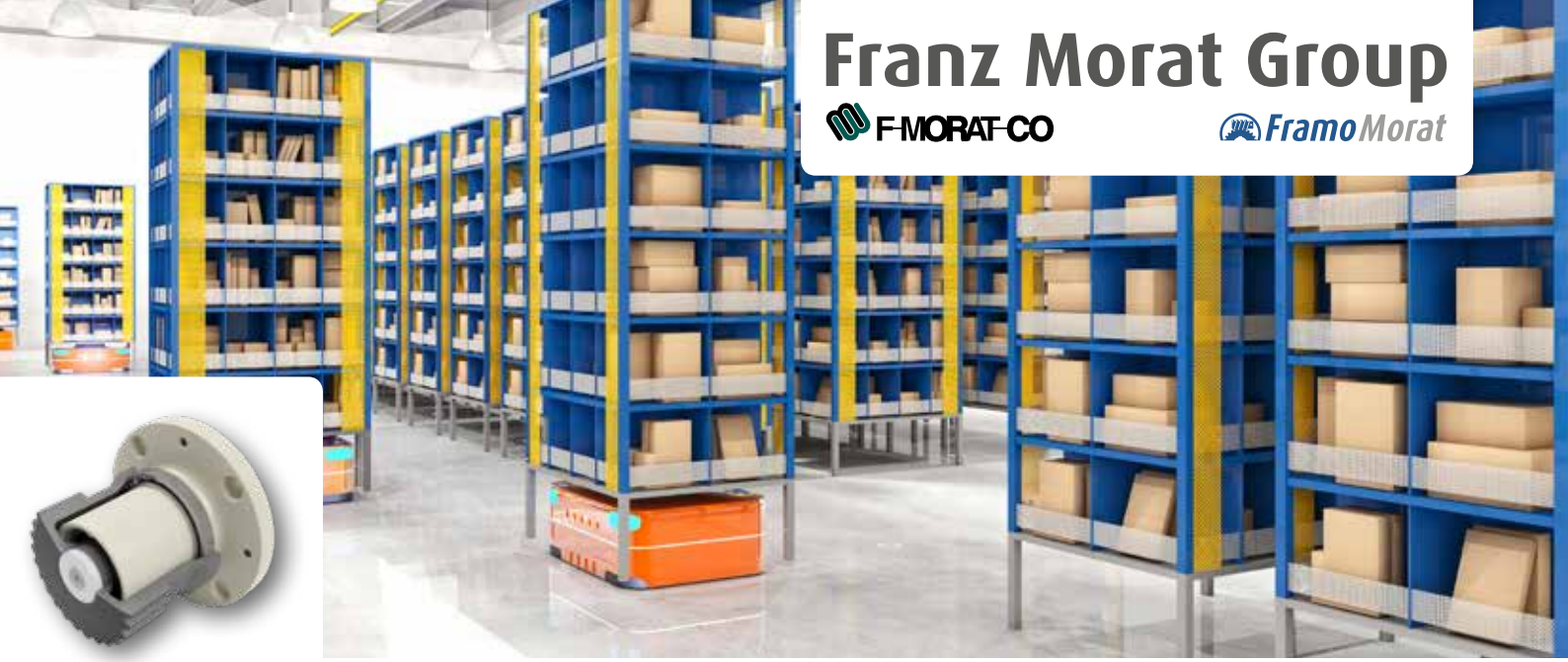
Franz Morat Group

F-MORAT-CO

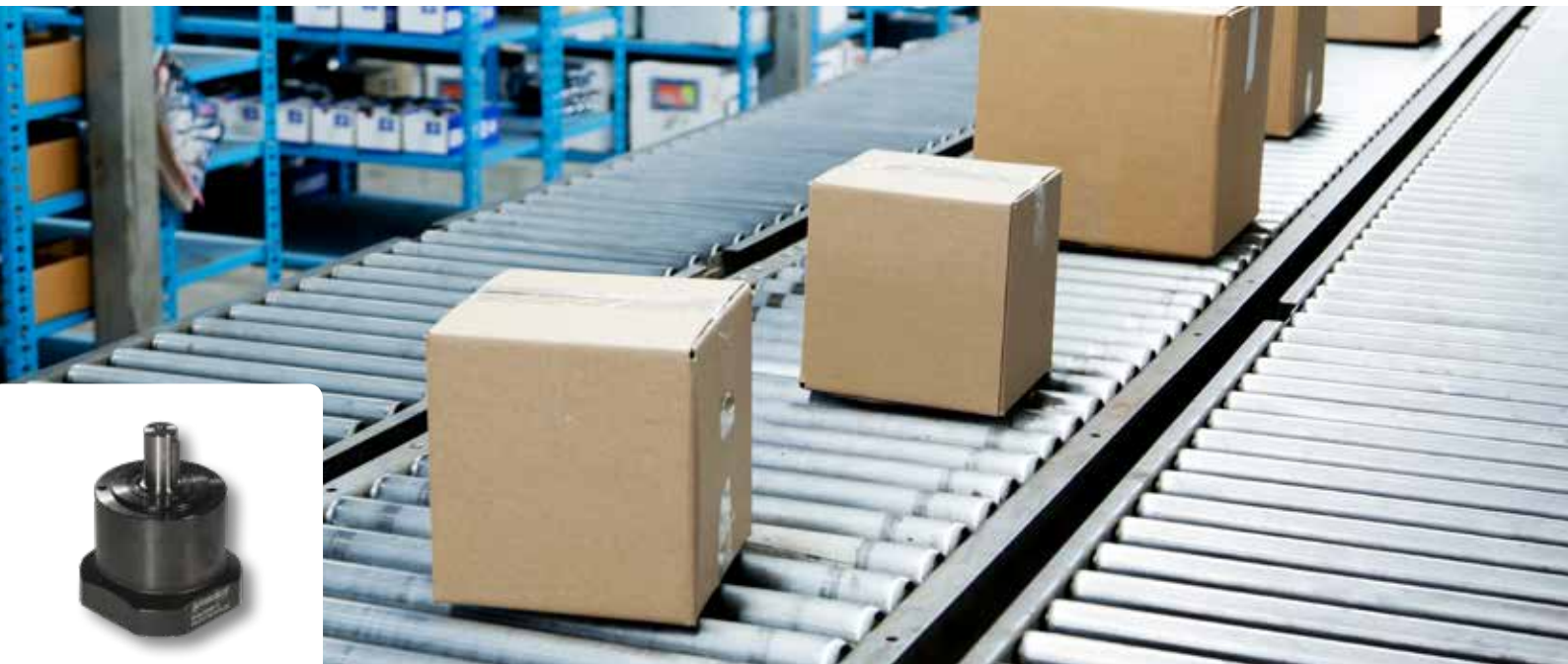
FramoMorat

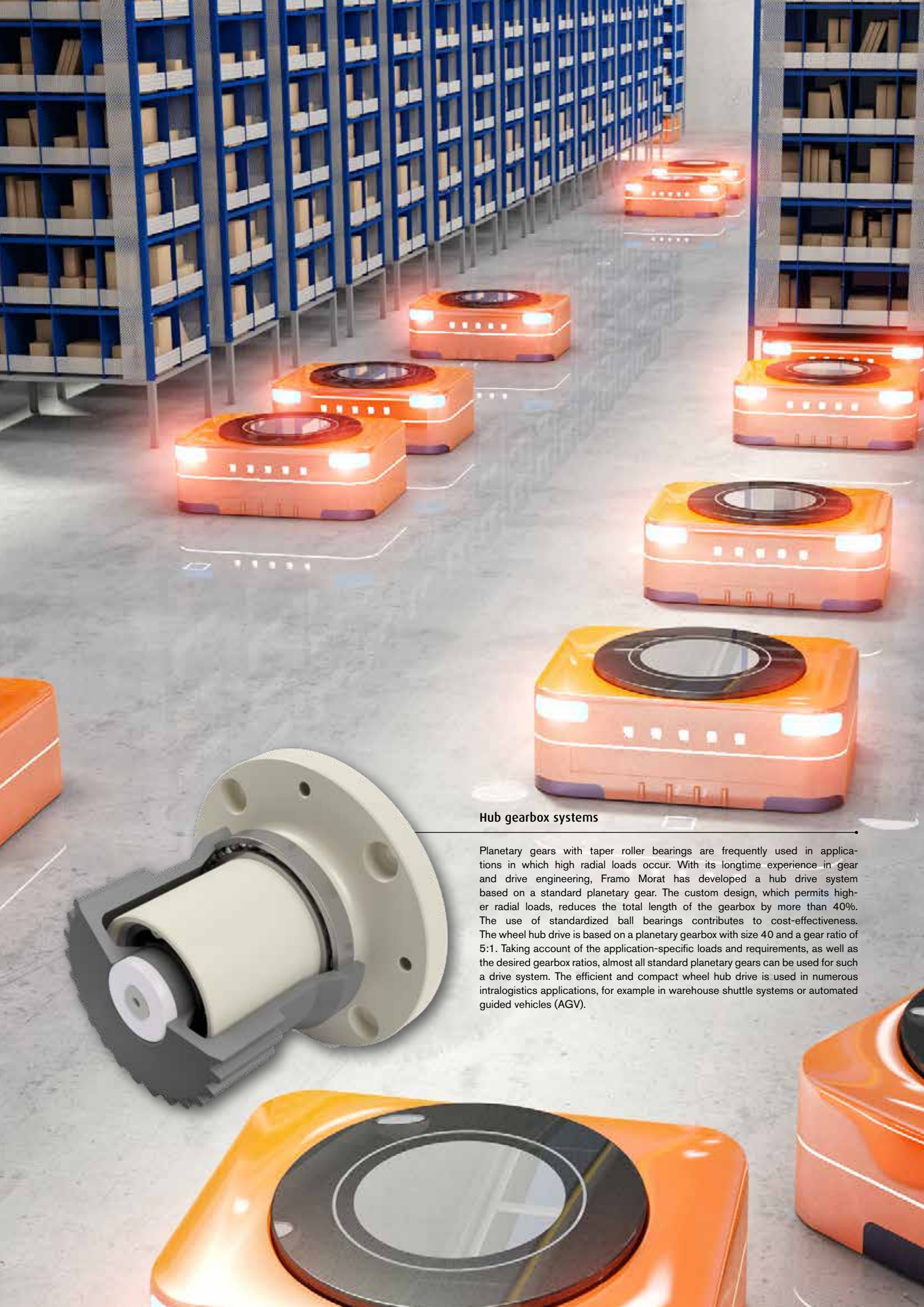


Your idea - Our drive.

Custom engineered drive solutions for the intralogistics industry.

Made in Germany





Hub gearbox systems

Planetary gears with taper roller bearings are frequently used in applications in which high radial loads occur. With its longtime experience in gear and drive engineering, Framo Morat has developed a hub drive system based on a standard planetary gear. The custom design, which permits higher radial loads, reduces the total length of the gearbox by more than 40%. The use of standardized ball bearings contributes to cost-effectiveness. The wheel hub drive is based on a planetary gearbox with size 40 and a gear ratio of 5:1. Taking account of the application-specific loads and requirements, as well as the desired gearbox ratios, almost all standard planetary gears can be used for such a drive system. The efficient and compact wheel hub drive is used in numerous intralogistics applications, for example in warehouse shuttle systems or automated guided vehicles (AGV).

Always on the move.

Stay one turn ahead with drive solutions from Franz Morat Group.

