

CNC 6-Side Drilling Machine ND612CTL



Invisible hardware

Description

- ND612CTL is an upgraded model capable of 6-sided drilling, front/back grooving, front milling, side milling, and side grooving. It also processes special features like wiring channels, Lamello joints, LogiClip connectors, and top/bottom hinge mortises which meet different process requests and gives batch-size-one production max flexibility;
- Machine is configured with one top and one bottom drilling blocks&5.5kw ATC8 main spindle, And 5.5kw 2-slot changable Crosshead spindle C axis. 2+8 tool changing magzine;
- Software is open port, support most formats in market.
- Standard with side outfeed conveyor table, selectable to outfeed from front and back.

PRICE LIST

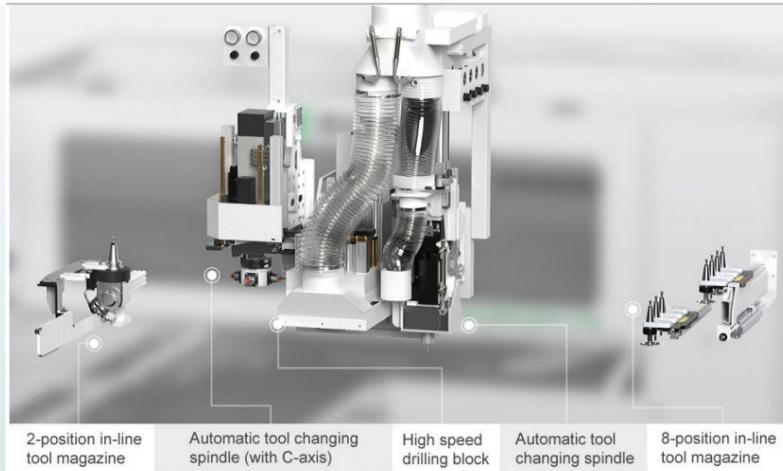
Nr. Crt	Article	Model	Quantity	Price (EUR)
1	Centru de găurire CNC pe 6 fețe	ND612CTL	1	included
2	Hand controller		1	included
3	Workpiece thickness detection		1	included
4	Independent mobile control console		1	included
5	Air conditioner for electric cabinet		1	included
6	Through feed		1	included
7	Automatic barcode scanner		1	included
8	Safety fence		1	included
9	CE standard package		1	included
Total				€ 79,372.80

OPTION

Nr. Crt	Article	Quantity	Price
1	Offcuts belt	1	€ 1,020.40
2	Air jet of clamp	1	€ 130.80

Prices are EXW (VAT NOT INCLUDED)

Overview



Processing size

Drilling&top bottom grooving: Thickness 10-60 Width: 30-1220mm Length: 200-2800mm	
Four head aggregate: Thickness 10-60 Width: Max 800mm Length: 200-2800mm	
Angle adjustable aggregate: Thickness 18-60 Width: Max 800mm Length: 200-2800mm	

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.



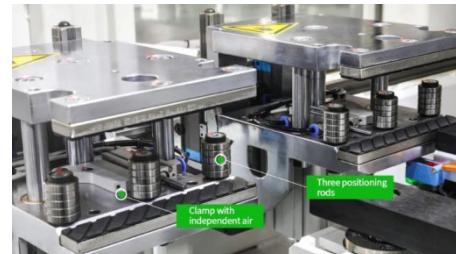
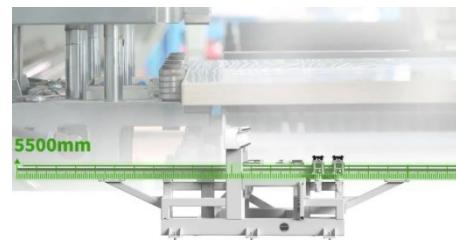
3. Professional assembly line

- 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.



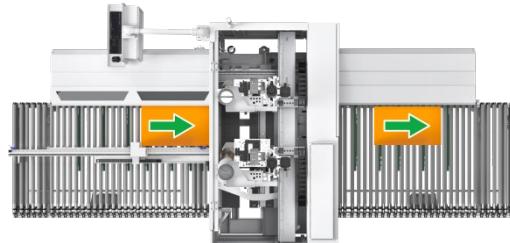
4. Long clamp beams & fast clamps

- The design of 5.5m longer high-rigidity clamp beams on two sides ensure stable and fast clamp moving with least vibration, and reduces the frequency of switching clamp during processing, thus higher efficiency.
- The movement of dual clamps on both sides is controlled by servo and along inclined rack&pinion for accuracy in process;
- The gripper is equipped with an independent air blowing function to effectively blow away dust on the board surface; three sets of built-in positioning rods ensure accurate positioning of narrow boards and more stable processing.



5. Auto Feed-in&out

- Feed in automatically
- The hairbrush and conveyor belt can offer very good protection to the surface.



