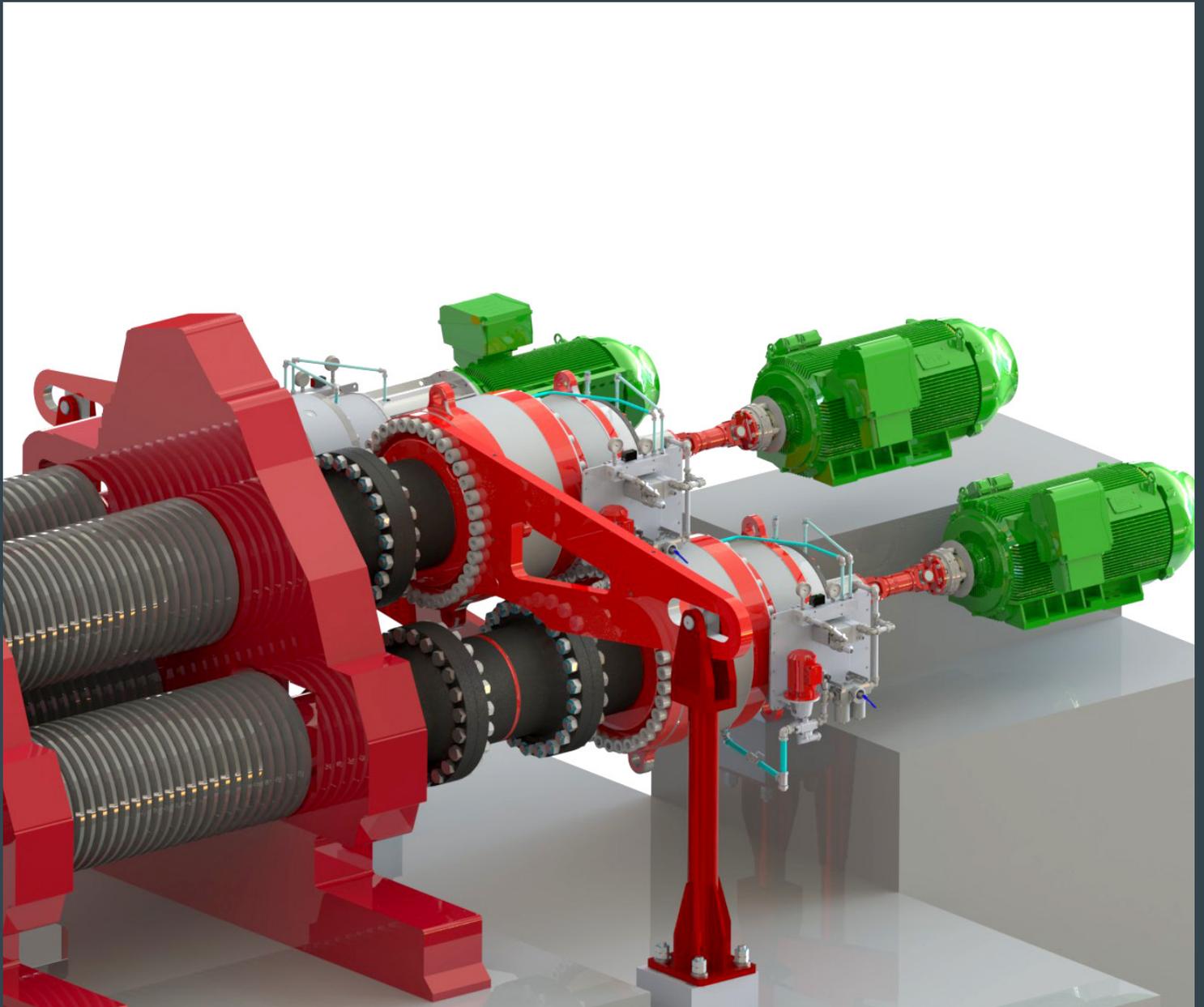


Drive solutions for the sugar and ethanol industry

High torque, low speed planetary gear units customized for crushing applications



Planetary gear units for the sugar and ethanol industry

The rugged construction of SEW-EURODRIVE's heavy duty planetary gear unit fulfills the high torque, severe shock absorbing, and low-speed requirements for crushing sugar cane. The unique design of planetary gearing allows the transmitted