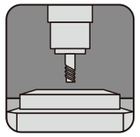
Tongtai

Trust & Technology



Vertical Machining Center

VP-8

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www.honorseiki.com.tw	www.apeccnc.com	www.quicktech.com.tw	www.pci.fr	www.anger-machining.com

VP-8 2015.09/20

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VP-8

- VP series is especially designed for high speed general parts machining. With high speed BBT-40 spindle, high torque performance, coolant through spindle(Opt.), and spindle cooler(Opt.), that assure machining ability and precision requirements.
- Excellent C type mechanical structure design provides strong machine rigidity. It assures machining performance for high speed and high precision machining.
- After numerous tests, VP series has the features of high efficiency, high quality, and low maintenance costs.
- Elegant sheet metal design with high quality powder coating, VP series show steady, reliable and simple characteristics.

CONTENTS

Main specifications

Spindle	10,000 rpm BT-40 Direct-drive type spindle
	15,000 rpm BBT-40 Direct-drive type spindle
	15,000 rpm BBT-40 Direct-drive type spindle with C.T.S
X/Y/Z axis	Rapid traverse 48/48/36 m/min
	X/Y/Z axis stroke 820/510/535 mm
	X/Y/Z axis adopts high quality linear guide ways and ballscrews

Main structure

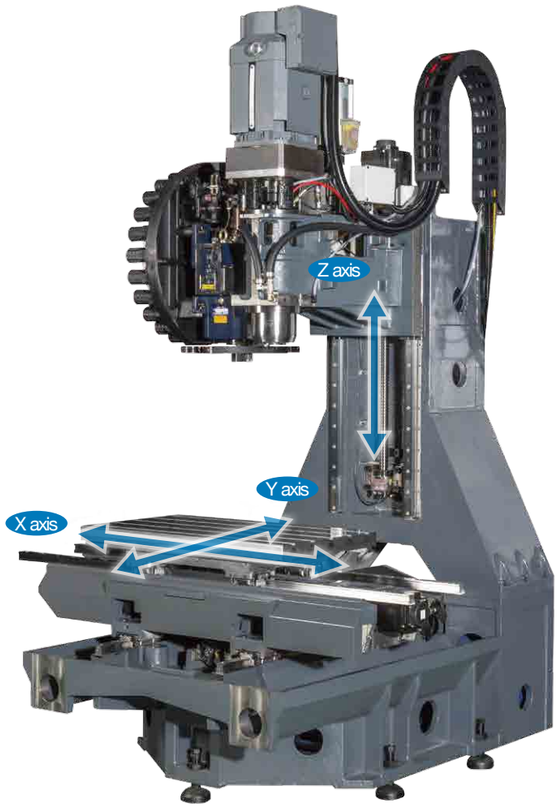
- Excellent performance/price ratio
- Stable machining precision
- Smarter and reliable standard functions
- Reliable quality
- High production efficiency and stability

Stroke
X/Y/Z axis 820/510/535 mm

Rapid traverse
X/Y/Z axis 48/48/36 m/min

Acceleration
1.18/1/0.7 G

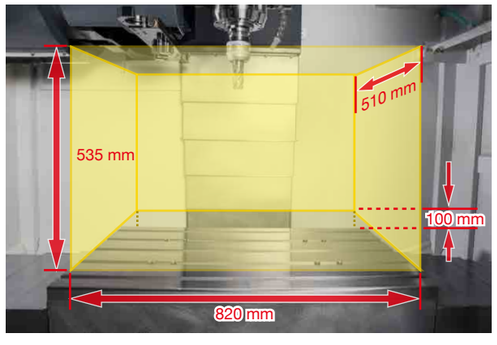
(Without loading and tested in Mitsubishi system.)



Working area

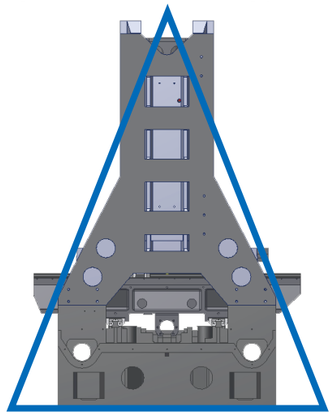
Table size 900 x 510 mm

Max. loading capacity 500 kg



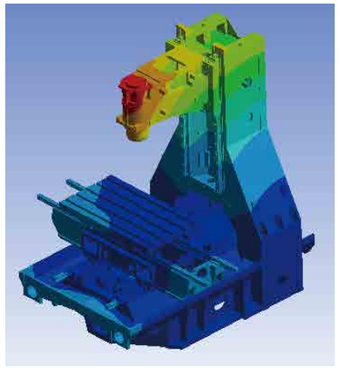
Stable structure

Delta structure with well combination of wide span column casting and vibration-absorbing base, that distributes cutting forces effectively and provides rigid and stable machining platform.



