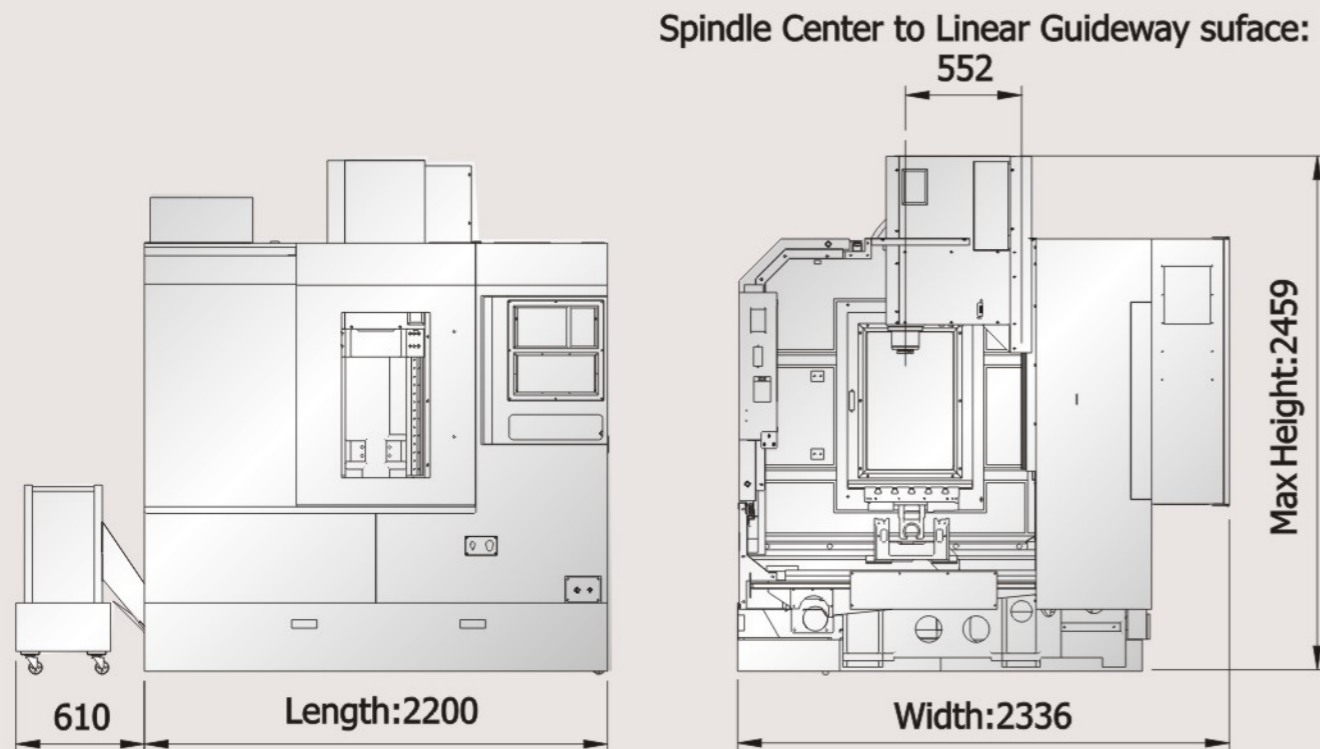
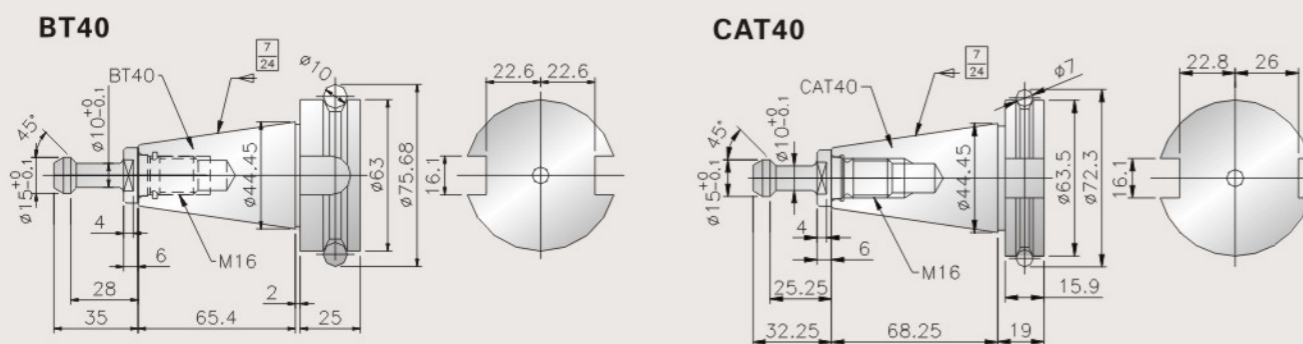


