

rtical Machining Center (**JN-IV1160**)

# Technical Document

By Jiangnan CNC Machine Co., Ltd.

By Jiangnan Technology (Songyang) Co., Ltd.



The picture is for reference only, the actual appearance may vary slightly due to selected configurations.

Party A: :

Party B: Jiangnan CNC Machine Tool Co., Ltd.

Date :

Date :

## 1. Company Profile



Jiangnan CNC Machine Tool Co., Ltd. is located in the beautiful coastal city of Wenzhou, China. It is a CNC machine manufacturing enterprise integrating research, design, manufacturing, and sales. The company was established in September 2006 and currently has a standardized plant covering an area of 85,000 square meters, with more than 180 excellent staff members. Among them, 90 employees have a college degree or above, accounting for 50% of the total staff; the company has 20 research and development personnel, accounting for 9% of the total workforce.

Adhering to the business philosophy of "technological innovation, win-win cooperation, integrity and efficiency, sincere service," and the quality policy of "quality first, customer foremost," the company provides customers with the most cost-effective products and comprehensive services, aiming to create the maximum value for customers. With advanced equipment including the world's most advanced large-scale CNC five-axis machining center and horizontal machining center, as well as contour grinding machines and high-precision Renishaw inspection equipment, the company strictly adheres to international standards. It has obtained ISO9001 certification and implements rigorous process inspections to ensure product quality.

The company mainly manufactures vertical Machining Centers, horizontal Machining Centers, drilling and tapping machine, gantry series, CNC lathes, and other series of products:

1. Vertical Machining Centers: JN-IV850, JN-NV856, JN-NV900, JN-NV1050, JN-IV1160, JN-NV1300, JN-NV1690, etc.
2. Horizontal Machining Centers: JN-H50, JN-IH50, JN-H63, JN-IH63, JN-H800, JN-H1810, etc.
3. Drilling and Tapping Machines: JN-T500, JN-T700, etc.
4. CNC Lathes: JN-CH106, JN-CH108, JN-CH108M, JN-CH108MY, JN-CH208, JN-CH506MSY, etc.
5. Gantry Series: JN-GL2013, JN-GL2015, JN-GL2518, JN-GL2720, JN-GL3023, JN-GL4023, JN-GL4027, JN-GL5030C, etc.

Our machine tools are popular in major provinces and cities in China, including Beijing, Shanghai, Chongqing, Tianjin, Hebei, Henan, Shanxi, Shandong, Jiangsu, Zhejiang, Guangdong, Anhui, Hubei, Fujian, and others, due to their excellent performance and first-class after-sales service. The company adopts a combination of direct sales and distributorship models and has cooperated with 100 distributors nationwide, covering major cities across the country.

Jiangnan CNC – A national brand, a national pride! We sincerely invite you to join with us to create a new era of high-tech machinery!

## 2.Introduction the Songyang Factory



Jiangnan Technology (Songyang) Co., Ltd., a wholly-owned subsidiary of Jiangnan CNC

Machine Tool Co., Ltd., was established in August 2017. Located in the beautiful scenic city of Songyang, Lishui, it covers an area of 107.69 acres with a total construction area of 29,693 square meters. The company has a registered capital of 50 million yuan, with fixed asset investment of 300 million yuan and working capital investment of 70 million yuan. It has introduced multiple sets of high-precision equipment such as the Japanese DAIWA CNC gantry five-axis machining center and horizontal machining centers.

Building on the development foundation of its parent company, Jiangnan Technology actively promotes brand building and product serialization strategies. Internally, it implements ERP systems and information construction, optimizing business processes, and enhancing the company's management level and core competitiveness. Facing the challenges of economic globalization, Jiangnan will continue to focus on the CNC machining center industry, adhere to market-oriented business philosophy, and persist in the direction of "internationalization, technologicalization, and industrialization." It will vigorously introduce advanced equipment, technology, and talents, integrate resources, leverage strengths, and strive to shape "Jiangnan" into a well-known enterprise in the international CNC machining center industry.

