

Takumi G1000



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Technical specifications

Work Area	
X-Axis Travel	1,020 mm
Y-Axis Travel	700 mm
Z-Axis Travel	500 mm
Spindle nose to table distance	180 - 680 mm
Distance between columns	1,080 mm
Table dimensions	1,050 x 700 mm
Table max. load (uniform distribution)	800 kg
T-slots (Quantity x Width x Pitch)	6 x 18 mm x 125 mm
Drive motors	
Spindle drive motor	HSK-E50¹
Type	Built-In
Power (cont. / 30 min rating)	22 / 28.6 kW
Torque (cont. / 30 min rating)	8.9 / 11.5 Nm
Pull stud	-
Max. spindle speed	25,000 min. ⁻¹
Axis drives	
Feed rate X/Y/Z	20,000 mm/min
Rapid traverse in X/Y/Z	32 / 32 / 32 m/min
Power X/Y/Z-Axis	3.5 / 3.5 / 3.5 kW
Automatic tool changer	
ATC Type	rotary ¹
Number of tools	30
Tool diameter (full load)	76 mm
Tool diameter (next pocket empty)	120 mm
Max. tool weight	3 kg
Max. tool length	250 mm
Design characteristics	
Material of machine bed	Meehanite
Guideway system	roller type
Ball bearing linear guides	X, Y, Z
Central lubrication system	1 pump (X, Y, Z)
Positioning system	
Type of system	photoelectric
Standard	linear
Resolution	
Internally in the control	0.0001 mm
Accuracy VDI/DGQ 3441	
Positioning accuracy	0.008 mm
Repeatability	0.006 mm
Dust management	
Dust collector tank volume	0.23 m ³
Dimensions and connections	
Maximum Floor Space (WxTxH)	3,950 x 4,600 x 2,950 mm
Shipping weight approx.	9,100 kg
Electrical connection	50 kVA / 125 A / 400 V
Air supply ³	6 bar / 0.15 cbm/min

¹ eligible standard equipment² optional equipment

* performance data on request

Accessories

Standard

- Heidenhain Control iTNC 530
- Graphite collector
- Linear scales
- Spindle thermal compensation system
- Spindle chiller
- Full enclosure
- Ethernet interface

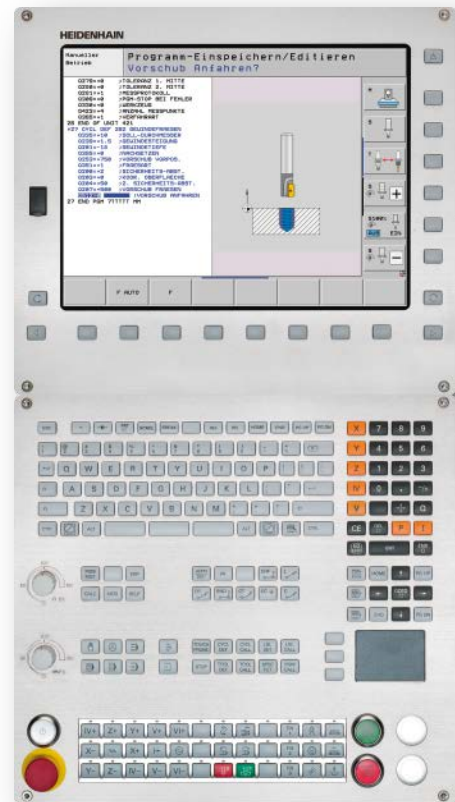
Optional

- Ballscrew cooling system (ex factory only, not upgradable)
- Part probe measurement system
- Tool probe measurement system
- Manual pulse generator (MPG)
- Programmable airblow machining
- Programmable airblow through spindle machining

