



# Mining

rossi.com





# Mining

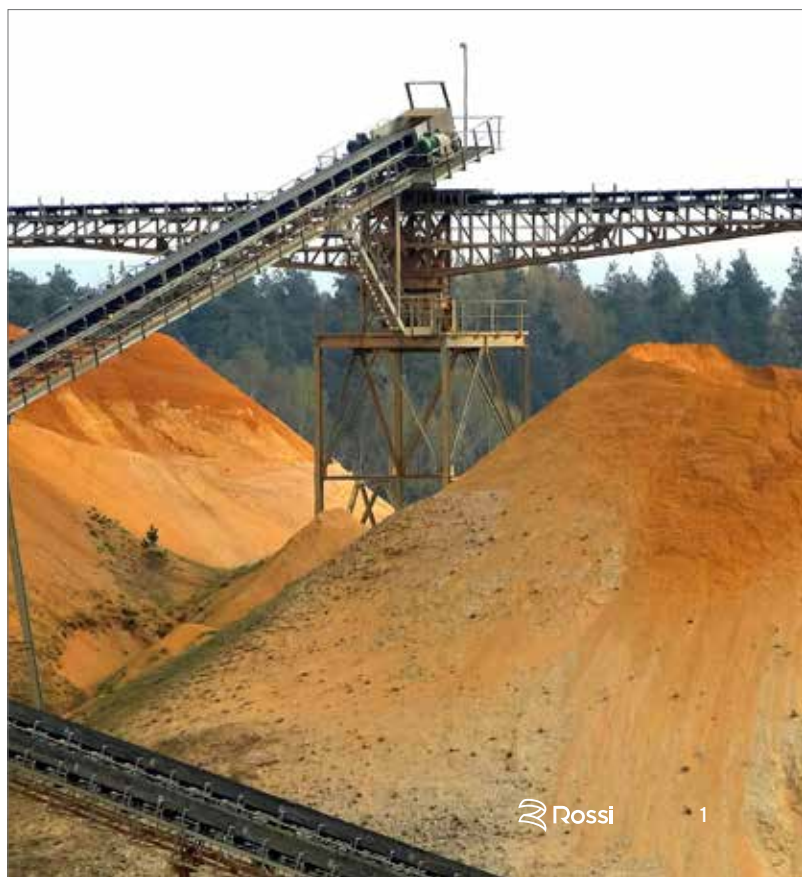
With more than 70 years experience in industrial gear unit manufacturing and 25 years devoted to the Mining & Cement sector, today Rossi is in the main EPC and OEM vendor lists. The wide range of product types (helical, bevel helical and planetary gear units, electric motors, couplings, etc) and sizes (up to 3,000,000 Nm), allows Rossi to supply “state of the art” drives

for all main applications of the sector.

A dedicated Project Team provides a high quality and fast time answers, making easier Customer project development and commissioning. More than 150 plants worldwide are successfully running thanks to Rossi!



Mining



# Mining overview

Bucket wheel excavators  
Stacker reclaimers

Flotation cells

Thickeners &  
Clarifiers

Ship unloader



**In-plant/Overland conveyor**

**Rail car dumper**

**Apron feeder & belt feeder**

**Crushing & grinding station**

**Pelletizers**

**HPGR**

**Bucket elevator**

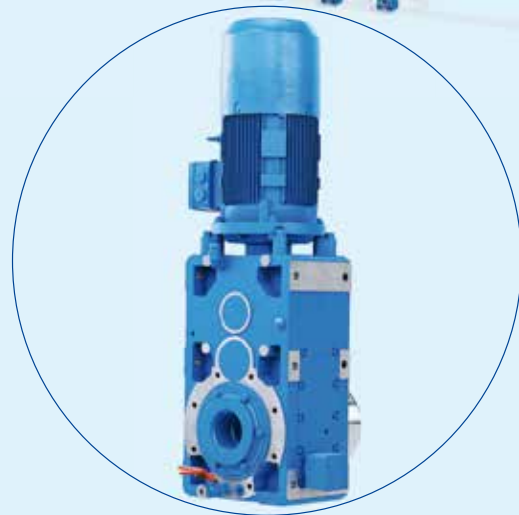
**Ship loader**

# Bucket wheel excavators - Stacker



## Slewing drive

- Compact, modular space saving design
- In-line planetary or right angle
- Weight less solution
- Low noise level
- Nominal torque up to 315 kN m
- Custom made support, steel made
- Standard support, cast iron made
- Protection cover
- Motor base
- Optimized sealing
- Spare pinion



## Long travel drive

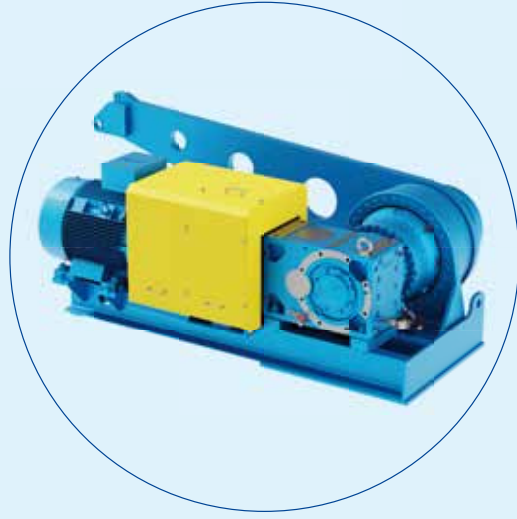
- IEC or NEMA brake motors
- Hand lever with or without automatic return
- 17 step sizes
- Ratio up to 160:1
- Grey or nodular cast iron housing
- Various low speed shaft options
- Low noise level
- Labyrinth seals
- External electromagnetic in-built brake
- Planetary right angle version as option

# reclaimers



## Boom conveyor drive

- Low noise level
- Spheroidal cast iron
- Nominal torque range up to 1000 kN m
- Reliable operation
- Various low speed shaft types
- Sealing for harsh conditions (labyrinth)



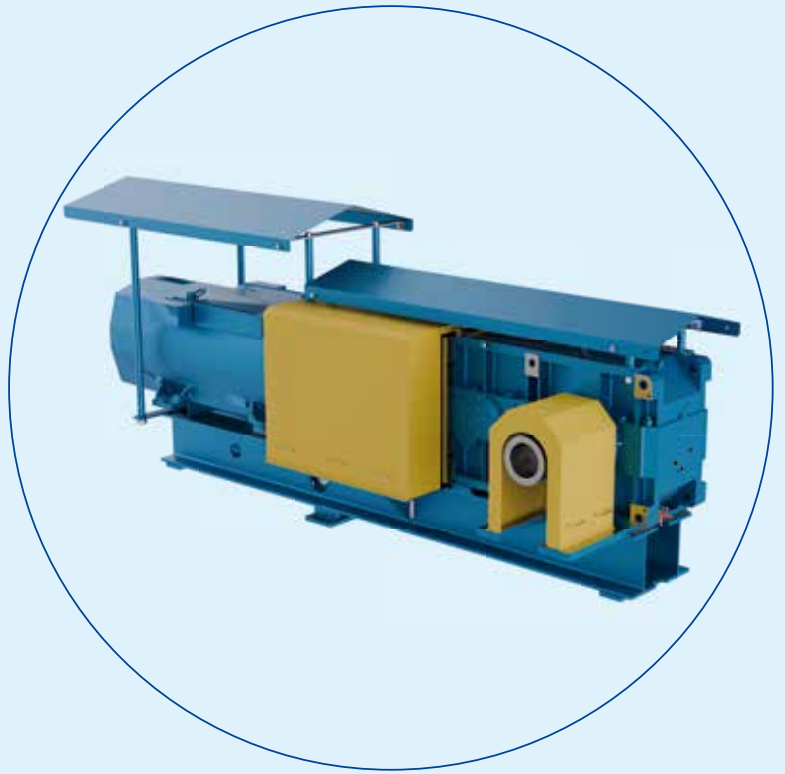
## Bucket wheel drive

- Compact, modular space saving design
- In-line planetary or right angle
- Wide ratio range
- Nominal torque up to 3000 kN m
- Various low speed shaft types
- Sealing for harsh conditions
- Increased thermal capacity
- Labyrinth seal

