



SOLUTIONS FOR

Wastewater Treatment



We engineer dreams



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Engineering Solutions



WWW.BONFIGLIOLI.COM

Wastewater Treatment

EFFICIENT, COMPACT SOLUTIONS FOR WATER TREATMENT

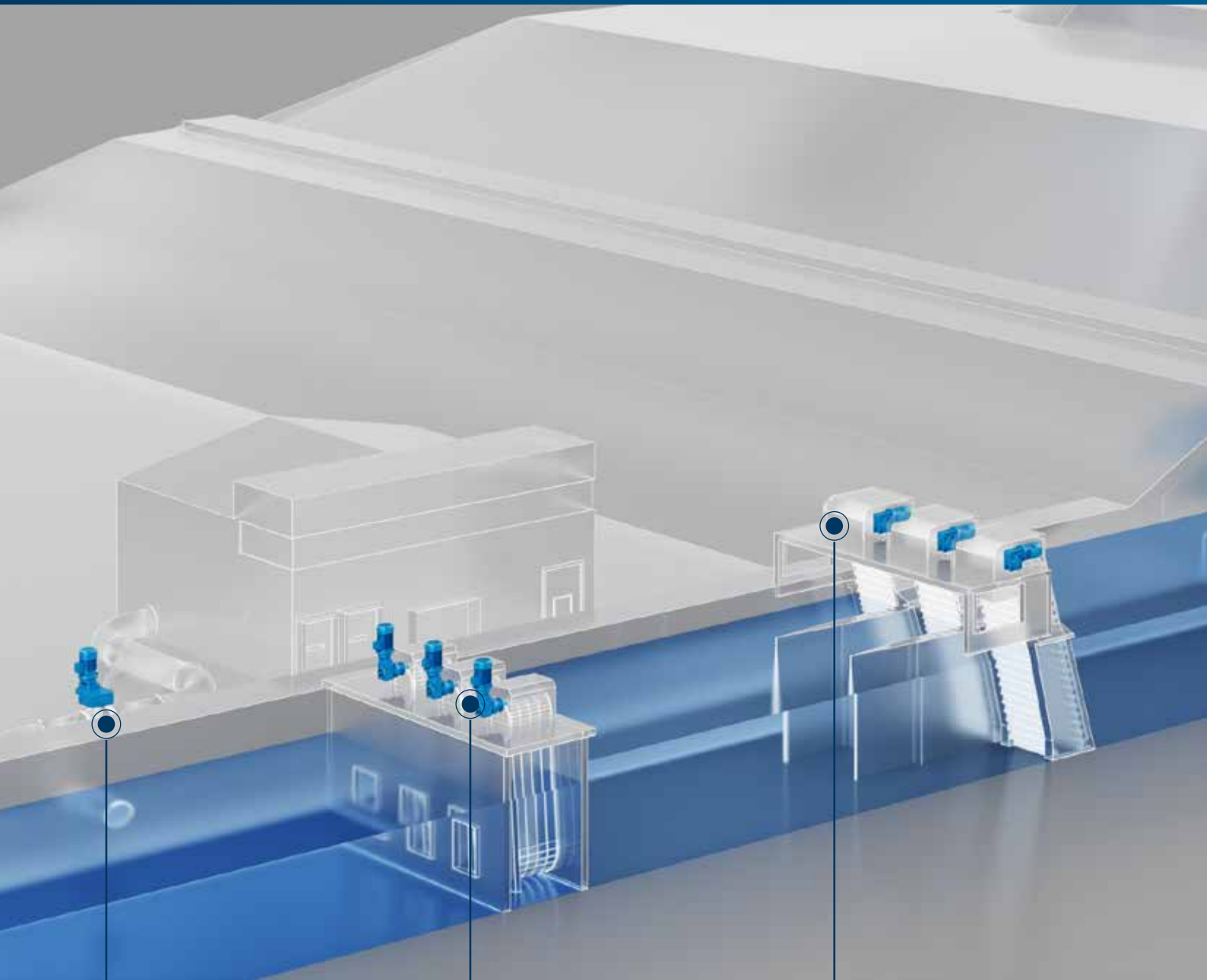
From desalination to purification, water and wastewater is a complex sector that requires reliable solutions to ensure uninterrupted operation.

With a comprehensive portfolio of power transmission products, Bonfiglioli can offer efficient solutions for all kinds of applications to support wastewater treatment plants. Easy maintenance, adaptability, compactness and a wide torque range are other fundamental features demanded by water and wastewater processes.

Perfect control of the drive speed and therefore water flow, easy maintenance and high reliability are key elements that enable us to supply our customers with energy saving solutions for the filters, mixers, areators, agitators, water flow control typically used in this sector.



