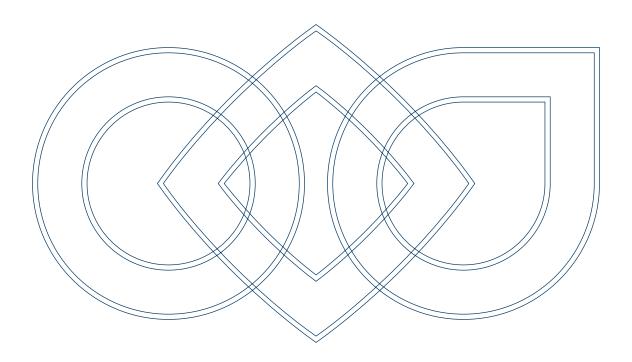


Solutions for **Marine and Offshore**





A complete range of drives for

Marine and Offshore applications

Bonfiglioli offers a wide and diverse range of products for lifting, pulling and slewing machinery in marine and offshore applications like shipboard cranes, offshore cranes, deck machinery, azimuth thrusters and pipe layers.

The design of several groups of products and jacking gears have been approved with the major Classification Societies like ABS, DNV GL, LR, CCS, RS, etc. These products can be delivered with 3.2 certification and full traceability of the load carrying components.

Bonfiglioli has also developed a specific range of gearboxes for jacking machinery with rack and pinion design, intended for jack-up drilling rigs, service liftboats, accommodation and windmill installation vessels.

Bonfiglioli and O&K range of products put together are giving us the opportunity to offer our customers the largest range of final drives in the world.