### 3.The technical parameters of the JN-IV1160

	Item	Unit	Specification
Worktable	Table size	mm	1300*600
	Processing range	mm	1100*600
	T-slot	mm	100*18*5
	Table load	kg	600
Travel	X/Y/Z travel	mm	1100/600/600
	Spindle nose to table surface	mm	150-750
	Spindle center to Z axis shield surface	mm	615
Spindle	Spindle taper		BT40
	Spindle speed	rpm	12000
	Spindle drive method		Direct drive
Spindle Motor	Spindle motor	kw	11-15
Feed Rate	X/Y/Z cutting feed	mm/min	1~10000
	X/Y/Z rapid feed	m/min	36/36/36
Precision	Positioning accuracy	mm	0.008

	Repeat positioning accuracy	mm	0.005
Automatic Tool Change System (Optional)	Tool magazine capacity	T	24
	Tool change method		Randomization
	Max. tool diameter	mm	Φ78
	Max. tool diameter(Next to Empty Slot)	mm	Φ150
	Max. tool length	mm	250
	Max. tool weight	kg	7
	Toolholder type(Pocket spec)		BT40
	Tool change time	s	2.5 (T-T)
Others	Air pressure demand	kg/cm <sup>2</sup>	5-7
	Power requirement	KVA	30
	Machine weight	kg	6000
	Machine size (Length/Width/Height )	mm	3134*2491*2761 (Chip removal machine not included)

The actual values for power supply, air pressure source, machine weight, and overall dimensions may vary due to different configurations and peripheral equipment.

#### 4、Detailed supplier of main components

NO.	Name	Manufacturer	Brand Origin	Remarks
1	CNC System	Mitsubishi	Japan	M80B
2	Spindle Motor	Mitsubishi	Japan	DG11/120
3	X/Y/Z Axis	Mitsubishi	Japan	HG204S HG204S HG303BS
4	Ballscrew (X/Y/Z Axis)	PMI/ HIWIN	Taiwan	40/40/40
5	Linear guideway (X/Y/Z Axis)	PMI/ HIWIN	Taiwan	45/45/45
6	Ballscrew coupling	JANETECH	Taiwan	
7	Bearing	NACHI	Japan	

8	Electric lubrication System	HERG	Joint Venture	
9	Cutting cylinder	HINAKA	Taiwan	
10	Spindle	VYU CHENG	Taiwan	
11	Tool magazine	CHNCIT	China	
12	Cooling pump	STAIRS	Taiwan	
13	Air tank		China	
14	Pneumatic components	SMC	Japan	
15	Transformer		LUHO	
16	Electrical components	Schneider	France	
17	Telescopic cover	CHNCIT	China	
18	Rear flush	CHNCIT	China	
19	Machine peripheral sheet metal	CHNCIT	China	
20	Oil cooler	TONGFEI/SAMENG	China	

Note: If any supplier fails to supply, it will be replaced with a brand of equal quality without further notice.

## 5. Casual tools and manual list

No.	Name	Quantity/Unit	Note
1			
2			
3			
4			

5			
6			
7			
8			

## 6. Comes with a list of tools and materials

### Randomization list

No.	Name	Quantity/Unit	Remarks
1	Toolbox	1Set	
2	Certificate of conformity	1Copy	
3	Machine specification	1Set	
4	Machine specification system specification	1Set	
5	Air gun	1 Piece	

## 7. Machine Mechanical Indicators

### 1、Machine Structure

Machine Structure The main structural components of the machine tool are made of high-tensile cast iron, optimized in design for high static rigidity. The spindle features a high-rigidity structure, high mechanical efficiency, suitable for high-precision heavy cutting machining. The spindle motor adopts AC servo technology, enabling stepless speed regulation in both forward and reverse directions. The three-axis ball screw and servo motor drive directly, with no transmission cumulative error, ensuring high repeatability and positioning accuracy. Automatic tool changing structure, quick and smooth tool changing operation. All machine



components and various measurement units comply with international (ISO) standards.

## **2、 Machine Protection**

Machine Protection The machine protection device is safe, complete, and reliable. Machine noise: in compliance with national standards, 75dB. Electrical control cabinet sealed to prevent dust and water, IP65 rating.

