

KN 5516 5 AXIS Gantry Frame CNC

Heavy Duty 5 Axis Machine

A perfect machine for solid wood processing. Optional to use high power liquid cooling spindles for heavy duty job.



KN 5516

1

Monolithic base and gantry structure ensures maximum structural stability for highest machining quality.

2

Automatic lubrication and reminding managed by NC. Easy maintenance.

3

Generous pin stops arrangement for flexible working zone arrangement.

4

Rich project resources for most applications such as furniture, door, window, stair, etc.

5

High speed moving up to 40m/min for pendular working cycle by using CE bumper protection.

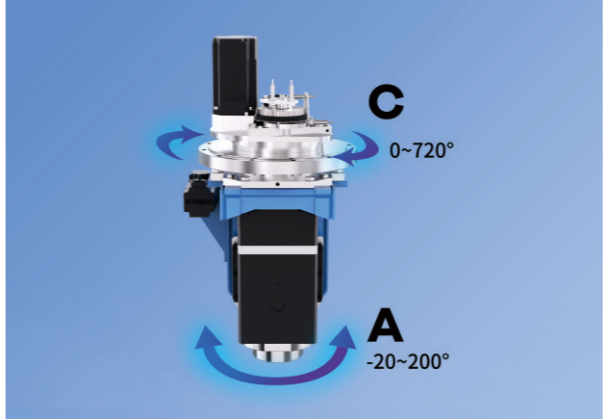
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Arrangement of pendula working mode with safty protection.

Mechanisms



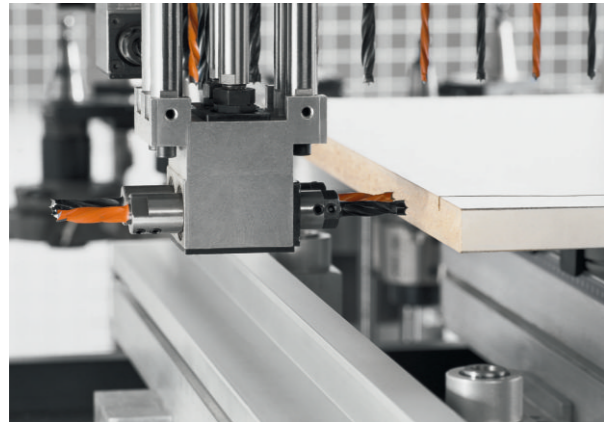
Rigid 5 Axis structure guaranties all position machining achieving perfect finishing quality. Possible automatic lock C axis when necessary.



Durable Masterwood high power 5 Axis spindle . A/C axis can be rotated at large angle



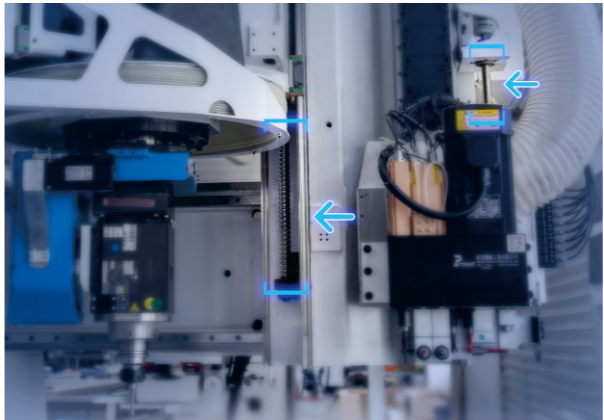
12 Vertical +8 Horizontal +1 Saw Blade Drill Head. Operating heads with multi-functions realizes efficient drilling and grooving