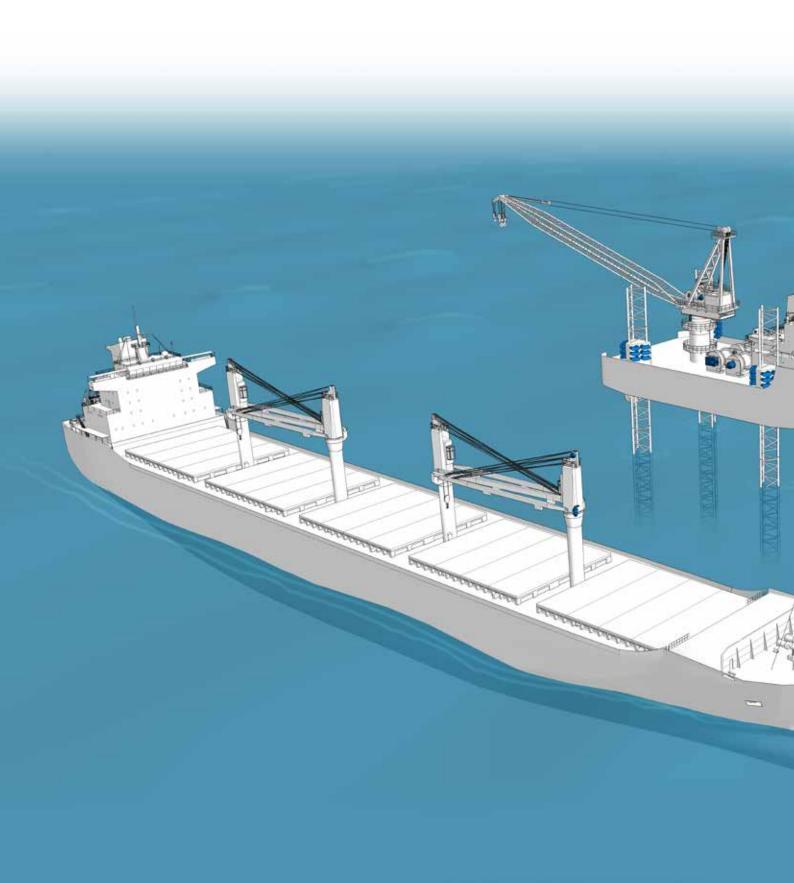


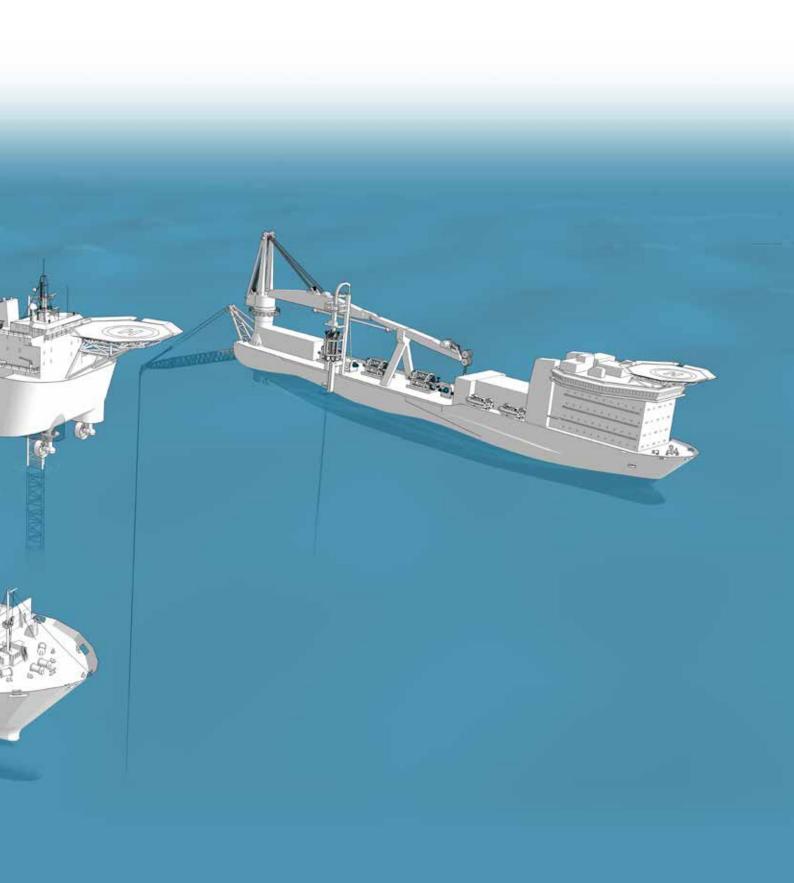




A complete range of drives for

Marine and Offshore applications





Shipboard Cranes

Bonfiglioli offers dedicated solutions including winch gears and slewing gears for marine cranes such as cargo cranes, utility cranes and, horse cranes.

Bonfiglioli gear series 700C and FW dedicated to winch applications is offering a wide possibility of variations and options.

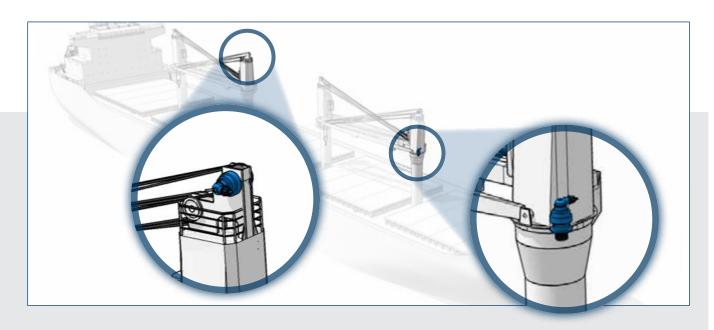
Thanks to a compact plug-in design, the units are integrated directly into the winch drum. The brake can be integrated inside the gearbox or mounted externally, with common lubrication of the gears.

Bonfiglioli slewing gears are developed with integrated and separated pinions. Many variations of pinions and interfaces are available.

The modular design of these two product series allows almost unlimited product configurations, one to four gear stages, and hydraulic and electric driven variations, as well as in-line or right angle configurations.







Winch drives



Slew drives



700C series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Typo	Torque (Nm)
Туре	
703 C2	2000
705 C2	5300
706 C3	10000
707 C3	16000
709 C3	23000
710 C3	29500
711 C3	31000
713 C3	48500
715 C3	64500
716 C3	77500
717 C3	105900
718 C3	111500
720 C3	164500
722 C3	260000

FW series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torqu	ue (Nm	1)
FW10	540	0	
FW13	72	50	
FW30	17	600	
FW40	2	0000	
FW40A	2	0000	
FW55		2540	0
FW55A		2540	0
FW55B		2540	0
FW80		42	2800
FW100		7	0000
FW130			100000
FW180			112500
FW220		1400	00
FW260		1	175000
FW360			210000

Bigger sizes on request

700T series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
705 T	4000
706 T	6600
707 T	10000
709 T	15000
710 T	20000
711 T	25000

Bigger sizes on request

S series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
S 5	6600
S7	10700
S10	14000
S13	21000
S17	27000
S30	48000

Deck Machinery

Several applications like mooring & tugger winches, anchor handling systems, traction & storage winches, capstans and windlasses offer a bench test for the 700C and FW series in medium-light power cases, and HDP/HDO series in medium-high power cases.

