BONFIGLIOLI RIDUTTORI

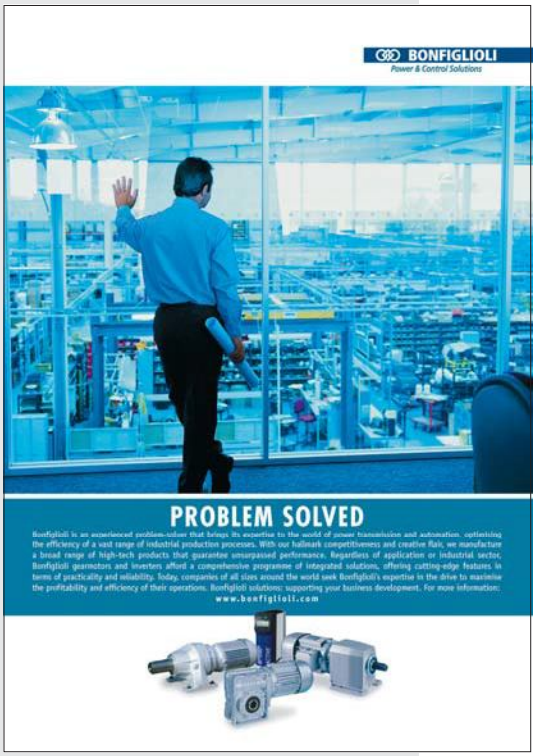
Inline gearmotors
Worm gearmotors
Right angle gearmotors
Parallel shaft gearmotors
Shaft-mounted gearboxes
Right angle units
Mechanical variable speed units
Three-phase AC motors
DC motors
Servomotors

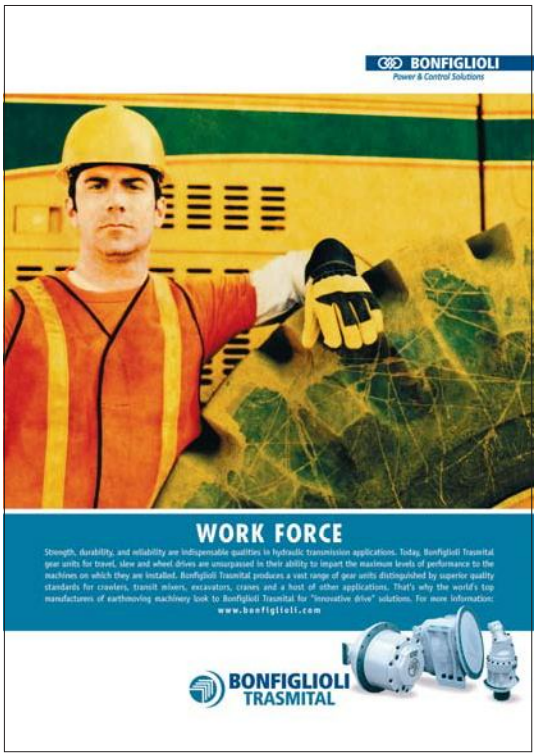
BONFIGLIOLI TRASMITAL

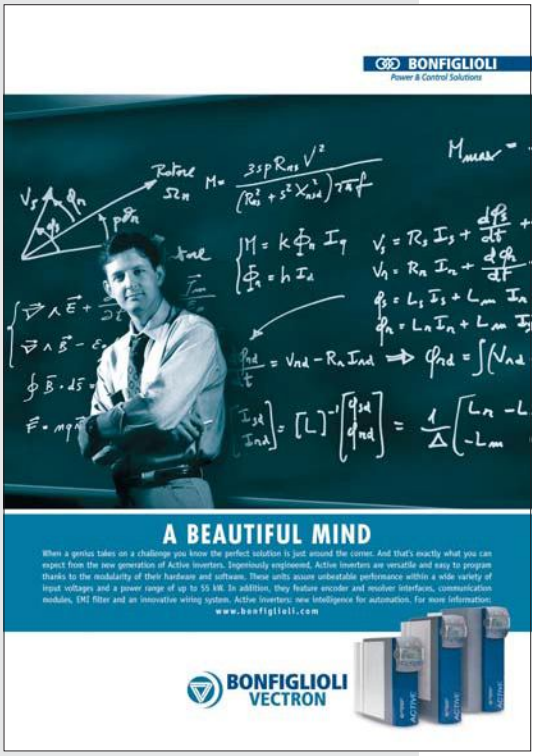
Gearmotors with hydraulic motors
Track drives
Gearboxes for truck mixer
Wheel drives
Winch drives
Slew drives

