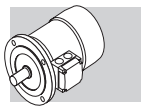
M12.14 Ventilation

Motors are cooled through outer air blow (IC 411 according to CEI EN 60034-6) and are equipped with a plastic radial fan, which operates in both directions.
Ensure that fan cover is installed at a suitable distance from the closest wall so to allow air circulation and servicing of motor and brake, if fitted.
On request, motors can be supplied with independently power-supplied forced ventilation system starting from BN 71, M1, BE 80, ME2, BX 80 and MX2 size.
Motor is cooled by an axial fan with independent power supply and fitted on the fan cover (IC 416 cooling system).
This version is used in case of motor driven by inverter so that steady torque operation is possible even at low speed or when high starting frequencies are needed.
Brake motors of motors with rear shaft projection (PS option) are excluded.

This variant has two different models, called **U1** and **U2**, having the same longitudinal size. Longer side of fan cover (**DL**) is specified for both models in the table below. Overall dimension can be reckoned from motor size table.

(F59)

Extra length for servoventilated motors			
		**Δ L_1** [*mm* / inch]	**Δ L_2** [*mm* / inch]
BN 71	**M1**	*93* / 3.661	*32* / 1.260
BX 80 - BE 80 - BN 80	**MX2 - ME2 - M2**	*127* / 5.000	*55* / 2.165
BX 90 - BE 90 - BN 90	**MX3**	*131* / 5.157	*48* / 1.890
BX 100 - BE 100 - BN 100	**MX3 - ME3 - M3**	*119* / 4.685	*28* / 1.102
BX 112 - BE 112 - BN 112	**MX4**	*130* / 5.118	*31* / 1.220
BX 132 - BE 132 - BN 132	**MX4 - ME4 - M4**	*161* / 6.339	*51* / 2.008
BX 160 - BE 160, BX 180 - BE 180	**MX5 - ME5**	*184* / 7.244	—

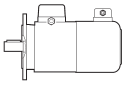


ΔL_1 = extra length to LB value of corresponding standard motor.

ΔL_2 = extra length to LB value of corresponding brake motor.
Only for BN motors.

U1

Fan wiring terminals are housed in a separate terminal box.
In brake motors of size BX 132 ... BX 160, BE 80 ... BE 160, MX 4 ... MX 5, ME 2 ... ME 5 - BN 71 ... BN 160MR, M1 ... M4L, with **U1** model, the release lever cannot be positioned to AA.
The option is not applicable to motors compliant with the CSA and UL norms (option CUS).

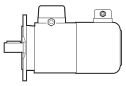


(F60)

		**V a.c.** ±10%	**Hz**	**P** [W]	**I** [A]
BN 71	**M1**	1 ~ 230	50 / 60	22	0.12
BX 80 - BE 80 **BN 80**	**MX2 - ME2** **M2**			22	0.12
BX 90 - BE 90 **BN 90**	**MX3**			40	0.30
BX 100 - BE 100 **BN 100**	**MX3 - ME3** **M3**			50	0.25
BX 112 - BE 112 **BN 112**	**MX4**	3 ~ 230Δ / 400Y		50	0.26 / 0.15
BX 132 - BE 132 **BN 132 ... BN 160MR**	**MX4 - ME4** **M4L**			110	0.38 / 0.22
BX 160 - BE 160 **BN 160M ... BN 180M**	**MX5 - ME5** **M5**		50	180	1.25 / 0.72
BX 180 - BE 180 **BN 180L ... BN 200L**	**–**			250	1.51 / 0.87

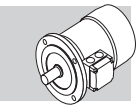
U2

Fan terminals are wired in the motor terminal box.
The **U2** option does not apply to motors BX, BE, MX, ME and to motors with option CUS (compliant to norms CSA and UL).



(F61)

		**V a.c.** ±10%	**Hz**	**P** [W]	**I** [A]
BN 71	**M1**	1 ~ 230	50 / 60	22	0.12
BN 80	**M2**			22	0.12
BN 90	**–**			40	0.30
BN 100	**M3**	3 ~ 230Δ / 400Y		40	0.26 / 0.09
BN 112	**–**			50	0.26 / 0.15
BN 132 ... BN 160MR	**M4L**			110	0.38 / 0.22



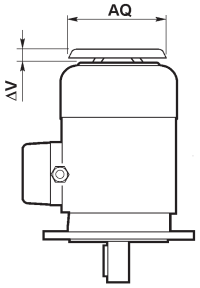
M12.15 Rain canopy

RC

The rain canopy protects the motor from dripping and avoids the ingress of solid bodies. It is recommended when motor is installed in a vertical position with the shaft downwards.
Relevant dimensions are indicated in the table below.
The drip cover is not compatible with variants PS, EN1, EN2, EN3, EN4, EN5, EN6.

(F62)

		**AQ** [*mm* / inch]	**ΔV** [*mm* / inch]
BN 63	**M05**	*118* / 4.646	*24* / 0.945
BN 71	**M1**	*134* / 5.276	*27* / 1.063
BX 80 - BE 80 **BN 80**	**MX2 - ME2** **M2**	*152* / 5.984	*25* / 0.984
BX 90 - BE 90 **BN 90**	**MX3**	*168* / 6.614	*30* / 1.181
BX 100 - BE 100 **BN 100**	**MX3 - ME3** **M3**	*190* / 7.480	*28* / 1.102
BX 112 - BE 112 **BN 112**	**MX4**	*211* / 8.307	*32* / 1.260
BX 132 - BE 132 **BN 132...BN 160MR**	**MX4 - ME4** **M4**	*254* / 10.000	*32* / 1.260
BX 160 - BE 160 **BN 160M...BN 180M**	**MX5 - ME5** **M5**	*302* / 11.890	*36* / 1.417
BX 180 - BE 180 **BN 180L...BN 200L**	**—**	*340* / 13.386	*36* / 1.417

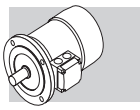


M12.16 Textile canopy

TC

Option TC is a cover variant for textile industry environments, where lint may obstruct the fan grid and prevent a regular flow of cooling air.
This option is not compatible with variants EN1, EN2, EN3, EN4, EN5, EN6, PS.
Overall dimensions are the same as drip cover type RC.

M12.17 Feedback units



Motors may be combined with six different types of encoders to achieve feedback circuits.
Configurations with double-extended shaft (PS) and rain canopy (RC, TC) are not compatible with encoder installation.

EN1

Incremental encoder, V_{IN} = 5 V, line-driver output RS 422.

EN2

Incremental encoder, V_{IN} = 10-30 V, line-driver output RS 422.

EN3

Incremental encoder, V_{IN} = 12-30 V, push-pull output 12-30 V

EN4

Encoder sin/cos, V_{IN} = 4.5-5.5 V, output Sinus 0.5V_{PP}.

EN5

Absolute encoder singleturn, HIPERFACE® interface, V_{IN} = 7-12 V.

EN6

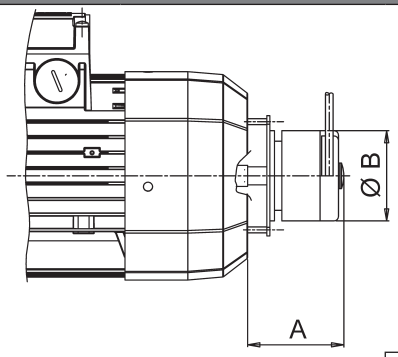
Absolute encoder multiturn, HIPERFACE® interface, V_{IN} = 7-12 V.

(F63)

		EN1	EN2	EN3	EN4	EN5	EN6
Interface		TTL/RS 422	TTL/RS 422	HTL/push-pull	Sinus 0.5 VPP	HIPERFACE®	HIPERFACE®
Power supply voltage	[V]	4...6	10...30	12...30	4.4...5.5	7...12	7...12
Output voltage	[V]	5	5	12...30	—	—	—
No-load operating current	[mA]	120	100	100	40	80	80
No. of pulses per revolution		1024					
Steps per revolution		—	—	—	—	15 bit	15 bit
Revolutions		—	—	—	—	—	12 bit
No. of signals		6 (A, B, Z + inverted signals)			6 (cos-, cos+, sin-, sin+, Z, $\overline{Z}$)	—	—
Max. output frequency	[kHz]	600			200		
Max. speed	[rpm]	6000 (9000 rpm for 10 s)					
Temperature range	[°F]	-20 ... +210					
Protection class		IP 65					

(F64)

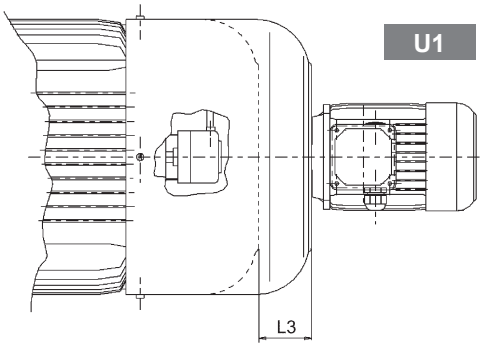
EN1, EN2, EN3, EN4, EN5, EN6



		A [*mm* / inch]	**B** [*mm* / inch]
BX 80 ... BX 180L **BE 80 ... BE 180L**	**MX2 ... MX5L** **ME2S ... ME5L**	*65* / 2.559	*59* / 2.323
BN 63 ... BN 200L	**M05 ... M5**		
BX 80_FD ... BX 180_FD **BN 63_FD ... BN 200L_FD**	**MX2_FD ... MX5_FD** **M05_FD ... M5_FD**		
BX 80_FA ... BX 160_FA **BN 63_FA ... BN 200L_FA**	**MX2_FA ... MX5_FA** **M05_FA ... M5_FA**		

(F65)

EN_ + U1



		L3 [*mm* / inch]
BX 160 - BE 160 - BN 160M...BN 180M	**MX5 - ME5 - M5**	*72* / 2.835
BX 180 - BE 180 - BN 180L...BN 200L	**–**	*82* / 3.228
BX 160_FD - BN 160M_FD...BN 180M_FD	**MX5_FD - M5_FD**	*35* / 1.378
BX 180_FD - BN 180L_FD...BN 200L_FD	**–**	*41* / 1.614

If the encoder device (option EN_) is specified on motors BX 80 ... BX 132 - MX2 ... MX4 - BE 80 ... BE 132 - ME2 ... ME4 - BN 71 ... BN 160MR - M1 ... M4, along with the independent fan cooling (options U1, U2), the extra length of motor is coincident with that of the correspondent U1 and U2 execution.

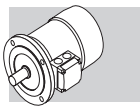
M12.18 Surface protection

C_

When no specific protection class is requested, the painted (ferrous) surfaces of motors are protected to at least corrosivity class C2 (UNI EN ISO 12944-2). For improved resistance to atmospheric corrosion, motors can be delivered with C3 and C4 surface protection.

(F66)

SURFACE PROTECTION	Typical environments	Maximum surface temperature	Corrosivity class according to UNI EN ISO 12944-2
C3	Urban and industrial environments with up to 100% relative humidity (medium air pollution)	120°C [248 F°]	C3
C4	Industrial areas, coastal areas, chemical plant, with up to 100% relative humidity (high air pollution)	120°C [248 F°]	C4



Motors with optional protection to class C3 or C4 are available in a choice of colours. If no specific colour is requested (see the “PAINTING” option) motors are finished in RAL 7042.
Motors can also be supplied with surface protection for corrosivity class C5 according to UNI EN ISO 12944-2. Contact our Technical Service for further details.

M12.19 Painting

RAL

Gearboxes with optional protection to class C3 or C4 are available in the colours listed in the following table.

(F67)

PAINTING	Colour	RAL number
RAL7042*	Traffic Grey A	7042
RAL5010	Gentian Blue	5010
RAL9005	Jet Black	9005
RAL9006	White Aluminium	9006
RAL9010	Pure White	9010

* Gearboxes are supplied in this standard colour if no other colour is specified.

NOTE – “PAINTING” options can only be specified in conjunction with “SURFACE PROTECTION” options.

M12.20 Certificates

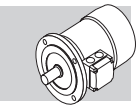
ACM

Certificate of compliance of motors

The document certifies the compliance of the product with the purchase order and the construction in conformity with the applicable procedures of the Bonfiglioli Quality System.

CC

Inspection certificate



The document entails checking on order compliance, the visual inspection of external conditions and instrumental testing of the electrical characteristics in unloaded conditions. Units inspected are sampled within the shipping batch and marked individually.

M13 TABLES OF MOTORS CORRELATION

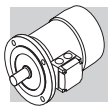
M13.1 50 Hz Motors

(F68)

2 pole								
Efficiency class			IE1	IE2	IE3	IE1	IE2	IE3
	[hp]	[kW]						
	0.08	**0.06**						
	0.12	**0.09**						
	0.16	**0.12**						
	0.25	**0.18**	BN 63A 2			M 05A 2		
	0.33	**0.25**	BN 63B 2			M 05B 2		
	0.5	**0.37**	BN 71A 2			M 05C 2		
	0.75	**0.55**	BN 71B 2			M 1SD 2		
	1	**0.75**	BN 71C 2 BN 80A 2	BE 80A 2		M 1LA 2	ME 2SA 2	
	1.5	**1.1**	BN 80B 2	BE 80B 2		M 2SA 2	ME 2SB 2	
	2	**1.5**	BN 90SA 2	BE 90SA 2		M 2SB 2		
Pn	**2.5**	**1.85**	BN 90SB 2					
	3	**2.2**	BN 90L 2	BE 90L 2		M 3SA 2		
	4	**3**	BN 100L 2	BE 100L 2		M 3LA 2	ME 3LB 2	
	5.5	**4**	BN 112M 2	BE 112M 2		M 3LB 2		
	7.5	**5.5**	BN 132SA 2	BE 132SA 2		M 4SA 2	ME 4SA 2	
	10	**7.5**	BN 132SB 2	BE 132SB 2		M 4SB 2	ME 4LA 2	
	12.5	**9.2**	BN 132M 2	BE 132MB 2		M 4LA 2	ME 4LB 2	
	15	**11**	BN 160MR 2 BN 160M 2	BE 160MA 2		M 4LC 2	ME 5SA 2	
	20	**15**	BN 160MB 2	BE 160MB 2		M 5SB 2	ME 5SB 2	
	25	**18.5**	BN 160L 2	BE 160L 2		M 5SC 2	ME 5LA 2	
	30	**22**	BN 180M 2			M 5LA 2		
	40	**30**	BN 200LA 2					

(F69)

4 pole								
Efficiency class			**IE1**	**IE2**	**IE3**	**IE1**	**IE2**	**IE3**
	[hp]	[kW]						
	0.08	**0.06**	BN 56A 4					
	0.12	**0.09**	BN 56B 4			M 0B 4		
	0.16	**0.12**	BN 63A 4			M 05A 4		
	0.25	**0.18**	BN 63B 4			M 05B 4		
	0.33	**0.25**	BN 63C 4			M 05C 4		
			BN 71A 4					
	0.5	**0.37**	BN 71B 4			M 1SD 4		
	0.75	**0.55**	BN 71C 4			M 1LA 4		
			BN 80A 4					
	1	**0.75**	BN 80B 4	BE 80B 4	BX 80B 4	M 2SA 4	ME 2SB 4	MX 2SB 4
	1.5	**1.1**	BN 80C 4	BE 90S 4	BX 90S 4	M 2SB 4	ME 3SA 4	MX 3SA 4
			BN 90S 4					
Pn	**2**	**1.5**	BN 90LA 4	BE 90LA 4	BX 90LA 4	M 3SA 4	ME 3SB 4	MX 3SB 4
	2.5	**1.85**	BN 90LB 4					
	3	**2.2**	BN 100LA 4	BE 100LA 4	BX 100LA 4	M 3LA 4	ME 3LA 4	MX 3LA 4
	4	**3**	BN 100LB 4	BE 100LB 4	BX 100LB 4	M 3LB 4	ME 3LB 4	MX 3LB 4
	5.5	**4**	BN 112M 4	BE 112M 4	BX 112M 4	M 3LC 4	ME 4SA 4	MX 4SA 4
	7.5	**5.5**	BN 132S 4	BE 132S 4	BX 132SB 4	M 4SA 4	ME 4SB 4	MX 4SB 4
	10	**7.5**	BN 132MA 4	BE 132MA 4	BX 132MA 4	M 4LA 4	ME 4LA 4	MX 4LA 4
	12.5	**9.2**	BN 132MB 4	BE 132MB 4	BX 160MA 4	M 4LB 4	ME 4LB 4	MX 5SA 4
	15	**11**	BN 160MR 4	BE 160M 4	BX 160MB 4	M 4LC 4	ME 5SA 4	MX 5SB 4
			BN 160M 4					
	20	**15**	BN 160L 4	BE 160L 4	BX 160L 4	M 5SB 4	ME 5LA 4	MX 5LA 4
	25	**18.5**	BN 180M 4	BE 180M 4	BX 180M 4	M 5LA 4		
	30	**22**	BN 180L 4	BE 180L 4	BX 180L 4			
	40	**30**	BN 200L 4					

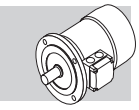


(F70)

6 pole								
Efficiency class			**IE1**	**IE2**	**IE3**	**IE1**	**IE2**	**IE3**
	[hp]	[kW]						
	0.08	**0.06**						
	0.12	**0.09**	BN 63A 6			M 05A 6		
	0.16	**0.12**	BN 63B 6			M 05B 6		
	0.25	**0.18**	BN 71A 6			M 1SC 6		
	0.33	**0.25**	BN 71B 6			M 1SD 6		
			BN 71C 6					
	0.5	**0.37**	BN 80A 6			M 1LA 6		
	0.75	**0.55**	BN 80B 6			M 2SA 6		
	1	**0.75**	BN 80C 6	BE 90S 6		M 2SB 6		
			BN 90S 6					
	1.5	**1.1**	BN 90L 6	BE 100M 6		M 3SA 6	ME 3LA 6	
	2	**1.5**	BN 100LA 6	BE 100LA 6		M 3LA 6	ME 3LB 6	
Pn	**2.5**	**1.85**	BN 100LB 6			M 3LB 6		
	3	**2.2**	BN 112M 6	BE 112M 6		M 3LC 6		
	4	**3**	BN 132S 6	BE 132S 6		M 4SA 6	ME 4SB 6	
	5.5	**4**	BN 132MA 6	BE 132MA 6		M 4LA 6	ME 4LA 6	
	7.5	**5.5**	BN 132MB 6	BE 160MA 6		M 4LB 6	ME 5SA 6	
	10	**7.5**	BN 160M 6	BE 160MB 6		M 5SA 6	ME 5SB 6	
	12.5	**9.2**						
	15	**11**	BN 160L 6			M 5SB 6		
	20	**15**	BN 180L 6					
	25	**18.5**	BN 200LA 6					
	30	**22**						
	40	**30**						

M13.2 60 Hz Motors

(F71)



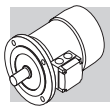
2 pole								
Efficiency class			IE1	IE2	IE3	IE1	IE2	IE3
	[hp]	[kW]						
	0.08	0.06						
	0.12	0.09						
	0.16	0.12						
	0.25	0.18	BN 63A 2			M 05A 2		
	0.33	0.25	BN 63B 2			M 05B 2		
	0.5	0.37	BN 71A 2			M 05C 2		
	0.75	0.55	BN 71B 2			M 1SD 2		
	1	0.75	BN 71C 2			M 1LA 2		
			BN 80A 2					
	1.5	1.1	BN 80B 2			M 2SA 2		
	2	1.5	BN 90SA 2			M 2SB 2		
Pn	2.5	1.85	BN 90SB 2					
	3	2.2	BN 90L 2			M 3SA 2		
	4	3	BN 100L 2			M 3LA 2		
	5.5	3.7	BN 112M 2			M 3LB 2		
	7.5	5.5	BN 132SA 2			M 4SA 2		
	10	7.5	BN 132SB 2			M 4SB 2		
	12.5	9.2	BN 132M 2			M 4LA 2		
	15	11	BN 160MR 2			M 4LC 2		
			BN 160M 2					
	20	15	BN 160MB 2			M 5SB 2		
	25	18.5	BN 160L 2			M 5SC 2		
	30	22	BN 180M 2			M 5LA 2		
	40	30	BN 200LA 2					

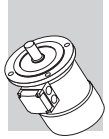
(F72)

4 pole								
Efficiency class			IE1	IE2	IE3	IE1	IE2	IE3
	[hp]	[kW]						
	0.08	0.06	BN 56A 4					
	0.12	0.09	BN 56B 4			M 0B 4		
	0.16	0.12	BN 63A 4			M 05A 4		
	0.25	0.18	BN 63B 4			M 05B 4		
	0.33	0.25	BN 63C 4			M 05C 4		
			BN 71A 4					
	0.5	0.37	BN 71B 4			M 1SD 4		
	0.75	0.55	BN 71C 4			M 1LA 4		
			BN 80A 4					
	1	0.75	BN 80B 4	BE 80B 4	BX 90SR 4	M 2SA 4	ME 2SB 4	MX 2SB 4
	1.5	1.1	BN 80C 4	BE 90S 4	BX 90S 4	M 2SB 4	ME 3SA 4	MX 3SA 4
			BN 90S 4					
Pn	2	1.5	BN 90LA 4	BE 90LA 4	BX 90LA 4	M 3SA 4	ME 3SB 4	MX 3SB 4
	2.5	1.85	BN 90LB 4					
	3	2.2	BN 100LA 4	BE 100LA 4	BX 100LA 4	M 3LA 4	ME 3LA 4	MX 3LA 4
	4	3	BN 100LB 4	BE 100LB 4	BX 100LB 4	M 3LB 4	ME 3LB 4	MX 3LB 4
	5.5	3.7	BN 112M 4	BE 112M 4	BX 112M 4	M 3LC 4	ME 4SA 4	MX 4SA 4
	7.5	5.5	BN 132S 4	BE 132S 4	BX 132SB 4	M 4SA 4	ME 4SB 4	MX 4SB 4
	10	7.5	BN 132MA 4	BE 132MA 4	BX 132MA 4	M 4LA 4	ME 4LA 4	MX 4LA 4
	12.5	9.2	BN 132MB 4	BE 132MB 4	BX 160MA 4	M 4LB 4	ME 4LB 4	MX 5SA 4
	15	11	BN 160MR 4	BE 160M 4	BX 160MB 4	M 4LC 4	ME 5SA 4	MX 5SB 4
			BN 160M 4					
	20	15	BN 160L 4	BE 160L 4	BX 160L 4	M 5SB 4	ME 5LA 4	MX 5LA 4
	25	18.5	BN 180M 4	BE 180M 4	BX 180M 4	M 5LA 4		
	30	22	BN 180L 4	BE 180L 4	BX 180L 4			
	40	30	BN 200L 4					

(F73)

6 pole								
Efficiency class			IE1	IE2	IE3	IE1	IE2	IE3
	[hp]	[kW]						
	0.08	**0.06**						
	0.12	**0.09**	BN 63A 6			M 05A 6		
	0.16	**0.12**	BN 63B 6			M 05B 6		
	0.25	**0.18**	BN 71A 6			M 1SC 6		
	0.33	**0.25**	BN 71B 6			M 1SD 6		
			BN 71C 6					
	0.5	**0.37**	BN 80A 6			M 1LA 6		
	0.75	**0.55**	BN 80B 6			M 2SA 6		
	1	**0.75**	BN 80C 6			M 2SB 6		
			BN 90S 6					
	1.5	**1.1**	BN 90L 6			M 3SA 6		
Pn	**2**	**1.5**	BN 100LA 6			M 3LA 6		
	2.5	**1.85**	BN 100LB 6			M 3LB 6		
	3	**2.2**	BN 112M 6			M 3LC 6		
	4	**3**	BN 132S 6			M 4SA 6		
	5.5	**3.7**	BN 132MA 6			M 4LA 6		
	7.5	**5.5**	BN 132MB 6			M 4LB 6		
	10	**7.5**	BN 160M 6			M 5SA 6		
	12.5	**9.2**						
	15	**11**	BN 160L 6			M 5SB 6		
	20	**15**	BN 180L 6					
	25	**18.5**	BN 200LA 6					
	30	**22**						
	40	**30**						



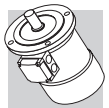


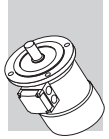
4 P	1800 rpm - S1	60 Hz - IE3

																	d.c. brake					a.c. brake				
																	FD					FA				
P_n			n	T_n	In 400V	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA code	J_m	IM B5		Mod	T_b	J_m	IM B5		Mod	T_b	J_m	IM B5	
hp	kW		rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs		lb·in	lb·ft²	Kg	lbs		lb·in	lb·ft²	Kg	lbs
1	0.75	**BX 90SR 4**	1755	36.3	1.48	85.5	86.4	83.9	0.73	8	3.7	2.5	L	0.0641	*16*	35	**FD 14**	133	0.0029	*20.2*	45	**FA 14**	133	0.0688	*20.1*	44
1.5	1.1	**BX 90S 4**	1740	53	2.15	86.5	85.9	83	0.74	8.2	4.1	2.8	K	0.0641	*16*	35	**FD 14**	133	0.0029	*20.2*	45	**FA 14**	133	0.0688	*20.1*	44
2	1.5	**BX 90LA 4**	1735	73	2.91	86.5	86.5	84.4	0.75	7.4	3.6	2.5	K	0.0736	*17*	37	**FD 05**	230	0.0035	*23*	51	**FA 05**	230	0.0831	*23.7*	52
3	2.2	**BX 100LA 4**	1760	105	4.4	89.5	88.6	86.2	0.71	9.9	4.8	3.6	N	0.1732	*29*	64	**FD 15**	354	0.0077	*36*	79	**FA 15**	354	0.1827	*36*	79
5	3	**BX 100LB 4**	1750	145	5.9	89.5	88.9	86.7	0.71	9.1	4.4	3.3	M	0.1732	*29*	64	**FD 15**	354	0.0077	*36*	79	**FA 15**	354	0.1827	*36*	79
5.5	3.7	**BX 112M 4**	1760	177	6.7	89.5	89.5	89.1	0.77	10.4	4.7	3.4	M	0.3085	*38*	84	**FD 06S**	531	0.0139	*48*	106	**FA 06S**	531	0.3298	*50*	110
7.5	5.5	**BX 132SB 4**	1770	266	9.9	91.7	92	90.2	0.76	10.7	5.1	4.6	N	0.9729	*77*	170	**FD 56**	664	0.0420	*90*	198	**FA 06**	664	0.9967	*91*	201
10	7.5	**BX 132MA 4**	1770	363	13.4	91.7	91.3	89.7	0.76	11	4.9	4.4	N	0.9729	*77*	170	**FD 06**	885	0.0420	*90*	198	**FA 07**	885	0.9967	*95*	209
12.5	9.2	**BX 160MA 4**	1770	443	15.6	92.4	92.5	91.6	0.8	9.1	4.1	2.6	L	1.5425	*95*	209	**FD 08**	1505	0.0725	*125*	276	**FA 08**	1505	1.7204	*124*	273
15	11	**BX 160MB 4**	1770	522	18.2	92.4	92.9	92	0.82	9.3	4	2.4	L	1.8509	*110*	243	**FD 08**	1505	0.0855	*140*	309	**FA 08**	1505	2.0289	*139*	306
20	15	**BX 160L 4**	1770	717	24.5	93	93.5	92.5	0.81	10.9	4.8	2.8	M	2.1120	*121*	267	**FD 08**	1770	0.0965	*151*	333	**FA 08**	1770	2.2899	*150*	331
25	18.5	**BX 180M 4**	1780	876	28.6	93.6	94.5	93.2	0.85	13	2.9	2.7	N	3.7019	*155*	342	**FD 09**	2655	0.1760	*195*	430					
30	22	**BX 180L 4**	1775	1044	33.1	93.6	94.2	93.1	0.87	11.5	2.8	2.4	M	3.9392	*163*	359	**FD 09**	2655	0.1860	*203*	448					

