 **Bonfiglioli**
Industrial

Solutions for
Crane Applications

Solutions for **Crane Applications**

With more than 60 years of experience in integrated power transmission solutions, Bonfiglioli offers a complete range of gearboxes and gearmotors for cranes and lifting equipment.

High productivity, reliable power transmission under all conditions are a prerequisite for crane applications. The undisputed reliability and durability of Bonfiglioli's "Heavy Duty" series permit continuous duty over an extended lifetime.

The availability of high protection ratings for gearboxes and motors make Bonfiglioli solutions ideal for indoor and outdoor installations, even in marine environments.

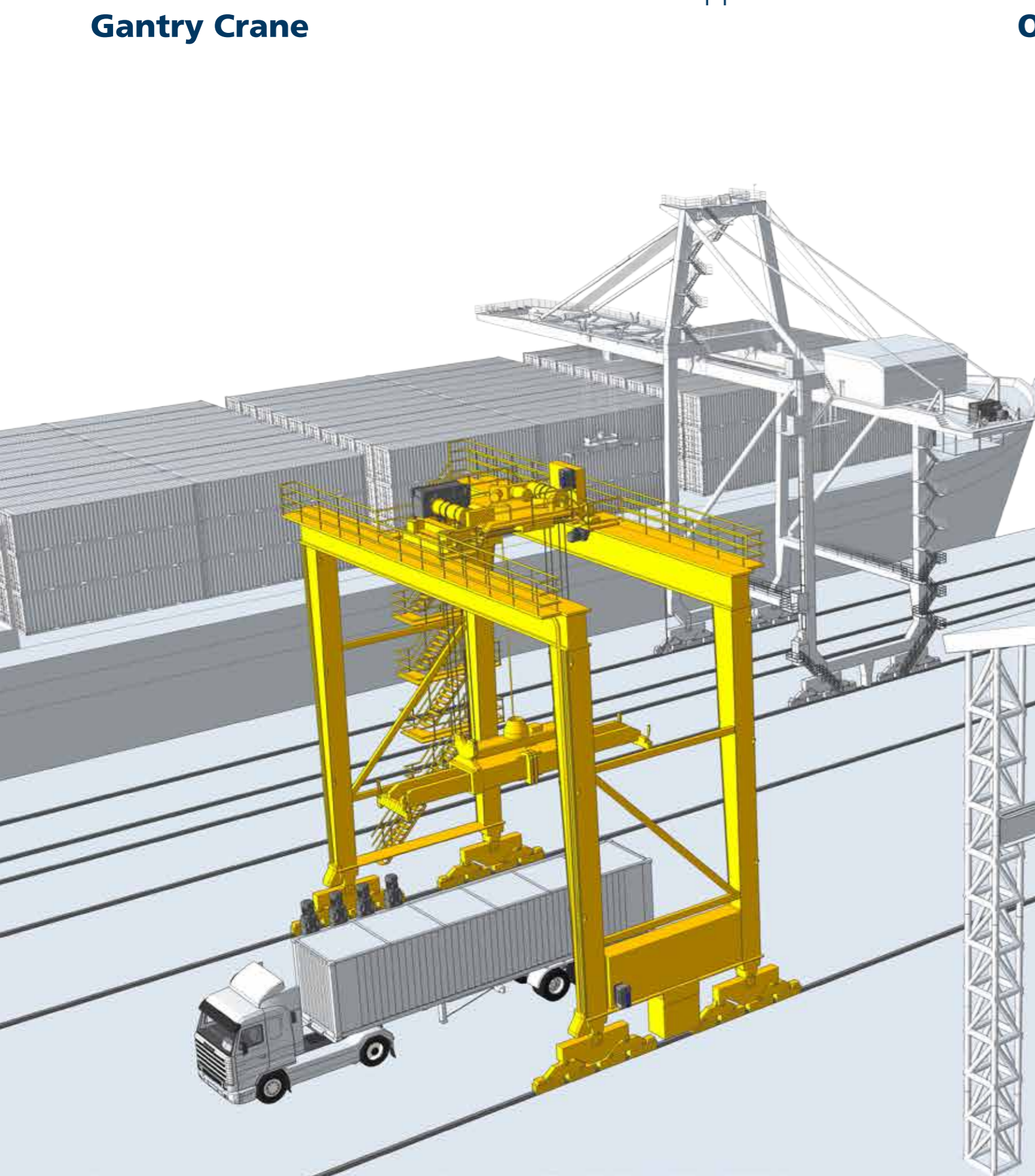
Modular gearbox design and special solutions for fast, easy maintenance of the entire power train help end users minimizing scheduled maintenance downtime.

