

Always one step ahead:
**The 7 Series with the right drive
for every application**

Gearmotors



We don't stop at just setting standards

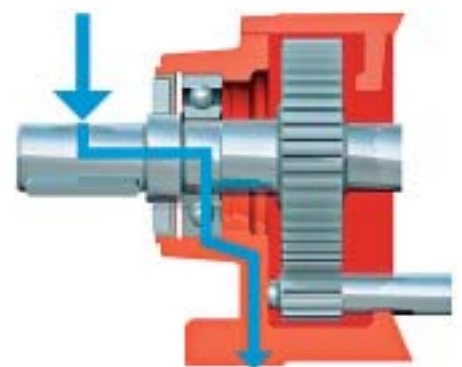
The gearmotors from SEW-EURODRIVE bear a distinctive wave design on the housing. This design not only gives the motors a unique appearance easily recognized, it also characterizes the unit's hidden strengths. The results speak for themselves: leading edge technology, high impact load capacities, top power density and a wide variety of designs to suit every application.

Torque and permissible overhung loads are impressively high in relation to the structural volume of the motor. This level of performance has been made possible by the compact and extremely rigid housing with its low weight and optimum magnetic flux. The sealing surfaces are not subject to any load pressure as the force flows through the one-piece housing. For maximum safety during use, all the shaft-keyway joints in the gearmotors are positive connections. Precision positioning tasks are taken care of by the helical, parallel and helical-bevel gearmotors, also available in reduced backlash design.



The 7 Series incorporates power and variety in a scope offered only by SEW-EURODRIVE

The optimized power flux ensures that forces are not applied to the sealing surfaces and effectively prevents leakage



Driving the world: with innovative drive solutions for all branches of industry and for every application. Products and systems from SEW-EURODRIVE for any application, worldwide! SEW-EURODRIVE products can be found in a variety of industries, e.g. automotive, building materials, food and beverage as well as metal-processing. The decision to use drive technology "made by SEW-EURODRIVE" stands for safety regarding functionality and investment.





Helping you set your own priorities

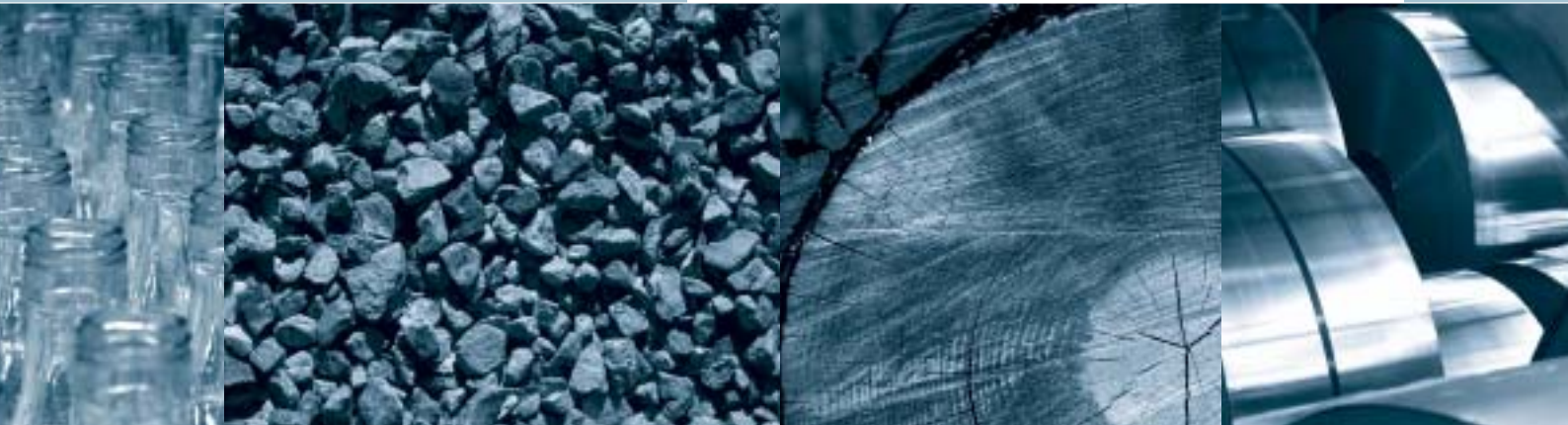
You can best decide how you want to set up your system to suit your needs – the millions of combinations made possible by the modular system gives you the freedom to do just that, even as far as the type of fixture for assembly and integration into the system are concerned. Even with adapters for IEC and NEMA-compliant motors or standard market servomotors, the SEW-EURODRIVE solution fits best.

