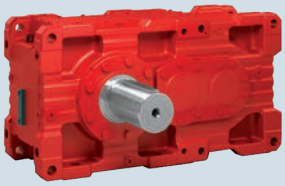
SEW EURODRIVE

A demanding industry requires a versatile product portfolio

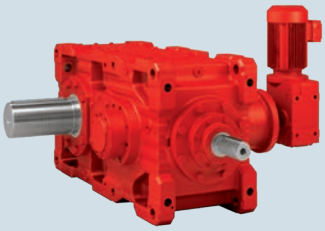
Drive solutions for the cement industry

Industrial gear units for cement processing

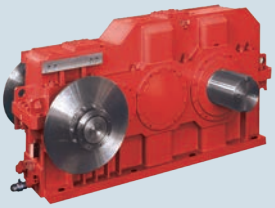
Cement production places demanding requirements on drive solutions. Heavy loads, high impact stresses, and harsh environments are the norm. Moreover, drive solutions need to be exceptionally energy efficient, customized for various machines, and capable of high production.



X Series
Helical gear units /
bevel-helical gear units



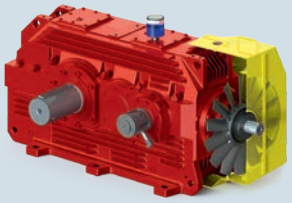
X Series
Bucket elevator drives



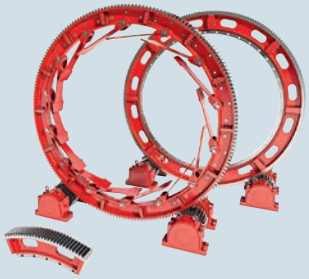
ML Series
Helical gear units /
bevel-helical gear units

P Series
Planetary gear units

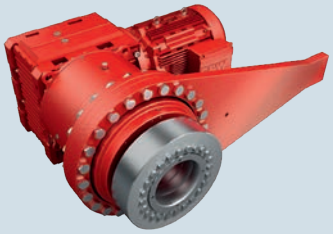
XP Series
Planetary gear units



X Series
Conveyor drives



Segmented girth gears



P-X Series
Planetary gear units

Service and maintenance

Additional support services

Startup Service
– Installation and laser adjustment
– Checking the installation of drive components
– Initial oil filling
– Production monitoring

Inspection and Maintenance Service
– Endoscopy for gear unit diagnostics
– Analysis of oil quality
– Oil change and disposal of waste oil
– Noise check to detect early signs of damage
– Preparation of an inspection and maintenance planning

Repair Service
– Central and decentralized repair work
– Complete overhaul, as-new repair work
– Reworking housings and shafts
– Coating preparation and modification to suit customer requirements

Retrofit Service
– Replacement of your drive components with SEW-EURODRIVE products, including adaptation constructions and customization
– Energy efficiency review
– Engineering and planning, ensuring 100% compatibility in your plant

SEW-EURODRIVE gear units deliver the strength and reliability needed for the cement industry. Our wide range of products, along with engineering and service support, makes new installs or retrofits a seamless process.

Your cement plant demands the reliability of the world-class leader in power transmission!

1 Extracting, crushing, grinding and transporting materials

Drive packages for crushers, horizontal and vertical conveying systems

2 Raw material preparation

Drive packages for blending beds (circular/linear)