# In-plant/Overland conveyor





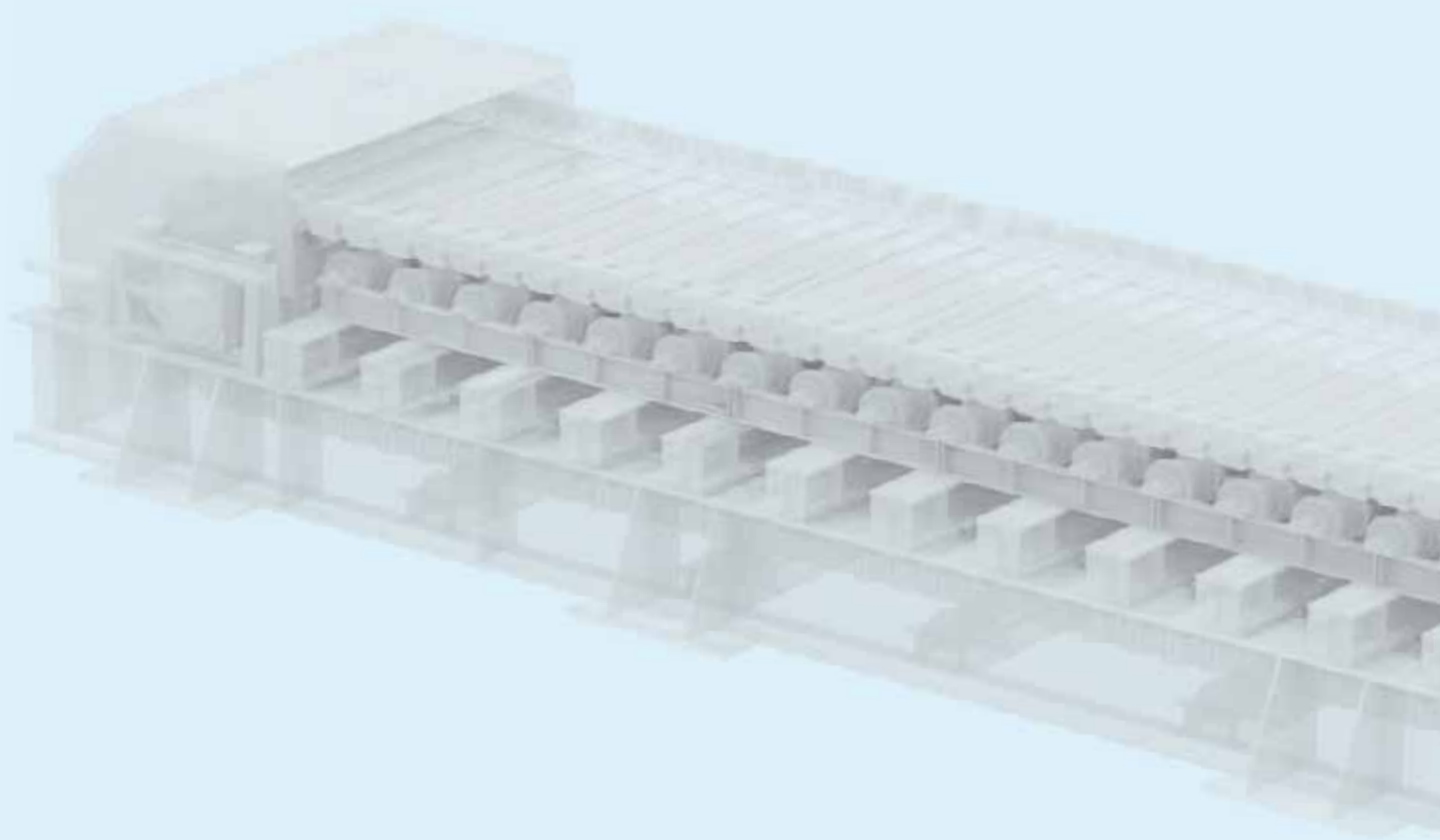


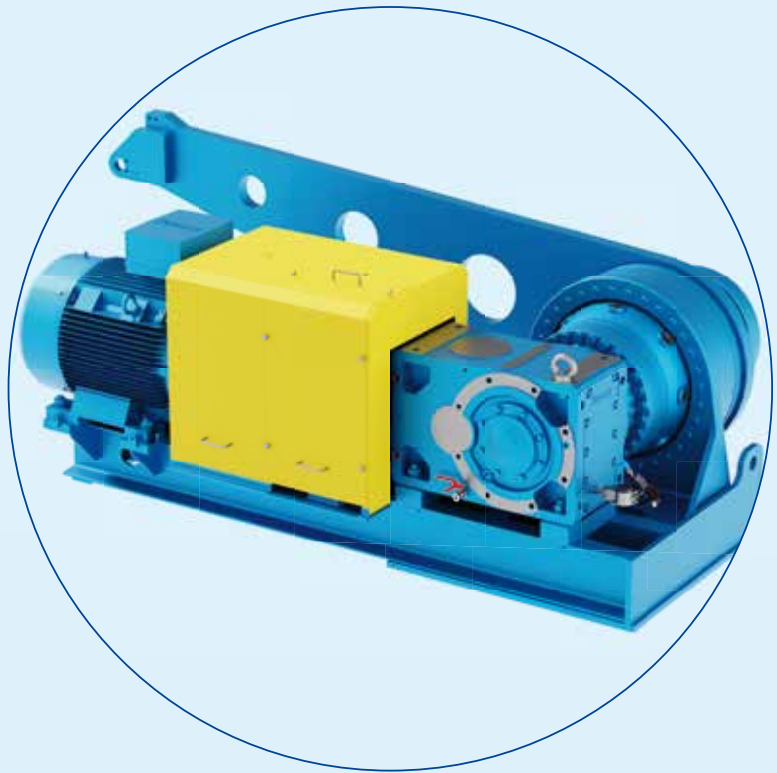
#### **Conveyor drive**

- Low noise level
- Nodular cast iron
- Nominal torque range up to 1000 kN m
- Reliable operation
- Various low speed shaft types
- Sealing for harsh conditions
- Labyrinth seal rings



