SEW EURODRIVE

Industrial Gear Units and Complete Drive Systems

Versatile and powerful – Industrial gear units from SEW-EURODRIVE

SEW-EURODRIVE has been a supplier of drive technology for decades, and is the worldwide leader in drive technology. The key to our competitive advantage lies in creating innovative energy-efficient solutions: from the modular system of drive components to the cost effective drive packages that are custom made for specific applications.

Industrial Gear solutions

SEW-EURODRIVE offers a wide range of industrial gear units for applications requiring high torque. The modular concept allows multiple combinations using standard components. The result is more options, and faster deliveries for a wide range of applications.

SEW-EURODRIVE also provides engineering support and service - from process planning to project development to startup. Our renowned, worldwide service ensures that you have comprehensive support after startup and throughout the life of the drive.

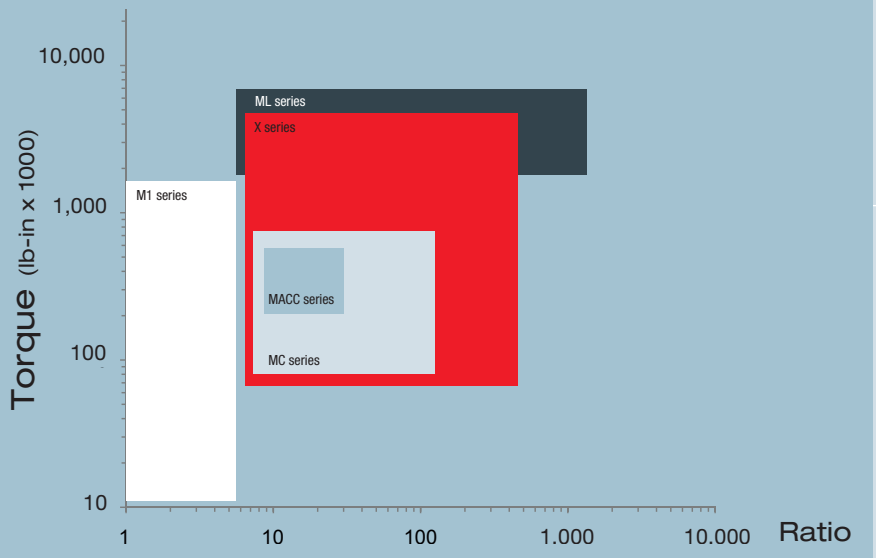
Global presence

With a global presence for over 85 years, we provide support with 15,000 employees in more than 48 countries, including manufacturing and assembly plants in Australia, Brazil, Chile, China, Finland, Germany, India, Singapore, South Africa, and the USA.

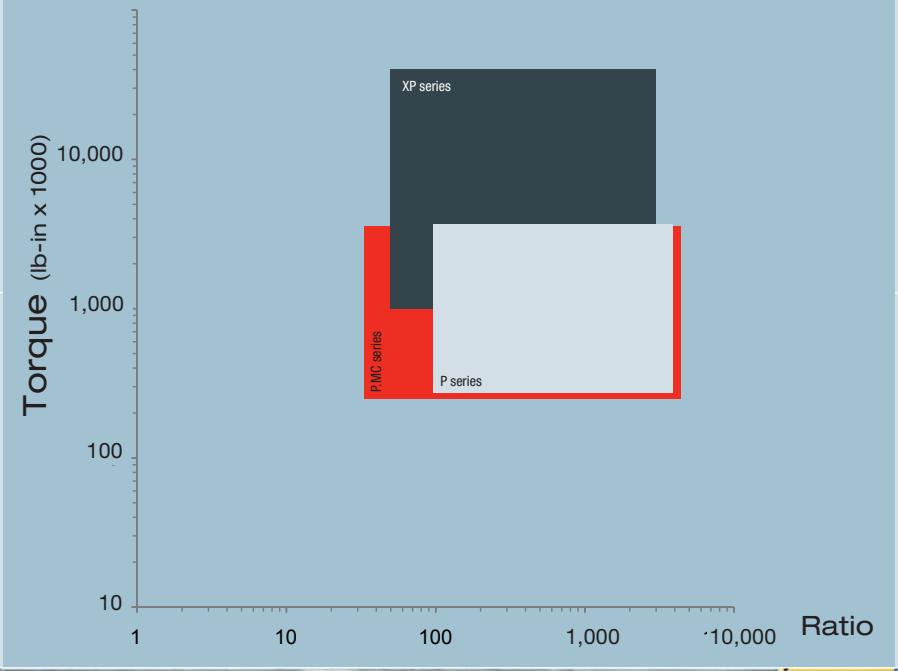
Our worldwide service ensures high product availability and shorter downtimes.

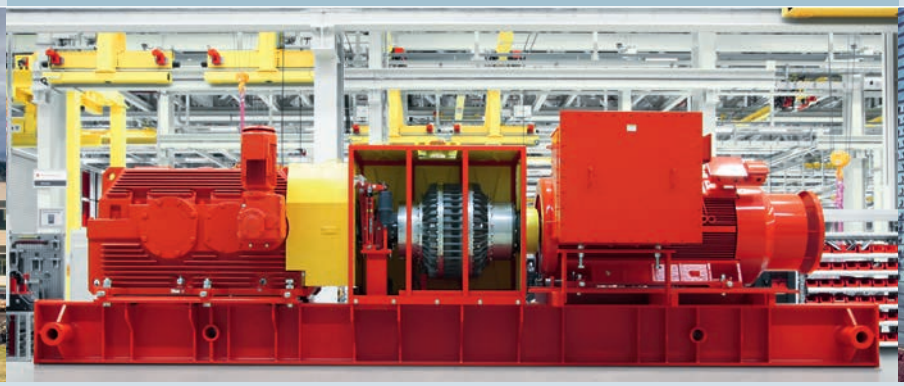
Overview of Products

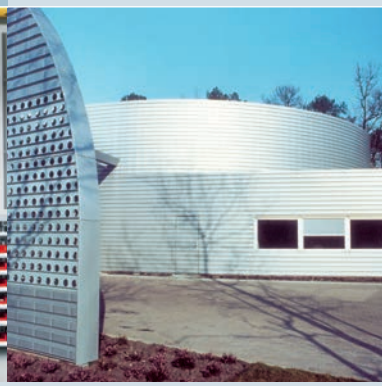
X/MC/ML Series helical and bevel-helical gear units