3 Raw material grinding

Drive packages for vertical mills

4 Fuel preparation

Drive packages for vertical and horizontal mills

5 Clinker production

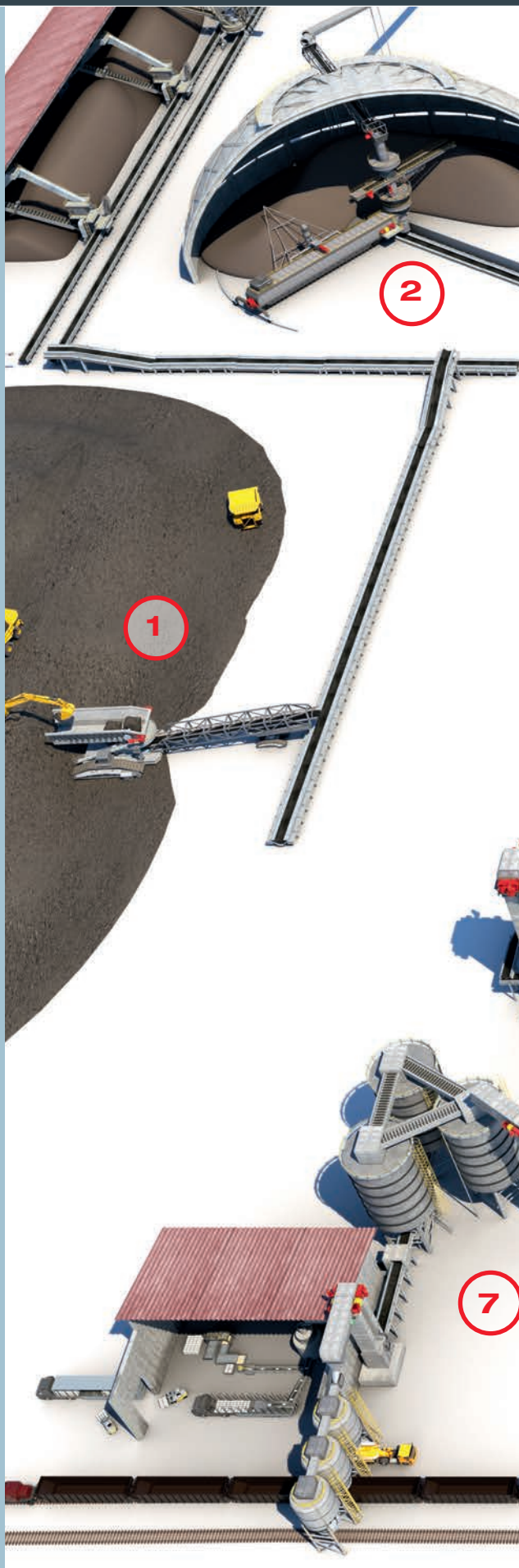
Drive packages for rotary kilns

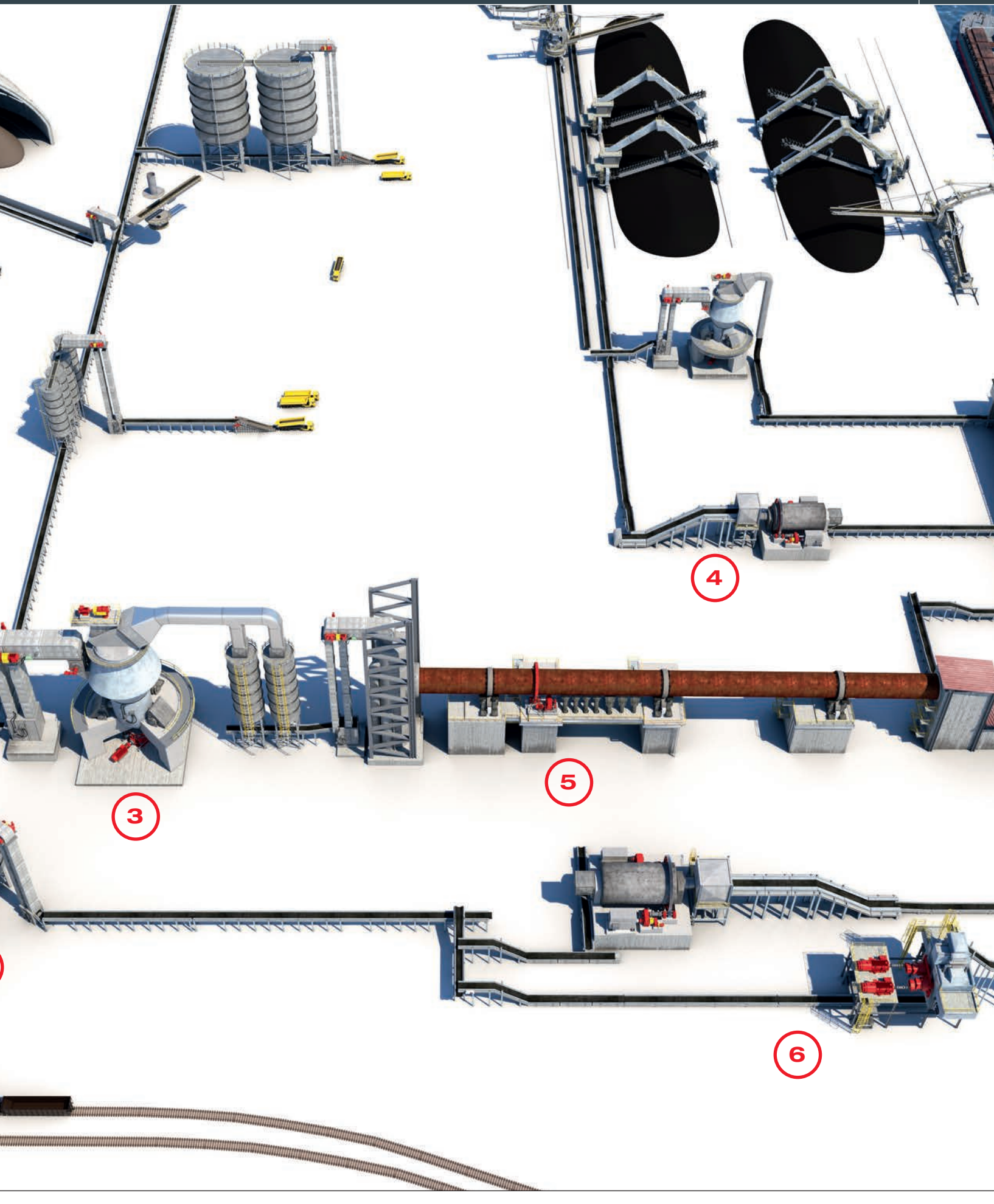
6 Clinker grinding

Drive packages for roller presses, vertical and ball mills

7 Storage, packaging and dispatch

Drive packages for silo discharge, filling and palletizing

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1 Extracting, crushing, grinding and transporting materials

During the first step in the cement manufacturing process, the raw materials are extracted from quarries before being crushed and transported to the cement plant.

Apron feeders

Whenr very high torque is required, you can rely on planetary gear units from the P-X series. These standardized high-performance industrial gear units combine planetary gear units from the P series with primary gear units from the X series. Solutions like these are the next evolutionary step from our tried-and-tested combination of planetary gear units and primary gearmotors.

Besides quick delivery and simplified installation, this industrial gear unit also boasts outstanding operational reliability. As a result, you can further reduce your maintenance and repair costs.

Our components

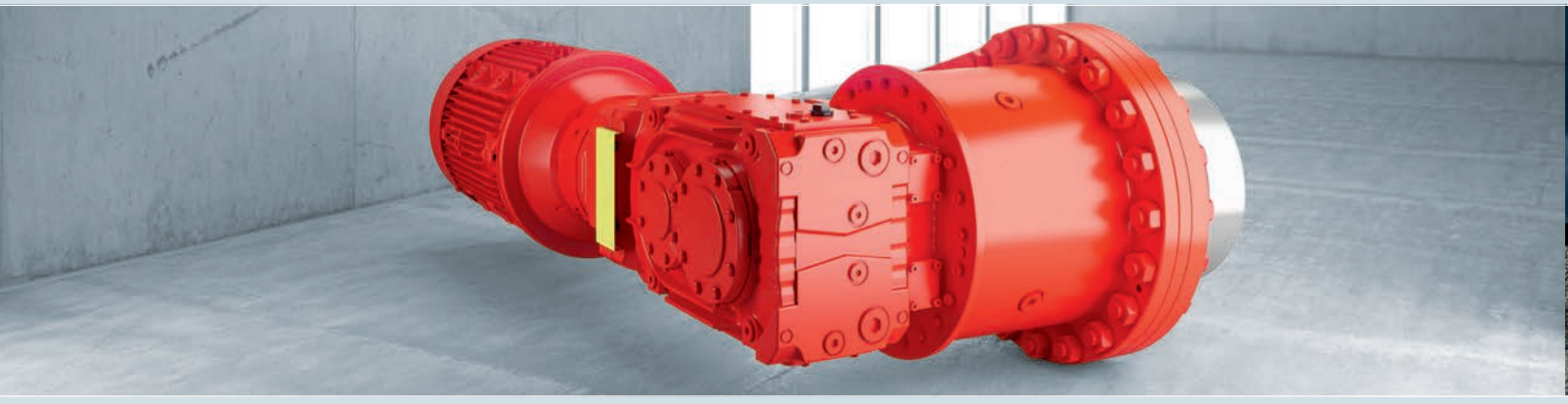
– Industrial gear units from the P-X series, including those with gearmotors as primary gear units

