CNC 6-Sided Drilling Machine ND512TS

(1 drilling block+grooving saw blade+5.5kw ATC4 main spindle)

Description

- Multi-functional CNC drilling machine is able to drill from 6 sides.
- Independent top grooving, 5.5kw main spindle of 4-slot tool changing magzine, and 1 drilling block on top, one drilling block and one main spindle on bottom meet different process requests and gives batch-size-one production max flexibility;
- Software is open port, support most formats in market.
- Compact design, save space

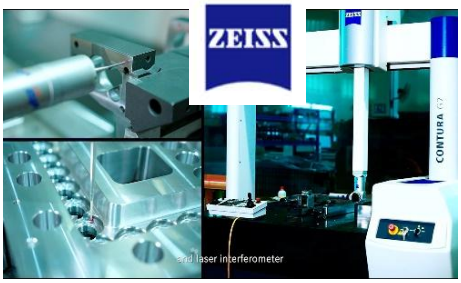
Details

1. Machine body

- The machine adopts an integrated heavy-duty frame structure body, designed with finite element analysis to ensure operational precision.
- The entire bed undergoes stress-relief annealing, vibration aging, and shot peening treatment to enhance stability.
- Constructed with rectangular square tubes and a monolithic frame, the machine is integrally formed in a single process using Japan's SNK machine tools."

2. 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;

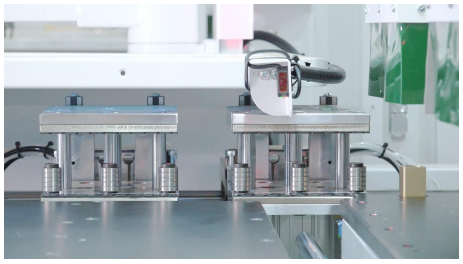


- All the machines are delivered with Quality Certificate signed by QC specialist.

3. Professional assembly line

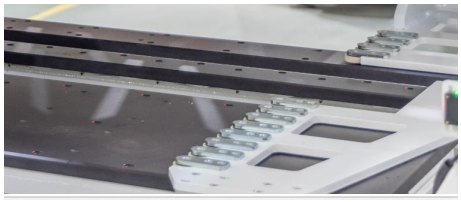
- Assembly is final and important step for better machine performance. Nanxing's professional assembly lines from machine body to small electrical components were by experienced technicians that guarantee machine standardization and performance.

4. Long clamp beam & fast clamps



- The design of 3.3m longer high-rigidity clamp beam on two sides ensure stable and fast clamp moving with least vibration, and reduces the frequency of switching clamp during processing, thus higher efficiency.
- Clamp finger is 5-65mm open&closing range; working range 3.2m;
- The movement of clamps is controlled by servo and along inclined rack&pinion for accuracy in process;
- High quality cable chain

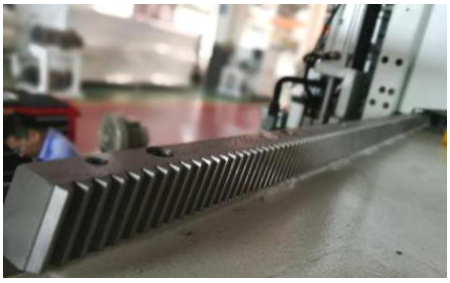
5. Positioning



Side aligner

- Dual clampers cooperate well with auto side alignment to guarantee precision and stability in panel processing.

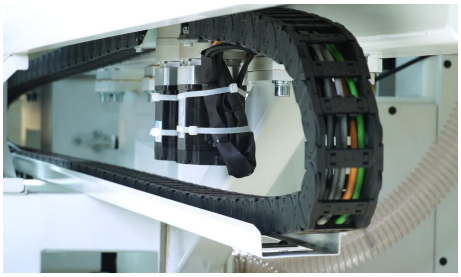
6. Accurate movement of each axis



Transmission mode

- X&Y axis by highly precise rack and pinion,
- Z axis by ball screw rod;

Servo motor

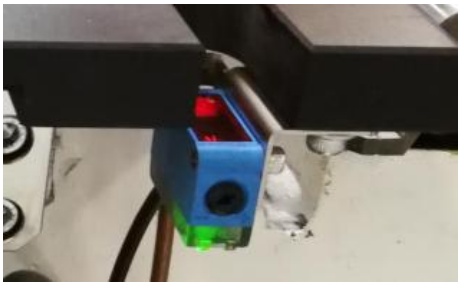


- The accurate movement of each axis is ensured by the high quality servo motors.
- X direction:0.75KW（2pcs）
- Y direction:0.85KW（1pc）.1.3KW（1pc）
- Z direction:0.85KW（2pcs）
- V2 axis（pusher :0.4KW（1pc）
- Max travelling speed: X/U/Y/Z/V:135/135/75/30/30m/min

7. Auto greasing

- Linear guiding rail and bearings can be greased automatically by electrically controlled greasing pump, save maintaining job.

