



LINEAR GUIDE WAYS



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Vertical Machining Center

- ◆ High Speed & High Precision
- ◆ 3 axes linear guide ways
- ◆ Rigid Structure design



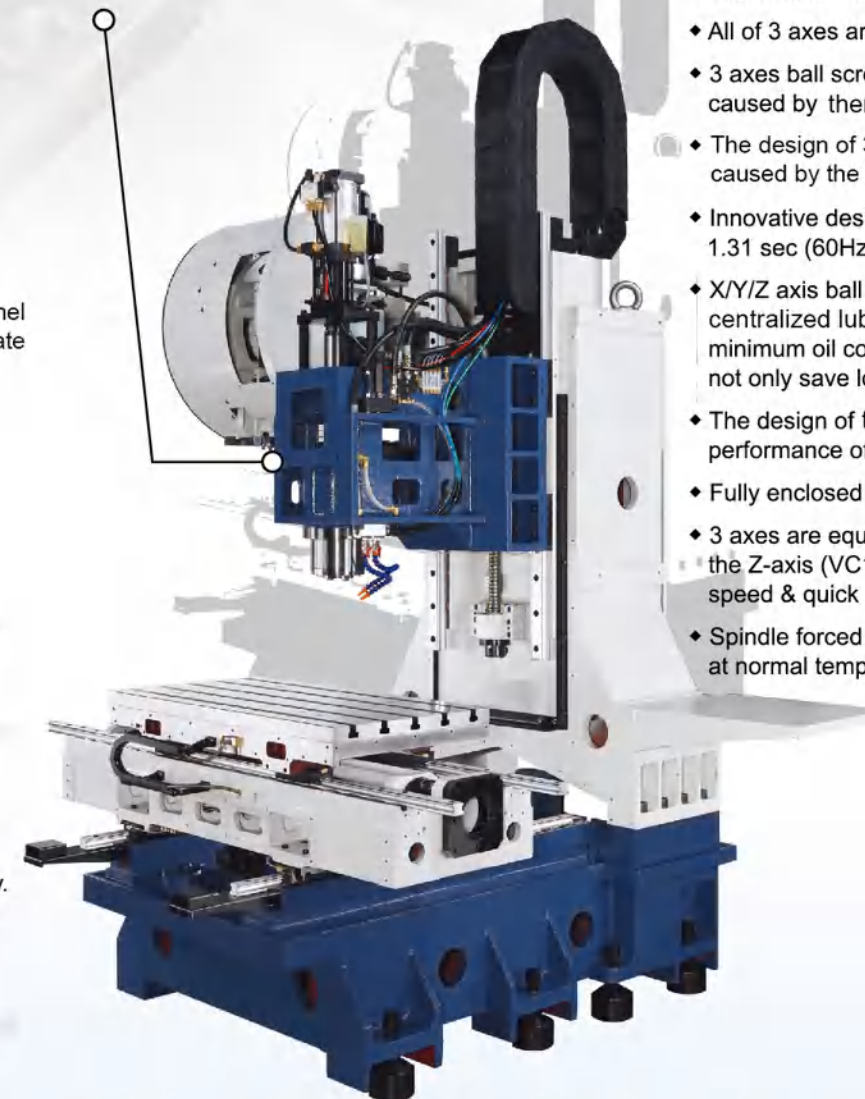
The Achievement of Takumi's Innovation and Technology The Perfect Performance of Fast Cutting and High Stability

VC series is specially designed for the industries of 3C parts machining and mold machining. To meet the requirements of fast cutting, 3 axes are equipped with linear guide ways. The highest rapid traverse reaches 48 m/min (MITSUBISHI NC).



- All accessories are covered inside the box-shape enclosure, which not only minimizes floor space, but reduces the cost of installation & transportation.
- Large internal space can reduce working interference effectively.
- Table is higher than the bottom rim of the side windows, making workpiece set-up easier.
- The design of sloping bed surface with flushing coolant system provides the outstanding chip-flushing efficiency.

