

Lijian[®] Busbar Machine

Standard Maker of China's CNC Busbar Machine National Standard (GB/T 37946-2021)



Shandong Lijian CNC Machinery Co., Ltd.

ISO 9001 | CE | SGS | Certified | www.sdljmachine.com

LJMN-200 Copper Busbar Chamfering Machine

CNC-Controlled | Automatic Tool Changing | Low Pollution | High Safety



Bullet points:

- CNC-controlled automatic milling can automatically complete arc machining simply by inputting parameters, requiring no skilled workers.
- 6-station in-line tool magazine + BT40 international standard tool holder, automatic tool changing according to thickness.
- Water circulation system + automatic chip removal system + chip collection cart, dust is suppressed by water and automatically collected.
- Gantry-type welded housing structure + high-load, large-size guide rails + high-speed spindle, resulting in high rigidity and low vibration.

I. Introduction:

1. Main use:

The main function of the machine is to perform arc machining on the end of copper busbar. It is mainly used for milling angle and arc angle of copper and aluminum busbars with thickness of 4-16mm and width of 30-200mm. It has simple structure with convenient use.

2. Control mode:

The electrical control is controlled by 5-axis CNC system. The feeding and cutting of copper busbar are completed through the start-up of spindle motor and servo motor. The clamping or loosening of cutter is completed by pneumatic control.

The two-axis CNC automatic control system is adopted, and a 10.4"LCD is equipped, which can display the working state of the machine tool. It has the functions of storing according to the input work number, calling the counting of workload, displaying and communicating, simulating processing, as well as online manual programming.

3. Machine tool structure, advantages and operation characteristics:

The machine is mainly composed of lathe bed workbench, gantry, slide rail, servo motor, power head and cylinder, fixture device, pneumatic system, CNC system, protective cover, etc.

Gantry-type mechanical structure adopts steel plate full-welded box structure, whose advantages are good rigidity and light weight of the lathe bed, meeting the requirements of rigidity of strong cutting of main spindle cutting tool and the requirement of sensitive feed response of moving parts.

The machine adopts high-precision ball screw and linear guide, and adopts high-load large-size guide in the selection of guide, significantly improving overall machine rigidity, reducing vibration and noise, improving the work-piece quality, and ensuring the high precision and efficiency.

The spindle of the machine tool adopts the high-precision high-speed milling machine main shaft which is installed integrally, and is driven by the variable-frequency motor with stepless speed change and the synchronous belt. It has the characteristics of simple and reliable transmission structure, no need of lubrication, convenient cooling, high installation precision, high cutting speed and the like.

A three-point positioning mode is adopted for workpiece positioning. After the workpiece is positioned, the workpiece is clamped by a workpiece clamping mechanism. The workpiece clamping mechanism adopts both pneumatic and hydraulic clamping, and has stable speed without impact, reliable clamping force and easy adjustment.

The longitudinal (Y-direction) transmission and guide system of the machine tool is equipped with an organ-type protective cover to prevent flying dust from polluting the equipment.

The lathe bed is equipped with an in-line cutting tool magazine with six stations, which is convenient for the replacement and placement of commonly used working cutting tools.

The bottom of the machine tool body is provided with a chip collecting groove and a chip collecting trolley, which not only facilitates the collection of metal chips, but also saves the occupied area of the machine tool. Meanwhile, the device is simple and reliable.

The machine has the function of automatically accumulating working hours that cannot be reset. In addition, it has production counting function that can be reset.

The cutting tool of this machine adopts the formed cutting tool shearing. The cutting tool adopts the BT40 tool handle of the international standard with simple tool changing, good rigidity, and high precision. **The in-line cutting tool magazine with six stations can automatically change the cutting tool according to the thickness of the busbar.**

The machine is equipped with a water circulation system, and an automatic chip removal system is added.

The used components are well-known brands at home and abroad, with long service life and quality assurance.



