

# Rover A EDGE

NC edgebanding machining centre



 **BIESSE**

When competitiveness  
means being able  
to satisfy any  
requirements



Made **In** Biesse

## The market demands

a change in manufacturing processes which enables companies to **accept the largest possible number of orders**. This is coupled with the need to maintain high quality standards whilst offering product customisation with **quick and defined delivery times**, as well as responding to the needs of highly creative designers.

## Biesse meets these requirements

with **technological solutions** that influence and support technical expertise as well as process and material knowledge. **Rover A Edge** is an edgebanding machining centre that supports the machining of shaped panels, which can be edgebanded on a single, compact, high performance machine. It is ideally suited to small and large joineries that need to manufacture either odd size products or standard size products in small batches.

- ▶ **Machine customisation depending on production requirements.**
- ▶ **Optimal edge grip.**
- ▶ **Cycle time reduction and productivity increase.**
- ▶ **Optimal finish quality.**
- ▶ **Reduced tool changeover time.**
- ▶ **High-tech becomes accessible and intuitive.**

Manufacturing shaped  
and edgebanded  
panels with a  
single machine



**Rover A EDGE**  
NC edgebanding processing centre



# Machine customisation depending on different production requirements

A team of specialised sales engineers can understand production requirements and suggest the optimal machine configuration.

4-axis configuration.



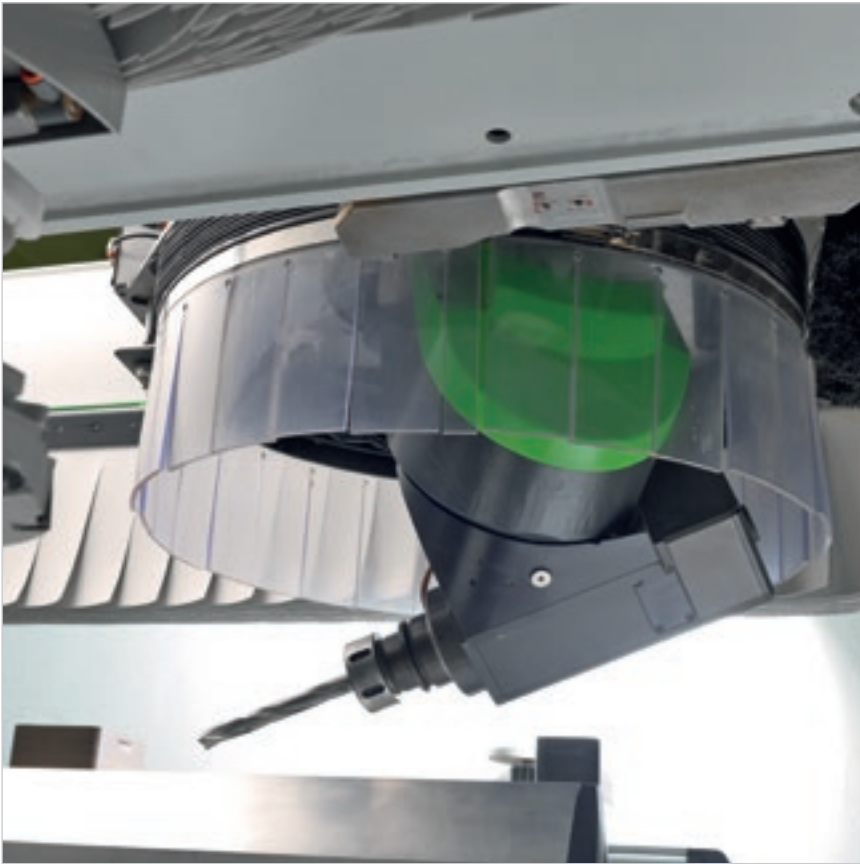
A full configuration of the working unit supports the execution of different types of machining operations whilst ensuring a high finished product quality.



5-axis configuration.