BONFIGLIOLI VECTRON

AC V/F Inverters
AC sensorless vectorial Inverters
AC feedback Inverters
Motor-integrated Inverters


BONFIGLIOLI
Power & Control Solutions
PROBLEM SOLVED
Bonfiglioli is an experienced problem-solver that brings its expertise to the world of power transmission and automation, optimising the efficiency of a vast range of industrial production processes. With our hallmark competitiveness and creative flair, we manufacture a broad range of high-tech products that guarantee unsurpassed performance. Regardless of application or industrial sector, Bonfiglioli gearmotors and inverters afford a comprehensive programme of integrated solutions, offering cutting-edge features in terms of practicality and reliability. Today, companies of all sizes around the world seek Bonfiglioli's expertise in the drive to maximise the profitability and efficiency of their operations. Bonfiglioli solutions: supporting your business development. For more information:
www.bonfiglioli.com


BONFIGLIOLI
Power & Control Solutions
WORK FORCE
Strength, durability, and reliability are indispensable qualities in hydraulic transmission applications. Today, Bonfiglioli Trasmital gear units for travel, slew and wheel drives are unsurpassed in their ability to impart the maximum levels of performance to the machines on which they are installed. Bonfiglioli Trasmital produces a vast range of gear units distinguished by superior quality standards for crawlers, transit mixers, excavators, cranes and a host of other applications. That's why the world's top manufacturers of earthmoving machinery look to Bonfiglioli Trasmital for "innovative drive" solutions. For more information:
www.bonfiglioli.com
BONFIGLIOLI
TRASMITAL


BONFIGLIOLI
Power & Control Solutions
A BEAUTIFUL MIND
When a genius takes on a challenge you know the perfect solution is just around the corner. And that's exactly what you can expect from the new generation of Active Inverters. Ingeniously engineered, Active inverters are versatile and easy to program thanks to the modularity of their hardware and software. These units assure unbeatable performance within a wide variety of input voltages and a power range of up to 55 kW. In addition, they feature encoder and resolver interfaces, communication modules, EMI filter and an innovative wiring system. Active inverters: new intelligence for automation. For more information:
www.bonfiglioli.com
BONFIGLIOLI
VECTRON


BONFIGLIOLI
Power & Control Solutions
PURE FORCE
Consistently high torque ratings, numerous close progression ratios, various mounting options along with compact dimensions to ease the application engineering to unmatched levels. The rigid monobloc gear case and the gears' high class of precision yield an extremely quiet and vibration-free operation. For more information:
www.bonfiglioli.com
BONFIGLIOLI
RIDUTTORI

Bonfiglioli - A brief...

Back in 1956, the Bonfiglioli Group experience began. At that time, the market was still taking shape and demanded ever-increasing production capacities from the industry. In order to conquer a leading position over an increasing number of competitors, Costruzioni Meccaniche Bonfiglioli started its activity under the trademark C.M.B. and launched an innovative project in the field of speed reduction units, abandoning the gear construction for other companies.

The first gearboxes entirely designed and produced in-house were wormgears, followed by helical units and then by a parallel shaft series.These products enabled C.M.B. to expand to more application fields, until the successful approach to packaging machines, produced mostly in Bologna, as well as conveyors and woodworking machines. Ever committed to grow and improve, the company patented a two-stage planetary gearbox that set the standard for further improvement for the years to come. The performance and reliability of C.M.B.'s products led to the acquisition of ever growing market shares.In order to meet changing and growing requirements, a first expansion project was launched involving several takeovers. Trasmital, taken over in 1976, was followed by the current Machining Division, Gear Division, Assembly Division, Silectron Sistemi and Vectron.This is how a major corporation in the power transmission industry was born and became an established name worldwide: the Bonfiglioli Group.

The Bonfiglioli has experienced a remarkable expansion over the last few years and has become stronger and more competitive by taking over several companies that were well established in their sectors, expanding its production facilities, and above all by undertaking a comprehensive process automation plan. Substantial funds were invested in advanced technology and powerful software tools that boosted the production capacity standards of the single companies to achieve total quality control.All facilities of the Bonfiglioli are equipped with transfer machines and fully automated machining centers with latest - generation PLCs that can handle highly complex processes.But this is just the beginning, as the Bonfiglioli's future is more and more oriented towards industrial automation.

