

morbidelli n100

numerical controlled machining centre



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FOR COMPANIES DEMANDING FLEXIBILITY AND HIGH PERFORMANCE

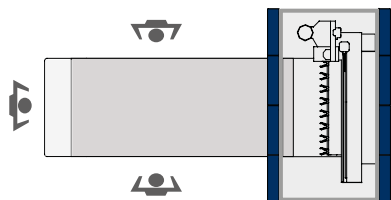
Machining centre designed and engineered for machining wood, plastics and non-ferrous metals. Due to the unique design and PRO-SPACE safety systems, it requires less floor space and can be operated from all sides for material handling of smaller components.





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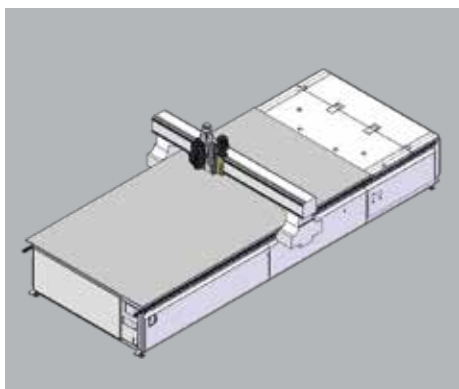
exclusive features



MINIMUM OVERALL DIMENSIONS AND MAXIMUM FLEXIBILITY: "PRO-SPACE" PROTECTIONS

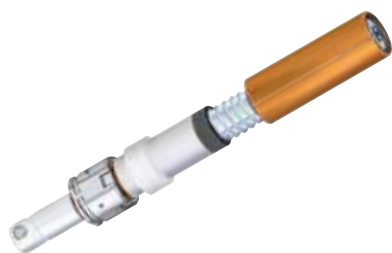
Loading zone completely free to reduce the space occupied to the minimum.

The absence of perimeter protections facilitates the work table access on all the sides of the machine.



TOTAL LACK OF VIBRATIONS: MOBILE GANTRY STRUCTURE

Performance without comparison with the mobile gantry structure that allows for high machining speeds whilst guaranteeing the best end products quality.



THE PERFECT DRILLING: RO.AX SPINDLE

Zero play during machining with the new RO.AX technology (Rotoaxial spindle technology), the most efficient spindle on the market with rotation speeds up to 8000 rpm.

The sturdiness of drilling heads is proven by the reduced maintenance costs: five times less than that imposed by the majority of other machine manufacturers.



UNIQUE CREATIVITY: MAESTRO SUITE

CAD/CAM programming software to design all the production processes.

Developed in Windows® environment it ensures easy programming with an advanced, simple and intuitive sketching environment that features all the tools necessary to design the parts, their layout on the work table, tools management and the relative machining operations. All the procedures are contained in a perfectly integrated and high performance software.



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machining unit

Optimal precision and flexibility
in all conditions of use with
the 3 or 4-axis routing unit
up to 15 kW power.
The electrospindle can be equipped
with a liquid cooling group that
allows to maintain constant the
operating temperature.



NO LIMITS TO MACHINING: INTERPOLATING VECTOR AXIS

360° rotation and automatic positioning
on X-Y axes of all angular heads with
the interpolating Vector axis digitally
managed by the NC.

