CNC Nesting Machine with AL&UL NCG2812LE + V10

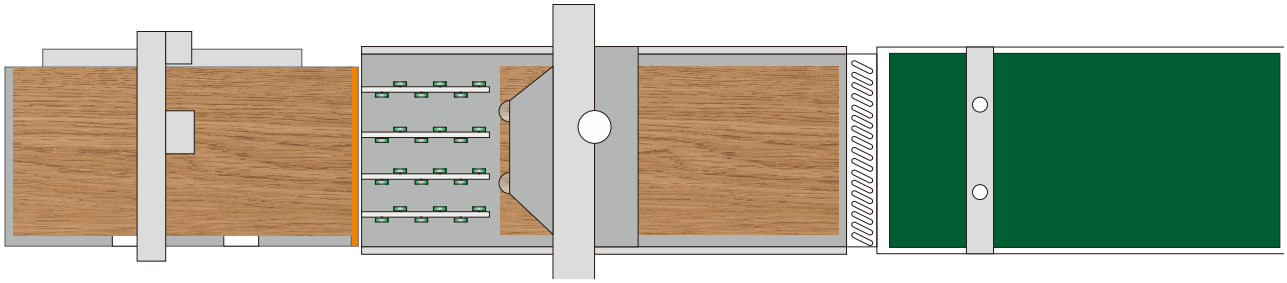


Description

NCG2812LE is a CNC machine made flexibly easy for sizing and drilling, it is usable for 4x8’ and 4x9’ panel. The machine has completed with labeling, infeed, drilling, grooving, cutting panel functions in line and shape, and unloading. That means the combination of automation, intelligence, and IT in production. Open port is equipped to link with furniture software in following the preset data for processing work. With this type of processing work can save labor force but without compromise in accuracy and efficiency.

Main parts

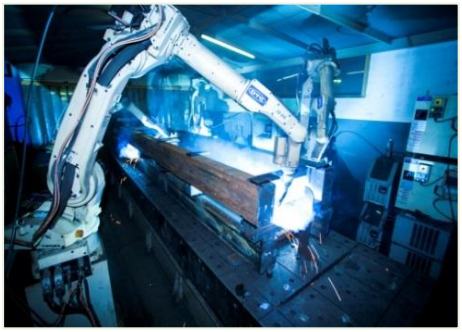
Fully automatic production including 3 parts: Auto load with labeling, CNC machining center and Auto unload.



Details

1. Machine body

- Heavy duty bed structure machine body is welded with square tube and laser-cut steel plates by professional robots welding line, even welding marks and distance ensures high stability of body.



- Vibration and aging to release internal strength.



- Parts and machine body are processed by advanced CNC machine for metal work, just one positioning to finish most processing work, hence guarantees processing accuracy and reduces the vibration in the process.



2. Quality control

- Advanced measuring equipment and strict QC system make sure the machines and parts are checked and certificated by very high standard.



- All the machines are delivered with Quality Certificate signed by QC specialist.



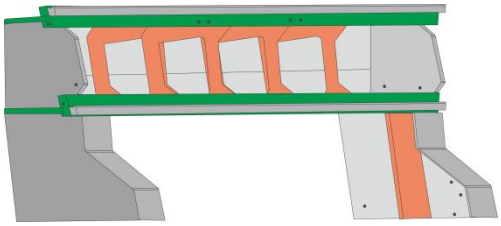
3. Professional assembly line

- Nanxing follow the SOP and set up the professional assembly lines. All the assembling is worked out by technicians with full experience that guarantee machine standardization and performance.



4. Gantry frame

- Gantry frame, reliable for high-speed milling work and ensure high precision in the long term.
- 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.



5. Working table

- One-piece pressure plate is easy to install or change. 2800*1220mm to work with 4x8’ and 4x9’.
- Working table is divided into 7 sections, which is easy to control by valve based on processing requirement.
- The crisscrossed grooves on top side ensures uniform distribution vacuum of absorption zone. Table thickness is 32mm.





6. 1pc vacuum pump



- 1pcs 7.5kw oil cooling vacuum pumps with suction flow rate 250m³/h, pressure 0.5 kg/cm² for high-performance sorption on the table.

7. Automatic loading





Hydraulic lift table

- Lifting table with safety curtain on all 4 sides to stop falling when someone's hand is there.
- Minimum height of lifting table is 350 mm which allows 600mm height of panels with no need of digging pit.

Pre-positioning vacuum cup

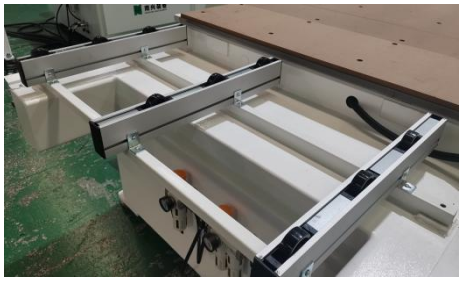
Vacuum cup to pre-positioning the board to standby position, save waiting time.