Bonfiglioli Transmissions Private Limited (BTPL), Chennai is a 100% subsidiary of the Bonfiglioli Group. BTPL has been established in India as an Indian Company with appropriate approvals and registration.The company was started in a modest way in the Year 1999 and the production facility started in the Chennai plant in the year 2000. In this state-of-the-art manufacturing facility at Chennai, BTPL are producing Inline Helical Gear Reducers, Shaft Mounted Gear Boxes, Subassemblies of Planetary Drives and various Components.

Bonfiglioli products are assembled and marketed in ten countries while, only in India, the products are "manufactured" and marketed. About 55% of the Indian Production is consistently exported Worldwide. Bonfiglioli Transmission India is accredited with ISO 9001:2000 (Vision 2000) Quality Certification by TÜV.

Currently BTPL are directly employing about 250 personnel with another 150 indirectly employed. 85% of raw material is sourced in India. Marketing in India is done through a national network of well trained Regional Sales Engineers and dealers, ably supported by the Head Office Marketing Dept. with sound Application Engineering Techniques.

The corner stone for the vertical growth in a short period and the success of this Indian Operation is a very rigid Quality Control employed, at all times, for all our Products manufactured in India. During the year 2005, the Indian Operation is aiming to reach a turnover target of Euro 30.00 M.With this aim, BTPL production facility is expanded to cover the total available land areas of 27,000 Sq.mtr. approximately, with a view to augmenting existing production capacity and for new products being introduced.

AS Series

Inline helical gear motors

Type	Torque Nm
AS 16	45
AS 20	90
AS 25	180
AS 30	320
AS 35	480
AS 45	720
AS 55	1,200
AS 60	2,100
AS 80	3,800
AS 90	6,200

Performance and price effectiveness alongside tradition

The dependable and performing solution for all in-line drive applications featuring unsurpassed Quality to Price ratio. Foot or flange mounting are possible in any mounting position, making the installation easier than ever.

Transmissible torque
30 Nm.. 7,200 Nm

Rated power (n1 = 1400min-1)
Up to 140 kW

Gear ratios
i_n = 4,5... 185

Output Configurations
Solid keyed shaft

Input Configurations
IEC motor mounting provision
Solid input shaft

Applicable motors
IEC-normalized motors, up to 45 kw
Single and dual speed motor

Main Brake Features
DC or AC Supply
Fast Braking and / or brake releasing through
SB, NBR, SBR optional electronic devices

Main Motor Options
Thermistors and thermostats sensor
Forced ventilation
Line driver and push-pull incremental encoder

Shaft mounted speed reducers

TA Series

The sturdy and weather – resistant product for the material handling industry

The TA series has long established itself in the industry until become a best seller for the construction industry, 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 inclined conveyors and mounting rigidity achieved with the Torque Arm.

Torque Range (n_1 = 900 min $^{-1}$)
150 Nm.. 16,000 Nm

Mechanical Rating (n1 = 900 min-1)
1,1 kw ... 156 kw

Gear ratios
IN=5,0... 31,5

Output Shaft
Keyed hollow shaft
Up to three bore options per frame size

Gearcase
Sturdy cast housing suitable for outdoor installation

Backstop
Available on all frame sizes – externally accessible

Type	Torque Nm
TA 30	150
TA 35	400
TA 40	900
TA 45	1,350
TA 50	2,100
TA 60	3,500
TA 70	4,900
TA 80	6,600
TA 100	10,500
TA 125	16,000

300 Series

Planetary Drives

Type	Torque Nm
300	1,000
301	1,750
303	2,500
304	3,600
305	5,000
306	8,500
307	12,500
309	18,500
310	25,000
311	40,000
313	55,000
314	80,000
315	100,000
316	135,000
317	170,000
318	250,000
319	350,000
321	500,000

The powerful solutions to all heavy duty drive problems

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 the features are available for each of the 18 finely spaced frame sizes, spanning over the 1.000 - 450.000 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 - 500.000 Nm

Transmissible Mechanical Power
Upto 450 kW

Reduction Ratios Range
1:3,4 to 5.000

Gear Unit Version
In line
Right angle (with bevel gear pair Gleason)

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

Gear Unit Input Configurations
IEC-normalized Motor Adaptors
Solid Input Shaft

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

Main Brake Motor Features
DC and AC brake
Fast Braking and/or brake releasing through
SB, NBR, SBR optional electronic devices

Main Motor Options
Thermistors and thermostates sensor
Servo ventilation
Line driver and push-pull incremental encoder

300 Series Planetary Drives for Windmill application - Yaw Drive.

This is the most popular Yaw Drive for all major Windmill manufacturers worldwide.