Your benefits

– High thermal rating due to shared oil chamber
– Maximum flexibility (even the heaviest motors can be directly flange-mounted using specially designed motor adapters)
– Reduced inventory costs (for compound gear units: Minimizes replacement gear units due to rotatable housing)

Additional options

– Diverse range of shaft-hub connections
– Premium sealing systems (e.g. Taconite)
– Innovative housing solutions
– Various cooling options
– Optimized for pivoted mounting position
– Backstops (including torque-limiting models)
– Swing bases, motor scoops, motor adapters
– Disk or drum brakes
– Mechanical or hydraulic centrifugal coupling
– Condition monitoring systems
– ATEX design



Crushers

No matter what crusher technology you are using (impact, hammer, unifeed, cone or roll crusher), our application engineers can tailor SEW-EURODRIVE products perfectly to your solution.

Products from SEW-EURODRIVE are designed for demanding loads and exhibit the rigidity needed to ensure that they can withstand large shock loads. Gear units can be fitted with Taconite seals and special ventilation filters and couplings, making them ideally equipped for the harsh operating conditions within the cement plant.

Our components
– Bevel-helical gear units
– Helical gear units
– Planetary gear units

Your benefits
– A complete, perfectly coordinated system
– Preassembled for straightforward startup
– Smallest possible roller spacings

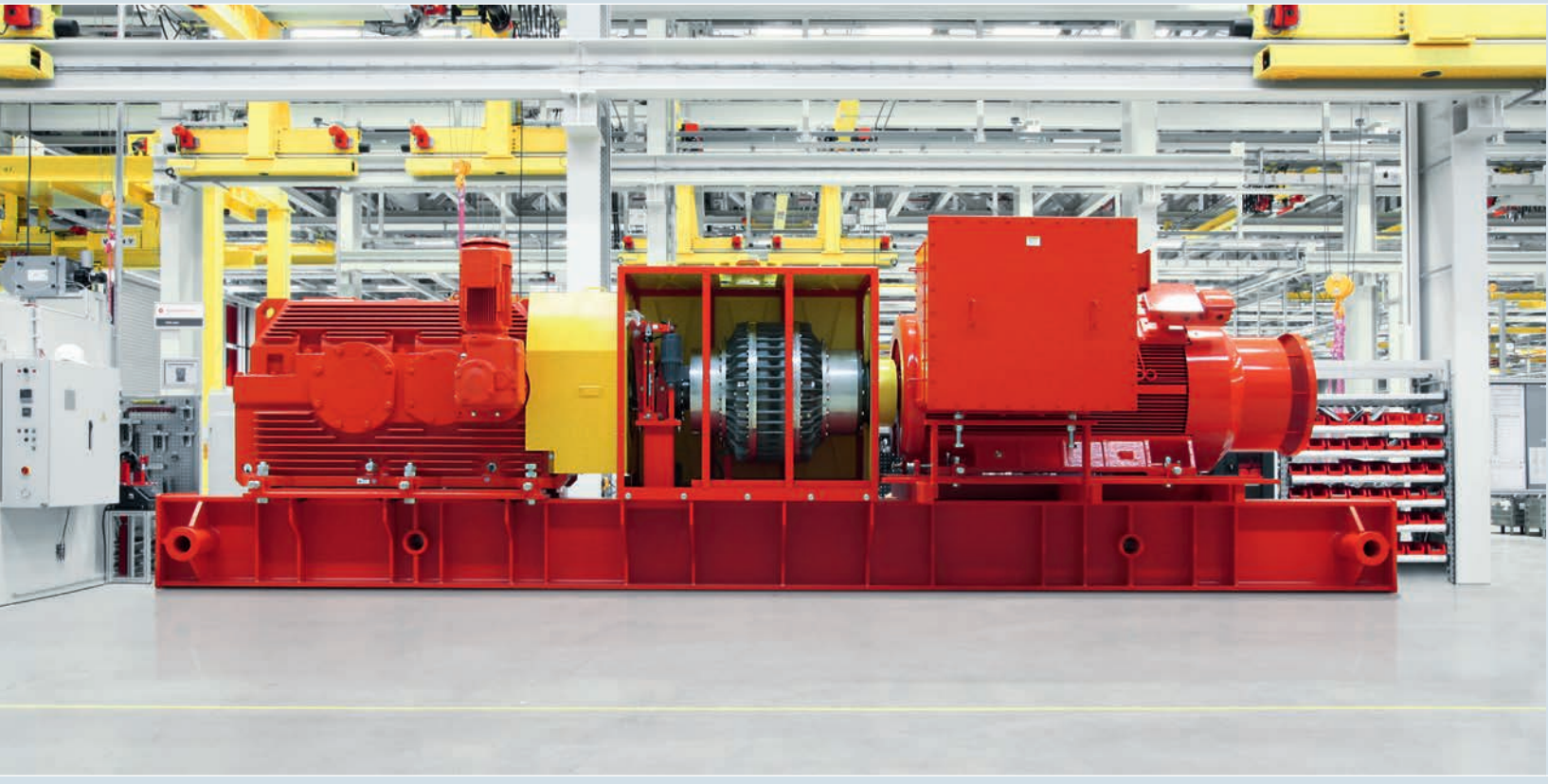
Additional options
– Various cooling systems (radial and axial fans)
– Industry-specific shaft-hub connection (via keys, splining, shrink disks)
– Hydraulic centrifugal couplings, gear couplings and safety clutches
– Motors

Belt conveyors

In raw material conveyor systems, distance, weight, and extreme temperatures pose unique challenges. With thousands of industrial drives in service around the globe, SEW-EURODRIVE has a proven track record of reliability. Our drives are specially engineered to deliver optimum mechanical performance and can often operate without the need for external cooling systems - even in very hot environments.

