

Twinhorn®

VTJ

VTJ SERIES

FOUR BOX-WAY SUPER POWER
MACHINING CENTER 1480/1680/1880

Twinhorn

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Design 201811.VTJ Series(E2)1000P

FOUR BOX-WAY SUPER POWER MACHINING CENTER 1480/1680/1880



All cast of machine are manufactured by accurate 5-sided machining center with one-piece machining. And measured by large type three-dimensional to ensure the precision of individual part. Machine is assembled according to ISO operating standards by the technicians who trained for long term, that makes CHI-FA's high quality.



picture : **VTJ-1680**

	1480	1680	1880
X=	1400mm	1600mm	1800mm
Y=	800mm	800mm	800mm
Z=	800mm	800mm	800mm

Unique Y axis oversized four box-way saddle design

1 All major are built with high tensile Meehanit FC-30 high alloy cast irons, provide outstanding wear-resistance.

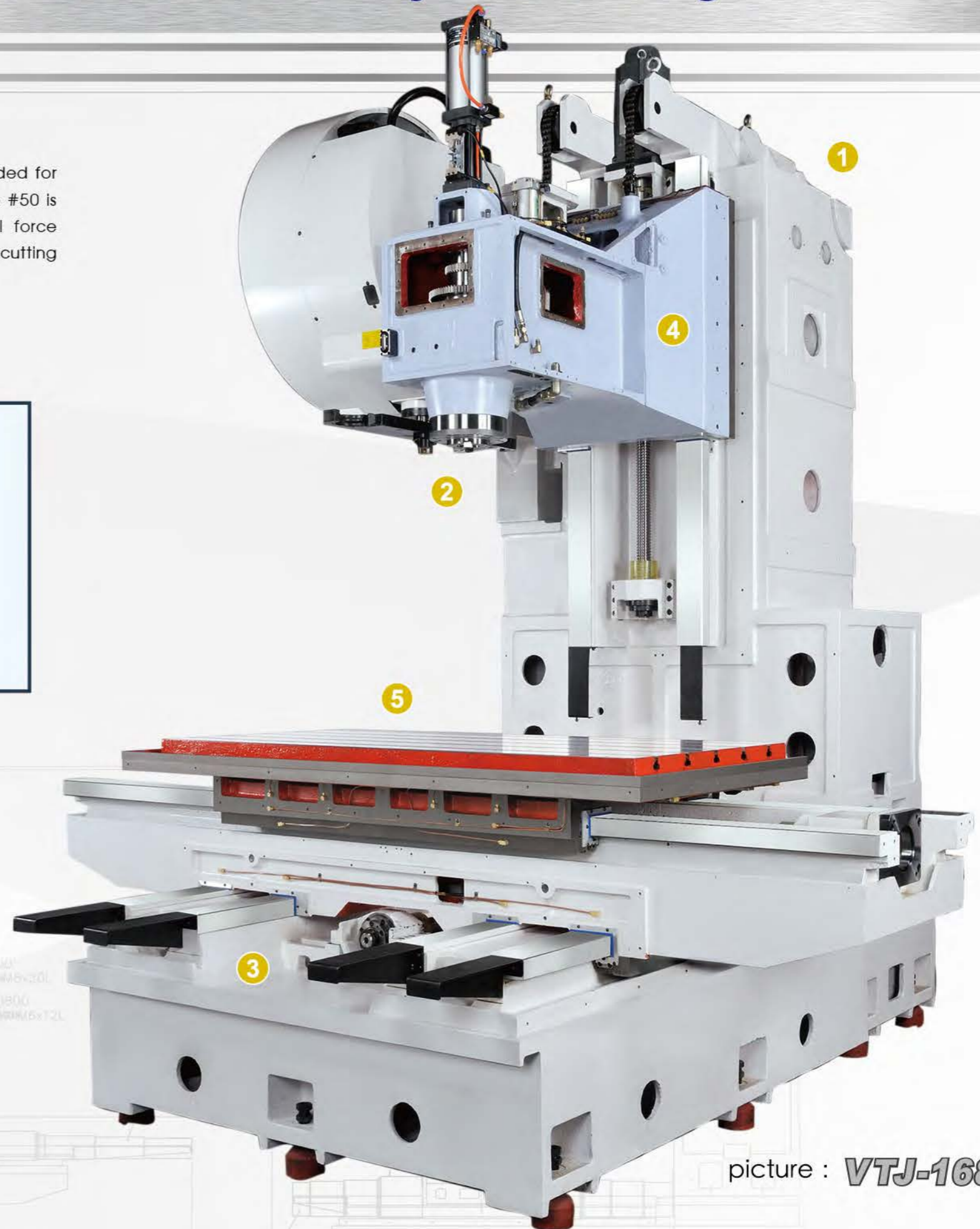
2 Monoblock magazine support used with convex column which is long span length, to reinforce structure. That can ensure the blance and stability of machine during machining, and provides users overall effectiveness performance.