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

Torque Range
150 Nm... 14,000 Nm

Mechanical Rating (n1 = 1400 min–1)
0,22kW... 150 kW

Gear ratios
5,4,....1715

Output Configuration
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
Spinned hollow shaft to DIN 5480

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

Applicable AC Motors
Integral motors and brake motors – M series
IEC – normalized motors and brake motors – BN 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
Thermistors and thermostats sensors
Separate supply forced ventilation
Line driver and push–pull incremental encoder

Type	Torque Nm
A 05	100
A 10	150
A 20	250
A 30	410
A 35	600
A 41	850
A 50	1,500
A 55	2,000
A 60	2,800
A 70	5,000
A 80	8,000
A 90	14,000

HDO Series

Bevel helical speed reducers

Type	Torque Nm
HDO 100	24,000
HDO 110	28,700
HDO 120	35,300
HDO 130	59,300
HDO 140	74,000

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.

Transmissible Torque

$24000 \leq M_{N2} \geq 74000$ Nm

Gear Ratios

$5{,}6 \leq i_N \geq 400$ con progressione $\varphi = 1{,}12$

Mounting

Foot, flange, shaft mounting

Input

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

Output shaft

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

HDP Series

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 gear are machined into helps producing an extremely quit and vibration-free operation.

Transmissible torque

4650 < MN2 < 75000 Nm

Gear ratios

7,1 < iN < 500 with progression . = 1,12

Mounting

Foot, flange, shaft mounting

Input

Solid shaft, direct motor mounting, lantern housing
with flexible coupling

Output shaft

Solid (single & double extension), keyed hollow, shrink disc

Options

Fan cooling, cooling coil, heaters
Backstop
Non-contacting labyrinth seals
Heavy duty bearings
Temperature and vibration sensors
Drywell
Torque arm
Forced lubrication
Indipendent cooling system

Type	Torque Nm
HDP 60	4,650
HDP 70	6,350
HDP 80	11,500
HDP 90	16,550
HDP 100	24,000
HDP 110	28,700
HDP 120	35,300
HDP 130	59,300
HDP 140	75,000

RAN Series

Bevel gears

Type	Torque Nm
RAN 1	1.350
RAN 2	3.000
RAN 2R	3.000
RAN 8	3
RAN 15	8
RAN 18	15
RAN 20	28
RAN 24	80
RAN 25	39
RAN 28	150
RAN 38	300
RAN 48	600

The handy drive when it comes to angled transmissions

The units of the RAN series are designed to fit the purpose of transmission 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 system .Also available in the version for screw jack duty.

Torque range
3 Nm … 3000 Nm

Mechanical rating (n1 = 1400 min-1)
0,15 kW … 91 kW

Gear ratios
1,0 … 7,4

Shaft arrangement
Single and double shaft projection

Input configurations
Solid input shaft

RAN 1 / RAN 2 / RAN 2R

Input shaft
Solid – single and double projection

Output shaft
Keyed hollow

Gear ratios
i = 3

Rated thrust capacity
RAN 1 50.000 N
RAN 2 80.000 N
RAN 2R 150.000 N

VF and W Series

A smart design enhanced by latest materials technology and advanced manufacturing

Wormgears of the VF and W series are milestones for the industry worlwide. They succeeded in combining uncompromising quality with stat-of-the art technology and reown price effectiveness. Absolute flexibility is given by the wide choice of several mounting options, shaft configuration 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 Nm... 7,100 Nm

Mechanical Rating (n_1 = 1400 min^{-1})
0,4kW... 75 kW

Gear ratios
7….10,000

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

Input Configurations
VF and W: IEC - standard motor adaptors
VF and W: Solid Input Shaft
W: Integral gearmotor

Applicable AC Motors
VF and W: IEC - standard motors and brake motors - BN series
W: Compact motors series M
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
Thermistors and thermostats sensors
Separate supply forced ventilation
Line driver and push–pull incremental encoder

Type	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	1,500
VF 150	2,000
VF 185	3,600
VF 210	5,000
VF 250	7,100

S Series

Single reduction helical gearmotors

Type	Torque Nm
S 10	21
S 20	37
S 30	70
S 40	125
S 50	200

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 standard.

