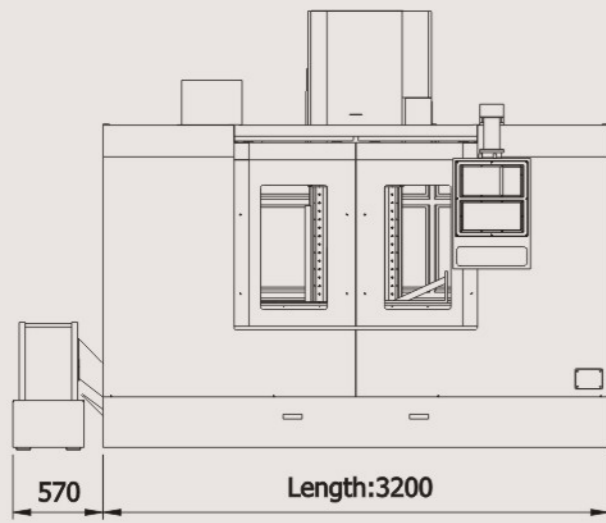
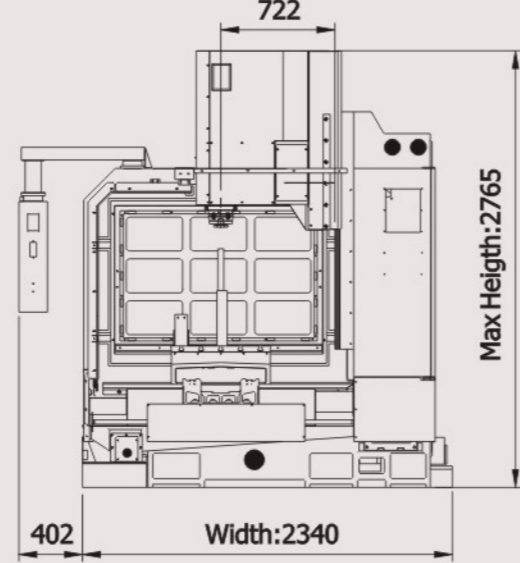


Machine Dimension

V1120/V1320



Spindle Center to Linear Guideway surface:
722



ISO 9001 CE

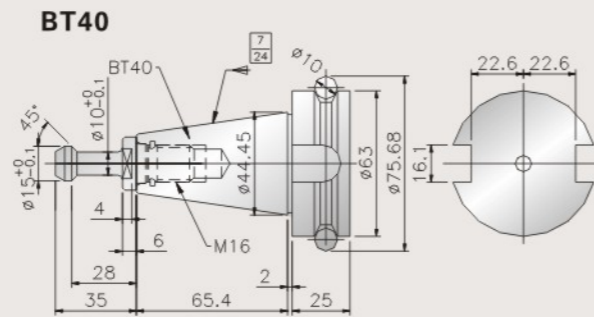
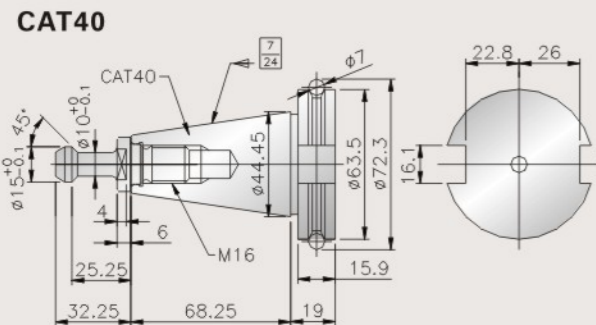
Super V series Vertical Machining Centers



15 / 18.5 Kw
10000 rpm



Tooling system



* CAT50/BT50 (option)



SHARPTECH PRECISION Machinery Co., Ltd.

