

A close-up, high-angle photograph of industrial gears. The gears are made of dark metal and are arranged in a row, with their teeth pointing towards the viewer. The lighting is dramatic, highlighting the metallic surfaces and the intricate geometry of the gear teeth. The background is dark and out of focus.

## PRODUCT OVERVIEW

Cutting edge solutions for industrial applications of gear reducers and gearmotors



## A TIMELINE OF OUR HISTORY

Rossi Motoriduttori is founded by Gilio Rossi	Operations are expanded and moved to the current headquarters	Quality becomes the company's principal goal Surface grinding of all gears is introduced	First on the market to develop a new series of gear reducers with a universal mounting system and a single-piece housing	New subsidiaries in Germany, England and France	Acquisition of SEIMEC, an Italian motor manufacturer New subsidiaries in Australia and in Spain First in Europe to offer a 3-year warranty on all products ISO 9001 certification	Acquisition of SMEI, an Italian manufacturer of planetary gear units
1953	1965	1970	1980	1986	1992-97	2002



<p>New subsidiary in India</p>	<p>Development of a new line of industrial use planetary gear units</p>	<p>Doubling of the production facility in Lecce, with introduction of new technologies</p>	<p>New subsidiaries in Benelux, Poland, Turkey, South Africa, Malaysia and Taiwan</p>	<p>USA opens new Headquarters</p>	<p>New subsidiary in Brazil</p>	<p>Further extension of our extra large helical / bevel helical and planetary gear reducers</p>
<p>Habasit Holding AG, a company based in Reinach (BL), Switzerland, acquires 51% of Rossi capital</p>	<p>Development of a new line of electric motors</p>	<p>Habasit Holding AG acquires the remaining portion of Rossi capital</p>	<p>Brand is changed from Rossi Motoriduttori to Rossi</p>	<p>Development of new, extra-large helical/ bevel helical and planetary gear reducers and an increase in performance</p>	<p>Start-up of a new center for manufacturing housings in extra-large sizes, complete with measurement system</p>	
<p>New subsidiaries in China and USA</p>	<p>Expansion of the production facility at Ganaceto (Modena), with introduction of new technologies</p>	<p>Merger of SMEI and SEIMEC into Rossi by takeover</p>				
<p>2003-05</p>	<p>2008</p>	<p>2009</p>	<p>2010-12</p>	<p>2014</p>	<p>2015</p>	<p>2017</p>