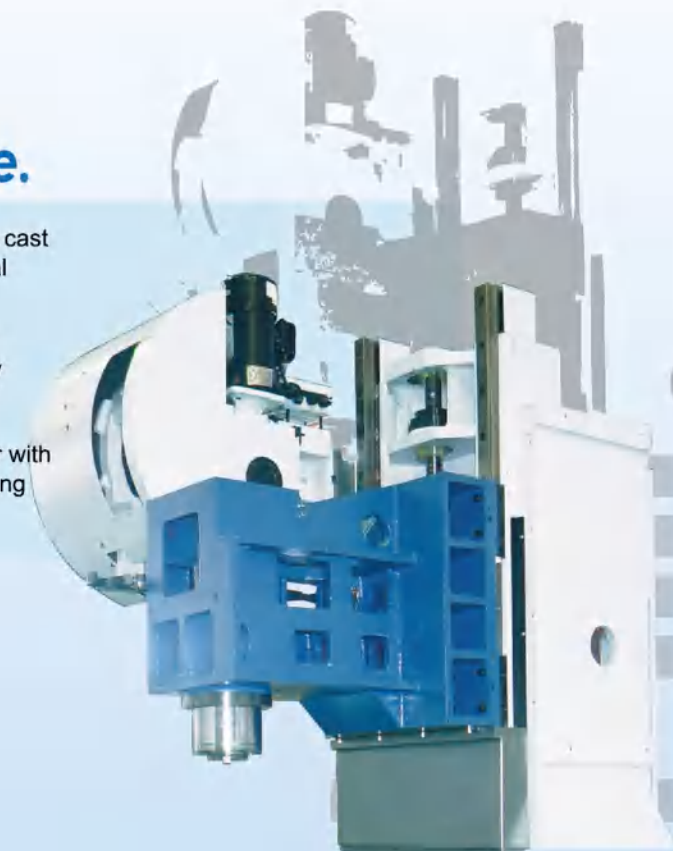
Spindle headstock is designed without counter balance to allow high speed & quick response.



- ◆ VC0852: X、Y、Z travel: 860x520x610mm.
- ◆ VC1052: X、Y、Z travel: 1060x520x610mm.
- ◆ All of 3 axes are equipped with high pre-stretched ball type linear guide ways.
- ◆ 3 axes ball screw pretension design reduces the thermal deformation caused by thermal effect, offering the best accuracy.
- ◆ The design of 3-axis ballscrew pre-stretch reduces the thermal deformation, caused by the thermal expansion, and offer the best accuracy.
- ◆ Innovative designed tool-changing system. T to T changing time is 1.31 sec (60Hz).
- ◆ X/Y/Z axis ball screws and linear guide ways are lubricated by automatic centralized lubrication system. By accurate calculation of oil supply, the minimum oil consumption achieves the best lubricating effects, which not only save lot of lubricant, but also make coolant without stinks.
- ◆ The design of tilting bed surface, flushing coolant system provides perfect performance of chip removal.
- ◆ Fully enclosed splash guard provides operator safety during operation.
- ◆ 3 axes are equipped with ball type linear guide ways, 6 guide blocks on the Z-axis (VC1052) & 4 guide blocks on the X/Y axis, allowing high speed & quick feed response.
- ◆ Spindle forced cooling system to ensure the operation of the spindle at normal temperature.

High Rigid and High Stable Structure.

- ◆ Bed, column, saddle and other main castings are made of Meehanite grade cast iron and released the stress by heat treatment, ensuring the best structural stability positioning accuracy.
- ◆ The assembling space between bed and column, where machining stress concentrated on, is enhanced to provide powerful and stable cutting ability to spindle.
- ◆ The best design of cast iron weight. The stable bed and column, altogether with lightweight design of head, saddle and table, provide the best stability during high acceleration and deceleration movement.