Finite Element Analysis (FEA)

Process FEA for optimizing machine structure.



High speed transmission system

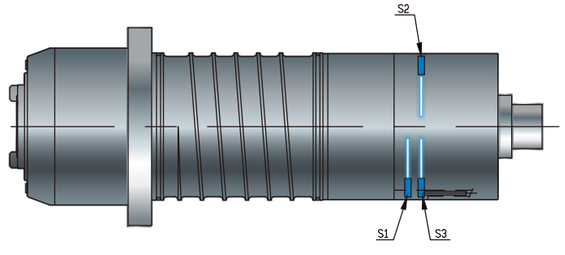
Ballscrews and linear guide way design are adopted in X/Y/Z axis, which have features of high rigidity, low friction and low noise.

Servo motor transmission directly

Servo motor and ballscrew is connected directly by non-backlash rigid couplings. It assures micro moving performance and reduce reverse errors.

Intelligent spindle

- Standard equipped with sensors in the pull rod for detecting clamping status. It avoids improper clamping condition before spindle rotating.
- Spindle motor is able to switch low or high speed winding automatically to maintain high power output for increasing cutting efficiency.

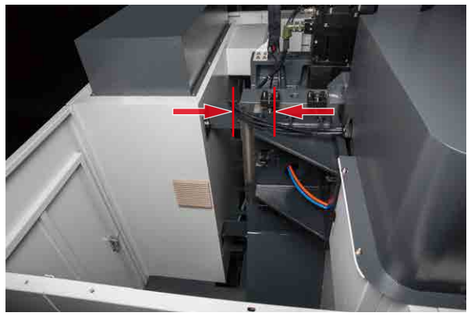


Main structure

Reduces thermal distortion

Preloaded ballscrews design in X/Y/Z to minimize the influence of thermal distortion and maintain machining precision during long-term operating.

Both heating and vibrating sources do not contact with column directly. It prevents the possibilities of thermal distortion and keeps the machining precision.

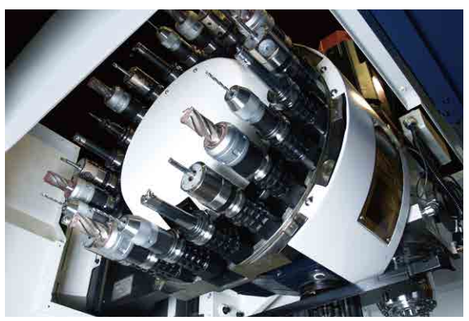


Operator safety

Safety glass window, which has passed EN12417 standards and certificated by CE, is adopted for providing excellent protection to the operator. The impact strength is 200 times that of tempered glass. Furthermore, the front door uses the multiple safety window (tempered glass mixes with PC), and is able to extend the usage life.

Tool changing system

Standard equipped with stable and rapid tool magazine. The time of T to T is 2.0 sec. and C to C is 3.6 sec. ATC is controlled by inverter, durability and less maintenance are superior than the traditional braking system. (ISO 10791-9)



Cam box is detected by absolute encoder, singal transfer faster and stable. With Tongtai PLC logic setting, ATC will re-try and reduces the possibilities of machine stop when errors happened during tool changing,

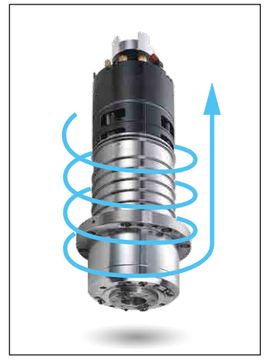
Direct-drive spindle motor

Direct-drive motor with flexible coupling design is able to prevent thermal delivery from motor. More, high accuracy, low vibration, long usage life, and easy maintenance are advance features of this spindle.

	Max. Speed	BT-40	BBT-40	CTS
Std.	10,000 rpm	●	X	X
Opt.	15,000 rpm	X	●	X
Opt.	15,000 rpm	X	●	●

Spindle cooling system (Opt.)

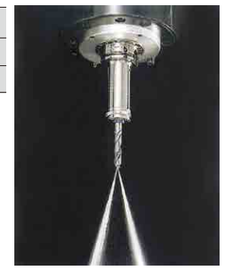
Spindle temperature are automatically adjusted according to machine temperature. Spindle coolant system is able to reduce the thermal distortion and maintain machining precision.



