

Takumi G700



Index

- Technical specifications3**
- Accessories..... 4**
 - Standard 4
 - Optional..... 4
- Heidenhain TNC 6405**
 - Standard 5
 - Optional..... 5
- Frame and structure 6**
- Operating dimensions.....7**
- Shipping dimensions.....8**
- Foundation drawing.....8**
- Standard accessories in detail 9**
 - Spindle 9
 - Other Standard Accessories 9
 - Dust collector 10
- Options in detail 11**
 - Part probing..... 11
 - Tool probing with touch probe 11
 - Tool probing with laser..... 11
 - Other options 12



Technical specifications

Work Area	
X-Axis Travel	750 mm
Y-Axis Travel	600 mm
Z-Axis Travel	500 mm
Spindle nose to table distance	150 - 650 mm
Distance between columns	850 mm
Table dimensions	810 x 620 mm
Table max. load (uniform distribution)	500 kg
T-slots (Quantity x Width x Pitch)	5 x 18 mm x 125 mm
Drive motors	
Spindle drive motor	HSK-E50¹
Type	Built-In
Power (cont. / S6-40%)	20 / 26 kW
Torque (cont. / S6-40%)	10.4 / 13.5 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	5.1 / 5.1 / 5.1 kW
Automatic tool changer	
ATC Type	rotary ¹
Number of tools	24
Tool diameter (full load)	75 mm
Tool diameter (next pocket empty)	120 mm
Max. tool weight	7 kg
Max. tool length	300 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)	2,890 x 4,510 x 2,870 mm
Shipping weight approx.	7,000 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 TNC 640
- Graphite collector
- Linear scales
- Spindle thermal compensation system
- Spindle chiller
- Full enclosure
- Ethernet interface