load to be spread across multiple gear teeth at the same time as opposed to a single tooth as found in typical helical gearing. This engagement of multiple gears provides greater contact surface and allows the gear unit to withstand higher shock loads. The resulting increase in overload capacity also extends its service life and reliability.

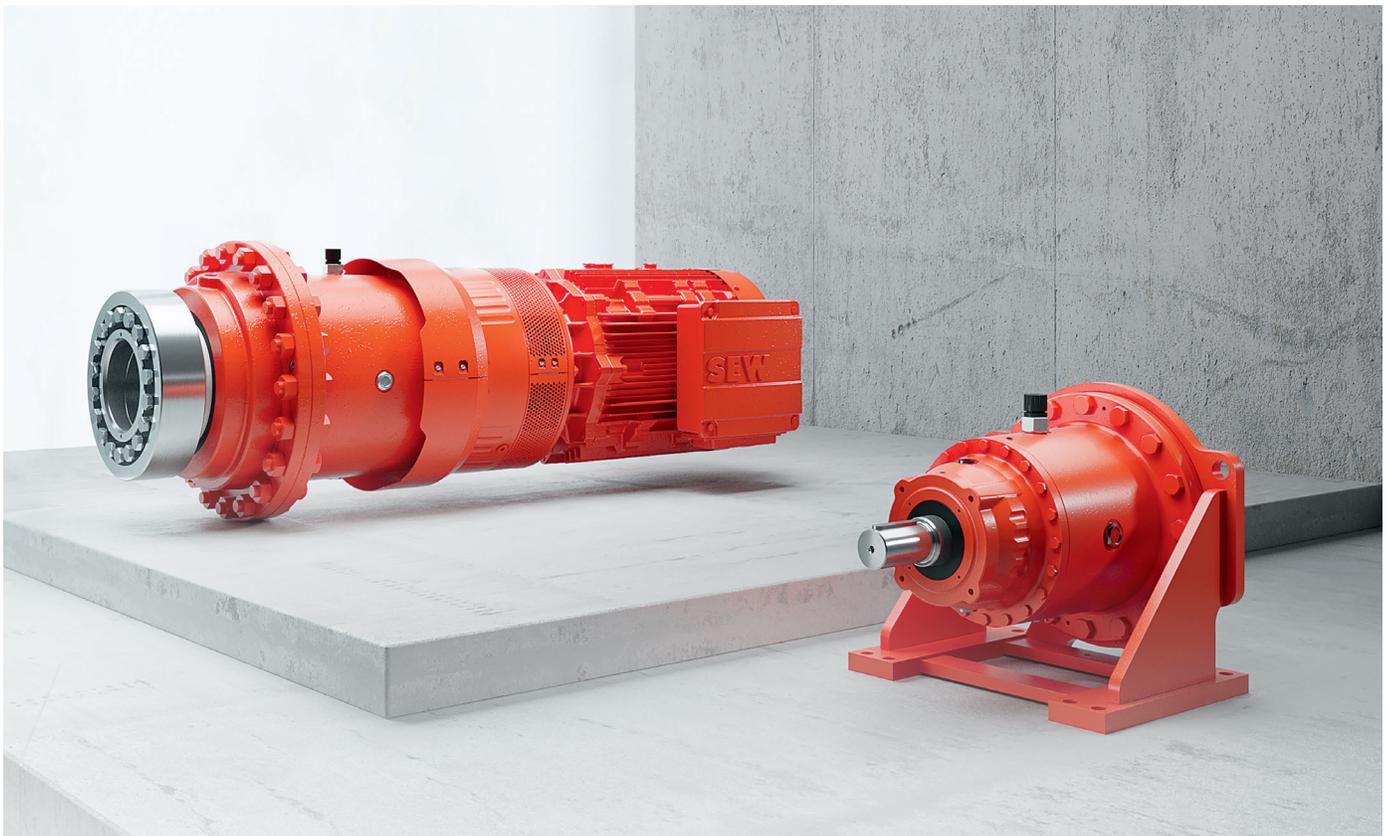
SEW-EURODRIVE engineers and manufactures 100% of the P and XP Series planetary gear units.