Torque range
21 Nm ... 200 Nm

Mechanical rating (n1 = 1400 min-1)
0,12 kW ... 11,6 kW

Gear ratios
1,4 ... 13,1

Output configurations
Foot and flange mount

Input configurations
IEC - normalized motor adaptors
Solid input shaft

Applicable AC motors
Integral motors and brake motors - M series
IEC - normalized motors and brake motors - BN 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
Thermistors and thermostats sensors
Separate supply forced ventilation
Line driver and push-pull incremental encoder

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

No better, easier and neat 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 application

Torque Range
140 Nm... 14,000 Nm

Mechanical Rating (n1 = 1400 min–1)
0,17kW... 125 kW

Gear ratios
6,4 ... 2099

Output Configuration
Keyed hollow shaft – two bore options per size
Keyless shrink disc fitting
Plug-in solid output shaft as on option

Input Configurations
IEC-normalized motor adaptors
Solid input shaft

Applicable AC Motors
Integral motors and brake motors – M series
IEC – normalized motors and brake motors – BN 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
Thermistors and thermostats sensors
Separate supply forced ventilation
Line driver and push–pull incremental encoder

Type	Torque Nm
F 10	140
F 20	250
F 25	400
F 31	600
F 41	1,100
F 51	1,800
F 60	2,900
F 70	5,000
F 80	8,000
F 90	14,000

Syn-Plus Series

AC Drives

Type	Torque Nm
SPL200 - 03	0,4
SPL200 - 07	0,75
SPL200 - 11	1,5
SPL200 - 13	2,2
SPL400 - 07	0,75
SPL400 - 11	1,5
SPL400 - 13	2,2
SPL400 - 17	3,7
SPL400 - 19	5,5
SPL400 - 21	7,5
SPL400 - 23	11

Easy and performing

The simple use, the wide range of controls as a sensorless vector or U/f frequency inverter, the builtin EMC filter and brake transistor, the extensive communication possibilities and simple PLC function as standard features, make SYNPLUS the right AC drive for medium level applications, where the performances at reasonable costs are matched with robust structure and absolute reliability.

Power Range (SYNPLUS 200)
0.4 - 2.2 kW / single-phase 200 - 240V + 10% / -15%

Power range (SYNPLUS 400)
0.75 - 11 kW / three-phase 380 - 480V +10% / -15%

Type of control
V/f and sensorless vector control CT/VT mode selection

Overload capacity
150% for 60S

Switching Frequency
2 - 16 kHz

Enclosure
IP 20

EMC Filter
Standard integrated class A

Main Standard Hardware Features
Integrated braking transistor, DC link connection
3 wire control, Heat sink fan overheat protected by thermistor
6 digital input, 1 multifunction input, 1 multifunction output
2 relay output

Optional Module
RS232, RS485, Modbus, Profibus DeviceNet, Copy function

Keypad
Digital operator with LED/LCD display, cabinet mounting kit
PC Software
PC communication software for WIN 95 / 98 / 2000 / NT / XP
PDA communication software for WinCE

Main Software Features
18 V/F patters fixed, one programmable
S curve, PID function
Torque boost, Slip compensation
Speed search, auto voltage regulation (AVR)
Communication function (Modibus) built-in
Auto restart, energy saving, PLC function

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 broadcast needs for electronic spees variation, where basic performance and contained costs are matched with robust construction and great reliability.

Power range (SYN 10 S 220)
0.2 - 0.75 kW 1 phase 200 - 240 V / 50 - 60 Hz (+10, -15%)
1.5 - 2.2 kW 1 phase 200 - 240 V / 50 - 60 Hz (+10, -15%)

Power range (SYN 10 T 400)
0.75 - 2.2 kW 3 Phase 380 - 460 V / 50 - 60 Hz (+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
IP 20, IP 65

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 (SYN 10 S220/07/09 - SYN 10 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)

Keypad
Integrated standard

Main functions
12t 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
Current limit

Type	Torque Nm
SYN10 S-001	0,2
SYN10 S-003	0,4
SYN10 S-005	0,75
SYN10 S-007	1,5
SYN10 S-009	2,2
SYN10 T-005	0,75
SYN10 T-007	1,5
SYN10 T-009	2,2

BTD Series

AC Brushless Servomotors

Type	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

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 designtechnology, ensures exceptional dynamics and low temperature operation.Equipped with IP65 pushpull connectors (IP67 connectors are optional), in conformity to EMCrequirements, and a PTC temperature probe with reinforced insulation, these motors guaranteesecure electrical connections under all ambient operating conditions.

