

Your idea – Our drive.

Custom drive solutions for intralogistics.

Franz Morat Group

F MORAT CO

FramoMorat



Drive solutions from the Franz Morat Group.

Used in every segment of the intralogistics market.

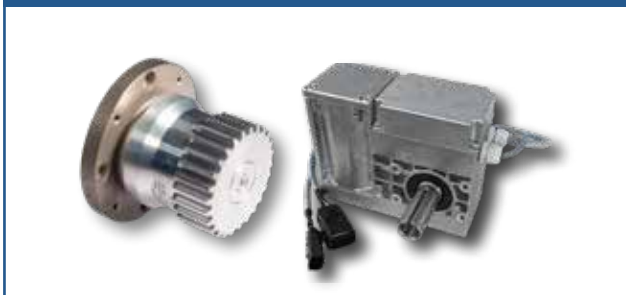
Automated guided vehicles (AGV)



Industrial trucks



Warehouse systems



Continuous conveyors



Cranes and lifting gear



You benefit from:

- 110 years of expertise in designing and developing custom drive components & complete systems
- 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

What can we do for you?

We are glad to be personally there for you and we look forward to common challenges and projects.

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Always on the move.

One step ahead with drive solutions from Franz Morat Group.

Flexibility, efficiency and reliability are some of the most important features of today's intralogistics. Fast response times necessitated by shorter product life cycles and delivery times as well as more frequent turnover — while batch sizes get smaller — mean long-term changes for intralogistics.

That's why many companies are relying on innovative automation solutions that provide a standardized, automated material flow around the clock. These include automated guided vehicles (AGV), automated high-bay warehouses or continuous conveyors for mechanical transport of goods that are in constant demand. For cost-effective operation, it is imperative to have drives that are durable and high-performance while also being extremely compact. This is the only way to cut costs for the long term while increasing flexibility and speed.

Decades of experience and industry expertise for your drive solution

For decades, Franz Morat Group has specialized in gear components and intelligent drive systems for intralogistics and, with a wide product range, supplies the five market segments of **automated guided vehicles, warehouse systems, industrial trucks, and continuous conveyors** as well as **cranes and lifting gear** (classifications of the German VDMA industry association).

When providing service and consultation, Franz Morat Group draws upon over 110 years of experience in gear technology and drive engineering and many years of industry expertise. This lets us control all quality-related parameters directly and perform complex machining tasks according to each customer's needs, while maintaining the highest possible standards of quality. The following application examples provide an overview of the wide spectrum of components and drive solutions.

Wheel hub drive and hub drive for AGV.

Automated material flow 24/7.



The highly integrated wheel hub drive was developed specifically for use in automated guided vehicles (AGV). The all-inclusive solution combines all functional elements, such as the polyurethane wheel, the high-precision planetary gear, the powerful electric motor as well as the brake and electronics, in one compact unit.

In addition to the complete wheel hub drive, the platform hub drives prove their value with their ultracompact design, including in combination with other motors, brakes and control units. The advantageous arrangement of the bearings also enables high radial loads for the gears. Customer-specific adaptations can be made, such as a brush seal for outdoor applications or custom wheels.



Drives for warehouse systems.

Optimized material flows for cost-effective intralogistics.



Automated high-bay warehouses are fast, efficient, flexible and reliable. Safety gate drives based on the Compacta drive platform ensure flawless workflows during the storage and retrieval process. They impose individual limits on the movement ranges of the shuttle systems. Plug-and-play function makes it possible to adapt the drives to different bearing systems. The high power density of the safety gate drives makes it possible to achieve high torques for short periods.

Gear solutions from Franz Morat Group are also used in the shuttle systems themselves. The containers are picked up and removed by telescoping arms moved precisely and efficiently by the belt drive.



Motor shafts and drive systems for industrial trucks.

Ideal prerequisites for efficient goods turnover.



Drive shafts for industrial trucks, high-lift trucks and electric forklifts must be manufactured with extremely high precision so they can withstand strong loads in daily operation and provide very smooth operation at the same time. Because we control all quality-related parameters directly, we perform complex machining tasks exactly according to each customer's needs, while maintaining the highest possible standards of quality. Attaining maximum freedom of movement with minimum installation space requires special drive concepts. This is where the design and development expertise of Franz Morat Group are evident. The starting point is the powerful driving motor, which provides the basis for the concept by means of the precision gearing of the motor shaft. The drivetrain begins with a helical cut spur gear stage and ends with a high-transmission speeroX gear set. Both gear stages are low-noise and feature high efficiency and low wear at the same time.



Transmission and components for continuous conveyors.

Reliability and safety for mechanical transport.



Planetary gears are an essential element of drum motors for belt conveyors and conveyor rollers. Due to their position in a tubular design, they require components that make as little noise as possible. The custom planetary gears fulfill this requirement with helical cut, ground precision components. The individual selection of the flange connection and a wide spectrum of viable gear ratios enables a flexible adaptation of the required specifications and available interfaces.

At the same time, the precision and compact standard planetary gears of the G-series and the high-transmission speeroX gear set are ideally suited as a drive solution for continuous conveyors.



Worm gear sets for cranes and lifting gear.

Precise and secure load handling with long-lasting function.



In numerous areas of industry such as mechanical engineering, flexible crane systems ensure that heavy loads can be moved, lifted, positioned and secured, all with maximum safety and ergonomics. The worm gear sets provide high-performance and precision work in the chain blocks and are also capable of compensating reliably for axle offsets. For this reason, the low-noise and low-wear brass-steel worm gear sets from Franz Morat Group are used in sophisticated crane systems worldwide.

Furthermore, the worm gear sets are used in the spindle lifting gears of lift vehicles for maintenance of heavy machines and plants. They are designed to carry high loads and optimized for long service life and low circumferential backlash.



The best of both worlds.

Gear technology and drive solutions of both metals & plastics.



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 approx. 700 employees and runs subsidiaries in the United States, Turkey, Poland and México.



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 110 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 70 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

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