4 P	1800 rpm - S1	60 Hz - IE3

																	d.c. brake					a.c. brake				
																	FD					FA				
P_n			n	T_n	In 400V	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{M_s}{M_n}$	$\frac{M_a}{M_n}$	KVA code	J_m	IM B5		Mod	T_b	J_m	IM B5		Mod	T_b	J_m	IM B5	
hp	kW		rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs		Nm	lb·ft²	Kg	lbs		Nm	lb·ft²	Kg	lbs
1	0.75	**MX 2SB 4**	1755	36	1.48	85.5	86.4	83.9	0.73	8.0	3.7	2.5	L	0.0641	*16*	35	**FD 14**	133	0.0688	*20.2*	45	**FA 14**	133	0.0688	*20.1*	44
1.5	1.1	**MX 3SA 4**	1755	53	2.19	86.5	86.0	83.0	0.73	7.9	3.3	2.5	L	0.0831	*17*	37	**FD 15**	133	0.0925	*24*	53	**FA 15**	133	0.0925	*24*	53
2	1.5	**MX 3SB 4**	1755	72	2.96	86.5	87.2	85.0	0.72	8.5	3.7	2.9	L	0.1020	*20*	44	**FD 15**	230	0.1115	*27*	60	**FA 15**	230	0.1115	*27*	60
3	2.2	**MX 3LA 4**	1760	106	4.4	89.5	88.6	86.2	0.71	9.9	4.8	3.6	N	0.1732	*29*	64	**FD 15**	354	0.1827	*36*	79	**FA 15**	354	0.1827	*36*	79
4	3	**MX 3LB 4**	1750	145	5.9	89.5	88.9	86.7	0.71	9.1	4.4	3.3	M	0.1732	*29*	64	**FD 15**	354	0.1827	*36*	79	**FA 15**	354	0.1827	*36*	79
5	3.7	**MX 4SA 4**	1770	177	6.6	89.5	89.8	87.7	0.78	9.9	4.7	3.4	M	0.5339	*45*	99	**FD 56**	664	0.5577	*58*	128	**FA 06**	664	0.5577	*59*	130
7.5	5.5	**MX 4SB 4**	1770	263	9.9	91.7	92.0	90.2	0.76	10.7	5.1	4.6	N	0.9729	*77*	170	**FD 56**	664	0.9967	*90*	198	**FA 06**	664	0.9967	*91*	201
10	7.5	**MX 4LA 4**	1770	358	13.4	91.7	91.3	89.7	0.76	11.0	4.9	4.4	N	0.9729	*77*	170	**FD 06**	885	0.9967	*90*	198	**FA 07**	885	0.9967	*95*	209
12.5	9.2	**MX 5SA 4**	1770	439	15.6	92.4	92.5	91.6	0.8	9.1	4.1	2.6	L	1.5425	*95*	209	**FD 08**	1505	1.7205	*125*	276	**FA 08**	1505	1.7205	*124*	273
15	11	**MX 5SB 4**	1770	525	18.2	92.4	92.9	92.0	0.82	9.3	4.0	2.4	L	1.8509	*110*	243	**FD 08**	1505	2.0289	*140*	309	**FA 08**	1505	2.0289	*139*	306
20	15	**MX 5LA 4**	1770	716	24.5	93.0	93.5	92.5	0.81	10.9	4.8	2.8	M	2.1120	*121*	267	**FD 08**	1770	2.2900	*151*	333	**FA 08**	1770	2.2900	*150*	331



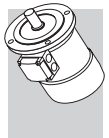


4 P	1500 rpm - S1	50 Hz - IE3

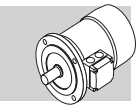
																	d.c. brake					a.c. brake				
																	FD					FA				
P_n			n	T_n	In 400V	η%			cos φ	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA code	J_m	IM B5		Mod	T_b	J_m	IM B5		Mod	T_b	J_m	IM B5	
kW	hp		rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs		lb·in	lb·ft²	Kg	lbs		lb·in	lb·ft²	Kg	lbs
0.75	1	**BX 80B 4**	1425	44.3	1.61	82.5	83.9	83.2	0.81	6.5	2	1.8	J	0.0831	*16*	35	**FD 04**	133	0.0878	*19.9*	44	**FA 04**	133	0.0878	*19.8*	44
1.1	1.5	**BX 90S 4**	1425	65	2.44	84.1	84.1	82	0.77	6.9	3.4	2.2	J	0.0641	*16*	35	**FD 14**	133	0.0688	*20.2*	45	**FA 14**	133	0.0688	*20.1*	44
1.5	2	**BX 90LA 4**	1420	89	3.3	85.3	86.2	84.9	0.78	6.3	3.1	1.9	J	0.0736	*17*	37	**FD 05**	230	0.0831	*23*	51	**FA 05**	230	0.0831	*23.7*	52
2.2	3	**BX 100LA 4**	1445	128	5.1	86.7	86.2	84	0.72	7.2	3.6	2.4	K	0.1376	*24*	53	**FD 15**	354	0.1471	*31*	68	**FA 15**	354	0.1471	*31*	68
3	5	**BX 100LB 4**	1445	175	6.7	87.7	87.7	86	0.74	7.6	3.9	2.6	K	0.1732	*29*	64	**FD 15**	354	0.1827	*36*	79	**FA 15**	354	0.1827	*36*	79
4	5.5	**BX 112M 4**	1445	230	8.1	88.6	88.9	87.6	0.8	8.1	3.8	2.5	J	0.3085	*38*	84	**FD 06S**	531	0.3298	*48*	106	**FA 06S**	531	0.3298	*50*	110
5.5	7.5	**BX 132SB 4**	1460	319	10.6	89.6	89.2	88.8	0.83	8.2	3.6	2.3	J	0.7356	*57*	126	**FD 56**	664	0.7594	*70*	154	**FA 06**	664	0.7594	*71*	157
7.5	10	**BX 132MA 4**	1460	434	15	90.4	90.9	90.2	0.8	8.4	3.8	2.5	K	0.8543	*67*	148	**FD 06**	885	0.8780	*80*	176	**FA 07**	885	0.8780	*85*	187
9.2	12.5	**BX 160MA 4**	1465	531	17.8	91	92.1	91.7	0.82	7.9	3.6	2.1	J	1.5425	*95*	209	**FD 08**	1505	1.7204	*125*	276	**FA 08**	1505	1.7204	*124*	273
11	15	**BX 160MB 4**	1465	637	20.5	91.4	92.9	92.5	0.84	7.8	3.4	1.9	J	1.8509	*110*	243	**FD 08**	1505	2.0289	*140*	309	**FA 08**	1505	2.0289	*139*	306
15	20	**BX 160L 4**	1465	867	28.1	92.1	93.2	92.6	0.82	9	4.1	2.3	K	2.1120	*121*	267	**FD 08**	1770	2.2899	*151*	333	**FA 08**	1770	2.2899	*150*	331
18.5	25	**BX 180M 4**	1480	1053	32.9	92.6	94.1	93.1	0.85	11.3	2.6	2.3	M	3.7019	*155*	342	**FD 09**	2655	4.1765	*195*	430					
22	30	**BX 180L 4**	1475	1257	38.2	93	93.6	92.8	0.88	10.2	2.5	2	L	3.9392	*163*	359	**FD 09**	2655	4.4138	*203*	448					

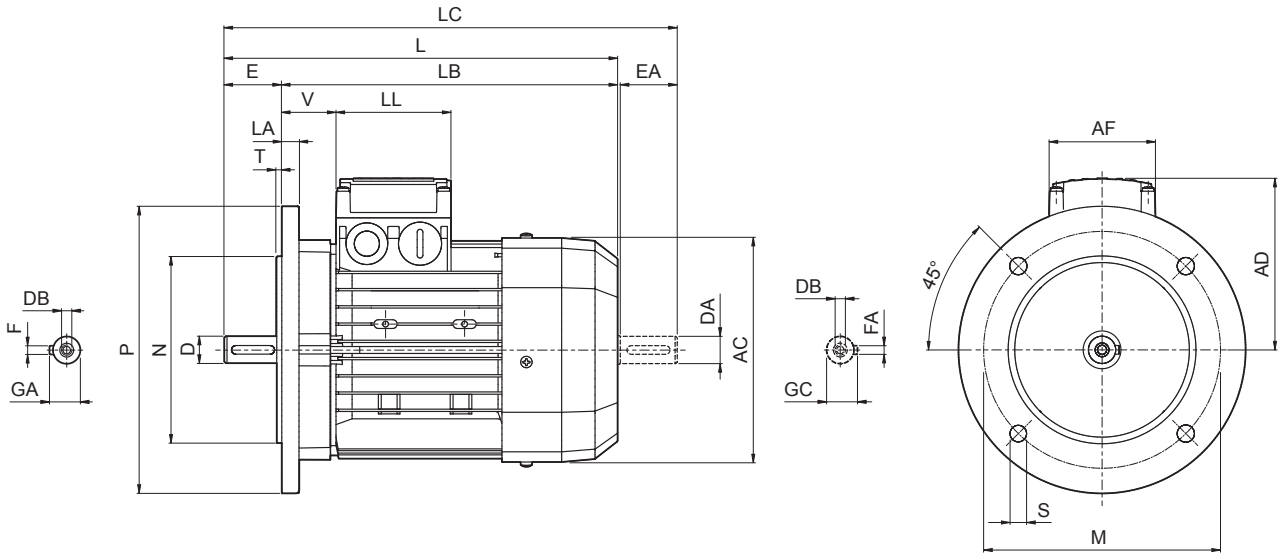
4 P	1500 rpm - S1	50 Hz - IE3

																	d.c. brake					a.c. brake				
																	FD					FA				
P_n			n	T_n	In 400V	η%			cos φ	I_s/I_n	M_s/M_n	M_a/M_n	KVA code	J_m	IM B5		Mod	T_b	J_m	IM B5		Mod	T_b	J_m	IM B5	
kW	hp		rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs		Nm	lb·ft²	Kg	lbs		Nm	lb·ft²	Kg	lbs
0.75	1	**MX 2SB 4**	1425	44	1.61	82.5	83.9	83.2	0.81	6.5	2.0	1.8	J	0.0831	*16*	35	**FD 04**	133	0.0878	*19.9*	44	**FA 04**	133	0.0878	*19.8*	44
1.1	1.5	**MX 3SA 4**	1445	64	2.46	84.1	85.5	83.5	0.75	6.7	3.0	2.0	J	0.0831	*17*	37	**FD 15**	133	0.0925	*24*	53	**FA 15**	133	0.0925	*24*	53
1.5	2	**MX 3SB 4**	1445	88	3.3	85.3	86.8	85.4	0.75	6.7	3.1	2.0	J	0.1020	*20*	44	**FD 15**	230	0.1115	*27*	60	**FA 15**	230	0.1115	*27*	60
2.2	3	**MX 3LA 4**	1445	129	5.1	86.7	86.2	84.0	0.72	7.2	3.6	2.4	K	0.1376	*24*	53	**FD 15**	354	0.1471	*31*	68	**FA 15**	354	0.1471	*31*	68
3	4	**MX 3LB 4**	1445	175	6.7	87.7	87.7	86.0	0.74	7.6	3.9	2.6	K	0.1732	*29*	64	**FD 15**	354	0.1827	*36*	79	**FA 15**	354	0.1827	*36*	79
3.7	5.4	**MX 4SA 4**	1460	232	7.8	88.6	89.9	88.7	0.82	8.1	3.7	2.5	J	0.5339	*45*	99	**FD 56**	664	0.5577	*58*	128	**FA 06**	664	0.5577	*59*	130
5.5	7.5	**MX 4SB 4**	1460	318	10.6	89.6	89.9	88.8	0.83	8.2	3.6	2.3	J	0.7356	*57*	126	**FD 56**	664	0.7594	*70*	154	**FA 06**	664	0.7594	*71*	157
7.5	10	**MX 4LA 4**	1460	434	15.0	90.4	90.9	90.2	0.80	8.4	3.8	2.5	K	0.8543	*67*	148	**FD 06**	885	0.8780	*80*	176	**FA 07**	885	0.8780	*85*	187
9.2	12.5	**MX 5SA 4**	1465	531	17.8	91.0	92.1	91.7	0.82	7.9	3.6	2.1	J	1.5425	*95*	209	**FD 08**	1505	1.7205	*125*	276	**FA 08**	1505	1.7205	*124*	273
11	15	**MX 5SB 4**	1465	635	20.5	91.4	92.9	92.5	0.84	7.8	3.4	1.9	J	1.8509	*110*	243	**FD 08**	1505	2.0289	*140*	309	**FA 08**	1505	2.0289	*139*	306
15	20	**MX 5LA 4**	1465	865	28.1	92.1	93.2	92.6	0.82	9.0	4.1	2.3	K	2.1120	*121*	267	**FD 08**	1770	2.2900	*151*	333	**FA 08**	1770	2.2900	*150*	331



BX - IM B5



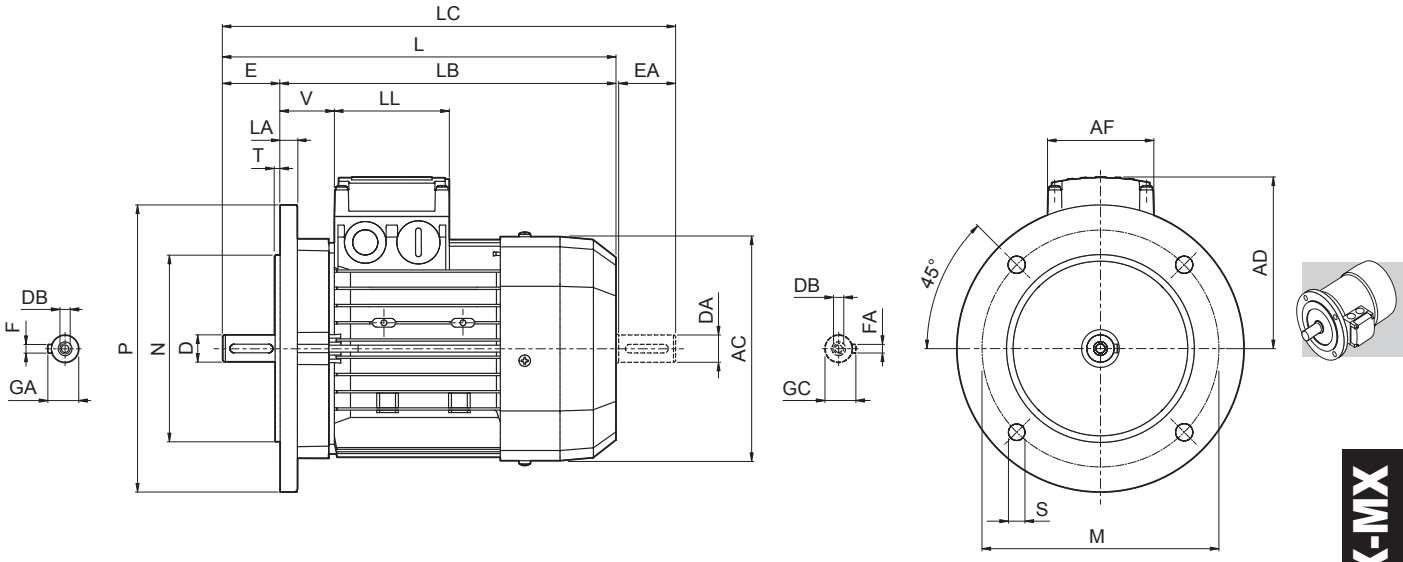


Dimensions are in [mm]

	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
BX 80 B	19 14(1)	40 30(1)	M6 M5(1)	21.5 16(1)	6 5(1)	165	130	200	11.5	3.5	11.5	156	320	280	351	119	74	80	38
BX 90 S	24 19(1)	50 40(1)	M8 M6(1)	27 21.5 (1)	8 6(1)							176	326	276	368	133			44
BX 90 LA																			
BX 100 LA	28 24(1)	60 50(1)	M10 M8(1)	31 27(1)	8 8(1)	215	180	250	14	4	14	195	410	350	462	142	98	98	50
BX 100 LB																			
BX 112 M											15	219	430	370	482	157			52
BX 132 SB	38 28(1)	80 60(1)	M12 M10(1)	41 31(1)	10 8(1)	265	230	300			20	258	493	413	556	193	118	118	58
BX 132 MA													528	448	591				
BX 160 MA	42 38(1)	110 80(1)	M16 M12(1)	45 41(1)	12 10(1)	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
BX 160 MB													640	530	724				
BX 160 L																			
BX 180 M	48 42(1)	110 110(1)	M16 M16(1)	51.5 45(1)	14 12(1)						18	348	708	598	823	261			52
BX 180 L																			

N.B.:
1) These values refer to the rear shaft end (PS).

BX - IM B5

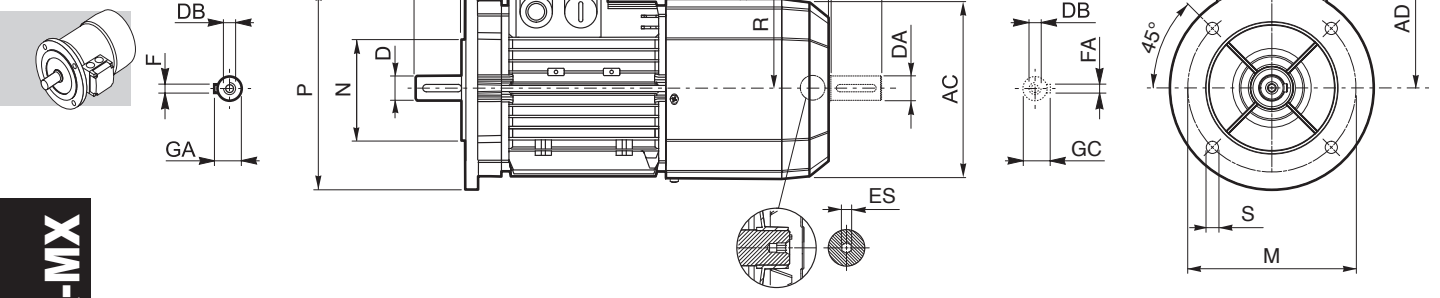


Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Flange						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BX 80 B	0.748 0.551(1)	1.575 1.181(1)	*M6* *M5(1)*	0.846 0.630(1)	0.236 0.197(1)	6.496	5.118	7.874	0.453	0.138	0.453	6.142	12.598	11.024	13.819	4.685	2.913	3.150	1.496
BX 90 S	0.945 0.748(1)	1.969 1.575(1)	*M8* *M6(1)*	1.063 0.846(1)	0.315 0.236(1)							6.929	12.835	10.866	14.488	5.236			1.732
BX 90 LA																			
BX 100 LA	1.102 0.945(1)	2.362 1.969(1)	*M10* *M8(1)*	1.220 1.063(1)	0.315 0.315(1)	8.465	7.087	9.843	0.551	0.157	0.551	7.677	16.142	13.780	18.189	5.591	3.858	3.858	1.969
BX 100 LB																			
BX 112 M											0.591	8.622	16.929	14.567	18.976	6.181			2.047
BX 132 SB	1.496 1.102(1)	3.150 2.362(1)	*M12* *M10(1)*	1.614 1.220(1)	0.394 0.315(1)	10.433	9.055	11.811			0.787	10.157	19.409	16.260	21.890	7.598	4.646	4.646	2.283
BX 132 MA													20.787	17.638	23.268				
BX 160 MA	1.654 1.496(1)	4.331 3.150(1)	*M16* *M12(1)*	1.772 1.614(1)	0.472 0.394(1)	11.811	9.843	13.780	0.728	0.197	0.591	12.205	23.465	19.134	26.772	9.646	7.362	7.362	2.008
BX 160 MB													25.197	20.866	28.504				
BX 160 L																			
BX 180 M	1.890 1.654(1)	4.331 4.331(1)	*M16* *M16(1)*	2.028 1.772(1)	0.551 0.472(1)						0.709	13.701	27.874	23.543	32.402	10.276			2.047
BX 180 L																			

N.B.:
1) These values refer to the rear shaft end (PS).

BX_FA/FD ; IM B5

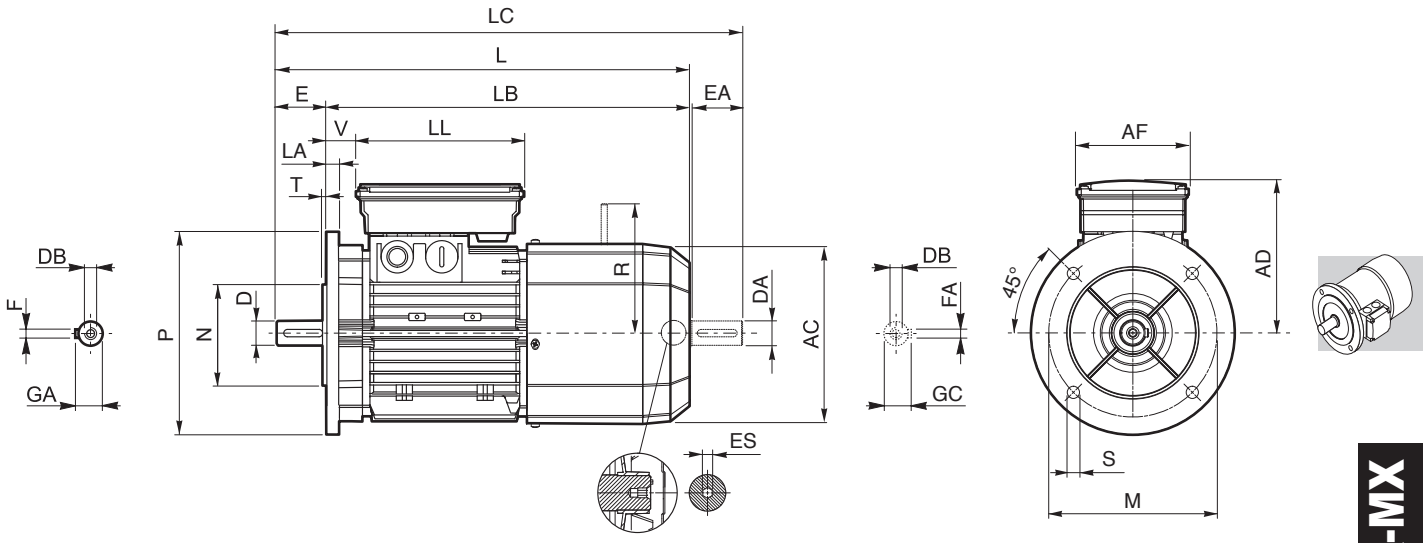


Dimensions are in [mm]

	Shaft					Housing						Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R FD	R FA	ES (2)
BX 80 B	19 14(1)	40 30(1)	M6 M5(1)	21.5 16(1)	6 5(1)	165	130	200	11.5	3.5	11.5	156	392	352	423	143	98	133	25	129	134	5
BX 90 S	24 19(1)	50 40(1)	M8 M6(1)	27 21.5 (1)	8 6(1)							176	410	360	452	146	110	165	32	160	160	6
BX 90 LA																						
BX 100 LA	28 24(1)	60 50(1)	M10 M8(1)	31 27(1)	8 8(1)	215	180	250	14	4	14	195	502	442	554	155			37			
BX 100 LB																						
BX 112 M											15	219	527	467	579	170			39	199	198	
BX 132 SB	38 28(1)	80 60(1)	M12 M10(1)	41 31(1)	10 8[1)]	265	230	300			16	258	603	523	667	210	140	188	46	204	200	
BX 132 MA													627	547	690						226	
BX 160 MA	42 38(1)	110 80(1)	M16 M12(1)	45 41(1)	12 10(1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	266	247	—
BX 160 MB													780	670	864							
BX 160 L																						
BX 180 M	48 42(1)	110 110(1)	M16 M16(1)	51.5 45(1)	14 12(1)						18	348	866	756	981	261			52	305	—	
BX 180 L																						

N.B.:
1) These values refer to the rear shaft end (PS).
2) “ES” hexagon is not present with PS option

