



AR MACHINERY
Woodworking Technology



NESTING CNC PRONEST 2137-UP-AR



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Company overview

PMSK

is one leading manufacturing and exporting company of wood working machine in China. We are committed to provide one stop service to our customers all over the world. Our company was established in 2012 with the manufacturing centers in Foshan, covering about 75000 square meters.

Our Foshan manufacturing center which is specialized in high quality and heavy duty CNC machines.

Our Mission & Target

Let Chinese woodworking machinery serve the whole world
Create maximum value for customer
To give the best support for our client.

Quality Control

Highly skilled and educated employees manufacture products in a modern facility, which incorporates

C.A.D.

(Computer Aided Design),

C.A.M.

(Computer Aided Manufacturing)

and

C.N.C.

(Computer Numeric Controlled)

manufacturing techniques

and our products are strict

produced according to **CE & EAC**

requirements.



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Intelligent production line workshop

The entire production link draws on the world's advanced automotive assembly line design concepts, independently developed and designed an advanced CNC machinery assembly line, which greatly improved the mechanization, intelligence, and information level of CNC equipment manufacturing, and the main technology reached the international advanced level of similar products. The production cycle of CNC equipment was reduced from one month to two hours.



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Our machines have successfully obtained the CE certification, confirming its compliance with European Union safety and quality standards.

This certification is a testament to our commitment to delivering high-quality, safe, and reliable machinery.

The CE mark ensures that our machine meets the necessary legal requirements, providing you with confidence in its performance and safety features.

CE



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1. Robot welding system



PMSK CNC

Introduced a Japanese robot welding system, and the bed and beam of the CNC machine are all welded by robots.

2. Trolley type resistance furnace

Trolley-type resistance furnace:

Mainly used to eliminate welding stress on the bed and beam of CNC equipment. At present, we are the only manufacturer in this industry with high-standard heat treatment technology and equipment. The whole machine of the trolley-type resistance furnace weighs about 100 tons. With automatic temperature control function, 8 sets of bed and gantry heat treatment can be completed at a time. Each heat treatment takes more than 10 hours and the power consumption reaches 4000 degrees.

Heat treatment process:

According to the specification, model and welding equivalent of the plate (or profile) used for the bed and beam, a strict stress relief annealing process is formulated. Take the bed and beam of EA48 as an example: place the welded bed and beam in the heat treatment furnace. Quickly heat up to 300°C and hold for 0.5h, then increase to 600°C at a heating rate of 150°C per hour, hold for 1.5h, and cool down the furnace to below 300°C.





3. Large-scale automatic shot blasting equipment



Shot blasting is mainly used in the anti-corrosion and rust removal of the fuselage. It uses high-sp moving projectiles (60-110m/s) to continuously impact the surface of the strength. work piece, so as to remove surface oxides and other impurities and improve the appearance quality.

The shot blasting equipment introduced by our company has an anti-corrosion and rust removal level of SA2.5 or higher.



4. Multiple large CNC gantry milling



The whole machine body adopts large gantry milling and finishing milling to ensure the accuracy of the equipment.





5. Plastic spray line

The plastic spraying process is to use the principle of electrostatic adsorption to spray the powder coating on the surface of the work piece; then it is cured at a high temperature to form the final protective coating; it is firmly attached to the surface of the work piece

(Note: heated to a predetermined temperature generally 185 degrees, and heat preservation corresponding 15 minutes).



6. Equipment assembly line

We have used the design concept of the world's advanced automobile assembly line for reference and independently developed and designed the first CNC equipment production assembly line in the industry. Four product assembly lines are arranged throughout the workshop. The production capacity is 2 hours off the assembly line for a finished machine, with a monthly output of more than 500 units.





