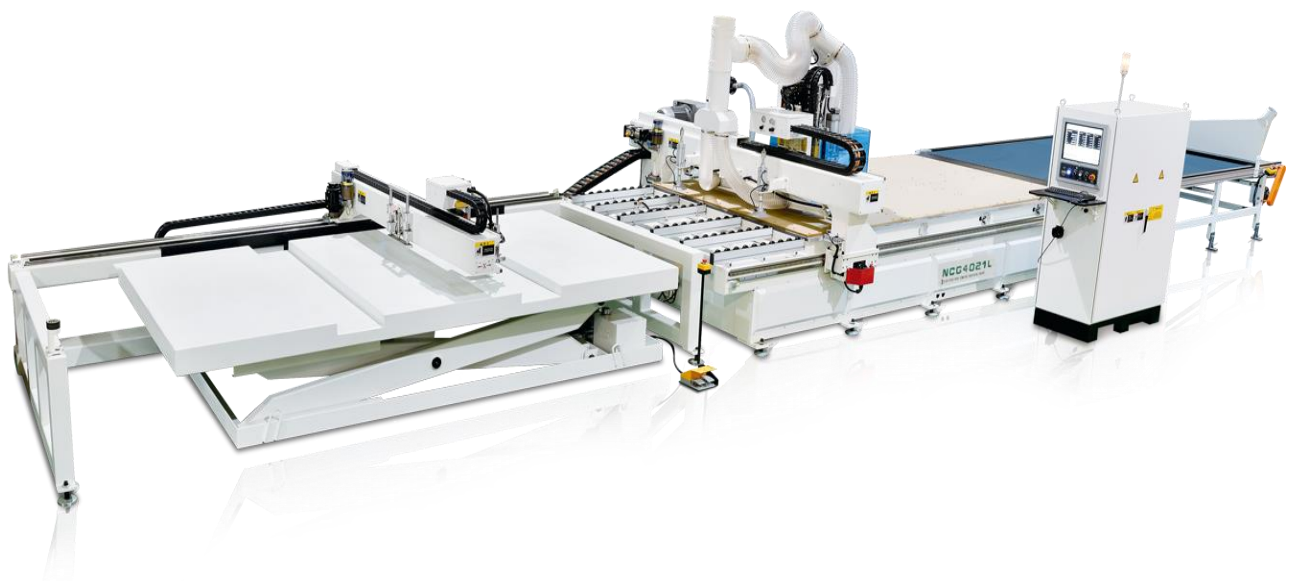


AL+UL CNC Nesting Line NCG3021L

Nanxing Machinery
Guangdong China

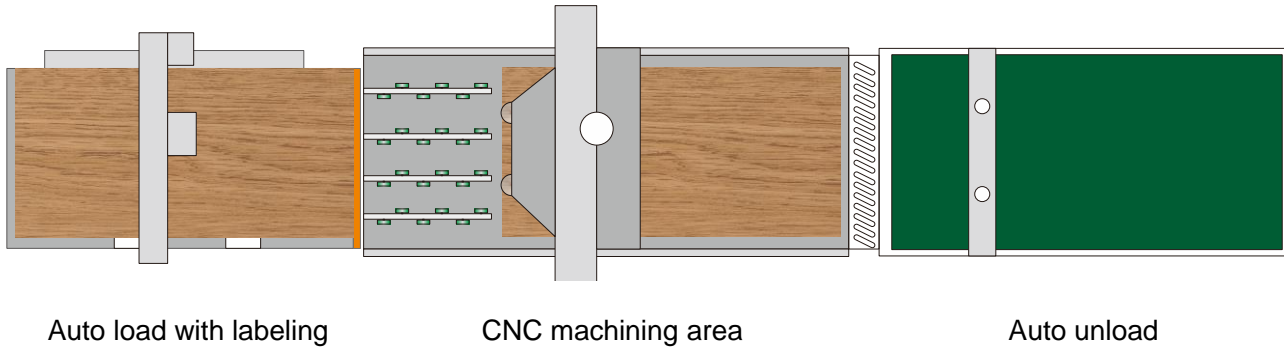


Description

NCG3021L with big working table is a CNC machine made flexibly easy for cutting and boring, it is usable for customized orders by furniture companies. The machine has completed with auto loading, labeling, top side boring, grooving, cutting panel in line and shape, and unloading. This means the combination of automation, intelligence, and IT in production. Auto tool changer with 8 slots gives machine added speed of processing and helps to meet different production requirements so as to save labor force but without compromise in accuracy and efficiency.

