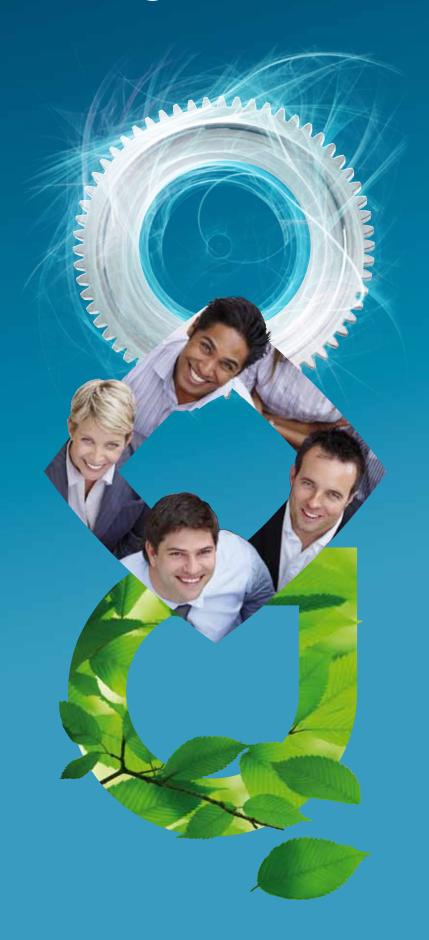




Power, control and green solutions





Bonfiglioli, one name for a large international group.

It was back in 1956 that Clementino Bonfiglioli established in Bologna, Italy, the company that still bears his name. Now, some fifty years later, the same enthusiasm and dedication is driving Bonfiglioli to become the world's top name in power transmission and control solutions. Through directly controlled subsidiaries and production plants around the world, Bonfiglioli designs, manufactures and distributes a complete range of gearmotors, drive systems and planetary gearboxes, and boasts the most integrated offering on the market today.

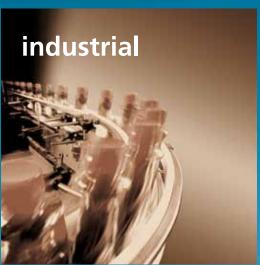
Now, to emphasise its commitment to health, safety and environmental sustainability, Bonfiglioli is adding the term "green" to the description of its offering.

This commitment can be seen too in the Group's new trademark, made up of three shapes and colours identifying Bonfiglioli's three main business areas - Power, Control & Green Solutions and symbolising a set of values that includes openness and respect for other cultures.

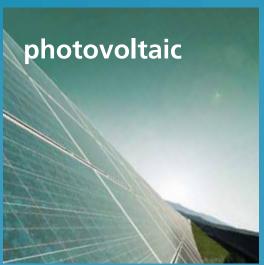
In a market in which excellent product quality alone is no longer sufficient, Bonfiglioli also provides experience, know-how, an extensive sales network, excellent pre-sales and after-sales service and modern communication tools and systems to create high level solutions for industry, mobile machinery and renewable energy.

Bonfiglioli solutions









Innovative solutions for industrial field.

Bonfiglioli Riduttori today is one of the leading brands in the power transmission industry. The company's success is the result of a business strategy that relies on three fundamental factors: know-how, innovation and quality. The complete range of Bonfiglioli gearmotors offers excellent technical characteristics and guarantees the highest performance. Substantial investment and technical expertise have enabled the company to achieve an annual production of 1.600.000 units using fully automated processes.

Certification of the company's Quality System by DNV and TÜV is proof of the high quality standards achieved.

Centres of excellence around the world allow the Bonfiglioli Group to guarantee the high levels of quality and efficiency needed to compete in industry today.

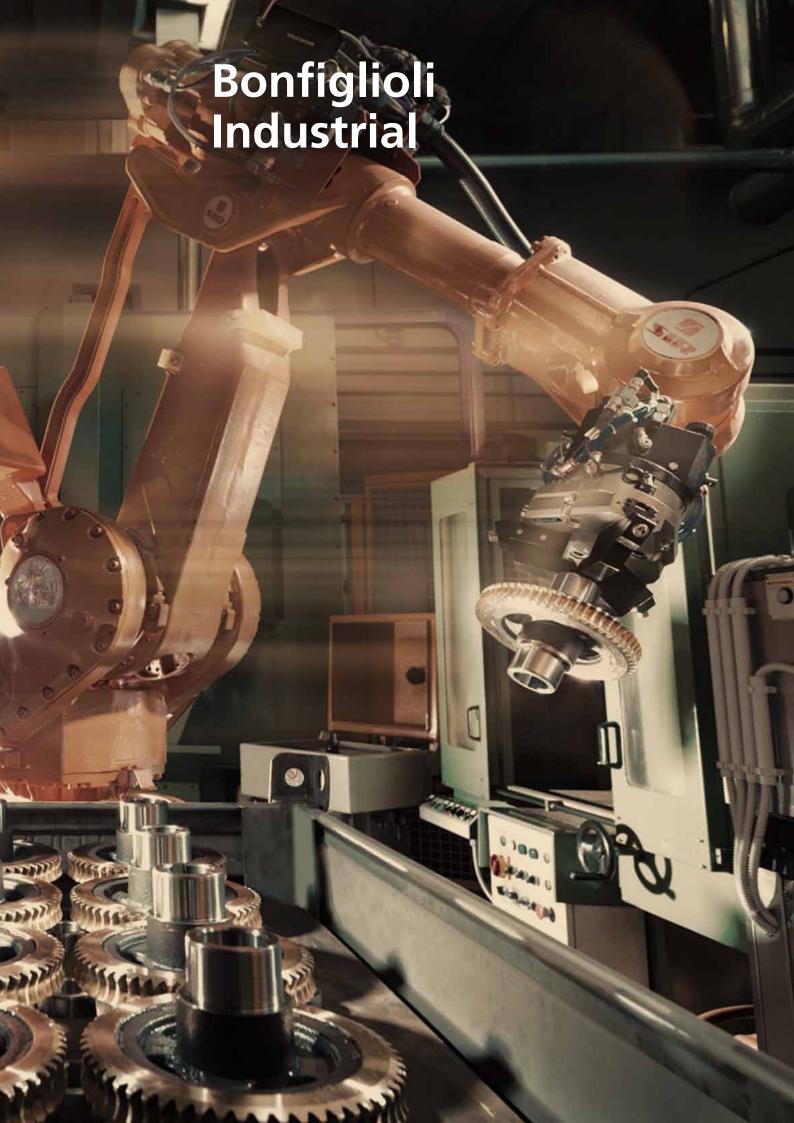
Optimised lean manufacturing principles, major investments in research and development to maintain a high level of innovation, a "local for local" service strategy, and a customer service network that is near to the customer and can rely on a large number of directly controlled subsidiaries and distributors all over the world, enable the Bonfiglioli group to be flexible and rapid and to stay in close touch with the changing needs of the markets it serves.