Coolant through spindle (Opt.)

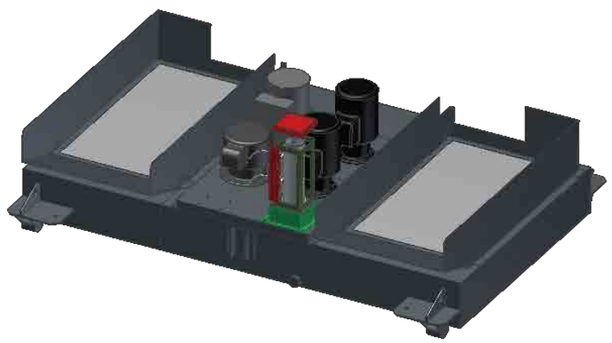
The coolant is supplied from the end of tool and enable to cool tools and extend tool life during machining. Also, it provides excellent chip removal in deep hole machining.

Coolant through spindle	
Optional	20 bar
	50 bar



Standard coolant tank

Coolant tank provides excellent filter effect and easy for cleaning and maintaince. Alternative tank design for chip conveyor is also available.



Filter type coolant tank	
Standard	Filter performance 40 mesh
	280 L

Conveyor type coolant tank	
Optional	Filter performance 40 mesh
	Chain type chip conveyor
	320 L

Accessories	
Optional	Ø2 Chips basket
	High/low coolant level detection
	Disc type oil skimmer

Operation·Machine dimension

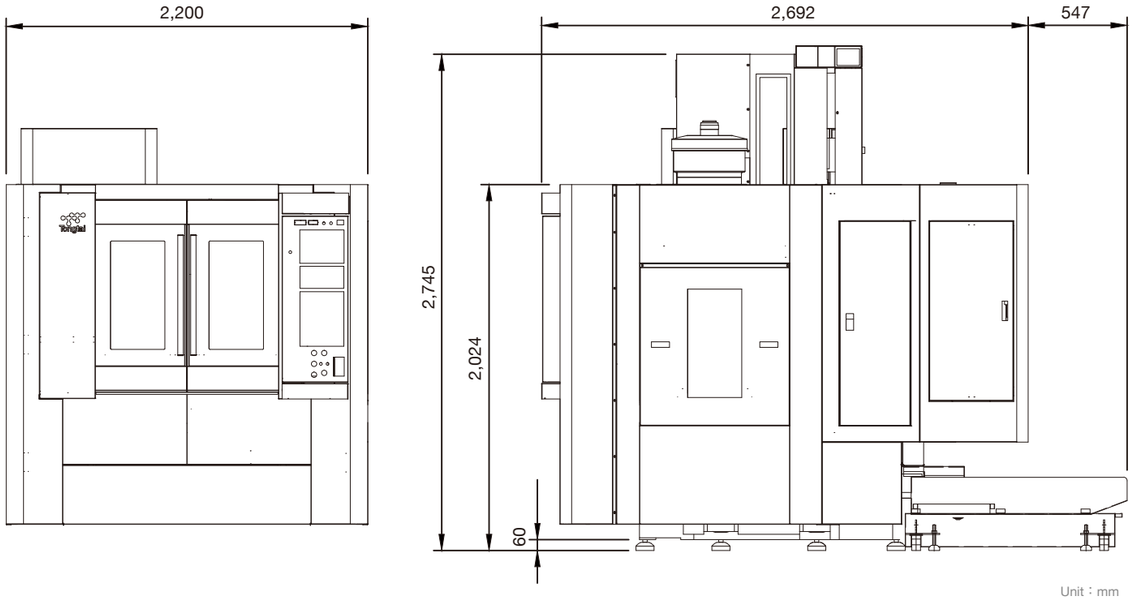
Ergonomic design

The swivel panel is easily convenient for operation and inspection during machining.

Easy daily maintenance

Through centralized management of air and hydraulic supply system, it is easy for daily maintenance.