# Apron feeders



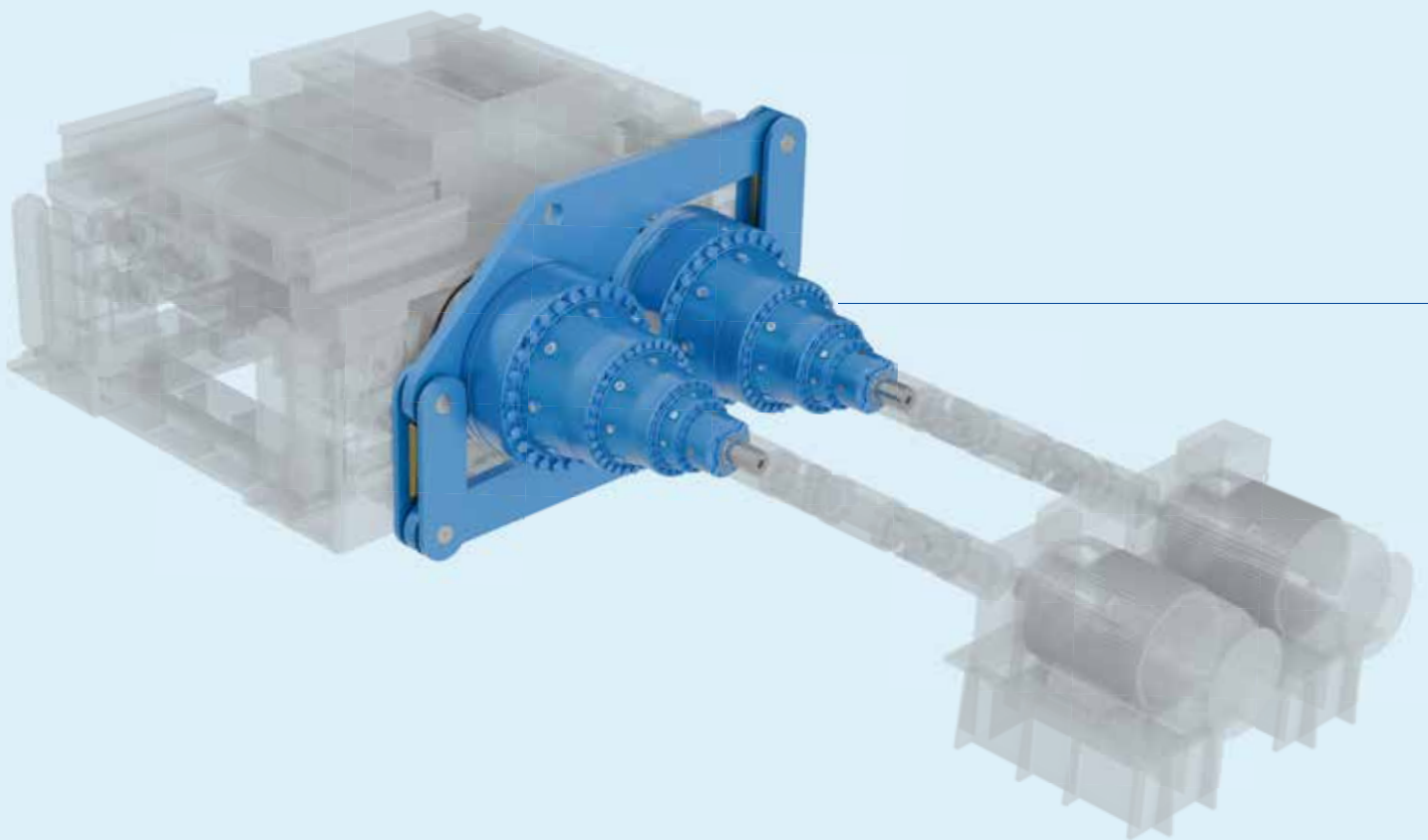


#### **Combined planetary + bevel helical gear units**

- Modular concept
- Wide ratio range
- Nominal torque up to 3000 kN m
- Various low speed shaft type
- Sealing for harsh conditions
- Increased thermal capacity
- Labyrinth seal

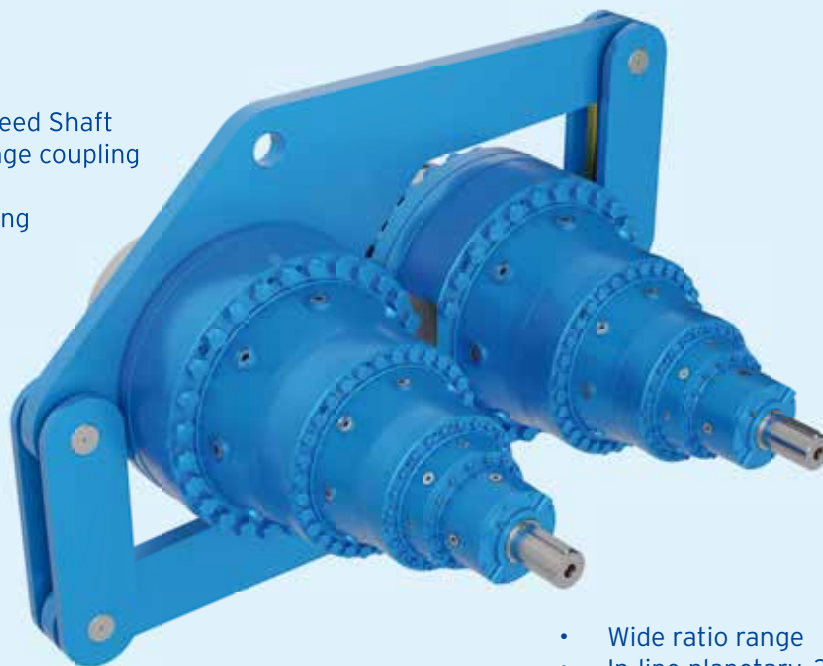


# High Pressure Roller Presses (HPGR)





- Hollow Low Speed Shaft
- Low speed flange coupling option
- Labyrinth sealing



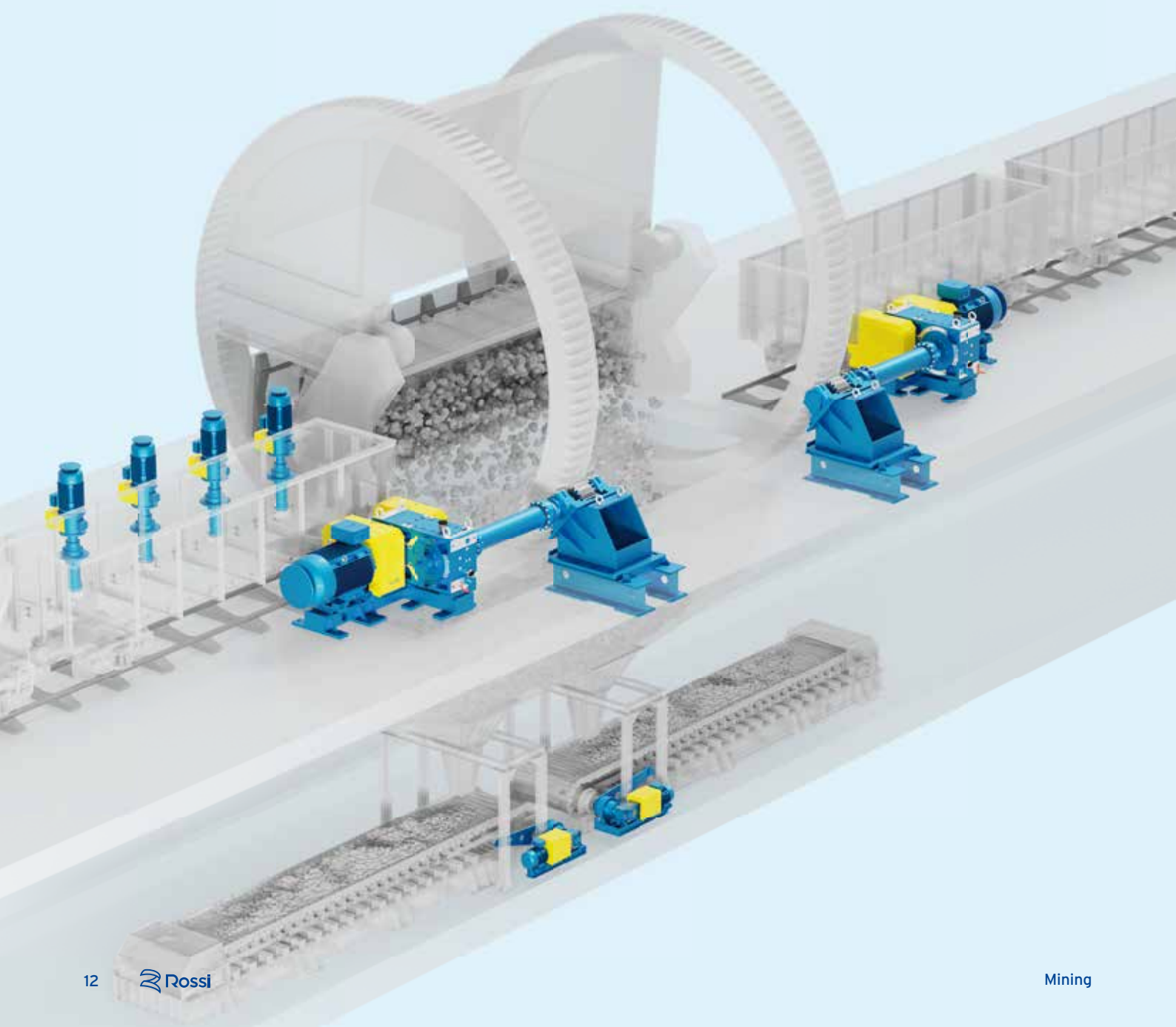
- Low noise gears
- Premium efficiency
- Nodular cast iron
- Reduced rolls center distance

