

MORE



Numerically controlled
machining centers

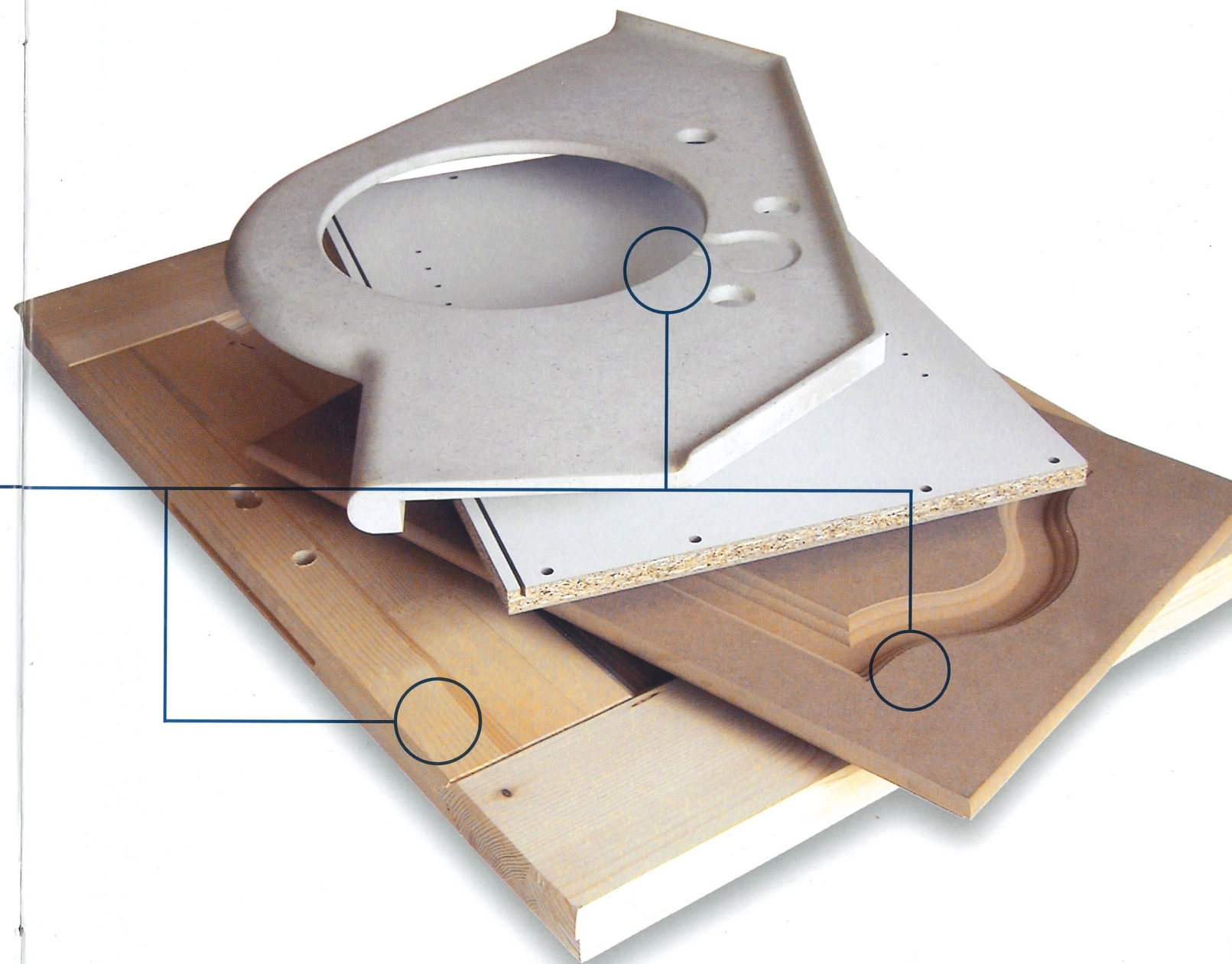


UNIVERSAL



MORBIDELLI

Looking for these results...



More room for productivity with Morbidelli machining centers; user-friendliness for everyone

Universal TV

Plug & Play
and off you start!



UNIVERSAL TV 2412
UNIVERSAL TV 3012
UNIVERSAL TV 3612
UNIVERSAL TV 3615

More room for productivity with Morbidelli
machining centers; user-friendliness for everyone

Morbidelli's know-how
for NESTING without limits

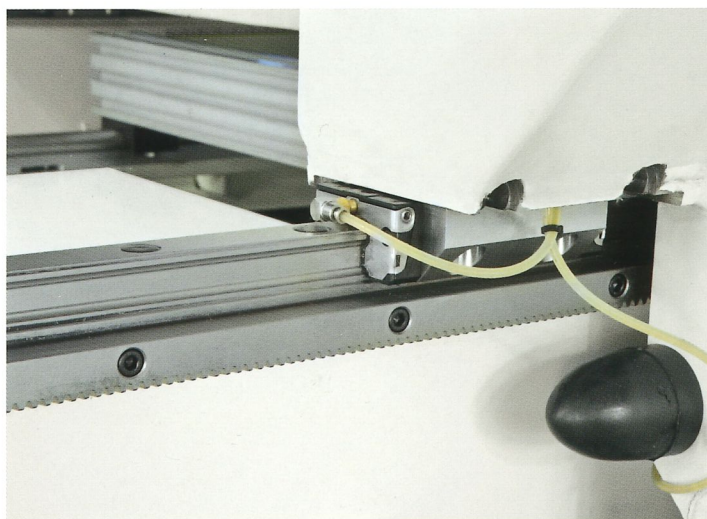
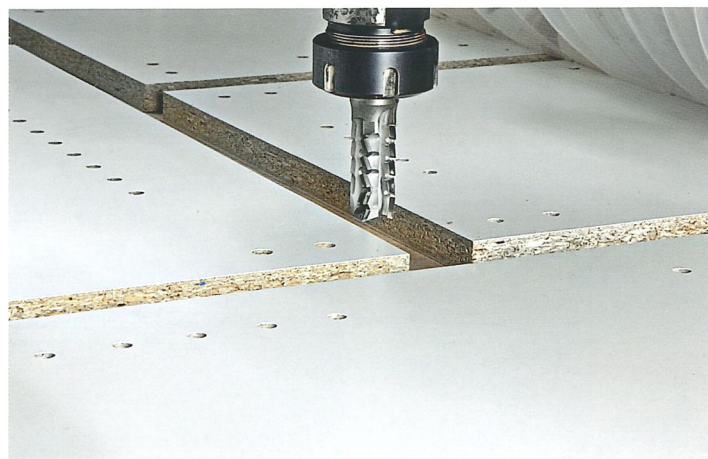
Universal NB