P/P.MC/XP Series planetary gear units







X Series – Heavy-duty

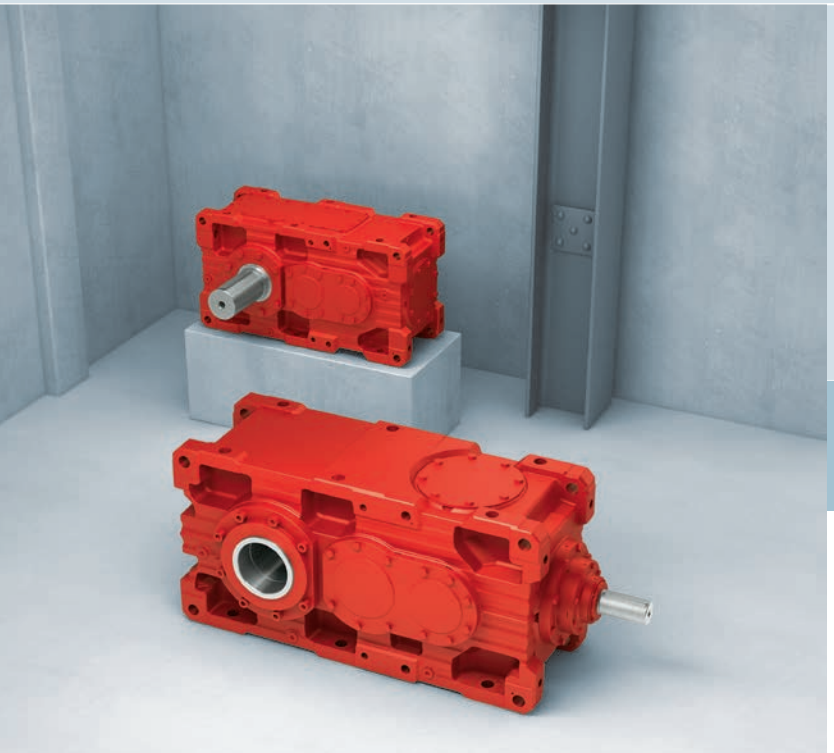
The X Series from SEW-EURODRIVE covers torques ranging from 60,200 to 4,200,000 lb-in. With its many graduated sizes, there is always a gear unit that closely matches your torque requirement. So, you won't have to waste money on an oversized gear unit. In addition, the large number of pre-engineered accessories, such as cooling systems, seal systems (dustproof, regreasable, radial labyrinth), torque arms, flanges, and IEC/NEMA motor adapters offer a serious advantage and a high degree of flexibility for adapting to a broad range of applications.

The X Series contains a comprehensive ratio range of 6:1 to 400:1 for both helical and bevel-helical gear units. It also has numerous shaft styles and may be mounted in any position. Its reversible gear housing allows the unit to be flipped over to accommodate either a right-hand or left-hand shaft configuration. Therefore, only one gearbox is required for two different applications – a tremendous savings in inventory.

Operational safety, ease of maintenance, robust housing, low-noise gearing, and proper cooling were important factors considered in the design of the X Series.

Equally important was having predefined drive packages. That is why conveyor drives and bucket elevator drives are no longer considered special – they are standard X Series options.

Of course, all X Series come complete with efficient project planning tools that include the generation of 3D CAD drawings.



X Series – The industrial gear unit platform with many graduated sizes

The intelligent, comprehensive gear unit featuring many graduated sizes, variable installation and a large number of standard options, such as motor adapters, backstops, sealing systems, shaft end pumps, mounting flanges, and much more.

X Series: Facts And Figures

Design features
- Helical and bevel-helical gear units
- Single-piece and split gear unit housing
- Gear unit can be inverted for either right-hand or left-hand shaft location
- Universal mounting positions
- Distinctive modular technology
- Large selection of standard accessories
- Customization

Advantages
- Extremely robust gear unit housing
- Reduced costs and weight due to high power density and many sizes
- Invertible gear unit reduces inventory costs - only one unit needed for two mounting styles
- High design flexibility w/pre-engineered accessories, such as cooling systems, seal systems, IEC/NEMA motor input adapters
- Efficient project planning tools
- Short delivery for standard units and spare parts
- Worldwide service

Preferred applications
- Conveyor systems used in the building material, extractive, chemical, food, and feed industries
- Environmental industry
- Agitators and mixers
- Timber and paper industry
- Steel industry
- Bucket elevators / Bulk material handling
- Shredders / Disintegrators
- Travel drives for cranes
- Calender drives in the plastics industry

X Series

Gear ratios and torques

X.F.. helical gear units: 2, 3 and 4 stages, gear ratio i = 6.3 to 450
X.K.. bevel-helical gear units: 2, 3 and 4 stages, gear ratio i = 6.3 to 450
X.T.. bevel-helical gear units : 3 and 4 stages, gear ratio i = 12.5 to 450

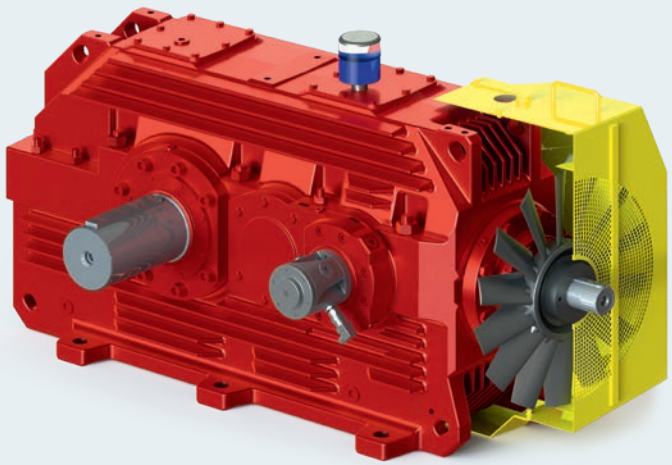
Gear unit size	Torque class M_{N2} [lb-in]	Gear unit size	Torque class M_{N2} [lb-in]
100	60,200	220	991,000
110	75,200	230	1,159,000
120	113,000	240	1,381,000
130	142,000	250	1,549,000
140	195,000	260	1,814,000
150	243,000	270	2,124,000
160	319,000	280	2,390,000
170	398,000	290	2,726,000
180	513,000	300	3,098,000
190	575,000	310	3,761,000
200	699,000	320	4,204,000
210	797,000		

X Series – Belt Conveyor Drive

Some conveyor belts run occasionally; others run 24 hours a day. In both cases, reliability and availability of the drive unit are critical. Our high-torque drive solutions from the X Series, with its special housing concept, meet the challenging requirements of these systems. SEW-EURODRIVE's modular drive system is the right industrial gear unit for conveyor belt systems, and are ideal in tough conditions such as high ambient temperature.

From project planning and installation through operation, you can rely on us. Our goal is to deliver the right drive solution, and keep operating costs as low as possible through efficiency and design.

Whether you require technical calculations, specific documentation, project-specific operating instructions or condition monitoring on-site, SEW-EURODRIVE is the right partner.



The modular products from the X Series offer many design options that can be combined with this gear unit.

Optimum project planning through efficient project planning tools from SEW-EURODRIVE.

