CERTIFICATE NUMBER	26-0561822-PDA
EFFECTIVE DATE	12-May-2026
EXPIRY DATE	11-May-2031
ABS TECHNICAL OFFICE	Genoa Engineering Department

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

BONFIGLIOLI RIDUTTORI SPA

located at

VIA CAVALIER CLEMENTINO BONFIGLIOLI 1, , CALDERARA DI RENO (BOLOGNA), ITALY, Italy, 40012

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product:	**Gearbox**
Model:	**Series 300**
Endorsements:	
Tier:	**5 - Unit Certification Required**

This Product Design Assessment (PDA) Certificate remains valid until 11/May/2031 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Simone Cavecchia,Engineer/Consultant

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Tier: 5 - Unit Certification Required

Product: **Gearbox**
Model: **Series 300**
Endorsements:

Intended Service:
Hoisting, Luffing and Slewing mechanism for Lifting Appliances and Drilling Systems.
Steering mechanism for Azimuthal Thrusters.

Description:
Multi stage or single stage auxiliary planetary reduction gears.
Single stages planetary reduction gears have reduction ratio among 3.43: 1 and 7.50: 1 and are grouped in following main types: 300, 301, 303, 305, 306, 307, 309, 310, 310M, 311M, 313, 313M and 314/315M.
Each single stage reduction gear is defined as a specific combination of sun gear, planetary gear and toothed ring.
Different planetary carriers, even if with different output splines, may grant the same gear combination.
The list of all the reduction gear stages with relevant reduction ratio and relevant main components technical drawings identification can be found in the attached document together with all the admissible compositions and sequences.

Rating:
Depending on the reduction gear composition, rated power could be greater or lower than 100 kW.
Reference maximum output dynamic torques and maximum output static torques, for each reduction gear stage, are provided in the attached document.
Above maximum output dynamic torques are provided for each Load Spectrum Class (L1, L2, L3 and L4) and for each Class of Utilization (T1, T2, T3, T4, T5, T6, T7 and T8), as defined in F.E.M. Standard 1.001 – "Rules for the Design of Hoisting Appliance", and are based on following assumptions:
- Reference Speed: 15 rpm;
- Type of Load: Monodirectional;
- Type of Oil: ISO-VG 150.

Reference maximum output static torques are provided for single and redundant arrangements.

Service Restriction:
1. For Lifting Appliances and Drilling Systems, Unit Certification is required for these products when the rated power is 100 kW and over as per 2-1/Table 3 of the ABS Requirements for Certification of Lifting Appliances and as per 3-2/Table 1 of the ABS Guide for the Classification of Drilling Systems.
2. For steering mechanism of certified thrusters (ref 4-3-5), Unit Certification is required for these products regardless of their power rating as per 4-3-1/1.1 and 4-3-1/3.1.3 of the ABS Rules for Building and Classing Marine Vessels.
3. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
1) The system designer is responsible of the suitability of the selected loading spectrum, lifetime and brake capacity for the intended application. Particularly, when the gearboxes are used for transmitting the brake torque on Lifting Appliances, they are to have a static strength of at least the braking capacity of the respective brake, as per 2-6/23 of ABS CLA Requirements.
2) Output pinions, output and input supports are not covered by present Certificate and need to be approved on a case-by-case basis. Output pinions and relevant shafts which are intended to be used for steering of azimuthing thruster are to be made of materials tested in the presence of the Surveyor, as per 4-3-1/3.1.3 of ABS Marine Vessel Rules.
3) Minimum Design Service Temperature (DST) is -20 °C. Where operation at lower temperature is requested, consideration shall be given to provision of adequate heating systems for the entire reduction gear or to adoption of materials with adequate fracture toughness as per 2-3/Table 2 of ABS Requirements for Certification of Lifting Appliances. Relevant design information is to be submitted for review on a case-by-case basis.
4) As per Manufacturer's Gearboxes Technical Specification BUInS_TS_037 – "Threaded Connections: Tightening Specification", all the connecting flanges of the Series 300 planetary gearboxes are to be fitted with Class 12.9 bolts

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Tier: 5 - Unit Certification Required

tightened to a nominal torque of 86 Nm (M10x1.5), 148 Nm (M12x1.75), 368 Nm (M16x2) or 719 Nm (M20x2.5).
5) Brake oil line is to be installed as short as possible with a minimum diameter sectional area equal to, at least, the brake outlet port diameter.
6) Hydraulic motors driving pinions for thruster steering mechanisms are to be certified by the Surveyor at Manufacturer's plant in accordance with 4-3-5/5.11 and 4-6-1/7.3 of ABS Marine Vessel Rules.
7) The Manufacturer has provided a declaration about the control of, or lack of Asbestos in this product.