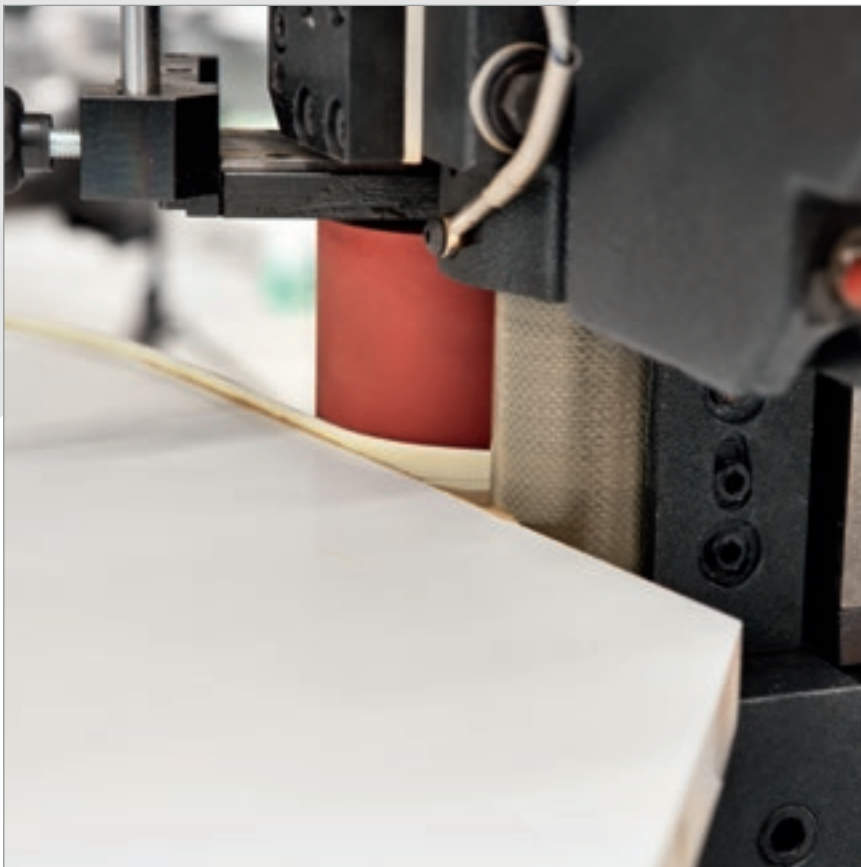


The cutting-edge **5-axis working group** supports the machining of pieces with complex shapes, ensuring quality and precision.



# Optimal edge grip

Optimal edge pressure quality during gluing on shaped panels thanks to the twinroller edge pressure system.



Similar to line edgebanding machines, the glue is applied directly onto the panel in order to ensure optimal adhesion quality. It supports the use of thin or transparent (3D) edges, as well as thicker and sturdier edges.



**Glue feed** occurs during the machining process via the granule feeding system within in integrated glue head. With the glue being stored in granules, only the required quantity is released for melting. This ensures optimal adhesion whilst preserving the glue characteristics.



# Firm, stable adhesion



**Biesse offers specific solutions for the use of polyurethane glues resistant to heat, humidity and water.**



Nordson pre-melter for high production needs. An exclusive direct injection system for non-stop machining operations at high speed and consumption levels.



Presser roller quick changeover kit with reduced diameter version. This ensures the correct pressure is delivered when switching from thick to thin edges as well as small radius curves.



Additional glue pots fitted with quick-release electrical system for PU granule adhesives.

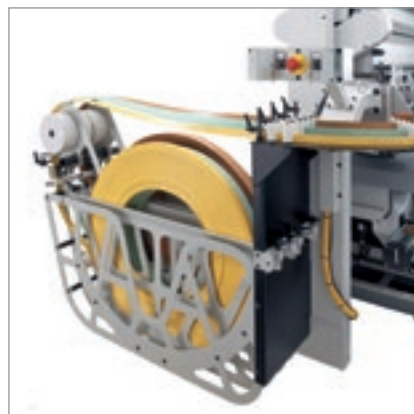
# Solutions that increase machine productivity



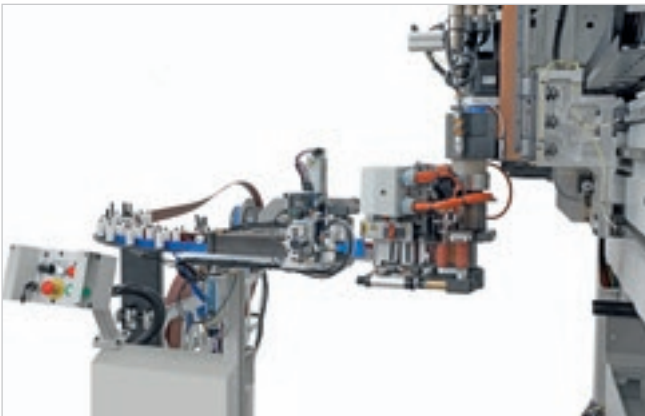
The automatic edging feeder, mounted on the X carriage, allows the user to change between thin or thicker edges during the same machining cycle.



Quick change of the coils with the banding material container positioned outside the safety fences.



Thin or thick edges, either pre-cut or coiled, with automatic or manual feeding.