With the acquisition of the Vectron brand, Bonfiglioli established itself as leader in the industrial automation sector.

Bonfiglioli Vectron supplies products and services for completely integrated inverter solutions. These solutions complement Bonfiglioli's power transmission and control offering to the industrial sector.







Specific solutions for power transmission and motion control.

Product diversification, process automation, and quality have enabled Bonfiglioli to play a leading role in industry.

Bonfiglioli's policy focuses on integrated solutions, competence, innovative technology and careful production planning as key factors in guaranteeing customer satisfaction.

The Bonfiglioli product portfolio aims at meeting the toughest and most sophisticated requirements in industrial processes and automation solutions.













Bonfiglioli products

Industrial market segment is covered through the following Product Lines:









Product offer

Helical gearmotors

- 10 C series
- 11 S series
- 12 F series
- 13 A series

Worm gearmotors

14 VF and W series

Planetary gear units

15 300 series

Helical gear units

- 16 TA series
- 17 HDP series
- 18 HDO series

Bevel gears

19 RAN series

Industry-specific solutions

- 20 EP series
- 21 ATEX compliant gear units

Precision gearboxes

- 22 LC series
- 23 LCK series
- 24 MP series
- 25 TR series
- 26 SL series27 KR series
- 28 TQ series

Mechanical speed variators

29 V series

Electric motors

- 30 BN series
- 31 BE series
- 32 BS series
- 33 BC series
- 34 BTD series
- 35 BCR series

AC drives

- 36 AGILE
- 37 ACTIVE
- 38 ACTIVE CUBE
- 39 VCB series
- 40 SYNTHESIS

42 Values

44 Worldwide



C seriesIn-line helical gearmotors



Top torque density, product variety, extremely wide speed choice, great compactness and price effectiveness make the C series the unparalleled line of helical gearmotors and speed reducers.



Torque range

45 ... 12000 Nm

Mechanical rating (n₁ = 1400 min⁻¹)

0.08 ... 213 kW

Gear ratios

2.6 ... 1481

Output

Foot and flange mount Metric or inch series solid output shaft

Input

IEC and NEMA motor adaptors Metric or inch series solid input shaft

Applicable AC motors

Integral motors and brake motors - M series / ME series IEC-normalized motors and brake motors - BN series / BE series Single and dual speed motors

Main brake features

DC and AC supply Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main motor options

Туре	Torque [Nm]
C 05	45
C 11	100
C 21	200
C 31	300
C 35	450
C 41	600
C 51	1000
C 61	1600
C 70	2300
C 80	4000
C 90	7200
C 100	12000



S seriesSingle reduction helical gearmotors

Simplicity above all.

Simple and yet powerful is the S series, developed for the pump industry as well as the fan and blower application.

Foot and flange mounted, with shaft dimensions to the UNEL - MEC standard.

Туре	Torque [Nm]
S 10	21
S 20	37
S 30	70
S 40	125
S 50	200

Torque range

21 ... 200 Nm

Mechanical rating $(n_1 = 1400 \text{ min}^{-1})$

0.12 ... 11.6 kW

Gear ratios

1.4 ... 13.1

Output

Foot and flange mount

Input

IEC-normalized motor adaptors Solid input shaft

Applicable AC motors

Integral motors and brake motors - M series / ME series IEC-normalized motors and brake motors - BN series / BE series Single and dual speed motors

Main brake features

DC and AC supply Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main motor options



F seriesShaft mounted gearmotors

Ruggedness and effectiveness to the state-of-the-art.

No better, easier and neater installation than with a shaft mounted unit of the F series. Lightweight and performing, an F unit is the dependable drive for all the material handling applications.



Torque range

140 ... 14000 Nm

Mechanical rating $(n_1 = 1400 \text{ min}^{-1})$

0.17 ... 125 kW

Gear ratios

6.4 ... 2099

Output

Keyed hollow shaft - two bore options per size Keyless shrink disc fitting Plug-in solid output shaft as an option

Input

IEC-normalized motor adaptors Solid input shaft

Applicable AC motors

Integral motors and brake motors - M series / ME series IEC-normalized motors and brake motors - BN series / BE series Single and dual speed motors

Main brake features

DC and AC supply Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main motor options

Туре	Torque [Nm]			
F 10	140			
F 20	250			
F 25	400			
F 31	600			
F 41	1100			
F 51	1800			
F 60	2900			
F 70	5000			
F 80	8000			
F 90	14000			



A series Helical-bevel gearmotors

When efficiency and versatility meet each other.

The A series is the first product to prove equally good in regard to efficiency and versatility within a highly competitive context, both performance- and price-wise.

Туре	Torque [Nm]
A 05	100
A 10	150
A 20	250
A 30	410
A 35	600
A 41	850
A 50	1500
A 55	2000
A 60	2800
A 70	5000
A 80	8000
A 90	14000

Torque range

100 ... 14000 Nm

Mechanical rating (n₁ = 1400 min⁻¹)

0.22 ... 150 kW

Gear ratios

5.4 ... 1715

Output

Foot and shaft mount - two bore options per size Keyless shrink disc fitting Metric or Inch series solid output shaft Taper bushings matching more shaft diameters Splined hollow shaft to DIN 5480

Input

IEC and NEMA motor adaptors Servomotor adapters Metric or inch series solid input shaft

Main gear options

Backstop

Reinforced bearings for higher overhung load capacity Reduced backlash

Applicable AC motors

Integral motors and brake motors - M series / ME series IEC-normalized motors and brake motors - BN series / BE series Single and dual speed motors

Main brake features

DC and AC supply Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main motor options



VF W series Worm gears



Wormgears of the VF and W series are milestones for the industry worldwide. They succeeded in combining uncompromising quality with state-of-the-art technology and renown price effectiveness.