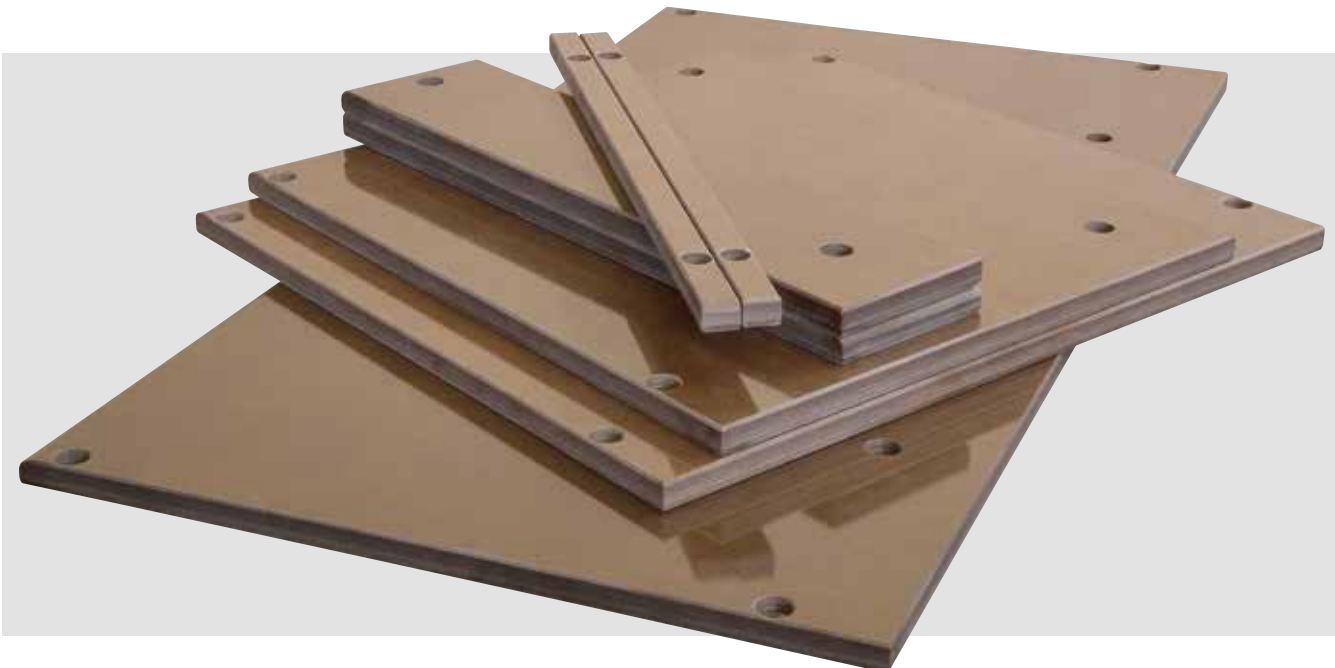
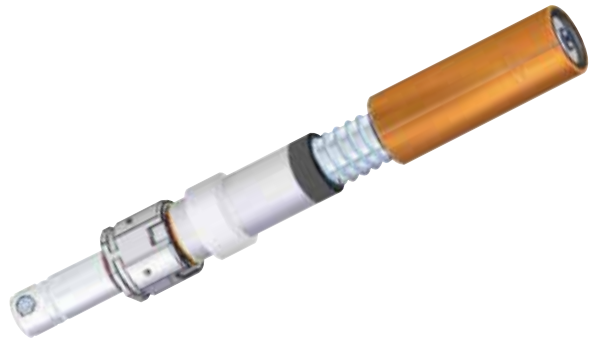


Efficiency and rigidity during the machining thanks to the drilling heads with up to 18 independent spindles. Easy grooves machining on the sides of the furniture thanks to the integrated blade unit.



THE PERFECT DRILLING: RO.AX SPINDLE

Zero play during machining with the new RO.AX technology (Rotoaxial spindle technology), the most efficient spindle on the market with rotation speeds up to 8000 rpm.



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tool changers and machine management



Maximum versatility thanks to the TR side tool changer that greatly reduces the tool changing times.