SEW-EURODRIVE heavy duty planetary gear units

The **XP Series** planetary gear units are widely used as low speed main drives in the sugar cane crushing industry. With proven success on hundreds of installed large units in the milling industry, the XP Series is well-suited for sugar cane crushers and diffusers, as well as other heavy duty applications. Custom designed torque arms, mounting bases and shafts are available.

The **P Series** planetary gear units utilize the same technology as the XP series, but they are smaller. P Series units are frequently used as "booster drives" to increase production capacity at a lower cost than a full upgrade. The P Series has a wide range of size and mounting combinations. SEW-EURODRIVE maintains a large U.S. inventory for all sizes.

P2.e Series heavy duty gear units



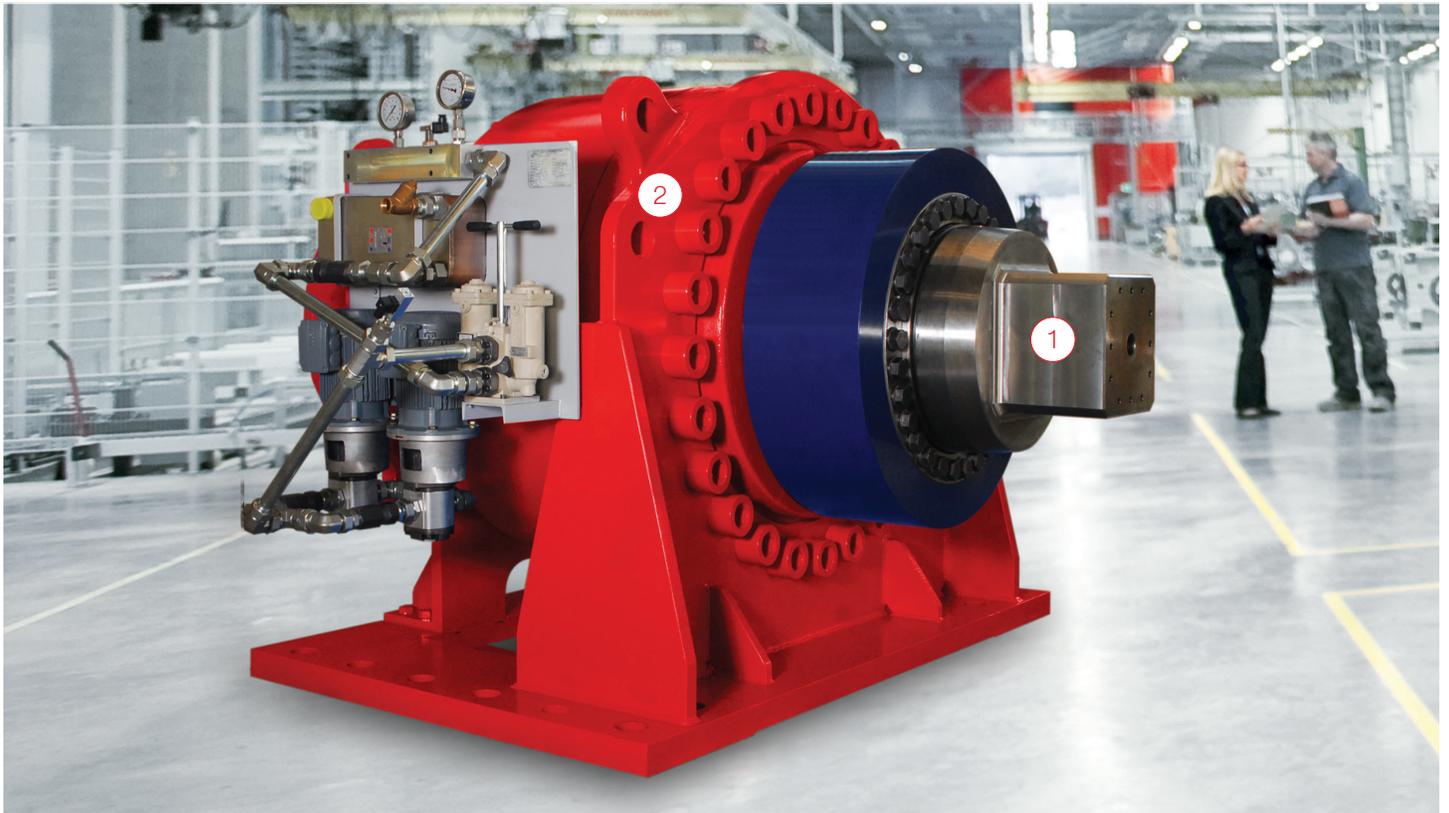
Application areas:

The XP Series and P Series planetary gear units are optimized for the sugar industry. They can easily replace low speed reducers, as well as couplings and bull gears, or they can be added to existing equipment as a “booster drive” to increase production capacity.

Benefits include:

- **Assembled and serviced in the U.S.A.**
- Increased milling capacity
- Increased energy efficiency
- Modular design for simple installation
- Long service life using planetary gear technology

The XP Series coaxial planetary gear reducer with pressure lubrication system and integrated square shaft for sugar mill application.



1

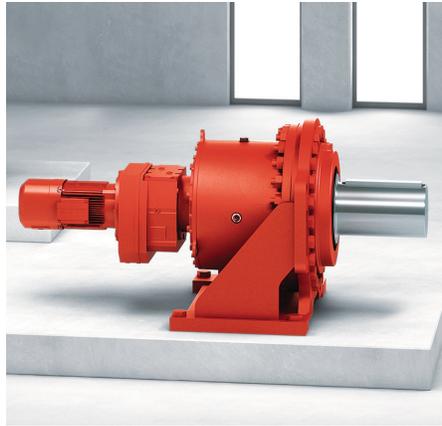
Output shaft options

A variety of output shaft options are available to fit custom applications.

2

Robust drive for maximum load requirements

Extremely high torque and power density ratings for use in the most demanding industries.



P Series: Booster drives for sugar cane crushers

The P Series is optimized for booster drive applications to increase overall milling capacity.

The P Series is a standard product, meaning no custom parts are needed. Standard product also means that a short delivery and a wide range of combinations are available.

Gear unit features

Planetary gear unit output:

- Planetary design produces high overload capacity and long service life
- Compact size allows ease of installation

7-series gearmotor input:

- Various mounting positions
- Large number of gear ratios
- A helical (RF) or bevel-helical (KF) unit mounts directly onto a P Series input

Advantages

- Increased sugar cane processing capacity
- Long service life through planetary technology
- Compact size; easy to fit existing equipment
- Lower investment than complete retrofit

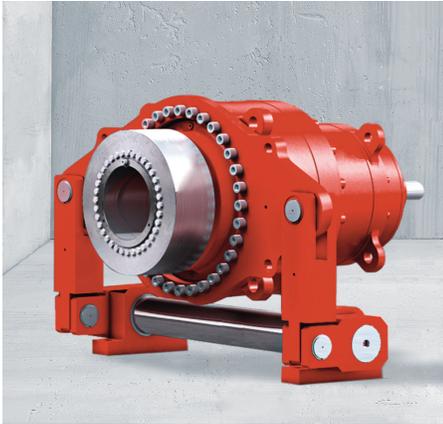


Assembled and serviced in the U.S.A.