Bonfiglioli's wide range of inverters allows special "complete drive solutions" for hoist, trolley and travel drives. Our closed loop inverters feature special functions like "brake release control" and "field weakening motor speed control" improve safety and increase productivity in hoisting operations. Our open loop inverters feature an innovative "stand-by" function to maximise the efficiency of trolley and travel drives under no-load conditions.

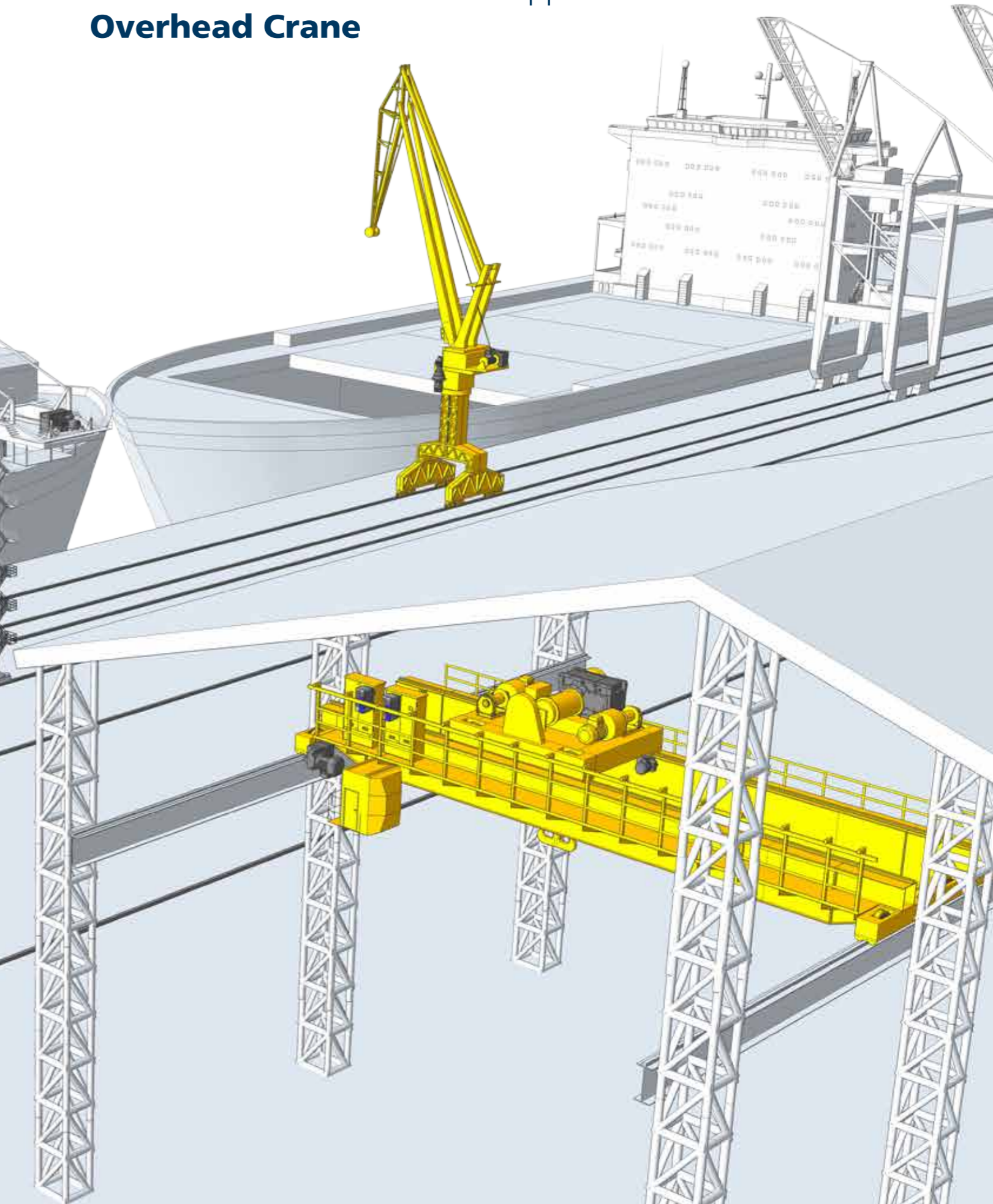
Bonfiglioli's vast expertise, acquired through long term partnerships with some of the world's leading manufacturers of lifting equipment, is at disposal of crane and hoist constructors around the world. Our widespread sales and service network ensures the availability of spare parts and technical support, anytime and anywhere.