X Series – Belt Conveyor Drive: Facts And Figures

Design features
- Gear unit consists of the proven components from the X Series
- Three-stage helical-bevel gear unit with special, horizontal housing for improved heat dissipation
- Increased cooling capacity through efficient fan design
- Comprehensive range of X Series accessories

Advantages
- The efficient cooling concept means that external cooling units and a larger gear unit are no longer necessary
- Especially reliable in tough environments
- Also available in ATEX design

Preferred application areas
- Cement industry
- Construction materials industry
- Surface and underground mining

X Series – Belt conveyors

Gear ratios and torques	
Bevel-helical gear units X3K.../HT..: 3-stage, gear ratio i = 12.5 to 90	
Gear unit size	**Torque class M_{N2} [lb-in]**
180	513,300
190	575,300
200	699,200
210	796,500
220	991,200
230	1,159,400
240	1,380,600
250	1,548,800
260	1,814,300
270	2,124,000
280	2,389,500
290	2,725,800
300	3,097,500
310	3,761,300
320	4,203,800

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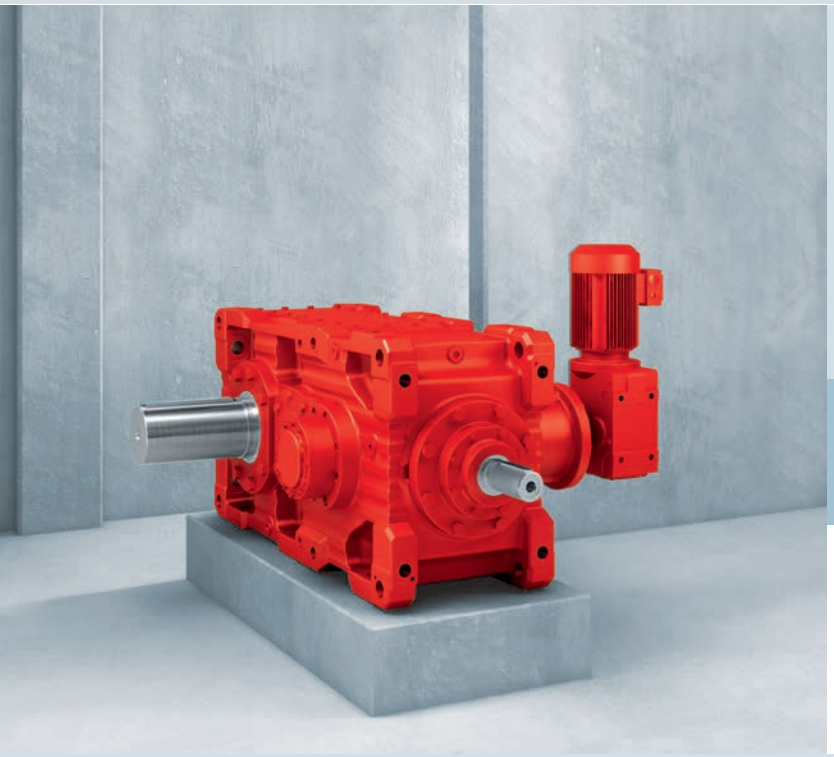
X Series – Bucket Elevator Drives

Bucket elevators are conveyor systems that transport large quantities of bulk material vertically. These applications typically require high torques and large gear units, depending upon the capacity of the container and the lifting height. SEW has a pre-engineered design specifically for bucket elevators: The input shaft couples to a motor that transports full buckets at high speed during normal operation. The 7-series auxiliary gearmotor transports either empty buckets at slow speed during maintenance or full buckets at an alternate speed during normal operation.

Bucket elevator drives are standard offerings for the X Series.The auxiliary drive can be supplied with the power requirement for either “empty bucket” or “full bucket” loads, so that all drive components are optimally matched to the specific application.



X Series bucket elevator drives are based on the proven concept of the 7-series gear unit.

High availability due to stocked components and the international assembly network of SEW-EURODRIVE.

X Series – Bucket Elevator Drives: Facts And Figures

Design features
- Based on the X Series with predefined drive components
- Auxiliary drive with a 7-series SEW gearmotor
- Auxiliary drive adapter with overrunning clutch and incremental encoder
- Mounted backstop
- Radial labyrinth seal on input and output shafts

Advantages
- All drive components are perfectly matched
- Safety through speed monitoring
- Readily available due to modular concept
- High design flexibility with numerous pre-engineered accessories
- Worldwide service

Preferred applications
- Bucket elevators in the handling of bulk material: cement, sugar, grains, etc.
- Conveyor systems used for building material, extractive and chemical industries

X Series – bucket elevator drives

Gear ratios and torques

X3K.B... bevel-helical gear units: 3 stages, gear ratio i = 28 to 80

Gear unit size	Torque class M_{N2} [lb-in]	Gear unit size	Torque class M_{N2} [lb-in]
100	60,200	200	699,000
110	75,200	210	797,000
120	113,000	220	991,000
130	142,000	230	1,159,000
140	195,000	240	1,381,000
150	243,000	250	1,459,000
160	319,000	260	1,814,000
170	398,000	270	2,124,000
180	513,000	280	2,390,000
190	575,000		

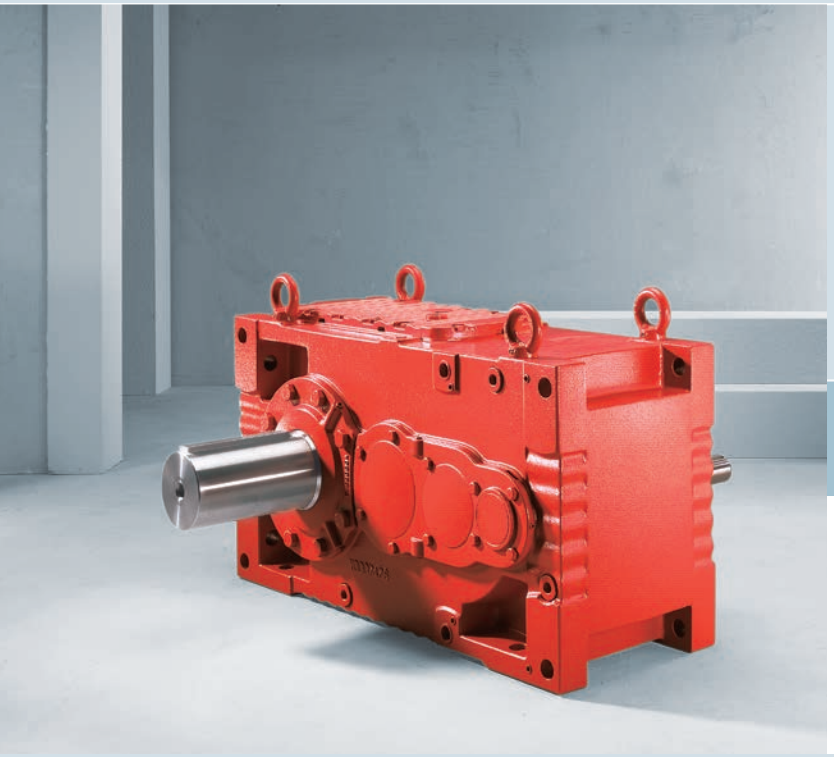
MC Series – Compact

Thousands of MC Series gear units have been successfully used in many applications. The MC Series in the industrial gear unit portfolio is designed for the small torque range up to 575,000 lb-in and is characterized by little space requirements and high availability.

