

speeroX – the gear set for high gear ratios in a small installation space

EISENBACH, Germany. Gear specialist Framo Morat presents the new speeroX gear set, in which the gearing of the wheel is relocated to the flat side. This results in a reduction of the installation space. speeroX enables high gear ratios in only one gear stage and is quiet and efficient at the same time.

An electric motor provides high speeds at a relatively low torque. To set loads into motion, gears are used that convert the rotary motion provided by the electric motor into a motion that is slower, but also more powerful. The classics among the high-transmission gears are multi-stage spur and planetary gear sets or bevel and worm gear sets if an angled arrangement is necessary. Often, combinations of these variants are used.

Depending on the specific application, the requirements for efficiency, service life, operating noise and installation space sometimes push conventional gear variants to the limit. Multi-stage spur and planetary gear sets consist of many components. Bevel gear sets are loud and require at least one downstream gear stage. Worm gear sets lose power and their service life is diminished by friction. This is where the high-transmission speeroX gear set developed by Framo Morat comes into play.

Thinking laterally – high gear ratio in only one stage

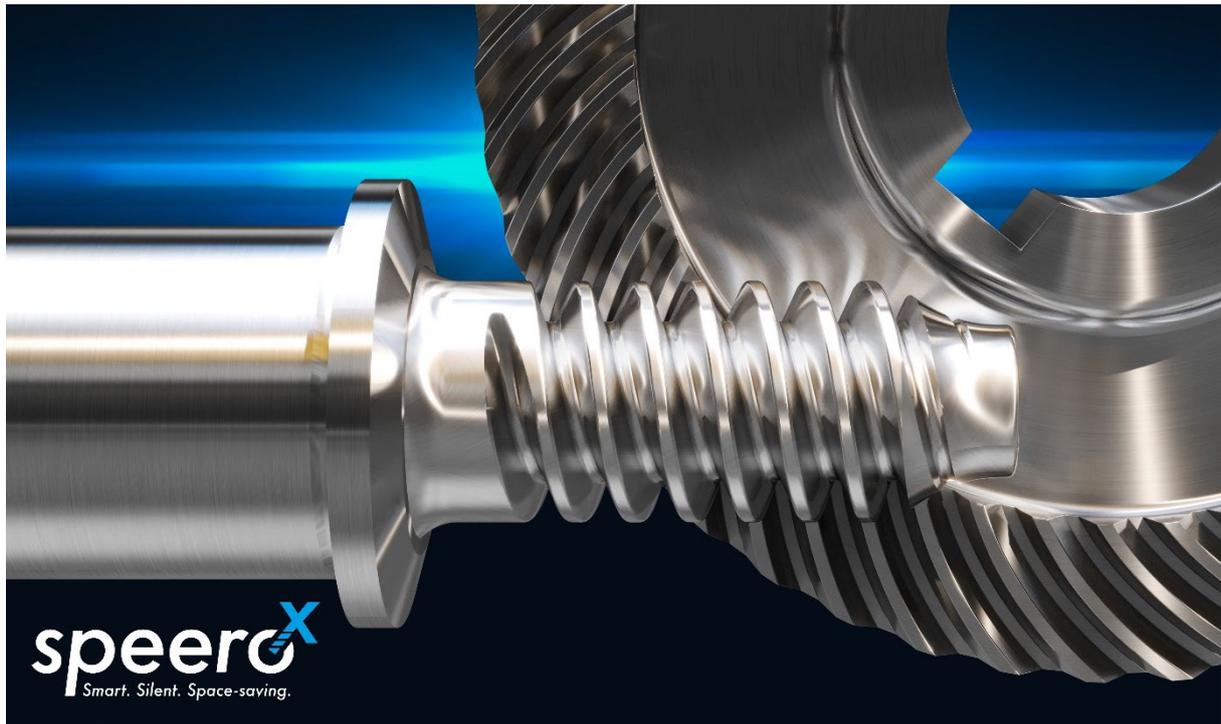
Relocating the gearing of the wheel to the flat side reduces the installation space and creates a spiral gearing that is driven by a modified worm screw. This results in favorable kinematic conditions that reduce the sliding components and thus the friction. Nevertheless, the gearing remains quiet thanks to the high overlap and the sliding engagement. Low-wear steel-steel pairing increases the power density and service life. The gear geometry of speeroX enables exceptionally high performance when only one direction of rotation is required.

In the right application, the speeroX gear set beats conventional multi-stage gears. It is quiet and features high efficiency with a long service life. And all this in only one gear stage with reduced weight and assembly effort, consisting of just two components: worm screw and wheel.

Customized design and development

When it comes to customer-specific solutions, Framo Morat brings 110 years of experience in gear and drive technology to the table. The customer-specific design of the gearing and gear makes it possible to prioritize key criteria such as reducing installation space, minimizing noise and increasing efficiency in a targeted manner. The advantages of speeroX over conventional solutions are evaluated on the basis of the requirements profile. In addition, certain drive designs only become possible when speeroX comes into play.

The Franz Morat Group will be presenting further details and potential applications of the speeroX gearing November 8-10, 2022, at the **SPS (smart production solutions) trade fair** in Nuremberg, Germany, in **Hall 1 / Booth 350**.



The high-transmission speeroX gear set, featuring a worm screw and spiral-toothed wheel (Image source: Franz Morat Group)



The use of speeroX gearing enables high performance with only one gear stage. This results in less weight and installation space compared to conventional gear unit variants. (Image source: Franz Morat Group)

About the Franz Morat Group:

With 110 years of experience in gear technology and drive engineering, the Franz Morat Group combines expertise in metal-cutting gear technology (Framo Morat) and plastic injection molding technology (F. Morat) under one roof. The traditional company from Eisenbach has over 700 employees. In addition to its headquarters in the High Black Forest, it operates subsidiaries in the US, Poland, Mexico and Turkey. The components and drive systems, most of which have been developed specifically for the customer, are used in such fields as mechanical engineering, rehabilitation equipment technology, the automotive industry, and intralogistics.

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Trade fair notice:

SPS (smart production solutions), Nuremberg, Germany

November 8-10, 2022

Hall 1 / Booth 350

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