# EXTENSIVE RANGE OF GEAR



**A series**  
Worm  
14 sizes  
40 ... 8,000 N m

**AS series**  
STANDARDFIT Worm  
6 sizes  
35 ... 670 N m

**E series**  
Coaxial  
16 sizes  
37 ... 10,000 N m

**ES series**  
STANDARDFIT Coaxial  
8 sizes  
56 ... 900 N m

**SR series**  
Worm  
10 sizes  
43 ... 1,800 N m

**SR series**  
Coaxial  
11 sizes  
29 ... 1,500 N m

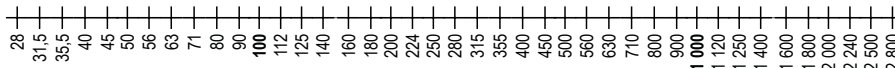
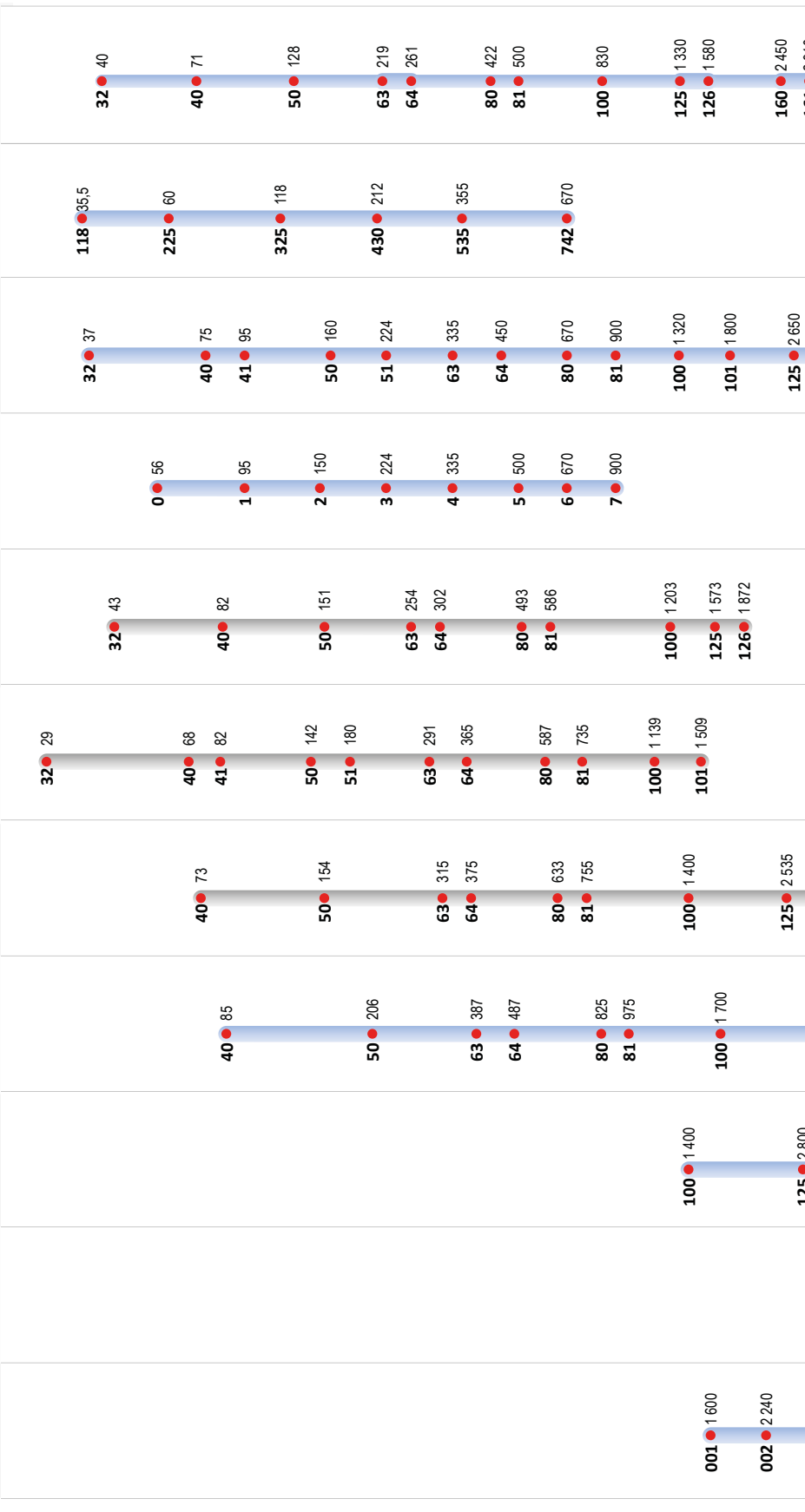
**SR series**  
Helical and bevel helical  
9 sizes  
73 ... 3,390 N m