High Accuracy/Performance Spindle

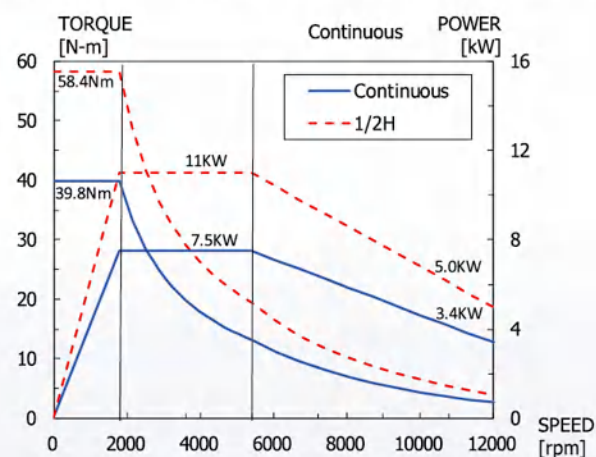


■ Belt Type Spindle

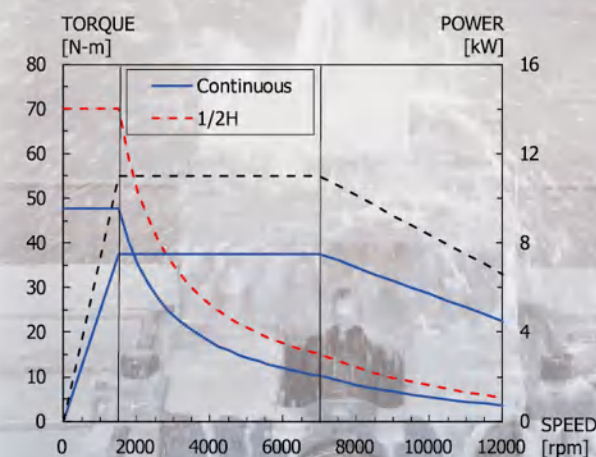
- ◆ Spindles are made by Taiwanese professional spindle manufacturers, featuring high accuracy and high performance.
- ◆ Spindle cooling system reduces thermal deformation and prolongs the service hour of spindle.

Power & Torque Chart

■ Belt type spindle, 7.5/11kW, 12000rpm (Standard)



■ Direct type spindle, 7.5/11kW, 12000rpm (Optional)



Max. Excellent Cost/Performance Value

VC series is designed to meet the requirements of fast cutting for the industries of 3C parts machining and mold machining. Excellent performance can decrease the mold delivery, processing costs and improve product competitiveness.

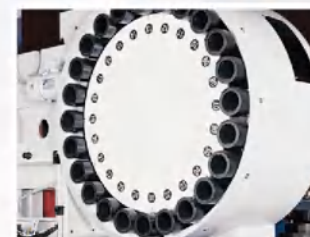


TAKUMI Test cutting workpiece
Material: Aluminum 7075
Application:
Surface / acute angle / positioning precision
excellent performance

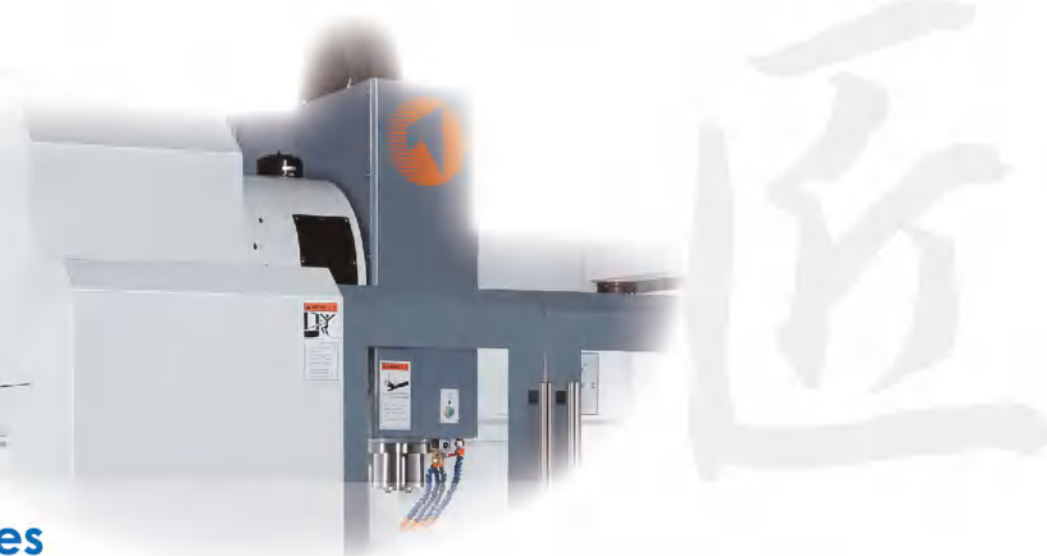


Hood test cutting workpiece
Material: Aluminum 7075
Application:
High speed working on different angle & surface

ATC & Magazine



24T, BT40, ARM type ATC (Standard)