The gear units are suitable for horizontal, vertical and upright mounting on the customer's machine. The MC Series is particularly suited for medium gear ratios.

The modular concept includes a great variety of optional accessory equipment, such as motor adapters, belt drives, and backstops.

Standardized application solutions are available for bucket elevators, cooling towers, and agitators. Even in process engineering plants, large axial and radial forces occur at the agitator shaft during agitating processes. SEW-EURODRIVE's "EBD" (Extended Bearing Distance) concept offers stronger bearings within the gear unit itself, which means that in many cases separate bearings are no longer required in the agitator or an oversizing of the gear unit can be avoided.



The concept is supplemented by an optional drywell seal, which prevents oil leakage at the output shaft and allows a standard mounting flange to be used.

MC Series: 8 sizes of particularly compact parallel shaft gear units or right-angle gear units.

The proven series for the small torque range with stable single-piece gear unit housing for nearly any industry and application.

MC Series: Facts And Figures

Design features
- Highly customizable to suit a wide range of applications
- Parallel shaft (helical) or right-angle (bevel-helical) arrangement
- Modular concept
- Single block housing design
- Universal mounting positions
- “Drywell” version available
- EBD version offers different bearing and shaft types to accommodate large axial/moderate radial loads, moderate axial/high radial loads, or moderate axial/moderial radial loads.

Advantages
- Space saving, compact drive with high torque transmission
- Many sizes available to eliminate needless oversizing
- Short delivery on standard units
- Robust unit due to block housing
- No leakage using “drywell” version
- Worldwide service
- No parting line means fewer areas for leakage

Preferred applications
- Conveyor systems used in the building material, extractive, chemical, food, and feed industries
- Environmental industry
- Agitators and mixers
- Timber and paper industry
- Bucket elevators / Bulk material handling
- Shredders / Disintegrators
- Travel drives for cranes

MC Series

Gear ratios and torques

MC.P.. helical gear units: 2 and 3 stages, gear ratio i = 7.1 to 112
MC.R.. bevel-helical gear units: 2 and 3 stages, gear ratio i = 7.1 to 112

Gear unit size	Torque class M_{N2} [lb-in]	Standard output shaft Ø mm	EBD2 output shaft Ø for high radial loads, high axial loads mm	EBD1 output shaft Ø for moderate radial loads, high axial loads mm
02	70,800	80	95	80
03	106,200	100	115	95
04	141,600	105	125	105
05	185,850	120	135	120
06	238,950	130	150	125
07	327,450	140	160	–
08	424,800	160	170	–
09	575,000	170	180	–

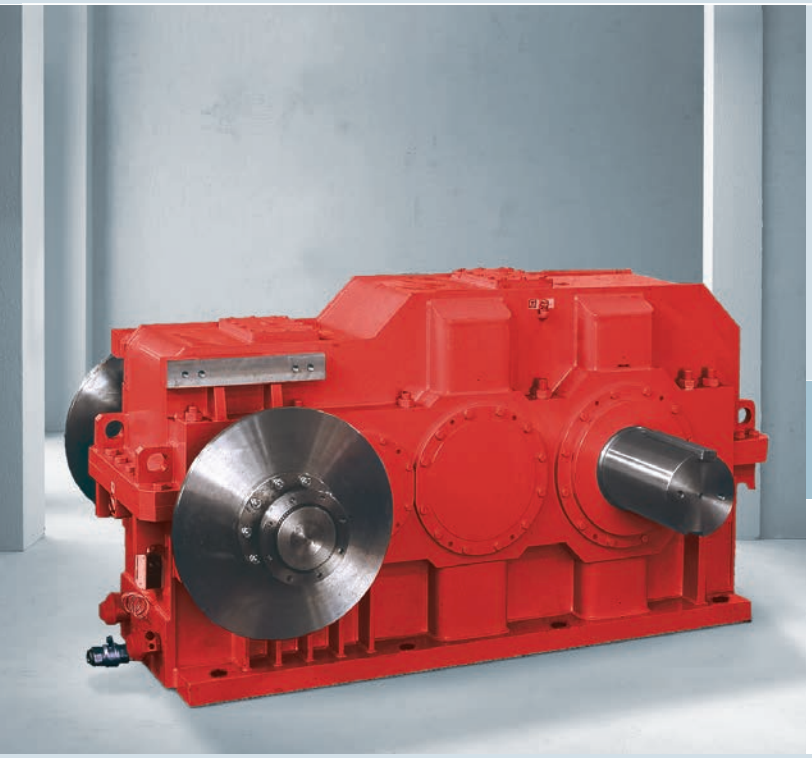
ML Series – Versatile

Tailor-made solutions are available for large machines and systems.

The ML Series meets the specific requirements in the upper torque range from 1.5 to 6 million lb-in and ensures the highest degree of flexibility.

A large variety of modules can be mounted on the input and output shafts of the ML Series gear units. For example, the input shaft may contain a brake on one side and a fan on the other side.

Gear units of the ML Series meet all the strict quality standards that have made SEW gear units so successful on the global market for decades.



Gear units of the ML Series are available in 5 sizes from 1.6 to 6 million lb-in, providing solutions for numerous applications.

The ML Series is particularly suited for higher torque ranges.

ML Series: Facts And Figures

Design features
- Highly customizable to suit a wide range of applications
- Inline (helical) or right-angle (bevel-helical) arrangement
- Welded steel housing construction
- Split housing design
- Horizontal mounting positions
- Available with increased center distance for hoist applications

Advantages
- Welded steel housing allows for more customization, such as center distance
- Easy maintenance due to split housing
- Worldwide service

Preferred applications
- Mining
- Crane construction and hoists (boom hoist, main hoist/winch)
- Large conveyor drives for bulk material handling
- Mill drives for raw material processing
- Large, unique machines in a variety of industrial applications

ML Series

Gear ratios and torques	
ML.P.. helical gear units: 2, 3 and 4 stages, gear ratio i = 5.6 to 315 **ML.R.. bevel-helical gear units: 3, 4 and 5 stages, gear ratio i = 14 to 1,250**	
Gear unit size	**Torque class M_{N2} [lb-in]**
100	1,593,000
110	2,213,000
120	3,098,000
130	4,071,000
140	6,018,000