UNIVERSAL 2412
UNIVERSAL 3612
UNIVERSAL 3615
UNIVERSAL 3618
UNIVERSAL 3622
UNIVERSAL 5722

Higher performances in finishing

Perfect balance and superior mechanical rigidity: the gantry structure joined to the steel wide base, strongly ribbed, have been designed for long lasting mechanical stability and high rigidity with complete absence of the vibrations also under all working conditions maintaining unaltered over the time the precision and quality of the product.

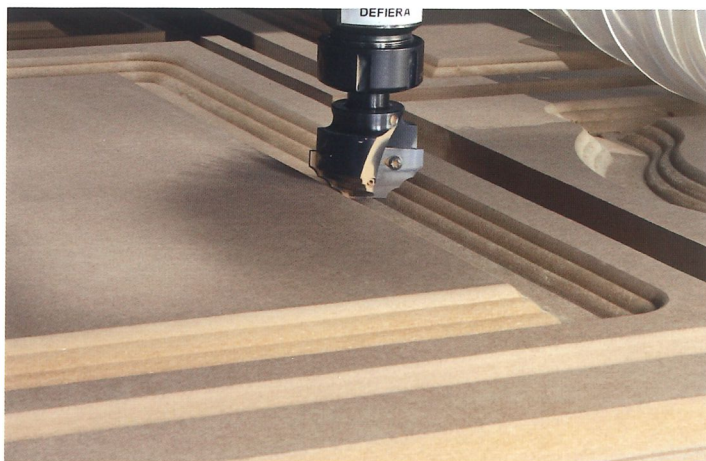


Accelerations and decelerations up to 5 m/sec²!
Absolute positioning precision with the axis **X** movement by **rack and pinion** and **Y** and **Z** axes movements by **recirculating balls screws**, all driven by Brushless motors.



High precision rectified linear guides with pre-loaded recirculating balls pads to displace the working units. The automatic **lubrication** of these devices cut off drastically the maintenance time of the operator.

Closer to your needs



The electro-spindle and the boring unit are fitted directly on the Z axis carriage and they move vertically on a **65 mm prismatic guides** assuring precision, stability and rigidity in any work condition; heavy routing speed over **30 m/min!**

Electrospindle **HSK 63** attachment available in two versions:

- **6,6 KW S1 working** (7,5 KW in S6) 1.500 ÷ 24.000 rpm
- **8,5 KW S1 working** (9,5 KW in S6) 1.500 ÷ 24.000 rpm

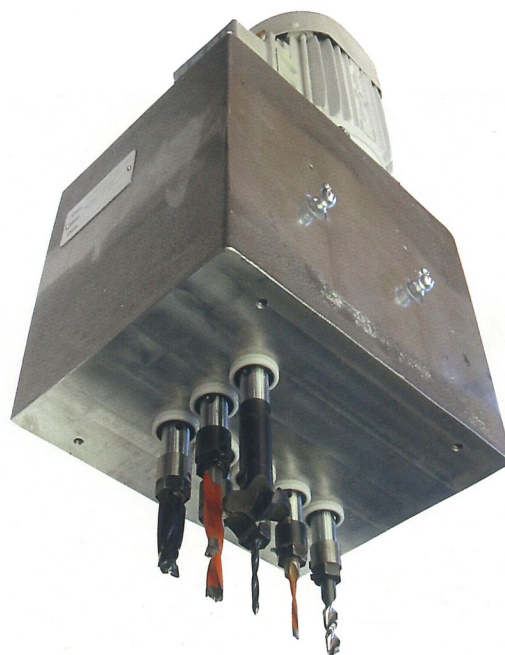


High flexibility of the tool room with **8, 10, 12 and 20 positions**, both on board of the machine and the **operating unit**, able to reduce drastically the tool change time to execute any routing, squaring and cutting operations.