Notes/Drawing/Documentation:
Single stage planetary gears main components technical drawings as per attached document.
Specification No. AQF040GI, Specification for the Supply of Raw Materials: Cast Iron, Revision: 12, Pages: 10;
Specification No. BUInS_TS_037, Threaded Connections: Tightening Specifications, Revision: 7, Pages: 17;
Specification No. C_PI_17, Supplier Quality Specification, Revision: 0, Pages: 12;
Specification No. Q430000I, Quality Specification – Sungear, Revision: 3, Pages: 10;
Specification No. Q555000I, Quality Specification – Planet Gear Carriers, Revision: 1, Pages: 13;
Specification No. ME, Quality of Materials According to ISO 6336-5, Revision: 4, Pages: 1;
Test report No. TR13023, Cold climate conditions functional test on 707T4F carried out at Bonfiglioli laboratory on June 2013, Revision: 0, Pages: 21;
Test report No. TR08047, Endurance and Static Tests for Yaw Drive 709T4N carried out at Bonfiglioli laboratory on 25th November 2008, Revision: 0, Pages: 33;
Test report No. TR09032, Endurance and Failure Tests on Yaw Drive 709T4N carried out at Bongilioli laboratory on 21st October 2009, Revision: 2, Pages 84;
Test report No. TR10023, 309 Gearbox Bench Test carried out at Bonfiglioli laboratory on 2010, Revision: 1, Pages: 7;
Test report No. TR10001_S, Endurance and Max Static Torque Tests on Yaw Drive 709T4F carried out at Bonfiglioli laboratory on 10th February 2010, Revision: 1, Pages 33;
Test report No. TR18015, Validation Test Report for Pitch Drive 710T carried out at Bonfiglioli laboratory on 21st March 2018, Revision: 0, Pages: 27;
Test report No. TR15003, Validation Test Report for Pitch Drive 711T3 carried out at Bonfiglioli laboratory on 13th February 2015, Revision: 1, Pages 48;
Test report No. TR12022, Validation Test Report for Topside Lifting System Y-Drive carried out at Bonfiglioli laboratory on 6th September 2012, Revision: 1, Pages: 25;
Test report No. TR15002, Validation Test Report for Yaw Drive 716T4 carried out at Bonfiglioli laboratory on 13th February 2015, Revision: 1, Pages: 41
Test report No. SG2615075, ABS Test Report for Jacking Gear JC-180 carried out at Singapore Amerin laboratory on 30th August 2015;
Test report No. HS3016187, ABS Prototype Test Report for Jacking Pinion and Gearbox with Torque Tube carried out at Aberdeen, Power Transfer Solution laboratory on 27th July 2017, Revision: 0; Pages: 24.

Terms of Validity:
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Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

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Tier: 5 - Unit Certification Required

STANDARDS

ABS Rules:
- ABS Requirements for Certification of Lifting Appliances (2026): 1-3/9, 2-1/Table 3, 2-3/5.3, 2-3/Table 2, 2-3/9 and 2-6/23.
- Guide for the Classification of Drilling System (2021): 2-7/9.7, 3-2/Table 1 and 3-2/Table 2.

- Rules for Conditions of Classification (2026): 1A-1-4/7.7, 1A-1-A3 and A4, which covers the following:
- Rules for Building and Classing Marine Vessels (2026): 4-3-1/1, 4-3-1/3.1.3, 4-3-1/5, 4-3-1/9.7, 4-3-5/5.11 and 4-3-5/13;

- Rules for Conditions of Classifications – Offshore Units and Structures (2025): 1B.1.4/9.7, 1B-1-A2 and A3, which covers the following:
- Rules for Building and Classing Offshore Units (2026): 4-1-2/3

