

Takumi H13



Index

Technical specifications	3
Accessories.....	4
Standard.....	4
Optional.....	4
Heidenhain iTNC 530	5
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
Options in detail	10
Part probing.....	10
Tool probing with touch probe.....	10
Tool probing with laser	10
Other options	11



Technical specifications

Work Area					
X-Axis Travel	900 mm				
Y-Axis Travel	1,300 mm				
Z-Axis Travel	700 mm				
Spindle nose to table distance	200 - 900 mm				
Distance between columns	1,500 mm				
Table dimensions	900 x 1,400 mm				
Table max. load (uniform distribution)	3,500 kg				
T-slots (Quantity x Width x Pitch)	5 x 22 mm x 160 mm				
Drive motors					
Spindle drive motor	BBT40 ¹	HSK63-A ¹	HSK63-A ²	HSK63-A ²	BBT50 ²
Type	direct	direct	direct	built-in	direct
Power (cont. / 30 min rating)	15 / 18.5 kW	15 / 18.5 kW	*	*	22 / 26kW
Torque (cont. / 30 min rating)	95 / 118 Nm	95 / 118 Nm	*	*	140 / 165 Nm
Pull stud	MAS 1	-	-	-	MAS 1
Max. spindle speed	15,000 min. ⁻¹	15,000 min. ⁻¹	20,000 min. ⁻¹	24,000 min. ⁻¹	10,000 min. ⁻¹
Axis drives					
Feed rate X/Y/Z	20,000 mm/min				
Rapid traverse in X/Y/Z	30 / 30 / 30 m/min				
Power X/Y/Z-Axis	5.5 / 5.5 / 5.5 kW				
Automatic tool changer					
ATC Type	rotary ¹	chain ²	rotary ¹	chain ²	
Number of tools	30	48	32	60	
Tool diameter (full load)	76 mm	76 mm	127 mm	125 mm	
Tool diameter (next pocket empty)	150 mm	127 mm	229 mm	250 mm	
Max. tool weight	7 kg	7 kg	15 kg	15 kg	
Max. tool length	250 mm	300 mm	350 mm	350 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	0.010 mm				
Repeatability	0.008 mm				
Coolant and washdown					
Content coolant tank	900 l				
Scraper type conveyor					
Dimensions and connections					
Maximum Floor Space (WxTxH)	5,620 x 4,640 x 3,940 mm				
Shipping weight approx.	18,000 kg				
Electrical connection	75 kVA / 160 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
- Linear Scales
- Spindle thermal compensation system
- Coolant wash-down system
- Spindle chiller
- Full enclosure
- Coolant through spindle (CTS 20 bar)
- Oil Skimmer
- Wash-down gun and air gun
- Chip conveyor and cart
- Ethernet interface

Optional

- Rotary table (4th / 5th axis)
- 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
- Oil mist device
- Oil mist collector
- Scraper type conveyor instead of chain type conveyor
- Production package Knoll
- Bypass Filter
- Rotoclear

- 250 mm Z-axis increase (ex factory only, not upgradable)