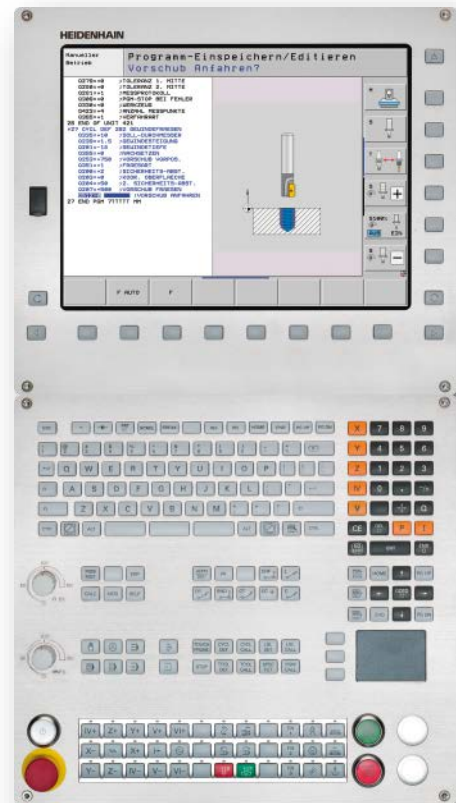
Optional

- 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 TNC 640

Standard

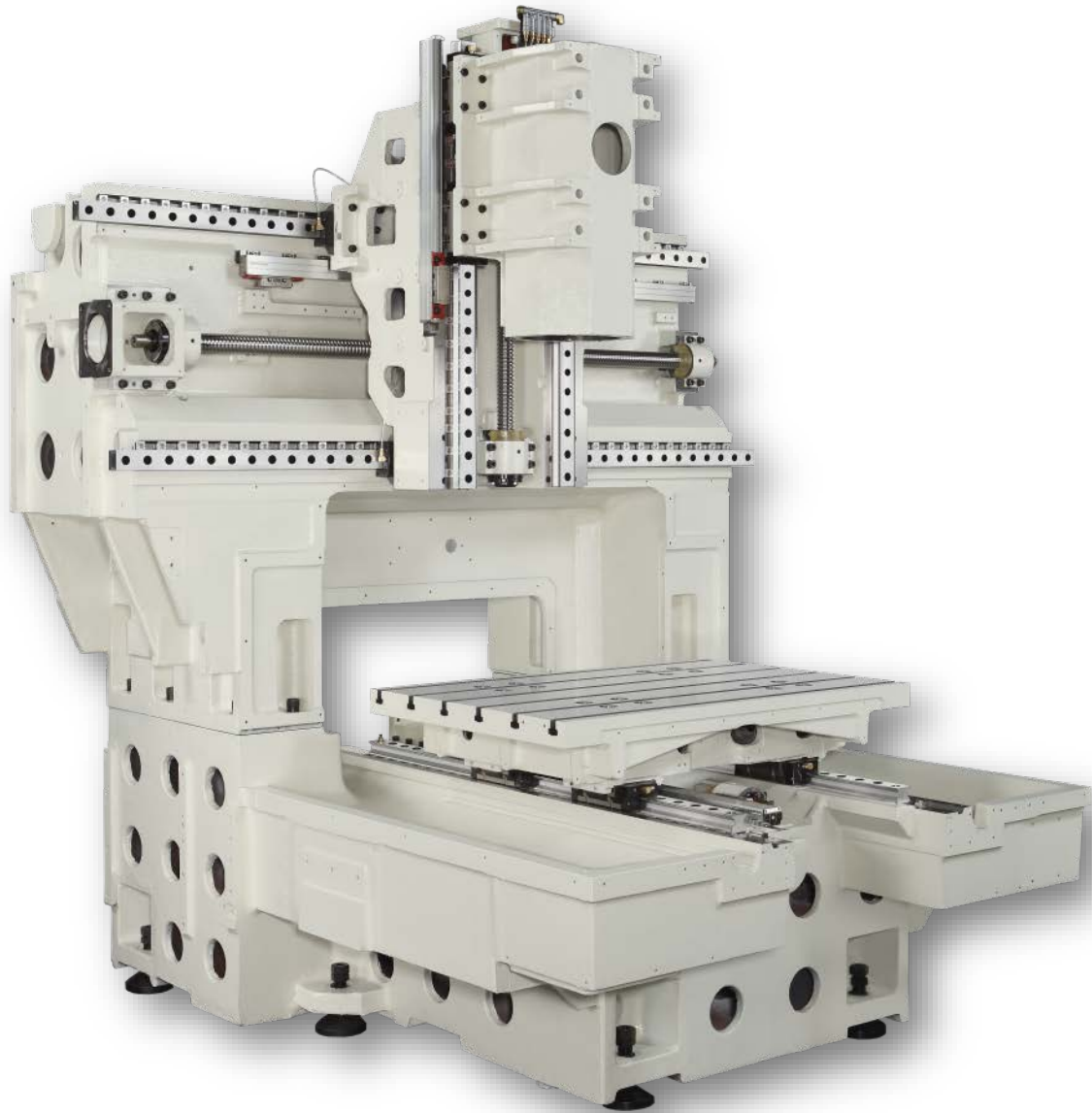
- Conversational programming
- ISO-NC programming
- FK free contour programming
- Extended milling and drilling cycles
- Touch probe cycles
- Parallel operation
- Integrated help system
- Program verification graphics
- 1,024 Block Look Ahead
- 0.5 ms Block Processing Time
- ≥21 Gigabyte Data Storage
- ≥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



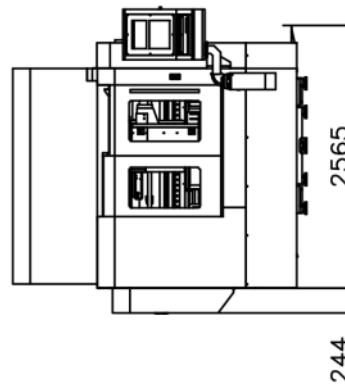
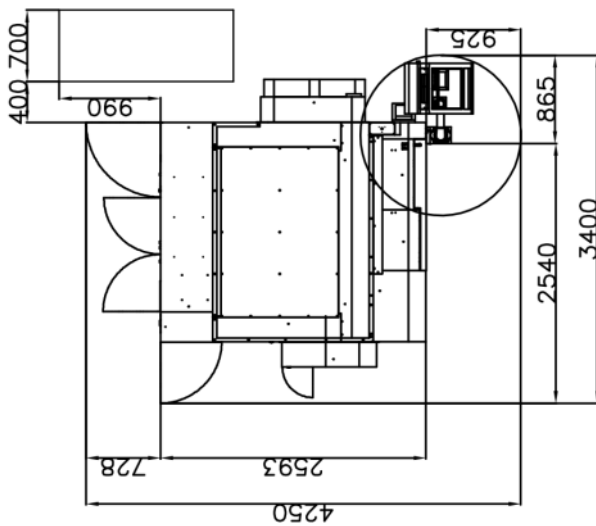
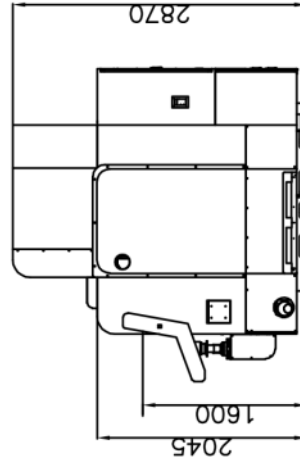
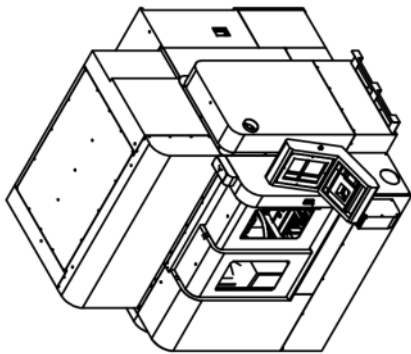
Optional