BX_FA/FD ; IM B5

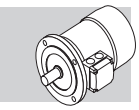


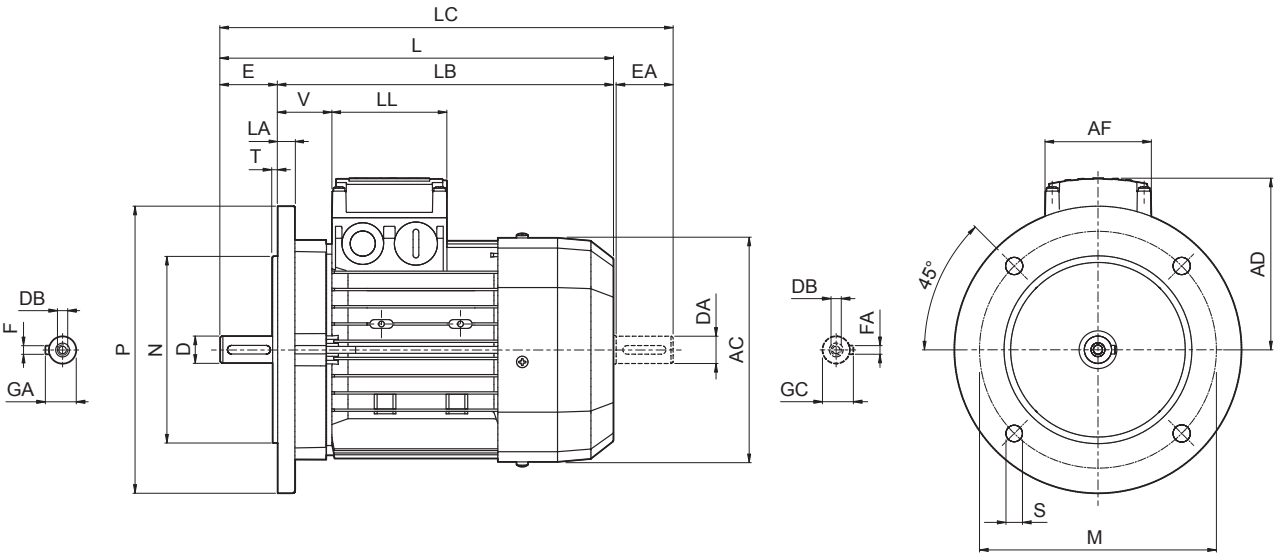
Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Housing						Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R FD	R FA	ES (2)
BX 80 B	0.748 0.551(1)	1.575 1.181(1)	*M6* *M5*(1)	0.846 0.630(1)	0.236 0.197(1)	6.496	5.118	7.874	0.453	0.138	0.453	6.142	15.433	13.858	16.654	5.630	3.858	5.236	0.984	5.079	5.276	0.197
BX 90 S	0.945 0.748(1)	1.969 1.575(1)	*M8* *M6*(1)	1.063 0.846(1)	0.315 0.236(1)							6.929	16.142	14.173	17.795	5.748	4.331	6.496	1.260	6.299	6.299	0.236
BX 90 LA																						
BX 100 LA	1.102 0.945(1)	2.362 1.969(1)	*M10* *M8*(1)	1.220 1.063(1)	0.315 0.315(1)	8.465	7.087	9.843	0.551	0.157	0.551	7.677	19.764	17.402	21.811	6.102			1.457			
BX 100 LB																						
BX 112 M											0.591	8.622	20.748	18.386	22.795	6.693			1.535	7.835	7.795	
BX 132 SB	1.496 1.102(1)	3.150 2.362(1)	*M12* *M10*(1)	1.614 1.220(1)	0.394 0.315(1)	10.433	9.055	11.811			0.630	10.157	23.740	20.591	26.260	8.268	5.512	7.402	1.811	8.031	7.874	
BX 132 MA													24.685	21.535	27.165						8.898	
BX 160 MA	1.654 1.496(1)	4.331 3.150(1)	*M16* *M12*(1)	1.772 1.614(1)	0.472 0.394(1)	11.811	9.843	13.780	0.728	0.197	0.591	12.205	28.976	24.646	32.283	9.646	7.362	7.362	2.008	10.472	9.724	—
BX 160 MB													30.709	26.378	34.016							
BX 160 L																						
BX 180 M	1.890 1.654(1)	4.331 4.331(1)	*M16* *M16*(1)	2.028 1.772(1)	0.551 0.472(1)						0.709	13.701	34.094	29.764	38.622	10.276			2.047	12.008	—	
BX 180 L																						

N.B.:
1) These values refer to the rear shaft end (PS).
2) “ES” hexagon is not present with PS option

BX - CUS - IM B5





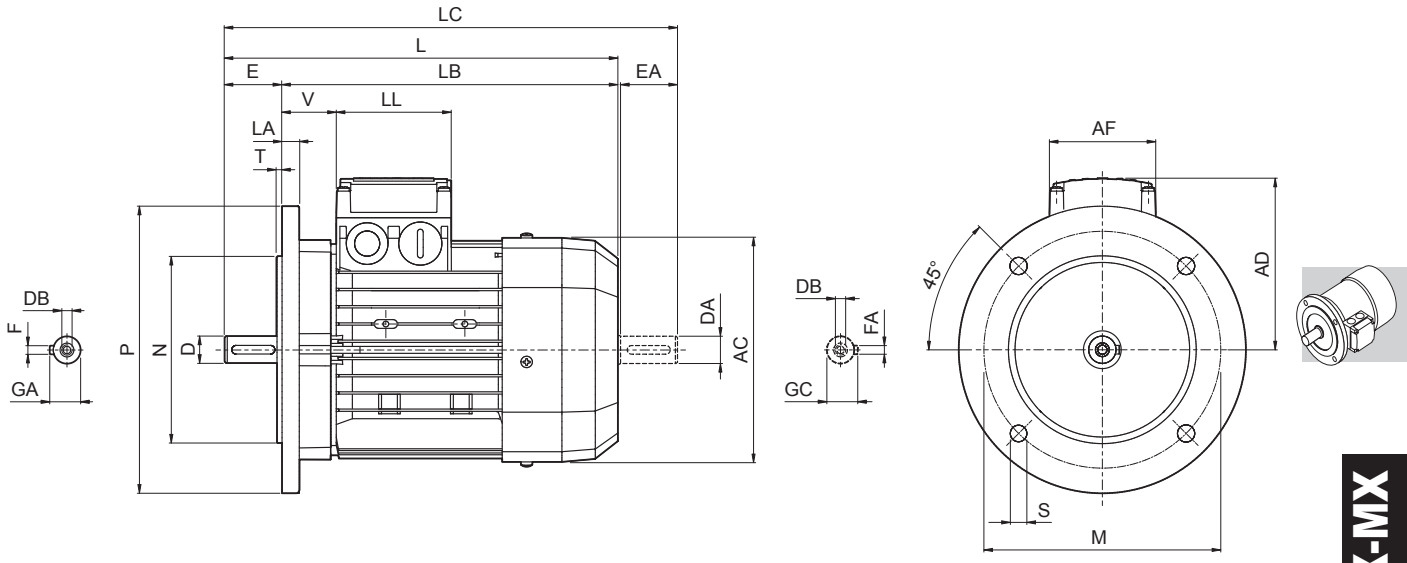
BX-MX

Dimensions are in [mm]

	Shaft					Housing						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BX 90 SR	19 19(1)	40 40(1)	M6 M6(1)	21.5 21.5(1)	6 6(1)	165	130	200	11.5	3.5	11.5	176	316	276	358	133	98	98	44
BX 90 S	24 19(1)	50 40(1)	M8 M6(1)	27 21.5 (1)	8 6(1)								326		368				
BX 90 LA																			
BX 100 LA	28 24(1)	60 50(1)	M10 M8(1)	31 27(1)	8 8(1)	215	180	250	14	4	14	195	410	350	462	142			50
BX 100 LB																			
BX 112 M											15	219	430	370	482	157			52
BX 132 SB	38 28(1)	80 60(1)	M12 M10(1)	41 31(1)	10 8(1)	265	230	300			20	258	552	472	615	193	118	118	58
BX 132 MA																			
BX 160 MA	42 38(1)	110 80(1)	M16 M12(1)	45 41(1)	12 10(1)	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
BX 160 MB													640	530	724				
BX 160 L																			
BX 180 M	48 42(1)	110 110(1)	M16 M16(1)	51.5 45(1)	14 12(1)						18	348	708	598	823	261			52
BX 180 L																			

N.B.:
1) These values refer to the rear shaft end (PS).

BX - CUS - IM B5

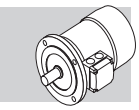


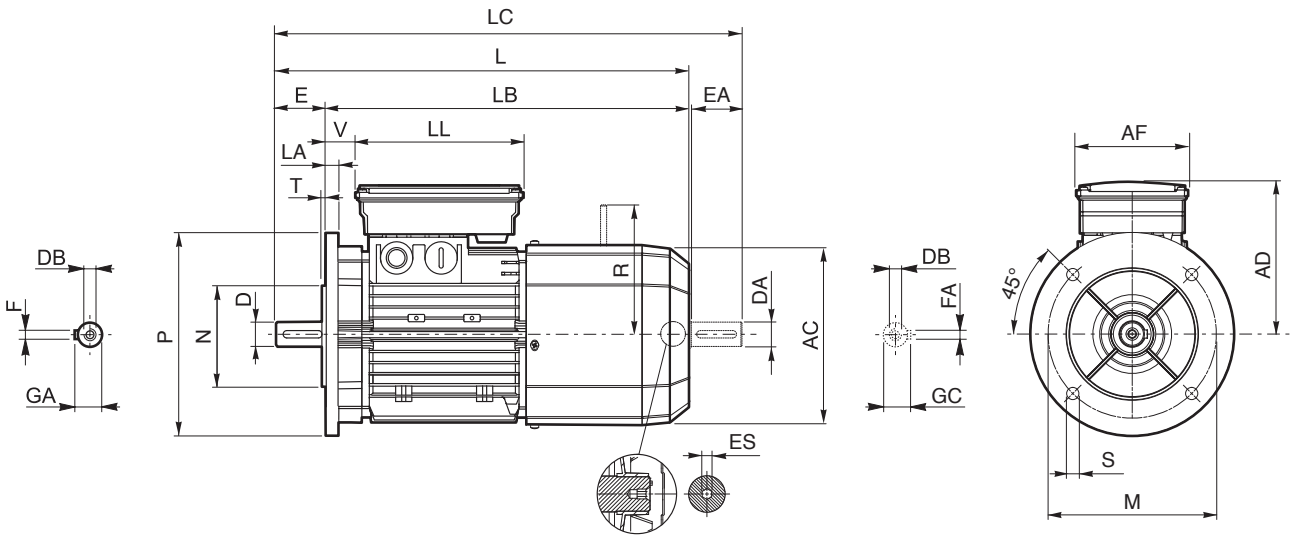
Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Housing						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BX 90 SR	0.748 0.748(1)	1.575 1.575(1)	*M6* *M6(1)*	0.846 0.846(1)	0.236 0.236(1)	6.496	5.118	7.874	0.453	0.138	0.453	6.929	12.441	10.866	14.094	5.236	3.858	3.858	1.732
BX 90 S	0.945 0.748(1)	1.969 1.575(1)	*M8* *M6(1)*	1.063 0.846(1)	0.315 0.236(1)								12.835		14.488				
BX 90 LA																			
BX 100 LA	1.102 0.945(1)	2.362 1.969(1)	*M10* *M8(1)*	1.220 1.063(1)	0.315 0.315(1)	8.465	7.087	9.843	0.551	0.157	0.551	7.677	16.142	13.780	18.189	5.591			1.969
BX 100 LB																			
BX 112 M											0.591	8.622	16.929	14.567	18.976	6.181			2.047
BX 132 SB	1.496 1.102(1)	3.150 2.362(1)	*M12* *M10(1)*	1.614 1.220(1)	0.394 0.315(1)	10.433	9.055	11.811			0.787	10.157	21.732	18.583	24.213	7.598	4.646	4.646	2.283
BX 132 MA																			
BX 160 MA	1.654 1.496(1)	4.331 3.150(1)	*M16* *M12(1)*	1.772 1.614(1)	0.472 0.394(1)	11.811	9.843	13.780	0.728	0.197	0.591	12.205	23.465	19.134	26.772	9.646	7.362	7.362	2.008
BX 160 MB													25.197	20.866	28.504				
BX 160 L																			
BX 180 M	1.890 1.654(1)	4.331 4.331(1)	*M16* *M16(1)*	2.028 1.772(1)	0.551 0.472(1)						0.709	13.701	27.874	23.543	32.402	10.276			2.047
BX 180 L																			

N.B.:
1) These values refer to the rear shaft end (PS).

BX_FA/FD CUS ; IM B5



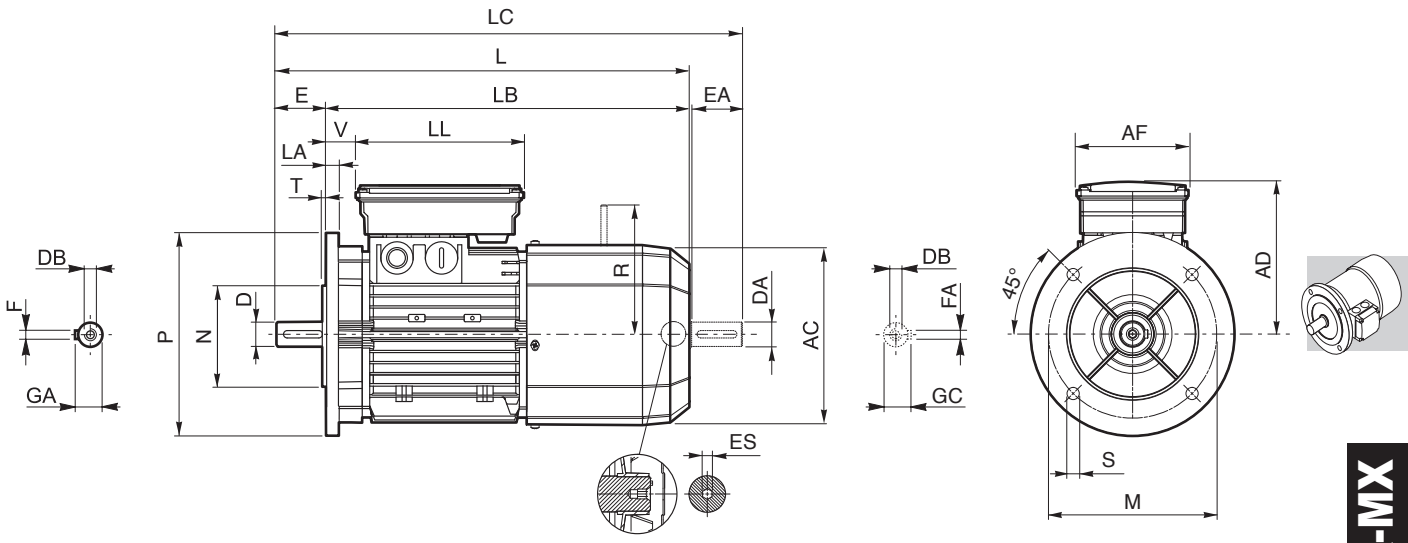


Dimensions are in [mm]

	Shaft					Housing						Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R FD	R FA	ES (2)
BX 90 SR	19 19(1)	40 40(1)	M6 M6(1)	21.5 21.5(1)	6 6(1)	165	130	200	11.5	3.5	11.5	176	400	360	442	146	110	165	32	129	134	6
BX 90 S	24 19(1)	50 40(1)	M8 M6(1)	27 21.5 (1)	8 6(1)								410		452							
BX 90 LA																				160	160	
BX 100 LA	28 24(1)	60 50(1)	M10 M8(1)	31 27(1)	8 8(1)	215	180	250	14	4	14	195	502	442	554	155			37			
BX 100 LB																						
BX 112 M											15	219	527	467	579	170			39	199	198	
BX 132 SB	38 28(1)	80 60(1)	M12 M10(1)	41 31(1)	10 8(1)	265	230	300			16	258	661	581	724	210	140	188	46	204	200	
BX 132 MA																					226	
BX 160 MA	42 38(1)	110 80(1)	M16 M12(1)	45 41(1)	12 10(1)	300	250	350	18.5	5	15	310	736	626	820	245	187	187	51	266	247	—
BX 160 MB													780	670	864							
BX 160 L																						
BX 180 M	48 42(1)	110 110(1)	M16 M16(1)	51.5 45(1)	14 12(1)						18	348	866	756	981	261			52	305	—	
BX 180 L																						

N.B.:
1) These values refer to the rear shaft end (PS).
2) “ES” hexagon is not present with PS option

BX_FA/FD CUS ; IM B5

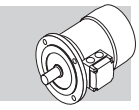


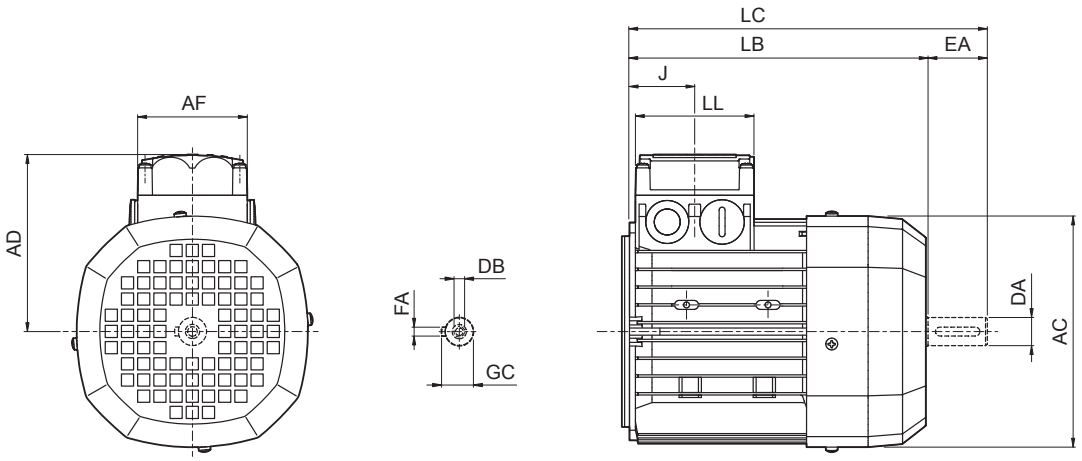
Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Housing						Motor										
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R FD	R FA	ES (2)
BX 90 SR	0.748 0.748(1)	1.575 1.575(1)	M6 M6(1)	0.846 0.846(1)	0.236 0.236(1)	6.496	5.118	7.874	0.453	0.138	0.453	6.929	15.748	14.173	17.402	5.748	4.331	6.496	1.260	5.079	5.276	0.236
BX 90 S	0.945 0.748(1)	1.969 1.575(1)	M8 M6(1)	1.063 0.846(1)	0.315 0.236(1)								16.142		17.795							
BX 90 LA																				6.299	6.299	
BX 100 LA	1.102 0.945(1)	2.362 1.969(1)	M10 M8(1)	1.220 1.063(1)	0.315 0.315(1)	8.465	7.087	9.843	0.551	0.157	0.551	7.677	19.764	17.402	21.811	6.102			1.457			
BX 100 LB																						
BX 112 M											0.591	8.622	20.748	18.386	22.795	6.693			1.535	7.835	7.795	
BX 132 SB	1.496 1.102(1)	3.150 2.362(1)	M12 M10(1)	1.614 1.220(1)	0.394 0.315(1)	10.433	9.055	11.811			0.630	10.157	26.024	22.874	28.504	8.268	5.512	7.402	1.811	8.031	7.874	
BX 132 MA																					8.898	
BX 160 MA	1.654 1.496(1)	4.331 3.150(1)	M16 M12(1)	1.772 1.614(1)	0.472 0.394(1)	11.811	9.843	13.780	0.728	0.197	0.591	12.205	28.976	24.646	32.283	9.646	7.362	7.362	2.008	10.472	9.724	—
BX 160 MB													30.709	26.378	34.016							
BX 160 L																						
BX 180 M	1.890 1.654(1)	4.331 4.331(1)	M16 M16(1)	2.028 1.772(1)	0.551 0.472(1)						0.709	13.701	34.094	29.764	38.622	10.276			2.047	12.008	—	
BX 180 L																						

N.B.:
1) These values refer to the rear shaft end (PS).
2) “ES” hexagon is not present with PS option

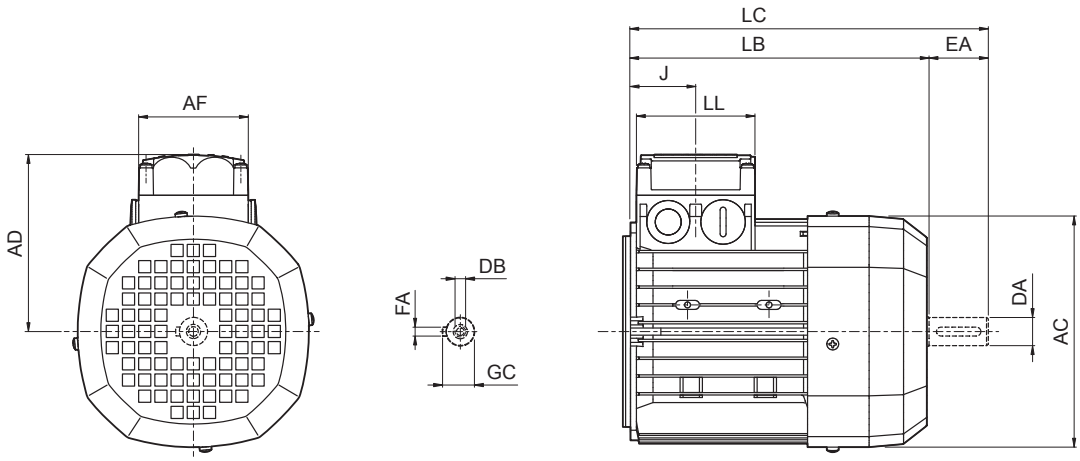
MX

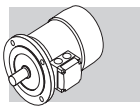




Dimensions are in [mm]

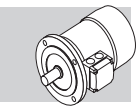
	Read shaft end					Motor						
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
MX 2SB	14	30	M5	16	5	156	246	278	74	80	44	119
MX 3SA	24	50	M8	27	8	195	265	317	98	98	53.5	142
MX 3SB												
MX 3LA							305	357				
MX 3LB												
MX 4SA	28	60	M10	31		258	361	424	118	118	64.5	193
MX 4SB												
MX 4LA							396	459				
MX 5SA	38	80	M12	41	10	310	418	502	187	187	77	245
MX 5SB							462	546				
MX 5LA												

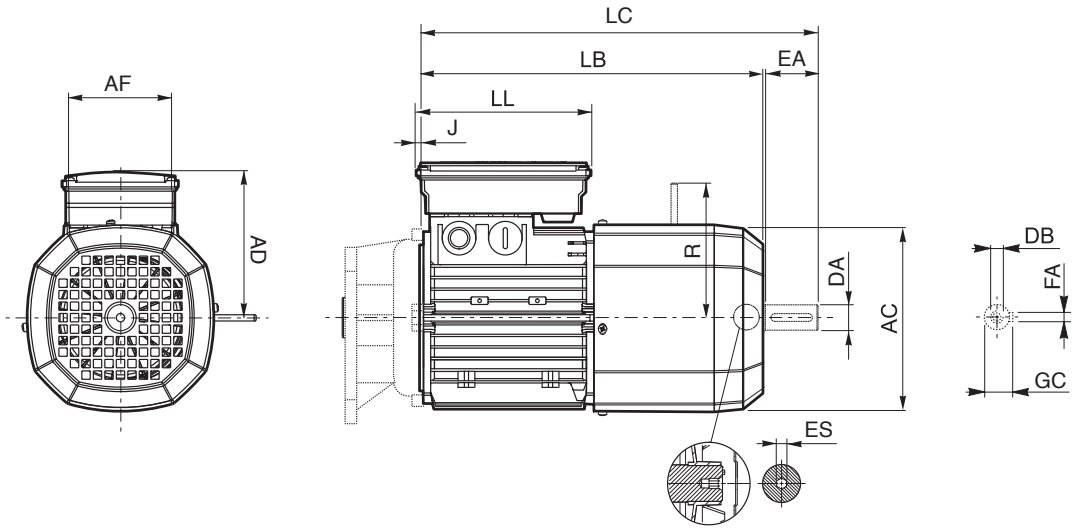




Dimensions are in Inch except when shown in *italic [mm]*

	Read shaft end					Motor						
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
MX 2SB	0.551	1.181	*M5*	0.630	0.197	6.142	9.685	10.945	2.913	3.150	1.732	4.685
MX 3SA	0.945	1.969	*M8*	1.063	0.315	7.677	10.433	12.480	3.858	3.858	2.106	5.591
MX 3SB												
MX 3LA							12.008	14.055				
MX 3LB												
MX 4SA	1.102	2.362	*M10*	1.220		10.157	14.213	16.693	4.646	4.646	2.539	7.598
MX 4SB												
MX 4LA							15.591	18.071				
MX 5SA	1.496	3.150	*M12*	1.614	0.394	12.205	16.457	19.764	7.362	7.362	3.031	9.646
MX 5SB							18.189	21.496				
MX 5LA												



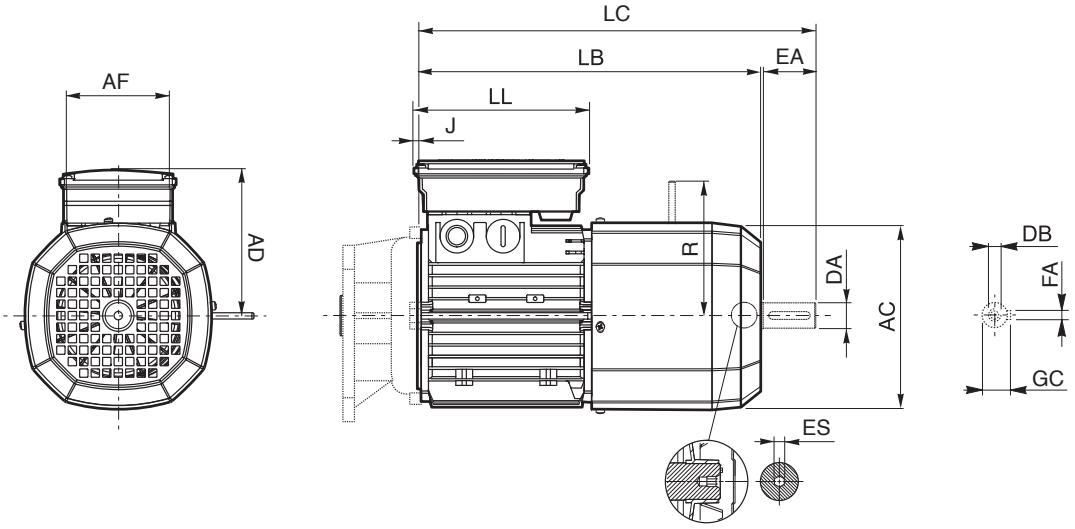


Dimensions are in [mm]

	Read shaft end					Motor									
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R FD FA**		**ES** [1]
MX 2SB	14	30	M5	16	5	156	318	349	98	133	9	143	129	134	5
MX 3SA	24	50	M8	27	8	195	355	407	110	165	7	155	160	160	6
MX 3SB															
MX 3LA							397	450							
MX 3LB															
MX 4SA	28	60	M10	31		258	470	534	140	188		210	204	200	
MX 4SB															
MX 4LA							494	558						226	
MX 5SA	38	80	M12	41	10	310	558	644	187	187	17	245	266	247	—
MX 5SB							602	686							
MX 5LA															