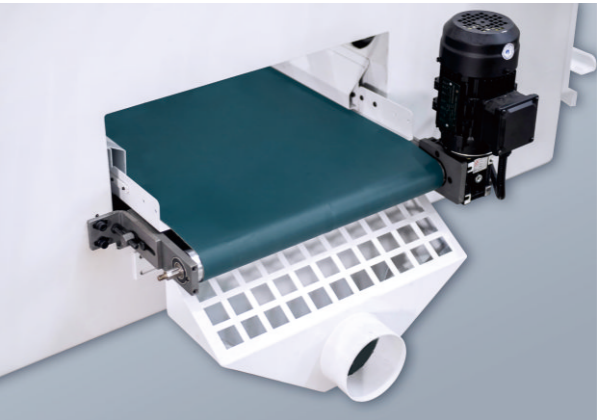
Durable Masterwood drilling head works with dindependent spindles. Horizontal drilling and saw shafts are protected by sensors.



Complicated shapes and one-step formed structure



Z-Axis with Double Screw-rod Equipped. Five-axis operating unit and drilling head are independently driven by screw-rod, quick change for different machining required.



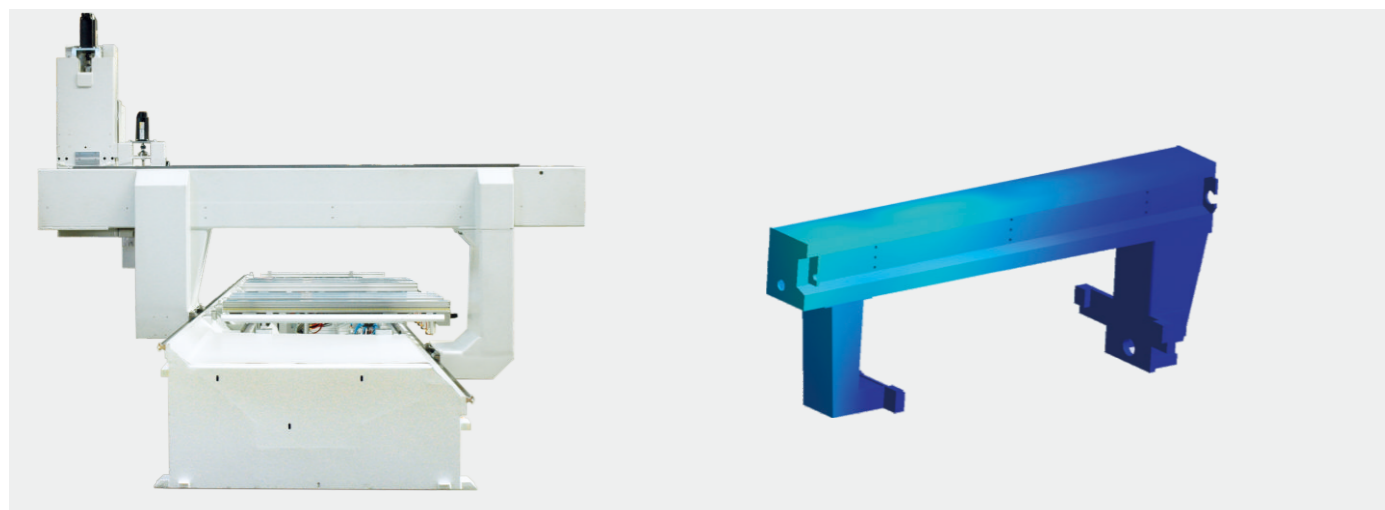
Dust collection belt is standard for all CNC models.



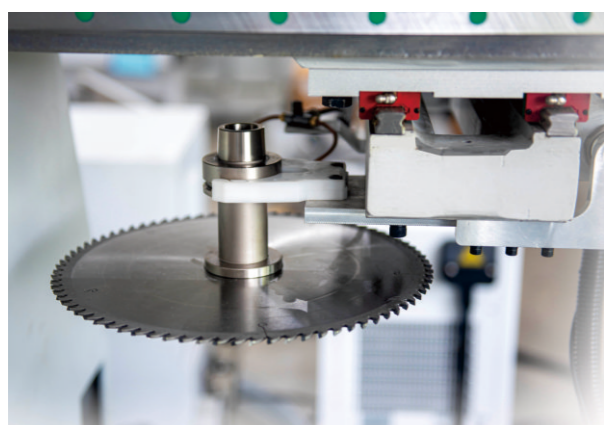
22-pcs Rotary Servo Tools-autochange+16-pcs Tool Change. Super-large capacity and fast switching to meet the storage requirements of various process tools.



