

New Generation

Vcenter-NH5000

Horizontal machining center

- Travels (X/Y/Z): 800 / 700 / 800 mm
- Rapid feeds: 48 / 48 / 48 m/min
- BBT-40 / 12000 rpm spindle / 18.5 KW
- Pallet loading 500 kg
- Roller type linear motion guideways
- Grease lubrication



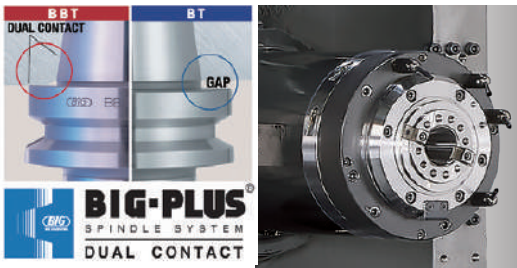
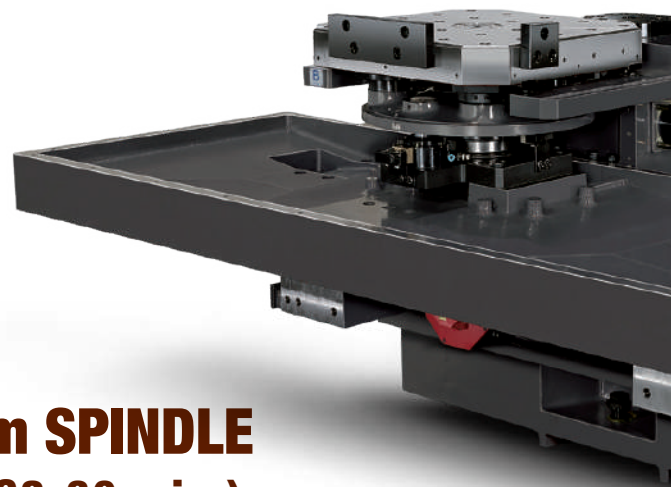
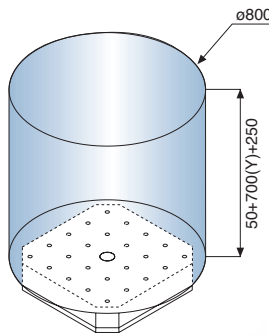
Vcenter-NH5000 New Generation HMC



- ◆ Y-axis travel 700 mm and high rapid feeds 48 m/min with roller type linear motion guideways
- ◆ 12000 rpm BBT-40 spindle with high power output 18.5 kW
- ◆ T-shape structure with slant style column design facilitates quick tool & pallet exchange and high cutting rigidity
- ◆ Symmetric base with deep groove in the center for efficient chip removal

X/Y/Z AXES

- Maximum part dimension: $\varnothing 800 \times 1000$ mm
- Travels: 800/700/800 mm
- Rapid feeds: 48/48/48 m/min
- Ballscrew diameter: 45/45/45 mm
- Roller type LM guideways 55/45/45 mm
- Grease lubrication



12000 rpm SPINDLE 18.5 KW (S2-30 min.)

- Direct drive 12000 rpm BigPlus® BT-40 spindle
- Dual low/high winding with high power output 18.5 KW 118 Nm (S2 30 min or S3-60%)
- Air curtain included with oil/air lubrication