National:
NA

International:
NA

Government:
NA

EUMED:
NA

OTHERS:
NA

ATTACHMENT 1

PDA 300 - Reduction Stages - Drawings

PDA Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Name	1:	MWSTool	Reduction Kit		Alternative Kit		Planet Carrier		Alternative Carrier		Planet gear		Pin		Sun gear		Toothed Ring		Alternative Ring		Alternative Ring	
300	3,48	**300_SR_3_48**	2T235530010	A			6655501102	C			6642000121	A	6634500093	D	6643000160	-	6641000141	G	6641000131	E	6641000231	D
300	4,26	**300_SR_4_26**	2T235530020	-			6655501112	D			6642000131	B	6634500093	D	6643000150	-	6641000141	G	6641000131	E	6641000231	D
300	5,77	**300_SR_5_77**	2T235530030	-			6655501122	C			6642000141	B	6634500093	D	6643000140	-	6641000141	G	6641000131	E	6641000231	D
300	7,20	**300_SR_7_20**	2T235530040	-			6655501132	C			6642000151	B	6634500093	D	6643000130	A	6641000141	G	6641000131	E	6641000231	D
301	3,48	**301_SR_3_48**	2T235531010	-			6655500192	C			6642000062	B	6634500250	C	6643000040	-	6641000041	F			6641000231	D
301	4,26	**301_SR_4_26**	2T235531020	-			6655500202	C			6642000031	B	6634500250	C	6643000050	-	6641000041	F			6641000231	D
301	5,77	**301_SR_5_77**	2T235531030	-			6655500212	C			6642000051	B	6634500250	C	6643000060	-	6641000041	F			6641000231	D
301	7,20	**301_SR_7_20**	2T235531040	-			6655500222	B			6642000041	B	6634500250	C	6643000070	B	6641000041	F			6641000231	D
303	3,60	**303_SR_3_60**	2T235532010	-			6655501202	C			6642000160	B	6634510280	D	6643000210	A	6641000360	E	6641000480	C		
303	4,25	**303_SR_4_25**	2T235532020	-			6655501162	C			6642000170	B	6634510280	D	6643000200	B	6641000360	E	6641000480	C		
303	5,33	**303_SR_5_33**	2T235532030	-			6655501172	C			6642000180	B	6634510280	D	6643000190	A	6641000360	E	6641000480	C		
303	6,20	**303_SR_6_20**	2T235532040	-			6655501192	C			6642000190	D	6634510280	D	6643000180	A	6641000360	E	6641000480	C		
303	7,50	**303_SR_7_50**	2T235532050	-			6655501182	C			6642000200	B	6634510280	D	6643000170	A	6641000360	E	6641000480	C		
305	3,60	**305_SR_3_60**	2T235533010	-			6655500343	C			6642000110	B	6634510441	C	6643000080	B	6641000250	E	6641000480	C		
305	4,25	**305_SR_4_25**	2T235533020	-			6655500353	C			6642000070	C	6634510441	C	6643000090	A	6641000250	E	6641000480	C		
305	5,33	**305_SR_5_33**	2T235533030	-			6655500363	C			6642000080	B	6634510441	C	6643000100	A	6641000250	E	6641000480	C		
305	6,20	**305_SR_6_20**	2T235533040	A			6655500373	C			6642000100	B	6634510441	C	6643000110	A	6641000250	E	6641000480	C		
305	7,50	**305_SR_7_50**	2T235533050	-			6655500383	C			6642000090	C	6634510441	C	6643000120	B	6641000250	E	6641000480	C		
306	3,60	**306_SR_3_60**	2T235534010	-			6655500822	C			6642010101	B	6634510470	E	6643010050	A	6641010030	C				
306	4,25	**306_SR_4_25**	2T235534020	-			6655500832	C			6642010111	B	6634510470	E	6643010060	A	6641010030	C				
306	5,33	**306_SR_5_33**	2T235534030	-			6655500842	C			6642010121	B	6634510470	E	6643010070	A	6641010030	C				
306	6,20	**306_SR_6_20**	2T235534040	-			6655500852	C			6642010131	B	6634510470	E	6643010080	-	6641010030	C				
306	7,50	**306_SR_7_50**	2T235534050	-			6655500862	C			6642010141	B	6634510470	E	6643010090	-	6641010030	C				
307	3,43	**307_SR_3_43**	2T235535010	-			6655504670	C			6642020050	A	6634520150	F	6643020020	A	6641020022	B				
307	4,09	**307_SR_4_09**	2T235535020	-			6655504680	C			6642020060	B	6634520150	F	6643020030	B	6641020022	B				
307	5,25	**307_SR_5_25**	2T235535030	-			6655504690	C			6642020070	A	6634520150	F	6643020040	B	6641020022	B				
307	6,23	**307_SR_6_23**	2T235535040	-			6655504700	C			6642020080	B	6634520150	F	6643020050	A	6641020022	B				
309	3,43	**309_SR_3_43**	2T235536050	-	2T235536151	-	6655501083	C	6655500613	C	6642020090	A	6634520161	H	6643020060	A	6641020031	D				
309	4,09	**309_SR_4_09**	2T235536060	-	2T235536161	-	6655501053	C	6655500623	D	6642020100	A	6634520161	H	6643020070	C	6641020031	D				
309	5,25	**309_SR_5_25**	2T235536070	-	2T235536171	-	6655501073	C	6655500633	C	6642020110	B	6634520161	H	6643020080	A	6641020031	D				
309	6,23	**309_SR_6_23**	2T235536080	-	2T235536181	-	6655501063	C	6655500643	C	6642020120	A	6634520161	H	6643020090	A	6641020031	D				
310	4,09	**310_SR_4_09**	2T235526020	A			6655506733	D			6642020400	A	6634510592	B	6643020770	A	6641020230	C				
310M	4,09	**310M_SR_4_09**	2T235626260	A	2T235626360	A	6655514190	C	6655514200	C	6642060160	A	6634510592	B	6643020770	A	6641020230	D				
310M	5,25	**310M_SR_5_25**	2T235626270	A	2T235626370	A	6655514210	C	6655514220	C	6642060170	A	6634510592	B	6643020780	A	6641020230	D				
310M	6,23	**310M_SR_6_23**	2T235626280	A	2T235626380	A	6655514230	C	6655514240	C	6642060180	B	6634510592	B	6643020790	A	6641020230	D				