**Y dual axis** to carry out tool changes and edge feeding during machining.

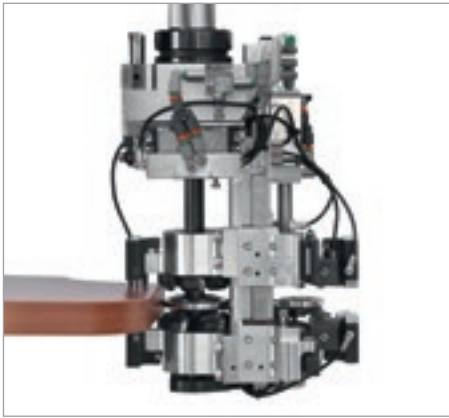


**Independent Z dual axis** to efficiently support different types of boring heads for 9, 24 or 30 drills or multi-function tools.



16 position tool magazine for edge-banding operations.

# Many solutions for perfect finishes



Edgebanding strip finishing aggregate with three functions. High feed and rotation speed, up to 14000 rpm. Particularly suitable for machining panels with a delicate or glossy surface, or with a protective film.

Finishing aggregates for edgebanding operations.



A complete range of aggregates for all machining operations.



Maximum adhesion between the edgbanding strip, glue and panel, and optimum finish.



Blower and anti-adhesive liquid dispensing aggregate.



Brusher aggregate with glue removal liquid dispenser.



Cold or hot air blower unit to brighten up the colour of the edgbanding strip.



Blower unit.



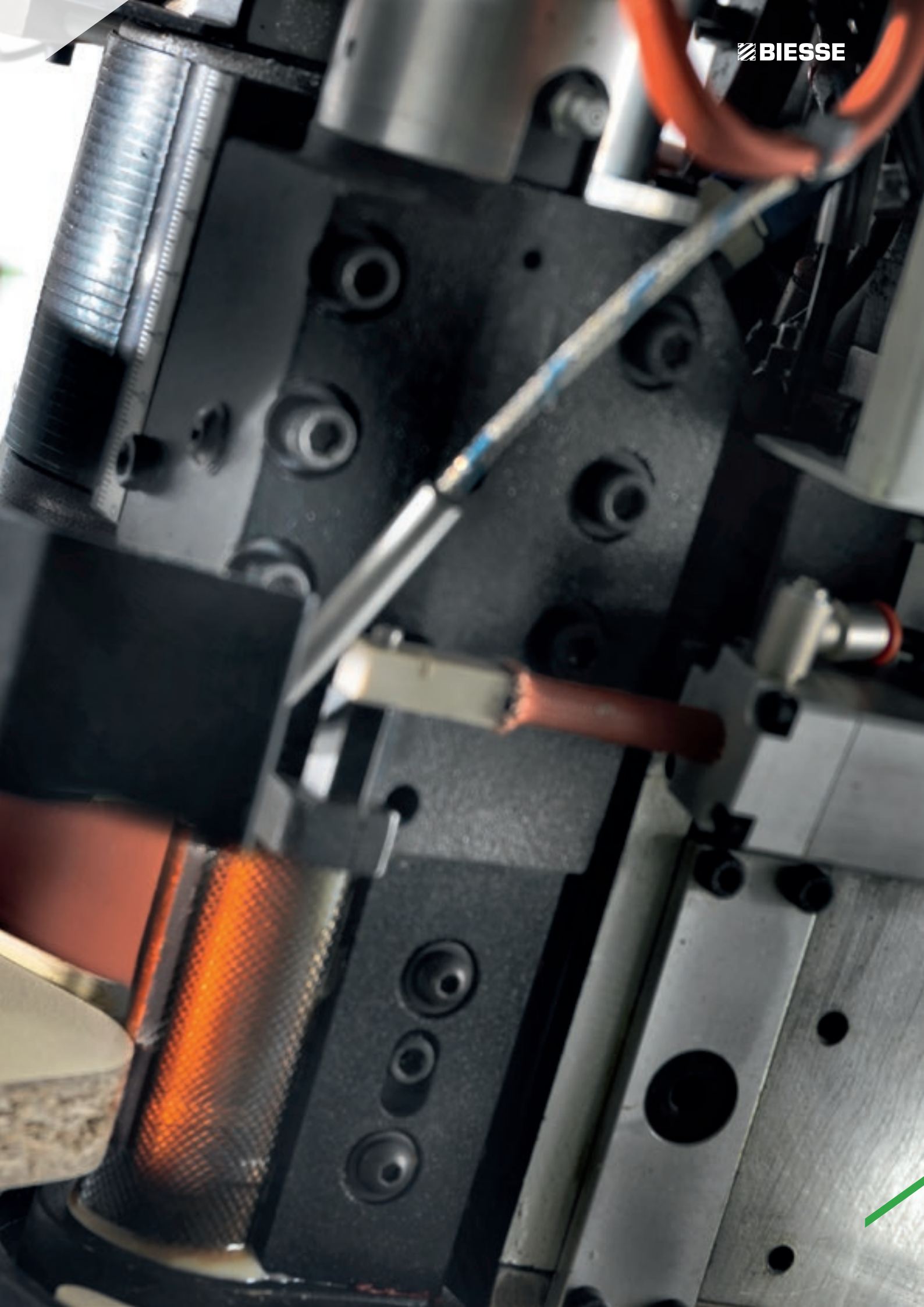
4-outlet blower unit for edgbanding strip finishing aggregates.