Vacuum infeed cup and roller bracket

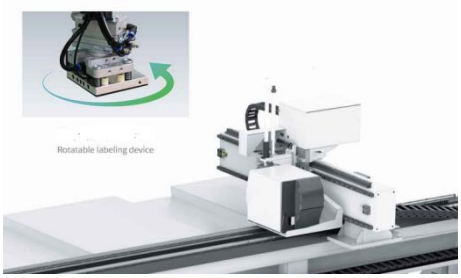
- Loading vacuum cups and roller brackets, easy to link to infeed & outfeed section.





8. Rotatable labeling

- Movement of X and Y axis by rack and pinion makes labeling accurate.
- Label printer moves with sticking device. And printer is Honeywell brand, stable and fast.
- Perfect time arrangement: auto labeling and nesting processing work simultaneously saves waiting time.



- Air blowing device to remove possible dust on panel surface.



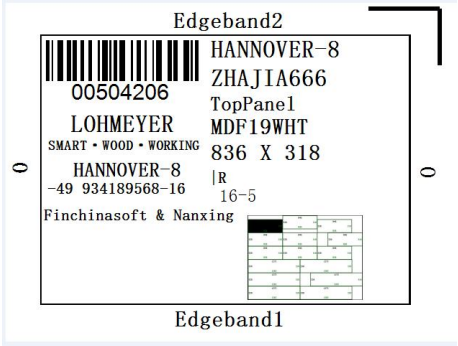
- Independent automatic electricity controlled greasing device.



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.

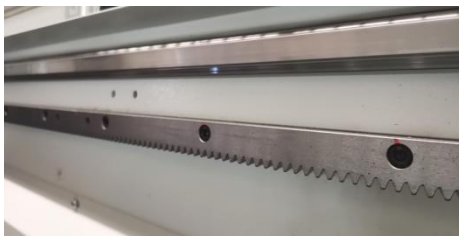


9. Movement of each axis



X and Y direction

- Transmitted by high-stiffness inclined rack and pinion with large contact area, higher accuracy.
- 25mm guiding rail along X direction to ensure accurate and stable movement under high speed.



Z direction

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



Servo Motor

- The accurate movement of each axis is ensured by the high-power servo motors.
  Y axis: 1.3kw*2; X axis: 1.3kw Z axis: 1.3kw
- Max. travelling speed: X/Y/Z: 100/100/20m/min



10. Automatic greasing

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



11. Side positioning cylinders& Positioning cups





- 2 alignments on each side of Y direction, and each alignment raised automatically via two side positioning cylinders.

- There are 2 vacumm cups around main spindle to move panel in proper working area before processing for positioning, friendly for different panel size.

12. 12kw main Spindle + 10 drills drilling block



- 12kw air cooling spindle: powerful, max. rotating speed up to 24000rpm/min, can work with 50mm thick panel.
- Coupler type ISO30 making contact between tool holder and clamp closely, fix tightly, fast for ATC.

- 10 Vertical drilling block, rotating speed: 4000rpm/min
- With cover





13. Automatic Line tool changer with 12 slots

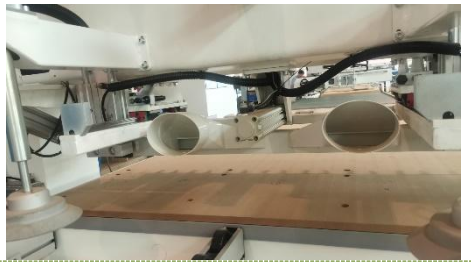


- The automatic line tool change magazine with 12-slots suitable for complicated process requirements, no need to change tool manually, offers maximum operation convenience and shorter distance between main spindle and tool position, changing tool is faster.
- Type ISO30 ER32

Tip: Standard with two tool couplers.

14. Unloading pusher

- Unloading pusher with dust collection to clear the scraps left on the working table while unloading work pieces, that offers most convenience for following processing work.



15. Rear positioning cylinders and dust collector



16. Auto unloading

- Unloading table also equipped with dust extraction reduces dust and chips further while unloading work pieces for better working condition.



17. Start/Stop Button on gantry

- Additional buttons on side of gantry, easier operation for flip over panel in process for double side process.



18. Tank cable chain

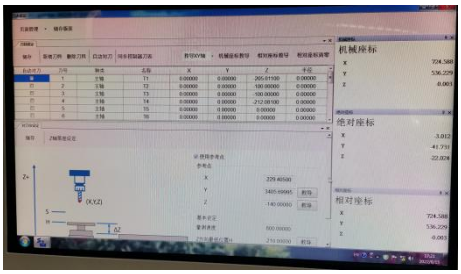
- High-quality chain in world famous brand, very wear proof and of longer service life, electric cables and tube can be protected well during high-speed movement.



19. Tool setting gauge and locker




- Automatic tool setting is precise and fast which ensures machine continuous working, no need of changing tool by hand, save time.



- Tool locker is used to put tool for the time being.

20. Hand wheel and foot switch



- Hand wheel and foot switch make commissioning more convenient.