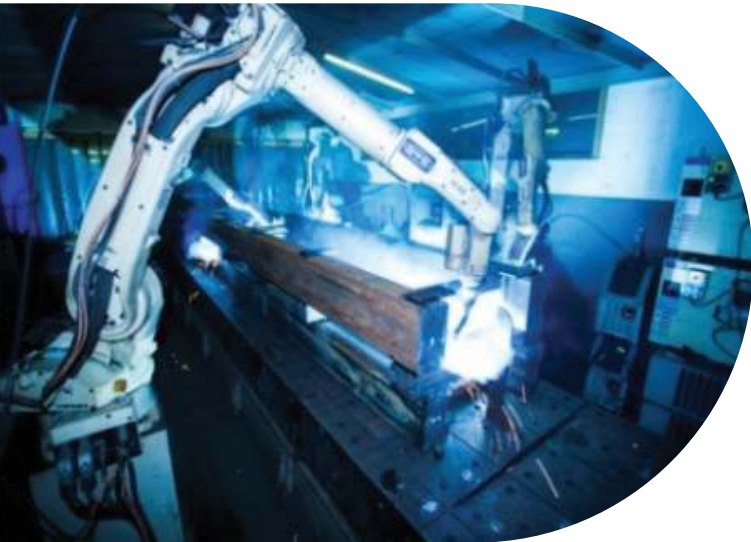
Main technical data

| | |
|--|---|
| Max Panel Length | 3700mm |
| Max Panel Width | 2100mm |
| Z Working Area | 250mm |
| Main Spindle | HSD 9kw Air Cooling |
| Drilling Head | PROTEAN 9 Vertical |
| Automatic Tool Change | LINEAR 12 Positions |
| Presetter (automatic tool measurement) | Enabled |
| Vacuum Pump | 250m ³ /h 5.5 KW Vanes Vacuum Pump *2 |
| Maximum Working Speed While Nesting | 35m/min |
| Automatic Vacuum Zone Control Control | 7 Different Zone Controlled From Screen Syntec New Version (21inch Screen+ Simulation Enabled+ Wireless Keyboard And Mouse+ Network Connection To Office Enabled) |
| Drive System | Yaskawa Servo Mechatrolink 850w |
| Electrical Components | Siemens + Schneider |
| Worktable | Special Compact Laminated 2 Layers (HPL not PVC) |
| Jig Fixing Possibility | Enabled |
| Rack | Imported From Germany |
| Control Program Support | ARTCAM, CABINET VISION, POLYBOARD, KNEST, ALPHACAM, MASTERCAM, WOODWOP... |
| Automatic Labeling System | ZEBRA Automatic Printer |
| Worklist + Opticut Integration | Enabled |
| Automatic Unloader | 1 Set |
| Net Weight | 3800 Kg |



Description

PNEST CNC 2137-AR is a CNC machine made flexibly easy for cutting and boring, it is usable for customized orders by furniture companies. The machine has completed top side boring, grooving, cutting panel in line and shape. Open port is equipped to link with furniture software in following the preset data for processing work. With professional Nesting software(option) makes the processing much optimized, under controlled, well managed, design intended, and IT included for easy operation.

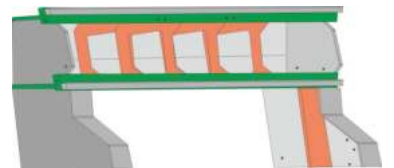


1. Machine body



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. AR professional assembly lines from machine body to small electrical components were by experienced technicians that guarantee machine standardization and performance.

5. Working table

Pieces pressure plate are easy to install or change. 3700*2100mm; The crisscrossed grooves on table to improve the vacuum sorption performance. Table has divided by sections and provided with sufficient vacuum automatically.



6. Vacuum pump

2* 5.5kw air cooling vacuum pumps with suction flow rate 250m³/h, pressure 0.5 kg/cm² for high- performance sorption on the table.



X AND Y DIRECTION

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

Z direction

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

Servo motor DELTA

- 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: 750w*2; Y axis: 750w Z axis: 850
- Max travelling speed: X/Y/Z: 80/50/20m/min



7. Automatic lubrication

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





9. Main Spindle

Powerful main spindle

- 9kw HQD air cooling spindle: powerful, precise and stable, max rotating speed up to
- 24000rpm/min
- Coupler type ISO making contact between tool holder and clamp closely, fix tightly, fast for ATC