- 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



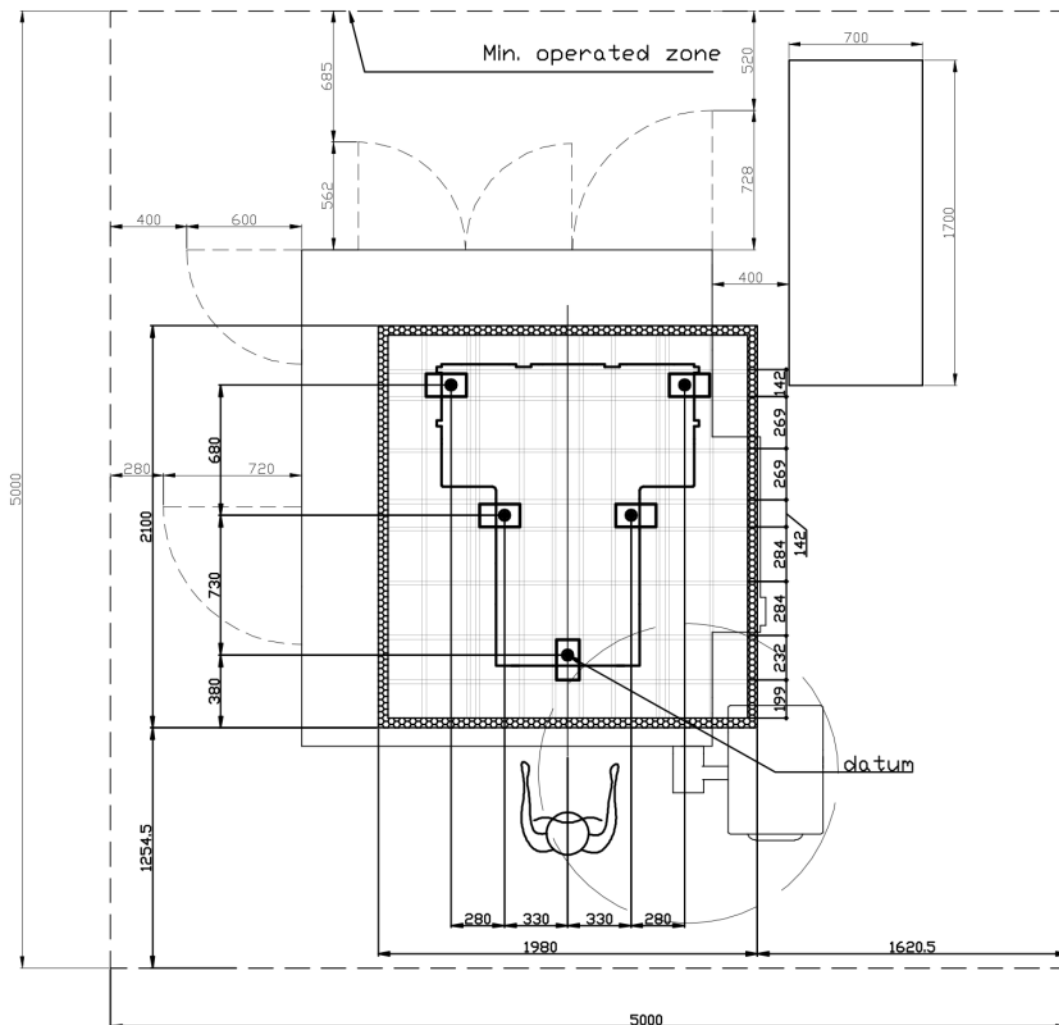
*Dimensions may vary depending on equipment