4 Built-in #40, belt-drive #40 are provided for mid-height speed cutting. Gear drive #50 is suitable for low-speed/high-torsional force heavy cutting. It can satisfy various cutting demand.

5 Extra size table design with chip & coolant-collected tank is easy for operator.



3 Unique Y axis oversized four box-way saddle design make it can absorb the stress appeared with heavy cutting. Conformity golden ratio with long span convex column. Bending length of saddle is the least, that can ensure the machine dynamic accuracy.

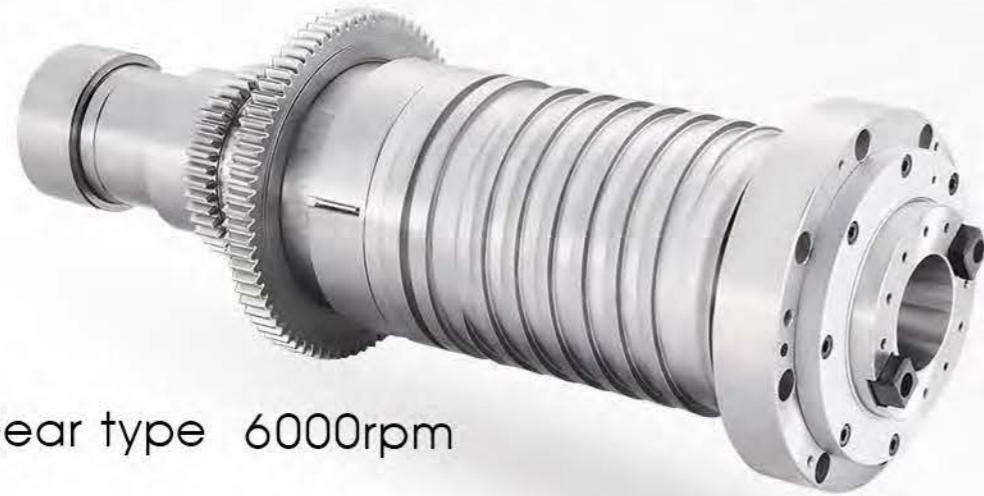


picture : VTJ-1680

Powerful gear driven spindle design



- ◎ The spindles are designed and manufactured by CHI-FA's own R & D. The spindle has unique precision, lifespan and high rigidity cutting feature.
- ◎ High-low and continuous variable speed gear driven design. Gear manufactured by alloy steel is hardened and grounded. It is suitable for low-speed/high-torsional force heavy cutting.
- ◎ Using floating tool clamping system to ensure the precision and extend lifespan of bearing. Head of gear used forced circulating cooling to control thermal change that can ensure long-term cutting precision.
- ◎ Spindle used P4 grade precision angular contact ball bearing with large span support. The feature enable the spindle to resist heavy thrust force in both radial and axial direction for heavy cutting.
- ◎ The spindle nose is a labyrinth design combined with air curtain protected to prevent impurity from entering, while ensuring the accuracy and service life.