Boring block

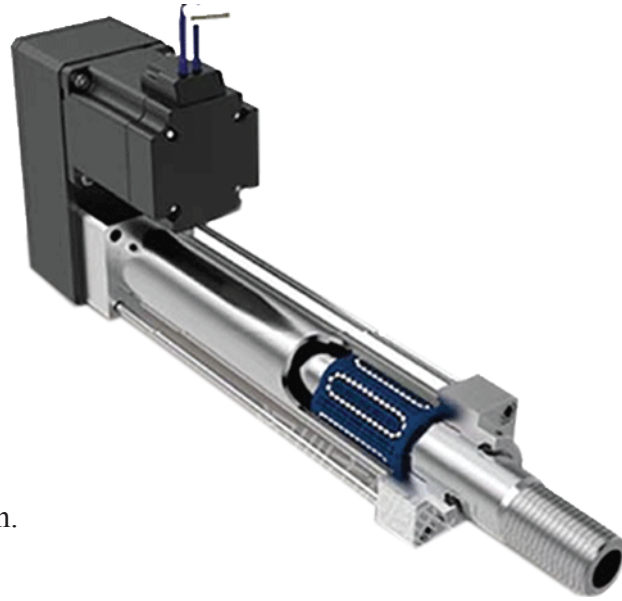
- CC
9 vertical drills rotating speed up to 4,000 rpm
- Each drill controlled separately. Diameter of drill shank: 10 mm; Max. borehole diameter: 35 mm; Center distance of drills: 32 mm
A A





9. Cover

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



10. Linear Automatic tool changer with 8 slots

Air cooling spindle: high precision.
Coupler type: ISO



11. Tool setting gauge

The tool setting gauge gives the tool setting added speed and accuracy effectively.



12. 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.

13. Hand wheel

Hand wheel makes commissioning more convenient.



14. Indicating light

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



15. Electric equipment

Control system

SYNTEC control system 21 inch provides stable performance, powerful functions and ease of use with friendly interface. (English and Chinese language are available), it could be connected by network to internet and office pc. Wireless keyboard and mouse



16. Unloader

Conveyor belt unloader with sensor for panel detection, connected automatically with CNC unloader system.

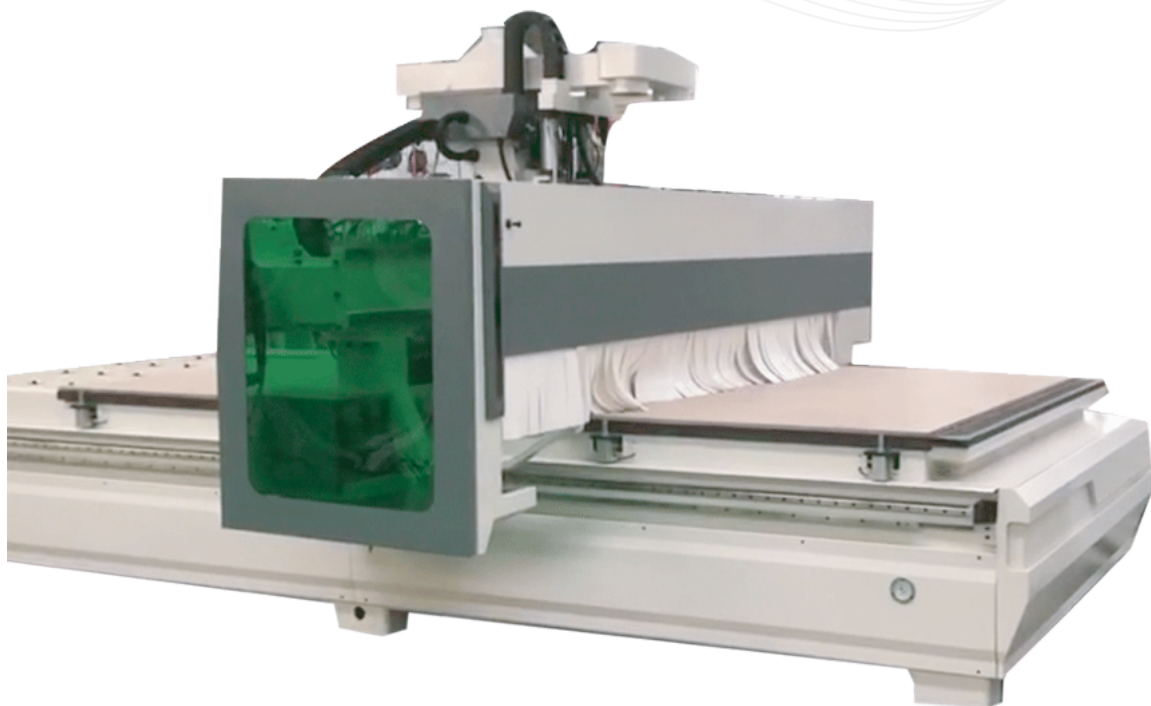




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VERY IMPORTANT OPTIONS ADDED

1-PRINTER to print label on panel automatically; with no need to add loading table.



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