Solutions for terminal and harbour outdoor applications
Gantry Crane



Solutions for industrial indoor applications
Overhead Crane



Solutions for terminal and harbour outdoor applications Gantry Crane

Customized solutions, service and support

- Pre-Sales support and co-engineering (FEM standard analysis, gears and bearings lifetime calculation according to required standards, load verifications etc.)
- Technical features as per Customer needs (special output shaft design and auxiliar devices like brakes, couplings etc.)
- Severe environment condition solutions (painting, seals etc.)
- Accessories for motion control and safety (inverters, motors, encoders, brakes etc.)
- Shaft mounted solutions with torque arm or solutions with baseplate



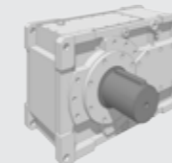
Solutions for Hoist of Gantry Crane



HDP series

Torque range
5000 ... 210000 Nm

Gear ratios
7.1 ... 500



300 series

Torque range
1250 ... 1286000 Nm

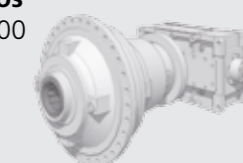
Gear ratios
3.4 ... 5234



3/H series

Torque range
98000 ... 1200000 Nm

Gear ratios
100 ... 1000



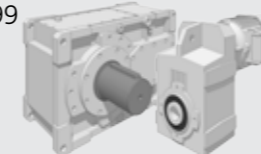
Solutions for Trolley of Gantry Crane