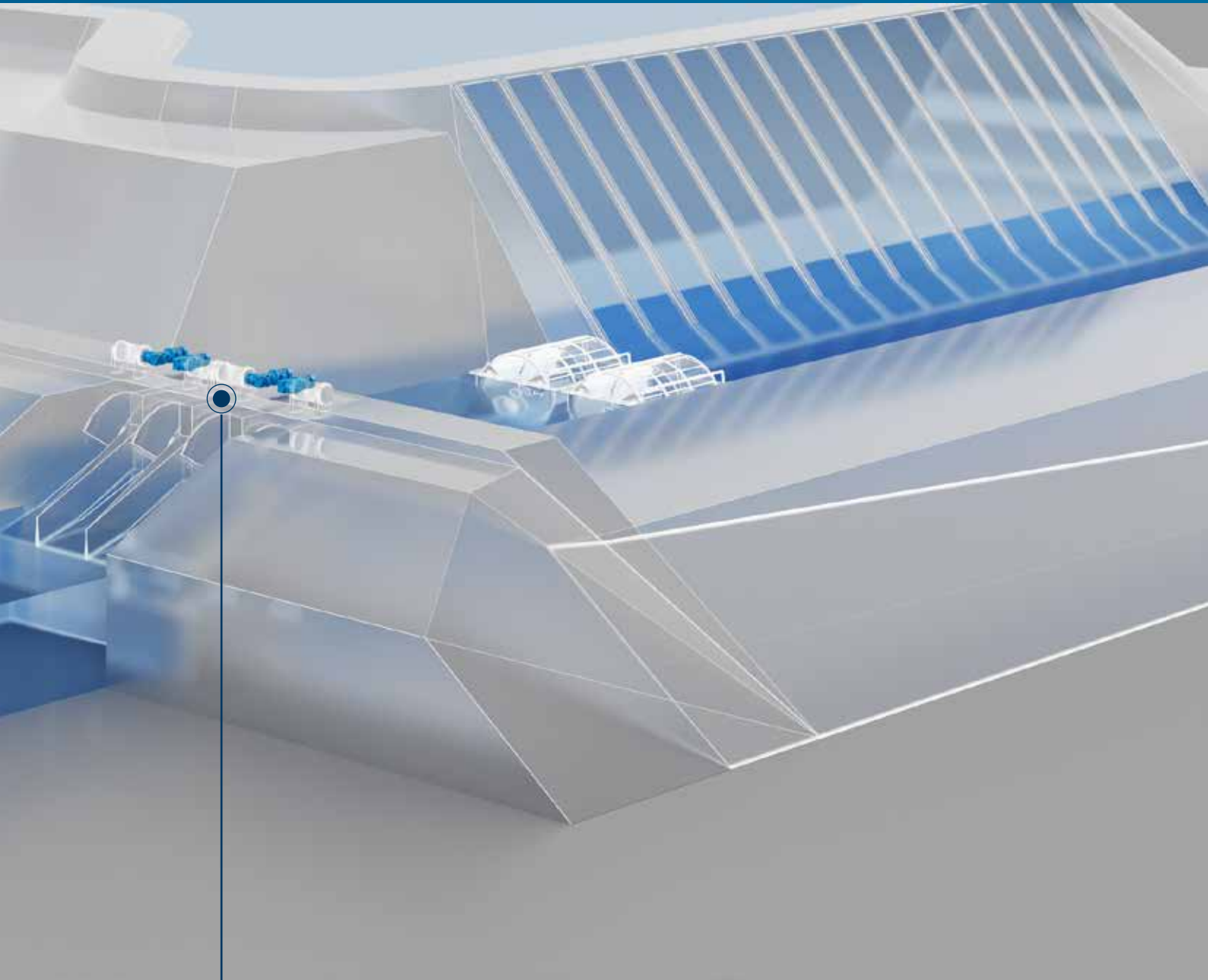
SOLUTIONS FOR Wastewater Treatment



4 DEBRIS FILTER

3 BAND SCREENER

2 TRASH RAKE



1 WATER GATE

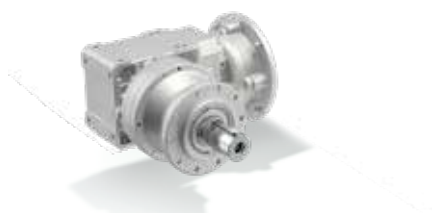
SOLUTIONS FOR Wastewater Treatment



1

WATER GATE

Ensure precise and dependable flow control, even remotely. Our solution delivers top-tier control which is both reliable and efficient, leveraging a wide range of technologies for optimum performance even in challenging environmental conditions.