Absolute flexibility is given by the wide choice of several mounting options, shaft configurations and motor interfaces, all offered as standard. The helical-worm and the double-worm versions, with or without the torque limiter, also add up, creating a highly versatile drive system.



Torque range

13 ... 7100 Nm

Mechanical rating (n₁ = 1400 min⁻¹)

0.04 ... 75 kW

Gear ratios

7 ... 10000

Output

Keyed hollow shaft Plug-in solid output shaft Torque limiter as an option

Input

IEC-normalized motor adaptors Solid input shaft

Applicable AC motors

Integral motors and brake motors - M series / ME series IEC-normalized motors and brake motors - BN series / BE series Single and dual speed motors

Main brake features

DC and AC supply Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main motor options

Туре	Torque [Nm]				
VF 27	13				
VF 30	24				
VF 44	55				
VF 49	88				
W 63	190				
W 75	320				
W 86	440				
W 110	830				
VF 130	1500	0			
VF 150	20	000			
VF 185		3600			
VF 210		5000			
VF 250		7100			



300 series Planetary drives

A powerful solution to heavy duty drive needs.

Compact, and yet extremely powerful, are the units of the 300 series. Their planetary drive train makes them the ideal choice for all the severe duty applications where shock loadings and impacts are more the rule than the exception. The product configuration is highly versatile, due to several options as far as the mounting, the gear layout, the output shaft and the motor interface. All features are available for each of the 18 closely spaced frame sizes, spanning over the 1000 - 1100000 Nm torque range. Finding the perfect match to any drive problem is therefore more than a wish, it is something users can safely rely on - always.

Torque range

1000 ... 1100000 Nm

Mechanical rating (n₁ = 1400 min⁻¹)

up to 450 kW

Gear ratios

3.4 ... 5000

Gear unit versions

In line

Right angle (with Gleason bevel gear set)

Output

Foot and flange mounted Output shaft: keyed solid, splined, splined hollow, hollow shaft with shrink disc

Input

IEC and NEMA motor adaptors Solid input shaft with or without fan cooling - inch or metric dims.

Applicable AC motors

Compact motors and brake motors M series IEC motors and brake motors BN series Single and dual speed motors

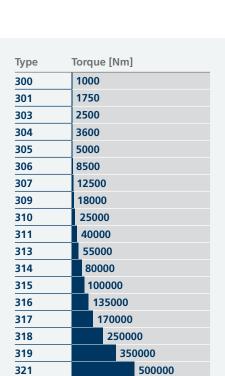
Main brake features

DC and AC supply

Faster brake reaction through electronically controlled rectifier

Main motor options

Thermistors and thermostatic sensors Independent forced cooling Line driver and push-pull incremental encoder



800000

1100000

323

325



TA seriesShaft mounted speed reducers

The sturdy and wheather-resistant product for the material handling industry.

The TA series has long established itself in the industry until become a best seller for the quarry and mine applications where absolute reliability and low maintenance are key factors.

Also appreciated is the backstop option that prevents backdriving in case of incline conveyors.



Torque range ($n_1 = 900 \text{ min}^{-1}$)

150 ... 16000 Nm

Mechanical rating $(n_1 = 900 \text{ min}^{-1})$

1.1 ... 156 kW

Gear ratios

5.0 ... 31.5

Output

Keyed hollow shaft Up to three bore options per frame size

Gearcase

Sturdy cast iron housing suitable for outdoor installation

Backstop

Available on all frame sizes - externally accessible

Туре	Torque [Nm]				
TA 30	150				
TA 35	400				
TA 40	900				
TA 45	1350				
TA 50	2100				
TA 60	3500				
TA 70	4900				
TA 80	6600				
TA 100	10500				
TA 125		16000			



HDP seriesParallel shaft gear units

The new benchmark in the parallel shaft category.

Torque ratings consistently high, gear ratios in close progression, numerous mounting options along with compact dimensions will ease the engineering of any application. The housing from nodular cast iron ensures robustness even In the harshest environment and the class of precision the gears are machined into helps producing an extremely quiet and vibration-free operation.

Туре	Torque [Nm]				
HDP 60	5000				
HDP 70	6850				
HDP 80	12600				
HDP 90	17650				
HDP 100	25650				
HDP 110	28900				
HDP 120	37500				
HDP 130	63250				
HDP 140	79150				
HDP 150	106550				
HDP 160	133700				
HDP 170	176350				
HDP 180	194050				

Torque range

5000 ... 194050 Nm

Gear ratios

7.1 ... 500

Mounting

Foot, flange, shaft mounting

Input

solid shaft, motor adapter

Output

solid (single and double extension), keyed hollow, shrink disc

Options

Fan cooling, cooling coil, heaters Independent cooling systems Backstop Non-contacting seals Forced lubrication Temperature and oil level sensors Drywell



HDO seriesBevel helical speed reducer

The heavy-duty product that matches performance and versatility with compactness.

The new bevel helical series from Bonfiglioli optimises superior performance with compact dimensions and flexibility. The several options that can be selected from the catalogue facilitate customization to meet specific application requirements. Gear case from nodular cast iron guarantee rigidity in all circumstances while gears, integrally ground finished on their profile, ensure quiet and vibration-free operation even in the harshest conditions.



Torque range

25650 ... 194050 Nm

Gear ratios

5.6 ... 400

Mounting

Foot, flange, shaft mounting

Inpu

Solid shaft, lantern housing c/w flexible coupling double input shaft (pony drive)

Outpu

solid (single and double extension), keyed hollow, shrink disc

Options

Fan cooling, cooling coil, heaters
Independent cooling systems
Backstop
Non-contacting seals
Forced lubrication
Temperature and oil level sensors
Drywell for installations with vertical shaft

Туре	Torq	Torque [Nm]				
HDO 100	į	2565	0			
HDO 110		289	00)		
HDO 120		37500				
HDO 130	63250					
HDO 140		79150				
HDO 150		106550			6550	
HDO 160	133700					
HDO 170	176350					
HDO 180						194050



RAN series Bevel gears

The handy drive when it comes to angled transmissions.