8. Board size detector



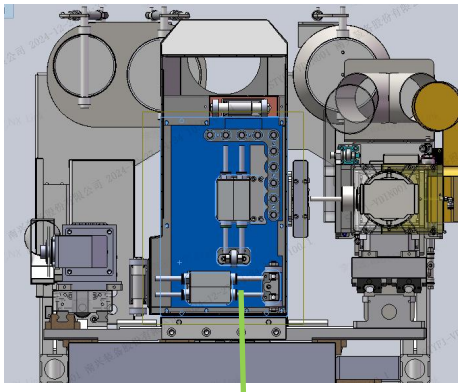
X direction board length detect

- There would be alarm when lengthwise detector detects length is not correct to ensure operator puts the right board.

Board width detect&offset

- Configured on drilling block to detect the board width and compensate the board width errors, so as to avoid the hole position error caused by different benchmarks. Accuracy is up to 0.02mm.

9. Processing units



Top processing unit

1 Top drilling block

- Vertical drills: 10; 1.7kw
  Horizontal drills: 2+2 in X direction; 2+2 in Y direction.
  5000rmp rotating speed, hole edge is smoother, friendly for hinge hole.
  Max drill bits diameter 35mm,
  drill bits spacing 32mm,
  drill head shank diameter 10mm
  Drill bits length 70mm

One 5.5kw main spindle

- **Type:**ER35, 5.5kw,
- Rotating speed:18000 rpm (4000rpm when use aggregate)
- 2-piece independent presser for better dust performance;

Independent grooving saw

- Motor:1.7KW*1
- Saw blade size:Φ100*Φ22*δ4
- Processed in X direction.Processing range:50-1000mm,the panel width cannot be less than 50mm.
- Processing depth: within 12mm
- The groove width:4-8mm,when the groove width is 4mm,it can be done in one time, if the groove width is greater than 4mm,need to mill 2 times.

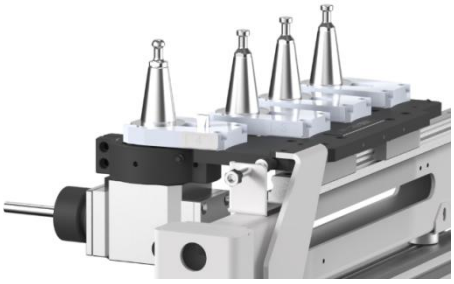
Bottom processing unit

- 3.5kw main spindle ER25+ one boring block 1.68kw with 9 vertical drills 18000rpm
- Bracket rises to support boards when do top processing, prevent accuracy issue caused by board deform;
- Col-linear vertical drills of top and bottom drilling blocks, faster to drill through holes.

10. Tool measuring gauge

- Without need of setting tool tip by manual, by using tool setting gauge, main spindle can change tool automatically;

11. 4 slots tool changing magzine



- Tool Magazine Type: 4-tool magazine, linear arrangement
- Tool Holder Model: ISO30
- Collet Specification: ER32
- Number of Tools (pcs): 4
- 1. Crescent Clamp Tool: (12.7*9.8*7*20). Lamello groove on the front (top) side.
- 2. Alloy Saw Blade: (D63x3.0). Grooving on the side (3-side grooving, excluding the gripper side).
- 3. Straight Flute Milling Cutter, grooving on the front side.
- 4. One direction aggregate, grooving side slots for top-and-bottom hinge mortises and blind slots of the workpiece. (aggregate is option)

12. Machining Workpiece Size

Machining size (Drilling & Grooving on Top/Bottom):

- Workpiece Thickness: 10-60mm
- Workpiece Width: 30mm (40mm for grooving) - 1200mm
- Workpiece Length: 70-2800mm

Machining size (Milling/Profiling):

- Workpiece Thickness: 10-60mm
- Workpiece Width: 65-1200mm
- Workpiece Length: 250-2800mm

13. Stack processing

- Support stacking processing if hole position is mirror
- Mirror grooving;

14. Invisible hardware

- Machine is configured with aggregate and tools to process Lamello groove and some invisible hardware processing.