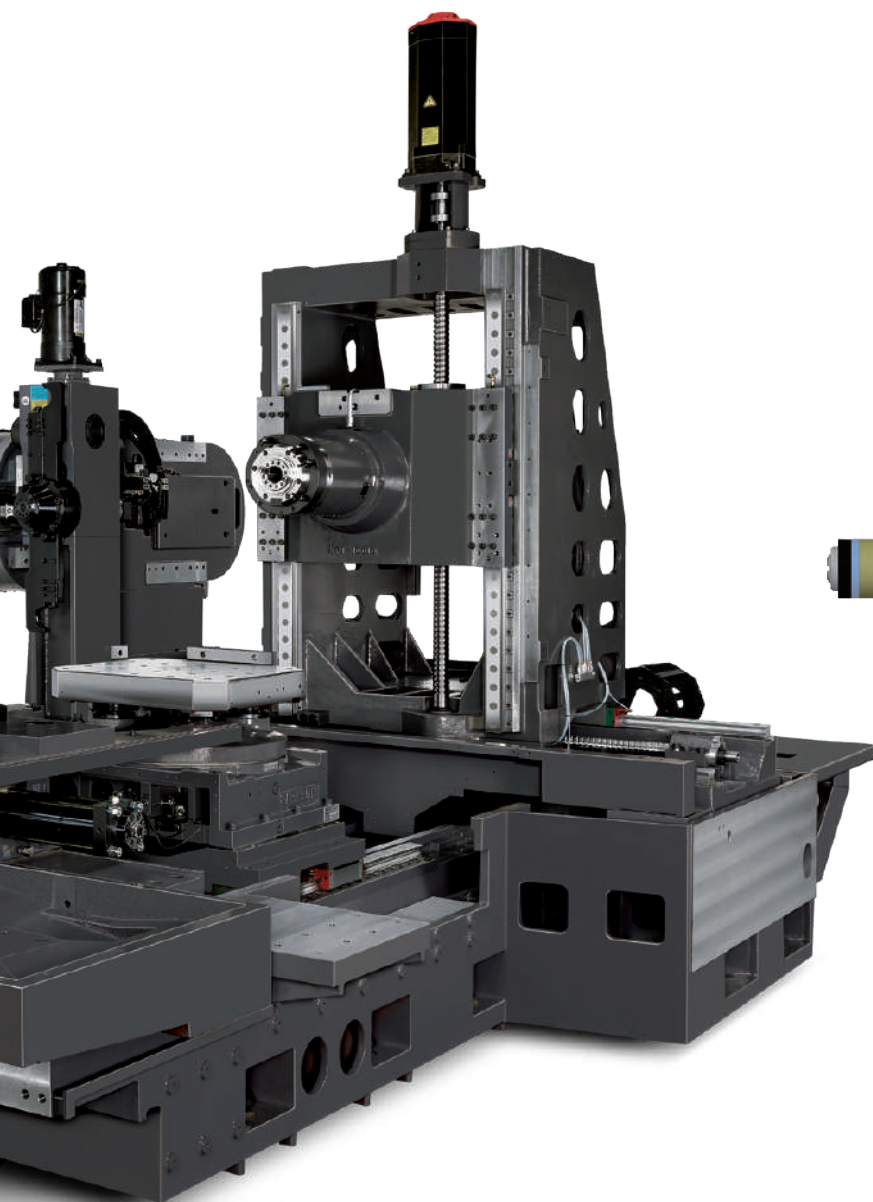
ATC (Auto Tool Changer)

- 40 tools (opt. 60, 90)
- Tool exchange time:
3.0 sec. (T-T, 7 kg tool)
6.7 sec. (C-C, 7 kg tool)

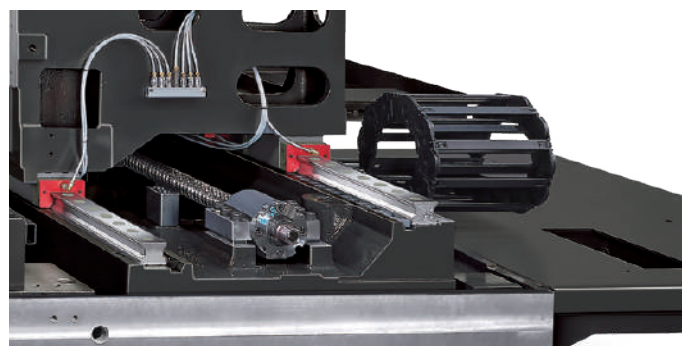
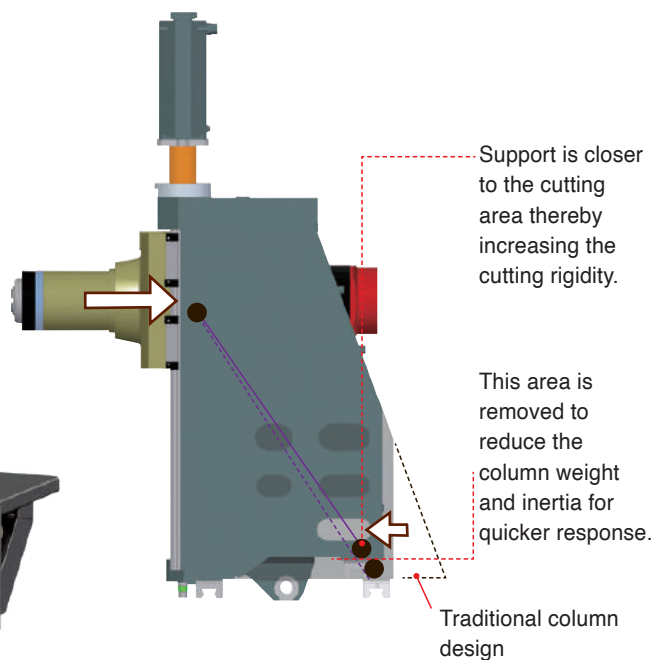