3/A Series

Combined planetary/
helical bevel heavy duty
gearbox

BENEFITS

- High torque density & peak load capacity
- Modular and adaptable solution
- Low maintenance costs
- Minimized mounting space



EVOX BXN Series

Asynchronous Induction
Phase Motor

- One motor for different markets
- Simplify installation complexities and inventory management
- Uncompromised Efficiency
- Modular electric motor



AxiaAgile Series

Advanced inverter

- Smooth start
- Variable "cut position" for smaller particles

FEATURES

- High torque density & peak load capacity
- Modular and adaptable solution
- Low maintenance costs
- Minimized mounting space
- Fluoroelastomer and double lip seals

- IE3 Efficiency level
- Power range up to 7,5kW
- Built in DC brake
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

- CAN open support (variant depending)
- Industrial Ethernet support (variant depending)
- Sensorless control of synchronous, synchronous-reluctance and asynchronous motors
- DC link connection
- Integrated brake chopper
- Power failure control
- Programmable PI Controller
- Integrated PLC (variant-depending)
- Master/slave function with electronic gear
- Integrated safe torque off STO (SIL 3 / PL e / Cat.3) function
- Intelligent current limits
- Output frequency 0...599 Hz, higher frequencies on request
- Diagnosis and setup via optional keypad and Service interface for PC connection

2

TRASH RAKE

Trash Rakes, together with similar machines, are engineered to efficiently extract debris, waste, and sizable materials from the primary water flow. Because of their critical function, durability and dependability are paramount with these machines. Our solutions offer unparalleled long operating lifetime, solidity, robustness and reliability. What's more, we seamlessly integrate rugged design with advanced technology for maintenance and preemptive servicing.



VF-W Series
Worm gearbox



EVOX BXN Series
Asynchronous Induction
Phase Motor



AxiaAgile Series
Advanced inverter

BENEFITS

- Designed for enduring performance
- Reduced downtime by effectively absorbing peak loads
- Extreme mounting flexibility in compact installation space
- Easy maintenance

- One motor for different markets
- Simplify installation complexities and inventory management
- Uncompromised Efficiency
- Modular electric motor

- Smooth start
- Variable "cut position" for smaller particles

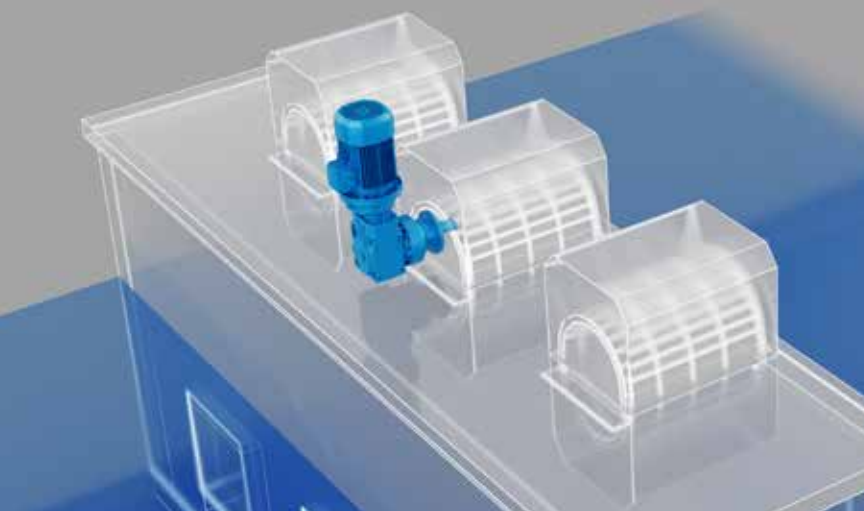
FEATURES

- Torque range: 13 to 7100Nm
- Ratio up to 1:10.000
- Wide option range including reinforced bearings, embedded torque limiter and torque arm
- Fluoroelastomer and double lip seals

- IE3 Efficiency level
- Power range up to 7,5kW
- Built in DC brake
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

- CAN open support (variant depending)
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- Sensorless control of synchronous, synchronous-reluctance and asynchronous motors
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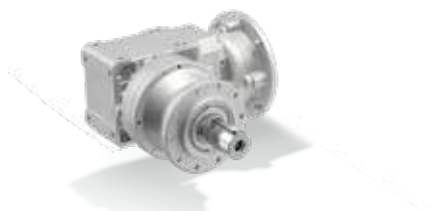
SOLUTIONS FOR Wastewater Treatment



3

BAND SCREENER

Stormwater often carries a mix of natural and man-made debris, which all needs to be effectively separated from the water before it goes on to the next stage of purification. A range of movable cleaning systems are used to ensure the filters stay clear at all times. Our gearmotors and solutions stand out as the best choice, offering a blend of reliability, robustness, cost-effectiveness, and efficiency.