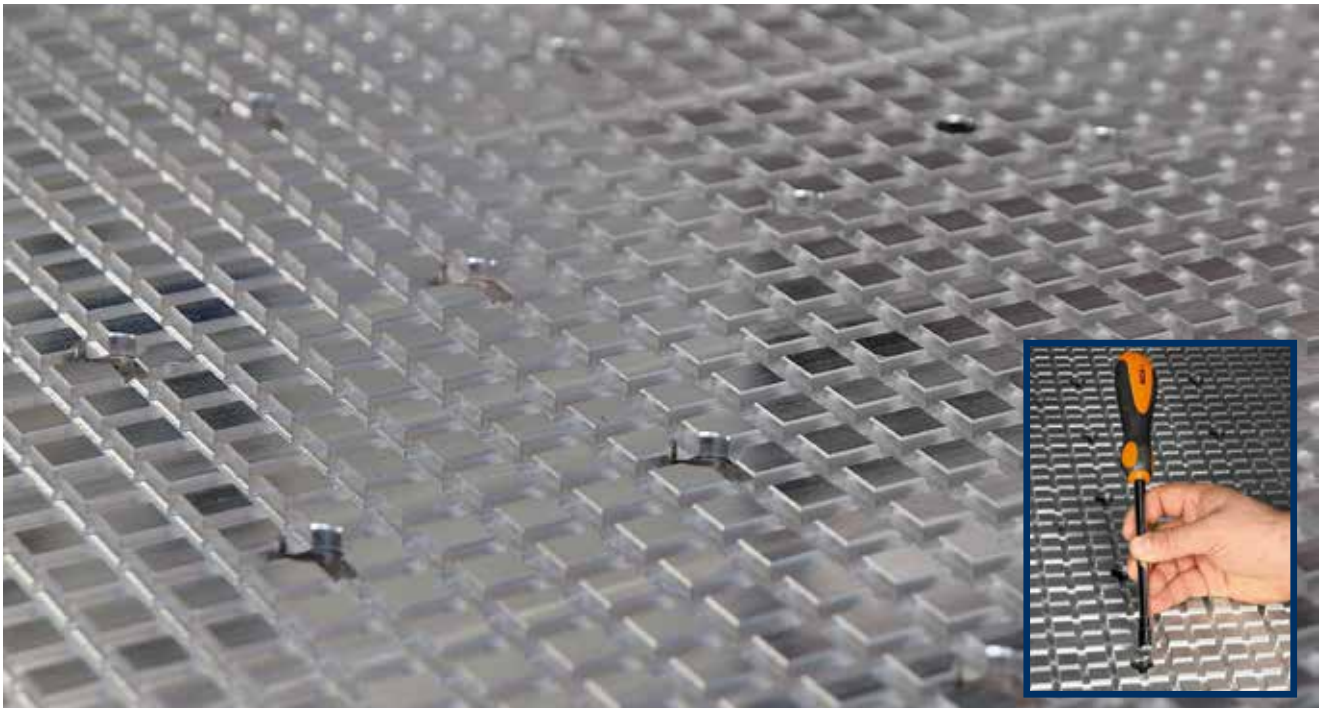
One position "Pick-up" tool changer with pneumatic positioning fitted on the mobile cross beam. Ideal set-up for large sized angular heads.

Console with integrated PC "eye-M"
Industrial PC with multi-touch colour display, 21,5" screen size, Full HD, positioned on a support base with displacement wheels, for an easy handling of the mobile console along the machine perimeter.



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work table



DESIGNED FOR EFFICIENCY AND SAVING: "H.E." (High Efficiency) WORK TABLE

Sturdy and practical work table, resistant over time thanks to its laminate aluminum structure.

Easy and quick setting with the magnetic locking system of the vacuum: in a few seconds the vacuum is activated only in the positioning area of the piece to be machined.



Wide choice of MPS vacuum pods and MODULSET to lock the pieces on the work table depending on the machining operations to be carried out.

MAXIMUM EFFICIENCY IN ALL MACHINING SITUATIONS: PRESSURE ROLLERS

Perfect holding down of small components or in conditions of reduced vacuum holding, thanks to the pressure rollers. By pressing close to the working area, the rollers are also ideal for the machining of overlapped panels.

In case of machining where their use is not foreseen, the rollers are excluded maintaining unchanged the machine performance.



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loading/unloading automation



Clean work environment with the chips conveying device positioned between the work table and the unloading belt.



No dust with the upper extraction system for the work table cleaning.



Unloading belt with photocell detection system.

100% productivity with the pusher that moves the processed work pieces on the unloading belt.



The perfect solution to easily assist the operator's work

Nesting cell with loading lifting table and unloading belt (also available with the loading version only or the unloading one).



Panel cleaning system
which provides an optimum holding down: air micro-jets clean the infeed panel. Automatic lifting of tool changer.



Perfect alignment of the loaded panels thanks to the aligning device for infeed work pieces.



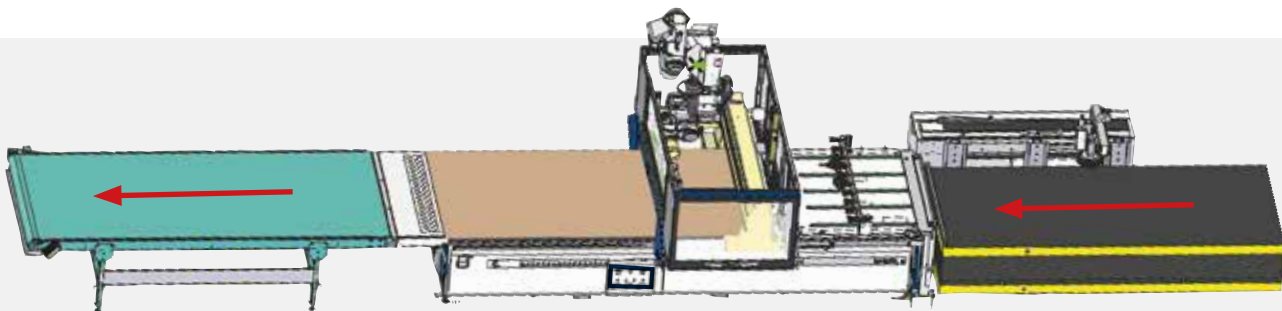
Precise and rapid panels positioning on the work table with the vacuum pods system.