## Machine Dimension V660/ V880



## Tooling system



**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](mailto:terrence@sharptechcnc.com.tw)

[terrence651111@hotmail.com](mailto:terrence651111@hotmail.com)



WE SIMPLY THE BEST  
ISO 9001 CE

# Super **V** SERIES Vertical Machining Centers



**5.5 / 7.5 Kw**  
**10000 rpm**



- **High efficiency**  
High rapid transfer speed 36 m/min (XY) , 30m/min (Z)
- **High rigidity**  
All P class linear guide way in XYZ 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 compact designed high C/P value - Super V Series V660 / V880

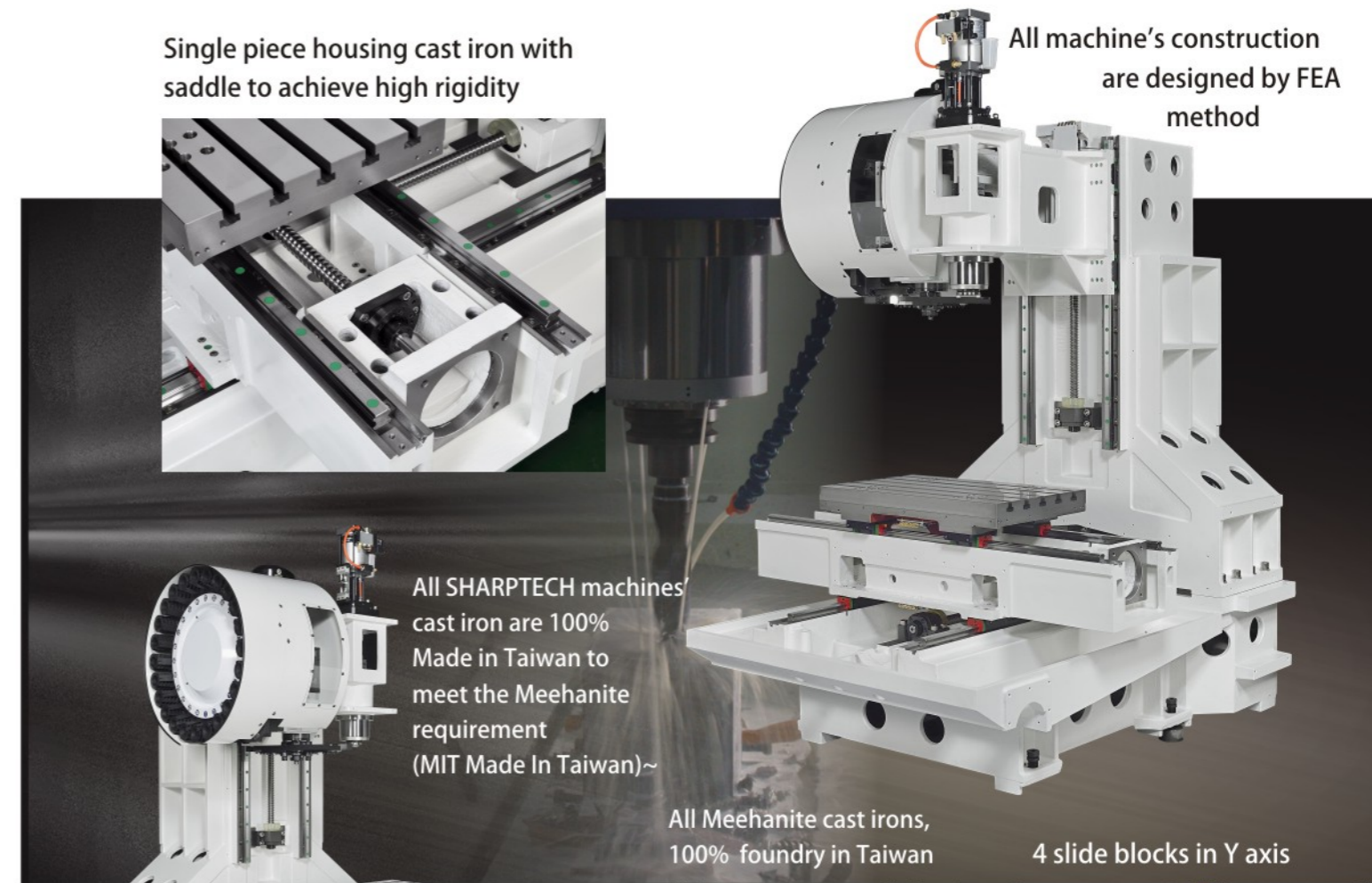
SHARPTECH's innovative powerful Super V series, high speed vertical machining center equipped with 5.5/7.5 kw spindle motor provide mass cutting capacity, and direct drives spindle is available up to 30000 rpm. The ball screws of XYZ axes use high precision C3 class with pre-loaded, no backlash designed 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 1.5/1.5/2 kw axial motors are applied to all axes.