No. 571, Sec. 1, Guo Feng Rd., Feng Yuan Dist.,
Taichung City, TAIWAN (ROC)

Tel : +886 4 25132612 Fax : +886 4 25132652

<http://www.sharptechcnc.com.tw>

Email : terrence@sharptechcnc.com.tw

terrence651111@hotmail.com

- **High efficiency**
Swing ARM ATC with 24 tool pocket ,
High rapid transfer speed 36 m/min (XY) , 30m/min (Z)
- **High rigidity**
4 heavy duty roller linear guide way in Y axis to achieve high rigidity construction
- **High precision**
Spindle with Angular contact ball bearing to achieve high speed and high precision
- **High Speed**
Direct coupling with high speed precision class pre-tensile designed ball screw to achieve high speed and high precision

SHARPTECH Precision Machinery Co., Ltd.

SHARPTECH completed brand new designed high C/P value -

Super V Series

SHARPTECH's innovative powerful Super V series, high speed vertical machining center equipped with 15/18.5 kw spindle motor provide mass cutting capacity, and direct drives spindle is available up to 30000 rpm. The ball screws of XYZ axes use high precision C3 class with pre-loaded, no backlash designed and direct transmission to achieve best cutting performance.

All axes are equipped with linear guide way, to achieve heavy loading and heavy cutting capacity, and 4 kw axial motors are applied to all axes. (FANUC Oi MF)

SHARPTECH's construction uses only high quality well ribbed Meehanite cast iron included machine's base, saddle, table, wider column and head stock. All structure parts are manufactured from high quality cast iron with tempering and normalization heat treatment. This resulted to assure the extremely high stability and high rigidity of material to achieve superior cutting performance without deformation by optimal FEA process.

V1120 (1120 x 660 x 640)

V1320 (1320 x 660 x 640)



Table guard is option



Chain type conveyor is option

All Meehanite cast irons,
100% foundry in Taiwan



Single piece column with double layer
designed to achieve high rigidity

2 x 3 heavy duty roller slide blocks in XYZ axis



The features

1.High rapid traverse

The XYZ rapid traverse ranged to 36/36/30 m/min, and driven by 4 Kw axial servo motor

2.High cutting feed for multi purpose use

From 1 to 10 m/min

Double layer column



Hand scraping



Injection mold



Needle mold sample



Engine cover case

3. 24 / 30 tool pocket swing arm type ATC (option)



24 swing arm type ATC



Swing arm and nozzleed spindle nose (BT50 option)



Swing arm ATC with 30 tool pockets (option)

4. Power

Standard spindle power 15/18.5 kw (20/25 hp)
Option M70/M80 15/18.5 kw 8000 rpm

5. Ball screw

All XYZ ball screw are using high precision C3 class with pre-loading and no backlash designed, and with direct coupling transmission to achieve the best accuracy of 0.015 mm positioning and 0.01 mm repeatability (VDI/VDQ 3441)



6. Cartridge type high speed spindle

The standard spindle speed is belt drive 10000 rpm. Optional 12000 rpm direct drive spindle and 30000 rpm Electro spindle is also available for extremely high speed cutting.



ZF 2 stage Gear Box (option)



BT 40 Belt drive spindle up to 10000 rpm



DDS Direct drive spindle up to 30000 rpm

7. Roller type linear motion guide way

All axes are equipped with P class roller linear guide way to achieve the high loading and high cutting capacity. Specially, SHARPTECH uses 4 heavy duty roller linear guide way in Y axis for heavy duty cutting.



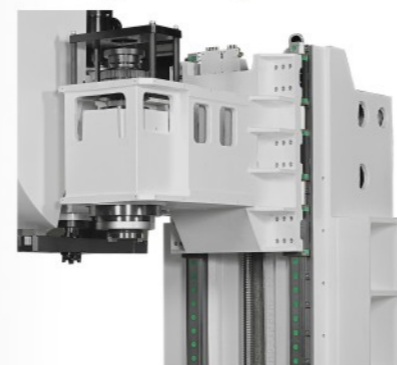
Roof type telescopic cover in Y axis



4 heavy duty roller type linear guide way in Y axis



2 roller type linear guide in X axis



2 x 3 heavy duty slide block in XYZ axis

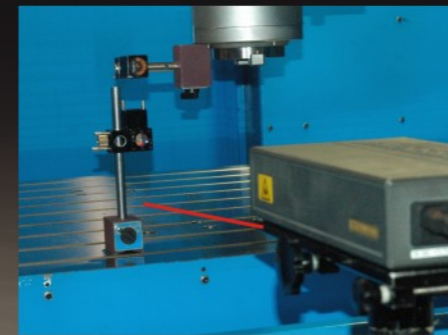
8. Quality assurance :