N.B.:
1) “ES” hexagon is not present with PS option

MX_FD/FA

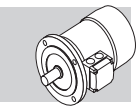


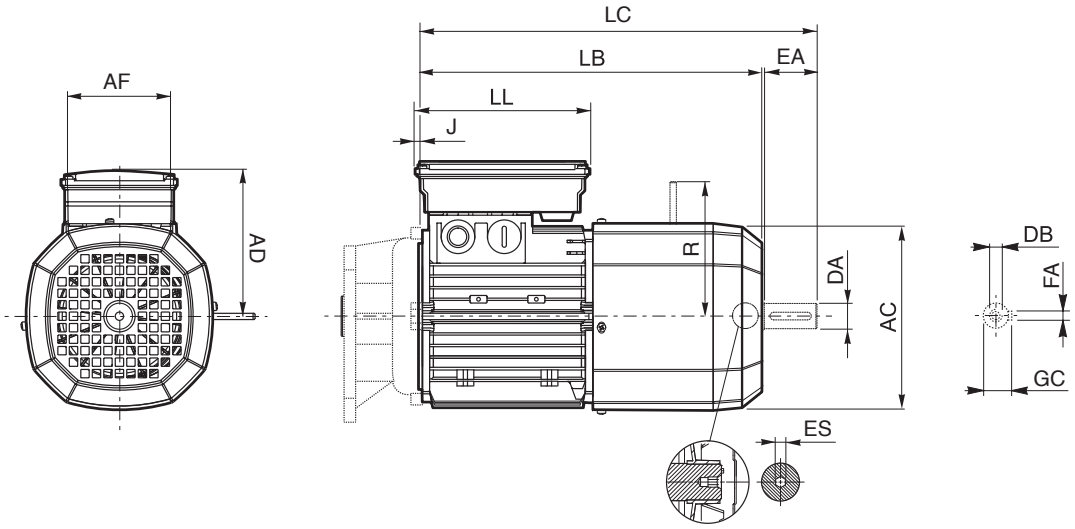
Dimensions are in Inch except when shown in *italic [mm]*

	Read shaft end					Motor									
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R FD FA**		**ES** [1]
MX 2SB	0.551	1.181	M5	0.630	0.197	6.142	12.520	13.740	3.858	5.236	0.354	5.630	5.079	5.276	0.197
MX 3SA	0.945	1.969	M8	1.063	0.315	7.677	13.976	16.024	4.331	6.496	0.276	6.102	6.299	6.299	0.236
MX 3SB															
MX 3LA							15.630	17.717							
MX 3LB															
MX 4SA	1.102	2.362	M10	1.220		10.157	18.504	21.024	5.512	7.402		8.268	8.031	7.874	
MX 4SB															
MX 4LA							19.449	21.969						8.898	
MX 5SA	1.496	3.150	M12	1.614	0.394	12.205	21.969	25.354	7.362	7.362	0.669	9.646	10.472	9.724	—
MX 5SB							23.701	27.008							
MX 5LA															

N.B.:
1) “ES” hexagon is not present with PS option

MX_FD/FA CUS





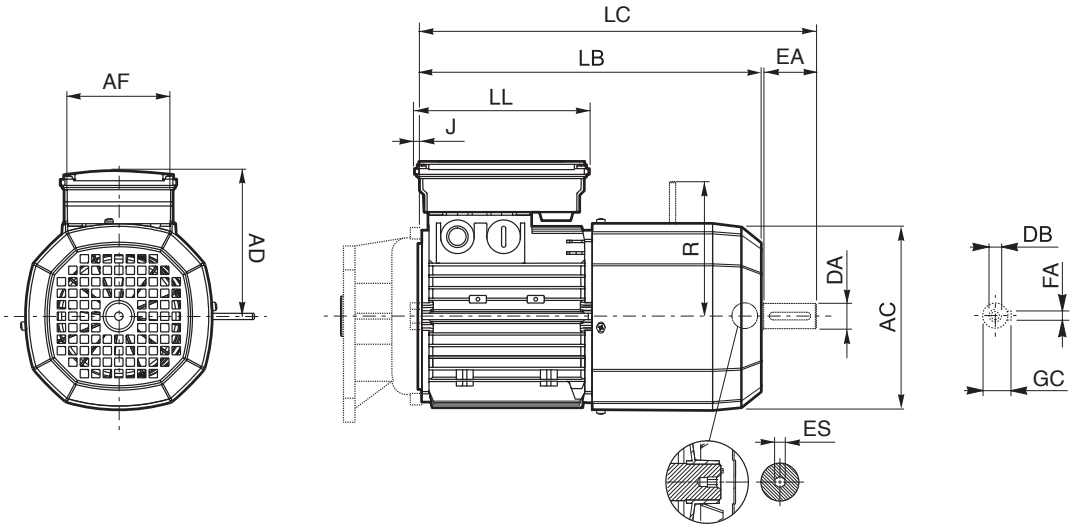
BX-MX

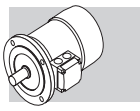
Dimensions are in [mm]

	Read shaft end					Motor									
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R FD**	**R FA**	**ES** [1]
MX 2SB	14	30	M5	16	5	176	347	379	110	165	-17	146	129	134	6
MX 3SA	24	50	M8	27	8	195	355	407			7	155	160	160	
MX 3SB															
MX 3LA							397	450							
MX 3LB															
MX 4SA	28	60	M10	31		258	470	534	140	188		210	204	200	
MX 4SB							528	592							
MX 4LA														226	
MX 5SA	38	80	M12	41	10	310	558	644	187	187	17	245	266	247	—
MX 5SB							602	686							
MX 5LA															

N.B.:
1) “ES” hexagon is not present with PS option

MX_FD/FA CUS





Dimensions are in Inch except when shown in *italic [mm]*

	Read shaft end					Motor									
	DA	**EA**	**DB**	**GC**	**FA**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R FD**	**R FA**	**ES** [1]
MX 2SB	0.551	1.181	M5	0.630	0.197	6.929	13.661	14.921	4.331	6.496	0.669	5.748	5.079	5.276	0.236
MX 3SA	0.945	1.969	M8	1.063	0.315	7.677	13.976	16.024			0.276	6.102	6.299	6.299	
MX 3SB															
MX 3LA							15.630	17.717							
MX 3LB															
MX 4SA	1.102	2.362	M10	1.220		10.157	18.504	21.024	5.512	7.402		8.268	8.031	7.874	
MX 4SB							20.787	23.307							
MX 4LA														8.898	
MX 5SA	1.496	3.150	M12	1.614	0.394	12.205	21.969	25.354	7.362	7.362	0.669	9.646	10.472	9.724	—
MX 5SB							23.701	27.008							
MX 5LA															

N.B.:
1) “ES” hexagon is not present with PS option

4 P	1800 rpm - S1	60 Hz - IE2

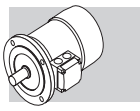
P_n HP	P_n kW		n rpm	T_n lb·in	In 460V A	η% 100%	η% 75%	η% 50%	cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m lb·ft²	IM B5 kg	IM B5 lbs
1	0.75	**BE 80B 4**	1745	36.3	1.46	82.5	81.1	77.6	0.78	7.6	3.5	3.2	K	0.0664	*12.2*	27
1.5	1.1	**BE 90S 4**	1740	53	2.25	84	82.7	79	0.73	7.7	3.5	3.2	L	0.0664	*13.6*	30
2	1.5	**BE 90LA 4**	1740	73	3.1	84.5	83.9	80.7	0.73	7.1	3.6	3.4	K	0.0807	*15.1*	33
3	2.2	**BE 100LA 4**	1745	106	4.2	87.5	85.5	83.2	0.76	7	3.3	2.9	J	0.1281	*22*	49
4	3	**BE 100LB 4**	1735	146	5.9	87.5	87.7	86.3	0.76	7	3.2	2.9	K	0.1448	*24*	53
5	3.7	**BE 112M 4**	1750	177	6.6	87.5	87.5	86.1	0.8	7.8	3.3	3.2	K	0.2492	*32*	71
7.5	5.5	**BE 132S 4**	1760	266	9.3	89.5	89.5	87.7	0.83	8.7	3.5	3.5	K	0.6407	*53*	117
10	7.5	**BE 132MA 4**	1760	363	12.7	89.5	89.5	87.9	0.83	8	3.4	3.3	K	0.7570	*59*	130
12.5	9.2	**BE 132MB 4**	1760	443	15.6	90	90	88.6	0.82	8.3	3.5	3.6	K	0.8543	*70*	154
15	11	**BE 160M 4**	1765	531	18.7	91	91	90	0.81	7.7	2.9	2.8	J	1.5425	*99*	218
20	15	**BE 160L 4**	1770	717	25.5	91	90.5	89.5	0.81	7.1	3.1	2.7	J	1.8747	*115*	254
25	18.5	**BE 180M 4**	1765	885	30.3	92.4	91.9	90.5	0.83	7.3	2.7	2.5	H	2.9663	*135*	298
30	22	**BE 180L 4**	1770	1053	36	92.4	92.5	92.2	0.83	8.1	3.3	3.2	J	3.9155	*157*	346

4 P	1800 rpm - S1	60 Hz - IE2

P_n HP	P_n kW		n rpm	T_n lb·in	In 460V A	η% 100%	η% 75%	η% 50%	cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m lb·ft²	IM B5 kg	IM B5 lbs
1	0.75	**ME 2SB 4**	1745	36.3	1.46	82.5	81.1	77.6	0.78	7.6	3.5	3.2	K	0.0664	*10.9*	24
1.5	1.1	**ME 3SA 4**	1740	53	2.25	84	82.5	80.5	0.73	6	2.9	2.7	J	0.0807	*15.5*	34
2	1.5	**ME 3SB 4**	1740	73	3.3	84.5	84	83	0.71	6.3	3.1	2.9	K	0.0949	*17*	37
3	2.2	**ME 3LA 4**	1745	106	4.2	87.5	85.5	83.2	0.76	7	3.3	2.9	J	0.1281	*21*	46
4	3	**ME 3LB 4**	1735	146	5.9	87.5	87.7	86.3	0.76	7	3.2	2.9	K	0.1448	*23*	51
5	3.7	**ME 4SA 4**	1740	177	6.7	87.5	85.6	82.9	0.79	7	3.3	2.9	J	0.5055	*42*	93
7.5	5.5	**ME 4SB 4**	1760	266	9.3	89.5	89.5	87.7	0.83	8.7	3.5	3.5	K	0.6407	*51*	112
10	7.5	**ME 4LA 4**	1760	363	12.7	89.5	89.5	87.9	0.83	8	3.4	3.3	K	0.7570	*57*	126
12.5	9.2	**ME 4LB 4**	1760	443	15.6	90	90	88.6	0.82	8.3	3.5	3.6	K	0.8543	*65*	143
15	11	**ME 5SA 4**	1765	531	18.7	91	91	90	0.81	7.7	2.9	2.8	J	1.5425	*85*	187
20	15	**ME 5LA 4**	1770	717	25.5	91	90.5	89.5	0.81	7.1	3.1	2.7	J	1.8747	*101*	223

2 P	3000 rpm - S1	50 Hz - IE2

P_n				n	T_n	In 400V	η%			cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m	IM B5	
HP	kW			rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs
1	0.75	**BE 80A**	**2**	2860	22.1	1.65	80	79.6	76.4	0.83	6.8	3.8	3.5	J	0.0214	*9.5*	21
1.5	1.1	**BE 80B**	**2**	2845	32.7	2.35	81.5	82.2	79.9	0.83	6.9	3.8	3.1	J	0.0271	*11.3*	25
2	1.5	**BE 90SA**	**2**	2865	44.3	3.2	81.3	80.7	78.1	0.82	6.8	3.6	2.8	J	0.0297	*12.3*	27
3	2.2	**BE 90L**	**2**	2870	65	4.7	83.2	83.1	80.8	0.82	6.9	3.1	2.9	J	0.0396	*14*	31
4	3	**BE 100L**	**2**	2880	88	6.2	84.6	84.6	83.7	0.83	7.3	3.5	3.1	J	0.0925	*23*	51
5.5	4	**BE 112M**	**2**	2920	116	8.2	85.8	85.5	84.3	0.82	7.9	3.5	3.1	K	0.1353	*28*	62
7.5	5.5	**BE 132SA**	**2**	2925	159	10.6	87	85	81.7	0.86	8.5	3.6	3.3	K	0.3441	*42*	93
10	7.5	**BE 132SB**	**2**	2935	212	14.3	88.1	87.4	84.7	0.86	8.8	3.9	3.6	K	0.4224	*53*	117
12.5	9.2	**BE 132MB**	**2**	2920	266	16.4	88.8	86.5	84.2	0.91	8.4	3.7	3.3	J	0.4983	*65*	143
15	11	**BE 160MA**	**2**	2940	319	20	89.4	89.5	88	0.89	8.1	3	2.9	J	0.8068	*84*	185
20	15	**BE 160MB**	**2**	2950	434	27.2	90.5	90.5	89.5	0.88	8.5	3	2.8	K	0.9967	*97*	214
25	18.5	**BE 160L**	**2**	2945	531	32	90.9	90.5	89.8	0.91	7.7	2.9	2.7	H	1.1628	*109*	240



BE-ME

4 P	1500 rpm - S1	50 Hz - IE2

P_n				n	T_n	In 400V	η%			cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m	IM B5	
HP	kW			rpm	lb·in	A	100%	75%	50%						lb·ft²	Kg	lbs
1	0.75	**BE 80B**	**4**	1430	44.3	1.65	81	80.5	78	0.81	6.1	3.2	3	H	0.0664	*12.2*	27
1.5	1.1	**BE 90S**	**4**	1430	65	2.53	82.5	82	79.5	0.76	6.3	2.9	2.8	J	0.0664	*13.6*	30
2	1.5	**BE 90LA**	**4**	1430	89	3.5	83.5	83	80	0.74	5.9	3.1	3	J	0.0807	*15.1*	33
3	2.2	**BE 100LA**	**4**	1430	130	4.9	85.4	85	84	0.76	5.8	3	2.8	H	0.1281	*22*	49
4	3	**BE 100LB**	**4**	1420	177	6.6	85.5	86	85.5	0.77	5.9	2.8	2.6	H	0.1448	*24*	53
5.5	4	**BE 112M**	**4**	1440	239	8.3	87	87	86	0.8	6.5	2.8	2.8	H	0.2492	*32*	71
7.5	5.5	**BE 132S**	**4**	1460	319	11.1	88.5	88.5	87.5	0.81	7.3	2.9	2.9	J	0.6407	*53*	117
10	7.5	**BE 132MA**	**4**	1460	434	14.8	89	89	88.5	0.82	6.9	2.9	2.8	H	0.7570	*59*	130
12.5	9.2	**BE 132MB**	**4**	1460	531	18.1	89.5	89.5	88.5	0.82	6.9	2.9	3	H	0.8543	*70*	154
15	11	**BE 160M**	**4**	1465	637	21.5	91	91.3	90.5	0.81	6.5	2.8	2.6	H	1.5425	*99*	218
20	15	**BE 160L**	**4**	1465	867	28.7	90.8	91	90.5	0.83	6.5	2.6	2.3	H	1.8747	*115*	254
25	18.5	**BE 180M**	**4**	1465	1071	35	91.6	92	91.3	0.83	6.5	2.6	2.5	H	2.9663	*135*	298
30	22	**BE 180L**	**4**	1465	1266	41	91.6	91.8	91.4	0.84	6.8	2.7	2.6	H	3.9155	*157*	346

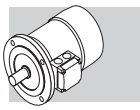
6 P	1000 rpm - S1	50 Hz - IE2

P_n HP	P_n kW		n rpm	T_n lb·in	In 400V A	η% 100%	η% 75%	η% 50%	cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs
1	0.75	**BE 90S 6**	935	68	2.06	75.9	75.9	73	0.69	5.1	3.1	2.9	J	0.0783	*15*	33
1.5	1.1	**BE 100M 6** (*)	945	98	2.75	78.1	76.2	73	0.74	4.9	2.2	1.9	G	0.1946	*22*	49
2	1.5	**BE 100LA 6**	945	135	3.9	79.8	77.5	74	0.72	5.6	2.5	2.3	J	0.2254	*24*	53
3	2.2	**BE 112M 6**	950	195	5.2	81.8	81.8	79.3	0.74	5.2	2.6	2.3	G	0.3987	*32*	71
4	3	**BE 132S 6**	955	266	6.6	83.3	83.3	82.4	0.79	6.1	2.1	1.9	H	0.7000	*44*	97
5.5	4	**BE 132MA 6**	965	354	8.7	84.6	85	83.1	0.79	6.9	2.2	2	J	0.9089	*56*	123
7.5	5.5	**BE 160MA 6** (*)	965	478	11.6	87	87	86.4	0.79	6.6	2.5	2.3	H	1.7561	*83*	183
10	7.5	**BE 160MB 6** (*)	965	655	15	88	88	87.2	0.82	6.6	2.3	2.1	H	2.3019	*103*	227

(*) Power /size relation not standardized

2 P	3000 rpm - S1	50 Hz - IE2

P_n HP	P_n kW			n rpm	T_n lb·in	In 400V A	η% 100%	η% 75%	η% 50%	cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m lb·ft²	IM B9 Kg	IM B9 lbs
1	0.75	**ME 2SA**	**2**	2860	22	1.63	80	79.6	76.4	0.83	6.8	3.8	3.5	J	0.0214	*8.8*	19
1.5	1.1	**ME 2SB**	**2**	2845	33	2.35	81.5	82.2	79.9	0.83	6.9	3.8	3.1	J	0.0271	*10.6*	23
2	1.5	**ME 3SA**	**2**	2845	44	3.2	81.3	79	76	0.84	6.1	2.9	2.7	H	0.0570	*15.5*	34
3	2.2	**ME 3LA**	**2**	2895	65	4.8	83.2	83.2	81.5	0.8	6.3	2.7	2.5	H	0.0736	*18.7*	41
4	3	**ME 3LB**	**2**	2880	88	6.2	84.6	84.6	83.7	0.83	7.3	3.5	3.1	J	0.0925	*22*	49
5.5	4	**ME 4SA**	**2**	2900	117	7.8	85.8	84.5	82.2	0.87	7	2.9	2.8	H	0.2397	*33*	73
7.5	5.5	**ME 4SB**	**2**	2925	159	10.6	87	85	81.7	0.86	8.5	3.6	3.3	K	0.3441	*40*	88
10	7.5	**ME 4LA**	**2**	2935	212	14.3	88.1	87.4	84.7	0.86	8.8	3.9	3.6	K	0.4224	*51*	112
12.5	9.2	**ME 4LB**	**2**	2920	266	16.4	88.8	86.5	84.2	0.91	8.4	3.7	3.3	J	0.4983	*60*	132
15	11	**ME 5SA**	**2**	2940	319	20	89.4	89.5	88	0.89	8.1	3	2.9	J	0.8068	*70*	154
20	15	**ME 5SB**	**2**	2950	434	27.2	90.5	90.5	89.5	0.88	8.5	3	2.8	K	0.9967	*83*	183
25	18.5	**ME 5LA**	**2**	2945	531	32	90.9	90.5	89.8	0.91	7.7	2.9	2.7	H	1.1628	*95*	209



BE-ME

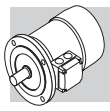
4 P	1500 rpm - S1	50 Hz - IE2

P_n HP	P_n kW			n rpm	T_n lb·in	In 400V A	η% 100%	η% 75%	η% 50%	cos φ	I_s/I_n	T_s/T_n	T_a/T_n	KVA Code	J_m lb·ft²	IM B9 Kg	IM B9 lbs
1	0.75	**ME 2SB**	**4**	1430	44	1.65	81	80.5	78	0.81	6.1	3.2	3	H	0.0664	*10.9*	24
1.5	1.1	**ME 3SA**	**4**	1430	65	2.6	82.5	82	79	0.74	5.5	2.5	2.8	H	0.0807	*15.5*	34
2	1.5	**ME 3SB**	**4**	1420	89	3.48	84	84	83	0.74	6.2	2.9	2.9	J	0.0949	*17*	37
3	2.2	**ME 3LA**	**4**	1430	130	4.89	85.4	85	84	0.76	5.8	3	2.8	H	0.1281	*21*	46
4	3	**ME 3LB**	**4**	1420	177	6.58	85.5	86	85.5	0.77	5.9	2.8	2.6	H	0.1448	*23*	51
5.5	4	**ME 4SA**	**4**	1440	239	8.25	87.5	86.8	84	0.8	7.1	3	3.1	J	0.5055	*42*	93
7.5	5.5	**ME 4SB**	**4**	1460	319	11.07	88.5	88.5	87.5	0.81	7.3	2.9	2.9	J	0.6407	*51*	112
10	7.5	**ME 4LA**	**4**	1460	434	14.83	89	89	88.5	0.82	6.9	2.9	2.8	H	0.7570	*57*	126
12.5	9.2	**ME 4LB**	**4**	1460	531	18.09	89.5	89.5	88.5	0.82	6.9	2.9	3	H	0.8543	*65*	143
15	11	**ME 5SA**	**4**	1465	637	21.54	91	91.3	90.5	0.81	6.5	2.8	2.6	H	1.5425	*85*	187
20	15	**ME 5LA**	**4**	1465	867	28.73	90.8	91	90.5	0.83	6.5	2.6	2.3	H	1.8747	*101*	223

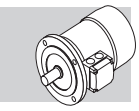
6 P	1000 rpm - S1	50 Hz - IE2

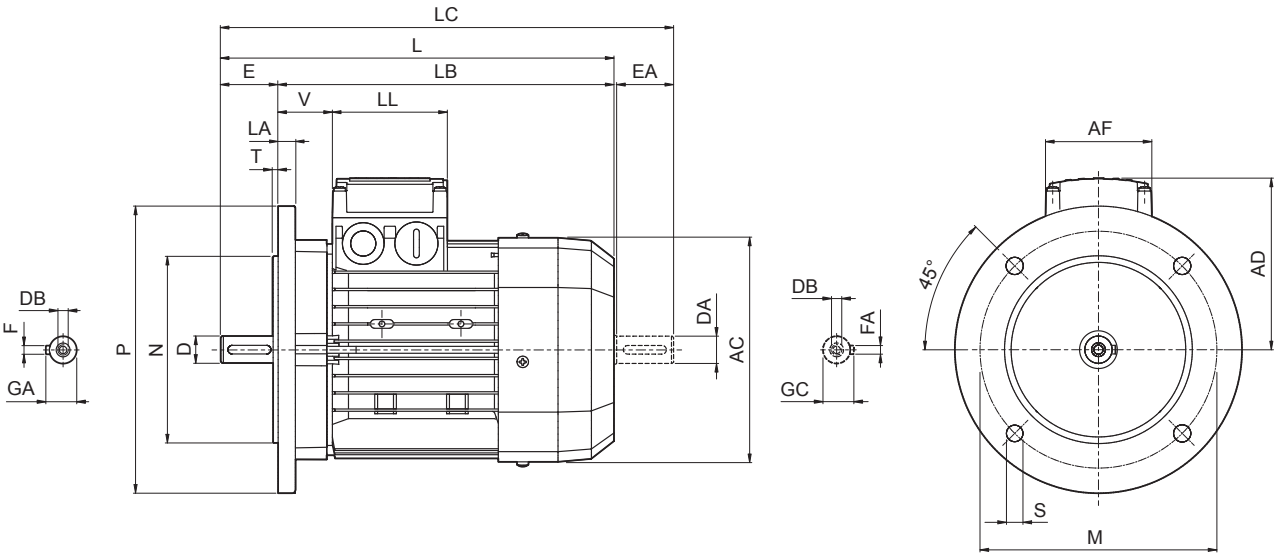
P_n HP	P_n kW			n rpm	T_n lb·in	In 400V A	η% 100%	η% 75%	η% 50%	cos φ	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B9 Kg	IM B9 lbs
1	0.75	**ME 3SA**	**6**	940	67	1.98	75.9	75	70.7	0.72	4.7	2.2	2	H	0.0783	*17*	37
1.5	1.1	**ME 3LA**	**6** (*)	945	98	2.75	78.1	76.2	73	0.74	4.9	2.2	1.9	G	0.1946	*21*	46
2	1.5	**ME 3LB**	**6**	945	135	3.8	79.8	77.5	74	0.72	5.6	2.5	2.3	J	0.2254	*23*	51
3	2.2	**ME 4SA**	**6**	955	195	4.9	81.8	81.8	80	0.8	5.7	1.9	1.7	H	0.5126	*34*	75
4	3	**ME 4SB**	**6**	955	266	6.6	83.3	83.3	82.4	0.79	6.1	2.1	1.9	H	0.7000	*43*	95
5.5	4	**ME 4LA**	**6**	965	354	8.6	84.6	85	83.1	0.79	6.9	2.2	2	J	0.9089	*54*	119
7.5	5.5	**ME 5SA**	**6** (*)	965	478	11.6	87	87	86.4	0.79	6.6	2.5	2.3	H	1.7561	*69*	152
10	7.5	**ME 5SB**	**6** (*)	965	655	15	88	88	87.2	0.82	6.6	2.3	2.1	H	2.3019	*89*	196

(*) Power /size relation not standardized



BE - IM B5

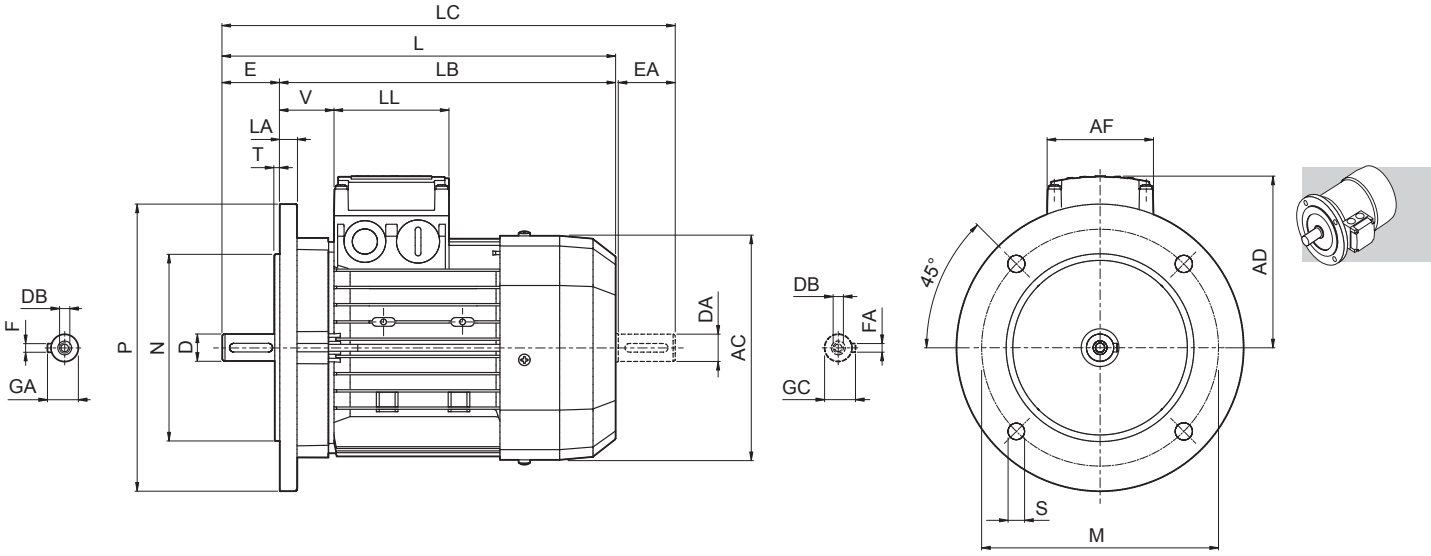




Dimensions are in [mm]