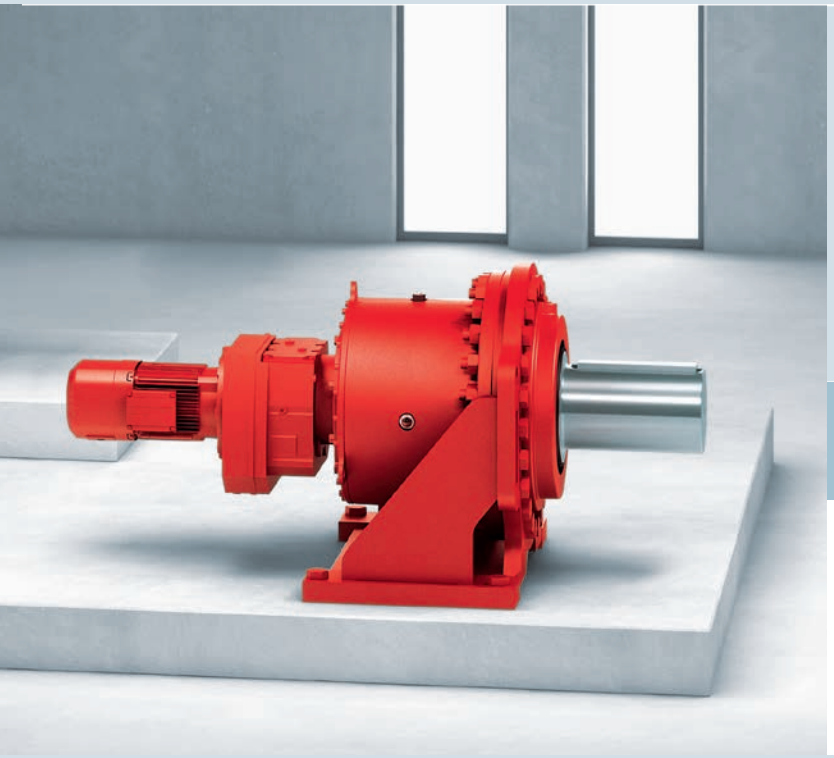
P Series – Standard

Not so long ago, huge transmissions and gears were required to achieve low output speeds and high torques. Today, there is the combination planetary gear unit from SEW. The planetary portion conserves space while the 7-series gearmotor on the input provides additional reduction to achieve higher ratios. The advantages of this completely new type of planetary gearmotor are impressive.

The gear units of the P Series are very compact. The design consists of a 7-series gearmotor directly mounted in front of a planetary gear unit, thereby eliminating couplings, intermediate flanges and adapter flanges that take up space and increase costs. The entire range of SEW's 7-series RF or KF gearmotors is available for mounting onto the planetary input.

The P Series is a standard product - no custom parts needed. Therefore, dimension sheets and 3D models are readily available.

As a modular product, the P Series allows a wide range of combinations, short deliveries, and outstanding performance at an attractive price.



A series of planetary gearmotors with readily available parts.

SEW-EURODRIVE also offers standardized planetary gearmotors for the upper torque range.

P Series: Facts And Figures

Design features

Planetary gear unit on output:
- Transmits high torque
- Very compact
- Contains high torsional rigidity

7-series gearmotor on input:
- Many optional features
- Large number of gear ratios
- (RF) helical or (KF) helical-bevel mount directly to planetary gear units

Advantages
- Numerous options available due to the SEW-EURODRIVE modular concept
- Short, compact - no couplings or adapter flanges
- Standard units mean excellent price, outstanding performance, and quick delivery

Preferred applications
- Low output speed & high torque
- Drying processes in the construction materials industry
- Filling processes in the cement industry
- Slow mixers, rotary filters
- Food industry

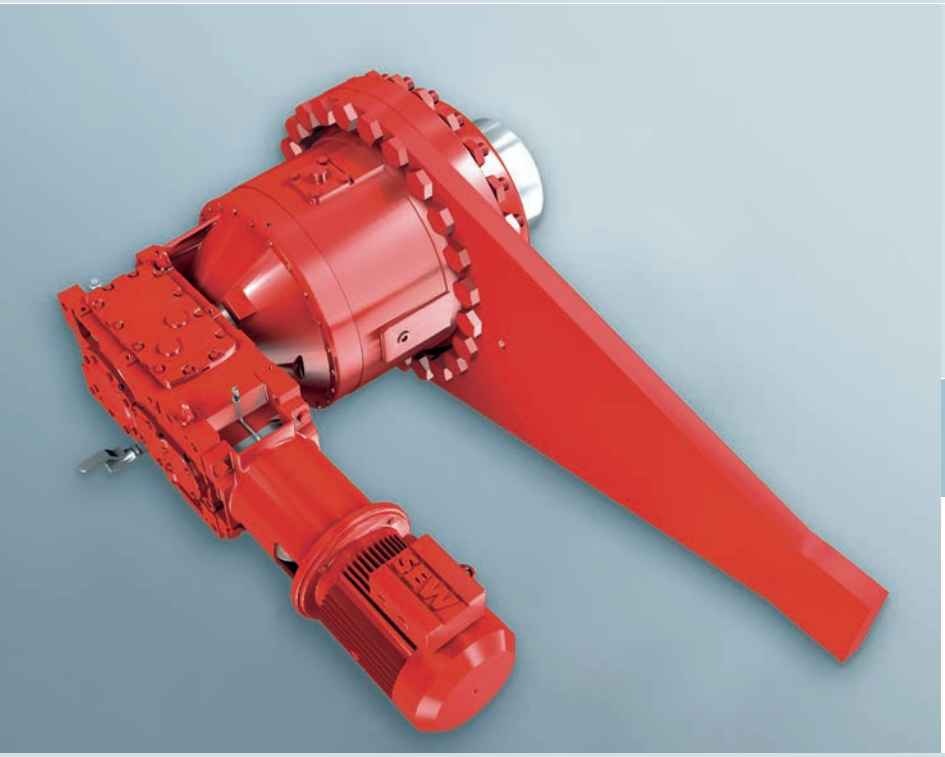
P Series

Gear ratios and torques	
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]**
002	212,000
012	319,000
022	451,000
032	611,000
042	885,000
052	1,097,000
062	1,637,000
072	2,168,000
082	3,177,000
092	3,743,550
102	4,425,000

P.MC Series – High Power Density

Many applications, including those used in bulk material handling or in the environmental and recycling industry, require drives with high torque. SEW-EURODRIVE has the solution: a perfectly matched unit that includes a planetary gear unit plus a standard MC Series helical or bevel-helical gear unit. Using an MC Series on the input instead of a 7-series allows for even greater horsepower and/or higher ratio.

The P.MC gear unit consists of a combination of a planetary gear unit and a primary gear unit from the proven MC Series. All mounting options and additional features of the MC Series are available. All bearings (including backstop) are oil lubricated and supplied by a shared oil chamber.



P.MC Series: applications with high torque

The helical or bevel-helical gears unit of the MC Series provide the input for the P Series planetary gear units.