Shipping dimensions

	Width (mm)	Length (mm)	Height (mm)	Weight (kg)
Machine	3,730	2,280	2,560	7,030
Accessories	2,080	2,280	2,400	810

*Values may vary depending on equipment

Foundation drawing

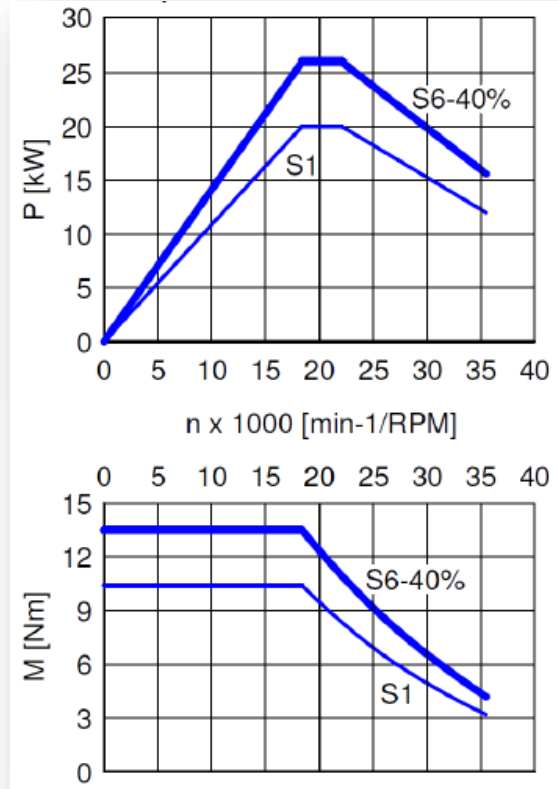
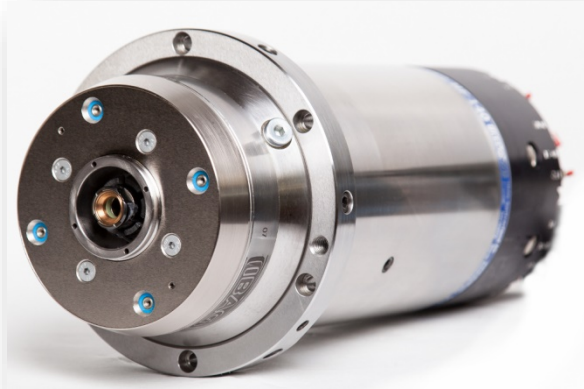


*Dimensions may vary depending on equipment

Standard accessories in detail

Spindle

(change the Power&Torque-Diagram)



Other Standard Accessories



Linear Scales



Automatic switch-off function



Spindle chiller

Dust collector

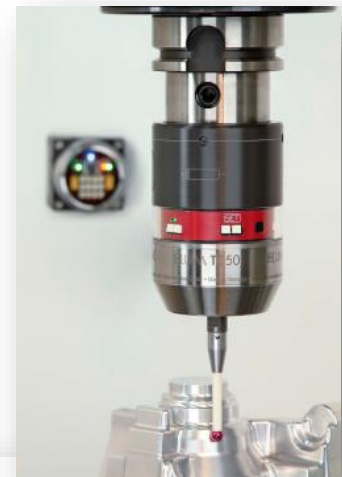


Inlet size	250 mm
Motor	3.7 kW
Air volume	88 CMM
Static pressure	2,300 Pa / 0.023 bar
Filter cleaning	By compressed air
Filter type	cartridge
Filter material	0.5 μ , Polyester+TEFLON
Number of filters	6
Residual dust content	<0.2 mg/m ³
Dust tank dimensions	540 x 750 x 570 mm
Dust tank volume	0.23 m ³
Air pressure required	6-8 kg / cm ³
Sound rate	72 dB @ 1M
Net weight	450 kg
Packing dimensions	1,880 x 820 x 2,180 mm

Options in detail

Part probing

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



Source: Blum



Source: Heidenhain

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: Heidenhain

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

Other options



Ballscrew cooling system



A member of HURCO companies