	Shaft					Flange						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BE 80	19	40	M6	21.5	6	165	130	200	11.5	3.5	11.5	156	274	234	315	119	74	80	38
BE 90 S	24	50	M8	27	8							176	326	276	378	133	98	98	44
BE 90 L																			
BE 100	28	60	M10	31		215	180	250	14	4	14	195	367	307	429	142			50
BE 112											15	219	385	325	448	157			52
BE 132 S	38	80	M12	41	10	265	230	300			20	258	493	413	576	193	118	118	58
BE 132 MA																			
BE 132 MB													528	448	611				
BE 160 M	42	110	M16	45	12	300	250	350	18.5	5	15	310	596	486	680	245	187	187	51
BE 160 L	38[1]	80[1]	M12[1]	41[1]	10[1]								640	530	724				
BE 180 M	48	110	M16	51.5	14						18	348	708	598	823	261			52
BE 180 L	42[1]	110[1]	M16[1]	45[1]	12[1]														

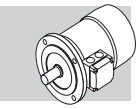
BE - IM B5

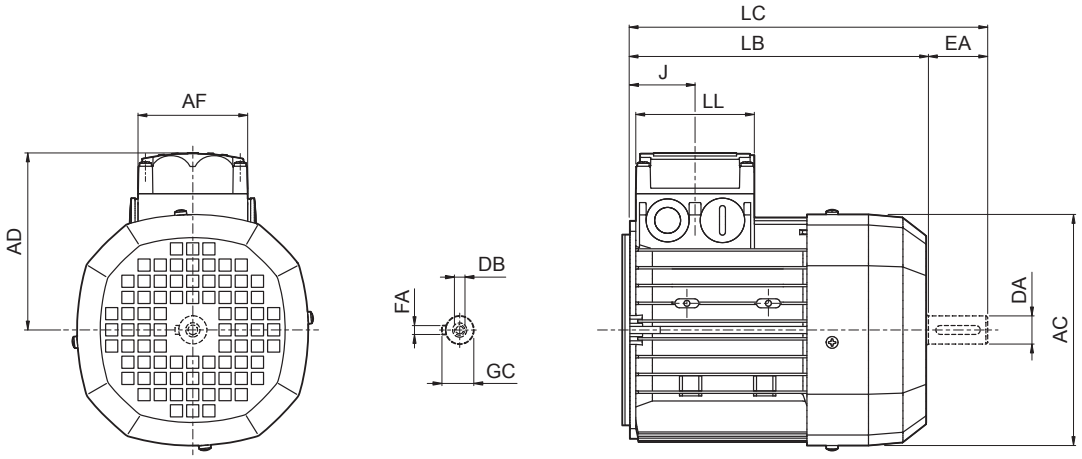


Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Flange						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BE 80	0.748	1.575	*M6*	0.846	0.236	6.496	5.118	7.874	0.453	0.138	0.453	6.142	10.787	9.213	12.402	4.685	2.913	3.150	1.496
BE 90 S	0.945	1.969	*M8*	1.063	0.315							6.929	12.835	10.866	14.882	5.236	3.858	3.858	1.732
BE 90 L																			
BE 100	1.102	2.362	*M10*	1.220		8.465	7.087	9.843	0.551	0.157	0.551	7.677	14.449	12.087	16.890	5.591			1.969
BE 112											0.591	8.622	15.157	12.795	17.638	6.181			2.047
BE 132 S	1.496	3.150	*M12*	1.614	0.394	10.433	9.055	11.811			0.787	10.157	19.409	16.260	22.677	7.598	4.646	4.646	2.283
BE 132 MA																			
BE 132 MB													20.787	17.638	24.055				
BE 160 M	1.654	4.331	*M16*	1.772	0.472	11.811	9.843	13.780	0.728	0.197	0.591	12.205	23.465	19.134	26.772	9.646	7.362	7.362	2.008
BE 160 L	1.496[(1)]	3.150[(1)]	*M12*[(1)]	1.615[(1)]	0.394[(1)]								25.197	20.866	28.504				
BE 180 M	1.890	4.331	*M16*	2.028	0.551						0.709	13.701	27.874	23.543	32.402	10.276			2.047
BE 180 L	1.654[(1)]	4.331[(1)]	*M16*[(1)]	1.772[(1)]	0.472[(1)]														

BE-ME

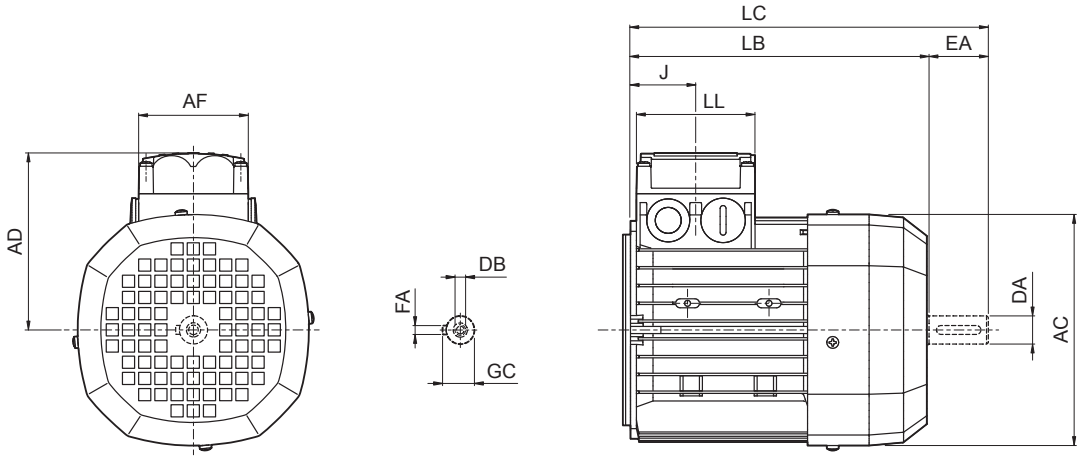


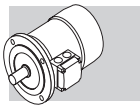


Dimensions are in [mm]

	Rear shaft end					Motor						
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
ME 2S	19	40	M6	6	21.5	156	202	245	74	80	44	119
ME 3S	28	60	M10	8	31	195	230	293	98	98	53.5	142
ME 3L							262	325				
ME 4S	38	80	M12	10	41	258	361	444	118	118	64.5	193
ME 4L												
ME 4LB							396	479				
ME 5S						310	418	502	187	187	77	245
ME 5L							462	546				

ME



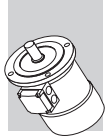


Dimensions are in Inch except when shown in *italic [mm]*

	Rear shaft end					Motor						
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
ME 2S	0.748	1.575	*M6*	0.236	0.846	6.142	7.953	9.646	2.913	3.150	1.732	4.685
ME 3S	1.102	2.362	*M10*	0.315	1.220	7.677	9.055	11.535	3.858	3.858	2.106	5.591
ME 3L							10.315	12.795				
ME 4S	1.496	3.150	*M12*	0.394	1.614	10.157	14.213	17.480	4.646	4.646	2.539	7.598
ME 4L												
ME 4LB							15.591	18.858				
ME 5S						12.205	16.457	19.764	7.362	7.362	3.031	9.646
ME 5L							18.189	21.496				

BN-M

BN-M



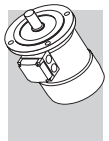
2P — 3600 rpm - S1 — 60 Hz

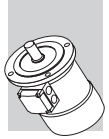
P_n			n	T_n	η	cosφ	I_n 460V	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m	IM B5		d.c. brake FD						a.c. brake FA					
															Mod	T_b	Z_o 1/h		J_m	IM B5		Mod	T_b	Z_o 1/h	J_m	IM B5	
hp	kW		rpm	lb•in	%		A					lb·ft²	kg	lbs		lb•in	NB	SB	lb·ft²	kg	lbs		lb•in		lb·ft²	kg	lbs
0.25	0.18	**BN 63A 2**	3360	4.7	58	0.74	0.55	3.7	2.9	2.4	H	0.0048	*3.5*	7.7	**FD 02**	15	2700	3300	0.0062	*4.9*	10.7	**FA 02**	15	3300	0.0062	*5.0*	11
0.33	0.25	**BN 63B 2**	3370	6.2	61	0.73	0.69	4.2	2.9	2.9	H	0.0055	*3.9*	8.6	**FD 02**	15	2700	3300	0.0071	*5.2*	11.5	**FA 02**	15	3300	0.0071	*5.4*	11.9
0.5	0.37	**BN 71A 2**	3420	9.2	71	0.77	0.86	5.8	3.3	3.1	J	0.0082	*5.4*	11.9	**FD 03**	30	2400	3200	0.0109	*7.5*	16.6	**FA 03**	30	3200	0.0109	*7.8*	17.2
0.75	0.55	**BN 71B 2**	3450	13.7	76	0.75	1.23	6.2	3.4	3.4	K	0.0097	*6.2*	13.7	**FD 03**	44	2200	2700	0.0126	*8.3*	18.2	**FA 03**	44	2700	0.0126	*8.6*	19
1	0.75	**BN 80A 2**	3440	18.3	76	0.76	1.62	5.9	3.1	2.8	J	0.0185	*8.6*	19	**FD 04**	44	1400	1700	0.0223	*11.8*	26	**FA 04**	44	1700	0.0223	*12.2*	27
1.5	1.1	**BN 80B 2**	3430	27.6	77	0.76	2.4	6.2	3.8	2.9	J	0.0214	*9.5*	21	**FD 04**	88	1200	1600	0.0252	*12.2*	27	**FA 04**	88	1600	0.0252	*13.2*	29
2	1.5	**BN 90SA 2**	3480	36.2	79	0.78	3.04	7.3	3.6	3.2	K	0.0297	*12.2*	27	**FD 14**	133	750	1000	0.0335	*15.4*	34	**FA 14**	133	1000	0.0335	*16.3*	36
3	2.2	**BN 90L 2**	3490	54	81	0.79	4.4	7.3	3.8	3.3	K	0.0397	*14.1*	31	**FD 05**	230	750	1000	0.0435	*18.6*	41	**FA 05**	230	1000	0.0435	*21*	46
5	3.7	**BN 100LB 2**	3490	90	84	0.83	6.7	6.7	2.9	3.3	J	0.0926	*23*	51	**FD 15**	354	360	500	0.102	*27*	59	**FA 15**	354	500	0.102	*30*	66
7.5	5.5	**BN 132SA 2**	3490	135	83	0.86	9.8	6.4	2.7	2.6	H	0.240	*35*	77	**FD 06**	440		400	0.266	*44*	98	**FA 06**	440	400	0.266	*49*	108
10	7.5	**BN 132SB 2**	3490	181	82	0.88	13	6.2	2.8	2.7	H	0.318	*42*	93	**FD 06**	440		350	0.344	*51*	113	**FA 06**	440	350	0.344	*56*	123
15	11	**BN 160MR 2**	3510	271	87	0.88	18.3	6.9	2.7	2.9	H	0.499	*65*	143													
20	15	**BN 160MB 2**	3510	359	86	0.9	24.2	6	2.5	2.8	G	0.808	*84*	185													
25	18.5	**BN 160L 2**	3520	449	88	0.91	29.2	6.9	2.8	2.7	H	0.998	*97*	214													
30	22	**BN 180M 2**	3520	537	88	0.91	35.1	6.9	2.8	2.8	H	1.164	*109*	240													
40	30	**BN 200LA 2**	3530	716	89	0.91	46.2	6.9	2.6	3.5	H	1.829	*140*	309													

4P — 1800 rpm - S1 — 60 Hz

P_n hp	P_n kW		n rpm	T_n lb•in	η %	cosφ	I_n 460V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 kg	IM B5 lbs	d.c. brake FD Mod	T_b lb•in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 kg	IM B5 lbs	a.c. brake FA Mod	T_b lb•in	Z_o 1/h	J_m lb·ft²	IM B5 kg	IM B5 lbs
0.08	0.06	**BN 56A 4**	1670	3	53	0.55	0.26	2.9	3.1	2.5	J	0.0036	*3.1*	6.8													
0.12	0.09	**BN 56B 4**	1670	4.5	59	0.52	0.37	2.8	2.9	3.0	H	0.0036	*3.1*	6.8													
0.16	0.12	**BN 63A 4**	1650	6.1	55	0.64	0.43	3.1	2.4	2.2	H	0.0048	*3.5*	7.7	**FD 02**	15	7000	9000	0.0062	*5.2*	11.5	**FA 02**	15	9000	0.0062	*5.0*	11
0.25	0.18	**BN 63B 4**	1670	9.4	58	0.59	0.68	3.1	2.8	2.4	H	0.0055	*3.9*	8.6	**FD 02**	30	7000	9000	0.0071	*5.6*	12.3	**FA 02**	30	9000	0.0071	*5.4*	11.9
0.33	0.25	**BN 71A 4**	1700	12.2	64	0.74	0.65	4.3	2.6	2.1	H	0.0138	*5.1*	11.2	**FD 03**	30	6000	8500	0.0164	*7.8*	17.2	**FA 03**	30	8500	0.0164	*7.5*	16.5
0.5	0.37	**BN 71B 4**	1700	18.5	66	0.73	0.97	4.5	2.6	2.4	H	0.0164	*5.9*	13	**FD 03**	44	4800	7500	0.0190	*8.6*	19	**FA 03**	44	7500	0.0190	*8.3*	18.3
0.75	0.55	**BN 80A 4**	1710	27.6	73	0.75	1.28	4.9	3	2.4	H	0.0356	*8.2*	18.1	**FD 04**	89	3400	7000	0.0394	*12.2*	27	**FA 04**	89	7000	0.0394	*11.8*	26
1	0.75	**BN 80B 4**	1720	36.6	78	0.75	1.6	6.2	3.4	3.1	J	0.0482	*10.0*	22	**FD 04**	133	3000	6000	0.0523	*13.6*	30	**FA 04**	133	6000	0.0523	*13.6*	30
1.5	1.1	**BN 90S 4**	1720	55	78	0.74	2.43	5.7	3.1	2.7	J	0.0499	*12.2*	27	**FD 14**	133	3000	7000	0.0546	*16.3*	36	**FA 14**	133	7000	0.0546	*16.3*	36
2	1.5	**BN 90LA 4**	1720	73	81	0.74	3.12	6.6	3.3	3.0	K	0.0665	*13.6*	30	**FD 05**	230	2200	4700	0.076	*19.5*	43	**FA 05**	230	4700	0.076	*20*	45
3	2.2	**BN 100LA 4**	1720	110	81	0.73	4.8	5.5	2.7	2.4	H	0.096	*18.1*	40	**FD 15**	354	1000	2700	0.105	*25*	55	**FA 15**	354	2700	0.105	*25*	55
5	3.7	**BN 100LC 4**	1730	182	84	0.74	7.5	5.6	2.8	2.9	K	0.145	*25*	55	**FD 55**	480		1200	0.154	*30*	66	**FA 15**	354	1200	0.154	*29*	64
5.5	4	**BN 112M 4**	1730	200	85	0.76	8	7	3.1	3.0	K	0.233	*30*	66	**FD 06S**	530		850	0.254	*40*	88	**FA 06S**	530	850	0.254	*42*	93
7.5	5.5	**BN 132S 4**	1730	273	84	0.84	10	6.3	2.9	2.6	H	0.506	*44*	97	**FD 56**	664		850	0.530	*57*	126	**FA 06**	664	850	0.530	*58*	128
10	7.5	**BN 132MA 4**	1740	362	85	0.84	13.1	6.1	2.9	2.9	H	0.641	*53*	117	**FD 06**	885		700	0.665	*66*	146	**FA 07**	885	700	0.665	*71*	157
15	11	**BN 160MR 4**	1740	543	88	0.81	19.4	6.5	3.1	3.0	H	0.855	*70*	154	**FD 07**	1328		600	0.907	*86*	190	**FA 07**	1328	600	0.907	*88*	194
20	15	**BN 160L 4**	1750	720	90	0.84	24.8	5.8	2.3	2.5	G	1.544	*99*	218	**FD 08**	1770		400	1.722	*129*	284	**FA 08**	1770	400	1.722	*128*	282
25	18.5	**BN 180M 4**	1760	895	90	0.83	31.3	5.8	2.5	3.0	G	1.876	*115*	254	**FD 08**	2210		300	2.054	*145*	320	**FA 08**	2210	300	2.054	*144*	317

BN-M



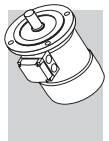


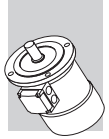
6P — 1200 rpm - S1 — 60 Hz

															d.c. brake							a.c. brake					
															FD							FA					
P_n			n	T_n	η	cosφ	I_n 460V	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m	IM B5		Mod	T_b	Z_o 1/h		J_m	IM B5		Mod	T_b	Z_o 1/h	J_m	IM B5	
hp	kW		rpm	lb•in	%		A					lb·ft²	kg	lbs		lb•in	NB	SB	lb·ft²	kg	lbs		lb•in		lb·ft²	kg	lbs
0.12	0.09	**BN 63A 6**	1100	6.9	47	0.5	0.48	2.8	2.9	2.3	K	0.0081	*4.6*	10.1	**FD 02**	30	7000	10000	0.0095	*6.3*	13.9	**FA 02**	30	10000	0.0095	*6.1*	13.4
0.16	0.12	**BN 63B 6**	1100	9.2	50	0.55	0.55	2.4	2.4	2.2	H	0.0088	*4.9*	10.8	**FD 02**	30	7000	10000	0.0102	*6.6*	14.6	**FA 02**	30	10000	0.0102	*6.4*	14.1
0.25	0.18	**BN 71A 6**	1100	14.3	61	0.65	0.57	3.3	2.6	2.0	G	0.0200	*5.5*	12.1	**FD 03**	44	6500	10000	0.0226	*8.2*	18.1	**FA 03**	44	10000	0.0226	*7.9*	17.4
0.33	0.25	**BN 71B 6**	1100	18.9	64	0.65	0.75	3.2	2.6	2.1	G	0.0259	*6.7*	14.8	**FD 03**	44	6200	8000	0.0285	*9.5*	21	**FA 03**	44	8000	0.0285	*9.1*	20
0.5	0.37	**BN 80A 6**	1130	27.9	67	0.65	1.07	3.9	2.6	2.5	H	0.0499	*10.0*	22	**FD 04**	88	4100	5500	0.0546	*13.6*	30	**FA 04**	88	5500	0.0546	*13.6*	30
0.75	0.55	**BN 80B 6**	1140	41.4	76	0.66	1.38	4.9	3.2	2.7	J	0.0594	*11.3*	25	**FD 04**	133	3800	5000	0.0641	*15.4*	34	**FA 04**	133	5000	0.0641	*15.0*	33
1	0.75	**BN 90S 6**	1140	55	73	0.63	2.05	4.5	2.9	2.8	K	0.0618	*13.2*	29	**FD 14**	133	2700	4000	0.0665	*16.8*	37	**FA 14**	133	4000	0.0665	*16.8*	37
1.5	1.1	**BN 90L 6**	1140	83	75	0.65	2.83	4.3	2.8	2.4	H	0.0784	*15.0*	33	**FD 05**	230	2000	3500	0.0879	*21*	46	**FA 05**	230	3500	0.0879	*22*	49
2	1.5	**BN 100LA 6**	1140	111	76	0.66	3.75	4.5	2.4	2.4	H	0.195	*22*	49	**FD 15**	354	1500	3000	0.204	*28*	62	**FA 15**	354	3000	0.204	*29*	64
3	2.2	**BN 112M 6**	1150	164	81	0.69	4.9	5.5	2.8	2.4	J	0.400	*32*	71	**FD 06S**	530		1250	0.420	*42*	93	**FA 06S**	530	1250	0.420	*44*	97
5	3.7	**BN 132MA 6**	1150	274	80	0.79	7.3	6.1	2.5	2.3	J	0.701	*44*	97	**FD 06**	885		900	0.724	*58*	128	**FA 07**	885	900	0.724	*63*	139
7.5	5.5	**BN 132MB 6**	1140	414	82	0.75	11.2	5.4	2.7	2.3	H	0.910	*56*	123	**FD 07**	1328		800	0.964	*72*	159	**FA 07**	1328	800	0.964	*74*	163
10	7.5	**BN 160M 6**	1160	543	85	0.82	13.5	5.8	2.3	2.4	G	1.758	*83*	183	**FD 08**	1500		550	1.936	*112*	247	**FA 08**	1500	550	1.936	*113*	249
15	11	**BN 160L 6**	1160	815	84	0.83	19.8	5.8	2.5	2.7	G	2.304	*103*	227	**FD 08**	1770		400	2.482	*133*	293	**FA 08**	1770	400	2.482	*133*	293

2P — 3600 rpm - S1 — 60 Hz

P_n hp	P_n kW		n rpm	T_n lb•in	η %	cosφ	I_n 460V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 kg	IM B5 lbs	d.c. brake FD Mod	T_b lb•in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 kg	IM B5 lbs	a.c. brake FA Mod	T_b lb•in	Z_o 1/h	J_m lb·ft²	IM B5 kg	IM B5 lbs
0.25	0.18	**M 05A**	**2**	3380	4.7	60	0.74	0.53	4.1	3	2.4	H	0.0048	*3.2*	7.1	**FD 02**	15	2700	3300	0.0062	*4.9*	10.8	**FA 02**	15	3300	0.0062	*4.7*	10.4
0.33	0.25	**M 05B**	**2**	3400	6.1	65	0.75	0.63	4.9	3.2	2.9	J	0.0055	*3.6*	7.9	**FD 02**	15	2700	3300	0.0071	*5.3*	11.7	**FA 02**	15	3300	0.0071	*5.1*	11.2
0.5	0.37	**M 05C**	**2**	3420	9.2	69	0.76	0.89	5.5	3.3	3.2	J	0.0062	*4.8*	10.6	**FD 02**	30	2500	3000	0.0078	*6.5*	14.3	**FA 02**	30	3000	0.0078	*6.3*	13.9
0.75	0.55	**M 1SD**	**2**	3450	13.7	76	0.75	1.23	6.2	3.4	3.4	K	0.0097	*5.8*	12.8	**FD 03**	44	2200	2700	0.0126	*8.5*	18.7	**FA 03**	44	2700	0.0126	*8.2*	18.1
1	0.75	**M 1LA**	**2**	3440	18.3	77	0.75	1.62	6.2	3.8	3.5	K	0.0119	*6.9*	15.2	**FD 03**	44	1500	2100	0.0145	*9.5*	21	**FA 03**	44	2100	0.0145	*9.5*	21
1.5	1.1	**M 2SA**	**2**	3430	27.6	77	0.76	2.4	6.2	3.8	2.9	J	0.0214	*8.8*	19.4	**FD 04**	88	1200	1600	0.0252	*12.7*	28	**FA 04**	88	1600	0.0252	*12.7*	28
2	1.5	**M 2SB**	**2**	3420	36.8	80	0.81	2.89	6	3.3	2.9	H	0.0271	*10.4*	23	**FD 04**	133	1000	1300	0.0309	*14.5*	32	**FA 04**	133	1300	0.0309	*14.5*	32
3	2.2	**M 3SA**	**2**	3430	55	81	0.83	4.2	6	2.4	3.2	H	0.0570	*15.4*	34	**FD 15**	230	800	1000	0.0665	*22*	49	**FA 15**	230	1000	0.0665	*23*	51
5	3.7	**M 3LB**	**2**	3490	92	84	0.83	6.7	6.7	2.9	3.2	J	0.0926	*22*	49	**FD 15**	354	360	500	0.102	*28*	62	**FA 15**	354	500	0.102	*29*	64
7.5	5.5	**M 4SA**	**2**	3490	135	83	0.86	9.8	6.4	2.7	2.6	H	0.240	*33*	72	**FD 06**	440		400	0.266	*46*	101	**FA 06**	440	400	0.266	*47*	104
10	7.5	**M 4SB**	**2**	3490	181	82	0.88	13	6.2	2.8	2.7	H	0.318	*40*	88	**FD 06**	440		350	0.344	*53*	117	**FA 06**	440	350	0.344	*65*	143
15	11	**M 4LC**	**2**	3510	271	87	0.88	18.3	6.9	2.7	2.9	H	0.499	*60*	132													
20	15	**M 5SB**	**2**	3510	359	86	0.9	24.2	6	2.5	2.8	G	0.808	*70*	154													
25	18.5	**M 5SC**	**2**	3520	449	88	0.91	29.2	6.9	2.8	2.7	H	0.998	*83*	183													
30	22	**M 5LA**	**2**	3520	537	88	0.91	35.1	6.9	2.8	2.8	H	1.164	*95*	209													