# Robust edgebanding

Edgebanding has always been based on applying glue directly to the panel; Biesse has followed this principle and applied it to straight edgebanding as well as shaped edgebanding performed by machining centres.

## ROVER EDGE

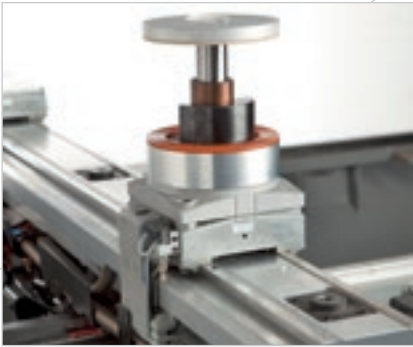
Maximum bonding, possibility of applying thin edges and 3D transparent edges, easy maintenance and panel cleaning during the machining cycle. A perfect combination of Biesse technology and Italian genius.



# Reduced tool changeover time

The Biesse work table is guaranteed to hold the work piece securely in place and ensures quick and easy tool changeover.

Over 1 500 processing centres sold with EPS.



**Hyperclamps** for rigid and precise locking.



## **SA (Set Up Assistance)**

The assisted set-up system, indicates to the operator where to position the panel, pods and rails to avoid potential collisions with the tool.



## **EPS (Electronic Positioning System)**

supports the automatic reconfiguration of the entire work area in less than 30 seconds. Positions work tables and carriages by means of separate motors, i.e. without engaging the operating section. The positioning of the area's pods and rails is performed during machining, whilst the machine is working on the opposite area.



The machine can house up to 28 aggregates and tools.



It is possible to switch from one machining operation to the next with no need for operator intervention for tool changes, thanks to the **large number of tools and aggregates** available in the tool magazine.



Quick and easy boring head change thanks to the exclusive **spindle snap-on coupling system**.



Facilitated access during tool change operations thanks to the **openable front cowl**.

# Ability to process large sizes

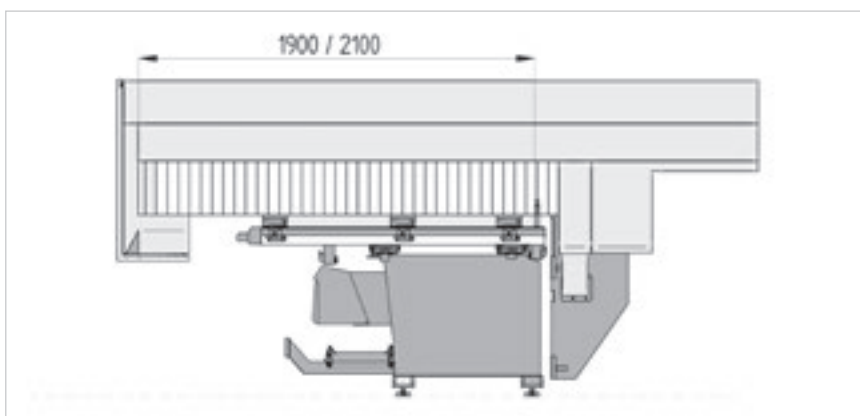
The open front cowl supports the loading of very-large sizes (up to 2100 mm in y axis) onto the machine, thus enabling the pre-sectioning phase to be omitted or machining operations to be performed for non-standard products.

The cross-head thickness tracer enables operators to measure panel dimensions with absolute precision.



Choose from a **comprehensive range of bed sizes** to facilitate the machining of all panel sizes.