Certificated Casting

GB300



Cutting force



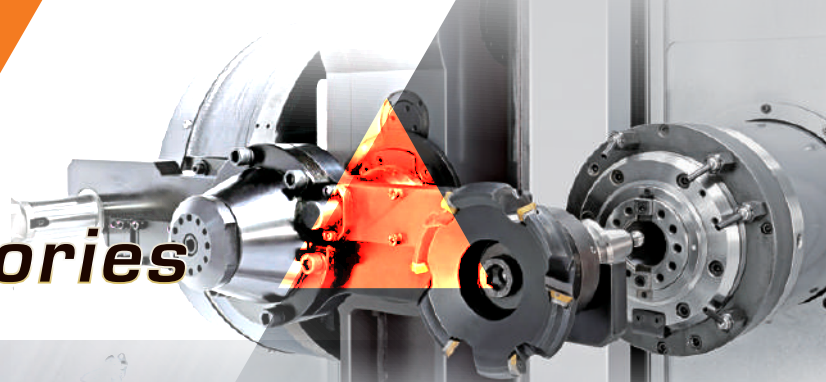
B AXIS

- 1 degree indexing (with coupling), opt. 0.001 degree (CNC pallet)
- 4 grounded cones shaped with taper pins and bushes for high accuracy and repeatability
- Air blow thru tapered cones.
- Hydraulic ports thru B-axis pallet available (opt.)

APC (Auto Pallet Changer)

- Pallet dimension 500 x 500 mm
- Hydraulic drive (opt. servo driven)
- Pallet exchange time : 6.5 sec (P-P), 11 sec (C-C)

Standard / Optional Accessories

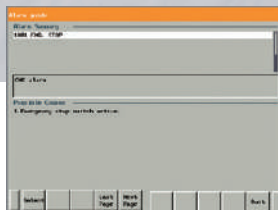


New FANUC Oi-MF Plus Control

- ◆ 10.4" screen + AICC-2 (200 blocks) + Manual Guide I (MGI) + 2GB CF card
- ◆ Victor's GUI (VSS macros)
- ◆ ECO design for tool calibration



15" screen (opt.)



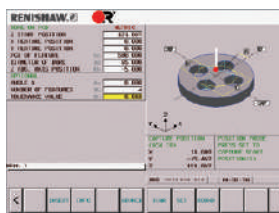
Alarm display with diagnosis



Tool management



Tool breakage detection (opt.)



Renishaw GUI (opt.)



Lube Hybrid Lubrication



Spindle oil cooler



Chip conveyor



Table shower

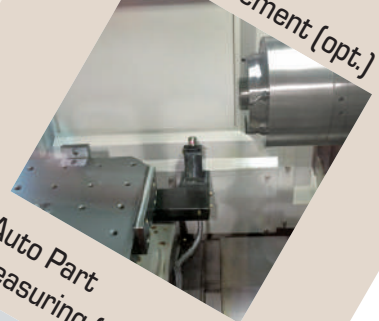


Optional Accessories

CTS (Coolants Thru Spindle, opt.)