Main parts

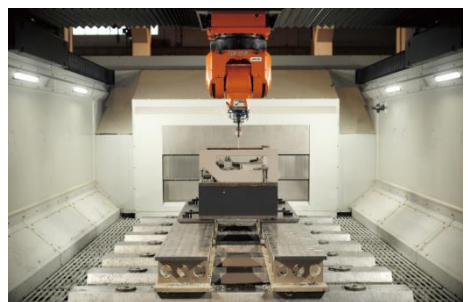
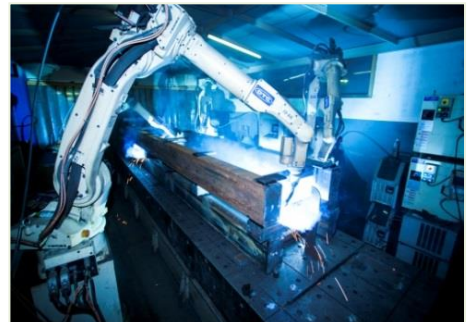
Fully automatic production including 3 parts: Auto load with labeling, CNC machining center and Auto unload.



Details

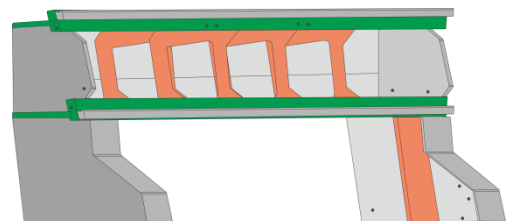
1. Machine body

- Heavy duty machine body is welded with square tube and laser-cut steel plates, then through processing of advanced CNC machine for metal work, hence enhance the stability and strength, reduce the vibration in the process;
- Some casting parts used on the machine guarantees long service life without deforming.



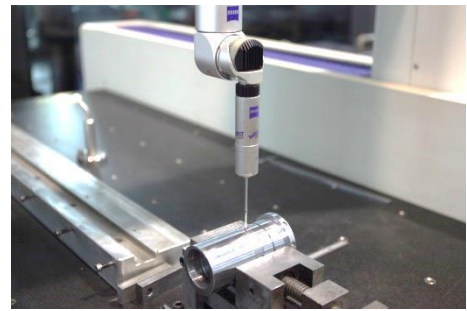
2. Gantry

- Compact support ribs inside gantry ensure the higher strength and stability, that means higher machining quality and longer service life;
- All the machine bodies and gantries are through stress relief before installation.



3. Quality control

- Advanced measuring equipment and strict QC system also help to make sure the final machine we offer to our customers are of high quality.



4. Professional assembly line

- Assembly is final and important step for better machine performance. Nanxing's professional assembly lines from machine body to small electrical components were by experienced technicians that guarantee machine standardization and performance.



5. Automatic loading

Hydraulic lift table

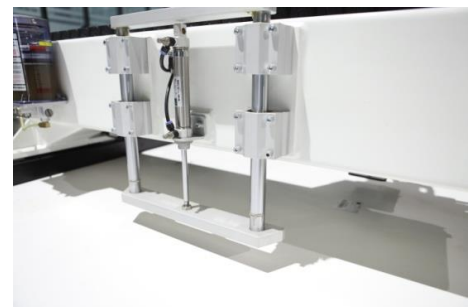
- 2 grooves on lift table not only reduce the contact surface between panel and table with less friction, but also give forklift max convenience to load panels;
- Stop at proper height to keep panels on the same level with machine working table. Capacity of 3,000 kg , stacking height up to 1200mm.