**G series**  
Helical and bevel helical  
20 sizes  
85 ... 103,000 N m

**GX series extruder**  
Helical and bevel helical  
16 sizes  
1,400 ... 134,600 N m

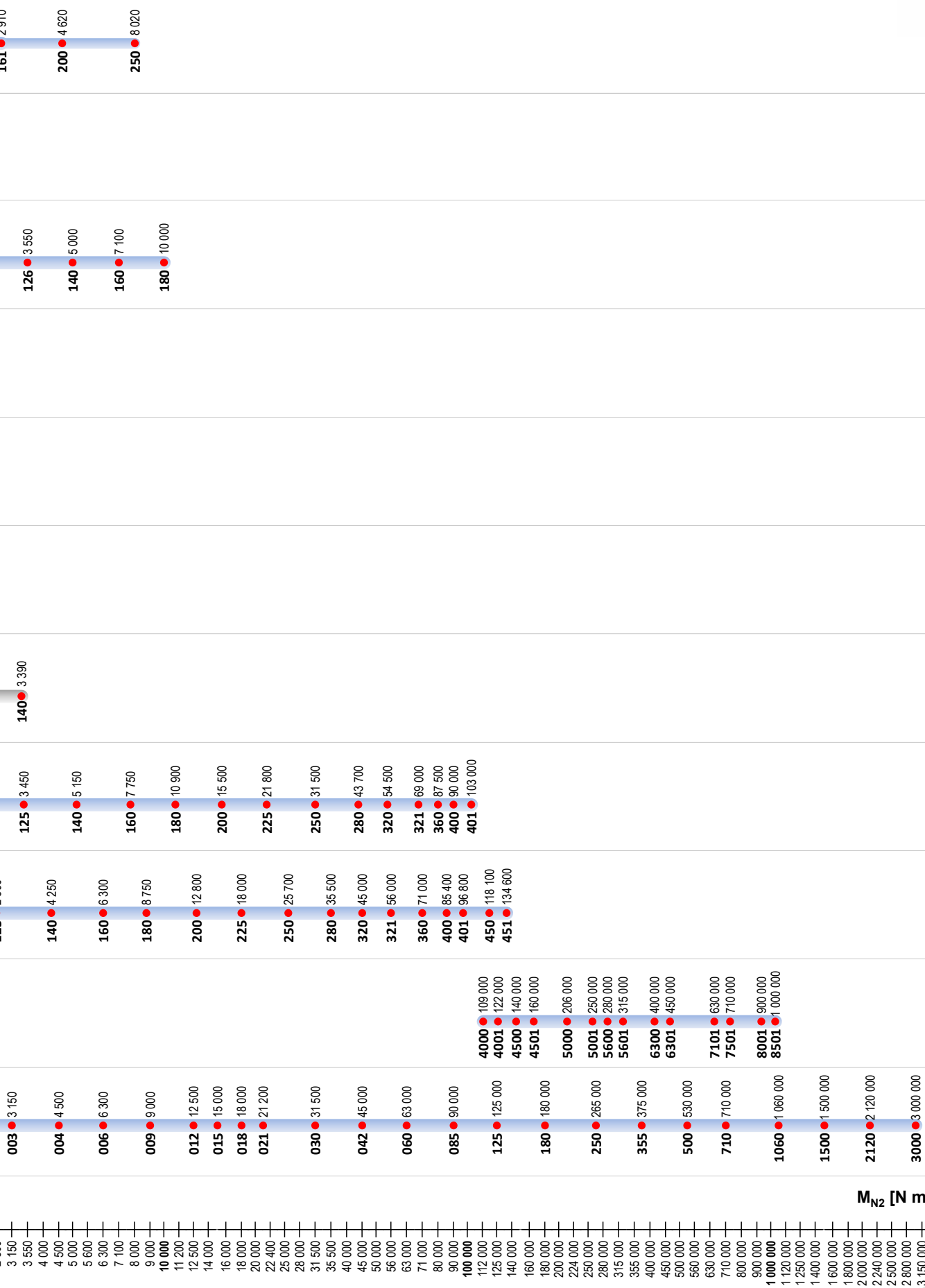
**H series**  
Helical and bevel helical  
14 sizes  
106,000 ... 1,000,000 N m

**EP series**  
Planetary  
24 sizes  
1,600 ... 3,000,000 N m





## REDUCERS AND GEARMOTORS



$M_{N2}$  [N m]





## FEATURES

## BENEFITS

Modular design	Reliability, different mounting positions, shorter delivery times, availability on stock, tailor made products from a modular design
High gear efficiencies	Low energy consumption and better thermal-rating
Optimized gear tooth profile	Low noise and increased torque
Design with FEA	Housing rigidity
Single piece housing from 85 to 103,000 N m	Greater stiffness, high precision, higher torque rating, low noise
Axial cooling fan	Lower surface temperature and improved oil life
Contactless seals option	Unlimited seal life, reduced maintenance, lower oil level and better efficiency
World leading brand roller bearings	Improved L10 service life, higher dynamic and static load capability
Leak-free "Taconite" sealing option	Long-lasting life in abrasive environment
Backstop device special design	More robust and reliable solution Easy to replace
Hollow shaft options (single keyway, shrink disk, etc.)	More compact and cost effective solution
Improved lubrication system	Lower surface temperatures, improved bearing life
3 year warranty worldwide	High quality and performance
All units tested to Rossi specifications on test bench	Aiming for zero non-conformances improving reliability standards
Compact design	Higher power to weight ratio