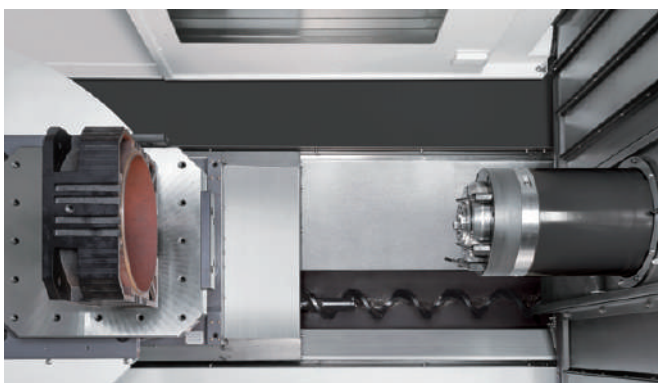
Tool length measurement (opt.)



Auto Part measuring (opt.)



Linear scales (opt.)



One piece Z-axis cover + Screw chip remover



Enclosed rear guarding

Victor Taichung's FANUC Oi-MF Plus (10.4") Control SPECIFICATION

Standard

ITEM	SPECIFICATION	DESCRIPTION
Operation & Program Input:		
1.	Input / Output interface	RS-232, PCMCIA Card, USB
2.	Tool Offset Pairs	± 6-digit, 400
3.	Program Number	O4-Digit
4.	Sequence Number	N5-Digit
5.	M Code Function	M3 digit
6.	S Code Function	S5 digit
7.	T Code Function	T2 digit
8.	Program Display	Program name 31 characters
9.	Positioning	G00
10.	Linear Interpolation	G01
11.	Circular Interpolation	G02, G03
12.	Helical interpolation	Std.
13.	Skip Function	G31
14.	Reference Position Return	G28, G30
15.	Absolute / Incremental Programming	G90/G91
16.	Plane Selection	G17, G18, G19
17.	Polar coordinate Command	G16.
18.	Workpiece Coordinate System	G52, G53, G54~G59
19.	Addition of Workpiece Coordinate System Pair	48 Pairs
20.	Optional Chamfering/Corner R	Std.
21.	Sub Program Call	4 folds nested
22.	Custom macro B	Std.
23.	Addition of Custom Macro Common Variables	#100~#199, #500~#999
24.	Canned cycle For Drilling	G73/G74/G76, G80-G89
25.	Small hole peck drilling cycle	G83
26.	Program Stop / Program End	M00 / M01 / M02 / M30
27.	Scaling	G51
28.	Rigid tapping	M29
29.	Coordinate System Rotation	G68
30.	Programmable mirror image	G50.1
31.	Manual Guide I (MGI) conversational programming	Std.
32.	Fine Surface Machining	Std.
33.	Smooth tolerance control+	Std.

Controlled Axes:

1.	Controlled Axes	3 Axes (X, Y, Z)
2.	Simultaneous Controlled Axes	4 Axes
3.	Least Input Increment	0.001 mm
4.	Least command increment	0.0001 mm
5.	HRV Control	HRV3+
6.	Unexpected disturbance torque detection (AIR-BAG)	Std.
7.	Backlash compensation	Std.
8.	Stored pitch error compensation	Std.

Feed:

1.	Rapid Traverse Override	F0, 25%, 50%, 100%
2.	Feed Per Minute	G94 (mm/min)
3.	Feed rate Override	0~200%
4.	Spindle Override	50~200%
5.	Manual Handle Feed Rate	X1, X10, X100
6.	AI contour control (AICC, G05.1) (in total)	200 blocks

