

 TAKUMI

# VT Series



High Speed Drill/ Tapping Machine Center

| VT500

# VT Series

The Takumi VT Series, drill and tapping center machining center, is designed for light and fast machining of small to medium parts and high precision dies and molds. Thanks to the high accuracy and speed, VT Series enables a wider range of machining applications such as 3C, electronic and automobile industry. The advantage of compact footprint enhance the space utility of the factory tremendously.

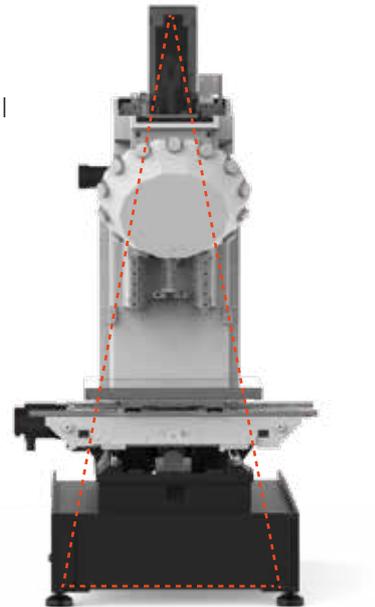
## Basic Structure



### High rigidity structure

Bed, columns, saddle and other main castings are made of Meehanite grade cast iron and remove the internal stress by heat treatment to ensure the best structural stability and positioning accuracy.

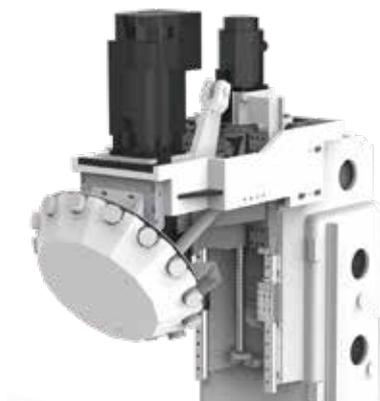
The VT Series achieves high-rigidity and optimal machine structure by using FEM analysis from the design.



### Solid type Stability Constructure

Combined with high rigidity large base span column, which offer absolute stability and accuracy. The low gravity center strengthens the structural rigidity of the machine base. Reduces vibration during cutting.

## User Convenience



### Stable ATC system

With the mechanical tool changing design, the tool change time has been optimized to reduce non cutting time.

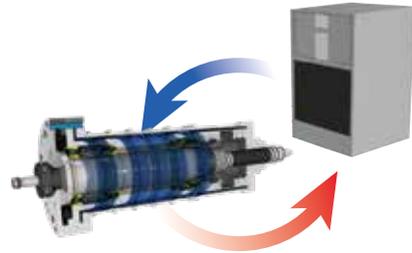
The tool change is synchronize with the movement of Z axis, which assures high speed and high productivity.

## Direct Spindle



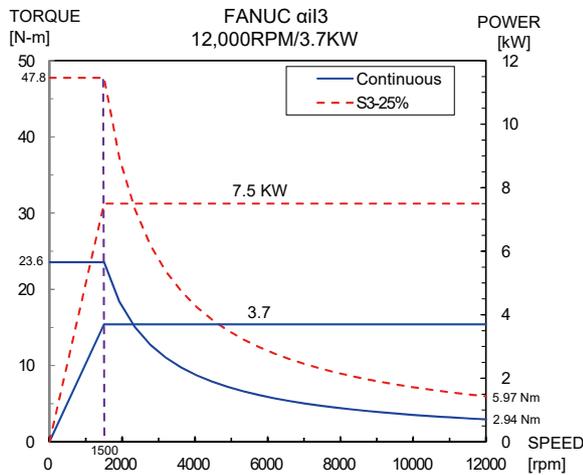
### Stable spindle cooling circulation

Spindle temperature is constantly controlled by oil chiller. Our test result have proven that the temperature of the circulating oil is controlled within certain variation, which minimizes thermal displacement during continuous operation at high speed.



### High speed direct drive spindle

The high-power direct drive spindle limits vibration, noise and power loss during high speed rotations to achieve superior part finish.