## WORM GEAR REDUCERS AND GEARMOTORS



### Worm gear reducers and gearmotors A series

Size		14 sizes (32 ... 250)
Power	$P_1$	0.09 ... 55 kW
Nominal torque	$T_{N2}$	$\leq 19000$ N m
Transmission ratio	$i_N$	7 ... 16,000

#### Features

- Universal mounting
- Forced ventilation for an easy thermal power dissipation
- Wide range of accessories and non-standard designs
- Worm wheels of A gear reducers and gearmotors made of nickel bronze with controlled phosphor content, in order to achieve improved performance, a higher load capacity, greater reliability and more wear resistance
- Higher worm efficiency

#### Benefits

- Easy and functional shaft mounting
- High performance and reliability
- Long life
- Noiselessness, constant performance also for the heaviest applications
- Lower power consumption



### Worm gearmotors STANDARDFIT AS series

Size		6 sizes (118 ... 742)
Power	$P_1$	0.09 ... 5.5 kW
Nominal torque	$T_{N2}$	$\leq 670$ N m
Transmission ratio	$i_N$	6 ... 75

#### Features

- Universal mounting with lower feet integral with housing, and B14 flange on 2 faces
- Improved modular construction both for components and assembled products
- Nickel bronze worm wheels
- Generous internal space between train of gears and housing
- Tapered roller bearings on worm shaft
- Flange for motor mounting integral with housing
- Higher worm efficiency

#### Benefits

- Interchangeability with major competitors without changing the machine
- High performance and reliability
- Long life
- Excellent low noise running
- Lower power consumption



## COAXIAL GEAR REDUCERS AND GEARMOTORS



### Coaxial gear reducers and gearmotors E series

Size		16 sizes (32 ... 180)
Power	$P_1$	0.09 ... 75 kW
Nominal torque	$T_{N2}$	$\leq 10,000$ N m
Transmission ratio	$i_N$	4 ... 6,300

#### Features

- Strong patented housing
- Wide range of sizes
- Final stage pinion with 3 bearings for increased torque capacity

#### Benefits

- Long life
- Minimum maintenance requirements
- High performance and reliability
- Universal mounting
- Strength and suitability also for the heaviest applications



### Coaxial gearmotors STANDARDFIT ES series

Size		8 sizes (0 ... 7)
Power	$P_1$	0.09 ... 11 kW
Nominal torque	$T_{N2}$	$\leq 900$ N m
Transmission ratio	$i_N$	4 ... 200

#### Features

- Foot mounting integral with housing
- Proportioned bearings to withstand high loads

#### Benefits

- Dimensional interchangeability with other manufacturers for flexible replacement options
- Maximum compactness
- High performance
- Excellent low noise running for any critical environment

# HELICAL AND BEVEL HELICAL GEAR REDUCERS AND GEARMOTORS



## Helical and bevel helical gear reducers and gearmotors G series

Size		20 sizes (40 ... 401)
Power	$P_1$	0.09 ... 160 kW
Nominal torque	$T_{N2}$	$\leq 103,000$ N m
Transmission ratio	$i_N$	2 ... 160

### Features

- Wide range of accessories and non-standard designs
- Single piece housing with high structural stiffness

### Benefits

- Easy and functional shaft-mounting design
- Minimum maintenance requirements
- High, reliable and tested performance
- Suitability for the heaviest duties



