

## Press Release

**From exceptionally quiet to extremely robust**

### **Flexible planetary gearhead family**

Flexibility, power density, and price are three essential requirements of the market for drive components. These were also the focus during the development of the GPT gearhead family from FAULHABER. The gearheads can be flexibly combined with various motors from the standard range, such as motors from the flat BXT brushless family or the brushless DC drives from the microdrive experts. During development, they were specifically designed to work with the DC drives of the GXR/SXR gearhead family. This allows for perfectly matched combinations of encoders, drives and gearheads, which can be combined compactly and with matching diameters without additional connecting elements.

### **Tolerate high torques and load changes**

The GPT gear series was developed for particularly high torques. Up to six planets per stage enable a shorter overall length and thus more power in the smallest of spaces. The GPT planetary gears are made of hardened stainless steel and their connections are continuously welded. This enables the reliable transmission of high forces. The gearboxes are available in diameters from 14 to 42 mm and are significantly shorter than alternative models of the same diameter. They tolerate constant load changes as well as abrupt or very strong ones. The 42 GPT series, for example, can achieve an intermittent torque of up to 25 Nm. Depending on the variant, continuous torques between 06 and 18 Nm and speeds of up to 24,000 rpm are possible. Thanks to a wide range of evenly distributed reduction ratios (from 3:1 to 1437:1), drive solutions can be ideally adapted to a wide variety of applications. Optimized component coordination and high-performance lubricants contribute to a further increase in performance, as does the wide selection of different output bearings.

### **High torque or low noise**

The low-noise series of the GPT family was developed for applications that require low noise levels, for example, because the drive solutions are used close to people or because multiple motors are used. With an input gear stage made of plastic gears, the 22 GPT LN and 32 GPT LN reduce the noise level by up to 10 dB compared to the standard version. Nevertheless, they can transmit occasional peak torques of up to 4 and 12 Nm, respectively. They operate in a wide temperature range from -30 to +110 °C, maintain their high efficiency even with frequent or sudden load changes, and impress not only with their performance but also with their excellent price-performance ratio.

The HT models are suitable for environmental conditions that require more robust variants. With their adapted geometry, they are suitable for higher loads, offer improved dynamics, and maximum performance. They are available with three or four gear stages, in numerous reduction ratios, and with an operating temperature range between -30 and +120 °C. Sudden load changes or emergency stops do not limit the long service life of the drives. The gear backlash is 0.8 or 0.6° depending on the model, enabling precise and repeatable positioning in a wide range of applications.

588 words / 3,193 characters



The flexible, powerful GPT gearhead family is available in diameters between 14 and 42 mm, as well as in low-noise and high-torque versions © FAULHABER

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**Press contact (Germany + International)**

Dr. Fritz Faulhaber GmbH & Co. KG  
Kristina Wolff – Marketing  
Faulhaberstraße 1 · 71101 Schönaich  
Germany

T +49 7031 638-148 · F +49 7031 638-8148  
[redaktion@faulhaber.com](mailto:redaktion@faulhaber.com)

**Press contact (Switzerland)**

FAULHABER SA  
Ann-Kristin Hage-Ripamonti – Marketing  
6980 Croglio  
Switzerland

T +41 91 61 13 239 · F +41 91 611 31 10  
[marketing@faulhaber.ch](mailto:marketing@faulhaber.ch)