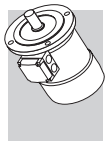


4P — 1800 rpm - S1 — 60 Hz

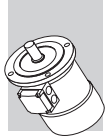
															d.c. brake							a.c. brake					
															FD							FA					
P_n			n	T_n	η	cosφ	I_n 460V	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m	IM B5		Mod	T_b	Z_o 1/h		J_m	IM B5		Mod	T_b	Z_o 1/h	J_m	IM B5	
hp	kW		rpm	lb•in	%		A					lb·ft²	kg	lbs		lb•in	NB	SB	lb·ft²	kg	lbs		lb•in		lb·ft²	kg	lbs
0.12	0.09	**M 0B 4**	1670	4.5	59	0.52	0.37	2.8	2.9	3.0	H	0.0036	*2.9*	6.4													
0.16	0.12	**M 05A 4**	1690	6	60	0.57	0.44	3.3	2.4	2.3	J	0.0048	*3.2*	7.1	**FD 02**	15	7000	9000	0.0062	*4.9*	10.8	**FA 02**	15	9000	0.0062	*4.7*	10.4
0.25	0.18	**M 05B 4**	1670	9.4	58	0.6	0.65	3.2	2.8	2.4	G	0.0055	*3.6*	7.9	**FD 02**	30	7000	9000	0.0071	*5.3*	11.7	**FA 02**	30	9000	0.0071	*5.1*	11.2
0.33	0.25	**M 05C 4**	1670	12.4	64	0.64	0.77	3.3	2.5	2.4	G	0.0078	*4.8*	10.6	**FD 02**	30	6000	8000	0.0093	*6.5*	14.3	**FA 02**	30	8000	0.0093	*6.3*	13.9
0.5	0.37	**M 1SD 4**	1700	18.5	66	0.73	0.96	4.5	2.6	2.4	G	0.0164	*5.5*	12.1	**FD 03**	44	4800	7500	0.0190	*8.2*	18.1	**FA 03**	44	7500	0.0190	*7.9*	17.4
0.75	0.55	**M 1LA 4**	1710	27.6	72	0.7	1.37	4.9	3	2.8	J	0.0216	*6.9*	15.2	**FD 53**	66	3400	7000	0.0242	*9.5*	21	**FA 53**	66	7000	0.0242	*9.5*	21
1	0.75	**M 2SA 4**	1720	36.6	78	0.75	1.61	6.2	3.4	3.1	J	0.0482	*9.1*	20	**FD 04**	133	3000	6000	0.0523	*13.2*	29	**FA 04**	133	6000	0.0523	*13.2*	29
1.5	1.1	**M 2SB 4**	1720	55	78	0.76	2.33	6.3	3.4	3.0	J	0.0594	*10.4*	23	**FD 04**	133	2000	4200	0.0641	*14.5*	32	**FA 04**	133	4200	0.0641	*14.5*	32
2	1.5	**M 3SA 4**	1720	73	82	0.73	3.15	5.7	2.9	2.6	J	0.0808	*15.4*	34	**FD 15**	230	1500	3000	0.0903	*22*	49	**FA 15**	230	3000	0.0903	*23*	51
3	2.2	**M 3LA 4**	1720	110	81	0.73	4.67	5.5	2.7	2.4	H	0.096	*16.8*	37	**FD 15**	354	1000	2700	0.105	*24*	53	**FA 15**	354	2700	0.105	*24*	53
5	3.7	**M 3LC 4**	1730	182	84	0.74	7.5	5.6	2.8	2.9	H	0.145	*23*	51	**FD 55**	480		1200	0.154	*29*	64	**FA 15**	354	1200	0.154	*30*	66
7.5	5.5	**M 4SA 4**	1730	273	84	0.84	9.8	6.3	2.9	2.6	H	0.506	*42*	93	**FD 56**	664		850	0.530	*55*	121	**FA 06**	664	850	0.530	*56*	124
10	7.5	**M 4LA 4**	1740	362	85	0.84	13.2	6.1	2.9	2.9	H	0.641	*51*	112	**FD 06**	885		700	0.665	*64*	141	**FA 06**	885	700	0.665	*65*	143
15	11	**M 4LC 4**	1740	543	88	0.81	19.4	6.5	3.1	3.0	H	0.855	*65*	143	**FD 07**	1328		600	0.907	*81*	179	**FA 07**	1328	600	0.907	*83*	183
20	15	**M 5SB 4**	1750	720	90	0.84	24.9	5.8	2.3	2.5	G	1.544	*85*	187	**FD 08**	1770		400	1.781	*115*	254	**FA 08**	1770	400	1.781	*114*	251
25	18.5	**M 5LA 4**	1760	895	90	0.83	31.1	5.8	2.5	3.0	G	1.876	*101*	223	**FD 08**	2210		300	2.054	*131*	289	**FA 08**	2210	300	2.054	*130*	287

6P — 1200 rpm - S1 — 60 Hz

																d.c. brake							a.c. brake					
																FD							FA					
P_n			n	T_n	η	cosφ	I_n 460V	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m	IM B5		Mod	T_b	Z_o 1/h		J_m	IM B5		Mod	T_b	Z_o 1/h	J_m	IM B5	
hp	kW		rpm	lb•in	%		A					lb·ft²	kg	lbs		lb•in	NB	SB	lb·ft²	kg	lbs		lb•in		lb·ft²	kg	lbs
0.12	0.09	**M 05A 6**	1100	6.9	47	0.46	0.52	2.4	2.9	2.3	K	0.0081	*4.3*	9.5	**FD 02**	30	7000	10000	0.0095	*6.0*	13.2	**FA 02**	30	10000	0.0095	*5.8*	12.8
0.16	0.12	**M 05B 6**	1100	9.2	49	0.54	0.57	2.3	2.4	2.2	H	0.0088	*4.6*	10.1	**FD 02**	30	7000	10000	0.0102	*6.3*	13.9	**FA 02**	30	10000	0.0102	*6.1*	13.4
0.25	0.18	**M 1SC 6**	1100	14.3	61	0.65	0.57	3.3	2.6	2.0	G	0.0200	*5.1*	11.2	**FD 03**	44	6500	10000	0.0226	*7.8*	17.2	**FA 03**	44	10000	0.0226	*7.5*	16.5
0.33	0.25	**M 1SD 6**	1100	18.9	64	0.65	0.75	3.2	2.6	2.1	G	0.0259	*6.3*	13.9	**FD 03**	44	6200	8000	0.0290	*9.0*	19.8	**FA 03**	44	8000	0.0290	*8.7*	19.2
0.5	0.37	**M 1LA 6**	1100	28.6	66	0.65	1.08	3.3	2.6	2.4	G	0.0306	*7.3*	16.1	**FD 53**	66	4000	7000	0.0330	*10.0*	22	**FA 03**	66	7000	0.0330	*9.5*	21
0.75	0.55	**M 2SA 6**	1140	41.4	76	0.66	1.38	4.9	3.2	2.7	J	0.0594	*10.4*	23	**FD 04**	133	3800	5000	0.0641	*14.5*	32	**FA 04**	133	5000	0.0641	*14.5*	32
1	0.75	**M 2SB 6**	1140	55	76	0.61	2.03	4.4	2.8	2.8	J	0.0665	*11.3*	25	**FD 04**	133	2700	5000	0.0713	*15.4*	34	**FA 04**	133	5000	0.0713	*15.4*	34
1.5	1.1	**M 3SA 6**	1140	83	74	0.68	2.74	4.4	2.4	2.2	H	0.147	*16.8*	37	**FD 15**	230	2300	4500	0.157	*23*	51	**FA 15**	230	4500	0.157	*24*	53
2	1.5	**M 3LA 6**	1140	111	76	0.66	3.75	4.5	2.4	2.4	H	0.195	*21*	46	**FD 15**	354	1500	3000	0.204	*27*	60	**FA 15**	354	3000	0.204	*28*	62
3	2.2	**M 3LC 6**	1140	166	77	0.68	5.3	5.1	2.6	2.6	J	0.226	*23*	51	**FD 55**	480		1500	0.235	*29*	64	**FA 15**	354	1500	0.235	*30*	66
5	3.7	**M 4LA 6**	1150	274	80	0.79	7.3	6.1	2.5	2.3	H	0.701	*43*	95	**FD 06**	885		900	0.724	*56*	123	**FA 06**	885	900	0.724	*57*	126
7.5	5.5	**M 4LB 6**	1140	414	82	0.75	11.2	5.4	2.7	2.3	H	0.910	*54*	119	**FD 07**	1328		800	0.964	*70*	154	**FA 07**	1328	800	0.964	*72*	159
10	7.5	**M 5SA 6**	1160	543	85	0.82	13.5	5.8	2.3	2.4	G	1.758	*69*	152	**FD 08**	1500		550	1.936	*98*	216	**FA 08**	1500	550	1.936	*98*	216
15	11	**M 5SB 6**	1160	815	84	0.83	19.8	5.8	2.5	2.7	G	2.304	*89*	196	**FD 08**	1770		400	2.482	*119*	262	**FA 08**	1770	400	2.482	*118*	260



BN-M



2P — 3000 rpm - S1 — 50 Hz

P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs	d.c. brake FD Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs	a.c. brake FA Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.18	0.25	**BN 63A 2**	2730	5.6	○	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	E	0.0005	*3.5*	7.7	**FD 02**	15	3900	4800	0.0006	*5.2*	11	**FA 02**	15	4800	0.0006	*5.0*	11
0.25	0.33	**BN 63B 2**	2740	7.7	○	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	E	0.0005	*3.9*	8.6	**FD 02**	15	3900	4800	0.0007	*5.6*	12	**FA 02**	15	4800	0.0007	*5.4*	12
0.37	0.5	**BN 63C 2**	2800	11.2	○	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	F	0.0008	*5.1*	11	**FD 02**	31	3600	4500	0.0009	*6.8*	15	**FA 02**	31	4500	0.0009	*6.6*	15
0.37	0.5	**BN 71A 2**	2820	11.1	○	73.8	73.0	70.6	0.76	0.95	4.8	2.8	2.6	H	0.0008	*5.4*	12	**FD 03**	31	3000	4100	0.0011	*8.1*	18	**FA 03**	31	4200	0.0011	*7.8*	17
0.55	0.75	**BN 71B 2**	2820	16.5	○	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	H	0.0010	*6.2*	14	**FD 03**	44	2900	4200	0.0013	*8.9*	20	**FA 03**	44	4200	0.0013	*8.6*	19
0.75	1	**BN 71C 2**	2810	23.0	○	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	H	0.0012	*7.3*	16	**FD 03**	44	1900	3300	0.0014	*10.0*	22	**FA 03**	44	3600	0.0014	*9.7*	21
0.75	1	**BN 80A 2**	2810	23.0	•	76.2	75.5	68.3	0.81	1.75	4.8	2.6	2.2	G	0.0019	*8.6*	19	**FD 04**	44	1700	3200	0.0022	*12.5*	28	**FA 04**	44	3200	0.0022	*12.4*	27
1.1	1.5	**BN 80B 2**	2800	33.6	•	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	G	0.0021	*9.5*	21	**FD 04**	89	1500	3000	0.0025	*13.4*	30	**FA 04**	89	3000	0.0025	*13.3*	29
1.5	2	**BN 80C 2**	2800	45	•	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	G	0.0027	*11.3*	25	**FD 04**	133	1300	2600	0.0031	*15.2*	34	**FA 04**	133	2600	0.0031	*15.1*	33
1.5	2	**BN 90SA 2**	2870	44	•	82.0	81.5	78.1	0.80	3.4	5.9	2.7	2.6	H	0.0030	*12.3*	27	**FD 14**	133	900	2200	0.0033	*16.5*	36	**FA 14**	133	2200	0.0033	*16.4*	36
1.85	2.5	**BN 90SB 2**	2880	54	•	82.5	82.0	75.4	0.80	4.0	6.2	2.9	2.6	H	0.0040	*14*	31	**FD 14**	133	900	2200	0.0043	*18.2*	40	**FA 14**	133	2200	0.0043	*18.1*	40
2.2	3	**BN 90L 2**	2880	65	•	82.7	82.1	80.8	0.80	4.8	6.3	2.9	2.7	J	0.0040	*14*	31	**FD 05**	230	900	2200	0.0050	*20*	44	**FA 05**	230	2200	0.0050	*20.7*	46
3	4	**BN 100L 2**	2860	89	•	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	H	0.0074	*20*	44	**FD 15**	230	700	1600	0.0083	*26*	57	**FA 15**	230	1600	0.0083	*27*	60
4	5.5	**BN 100LB 2**	2870	118	•	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	H	0.0093	*23*	51	**FD 15**	354	450	900	0.0102	*29*	64	**FA 15**	354	1000	0.0102	*30*	66
4	5.5	**BN 112M 2**	2900	117	•	85.5	84.5	83.0	0.82	8.2	6.9	3.0	2.9	J	0.0135	*28*	62	**FD 06S**	354	—	950	0.0157	*39*	86	**FA 06S**	354	950	0.0157	*40*	88
5.5	7.5	**BN 132SA 2**	2890	161	•	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	G	0.0240	*35*	77	**FD 06**	443	—	600	0.0266	*48*	106	**FA 06**	443	600	0.0266	*49*	108
7.5	10	**BN 132SB 2**	2900	221	•	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	H	0.0344	*42*	93	**FD 06**	443	—	550	0.0365	*55*	121	**FA 06**	443	550	0.0365	*56*	123
9.2	12.5	**BN 132M 2**	2930	266	•	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	H	0.0422	*53*	117	**FD 56**	664	—	430	0.0449	*66*	146	**FA 06**	664	430	0.0449	*67*	148
11	15	**BN 160MR 2**	2920	319	•	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	H	0.0498	*65*	143													
15	20	**BN 160MB 2**	2930	434	•	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	H	0.0807	*84*	185													
18.5	25	**BN 160L 2**	2930	531	•	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	J	0.0997	*97*	214													
22	30	**BN 180M 2**	2930	637	•	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	J	0.116	*109*	240													
30	40	**BN 200LA 2**	2930	867	•	90.7	90.1	87.6	0.89	54	7.8	2.7	2.9	J	0.183	*140*	309													

○ = n.a. • = IE1

4P — 1500 rpm - S1 — 50 Hz

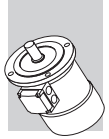
P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.06	0.08	**BN 56A**	**4**	1340	3.8	○	46.8	44.2	41.3	0.65	0.28	2.6	2.3	2.0	H	0.0004	*3.1*	6.8
0.09	0.12	**BN 56B**	**4**	1350	5.7	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	H	0.0004	*3.1*	6.8
0.12	0.16	**BN 63A**	**4**	1350	7.5	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	F	0.0005	*3.5*	7.7
0.18	0.25	**BN 63B**	**4**	1320	11.5	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	F	0.0005	*3.9*	8.6
0.25	0.33	**BN 63C**	**4**	1340	15.8	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	E	0.0008	*5.1*	11
0.25	0.33	**BN 71A**	**4**	1380	15.3	○	63.7	62.2	59.1	0.73	0.78	3.3	1.9	1.7	F	0.0014	*5.1*	11
0.37	0.5	**BN 71B**	**4**	1370	23.0	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	F	0.0016	*5.9*	13
0.55	0.75	**BN 71C**	**4**	1380	33.6	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	G	0.0022	*7.3*	16
0.55	0.75	**BN 80A**	**4**	1390	33.6	○	72.0	71.3	69.7	0.77	1.43	4.1	2.3	2.0	F	0.0036	*8.2*	18
0.75	1	**BN 80B**	**4**	1400	45	•	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	H	0.0047	*9.9*	22
1.1	1.5	**BN 80C**	**4**	1400	66	•	75.5	76.2	70.4	0.78	2.7	5.1	2.8	2.5	H	0.0059	*11.3*	25
1.1	1.5	**BN 90S**	**4**	1390	67	•	76.5	76.2	72.2	0.77	2.70	4.6	2.6	2.2	G	0.0050	*12.2*	27
1.5	2	**BN 90LA**	**4**	1410	90	•	78.7	78.5	74.9	0.77	3.6	5.3	2.8	2.4	H	0.0066	*13.6*	30
1.85	2.5	**BN 90LB**	**4**	1390	112	•	78.6	78.9	77.2	0.79	4.3	5.1	2.8	2.6	G	0.0071	*15.1*	33
2.2	3	**BN 100LA**	**4**	1410	132	•	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	F	0.0095	*18*	40
3	4	**BN 100LB**	**4**	1410	177	•	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	G	0.0128	*22*	49
4	5.5	**BN 112M**	**4**	1430	239	•	84.4	84.2	81.6	0.81	8.4	5.6	2.7	2.5	G	0.0233	*30*	66
5.5	7.5	**BN 132S**	**4**	1440	319	•	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	G	0.0505	*44*	97
7.5	10	**BN 132MA**	**4**	1440	443	•	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	H	0.0641	*53*	117
9.2	12.5	**BN 132MB**	**4**	1440	540	•	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	H	0.0757	*59*	130
11	15	**BN 160MR**	**4**	1440	646	•	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	G	0.0854	*70*	154
15	20	**BN 160L**	**4**	1460	867	•	88.7	88.5	88.4	0.81	30	6.0	2.3	2.1	G	0.154	*99*	218
18.5	25	**BN 180M**	**4**	1460	1071	•	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	H	0.187	*115*	254
22	30	**BN 180L**	**4**	1460	1275	•	89.9	90.0	90.0	0.80	44	6.4	2.5	2.5	G	0.297	*135*	298
30	40	**BN 200L**	**4**	1460	1735	•	91.4	91.7	91.0	0.80	59	7.1	2.7	2.8	J	0.392	*157*	346

d.c. brake — FD								a.c. brake — FA					
Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs		Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
FD 02	15	10000	13000	0.0006	*5.2*	11		**FA 02**	15	13000	0.0006	*5.0*	11
FD 02	31	10000	13000	0.0007	*5.6*	12		**FA 02**	31	13000	0.0007	*5.4*	12
FD 02	31	7800	10000	0.0009	*6.8*	15		**FA 02**	31	10000	0.0009	*6.6*	15
FD 03	31	7700	11000	0.0016	*7.8*	17		**FA 03**	31	11000	0.0016	*7.5*	17
FD 03	44	6000	9400	0.0019	*8.6*	19		**FA 03**	44	9400	0.0019	*8.3*	18
FD 53	66	4300	8700	0.0024	*10.0*	22		**FA 03**	66	8700	0.0024	*9.7*	21
FD 04	89	4100	8000	0.0039	*12.1*	27		**FA 04**	89	8000	0.0039	*12.0*	26
FD 04	133	4100	7800	0.0052	*13.8*	30		**FA 04**	133	7800	0.0052	*13.7*	30
FD 04	133	2600	5300	0.0064	*15.2*	34		**FA 04**	133	5300	0.0064	*15.1*	33
FD 14	133	4800	8000	0.0055	*16.4*	36		**FA 14**	133	8000	0.0055	*16.3*	36
FD 05	230	3400	6000	0.0076	*19.6*	43		**FA 05**	230	6000	0.0076	*20.3*	45
FD 05	230	3200	5900	0.0081	*21.1*	47		**FA 05**	230	5900	0.0081	*21.8*	48
FD 15	354	2600	4700	0.0104	*25*	55		**FA 15**	354	4700	0.0104	*25*	55
FD 15	354	2400	4400	0.0138	*28*	62		**FA 15**	354	4400	0.0138	*29*	64
FD 06S	531	—	1400	0.0254	*40*	88		**FA 06S**	531	2100	0.0254	*42*	93
FD 56	664	—	1050	0.0529	*57*	126		**FA 06**	664	1200	0.0529	*58*	128
FD 06	885	—	950	0.0664	*66*	146		**FA 07**	885	1000	0.0664	*71*	157
FD 07	1328	—	900	0.0812	*75*	165		**FA 07**	1328	900	0.0812	*77*	170
FD 07	1328	—	850	0.0906	*86*	190		**FA 07**	1328	850	0.0906	*88*	194
FD 08	1770	—	750	0.172	*129*	284		**FA 08**	1770	750	0.168	*128*	282
FD 08	2213	—	700	0.205	*145*	320		**FA 08**	2213	700	0.202	*144*	317
FD 09	2655	—	400	0.344	*175*	386							
FD 09	3540	—	300	0.439	197	434							

○ = n.a. • = IE1

BN-M

BN-M



6P — 1000 rpm - S1 — 50 Hz

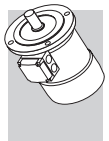
P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs	d.c. brake FD Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs	a.c. brake FA Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.09	0.12	**BN 63A 6**	880	8.7	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	J	0.0008	*4.6*	10	**FD 02**	31	9000	14000	0.0015	*6.3*	14	**FA 02**	31	14000	0.0009	*6.1*	13
0.12	0.16	**BN 63B 6**	870	11.7	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	G	0.0009	*4.9*	11	**FD 02**	31	9000	14000	0.0016	*6.6*	15	**FA 02**	31	14000	0.0010	*6.4*	14
0.18	0.25	**BN 71A 6**	900	16.9	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	F	0.0020	*5.5*	12	**FD 03**	44	8100	13500	0.0019	*8.2*	18	**FA 03**	44	13500	0.0023	*7.9*	17
0.25	0.33	**BN 71B 6**	900	23.9	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	D	0.0026	*6.7*	15	**FD 03**	44	7800	13000	0.0022	*9.4*	21	**FA 03**	44	13000	0.0028	*9.1*	20
0.37	0.5	**BN 71C 6**	910	34.5	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	E	0.0031	*7.7*	17	**FD 53**	66	5100	9500	0.0025	*10.4*	23	**FA 03**	66	9500	0.0033	*10.1*	22
0.37	0.5	**BN 80A 6**	910	34.5	○	68.0	67.4	63.3	0.68	1.15	3.2	2.2	2.0	F	0.0050	*9.9*	22	**FD 04**	89	5200	8500	0.0033	*13.8*	30	**FA 04**	89	8500	0.0055	*13.7*	30
0.55	0.75	**BN 80B 6**	920	50	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	G	0.0059	*11.3*	25	**FD 04**	133	4800	7200	0.0036	*15.2*	34	**FA 04**	133	7200	0.0064	*15.1*	33
0.75	1	**BN 80C 6**	920	69	•	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	G	0.0066	*12.2*	27	**FD 04**	133	3400	6400	0.0038	*16.1*	35	**FA 04**	133	6400	0.0071	*16.0*	35
0.75	1	**BN 90S 6**	920	69	•	70.0	69.0	64.2	0.68	2.27	3.8	2.4	2.2	G	0.0062	*12.6*	28	**FD 14**	133	3400	6500	0.0040	*16.8*	37	**FA 14**	133	6500	0.0066	*16.7*	37
1.1	1.5	**BN 90L 6**	920	101	•	72.9	72.6	69.1	0.69	3.2	3.9	2.3	2.0	G	0.0078	*15*	33	**FD 05**	230	2700	5000	0.0050	*21*	46	**FA 05**	230	5000	0.0088	*22*	49
1.5	2	**BN 100LA 6**	940	135	•	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	G	0.0195	*22*	49	**FD 15**	354	1900	4100	0.0066	*28*	62	**FA 15**	354	4100	0.0204	*29*	64
1.85	2.5	**BN 100LB 6**	930	168	•	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	G	0.0225	*24*	53	**FD 15**	354	1700	3600	0.0071	*30*	66	**FA 15**	354	3600	0.0235	*31*	68
2.2	3	**BN 112M 6**	940	195	•	78.5	79.0	76.5	0.73	5.5	4.8	2.2	2.0	H	0.0399	*32*	71	**FD 06S**	531	—	2100	0.0100	*42*	93	**FA 06S**	531	2100	0.0420	*44*	97
3	4	**BN 132S 6**	940	266	•	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	G	0.0513	*36*	79	**FD 56**	664	—	1400	0.0116	*49*	108	**FA 06**	664	1400	0.0536	*50*	110
4	5.5	**BN 132MA 6**	950	354	•	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	H	0.0700	*45*	99	**FD 06**	885	—	1200	0.0138	*58*	128	**FA 07**	885	1200	0.0755	*63*	139
5.5	7.5	**BN 132MB 6**	945	496	•	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	H	0.0909	*56*	123	**FD 07**	1328	—	1050	0.0171	*72*	159	**FA 07**	1328	1050	0.0963	*74*	163
7.5	10	**BN 160M 6**	955	664	•	85.0	85.0	84.8	0.81	15.7	5.9	2.2	2.0	H	0.176	*83*	183	**FD 08**	1505	—	900	0.0266	*112*	247	**FA 08**	1505	900	0.193	*113*	249
11	15	**BN 160L 6**	960	965	•	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	H	0.230	*103*	227	**FD 08**	1770	—	800	0.0316	*133*	293	**FA 08**	1770	800	0.248	*133*	293
15	20	**BN 180L 6**	970	1310	•	87.7	88.0	87.3	0.82	30	6.2	2.0	2.4	H	0.368	*130*	287	**FD 09**	2655	—	600	0.0403	*170*	375						
18.5	25	**BN 200LA 6**	960	1629	•	88.6	88.0	87.3	0.81	37	5.9	2.0	2.3	G	0.403	*145*	320	**FD 09**	3540	—	450	0.0439	*185*	408						

○ = n.a. • = IE1

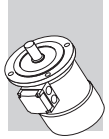
2P — 3000 rpm - S1 — 50 Hz

P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs	d.c. brake FD Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs	a.c. brake FA Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.18	0.25	**M 05A 2**	2730	5.6	○	59.9	56.9	51.9	0.77	0.56	3.0	2.1	2.0	F	0.0005	*3.2*	7.1	**FD 02**	15	3900	4800	0.0006	*4.9*	11	**FA 02**	15	4800	0.0006	*4.7*	10
0.25	0.33	**M 05B 2**	2740	7.7	○	66.0	64.8	64.8	0.76	0.72	3.3	2.3	2.3	D	0.0005	*3.6*	7.9	**FD 02**	15	3900	4800	0.0007	*5.3*	12	**FA 02**	15	4800	0.0007	*5.1*	11
0.37	0.5	**M 05C 2**	2800	11.2	○	69.1	66.8	66.8	0.78	0.99	3.9	2.6	2.6	A	0.0008	*4.8*	11	**FD 02**	31	3600	4500	0.0009	*6.5*	14	**FA 02**	31	4500	0.0009	*6.3*	14
0.55	0.75	**M 1SD 2**	2820	16.5	○	76.0	75.8	74.8	0.76	1.37	5.0	2.9	2.8	A	0.0010	*5.8*	13	**FD 03**	44	2900	4200	0.0013	*8.5*	19	**FA 03**	44	4200	0.0013	*8.2*	18
0.75	1	**M 1LA 2**	2810	23.0	○	76.6	76.2	76.2	0.76	1.86	5.1	3.1	2.8	J	0.0012	*6.9*	15	**FD 03**	44	1900	3300	0.0014	*9.6*	21	**FA 03**	44	3300	0.0014	*9.3*	21
1.1	1.5	**M 2SA 2**	2800	33.6	•	76.4	76.2	75.0	0.81	2.57	4.8	2.8	2.4	H	0.0021	*8.8*	19	**FD 04**	89	1500	3000	0.0025	*11.9*	26	**FA 04**	89	3000	0.0025	*12.6*	28
1.5	2	**M 2SB 2**	2800	45	•	79.1	79.5	77.2	0.81	3.4	4.9	2.7	2.4	F	0.0027	*10.6*	23	**FD 04**	133	1300	2600	0.0031	*9.9*	22	**FA 04**	133	2600	0.0031	*14.4*	32
2.2	3	**M 3SA 2**	2880	65	•	82.7	82.1	81.0	0.80	4.8	6.3	2.9	2.7	K	0.0057	*15.5*	34	**FD 15**	230	1100	2400	0.0066	*22*	49	**FA 15**	230	2400	0.0066	*23*	51
3	4	**M 3LA 2**	2860	89	•	81.5	81.3	77.4	0.79	6.7	5.6	2.6	2.2	J	0.0074	*18.7*	41	**FD 15**	230	700	1600	0.0083	*25*	55	**FA 15**	230	1600	0.0083	*26*	57
4	5.5	**M 3LB 2**	2870	118	•	83.1	83.0	77.8	0.80	8.7	5.8	2.7	2.5	A	0.0093	*22*	49	**FD 15**	354	450	900	0.0102	*28*	62	**FA 15**	354	900	0.0102	*29*	64
5.5	7.5	**M 4SA 2**	2890	161	•	84.7	84.5	81.2	0.84	11.2	5.9	2.6	2.2	H	0.0240	*33*	73	**FD 06**	443	—	600	0.0266	*46*	101	**FA 06**	443	600	0.0266	*47*	104
7.5	10	**M 4SB 2**	2900	221	•	86.5	86.3	84.4	0.85	14.7	6.4	2.6	2.2	J	0.0344	*40*	88	**FD 06**	443	—	550	0.0365	*53*	117	**FA 06**	443	550	0.0365	*54*	119
9.2	12.5	**M 4LA 2**	2930	266	•	87.0	86.5	83.6	0.86	17.7	6.7	2.8	2.3	J	0.0422	*51*	112	**FD 56**	664	—	430	0.0449	*64*	141	**FA 06**	664	430	0.0449	*65*	143
11	15	**M 4LC 2**	2920	319	•	87.6	87.0	86.0	0.88	20.6	6.9	2.9	2.5	J	0.0498	*60*	132													
15	20	**M 5SB 2**	2930	434	•	89.6	89.4	88.0	0.86	28.1	7.1	2.6	2.3	J	0.0807	*70*	154													
18.5	25	**M 5SC 2**	2930	531	•	90.4	90.1	89.0	0.86	34	7.6	2.7	2.3	K	0.0997	*83*	183													
22	30	**M 5LA 2**	2930	637	•	89.9	89.7	89.5	0.88	40	7.8	2.6	2.4	K	0.116	*95*	209													