Lifting table for the management of panels stacks with height up to 700 mm.

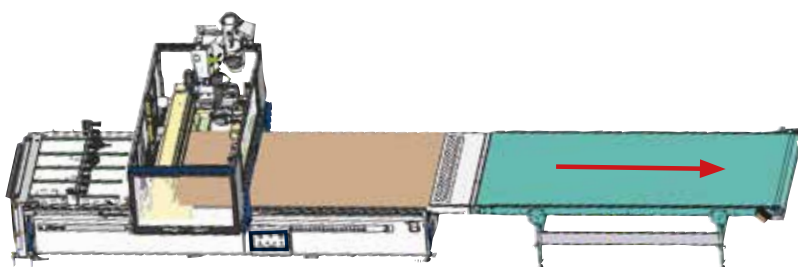
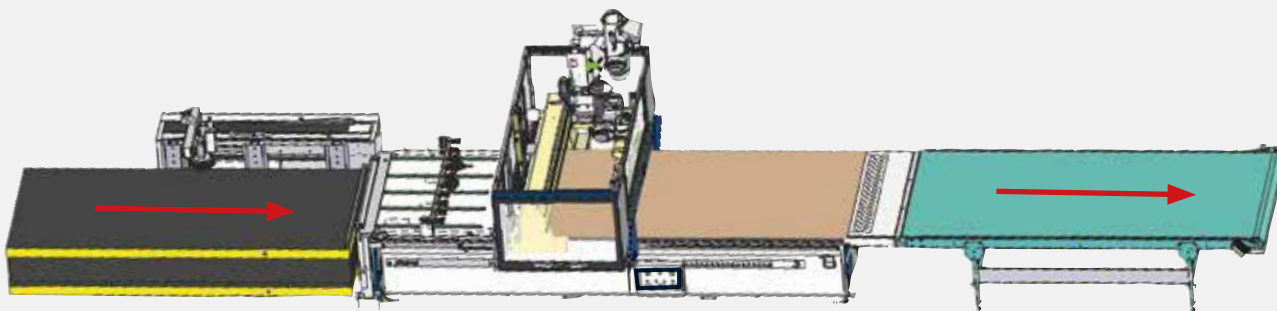


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loading/unloading automation

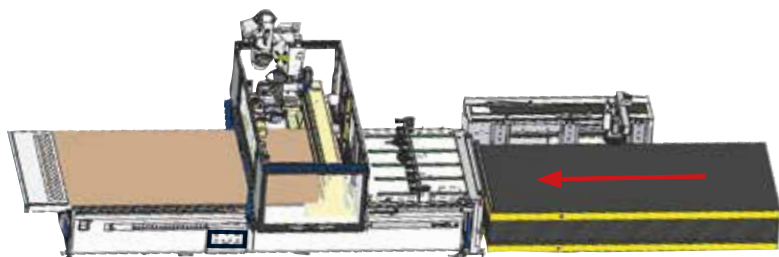


The modular project of the whole system allows to install the whole cell both with the working flow towards the right side and the left side.



Partial compositions

It is possible to configure the cell with loading only, or with unloading system, with or without belt.



Manual label printer
The operator manually applies the label on the work pieces coming out of the machine.



scm	Base	01/04/2010
	800 X 720 X 480	15:35:43
PIECE: Left side		
COLOUR: BIANCO		THICKN. 18
SIZE: Dx: 739.0		Dy: 489.0
Edge side 1-3:		
		MELA05SS18.05B0.5
Edge side 2-4:		
		MELA05SS18.05B0.5
CNC Code:		
		L:Side0 DX739 DY489

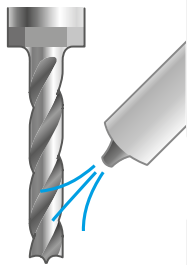
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devices for other materials

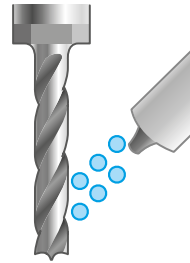


A range of dedicated heads for the machining of non-wood and advanced materials, such as plexiglas, plastics, alucobond, aluminum, polyurethane foams and honeycomb cardboard.