Material handling (warehouse technology and conveyor technology) and automation are terms that go hand in hand in the field of intralogistics. The transitions are fluid. Constantly high quality and functional safety are the main requirements of an industry that has made it its business to provide for the safe, smooth and efficient flow of all kinds of products. Particularly in the area of controlling the flow of goods and information, a constant and dynamic transformation is occurring thanks to state-of-the-art distribution centers and new order picking concepts in the age of Industry 4.0.
With decades of expertise in producing gear components and developing complete drive systems and an in-house production that covers all processing steps critical to quality, Franz Morat Group is your ideal partner.

You benefit from:

- More than 100 years of expertise in designing & developing custom drive components & complete systems
- A commercially solid, family-owned company, with a flexible organization and the ability to react rapidly to customer requirements and changing circumstances
- Project specific choice of materials (metals, thermoplastics or combinations of both) according to your requirements regarding quality, weight, smooth operation or lifetime
- All process steps from a single source

Application examples

Rotor shafts for fork lift trucks

Rotor shafts for the drives of industrial trucks and fork-lift trucks require maximum precision during production in order to withstand the heavy loads in daily operation whilst offering very quiet running. Our rotor shafts for use in sports cars and electric cars meet comparable requirements.

Planetary gears for handling systems

The compact design and the low circumferential backlash (through <= 3 arcmin as standard, optionally down to <= 1 arcmin) make GSD series planetary gearboxes the optimal high-end gears for robotized handling systems when high dynamics and highest precision for positioning and speed are required. The robotics output flange ensures the highest torsional rigidity. Another advantage of the GSD line is the absorption of high axial and radial loads.

Application examples

Custom safety gate drive for high-bay warehouses

The individually adaptable Compacta MR6 slip-on geared motor, featuring a gear ratio up to 450:1, is used as a gate drive for safety locks in high-bay warehouses. In full-automatic high-bay warehouses, the drives block the entry of Automated Guided Vehicles into rack lanes where maintenance and service personnel may be working. As such, the locking mechanism must also be guaranteed to be safe in the event of a collision between the locking mechanism and heavy vehicles up to 350kg at up to 40 km/h. The 24V DC motor with max. 60Nm output torque can lock up to 6 entrances simultaneously and is designed for low-temperature use in cold-storage warehouses.