○ = n.a. • = IE1



BN-M



4P — 1500 rpm - S1 — 50 Hz

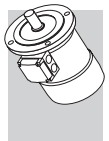
P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs	d.c. brake FD Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs	a.c. brake FA Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.09	0.12	**M 0B 4**	1350	5.7	○	51.7	47.6	42.9	0.60	0.42	2.6	2.5	2.4	H	0.0004	*2.9*	6.4													
0.12	0.16	**M 05A 4**	1350	7.5	○	59.8	56.2	47.0	0.62	0.47	2.6	1.9	1.8	E	0.0005	*3.2*	7.1	**FD 02**	15	10000	13000	0.0006	*4.9*	11	**FA 02**	15	13000	0.0006	*4.7*	10
0.18	0.25	**M 05B 4**	1320	11.5	○	54.8	52.9	52.5	0.67	0.71	2.6	2.2	2.0	A	0.0005	*3.6*	7.9	**FD 02**	31	10000	13000	0.0007	*5.3*	12	**FA 02**	31	13000	0.0007	*5.1*	11
0.25	0.33	**M 05C 4**	1340	15.8	○	65.3	65.0	57.9	0.69	0.80	2.7	2.1	1.9	E	0.0008	*4.8*	11	**FD 02**	31	7800	10000	0.0009	*6.5*	14	**FA 02**	31	10000	0.0009	*6.3*	14
0.37	0.5	**M 1SD 4**	1370	23.0	○	66.8	66.7	63.0	0.76	1.05	3.7	2.0	1.9	D	0.0016	*5.5*	12	**FD 03**	44	6000	9400	0.0019	*8.2*	18	**FA 03**	44	9400	0.0019	*7.9*	17
0.55	0.75	**M 1LA 4**	1380	33.6	○	69.0	68.9	68.8	0.74	1.55	4.1	2.3	2.3	G	0.0022	*6.9*	15	**FD 53**	66	4300	8700	0.0024	*9.6*	21	**FA 03**	66	8700	0.0024	*9.3*	21
0.75	1	**M 2SA 4**	1400	45	•	75.0	74.5	69.3	0.78	1.85	4.9	2.7	2.5	A	0.0047	*9.2*	20	**FD 04**	133	4100	7800	0.0052	*13.1*	29	**FA 04**	133	7800	0.0052	*13.0*	29
1.1	1.5	**M 2SB 4**	1400	66	•	76.4	76.2	70.4	0.78	2.66	5.1	2.8	2.5	G	0.0059	*10.6*	23	**FD 04**	133	2600	5300	0.0064	*14.5*	32	**FA 04**	133	5300	0.0064	*14.4*	32
1.5	2	**M 3SA 4**	1410	90	•	79.6	80.5	79.3	0.77	3.5	4.6	2.1	2.1	D	0.0081	*15.5*	34	**FD 15**	230	2800	4900	0.0090	*22*	49	**FA 15**	230	4900	0.0090	*23*	51
2.2	3	**M 3LA 4**	1410	132	•	81.1	81.4	79.9	0.75	5.2	4.5	2.2	2.0	A	0.0095	*17*	37	**FD 15**	354	2600	4700	0.0104	*24*	53	**FA 15**	354	4700	0.0104	*24*	53
3	4	**M 3LB 4**	1410	177	•	82.6	83.8	83.7	0.77	6.8	5.0	2.3	2.2	G	0.0128	*21*	46	**FD 15**	354	2400	4400	0.0138	*27*	60	**FA 15**	354	4400	0.0138	*28*	62
4	5.5	**M 3LC 4**	1400	239	○	82.7	83.1	80.5	0.78	9.0	4.7	2.3	2.2	F	0.0145	*23*	51	**FD 55**	487	—	1300	0.0154	*29*	64	**FA 15**	354	1300	0.0154	*30*	66
5.5	7.5	**M 4SA 4**	1440	319	•	84.7	84.8	82.5	0.81	11.6	5.5	2.3	2.2	A	0.0505	*42*	93	**FD 56**	664	—	1050	0.0529	*55*	121	**FA 06**	664	1050	0.0529	*56*	123
7.5	10	**M 4LA 4**	1440	443	•	86.0	86.3	85.3	0.81	15.5	5.7	2.5	2.4	G	0.0641	*51*	112	**FD 06**	885	—	950	0.0664	*64*	141	**FA 07**	885	950	0.0664	*65*	143
9.2	12.5	**M 4LB 4**	1440	540	•	88.4	88.6	87.5	0.81	18.8	5.9	2.7	2.5	G	0.0757	*57*	126	**FD 07**	1328	—	900	0.0812	*73*	161	**FA 07**	1328	900	0.0812	*75*	165
11	15	**M 4LC 4**	1440	646	•	87.6	87.8	86.0	0.81	22.4	6.0	2.7	2.5	G	0.0854	*65*	143	**FD 07**	1328	—	850	0.0906	*81*	179	**FA 07**	1328	850	0.0906	*83*	183
15	20	**M 5SB 4**	1460	867	•	88.7	88.5	88.4	0.81	30.1	6.0	2.3	2.1	G	0.154	*85*	187	**FD 08**	1770	—	750	0.172	*115*	254	**FA 08**	1770	750	0.168	*114*	251
18.5	25	**M 5LA 4**	1460	1071	•	89.3	89.5	89.2	0.81	37	6.2	2.6	2.5	H	0.187	*101*	223	**FD 08**	2213	—	700	0.205	*131*	289	**FA 08**	2213	700	0.202	*130*	287

○ = n.a. • = IE1

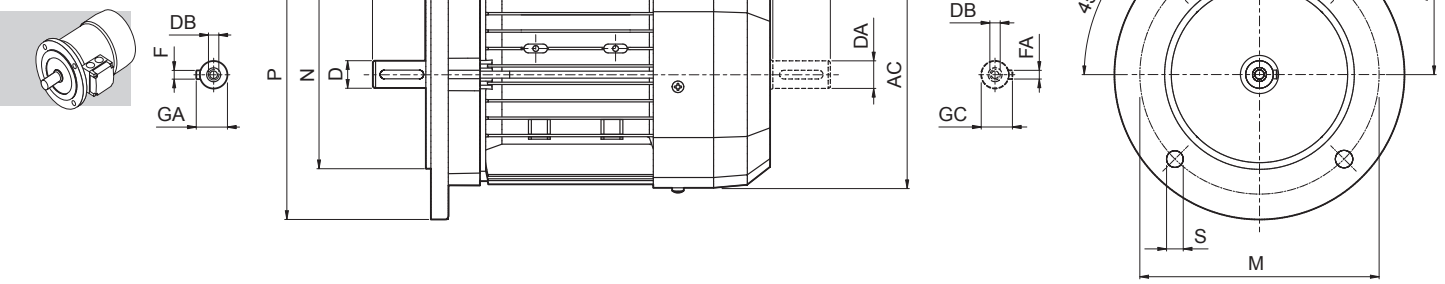
6P — 1000 rpm - S1 — 50 Hz

P_n kW	P_n HP		n rpm	T_n lb·in	IE1	η (100%) %	η (75%) %	η (50%) %	cosφ	In 400V A	$\frac{I_s}{I_n}$	$\frac{T_s}{T_n}$	$\frac{T_a}{T_n}$	KVA Code	J_m lb·ft²	IM B5 Kg	IM B5 lbs	d.c. brake FD Mod	T_b lb·in	Z_o 1/h NB	Z_o 1/h SB	J_m lb·ft²	IM B5 Kg	IM B5 lbs	a.c. brake FA Mod	T_b lb·in	Z_o 1/h	J_m lb·ft²	IM B5 Kg	IM B5 lbs
0.09	0.12	**M 05A 6**	880	8.7	○	41.0	41.0	32.9	0.53	0.60	2.1	2.1	1.8	J	0.0008	*4.3*	9.5	**FD 02**	31	9000	14000	0.0009	*6.0*	13	**FA 02**	31	14000	0.0009	*5.8*	13
0.12	0.16	**M 05B 6**	870	11.7	○	45.0	44.0	41.8	0.60	0.64	2.1	1.9	1.7	F	0.0009	*4.6*	10	**FD 02**	31	9000	14000	0.0010	*6.3*	14	**FA 02**	31	14000	0.0010	*6.1*	13
0.18	0.25	**M 1SC 6**	900	16.9	○	55.0	55.5	51.0	0.69	0.68	2.6	1.9	1.7	A	0.0020	*5.1*	11	**FD 03**	44	8100	13500	0.0023	*7.8*	17	**FA 03**	44	13500	0.0023	*7.5*	17
0.25	0.33	**M 1SD 6**	900	23.9	○	62.0	58.5	51.4	0.71	0.82	2.6	1.9	1.7	D	0.0026	*6.3*	14	**FD 03**	44	7800	13000	0.0028	*9.0*	20	**FA 03**	44	13000	0.0028	*8.7*	19
0.37	0.5	**M 1LA 6**	910	34.5	○	66.0	60.0	53.3	0.69	1.17	3.0	2.4	2.0	B	0.0031	*7.3*	16	**FD 53**	66	5100	9500	0.0033	*10.0*	22	**FA 03**	66	9500	0.0033	*9.7*	21
0.55	0.75	**M 2SA 6**	920	50	○	70.0	69.8	64.3	0.68	1.67	3.9	2.6	2.2	G	0.0059	*10.6*	23	**FD 04**	133	4800	7200	0.0064	*14.5*	32	**FA 04**	133	7200	0.0064	*14.4*	32
0.75	1	**M 2SB 6**	920	69	•	70.0	70.0	64.4	0.65	2.38	3.8	2.5	2.2	A	0.0066	*11.5*	25	**FD 04**	133	3400	6400	0.0071	*15.4*	34	**FA 04**	133	6400	0.0071	*15.3*	34
1.1	1.5	**M 3SA 6**	920	101	•	75.0	74.0	72.0	0.72	2.9	4.3	2.0	1.8	G	0.0078	*17*	37	**FD 15**	230	2700	5000	0.0088	*23*	51	**FA 15**	230	5000	0.0088	*24*	53
1.5	2	**M 3LA 6**	940	135	•	75.2	74.2	70.3	0.72	4.0	4.1	2.1	2.0	D	0.0195	*21*	46	**FD 15**	354	1900	4100	0.0204	*27*	60	**FA 15**	354	4100	0.0204	*28*	62
1.85	2.5	**M 3LB 6**	930	168	•	76.6	72.8	62.6	0.73	4.8	4.6	2.1	2.0	A	0.0225	*23*	51	**FD 15**	354	1700	3600	0.0235	*29*	64	**FA 15**	354	3600	0.0235	*30*	66
2.2	3	**M 3LC 6**	930	204	•	77.7	76.8	72.4	0.71	5.8	4.7	2.3	2.1	G	0.0225	*23*	51	**FD 55**	487	—	1900	0.0235	*29*	64	**FA 15**	354	1900	0.0235	*30*	66
3	4	**M 4SA 6**	940	266	•	79.7	77.0	75.1	0.76	7.1	5.1	1.9	1.8	G	0.0513	*34*	75	**FD 56**	664	—	1400	0.0536	*47*	104	**FA 06**	664	1400	0.0536	*48*	106
4	5.5	**M 4LA 6**	950	354	•	81.4	81.5	79.5	0.77	9.2	5.5	2.0	1.8	A	0.0700	*43*	95	**FD 06**	885	—	1200	0.0724	*56*	123	**FA 07**	885	1200	0.0724	*57*	126
5.5	7.5	**M 4LB 6**	945	496	•	83.1	80.9	79.1	0.78	12.2	6.1	2.1	1.9	H	0.0909	*54*	119	**FD 07**	1328	—	1050	0.0963	*70*	154	**FA 07**	1328	1050	0.0963	*72*	159
7.5	10	**M 5SA 6**	955	664	•	85.0	85.0	84.8	0.81	15.7	5.9	2.2	2.0	H	0.176	*69*	152	**FD 08**	1505	—	900	0.193	*98*	216	**FA 08**	1505	900	0.190	*98*	216
11	15	**M 5SB 6**	960	965	•	86.4	86.5	85.9	0.81	22.7	6.6	2.5	2.3	H	0.230	*89*	196	**FD 08**	1770	—	800	0.248	*119*	262	**FA 08**	1770	800	0.244	*118*	260

○ = n.a. • = IE1



BN - IM B5

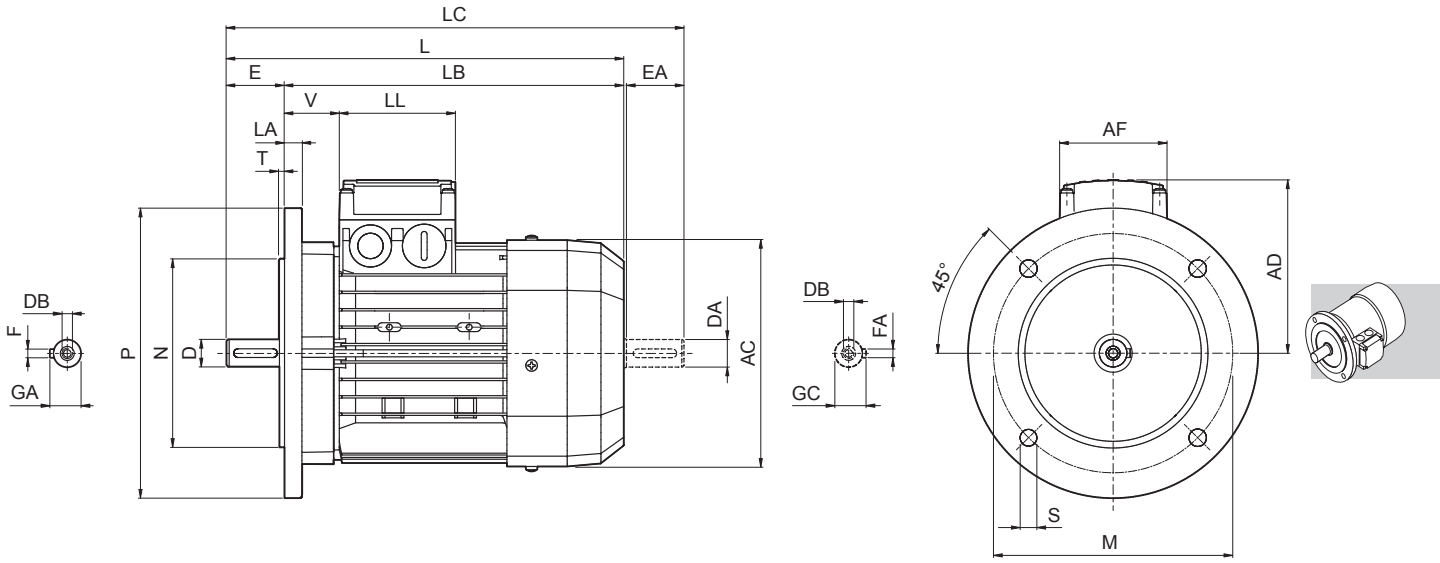


Dimensions are in [mm]

	Shaft					Flange						Motor							
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V
BN 56	9	20	M3	10.2	3	100	80	120	7	3	8	110	185	165	207	91	74	80	34
BN 63	11	23	M4	12.5	4	115	95	140	9.5		10	121	207	184	232	95			26
BN 71	14	30	M5	16	5	130	110	160		3.5		138	249	219	281	108			37
BN 80	19	40	M6	21.5	6	165	130	200	11.5		11.5	156	274	234	315	119			38
BN 90	24	50	M8	27	8							176	326	276	378	133	98	98	44
BN 100	28	60	M10	31		215	180	250	14	4	14	195	367	307	429	142			50
BN 112											15	219	385	325	448	157			52
BN 132	38	80	M12	41	10	265	230	300			20	258	493	413	576	193	118	118	58
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		562	452	645				218
BN 160 M												310	596	486	680	245	187	187	51
BN 160 L																			
BN 180 M	48 38 (1)	110 110 (1)	M16 M12 (1)	51.5 41 (1)	14 10 (1)							310	640	530	724				
BN 180 L	48 42 (1)		M16 M16 (1)	51.5 45 (1)	14 12 (1)						18	348	708	598	823	261			52
BN 200 L	55 42 (1)		M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400					722	612	837				66

NOTE:
1) These values refer to the rear shaft end.

BN - IM B5

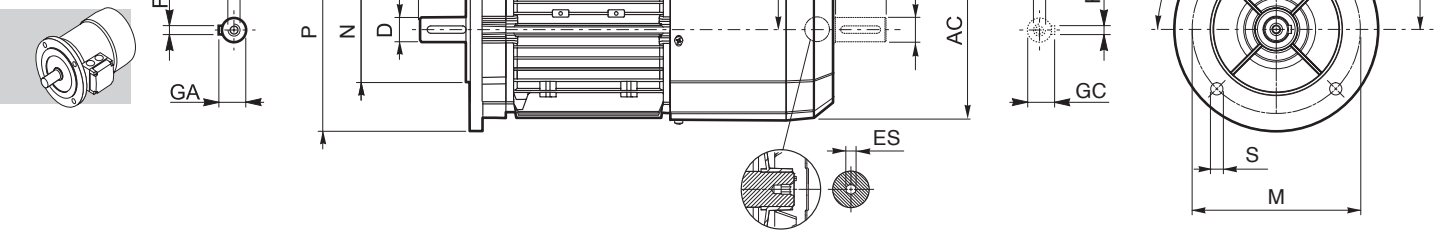


Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Flange						Motor							
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**
BN 56	0.354	0.787	*M3*	0.402	0.118	3.937	3.150	4.724	0.276	0.118	0.315	4.331	7.283	6.496	8.150	3.583	2.913	3.150	1.339
BN 63	0.433	0.906	*M4*	0.492	0.157	4.528	3.740	5.512	0.374		0.394	4.764	8.150	7.244	9.134	3.740			1.024
BN 71	0.551	1.181	*M5*	0.630	0.197	5.118	4.331	6.299		0.138		5.433	9.803	8.622	11.063	4.252			1.457
BN 80	0.748	1.575	*M6*	0.846	0.236	6.496	5.118	7.874	0.453		0.453	6.142	10.787	9.213	12.402	4.685			1.496
BN 90	0.945	1.969	*M8*	1.063	0.315							6.929	12.835	10.866	14.882	5.236	3.858	3.858	1.732
BN 100	1.102	2.362	*M10*	1.220		8.465	7.087	9.843	0.551	0.157	0.551	7.677	14.449	12.087	16.890	5.591			1.969
BN 112											0.591	8.622	15.157	12.795	17.638	6.181			2.047
BN 132	1.496	3.150	*M12*	1.614	0.394	10.433	9.055	11.811			0.787	10.157	19.409	16.260	22.677	7.598	4.646	4.646	2.283
BN 160 MR	1.654 1.496(1)	4.331 3.150(1)	*M16 M12(1)*	1.772 1.614(1)	0.472 0.395(1)	11.811	9.843	13.780	0.728	0.197	0.591		22.126	17.795	25.394				8.583
BN 160 M												12.205	23.465	19.134	26.772	9.646	7.362	7.362	2.008
BN 160 L																			
BN 180 M	1.890 1.496(1)		*M16 M12(1)*	2.028 1.614(1)	0.551 0.394(1)							12.205	25.197	20.866	28.504				
BN 180 L	1.890 1.654(1)	4.331 4.331(1)	*M16 M16(1)*	2.018 1.772(1)	0.551 0.472(1)						0.709	13.701	27.874	23.543	32.402	10.276			2.047
BN 200 L	2.165 1.654(1)		*M20 M16(1)*	2.323 1.772(1)	0.630 0.472(1)	13.780	11.811	15.748					28.425	24.094	32.953				2.598

NOTE:
1) These values refer to the rear shaft end.

BN_FD ; IM B5



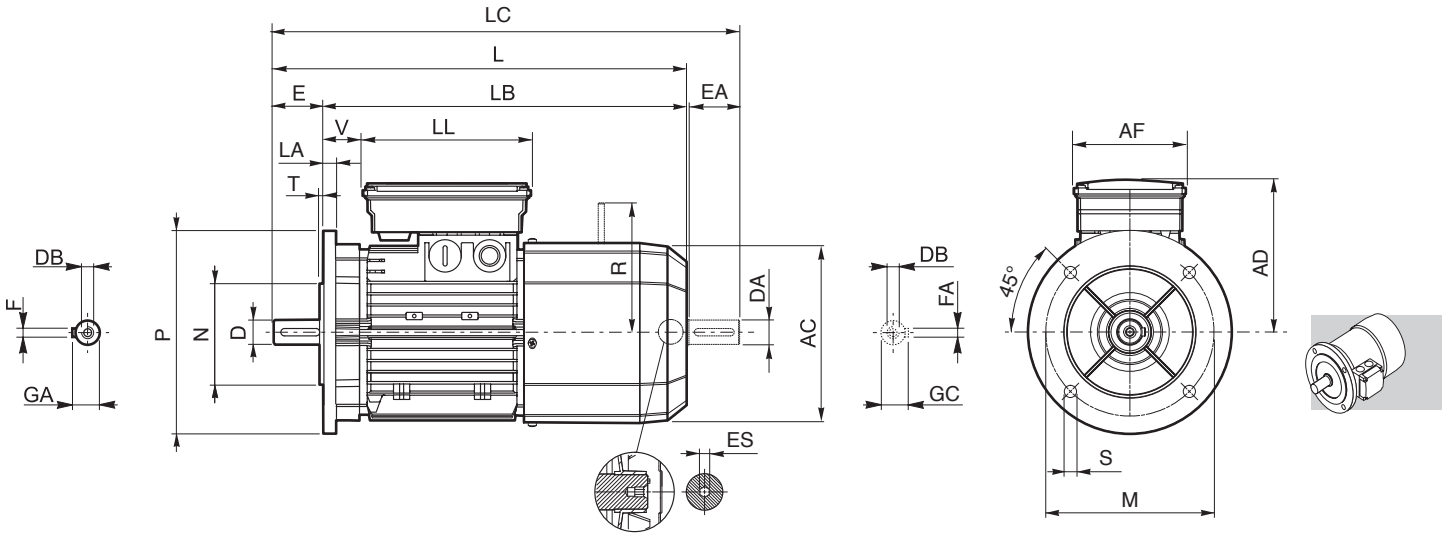
Dimensions are in [mm]

	Shaft					Flange						Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	122	98	133	14	96	5
BN 71	14	30	M5	16	5	130	110	160	9.5	3.5		138	310	280	342	135			25	103	
BN 80	19	40	M6	21.5	6	165	130	200	11.5		11.5	156	346	306	388	146			41	129	
BN 90 S	24	50	M8	27	8							176	409	359	461	149	110	165	39		6
BN 90 L																146				160	
BN 100	28	60	M10	31		215	180	250	14	4	14	195	458	398	521	158		165	62		
BN 112											15	219	484	424	547	173		165	73	199	
BN 132	38	80	M12	41	10	265	230	300			20	258	603	523	686	210	140	188	46	204 (2)	
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		672	562	755				161	226	
BN 160 M												310	736	626	820	245	187	187	51	266	—
BN 160 L	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)								780	670	864						
BN 180 M	48 38 (1)			51.5 41 (1)	14 10 (1)																
BN 180 L	48 42 (1)	110 110 (1)	M16 M16 (1)	51.5 45 (1)	14 12 (1)						18	348	866	756	981	261			52	305	
BN 200 L	55 42 (1)		M20 M16 (1)	59 45 (1)	16 12 (1)	350	300	400	18.5				878	768	993				64		

NOTE:
1) These values refer to the rear shaft end.
2) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.

BN_FD ; IM B5



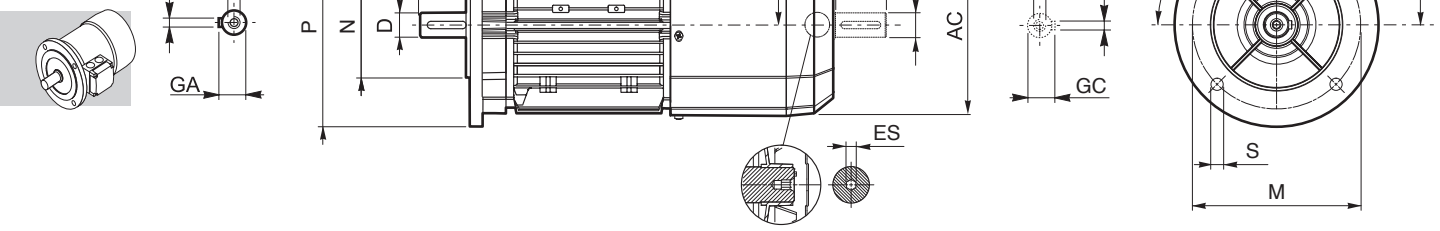
Dimensions are in Inch except when shown in *italic [mm]*

	Shaft					Flange						Motor									
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**	**R**	**ES**
BN 63	0.433	0.906	*M4*	0.492	0.157	4.528	3.740	5.512	0.374	0.118	0.394	4.764	10.709	9.803	11.693	4.803			0.551	3.780	
BN 71	0.551	1.181	*M5*	0.630	0.197	5.118	4.331	6.299	0.374			5.433	12.205	11.024	13.465	5.315	3.858	5.236	0.984	4.055	0.197
BN 80	0.748	1.575	*M6*	0.846	0.236					0.138		6.142	13.622	12.047	15.276	5.748			1.614	5.079	
BN 90 S	0.945	1.969	*M8*	1.063		6.496	5.118	7.874	0.453		0.453	6.929	16.102	14.134	18.150	5.866			1.535		
BN 90 L																5.748		6.496		6.299	
BN 100	1.102	2.362	*M10*	1.220	0.315	8.465	7.087	9.843	0.551	0.157	0.551	7.677	18.031	15.669	20.512	6.220	4.331	6.496	2.441		0.236
BN 112											0.591	8.622	19.055	16.693	21.535	6.811		6.496	2.874	7.835	
BN 132	1.496	3.150	*M12*	1.614	0.394	10.433	9.055	11.811			0.787	10.157	23.740	20.591	27.008	8.268	5.512	7.402	1.811	8.031[2]	
BN 160 MR	1.654	4.331	*M16*	1.772	0.472	11.811	9.843	13.780	0.728	0.197	0.591		26.457	22.126	29.724				6.339	8.898	
BN 160 M	1.496[1]	3.150[1]	*M12*[1]	1.614[1]	0.394[1]							12.205	28.976	24.646	32.283	9.646	7.362	7.362	2.008	10.472	—
BN 160 L	1.654	4.331	*M16*	1.772	0.472																
BN 180 M	1.496[1]	3.150[1]	*M12*[1]	2.028	0.551								30.709	26.378	34.016						
BN 180 L	1.890	4.331	*M16*	2.028	0.551						0.709	13.701	34.094	29.764	38.622	10.276			2.047	12.008	
BN 200 L	1.654[1]	4.331[1]	*M16*[1]	1.772[1]	0.472[1]	13.780	11.811	15.748	0.728				34.567	30.236	39.094				2.520		
	2.165		*M20*	2.323	0.630																
	1.654[1]		*M16*[1]	1.772[1]	0.472[1]																

NOTE:
1) These values refer to the rear shaft end.
2) For FD07 brake value R=8.898

ES hexagon is not supplied with PS option.