Stall torque
0,26 Nm … 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
CEE 73/23 (LVD) and CEE 89/336 (EMC)

DC brake
Optional 24 Vdc

Certification
CE, UL

BCR Series

A range of high performance servomotors

BCR Series servomotors are designed to satisfy the needs of continuous and transient high torqueapplications.Thanks to a wide torque range and above average instantaneous overload ratings, BCR servomotorsare robust enough for even the most demanding drive applications.Equipped with IP65 push-pull connectors (IP67 connectors are optional), in conformity to EMCrequirements, 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 Nm … 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
CEE 73/23 (LVD) and CEE 89/336 (EMC)

DC brake
Optional 24 Vdc

Certification
CE, UL

Type	Torque Nm
BCR2 0020	0,2
BCR2 0040	0,4
BCR2 0060	0,6
BCR2 0080	0,8
BCR3 0065	0,65
BCR3 0130	1,3
BCR3 0250	2,5
BCR3 0300	3
BCR4 0100	1
BCR4 0260	2,6
BCR4 0530	5,3
BCR4 0750	7,5
BCR5 0660	6,6
BCR5 1050	10,5
BCR5 1350	13,5
BCR5 1700	17
BCR5 2200	22
BCR6 1350	13,5
BCR6 1900	19
BCR6 2200	22
BCR6 2900	29
BCR7 2700	27
BCR7 3200	32
BCR7 4000	40
BCR8 0400	40
BCR8 0680	68
BCR8 0930	93
BCR8 1150	115

Active Series

Solution Drives

Type	Torque Nm
ACT401 - 05	0,55
ACT401 - 07	0,75
ACT401 - 09	1,1
ACT401 - 11	1,5
ACT401 - 12	1,85
ACT401 - 13	2,2
ACT401 - 15	3
ACT401 - 18	4
ACT401 - 19	5,5
ACT401 - 21	7,5
ACT401 - 22	9,2
ACT401 - 23	11
ACT401 - 25	15
ACT401 - 27	18,5
ACT401 - 29	22
ACT401 - 31	30
ACT401 - 33	37
ACT401 - 35	45
ACT401 - 37	55
ACT401 - 39	65
ACT401 - 43	75
ACT401 - 45	90
ACT401 - 47	110
ACT401 - 49	132
ACT201 - 05	0,55
ACT201 - 07	0,75
ACT201 - 09	1,1
ACT201 - 11	1,5
ACT201 - 13	2,2
ACT201 - 15	3
ACT201 - 18	4
ACT201 - 19	5,5
ACT201 - 21	7,5
ACT201 - 22	9,2

*200% overload - 1sec, 150% overload - 1min

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

ACT 401: 0.55 – 132 kW / 3-phase 360 – 480 V / 50 – 60 Hz
ACT 201: 0.55 – 9.2 kW / 1 or 3-phase 200 – 240 V / 50 – 60 Hz

Type of control

Selectable vector control function: sensor-less control, sensorless 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 upto 7.5 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 (upto 3 kW), Plug-in and programmable control terminals, 1 relay output (changeover contact), 6 digital input, 1 multifunction input, 1 digital output, 1 multifunction output

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, Profitbus-DP, CANopen, LON

Optional keypad

Removable keypad KP500 with copy function

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, PL 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 off 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 Series

Versatility, promptness, accuracy

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

Power Range

ACU401: 0.55 - 132 kW / 3-phase 360 V - 480 V / 50 Hz - 60 Hz (± 10%)
ACU201: 0.55 - 9.2 kW / 1 or 3-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

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 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 powerterminals (up to 3kW), Plug-in and programmable control terminals, 6 digital input, 1 multifunction input, 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
Communication Modules: RS232, RS485, Modbus, Profibus-DP, CANopen
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 servo motors 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, bumpless torque / speed changeover, master / slave function with electronicgear, index and stability control, intelligent current limits, power failureregulation, comprehensive monitoring and protection capabilities, highspeed 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.