German Schmitz Bridge-bars. Working table structured with 8 pcs of bridge bars, flexible in machining, fast in loading and unloading workpiece. Quick-change clamping device. Choose fixtures according to process requirements



Frames are designed based on numerical simulations to ensure rigidity.



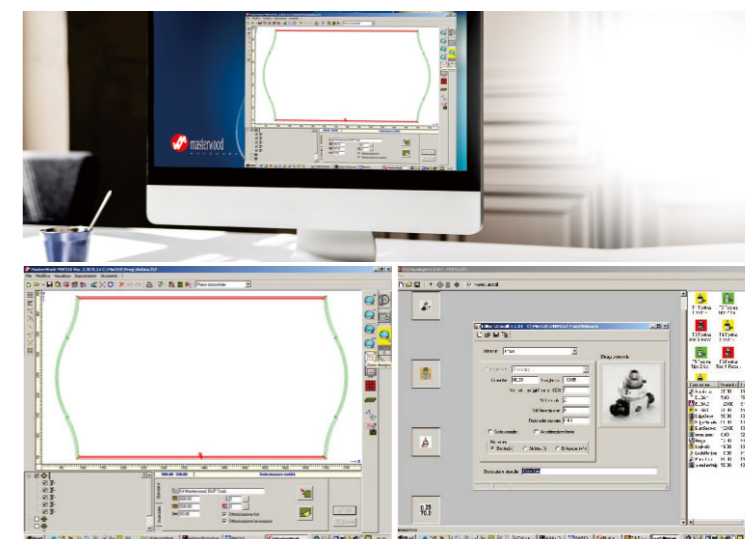
A 250 saw blade is hosted under gantry beam. This makes the saw always available during pendula operation.



Mobile touch screen controller for easy positioning and operation with cord.

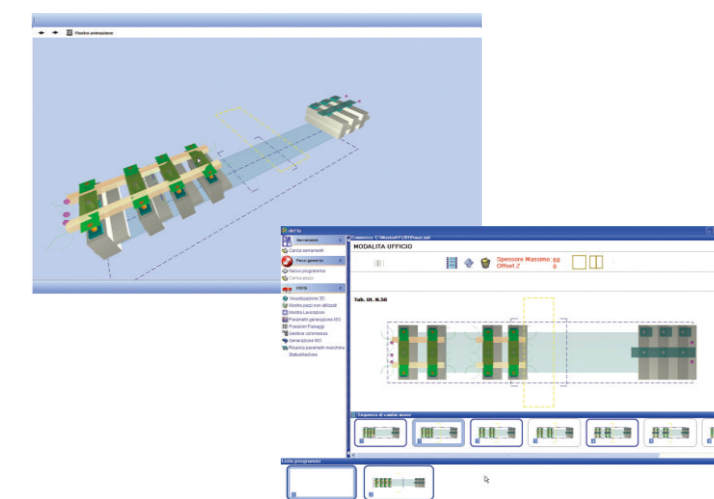
Masterwork

Graphic programming software for all Masterwood machines, which combines high performance and extreme ease of use. The software is suitable not only for more expert users, but also for those who have no experience with CNCs. Masterwork controls every aspect of the process: design, tools equipping, positioning of the vacuum cups, etc. The office version, standard with the machine, allows remote usage of the software as a program generator and as a single programming station for all Masterwood machines.