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.

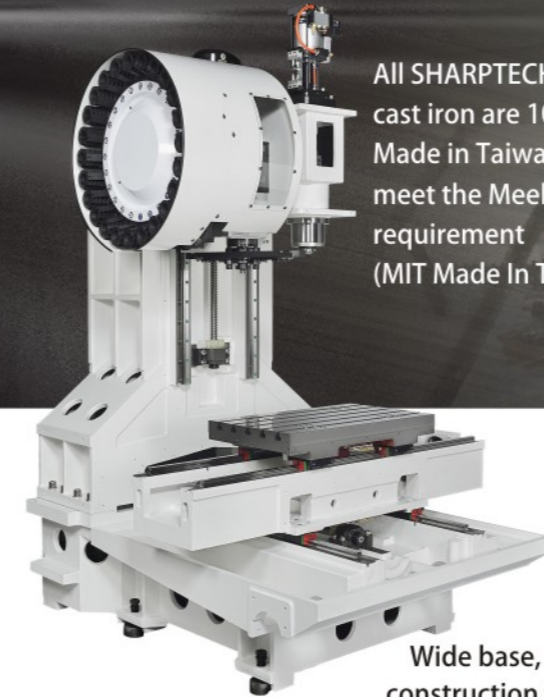


V660 (660 x 420 x 510)  
V880 (880 x 510 x 510)



Single piece housing cast iron with saddle to achieve high rigidity

All machine's construction are designed by FEA method



All SHARPTECH machines cast iron are 100% Made in Taiwan to meet the Meehanite requirement (MIT Made In Taiwan)~

All Meehanite cast irons, 100% foundry in Taiwan

4 slide blocks in Y axis

Wide base, column construction to achieve high reliability

## The features

### 1. High rapid traverse

The XYZ rapid traverse ranged to 36/36/30 m/min, and driven by 1.5/1.5/2 Kw axial servo motor (Mitsubishi)

### 2. High cutting feed for multi purpose use

From 1 to 10 m/min

### 3. 24 tool pocket swing arm type ATC



Needle mold sample



Engine cover case



Oil cooler adapter case



24 swing arm type ATC



Swing arm ATC and spindle nose



4th axis rotary and with tilting axis

#### 4. Power

Standard spindle power 5.5/ 7.5 Kw (7.5/10hp) ,  
10000 rpm  
Option FANUC 0iMF 7.5/11Kw (11/15hp)  
XYZ Servo motors 1.8 / 1.8 / 3 Kw



#### 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 .

#### 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.

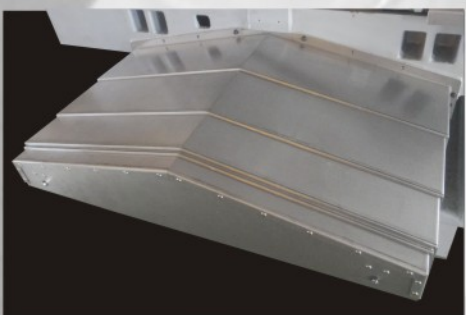


BT 40 Belt drive spindle up to 10000 rpm

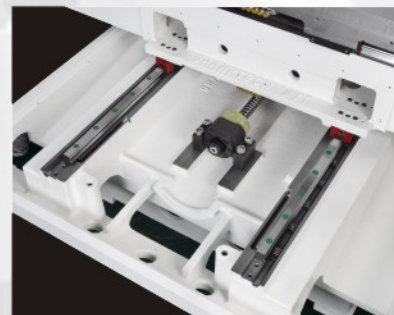
Direct Drive Spindle up to 30000 rpm

#### 7. Linear motion guide way

All axes are equipped with P class linear guide way to achieve the high loading and high cutting capacity. Specially, SHARPTECH uses 2 linear guide way in Y axis for heavy duty cutting.