The units of the RAN series are designed to fit the purposes of transmissions laid out in right angle setting. Easy to fit and almost maintenance-free, RAN units offer multiple shaft arrangements and a choice of several exact gear ratios, beside the 1:1, that come handy when designing synchronized drive systems. Also available in the version for screw jack duty.

Туре Torque [Nm] 1350 RAN 1 3000 RAN 2 RAN 2R 3000 RAN 8 **RAN 15 RAN 18** 15 **RAN 20** 28 **RAN 24** 80 **RAN 25** 39 **RAN 28** 150 **RAN 38** 300 **RAN 48** 600

Torque range

3 ... 3000 Nm

Mechanical rating $(n_1 = 1400 \text{ min}^{-1})$

0.15 ... 91 kW

Gear ratios

1.0 ... 7.4

Shaft arrangement

Single and double shaft projection

Input

Solid input shaft

RAN 1 / RAN 2 / RAN 2R

Input

Solid - single and double projection Output shaft Keyed hollow

Gear ratios

i = 3

Rated thrust capacity

RAN 1 50000 N RAN 2 80000 N RAN 2R 150000 N



W VF_EP series Gearmotors for hostile environments

When multi-purpose products become specific and meet industry requirements.

Wormgears and motors are also available in the enhanced protection "EP" configuration, featuring food grade specifications and extra corrosion protection, allowing for cleanability and sanification after operation.

Besides the food processing, the EP configuration will also suit the requirements of the chemical and pharmaceutical industry as well as the marine on-board and quayside installations.



Applications

Food processing, chemical and pharmaceutical industry Marine on-board and quayside installations Corrosive and/or highly hygienic environments

Availability on

Gears: VF 44, VF 49, W 63, W 75, W 86 Motors: BN 63 ... BN 112 / M1SD ... M3LC

Standard features

Stainless steel hollow shaft
Stainless steel mounting hardware and tag
Oil seals loaded with stainless steel spring
Sealed gearcase (unvented)
Unused tapped holes closed with button plugs
Four draining holes on motor DE and NDE shield
Motor protection IP 56

Options

Epoxy primer+epoxy top coating FDA approved Washdown duty oil seals Food grade lubricant, class H1

Configurations

Foot, flange and shaft mount

Accessories

Plug-in solid output shaft from stainless steel Safety cover for the hollow output shaft Torque arm







Gearmotors for use in potentially explosive atmosphere.

ATEX-compliant gear units in categories 2G and 2D are available, according to the classification set forth by the European Directive 94/9/CE, applying to areas with presence of potentially explosive atmosphere. AC three-phase motors in category Ex II 2D 125 °C are also available in either the integral or the IEC design.

Coaxials series C

C11 ... C61

Bevel helicals series A

A10 ... A60

Shaft mounts series F

F10 ... F60

Worm gears series VF and W

VF30 ... VF49 W63 ... W110

Planetaries series 300

300 ... 321

Motors series M and BN

0.12 ... 3 kW



LC series Low backlash gearboxes

Low backlash at a competitive price.

The LC Series of planetary gearboxes is characterised by low backlash, silent running and easy motor coupling.



Torque range

12 ... 300 Nm

Maximum acceleration torque

20 ... 450 Nm

Transmission ratios

3 ... 100

Output configuration

Flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life



Туре	Acceleration torque [Nm]			
LC 050	20			
LC 070	35			
LC 090	80			
LC 120	190			
LC 155	450			

Backlash [arcmin]

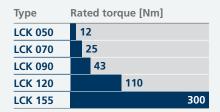
Туре	1 stage	2 stages
Standard	12	15
Reduced	6	8



LCK series Low backlash right-angle gearboxes

The economical, precise and efficient solution wherever space is at a premium.

LCK Series gearboxes offer the same exceptional performance as the LC in-line series, but their right-angle design makes then easier to install in tight spaces.



Туре Acceleration torque [Nm] **LCK 050 LCK 070 LCK 090** 190 **LCK 120 LCK 155** 450

Backlash [arcmin] 2 stages 3 stages Standard

Туре

Torque range

10 ... 300 Nm

Maximum acceleration torque

20 ... 450 Nm

Transmission ratios

6 ... 100

Output configuration

Flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life



MP seriesLow backlash planetary gearboxes

High precision for excellent results.

The MP Series of low backlash planetary gearboxes is characterised by a wide range of mounting configurations, silent running, and superbly easy motor coupling.



Torque range

20 ... 1000 Nm

Maximum acceleration torque

30 ... 1200 Nm

Transmission ratios

3 ... 1000

Output configuration

Flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life

Versions available

MP - MB









Type Rated torque [Nm]					
MP 053	20				
MP 060	30				
MP 080	70				
MP 105	170				
MP 130	450				
MP 160	700				
MP 190	1000				

Туре	Acceleration torque [Nm]				
MP 053	3	0			
MP 060	4	5			
MP 080		10	0		
MP 105			250		
MP 130				700	
MP 160					950
MP 190					1200

Backlash [arcmin]

Туре	1 stage	2 stages	3 stages
Standard	15	15	17
Reduced	10	10	12



TR seriesLow backlash planetary gearboxes

Maximum precision for highly dynamic applications.

TR Series planetary gearboxes set new standards for low backlash, superb reliability, extremely silent operation and compatibility with all leading brands of servomotor.

Туре	Rated torque [Nm]	
TR 053	20	
TR 060	30	
TR 080	70	
TR 105	170	
TR 130	450	
TR 160		700
TR 190		1000

Туре	A	ccel	eratio	1 tor	que [N	lm]
TR 053	3	30				
TR 060	-	45				
TR 080		10	0			
TR 105			250			
TR 130					700	
TR 160						950
TR 190						1200

Backlash [arcmin]

Туре	1 stage	2 stages	3 stages
Standard	5	5	7
Reduced	3	3	5

Torque range

20 ... 1000 Nm

Maximum acceleration torque

30 ... 1200 Nm

Transmission ratios

3 ... 1000

Output configuration

Flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life

Versions available







MP - G

MP - MB





SL seriesLow backlash planetary gearboxes for pulley drives



The new SL Series from Tecnoingranaggi knows no rivals when it comes to compactness, efficiency and an optimised design for use with toothed belt drive systems. SL Series low backlash gearboxes are the ideal complement to servo-drive systems in applications that need to combine precision and high overhung loads with ultra-compact dimensions. SL Series gearboxes are also ideal for turntable applications without pulleys.