Type	Torque Nm
ACU401 - 07	0,75
ACU401 - 09	1,1
ACU401 - 11	1,5
ACU401 - 12	1,85
ACU401 - 13	2,2
ACU401 - 15	3,0
ACU401 - 18	4,0
ACU401 - 19	5,5
ACU401 - 21	7,5
ACU401 - 22	9,2
ACU401 - 23	11
ACU401 - 25	15
ACU401 - 27	18,5
ACU401 - 29	22
ACU401 - 31	30
ACU401 - 33	37
ACU401 - 35	45
ACU401 - 37	55
ACU401 - 39	65
ACU401 - 43	75
ACU401 - 45	90
ACU401 - 47	110
ACU401 - 49	132
ACU201 - 05	0,55
ACU201 - 07	0,75
ACU201 - 09	1,1
ACU201 - 11	1,5
ACU201 - 13	2,2
ACU201 - 15	3,0
ACU201 - 18	4,0
ACU201 - 19	5,5
ACU201 - 21	7,5
ACU201 - 22	9,2

*200% overload - 1sec, 150% overload - 1min

BN Series

AC Motors

A complete range of AC motors developed for gearmotor duty that will exceed expectations

The IEC-normalised 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 flange mounting version, 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.

Type	Torque Nm
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

kW rating (4 pole)
0,06 kW … 30 kW

Frame sizes
25 nos

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
CEE 73 / 23 (LVD) and CEE 89/336 (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 thermostats sensors
Separate supply forced ventilation
Line driver and push – pull incremental encoder
CSA and UL approved design
Anti-condensate Heaters
Textile Canopy
Encoder
Balanced Rotors
Extended shaft at NDE
Flywheel for soft start

Low-backlash at a competitive price

Low backlash, smooth operation and a user friendly motor assembly are key features of the planetary drives of the LC series.

Standard Backlash
12' … 15'

Reduced Backlash
6' … 8'

Nominal Output Torque
10 Nm … 300 Nm

Maximum Acceleration Torque
16 Nm ... 160 Nm

Emergency Stop Torque
28 Nm ... 360 Nm

Gear Ratio
3 ... 100

Output Configuration
Flange mount

Type	Torque Nm
LC 050	16 ... 20
LC 070	18 ... 25
LC 090	37 ... 43
LC 120	95 ... 110
LC 155	250 ... 300
	Std. backlash
LC 050	12' - 15'
LC 070	12' - 15'
LC 090	12' - 15'
LC 120	12' - 15'
LC 155	12' - 15'
	Reduced backlash
LC 050	6' - 8'
LC 070	6' - 8'
LC 090	6' - 8'
LC 120	6' - 8'
LC 155	6' - 8'

TR Series

Low-backlash gearboxes

Maximum precision for highly dynamic applications

TR planetary drives are landmark for extremely reduced backlash, silent operation and facilitated motor assembly along with top reliability. TR units will match servomotors from most makes.

Standard backlash

1 stage 5'
2 stages 5'
3 stages 7'

Reduced backlash

1 stage 3'
2 stages 3'
3 stages 5'

Gear ratio

1 stage $3 \leq i \leq 10$
2 stages $9 \leq i \leq 100$
3 stages $48 \leq i \leq 1000$

Type	Torque Nm	
	Nominal	Acceleration
TR 053	20	30
TR 060	30	45
TR 080	70	100
TR 105	170	250
TR 130	450	700
TR 160	700	950
TR 190	1000	1200

High precision for optimal results

Reduced backlash, smooth operation, easy motor assembly and numerous product configurations as standard options are some of the many outstanding features of the MP series.

Standard backlash

1 stage 15'
2 stages 15'
3 stages 17'

Reduced backlash

1 stage 10'
2 stages 10'
3 stages 12'

Gear ratio

1 stage $3 \leq i \leq 10$
2 stages $9 \leq i \leq 100$
3 stages $48 \leq i \leq 1000$

Type	Torque Nm	
	Nominal	Acceleration
MP 053	20	30
MP 060	30	45
MP 080	70	100
MP 105	170	250
MP 130	450	700
MP 160	700	950
MP 190	1000	1200