## Helical and bevel helical gear reducers for extruders GX series

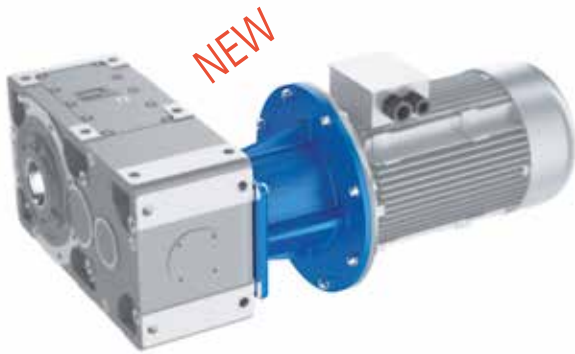
Size		16 sizes (100 ... 451)
Power	$P_{N2}$	$\leq 1,710$ kW
Nominal torque	$T_{N2}$	$\leq 132,200$ N m
Transmission ratio	$i_N$	6.3 ... 28

### Features

- Extruder support conceived for heavy applications
- Option of long models

### Benefits

- Excellent gear reducer transmitted torque to weight ratio



## Motor bell housings BH series

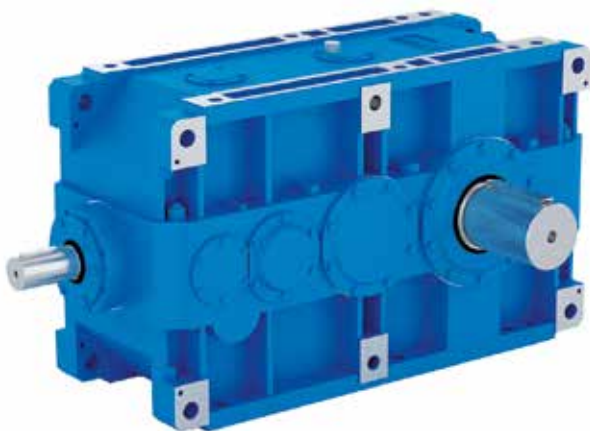
Motor size	100 ... 355
G gear reducer size	125 ... 400

### Features

- Connection of electrical motors with helical and bevel helical gear reducers of cat. G by means of flexible coupling
- Available connection for IEC standard electric motors, mounting position IM B5
- Nodular cast iron housings
- Design temperature: -30 °C - +50 °C

### Benefits

- Bell housings designed to reach the best performance in terms of strength and stiffness



## Helical and bevel helical gear reducers H series

Size		10 sizes (4000 ... 6301)
Nominal torque	$T_{N2}$	$\leq 450,000$ N m
Transmission ratio	$i_N$	8 ... 315

### Features

- Large size gear reducers produced in series specifically conceived for heavy industry applications
- New options
- Flexible mounting arrangements - typical mountings include horizontal vertical, inclined and oscillating mounting positions
- Nodular cast iron housings for all sizes

### Benefits

- Highest reliability in heaviest application conditions
- Long life
- Split housing for simplified maintenance



## PLANETARY GEAR REDUCERS AND GEARMOTORS

### Planetary gear reducers and gearmotors (in line and bevel) EP series

Size		20 sizes (001...710)
Power	$P_1$	0.18 ... 90 kW
Nominal torque	$T_{N2}$	1600 ... 710,000 N m
Transmission ratio	$i_N$	3.55 ... 3,550 (in line) 9 ... 2,240 (bevel)

#### Features

- 2, 3 or 4 reduction stages for both coaxial and right angle shaft
- Wide range of accessories and non-standard designs
- Modular design, with multi-optional executions
- Very compact size and reduced mass of gearbox

#### Benefits

- Easy and functional flange, foot, or shaft-mounting design
- High torque transmitted
- Extended range of transmission ratios and output speeds available



### Slewing drives EP series

Size		10 sizes (007 ... 250)
Nominal torque	$T_{N2}$	7,500 ... 265,000 N m
Transmission ratio	$i_N$	12.5 ... 2,800

#### Features

- Slew drive gear reducers, ranging from 9 kNm to 400 kNm maximum output torque over 10 primary sizes and 3 output reinforced support configurations:
  - R: dual pilot flanged
  - S: dual pilot compact
  - H: single pilot front flanged
- Modular design, with multi-optional executions

#### Benefits

- Wide choice of the drives allows always the highest performance of cost-efficient solutions
- Enable to benefit of the wider range of options of the EP industrial catalog



## Combined units EP series

Size		6 sizes (125...710)
Nominal torque	$T_{N2}$	125,000 ... 710,000 N m
Transmission ratio	$i_N$	according to Customer's requirements