Heidenhain iTNC 530

Standard

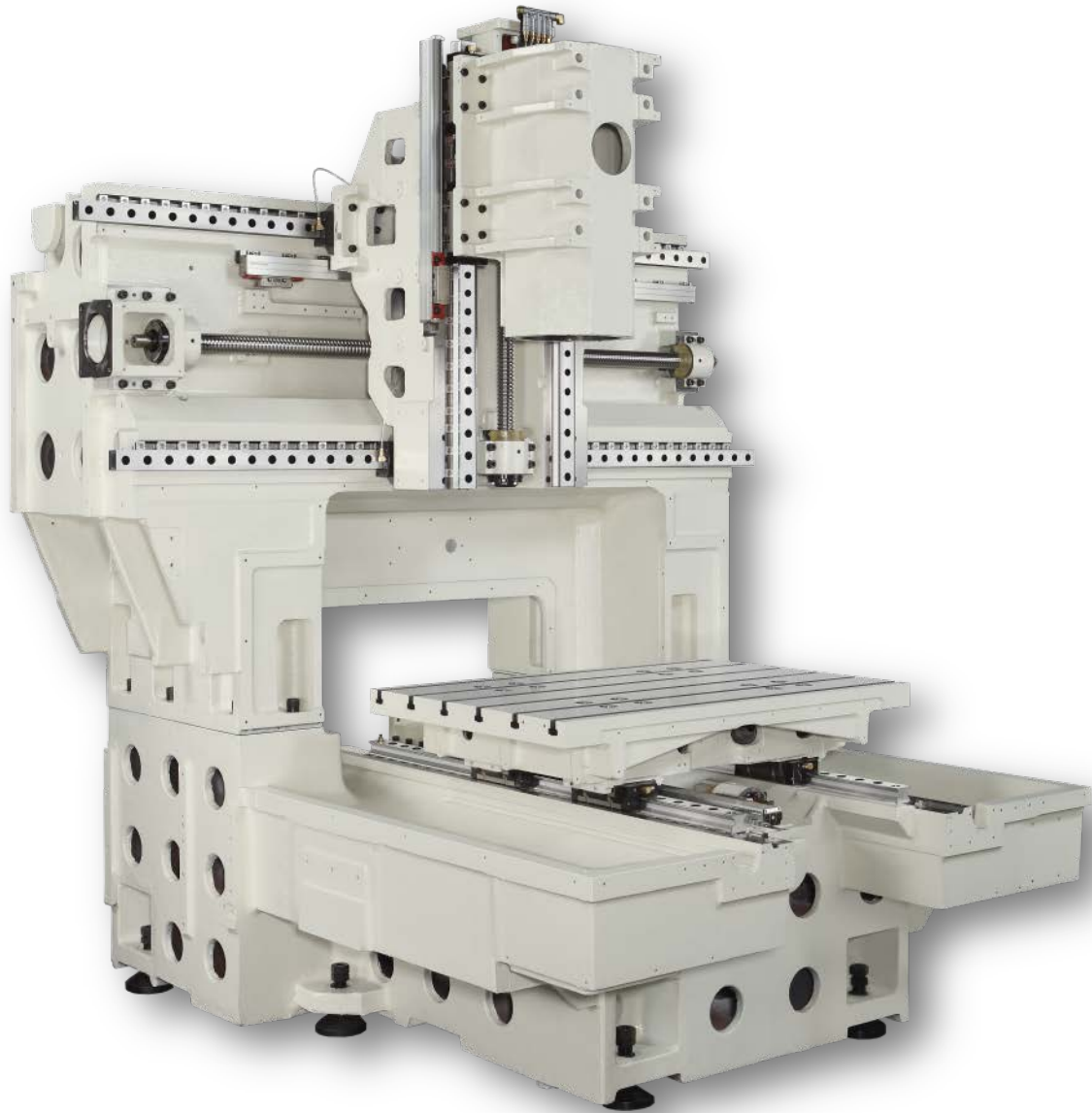
- Conversational programming
- ISO-NC programming
- FK free contour programming
- Extended milling and drilling cycles
- Touch probe cycles
- Parallel operation
- Integrated help system
- Program verification graphics
- 1,024 Block Look Ahead
- 0.5 ms Block Processing Time
- ≥21 Gigabyte Data Storage
- ≥2 GB RAM
- 15.1" LCD Display
- Least Input Increment 0.1µm, 0.0001°
- 2x Gigabit Ethernet adapter
- 4x USB port
- RS-232-C & RS-422 port
- Extended data interface for remote control
- Lift-Off function



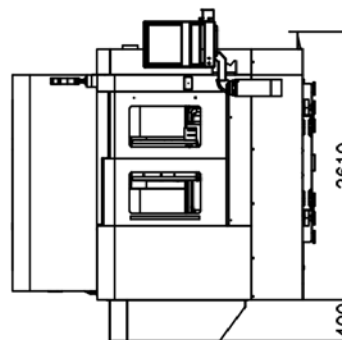
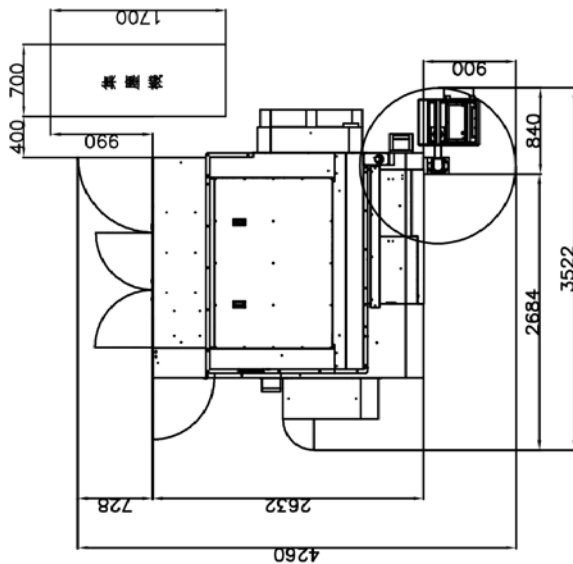
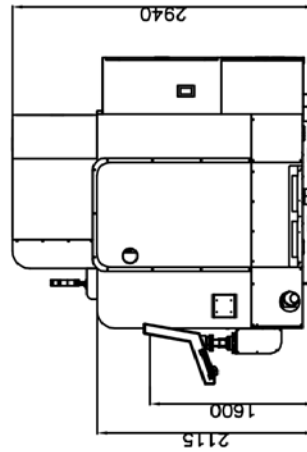
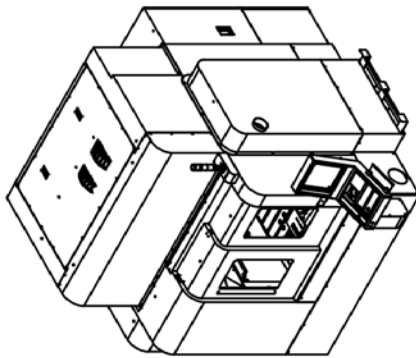
Optional