Higher productivity (Just in Time)



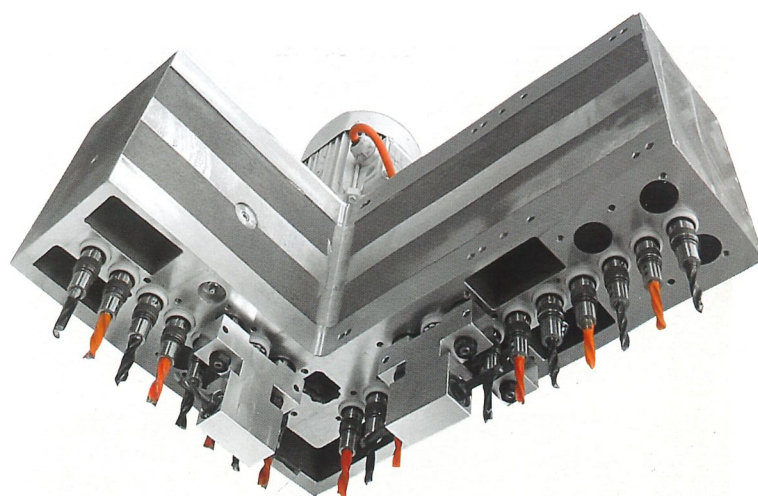
- Faster boring speed: up to 6000 rpm
- Reduced machining time: 45% quicker than the other machines on the market
- Improved quality of the holes: thanks to the new integrated bearings (patented)
- Best quality finish of the pieces thanks to the suction integrated into the boring and routing unit that removes the dust just produced.



Drilling head with 7 vertical spindles:
Dedicated to the NESTING process.

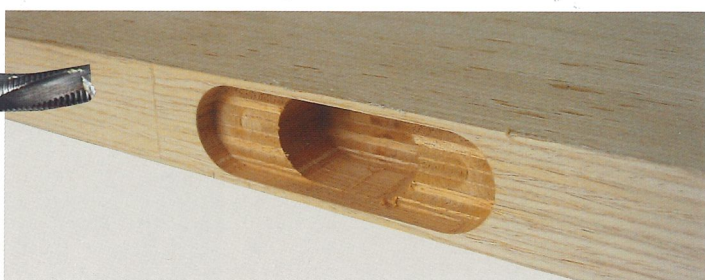
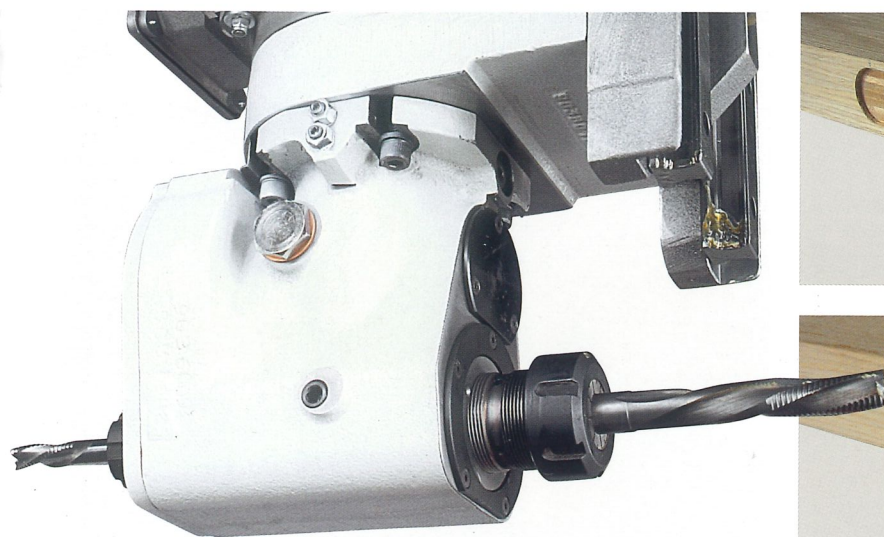


**Drilling head with 12 vertical spindles
4+2 horizontal spindles and integrated saw-blade.**
The solution that combines solidity and versatility.



**Drilling head with 21+3 vertical spindles
4+4 horizontal spindles and integrated saw-blade**
to work with greater efficiency all components
of the furniture.

Higher flexibility with dedicated operating units



Horizontal routing unit with 3 kW and speed rotation 6000÷18.000 rpm managed by inverter that permits door locks and shelf holding recesses operations to be carried with complete reliability.



VECTOR, 0/360° numerically controlled rotating continuous axis, to execute, transversal and inclined borings and in respect of the panel's surface, utilising angular head. It can make without any problem also **interpolating routing operations** thanks to its body with **mechanical displacement extremely rigid and exact**.

Simpler and effective programming

An easy and user-friendly interface together with the innovative and powerful Numeric Control are dedicated to these new machining centers.

PC Office: incomparable level of user-friendliness and comfort of the operator in the whole machine operations with the more innovative hardware features on the market.

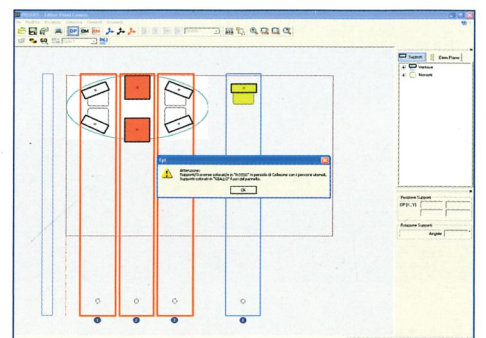
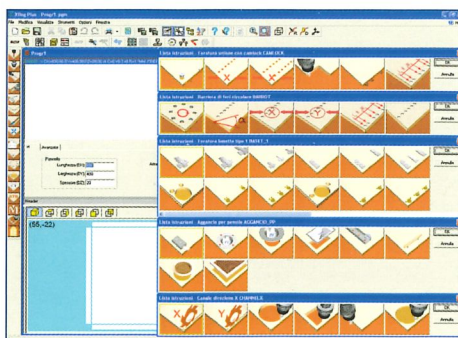
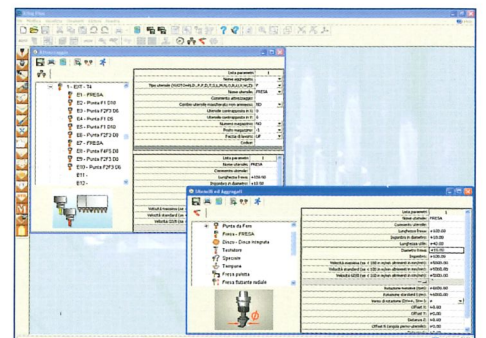
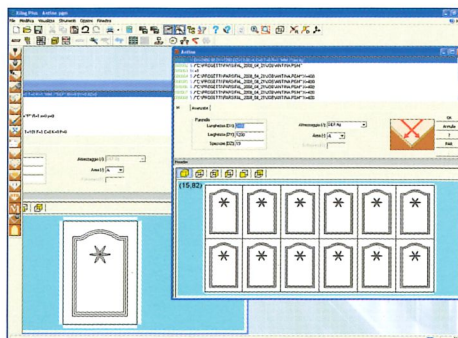
Morbidelli software, with its **graphic helps** and **dedicated macros**, operates in a Windows® environment for a simple and effective programming studied to fulfil the requests of both a skilled operator as a first user one.