F series / HDP series

Torque range
140 ... 210000 Nm

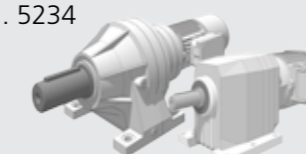
Gear ratios
6.4 ... 2099



300 series / C series

Torque range
45 ... 1286000 Nm

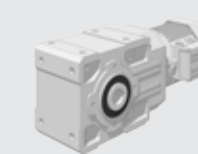
Gear ratios
2.6 ... 5234



A series

Torque range
100 ... 14000 Nm

Gear ratios
5.4 ... 1715



Solutions for Travel of Gantry Crane



A series

Torque range
100 ... 14000 Nm

Gear ratios
5.4 ... 1715



300R series

Torque range
1000 ... 500000 Nm

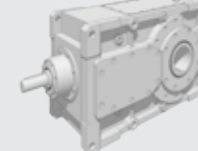
Gear ratios
7.13 ... 953



HDO series

Torque range
28200 ... 210000 Nm

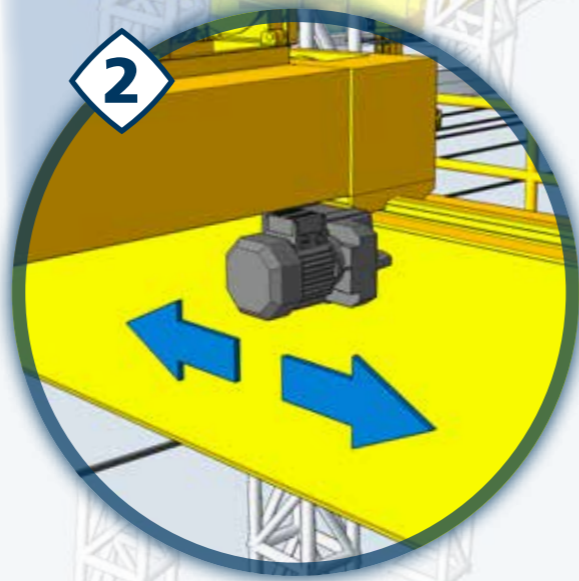
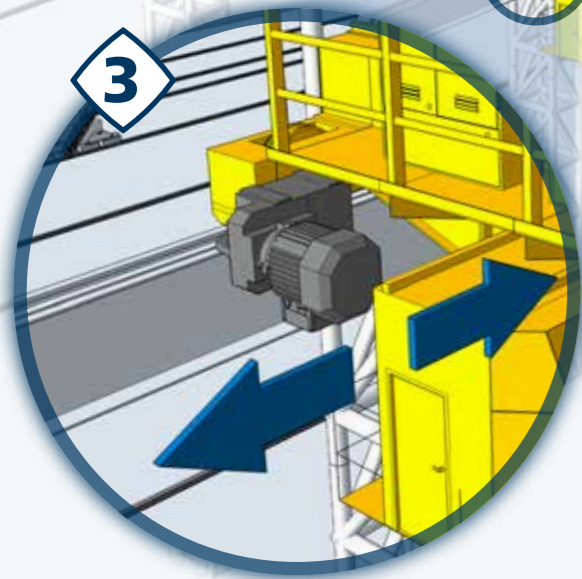
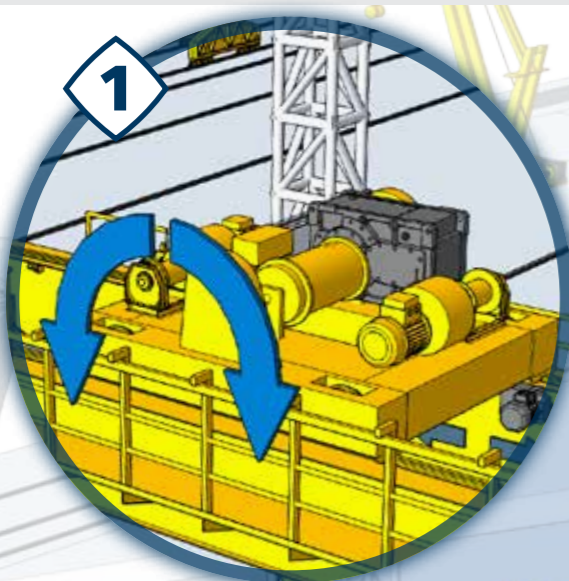
Gear ratios
5.6 ... 400



Solutions for industrial indoor applications Overhead Crane

Benefits for the customer

- Productivity, reliability and robustness
- Extensive, modular product range
- Tailored service and warranty plans
- Long term experience in crane drive control
- Lower thermal losses
- Selectable sine or square wave feedback current
- Load-dependent hoisting speed
- Extended brake control
- Built-in "Safe torque off" function