Before assembling

- Components -- 100% QC
- Assembling -- 100% QC
- Assembly by skillful and experienced engineers

After assembling

- Ball bar test – to ensure the linear and geometry accuracy of machine
- Laser calibration – to ensure the positioning accuracy and repeatability accuracy



Oil distributor

ASME B5.54-1992 Non Roundness

10010305-YZ

Operator: Q.C
Date: 2011-Sep-01 16:47:27

Dynamic ASME B5.54

Non roundness 8.9µm

Maximum deviation 3.4µm

Minimum deviation -5.5µm

Test parameters

Speed 150

Feedrate 2000

Run sequence

Plane under test

Test position

Start

End

Comment

Unit

Unit

Unit

Unit

Unit

Unit

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Unit

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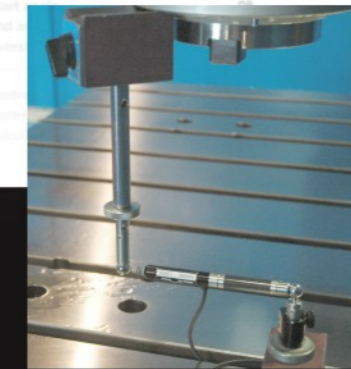
Unit

Unit

Unit



Hand scrapping in all contact surfaces



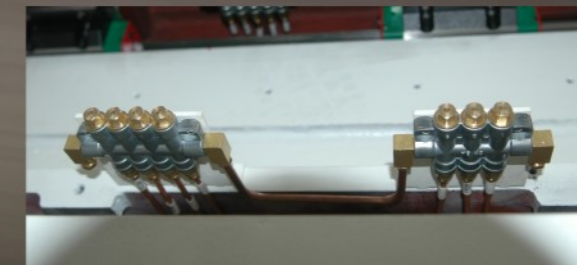
Ball bar check



MARPOSS touch probe (option)

9. Lubrication

All axes ball screws, linear guide ways and bearing are lubricated compulsorily by automatic lubrication system.



Oil distributor

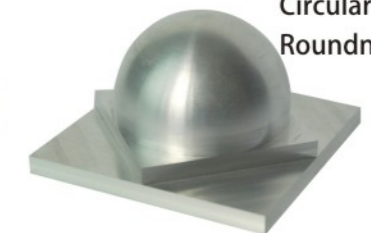


Lubrication pump

10. Test Before shipment

Cutting test

Drilling, Tapping,
Cutting capacity test
Drilling : Ø42 mm
Cutting capacity : 400 cc /min
Tapping : M45xP3 (S45C)