Your benefits

– Perfectly coordinated system components
– Exceptional dependability and operational reliability in harsh environments
– Customized solution concepts
– Comprehensive optional equipment available (ATEX)



Bucket elevators

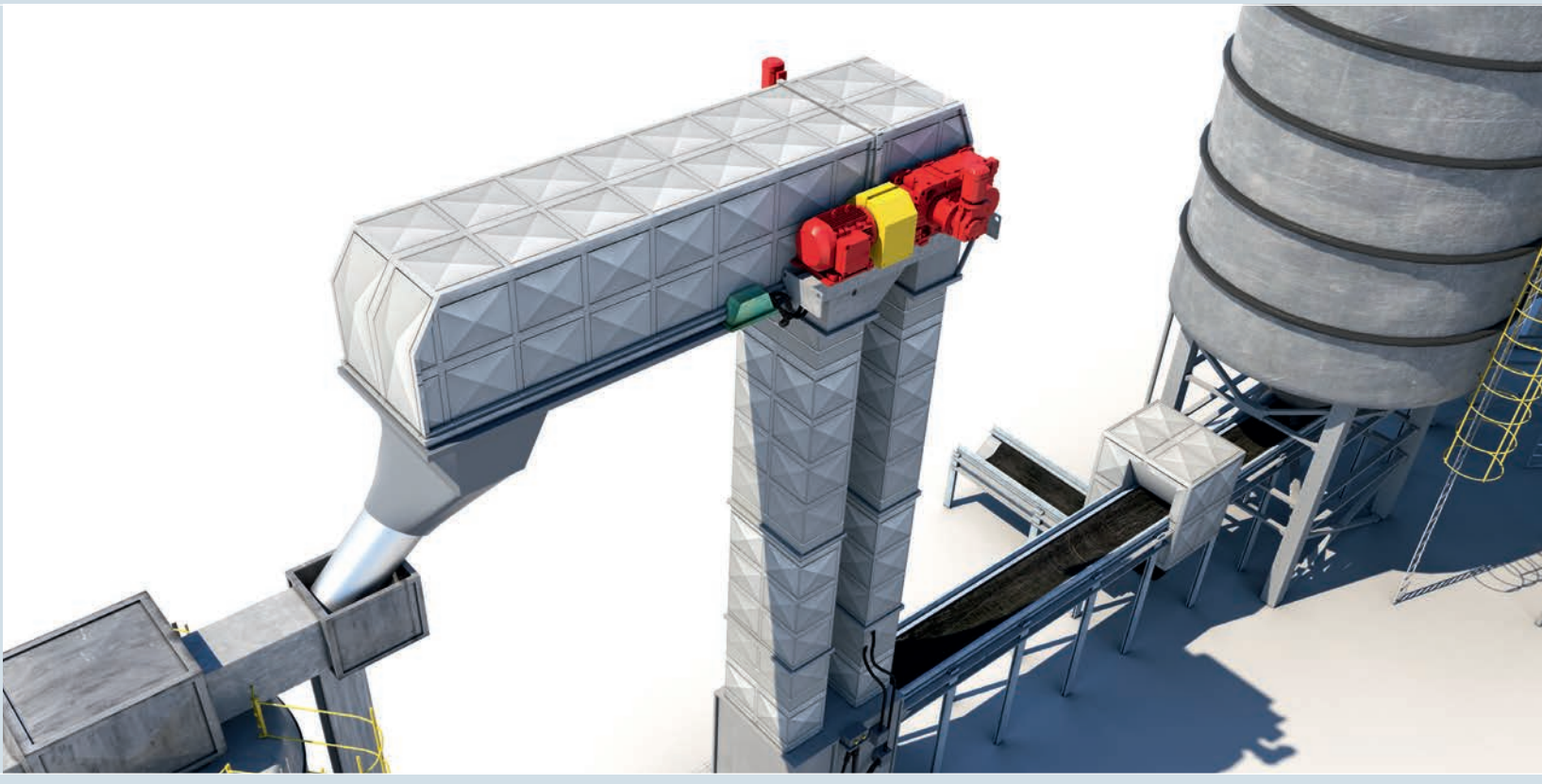
Our drive solutions for bucket elevators include helical and bevel-helical gear units ranging from 60,000 – 2,400,000 lb-in. Custom applications are made simple by the modular build of the gear unit along with a wide range of installation options.

Our components
– Bevel-helical gear units with solid or hollow shafts
– Auxiliary drives with free-running clutch and speed sensor

Your benefits
– All drive components are perfectly matched
– Short delivery time due to modular concept
– Rapid startup