3/A Series

Combined planetary/
helical bevel heavy duty
gearbox



BX Series

Asynchronous induction
phase motor



AxiaAgile Series

Advanced inverter

BENEFITS

- High torque density & peak load capacity
- Modular and adaptable solution
- Low maintenance costs
- Minimized mounting space

- Reliable, balanced and robust
- Compliant with the most of the efficiency standards

- Smooth start
- Variable "cut position" for smaller particles

FEATURES

- Backstop device
- Planetary and helical bevel gear technology
- Shaft mounting
- Rain Canopy
- Fluoroelastomer and double lip seals

- Power range up to 22kW
- Built in DC brakes
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

- CAN open support (variant depending)
- Industrial Ethernet support (variant depending)
- Sensorless control of synchronous, synchronous-reluctance and asynchronous motors
- DC link connection
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- Output frequency 0...599 Hz, higher frequencies on request
- Diagnosis and setup via optional keypad and Service interface for PC connection

4

DEBRIS FILTER

Whether it's a Band Screener or a Rake Filter, the ultimate goal of the Debris Filter is to efficiently capture and eliminate unwanted materials and debris from the fluid stream, ensuring a clean flow for the subsequent treatment stages. Our solution boasts a solid, robust design precisely engineered to withstand demanding operation and harsh climates. What's more, it simplifies maintenance and servicing procedures, enhancing overall efficiency.



F Series
Shaft Mounted Gearbox



EVOX BXN Series
Asynchronous Induction
Phase Motor



AxiaAgile Series
Advanced inverter

BENEFITS

- High efficiency
- Reliability and robustness
- Compactness
- Low maintenance

- One motor for different markets
- Simplify installation complexities and inventory management
- Uncompromised Efficiency
- Modular electric motor