Heidenhain iTNC 530

Standard

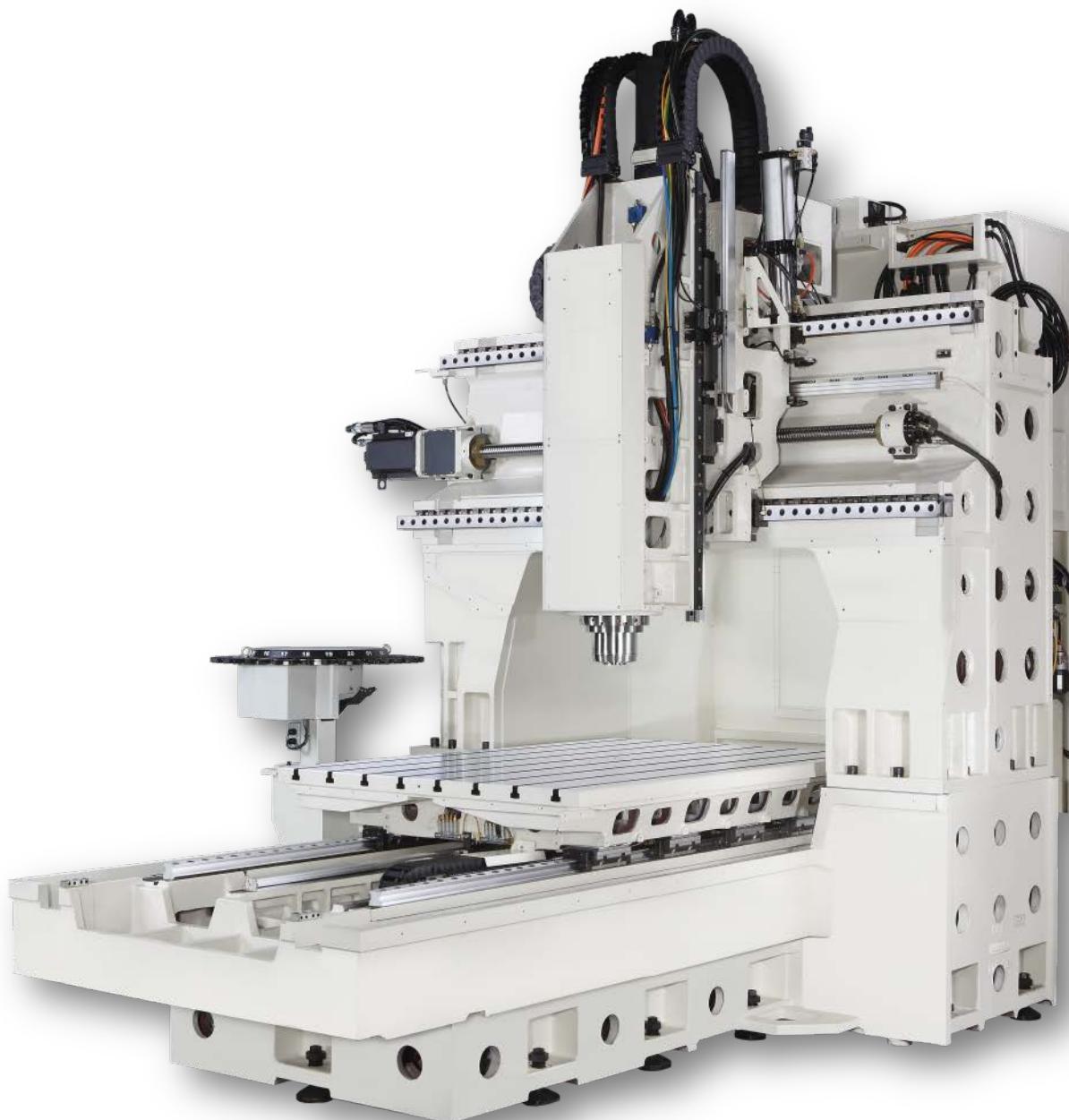
- Conversational programming
- ISO-NC programming
- FK free contour programming
- Extended milling and drilling cycles
- Touch probe cycles
- Parallel operation
- Integrated help system
- Program verification graphics
- 1,024 Block Look Ahead
- 0.5 ms Block Processing Time
- ≥21 Gigabyte Data Storage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



