

**Innovative solutions for the
sugar and ethanol industry**



Planetary gear units for the sugar and ethanol industry

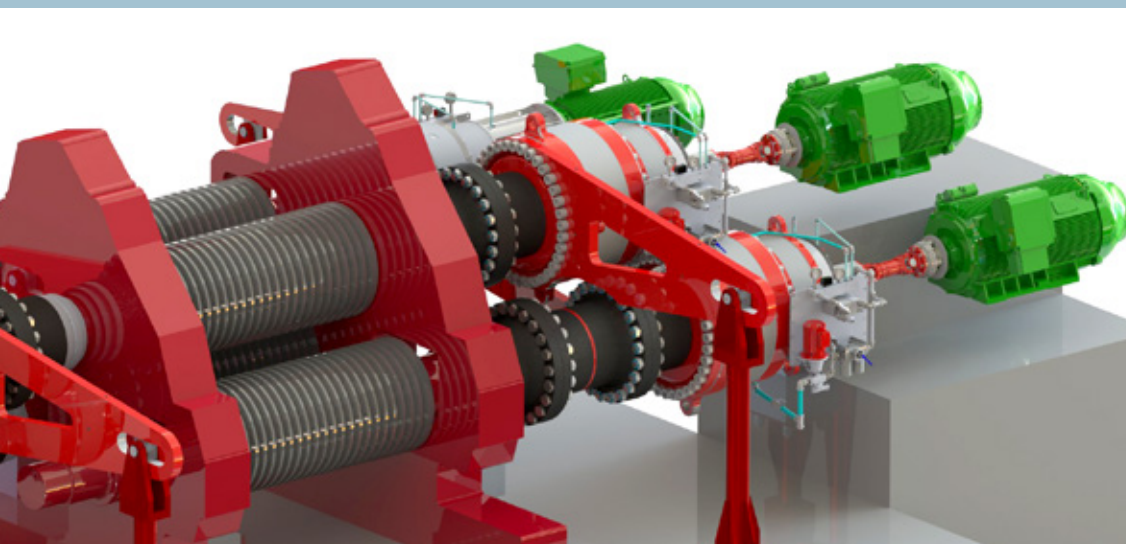
The rugged construction of SEW-EURODRIVE's heavy duty planetary gear unit fulfills the high torque, severe shock absorbing, and low-speed requirements for crushing sugar cane. The unique design of planetary gearing allows the transmitted load to be spread across multiple gear teeth at the same time as 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.

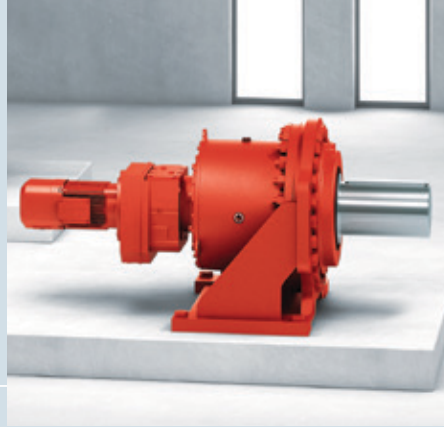
SEW-EURODRIVE heavy duty planetary gear units

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.



XP Series heavy duty gear units driving crusher rollers.



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.

- Rush 48 hour delivery available
- 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