ATTACHMENT 1

PDA 300 - Reduction Stages - Drawings

PDA Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Name	1:	MWSTool	Reduction Kit		Alternative Kit		Planet Carrier		Alternative Carrier		Planet gear		Pin		Sun gear		Toothed Ring		Alternative Ring		Alternative Ring	
311M	4,09	**311M_SR_4_09**	2T235626450	B	2T235626540	A	6655514250	D	6655514280	C	6642060190	B	6634520490	A	6643030040	-	6641030031	H				
311M	5,25	**311M_SR_5_25**	2T235626460	A	2T235626550	A	6655514260	G	6655514290	C	6642060200	A	6634520490	A	6643030050	-	6641030031	H				
311M	6,23	**311M_SR_6_23**	2T235626470	B	2T235626560	A	6655514270	D	6655514300	C	6642060210	-	6634520490	A	6643030060	-	6641030031	H				
313	5,40	**313_SR_5_40**	2T235638270	-	2T235638320	-	6655506951	B	6655506821	B	6642040021	A	6634520261	A	6643040020	B	6641040011	D				
313M	4,14	**313M_SR_4_14**	2T235626840	A	2T235626900	A	6655514370	B	6655514400	B	6642060220	-	6634520500	A	6643040010	A	6641040011	D				
313M	5,40	**313M_SR_5_40**	2T235626850	A	2T235626910	A	6655514380	B	6655514410	B	6642060230	A	6634520500	A	6643040020	B	6641040011	D				
313M	6,50	**313M_SR_6_50**	2T235626830	A	2T235626920	A	6655514390	B	6655514420	B	6642060240	A	6634520500	A	6643040030	B	6641040011	D				
315M (314M)	4,25	**314-5M_SR_4_25**	2T235627170	A	2T235627260	A	6655514490	D	6655514520	B	6642060250	A	6634520510	C	6643040440	A	6641040180	A				
315M (314M)	5,33	**314-5M_SR_5_33**	2T235627180	A	2T235627270	A	6655514500	D	6655514530	B	6642060260	B	6634520510	C	6643040450	A	6641040180	A				
315M (314M)	6,20	**314-5M_SR_6_23**	2T235627190	A	2T235627280	A	6655514510	D	6655514540	B	6642060270	A	6634520510	C	6643040460	A	6641040180	A				

ATTACHMENT 1

PDA 300 - Reduction Stages - Compositions

PDA Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Stages	300	301	303	305	306	307	309	310	311	313	314/315
Seq. 1	300	301		305		307			311		315*
Seq. 2	300	301		305			309			313	
Seq. 3	300		303		306			310			314*

*Reduction stages 315 are named 314 when installed after a 310 reduction stage.
Compositions are the same.

Load Spectrums							
L1- km = 0,1		**L2**- km = 0,126		**L3** - km = 0,253		**L4**- km = 0,647	
Load [%]	**Time [%]**	**Load [%]**	**Time [%]**	**Load [%]**	**Time [%]**	**Load [%]**	**Time [%]**
100	3	100	4	100	12	100	55
50	35	50	25	60	46	60	45
35	62	45	51	43	42		
		35	20				

Classes of Utilisation								
Class	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**
Hours	400	800	1.600	3.200	6.300	12.500	25.000	50.000

Other costrains		
Speed	15	**[r.p.m.]**
Type of Load	Monodirectional	
Type of Oil	ISO-VG 150	

Electronically published by ABS Genoa.
Reference WO0561822, dated 14-May-2026

Certificate No. 26-0561822-PDA
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ATTACHMENT 2

PDA 300 - Project Data - L1

Stage	Output Torque [Nm]							
	T1/ M1	T2 / M1	T3 / M2	T4 / M3	T5 / M4	T6 / M5	T7 / M6	T8 / M7
300_SR_3_48	1.244	1.109	990	888	800	720	647	622
300_SR_4_26	1.804	1.595	1.388	1.209	1.123	979	853	742
300_SR_5_77	1.211	1.071	931	818	753	656	571	496
300_SR_7_20	819	713	620	573	501	436	379	329
301_SR_3_48	2.446	2.180	1.946	1.746	1.573	1.415	1.272	1.223
301_SR_4_26	2.522	2.522	2.393	2.217	2.043	1.878	1.706	1.485
301_SR_5_77	2.423	2.141	1.862	1.637	1.506	1.312	1.141	992
301_SR_7_20	1.637	1.426	1.240	1.146	1.003	873	758	659
303_SR_3_60	3.891	3.495	3.116	2.794	2.514	2.260	2.029	1.946
303_SR_4_25	4.762	4.345	3.866	3.469	3.123	2.808	2.522	2.266
303_SR_5_33	4.151	3.673	3.203	2.798	2.593	2.265	1.975	1.723
303_SR_6_20	3.321	2.937	2.559	2.313	2.071	1.807	1.575	1.372
303_SR_7_50	2.549	2.219	1.932	1.790	1.563	1.363	1.187	1.033
305_SR_3_60	7.581	6.809	6.071	5.443	4.899	4.404	3.954	3.791
305_SR_4_25	7.902	7.902	7.536	6.764	6.088	5.475	4.919	4.537
305_SR_5_33	7.902	7.345	6.406	5.595	5.185	4.530	3.950	3.445
305_SR_6_20	6.665	5.895	5.137	4.642	4.157	3.629	3.162	2.755
305_SR_7_50	5.105	4.446	3.872	3.586	3.133	2.733	2.379	2.072
306_SR_3_60	14.683	14.683	14.369	12.838	11.514	10.314	9.227	8.834
306_SR_4_25	14.683	14.683	13.800	12.355	11.095	9.955	8.920	8.181
306_SR_5_33	14.683	13.500	11.789	10.348	9.545	8.348	7.289	6.364
306_SR_6_20	12.015	10.622	9.267	8.423	7.502	6.555	5.718	4.988
306_SR_7_50	9.112	7.944	6.926	6.410	5.606	4.895	4.266	3.718
307_SR_3_43	13.537	12.136	10.891	9.829	8.903	8.055	7.279	7.000
307_SR_4_09	24.492	22.953	20.424	18.319	16.483	14.816	13.073	11.435
307_SR_5_25	20.349	18.026	15.761	13.912	12.766	11.179	9.774	8.545
307_SR_6_23	15.447	13.565	11.848	10.822	9.594	8.393	7.329	6.400
309_SR_3_43	20.159	18.069	16.214	14.631	13.251	11.986	10.830	10.414
309_SR_4_09	24.492	24.492	24.492	24.492	24.431	21.961	19.716	17.330
309_SR_5_25	24.492	24.492	23.642	20.868	19.150	16.769	14.661	12.817
309_SR_6_23	23.170	20.348	17.772	16.232	14.392	12.589	10.994	9.600
310_SR_4_09	36.075	36.075	36.075	36.075	34.889	30.594	26.786	23.451