- Input with cardan shaft torque limiting coupling and regreaseable seals

- Special Counter acting torque arm system

- Wide ratio range
- In-line planetary, 3 stages
- 2 planetary stages + Helical unit
- Nominal torque up to 3000 kN m

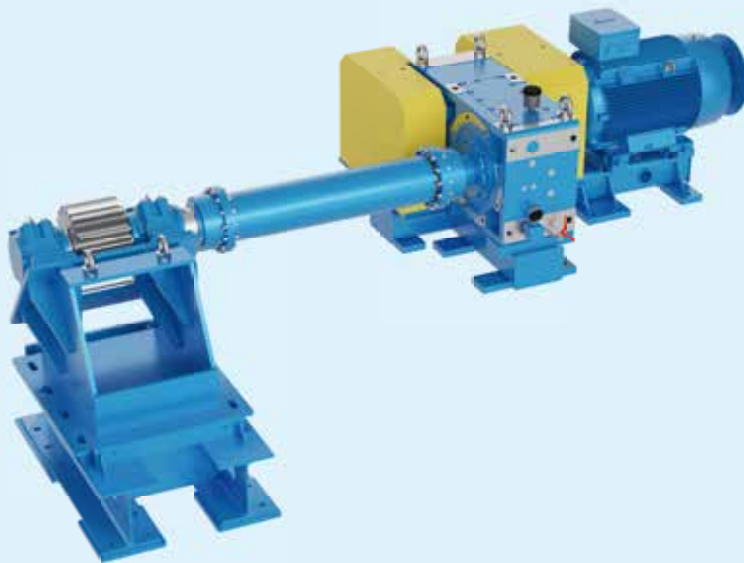
# Rail car dumpers





#### **Positioner drive**

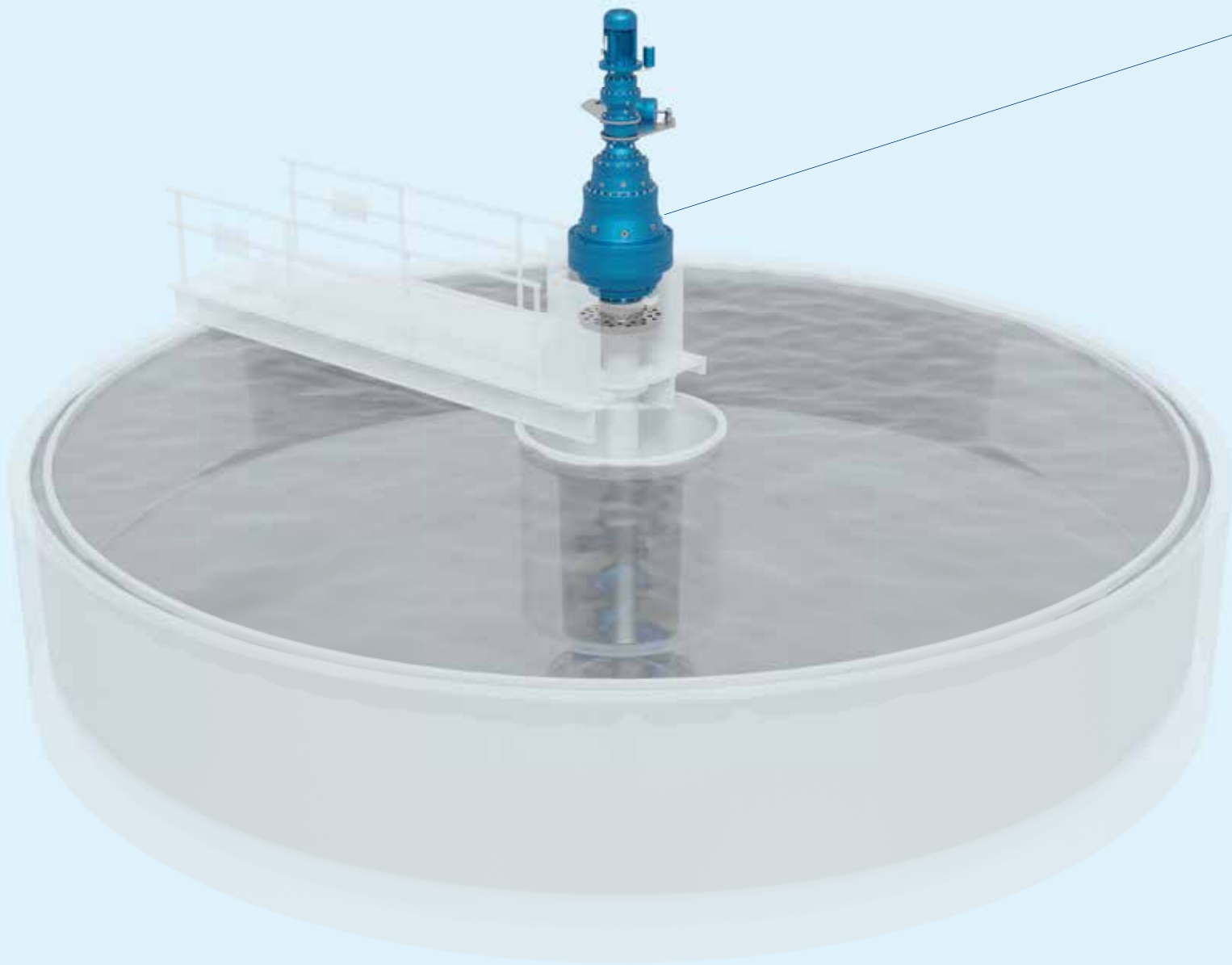
- Compact, modular space saving design
- In-line planetary
- Increased thermal capacity
- Weight less solution
- Low noise level
- From 45 kW to 110 kW
- Custom made support, fabricated steel made
- Protective hood
- Optimized sealing
- Spare pinion



#### **Dumper drive**

- Gear coupling with spacer suitable for low temperature
- Custom made pinion stool
- Custom made pinion with plummer blocks
- Low speed shaft encoder
- Protective hoods for brakes
- Redundant parking brakes
- Custom made base frame