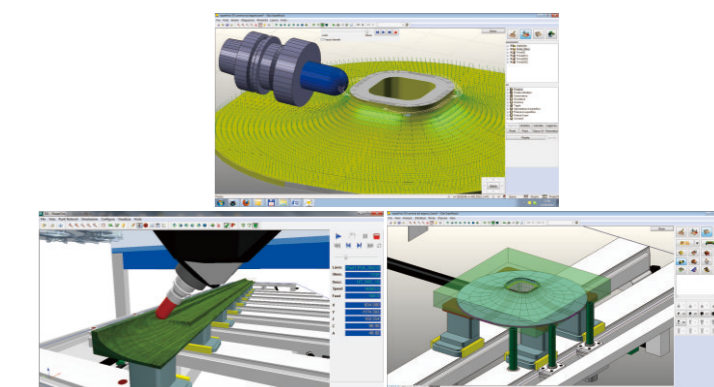
Master AT

Master AT is the common operating interface for all Masterwood machines. It allows to have a three-dimensional view of the piece and the work surface for an easy tooling and helping the operator in identifying any errors. In a simple and immediate way, it is possible to manage the positioning of the clamps or vacuum cups. The software also allows the multiple placements of pieces by optimizing tool paths and significantly reducing the execution time.



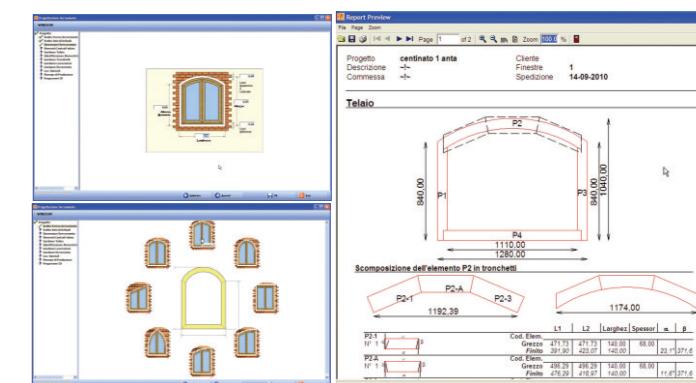
Master 3d

Complete CAD/CAM software that manages every aspect of the machining: design, arrangement of the pieces and sub-pieces on the workbench, collision control with 3D simulation, optimization of tool machining paths, generation of programs machine. Master 3D is a scalable software with many modules and applications available.