## **3、 Lubrication System**

Lubrication System Adopts TZ electric lubrication device to quantitatively lubricate all sliding surfaces and ball screws. Adjustable lubrication time intervals and amounts to ensure 100% lubrication at all lubrication points. Machine displays an alarm in case of low oil level (oil shortage). Uses 68# guide rail lubricating oil. Lubrication tank capacity: 2 liters. Lubrication pump voltage: 220V, motor output power: 25W, maximum pressure: 2.5MPa, discharge flow rate: 110ml/min.

## **4、 Pneumatic System**

Pneumatic System Pneumatic system, pressure switches, solenoid valves, etc., realize pneumatic tool changing, pressure: 6-8KG/C  $m^2$ , flow rate: 220L/MIN, can clean the working area.

## **5、 Electrical System**

Electrical System The standard system has complete and reliable interlocking, safety protection, and fault self-diagnosis alarm functions. Equipped with RS232 standard communication interface, can use computer floppy disk for program storage. (Other systems can be provided according to user requirements).

# **8、 Product Services**

1. Installation and Commissioning
  - 1.1. Before equipment installation, Party A should prepare the site, power supply, air supply, and related supporting measures in advance.
  - 1.2. After the equipment arrives at Party A's location, Party A is responsible for the foundation, unloading, and hoisting of the machine tool, and should promptly notify Party B. Party B will send installation and commissioning personnel to Party A's site upon receiving notification.
  - 1.3. Upon delivery of the machine tool, our company will dispatch engineers to the customer's site for free installation and commissioning of the equipment. Party A should designate operators and maintenance personnel for the machine tool and assign dedicated personnel to assist with installation and commissioning.
2. Training

Training Provide customers with training on machine tool operation and routine maintenance knowledge, and guide operators in troubleshooting simple faults and related techniques.

### 3. Product Technical Services

Product Technical Services Our company can provide customers with technical consulting and after-sales technical support. As long as it is related to machine tool technology and operation issues, our company can handle customer inquiries.

### 4. Acceptance Methods

4.1. Acceptance will be conducted at Party A's site.

4.2. Appearance inspection: Personnel from both parties visually inspect the appearance of the machine tool, and tools and accessories are checked and accepted according to the contract and attachment.

4.3. Mechanical accuracy acceptance: When the machine tool is delivered from Party B to Party A, relevant qualification certificates and factory accuracy inspection reports should be provided. Acceptance will be conducted at Party A's site, and the machine tool accuracy acceptance should be based on the static accuracy provided in the qualification certificate from Party B. The inspection tools required for acceptance will be provided jointly by both parties.

### 5. After-Sales Service Commitment

#### 5.1. Warranty Period and Scope

The warranty period is one year from the date of shipment of the machine tool, but lifetime maintenance is provided.

During the warranty period, if there are any quality issues with components, our company will provide free repair or replacement.

#### 5.2. Exclusions from Free Warranty during the Warranty Period

5.2.1. Equipment damage caused by natural disasters such as earthquakes, floods, fires, lightning, typhoons, etc.

5.2.2. Human factors caused by Party A's personnel disassembly, modification, and improper operation.

5.2.3. Equipment damage caused by prolonged storage.

5.2.4. Equipment relocation, secondary training, etc.

5.3. Outside the warranty period, our company will also provide timely repairs. Cost of parts replacement will be charged, while related labor costs will be negotiated between both parties.

5.3.1. After-Sales Service Content Upon receiving a customer's repair call, our company will respond by phone within half an hour; if personnel are needed on-site, our company will arrange for maintenance personnel to arrive at the site within 24 hours for locations within the province and within 48 hours for locations outside the province, with special circumstances subject to confirmation through mutual agreement.

5.3.2. Other Commitments in After-Sales Service (Regular Inspection, etc.) When customers require our company to service or maintain the machine tool, our company will send maintenance engineers for on-site service through negotiation, and conduct regular inspections of the machine tool.

5.3.3. After-Sales Service Contact Information Our company's after-sales service hotline: 18957736620, 18968800655.