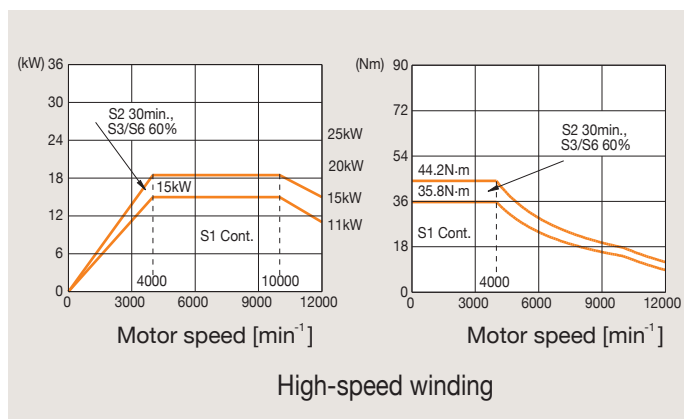
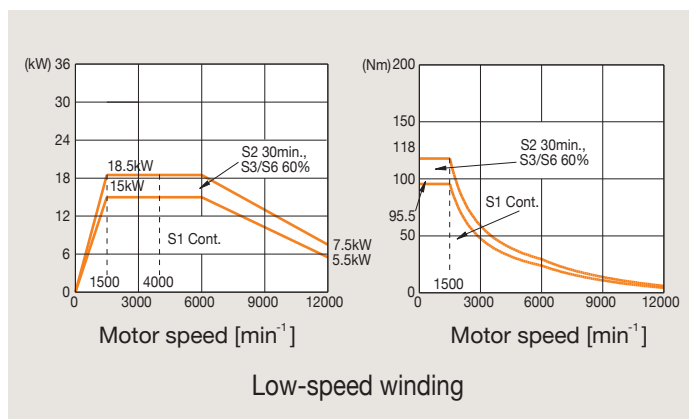
Edit Operation:

1.	Part Program Storage Length (in total)	5120m
2.	Part Program Editing / Protect	Std.
3.	Memory Card Editing (Max. 63 programs.)	Std.

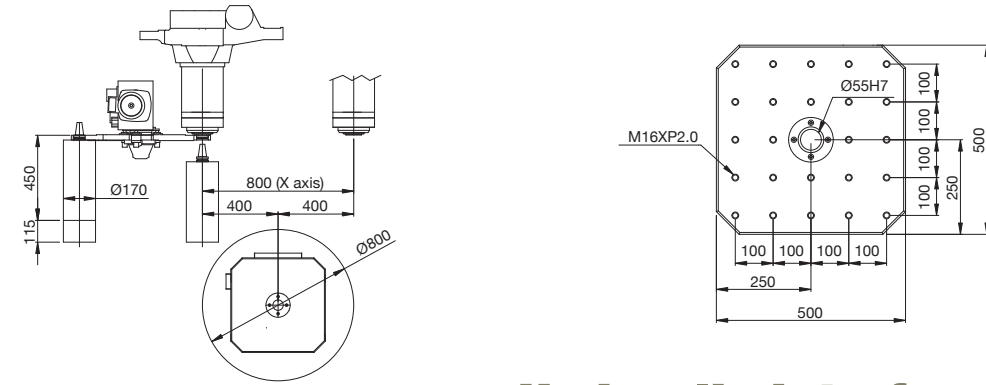
OPTIONS

ITEM	SPECIFICATION	DESCRIPTION
With hardware included:		
		Oi-M
1.	Data server (with PCB and CF card 1GB)	<input type="checkbox"/>
2.	Ethernet/IP (to be linked to robot)	<input type="checkbox"/>
3.	PROFIBUS-DP (to be linked to robot)	<input type="checkbox"/>
4.	CC-Link (to be linked to robot)	<input type="checkbox"/>
5.	Fast Ethernet (required for SCADA Web with additional RJ45 port)	<input type="checkbox"/>
6.	15" LCD with Panel iH (iHMI) and touch screen	<input type="checkbox"/>
7.	AI contour control 400 blocks	<input type="checkbox"/>
Edit Operation:		
8.	Tool load monitoring (with Victor own PLC)	<input type="checkbox"/>
9.	Cylindrical interpolation (G7.1) (used on 4th axis)	<input type="checkbox"/>
10.	Addition of work-piece coordinate systems 300 sets	<input type="checkbox"/>
11.	Tilted working plane indexing command	<input type="checkbox"/>
12.	Memory card program entry count extension (Max. 1000)	<input type="checkbox"/>