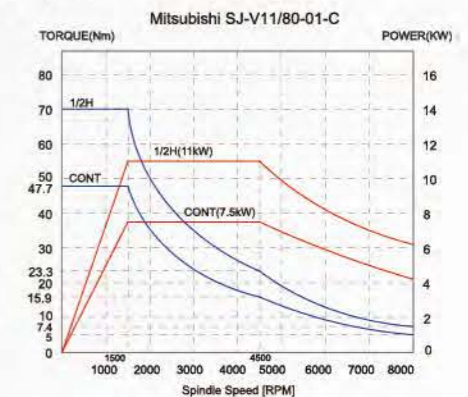
BT-50 Gear type 6000rpm



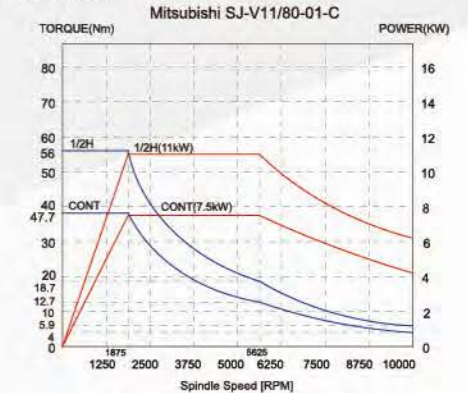
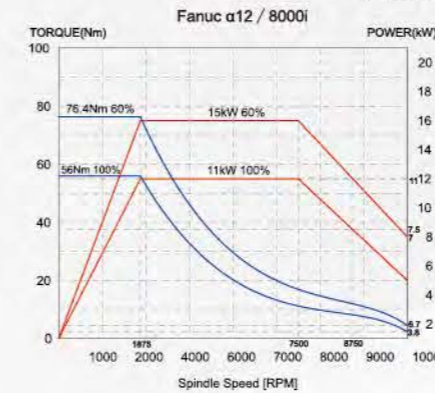
BT40 Belt type 8000rpm

Spindle Motor Torque

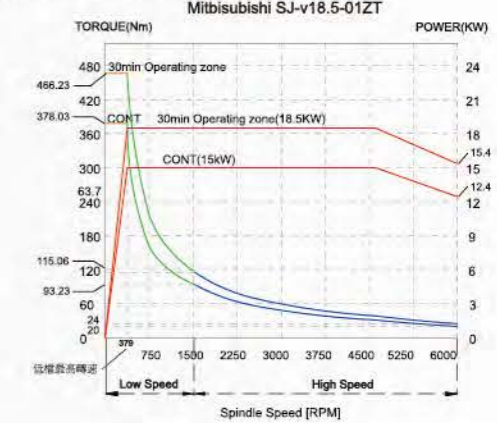
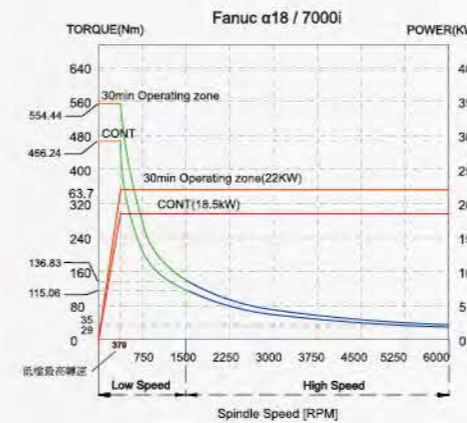
#40 belt-drive spindle 8000rpm



#40 belt-drive spindle 10000rpm

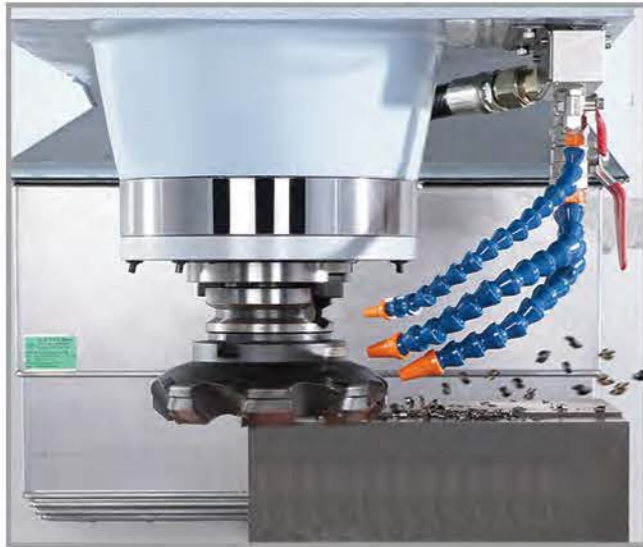


#50 dual clutch gear head 6000rpm



Cutting ability

Tool Shank & Pull Stud



Face Milling

Tool diameter	160 mm
Tool edge amount	8 pcs
Material	S50C
Spindle speed	380 RPM
Cutting feed	900mm/min
Cutting width	120 mm
Cutting depth	7 mm
Chip removal	756 cc /min



End Milling

Tool diameter	50 mm
Tool edge amount	4 pcs
Material	S50C
Spindle speed	380 RPM
Cutting feed	960mm/min
Cutting width	15 mm
Cutting depth	25 mm
Chip removal	326 cc /min