BN_FA - IM B5



Dimensions are in [mm]

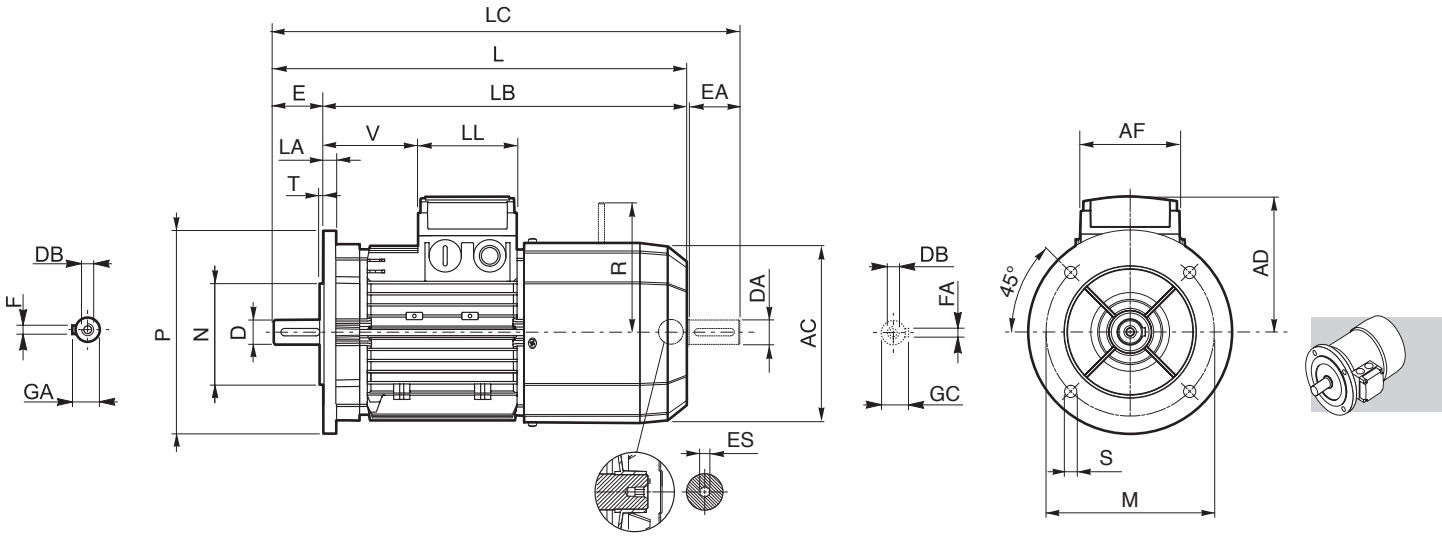
	Shaft					Flange						Motor									
	D DA	E EA	DB	GA GC	F FA	M	N	P	S	T	LA	AC	L	LB	LC	AD	AF	LL	V	R	ES
BN 63	11	23	M4	12.5	4	115	95	140	9.5	3	10	121	272	249	297	95	74	80	26	116	5
BN 71	14	30	M5	16	5	130	110	160		3.5		138	310	280	342	108			68	124	
BN 80	19	40	M6	21.5	6	165	130	200	11.5		11.5	156	346	306	388	119			83	134	
BN 90	24	50	M8	27	8							176	409	359	461	133	98	98	95	160	6
BN 100	28	60	M10	31		215	180	250	14	4	14	195	458	398	521	142			119		
BN 112											15	219	484	424	547	157			128	198	
BN 132	38	80	M12	41	10	265	230	300			20	258	603	523	686	210	140	188	46	200 (2)	
BN 160 MR	42 38 (1)	110 80 (1)	M16 M12 (1)	45 41 (1)	12 10 (1)	300	250	350	18.5	5	15		672	562	755	193	118	118	218	217	
BN 160 M												310	736	626	820	245	187	187	51	247	—
BN 160 L																					
BN 180 M				51.5 41 (1)	14 10 (1)								780	670	864						

NOTE:
1) These values refer to the rear shaft end.
2) For FA07 brake value R=217.

Dimensions AD, AF, LL and V, relevant to terminal box of motors BN…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN…FD motors

ES hexagon is not supplied with PS option.

BN_FA - IM B5



Dimensions are in Inch except when shown in *italic [mm]*

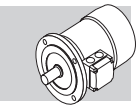
	Shaft					Flange						Motor									
	D DA	**E EA**	**DB**	**GA GC**	**F FA**	**M**	**N**	**P**	**S**	**T**	**LA**	**AC**	**L**	**LB**	**LC**	**AD**	**AF**	**LL**	**V**	**R**	**ES**
BN 63	0.433	0.906	*M4*	0.492	0.157	4.528	3.740	5.512	0.374	0.118	0.394	4.764	10.709	9.803	11.693	3.740			1.024	4.567	
BN 71	0.551	1.181	*M5*	0.630	0.197	5.118	4.331	6.299		0.138		5.433	12.205	11.024	13.465	4.252	2.913	3.150	2.677	4.882	0.197
BN 80	0.748	1.575	*M6*	0.846	0.236	6.496	5.118	7.874	0.453		0.453	6.142	13.622	12.047	15.276	4.685			3.268	5.276	
BN 90	0.945	1.969	*M8*	1.063	0.315							6.929	16.102	14.134	18.150	5.236			3.740	6.299	
BN 100	1.102	2.362	*M10*	1.220		8.465	7.087	9.843	0.551	0.157	0.551	7.677	18.031	15.669	20.512	5.591	3.858	3.858	4.685		
BN 112											0.591	8.622	19.055	16.693	21.535	6.181			5.039	7.795	0.236
BN 132	1.496	3.150	*M12*	1.614	0.394	10.433	9.055	11.811			0.787	10.157	23.740	20.591	27.008	8.268	5.512	7.402	1.811	7.874[2]	
BN 160 MR	1.654 1.496[1]	4.331 3.150[1]	*M16* *M12*[1]	1.772 1.614[1]	0.472 0.394[1]	11.811	9.843	13.780	0.728	0.197	0.591		26.457	22.126	29.724	7.598	4.646	4.646	8.583	8.543	
BN 160 M												12.205	28.976	24.646	32.283	9.646	7.362	7.362	2.008	9.724	—
BN 160 L																					
BN 180 M				2.028 1.614[1]	0.551 0.394[1]								30.709	26.378	34.016						

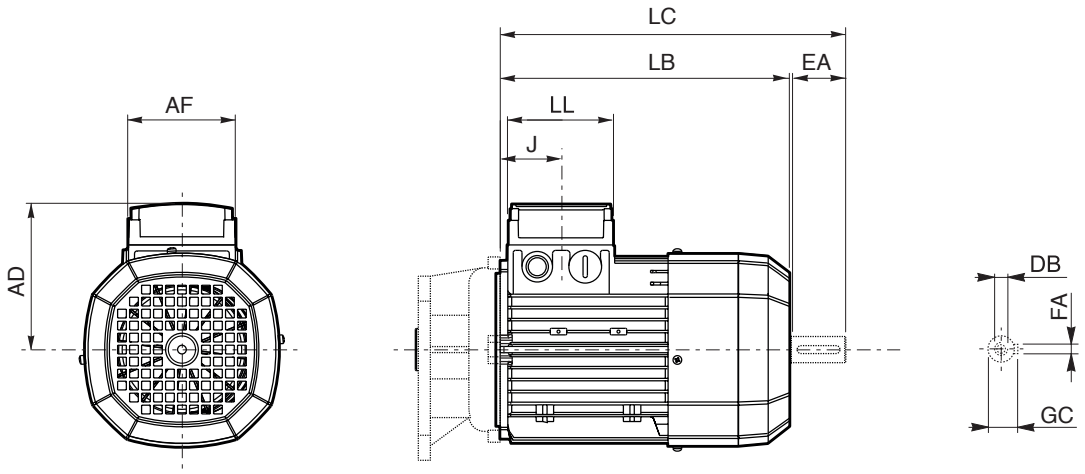
NOTE:
1) These values refer to the rear shaft end.
2) For FA07 brake value R=8.543

Dimensions AD, AF, LL and V, relevant to terminal box of motors BN…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size BN…FD motors

ES hexagon is not supplied with PS option.

M

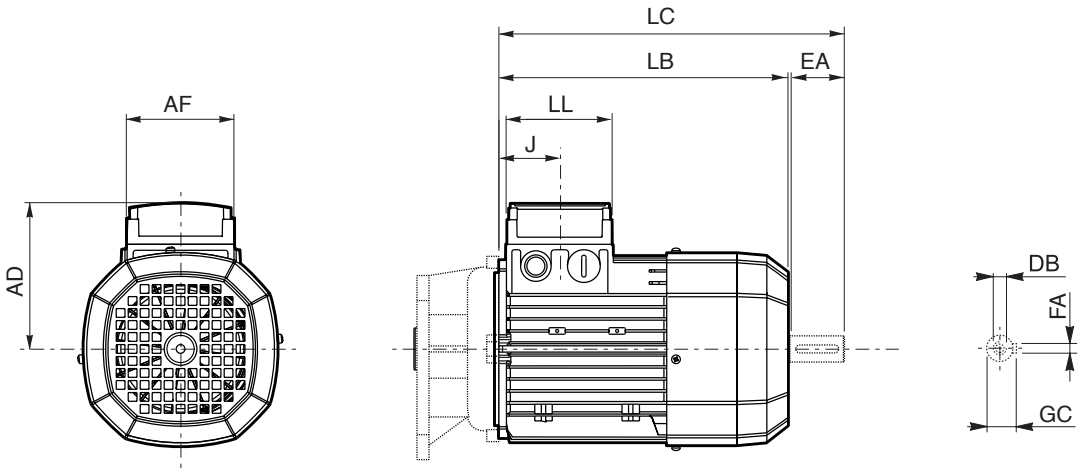


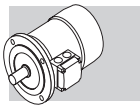


Dimensions are in [mm]

	Rear shaft end					Motor						
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
M 0	9	20	M3	3	10.2	110	133	155	74	80	42	91
M 05	11	23	M4	4	12.5	121	165	191			48	95
M 1	14	30	M5	5	16	138	187	219			45	108
M 2 S	19	40	M6	6	21.5	156	202	245			44	119
M 3 S	28	60	M10	8	31	195	230	293	98	98	53.5	142
M 3 L							262	325				
M 4	38	80	M12	10	41	258	361	444	118	118	64.5	193
M 4 LC							396	479				
M 5 S						310	418	502	187	187	77	245
M 5 L							462	546				

M

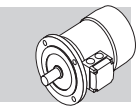


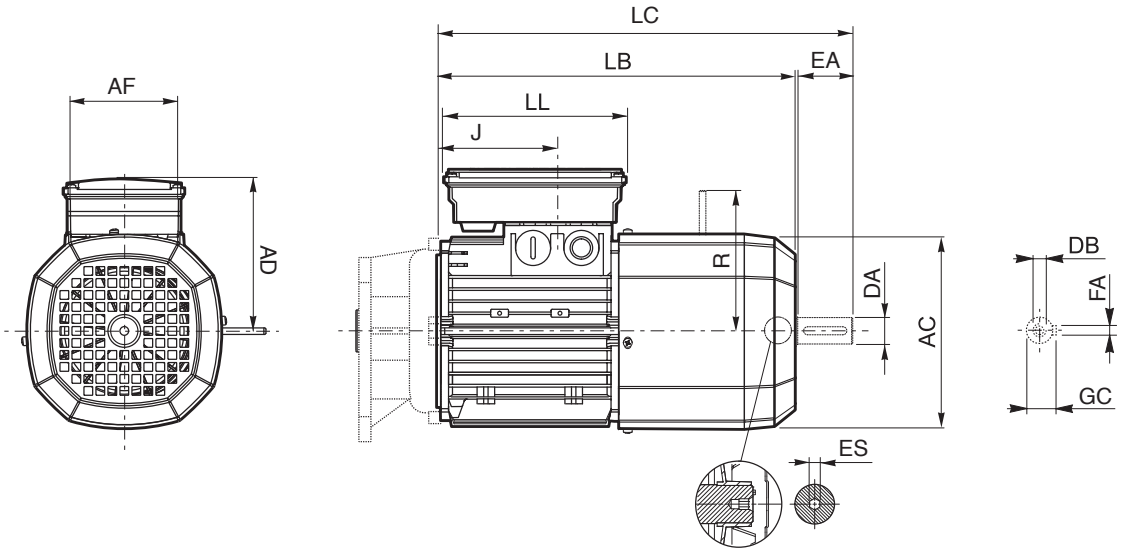


Dimensions are in Inch except when shown in *italic [mm]*

	Rear shaft end					Motor						
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**
M 0	0.354	0.787	*M3*	0.118	0.402	4.331	5.236	6.102	2.913	3.150	1.654	3.583
M 05	0.433	0.906	*M4*	0.157	0.492	4.764	6.496	7.520			1.890	3.740
M 1	0.551	1.181	*M5*	0.197	0.630	5.433	7.362	8.622			1.772	4.252
M 2 S	0.748	1.575	*M6*	0.236	0.846	6.142	7.953	9.646			1.732	4.685
M 3 S	1.102	2.362	*M10*	0.315	1.220	7.677	9.055	11.535	3.858	3.858	2.106	5.591
M 3 L							10.315	12.795				
M 4	1.496	3.150	*M12*	0.394	1.614	10.157	14.213	17.480	4.646	4.646	2.539	7.598
M 4 LC							15.591	18.858				
M 5 S						12.205	16.457	19.764	7.362	7.362	3.031	9.646
M 5 L							18.189	21.496				

M_FD





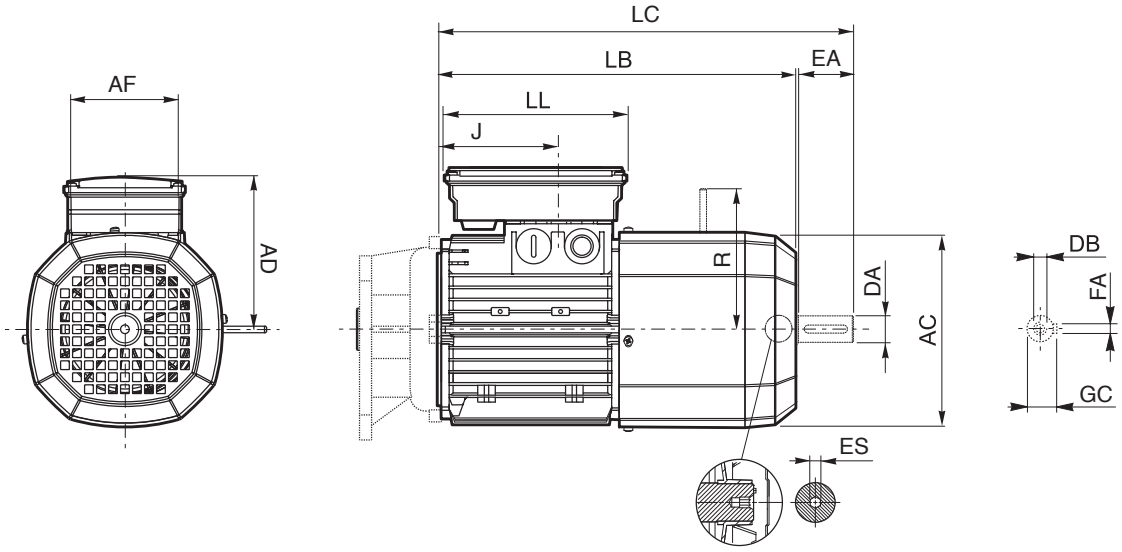
Dimensions are in [mm]

	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	11	23	M4	4	12.5	121	231	256	98	133	48	122	96	5
M 1	14	30	M5	5	16	138	248	280			73	135	103	
M 2 S	19	40	M6	6	21.5	156	272	314			88	146	129	
M 3 S	28	60	M10	8	31	195	326	389	110	165	124.5	158	160	6
M 3 L							353	416						
M 4	38	80	M12	10	41	258	470	553	140	188	185.5	210	204 (1)	
M 4 LC							495	578			64.5		226	
M 5 S						310	558	642	187	187	77	245	266	—
M 5 L							602	686						

NOTE:
1) For FD07 brake value R=226.

ES hexagon is not supplied with PS option.

M_FD



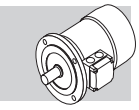
Dimensions are in Inch except when shown in *italic [mm]*

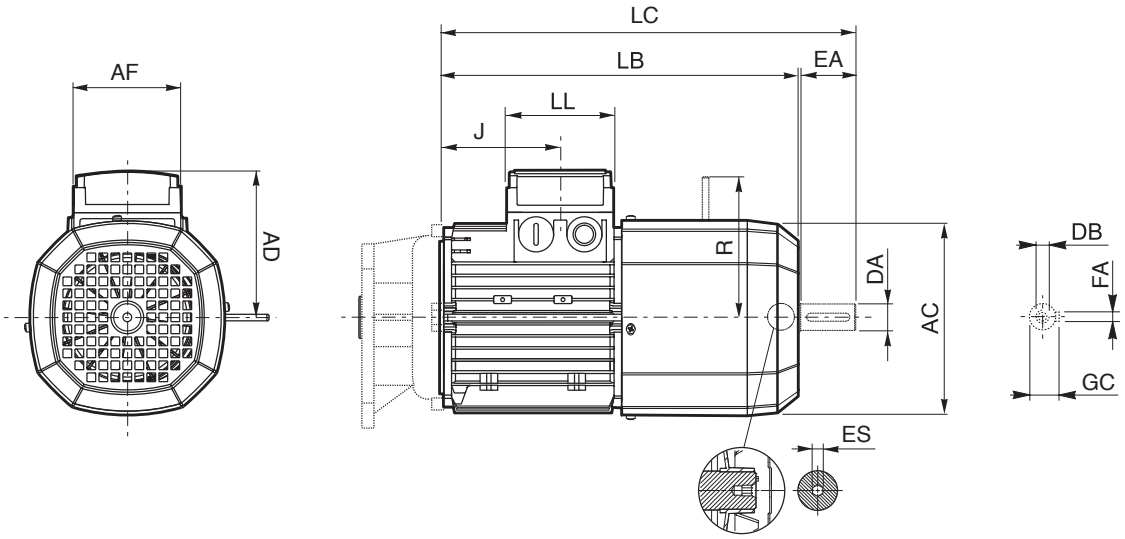
	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	0.433	0.906	*M4*	0.157	0.492	4.764	9.094	10.079	3.858	5.236	1.890	4.803	3.780	0.197
M 1	0.551	1.181	*M5*	0.197	0.630	5.433	9.764	11.024			2.874	5.315	4.055	
M 2 S	0.748	1.575	*M6*	0.236	0.846	6.142	10.709	12.362			3.465	5.748	5.079	
M 3 S	1.102	2.362	*M10*	0.315	1.220	7.677	12.835	15.315	4.331	6.496	4.902	6.220	6.299	0.236
M 3 L							13.898	16.378						
M 4	1.496	3.150	*M12*	0.394	1.614	10.157	18.504	21.772	5.512	7.402	7.303	8.268	8.031(1)	
M 4 LC							19.488	22.756			2.539		8.898	
M 5 S						12.205	21.969	25.276	7.362	7.362	3.031	9.646	10.472	—
M 5 L							23.701	27.008						

NOTE:
1) For FD07 brake value R=8.898

ES hexagon is not supplied with PS option.

M_FA





Dimensions are in [mm]

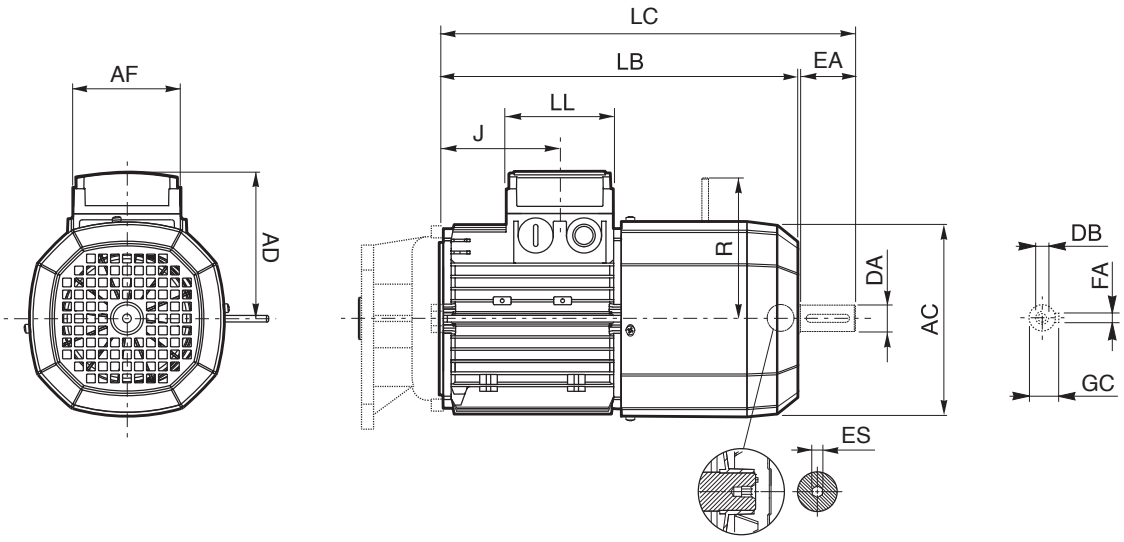
	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	11	23	M4	4	12.5	121	231	256	74	80	48	95	116	5
M 1	14	30	M5	5	16	138	248	280			73	108	124	
M 2 S	19	40	M6	6	21.5	156	272	314			88	119	134	
M 3 S	28	60	M10	8	31	195	326	389	98	98	124.5	142	160	6
M 3 L							353	416						
M 4	38	80	M14	10	41	258	470	553	140	188	185.5	210	200 (1)	
M 4 LC							495	578			64.5		217	
M 5 S			M12			310	558	642	187	187	77	245	247	—
M 5 L							602	686						

NOTE:
1) For FA07 brake value R=217.

Dimensions AD, AF, LL and V, relevant to terminal box of motors M…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size M…FD motors

ES hexagon is not supplied with PS option.

M_FA



Dimensions are in Inch except when shown in *italic [mm]*

	Rear shaft end					Motor								
	DA	**EA**	**DB**	**FA**	**GC**	**AC**	**LB**	**LC**	**AF**	**LL**	**J**	**AD**	**R**	**ES**
M 05	0.433	0.906	*M4*	0.157	0.492	4.764	9.094	10.079	2.913	3.150	1.890	3.740	4.567	0.197
M 1	0.551	1.181	*M5*	0.197	0.630	5.433	9.764	11.024			2.874	4.252	4.882	
M 2 S	0.748	1.575	*M6*	0.236	0.846	6.142	10.709	12.362			3.465	4.685	5.276	
M 3 S	1.102	2.362	*M10*	0.315	1.220	7.677	12.835	15.315	3.858	3.858	4.902	5.591	6.299	0.236
M 3 L							13.898	16.378						
M 4	1.496	3.150	*M14*	0.394	1.614	10.157	18.504	21.772	5.512	7.402	7.303	8.268	7.874[1]	
M 4 LC							19.488	22.756			2.539		8.543	
M 5 S			*M12*			12.205	21.969	25.276	7.362	7.362	3.031	9.646	9.724	—
M 5 L							23.701	27.008						

NOTE:
1) For FA07 brake value R=8.543

Dimensions AD, AF, LL and V, relevant to terminal box of motors M…FA featuring the separate brake supply (option SA), are coincident with corresponding dimensions of same-size M…FD motors

ES hexagon is not supplied with PS option.

INDEX OF REVISIONS

BR_CAT_300M_NEMA_ENG_R00_2	
	Description
41…134	300ML - 300MR Gearmotor rating charts updated (section A)
520	Updated dimensions for FZP customer shaft.
542…663	Updated electric motors section.

30 04 2018

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Conversion table for commonly used metric – imperial units

Length

1 in	=	25.40 mm	= 0.0254 m
1 ft	=	304.8 mm	= 0.3048 m
1 yd	=	914.4 mm	= 0.9144 m

Area

1 in^2	=	645.16 mm^2	= 0.645×10^{-3} m^2
1 ft^2	=	92.9×10^3 mm^2	= 92.9×10^3 m^2
1 yd^2	=	836×10^3 mm^2	= 0.8361 m^2

Volume

1 in^3	=	16.4×10^{-3} dm^3	= 16.4×10^{-6} m^3
1 ft^3	=	28.32 dm^3	= 28.3×10^{-3} m^3

Force – Weight

1 lbm	=	2.2046 kg
1 lbf	=	4.4482 N

Torque

1 lb in	=	0.1129 Nm
1 lb ft	=	1.3558 Nm

Power

1 hp	=	0.7457 kW

Moment of inertia

1 lb ft^2	=	4.214×10^{-2}	kg m^2
1 lb in s^2	=	1.12985×10^{-1}	kg m^2
1 lb ft s^2	=	1.35582	kg m^2

Pressure – stress

1 lb/in^2	=	6.89×10^{-3}	N/mm^2
1 lb/ft^2	=	47.88	N/m^2

Temperature

t [°F]	=	$\frac{5}{9} \text{ x } [t - 32]$	[°C]
T [°C]	=	$\left(\frac{9}{5} \text{ x } T + 32\right)$	[°F]

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Forever Forward

We have a relentless commitment to excellence, innovation and sustainability. Our team creates, distributes and services world-class power transmission and drive solutions to keep the world in motion.

HEADQUARTERS
Bonfiglioli Riduttori S.p.A.
Via Giovanni XXIII, 7/A
40012 Lippo di Calderara di Reno • Bologna (Italy)
tel: +39 051 647 3111 • fax: +39 051 647 3126
bonfiglioli@bonfiglioli.com • www.bonfiglioli.com