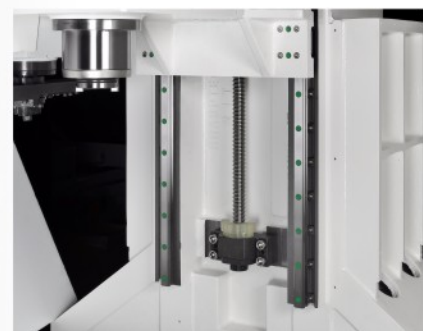
Roof type telescopic cover in X and Y axis.



2 linear guide way with total 4 slide blocks in Y axis



2 linear guide way with 4 slide blocks in X axis



2 linear guide way with 4 slide blocks in Z axis

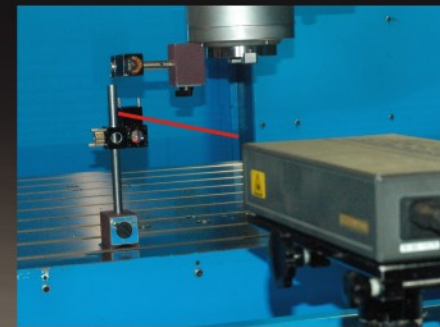
#### 8. Quality assurance :

##### Before assembling

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

##### After assembling

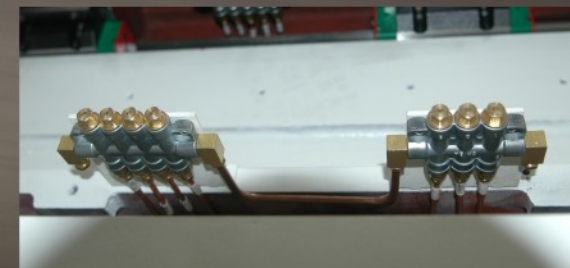
- Ball bar test – to ensure the linear and geometry accuracy of machine
- Laser calibration – to ensure the positioning accuracy and repeatability accuracy



Oil distributor

#### 9. Lubrication

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



Lubrication pump



MARPOSS touch probe (option)

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	0.1	
Minimum deviation	-5.5µm	179.0	
Test parameters			
Radius	150.0000mm		
Feed	52.632mm/min		
Spindle speed	2000.0mm/min		
Run sequence			
Plane under test			
Test position			
Test ID			
Operator			