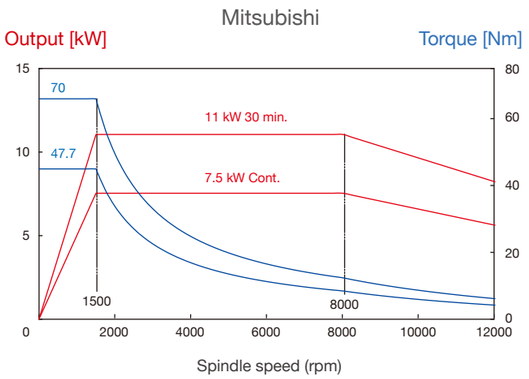
Machine dimension



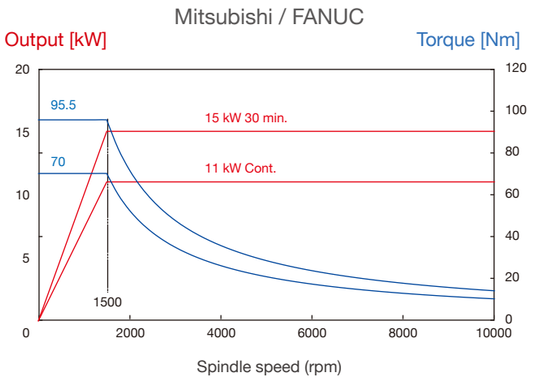
Unit : mm

Spindle output and torque chart

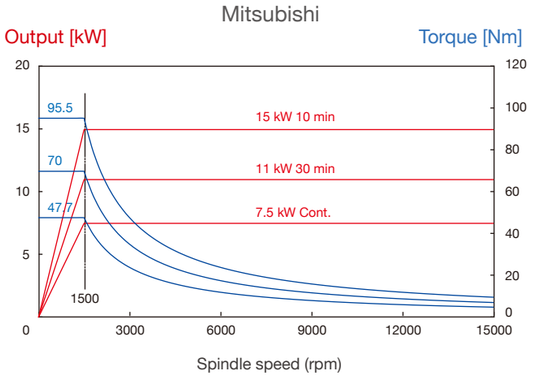
10,000 rpm (Std.)



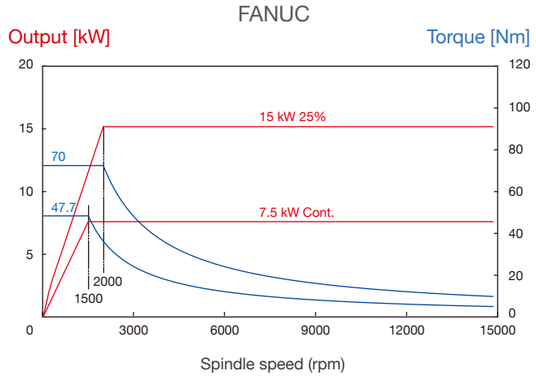
10,000 rpm (Opt.)



15,000 rpm (Opt.)



● C.T.S. is an optional.



● C.T.S. is an optional.

Standard / Optional accessories

	Std.	Opt.
LED working light	●	
Separated manual pulser	●	
Workpiece counter	●	
Anti-chip sheet metal in tool magazine	●	
Tri-color warning light	●	
Tool magazine (24 tools)	●	
Machine bed flushing system	●	
Air blow system	●	
CE switch	●	
High speed and high precision control mode (only for Mitsubishi system)	●	
Disc type oil skimmer		○
Coolant through spindle		○
Flushing system in the root		○
Chip augers		○
Air gun set/ Coolant gun set		○

	Std.	Opt.
Automatic door		○
Oil-mist collector		○
280L Standard coolant tank	●	
320L Chip conveyor coolant tank		○
Spindle cooling system		○
Transformer/ Stabilizer		○
Tool breakage detector		○
Standard 4th axis		○
Hydraulic units and interface		○
FANUC high quality package		○
Linear scale		○
Automatic power off system		○
Tool magazine (30 tools)		○
A/C for electrical cabinet		○
CE standards		○

Specification

Item	Specification	Unit
Spindle nose	Spindle 7/24 Taper NO.40	
X/Y/Z axis stroke	820/510/535	mm
Spindle nose to table	100-635	mm
X/Y/Z axis rapid traverse	48/48/36	m/min
X/Y/Z axis cutting feedrate	1-10,000	mm/min
Table loading capacity	500	kg
Table size (LxW)	900×510	mm
T-slot	18×5	
Controller	Mitsubishi M70V TYPE A	
	FANUC 0i-F	
Tool capacity	24 (Opt.30)	pc
Max. tool diameter	Ø75	mm
Max. tool diameter (without adjacent tool)	Ø150	mm
Max. tool length	250	mm
Max. tool weight	7	kg
Machine size (W x D x H)	2,200 × 2,692 × 2,745	mm
Positioning accuracy	±0.005	mm
Repetition accuracy	±0.003	mm
Machine weight	5,000	kg

◎Specifications may be changed without prior notice.