II. Main technical parameters:

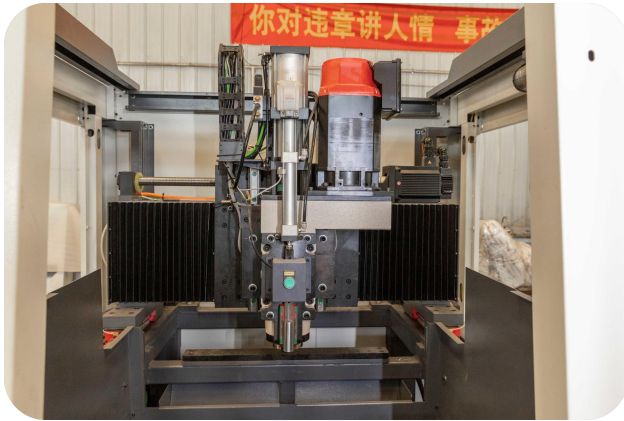
No.	Parameter Name	Unit	Parameter	Remarks
1	Maximum spindle speed	r/min	6000	
2	Main motor power	KW	3.7	
3	Model of spindle handle		BT40	
4	X-axis working stroke	mm	525	Ensure that the copper busbar within the range of R100 can be machined
5	Y-axis working stroke	mm	500	Ensure that the copper busbar within the width of 160 can be machined.
6	X-axis maximum operating speed	m/min	15	
7	Y-axis maximum operating speed	m/min	15	
8	X-axis positioning accuracy	mm	±0.08	
9	Y-axis positioning accuracy	mm	±0.08	
10	Thickness of workpiece	mm	4-16	4-16
11	Width of workpiece	mm	30-200	
12	Length of workpiece	mm	150-6000	
Control mode				
1	Number of CNC axes	Piec	4	

		e		
2	Power of X-axis servo motor	KW	2	
3	Power of Y-axis servo motor	KW	2	
4	Hydraulic pump motor power	KW	2.0	
5	Working pressure of pneumatic system	MPa	0.6-0.8	
6	Dimension (L×W×H)	mm	2260×1580×2100	Length does not include feeding table.
7	Machine weight	Kg	2380	
8	Total power	KW	12	

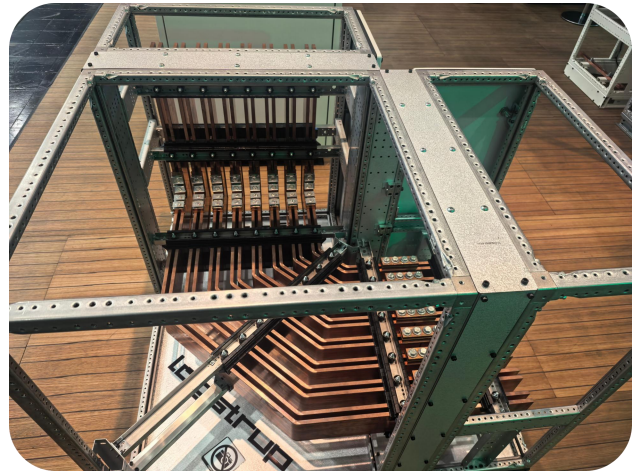
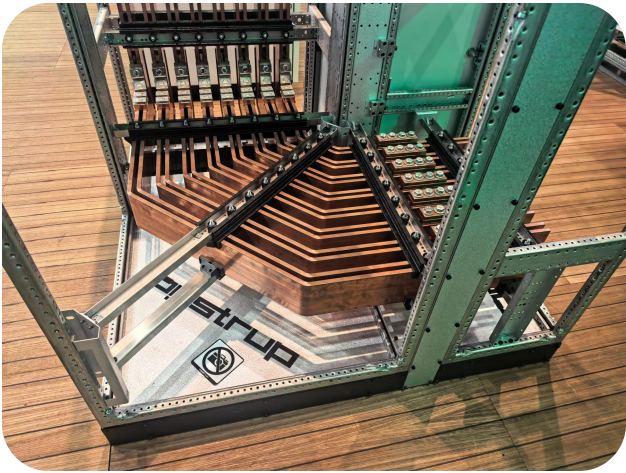
III. Selection of main equipment accessories:

Serial No.	Name	Quantity	Brand
1	Ball screw	4 sets	HIWIN/TBI
2	Linear rolling guide	8 sets	HIWIN/PEK
3	Servo driver	4 sets	Rexroth
4	Servo motor	4 sets	Rexroth
5	Pneumatic parts	1 set	HSBC
6	Hydraulic components	1 set	Shanghai Fengyi
7	Spindle servo	1 set	Jing Yao
8	Programmable controller	1 set	BECKHOFF, Germany

Machine Display



Customer Reference:



Cooperation Partner:



Let's Shape the Future of Power Automation Together.

Inquiry Email:

Phone/WhatsApp:

Factory Address:

Website: