

Universal and scalable variety

CMP, DS/CM synchronous servomotors and
CT/CV asynchronous servomotors
for direct mounting to R, F, K, and S gear units



Servomotors and standard gear units – a perfect combination

Due to the increased power density of machines and ever decreasing space available in systems, servomotors are entering areas that – so far – have almost exclusively been predominated by asynchronous motors. Thus, there are new fields of application and solutions can be implemented more effectively.



The 7 series standard gear units provide efficiency, power density, and a variety of variants.

The synchronous and asynchronous servomotors provide precision, dynamic and torque in a compact design.

The combination of these gear units and motors sets global standards. Now, the innumerable variety of the SEW-EURODRIVE modular system is also available for servomotors, offering you all the freedom you require.



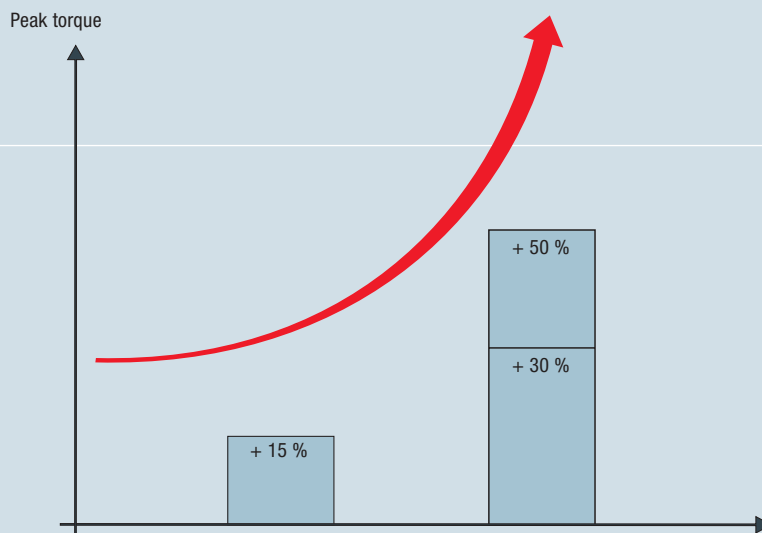
Advantages at a glance:

- A rigid housing with optimum power flow
- Favorable force progression in a monoblock housing
- Sealing surfaces are not subject to any load pressure
- Positive shaft-hub connection
- Positioning tasks also in reduced backlash version
- New project planning guidelines use additional power reserves
- Extremely compact dimensions in combination with CMP motors
- Prefabricated cables for minimum startup times

New project planning guidelines use additional power reserves

Now, especially for highly dynamic servo applications, the helical, parallel shaft helical, helical-bevel and helical-worm gear units are even more serviceable. On average, the permitted torque peaks have been increased by 15 % – in some cases, the higher gear unit utilization

alone results in increases of up to 30 %, in individual cases even up to 50 %. If this allows for a smaller unit to be used, the reduced inertia additionally increases the maximum possible angular acceleration.



New standards in servo technology

System solutions with servo gearmotors:

All designs and sizes of the helical, parallel shaft helical, helical-bevel and helical-worm gear units can now also be mounted to the DS, CM

and CMP synchronous servomotors and to the CT/CV asynchronous servomotors from SEW-EURODRIVE.

The /R option, i.e. reduced circumferential backlash in conjunction with high efficiency ratings and a high endurance gearing, provides for servo-typical advantages for these gear units, such as high positioning accuracy.

The MOVIDRIVE® drive inverters, the powerful MOVIAXIS® series and their diverse options provide for functional, scalable and intelligent systems that ensure the maximum utilization of all components.



The servo helical gearmotors provide for the best performance in any position

Six single-stage and thirteen two- and three-stage sizes covering a power range from 31 to 18,000 Nm – the helical gear units always offer an optimum ratio between performance and space requirements. The proven modular system and the strict quality criteria allow SEW-EURODRIVE to offer a fine graduation and variety of torque ratings as well as gear ratios that is peerless.

Space-saving and low weight

The variety of sizes meets almost any requirement. The RX57 to RX107 single stage gear units offer space-saving solutions for a high output speed. If every kilogram counts, you may benefit from a solution with multi-stage gear units:

Due to their die-cast aluminum design, the R07, R17 and R27 models are three particularly efficient lightweights – ideal as satellite drives and for use in light machine constructions.



Whether for finely stepped torque rates and gear ratios or for high output speed rates – a helical gear unit is always the right choice.

Servo helical gearmotors

Technical data	Synchronous servo gearmotors		Asynchronous servo gearmotors
	CMP	DS/CM	CT/CV
	RX57 - RX77	RX57 - RX107	RX57 - RX107
	R07 - R77	R17 - R107	R17 - R167
Gear ratios [i]	1.3 ... 6.41	1.3 ... 8.23	1.3 ... 8.23
	3.21 ... 199.81	3.37 ... 216.28	3.37 ... 255.71
Output torque rates [Nm]	63 ... 215	63 ... 830	63 ... 830
	31 ... 820	45 ... 4300	45 ... 18000
Circumferential backlash (/R option) [arcmin]	–	–	–
	5 ... 14	5 ... 14	5 ... 14

Preferred application areas

- Winders
- Conveyor belts, typically in M4 mounting position
- Cutter drums



The advantages at a glance

- Cost-efficient gear unit in axially parallel design
- Flexible foot or flange mounting
- Complete torque graduation due to 14 sizes from 50 to 18,000 Nm
- Single stage design for higher output speed rates
- Also available in reduced backlash design

The servo parallel shaft helical gearmotors are truly great – even in confined space conditions

In cramped space conditions, the exceptionally lean parallel shaft helical gearmotors convince with their high performance. Even under adverse conditions, the wide torque range from 87 to 18,000 Nm as well as the diverse mounting positions and designs allow for a variety of possible applications.