Remote control device to manage the main functions of the machine.

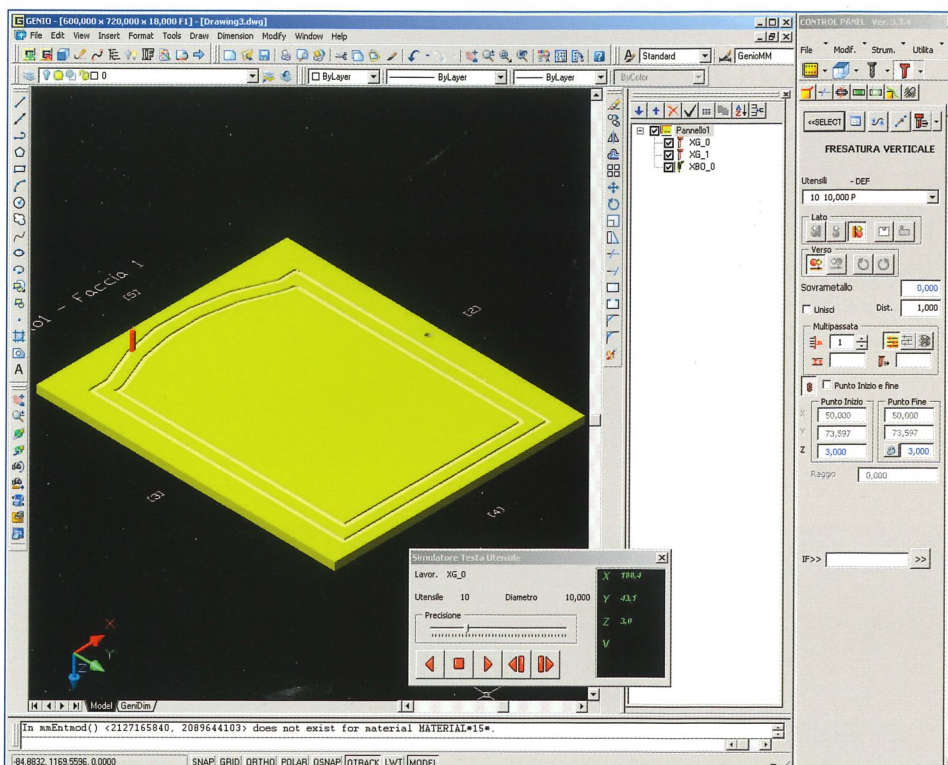
Main software features:

- Equipping management with **tool visualisation** and with graphic supports to avoid the possibility of data input errors;
- **Immediate and direct uploads** of DXF format files;
- **Optimised dynamic drilling; graphic and syntactic aids** or drilling and milling operations to speed up data input operations;
- **Parametric programming**, to automatically update the programme when the sizes of the manufactured piece change, thus avoiding having to write a new programme;
- **Self diagnosis and warning of any errors** or possible failures through alarm messages in the user's language that aid quick understanding;
- **Graphic aids for the positioning of work supports** to avoid collisions with the tools in cases of passing drilling and/or milling to eliminate the empirical trials directly on the machine;
- **Execution of programmes through bar codes**.



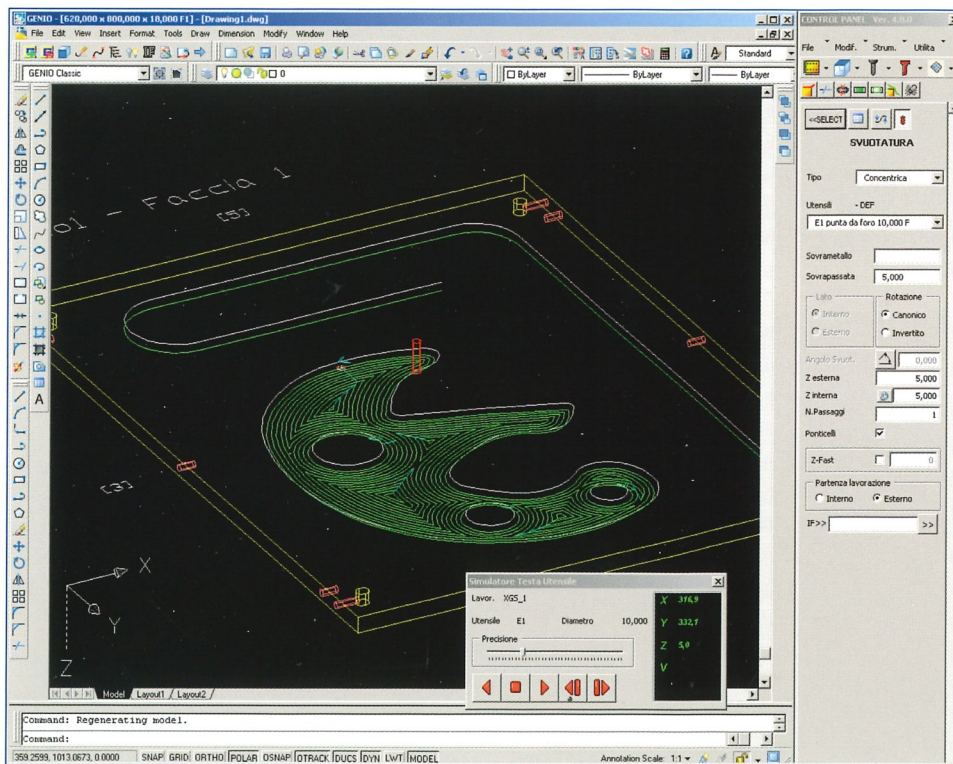
Greater support to program and to optimize time and materials