Unique not only as far as the range of sizes and gear ratios is concerned, our gearmotors have even more to offer: exemplary reliability, overload capacity and long service life, the results of our proficiency in serial production. Our benchmarking criteria and quality control system eliminate every weak link in the production chain. Every component must meet the highest requirements.

Reliability and environmental friendliness are the result of our high-quality sealing concept and housing design. The use of oil seals and resilient sealing surface gaskets in combination with the favorable magnetic flux prevents leakages and prolongs maintenance-free service life. The units are also exceptionally quiet. This is achieved by precision gearing, particularly torsionally rigid housing and by the wave design that absorbs sound waves and significantly reduces noise levels.



The capabilities of the gearmotors illustrates clearly why SEW-EURODRIVE is represented by its drive technology in the most important branches the world over. Power density, design diversity, overload capacity and reliability give the user the security desired – optimally positioned and highly efficient in every application.



The helical gearmotors for complete satisfaction

Six single-stage and fourteen multi-stage gearmotors covering a power range of 70 to 18.000 Nm maintain optimum equilibrium between power and space requirements. The tried and proven modular system together with their stringent quality criteria make it possible for SEW-EURODRIVE to supply torques and gear ratios that are incomparably closely spaced and widely varied. This exceptional diversity of design sets new standards in this field of drive engineering.

More efficiency in every situation

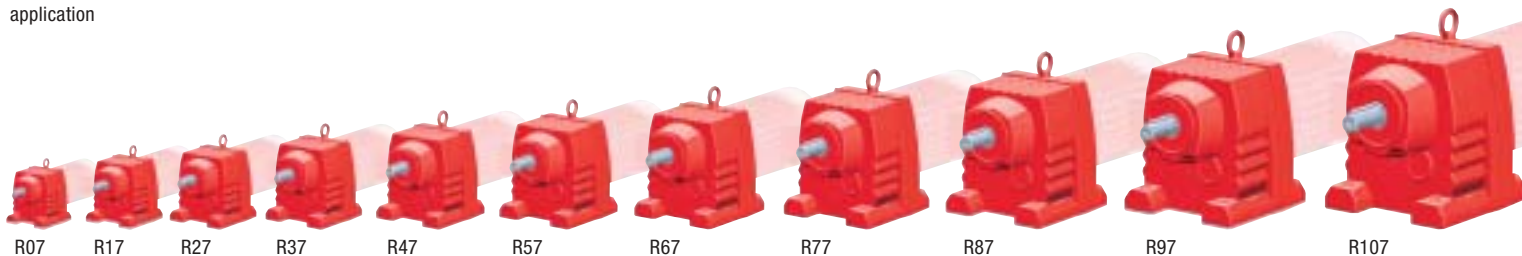


The variety of sizes allows all requirements to be met. For high output speeds, the RX57 to RX107 series of single-stage gear units offers compact solutions. And when weight-watching is an issue, we have something special to offer from our range of multi-stage gear units: The use of aluminum casting makes the R17 and R27 models particularly light – ideal for satellite drives and for use in light machine constructions.

Every design has efficient immersion lubrication and a breather valve which not only help assure performance reliability, but also secure other no less important benefits such as long service life and low maintenance requirements.