Tip: It is necessary to dig a pit for the lift table or raise the machine and unloading device to achieve max. loading capacity of lift table.

Pusher

- Automatic pushing panel after labeling, coordinate well with vacuum cups to ensure the panel move to proper processing area.



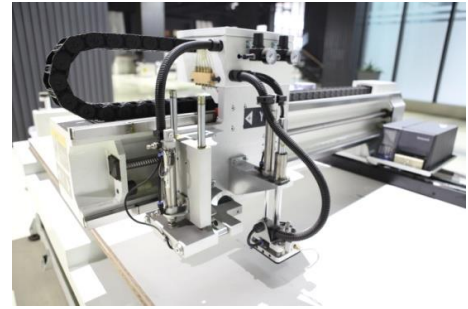
Vacuum cups

- Two vacuum cups equipped with dust collection for better performance.



6. Auto labeling

- Error-free and quick labeling; Movement of Y axis by ball screw, X axis by rack and pinion;
- Perfect time arrangement: auto labeling and nesting processing are carried out simultaneously;



- Air blowing device;



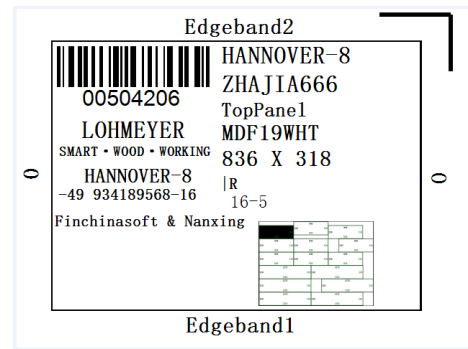
- Independent automatic lubrication.



Label

- The necessary work piece information including panel size, barcode, QR code, customer name, order info, edge banding info can be shown as request.

Tip: Additional furniture making software is necessary for labeling function, but not included in standard machine.



7. Working table

- One-piece pressure plate is easy to install or change. 3000*2100mm; 800mm is most suitable height for operation;
- The crisscrossed grooves on table to improve the vacuum sorption performance. Table has divided by sections and provided with sufficient vacuum automatically.



8. Vacuum pump

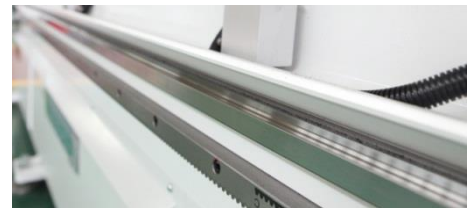
- 7.5kw air cooling vacuum pumps with suction flow rate 250m³/h, pressure 0.5 kg/cm² for high-performance sorption on the table.



9. Movement of each axis

X direction

- Long rack and pinion along X direction improve accurate movement of the gantry, partly reducing the possible vibration in the process.



Y and Z direction

- Ball screw with fine screw threads gives the machine added precision in Z direction.



Servo motor

- The accurate movement of each axis is ensured by high quality servo motors; X axis activated by two servo motors for stable processing and high accuracy.
- X axis: 1.3kw*2; Y axis: 1.3kw Z axis: 1.3kw
Max travelling speed: X/Y/Z: 80/80/20m/min



10. Automatic lubrication

- Grease main transmission components automatically so as to prevent machine components from aging thus reducing the maintenance work by operators.



11. Main Spindle + boring block

Powerful main spindle

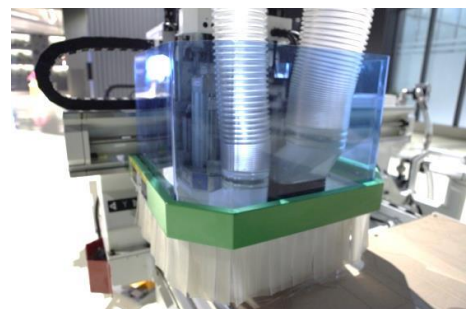
- 12kw Italian air cooling spindle: powerful, precise and stable, max rotating speed up to 24000rpm/min
- Coupler type HSK-63F making contact between tool holder and clamp closely, fix tightly, fast for ATC

Boring block

- 10 vertical drills, rotating speed up to 4,000 rpm
Rotating direction: clockwise, counter clockwise;
- Each drill controlled separately.
Diameter of drill shank: 10 mm;
Max. borehole diameter: 35 mm;
Center distance of drills: 32 mm;

Cover

- Processing unit is fully covered by dust cover of good appearance for better working condition.