GENIO, a software based on OEM Autocad® 2008 licence, is the easiest and most powerful application of CAD/CAM dedicated to Morbidelli's machining centers, developed on one of the platforms best known and sold throughout the world.



Simple programming through traditional Autocad® commands combined with all the specific working functions of a machining center.

Just select on the display the wanted geometry and with a simply choice from the menu it is possible to assign the working to it.

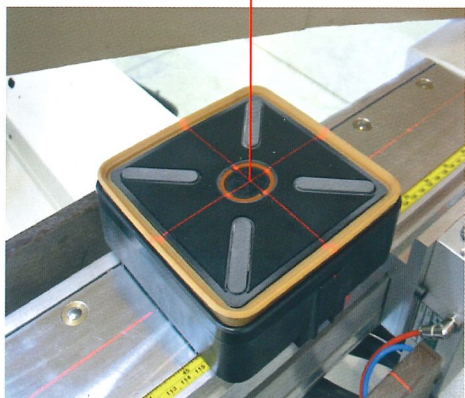
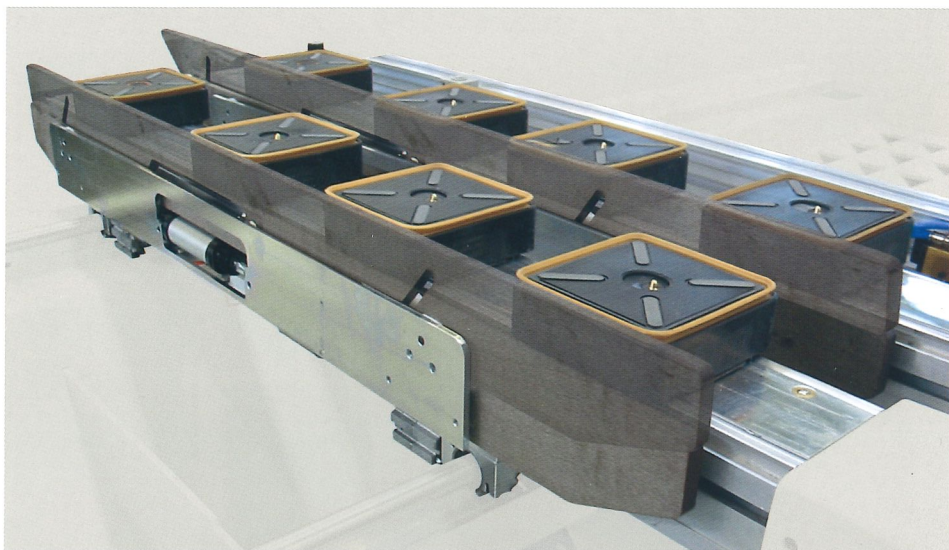


Advanced technology of machining simulation with execution times

Faster worktable set-up

Practicalness, safety and new design with TV Morbidelli worktable

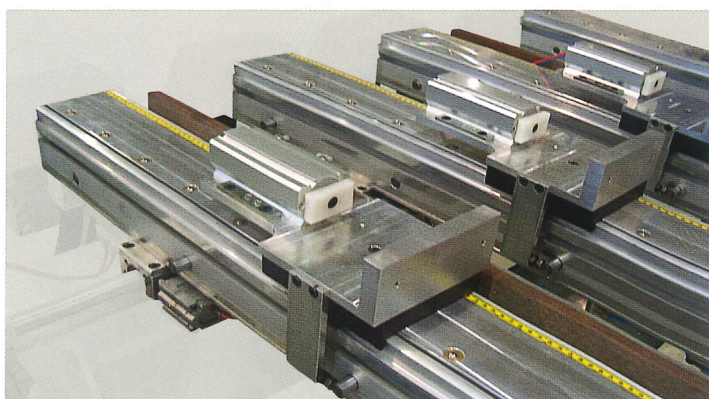
- Fast locking and unlocking operation of each support and vacuum cup for a complete safety working. All vacuum cups are firmly locked in their optimal position by a pneumatic system avoiding accidental displacements of the piece during the working phases.
- Aluminium supports characterized by the total absence of pneumatic pipes and connections in order to avoid obstructions during the vacuum cups and supports positioning that might cause the stop of the machine.
- Safety sensor checks the locking of the vacuum cups: only after an automatic control the start to the execution of the programs is authorized, thus granting the operator's safety.
- Displays, placed on the remote control, to give immediately the right and optimal position of each single vacuum cup and support.
- Laser devices allowing to visualize on the worktable, by a fast and easier process managed by CNC, the exact positioning where the suction cup has to be placed. The positioning precision, considering shapes and dimensions of each piece, assures a complete security for the operators as no operation is required by them (calculation, reading or interpretation).