- Smooth start
- Variable "cut position" for smaller particles

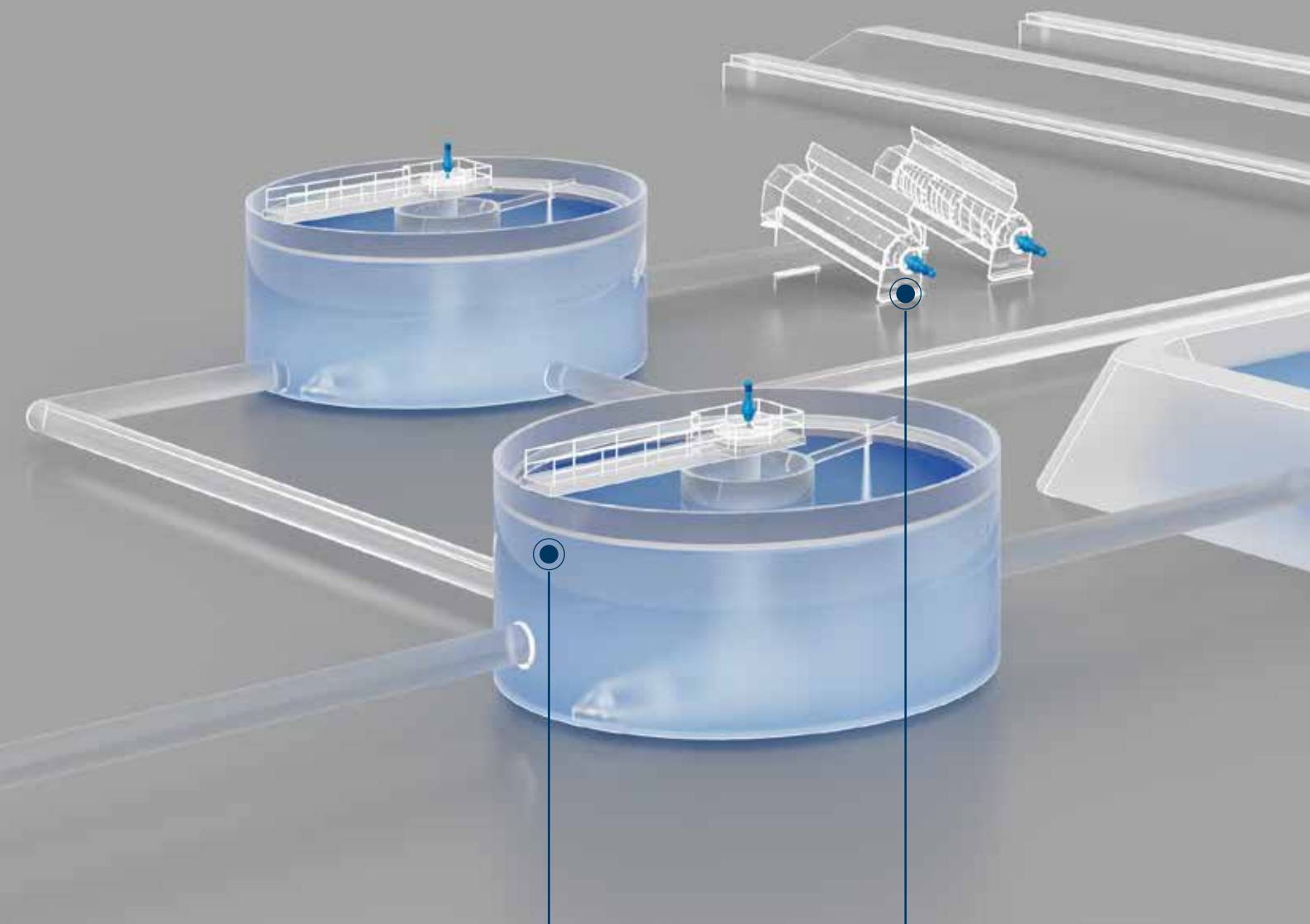
FEATURES

- Shaft mounted solution with different output configurations
- Housing integrated torque arm design and anti-vibration kits
- Wide range of ratios
- Availability of different grade of protection
- Compact or IEC/NEMA flanged motor adaptors
- Fluoroelastomer and double lip seals

- IE3 Efficiency level
- Power range up to 7,5kW
- Built in DC brake
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

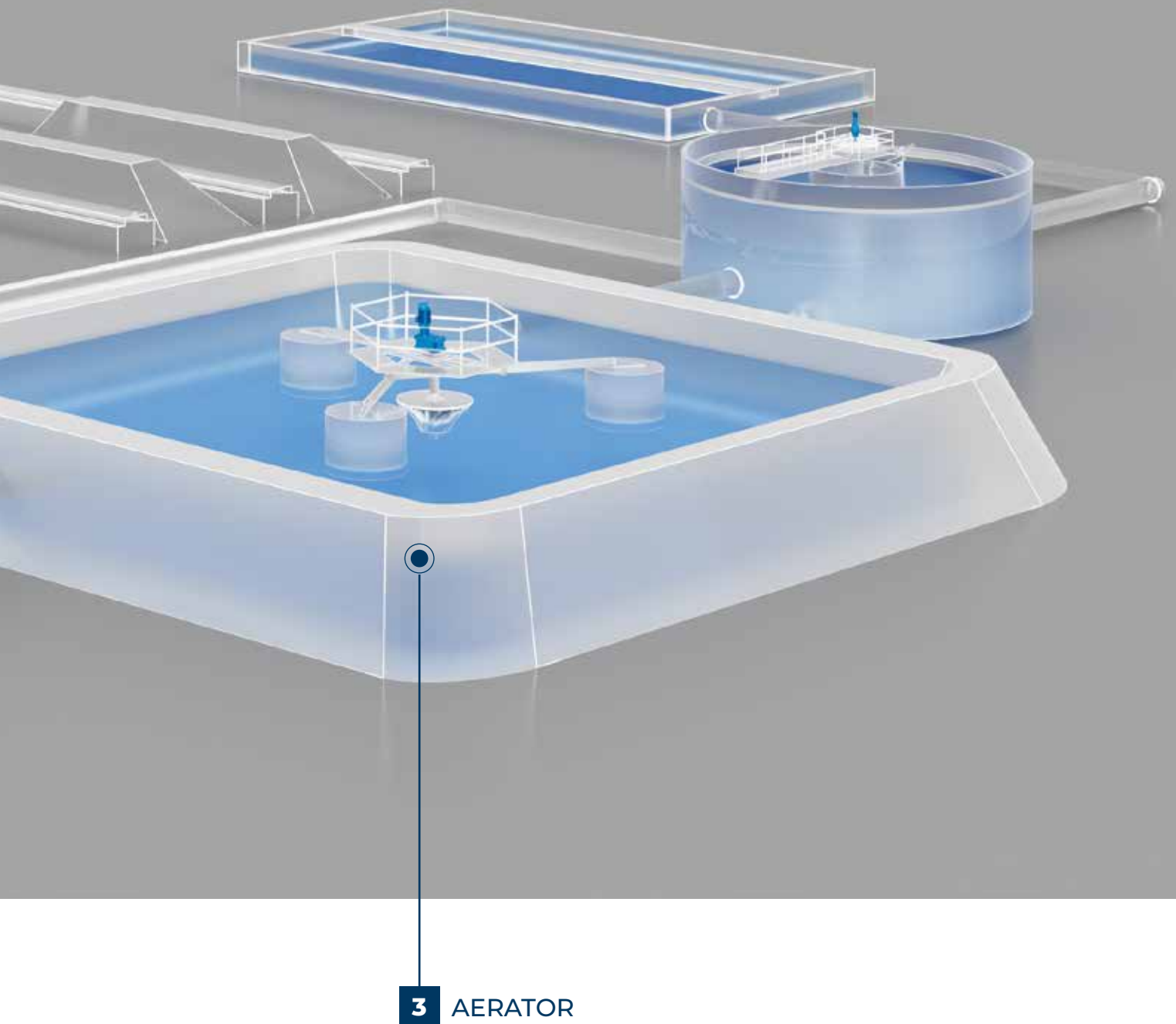
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- Industrial Ethernet support (variant depending)
- Sensorless control of synchronous, synchronous-reluctance and asynchronous motors
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SOLUTIONS FOR Wastewater Treatment