21. Electric equipment

Computer



- IPC with Windows operating system;
  DELL display;

  USB port， easy for remote assistance.

Independent control cabinet

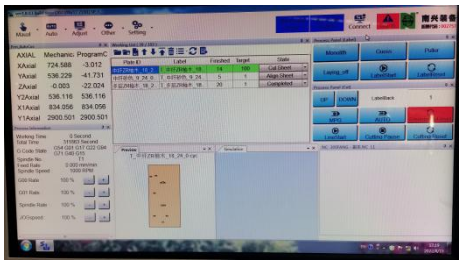


- Electric components are of high quality and famous brand. Equipped with air conditioner to control the operating temperature for highest performance.
- Door with sealing strip avoids dust and chips.

22. Control System

- Powerful SYNTEC control system provides stable performance, powerful functions and ease of use with friendly interface. Processing path is available at a glance (English and Chinese language are available)
- 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.

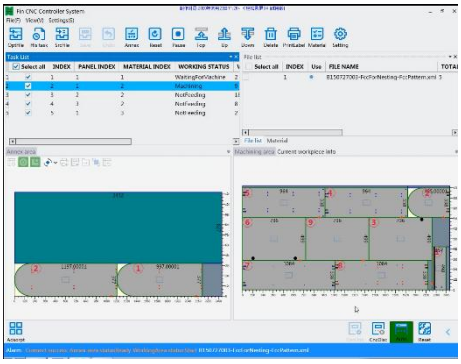




Option

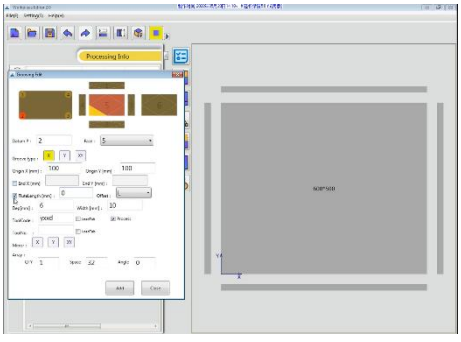
23. Optimizing Software

- Machine is standard with FCC optimizing software. Combination of automation, Nanxing Smartech, and Nanxing Infotech in production;



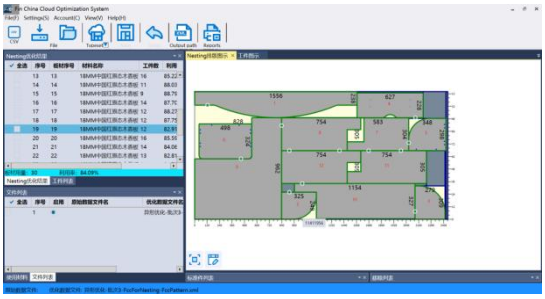
24. Workpiece editor software

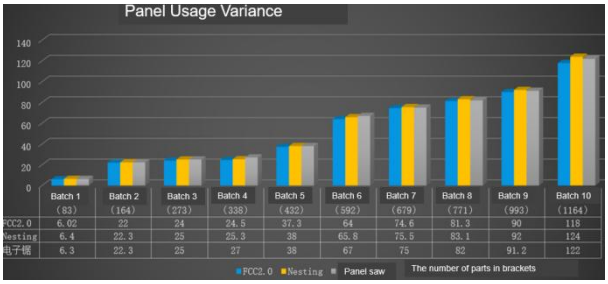
- Office version editor software for basic design for single workpiece, linkable to FCC to generate layout, machine is optional even without furniture design software.



3. **Online Optimizing Software (one year free of charge)**

- A typesetting optimization software based on cloud computing, select best typesetting result through 30 times computing on cloud server with higher optimizing rate which saves much material in the long term. Also possible for free-shaped parts typesetting, effectively improving the utilization rate of panels.
- Linkable to MPR/BPP+CSV





25. Pressure Roller



26. FCC

27. 2no. Standard Tool Holder

Stand-alone



Technical Data

Control system	SYNTEC	
Working range	X-axis: 2,800 mm Z-axis: 50 mm	Y-axis: 1,220 mm
Working table	Size: 2,800×1,220 mm	Height: 950mm
Max. traveling speed	X-axis: 100 m/min Z-axis: 20 m/min	Y-axis: 100 m/min
Main spindle	Quantity: 1 Power:12 kW Tool holder type: ISO30	Rotating speed: 24,000 rpm
ATC	Line tool changer with 12 slots	Servo control
Vacuum pump	Quantity: 1 Power: 7.5 kW	Suction flow rate: 250 m^3/h
Dust extraction	Outlet: Φ150 mm*1 Φ125mm*3	Speed required: 28 m/s
Air supply	Air pressure required: 6~7 kg/cm^2	
Power supply	Voltage: 415V, 3-phase	Frequency: 50 Hz
Total power	27.31 kW	
Floor space	L×W×H: 11000×2460×2500 mm	
Net weight	4,600 kg	

**Thanks for the attention!*

The company continuous to improve the product specifications and design details, the specifications are subject to change without notice. 221024