Gear unit 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 $3,000^{1)}$

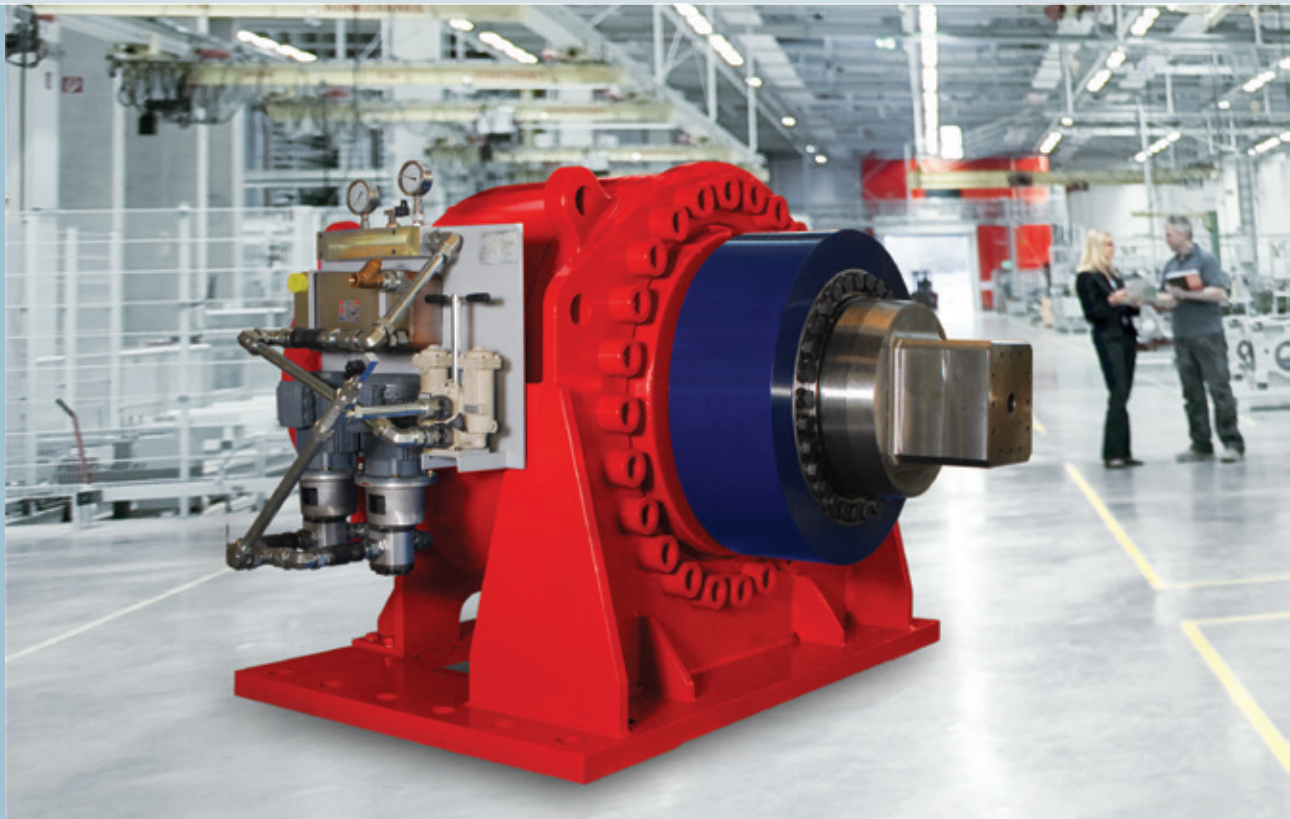
Size	Torque class M_{N2} [lb-in]
XP130	5,310,000
XP140	6,460,000
XP150	7,970,000
XP160	9,735,000
XP170	11,950,000
XP180	14,160,000
XP190	16,815,000
XP200	20,355,000
XP210	25,221,000
XP220	29,205,000
XP230	35,400,000
XP240	40,710,000
XP250	46,020,000

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.



The planetary XP series gear reducers are capable of up to 46,000,000 lb-in of torque.



U.S. Operations

Industrial Gears

SEW-EURODRIVE, Inc.
148 Finch Rd.
Wellford, SC 29385
P: (864) 439-8792
F: (864) 661-1167
igssorders@seweurodrive.com

Midwest Region

SEW-EURODRIVE, Inc.
2001 West Main St.
Troy, OH 45373
P: (937) 335-0036
F: (937) 332-0038
cstroy@seweurodrive.com

Northeast Region

SEW-EURODRIVE, Inc.
2107 High Hill Rd.
Bridgeport, NJ 08014
P: (856) 467-2277
F: (856) 845-3179
csbridgeport@seweurodrive.com

Southeast Region (U.S. Headquarters)

SEW-EURODRIVE, Inc.
1295 Old Spartanburg Hwy.
Lyman, SC 29365
P: (864) 439-7537
F: (864) 439-7830
cslyman@seweurodrive.com

Southwest Region

SEW-EURODRIVE, Inc.
3950 Platinum Way
Dallas, TX 75237
P: (214) 330-4824
F: (214) 330-4724
csdallas@seweurodrive.com

Western Region

SEW-EURODRIVE, Inc.
30599 San Antonio St.
Hayward, CA 94544
P: (510) 487-3560
F: (510) 487-6433
cshayward@seweurodrive.com