More flexibility and several geometries.....
with the highest functional reliability



Studied with different dimensions, geometries and heights, **the vacuum cups**, are able to follow the shapes of the pieces to work in a such **way to concentrate the vacuum only where it is necessary**, increasing the locking efficiency of the pieces.



Dedicated Systems, are available for holding-down special components as frames, uprights, etc.

Nesting Base

More free space in your factory and reduced production costs

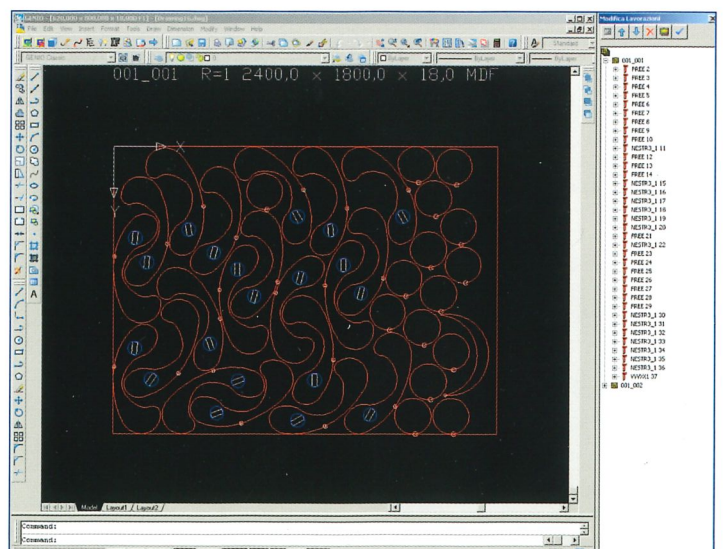
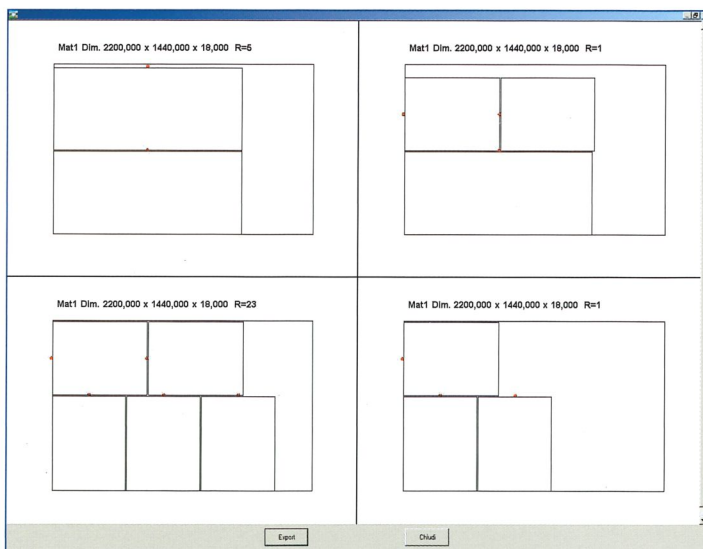
DOORS



KITCHEN ELEMENTS



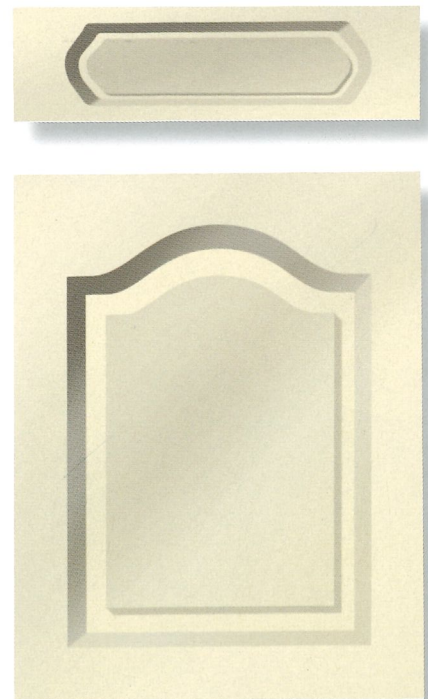
FREE FORMS



Maximum optimization of the working cycle thanks to the dedicated Software (Xilog NEST, Genio Nesting, ect...) able to cut down the waste materials reducing the production times.

Nesting Based Manufacturing advantages

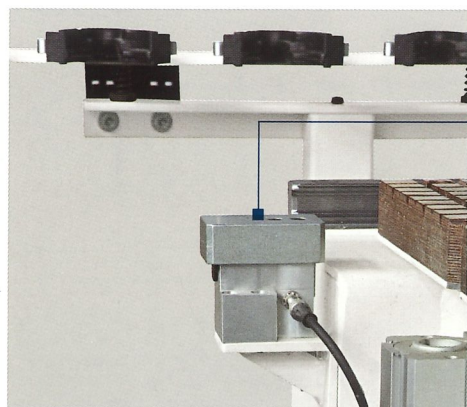
- **Reduction of the waste materials.**
maximum efficiency of the working area
- **Drastic lowering of the “Time to Market”**
possibility to work on “single orders”
- **Production of single piece considerably shorter**
sizing and boring in only one positioning
- **Increased quality of the finished product**
 - use of only one machine;
 - less manipulation of pieces;
- **Reduction of the stock of work in progress parts;**
you produce only what it is sold;
- **Reduction of labour use**
an almost completely automated solution
- **Reduction of investments (costs reduction)**
Reduction of the number of machinery which intervenes in the production cycle.