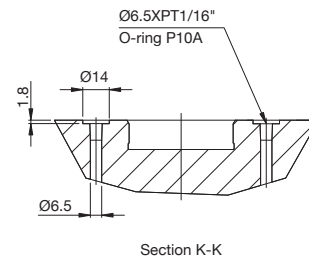
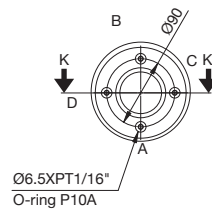
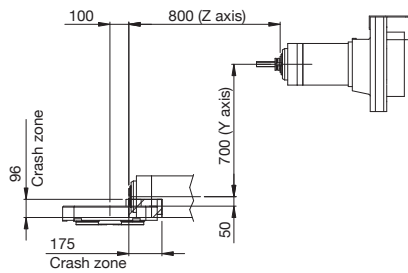
Spindle Output



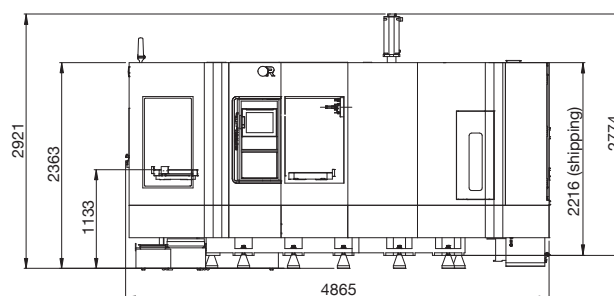
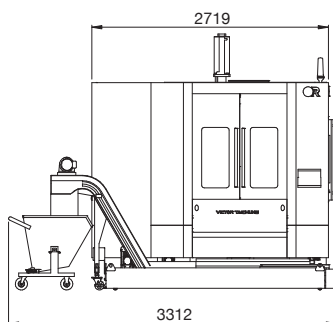
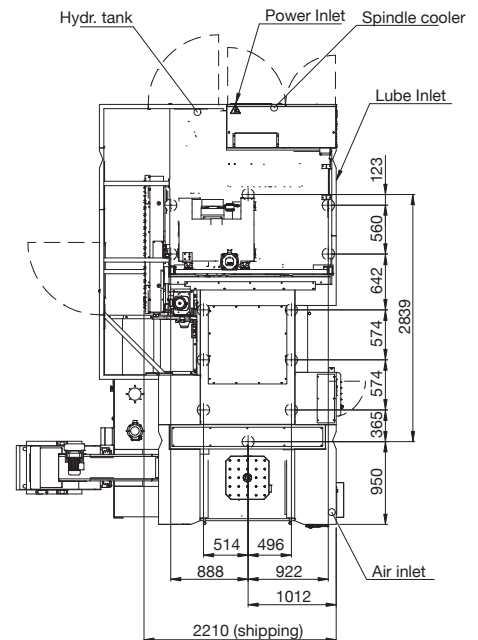
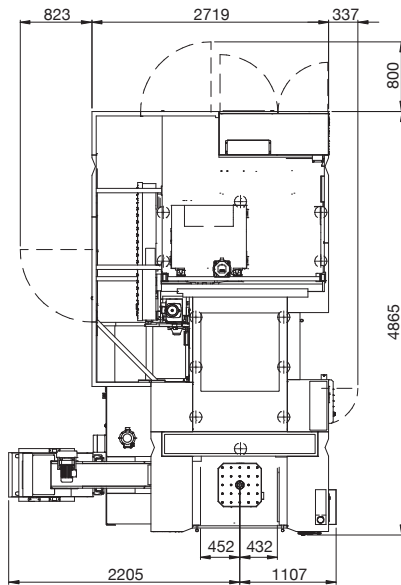
Machining Range



Hydraulic interface (4 ports, opt.)