The 300 series and 700T series are used for pinion ring transmission systems. The winch drum is generally supported on the opposite side of the gearbox, but strong bearings in the 700C and FW series enables it to have a console set-up as well.

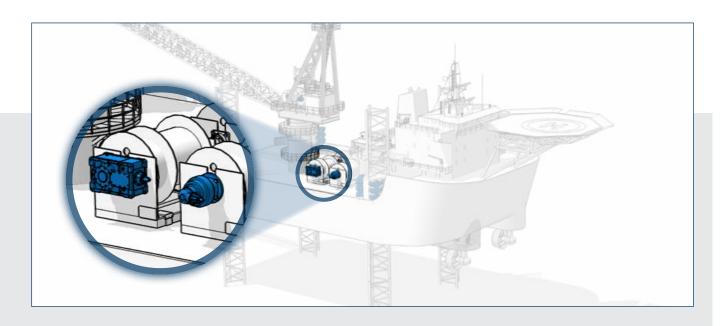
Hydraulic and electric driven variations, as well as in-line or right angled configurations, are available throughout the Bonfiglioli range.



700C series with hydraulic motor, with electric motor and with right angle







Planetary drives

Parallel shaft gear units and bevel helical

Winch drives









300 series

Type	Nominal Torque (Nm)		
300	1000		
301	1750		
303	2500		
304	3600		
305	5000		
306	8500		
307	12500		
309	18000		
310	25000		
311	40000		
313	55000		
314	80000		
315	100000		
316	135000		
317	170000		
318	250000		
319	350000		
321	500000		
323	800000		
325	1100000		

HDP/HDO series

Type	Nominal Torque (Nm)
HD_ 60	5190
HD_ 70	7080
HD_ 80	12600
HD_ 90	17900
HD_ 100	28200
HD_ 110	31700
HD_ 120	41000
HD_ 125	49000
HD_ 130	69500
HD_ 140	87000
HD_ 150	117000
HD_ 160	147000
HD_ 170	190000
HD_ 180	210000

700C series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
703 C2	2000
705 C2	5300
706 C3	10000
707 C3	16000
709 C3	23000
710 C3	29500
711 C3	31000
713 C3	48500
715 C3	64500
716 C3	77500
717 C3	105900
718 C3	111500
720 C3	164500
722 C3	260000

FW series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
FW10	5400
FW13	7250
FW30	17600
FW40	20000
FW40A	20000
FW55	25400
FW55A	25400
FW55B	25400
FW80	42800
FW100	70000
FW130	100000
FW180	112500
FW220	140000
FW260	175000
FW360	210000

Bigger sizes on request

Offshore Cranes & Winches

Oil & gas applications like cranes and winches for supply vessels (PSV, OSV), FPSO, drilling rigs, anchor handling systems, riser pull-in systems, turret winches, ROV winches with AHC function and A&R systems have bigger demands for power. In order to meet these specific needs of power, Bonfiglioli has created a wide range of solutions.

Products for winches are often designed with multiple pinions to drive a toothed ring fixed to the drum. With the same versatility of the shipboard cranes, the 700T and S series perfectly match the requirements.

Where power is excessive for planetary gear systems, Bonfiglioli offers heavy duty series HDP/HDO or a combination between input bevel helical units and final planetary gear stages.

Bonfiglioli has created special units for AHC winches using secondary control motors, with a flywheel integrated in the gear train. The static brake is in the same oil bath with the gears to allow better heat dissipation due to continuous duty during heavy compensating work mode. Visual oil monitoring systems are available.

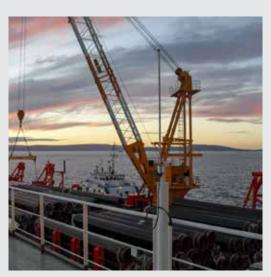
Backstop wheel is an available option for preventing sudden load descend after startup.