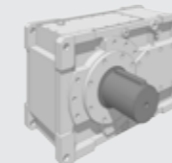
Solutions for Hoist of Overhead Crane

1

HDP series

Torque range
5000 ... 210000 Nm

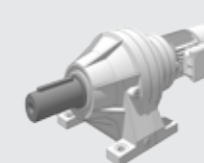
Gear ratios
7.1 ... 500



300 series

Torque range
1250 ... 1286000 Nm

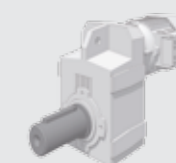
Gear ratios
3.4 ... 5234



F series

Torque range
140 ... 14000 Nm

Gear ratios
6.4 ... 2099



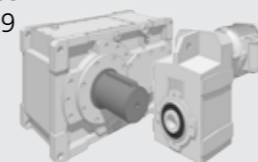
Solutions for Trolley of Overhead Crane

2

F series / HDP series

Torque range
140 ... 210000 Nm

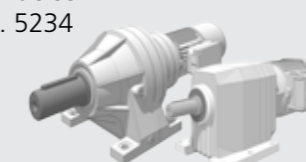
Gear ratios
6.4 ... 2099



300 series / C series

Torque range
45 ... 1286000 Nm

Gear ratios
2.6 ... 5234



A series

Torque range
100 ... 14000 Nm

Gear ratios
5.4 ... 1715



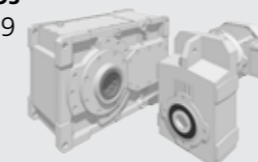
Solutions for Travel of Overhead Crane

3

F series / HDP series

Torque range
140 ... 210000 Nm

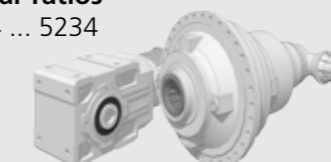
Gear ratios
6.4 ... 2099



300 series / A series

Torque range
100 ... 1286000 Nm

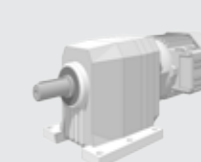
Gear ratios
3.4 ... 5234



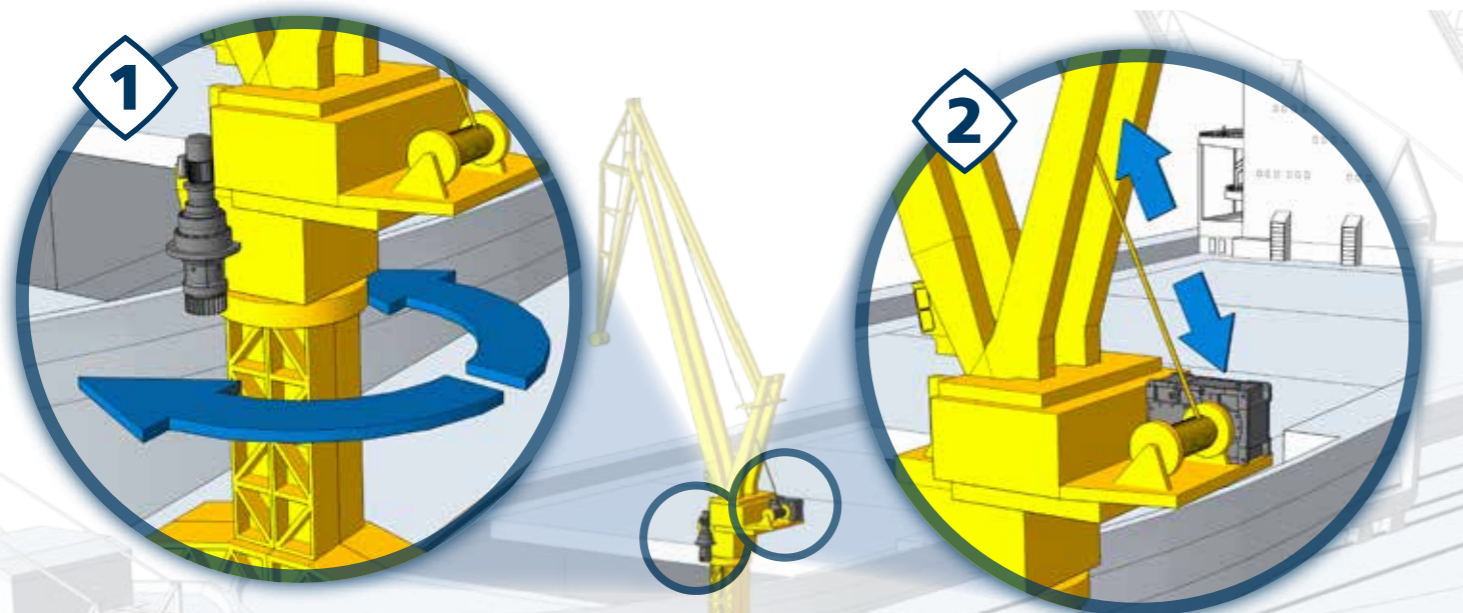
C series

Torque range
45 ... 12000 Nm

Gear ratios
2.6 ... 1481



Solutions for terminal and harbour outdoor applications Boom Shipyard single and double



1 Solutions for **Slewing Drive of S/D Boom Shipyard**

300 series SCN/SCF-SEN/SEF

Torque range
2000 ... 65000 Nm



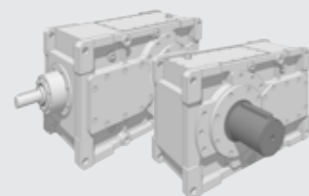
Note
Calculation Ref. FEM T5 L2 M5
Output speed $n_2 = 15$ rpm