12. Automatic tool changer with 8 slots

- The automatic servo tool change magazine with 8-slots, no need to change tool manually offers maximum operation convenience, saves labor. Coupler type: HSK-63F;

Tip: Standard with two tool couplers.



13. Side positioning cylinders and alignments

- There are 2 alignments on each side of X direction, and each alignment raised automatically by two side positioning cylinders. 8 cylinders, 4 alignments in total to fix panel in the process.



14. Auto unloading

- Unloading table also equipped with dust extraction reduces dust and chips further while unloading work pieces for better working condition;
- Optical-electronic sensor ensures the panels stop at exact position.



15. Tool setting gauge and locker

- The tool setting gauge gives the tool setting added speed and accuracy effectively.
- The tool locker makes change tools convenient.



16. Drag chain

- High-quality drag chain used to drag and protect electric wire and air tube during movement of each axis for longer service life.



17. Hand wheel

- Hand wheel makes commissioning more convenient.



18. Indicating light

- Operation indicating light, the operation status of the machine is available at a glance.



19. Dust collection

- Suction pipes are combined together for easy connecting to each suction part.
Outlet: $\Phi 200\text{ mm} \times 1$ $\Phi 125\text{ mm} \times 3$



20. Electric equipment

Computer

- IPC with Windows operating system;
DELL display;
USB port



Control system

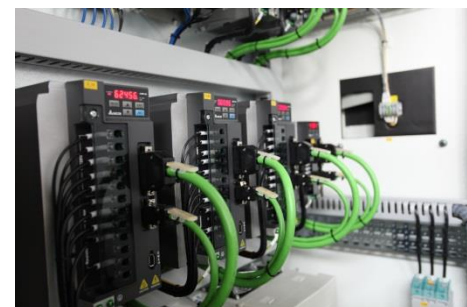
- SYNTEC control system provides stable performance, powerful functions and ease of use with friendly interface. (English and Chinese language are available)
- Combination of automation, Nanxing Smartech, and Nanxing Infotech in production; open port equipped to link with various international nesting software making processing much optimized, under controlled, well managed, design intended, and data networking included for easy operation.



Tip: Optimizing software is not included.

Independent control cabinet

- Electric components are of high quality and famous brand.



Technical Data

Control system	SYNTEC	
Working range	X-axis: 3,000 mm	Y-axis: 2,100 mm
	Z-axis: 30 mm	
Working table	Size: 3,000x2,100 mm	Height: 800mm
Max. traveling speed	X-axis: 80 m/min	Y-axis: 80 m/min
	Z-axis: 20 m/min	
Main spindle	Quantity: 1	
	Power: 12 kW	Rotating speed: 24,000 rpm
	Tool holder type: HSK-63F	Collet type: ER32
ATC	Automatic tool changer with 8 slots	Servo control
Drilling unit	Power: 1.7 kW	Rotating speed: 4,000rpm
	Vertical drills: 10	Max. drill diameter: $\Phi 35$ mm
Vacuum pump	Quantity: 1	
	Power: 7.5 kW	Suction flow rate: 250 m ³ /h
Dust extraction	Outlet: $\Phi 200$ mm $\Phi 125$ mm*3	Speed required: 28 m/s
Air supply	Air pressure required: 6~7 kg/cm ²	
Power supply	Voltage: 380V, 3-phase	Frequency: 50 Hz
Total power	44 kW	
Floor space	LxWxH: 12,500x4,500x2,500 mm	
Net weight	7,000 kg	

**Thanks for the attention!*

The company continuous to improve the product specifications and design details, the specifications are subject to change without notice. 80914