Torque range

18 ... 110 Nm

Maximum acceleration torque

35 ... 190 Nm

Transmission ratios

3 ... 10

Output configuration

Flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life

Туре	Rated torque [Nm]
SL 070	25
SL 090	43
SL 120	110

Туре	Acceleration torque [Nm]	
SL 070	35	
SL 090	80	
SL 120	190)

Backlash [arcmin]

Туре	
Standard	12
Reduced	6



KR series Low backlash right-angle gearboxes

The economical, flexible and efficient solution for low backlash right-angle drive systems.

The KR Series of low backlash, right-angle gearboxes delivers the best possible combination of precision, dynamics and compactness. A wide range of input and output configurations combined with a selection of transmission ratios give these gearboxes unrivalled flexibility.

Type Rated torque [Nm] KR 010 10 KR 020 24 KR 030 55 KR 040 120

Type Acceleration torque [Nm] KR 010 14 KR 020 35 KR 030 75 KR 040 170

	Backlash [arcmin]	
Туре		
Standard	8	

Torque range

3 ... 120 Nm

Maximum acceleration torque

14 ... 170 Nm

Transmission ratios

1, 2, 5

Output configuration

Hollow shaft with keyway Solid shaft, single or double sided Hollow shaft with shrink disc Mounting flange

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life



TQ series

Low backlash planetary gearboxes

The TQ Series of low backlash planetary gearboxes is designed to deliver the highest possible level of precision. Low backlash internals combined with a casing of high torsional rigidity guarantee extremely low total backlash. The chosen design solutions also permit high loads on the output shaft while still ensuring superbly silent operation.



Torque range

30 ... 800 Nm

Maximum acceleration torque

45 ... 1200 Nm

Transmission ratios

3 ... 100

Output configuration

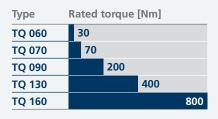
Square flange mounting

Input configuration

Wide range of coupling configurations to suit most common servomotors

Maintenance

Lubricated for life



Туре	Acceleration torque [Nm]
TQ 060	45
TQ 070	100
TQ 090	300
TQ 130	600
TQ 160	1200

Backlash [arcmin]

Туре	1 stage	2 stages
Standard	3	5
TQ 060 TQ 070	4	6



V Series Mechanical speed variators

A conventional product optimised by re-engineering.

The completely renewed V Series features a brand new speed control mechanism that optimises functioning, extends the lifetime of key components, and allows the variator to run cooler and more silently than ever. V Series speed variators are available with an additional helical reduction stage and can be coupled to most Bonfiglioli gearboxes.

Туре	Power kW
V 0.25	4
V 0.5	8
V 1	16
V 2	35
V 3	56
V 5.5	72
V 10	144

Max. to Min. speed setting

5.2 times

∞ Reduction through a differential unit

Transmissible power $(n_1 = 1400 \text{ min}^{-1})$

0.18 ... 9,2 kW

Additional helical reduction stage

 $i_N = 2.5 ... 6.3$

Output configuration

Foot or flange mounting Metric or Inch series solid output shaft Compact and IEC coupling for helical and worm gearboxes

Speed setting

Manual by knob Remote by servo mechanism Optional speed measuring kit with display

Input configuration

Provision for IEC and NEMA standard motors Solid input shaft

Applicable three phase motors

IEC standard and BN Series self-braking motors



BN seriesAC motors



The IEC-normalized BN motors comply with all the applicable international standards, including the EMC and LV Directives. They are available in the 0.06 - 30 kW range in the foot and the flange mounting version, the latter in both the IM B5 and the IM B14 configuration. Single and dual pole versions available with generally, three brake options offered, one DC and two AC supply, lending further flexibility to the system. Finally, all motors are inverter duty.



kW rating (4 pole)

0.06 ... 30 kW

Frame sizes

56A ... 200L

Pole numbers

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

Mounting options

Foot IM B3 Flange IM B5 and IM B14

Operation

50 Hz and 60 Hz

Compliance

2006/95/EC (LVD) and 2004/108/EC (EMC)

Inverter duty

All frame sizes

Housing

Cast aluminium

Main brake features

DC and AC supply

Faster brake engage/disengage through electronically Controlled AC/DC rectifier type SB, NBR, SBR (options)

Main options

Thermistors and thermostates sensors Separate supply forced ventilation Line driver and push-pull incremental encoder CSA and UL approved design

Туре	kW rating
BN 56A	0.06
BN 56B	0.09
BN 63A	0.12
BN 63B	0.18
BN 63C	0.25
BN 71A	0.25
BN 71B	0.37
BN 71C	0.55
BN 80A	0.55
BN 80B	0.75
BN 80C	1.1
BN 90S	1.1
BN 90LA	1.5
BN 90LB	1.85
BN 100LA	2.2
BN 100LB	3
BN 112M	4
BN 132S	5.5
BN 132MA	7.5
BN 132MB	9.2
BN 160MR	11
BN 160M	15
BN 180M	18.5
BN 180L	22
BN 200L	30



BE seriesIE2 AC motors

Class IE2 high efficiency AC motors.

The IEC-normalized BE motors comply with IEC 60034-30:2008 (efficiency classes) and all the applicable international standards, including the EMC and LV Directives. They are available in the 0.75 - 22 kW range in the foot and the flange mounting version, the latter in both the IM B5 and the IM B14 configuration. Single pole version available with generally, two brake options offered, one DC and one AC supply, lending further flexibility to the system. Finally, all motors are inverter duty.



18.5

BE 80B 0.75 **BE 90S** 1.1 BE 90LA 1.5 **BE 100LA** 2.2 **BE 100LB BE 112M BE 132S BE 132MA** 7.5 **BE 132MB BE 160M** 11 **BE 160L** 15

kW rating

Туре

BE 180M

BE 180L

kW rating (4 pole)

0.75 ... 22 kW

Frame sizes

80B ... 180L

Pole numbers

2, 4, 6

Mounting options

Foot IM B3 Flange IM B5 and IM B14

Operation

50 Hz and 60 Hz

Compliance

IEC 60034-30:2008 (IE), 640/2009/EC 2006/95/EC (LVD) and 2004/108/EC (EMC)

Inverter duty

All frame sizes

Housing

Cast aluminium

Main brake features

DC and AC supply
Faster brake engage/disengage through electronically

controlled AC/DC rectifier type SB, NBR, SBR (options)

Main options

Thermistors and thermostates sensors Separate supply forced ventilation Line driver and push-pull incremental encoder CSA and UL approved design



BS seriesSingle-phase induction motors

A range of motors dedicated to domestic and light workshop duty.