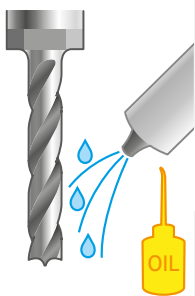
DEVICES FOR PARTICULAR APPLICATIONS



Air blower on electrospindle
For generic applications.



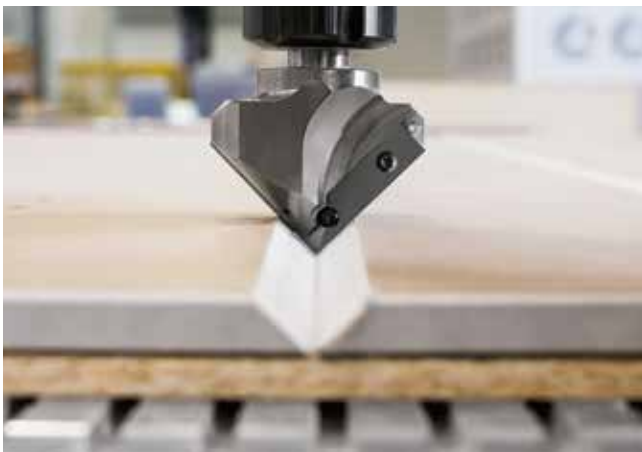
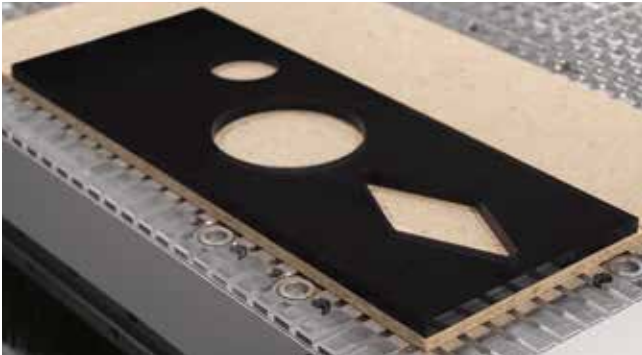
Ionized air blower on electrospindle
It is suitable to eliminate the electrostatic charges due to the cut material, making easier the shavings suction (advisable for plastic materials machining).



Air blower with microlubrication
Air blower with very little oil quantity for the tool lubrication and cooling when used on coated panels.



Guides protections, X-Y axes
By means of dedicated cleaning and protection system, it allows the machining also on abrasive materials (this device is compulsory for machining on plasterboard material).



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other devices

“ALL” AT YOUR FINGERTIPS: TECPAD CONTROL

Management of machine controls with the 7” colour remote control with touch-screen function that facilitates and speed up the setting operations.



Bar-code reader

Quick and simple scanning of the label associated to the panel by means the bar-code reader.



Tool length detection device

Positioned on the machine base side, it allows to automatically detect the length of the tool.



Possibility of extensive customisation

With angular heads having 1, 2 and 4 outlets with HSK taper couplings for angled routing, drilling and blade grooving, with plays elimination system or fixed mechanical couplings.

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other devices and safety systems



Telesolve

Teleservice system to connect the machine's PC to the service department via internet.



A.C.

Electrical cabinet

with air conditioner which maintains the temperature at around 18°C.