### Features

- Standard products
- Catalog G + EP

### Benefits

- Easy customization
- Flexibility and adaptability to specific application needs
- Interchangeability



## Parking brakes PB series

Size		3 sizes (PB10, PB30, PB90)
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### Features

- Direct coupling with standard U flanges
- On the same housing, extensive range of braking torques
- Ideal for outdoor and sparking-free operations

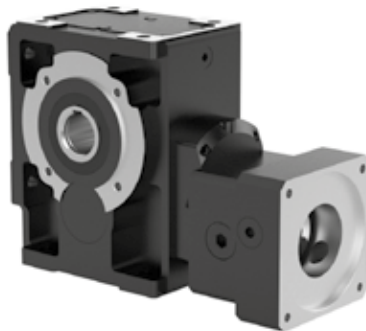
### Benefits

- Modular system
- Extensive brake range

## MOTION CONTROL



Worm servo gear reducers SR series		MR	R
Size		7 sizes (32 ... 81)	9 sizes (40 ... 126)
Accelerating torque	$T_{A2}$	31.5 ... 747 N m	56 ... 2,200 N m
Transmission ratio	$i$	7 ... 239	7 ... 125



Helical and bevel helical servo gear reducers SR series		MR	R
Size		8 sizes (40 ... 125)	8 sizes (50 ... 140)
Accelerating torque	$T_{A2}$	64 ... 3,000 N m	140 ... 4,400 N m
Transmission ratio	$i$	6.16 ... 139	6.42 ... 127

### Type MR

#### Features

- Wide range of Servo gearboxes, designed to fit almost all servo motors found on the market
- Designed for the highest torsional stiffness and the lowest angular backlash, for the maximum torque and overhung loads
- Bush with slots and hub clamp for servomotor coupling

#### Benefits

- Enhanced dimensional compactness due to direct servomotor coupling
- The correct technical solution thanks to a comprehensive range of sizes, gear stages, transmission ratios, designs, and non-standard designs
- Widest range of possible servomotor coupling dimensions



Coaxial servo gear reducers SR series		MR	R
Size		11 sizes (32 ... 101)	—
Accelerating torque	$T_{A2}$	31.5 ... 2,000 N m	—
Transmission ratio	$i$	4 ... 154	—



Low backlash planetary (coaxial and bevel helical) gearmotors without motor SM series		
Size		5 sizes (57 ... 181)
Accelerating torque	$T_{A2}$	33 ... 1,700 N m
Transmission ratio	$i$	3.4 ... 50

## Type R

### Features

- Standard input flanges
- Input shaft: with torsionally rigid elastomer coupling
- Output shaft: smooth solid shaft with or without key; hollow shaft with keyway or with shrink discs

### Benefits

- Manufacturing program and product types suitable to ensure full coupling possibility to all servomotors available on the market, thanks to standard products
- High stability and stiffness of servomotor-gear reducer connection
- Backlash-free servo gear reducer keying
- Easy servomotor dismounting even after long running periods

## MOTORS



### Premium line electric asynchronous three-phase motors and brake motors TX series

Size		63 ... 280
Power	$P_N$	0.06 ... 110 kW
Polarity		2, 4, 6, 8 poles

#### Features

- IEC standard motors
- IP 55 protection
- IE3 Energy efficiency
- Standard and safety brake (AC. DC)
- Optional complex executions available (encoders, axial cooling, increased protection, etc.)

#### Benefits

- Compactness and flexibility
- Suitable for running with inverter
- Reduced environmental impact and energy saving



### Heavy duty roller table motors S series

Size		112 ... 250
Peak torque	$T_k$	$\leq 1,700$ N m
Polarity		4, 6 poles

#### Features

- 4, 6 poles,  $\Delta Y$  connection with standard or customer tailored voltage and frequency
- IEC standardized mating dimensions under accuracy rating
- IP 55 protection
- Insulation class F (class H on request), impregnation allows use in tropical climates without further treatments
- Overtemperature class F
- Three thermistors PTC type (DIN 44081) wired to the terminal box
- Motor shaft axially fastened on rear end shield with compensation spring for thermal expansion