Hand scraping in all contact surfaces

Ball bar check

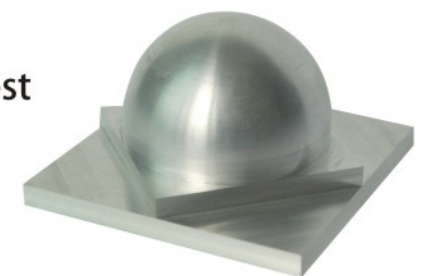
#### 10. Test Before shipment

##### Cutting test

Drilling, Tapping, Cutting capacity test

##### Accuracy test

Rectangular, Circular and Roundness test



#### Standard accessories



Mitsubishi  
FANUC  
SIEMENS  
Heidenhain



Coil type chip conveyor



Oil Chiller for spindle



Heat exchanger in electrical cabinet

## Sharptech Vertical Machining center Compact High Speed Super V series

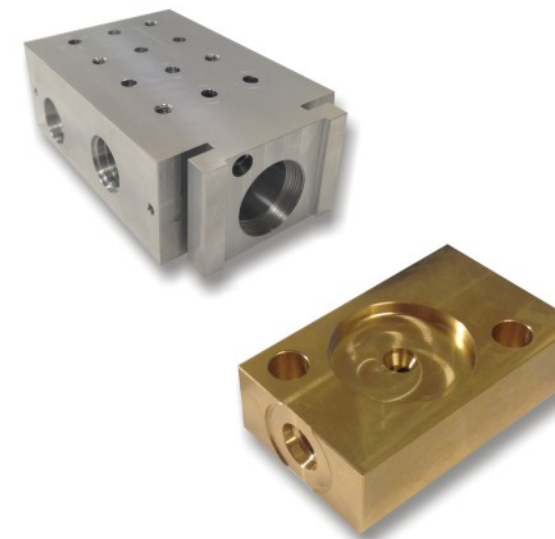
		V660	V880
X axis	mm (in)	660 (25.98)	880 (34.64)
Y axis	mm (in)	420 (16.5)	510 (20)
Z axis	mm (in)	510 (20)	510 (20)
Spindle nose to table	mm (in)	125~635 (4.9~25)	125~635 (4.9~25)
Spindle center to column	mm (in)	520 (20.47)	520 (20.47)
<b>Table</b>			
Table size	mm <sup>2</sup> (in <sup>2</sup> )	750x450 (29.52x17.71)	900x500 (35.43x19.68)
Table height	mm (in)	850 (33.46)	850 (33.46)
Table surface (T slot)	mm (in)	5x18Tx80	5x18Tx80
Table max load	kg (lb)	300 (660)	400 (880)
<b>Spindle</b>			
Spindle speed (belt drive)	rpm	10000	10000
Spindle motor power	kw (hp)	5.5/7.5 (7.3/9.97)	5.5/7.5 (7.3/9.97)
Spindle taper	no.	BT40	BT40
<b>Axes rapid and feed rate</b>			
XYZ rapid	m/min (ipm)	36/36/30 (1417/1417/1181)	36/36/30 (1417/1417/1181)
XYZ feed rate	m/min (ipm)	1-10 (39.3 ~ 393)	1-10 (39.3 ~ 393)
XYZ servo motor(Mitsubishi)	kw (hp)	1.5/1.5/2 (2/2/2.66)	1.5/1.5/2 (2/2/2.66)
<b>ARM type ATC</b>			
No of tools	no.	24	24
ATC time (T - T)	sec	3	3
ATC time (C - C)	sec	6	6
Pocket pitch	mm (in)	80 (3.15)	80 (3.15)
Max tool length	mm (in)	350 (13.7)	350 (13.7)
Max tool diameter	mm (in)	80 (3.15)	80 (3.15)
No adjacent tool	mm (in)	160 (6.3)	160 (6.3)
Max tool weight	kg (lb)	8 (17.6)	8 (17.6)
<b>Accuracy</b>			
Positioning	mm (in)	VDI /DGQ 3441 0.015	VDI /DGQ 3441 0.015
Repeatability	mm (in)	VDI /DGQ 3441 Ps Max 0.01	VDI /DGQ 3441 Ps Max 0.01
<b>Pneumatic</b>			
System pressure	bar	6	6
Compressor consumption	litre / min	400	400
<b>Coolant system</b>			
Pump motor output	kw (hp)	0.96 (1.26)	0.96 (1.26)
Pump flow rate	litre/min	66	66
Pump / machine	unit	2	2
Coolant tank capacity	litre	240	240
Power capacity	KVA	15 KVA	15 KVA
<b>Dimension</b>			
Length	mm (in)	2336 (92)	2336 (92)
Width	mm (in)	2200 (86.6)	2200 (86.6)
Machine height	mm (in)	2459 (97)	2459 (97)
Weight	kg (lb)	4200 (9240)	4700 (10368)

Remark

- \* As to improve the machine's performance , all specification are subject to change without notice
- \* Positioning accuracy is basis on VDI 3441
- \* Repeatability accuracy is basis on VDI 3441 Ps
- \* XYZ servo power of Fanuc 0iMF are 1.8 / 1.8/ 3 kw (option)
- \* Spindle power of Fanuc 0iMF is 7.5/11 kw (option)

### Standard accessories

- MITSUBISHI M70 / M80
- Full enclosure guard
- 24 tool postions swing ARM type ATC
- Swing type control panel
- Lubrication system for XYZ ball screws and linear guide ways
- 10000 rpm belt drive spindle
- Coolant system with 2 pumps and 1 coolant tank
- Coolant flushing system in machine's base
- Coolant gun for cleaning work pcs
- Coil type chips conveyor with wheeled bucket
- Air purge for spindle
- Air blow for tool tip
- Air gun for cleaning work pcs and working area
- LED working light
- LED indicatiing light
- Rigid tapping
- look ahead function
- M30 auto power off
- Door interlock
- RJ45 port
- RS 232 port
- CF card slot
- PCMCIA card slot
- Remote wire MPG
- 8.4" LCD screen
- Operation manual
- Simple tool box
- Foundation pads and screws



### Options

- 20 bar coolant thru spindle
- 10000 /12000 direct drive spindle
- 20000 /30000 rpm build in spindle
- Chain type chips conveyor with wheeled bucket
- Automatic tool length measurement and work pcs measurement
- Oil skimmer
- Extra M function
- 4 axis package , rotary table , motor , drive , pipe and wiring
- Transfomer (380V or 415V)
- FANUC 0iMF