Accuracy test
Rectangular,
Circular and
Roundness test

Standard accessories



Coil type chip conveyor



Oil Chiller for spindle



Heat exchanger in electrical cabinet



Mitsubishi
FANUC
SIEMENS
Heidenhain

Vertical Machining Center Super V series

	Unit	V1120	V1320
Travel			
X axis	mm (in)	1120 (44)	1320 (52)
Y axis	mm (in)	660 (26)	660 (26)
Z axis	mm (in)	640 (25)	640 (25)
Distance from spindle nose to table	mm (in)	142-782 (5.6-30)	142-782 (5.6-30)
Distance from spindle center to column	mm (in)	720 (28)	720 (28)
Table			
Table size	mm (in)	1200x630 (47x24)	1400x630 (55x24)
Table loading	kg (lb)	1000 (2200)	1100 (2420)
T slot (W x no. x Pitch)	mm (in)	18x5x125 (0.7x5x4.9)	18x5x125 (0.7x5x4.9)
Spindle			
Spindle speed	rpm	10000	10000
Spindle motor power	kw (hp)	15/18.5 (20/25)	15/18.5 (20/25)
Spindle taper	type	BT40 (CAT40)	BT40 (CAT40)
Rapid traverse and cutting feed			
XYZ Rapid traverse	m/min	36/36/30	36/36/30
	ipm	1417/1417/1181	1417/1417/1181
XYZ Cutting feed	m/min	1--10	1--10
	ipm	39--393	39--393
XYZ Servo motor power (FANUC)	kw (hp)	4/4/4(5.3/5.3/5.3)	4/4/4(5.3/5.3/5.3)
Automatic tool changer			
Automatic tool changer	type	Arm	Arm
Tool pocket no.	no.	24	24
Max. tool dia. without neighbor tool	mm (in)	80 (3.1)	80 (3.1)
Max. tool dia. With neighbor tool	mm (in)	160 (6.29)	160 (6.29)
Max. tool weight	kg (lb)	8 (17.6)	8 (17.6)
ATC time : tool to tool	sec	1.8~2.0	1.8~2.0
ATC time chip to chip	sec	4.9~5.1	4.9~5.1
Accuracy			
Positioning	mm	VDI /DGQ 3441 0.015	VDI /DGQ 3441 0.015
Repeatably	mm	VDI /DGQ 3441 Ps Max 0.01	VDI /DGQ 3441 Ps Max 0.01
Micellaneous			
Floor space requirement (L x W)	mm (in)	3200x2400 (126x96)	3200x2400 (126x96)
Max height of machine (H)	mm (in)	2700 (106)	2700 (106)
Machine weight	kg (lb)	8300 (18260)	8500 (18700)
Pneumatic source requirement	bar	6	6
Electric power requirement	KVA	25	25

- All specifications are subject to change without notice
- All accuracy check : Positioning is basis on VDI/DGQ 3441 0.015mm , repeatably is basis on VDI/DGQ 3441 Ps Max. 0.01 mm.
- XYZ servo power of Fanuc 0iMF are 4 / 4 / 4 kw (option)
- Spindle power of Fanuc 0iMF is 15 / 18.5 kw (option)

Standard accessories

- Full enclosure guard
- XYZ axes telescopic cover
- Automatic lubrication system for XYZ axes
- Pneumatic system
- Air purge system for spindle
- Air blow system for tool tip
- Air gun
- 10000 rpm belt drive spindle with BT 40 taper
- Coolant system with pump and tank
- Coolant nozzle in spindle nose
- Coolant gun
- Coolant flushing system
- Coolant and oil separator
- Coil type chips conveyor with wheeled bucket
- Drum type ACT with 16 tool pocket (BT40 taper)
- Rigid tapping
- Helical interpolation
- Look ahead function
- Heat exchanger for electrical cabinet
- RJ 45 port
- RS 232 port
- PCMCIA card slot
- Remote wired MPG
- LED Working lamp
- LED 3 color indicating lamp
- Maintenance tool box
- Leveling screw and pad

Options

- ZF gear box (4500/6000 rpm)
- BT50 spindle (6000 rpm)
- BT50 ARM type ATC
- Coolant thru spindle with 20 BAR high pressure coolant tank and filter system
- Extra high pressure coolant pump
- Coolant thru tools kit
- Programmable swing type coolant nozzle
- 24 tool pocket swing arm type ATC
- 30 tool pocket swing arm type ATC
- 10000 rpm direct drive spindle with oil chiller
- 12000 rpm direct drive spindle with oil chiller
- 15000 rpm direct drive spindle with oil chiller
- 30000 rpm electro spindle with water chiller
- Chain type chip conveyor with wheeled bucket
- Linear scale in XYZ axes
- Automatic tool length measurement
- Automatic work piece measurement
- M30 automatic power off
- Extra 8 M function
- Oil skimmer
- 4th axis package including rotary table, driver, motor, wiring and piping
- Multi tapped transformer
- CE package for EC countries