#### Benefits

- Motors conceived specifically for metal industry



## DRIVE UNITS ON SWING BASE



### Drive units on swing base RE series

Gear reducer size		140 ... 631
Motor size		132 ... 400
Nominal torque	$T_{N2}$	up to 450,000 N m

#### Features

- Accurate design and selection of equipment
- Unique reference for commercial and technical issues
- Precise certified alignment of the complete drive
- Global well known and qualified brands of equipment suppliers

#### Benefits

- Turn key drive units
- Easy and quick installation on site
- Precise and qualified design for baseplates

## ROSSI SPECIAL PROJECTS



### Rossi Special Projects

Power	$P_N$	according to Customer's requirements
Nominal torque	$T_{N2}$	according to Customer's requirements
Transmission ratio	$i$	according to Customer's requirements

#### Features

- Project management
- Accurate selection and sizing of the components
- Precise certified alignment of the complete drive

#### Benefits

- Heavy customized and innovative solution to match customer requirements
- Feasibility study to find optimal solution
- Turn key drive units design
- Easy and quick installation on site

## HEAVY INDUSTRY



### Planetary gear reducers and gearmotors EP series

Size		4 sizes (1060...3000)
Nominal torque	$T_{N2}$	from 1,060,000 to 3,000,000 N m
Transmission ratio	$i_N$	80 ... 1,000

#### Features

- Multi-stage modular design
- Easy customization
- Modular add-on accessories
- Ground gears (bevel and planet wheels)

#### Benefits

- Easy to fit in any industrial application
- Reduced maintenance intervals
- Easy maintenance
- Worldwide product and service support



## Helical and bevel helical gear reducers H series

Size		4 sizes (7101, 7501, 8001, 8501)
Nominal torque	$T_{N2}$	$\leq 1,000,000$ N m
Transmission ratio	$i_N$	according to Customer's requirements

### Features

- Helical and bevel-helical gear units with 2 and 3 gear stages
- Ratios to R20 series
- Split housing; nodular cast iron frame
- Helical and bevel gear with ground and optimized profile

### Benefits

- One of the widest torque range from a single supplier
- Customized solutions on request starting from a standard modular design
- Short delivery times
- Optimized design for heavy industry applications

## OTHER PRODUCTS



### Right angle shaft gear reducers L series

Size		7 sizes (80 ... 320)
Nominal torque	$T_{N2}$	up to 5,600 N m
Transmission ratio	$i_N$	1 ... 6.25

#### Features

- Right angle units with multiple options of executions
- Compact size
- Rigid and durable housing of cast iron
- Several output solutions, with solid or hollow shaft

#### Benefits

- Low ratios available
- Capability for multiple drives synchronization
- Easy adjustment to specific applications
- High performance and reliability



### Shaft mounted gear reducers P series

Size		7 sizes (85 ... 250)
Nominal torque	$T_{N2}$	up to 11,200 N m
Transmission ratio	$i_N$	10 ... 25

#### Features

- Split housing reducers
- Simplified design, with narrow housing execution

#### Benefits

- Very easy maintenance, with minimal requirements
- Easy and functional shaft mounting
- Durable solution dedicated for conveyors



## OUR MAIN INDUSTRIAL SEGMENTS

With over 60 years experience in the design, manufacturing and commissioning of gear reducers and gearmotors, Rossi has become a power transmission leader in all industrial segments.

Rossi has forged many strategic partnerships with leading companies and OEM in various sectors throughout the world.

Relationships forged from Rossi's know-how and expertise, offering turnkey solutions for nearly every application.

Rossi smart solutions, thanks to product designed around modularity, robustness and reliability, help customers to minimize Total Cost of Ownership of plants, reducing maintenance costs and enhancing energy saving.