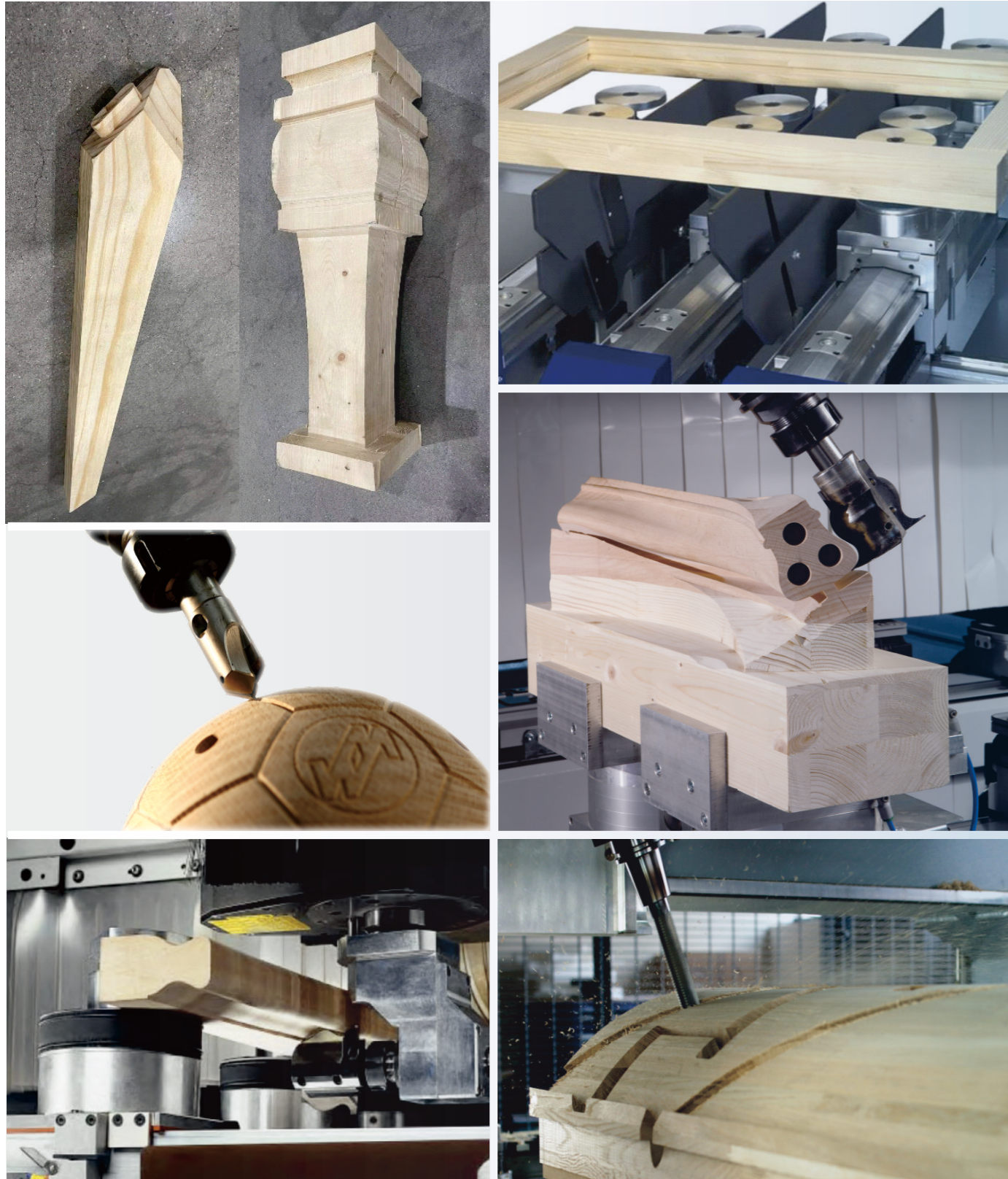
Master Window

Software entirely dedicated to windows processing. Using Master Window, it is possible to configure the parameters of all the elements that make up a frame: doors, elements, uprights, crosspieces, glass, bosses, types of joints, types of ironmongery and arches. Extremely intuitive interface: the user is guided in all phases of the design, from the choice of the shape to the decomposition of the arches into pieces. Design your windows and let the software create the cutting list and the generation of the machining programs.



Application

5-axis Gantry Frame CNC is used for solid wood processing such as roman columns, door and window modeling frames, stair handrails, works of art and so on.



Parameter

KN-5516

Working size	5150mm*1500mm*200mm
Machine size	7830mm*4365mm*3100mm
Total power	28kW

Limit speed--x axis	48m/min
Limit speed--y axis	48m/min
Limit speed--z1 axis(5 axis heads)	15m/min
Limit speed--z2 axis(drill head)	15m/min
Limit speed--A/C axis	40°/s

Travel range--X axis	6080mm
Travel range--Y axis	3050mm
Travel range--Z axis	640mm
Travel range--A axis	-20°-200°
Travel range--C axis	0°-720°

"TUBELESS" type working table:

Panel supports	8
Prearrangement for arch clamping	opt
Clamping systems	opt
Intermediate reference stops	8
Rear reference stops	9
Side reference stops	2 dx - 2 sx
Reference stops for panels with overhang	opt
Panel lifting blades	6
Vacuum pump capacity	244 m ³ /h