2 Solutions for **Hoist of S/D Boom Shipyard**

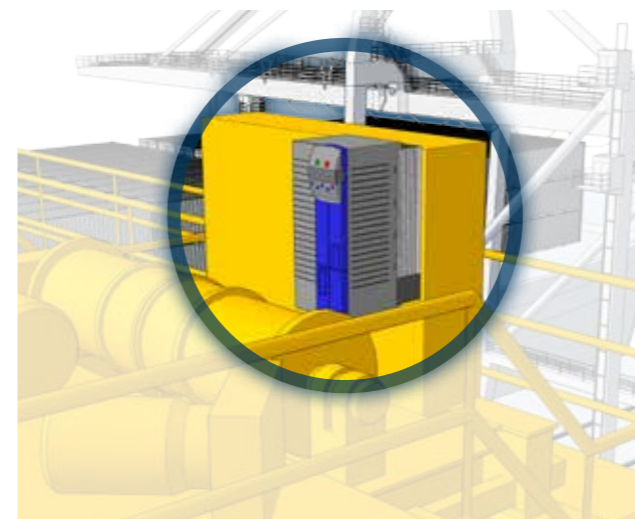
HDO series / HDP series

Torque range
5000 ... 210000 Nm

Gear ratios
7.1 ... 500



Motion and Control Solutions



Regenerative & Servo Drive

Active Cube series

Power range
ACU401: 0.25 ... 400 kW*
ACU201: 0.25 ... 9.2 kW
(*1200 kW in parallel connection)



Additional benefits

- Highest power density in the market
- "Safe Torque Off" function
- PLC as integrated functionality
- Open/Closed speed loop control
- Integrated positioning control
- Advanced motor brake control
- Availability of the most used fields bus
- Availability of additional I/O

Agile series

Power range
AGL402: 0.25 ... 11 kW
AGL202: 0.12 ... 7.5 kW



Additional benefits

- Highest power density in the market
- "Safe Torque Off" function
- PLC as integrated functionality
- Advanced motor brake control
- Availability of the most used fields bus

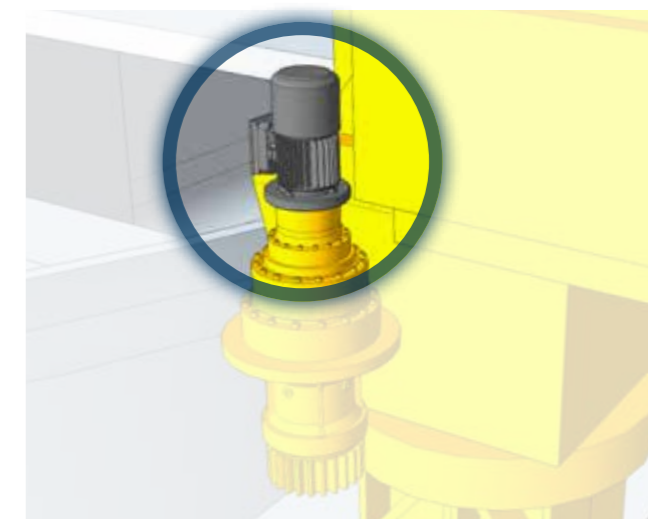
AEC series (Regenerative unit)

Power range
9.7 ... 173.2 kVA



Additional benefits

- Highest power density in the market
- Active brake unit to recover the braking energy
- Availability of the most used fields bus
- Availability of additional I/O



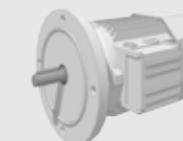
AC Motors

M/BN series (Brake motor)

kW rating (4 pole)
0.06 ... 30 kW

Pole numbers

2, 4, 6, 8, 2/4, 2/6, 2/8, 2/12, 4/6, 4/8



Main Options

- DC brake [FD]
- Separate brake supply
- Microswitch
- Protection degree up to IP55
- Incremental and absolute Encoder availability
- Thermal protection (Bi-metallic or Ptc)
- Heater and tropicalization
- Anti-condensate drain

ME/BE - MX/BX series

kW rating (4 pole)
0.75 ... 22 kW

Pole numbers

2, 4, 6 (MX/BX 4 poles only)



