Specification Table

Model		Unit	JN-T500
Travel	X axis	mm (inch)	500 (19.7)
	Y axis	mm (inch)	400 (15.7)
	Z axis	mm (inch)	330 (12.9)
	Spindle nose to table	mm (inch)	150-480 (5.9-18.9)
	Spindle centre to solid column surface	mm (inch)	430 (16.9)
Table	Working area	mm (inch)	650*400 (25.6*15.7)
	Max.loading	kg	350
	T-slots(No.*Width*Pitch)	mm (inch)	3*14*125 (3*0.5*4.9)
Spindle	Tool shank	-	BT30
	Speed	rpm	12000 (OPT15000)
	transmission	-	Direct drive
	Bearing lubrication	-	Grease
	Cooling system	-	Oil cooled
	Spindle motor max.rating	kw (HP)	7.5 (10)
	Axis motor max.rating(MITSUBISHI)	kw	1.5/1.5/3.0
	Axis motor max.rating(FANUC)	kw	1.8/1.8/2.5
Facel water	Rapids on X/Y/Z axis	m/min	60/60/60
Feed rates	Max. Cutting feedrate	m/min	12/12/12
Tool magazine	Tool storage capacity	pcs	21
	Type of tool (optional)	type	BT30
	Max.tool diameter	mm (inch)	60 (2.3) turret
	Max.tool weight	kg	3
	Max. Tool length	mm (inch)	250 (9.8) turret
Avg.changing Time (ARM)	Tool to tool	sec.	0.35 (60HZ)
	Air source required	kg/cm²	6 up
Accuracy	Positioning (VDI3341)	mm (inch)	0.01 (0.0004)
	Repeatability (VDI3341)	mm (inch)	0.005 (0.0002)
Dimension	Machine weight(net)	kg	5000
	Power source required	kva	20
	Shipping Floor plan(L*W*H) water tank and chip conveyor not included	mm (inch)	1800*2100*2200 (70.8*82.7*86.6)
	Floor plan (L*W*H)	mm (inch)	1800*2600*2500 (70.8*102.4*98.4)

Configuration List

Standard Accessories

Fanuc controller

Spindle speed 8000/10000/12000/20000 rpm(depend on machine model)

Automatic tool changer

Full splash guard

Heat exchanger for lectric cabinet

Automatic lubricating system

Spindle air blast system

Spindle oil cooler

Spindle air curtain

Spindle orientation

Coolant gun and air socket

LED light

Rigid tapping

Coolant system and tank

Cycle finish indicator and alarm lights

Note: Due to the continuous research and development of products and continuous technological innovation, the company has the right to change and the right to final interpretation, without prior notice.







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JN-T500
HIGH SPEED
DRILLING & TAPPING
MACHINING CENTER

- Structural design with High rigidity and dynamic performance
- Fully enclosed protection, oil mist recovery machine
- Air blowing in the center of the spindle and air curtain protection of the spindle
- High speed and high precision performance control system

OUTPUT

POWER

(kW)

5.5

4.5

3.3

Output characteristics of spindle motor

SPEED

(r/min)

10000

TORQUE

(N-m)

47.7

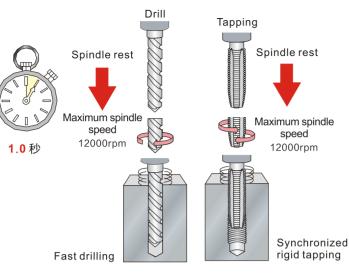
11.9

8.8

SPEED

10000

CONT





The three axes of T500 cobalt tapping center are all one-piece bearing pedestal, and all kinds of loads acting on the machine tool will eventually be transferred to the bed through various links, which greatly improves the dynamic performance and transmission rigidity of the machine. Due to some reasons such as processing difficulties and processing accuracy, very few domestic



- · All castings are analyzed by FEM finite element method with rigidity, dynamic, damping, frequency and restraint optimization design
- Compared with the same machine, the rigidity of the machine increased by 70%.



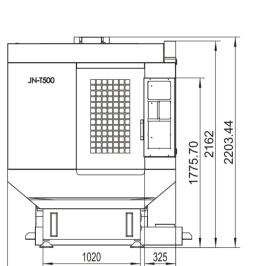
- full-motion design, which can achieve large travel, small space, fast and stable movement.
- · Y-axis shield design single-chip fullcover type, simple and reliable;
- · Z-axis shield is unique design, driven by gravity is more environmentally friendly and reliable.