Drilling head

Spindles	20
X axis independent vertical spindles	8
Y axis independent vertical spindles	5
X axis double horizontal spindles	N° 2
Y axis double horizontal spindles	2
Spindles pitch	32 mm
Motor power	2.2 kW
Spindles revolution speed	4500 rpm

Sawing units

Grooving saw built in the drilling head	Ø 125 mm - 5400 rpm
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Routing units

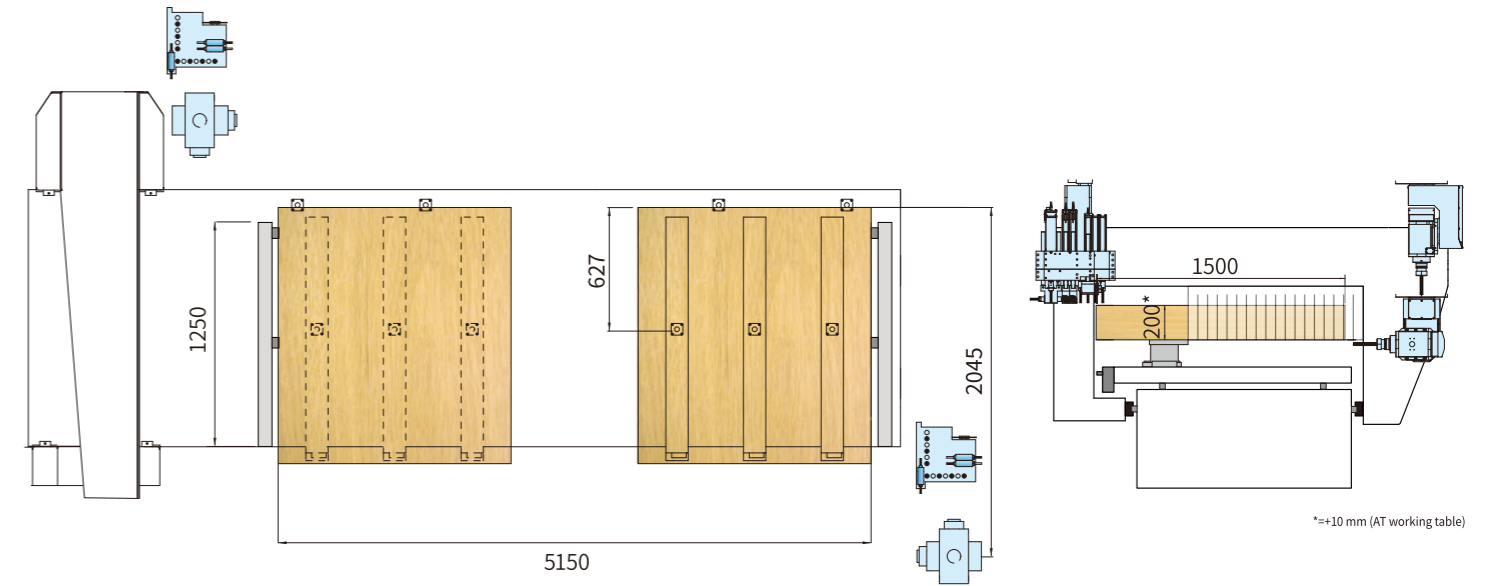
Two axes liquid cooled electrospindle with rotation axe "C" (index) ± 360° - HSK-F63 cone attachment	12 kW
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Numeric control and software

Numeric control with PC	std
CAM	DDX lev.2
Masterwork	std
Mobile PC control stand	std
Remote control with display	opt

Installation

Max. power supply*	35 kVA
Working air pressure	7 ÷ 8 bar
Compressed air consumption	~ 100 NI/min
Upper dust extraction out let	Ø 250 mm
Out let of conveyor belt for scraps	Ø 120 mm
Air extraction speed	25 ÷ 30 m/sec
Air extraction consumption*	4900 m ³ /h
Total weight*	5000 kg



Dimension