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ATTACHMENT 2

PDA 300 - Project Data - L1

Stage	Output Torque [Nm]							
	T1/ M1	T2 / M1	T3 / M2	T4 / M3	T5 / M4	T6 / M5	T7 / M6	T8 / M7
310M_SR_4_09	36.075	36.075	36.075	36.075	34.947	30.646	26.832	23.491
310M_SR_5_25	36.075	36.075	33.227	29.446	26.921	23.595	20.647	18.066
310M_SR_6_23	34.493	30.156	26.363	24.212	21.353	18.695	16.341	14.283
311M_SR_4_09	60.840	59.192	54.356	49.915	45.924	42.211	38.760	36.923
311M_SR_5_25	60.840	60.840	53.907	47.921	43.688	38.321	33.560	29.388
311M_SR_6_23	52.396	45.845	40.110	36.919	32.496	28.473	24.908	21.788
313_SR_5_40	79.723	70.679	61.906	55.397	50.171	44.009	38.542	33.752
313M_SR_4_14	80.925	79.795	73.412	67.049	61.685	56.750	50.758	44.479
313M_SR_5_40	79.721	70.677	61.903	55.394	50.169	44.007	38.540	33.750
313M_SR_6_50	57.749	50.552	44.249	40.840	35.856	31.431	27.507	24.071
314-5M_SR_4_25	102.109	102.109	102.109	102.109	102.109	96.864	86.678	77.656
314-5M_SR_5_33	102.109	102.109	102.109	101.440	91.103	80.095	70.306	61.708
314-5M_SR_6_23	102.109	98.532	86.421	79.665	70.081	61.555	53.978	47.330

ATTACHMENT 2

PDA 300 - Project Data - L2

Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Stage	Output Torque [Nm]							
	T1/ M1	T2 / M2	T3 / M3	T4 / M4	T5 / M5	T6 / M6	T7 / M7	T8 / M8
300_SR_3_48	1.188	1.052	946	850	766	689	622	622
300_SR_4_26	1.707	1.491	1.298	1.172	1.060	925	805	701
300_SR_5_77	1.150	1.000	903	815	711	619	538	468
300_SR_7_20	766	666	601	543	473	412	358	311
301_SR_3_48	2.336	2.069	1.859	1.671	1.505	1.354	1.223	1.223
301_SR_4_26	2.465	2.465	2.382	2.191	2.017	1.850	1.611	1.402
301_SR_5_77	2.300	2.001	1.806	1.629	1.422	1.238	1.077	936
301_SR_7_20	1.533	1.332	1.202	1.085	946	823	716	622
303_SR_3_60	3.746	3.316	2.976	2.671	2.404	2.161	1.946	1.946
303_SR_4_25	4.650	4.129	3.696	3.317	2.986	2.686	2.412	2.141
303_SR_5_33	3.943	3.440	3.104	2.800	2.450	2.140	1.866	1.627
303_SR_6_20	3.155	2.749	2.481	2.238	1.956	1.707	1.487	1.295
303_SR_7_50	2.384	2.075	1.873	1.690	1.476	1.287	1.120	975
305_SR_3_60	7.298	6.460	5.798	5.205	4.685	4.211	3.791	3.791
305_SR_4_25	7.695	7.695	7.205	6.468	5.823	5.237	4.704	4.288
305_SR_5_33	7.695	6.879	6.207	5.600	4.899	4.280	3.732	3.255
305_SR_6_20	6.331	5.517	4.979	4.492	3.927	3.427	2.986	2.602
305_SR_7_50	4.776	4.159	3.753	3.386	2.958	2.580	2.247	1.956
306_SR_3_60	14.683	14.683	13.702	12.258	10.994	9.848	8.834	8.829
306_SR_4_25	14.683	14.683	13.181	11.803	10.601	9.512	8.523	7.735
306_SR_5_33	14.492	12.655	11.419	10.301	9.023	7.891	6.889	6.015
306_SR_6_20	11.405	9.950	8.979	8.100	7.089	6.194	5.403	4.713
306_SR_7_50	8.531	7.437	6.712	6.056	5.296	4.623	4.030	3.512
307_SR_3_43	12.959	11.546	10.430	9.425	8.537	7.724	7.000	7.000
307_SR_4_09	24.492	21.799	19.520	17.515	15.761	14.137	12.366	10.817
307_SR_5_25	19.343	16.913	15.261	13.767	12.074	10.573	9.244	8.081
307_SR_6_23	14.561	12.718	11.476	10.353	9.070	7.934	6.928	6.050
309_SR_3_43	19.296	17.190	15.526	14.028	12.704	11.492	10.414	10.414
309_SR_4_09	24.492	24.492	24.492	24.492	23.361	21.000	18.741	16.394
309_SR_5_25	24.492	24.492	22.892	20.651	18.112	15.860	13.865	12.121
309_SR_6_23	21.841	19.077	17.214	15.530	13.605	11.901	10.392	9.074
310_SR_4_09	36.075	36.075	36.075	36.075	33.017	28.952	25.348	22.191

