# Solutions for the heavy industry









# BONFIGLIOLI RIDUTTORI



BONFIGLIOLI VECTRON



Bonfiglioli is a leading company that competes at the highest levels of the global power transmission market.

Bonfiglioli designs, manufactures and distributes a complete range of gearmotors, drive systems and planetary gearboxes and boasts the best integrated offering on the market today. Bonfiglioli has enjoyed impressive growth in recent years.

Efficiency and competitiveness have both been improved by the acquisition of established market-leading companies, the expansion of existing plant and the construction of new factories and, above all, by an ambitious programme of production process automation. The Bonfiglioli name embodies the values of experience and advanced technology, supported by constant dedication to the cause of innovation and research and by the financial resources necessary to sustain a process of continuous evolution.

The Bonfiglioli Group offers the power transmission market three distinct brands:



BONFIGLIOLI VECTRON



The strength of these brands lies in the high technology content of each product and the careful integration of different technologies to provide an exclusive and synergic solution. Quite uniquely, Bonfiglioli has the core capabilities to develop systems which integrate electronic, hydraulic and mechanical engineering.

These solutions represent choices of excellence for industrial systems and mobile machinery as well as innovative renewable energy applications in the wind turbine, solar panel and bio fuel sectors.

Hi-tech industries and complex applications increasingly call for the ability to provide solutions and not just products. This can only be achieved with the appropriate expertise. And we are convinced that this is our unique selling point which we must foster and invest in our drive to promote innovation.

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## Industries using Bonfiglioli

## Heavy Duty gearboxes

Material handling
(belt, plate, bucket, screw, chain conveyors, etc.)
Packaging, confectioning and stacking equipment
Metallurgical industry
Mining
Paper mills
Sugar processing
Water treatment
Agitators and stirrers
Woodworking
Pumps and fans

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# Bonfiglioli solutions for heavy industry



The Bonfiglioli range features a wide variety of products covering the needs of mechanical power transmission and electronic control.

Of the entire range, Bonfiglioli's heavy duty products are those designed to serve applications that demand extremely high torque values, often beyond the scope of most power transmission manufacturers.

Bonfiglioli offers a choice of gearbox architectures in this highly specialised area and over the years these have gained an enviable reputation for their "Heavy Duty" characteristics of robustness, quality and superior reliability.

Certification by TÜV and DNV of the Quality Systems of all Bonfiglioli production and assembly plants proves the point.

This also extends to the factory in Sala Bolognese where Bonfiglioli Riduttori has concentrated the assembly of all its heavy duty gearboxes precisely to create a specially equipped and highly qualified production unit.

HDP Series parallel shaft gearboxes, HDO Series bevel-helical gearboxes and 300 Series planetary gearboxes offer system designers the ultimate flexibility in choosing transmission architecture and transmissible power.

A long and complete list of options and standard accessories is also available to cover all installation, cooling and lubrication needs and to add extra functionality. Operating from the Group's subsidiaries around the world, Bonfiglioli's Technical Service is always available to support customers in selecting the most suitable type and size of product for the application in hand. Bonfiglioli's Technical Service provides recognised added value and benefits the safety and cost effectiveness of installations.



4 5



HDP Series parallel shaft and HDO Series bevel-helical gearboxes offer uniform high performance across the entire range of transmission ratios.

Robust nodular cast iron casings, gears with ground finished tooth profile, top brand bearings and generously sized parts combine to guarantee tangible quality, which is also guaranteed by TÜV Quality System certification. Once assembled, each individual gearbox is tested to ensure conformity to technical specifications and quality requirements.





## series HDO





# Series HDP and HDO Heavy Duty parallel and right angle gear units





# series HDP

HDP 160					 	125	5.000	
HDP 150					100.000			
HDP 140				74 <mark>,</mark> 000				
HDP 130			58.000					
HDP 120		35.350						
HDP 110	   	26.500						
HDP 100	21	.700						
HDP 90	16.550							
HDP 80	11.500							
HDP 70	6.550							
HDP 60	4.650			   	   	1		
0	20.000	40.000	60.000	80.000	100.000	120.000	140.000	
Transmissible torque M <sub>N2</sub> [Nm]								







# Planetary drives series 300

300 Series planetary gearboxes are extremely compact despite their outstanding transmissible torque characteristics and overload capacity typical of "heavy duty" applications.

The 300 Series can transmit torque in excess of 1,000,000 Nm, an impressive value indeed, and one that very few gearbox manufacturers can equal. Superb flexibility is ensured by a large number of optional variants that can be selected directly from the catalogue and that allow gearbox configurations to be customised to meet the needs of specific applications.













Туре	kW
VCB400 - 250	132
VCB400 - 300	160
VCB400 - 370	200
VCB400 - 460	250
VCB400 - 570	315
VCB400 - 610	355

*Higher ratings can be achieved through multiple combinations.* 



## VCB series frequency inverter Powerful 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

### Main Standard Hardware features

Three-phase 500 V on request 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)

## **Main Software Features**

Programmable reference value channel Programmable start and stop characteristics Motor potentiometer Programmable S curve 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 Coordinated brake/torque control at start-up in loaded conditions Innovative dynamic braking through high frequency induction Index and stability control Comprehensive monitoring and protection capabilities Function for lift, crane and winch applications

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# **Construction technology**

All essential parts are produced in Bonfiglioli's own plant using constantly updated machine tools of the latest generation.

Machining technology is therefore fully owned by Bonfiglioli and part of a know-how acquired over 50 years of manufacturing.

Today, precision machining is very much a part of Bonfiglioli's consolidated heritage.









# A specialized facility for the assembly of Heavy Duty gear units

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Bonfiglioli's B2 production plant in Sala Bolognese was specifically built to house the entire assembly process, including final testing, of heavy duty gearboxes of the HDP (parallel shaft), HDO (bevel-helical) and 300 (planetary) series.

The plant covers a ground area of 11,350 m<sup>2</sup> and the buildings that account for some 50% of this area house warehousing, assembly, testing and shipment facilities for the gearboxes produced there.

Assembly is organised in a island layout to ensure maximum efficiency and productivity while maintaining the flexibility needed to adapt production to a work flow that varies frequently in terms of product type and size.

The CNC machine tools and equipment used for the production of gears and other essential component parts are all state-of-the-art in terms of quality, efficiency and productivity in general. Advanced machinery has always been central to Bonfiglioli's production system and Bonfiglioli has always assigned top priority to the quality and efficiency of its machine park, and has invested accordingly.

All key components are therefore produced within the Bonfiglioli organisation, benefiting from a long and consolidated experience gained in over 50 years of manufacturing in the field of power transmission.











# Bonfiglioli's global Service



The BONFIGLIOLI organisation consists of 14 subsidiaries, strategically located across all five continents. In addition to commercial competence, each subsidiary has its own autonomous and efficient structures for assembling BONFIGLIOLI products.

Manufacturers all over the world understand how important it is to be able to rely on service provided through an official organisation, not only for product supplies but also for all kinds of technical assistance that may be required over time.







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