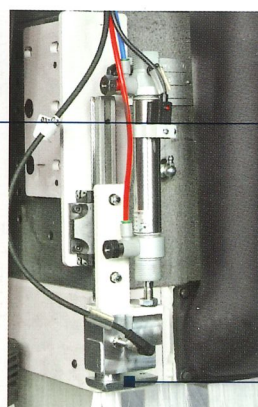
Absolute guarantee of stability and inalterability over the time of the Universal Nesting aluminium worktable built in a single block.



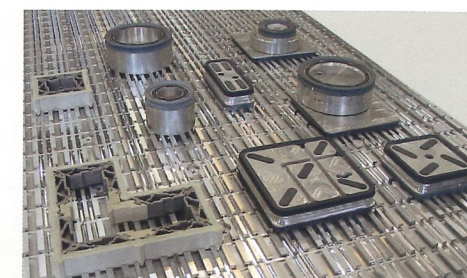
No loss of time for the setting of the machine (loading operation in masked time): the automatic unloading device and the dedicated suction device allow at the end of the cycle, to push out on a side table the finished pieces and to clean the area from the dust being immediately ready for the next processing.



Absolute precision in routing with the automatic measuring of the effective thickness of the panel in process and the length of the tools.



A wide series of locking system is able to assure an incomparable **flexibility** of the working table.



Easy and fast setting of the worktable with vacuum cups or other devices through the new (patented) magnetic locked system of the vacuum: in a few seconds the vacuum is activated only into the positioning area of the piece to be machined.

Friendly and easy to use with the 8 vacuum areas with pneumatically selection that allow to lock also pieces smaller than the waste panel underneath, locking the areas not interested and carrying automatically all the vacuum where it is necessary.



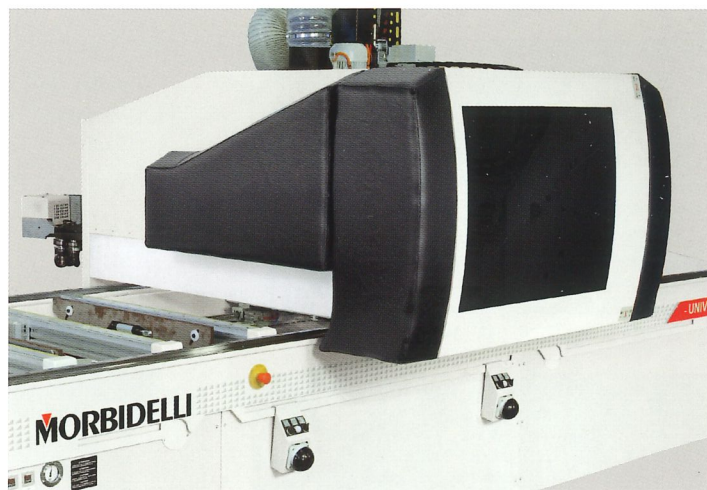
More room to the safety with innovative and practical systems



Photocell barriers:

Immediate stop of the working cycle if the operator enters the machine operating area.

These so-called "active" safety systems prevent any contact between the machine moving parts and the operator.

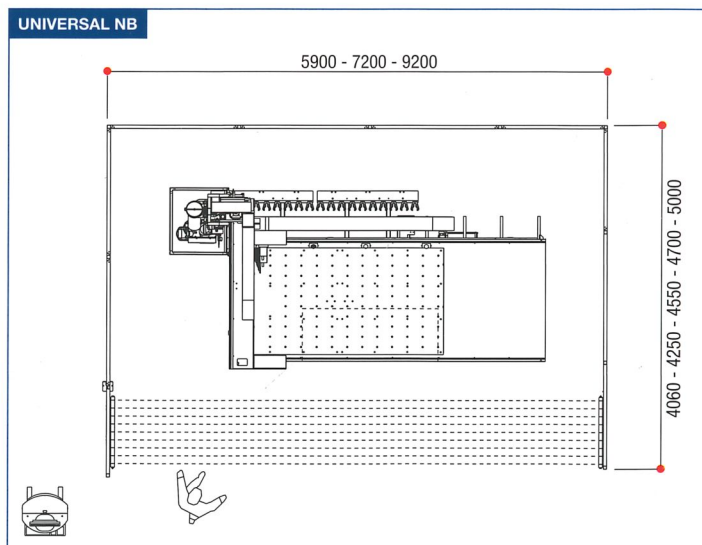
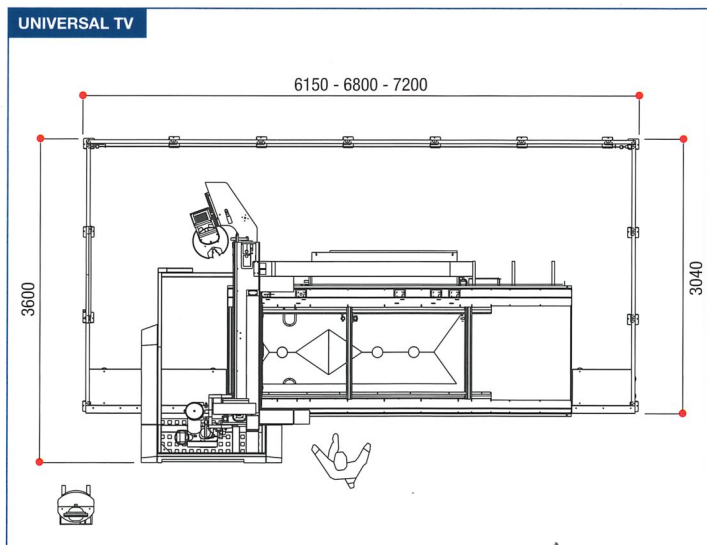


Bumpers:

- Maximum production capacity
No waiting time to load and unload pieces during machining
- Bigger dimensions of the pieces to work
Compared to machines of same overall dimensions equipped with mats solution

The working cycle stops immediately if there is any contact between the operator and the safety absorbent material fitted around the operating unit.