- Large inventory available in the U.S.

P Series

Gear ratios and torque ratings	
P.RF... helical planetary gear units:	4 and 5 stages, gear ratio $i = 100$ to 4,000
P.KF... bevel-helical planetary gear units:	5 stages, gear ratio $i = 140$ to 4,000
Size	Torque class M_{N2} [lb-in]
P002	220,000
P012	326,000
P022	453,000
P032	616,000
P042	886,000
P052	1,100,000
P062	1,645,000
P072	2,175,000
P082	3,181,000
P092	3,743,000
P102	4,425,000



XP Series: Heavy duty planetary gear units for the sugar industry

The XP Series is optimized for the sugar industry. SEW-EURODRIVE can design and engineer upgrades and retrofits of existing grinding installations. Couplings, torque arms, special adaptation shafts and transition bases can be custom designed for each installation.

In typical crusher applications, the XP Series provides much higher total energy efficiency when compared with traditional open gearing solutions powered by steam turbines.

Gear Unit Features

- Planetary design produces high overload capacity and long service life
- Heavy duty components including mounting bases and torque arms
- Modular design and mounting options makes transportation, installation and shaft connection easy

Low speed shaft:

- Hollow shaft with mechanical or hydraulic shrink disc
- Solid cylindrical or square profile

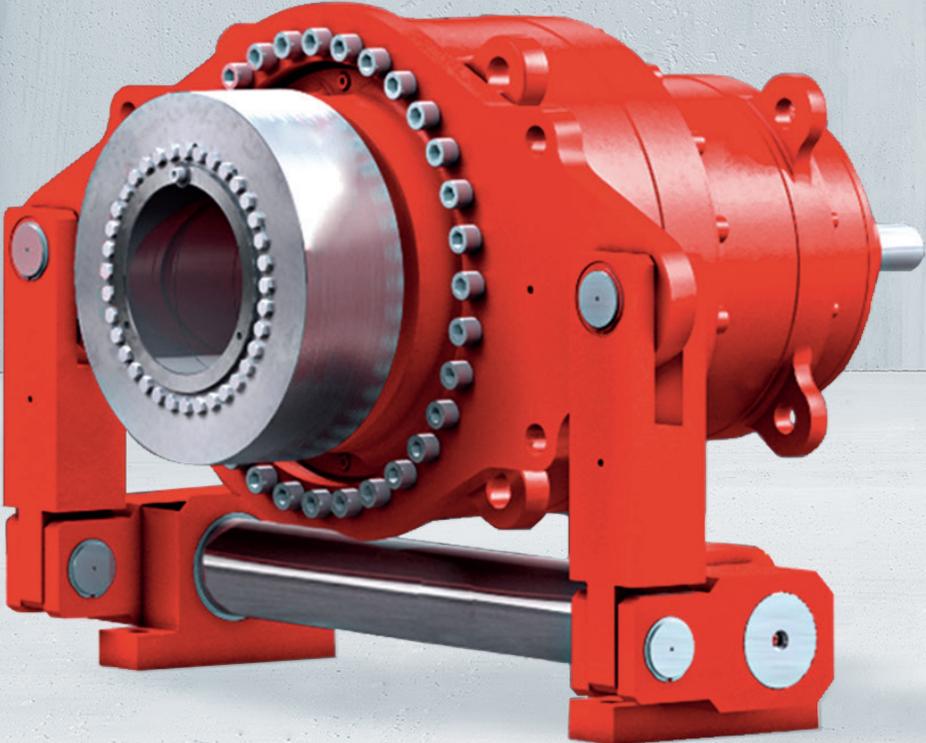
Advantages

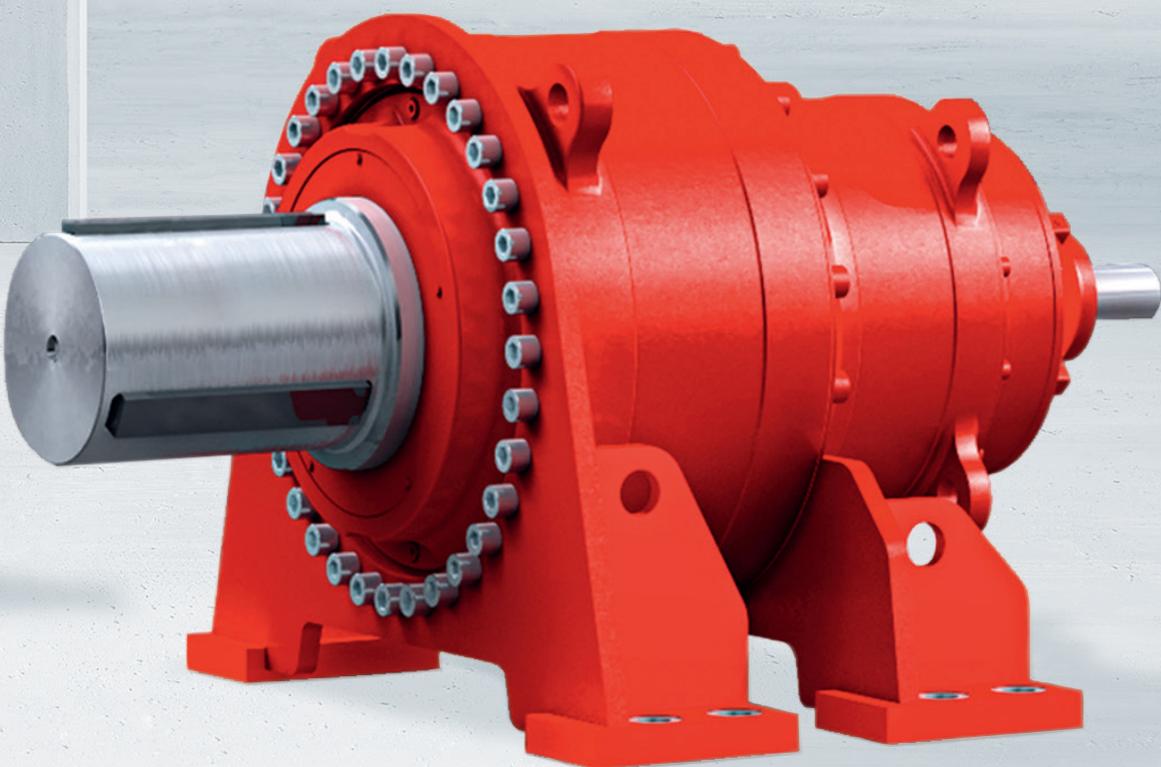
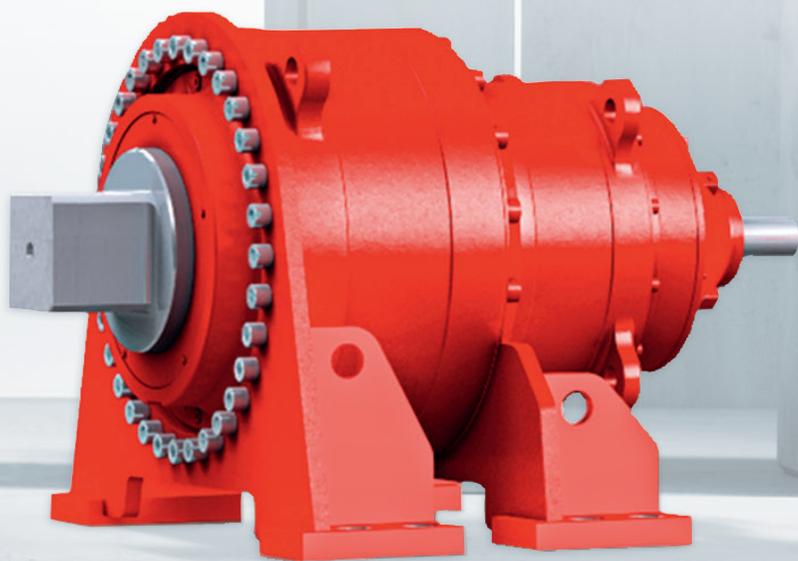
- Increased milling capacity at lower cost
- Highly energy efficient
- Compact footprint allows easy retrofit on existing installations without major foundation work
- Decentralized AC drives provide greater control
 - Rollers are driven and controlled individually
 - Torque and speed are adjusted separately
- Can replace large, inefficient bull gears
- No intermediate gears required