Single-phase motors of the BS series are manufactured to the applicable IEC standards and are of the enclosed type, externally ventilated and with run capacitor permanently connected.

Motors are available in the B5 and B14 flange mountings, in the 4-pole execution. For applications requiring high starting torque the version with both the run and the starting capacitor can be specified.



kW ratings

0.06 ... 1.5 kW

Frame sizes

56A to 90L

Poles

1

Mounting

Flange mounting IM B5 and IM B14

Frequency

50 and 60 Hz

European norms

2006/95/EC (LVD) and 2004/108/EC (EMC)

Housing

Cast Aluminium

Main options

Starting and run capacitors Bimetal thermal protector Balanced winding

Туре	kW rating
BS 56A	0.06
BS 56B	0.09
BS 63A	0.12
BS 63B	0.18
BS 71A	0.25
BS 71B	0.37
BS 80A	0.55
BS 80B	0.75
BS 90S	1.1
BS 90L	1.5



BC series DC motors

A comprehensive range of permanent magnet DC motors.

The motors of the BC series are the simple, proven and economical solution to the requirements of DC drives. The materials and the design concepts exploited allow the use of BC motors under the severest duty and with 4-quadrants thyristor converters. Motors can be operated in the –20 to +40 °C temperature range and are IP54 protected and class F isolated.

Туре	Torque [Nm]
BC 110	0.3
BC 120	0.8
BC 140	1.4
BC 220	0.9
BC 240	1.2
BC 270	2.2
BC 310	4.5

Torque range

0.3 ... 4.5 Nm

Speed

. 1500, 2000, 3000 min⁻¹

Supply

12, 24, 36, 48,65, 110, 180, Vdc

Configurations

IM B5 and IM B14 Flange Mount

Ventilation

BC110 ... BC140 non-ventilated BC220 ... BC310 TEFC

BTD series AC brushless servomotors

A range of compact servomotors.

BTD Series servomotors are designed to provide effective solutions for applications demanding high efficiency, compact motors.

The extremely small size of these actuators, achieved by the use of advanced materials and design technology, ensures exceptional dynamics and low temperature operation. Equipped with IP65 push-pull connectors (IP67 connectors are optional), in conformity to EMC requirements, and a PTC temperature probe with reinforced insulation, these motors guarantee secure electrical connections under all ambient operating conditions.



Stall torque

0.26 ... 27 Nm

Rated speed

3000, 4500 min⁻¹

Power supply

230, 400 Vac

Inertia

Low for BTD sizes from 0.26 Nm ... to 1 Nm

Conformity

2006/95/EC (LVD) and 2004/108/EC (EMC)

DC brake

Optional 24 Vdc

Certification

CE, UL

Туре	Torque [Nm]	
BTD2 0026	0.26	
BTD2 0053	0.53	
BTD2 0074	0.74	
BTD2 0095	0.95	
BTD3 0095	0.95	
BTD3 0190	1.9	
BTD3 0325	3.25	
BTD3 0420	4.2	
BTD4 0410	4.1	
BTD4 0630	6.3	
BTD4 0860	8.6	
BTD5 1160	11.6	
BTD5 1490	14.9	
BTD5 1870		18.7
BTD5 2730		27.3



BCR seriesAC brushless servomotors

A range of high performance servomotors.

BCR Series servomotors are designed to satisfy the needs of continuous and transient high torque applications. Thanks to a wide torque range and above average instantaneous overload ratings, BCR servomotors are robust enough for even the most demanding drive applications. Equipped with IP65 push-pull connectors (IP67 connectors are optional), in conformity to EMC requirements, and with a PTC temperature probe with reinforced insulation, these motors guarantee a secure electrical connection under all ambient operating conditions.

Stall torque

0.2 ... 115 Nm

Rated speed

2000, 3000, 4500 rpm

Power supply

230, 400 Vac

Inertia

Low for BCR sizes from 0.2 Nm ... to 1 Nm

Conformity

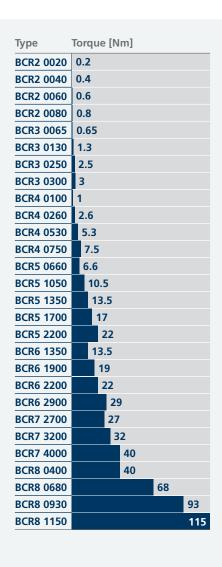
2006/95/EC (LVD) and 2004/108/EC (EMC)

DC brake

Optional 24 Vdc

Certification

CE, UL





Agile Frequency Inverter

Innovative, eco-friendly, user-friendly.

Agile series provide in a sensorless vector inverter innovations able to boost plant efficiency through open loop vector control of brushless motors, MMC memory cards and web control.

Agile inverters are easy to install, program and quick to start-up without the needs of specialized resources.



0.25 kW - 11 kW / three-phase 320 V ... 530 V / 45 Hz... 69 Hz

Motor compatibility

Two types of motor: Asynchronous AC motors Permanent magnet synchronous (brushless) motors

Type of control

Selectable control function: V/f control for asynchronous motors Sensor-less vector control for asynchronous motors Sensor-less vector control for brushless motors

Degree of protection

IP20 (EN 60529)

Main hardware features

Power supply from common DC bus Integrated braking module Short circuit / ground fault protection Integrated Safe Torque Off safety system Plug-in and programmable control terminals 6 digital inputs, 2 multifunctional A/D inputs 1 multifunctional I/O, 1 digital output 1 multifunctional A/D/pulse output, 1 relay output (alarm) available power outputs: +24 V DC, +10 V DC optional separate 24 V DC electronic power supply standard serial interfaces: RS-232, RS485, Systembus Integrated Modbus

Optional expansion modules

Resource Pack memory card

Optional communication modules

Profibus-DP, CANopen

PC software

VPlus suite

Main software features Permanent motor tuning Selective Multi-Motor Control (SMMC) **Energy saving function** Ready to use application masks Integrated maintenance wizard Alarm history Motor and inverter state memory Autodiagnostics Integrated PLC function with graphic development environment Integrated oscilloscope function Customisable units of measurement

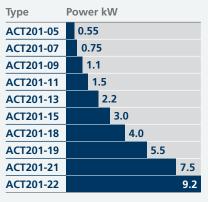


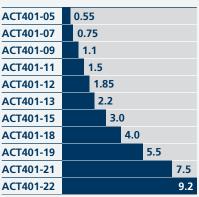


ActiveSolution Drives

Versatility, rating, performances.