Planetary gears for conveyer belts

Planetary gears are an indispensable element in drum motors for conveyor belts and rollers, which require components that make as little noise as possible due to their position in tubular design. These requirements are optimally fulfilled by the GSN line, due to the precision helical ground gears. High flexibility in the flange connection and a wide spectrum of viable gear ratios enables the individualized adaptation to the required specifications and available interfaces.

Gear components for electric cargo bicycles

Electric cargo bicycles are enjoying increasing popularity - both in the area of intralogistics and as delivery vehicles. The drive components must make a contribution to weight reduction while fulfilling high smoothness and service life requirements. The advantages of pairing metal and plastic are evident here. The spur gear stage used here consists of a metal helical-cut rotor shaft and a plastic gear made of Delrin.

The best of both worlds.

Customized gear technology and drive solutions of both metals & plastics.

Producing drive components & systems.

With 100+ years of experience in the areas of gearwheel technology, worm gear sets and drive systems, Franz Morat Group supplies a comprehensive range of products that cover a wide spectrum of applications. In addition to our complete range of standard products, we also design and implement custom engineered drive solutions.

Franz Morat Group is your reliable partner for worm, spur or planetary gears, complete gearmotors and complex drive systems – and for your drive concept, too!

Uniting metals & plastics.

Our core competencies lie in the production of high-precision gears, rotor shafts and worm gear sets made from various metals as well as technically advanced injection-molded parts from thermoplastics. This results in solutions that incorporate the technical advantages of both material groups depending on the required specifications. You benefit from over 100 years of expertise and an experienced partner who offers all process steps from a single source.

Metal machining:

Turning, Milling, Gear Hobbing, Gear Shaping, Broaching, Hardening, Cylindrical Grinding, Honing, Profile & Hob Grinding

Plastic injection molding:

Mold Design & Tool Making, Over 75 injection molding machines, All technical thermoplastics (incl. PEEK™), Subsequent processing

Pioneering research & development.

In developing custom engineered drive solutions, Framo Morat and F. Morat cooperate closely under the umbrella of the Franz Morat Group. Our many years of experience make us your ideal partner, from development and design engineering to prototyping and testing all the way to series production and assembly. Numerous highly respected companies from a wide variety of industries rely on our development services and the resulting drive solutions.

Drive technology:

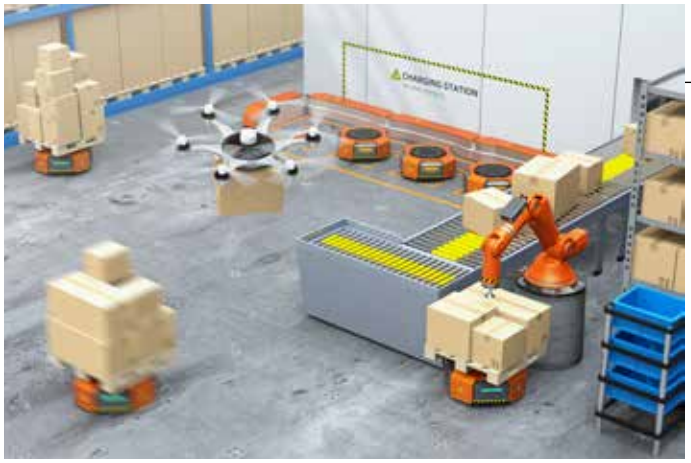
Specification, Development & Design, Prototyping, Testing & Quality Control, Serial Production, Assembly & Use

A long standing process of progress.

Deriving motion from energy for more than 100 years.

Combining local expertise & global presence.

Since the founding of Franz Morat GmbH in 1912, gear and drive engineering has been in a continuous state of development at the company's headquarters in Eisenbach, Black Forest. Today, the Franz Morat Group is a globally operating manufacturer of high-quality drive solutions for many industries and applications. The company counts over 600 employees and runs subsidiaries in the United States, Turkey, Poland and México.



Providing industry expertise & innovative ideas.

From individually adaptable wheel hub drives used in warehouse shuttle systems or Automated Guided Vehicles (AGVs) to planetary gearboxes for materials handling technology or robotized handling systems to gearing components for industrial trucks or electric cargo bicycles – the Franz Morat Group has been a reliable partner of the most notable global players in the intralogistics sector for generations.

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