Steel making

Mining

Food and beverage

Cranes and hoisting machinery

Construction machinery

Water and waste treatment

Chemical, oil and gas

Rubber and plastics

Energy (thermal and renewable)

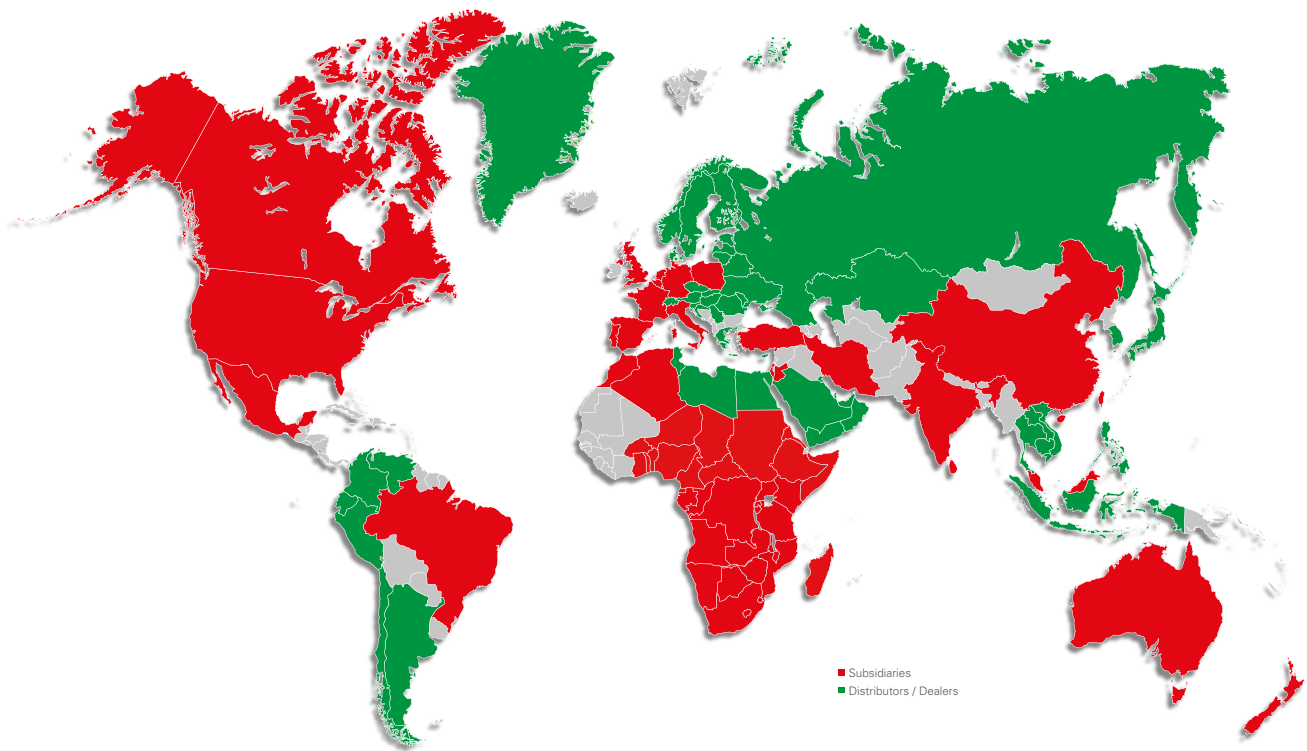
Motion engineering (bulk and packaged products)

Marine, offshore and harbor sectors

Wood and paper

Packaging





## GLOBAL PARTNERSHIP FOR LOCAL SOLUTIONS

As a result of the rapidly growing importance of the global market for power transmission systems, Rossi has set up a network of subsidiaries and dealers in nearly all industrialized countries. Support during the design phase, local availability of the required drive technology and rapid local service make Rossi a flexible and dependable partner throughout the world.

Cooperation with Rossi is especially customer-friendly and efficient with **Rossiforyou** - a communication network which provides a 24/7 global coordination of the ordering, supply and service processes.



## GLOBAL SERVICE

We don't stop with the sale of our product, we provide our customers with service and back-up.

Through our subsidiaries' inventories and assembly centers worldwide we make sure that we are not only able to supply gearboxes but that we can also back them up, if need be, with the spare parts required.

Our Global Service has the possibility to reach our customer's plants quickly, in case of breakdown. Our main goal is to return our customers' plants to operation as soon as possible and to keep maintenance overheads as low as possible.

## OUR SERVICE CENTERS WORLDWIDE

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