A full series of flexible solution drives that are versatile and extremely easy to use, featuring control for high performance and unbeatable advantages in their scalability and compact size.







Power range (ACT401)

0.55 - 132 kW / three-phase 360 V - 480 V / 50 Hz - 60 Hz (± 10%)

Power range (ACT201)

0.55 - 9.2 kW / single or three-phase 200 V - 240 V / 50 Hz - 60 Hz (± 10%)

Type of control

Selectable Vector control function:

sensor-less control, sensor-less field oriented control, field oriented control with encoder

Overload capacity

150% for 60s / 200% for 1s

Switching frequency

2, 4, 8, 12, 16 kHz

Enclosure

IP20 (EN 60529)

EMC filter

Integrated up to 9.2 kW (EN 61800-3)

Main standard hardware features

Integrated dynamic braking module, DC link connection, Standard encoder interface, Motor temperature monitoring, Plug-in power terminals (up to 3kW), Plug-in and programmable control terminals, 6 digital input, 1 multifunction input, 1 digital output, 1 multifunction Output, 1 relay output (changeover contact)

Optional expansion modules

Expansion of analog, digital inputs and outputs, additional encoder or resolver input, repetition frequency output, System bus

Optional communication modules

RS232, RS485, Profibus-DP, CANopen

Optional keypad

Removable keypad KP500 with copy function, Cabinet mounting kit and handheld for keypad

Optional PC software

VPlus for Windows operating system with set-up, terminal monitor, actual value window, scope function and teleservice

Main software features

Programmable reference value channel, Programmable start and stop characteristics, Motor potentiometer, Programmable S curve, 4 data sets, Auto start-up and commissioning, Auto reset after failure, Auto start after power failure, PI controller, Programmable logic and timer functions, Volume flow control, Bump-less torque / speed changeover, Master / Slave function with electronic gear, Enhanced positioning function, Mechanical brake control free of friction, Index and stability control, Intelligent current limits, Power failure regulation, Comprehensive monitoring and protection capabilities, High speed control, Function for lift, crane and winch applications, 3 different brake Management Functions.



Active Cube Solution & Servo Drive

Versatility, promptness, accuracy.

A full series of solution & servo drives, compact and flexible, dedicated both to high demanding industrial automation systems and to motion control architectures, in match with Bonfiglioli servomotors



Power range (ACU401)

0.25 - 132 kW / three-phase 360 V - 480 V / 50 Hz - 60 Hz (± 10%)

Power range (ACU201)

0.25 - 9.2 kW / single or three-phase 200 V - 240 V / 50 Hz - 60 Hz (± 10%)

Type of control

Selectable Vector control function: sensor-less control, sensor-less field oriented control, field oriented control with speed sensor, field oriented control of synchronous servomotors with speed/position sensor

Overload capacity

200% for 1min (size 01 and 03) / 150% for 1min (other ratings), Shorter overload: 200% for 1sec all ratings

Switching frequency

2, 4, 8, 12, 16 kHz

Enclosure

IP20 (EN 60529)

EMC filter

Integrated up to 9.2 kW (EN 61800-3)

Main standard hardware features

Integrated safe torque off function, External 24Vdc supply for control board and electronics, Integrated dynamic braking module, DC link connection, Standard encoders interface, Resolver module for feedback acquisition from Bonfiglioli servomotors, Motor temperature monitoring, Plug-in power terminals (up to 3kW), Plug-in and programmable control terminals 6 digital input, 1 multifunction input, 1 digital output, 1 multifunction, Output, 1 relay output (changeover contact)

Optional expansion modules

Expansion of analog, digital inputs and outputs, additional encoder or resolver input and sincos encoder, repetition frequency output, System bus

Optional communication modules

RS232, RS485, Modbus, Profibus-DP, CANopen

Optional keypad

Removable keypad KP500 with copy function, Cabinet mounting kit and handheld for keypad

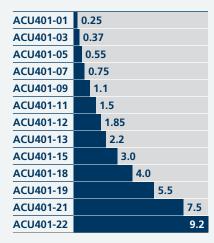
PC software VPlus

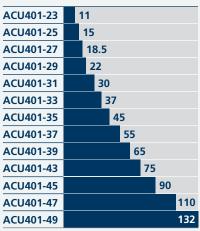
Windows-based engineering "workbench" with easy interface, Drive parameters set-up, Terminal monitor, Actual value window, Scope function, Bonfiglioli servomotors quick-configuration window, Motion block parameters management, Teleservice

Main software features

32 Programmable Motion blocks, 36 Homing functions according to CANopen DSP4.02, Unit converter, Jog function, Absolute and relative positioning modes, Touch probe, Teach-In functions, Rotary table control, Programmable reference value channel, Programmable start and stop characteristics, Motor potentiometer, Programmable S curve, 4 data sets, Auto start-up and commissioning, Auto reset after failure, Auto start after power failure, PI controller, Programmable logic and timer functions, Bump less torque / speed changeover, Master / Slave function with electronic gear, Index and stability control, Intelligent current limits, Power failure regulation, Comprehensive monitoring and protection capabilities, High speed control, Function for lift, crane and winch applications, 3 different brake Management Functions. Advanced application functions: advanced brake release control, spindle control up to 1000Hz, traverse function for winders, Volume flow control, load evaluation.









VCB series Frequency Inverter

Convenient in operation and flexible in application.

Reliable, highly compact and a robust choice for any application, this inverter with high-level functions soundly meets the requirements of a constantly evolving market.



