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## PxG<sup>®</sup> PLANETARY SERVO GEAR UNIT

# FAQ



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### PxG® PLANETARY SERVO GEAR UNIT



#### **1 ● WHICH MOTORS CAN I CONNECT A PxG® PLANETARY SERVO GEAR UNIT TO?**

The two-part construction of our motor adapters, consisting of bellows coupling and clamping ring, means PxG® planetary servo gear units can easily be connected to different motors.

PxG® planetary servo gear units are compatible with:

- Servomotors from SEW-EURODRIVE
- Servomotors from other common international manufacturers available on the market

As a result, PxG® planetary servo gear units can be integrated into applications as a replacement gear unit without any additional adaptation outlay.

#### **2 ● FOR WHICH DUTY CYCLE ARE PxG® PLANETARY SERVO GEAR UNITS OPTIMIZED? SHORT-TIME DUTY OR CONTINUOUS DUTY? AND WHAT SERVICE LIFE ARE THEY DESIGNED TO HAVE?**

In principle, PxG® planetary servo gear units can be used in both continuous duty and short-time duty.

Gear units in performance classes P5.G and P7.G, however, are primarily designed for short-time duty. Based on a cyclic duration factor of 60%, they can achieve a service life of 20 000 operating hours.

The P6.G series, on the other hand, is optimized specifically for high cyclic duration factors and high mean input speeds. At 100% cyclic duration factor, these endurance runners have a service life of up to 30 000 hours.

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#### 3 ● HOW HIGH IS THE PEAK TORQUE OF PxG® PLANETARY SERVO GEAR UNITS AND WHAT IS THE MAXIMUM PERMITTED TORQUE FOR CONTINUOUS DUTY?

The maximum torques for the P5.G, P6.G and P7.G series vary based on usage scenarios and service life.

Series	Performance	Nominal torque continuous duty	Peak torque short term
		MaNenn	Mapk
P5.G	Standard for broad application	20 – 450 Nm	25 – 530 Nm
P6.G	For applications with high speeds or continuous duty	32 – 300 Nm	44 – 380 Nm
P7.G	For applications with high power density (high torques and also small installation space)	60 – 790 Nm	82.5 – 990 Nm

The maximum acceleration torque (peak torque) for the solid shaft versions of the P5.G to P7.G series is 830 Nm and can go up to 990 Nm for the flange-mounted design.

#### 4 ● WHY DO THE PxG® PLANETARY SERVO GEAR UNITS HAVE SUCH A LONG SERVICE LIFE?

The long service lives of the PxG® planetary servo gear units are derived from factors that were specifically designed and developed for them:

- The Premium Sine Seal oil seal in the adapter is very low-wear and has twice the service life of conventional oil seals.
- The formulation and additives in the SEW GearOil brand synthetic lubricants specially developed with technology partners are perfect for use in the temperature ranges of the gear units.
- The hardened and in some cases specially coated gearing components exhibit significantly less wear.
- The housing surfaces of the gear units and the interfaces are already corrosion-protected as standard. Common coating procedures such as painting, for example, are not required.

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#### 5 ● WHY ARE THE PxG® PLANETARY SERVO GEAR UNITS SO QUIET?

Thanks to ground or finely ground helical gearing, all PxG® planetary servo gear unit series are very low-noise. Low manufacturing tolerances also ensure excellent synchronization characteristics and concentricity properties, and these in turn reduce vibrations.

#### 6 ● HOW CAN I SEE AT A GLANCE WHICH SIZE, HOW MANY STAGES, AND WHICH GEAR RATIO MY PxG® PLANETARY SERVO GEAR UNIT HAS?

On PxG® planetary servo gear units, this information can be found in the type designation.

Example: P5BG41-0007...

- The number "41" indicates the size and the number of stages:  
4 = Size 40, 1 = Single-stage
- "-0007" indicates a gear ratio of  $i = 7$ .

