

M Bonfiglioli

We engineer dreams





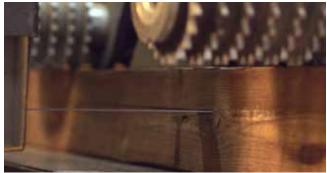
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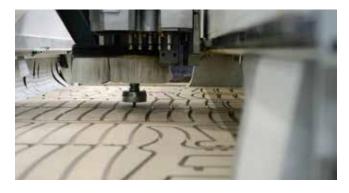
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# Engineering Solutions







WWW.BONFIGLIOLI.COM

# WOODWORKING

Bonfiglioli is a longstanding leading manufacturer of mechatronic solutions for the woodworking industry, supplying excellence and innovation by keeping focus on our customers and their needs.

Thanks to our know-how and long-term co-design with key players in this industry, we supply **bespoke solutions by integrating specific sector features into our products**, including both industrial and precision gearboxes, motors and servomotors up to IE5, as well as frequency inverters for spindle control.

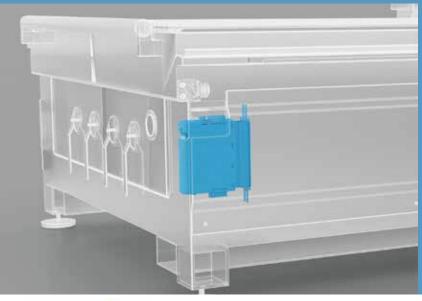


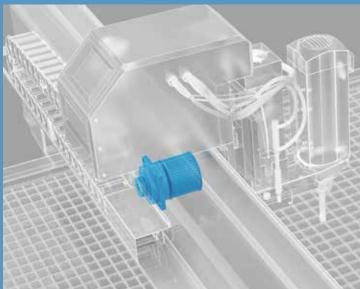


CNC Machining Centers are processing machines for manufacture furniture, windows and doors and are able to create complex shaped items thanks to their multi-axis operating section.

Bonfiglioli supplies application-specific solutions for both synchronous and asynchronous spindle control, with a wide range of dedicated functions. In addition, our precision planetary gearboxes designed for timing belt pulleys are the perfect fit when a combination of compactness and performance is required.

# **CNC MACHINING CENTERS**







# **AxiaVert Series**

Inverter for synchronous spindle control, delivering high performance on a wide range of functions and with different tools

# NEFITS

- No sine filter required + Reduced Heat
- Online control switch from asy. to syn. spindle motor
- Emergency ramp to stop the spindle
- Tapping function
- Space saving
- · Saving on 3<sup>rd</sup> party safety components and cabling
- · Less sensors and less cabling



- · High Switching Frequency
- Up to 12 data sets
- Grid Power-off Control
- · Sin/Cos interface for Sin/Cos encoders
- Power density
- Safety functions integrated in Axia
- Functional safety



# **SL Series**

Precision Planetary Gearbox to drive tool tool change pulley

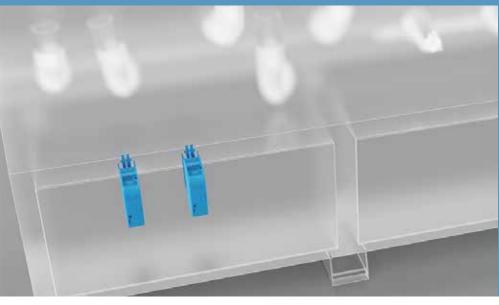
- Highly compact solution
- Precise positioning

- Gears within pulley interface
- · Planetary solution



operations on the same machine.

Bonfiglioli solutions for edgebanders vary from spindle control inverters to complete drive trains for the pull axis, as well as the rounding unit. They are manufactured with top class efficiency, reliability and noise level. Furthermore, the main axis can be sensorized for IoT services.







# **Agile Series**

Inverter for asynchronous spindle control, delivering high performance on a wide range of functions and with different tools



- Price/Performance Effectiveness with Agile series
- No sine filter required + Reduced Heat
- Emergency ramp to stop the spindle
- Simplified PLC mgmt



**BMD Series** 

For rounding units



**EVOX CP Series** 

Driving the pull axis

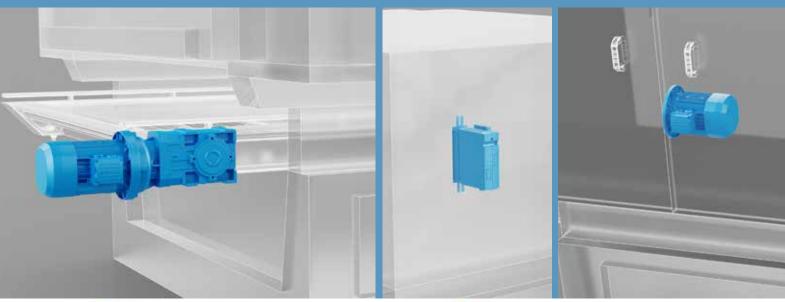
- Compactness
- Flexible design and range of options
- IoT Services
- Low energy consumption for End-User
- Minimum machine downtime
- Comfortable operation at End-user side