Applications

In Mobile Equipment, Conveyor and Port Handling

Shaft mounted drive in Conveyors

Winch drive

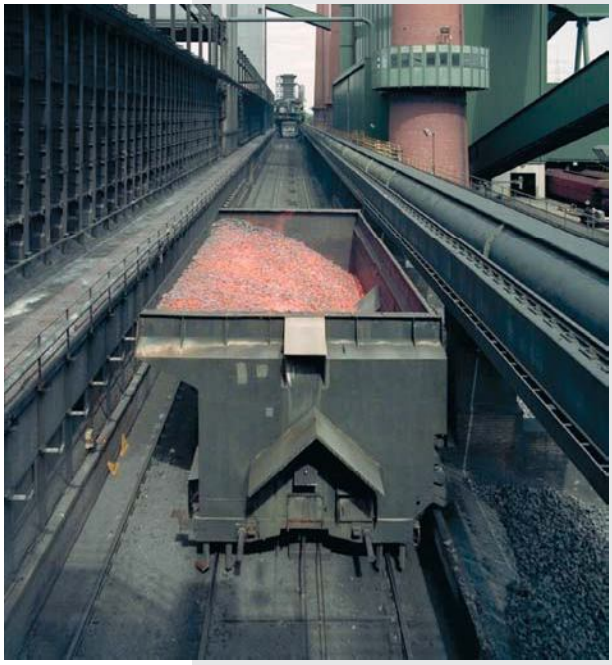
Hydraulic winches

Container handling

Wheel control

In Coke Oven Plant

Coke charging car



Transfer car carrying coke

Coke pusher drive

Coke oven plant

Quenched coke pusher

Transfer car undercarriage with drive arrangement

Applications

In Construction and Related Industry

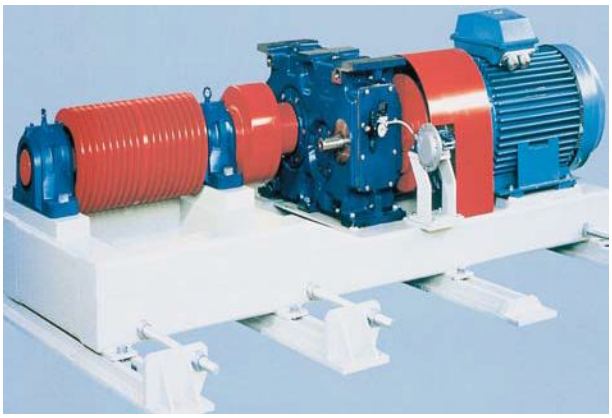
Truck mixers

Vertical concrete mixers

Concrete batch mixing plant

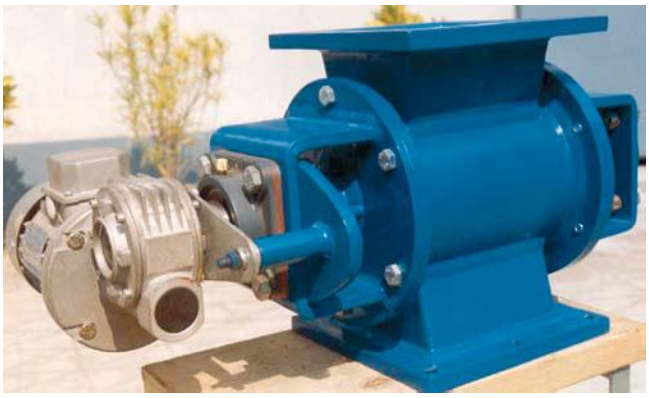
Feed conveyor in batching plant

Tile conveyor in ceramic plant



Ball mill in Ceramic plant

Few of the other Applications

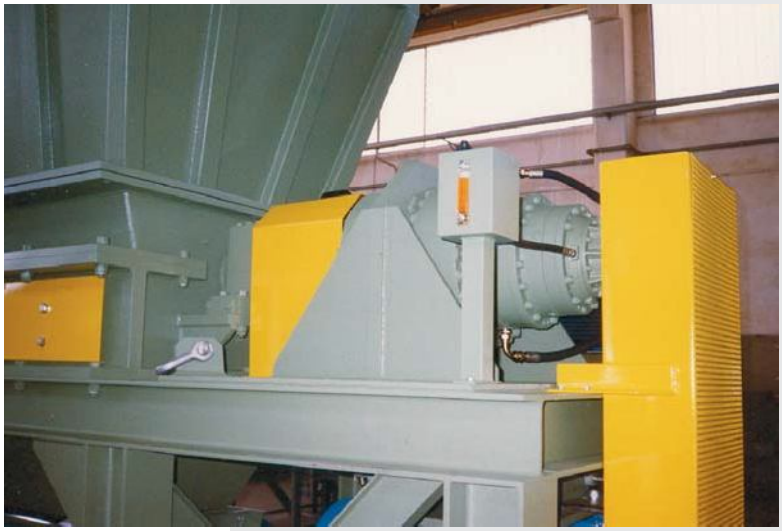


Rotary feeder

Racking system

Surface aerator

Plate bending rolls



Shredding machines

Applications

Few of the other Applications

Pipe industry

Cane carrier drive in sugar plant

Packing machine

Radio telescopes

Bagasse carrier drive in sugar plant