Electronically published by ABS Genoa.
Reference WO0561822, dated 14-May-2026

ATTACHMENT 2

PDA 300 - Project Data - L2

Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Stage	Output Torque [Nm]							
	T1 / M1	T2 / M2	T3 / M3	T4 / M4	T5 / M5	T6 / M6	T7 / M7	T8 / M8
310M_SR_4_09	36.075	36.075	36.075	36.075	33.072	29.001	25.391	22.229
310M_SR_5_25	36.075	35.649	32.167	29.018	25.471	22.324	19.534	17.091
310M_SR_6_23	32.362	28.292	25.528	23.030	20.194	17.680	15.454	13.506
311M_SR_4_09	60.840	57.135	52.467	48.179	44.327	40.743	37.411	34.985
311M_SR_5_25	60.840	57.824	52.176	47.069	41.349	36.268	31.761	27.813
311M_SR_6_23	49.189	43.036	38.832	35.032	30.742	26.936	23.563	20.610
313_SR_5_40	75.813	66.403	59.917	54.053	47.485	41.652	36.477	31.943
313M_SR_4_14	80.925	78.011	71.227	65.574	59.921	54.832	48.051	42.107
313M_SR_5_40	75.811	66.401	59.915	54.051	47.484	41.650	36.475	31.941
313M_SR_6_50	54.233	47.471	42.835	38.644	33.927	29.739	26.025	22.773
314-5M_SR_4_25	102.109	102.109	102.109	102.109	102.109	92.498	82.771	73.575
314-5M_SR_5_33	102.109	102.109	102.109	98.023	86.308	75.877	66.601	58.455
314-5M_SR_6_23	102.109	92.663	83.619	75.444	66.366	58.290	51.113	44.815

Stage	Output Torque [Nm]							
	T1/ M2	T2 / M3	T3 / M4	T4 / M5	T5 / M6	T6 / M7	T7 / M8	T8 / M8
300_SR_3_48	990	888	798	717	646	622	622	622
300_SR_4_26	1.391	1.221	1.063	946	851	742	646	569
300_SR_5_77	941	818	712	653	570	496	431	410
300_SR_7_20	627	545	478	434	379	329	287	287
301_SR_3_48	1.946	1.746	1.569	1.410	1.270	1.223	1.223	1.223
301_SR_4_26	2.169	2.169	2.073	1.894	1.703	1.485	1.293	1.138
301_SR_5_77	1.882	1.637	1.423	1.306	1.139	992	863	819
301_SR_7_20	1.253	1.089	956	869	757	659	573	573
303_SR_3_60	3.116	2.794	2.508	2.252	2.027	1.946	1.946	1.935
303_SR_4_25	3.866	3.469	3.115	2.798	2.519	2.266	1.977	1.743
303_SR_5_33	3.232	2.819	2.459	2.254	1.972	1.723	1.502	1.401
303_SR_6_20	2.584	2.251	1.961	1.799	1.572	1.372	1.195	1.154
303_SR_7_50	1.952	1.699	1.513	1.357	1.185	1.033	908	908
305_SR_3_60	6.071	5.443	4.887	4.388	3.949	3.791	3.791	3.791
305_SR_4_25	6.769	6.764	6.073	5.455	4.912	4.537	3.959	3.490
305_SR_5_33	6.464	5.638	4.917	4.509	3.944	3.445	3.004	2.801
305_SR_6_20	5.186	4.519	3.938	3.612	3.157	2.755	2.400	2.320
305_SR_7_50	3.910	3.405	3.033	2.720	2.376	2.072	1.822	1.822
306_SR_3_60	14.369	12.838	11.485	10.274	9.215	8.834	8.159	7.129
306_SR_4_25	13.800	12.355	11.068	9.917	8.909	8.181	7.148	6.308
306_SR_5_33	11.888	10.381	9.064	8.309	7.277	6.364	5.556	5.183
306_SR_6_20	9.350	8.157	7.116	6.525	5.709	4.988	4.350	4.206
306_SR_7_50	6.991	6.094	5.447	4.872	4.260	3.718	3.273	3.273
307_SR_3_43	10.891	9.829	8.883	8.027	7.271	7.000	7.000	7.000
307_SR_4_09	20.424	18.319	16.233	14.582	13.052	11.435	10.002	8.751
307_SR_5_25	15.883	13.888	12.142	11.128	9.759	8.545	7.469	6.947
307_SR_6_23	11.947	10.435	9.113	8.354	7.318	6.400	5.588	5.410
309_SR_3_43	16.214	14.631	13.220	11.945	10.817	10.414	10.414	10.414
309_SR_4_09	24.492	24.492	24.372	21.880	19.692	17.330	15.159	13.263
309_SR_5_25	23.825	20.832	18.213	16.692	14.638	12.817	11.204	10.421
309_SR_6_23	17.921	15.652	13.669	12.531	10.977	9.600	8.382	8.114
310_SR_4_09	36.075	36.075	33.239	29.967	26.745	23.451	20.529	17.976