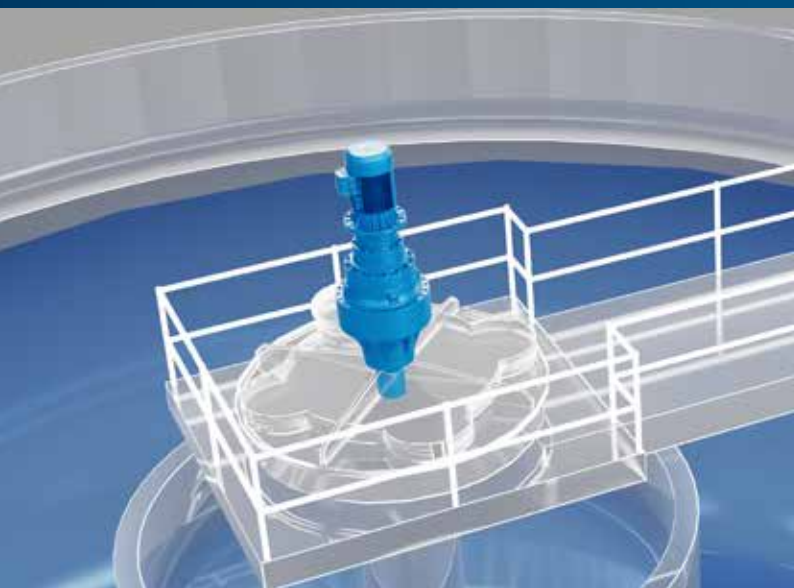


1 CLARIFIER

2 SCREW PRESS



SOLUTIONS FOR Wastewater Treatment



1

CLARIFIER

In the latter phase of treatment, water is clarified using various methods, like applying coagulants and flocculants to facilitate the aggregation of fine particles, settling tanks where gravity aids the separation of particles, or mechanical devices that physically remove impurities from the water. This stage typically demands an aggressive environment, high torque, and low speed. Our solution and products are meticulously crafted to meet the precise technical specifications of the clarifier. Torque control protects against system failures caused by blade overload, ensuring smooth operation.



300M Series Planetary Gearbox

- Robustness
- Reliability in harsh working conditions & wide range of temperature
- High torque density
- Modularity
- High overhung load capacity



BX Series Asynchronous induction phase motor

- Reliable, balanced and robust
- Compliant with the most of the efficiency standards



AxiaVert series Premium drive

- Multi-drive synchronization & torque control
- Drive Control is highly customizable
- Extremely compact

BENEFITS

FEATURES

- Widest range of ratios
- Easy to fit output pinion
- IEC or NEMA motor flange
- Wide range of motion control solutions
- Availability of different grades of protection
- Fluoroelastomer and double lip seals

- Power range up to 22kW
- Built in DC brakes
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

- Power range: 0.25 to 15 kW (up to 200 kW in preparation)
- Electric shaft with master/slave configuration (Systembus)
- Master & slave control & communication protocol
- Optional integrated PLC (IEC61131)



2

SCREW PRESS

The process of separating liquid from solids usually involves pressing sludge or slurry, followed by the separation of water and solids. The pressing is often performed using a press with a rotating screw housed in a cylindrical or conical structure. As the screw rotates, it compresses the sludge, expelling water through press apertures while retaining the dewatered solids.

This operation often means high specific axial loads have to be handled, which is why our extensive product range offers a variety of technologies and solutions to ensure robust, reliable performance. The modular design of the 300 M series aligns seamlessly with the required screw speed, promoting efficient operation.



300M Series Planetary Gearbox

BENEFITS

- Robustness
- Reliability in harsh working conditions and wide range of temperature
- High torque density
- Modularity
- High overhung load capacity



BX Series Asynchronous induction phase motor

FEATURES

- Widest range of ratios
- Easy to fit output pinion
- IEC or NEMA motor flange
- Wide range of motion control solutions
- Availability of different grades of protection
- Fluoroelastomer and double lip seals

- Reliable, balanced and robust
- Compliant with the most of the efficiency standards

- Power range up to 22kW
- Built in DC brakes
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