# Thickeners & Clarifiers



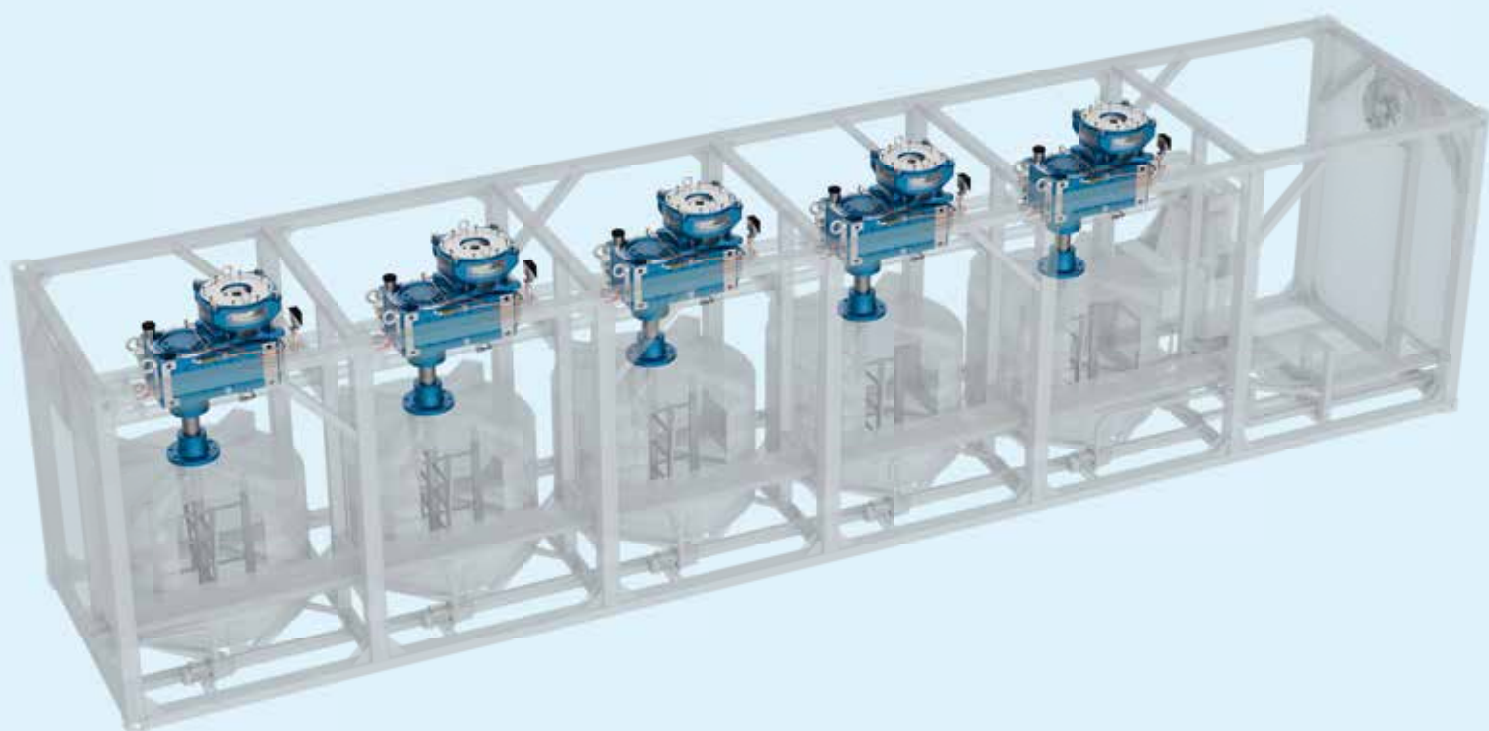




#### **Thickener drive**

- Complete drive solution
- Modular design with wide range of ratios
- Nominal torque up to 3.000 kN m
- High resistance in harsh conditions
- Premium bearing load capability
- Premium sealing
- Torque measurement device

# Flotation cells

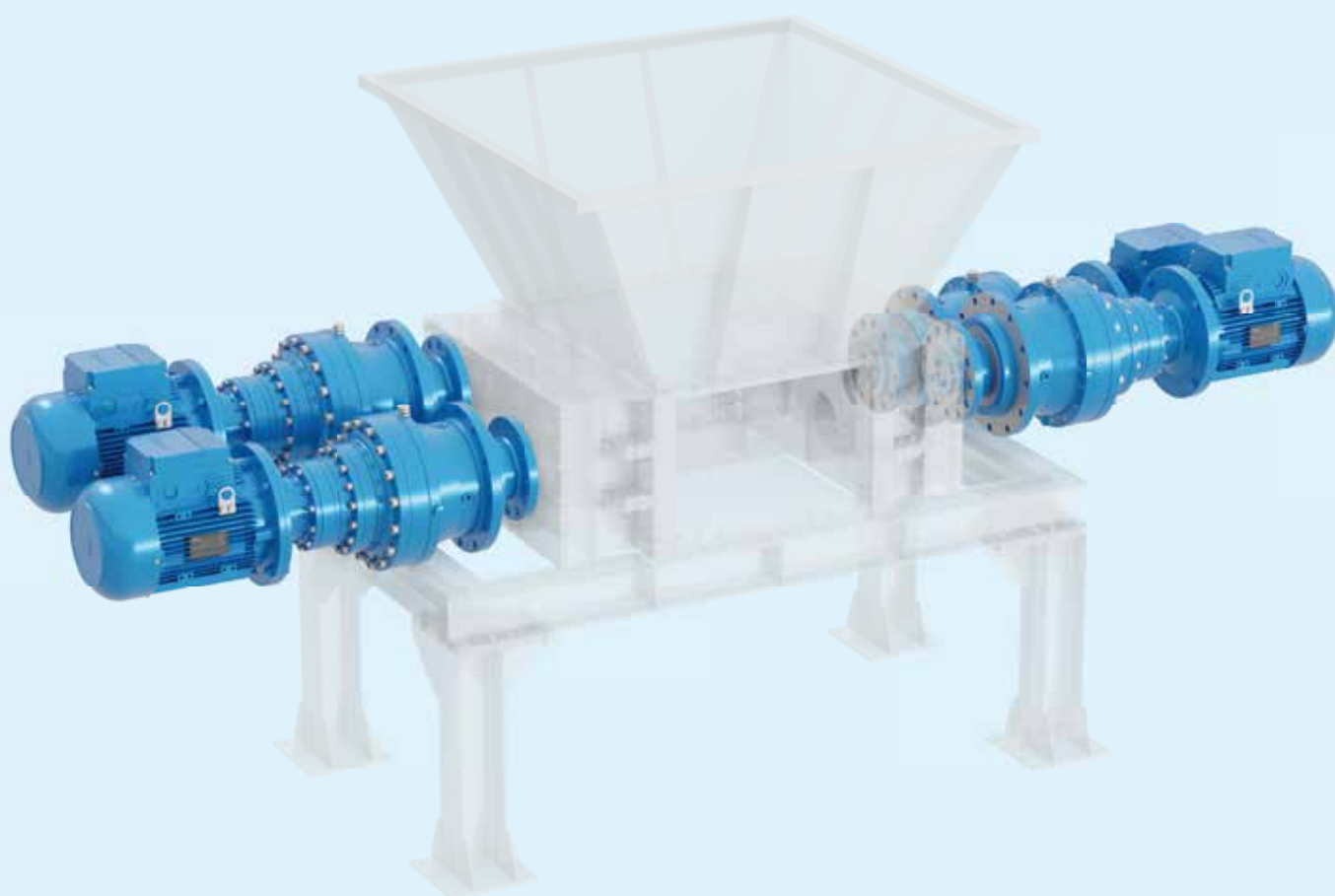




#### **Flotation cell drive**

- Drywell design
- Customized LSS shaft dimensions
- Low speed shaft with pass through hole
- Shaft driven oil pump
- Motor bell housing with integrated axial cooling fan

# Crushers - Sizers







### **Planetary EP series**

- Modular concept
- Wide ratio range
- Nominal torque up to 3000 kN m
- Various low speed shaft type
- Sealing for harsh conditions
- Spheroidal cast iron

### G Series

Helical & bevel helical gear reducers & gearmotors

20 sizes 40 ... 401

Nominal torque ( $M_{N2}$ ) up to 103,000 N m

Transmission ratio ( $i_N$ ) 2 ... 160

#### Features

- Single piece cast or ductile iron housings available. Machine face on all 4 sides
- Wide range of sizes & ratios available
- Suitable for NEMA or IEC motor inputs
- Extended housing design for large center to center distance
- Case carburized gear sets
- Helical gear pairs with ground profile
- Ground GLEASON spiral bevel gear set
- Bell housing for IEC and NEMA motors available
- Bell housing with or without elastic coupling available

#### Benefits

- Modular design allows for flexibility in mounting positions
- Minimum maintenance requirements
- High performance and reliability
- Strength and reliability for heavy duty applications



