READY DR ANY-THING OUR MODULAR GANTRY-TYPE ROBOTS

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AT A GLANCE OUR MODULAR GANTRY-TYPE ROBOTS

THE DIFFERENT VARIANTS OF FLT GANTRY-TYPE ROBOTS COVER A WIDE RANGE OF INDUSTRIAL APPLICATIONS, ENSURING HIGH STANDARDIZATION, RELIABILITY AND PRECISION.





AREA GANTRY CANTILEVER

AUTOMATION SOLUTIONS FOR ANY APPLICATION

Thanks to the modularity of the components, they can be used as a single-axis system or combined to create multi-axis systems. The basic unit of the systems are linear axes with movable carriages, which are connected to further axes, grippers or rotary units. This provides the greatest possible degree of flexibility depending on the design required. The best solution can be found, for example, for particularly heavy loads, large travel paths or for small workspaces, depending on the requirements.

FLEXIBLY ADAPTABLE TO YOUR NEEDS

- Six different sizes cover payloads up to 3,000 kg
- Depending on the type and bearing load:
- Horizontal travel paths over 100 m and vertical strokes up to 3 m
- Speed and acceleration: horizontal up to 4.5 m/s-6 m/s² and vertical up to 2 m/s-4 m/s²
- With or without control
- Standalone solutions or inline integration
- Telescopic axis for confined spaces and low ceiling heights
- Flexible tailoring to the individual application through additional components such as rotary axes, grippers or safety brakes

TRANSPORT LOAD OF EACH SIZE IN KG WITH CENTRIC LOAD



25 50 65 80 100 1100 700 850 7100 11200 11200 11200 250 11200 11200 250 11200 250 11200 250 11200

Efficient

- Acceleration
- Transport weight ***

PRODUCT DETAILS

ROLLER BLOCKS

- Extreme durability and low wear thanks to hardened guide rails
- Triple roller system means optimum power transmission
- Extremely operator-friendly maintenance, as roller blocks can be replaced quickly and easily







CARRIAGE

Countless possible carriage variants



COLLISION PROTECTION

In the event of a collision, impact absorption units compensate for the impact energy and protect the system from damage



DOVETAIL

Dovetail guide means that the racks and all attached components can be positioned flexibly

SMART PRODUCT OPTIONS

INDUCTIVE ENERGY TRANSMISSION

To give the trolley of a gantry the greatest possible freedom, FLT has developed a variant with inductive energy transmission. This means that there is no need for an energy chain in the horizontal travel axis and that the travel path of the carriage can be used as required.

The drag chain-free carriage is not only available for the LGR-ID linear gantry, but also as an AGR-ID area gantry. In this case, the complete travel bridge is equipped with contactless energy transmission.



LGR-ID

ADVANTAGES OF INDUCTIVE ENERGY TRANSMISSION

- Travels of the individual carriages of more than 100 m possible
- Working areas of the carriages can overlap as desired
- Carriages can be dynamically coupled with each other
- No risk of breaking or tipping the energy chain
- No increased travel resistance through the energy chain
- High energy efficiency due to energy recovery with condenser storage unit
- High acceleration without load peaks in the network due to local energy buffering
- Low maintenance due to fewer wearing parts

TECHNICAL DATA (USING THE LGR-3ID AS AN EXAMPLE)

- Speed up to 4.5 m/s
- Acceleration up to 6 m/s²
- Bearing loads up to 250 kg

e unit rgy buffering

SMART FUNCTIONS FOR GANTRY-TYPE ROBOTS

For predictive maintenance and avoidance of unplanned downtime, FLT offers various smart condition monitoring options.

THE SMART FUNCTIONS SUPPORT YOU WITH

- Reduction of maintenance and servicing costs
- Quality increase of the production processes
- Real-time data acquisition and analysis
- Reduction in system downtime
- Documentation of production-relevant process parameters



ENERGY CHAIN MONITORING

Because of the highly dynamic nature, energy chains on gantries are exposed to very strong forces. They connect the moving parts of the gantry. In order to prevent the piping from breaking off or the chain from bouncing and tipping out of the guide trough, sensors are used to monitor the condition, wear and breakage.

ROLLER MONITORING

The service life of the rubber rollers is calculated on the basis of the operating data. This enables the display of the remaining service life as well as the prediction of the possible point of failure. Measuring structure-borne noise with vibration sensor technology also enables breakage detection and damage monitoring, which can reduce unplanned downtime and thereby costs.

FORCE-DISPLACEMENT MONITORING

To stabilize the quality of the end product as well as for process assurance and control, it is possible to record the force-displacement curves. This enables evaluation through tolerance windows and envelope curves for long-range predictions.

GEARBOX MONITORING

The built-in sensor technology enables early detection of potential defects.

MECHANICAL Components

Our modules for rotation and gripping can be used as individual modules or combined in a wide variety of ways to form a host of devices and systems – from simple pick-&-place units to multi-axis robots. The modules are available either with or without electrical, pneumatic or hydraulic installation.

ROTATION

Our powerful rotary modules for pneumatic and electric applications offer the highest quality.

The electrical modules are normally driven by servomotors, achieving high performance levels with high acceleration and speed and optimum positioning accuracy.

The pneumatic rotation modules offer a compact, integrated damping system that permits optimum end position damping to be achieved with a short cycle time in just a few steps.

GRIP

Our comprehensive standard range of parallel and angle grippers features high product quality and precision. The series feature optimum grading and include a wide range of sizes for transporting workpieces with weights of up to 440 kg.

GRIPPERS

ELECTRIC PNEUMATIC

ROTATION

ELECTRIC PNEUMATIC

ALWAYS THERE FOR YOU OUR SERVICE

Our service team ensures that FLT products and solutions deliver maximum performance over the long term. Whether a helpful consultation by telephone, rapid spare parts supply, or onsite assembly: FLT's service technicians are ready to help with their knowledge, quick response times and reliability. If you need us, we'll be at your side with our comprehensive range of services.

- INSPECTION AND MAINTENANCE
- REPAIR AND TROUBLESHOOTING
- OPTIMAL SPARE PARTS MANAGEMENT
- CONVERSIONS, OPTIMIZATIONS AND SECOND LIFE
- CONSULTING AND TRAINING



OUR LOCATIONS



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