#### Specification Table

Model		Unit	JN-NV900
Travel	X axis	mm (inch)	900 (35.4)
	Y axis	mm (inch)	500/625 (19.7/24.6)
	Z axis	mm (inch)	500 (19.7)
	Spindle nose to table	mm (inch)	150-650 (5.9-25.6)
	Spindle centre to solid column surface	mm (inch)	517/630 (20.4/24.8)
Table	Working area	mm (inch)	1000*500 (39.4*19.7)
	Max.loading	kg	700
	T-slots(No.*Width*Pitch)	mm (inch)	5*18*125 (5*0.8*5.0)
Spindle	Tool shank	-	BT40
	Speed	rpm	8000 / 10000 / 18000
	transmission	-	Belt / Direct / Electric
	Bearing lubrication	-	Grease
	Cooling system	-	Oil cooled/water cooled
	Spindle motor max.rating	kw (HP)	11 (15)
	Axis motor max.rating(MITSUBISHI)	kw	1.5 / 2.2 / 3.0
	Axis motor max.rating(FANUC)	kw	3.0 / 3.0 / 3.0
Feed rates	Rapids on X/Y/Z axis	m/min	36 / 36 / 36
	Max. Cutting feedrate	m/min	10 / 10 / 10
Tool magazine	Tool storage capacity	pcs	24 / 30
	Type of tool (optional)	type	BT40
	Max.tool diameter	mm (inch)	85 (3.3) arm
	Max.tool weight	kg	7
	Max. Tool length	mm (inch)	300 (11.8) arm
Avg.changing Time (ARM)	Tool to tool	sec.	2.5
	Air source required	kg/cm <sup>2</sup>	6 up
Accuracy	Positioning (VDI3341)	mm (inch)	0.01 (0.0004)
	Repeatability (VDI3341)	mm (inch)	0.005 (0.0002)
Dimension	Machine weight(net)	kg	6000
	Power source required	kva	25
	Shipping Floor plan(L*W*H) water tank and chip conveyor not included	mm (inch)	2600*2300*2600 (102.4*90.6*102.4)
	Floor plan (L*W*H)	mm (inch)	3468*2282*2618 (136.5*89.8*103.1)

#### **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.







## JIANGNAN CNC MACHINE TOOL CO., LTD. JIANGNAN TECHNOLOGY (SONGYANG) CO.,LTD.

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# JN-NV900

HIGH-SPEED HEAVY-DUTY MACHINING CENTER

- Structural design of high speed, heavy cutting and high precision
- Short nose spindle, high precision and rigidity
- Air blowing in the center of the spindle and air curtain protection of the spindle
- High speed and high precision performance control system
- Fully enclosed protection (oil mist reclaimer OP)



Rigidity of machine tools is one of the important factors that determine the accuracy and processing performance of machining centers.

To shorten the non-processing time, only the main mechanisms such as spindle, transmission group, ATC have high-speed performance, can they reflect the significance.

To pursue the user-oriented operating environment, after improving the door width and working distance, compared with traditional models, greatly improve the efficiency of operation.

JN-NV900, as a high-speed and high-precision heavy-duty cutting center, is competent for both highperformance heavy-duty cutting and all-round precision cutting, which also benefits from the design of high dynamic performance structure.

In order to achieve the above characteristics, all castings are optimized by finite element analysis (FEA). Symmetry, compactness, high rigidity and thermal stability are adopted in the design. The rigidity of the body

of the integrated box bed is the basis to ensure that the machine tool does not deform. It can also ensure good shock absorption, high stability and high rigidity when it is processed continuously under

heavy load. Reaction in the processing structure is stable nilling performance. The constant quality of high precision production process is guaranteed.

This newly designed and highly efficient vertical machining center opens a new chapter in the field of standard vertical machining centers. It shows unprecedented high performance with its high speed, high precision and heavy cutting, simple operation, modern design, ruggedness, durability and automatic chip removal, and has won a reputation in the market. From low-speed casting processing to high-speed aluminum alloy processing, it meets the extensive needs of various industries led by the automotive industry and shows its existence value.

## Fast Forward

High speed servo motors are used for X, Y and Z axes, and the feeding speed of fast forward and cutting is very fast

The stability of heavy-duty ball guide can also be ensured when heavy-duty cutting is used.

#### Saddle

JN-NV900 is designed and manufactured by the core technology of all its mechanical structure design.

All structural parts are optimized by the latest FEA computer-aided simulation analysis and design technology. It is possible to ensure the high stability of machine tools as much as possible.

The rigidity of the body of the integrated box bed is the basis to ensure that the machine tool does not deform. It can also ensure good shock absorption, high stability and high rigidity when it is processed continuously under heavy load.



#### Maximum acceleration of X-axis

Tradition 800

**24** m/min

0.30 G (2.94 m/s<sup>2</sup>)

**JN-NV900** 

36 m/min

1.10 G (10.78 m/s<sup>2</sup>)

#### Maximum acceleration of Y-axis

Tradition 800 24 m/min

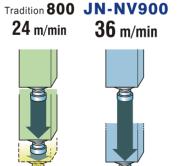
0.236 $(2.25 \, \text{m/s}^2)$ 

**JN-NV900** 

36 m/min 1.10 G

(10.78 m/s<sup>2</sup>)

0.27 G (2.65 m/s²)



Maximum acceleration of Z-axis

1.24 G  $(12.15 \text{ m/s}^2)$ 



NV900 is validated by repeated analysis to ensure structural rigidity at the design stage. Compared with the traditional method, the NV900 tool base is directly loaded on the base from the column, which is not easy to deform and greatly improves the rigidity of the machine tool.



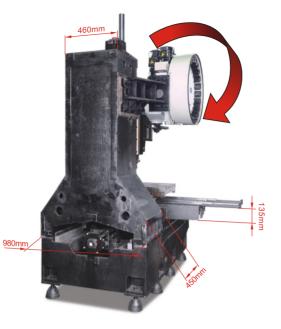
NV900 uses chip removal machine to remove debris. realizes the convenience and cleanliness of debris cleaning, improves the efficiency of waste disposal, increases the capacity of waste accumulation, liberates labor force, and provides the basis and guarantee for intelligent production. The box filter makes the water tank have a further reflux path under the same volume, and enhances the filtering effect of the water tank.

#### Electric Cabinet



Closed electric cabinet prevents any oil and water mist from entering the cabinet, so as to avoid short circuit or damage of electrical components due to numidity.

Electrical standards meet the requirements of safety regulations, and the electrical layout is neat, orderly and reasonable.



It is easy to make the column deform when the side hanging of the common type tool storehouse is empty.

#### Spindle Box and Spindle



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 bearing with diameter 7014, 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 and improves the accuracy and life of the main shaft.

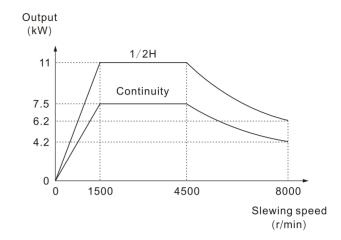
#### Electrical Box

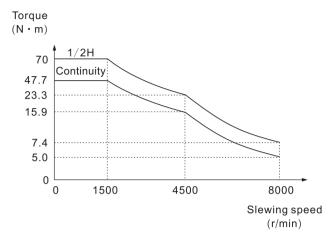


The air pressure system is centrally hung outside the protection. easy to manage and maintain.

The position of the oil injector is convenient to add lubricating oil, away from electrical components, ensuring safety and easy to use.

### Output characteristics of spindle motor





## **Machine Outward Size Diagram**