### H Series

Helical & bevel helical gear reducers

12 sizes 4000 ... 8001

Nominal torque ( $M_{N2}$ ) up to 1,000,000 N m

Transmission ratio ( $i_N$ ) 8 ... 315

#### Features

- Ductile iron housing suitable for horizontal or vertical mounting with integral feet
- Horizontal split housing
- 12 sizes available
- Helical gear units with 2, 3, and 4 gear stages
- Bevel helical gear units with 2, 3, and 4 gear stages
- Case carburized gear sets
- Helical gear pairs with ground profile
- Ground GLEASON spiral bevel gear set

#### Benefits

- One of the widest torque range from a single supplier
- Custom solutions available on request
- Short delivery times
- Optimized design for heavy industry applications



## EP Series

### Planetary gear reducers & gearmotors

24 sizes 001 ... 3000

Nominal torque ( $M_{N2}$ ) up to 3,000,000 N m

Transmission ratio ( $i_N$ ) 3.55 ... to unlimited



#### Features

- Multiple input stages in inline or right angle configurations
- Modular design
- Suitable with NEMA, IEC motors or hydraulic input
- Final stage gear set case carburized & ground with nitriding on internal sun gears
- Cylindrical spur gear with ground profile
- GLEASON spiral bevel gear pairs with ground profile
- Very compact size
- Wide range of accessories and non-standard designs
- Low backlash, enhanced stiffness and heavy duty bearings as a standard
- Improved lubrication system
- Wide range of hydraulic brakes

#### Benefits

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

## EP Combined Units Series

### Combined planetary gear reducers & gearmotors

12 sizes 001 ... 3000

Nominal torque ( $M_{N2}$ ) up to 3,000,000 N m

Transmission ratio ( $i_N$ ) according to Customer's requirements



#### Features

- Planetary drives combined with other Rossi products to optimize performances
- Possible combinations with standard Rossi products utilizing planetary drives in conjunction with worm, inline, helical or bevel drive/gearmotors

#### Benefits

- Flexibility and adaptability to specific application needs
- Large thermal capacity
- High torque density
- Unlimited reduction ratios available

### EPS Slewing Series

Planetary Slewing drives

10 sizes 007 ... 250

Nominal torque ( $M_{N2}$ ) up to 315,000 N m

Transmission ratio ( $i_N$ ) 12.5 ... 2,800

Excellent specific series from the standard EP series

#### Additional features

- 10 modular sizes
- 3 different output supports: Dual pilot flange (R), Dual compact pilot design (S), single pilot flange (H)
- Loose or integral slewing pinions available
- Wide range of hydraulic brakes

#### Additional benefits

- Wide range of drives allows for very high performance while being cost-efficient





## TX Series

Premium line electric asynchronous three-phase motors and brake motors

Sizes 63 ... 315

Power ( $P_N$ ) 0.06 ... 160 kW

Polarity 4, 6 poles

### Features

- IEC standard motors
- Protection: IP 55 standard, up to IP 66 on request
- IE3 Energy efficiency (IE4 for  $P_1 \geq 75$  kW)
- 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



## dDrive Inverter Series

Decentralized Drive

Sizes A, B, C

Rec. motor rating 0.55 ... 7.5 kW

Supply Voltage 3x200V AC...480V AC  
280V DC...680V DC

Rated current 1.7A...16.5A

### Features

- Decentralized Frequency Inverter
- Designed for Rossi IE2, IE3 electric motors
- Aluminum Housing IP 65
- Sensorless Vector Control
- Safe Torque Off (STO)
- Configurable I/O's board and internal PLC
- A large number of field buses available
- Bluetooth Interface

### Benefits

- Reduced electric cabinet dimension and cooling systems
- Compact solution of inverter, motor, and gearbox
- Suitable for hard environmental operating conditions
- No need of motor encoder for speed control
- High Safety Performance Level (up to PL E)
- To develop your own dedicated control functions
- Ease integration with existing automation controllers
- Fast and smart inverter parametrization access