- Speed feedback management with on-fly open loop
- High Switching Frequency
- Grid Power-off Control
- Repetitive movement managed by inverter
- High torque density and efficiency
- Wide range of feedback types
- · Sensorization of Pull Axis
- Efficiency
- Reliability
- · Low Noise



Bonfiglioli solutions for this part of the woodworking process are centered around our synchronous reluctance technology, which guarantees IE4 efficiency on the roller axis, good dynamics on panel positioning and lifting, as well as high quality control at low speed when required.

# FINISHING MACHINING CENTERS





# AxiaVert + BSR + A

Power drive system to control panel conveyor and AXV + BSR to power the main roller

- $\cdot$  Low energy consumption for End-User on roller
- High productivity
- Easy to fit
- · Replaceable with standard asyn. motors
- Good control for different operating modes
- · Less sensors and less cabling



# AxiaVert + BX + VF/W

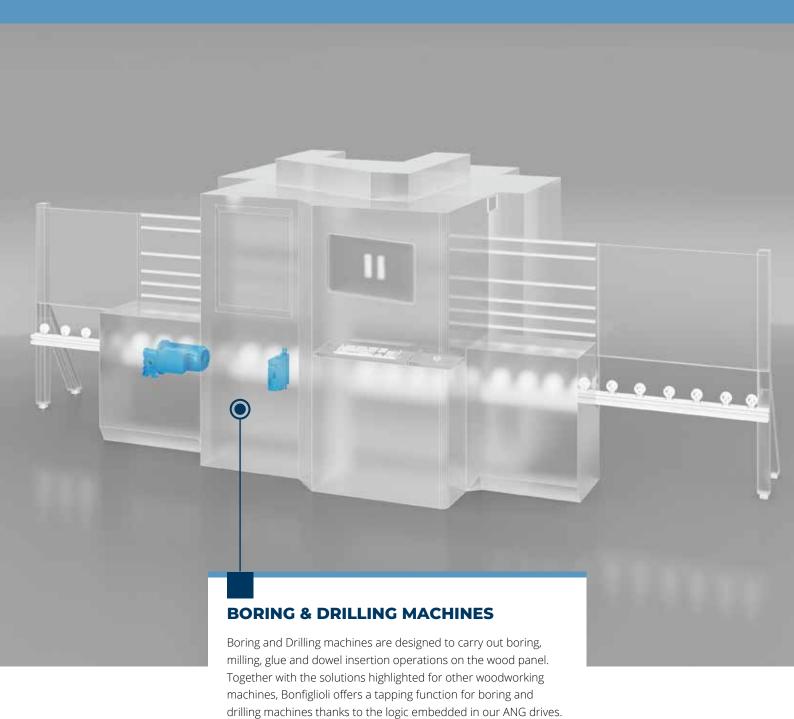
To control the panel positioning and the lifting mechanism

Price/Performance Effectiveness

TURE

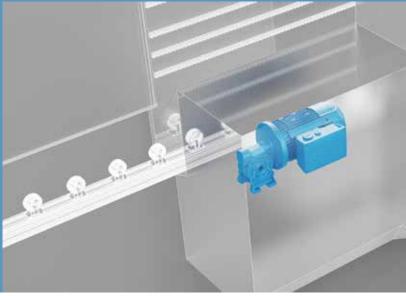
- High efficiency
- High dynamics
- Compactness
- IEC frame
- High performance @low speed
- Functional safety

• Top-class manufacturing technology



# **BORING & DRILLING MACHINES**







# **ANG Series**

Inverter for synchronous spindle control with tapping function

# BENEFITS

- $\cdot \ \mathsf{Tapping}$
- No sine filter required + Reduced Heat
- Emergency ramp to stop the spindle