Whether with closely spaced torque steps and ratios or high output speeds – a helical gearmotor fits in every situation

The complete program of helical gearmotors provides the correct size and power for every application



R07

R17

R27

R37

R47

R57

R67

R77

R87

R97

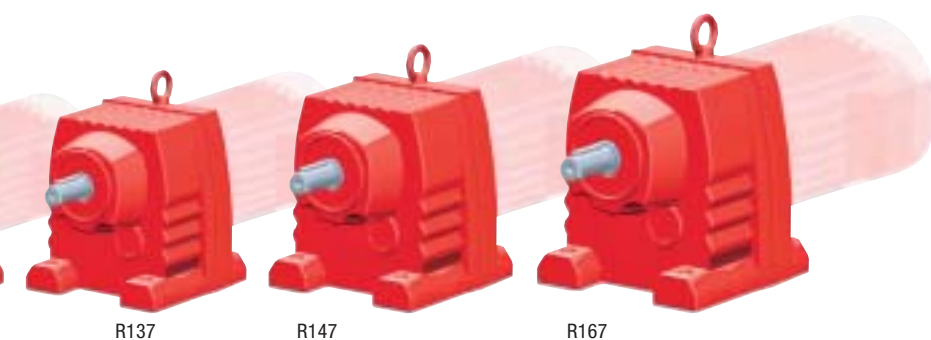
R107

Helical gearmotors

Type	Maximum torque [Nm]	Gear ratios	No. of ratios
RX57	70	1.30 – 5.50	14
RX67	135	1.40 – 6.07	13
RX77	215	1.42 – 8.00	16
RX87	405	1.39 – 8.65	16
RX97	595	1.42 – 8.23	15
RX107	830	1.44 – 6.63	13
R07	50	3.21 – 78.24	29
R17	85	3.83 – 81.64	31
R27	130	3.37 – 135.09	35
R37*	200	3.41 – 134.82	35
R47*	300	3.83 – 176.88	43
R57*	450	4.39 – 186.89	37
R67*	600	4.29 – 199.81	36
R77*	820	5.31 – 195.24	32
R87*	1,550	5.30 – 246.54	35
R97*	3,000	4.50 – 289.74	36
R107*	4,300	4.92 – 251.15	34
R137*	8,000	5.15 – 222.60	30
R147*	13,000	5.00 – 163.31	25
R167*	18,000	10.24 – 229.71	28

Multi-stage gear units achieve gear ratios of up to $i > 27,000$

* Also available in low backlash design



R137

R147

R167

Parallel shaft helical gearmotors: the fitting solution for tight spaces

Where installation space is limited, the slim-lined parallel shaft helical gearmotors cut a particularly good figure. The wide torque range providing torque from 130 to 18,000 Nm, and the many different sizes and designs means that even under the most unfavorable conditions, a wide variety of applications can be catered for.

Drives for every branch



A standard drive that is not only favored because of its constructional properties. Typically found in conveyor and materials processing applications, the parallel shaft helical gearmotors from SEW-EURODRIVE can always be relied on to solve a diversity of drive tasks.

Even under the most unfavorable conditions, parallel shaft helical gearmotors always find their place

Parallel shaft helical gearmotors

Type	Max. torque [Nm]	Gear ratios	No. of ratios
F27	130	4.16 – 140.74	31
F37*	200	3.77 – 128.51	33
F47*	400	4.99 – 190.76	32
F57*	600	5.18 – 199.70	34
F67*	820	3.97 – 228.99	37
F77*	1,500	4.28 – 281.71	39
F87*	3,000	4.12 – 270.68	36
F97*	4,300	4.57 – 276.77	40
F107*	7,680	6.22 – 254.40	32
F127*	12,000	4.68 – 170.83	28
F157*	18,000	11.92 – 267.43	27

Multi-stage gear units make gear ratios up to $i > 31,000$ possible

* Also available in low backlash design

Helical-bevel gearmotors yield up to 50,000 Nm on a constant basis

The principle of compact design as applied to the generation of 7 Series units is most clearly represented by the helical-bevel gear unit. These units are sophisticated angular gear units for all mechanical engineering applications demanding space-saving installation. At the same time they also provide a powerful torque range extending from 200 to 50,000 Nm.