Drilling

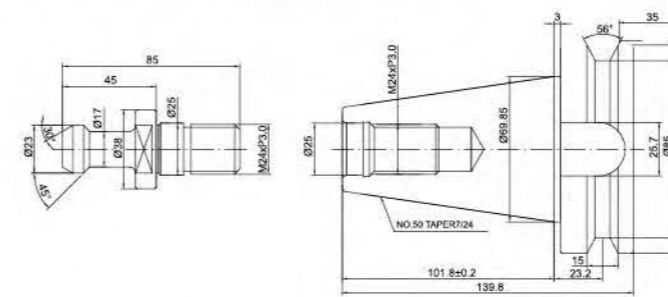
Bit diameter	50 mm
Material	S50C
Spindle speed	380 RPM
Cutting feed	200mm/min
Chip removal	392.5 cc/min



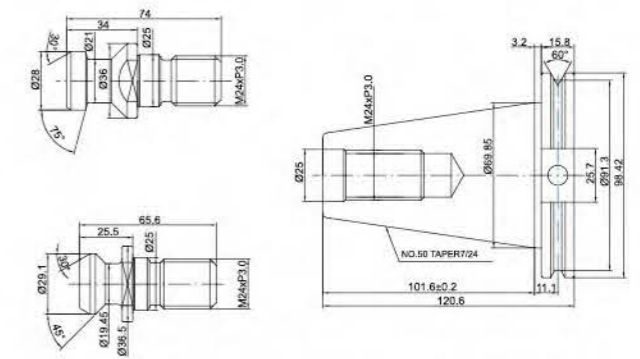
Tapping

Tap	M45
Material	S50C
Spindle speed	100 RPM
Cutting feed	450 mm/min

BT-50/DIN-50/CAT-50

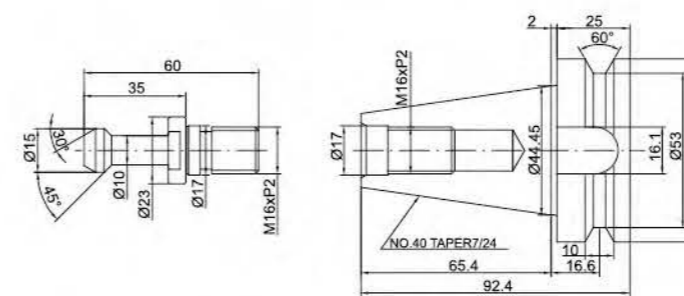


BT-50 Tool shank/Pull stud

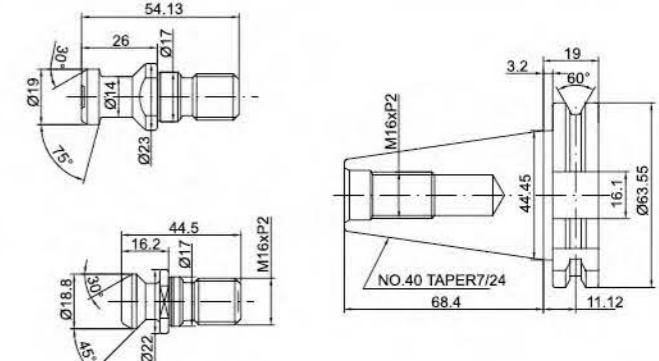


CAT-50, DIN-50 Tool shank/Pull stud

BT-40/DIN-40/CAT-40



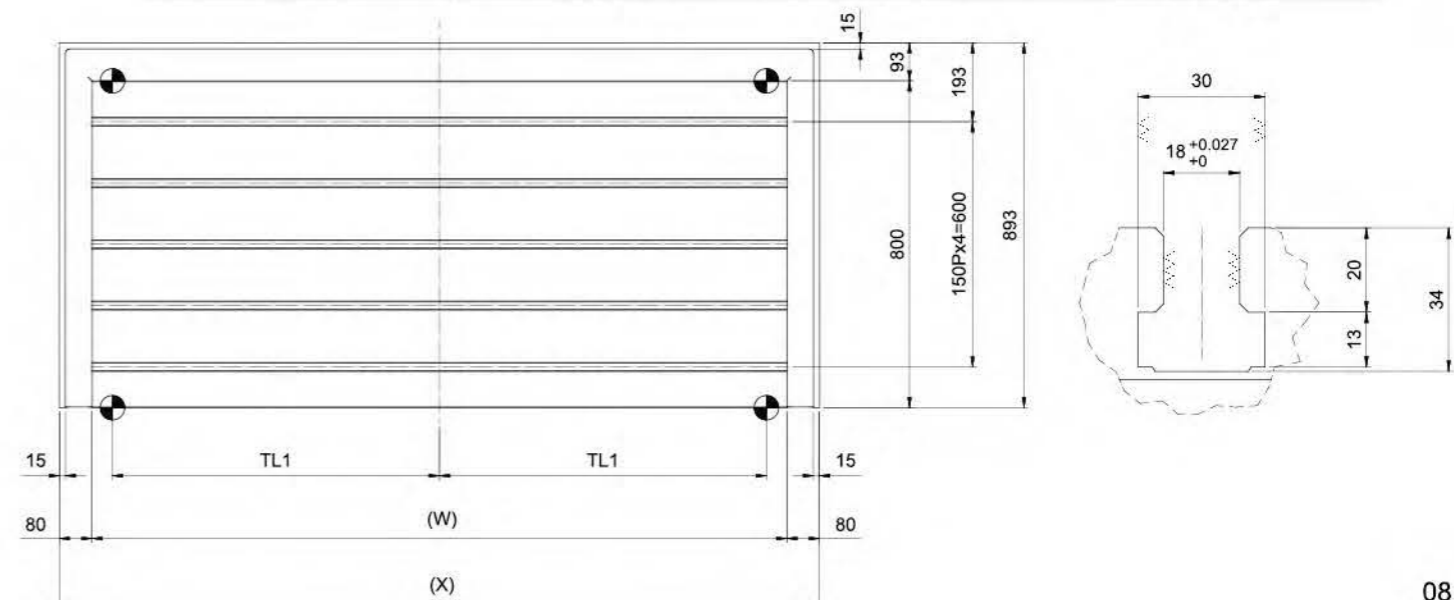
BT-40 Tool shank/Pull stud



CAT-40, DIN-40 Tool shank/Pull stud

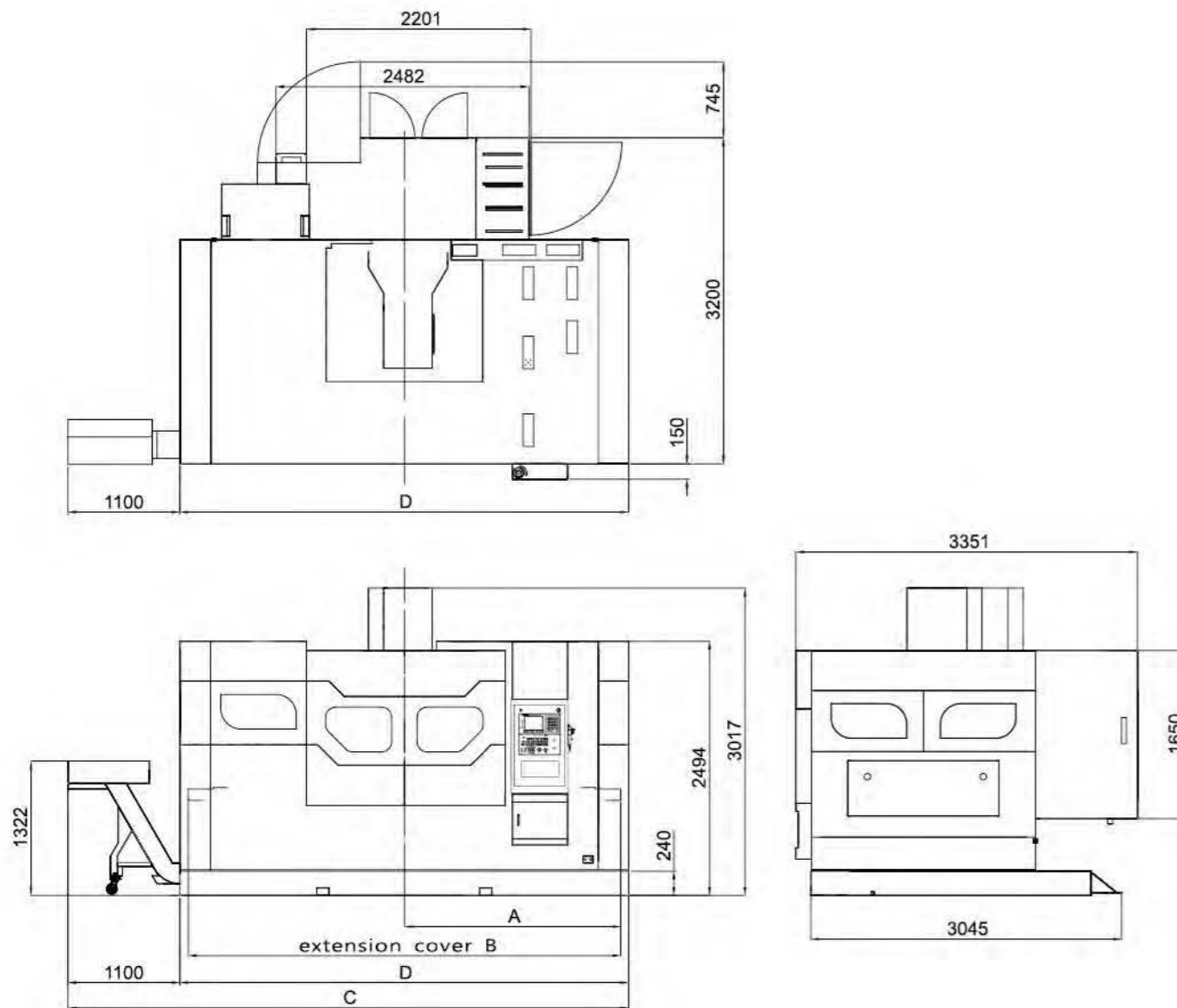
Table Dimension Drawing

Model	VTJ-1480	VTJ-1680	VTJ-1880
Length(X)	1660mm	1860mm	2160mm
Surface length(W)	1500mm	1700mm	2000mm
TL1	700mm	800mm	900mm



Machine Specification

Dimension Drawing (VTJ-1480 / 1680 / 1880)



Model	VTJ-1480	VTJ-1680	VTJ-1880
A	1913	2121	2431
B	3826	4242	4862
C	5500	5500	6100
D	4400	4400	5000

Item	Unit	VTJ-1480	VTJ-1680	VTJ-1880
Travel				
X-axis travel	mm	1400	1600	1800