ATTACHMENT 2 **PDA 300 - Project Data - L3**

Stage	Output Torque [Nm]							
	T1/ M2	T2 / M3	T3 / M4	T4 / M5	T5 / M6	T6 / M7	T7 / M8	T8 / M8
310M_SR_4_09	36.075	36.075	33.295	30.018	26.791	23.491	20.565	18.008
310M_SR_5_25	33.470	29.291	25.632	23.488	20.615	18.066	15.806	14.708
310M_SR_6_23	26.570	23.228	20.304	18.610	16.316	14.283	12.482	12.087
311M_SR_4_09	54.356	49.915	45.835	42.088	38.722	36.923	32.425	28.480
311M_SR_5_25	54.280	47.540	41.635	38.147	33.508	29.388	25.734	23.957
311M_SR_6_23	40.409	35.354	30.929	28.344	24.870	21.788	19.057	18.457
313_SR_5_40	62.333	54.595	47.815	43.810	38.483	33.752	29.556	27.699
313M_SR_4_14	74.758	68.279	62.797	57.135	50.681	44.479	38.975	34.269
313M_SR_5_40	62.331	54.593	47.813	43.808	38.481	33.750	29.554	27.697
313M_SR_6_50	44.570	39.011	34.329	31.288	27.465	24.071	21.061	20.598
314-5M_SR_4_25	102.109	102.109	102.109	96.494	86.568	77.656	68.183	60.445
314-5M_SR_5_33	102.109	99.169	87.053	79.738	70.200	61.708	54.157	50.664
314-5M_SR_6_23	86.964	76.273	66.942	61.279	53.897	47.330	41.496	40.165

Stage	Output Torque [Nm]							
	T1/ M3	T2 / M4	T3 / M5	T4 / M6	T5 / M7	T6 / M8	T7 / M8	T8 / M8
300_SR_3_48	782	702	631	622	622	611	579	561
300_SR_4_26	1.076	948	826	719	628	569	569	556
300_SR_5_77	721	635	553	480	419	410	410	410
300_SR_7_20	480	423	367	319	287	287	287	287
301_SR_3_48	1.537	1.381	1.241	1.223	1.223	1.223	1.158	1.121
301_SR_4_26	1.804	1.804	1.652	1.438	1.256	1.138	1.138	1.112
301_SR_5_77	1.443	1.271	1.105	961	838	819	819	819
301_SR_7_20	960	845	734	638	573	573	573	573
303_SR_3_60	2.456	2.205	1.979	1.946	1.946	1.884	1.802	1.741
303_SR_4_25	3.050	2.739	2.460	2.196	1.922	1.743	1.743	1.733
303_SR_5_33	2.487	2.194	1.914	1.669	1.460	1.401	1.401	1.401
303_SR_6_20	1.985	1.751	1.525	1.329	1.161	1.154	1.154	1.154
303_SR_7_50	1.513	1.320	1.149	1.000	908	908	908	908
305_SR_3_60	4.785	4.296	3.857	3.791	3.791	3.767	3.603	3.481
305_SR_4_25	5.635	5.342	4.798	4.397	3.849	3.490	3.490	3.471
305_SR_5_33	4.973	4.389	3.828	3.338	2.920	2.801	2.801	2.801
305_SR_6_20	3.986	3.515	3.063	2.669	2.332	2.320	2.320	2.320
305_SR_7_50	3.037	2.647	2.305	2.007	1.822	1.822	1.822	1.822
306_SR_3_60	11.236	10.052	8.993	8.834	7.933	6.943	6.724	6.498
306_SR_4_25	10.831	9.706	8.697	7.930	6.950	6.308	6.308	6.243
306_SR_5_33	9.160	8.091	7.064	6.167	5.401	5.183	5.183	5.183
306_SR_6_20	7.196	6.352	5.541	4.833	4.228	4.206	4.206	4.206
306_SR_7_50	5.440	4.742	4.133	3.602	3.273	3.273	3.273	3.273
307_SR_3_43	8.708	7.869	7.111	7.000	7.000	7.000	7.000	7.000
307_SR_4_09	16.097	14.452	12.675	11.088	9.728	8.751	8.751	8.695
307_SR_5_25	12.260	10.838	9.476	8.284	7.263	6.947	6.947	6.947
307_SR_6_23	9.209	8.134	7.104	6.203	5.433	5.410	5.410	5.410
309_SR_3_43	12.959	11.709	10.580	10.414	10.414	10.414	10.414	10.414
309_SR_4_09	23.860	21.422	19.210	16.804	14.743	13.263	13.263	13.127
309_SR_5_25	18.390	16.258	14.213	12.426	10.895	10.421	10.421	10.421
309_SR_6_23	13.813	12.202	10.655	9.304	8.149	8.114	8.114	8.114
310_SR_4_09	33.529	29.671	25.977	22.742	19.969	17.976	17.976	17.843

