

**MORE TORQUE**

# **POWERFUL** **WORM GEAR UNITS**

The new S..7p helical-worm gear units

**up**  
**to date**

# SPACE- SAVING, COST-EFFECTIVE ENDURANCE RUNNERS.

Their cost-effectiveness comes from their simple design. Thanks to the special coordination of torque and speed, our helical-worm gear units enable you to make the most of the space that is available for their installation. Our new S..7p (p for power) series offers even higher torque in all seven sizes, thus also delivering a higher power density. Torque on the S..7p series is between 7.5 and 38% higher than on standard S..7 helical-worm gear units.

The increased maximum permissible torques ( $M_{amax}$ ) result in higher service factors ( $f_b$ ) and therefore provide greater safety when using the gear units as part of a system. When planning a brand-new project, it may also be possible to use a smaller gear unit size. The higher  $f_b$  factors also result in some new permissible gear unit-motor combinations.

## Lubrication

Besides lubricating the gearing, gear unit oils also play a significant role in dissipating heat in gear units. Our new lubricant SEW GearOil Poly boosts the performance of the helical-worm gear units by reducing friction in the gearing and improving heat dissipation. SEW GearOil Poly reduces heat generation by up to 25 °C compared with mineral lubricants and by up to 7 °C compared with other conventional polyglycol oils on the market. As a result, the S..7p helical-worm gear units can be pushed to a higher torque. SEW GearOil Poly forms a highly effective lubrication film, which increases the service life of both the lubricant itself and wear parts such as sealing rings and bearings. SEW GearOil Poly also improves the efficiency of the helical-worm gear units.



## YOUR BENEFITS

- Torque increase from +7.5% to +38%
- More safety in use
- Your technology remains up to date
- New projects with smaller gears possible
- SEW GearOil Poly increases performance
- Reduction of heat generation by up to 25 °C
- Reduced energy costs

SIZE	GEAR UNIT RATIO (i)	$M_{amax}$	TORQUE INCREASE*
S..37p	3.97 – 157.43	105 Nm	+14%
S..47p	4.00 – 201.00	200 Nm	+18%
S..57p	4.00 – 201.00	370 Nm	+25%
S..67p	7.56 – 217.41	7200 Nm	+38%
S..77p	8.06 – 256.47	1500 Nm	+18%
S..87p	7.88 – 288.00	3000 Nm	+32%
S..97p	8.26 – 286.40	4300 Nm	+7.5%

\* compared with standard S..7 helical-worm gear units

## FEATURES

Helical-worm gear unit series with enhanced performance

Improved performance thanks to use of premium lubricant SEW GearOil Poly

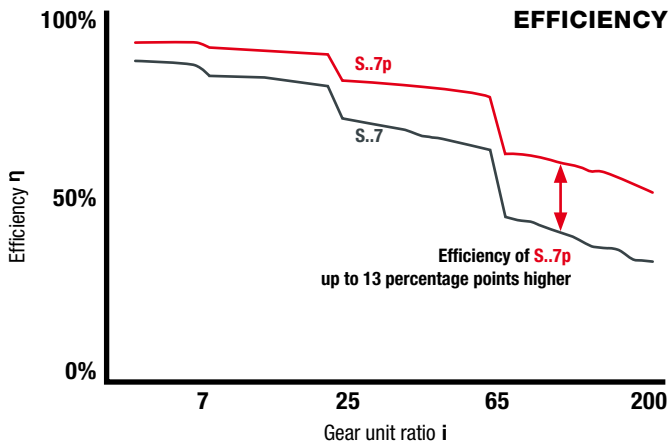
Reduced temperature generation

Enhanced efficiency

Option to configure smaller gear unit sizes or gear units in the same size but with greater safety/reserves

Same design variants possible as with standard S..7 helical-worm gear units

Motor power range: 0.12 – 30 kW



### Efficiency

The way power and speed are transmitted in helical-worm gearing generates a high level of sliding friction between the worm and worm gear. Using SEW GearOil Poly ensures outstanding lubrication and optimum heat dissipation at every operating point, which fundamentally enhances efficiency. As a result, it has been possible to increase the efficiency of S..7p helical-worm gear units by up to 13 percentage points. This effect is particularly noticeable on the large gear ratios and is hugely beneficial. This enhanced efficiency immediately gives you a higher usable output torque for the same motor power. If this higher output torque is not taken off, motor utilization is reduced and you save energy and benefit from reduced energy costs.

### More power or more reserves

The increased torques mean that, in the best-case scenarios, you can select the next size down, as you can now take off higher torques in a smaller space or, if you cannot vary the gear unit size, you gain greater safety/reserves in your drive.

**SEW**  
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