

- **Heavy-duty cutting performance.**
- **Excellent and stable accuracy.**
- **User-friendly ergonomic design.**
- **High precision and rigidity.**
- **Wider door open range.**
- **High efficiency.**
- **Fully enclosed splashguard.**

**SADDLE AND Z AXIS**

- The enlarged saddle in 14000mm and with 6 blocks at Z axis reinforce cutting rigidity.

**TRIPLE GUIDEWAYS FOR Y AXIS MOVEMENT**

- 2 roller type linear guideways are on the face of bridge, and the 3rd is located on the top to offer excellent holding of headstock.

**STANDARD SPINDLE**

- Easy for after service.
- High accuracy.
- Cool jet around spindle.

**BIG PRELOADED BALL SCREWS**

- Double nut C3 class precision ball screws are used on all three axes.
- Direct drive from servo motor to ball screw.
- Ball screws diameter: X:63mm / Y: 40mm / Z: 50mm.
- Rapid traverse speed: X:30mm / Y: 30mm / Z: 16mm.
- Table size: 2200x1100 mm.
- Max. table loading: 3000 kgs.

- One-piece base with two slots for chip auger at both sides minimizes cleaning time.



**MAGAZINE**

- Loading and un-loading tools can be done during machining. Tool change or tool selection will not be executed while door open for safety consideration.



**ROTARY WINDOWS (OPTION)**

- Rotary window can rid the liquid on the front door. It's the best solution for user who needs to monitor machining frequently.



**COOLANT GUN**



**ELECTRICAL MODULARITY**



- Perpendicular and swing design for user friendly.

**SPECIFICATION**

MODEL	V2000
<b>Travel</b>	
X-Axis	2050 mm(80.7")
Y-Axis	1150 mm(45.27")
Z-Axis	700 mm(27.55")
Spindle nose to table	200 - 900 mm(8.87-35.43")
<b>Table</b>	
Table size	2200mm x 1000mm(86.61x39.97")

Floor to table	830 mm(32.67")			
Max. table loading capacity	3000 kgs (6600 Lbs)			
T-slot (no x Width x Pitch)	6 x 22mm x 160 mm ( 6 x 0.86" x 6.29" )			
Spindle center to column	During double columns: 1200 mm(47.2")			
<b>Feed system</b>				
Rapid traverse speed	X/Y/Z: 30 / 30 / 16 M/min			
Feed motor(FANUC)	X/: Alpha 30-3000i Y/Z: Alpha 22-3000i			
Ball screw diameter & pitch	X: 63mm/12mm(2.48/0.47") Y: 40mm/10mm(1.57/0.39") Z: 50mm/10mm(2/0.39")			
Cutting feedrate	1-10,000 mm/min (0.04 - 393.7/Min")			
Type of transmission	Direct Drive			
<b>Spindle</b>				
Type of tool shank	BT40/CAT40/DIN 69871A		BT50/CAT50/DIN 69871A	
Max. spindle speed	10,000 / (Op) 12,000 / 15,000 rpm		10,000 rpm	
Spindle motor	15/18.5 kW		22/26 kW	
Type of transmissiop	Direct Drive		Direct Drive / ZFGear Box (Op)	
<b>ATC</b>				
Tool storage capacity	30 / (Op) 40 / 60T	(Op) 90 / 120T	32 / (Op) 40 / 60T	(Op) 90 / 120T
ATC type	Armless type			
Max. tool diameter	76 mm (2.99")	90 mm (3.54")	127 mm (5")	127 mm (5")
Without adjacent tool	127 mm (5")	180 mm (7.08")	228 mm (8.97")	228 mm (8.97")
Max. tool length	350 mm (13.77")	350 mm (13.77")	400/400/350 mm (15.74/15.74/13.77")	400 mm (15.74")
Max. tool weight	7 kg (15.43Lbs)	7 kg (15.43Lbs)	15 kg (33.06Lbs)	15 kg (33.06Lbs)
Tool changing time (Tool to Tool)	2.5 sec	1.6 sec	3.5 sec	3.57 sec
Tool changing time (Chip to Chip)	5.5 sec	9.6 sec	6.8sec	11.57 sec
Method of tool selection	Random selection			
	bi-directional magazine rotation			
Tool display	Yes			
Special tool management	Yes			
<b>Coolant system</b>				
Coolant tank size	600 L			
Coolant capacity	105 L / min			
Chip Flush capacity	screw type			
<b>Machine size</b>				

Machine height	3481 mm (137")			
Floor space	5865x3474 mm (230.9x136.7")	5865x3474 mm (230.9x136.7")	5865x3474 mm (230.9x136.7")	6865x3474 mm (270.2x136.7")
weight	19500 kgs (8845Lbs)	22942 kgs (10406Lbs)	22110 kgs (10029Lbs)	23600 kgs (10732Lbs)
<b>Power source</b>				
Electrical power supply	60 KVA/3PH/220V 50/60HZ			
Compressed air supply	6.0 kgf/cm <sup>2</sup> (85psi) (0.6MPa)			
<b>Controller</b>				
	FANUC / HEIDENHAIN / SIEMENS			

Edition / A01

\* Specifications may differ according to option accessories and are subject to change without notice.

#### Standard accessories

- (#40) Arm type ATC (30tools)
- (#50) Arm type ATC (32tools)
- Spindle chiller
- Automatic lubrication system
- Sprial & flat type chip conveyor
- Heidenhain 3-Axis rotary table
- Portable electronic handwheel (FANUC)
- Working light
- Alarm light
- Fully enclosed splash guard
- Coolant gun (control by panel)
- 10,000 rpm spindle (Direct drive)
- Spindle coolant system
- Spindle temperature compensation (HEIDENHAIN)
- Preparation for "Spindle temperature compensation" (FANUC)

#### Optional accessories

- Arm type ATC 40/60 Tools
- (#40) 15,000 rpm spindle (Direct drive) / 20,000 rpm spindle (Built-in)
- (#50) 6,000 rpm spindle (ZF Gear Box)
- Bigger spindle motor
- Coolant through spindle system
- Spindle air blow
- 4th or 4+5th axis rotary table
- Working piece measurement system
- Tool length measurement system
- Heat exchanger on electrical cabinet
- Vacumn dust collector
- Power transformer
- CE (Safety door interlock)
- Air gun
- Rotary Window
- Rapper fillter system
- Mist collection system
- Spindle temperature compensation (FANUC)