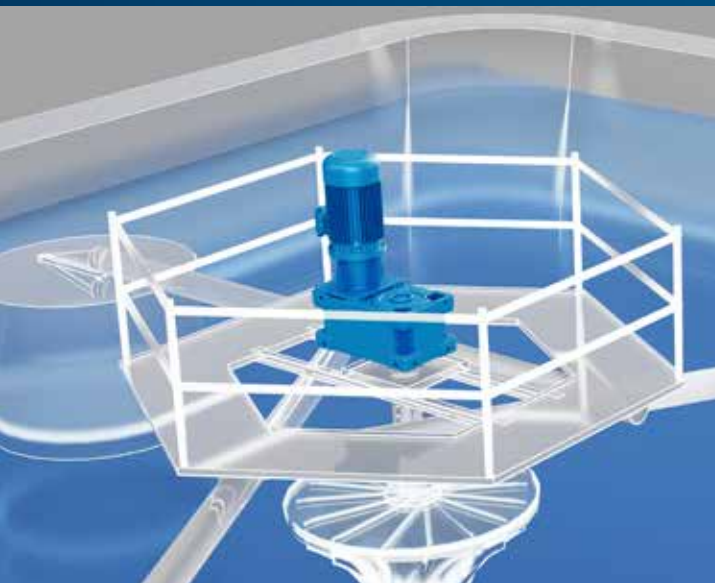


Active Cube Series Premium inverter

- Multi-drive synchronization & torque control
- Drive Control is highly customizable
- Extremely compact

- Power range: 0.25 to 400 kW (parallel connection: up to 1200 kW)
- Electric shaft with master/slave configuration (Systembus)
- Master & slave control & communication protocol
- Integrated VPLC

SOLUTIONS FOR Wastewater Treatment



3

AERATOR

Aerator, mixer, and agitator devices are specifically engineered to introduce air or other gases into liquids, aiding processes like oxygenation or other chemical reactions. This is achieved through rotating systems, like paddle or shaft agitators, which generate fluid movement and produce bubbles.

Our products and solutions are meticulously designed to meet the rigorous demands of these applications. Their capabilities can withstand high radial loads, ensure mechanical separation between the lubrication chamber and output, regulate speed effectively, and thrive in aggressive atmospheres. Remote control and preventive maintenance solutions are available as extra options, ensuring seamless integration with the primary requirements for the application.



HDP Series

Heavy Duty Geared Motor
(Helical-Parallel)



BX Series

Asynchronous induction
phase motor



AxiaVert series

Premium drive

BENEFITS

- Robustness
- Reliability in harsh working conditions and wide range of temperature
- Space effective U-shape arrangement
- High overhung load capacity
- Tailored service and warranty plans
- Pre-sales and product definition support according to the material handling and lifting standards

FEATURES

- Double input and output shaft
- Wide range of ratios
- Transmissible torque up to 210.000 Nm
- IEC or NEMA motor flange
- Safety solutions according to the customer requirements
- Wide range of motion control solutions
- Availability of different grade of protection

- Reliable, balanced and robust
- Compliant with the most of the efficiency standards

- Power range up to 22kW
- Built in DC brakes
- Thermal protection
- Anti-condensate heaters
- Second shaft extension
- Anti corrosive painting up to C5M
- Tropicalization
- Degree of protection up to IP56

- Multi-drive synchronization & torque control
- Drive Control is highly customizable
- Extremely compact

- Power range: 0.25 to 15 kW (up to 200 kW in preparation)
- Electric shaft with master/slave configuration (Systembus)
- Master & slave control & communication protocol
- Optional integrated PLC (IEC61131)

SECONDARY/WASTEWATER & SLUDGE TREATMENT



SOLUTIONS FOR Wastewater Treatment



GEAR UNITS

HEAVY DUTY

Helical parallel shaft gear units

HDP Series

- Torque range: 5,190 to 147,070 Nm
- Gear ratios: 7.1 to 500

Planetary gear units | 300M Series

- Torque range: 1,250 to 1,286,000 Nm
- Gear ratios: 3.4 ... 2,916

Combined planetary/helical bevel gear units

3/A Series

- Torque range: 46,660 to 1,188,610 Nm
- Gear ratios: 30 to 1,160

LIGHT DUTY

Worm gear units | W-VF Series

- Torque range: 13 to 7,100 Nm
- Gear ratios: 5.6 to 10,000

Helical parallel gear units | F Series

- Torque range: 140 to 14,000 Nm
- Gear ratios: 6.4 to 2,188

ELECTRIC 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: 4

IE3

Asynchronous IEC motors | eVOX BXN Series

Asynchronous compact motors | eVOX MXN Series

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

- Power range: 0.12 to 7.5 kW
- Poles: 4

IE3



INVERTERS

HEAVY DUTY

Premium drive | **AxiaVert series**

- **AXV20:** 0.25 - 9.2 kW / 230 V 1- or 3-phase
- **AXV40:** 0.25 - 15 kW / 400 V 3-phase