Compatible and powerful

A standard drive that is not only appreciated because of its power, but also because of its construction characteristics. There is always a place for parallel shaft helical gearmotors by

SEW-EURODRIVE to reliably implement all kinds of drive solutions. They are typically used in materials handling and process engineering applications.



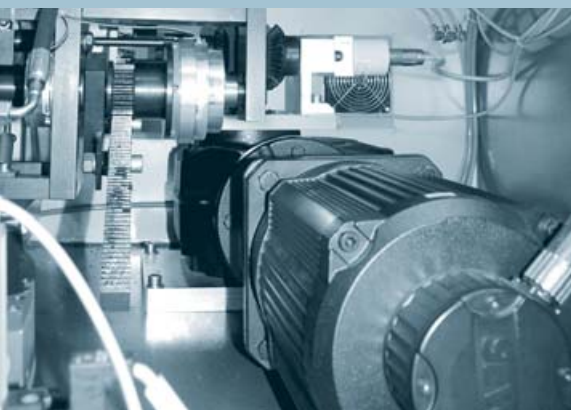
Even under adverse conditions, there will always be room for parallel shaft helical gearmotors.

Servo parallel shaft helical gearmotors

Technical data	Synchronous servo gearmotors		Asynchronous servo gearmotors
	CMP	DS/CM	CT/CV
	F27 - F77	F27 - F107	F27 - F157
Gear ratios [i]	3.77 ... 228.99	3.77 ... 276.77	3.77 ... 276.77
Output torque rates [Nm]	87 ... 1500	87 ... 7680	87 ... 18000
Circumferential backlash (/R option) [arcmin]	5 ... 12	5 ... 12	5 ... 12

Preferred application areas

- X axis in panel gantries
- Gantry order picking robots
- Travel axes in palletizing systems
- Main drives
- Trolleys



Advantages at a glance:

- Foot or flange-mounted version
- Available with solid or hollow shaft
- Customer shaft can be passed through
- Backlash-free connection of the customer shaft with shrink disk or TorqLOC® hollow shaft mounting
- Space-saving and lean design
- Torque arm with flexible rubber buffers
- Also available in reduced backlash design

In each design, the helical-bevel servo gearmotors provide durable power

The compact design of the 7 series is most obvious in our helical-bevel gear units. They are sophisticated right-angle gear units for all engineering applications that require space-saving installation. At the same time, they offer a powerful torque range from 125 to 50,000 Nm.

Wear-free and energy-efficient

In both directions of torque and at any input speed, the helical-bevel gear units by SEW-EURODRIVE provide a high degree of efficiency of approx. 95 percent – reliably in the long run. The gearing is designed for high endurance and thus makes for a high-torque, wear-free drive.

The remarkably high efficiency of our helical-bevel gearmotors makes them energy-savers. Their long maintenance-free service life is yet another reason for using both AC asynchronous motors and asynchronous and synchronous servomotors for every occasion.



In any application, these compact power packs provide a high degree of efficiency.

Helical-bevel servo gearmotors

Technical data	Synchronous servo gearmotors		Asynchronous servo gearmotors
	CMP	DS/CM	CT/CV
	K37 - K77	K37 - K107	K37 - K187
Gear ratios [i]	3.98 ... 154.02	3.98 ... 176.05	3.98 ... 179.86
Output torque rates [Nm]	125 ... 1550	125 ... 8000	125 ... 50000
Circumferential backlash (/R option) [arcmin]	5 ... 13	5 ... 13	5 ... 13



Preferred application areas

- Lifting axes in gantries
- Timing belts with angle-shaped power flow
- Main drives with angle-shaped power flow
- Winding drives and cutter drums



Advantages at a glance:

- High permitted overhung loads
- Angle-shaped power flow with solid or hollow shaft
- A wide setting range in conjunction with CT/CV; typical for winding applications
- Maximum torque rates of up to 50,000 Nm
- Backlash-free connection of the customer shaft with shrink disk or TorqLOC® hollow shaft mounting
- Also available in reduced backlash design

The distinguishing feature of the helical-worm servo gearmotors is their low-noise

Their remarkable efficiency makes these drives applicable for any sector – with customized torque and speed rates. Due to their large ratio in the worm gear stage and their quiet operation, these gearmotors represent a cost-efficient solution for simple applications. They are exceptionally powerful: the torque range runs from 92 to 4,000 Nm.

Powerful and cost-efficient

Being designed as right-angular drives, they are very space saving. Their good dampening properties are yet another advantage of the simple, mechanical design. As the power transmission to the drive shaft is linear, torque shocks are

reduced. The noise of this type is very low, even when operating at full capacity. Thus, the helical-worm gearmotors by SEW-EURODRIVE are even used for stage lifts.



The helical-worm gear units are even suitable for niche applications of drive technology.

Helical-worm servo gearmotor

Technical data	Synchronous servo gearmotors		Asynchronous servo gearmotors
	CMP	DS/CM	CT/CV
	S37 - S67	S37 - S67	S37 - S67
Gear ratios [i]	6.80 ... 75.06	6.80 ... 75.06	6.80 ... 75.06
Output torque rates [Nm]	43 ... 520	43 ... 520	43 ... 520



Preferred application areas

- Format-dependent adjusting axes with compact design
- Positioning axes – to some extent
- Haul-offs
- Winders



Advantages at a glance:

- Angle-shaped power flow with solid or hollow shaft
- Quiet drive for sensitive areas
- Cost-efficient gear unit with angle-shaped power flow
- Torque arm possible in any direction
- Backlash-free connection of the customer shaft with shrink disk or TorqLOC® hollow shaft mounting

How we're driving the world



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