ATTACHMENT 2

PDA 300 - Project Data - L4

PDA Certificate No. 26-0561822-PDA
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Expiring on 11th May 2031

Stage	Output Torque [Nm]							
	T1/ M3	T2 / M4	T3 / M5	T4 / M6	T5 / M7	T6 / M8	T7 / M8	T8 / M8
310M_SR_4_09	33.585	29.721	26.021	22.781	20.004	18.008	18.008	17.895
310M_SR_5_25	25.865	22.880	20.021	17.518	15.373	14.708	14.708	14.708
310M_SR_6_23	20.504	18.124	15.842	13.846	12.138	12.087	12.087	12.087
311M_SR_4_09	45.074	41.389	38.005	35.833	31.561	28.480	28.480	28.480
311M_SR_5_25	41.991	37.166	32.548	28.502	25.033	23.957	23.957	23.957
311M_SR_6_23	31.217	27.609	24.152	21.126	18.534	18.457	18.457	18.457
313_SR_5_40	48.223	42.683	37.380	32.734	28.750	27.699	27.699	27.699
313M_SR_4_14	62.299	56.183	49.236	43.145	37.920	34.269	34.269	34.269
313M_SR_5_40	48.221	42.682	37.379	32.733	28.749	27.697	27.697	27.697
313M_SR_6_50	34.452	30.480	26.674	23.341	20.598	20.598	20.598	20.598
314-5M_SR_4_25	102.109	94.415	84.485	75.362	66.364	60.445	60.445	60.445
314-5M_SR_5_33	87.666	77.723	68.223	59.879	52.707	50.664	50.664	50.664
314-5M_SR_6_23	67.404	59.719	52.367	45.916	40.375	40.165	40.165	40.165

ATTACHMENT 2

PDA 300 - Project Data - Static

PDA Certificate No. 26-0561822-PDA
Issued on 12th May 2026
Expiring on 11th May 2031

Stage	Static Torque [Nm]	
	Single arrangement	Redundant arrangement
300_SR_3_48	2.138	2.138
300_SR_4_26	3.277	3.277
300_SR_5_77	2.806	2.806
300_SR_7_20	2.904	2.904
301_SR_3_48	3.372	3.372
301_SR_4_26	3.372	3.372
301_SR_5_77	3.372	3.372
301_SR_7_20	3.082	3.372
303_SR_3_60	6.759	6.759
303_SR_4_25	8.207	8.207
303_SR_5_33	7.851	7.851
303_SR_6_20	6.395	6.395
303_SR_7_50	6.931	6.931
305_SR_3_60	8.167	9.800
305_SR_4_25	9.698	10.525
305_SR_5_33	10.525	10.525
305_SR_6_20	10.525	10.525
305_SR_7_50	7.327	8.792
306_SR_3_60	20.556	20.556
306_SR_4_25	20.556	20.556
306_SR_5_33	20.556	20.556
306_SR_6_20	20.556	20.556
306_SR_7_50	13.838	16.606
307_SR_3_43	22.562	22.562
307_SR_4_09	25.538	30.646
307_SR_5_25	34.289	34.289
307_SR_6_23	33.025	33.025
309_SR_3_43	25.525	30.630
309_SR_4_09	30.255	34.289
309_SR_5_25	34.289	34.289
309_SR_6_23	34.289	34.289
310_SR_4_09	50.505	50.505

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PDA 300 - Project Data - Static

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Stage	Single arrangement	Redundant arrangement
310M_SR_4_09	50.505	50.505
310M_SR_5_25	50.505	50.505
310M_SR_6_23	50.505	50.505
311M_SR_4_09	85.176	85.176
311M_SR_5_25	85.176	85.176
311M_SR_6_23	72.160	85.176
313M_SR_5_40	113.295	113.295
313M_SR_4_14	85.654	102.785
313M_SR_5_40	111.605	125.059
313M_SR_6_50	67.470	80.964
314-5M_SR_4_25	177.570	204.218
314-5M_SR_5_33	204.218	204.218
314-5M_SR_6_23	130.278	156.334