Takumi

The *Art* of Productivity

H12

Double-Column Machining Center

High Speed Machining and Outstanding Surface Finish

- ❯ 53.2 x 37.4 x 23.6 in (1350 x 950 x 600mm) travels
- ❯ 59.1 x 37.8 in (1,050 x 700 mm) table working surface with 5,512 lbs (2,500 kg) maximum capacity
- ❯ 1,181 inches per minute (30 m/minute) rapids
- ❯ 787 in/minute (20 m/mintue) cutting feed rates
- ❯ 30-station swing-arm ATC, random access
- ❯ 15,000 RPM Big Plus® CAT 40 inline direct-drive spindle
- ❯ World-class performance for die/mold, aerospace, and other high speed applications
- ❯ One piece robust base absorbs the inertia of high cutting feeds
- ❯ Extra-wide door openings, for easier loading and unloading
- ❯ One piece double column design increases rigidity enabling higher cutting feeds while maintaining part finish
- ❯ 45% increase in Y axis work area over the standard vertical machine design
- ❯ Specially designed head and included spindle chiller ensure thermal stability
- ❯ 30 components on the machine are hand scraped for alignment during asembly
- ❯ Roller-type rails on all axes for added rigidity and speed
- ❯ Large diameter , preloaded and pretensioned ballscrews with fine pitch for accurate motion control
- ❯ Linear scales on all axes
- ❯ FANUC© 31*i*-MB Series Control
- ❯ AICC II for high feed rates with optimal cutting precision
- ❯ High speed processor and 600 block look ahead for fast contour milling
- ❯ 1 Gigabyte data server with high speed ethernet connection
- ❯ Programmable mirror image
- ❯ Rigid Tapping (M29)
- ❯ 2 year machine parts warranty
- ❯ 2 year control parts and labor warranty
- ❯ Factory trained local service and 24/7 tech support

Specifications

	H12
Travel	
X-Axis	53.2 in / 1,350 mm
Y-Axis	37.4 in / 950 mm
Z-Axis	23.6 in / 600 mm
Distance from Spindle Nose to Table	7.87 ~ 31.5 in / 200~800 mm
Distance between Columns	41.7 in / 1,060 mm
Table	
Dimensions	59.1 x 37.8 in / 1,500 x 960 mm
Max. Load	5,512 lbs / 2,500 kg
T-slot (number x width x pitch)	6 x .9" on 6.3" Centers/ 6 x 22mm on 160mm Centers
Spindle	
Type	Direct Drive
Spindle Speed	15,000 rpm
Spindle Torque Peak	105.5 ft/lb / 143.04 nm
Motor Power (cont./30 min)	20.1/24.8 HP / 15/18.5 kW
Coolant Thru Spindle	30 bar / 435.11 psi
Spindle Taper	Big Plus® CAT 40
Feed Rate	
Rapid Traverse (X/Y/Z)	1,181 x 1,181 x 1,181 ipm / 30 x 30 x 30 m/min
Cutting Feed Rate	0.04~787 ipm / 1 ~ 20,000 mm/min
Power (X/Y/Z)	7.0kw/4.5kw/7.0kW
ATC & Magazine	
ATC Type	Swing-Arm
Magazine Capacity	30 tools
Maximum Tool Diameter (next pocket empty)	2.95/5.85 in / 74.9/151.1 mm
Maximum Tool Length	11.8 in / 300 mm
Maximum Tool Weight	15.4 lbs / 7 kg
Tool Shank	CAT40 (BT 40 optional)
Space & System Requirements	
Pneumatic Pressure	5 CFM @ 85-115 psi / 0.14m3 /min. @ 6-8 bar
Electrical Power Consumption	50 KVA
Machine Net Weight	28,600 lbs / 13,000 kg
Operating Dimensions (W x L x H)	197.44 x 203.72 x 137.91 in / 5,015 x 5,327 x 3,503 mm

Accessories

Standard:

❯ Linear Scales
❯ 15,000 RPM, Big Plus® CAT 40, inline spindle
❯ 435 PSI coolant thru the spindle
❯ Operator safety door switches
❯ Spindle chiller
❯ Programmable cutting airblow
❯ 173 gallon coolant tank
❯ Programmable coolant washdown
❯ Centralized automatic lubrication system
❯ Oil Skimmer
❯ Wash-down gun and air gun
❯ 1GB Dataserver
❯ Manual pulse generator (MPG)
❯ Ethernet & RS-232C interface
❯ Electrical cabinet air conditioner
❯ Dual internal chip augers and 1 exhaust chip auger
❯ Toolbox, leveling bolts and pads
❯ Operator manuals
❯ Full enclosure
❯ Work-light
❯ 3-light indicator lamp

Optional:

❯ 10000 rpm Big Plus® CAT50 spindle
❯ 24000 rpm HSK A63 IBAG integral spindle
❯ Oil mist device
❯ Oil mist collector
❯ Coolant filtration
❯ Part probe measurement system
❯ Tool probe measurement system
❯ 4th axis preparation kit
❯ 4th axis rotary table
❯ Lift up chip conveyor with cart
❯ 1000 psi coolant thru spindle
❯ Cutting air thru spindle
❯ 48 additional work offsets
❯ BBT 40 tool holder conversion

Layout

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Information may change without notice. Some machines shown with options T003 rev4.24.18

TakuMi

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