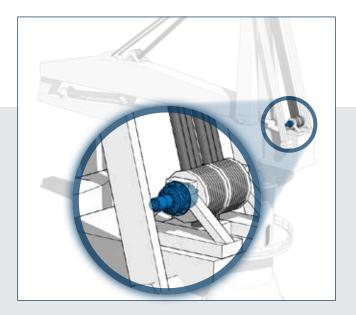
Slewing gears are offered from the 700T, S and 300 series, for the shipboard cranes. ATEX compliance is available for 700T, S, 300, 700C and FW series products. C5M coating systems are available in conformity with Norsok M501 prescriptions. A selection of suitable products is in compliance with Class requirements and FEM classification rules.



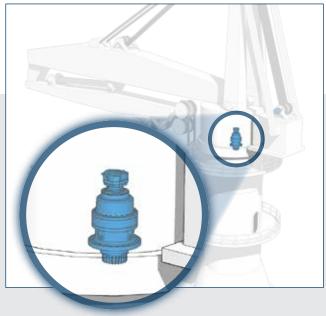
3/HD series with hydraulic motor, with electric motor











Slew drives



700C series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
703 C2	2000
705 C2	5300
706 C3	10000
707 C3	16000
709 C3	23000
710 C3	29500
711 C3	31000
713 C3	48500
715 C3	64500
716 C3	77500
717 C3	105900
718 C3	111500
720 C3	164500
722 C3	260000



FW series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torqu	ıe (Nm	1)
FW10	540	0	
FW13	72!	50	
FW30	17	600	
FW40	2	0000	
FW40A	2	0000	
FW55		2540	0
FW55A		2540	0
FW55B		2540	0
FW80		42	2800
FW100		7	0000
FW130			100000
FW180			112500
FW220		1400	000
FW260			175000
FW360			210000
<u>. </u>			

Bigger sizes on request



700T series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
705 T	4000
706 T	6600
707 T	10000
709 T	15000
710 T	20000
711 T	25000

Bigger sizes on request



S series

FEM classification M5-L2-T5 at OUTPUT SPEED 25 rpm:

Туре	Torque (Nm)
S 5	6600
S7	10700
S10	14000
S13	21000
S17	27000
S30	48000

Azimuth Thrusters

Bonfiglioli gears are used for steering the azimuth thrusters on tug boats, drilling rigs and cruise vessels.

Gear and bearings life is calculated based on Class requirements for both dynamic positioning mode as well as cruise mode operation.

Solutions are available with integrated pinion 700T Series and 3.2 Class certified pinion and 300 series with female spline connection to the steering block.

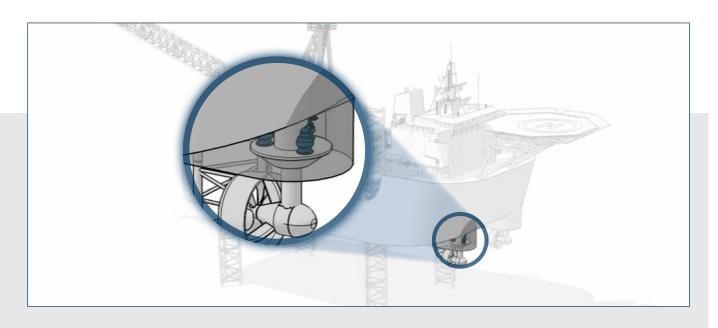
Units are delivered under approval and certification of all major Classes.

Electric and hydraulic versions are available, with pinion eccentricity for gear play adjustment, or with eccentric ring on the gearbox body for maintaining the motor alignment in right angled configurations.

Image courtesy of ABB Marine.







Planetary steering gear



300 series

Туре	Torque (Nm)
306	8500
307	12500
309	18000
310	25000
311	40000
313	55000
314	80000
315	100000
316	135000
317	170000

Steering gear with pinion



700T series

Туре	Torque (Nm)			
706 T	10000			
707 T	15000			
709 T	20000			
710 T	30000			
711 T	35000			
712 T	45000			
713 T	55000			
714 T	65000			
715 T	80000			

Jacking Machinery

For many years, Bonfiglioli has been developing and supplying gearboxes of jacking machinery for offshore platforms.

Specific design of the 700T, JD2400 and 300 series have been assessed by ABS to work in lifting and lowering legs and hulls of drilling and service jack up rigs, lift boats and windmill installation vessels.

Units can be in-line design or with a drop box for offsetting the motor installation. They can be electric or hydraulic driven, with or without negative parking brake. Bonfiglioli can deliver integrated pinion from m50 to m100 and lantern piece with integrated torque arm for easy installation.