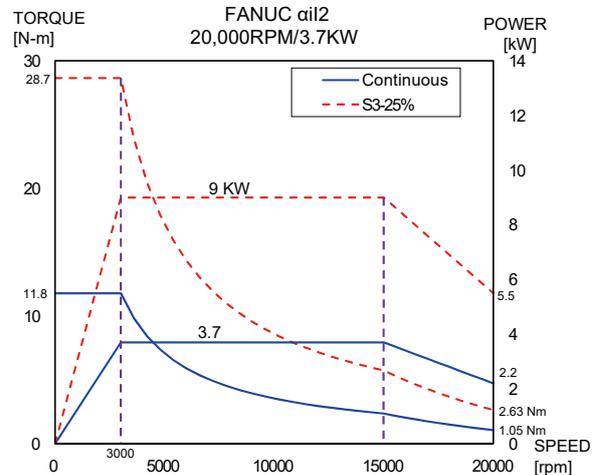


\*FANUC control

**12,000rpm Direct drive spindle (ST: VT500)**

**3.7/7.5 kW** Power (Cont./S3-25%)

**23.6/47.8 N.m** Torque (Cont./S3-25%)



\*FANUC control

**20,000rpm Direct drive spindle (ST: VT500)**

**3.7/9 kW** Power (Cont./S3-25%)

**11.8/28.7 N.m** Torque (Cont./S3-25%)

## Compact Footprint



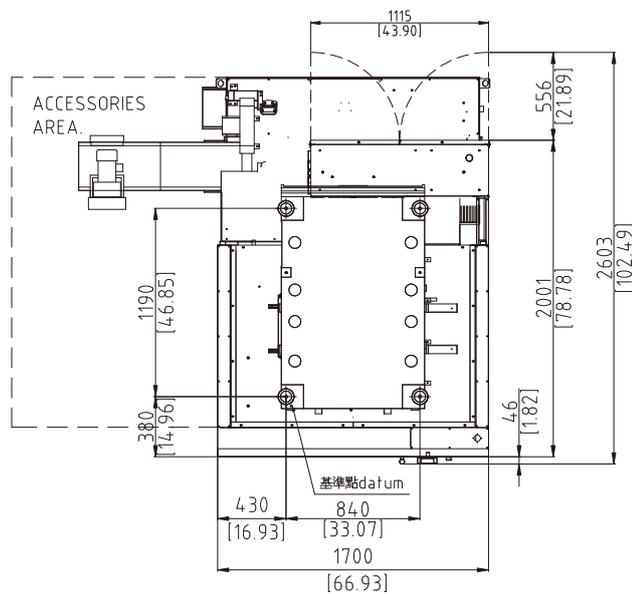
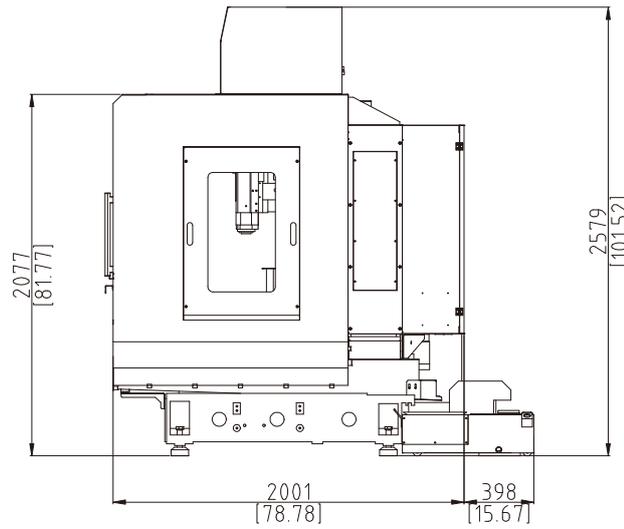
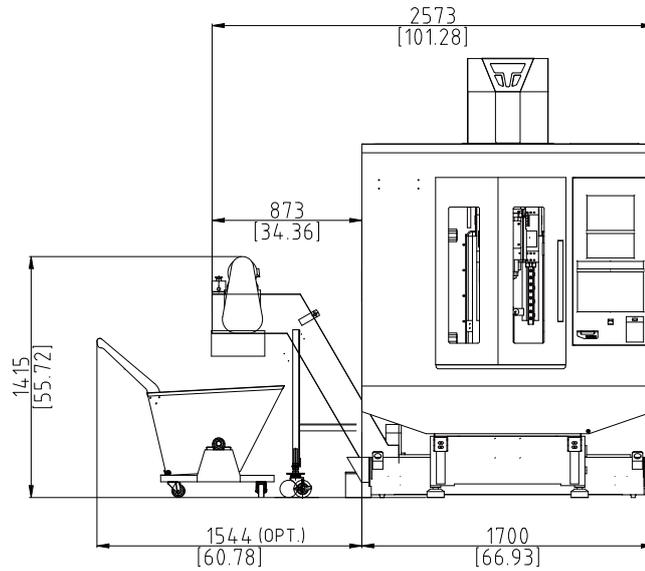
### Small footprint

The dimension of the machine on the front side is only 1,700mm, which increases the productivity by saving factory floor space.

# External Dimension

VT500

Unit : mm



## Machine Specification

Travel		VT500
X/Y/Z-axis	500 / 400 / 320mm	
Distance from spindle nose to table	160-480mm (short column)	
	260-580mm (long column)	

Table	
Dimension	650 x 400mm
Max. load	250kg
T-slot	14 x 125 x 3mm

Spindle	
Spindle type	Direct drive
Spindle speed	12000rpm
Spindle motor power	3.7kW/5.5kW (Cont./S3-25%)
Spindle taper	BT30

Feed	
Rapid feed (X/Y/Z) (ball screw pitch 16mm)	48/48/48m/min
Cutting feed	10000mm/min
Motor power (X/Y/Z)	1.5/1.5/2.2kW

ATC & Magazine	
ATC type	Turret
Number of tools	21pcs
Max. tool diameter (next pockets empty)	80mm
Max. tool length	150mm
Max. tool weight	3kg

Supply	
Air pressure	6kgf/cm <sup>2</sup>
Electric power supply	20kVA

Net weight	
Machine weight	2500kg

## Standard & Optional

### Standard:

Fanuc 0iMF-Plus 10.4"  
 12,000rpm, BT30, direct spindle  
 21T, turret  
 Spindle air curtain  
 Cutting coolant system  
 Flush coolant system  
 Manual pulse generator  
 Full chip enclosure  
 Working light  
 3-Color signal light  
 Heat exchange for electric cabinet (fan)  
 Leveling block and screws  
 Maintenance tools  
 Manuals

### Optional:

20,000rpm, BT30, direct drive  
 Long column  
 Spindle oil cooler  
 Coolant through spindle (20bar)  
 Chain type chip conveyor  
 Workpiece measurement  
 Tool measurement  
 4th axis rotary table  
 CNC tilting rotary table (4+1 axis)  
 Transformer  
 CE certified

- The specifications and information may be changed without prior notice.



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