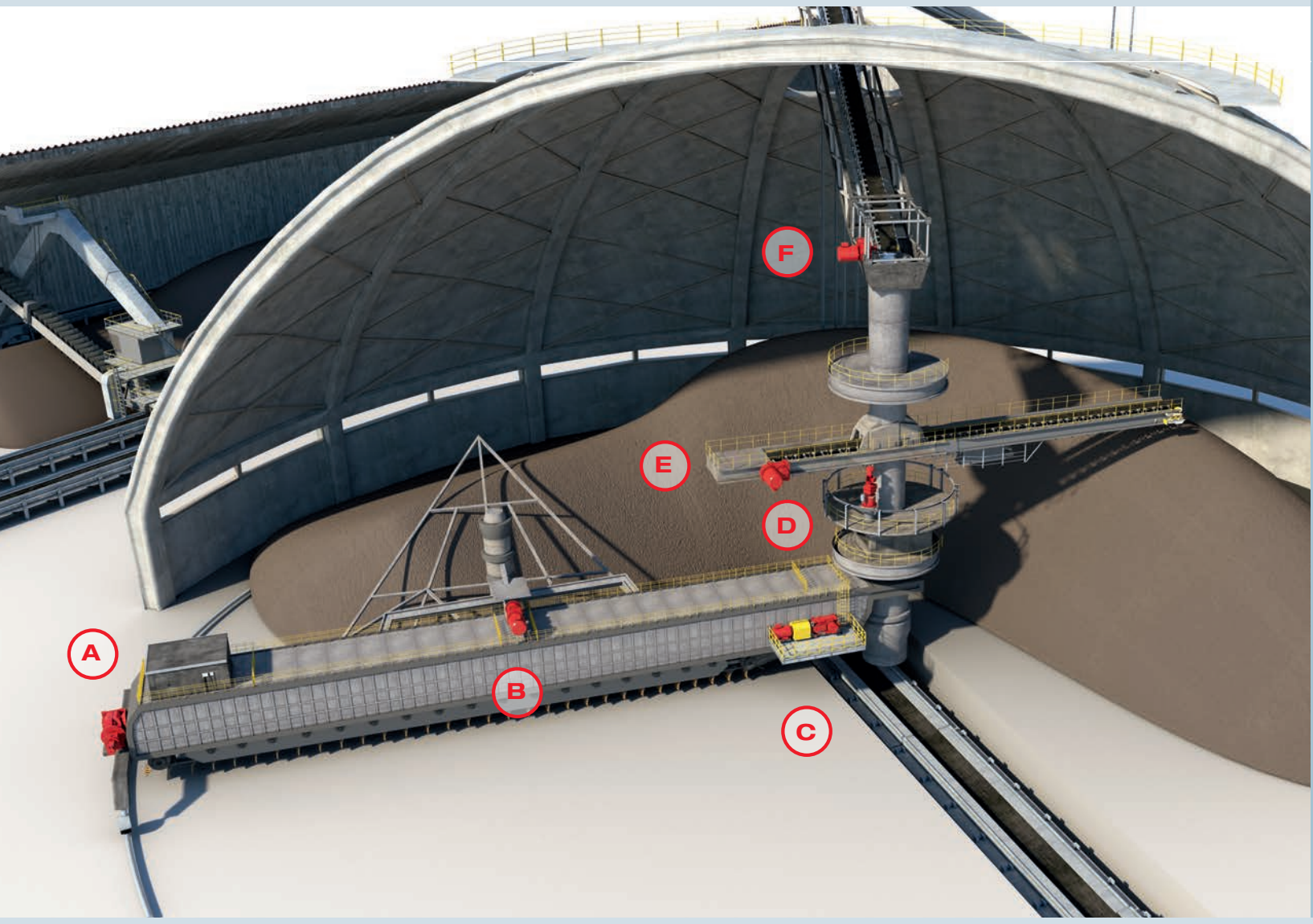
Additional options
– Backstops
– Speed monitors
– Swing bases / base frames
– Torque brackets
– Mechanical or hydraulic centrifugal couplings
– Motors (IE1 – IE4)
– Frequency inverters

Product advantages
– Available in 19 sizes
– High nominal torques from 60,000 to 2,400,000 lb-in
– Gear ratio range 28 – 80
– Reliability due to speed monitoring



2 Raw material preparation

In cement processing, high quality blending consistency is required to ensure proper combustion. SEW-EURODRIVE maintains this consistency with drives perfectly suited for blending beds using circular or linear raw material preparation.



Blending beds

Ⓐ Travel drive

Our components
– Innovative travel drive solutions using servomotors from SEW-EURODRIVE

Your benefits
– High gear ratios
– Lowest output speeds at 0.012/min – 0.03/min and highest torques
– Powerful drive inverter for dynamic applications
– Great diversity of applications due to extensive expansion options with MOVIDRIVE® VFD technology and communication options

Ⓑ Raking-down drive

Our components
– Planetary gear units and gearmotors
– Frequency inverters

Your benefits
– Perfectly coordinated units (gear unit and motor), wide range of options due to the modular system used by SEW-EURODRIVE
– Short, compact design; no need for couplings and adapter flanges
– Standardized units for ideal cost savings and short delivery times
– Large gear ratios

Ⓒ Chain scraper drive

Our components
– Complete gear unit packages
– X Series modular bevel-helical gear units
– Fluid couplings
– Motors
– Swing bases / base frames
– Torque brackets

Your benefits
– All drive components are perfectly matched
– Speed monitoring
– High availability due to modular concept
– Comprehensive optional equipment is available upon request

Ⓓ Slewing mechanism drive

Our components
– Planetary gear units
– Primary gear units (inline or right-angle)
– Customer-specific adapter solutions

Your benefits
– Common oil chamber
– Pinions
– Motor scoops
– Drum or disk brakes
– Motors with brakes
– Safety clutches