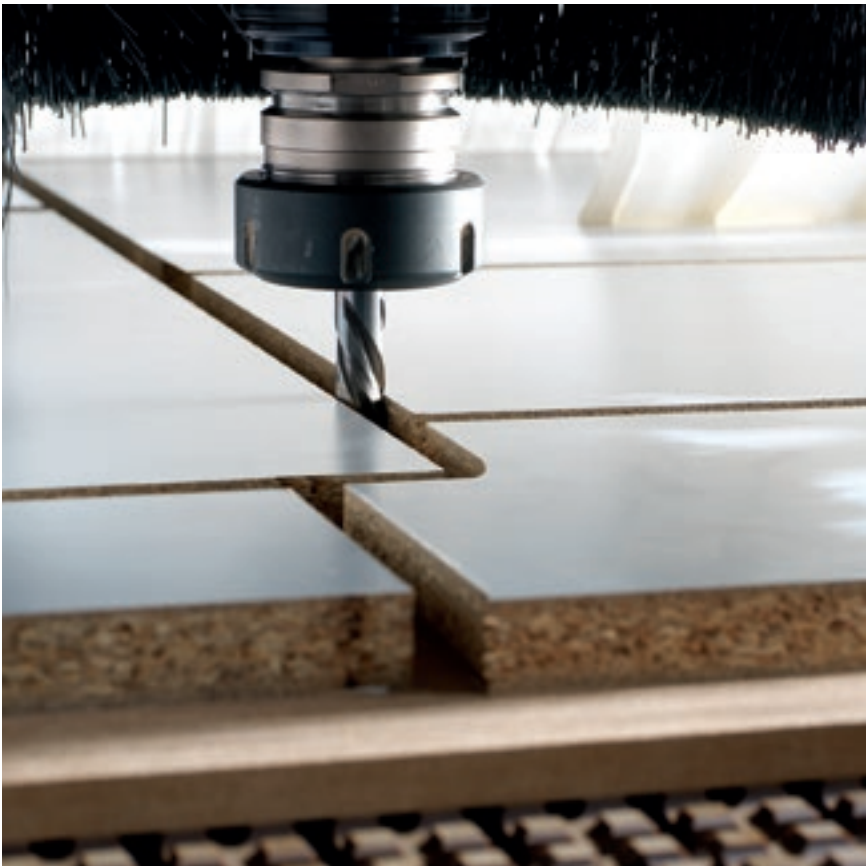
Rover A 1632  
Rover A 1643  
Rover A 1659



# Rover A EDGE

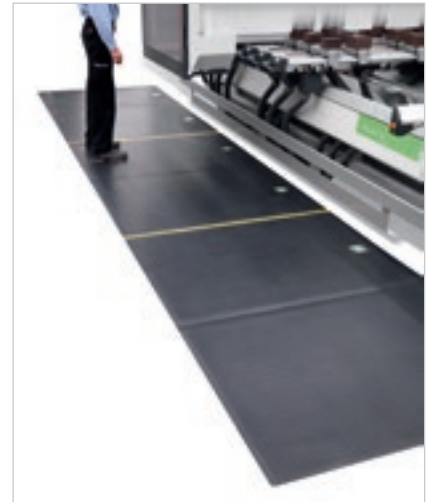


Two machines in one: the full functionality and quality of a true pantograph table are guaranteed by the **CFT (Convertible Flat Table)**, which supports the machining of thin panels, nesting and folding.



# Maximum operator safety

Safety and flexibility thanks to the new bumpers combined with photocells with no footprint and dynamic tandem loading.



Pressure-sensitive floor mats enable the machine to operate at constant maximum speed.



Side curtain guards to protect the working unit, which are movable to enable the machine to work at maximum speed in total safety.



Remote control panel for direct and immediate operator control.

Maximum visibility of machining operation. LED bar with 5 colours showing machine status in real time.



# Optimal cleaning of machined components and work area



**Motorised conveyor belt** for the removal of chips and waste.



NC controlled chip **deflector**.



6-position (for 4 axes) and 13-position (for 5-axes) adjustable suction hood with deflector (chip conveyor) managed via NC.

# The most advanced technology close at hand



## bPad

Wi-Fi control console for performing the key functions required during the preparation of the working area and the tooling of the working units and tool holder warehouses. The bPad is a valuable tool for supporting teleservicing, courtesy of the camera and bar code reader functions.

## bTouch

The new 21.5" touch screen which enables you to carry out all of the functions previously performed using the mouse and the keyboard, enhancing the direct interaction between the user and the device. Perfectly integrated with the bSuite 3.0 interface (and with later versions) and optimised for touch, this solution is incredibly simple, and makes the best possible use of the Biesse software functions installed on the machine.

**bPad and bTouch are an optional feature which can also be bought after purchasing the machine, in order to improve the functionality and application of the technology available.**



# Industry 4.0 ready



Industry 4.0 is the new industry frontier, based on digital technologies and on machines that speak to companies. The products driving this revolution can communicate and interact independently within production processes, which in turn are connected via intelligent networks.