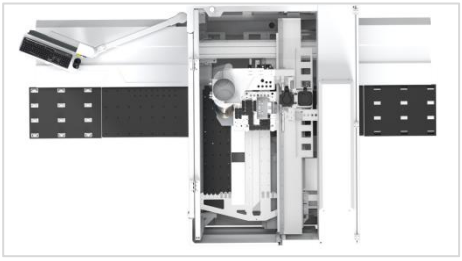
Invisible hardware

15. Side Grooving

- Side grooving by adding an saw blade head, suitable for light trough

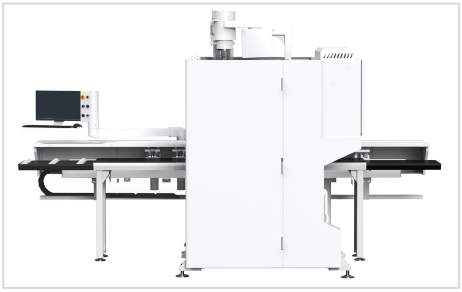
16. Infeed air float table

- Table Style: Front-and-rear fixed type
- Table Material: HPL (Phenolic Resin)
- Main Table Dimensions: 1613 × 615 mm
- Working Height: 960 mm
- Air Floatation Table Blower: 1.1 kW
- Workpiece Positioning Method: Each gripper is equipped with 3 sets of positioning wheels, combined with the front table's positioning cylinder
- Number and Location of Positioning Cylinders: 1 (located on the front worktable)



17. Feed-out

- Table Style: Front-and-rear fixed type
- Table Material: HPL (Phenolic Resin)
- Main Table Dimensions: 1613 × 615 mm
- Working Height: 960 mm
- Air Floatation Table Blower: 1.1 kW



18. Dust collection port

- Qty 3
- Φ200mm×2（top）、Φ125mm（bottom）
- Air speed：≥28m/min

19. Cable chain

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

20. Hand controller

- Hand controller makes commissioning more convenient.

21. Control system

- SYNTEC CNC control system and Operation Software, reliable and the process efficiency is 20%-25% faster

22. Industrial computer

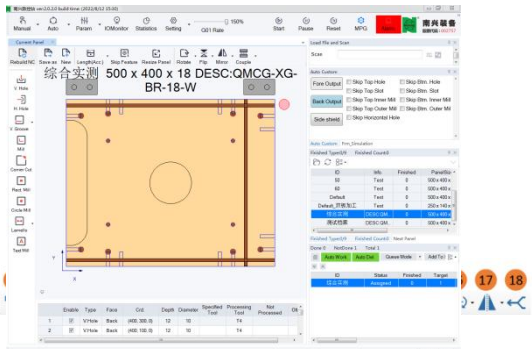
- Windows 10 operating system.
- All-in-one industrial computer

23. Excellent electrical components

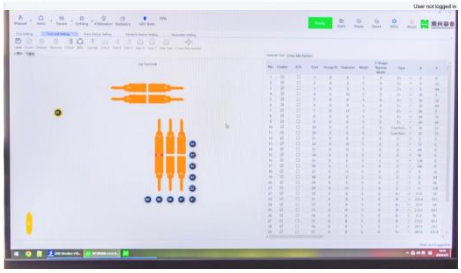
- Electrical parts and components are in reliable brand, standard and clean wiring connection make machine reliability and stability.

24. User-friendly operation

- Control interface is modern and friendly,
- Manual programming interface is easy to operate, functions are available at a glance like horizontal hole, vertical hole, grooving, flip, mirror, rotate etc.

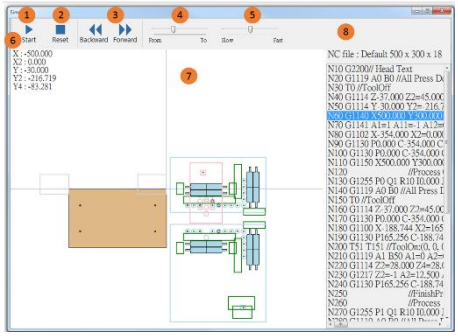


- Tool management
- Easy to set, and tool life is available at a glance



- Simulation function

9.6 Drill Machine PC CAM - Auto Mode - Simulation

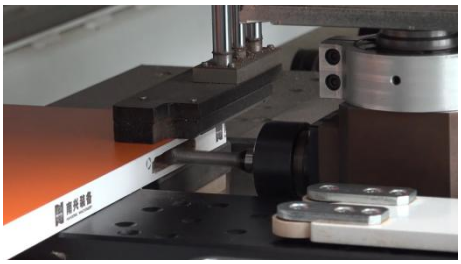


25. Data interface interaction

- The equipment can be connected to the user's factory network.
- All machining data can be collected.
- Compatible with various furniture design software.
- Supports multiple file formats, including MPR, DXF, BAN, BPP, PDX; XML; XXL.
- Accurately and quickly generates machining paths.
- With bar-code scanner, Scan-and-machine in one step for seamless processing.