Units have class approval with ABS and DNV GL, and full 3.2 certification of the load carrying parts of the gear transmission with full traceability from raw material to final machined component.







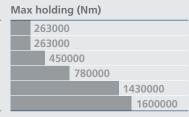
Jacking gears

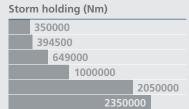




700T series

Туре	Kips	Max jacking (Nm)			
718 T5	200	163000			
718 T5 FZ	250	225700			
719 T5	300	305000			
721 T5	400	650000			
723 T6	700	1150000			
725 T6	800	1245000			





O&K Jack-up series

Туре	Kips	Max jacking (Nm)		Max holding (Nm)		Storm holding (Nm)	
JD2400	1200		1900000		2400000		2900000

Pipelayers

For many years, Bonfiglioli is supplying dedicated solutions for pipelayers.

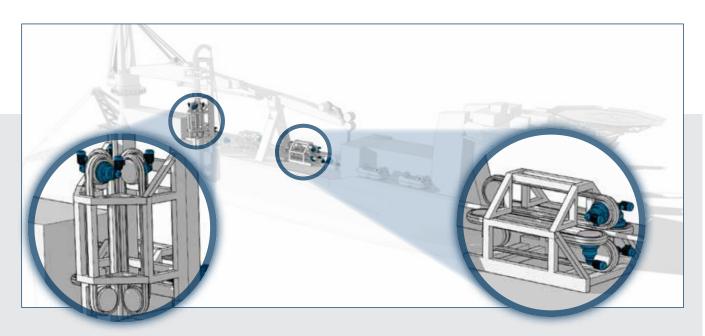
Bonfiglioli track gears of the 700C and F series represent a perfect solution for the most demanding pipe tensioners in terms of torque, life and power.

The cooling system is provided with forced lubrication of the gear train and bearings.

A torque range up to 600 kNm covers almost all known applications. Modular gearboxes of the 300 series are capable of torque up to 2000 kNm.







Planetary drives



300 series

Туре	Torque (Nm)
315	100000
316	135000
317	170000
318	250000
319	350000
321	500000
323	800000
325	1100000

Track tensioner gear



700C series

Type	Torque (Nm)				
710 C3 B	36000				
711 C3 B	45000				
713 C3 B	60000				
715 C3 B	85000				
716 C3 B		100000			
717 C3 H		130000			
718 C3 H		180000			
720 C3 H		220000			
722 C3 H		330000			
724 C4 H		450000			
726 C4 H		625000			

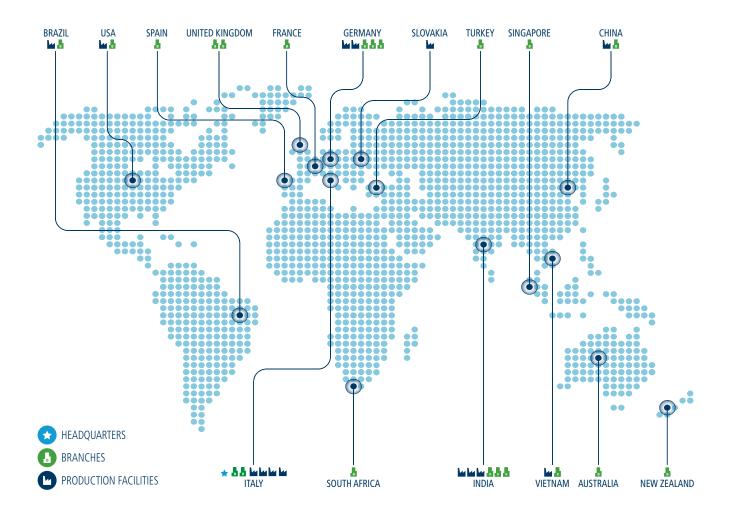


F series

Туре	Tord	que	(Nm)	
F40	40	0000)		
F40A	40	0000			
F55	5	500	0		
F55A	5	500	0		
F55B	5	500	0		
F80		80000			
F80XR	80000				
F100	100000				
F100XR	100000				
F130	130000				
F130XR	130000				
F180	180000				
F180XR		180000			
F220		220000			
F220XR		220000			
F260		260000			
F280		280000			
F360		360000			
F420		420000			
F440		440000			
F560				560000	

Bonfiglioli worldwide presence

Bonfiglioli is located in regions and countries around the world that enable us to provide faster sales and service to customers. **We are around the world, and around the corner.**