Machine Layout



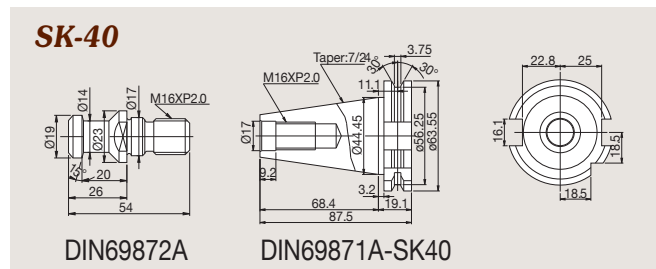
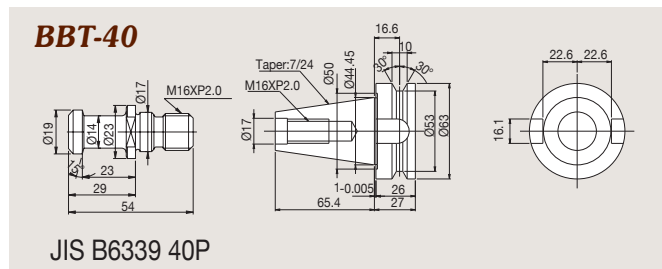
Unit: mm

Machine Specification

Item	Unit	Vcenter-NH5000	
Capacity	X axis travel	mm	800
	Y axis travel	mm	700
	Z axis travel	mm	800
Distance	Spindle center to column	mm	100-900
	Spindle nose to table surface	mm	50-750
	Max. part dimension (W x L x H)	mm	Ø800 x 1000
Working Table	Table work area	mm	500 x 500
	Max. table (pallet) loading	kg	500
	Surface configuration		M16 x P2.0
	Min. angle of rotation	deg.	1 (opt. 0.001 for CNC table)
	Pallet exchange time	sec	6.5 (P-P), 11 (C-C)
	Pallet exchange type		Rotary
	Time to index 90°	sec	3 (opt. 1.6 for CNC table)
	Time to index 180°	sec	5 (opt. 3 for CNC table)
Spindle	Spindle taper		BBT-40
	Spindle motor- cont/30min	kW	15 / 18.5
	Spindle speed	rpm	12000 (opt. 15000)
	Spindle bearing diameter	mm	70
Axis feed	Rapid feed rate - X/Y/Z	m/min	48 / 48 / 48
	Axis feed motor - X/Y/Z	kW	4 / 6 / 4
	Cutting feed rate	m/min	20
	B axis feed motor	kW	2.5
	X/Y/Z ball screw (dia. x pitch)	mm	Ø45 x 16
ATC & Tools	Linear guideway width	mm	55 / 45 / 45
	Tool magazine capacity		40 (opt. 60, 90)
	Tool selection		Random
	Max. tool dia. (without Adjacent tool)	mm	85 (170)
	Max tool length	mm	450
	Max. tool weight	kg	7
	Tool exchanging Time	sec	3 (T-T), 6.7 (C-C)
Machine	Pull stud angle	deg.	15° (JIS 40P)
	Standard CNC controller		0i-MF Plus (10.4")
	Power requirement	KVA	40 (50 with CTS)
	Air pressure requirement	kg/cm ²	5.5 ~ 6.5
	Coolant tank	L.	500
	Chip disposal		Front and left
	Machine height	mm	2921
	Floor space requirement (with chip conveyor)	mm	3312 x 4865
Machine weight	kg	13000	

* Specifications are subject to change without notice for design improvement.

** Available with CE / UKCA / TS / GB certificates.



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Standard Accessories:

- 1° indexing table
- Spindle oil cooler
- Fully enclosed splash guard
- Manual pulse generator (remote type)
- Hand tools and tool box
- Scroll type chip remover
- Built-in work lamp
- Programming end light
- Leveling blocks
- Automatic pallet changer
- Spindle load meter
- Rigid tapping
- Table shower system
- Chip conveyer with cart
- Handy air gun
- Handy coolant gun
- Fanuc e-book (CD)

Optional Accessories:

- Air conditioner for electrical cabinet
- CNC table with 0.001° continuous indexing
- Coolant Through Spindle (CTS)
- 60, 90 tool magazine
- 15000 rpm spindle
- Hydraulic interface on pallet
- T-slot pallet
- Tool length measurement
- Workpiece measurement
- Linear encoder feedback
- Multi-face table (Tombstone fixture)