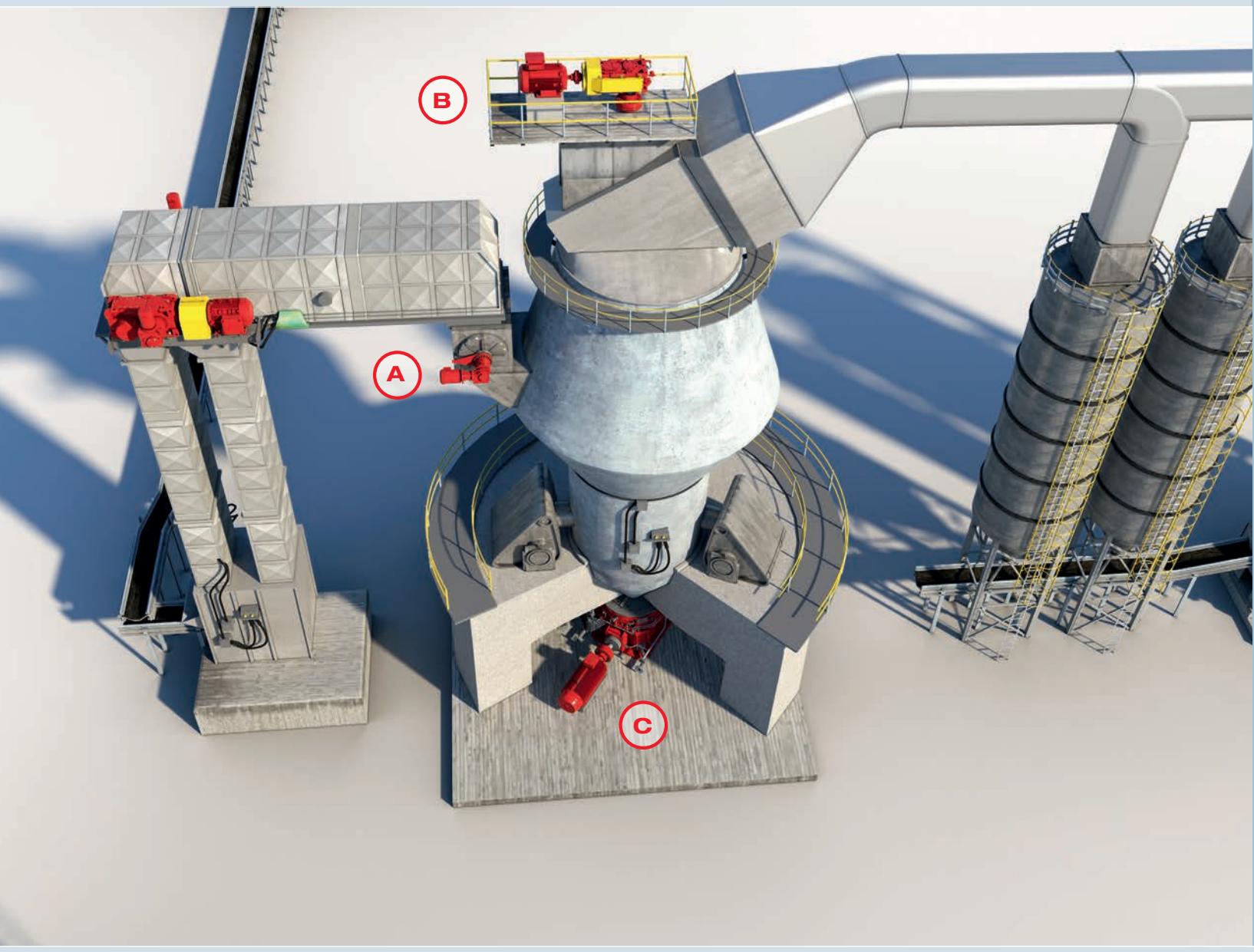
Ⓔ Ⓕ Conveyor drive

Our components
– Helical or bevel-helical gear design

Your benefits
– Highly efficient helical gear units
– High output speeds
– Long, maintenance-free life
– Reduced-backlash design available

3 Raw material grinding

During the grinding process, vertical mills reduce the raw material to the correct particle size. Throughout this process, our drive solutions ensure fault-free, high-performance processing and also further optimize and minimize your energy costs.

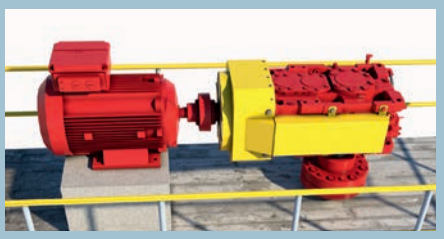


Vertical mills

(A) Course feed valve drives

Our components
– Planetary gear units
– Gearmotors

Additional options
– Shrink disks
– Safety clutches
– Torque brackets
– Electronic motors in energy efficiency class IE4



(B) Separator drives

Rapidly rotating separator shafts with stepless regulation systems require gear units with the smallest possible gear ratios

Our components
– Bevel-helical gear units, in vertical mounting positions
– Elastic and highly elastic couplings for HSS
– Elastic couplings for LSS
– Articulated shafts
– E motors
– Cooling systems
– Frequency inverters
– Condition monitoring systems

Your benefits
– Low oil bath temperatures
– Long lubricant service life
– High availability
– Support with project planning from application experts
– Short delivery times
– Fully preassembled drive units
– Quick startup

Product advantages
– Robust design, vibration-optimized variants
– Specially designed cooling options
– Various lubrication concepts
– High thermal limit ratings
– Taconite seals on the input and output shafts
– ATEX design

(C) Rotary plate drives

Our components
– Planetary gear units with bevel-helical gear stages

Product advantages
– Power range 100 – 1150 HP
– Torque range 80,000 – 2,200,000 lb-in
– Gear ratio range 20 – 35
– Integrated tilting-pad bearings for high axial loads
– Oil cooling system
– Hydrodynamic or hydrostatic lubrication systems
– Replacement gear units for existing plants
– Customized solutions

4 Fuel preparation

SEW-EURODRIVE offers you a complete drive unit for your ball mill – whether for direct drive, pinion or girth gear drive solutions. Depending on requirements, our application engineers design a drive package with planetary gear units from the P and XP series or helical gear units from the X, M, ML or MD series. In addition to our standard gearmotors, our tried-and-tested industrial gear units can also be used as auxiliary drives and seamlessly integrated into your existing system.

Direct drives for ball mills

Our components
– Helical gear units
– Planetary gear units with primary gear units, rated output torques up to 46,000,000 lb-in
– Auxiliary drives with clutch
– Cooling systems
– Various couplings
– Brakes
– Base frames
– Coupling safety covers (input and output side)
– Condition monitoring systems

Your benefits
– Complete design of the mechanical drive train
– Drive solution from one source
– High power density
– Compact design