Helical-bevel gear units from SEW-EURODRIVE provide a high degree of efficiency of over 96 percent in both torque directions and at all input speeds. A performance designed to last – high-endurance gearing gives drives full-force torques while making them wear-free.

Energy saving, low-maintenance

The remarkably high efficiency of our helical-bevel gearmotors makes them into real energy-savers. The enduring maintenance-free service life is yet another reason that

you can use not only AC asynchronous motors but also asynchronous and synchronous servomotors for every occasion.

Compact and strong, these bundles of energy are a popular choice for every application because of their efficiency



Helical-bevel gearmotors

Type	Max. torque [Nm]	Gear ratios	No. of ratios
K37	200	3.98 – 106.38	26
K47	400	4.64 – 131.87	28
K57	600	4.69 – 145.14	28
K67	820	5.20 – 144.79	27
K77	1,550	7.24 – 192.18	29
K87	2,700	7.21 – 197.37	28
K97	4,300	8.71 – 176.05	25
K107	8,000	8.69 – 143.47	24
K127	13,000	8.68 – 146.07	21
K157	18,000	12.65 – 150.41	17
K167	32,000	17.34 – 164.50	15
K187	50,000	17.18 – 179.86	18

Ratios up to $i > 32,000$ can be achieved with multi-stage gear units.

All gear unit types are also available in low backlash design.

Helical-worm gearmotors – for thinking round corners

Due to their excellent economic efficiency, these drives can be used in every branch of industry – tailored individually to torque and speed requirements. The gear ratios afforded by the worm gear stage, and the low noise levels during operation make these gearmotors ideal low-cost solutions for simple applications. And yet, they can deliver quite a powerful performance: the torque ranges from 92 to 4,000 Nm.

Simple, practical and unobtrusive



Installation of angular gear units is particularly space-saving. The attenuation characteristics are a further bonus resulting from the simplicity of the mechanical design. As a result of the longitudinal application of the force on the input shaft, the torque impulses are dampened.

In spite of their strength, the noise level produced is very low, even for this type of gear unit. This means that our helical-worm gearmotors can be used even for stage elevators.

Our helical-worm gear units fill even the smallest niches in drive engineering

Helical-worm gearmotors

Type	Max. torque [Nm]	Gear ratios	No. of ratios
S37	92	6.80 – 157.43	30
S47	170	7.28 – 201.00	31
S57	295	7.28 – 201.00	31
S67	520	7.56 – 217.41	33
S77	1,270	8.06 – 256.47	37
S87	2,280	7.88 – 288.00	36
S97	4,000	8.26 – 286.40	34

Multi-stage gear units make gear ratios of up to $i > 33,000$ possible

Flexibility even on the drive end



The input shaft assembly and different adapters are the best examples of how our gear units can increase efficiency everywhere and in every drive

In line with its family of gear units, SEW-EURODRIVE also provides optimum solutions for motorizing the drive end, increasing both flexibility and efficiency. Input covers and motor adapters are characterized by their compact dimensions, low weight and long service life. Tailored specifically to our gear units, these components ultimately increase the economic efficiency of the drive as a whole.

SEW-EURODRIVE offers eight different cover sizes for different tasks. Depending on the gear unit and drive tasks involved, these options optimize connection to the drive. Take for example height adjustment of cover's of which the motor mounting platform height adjustment simplifies assembly and startup. Or again, the integrated back stop ensuring compact drive design and optimum operation.

Adapters open up more possibilities

In addition to the integrated torque limiting coupling, there are also a variety of adapters with integrated hydraulic centrifugal couplings. As a standard, the centrifugal coupling comes with protection against overheating and it can optionally be equipped with an integrated mechanical brake and/or integrated backstop. The AM adapter series means that all IEC motors in sizes 63 to 280 and all NEMA motors in sizes 56 to 365 can be fitted to the 7 Series gear units. The AQ adapter is for servomotors; these can be either servomotors with interlocking keyed connections (AQA) or non-positive connections with clamping ring hubs (AQH).