dDrive







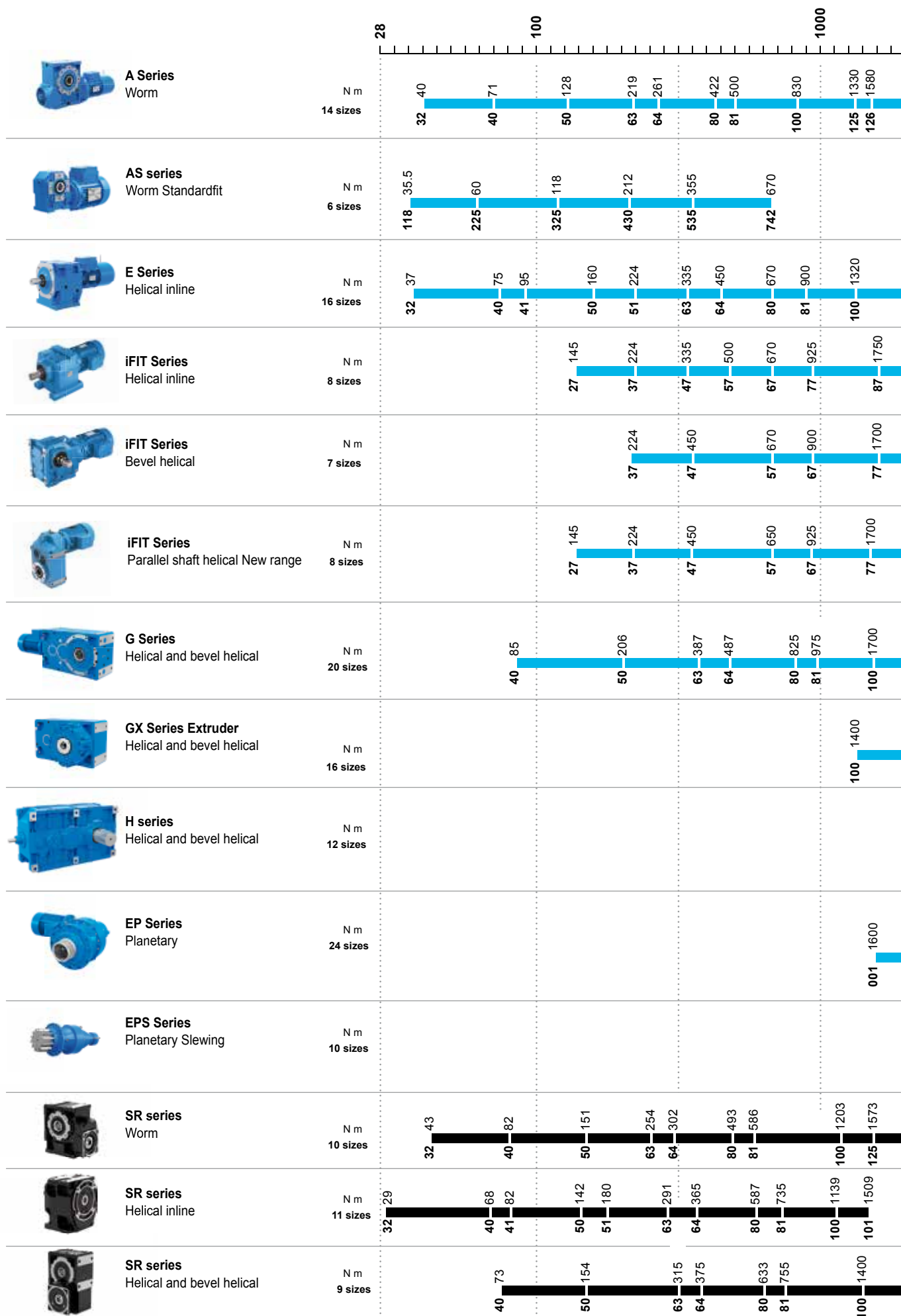


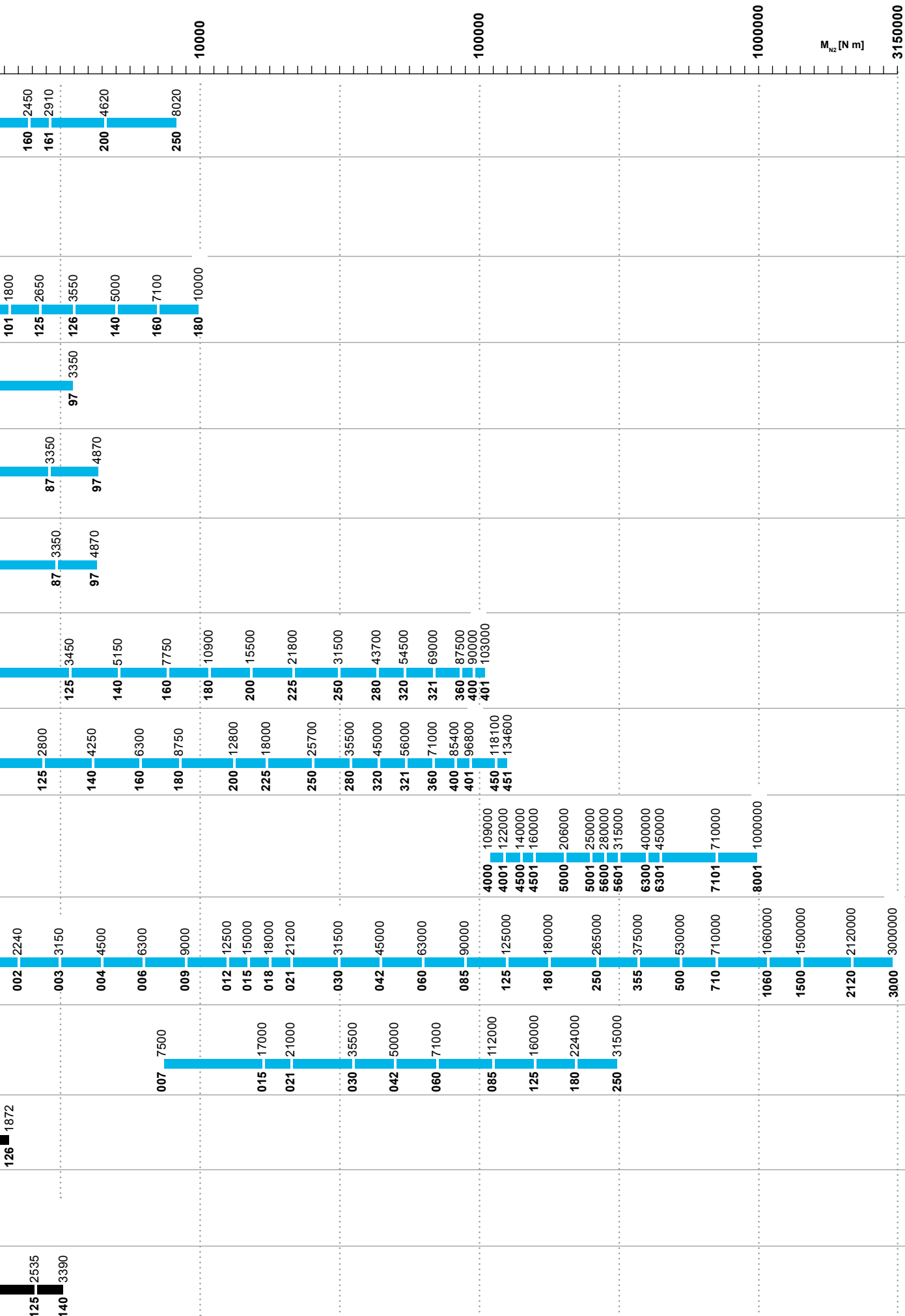




# Product range performances

## Gear reducers and gearmotors





## Our references



CEMENT KILN



APRON FEEDERS



SHIP LOADER / UNLOADER

**We deliver  
reliable  
solutions  
worldwide**



BUCKET WHEEL EXCAVATOR - STACKER RECLAIMERS



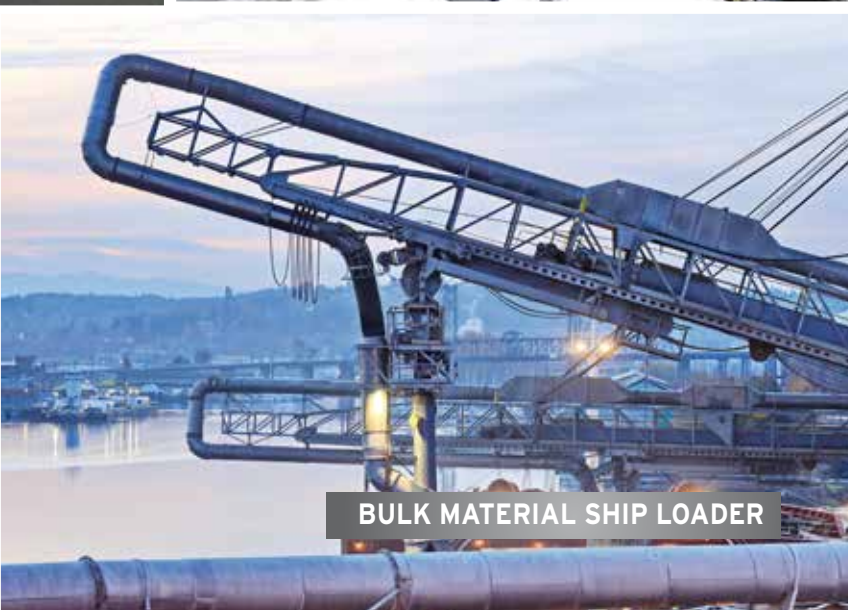




BELT CONVEYOR



THICKENER



BULK MATERIAL SHIP LOADER



THICKENER



BELT CONVEYORS



CRUSHER

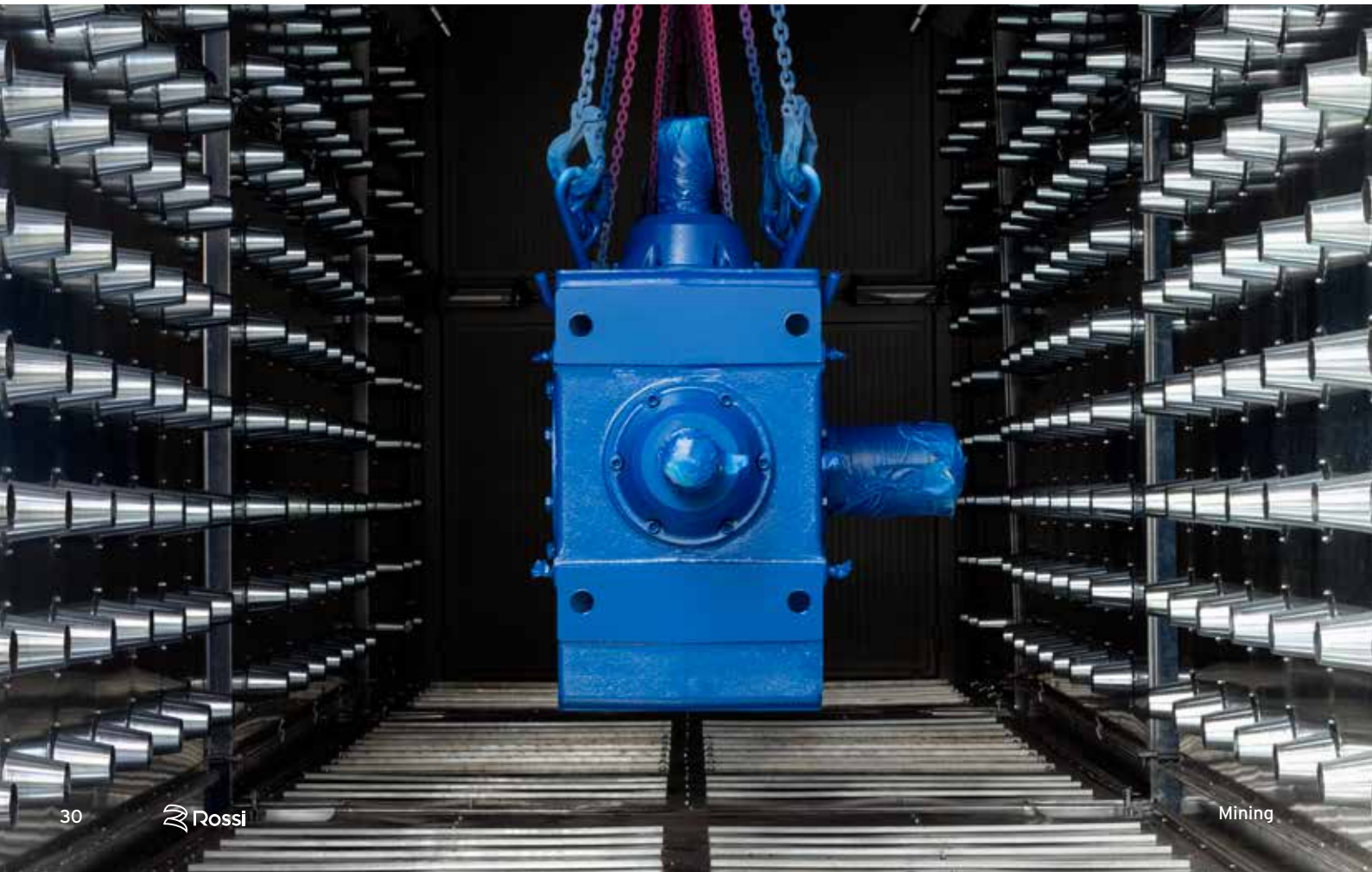


# Solutions for an evolving industry

In the global marketplace, our customers, investors, partners value our products and services for two reasons: excellence and reliability. At Rossi we utilize change as a strategic lever for our growth.

"Solutions for an evolving industry" fully expresses our corporate philosophy: We are a flexible and dynamic reality, able to satisfy all requirements of a continuously evolving industrial world, thanks to our innovative solutions.

- Cutting-edge manufacturing
- Specialized housing machining
- Extensive systematic controls
- Experience and know-how
- Excellence and innovation
- Reliable customer support.



# We have a solution for every segment



# Global presence local service



## Local support

Sales, customer service,  
technical support, spare parts



## 17 branches\*



## Worldwide distribution network\*

A global network of subsidiaries and dealers. From design and execution to after-sales service. Rossi is always close to you: a local, reliable and flexible partner.