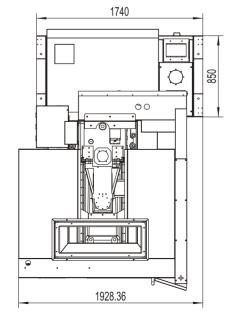


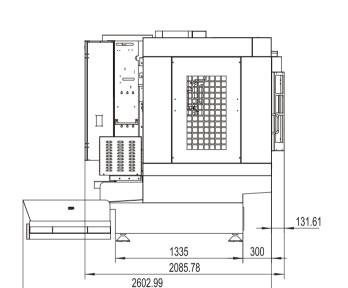
Machine Outward Size Diagram

CONT

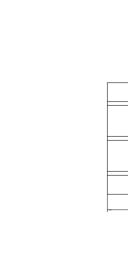
OUTPUT POWER - SPEED CHARACTERISTIC NORMAL

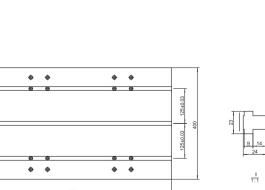






TORQUE - SPEED CHARACTERISTIC NORMAL





Spindle box and spindle

- \cdot The spindle box of spindle direct connection type adopts thermal symmetry to reduce the influence of thermal deformation of spindle on the dimensional accuracy of parts.
- · The front end of the spindle is equipped with large size bearings with diameter of 45, which greatly improves the rigidity and stability of the spindle
- · The design of the main shaft structure of the heat insulation source reduces the thermal displacement. Improve the accuracy and life of the spindle.

Structural Design with High Rigidity and High Precision

Introduction to machine tools

The rigidity of the body of the integrated box-type bed is the basis to ensure that the machine tool is not deformed. The low center of gravity (the design center of gravity of the whole machine tool is 600 mm high) makes the machine tool's amplitude small and not easy to be resonated. The long-span fulcrum (the four-point support distance is 1200 mm X840 mm) guarantees that the center of gravity of the machine tool is offset by the influence of the workpiece without the large-distance offset of the center of gravity of the In order to prevent the vibration superposition of different self-excitation frequencies and excitation frequencies, the unequal-distance net-shaped staggered bars are designed to avoid the same amplitude.

X/Y/Z feed shaft (60m/min) optimization is a method to improve the dynamic performance with HRV control technology. The method of improving the dynamic characteristics of feed shaft by increasing transmission ratio is suitable for high-speed mobile machine tools. The output speed of servo motor does not reach the rated speed. The matching performance can be improved by increasing transmission ratio.

Imported precision ball screw, precision linear guide rail and P4 angular contact bearing are used in all three axes.

Pursuing High Acceleration

Old model JN-T500 Z-axis acceleration: 1.1G 2,2 G

Because the Z-axis moves most frequently, the acceleration of the Z-axis is about two times higher than that of the old model.

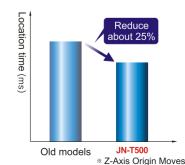
The most appropriate acceleration according to the load

(Maximum load): 1.4G/1.1G

(Load 150 kg): $2.0 \, \text{G} / 1.3 \, \text{G}$

The most suitable XY acceleration setting function can be set according to the load of the table.

*The acceleration load of \$500 needs to be set according to the parameters.



to Travel Center

The control system is equipped with the highest performance high-speed and high-precision control system, Mitsubishi M80B system, which improves the accuracy, production efficiency and process safety.

The number of control programs and memory of the control system are increased compared with the previous models; the control system is equipped with SD card to increase the memory element; the control system has a variety of error compensation. Achieve high precision



The special tool library in Jiangnan is designed with frequency conversion motor, which can be controlled by PLC software to achieve rapid tool change and more reliable performance. The cam drives the tool library to ensure the smooth operation of precision transmission when using heavy cutters.



- The labyrinth water tank design effectively avoids iron chips and oil pollution entering the pump.
- for the chip fluid system to cool the heat generated by cutting tools and workpiece processing.



- mist, water mist into the cabinet, so as to avoid damp electrical components and short circuit or damage;
- uirements, standardized machine tools.





- · The air pressure system is centralized and hung outside the protection, which is easy to manage and maintain.
- Mechanical decompression, no circuit malfunction and alarm risk, to ensure the normal operation of machine tools



- Closed electric cabinet, prevent any oil
- Electrical standards meet safety req-





High-pressure pumps provide sufficient pressure