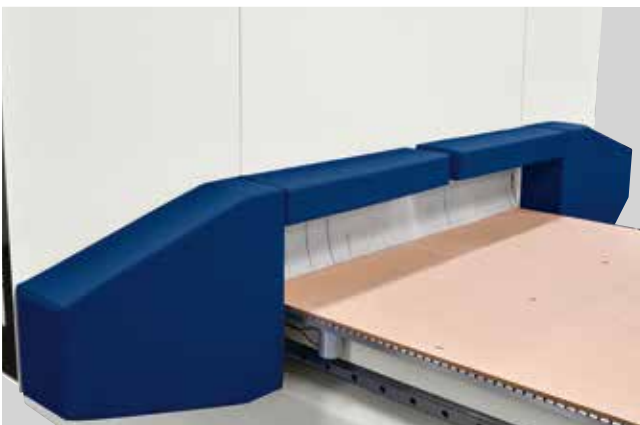
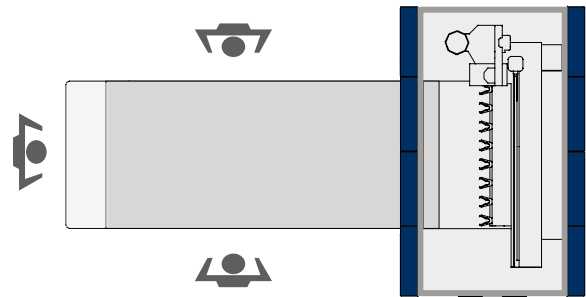
Upgrade

to four 250 m³/h 50 Hz vacuum pumps.

MINIMUM OVERALL DIMENSIONS AND MAXIMUM FLEXIBILITY: "PRO-SPACE" PROTECTIONS

Loading zone completely free to reduce the space occupied to the minimum.

The absence of perimeter protections facilitates the work table access on all the sides of the machine.



GUARANTEED SAFETY: BUMPERS PROTECTIONS

Fully safe machining with the bumpers safety system with lock the machine in case of accidental contact with the operator.

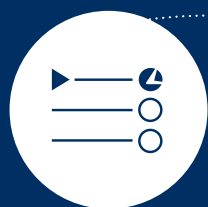
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software

MAESTRO SUITE: UNIQUE CREATIVITY

CAD/CAM programming software to design all the production processes.

Developed in Windows® environment it ensures easy programming with an advanced, simple and intuitive sketching environment that features all the tools necessary to design the parts, their layout on the work table, tools management and the relative machining operations. All the procedures are contained in a perfectly integrated and high performance software.



Maestro apps

UNIQUE KNOW-HOW

Maestro apps is a library of programming functions that are always available and easy to use, developed by SCM for the production of parts for doors, windows, stairs, furniture and furnishings.



Maestro nest

UNIQUE NESTING PROCESS

The module integrated in the Maestro suite provides all the functions necessary to manage the “nesting” process: from a simple “rectangular” piece to the most varied and complex “free form” geometrical shapes.



Maestro 3d

UNIQUE IN THE CREATION OF 3D OBJECTS

The module integrated in the Maestro suite is designed to program three dimensional objects.



Maestro cabinet

UNIQUE IN THE CREATION OF FURNITURE

This application is designed for the home and office furniture sector to design furniture and program cabinet production step by step.

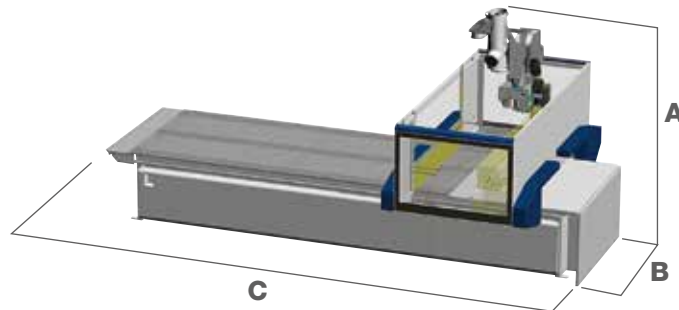
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STAND-ALONE

OVERALL DIMENSIONS AND LAYOUT

		A	B	C
Morbidelli n100 12	mm	2190	2552 (3552*)	4565 (5570*)
Morbidelli n100 15	mm	2190	2852 (3852*)	5765 (6770*)
Morbidelli n100 18	mm	2190	3152 (4152*)	5765 (6770*)
Morbidelli n100 22-31	mm	2190	3472 (4472*)	5215 (6215*)
Morbidelli n100 22-43	mm	2190	3472 (4472*)	6402 (7400*)