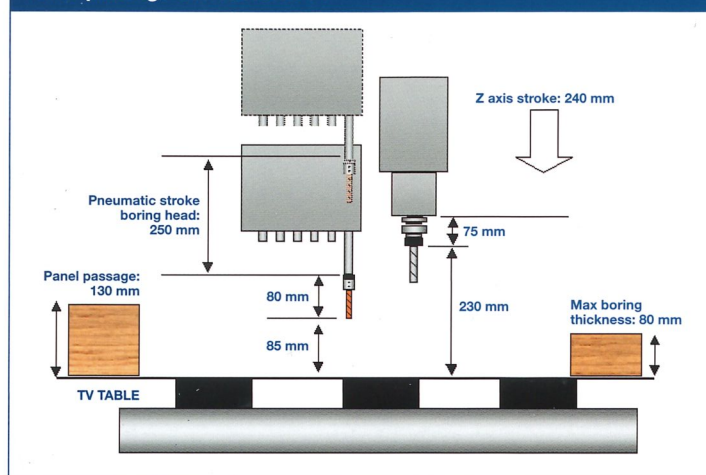
Overall dimension



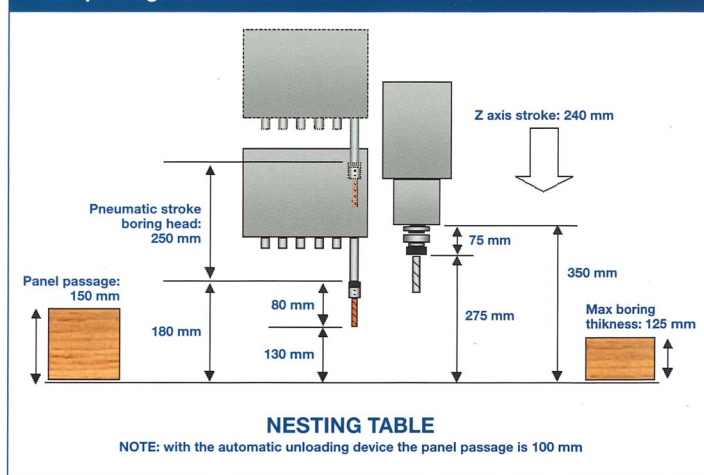
Technical Data

		UNIVERSAL TV	UNIVERSAL NB
Speed movement X axis	m/min	70	70
Speed movement Y axis	m/min	60	60
Speed movement Z axis	m/min	15	15
Electro-spindle power (S1)	kW	8,5	8,5
Tools available on Rapid	n°	8-20	8-20
N. vertical spindles	n°	12-24	7-12
N. horizontal spindles	n°	6-8	6
Max diameter saw blade	mm	120	120
Panel passage	mm	130	150
Z axis stroke	mm	240	240
Installed power	kW	20-30	20-30
Weight	kg	3000	3000

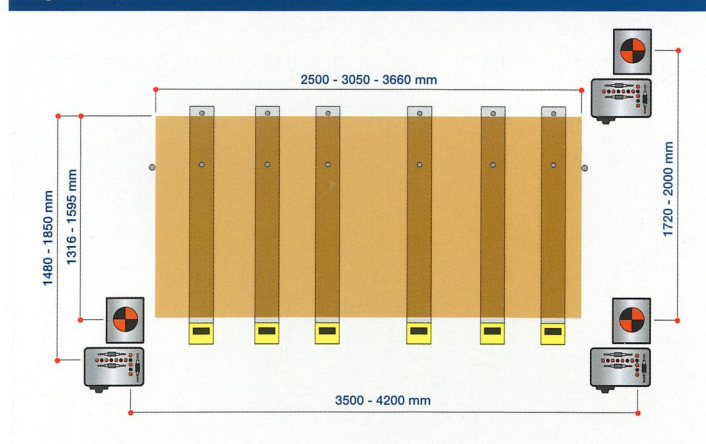
Panel passage UNIVERSAL TV



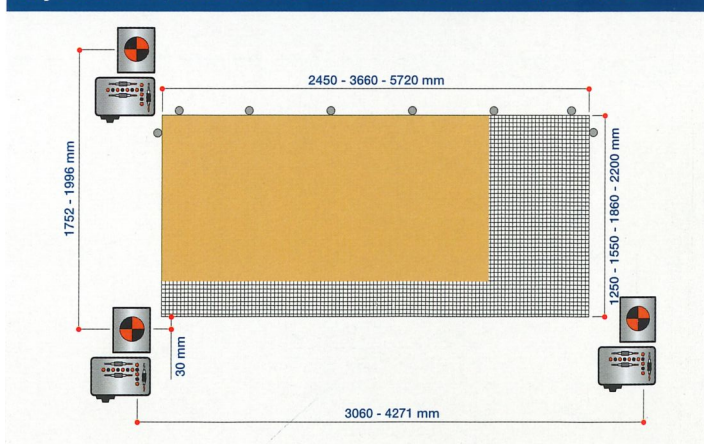
Panel passage UNIVERSAL NB



Layout UNIVERSAL TV 2412 - 3012 - 3615



Layout UNIVERSAL NB 2412 - 3612 - 3615 - 3618 - 3622 - 5722



In this catalogue, machines are shown with options. The firm reserves the right to modify technical specifications without prior notice, provided that such modifications do not affect safety as per E.C. certification.

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