IE2

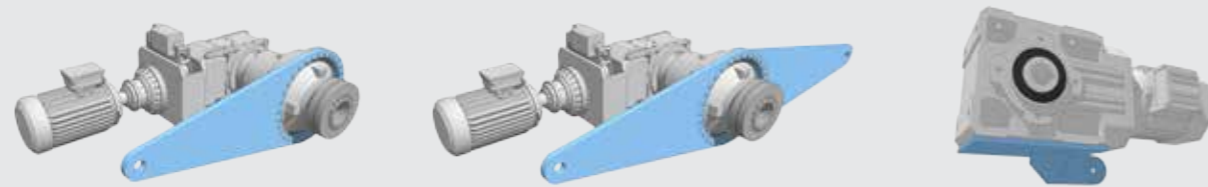
IE3

Main Options

- High efficiency motors
- Protection degree up to IP65
- Incremental and absolute Encoder availability
- Thermal protection (Bi-metallic or Ptc)
- Heater and tropicalization
- Anti-condensate drain

Accessories

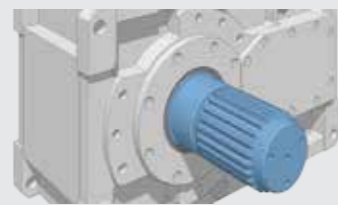
Torque Arm



Baseplate



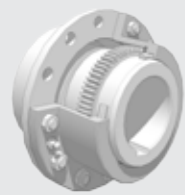
Splined shaft



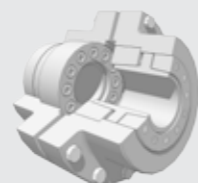
Splined shaft + Flange coupling



Splined Coupling



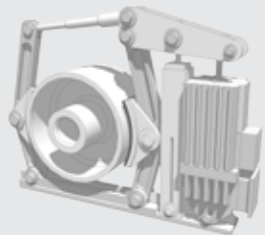
Flange Coupling



Self Aligning Coupling



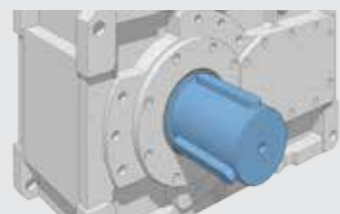
Shoe Brake



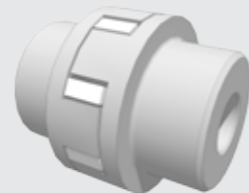
Disk Brake



Double Key way (120°)



Special Elastic Coupling



Heavy Environment Solutions

- Double seals
- Viton seals
- Taconite seals
- Heaters, Greaser, Sensors (Low temperature, dust environment)
- Special painting (Marine, dust environment)