Optional Accessories



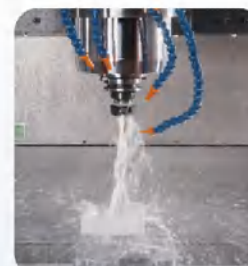
■ Workpiece measurement system



■ Tool Length measurement system



■ Chip conveyor/ Cart



■ Coolant through spindle



■ 4th axis rotary table



■ Oil mist collector

Quality Management (ISO 9001:2008)



■ Laser inspection



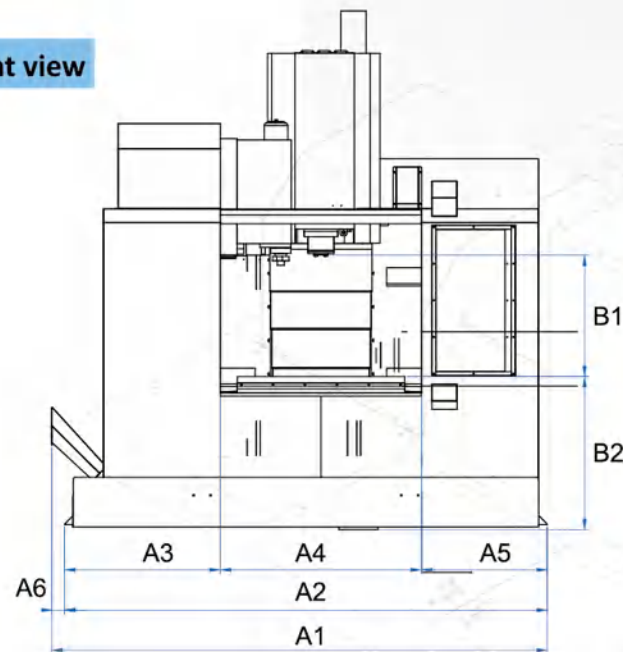
■ Ball bar inspection



■ Spindle running test

Dimensions

Front view

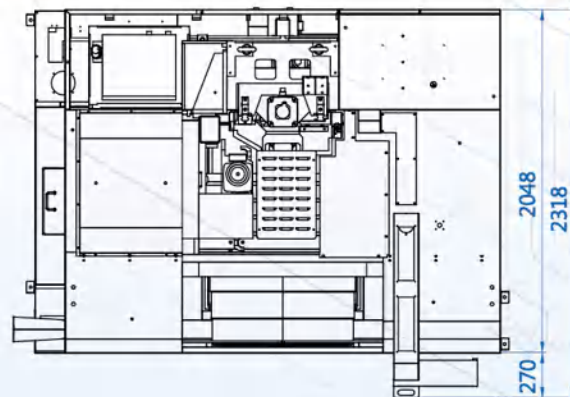


Front view dimension

Unit:mm

	VC0852	VC 1052
A1	2958	3258
A2	2880	3180
A3	930	1080
A4	1200	1350
A5	750	900
A6	78	78
B1	725	725
B2	915	915

Top view



Side view

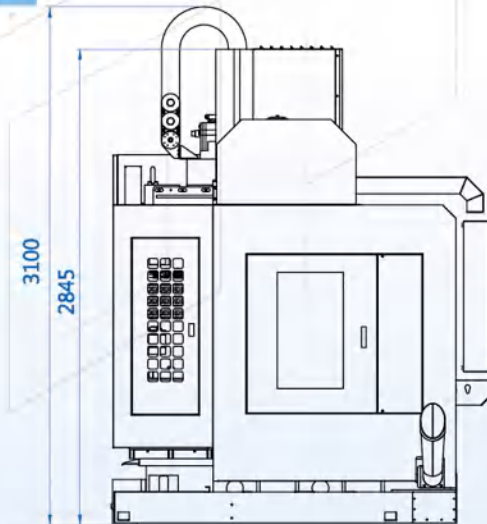
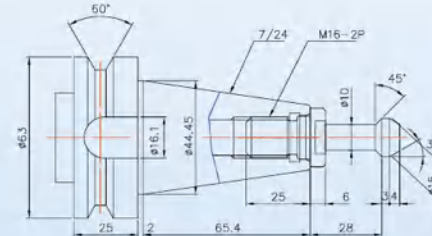
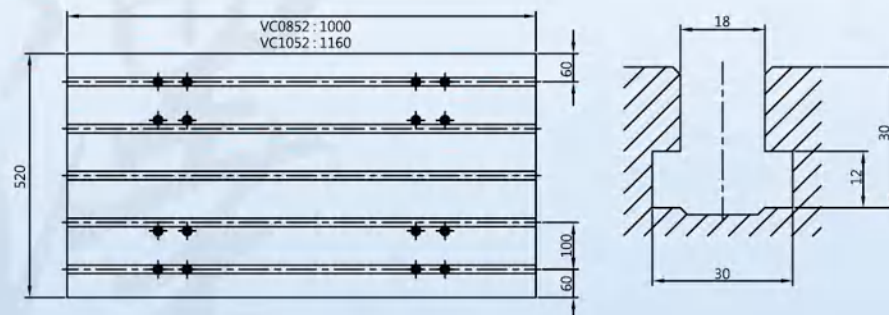