Premium inverter | **Active Cube Series**

- **ACU210:** 0.25 - 9.2 kW / 1- or 3-phase 230 V
- **ACU410*:** 0.25 - 400 kW / 3-phase 380...480 V
- **ACU510*:** 160 - 400 kW / 3-phase 525 V
- **ACU610*:** 160 - 400 kW / 3-phase 690 V

LIGHT DUTY

Premium drive | **AxiaVert series**

- **AXV20:** 0.25 - 9.2 kW / 230 V 1- or 3-phase
- **AXV40:** 0.25 - 15 kW / 400 V 3-phase

Premium inverter | **Active Cube Series**

- **ACU210:** 0.25 - 9.2 kW / 1- or 3-phase 230 V
- **ACU410*:** 0.25 - 400 kW / 3-phase 380...480 V
- **ACU510*:** 160 - 400 kW / 3-phase 525 V
- **ACU610*:** 160 - 400 kW / 3-phase 690 V

Advanced inverter | **AxiaAgile Series**

- **AXA20:** 0.12 - 3 kW / 1-phase | 0.25 - 7.5 kW / 3-phase 230 V
- **AXA40:** 0.25 - 11 kW / 3-phase 380...480 V

* up to 1200 kW with parallel connection

R&D Capacity

DESIGN SIMULATION



TESTING
LABORATORIES



CO-ENGINEERING



The R&D department at Bonfiglioli develops cutting-edge solutions that integrate the most advanced mechanical, electrical, electronic and hydraulic technologies, responding to the most complex application challenges. **Each R&D center focuses on dedicated product lines, ensuring specialist know-how and tailor-made innovation.**

R&D CENTERS WORLDWIDE



ITALY

Bologna
Rovereto
Forlì



GERMANY

Hattingen
Krefeld



INDIA

Chennai



CHINA

Shanghai



Production: the heart of our company

OUR PRODUCTION SITES COMBINE INNOVATION AND PRECISION, REDEFINING THE CONCEPT OF OPERATIONAL EXCELLENCE.



With a fleet of 200 collaborative, high-capacity robots joining our AGVs/AMRs, we have built a seamlessly integrated **automated production ecosystem**.

We bridge the gap between production and IT infrastructure thanks to end-to-end digital integration, ensuring real-time monitoring and data-driven optimization.



From smart picking in our **advanced warehouses** to dynamic shipping, we guarantee agile, reliable and fast global delivery.

Our worldwide 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 17 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

24  COMMERCIAL SITES

80  COUNTRIES

550  DISTRIBUTORS

~5,000  PEOPLE

Bonfiglioli global locations

AUSTRALIA

Bonfiglioli Transmission (Aust.) Pty Ltd
Plumpton NSW



BRAZIL

Bonfiglioli Redutores do Brasil Ltda
São Bernardo do Campo - São Paulo



CHINA

Bonfiglioli Drives (Shanghai) Co. Ltd.
Shanghai



Selcom Electronics (Shanghai) Co., Ltd
Shanghai



Shanghai



FRANCE

Bonfiglioli Transmission S.A.S.
Marly la Ville



GERMANY

Bonfiglioli Deutschland GmbH
Neuss



Bonfiglioli Deutschland GmbH
Krefeld



O&K Antriebstechnik GmbH
Hattingen



INDIA

Bonfiglioli Transmission Ltd.
Mobility & Wind Industries
Thirumudivakkam
Kancheepuram - Tamil Nadu



Industry & Automation Solutions
Mannur Village, Sriperumbudur Taluk
Kancheepuram - Tamil Nadu



Industry & Automation Solutions
Pune - Maharashtra



ITALY

Bonfiglioli Riduttori S.p.A.
Industry & Automation Solutions
Calderara di Reno (BO)



Industry & Automation Solutions
Carpiano



Mobility & Wind Industries
Forlì



Industry & Automation Solutions
Rovereto



Selcom Group S.p.A.
Castel Maggiore (BO)



Castel Maggiore (BO)



Cadriano (BO)



NEW ZEALAND

Bonfiglioli Transmission (Aust.) Pty Ltd
Auckland - Ellerslie



SINGAPORE

Bonfiglioli South East Asia Pte Ltd
Singapore



SLOVAKIA

Bonfiglioli Slovakia s.r.o.
Považská Bystrica



SOUTH AFRICA

Bonfiglioli South Africa Pty Ltd.
Johannesburg



SOUTH KOREA

Bonfiglioli Korea Co., Ltd.
Busan



SPAIN

Tecnotrans Bonfiglioli S.A
Castellbisbal - Barcelona



TURKEY

Bonfiglioli Türkiye Jsc
Çiğli - Izmir



UNITED KINGDOM

Bonfiglioli UK Ltd.
Warrington - Cheshire



USA

Bonfiglioli USA Inc.
Hebron - Kentucky



VIETNAM

Bonfiglioli Vietnam Co. Ltd.
Ben Cat city, Binh Duong province





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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