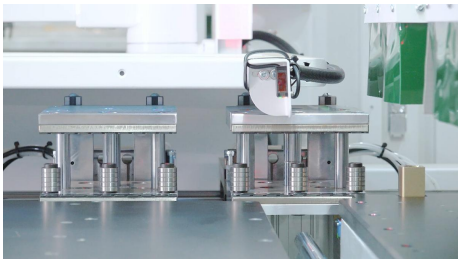
26. One-head aggregate for side routing

- By using optional fixed one-head aggregate, machine can process Pivot Hinge groove
- Board thickness: 10-60mm
  Board width: 65-1000mm
  Board length 250- 2800mm



27. Board thickness sensor

- Board thickness sensor to avoid the possible influence caused by putting wrong thick board



28. Hand wheel

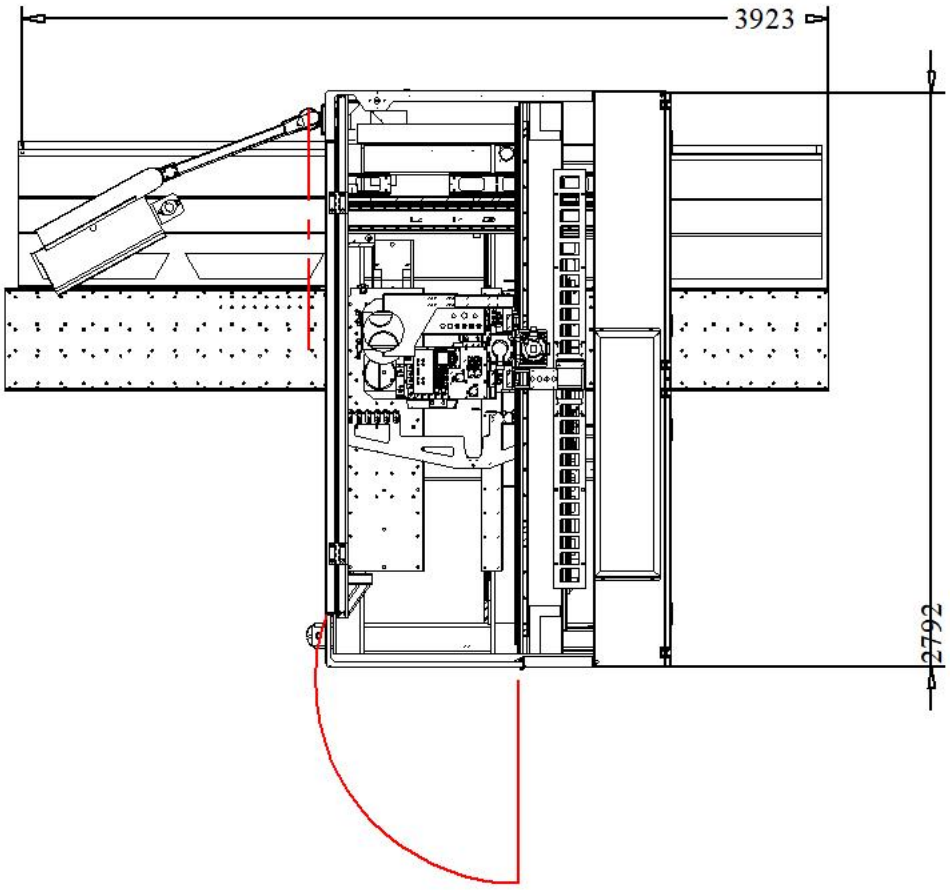
- (Wired/Wireless(depend on the model) remote control for easy test run)

29. #90901.00690 saw blade for lamello

30. Air jet for Gripper

31. Standard Toolbox for testing

Layout



Technical Data

Total power	21.07 KW	
Machine size	3962×3010×2320mm	
Power supply	415V/50Hz	
Air supply	0.6-0.7MPa	
Control system	Brand	SYNTEC
Panel size	Length	200-2,800mm
	Width	30-1,220mm
	Thickness	10-60mm
Max. traveling speed	（X /U）axis	135m/min
	Y axis	75m/min
	Z axis	30m/min
	V axis (push)	30m/min
Drilling blocks	Drilling block qty	Top 1; Bottom 1
	Vert. drills qty (top)	10
	Horiz. drills qty (top)	X: 2*2 + Y: 2*2
	Vert. drills qty (Bottom)	9
	Max drill diameter	Φ35mm
	Drill spacing	32mm
	Rotation speed	5000rpm
	Shank diameter	Φ10mm
	Drill length	70mm
Main spindle	Top	1*5.5kw ER32 ATC4 18000rpm
	Bottom	1*3.5kw er25 18000rpm
Saw blade	Power	1.7kw
	Size	Φ100*Φ22*δ4

	Processing range	50-1200mm
Dust collector	qty	3
	diameter	Top 200mm×2 Bottom 125mm×1
	speed	≥28m/min

**Thanks for the attention!*

The company continuous to improve the product specifications and design details, the specifications are subject to change without notice. 250511