Biesse is dedicated to transforming the factories owned by our customers into real-time factories that are ready to provide digital manufacturing opportunities. Intelligent machines and software become indispensable tools that facilitate the daily work of those who machine wood and other materials on a daily basis.

# High-tech becomes accessible and intuitive



**bSolid** is a 3D cad cam software program that supports the performance of any machining operation thanks to vertical modules designed for specific manufacturing processes.

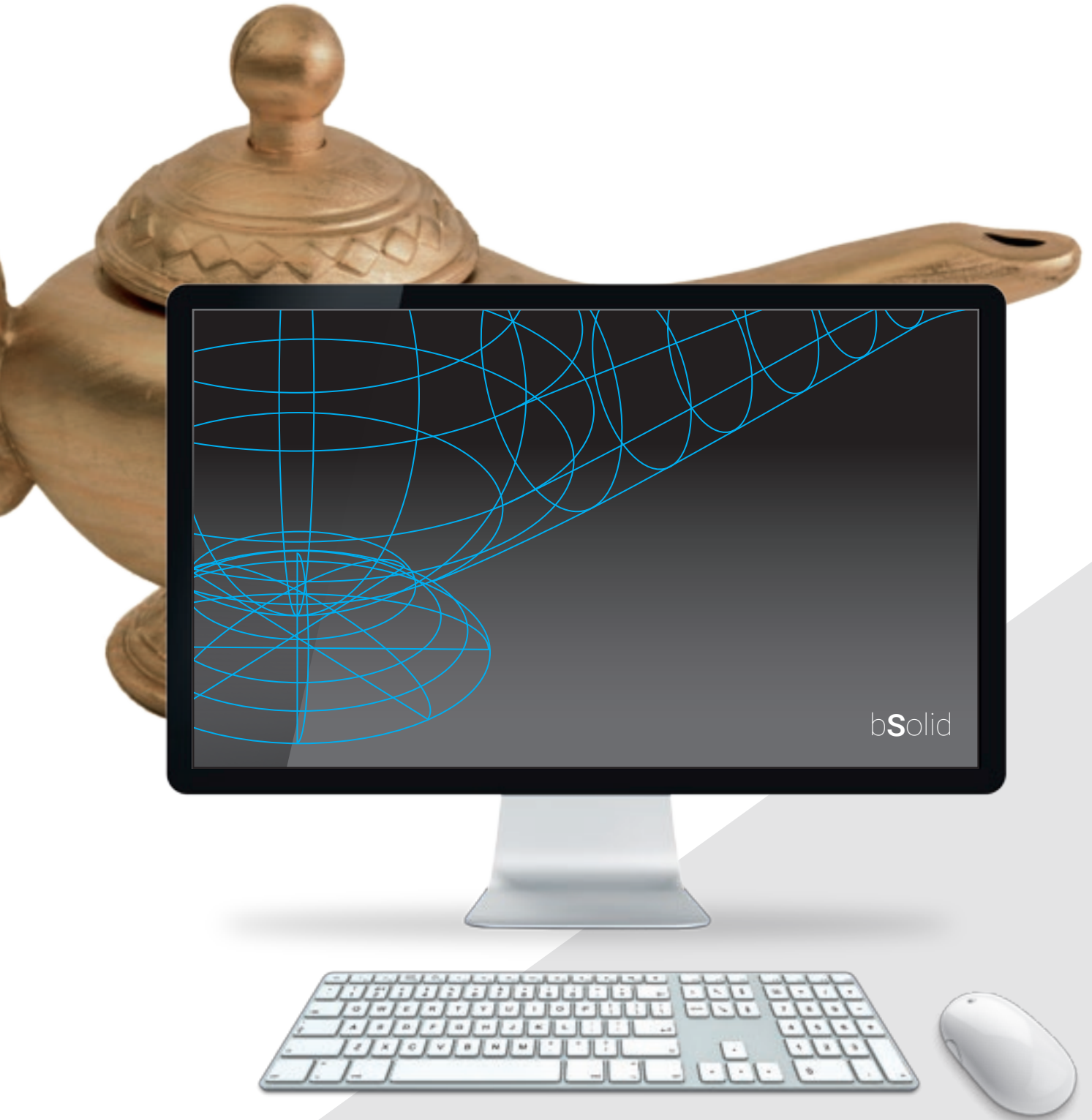
- ▶ **Planning in just a few clicks, with endless possibilities.**
- ▶ **Simulating machining operations to visualise the piece ahead of manufacturing and have some guidance for the planning phase.**
- ▶ **Virtual prototyping of the piece to avoid collisions and ensure optimal machine equipment.**