P.MC Series: Facts And Figures

Design features

Planetary gear unit on output:
- Transmits high torque
- Very compact
- Contains high torsional rigidity

MC Series on the input ...
- Provides application-specific sealing systems and lubricants as well as options for torque arms, mounting flanges, motor brackets, motor adapters, swing bases and drive flange hubs
- Offers wide range of gear ratios

Advantages
- Increased power density due to planetary output stage
- Individual customer solutions using standard components
- Oil lubricated and maintenance-free roller bearings and backstops

Preferred applications
- Low output speed & high torque
- Drying processes in the construction materials industry
- Filling processes in the cement industry
- Slow mixers, rotary filters
- Food industry
- Boom drives for cranes

P.MC Series

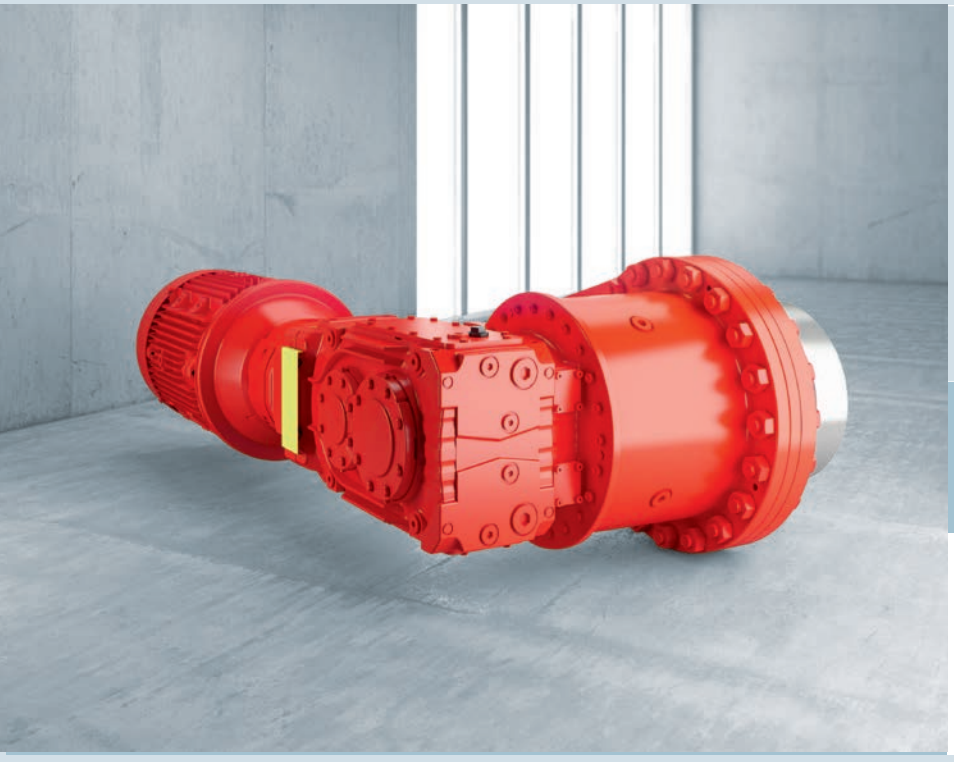
Gear ratios and torques	
P1.MC.. helical/bevel-helical planetary gear units: Gear unit size 002 to 061, gear ratio i = 31.5 to 500 **P2.MC.. helical/bevel-helical planetary gear units: Gear unit size 032 to 082, gear ratio i = 140 to > 5,000**	
Gear unit size	**Torque class M_{N2} [lb-in]**
002	212,000
012	319,000
022	451,000
032	611,000
042	885,000
052	1,097,000
062	1,637,000
072	2,168,000
082	3,177,000
092	3,743,550
102	4,425,000

NEW: P-X Series – High Power Density

Many applications, including bulk material handling and the environmental and recycling industry, require drives with high torque at medium speed. SEW-EURODRIVE offers the solution: a perfectly matched planetary gear unit combined with a standard helical or bevel-helical gear unit.

The P-X gear unit consists of a combination planetary gear unit and primary gear unit from the proven X Series. All mounting options and other features of the X Series are available.

The optimized gear unit housing and shared oil chamber result in an extremely high thermal rating required in high torque environments.



P-X Series: applications with high torque at medium speed.

High output torque and very compact design

P-X Series: Facts And Figures

Design features
- Seven sizes
- High torque at medium speed
- Compact design
- Variable gear reduction range
- Weight-optimized drive
- High radial load (OHL) on output
- Invertible housing
- High thermal rating
- Shared oil chamber

Advantages
- High thermal rating due to optimum exchange of oil between P and X Series gear units
- Application-specific sealing systems and lubricants
- Reduced space and weight due to the use of a motor scoop or adapter
- Reduced costs as no replacement gear unit is needed (invertible housing)
- Can be used at temperatures under –25°C
- Oil lubricated and maintenance-free rolling bearings and backstops

Preferred application areas

All applications requiring medium output speeds with high torques

Examples:
- Apron conveyors and bucket wheel drives in mining
- Filling processes in the cement industry
- Material processing systems, such as mixers and rotary filters
- Drum washers in the pulp and paper industry
- Particle board systems and timber industry
- Shredders used in the recycling industry
- Drying processes in the construction materials industry

P-X Series

Gear ratios and torques	
P-X… helical/bevel-helical gear units: gear units sizes 042 to 102, gear ratio i = 160 to 550	
Gear unit size	**Torque class M_{N2} [lb-in]**
042	885,000
052	1,097,400
062	1,637,250
072	2,168,250
082	3,177,150
092	3,717,000
102	4,425,000

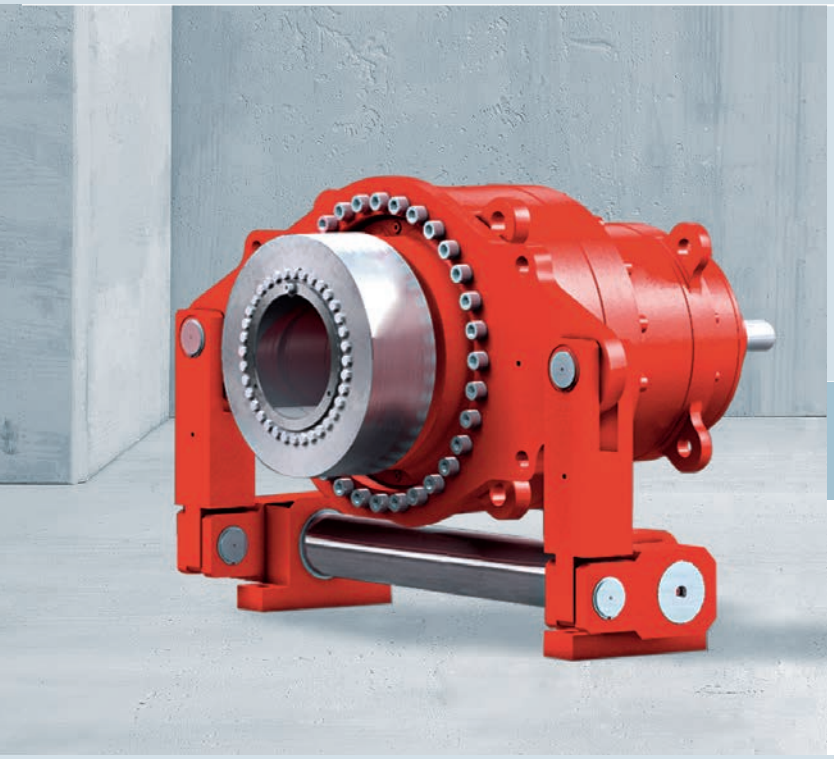
For gear ratios outside this range, please contact us.