Bonfiglioli worldwide locations

Australia

www.bonfiglioli.com.au 2, Cox Place Glendenning NSW 2761 Locked Bag 1000 Plumpton NSW 2761 Tel. + 61 2 8811 8000

Brazil

www.bonfigliolidobrasil.com.br Travessa Cláudio Armando 171 Bloco 3 - CEP 09861-730 - Bairro Assunção São Bernardo do Campo - São Paulo Tel. +55 11 4344 2322

China

www.bonfiglioli.cn Bonfiglioli Drives (Shanghai) Co., Ltd. #68, Hui-Lian Road, QingPu District, 201707 Shanghai Tel. +86 21 6700 2000

France

www.bonfiglioli.fr 14 Rue Eugène Pottier Zone Industrielle de Moimont II - 95670 Marly la Ville Tel. +33 1 34474510

Germany

www.bonfiglioli.de Sperberweg 12 - 41468 Neuss Tel. +49 0 2131 2988 0

Industrial

Europark Fichtenhain B6 - 47807 Krefeld Tel. +49 0 2151 8396 0

O&K Antriebstechnik

Ruhrallee 8-12 - 45525 Hattingen Tel. +49 0 2324 2050 1

India

www.bonfiglioli.in

Mobile, Wind

Bonfiglioli Transmissions Pvt. Ltd. Plot No. AC7-AC11, SIDCO Industrial Estate, Thirumudivakkam - 600 044 Chennai

Tel. +91 44 2478 1035

Industrial

Survey No. 528, Porambakkam High Road, Mannur Village, Sriperambudur Taluk - 602 105 Chennai Tel. +91 44 6710 3800

Plot No. A-95, Phase IV, MIDC Chakan, Village Nighoje Pune, Maharashtra - 410 501

Italy

www.bonfiglioli.it

Headquarters

Bonfiglioli Riduttori S.p.A. Via Giovanni XXIII, 7/A

Lippo di Calderara di Reno - 40012 Bologna

Tel. +39 051 647 3111

Mobile, Wind

Via Enrico Mattei, 12 Z.I. Villa Selva - 47100 Forlì

Tel. +39 0543 789111

Industria

Via Bazzane, 33/A - 40012 Calderara di Reno Tel. +39 051 6473111 Via Trinità, 1 - 41058 Vignola

Tel. +39 059 768511

Via Sandro Pertini lotto 7b - 20080 Carpiano

Tel. +39 02 985081

Bonfiglioli Mechatronic Research

Via F. Zeni 8 - 38068 Rovereto

Tel. +39 0464 443435/36

New Zealand

www.bonfiglioli.co.nz 88 Hastie Avenue, Mangere Bridge, 2022 Auckland PO Box 11795, Ellerslie Tel. +64 09 634 6441

Singapore

www.bonfiglioli.com 24 Pioneer Crescent #02-08 West Park Bizcentral - Singapore, 628557 Tel. +65 6268 9869

Slovakia

www.bonfiglioli.com Robotnícka 2129 Považská Bystrica, 01701 Slovakia Tel. +421 42 430 75 64

South Africa

www.bonfiglioli.co.za 55 Galaxy Avenue, Linbro Business Park - Sandton Tel. +27 11 608 2030

Spain

www.tecnotrans.bonfiglioli.com Tecnotrans Bonfiglioli S.A. Pol. Ind. Zona Franca, Sector C, Calle F, n° 6 08040 Barcelona Tel. +34 93 447 84 00

Turkey

www.bonfiglioli.com.tr Atatürk Organize Sanayi Bölgesi, 10007 Sk. No. 30 Atatürk Organize Sanayi Bölgesi, 35620 Çiğli - Izmir Tel. +90 0 232 328 22 77

United Kingdom

www.bonfiglioli.co.uk

Industrial

Unit 7, Colemeadow Road North Moons Moat - Redditch, Worcestershire B98 9PB Tel. +44 1527 65022

Mobile, Wind

3 - 7 Grosvenor Grange, Woolston Warrington - Cheshire WA1 4SF Tel. +44 1925 852667

JSA

www.bonfiglioliusa.com 3541 Hargrave Drive Hebron, Kentucky 41048 Tel. +1 859 334 3333

Vietnam

www.bonfiglioli.vn Lot C-9D-CN My Phuoc Industrial Park 3 Ben Cat - Binh Duong Province Tel. +84 650 3577411



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