Watch the **bSolid** ad at: [youtube.com/biessegrou](https://youtube.com/biessegrou)





bSolid



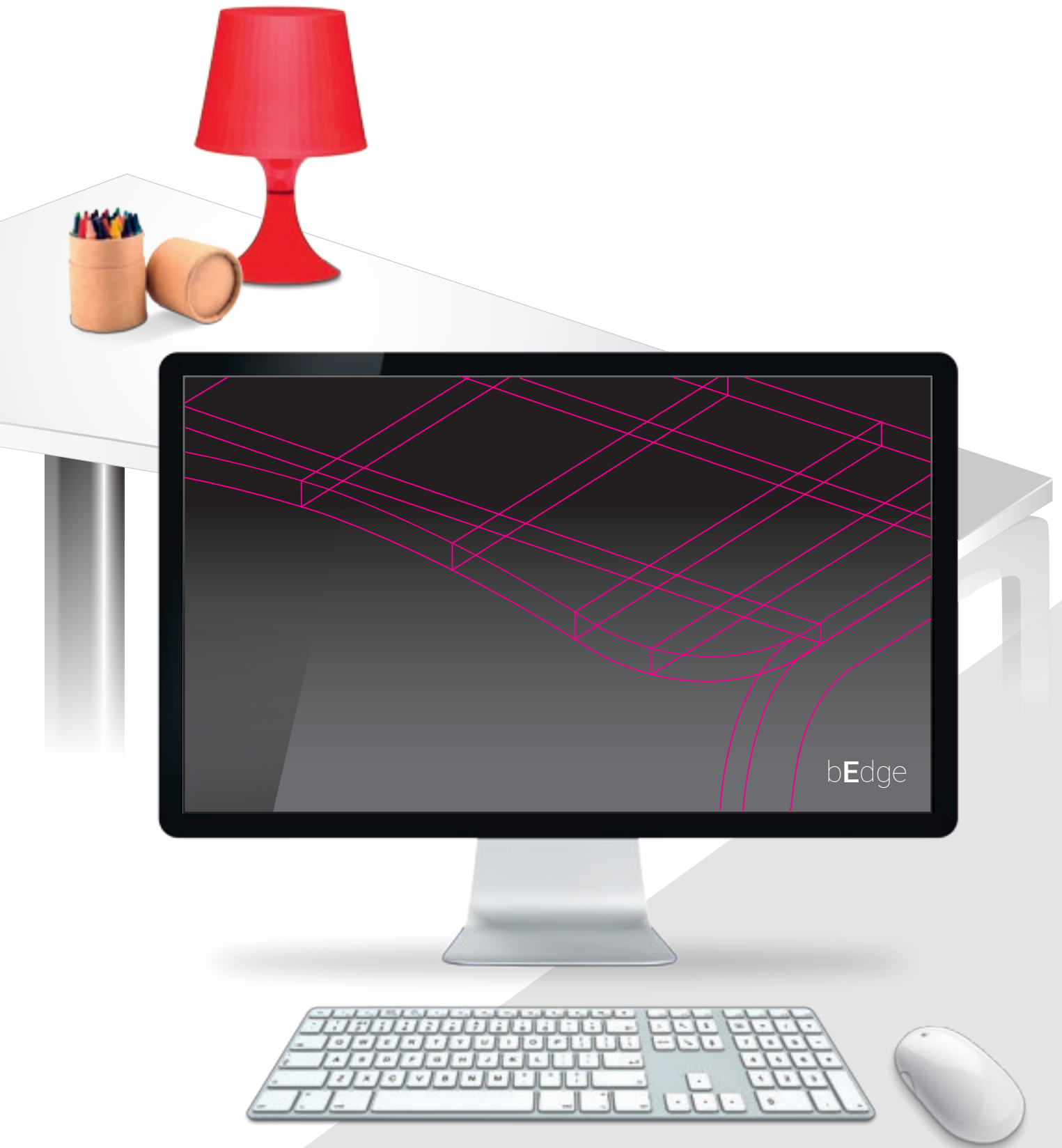
# Simplifying edgebanding programming



**bEdge** is a bSuite plug-in, seamlessly integrated for edgebanding planning. By utilising bSuite's design and simulation capabilities, bEdge makes edgebanding even the most complex shapes, very simple.

- ▶ **Automatic generation of the edgebanding operation sequence.**
- ▶ **Easy to understand and operate.**
- ▶ **Simplified management of edgebanding aggregates.**

bEdge



# Ideas take form and shape



**bCabinet** is the bSuite plugin for furniture design. It allows users to develop designs for a given space, and to quickly identify the individual elements that make it up.