6. Auto positioning

- Servo side aligner for both crosswise and lengthwise direction to feed board to grippers



7. Positioning

Side aligner

- Dual clampers cooperate well with auto side alignment to guarantee precision and stability in panel processing. Mini. 50mm in width



Air jet

- Air jet integrated on side aligner to remove the dust of table.



Support plates

- Top and bottom drilling blocks and main spindles have support plate to offer the board a support force when the other side is being processed to ensure accuracy in process.



8. 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
- Y direction:1.3KW
- Z/W/V direction:0.85KW
- V2 axis: pusher :0.4KW
- Max travelling speed:
X/U/Y/Z/V:135/135/75/30/30m/min



9. Auto greasing

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



10. Board length&width&thickness detect

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



11. Board thickness sensor

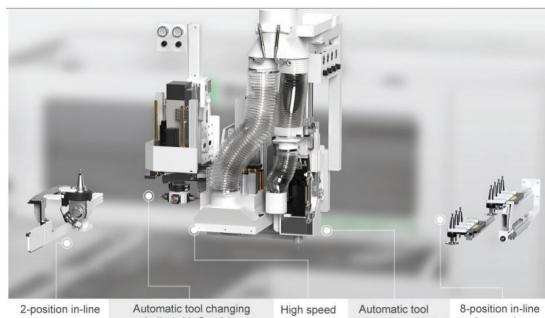
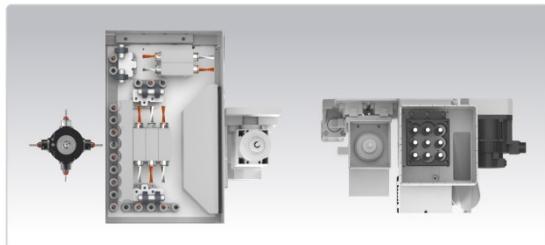
- Board thickness sensor to avoid the possible influence caused by putting wrong thick board



12. Processing units at a glance

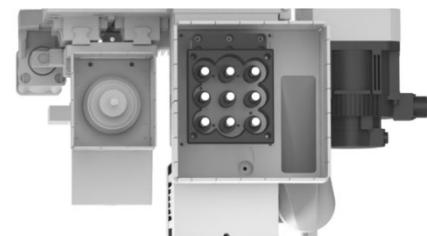
Top Processing unit:

- 5.5kw 2-slot ATC main spindle (with C axis)
- 1 set High speed drilling block
- 5.5kw 8-slot ATC main spindle



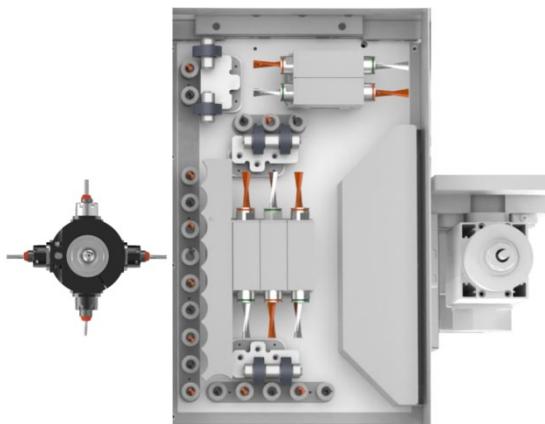
Bottom processing unit

- 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.



13. Top optimal Drilling block

- 1 high speed drilling block 2.2kw: Vertical drills: 19;
- Horizontal drills: 3*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
- More drills along lengthwise direction and optimized drill bits layout improve the drilling efficiency;
- Drilling block features with stabilized pressure pump ensures drilling depth;



14. 1*Main spindle with C axis & 2-slot ATC on top

- 5.5kw ATC2 main spindle with C axis, quick switch between cross aggregate and bevel milling aggregate; Machine is standard with 2 aggregates;



Cross-head aggregate

- 4 independent tools. It can rotate 360° along 4 directions and perform multi-directional side milling.
- ER25



Bevel milling aggregate

- Angle is adjustable from 0-90° and is equipped with saw blade tools for bevel Lamello processing.
- Tool speci, $\varphi 100.4 \times 7 \times 35$
- The Lamello saw blade and Lamello mortising router bit can be integrally assembled on the aggregate



15. 5.5kw ATC8 Top main spindle

- Tool type ER25, 5.5kw ATC spindle;
- ISO30, Rotating speed:18000 rpm
- Separate, segmentable motion;
- Replaces the previous generation's one-piece design for greater rationality.