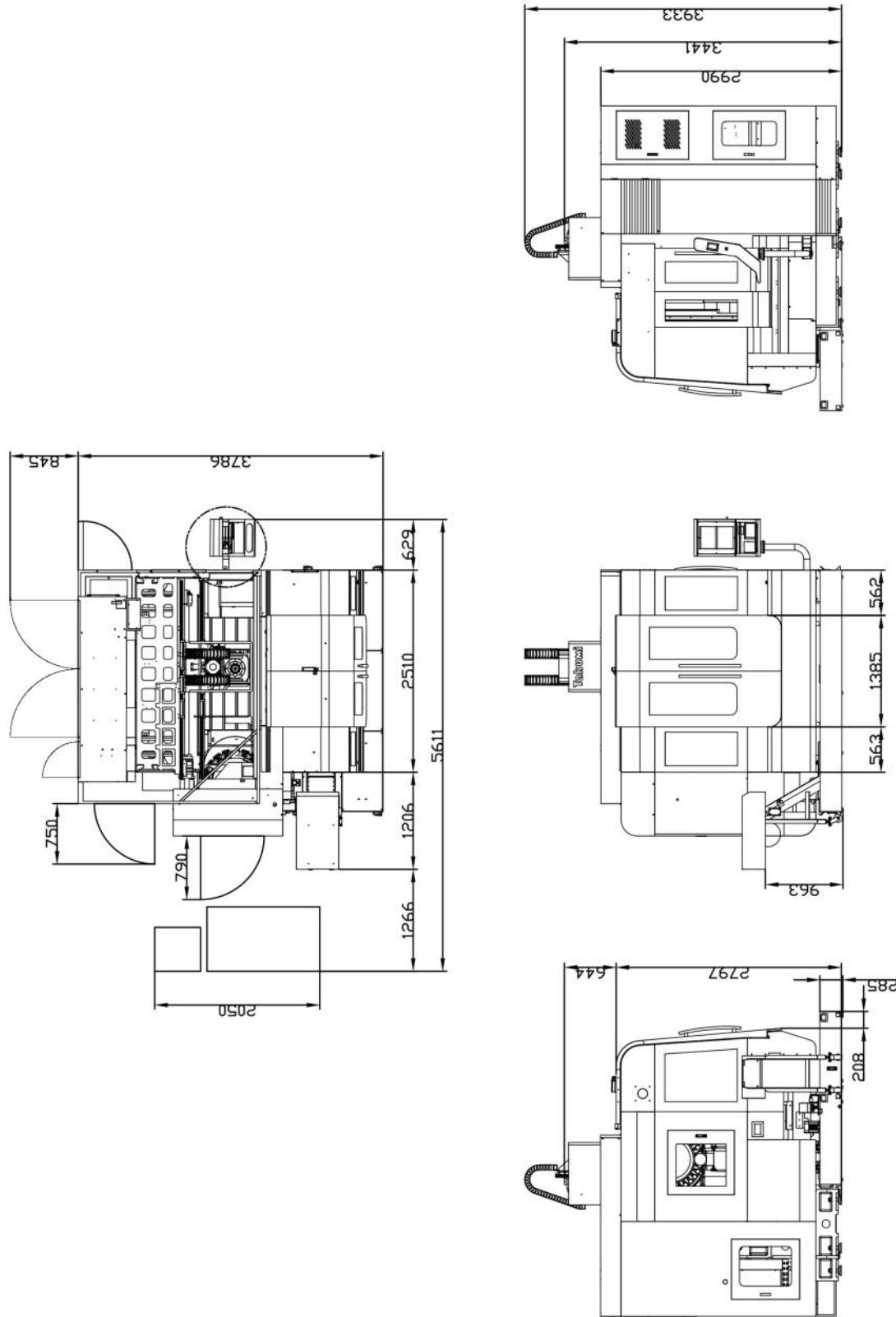
Optional

- 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



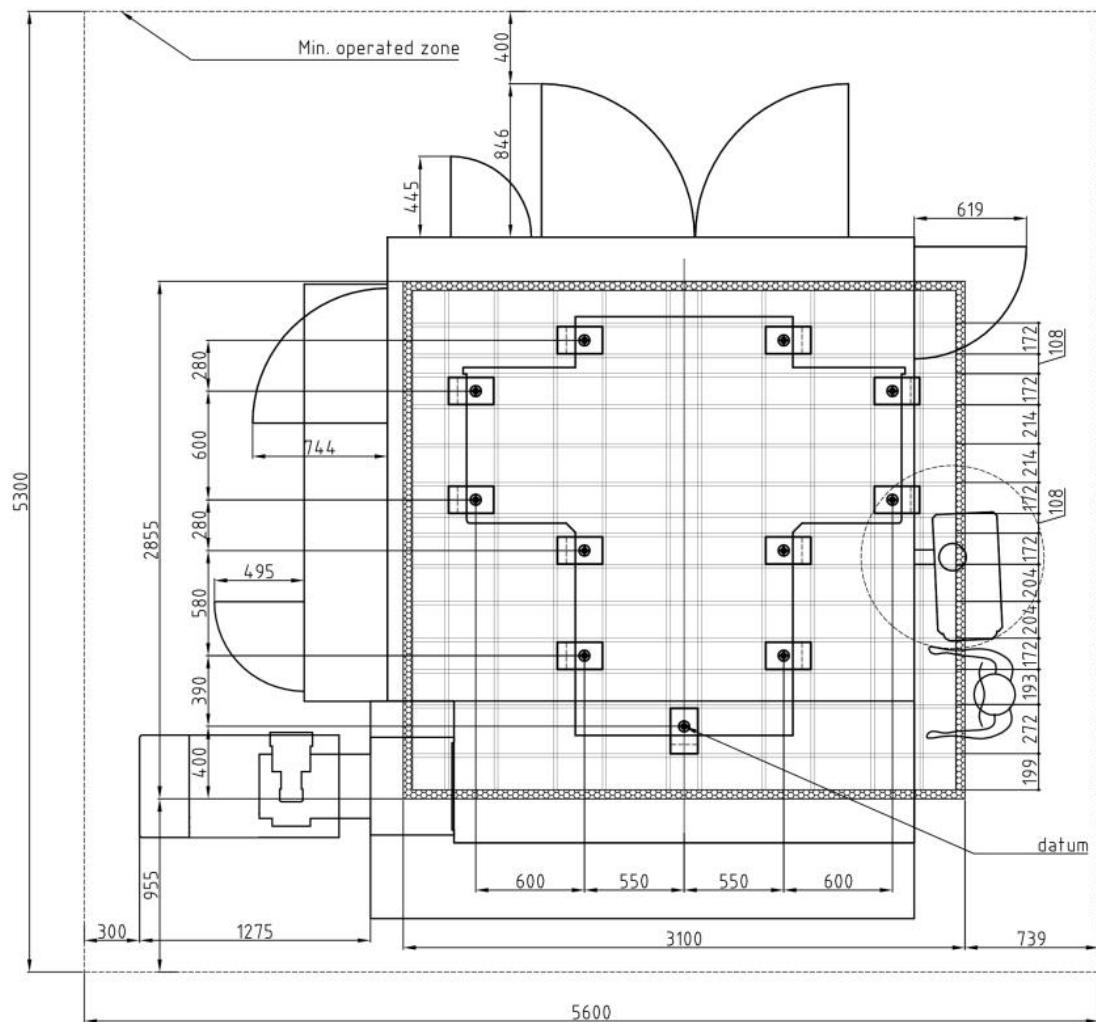
*Dimensions may vary depending on equipment

Shipping dimensions

	Width (mm)	Length (mm)	Height (mm)	Weight (kg)
Machine	4,300	3,700	3,550	17,920
Accessories	3,670	1,110	1,950	950

*Values may vary depending on equipment

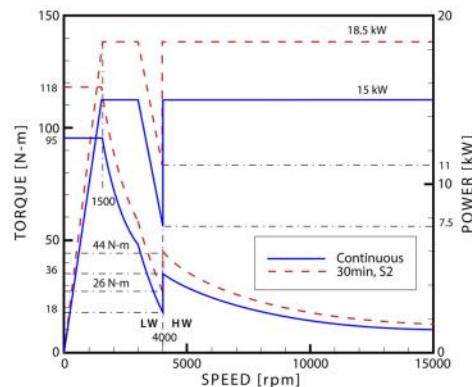
Foundation drawing



*Dimensions may vary depending on equipment

Standard accessories in detail

Spindle



Other Standard Accessories



Linear Scales



Automatic switch-off function



CTS unit (20 bar)



Spindle chiller

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: Renishaw

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



Bypass Filter



Production package



Ballscrew cooling system



Oil mist collector



Rotoclear



Oil mist device



A member of HURCO companies