* It includes the operating area

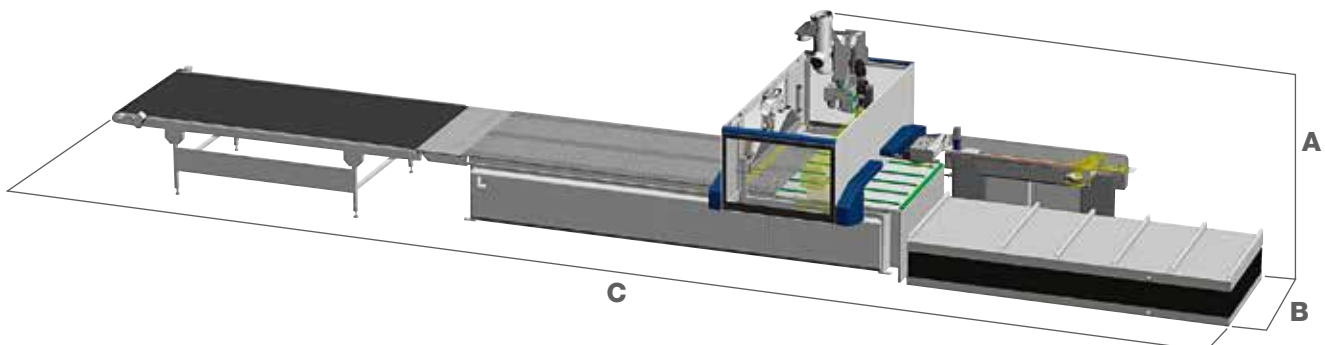


LOADING/UNLOADING AUTOMATION

OVERALL DIMENSIONS AND LAYOUT

		A	B	C
Morbidelli n100 12	mm	2385	2552 (3552*)	9760 (10260*)
Morbidelli n100 15	mm	2385	2852 (3852*)	13375 (13875*)
Morbidelli n100 18	mm	2385	3152 (4152*)	13375 (13875*)
Morbidelli n100 22-31	mm	2385	3472 (4472*)	11610 (12110*)
Morbidelli n100 22-43	mm	2385	3472 (4472*)	15215 (15715*)

* It includes the operating area

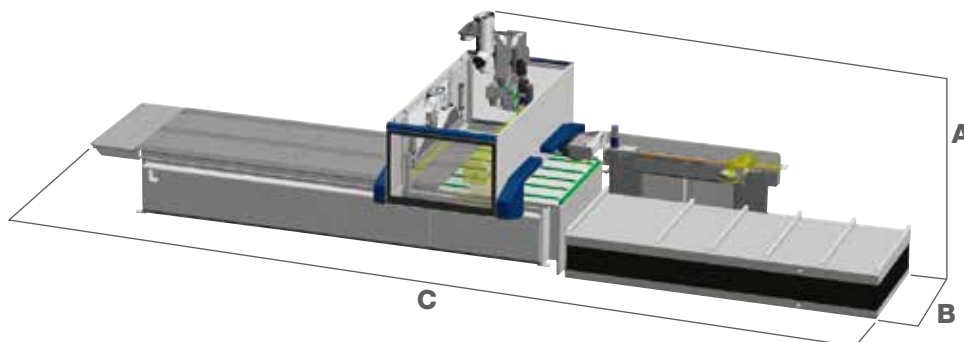


LOADING AUTOMATION

OVERALL DIMENSIONS AND LAYOUT

		A	B	C
Morbidelli n100 12	mm	2190	2552 (3552*)	7096 (8096*)
Morbidelli n100 15	mm	2190	2852 (3852*)	9495 (10495*)
Morbidelli n100 18	mm	2190	3152 (4152*)	9495 (10495*)
Morbidelli n100 22-31	mm	2190	3472 (4472*)	8340 (9340*)
Morbidelli n100 22-43	mm	2190	3472 (4472*)	10725 (11725*)

* It includes the operating area

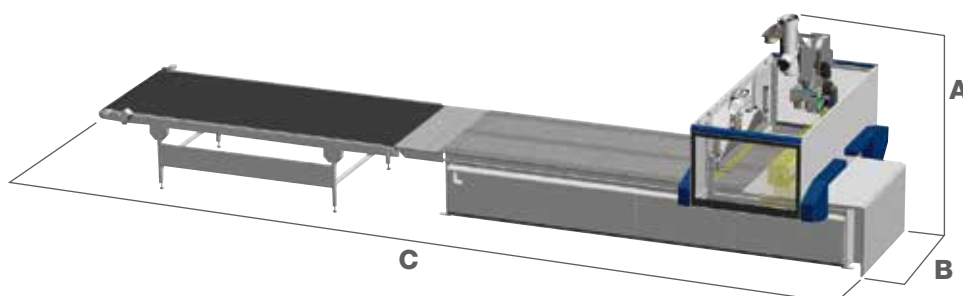


UNLOADING AUTOMATION

OVERALL DIMENSIONS AND LAYOUT

		A	B	C
Morbidelli n100 12	mm	2385	2552 (3552*)	7250 (7750*)
Morbidelli n100 15	mm	2385	2852 (3852*)	9650 (10150*)
Morbidelli n100 18	mm	2385	3152 (4152*)	9650 (10150*)
Morbidelli n100 22-31	mm	2385	3472 (4472*)	8500 (9000*)
Morbidelli n100 22-43	mm	2385	3472 (4472*)	10875 (11375*)