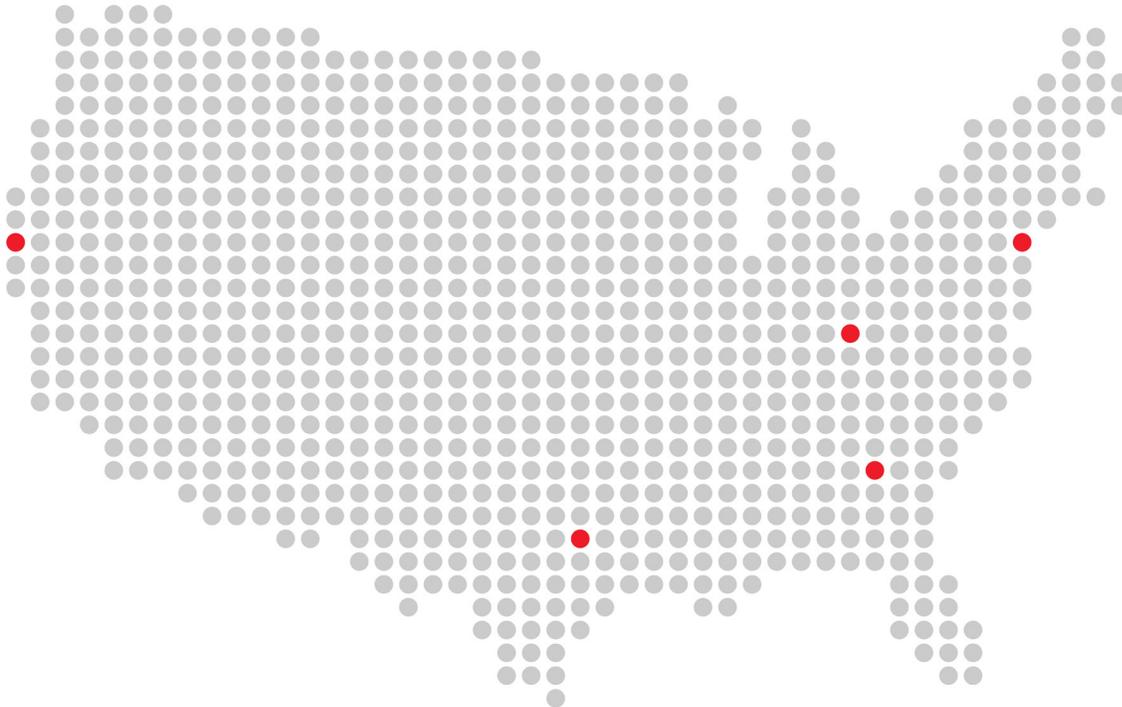
XP Series

Gear ratios and torque ratings	
XP planetary gear units: 2 and 3 planetary stages, gear ratio $i = 50$ to $3,000^{1)}$	
Size	Torque class M_{N2} [lb-in]
XP130	5,310,000
XP140	6,460,000
XP150	7,970,000
XP160	9,735,000
XP170	11,950,000
XP180	14,160,000
XP190	16,815,000
XP200	20,355,000
XP210	25,221,000
XP220	29,205,000
XP230	35,400,000
XP240	40,710,000
XP250	46,020,000

Planetary gear unit
XP Series







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