Taconite seals

Heater wire

Customer Support & Certifications

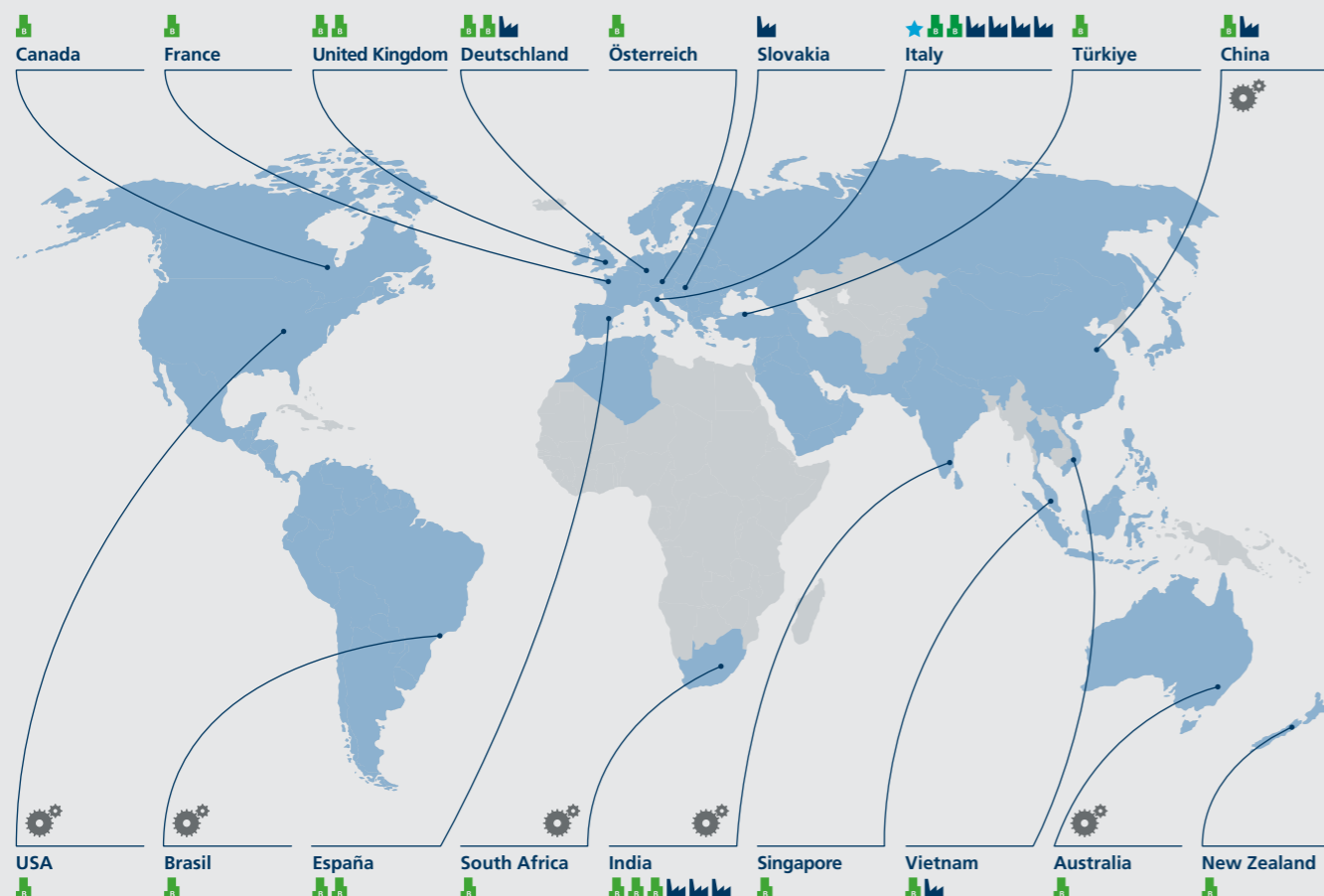
- Application support and product selection
- Gearboxes calculations (FEM analysis, Life time ISO 281, ISO 6336, AGMA)
- Gearboxes test certificates



On request:

- Quality documentations and certifications
- Certifications (DNV, LLOYD, ABS..)

Bonfiglioli Worldwide



Headquarters

ITALY • Lippo di Calderara, Bologna



Branches

AUSTRALIA • Sydney
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TURKEY • Izmir
UNITED KINGDOM • Redditch
UNITED KINGDOM • Warrington
USA • Cincinnati
VIETNAM • Ho Chi Minh



Production facilities

ITALY • Calderara di Reno, Bologna
 Casting and gearcutting plant
 Assembly HDP, HDO, 300 series
ITALY • Vignola, Modena
 Gearmotor assembly plant
 Precision gearbox manufacturing and assembly plant
ITALY • Forlì
 Planetary gearboxes manufacturing and assembly plant
ITALY • Rovereto, Trento
 Brushless motor production
GERMANY • Krefeld
 Inverter plant
SLOVAKIA • Považská Bystrica
 Large gearboxes manufacturing plant
INDIA • Chennai
 Planetary gearbox manufacturing and assembly plant
INDIA • Mannur
 Gearmotors manufacturing and assembly plant
INDIA • Bangalore
 Photovoltaic Inverter assembly
VIETNAM • Ho Chi Minh
 Electric motor plant
CHINA • Shanghai
 Photovoltaic Inverter assembly



Heavy duty assembly dept.

AUSTRALIA • Sydney
BRAZIL • São Paulo
CHINA • Shanghai
INDIA • Chennai
SOUTH AFRICA • Johannesburg
USA • Cincinnati



Resellers

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OCEANIA • Australia, New Zealand

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Bonfiglioli has been designing and developing innovative and reliable power transmission and control solutions for industry, mobile machinery and renewable energy applications since 1956.

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