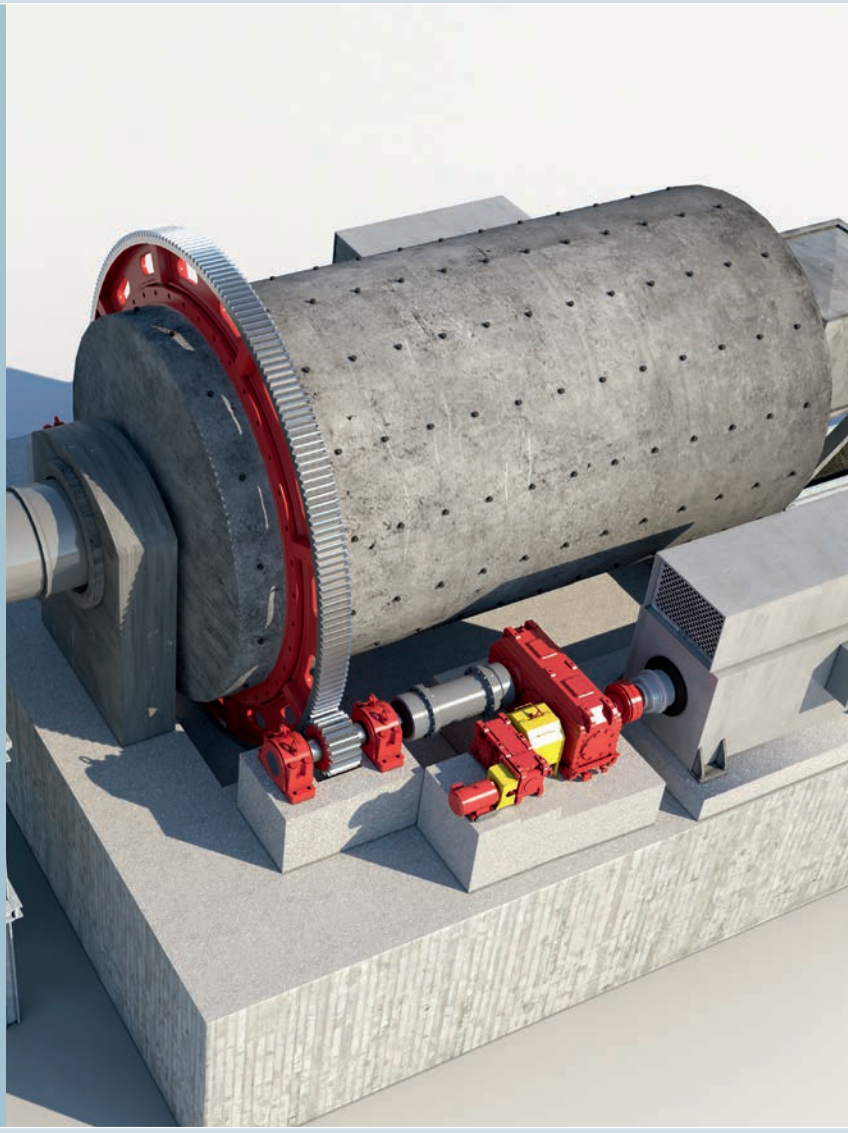
Girth gear drives for ball mills

Our components

– Multi-stage helical gear units up to 22,000,000 lb-in
– Girth gears in segmented design
– Oil cooling systems
– Heating systems
– Motors
– Various couplings (input and output side)
– Base frames
– Auxiliary drives
– Pinions and bearing blocks

Your benefits

– Maximum reliability
– Weight-optimized solution in segmented design
– Segmented design provides simplified handling, logistics and installation
– ADI material ensures a longer service life and significantly more compact dimensions
– Comprehensive package documentation
– Startupcommissioning
– Service and maintenance



5 Clinker production

Rotary kilns

Our components
– Main gear units up to 22,000,000 lb-in
– Auxiliary drives
– Various couplings
– Girth gears (with leaf spring coupling)
– Pinions
– Covers and seals
– Rolling bearing systems
– Lubrication systems (for girth gear and gear unit)
– Motors
– Submountings and casings
– Condition monitoring systems
– Emergency power drives

Your benefits
– Cost-optimized design
– Short delivery
– Suitable for the replacement of existing systems
– Simplified handling
– Startup support
– Preventive service concepts
– Condition monitoring systems

