GRIMME
SysTech GmbH

Type: G-S-F(20-10)/B

Economical Plastic Touch-up with Accuracy and High Speed

HG 5-axis Gantry Milling System G-S-F

Flexible system concept for maximum performance

Type: G-T-F(18-10)

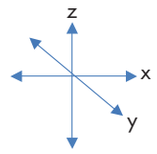
Focusing on value creation

With every machining system, we are committed to provide customers the right solution required for their own value creation. HG gantry-type milling systems are typical examples of the flexible design of our modular machine concepts.

The system is based on the generic gantry machine G-S-F(20-10)/B. This version has been developed as economic entry model. By installing a separation panel, tandem operation is possible and one table side can be loaded and unloaded while milling is performed on the other table side. **Further equipment such as a shuttle table or a rotary indexing table** speed up the production cycle extremely: While the part is machined on one side of the table inside the workspace, the other side of the table can be unloaded or loaded.

Performance characteristics

The extremely torsion-resistant steel construction, acceleration values up to 60 m/min, high frequency milling spindles with a maximum power of 8 kW in continuous operation (S1) and a rotation speed of max. 40,000 rev/min as well as the positioning accuracy of ± 0.08 mm are proven facts of the exciting dynamics and outstanding accuracy of this system.



Notation of axes

Materials

The machine is suitable for milling of components in plastic or composite material (CFRP, GFRP).

Because the machine will be customized and configured perfectly for all material requirements, there is no need for touch-ups of products. This guarantees an excellent surface finish.

Applications

With its 5-axis design the milling centre allows complex components to be machined perfectly and very economically. The outstanding precision meets the exacting requirements of the automotive suppliers, aircraft and aerospace industries as well as the yacht building and sanitary sectors.

Type: G-S-F(20-10)
with shuttle table system and tool change magazine

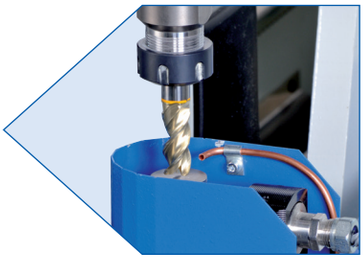
Milling spindle with twin shaft
watercooled, up to 5 kW

Product benefits

- Maximum production performance based on high feed rates with excellent results
- Extremely solid and torsion-resistant steel construction in gantry design; all drives and guides in the protected segment upside the workspace
- Compact 5-axis milling head for high-precision, three-dimensional machining of a wide range of materials
- Modular configuration of table models and upgraded versions; single-table system or optionally tandem operation possible by installing a separation panel, a rotary table or a shuttle table as option
- Possibility to install grids and scrap-container in the interior
- Safety cabin with convenient entry area (optional sound insulation is possible)

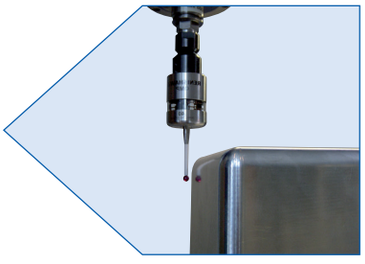
Options

Tool measurement
for tool length correction and breakage control



Wear-free linear drive
increases as direct drive the axis positioning speed many times over

3D tactile measuring system
with scaling software for machine calibration and measuring of components



HG 5-axis Gantry Milling System G-S-F(20-10)/B – (30-10)/B

The HG 5-axis gantry-type milling system offers maximum process safety and productivity. Its performance characteristics can be optimized in line with your specific needs and requirements through extensive options, enhancement and customization.

Machining range in 5-axis mode	G-S-F(20-10)/B	G-S-F(30-10)/B
X-axis	2,000/2,400 mm	3,000 mm
Y-axis	1,000/1,250 mm	1,250 mm
Z-axis	600 mm	600 mm

Travel ranges	
X-axis	2,600 mm to 3,600 mm
Y-axis	1,500 mm to 1,800 mm
Z-axis	900 mm
Rotation axis C	540°
Swivelling axis A	365°, with optional tool change device ± 110°

Speed of travel	
Rapid traverse linear axes X/Y	60 m/min (110 m/min with linear drive option)
Rapid traverse linear axis Z	30 m/min
Rapid traverse rotary axes A/C	9,000°/min / 12,000°/min (15,000°/min / 25,000°/min with linear drive option)
Positioning accuracy	± 0.08 mm
Repeatability	± 0.05 mm

High-frequency milling spindle	2.5 kW to 8 kW continuous operation (S1)
Rotational speed	max. 24,000 to 40,000 rev/min
Tool holder	WK 25/HSK 32 E/HSK 40 E
CNC control	Siemens Sinumerik 840D or NUM Flexium
Tool change magazine	dust protected 12/24 position magazine
Drive, electrical	digital AC servo drives/multiturn system; optional: linear drives in X/Y
Drive, mechanical	rack (X/Y) with ground helical teeth, ball screw (Z), induction-hardened and ground guides

General data	
Machine weight	approx. 8,000 kg
Construction	rigid, vibration dampening design
Central lubrication	manual, optional: automatic
Vacuum pump	60 m³/h, optional: 100 m³/h with scrap filter and pressure control
Referencing	not required because of digital multiturn drives
Technical training	optional, on your choice whether in the HG technology training centre or on site at the customer's

We reserve the right to make changes due to technical improvements. Please note: This information refers to the standard version of the machine. **Of course, we specify our systems in accordance with your specific requirements.**

Options, enhancement, customization

The system is designed within a modular concept. Our flexible, compatible interfaces ensure we can always meet your specific requirements. With our cost-efficient construction customizations, we offer perfect value for money and real added value for your company: You will get a machine that suits exactly your specific requirements.

Your system partner HG GRIMME SysTech

Founded in 1987, we established ourselves globally as highly regarded machine manufacturer with an excellent track record. As your proficient system partner, we are able to offer complete one-stop solutions. Design and engineering in line with specific requirements and application-specific configuration of the machine with reliable equipment.

Our own customer support organization with domestic and worldwide support centres offers customer support by local service. On demand, we can provide a remote diagnostic link to your HG system. Our hotline service and quick response of our service teams ensure maximum system availability and close customer contact wherever you are.

Please contact us if you need any advice!

Technical training/Application technology

On-line diagnostics via internet

Project management/
Engineering department

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