NEW: XP Series – Specialized

Applications in the highest torque range generally require highly individual and very specific drive solutions. SEW-EURODRIVE offers a reliable and robust drive for applications where maximum loads under tough conditions are the norm, such as in the sugar industry or in the extraction of raw materials. The XP Series fulfills the necessary requirements with a maximum output torque of 35.4 million lb-in.

XP Series gear units are primarily designed as stand-alone gear units with free input shafts. The number of stages and the individual gear ratios are very flexible and can be adapted to specific customer applications.

XP Series units can also be directly coupled with a modular 7-series gear unit on the input.



XP gear units as custom solutions for the highest output torque ratings

Gear units from the XP Series are also available with torques above the specified torque range.

XP Series: Facts And Figures

Design features
- Highest torque
- High power density
- Maximum flexibility
- Various mounting positions
- Foot or flange mounting
- Can be combined with a 7-series gear unit on the input

Advantages
- Custom solutions
- Very wide choice of gear ratios
- High flexibility when coupled with a modular 7-series gear unit on the input
- Wide range of options
- Worldwide service

Preferred applications
- Materials handling technology
- Raw materials processing
- Timber and paper industry
- Food industry
- Agitators and mixers
- Applications requiring the highest torque

XP Series

Gear ratios and torques

XP planetary gear units: 2 and 3 planetary stages, gear ratio i = 50 to 3,000[1)]

Gear unit size	Torque class M_{N2} [lb-in]	Gear unit size	Torque class M_{N2} [lb-in]
07	885,000	16	7,965,000
08	1,106,000	17	8,850,000
09	1,637,000	18	10,620,000
10	2,168,000	19	14,160,000
11	3,186,000	21	16,815,000
12	3,983,000	22	19,470,000
13	4,425,000	23	22,125,000
14	5,310,000	25	35,400,000
15	7,080,000		

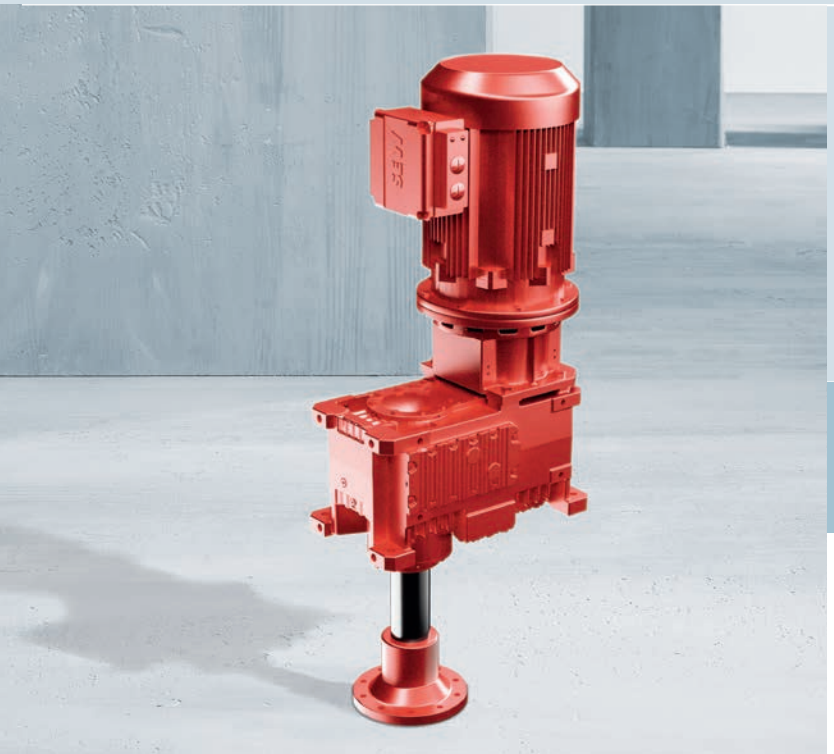
[1)] In combination with 7-series gear units from the SEW modular system

MACC Series – for Air Cooled Condensers

A dedicated gear unit series for air cooled condensers … Reliable, powerful, quiet, and efficient design with high quality components including a rigid housing and industrial bearings. The high-torque MACC Series meets air-cooled condenser demands like fan impeller loads with an extensive speed range, low noise levels and motor weight support.

High thermal capacity due to large housing, cooling ribs, optimized oil level and oil circulation. An optional low-noise axial cooling fan also increases thermal capacity.

For harsh conditions, a reliable surface treatment is available, along with additional easy-to-install accessories.



Also available on request:

– Special ratio
– ATEX environment

Reliable surface treatment for aggressie ambient conditions.

MACC Series: Facts And Figures

Design features
- Enhanced motor lantern
- Drywell
- Shaft end pump for pressure lubrication
- Cooling fan
- Backstop, internal design

Advantages
- Optimized thermal rating
- Rigid housing
- High thrust load capacity on low speed shaft (LSS)

Preferred application areas
- Air cooled condensers

MACC Series

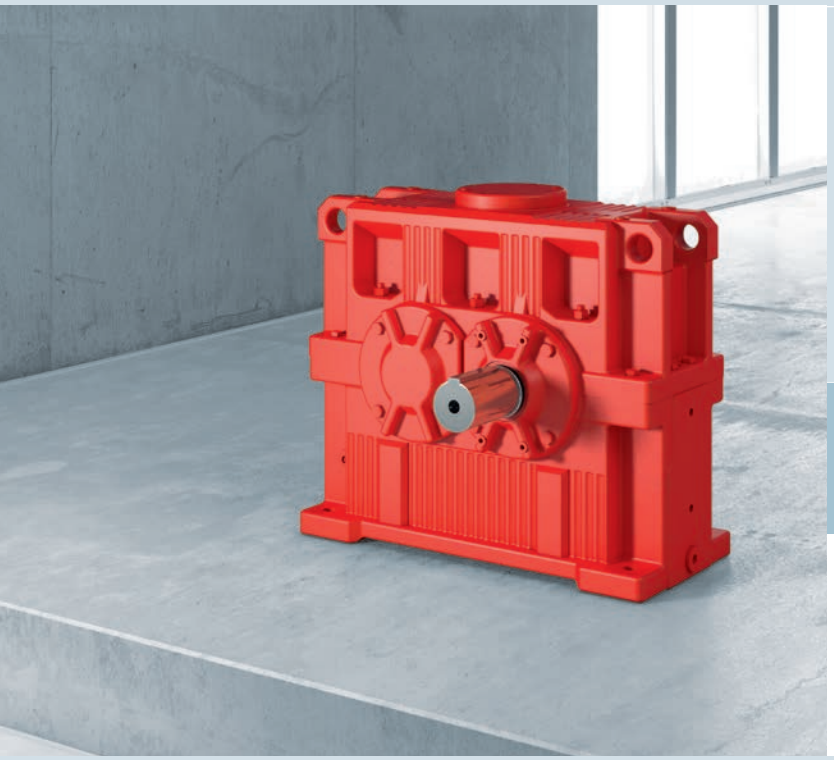
Gear unit size	H	W	L	Torque class M_{N2} [lb-in]	Nominal ratio range
05	484	480	897	185,850	9 – 25
06	516	530	992	247,800	9 – 25
07	540	570	1,055	327,450	9 – 25
08	585.5	716	1,187	451,350	9 – 25
09	606	730	1,267	584,100	9 – 25