Y-axis travel	mm		800	
Z-axis travel	mm		800	
Spindle center to Z-axis guide way surface	mm		900	
Spindle nose to table surface	mm		200~1000	
Table				
Table size	mm	1500 × 800	1700 × 800	2000 × 800
The maximum load	kg	1800	2000	2200
T-slot (quantity / distance)			5/150	
T-slot size	mm		18	
Spindle				
Spindle nose taper			BT-50 (Opt : BT-40)	
Spindle motor (Fanuc)	kw	18.5/22 (Cont./15min)		
Spindle motor (Mitsubishi)	kw	15/18.5 (Cont./15min)		
Spindle speed	rpm	6000 rpm		
ATC system				
ATC type		Arm type		
Tool capacity		24 (Opt : 32/40)		
Max. tool diameter (with adjacent tool / with gap)	mm	130/250		
Max. tool length	mm	350		
Max. tool weight	kg	15		
Feed rate				
X Rapid feed rate	mm/min	15000		
Y Rapid feed rate	mm/min	15000		
Z Rapid feed rate	mm/min	12000		
Cutting feed rate	mm/min	12000		
General Information				
Positioning accuracy (ISO-230)	mm	±0.005/300		
Repeatability accuracy (ISO-230)	mm	±0.003		
Required power	kVA	40		
Air pressure required	kg/cm ²	6		
Machine size (width) (Approx.)	mm	4400	4400	5000
Machine size (depth) (Approx.)	mm	3350	3350	3350
Machine size (height) (Approx.)	mm	3020	3020	3020
Machine weight	kg	13000	14000	15000
Coolant tank capacity	Liter	480		

※Specification and design characteristics subject to change without prior notice.

Standard Accessories

- Coolant system
- Work lamp
- Arm type with 24T (BT-50)
- Fully enclosed splash guard
- Leveling bolts and pads
- Auto. Power off (M30)
- Rigid tapping
- Floating tool clamping system
- Auto. Lubrication system
- Tool box with adjustment tools
- RS-232 interface
- MPG
- Heat exchanger for electrical cabinet
- Spindle air blast device
- Working air blast
- Dual clutch gear head (BT-50)
- Fanuc Oi-MF

Optional Feature

- BT-40 Belt type spindle (8000/10000 rpm)
- Arm type 32T/40T
- Coolant through tool holder device
- Coolant through spindle included filtering system
- 4th axis rotary table
- Chain type chip conveyor with cart
- Transformer
- CE regulation
- Siemens 828D/840D SL
- Mitsubishi M80