6 Clinker grinding

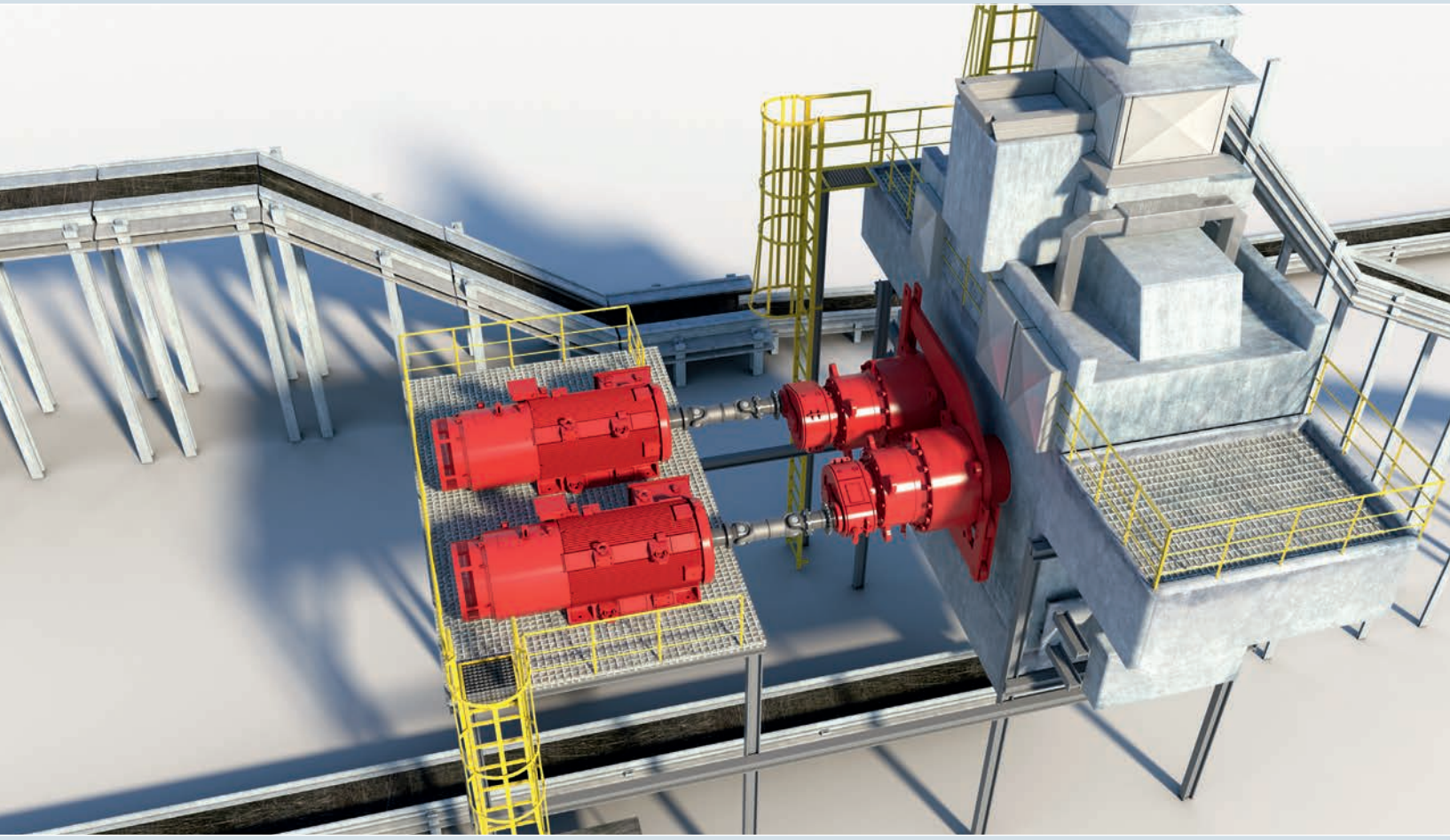
Roller presses, vertical and ball mills

No matter what Blaine value you want your final product to achieve, SEW-EURODRIVE can supply the right drive package for your application.

Our components
– Drive systems with planetary/helical gear unit combinations

Your benefits
– High nominal output torque up to 46,000,000 lb-in
– Small roller spacings possible
– Intelligent torque bracket design ensures an unlimited roller travel distance
– Drive maintenance without shutdown using auxiliary drives

Additional options
– Gear unit design with hollow shaft and mechanical or hydraulic shrink disk
– Cooling lubricant systems
– Condition monitoring systems
– Safety clutches
– Articulated shafts
– Auxiliary drives via sprocket
– Customer-specific torque supports



7 Storage, packaging and dispatch

Silo discharge

Our components

– Complete drive package with planetary gear unit

Your benefits

– High gear ratio
– Robust solid output shaft
– No separate rolling bearing support required; radial and axial (tensile) loads are deflected via the gear unit bearing concept

Additional options

– Robust expansion tanks with electronic oil level monitoring for remote maintenance
– Wide range of shaft-hub connections (with and without keys)

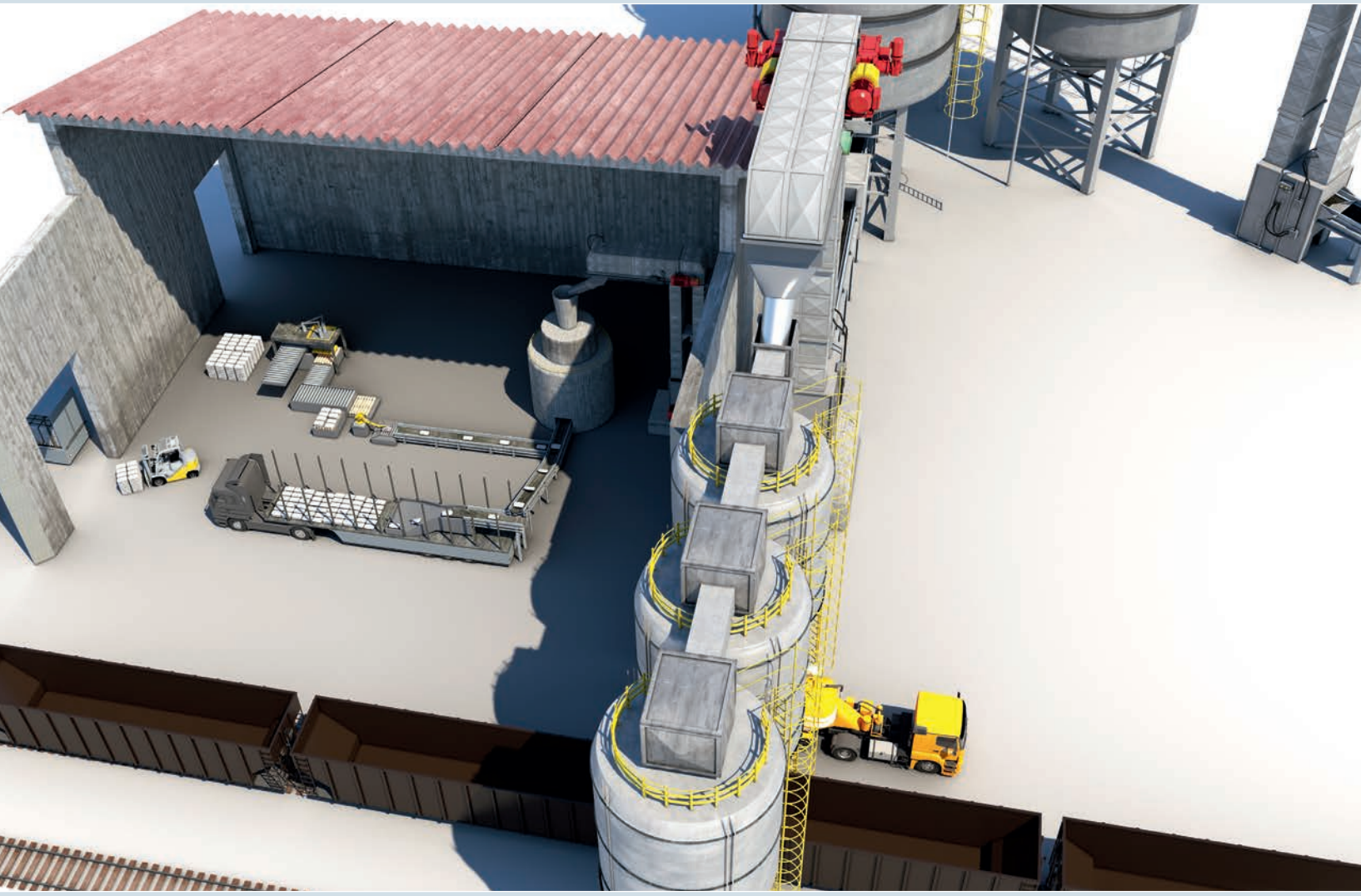
Filling and palletizing

Our components

– Gearmotors and decentralized drive technology

Your benefits

– Gearmotors with integrated frequency inverter (MOVIMOT®).
– Various mounting positions
– With and without brakes
– Efficiency class up to IE4



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