# W/VF + BXN

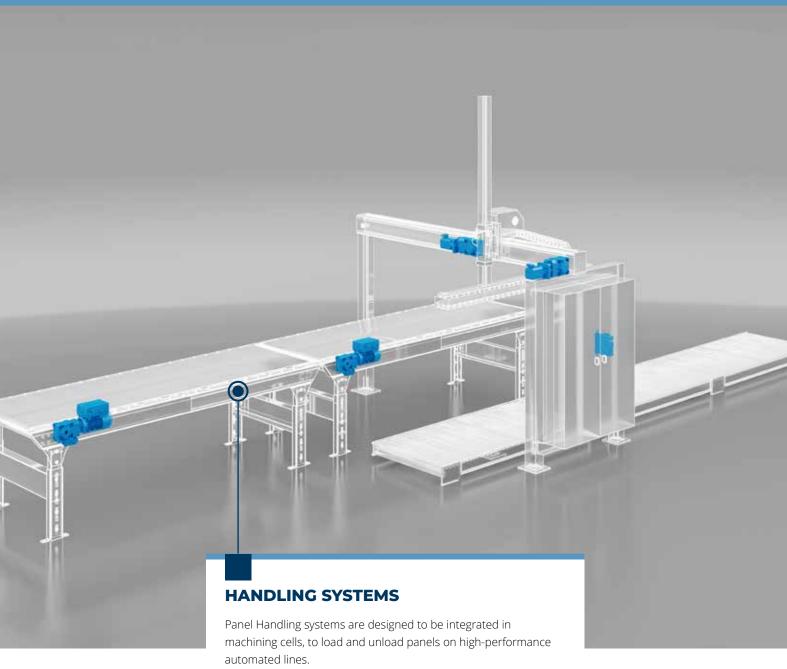
Gearmotor for pulling

- Price/Performance Effectiveness with AGL
- No sine filter required + Reduced Heat
- Emergency ramp to stop the spindle

# TURES

- $\cdot$  EtherCAT interpolation and positioning mode
- High Switching Frequency
- Grid Power-off Control

- Speed feedback management with on-fly open loop
- High Switching Frequency
- Grid Power-off Control



Thanks to its extensive experience in the intralogistic sector, Bonfiglioli couples industrial gearboxes with servomotors to offer compact gearmotors with the right amount of dynamics for highly productive machining lines.



A + BXN + DGM

To drive rollers and conveyors

BENEFITS

**FEATURES** 

• Easy to fit and install, limited cabling



ANG + BMD + A

To drive 3D panel handling systems

- High dynamics for 3D panel handling, compactness
- Complete axis control

Very compact decentralized solution

- Brushless motor coupled with ind. gearbox
- $\boldsymbol{\cdot}$  Integrated communication and feedback into the inverter

# WOODWORKING





# **GEARBOXES & GEARED MOTORS**

# Heavy duty parallel/right angle shaft geared motors **HDP/HDO Series**

• Torque range: 5,190 to 210,000 Nm

• **Gear ratios:** 5.6 to 500

# Planetary geared motors | 300 Series

• **Torque range:** 1,250 to 1,287,000 Nm

• **Gear ratios:** 3.4 ... 2,916

# Worm geared motors | W/VF Series

• Torque range: 13 to 7,100 Nm

• **Gear ratios:** 5.6 to 500

# Helical geared motors | C Series

• Torque range: 45 to 12,000 Nm

• **Gear ratios:** 5.6 to 500

# Bevel-helical geared motors | A Series

• Torque range: 100 to 14,000 Nm

• **Gear ratios:** 5.6 to 500

# Shaft-mounted geared motors | F Series

• **Torque range:** 140 to 14,000 Nm

• **Gear ratios:** 5.6 to 500

# Precision planetary servo geared motors

# $\mathsf{TQ}$ , $\mathsf{TQK}$ , $\mathsf{TQF}$ , $\mathsf{TR}$ , $\mathsf{MP}$ , $\mathsf{LC}$ , $\mathsf{LCK}$ , $\mathsf{SL}$ , $\mathsf{KR}$ Series

Torque range: up to 1,000 NmGear ratios: up to 1,000

· Backlash: lower than 2 and 17 arcmin

# **MOTORS**

# Asynchronous IEC motors | BN, BE, BX Series Asynchronous compact motors | MN, ME, MX series

A complete range of AC motors, meeting worldwide MEPS (e.g. IE3)



• Power range: 0.06 to 355 kW

· Poles: from 2 to 8 and multiple poles

# Asynchronous motors | BN, BE, BX, M, ME, MX Series

A complete range of AC motors, meeting worldwide MEPS (e.g. IE3)