Planetary gearmotors for moving with the greatest precision, even in the largest applications

The compact, low backlash planetary gear units in both single-stage and multi-stage design can handle the most demanding positioning tasks – powerfully and with the utmost precision. The compact design of these units is particularly advantageous when it comes to cramped space conditions.

The highest quality in both production and assembly guarantee circumferential backlash of less than six angular minutes or less than three angular minutes in the reduced versions. Additional measures can even produce circumferential backlash of less

than one angular minute. This low backlash together with a wide variety of integer ratios delivers the highest possible precision in all positioning tasks.

The big jobs, such as typical heavy engineering tasks, are taken care of by our heavy duty industrial gear units. The helical gear, bevel gear, and planetary gear units reliably produce torque of more than 1,000,000 Nm.



The particularly compact planetary gearmotors (left) or the particularly powerful planetary gearmotors (right) – power and precision for every application.



Quality, even in the lower ranks

The single-stage SPIROPLAN® right-angle gearmotors deliver their power reliably and quietly: in a power range of up to 0.09 to 1.1 kW, the Spiroplan series delivers output torques of up to 70 Nm thanks to the particularly quiet, wear-free gearing. In combination with its compact design and light-weight aluminum housing, the unit is almost perfectly discreet.



The SPIROPLAN® angular gearmotors round off the range and variety of our gearmotors program to perfection

Discover the endless possibilities – all you need is a PC

Even without detailed knowledge of our products, you can use the EKAT, our electronic catalog, to find the right drive quickly and simply. You only need to enter values such as power, torque, speed and gear unit type. The EKAT is a straight-forward PC application for Windows 95/98/NT4.0/2000.

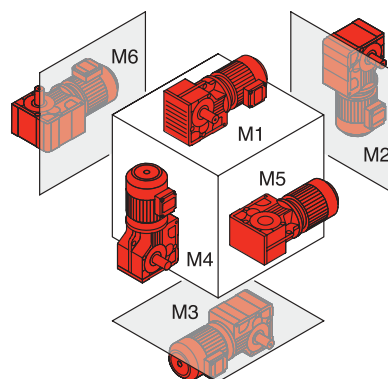
The data of the complete gear unit program including planetary gear units with AC motors and drives with particularly low speed ranges are contained in EKAT. For quick and focused product selection, specification data input is supported by both graphics and texts. The selection of certain search options optimizes the display of all the relevant products.

By displaying the most important data in the selection list, it is possible to quickly compare the different products. For a better comparison of different drives, for instance the different kinds of gear unit types with the same motor, several selection lists can be displayed simultaneously beside each other.



Put your unit exactly where you want it – our mounting positions make it possible

Once you have chosen the right type of unit for the job, you have to find the right mounting position. Our mounting positions make this an easy task: you just select the installation position for the gear unit from only six different mounting positions, M1 to M6. This simple principle is based on the standardization of the mounting positions for all the gear unit types and the reduction of the mounting position designations.



Intelligent electronics to smarten up our drives

In the field of drive electronics we have the right solutions for every requirement and every task. Take, for instance, our frequency inverters: MOVITRAC® 07 for every application. This compact frequency inverter providing comprehensive functionality together with simple operation.

Our intelligent drive inverters, MOVIDRIVE® and MOVIDRIVE® *compact*, are equipped with the IPOS^{plus}® positioning and sequence control as a standard. This optional functionality allows even the most difficult drive tasks to be resolved economically and flexibly.

We have complete future-safe system solutions for decentralization purposes. MOVIMOT®, the gearmotor with the integrated frequency inverter, and MOVI-SWITCH®, the gearmotor with the integrated circuit breaker and protective function are the compact specialists for decentralized drive application. The custom-designed field distributors and cable systems round off our system to help you optimize the implementation of your decentralized systems and engineering concepts.

This program will
always have the perfect
solution for you:
MOVIMOT® (right)
MOVIDRIVE®
(below left)
or MOVITRAC® 07
(below right)





How we're driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.



With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow's problems today.

With online information and software updates, via the Internet, available around the clock.

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Driving the world

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