Table & T-slot

Unit:mm



TOOL SHANK: BT40
RETENSION STUD: MAS 407

Specifications

Travel	Unit	VC0852	VC1052
X-axis	mm	860	1060
Y-axis	mm	520	520
Z-axis	mm	610	610
Dist. from spindle nose to table	mm	115~725	115~725
Dist. from spindle center to Z-axis guide way	mm	575	575
Table			
Dimension	mm	1000 x 520	1160 x 520
Max. load	kg	500	650
T-slot (width×pitch×number)	mm	18x100x5	18x100x5
Spindle			
Spindle type	—	Belt type	Belt type
Spindle speed	rpm	12,000	12,000
Motor power (cont./30 min)	kW	7.5/11	7.5/11
Spindle taper	—	BT40	BT40
Feed rate			
Rapid traverse (X/Y/Z)	MITSUBISHI SPEC.	m/min	48x48x36
	FANUC SPEC.(Opt.)	m/min	36x36x24
Cutting feedrate	mm/min	1~12000	1~12000
Motor power (X/Y/Z) MITSUBISHI SPEC.	kW	2.2/2.2/3.5	2.2/2.2/3.5
ATC & Magazine			
ATC type	—	Arm type	Arm type
Magazine capacity	pcs	24	24
Max. tool diameter	mm	80/150	80/150
Max. tool length	mm	300	300
Max. tool weight	kg	7	7
Tool shank	—	BT40	BT40
Pull stud	—	MAS 407	MAS 407
Space & System requirement			
Pneumatic pressure	kgf/cm ²	6	6
Electrical power consumption	kVA	30	30
Machine net weight	kg	5250	5500
Machine Dimensions (L x W x H)	mm	3900x3200x3200	4200x3200x3200

Specification are subject to change without notice

1.All data listed here are based on machines with standard accessories. Data will be altered according to different options.

For detailed information, please refer to local agents or Takumi sales.

2.Takumi reserves the rights on the modifications of the machine specifications.

Standard Accessories

- ♦ MITSUBISHI M70A controller
- ♦ 12000rpm, BT40, belt type spindle
- ♦ 24T, BT40, Arm type
- ♦ Spindle air blast
- ♦ Cutting air blast
- ♦ Spindle oil cooler
- ♦ Cutting coolant system
- ♦ Automatic centralized lubrication system
- ♦ Chip auger with lift up exhaust tube
- ♦ Full enclosure
- ♦ Working lamp
- ♦ Indication lamp
- ♦ Washing gun & air gun
- ♦ Coolant flushing system
- ♦ Coolant tank & chip bucket
- ♦ Manual pulse generator (MPG)
- ♦ Ethernet & RS-232C interface
- ♦ Heat exchanger for electrical cabinet
- ♦ Tool kits
- ♦ Leveling bolts & pads
- ♦ Operation manuals
- ♦ One-year machine warranty (Spindle warranty upon spindle manufacturer)
- ♦ Controller warranty (Controller warranty upon Controller manufacturer)

Optional Accessories

- ♦ FANUC 0iMD controller
- ♦ 12000rpm, BT40, direct driven spindle
- ♦ Coolant through spindle
- ♦ Oil skimmer
- ♦ Oil mist device
- ♦ Oil mist collection
- ♦ Roller type linear guide way
- ♦ Ballscrew cooling system
- ♦ Workpiece measurement system
- ♦ Tool length measurement system
- ♦ 4th axis rotary table
- ♦ Scraper type chip conveyor
- ♦ Chain type chip conveyor
- ♦ Transformer
- ♦ Coolant through tool adapter
- ♦ Tapping lubrication device
- ♦ CE (CE area only)