M1 Series – Low Ratio Applications

Applications in the low-ratio range require efficient, powerful and reliable drives. Our M1 Series fits applications that requires a small differential from the operating speed of the motor and the speed of the load. SEW-EURODRIVE offers a solution to the paper mill, waste water plant, and vacuum, slurry and centrifugal pump industries.

The M1 Series gearboxes are single-stage gear units for applications with low ratios in the range of 1.12 to 7.1. The maximum nominal torque is 1.5 million lb-in.

Typical fields of application include pump drives or rollers and refiners (paper industry) where foot-mounted helical gear units are required.



The horizontal, split housing design is maintenance-friendly.

Worldwide service to improve your productivity.

M1 Series: Facts And Figures

Design features
- Fan or coil cooled
- Optional oil heating
- Sealed for rough conditions

Advantages
- Optimized thermal rating
- Easy maintenance
- Fine-tuned range

Preferred application areas
- Paper industry
- Pumps
- Waste water treatment
- Many other applications requiring low ratios

M1 Series

Size M1P	Nominal output torque M_{N2} [lb-in x 1,000]																
	Nominal ratio i_N																
	1.12	1.25	1.40	1.60	1.80	2.00	2.25	2.50	2.80	3.15	3.55	4.00	4.50	5.00	5.60	6.30	7.10
19	13.0	13.7	14.5	15.0	15.5	15.0	14.9	14.1	13.5	12.8	11.6	10.7	9.6	8.1	6.7	6.1	4.5
20	46.2	48.8	51.4	53.5	56.1	58.4	60.5	62.7	60.1	56.8	52.5	48.3	43.9	38.6	33.0	27.3	22.2
30	83.4	88.0	92.9	96.5	100.9	105.3	107.1	108.9	108.9	109.7	104.4	95.6	88.5	75.1	61.3	57.5	45.3
40	115.1	121.2	128.3	133.6	139.8	145.1	151.3	157.5	162.0	164.6	153.1	140.7	127.4	113.3	97.4	82.1	67.2
50	169.0	177.9	188.5	196.5	205.3	213.3	223.0	230.1	238.1	231.0	215.9	193.8	175.2	154.9	136.3	114.2	92.9
60	217.7	230.1	242.5	253.1	266.4	277.9	288.5	297.4	304.4	306.2	305.3	280.5	250.5	222.1	185.9	160.2	135.4
70	310.6	328.3	346.9	360.2	377.0	394.7	408.9	424.8	437.2	450.5	433.7	399.1	358.4	320.4	282.3	241.6	199.1
80	416.8	439.8	464.6	484.1	509.8	526.6	552.2	569.1	591.2	608.0	624.8	588.5	531.0	480.6	416.8	354.9	284.1
90	524.8	554.0	585.9	610.7	639.9	665.5	693.8	719.5	741.6	763.8	786.8	806.2	761.1	631.9	586.8	516.0	-
100	728.4	770.8	816.9	850.5	885.0	920.4	964.7	1000.1	1026.6	1062.0	1097.4	1124.0	1115.1	947.0	870.0	781.5	-
110	938.1	991.2	1053.2	1097.4	1150.5	1194.8	1247.9	1292.1	1336.4	1371.8	1416.0	1460.3	1486.8	1177.1	1194.8	1088.6	-

Segmented Girth Gear

Girth gears are used to drive large, rotating systems such as dryers, rotary kilns or horizontal mills. They are installed around the circumference of these systems and transfer the drive torque from the gearmotor to the rotary cylinder. SEW-EURODRIVE girth gears are designed for maximum application flexibility including production, transportation and assembly.

In comparison to girth gears made of conventional materials, girth gears made of ADI (Austempered Ductile Iron) weigh less than half due to their amazing material characteristics, but offer the same performance and the same level of safety. The advanced configuration of the girth gear offered by SEW-EURODRIVE has many advantages including increased segmentation for maximum application flexibility.

Options include:
- Segmented girth gears
- Drive pinion and, if required, pedestal bearing
- Fastening parts for the girth gear: Mounting springs or mounting flange
- Main gear unit
- Motors
- Auxiliary drives
- Lubrication system
- Foundation or base frame
- Couplings and covers
- Condition monitoring
- Installation and drive startup

For large rotating systems, the versatile girth gear offers flexibility and performance benefits.

Segmented Girth Gear: Facts And Figures

Design features
- Girth gear pitch diameter up to 53 ft. Larger diameters are possible
- Maximum width 2 ft
- Maximum power 4,000 kW per pinion
- Maximum pitch line velocity 6 m/s
- Girth gear module 20, 25, 30, and 40 mm
- Calculation according to standard ISO 6336 (AGMA on request)

Advantages
- Feeder and heat sink design guarantee a seamless casting quality
- Simple handling: Segmented girth gears can be transported in standard cost-effective containers
- Easy segment exchange. No need to dismantle the whole ring.
- Low weight: ADI has an above-average contact fatigue strength due to its cold work hardening properties
- Compact and lighter design compared to the traditional solution
- Lower weight is advantageous for handling and assembly, and circumferential velocity
- Longer service life: ADI girth gear is nearly wear-free with the correct dimensioning, load, and lubrication
- Short delivery: The small segments allow for a faster production and therefore a shorter delivery

Applications

Industry sectors
- Chemicals
- Environment
- Mining
- Power
- Pulp and paper industry
- Steel
- Cement

Application examples
- Ball mills
- Rotary kilns
- Rotary dryers and calciners
- Drum brakers
- Drum pulper and drum screens

Typical application sizes

Mill	Rotary kiln
Up to about 15 MW	Up to about 1 MW
Up to about 53 ft.	Up to about 30 ft.
Flange	Leaf spring
High (10 to 20 rpm)	Low (1 to 2 rpm)

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