



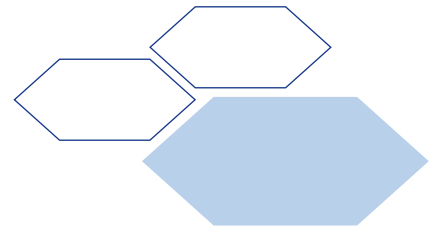
Type: G-DT-F (12-10)/SB

*An "Inclined" Concept ...*

**Maximum Production  
Capacity in a Small Space**

**HG 5-axis-Gantry-Rotary-Table Milling Machine/INCLINED BED – G-DT-F/SB**

# Space-saving system concept for maximum performance



## Value creation in focus

The G-DTF/SB machining centre with inclined bed and rotary table technology is a further high-tech innovation for the highly efficient and precise milling of work pieces over five axes. The gantry-type construction ensures better dynamics and a long life of all the components.

While the machining operation is carried within the interior of the machine the work pieces that have already been machined are ergonomically removed by the machine operator – from the outside at the front – and the new work pieces are put in place. This reduces machine downtime to a minimum. The operator is protected against dust and noise.

## Performance characteristics

The extremely torsion-resistant steel construction, with acceleration speeds of 3,500 mm/s<sup>2</sup> and travelling speeds of 55,000 mm/s, high-frequency milling spindles with a rating of up to 8.5 kW in continuous operation (S1) and a rotating speed of up to 36,000 rpm and a positioning accuracy of  $\pm 0.08$  mm reflect in a most impressive way the dynamics and precision of this unit.

## Materials

Components made of plastic and composites of all kinds, such as GRP, CFRP, ABS, ureol, foam, acrylics and wood can be milled with this machine.

No post-machining needs to be done on the work pieces since the machine has been perfectly adapted to and set up for all material requirements. This ensures superlative surface finish with all materials.

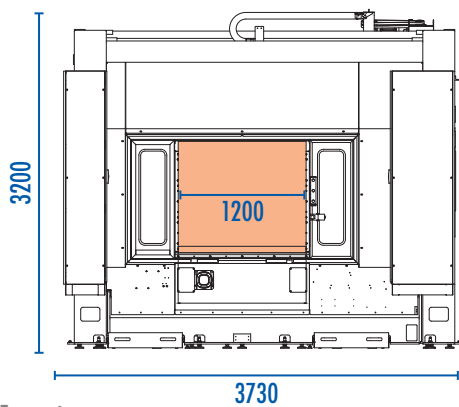
## Application areas

You can carry out technically demanding work on three-dimensional solids perfectly and especially efficiently with the five-axis technology. This kind of production precision is a convincing argument in the automotive supply, aircraft and aerospace industries as well as in yacht construction and the sanitary fittings industry.



Swivelling operating desk with monitor

Loading range with sensor for safety zone



Front view

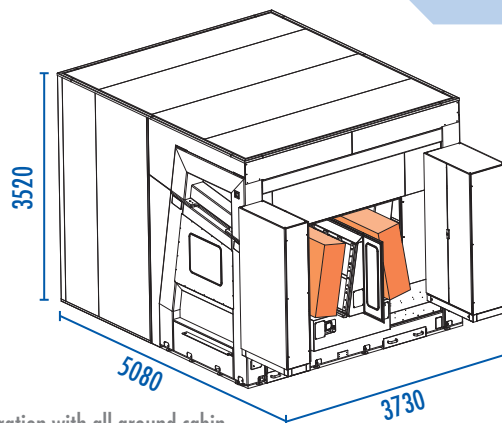
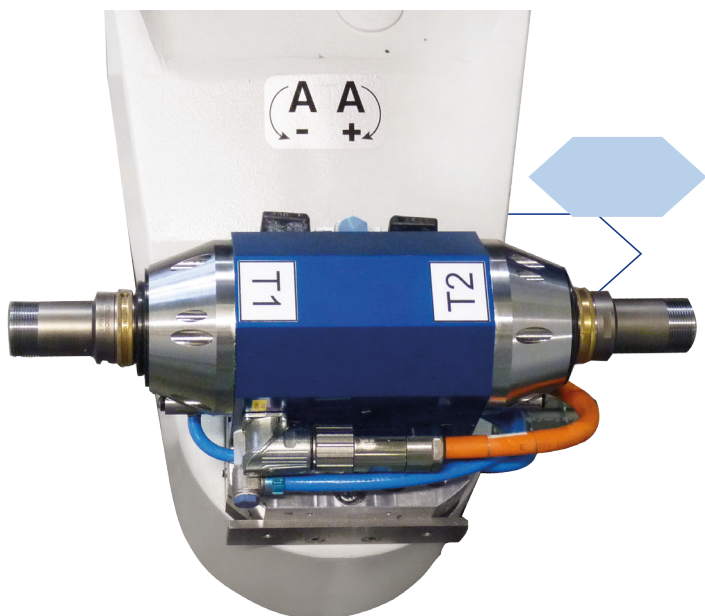