16. 8 slots tool changing magazine

- Tool Holder: ISO30; ER32
- Crescent clamp tool (12.7×9.8×7×20) – Top-side Lamello grooving
- Carbide saw blade (D63×5.0) – 3-edge grooving (excluding gripper side)
- Lamello blade ($\varphi 100.4 \times 7 \times 22$) – 3-edge Lamello grooving (excluding gripper side)
- Straight flute milling cutter – Front-side grooving

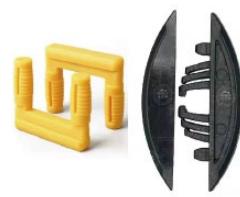


Tool measuring gauge

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

17. Invisible hardware

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



Invisible hardware

18. Min. processing part

- Drilling block design and software can do drilling for narrow parts
- Panel length: 250-2800mm
- Panel width 50-1220mm



19. Side Grooving

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



20. 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.



21. Hand controller

- Hand controller makes commissioning more convenient.



22. Control system

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



23. Industrial computer

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



24. Excellent electrical components

- Electrical parts and components are in reliable brand, standard and clean wiring connection make machine reliability and stability.
- Air conditioner on control cabinet to keep electrical components always in proper working condition



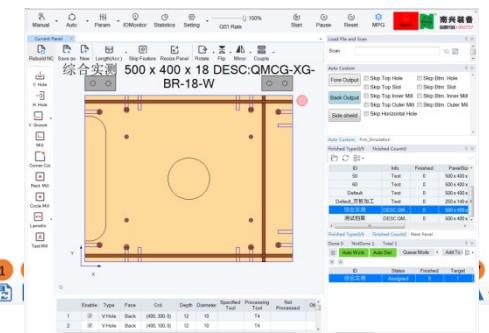
25. File format support.

- Open port to interface with furniture design software, support the file format: MPR, DXF, BAN, BPP, PDX; XML; XXL.

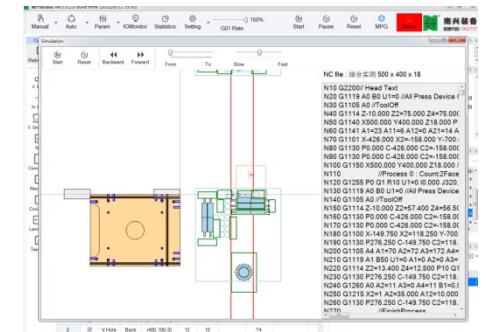
MPR DXF BAN BPP PDX XML XXL

26. User-friendly operation

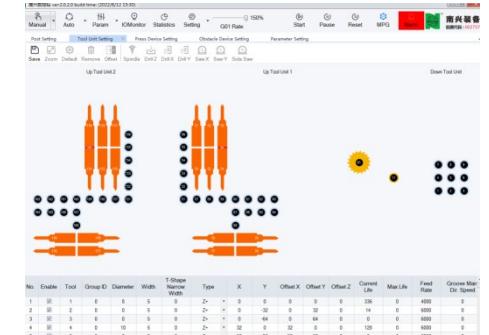
- Control interface is modern and friendly,
- Manual programming interface is easy to operate, functions are available at a glance like horizontal hole, vertical hole, grooving, flip, mirror, rotate etc.



- Simulation function



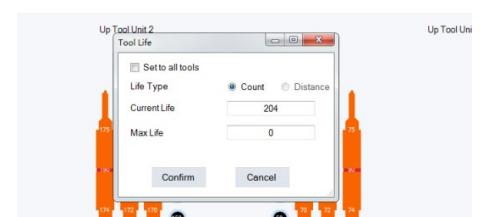
- Easy tools setting;



- Statistics function, production capacity is available at a glance



- Set tool life, software will remind when tool is time to change for smart tool management



Option**1. Dust conveyor belt**

- A powered belt on bottom of machine to feed dust and chips out of machine, easy to clean

**2. Overhead auto scanning (INCLUDE)**

- By using optional fixed aggregate, machine can process Pivot Hinge groove

**3. 3m working length**

- Optional 3.5m table to infeed and outfeed max 3m long board.



Technical Data

Total power	29.2KW
Machine size	7440*30106*2,320 mm
Power supply	380V/50Hz
Air supply	0.6-0.7MPa
Total weight	4,900Kg
Control system	Brand SYNTETC
Panel size	Length 250-2,800mm
	Width 50-1,220mm
	Thickness 10-60mm
Max. traveling speed	(X / U) axis 135m/min
	Y axis 75m/min
	Z axis 30m/min
Transmission mode	X axis Rack and pinion
	Y axis Rack and pinion
	Z axis Ball screw rod
Boring blocks	Boring block qty Top 1; Bottom 1
	Vert. drills qty (top) 19
	Horiz. drills qty (top) X: 3*2 + Y: 2*2
	Vert. drills qty (Bottom) 9
	Max drill diameter Φ35mm
	Drill spacing 32mm
	Rotation speed 5000rpm
	Shank diameter Φ10mm
Main spindle	qty Top 2 bottom 1
	power 5.5 kw on top;

	5.5kw crosshead spindle with C axis, (ATC2) 3.5 kw on bottom
	8 (ATC)
Dust collector	qty 2
	diameter Top 150mm×1 Bottom 125mm×1
	speed ≥28m/min