- DXF converter
- CAD viewer
- Dynamic Collision Monitoring (DCM)
- 4th and 5th axis
- Heidenhain-DNC
- Remote Desktop Manager
- Extended Tool Management
- Dynamic Precision
 - Compensation of position errors through mechanical compliance (CTC)
 - Active vibration damping (AVD)
 - Position-dependent adaptation of control parameters (PAC)
 - Load-dependent adaption of control parameters (LAC)
 - Motion-dependent adaption of control parameters (MAC)
- Dynamic Efficiency
 - Adaptive feed control (AFC)
 - Active chatter control (ACC)
 - Trochoidal milling

Frame and structure



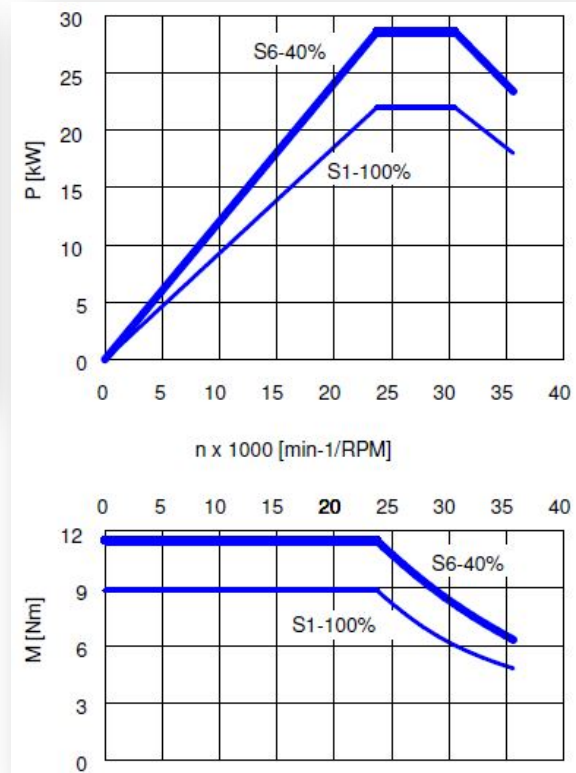
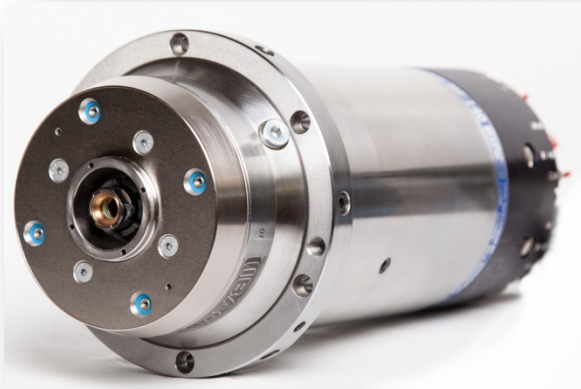
Operating dimensions



* Dimensions may vary depending on equipment

Standard accessories in detail

Spindle



Other Standard Accessories



Linear Scales



Automatic switch-off function



Spindle chiller

Dust collector



Inlet size	250 mm
Motor	3.7 kW
Air volume	75 m ³
Static pressure	2,300 Pa / 0.023 bar
Filter cleaning	Durch Luftdruck
Filter type	Tasche
Filter material	5μ, L-PET, elektrisch leitend
Number of filters	20
Filter area / Filter size	8m ² / 0.4m ² / pc
Residual dust content	<0.2 mg/m ³
Dust tank dimensions	540 x 750 x 570 mm
Dust tank volume	0.23 m ³
Air pressure required	6-8 kg / cm ³
Sound rate	82 dB @ 1M
Net weight	210 kg
Packing dimensions	1,700 x 770 x 2,130 mm

Options in detail

Part probing

- Probing part zero:
 - Edge
 - Corner
 - Hole
 - Cylinder
 - Rectangular pocket
 - Rectangular Solid
- Probing skew angle
- Measuring of Workpiece



Source: Renishaw



Source: Blum

Tool probing with touch probe

- Probing of tool length
- Probing of tool diameter
- Tool breakage detection over tool length with spare tools usage
- Tool wear detection and compensation for length and diameter



Source: Renishaw

Tool probing with laser

- Probing of tool length
- Probing of tool diameter
- Tool breakage detection over tool length with spare tools usage
- Tool wear detection and compensation for length and diameter
- Single edge inspection



Source: Blum

Source: Renishaw

Other options



Ballscrew cooling system



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