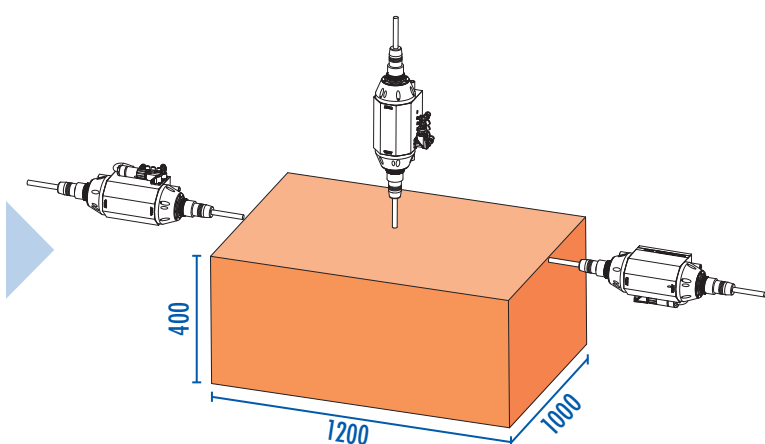
Illustration with all around cabin



Milling spindle DUO Classic 100  
with 2 tools

## Product advantages

- ▶ Maximum production capacity thanks to vertical rotary tandem table
- ▶ Saving of space due to reduced dimensions
- ▶ Compact 5-axis milling head for the high-precision three-dimensional machining of various materials
- ▶ Ergonomic placing and removal of the work pieces from outside the machine area at the loading table at the front, with loading angle 170°
- ▶ Time is saved when cleaning the machine through gratings and chip collection tubs in the interior of the machine
- ▶ Protection against dust, chips and noise due to the safety concept of all-round enclosure (cabin, laser scanner)



3D-working range

## HG 5-axis-Gantry-Rotary-Table Milling Machine/ INCLINED BED G-DT-F (12-10)/SB

The HG 5-axis-Gantry-Rotary-Table Milling machine/INCLINED BED 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-DT-F (12-10)/SB |
|--------------------------------|-------------------|
| X-axis                         | 1,200 mm          |
| Y-axis                         | 1,000 mm          |
| Z-axis                         | 400 mm            |

| Travel ranges, appr.      |          |
|---------------------------|----------|
| X-axis with rack          | 1,800 mm |
| Y-axis                    | 1,600 mm |
| Z-axis                    | 600 mm   |
| Rotary axis               |          |
| Max. rotation range – C – | 455°     |
| Max. swivel range – A –   | 362°     |

| 2 Machine tables             |                      |
|------------------------------|----------------------|
| With ergonomic loading angle | 170°                 |
| Each table side              | ca. 1,200 x 1,000 mm |
| Table rotation               | ± 180°; 3.0 sec      |
| Loading weight each side     | 300 kg max.          |
| Table accuracy               | ± 0.12 mm            |

| Speed of travel                   |                           |
|-----------------------------------|---------------------------|
| Max. acceleration each linear axe | 3,500 mm/sec <sup>2</sup> |
| Max. speed in X/Y                 | 55,000 mm/min             |
| Max. speed in Z                   | 35,000 mm/min             |
| Max. speed in C                   | 18,000°/min               |
| Max. speed in A                   | 9,000°/min                |
| Positioning accuracy              | ± 0,085 mm                |
| Repeatability                     | ± 0,070 mm                |

| High-frequency milling spindle |                          |
|--------------------------------|--------------------------|
| DUO Classic 100, IMT           | 6.0 kW in S1             |
| Rotational speed               | 32,000 U/min             |
| Tool holder                    | 2 x HSK-C 40, max. 16 mm |

| CNC control |  |
|-------------|--|
|             | Siemens Sinumerik 840D SL or NUM Flexium |

| Dimensions incl. safety cabin, appr. |                                      |
|--------------------------------------|--------------------------------------|
|                                      | 5,080 x 3,670 x 3,240 mm (l x w x h) |

| Drive mechanical |   |
|------------------|---|
|                  | rack (X-Gantry), ball screw (Y/Z) with precision linear guide with scrapers |

| General data        |   |
|---------------------|---|
| Machine weight      | appr. 6,500 kg  |
| Construction        | rigid, vibration dampening design                                 |
| Central lubrication | automatic   |
| 2 vacuum pumps      | each 100 m <sup>3</sup> /h with scrap filter and pressure control |
| Referencing         | not required because of digital multiturn drives                  |
| Loading range       | protected by laser scanner  |

| Technical training |  |
|--------------------|--|
|                    | optional, on your choice whether in the HG technology training centre or on site at 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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