



Efficient Production Processes  
based on Minimum of Movements

**HG 5-axis Turntable System RT-F 1400/RT-F-T 1400**

# Perfect interaction of all components

## Designed for best dynamic response

The RTF machining centre in turntable technology represents the innovation in high-efficient, accurate milling of smaller work pieces in five axes. The highly dynamic behaviour is generated first of all by the turntable that executes the C-axis move. Complete machining of work pieces in only one mounting device shortens processing times and at the same time leads to excellent results in component accuracy. In addition to the single-table version, the RT-F 1400 system can also be delivered as tandem table system with increased production rate.

## Performance characteristics

Perfect interaction of all mechanical and electrical components makes the difference and results in outstanding efficiency of the HG turntable system RT-F 1400. A key element here is the water-cooled dual-shaft milling spindle, in which the tools are fixed via collet chucks. For time economic tool change (for example shaft mill – side mill), just swivel to the other shaft end of the spindle.

The RT-F 1400 system with its extremely torsion-resistant construction fits also in small locations thanks to its compact design. Shavings remain in the cabin and cleaning work thus is minimized.

## Materials

The machine is suitable for milling components made of plastics and of all kinds of composites such as GFRP, CFRP, ABS, ureol, (solid) foam, acryl and wood.

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

## Applications

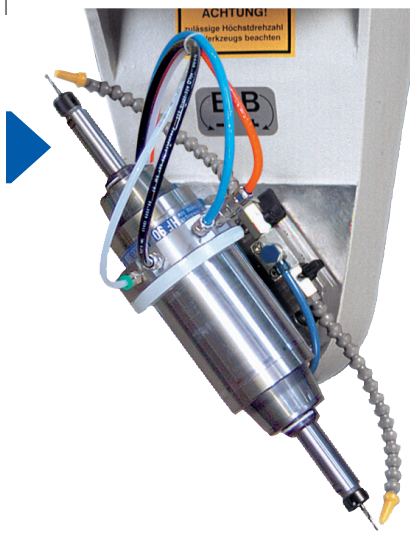
The HG turntable system RT-F 1400 is especially applicable for rational and economic machining of smaller parts such as decoration panels, cover plates, cycle helmets etc. It can be used successfully in the automotive sector and in the automotive supplier industry as well as for model making and is also suitable for small companies.



Type: RT-F 1400 – Single-table system with dual-shaft milling spindle



Type: RT-F-T 1400 – Tandem system with tool change device



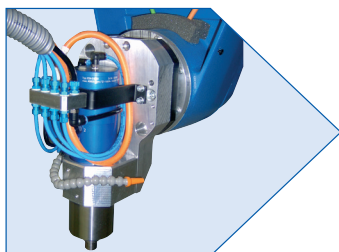
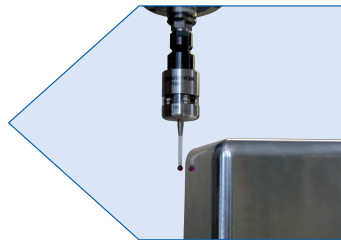
Milling spindle with twin shaft  
watercooled, up to 5 kW

## Product benefits

- ▶ Cost-efficient 5-axis system in turntable technology for extremely fast production processes and high production output
- ▶ Small utility space due to compact design
- ▶ Excellent contour accuracy
- ▶ Standard milling spindle with two shaft ends
- ▶ Very short set-up time, reduced maintenance work also in multiple shift operation
- ▶ High performance CNC control NUM Flexium with PC and high-resolution graphics screen, simple menu navigation
- ▶ More operating convenience by mobile desk
- ▶ Standard safety cabin with two manual sliding side-doors (optional: automatic)
- ▶ Long-life and solid construction, extremely torsion-resistant C-frame design

## Options

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



Spindle for automatically  
tool changing  
2.5 kW – 40,000 rev/min  
6 kW – 30,000 rev/min

**Tool change magazine**  
with 12 position magazine



## HG 5-axis Turntable System RT-F 1400 (Single-table system) RT-F-T 1400 (Tandem system)

The HG 5-axis turntable 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	RT-F 1400	RT-F-T 1400
X-/Y-axis, mm	800 x 1,000	800 x 1,000
Z-axis, mm	400	400
Work table, ø, mm	800	2 x 800
Travel ranges X/Y, mm	1,000 x 1,400	1,000 x 2,600
Travel range Z, mm	700	700
Rotary axis C (table)	± 1,080°	2 x ± 1,080°
Swivelling axis A, standard	360°	360°
Swivelling axis A, with tool change device	± 110°	± 110°
<b>Speed of travel</b>		
Rapid traverse linear axes X/Y/Z	30 m/min	
Rapid traverse rotary axes A/C	12,000°/min	
Positioning accuracy	± 0.08 mm	
Repeatability	± 0.06 mm	
<b>High-frequency milling spindles</b>		
Rotational speed	2.5 kW to 6 kW continuous operation (S1)	
Tool holder (optional)	WK 25/HSK 32 E/HSK 40 E	
<b>CNC control</b>		
	NUM Flexium	
<b>Tool change magazine</b>		
	dust protected 12 position magazine	
<b>Drive, electrical</b>		
	digital AC servo drives/multiturn system	
<b>Drive, mechanical</b>		
	ball screw (X/Y/Z), induction-hardened and ground guides	
<b>General data</b>		
Machine weight	approx. 3,000 kg	
Machine dimensions (D x W x H)	RT-F 1400 – Single-table system: approx. 3,700 mm x 2,700 mm x 3,500 mm RT-F-T 1400 – Tandem system: approx. 3,600 mm x 4,200 mm x 3,500 mm	
Maximum load	approx. 200 kg per table	
Construction	rigid and vibration dampening design	
Central lubrication	manual, option: automatic	
Vacuum pump	60 m <sup>3</sup> /h, with scrap filter and pressure control	
Referencing	not required because of digital multiturn drives	
<b>Technical training</b>		
	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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