* It includes the operating area



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MORBIDELLI N100

TECHNICAL DATA

MORBIDELLI N100		12	15	18	22-31	22-43
AXES						
Vectorial speed X-Y axes	m/min	35	35	35	35	35
Z axis stroke	mm	250	250	250	250	250
Z axis panel passage	mm	150	150	150	150	150
ROUTING UNIT						
Motor power (max.)	kW (hp)	15 (21)	15 (21)	15 (21)	15 (21)	15 (21)
Rotation speed (max.)	rpm	24000	24000	24000	24000	24000
Available tools on tool changer (max.)	places	12	15	17	20	20
DRILLING UNIT						
Independent vertical spindles (max.)	n.	12	12	12	12	12
Independent horizontal spindles (max.)	n.	6	6	6	6	6
Rotation speed (max.)	rpm	8000	8000	8000	8000	8000
Integrated blade in X, diameter	mm	125	125	125	125	125
Integrated blade rotation speed (max.)	rpm	10000	10000	10000	10000	10000
INSTALLATION						
Exhaust air consumption	m ³ /h	5300	5300	5300	5300	5300
Exhaust air speed	m/sec	30	30	30	30	30
Exhaust outlet diameter	mm	250	250	250	250	250



THE USE OF POWER ONLY WHEN IT IS REQUIRED

SavEnergy allows making things operate only when they are really necessary. It means the machine automatically enters "stand-by" mode when there are no panels to be machined.

Maximum noise levels measured according to the operating conditions established by EN 848-3:2012
Acoustic pressure in process (routing) 83 dbA (measured according to EN ISO 11202:2010, uncertainty K = 4 dB)
Acoustic power in process (routing) 102 dbA measured according to EN ISO 3746:2010, uncertainty K = 4 dB)

Even if there is a correlation between above mentioned "conventional" noise emission values and average levels of personal exposure over eight hours of operators, these last also depend on the real operating conditions, duration of exposure, acoustic conditions of the working environment and presence of further noise sources, this means the number of machines and other adjacent processes.



The technical data can vary according to the requested machine composition. In this catalogue, machines are shown with options. The company reserves the right to modify technical specifications without prior notice; the modifications do not influence the safety foreseen by the CE Norms.

THE STRONGEST WOOD TECHNOLOGIES ARE IN OUR DNA

SCM. A HERITAGE OF SKILLS IN A UNIQUE BRAND

Over 65 years of success gives SCM the centre stage in woodworking technology. This heritage results from bringing together the best know-how in machining and systems for wood-based manufacturing. SCM is present all over the world, brought to you by the widest distribution network in the industry.

65 years history

3 main production sites in Italy

300.000 square metres of production space

17.000 machines manufactured per year

90% export

20 foreign branches

350 agents and dealers

500 support technicians

500 registered patents

In SCM's DNA also strength and solidity of a great Group. The SCM Group is a world leader, manufacturing industrial equipment and components for machining the widest range of materials.

SCM GROUP, A HIGHLY SKILLED TEAM EXPERT IN INDUSTRIAL MACHINES AND COMPONENTS

INDUSTRIAL MACHINERY

Stand-alone machines, integrated systems and services dedicated to processing a wide range of materials.



WOODWORKING TECHNOLOGIES



TECHNOLOGIES FOR PROCESSING
COMPOSITE MATERIALS, ALUMINIUM,
PLASTIC, GLASS, STONE, METAL

INDUSTRIAL COMPONENTS

Technological components for the Group's machines and systems, for those of third-parties and the machinery industry.

HITECO

SPINDLES AND
TECHNOLOGICAL COMPONENTS

Les

ELECTRIC PANELS

steelmec

METALWORK

scmfonderie

CAST IRON



is more



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