• Power range: 0.06 to 355 kW

· Poles: from 2 to 8 and multiple poles

# Synchronous motors | BMD Series

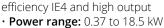
• Stall torque: 0.85 to 60 Nm

• Rated speed: from 1,600 to 6,000 min<sup>-1</sup>

• Power supply: 230, 400 VAC

## Synchronous reluctance motors | BSR Series

Two different versions for different needs: High





# Synchronous motors | BMD, BCR Series

• Stall torque BMD: 0.85 to 60 Nm

• Stall torque BCR: 0.2 to 115 Nm

• Rated speed BMD: from 1,600 to 6,000 min<sup>-1</sup>

• Rated speed BCR: from 2,000 to 4,500 min<sup>-1</sup>

· Power supply: 230, 400 VAC

# Synchronous motors with integrated drives | iBMD Series

Stall torque: 2.7 to 36 Nm
 Rated speed: 3,000 min<sup>-1</sup>
 Power supply: 560 VDC



# COMPLETE SOLUTIONS FOR POWER TRANSMISSION & AUTOMATION





# **CABINET INVERTERS**

## Cabinet solution | Active Cube 8 IP54

• Power range: 200 up to 1,200 kW

· Voltage: 400 V, 525V, 690V

# Premium inverter | Active Cube Series

• ACU210: 0.25 - 9.2 kW / 1- or 3-phase

• ACU410\*: 0.25 - 400 kW / 3-phase

• ACU510\*: 160 - 400 kW / 3-phase

• **ACU610\*:** 0.25 - 400 kW / 3-phase

# High performance frequency inverter | AxiaVert Series

• AXV20: 0.25 - 9.2 kW / 3-phase

• **AXV40:** 0.25 - 15 kW / 3-phase

# Premium inverter | Active Cube Series

• **ACU210:** 0.25 - 9.2 kW / 1- or 3-phase

• ACU410\*: 0.25 - 400 kW / 3-phase

· ACU510\*: 160 - 400 kW / 3-phase

· ACU610\*: 0.25 - 400 kW / 3-phase

# Smart inverter | Agile Series

• **AGL202:** 0.12 - 3 kW / 1-phase | 0.25 - 7.5 kW / 3-phase

• AGL402: 0.25 - 11 kW / 3-phase

# Compact inverter | S2U Series

• **S2U230S--..(F) IP66:** 0.25 - 400 kW / 3-phase

# Servo inverter | ANG Series

· ANG210: 0.25 - 9.2 kW / 1- or 3-phase

· ANG410\*: 0.25 - 400 kW / 3-phase

• ACU510\*: 160 - 400 kW / 3-phase

· ANG610\*: 0.25 - 400 kW / 3-phase

# Premium inverter | Active Cube Series

· ACU210: 0.25 - 9.2 kW / 1- or 3-phase

· ACU410\*: 0.25 - 400 kW / 3-phase

• ACU510\*: 160 - 400 kW / 3-phase

• ACU610\*: 0.25 - 400 kW / 3-phase

# Smart inverter | Agile Series

• **AGL202:** 0.12 - 3 kW / 1-phase | 0.25 - 7.5 kW / 3-phase

· AGL402: 0.25 - 11 kW / 3-phase

# \* up to 1200 kW with parallel connection

# **DECENTRALIZED INVERTERS**

### DGM<sub>1</sub>

• Size A: 0.37 - 1.1 kW / 1-phase

· Voltage: 230 V

• Motor type: Asynchronous

### DGM3

• Size A: 0.55 - 1.5 kW / 3-phase

• **Size B:** 2.2 - 4 kW / 3-phase

• Size C: 5.5 - 7.5 Kw / 3-phase

• Size D: 11 - 22 kW / 3-phase

• **Voltage:** 3 x 200 Vac -10%... 480 Vac +10% 280 Vdc -10%... 680 Vdc +10%

• Motor type: Asynchronous

# DGM MPM

• Size A: 0.55 - 1.5 kW / 3-phase

• Size B: 2.2 - 4 kW / 3-phase

• Size C: 5.5 - 7.5 Kw / 3-phase

• **Size D:** 11 - 30 kW / 3-phase

• **Voltage:** 3 x 200 Vac -10%... 480 Vac +10% 280 Vdc -10%... 680 Vdc +10%

• Motor type: Asynchronous & Synchronous



# **OUR GLOBAL PRESENCE**

Thanks to an international network of closely interconnected commercial and production sites, we can guarantee the same high standards of Bonfiglioli quality anywhere at any given time. We know that our direct presence in local markets is the key to long-lasting success, so our family includes 18 production sites, 23 commercial sites and more than 550 distributors around the world.

Our organization is always close by, offering complete and efficient solutions and supporting our customers with dedicated services, co-engineering and after-sales assistance.

18
PRODUCTION SITES

25
COMMERCIAL SITES



550
DISTRIBUTORS

~4,700

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We have a relentless commitment to excellence, innovation & sustainability. Our team creates, distributes and services world-class power transmission & drive solutions to keep the world in motion.

# **HEADQUARTERS**

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