Alongside our 24/7 **Rossi for You** portal you have a suite of digital support tools enabling real time access to your order tracking, invoices, spare part tables download and contact to our service.

\*All contacts available on [www.rossi.com](http://www.rossi.com)





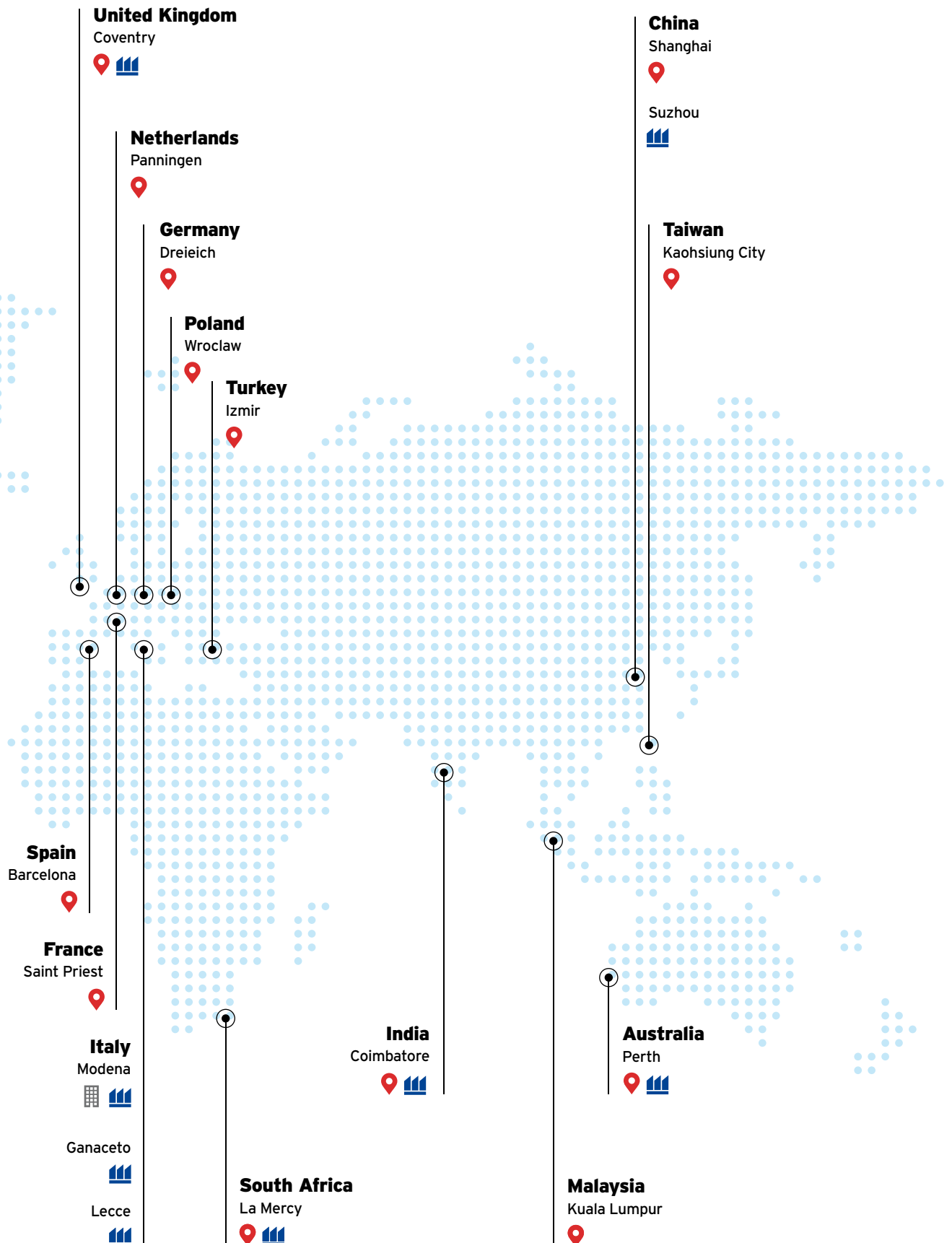
Main offices



Affiliated companies



Production facilities/Assembly plants



# Key figures



over

1000

people around  
the world



5000

customers  
worldwide



70

years of  
experience



50

million euros investments  
in new technologies and methodologies  
to improve manufacturing efficiency



17

affiliated  
companies



5

production  
facilities



8

assembly  
plants



18

authorized  
service centers

## After-sale service



Highly trained mechanics and support teams can ensure a fast and efficient after-sale service providing support worldwide.

## Digital support



Rossi Drawings, Selector and Download area enable real-time access to your order tracking, invoices, spare part tables download and contact to our service. Fast and easy online access is available 24/7, in 5 languages.

Visit us at  
**[www.rossi.com](http://www.rossi.com)**



# Quality

## 3 years warranty\*



Our drive is to innovate and boost operations by manufacturing performing, precise, reliable and high-quality products all over the world. We are always one step forward in offering and developing solutions that can satisfy an unlimited number of application needs, even in the most demanding conditions.

\* As per our warranty terms.

## System certifications

ISO  
9001:2015

ISO  
14001:2015

ISO  
45001:2023

## Product certifications









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