Power range (VCB400)

132 kW - 800 kW, three-phase 320 V - 506 V, 45 Hz - 66 Hz

Type of control

Selectable Vector control function:
Sensor-less control, sensor-less field oriented control,
Field oriented control with encoder

Overload capacity

120% / 150% for 60s

Switching frequency

1 kHz up to 8 kHz

Enclosure

IP20 up to 355 kW (EN 60529) / IP54 on demand

Main standard hardware features

Three-phase 230 V and three-phase 500 V on demand DC link connection, Plug-in and programmable control terminals 8 digital input, 3 analog input 2 digital output, 1 analog output 1 Relay output (changeover contact)

Optional expansion modules

Motor temperature monitoring, expansion of analog, digital inputs and outputs, additional encoder or resolver input, repetition frequency output, Safety relay in combination with expansion module

Optional communication modules

RS232, RS485, Profibus-DP, CANopen, LON

Optional keypad

Removable keypad KP100

Optional PC software

VPlus for Windows operating system with set-up, terminal monitor, actual value window, scope function and teleservice

Main software features

Programmable reference value channel, Programmable start and stop characteristics, Motor potentiometer, Programmable S curve, 4 data sets, Auto start-up and commissioning, Auto start after power failure, PI controller, Volume flow control, Bump-less torque / speed changeover, Master / Slave function with electronic gear, Dynamic braking and motor chopper, Mechanical brake control free of friction, Intelligent current limits, Power failure regulation, Index and stability control, Comprehensive monitoring and protection capabilities, Function for lift, crane and winch applications



Synthesis AC Drive

Install and go.

The simple use, wide range of controls, integrated EMC filter, IP65 protection level and the limited size make the SYN10 a sound response to the broadest needs for electronic speed variation, where basic performance and contained costs are matched with robust construction and great reliability.



Power range (SYN10 S 220)

0.2 - 0.75kW 1 - Phase 200 - 240V / 50 - 60Hz (+10, -15%) 1.5 - 2.2kW 1 and 3 - Phase 200 - 240V / 50 - 60Hz (+10, -15%)

Power range (SYN10 T 400)

0.75 - 2.2kW 3 - Phase 380 - 460V / 50 - 60Hz (+10, -15%)

Type of control

V/f control with Torque Gain and Selectable Patterns

Overload capacity

150% for 60s

Switching frequency

4-16 kHz

Enclosure

IP20, IP65

EMC filter

Standard Integrated A Class (EN 61800-3)

Main standard hardware features

Integrated braking module (SYN10 S 220/07/09 - SYN10 T 400)

DC link connection (SYN10 S 220/07/09 - SYN10 T 400)

Inverter temperature monitoring

- 1 Analog Input (V or I selectable)
- 4 Digital Input (programmable multifunction) 1 Analog Output (voltage linear)
- 1 Relay output (programmable multifunction)

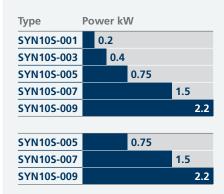
Kevpad

Integrated standard

Main functions

Current limit

I2t Motor temperature monitoring DC braking injection Selectable Volt on Hz characteristic JOG frequency Selectable Auto-restart Selectable stop method Automatic alarm reset Alarm history Momentary power loss prevention Stall prevention Output Short-Circuit protection Grounding fault protection Heat sink overheat protection









Sharing the value of our work with you.











RoHS

The development of effective, tailored solutions for a wide range of applications is a fundamental aspect of our work.

We succeed in this because we co-operate closely with our customers, listen to their requests and work with them to improve our own performance.

Bonfiglioli is determined to deliver the best service possible – before, during and after the sale of any of our products – by applying all our know-how, experience, technology, and advanced communication tools. Bonfiglioli works to the strictest standards of quality and safety, as certified by seven different internationally recognised institutes.

We believe in innovation, and back up this belief by dedicating 100 of our people and 5 activity centres to research and development, and by working hand in hand with some of the world's most prestigious universities.

Our work increasingly brings us into contact with other nations and cultures, for which we have the greatest respect and with whom we share a vision of sustainable development based on renewable energy.

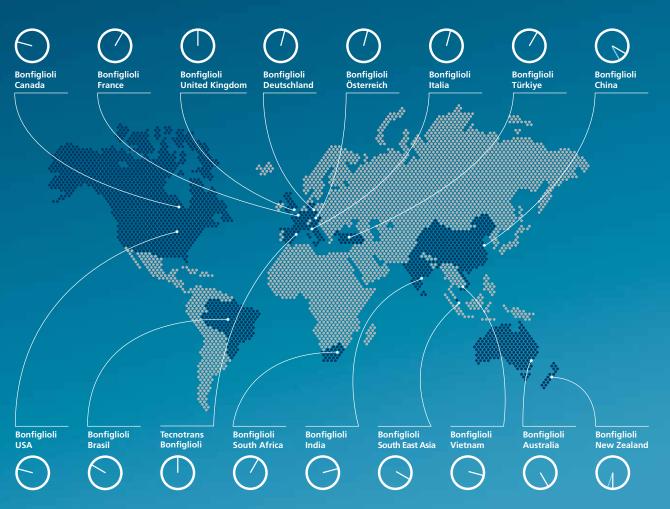
This bond of commitment allows us to be an authoritative and reliable global partner for the present and the future.





Branches and facilities

Our branches







Bonfiglioli is your partner worldwide for power transmission and motion control.

Customer satisfaction has always been one of Bonfiglioli's key values. It is pursued around the world, and in a wide range of contexts, by a network of subsidiaries located in 17 countries and on 5 continents.

Each subsidiary provides rapid and efficient presales and after-sales service, and can guarantee prompt deliveries from local assembly plant and warehouses.

In addition to our directly controlled subsidiaries, Bonfiglioli can also rely on an extensive network of authorised dealers, selected for their ability to guarantee excellent pre-sales and after-sales assistance.

To give everybody the chance to purchase a Bonfiglioli product - anywhere.

This is the ambitious objective that drives the development of our added value sales networks, off and on-line.

BEST (Bonfiglioli Excellence Service Team) is one of the most modern sales organisations in the field of power transmission.

Our BEST partners can benefit from our local assembly plant and warehouses, our training courses and tools, and our promotional activities.

For the first time ever, manufacturer and distributors are working together from the product assembly stage and in the design of new applications, in a sharing process that sees one party transferring know-how and technology and the other partly providing a thorough knowledge of the local market.







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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.