- ▶ **With the new plugin, it is easy to draw both individual items of furniture and complete furnishings for a range of spaces.**
- ▶ **Offering optimal integration with bSuite, users can move from design to manufacturing in just a few clicks.**
- ▶ **Total control and maximum optimisation of the furniture design and creation process, to achieve the highest levels of efficiency.**

# bCabinet



bCabinet

# Service 4.0

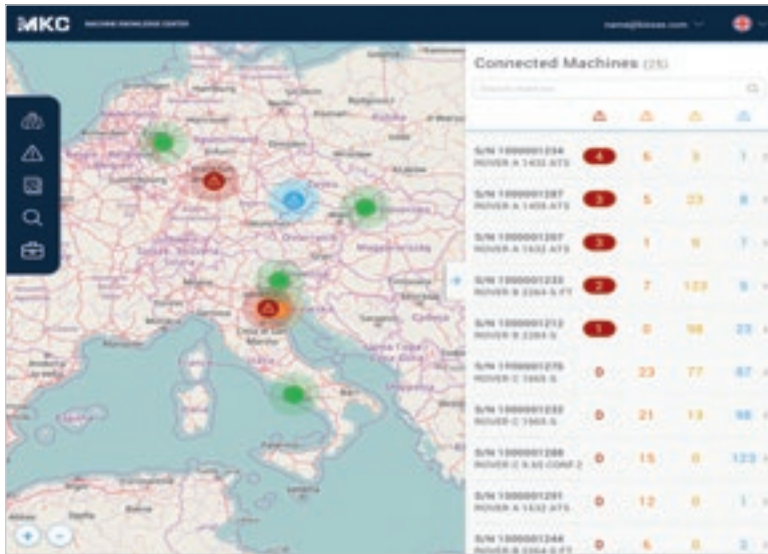
Biesse has developed a wide range of services to enhance machine performance and customer productivity, improving operational efficiency and lowering costs.

Sensors and devices fitted onto machines enable in-depth analyses to be carried out and viewed via control panels for mobile devices.



## CNC IoT Biesse Service Pack

- ▶ Priority service and extended coverage.
- ▶ Continuous connection with the Biesse control centre.
- ▶ Direct monitoring of machine performance through a dedicated app.
- ▶ Analysis of machine stoppages, remote diagnostics and fault prevention.
- ▶ On-site functional check and technical inspection within the warranty period.



Machine monitoring screen connected to the Biesse control centre.



Control screen displaying machine details.

### The direct connection with Biesse provides a range of significant benefits

- ▶ Optimisation of efficiency and of operating quality.
- ▶ Net reductions in repair times.
- ▶ Better accuracy in predicting machine stoppages.
- ▶ Remote software updates.

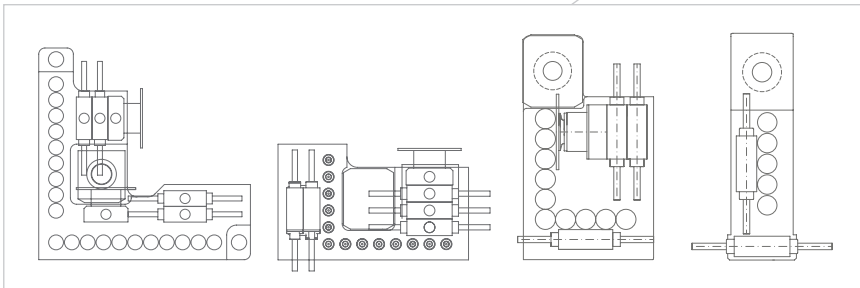
**60 minutes** maximum time taken to deal with an instance of machine stoppage.

**80%** reduction in the time required for the diagnostics process.

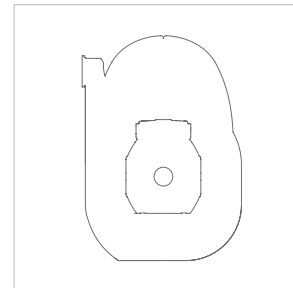
Overall reduction in downtime of **50%**.

# Working unit configuration

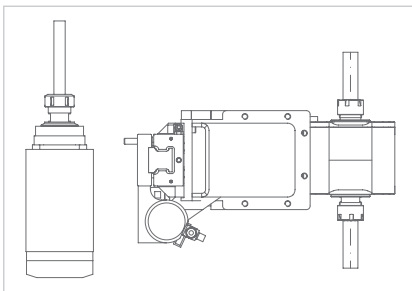
4-axis configuration.



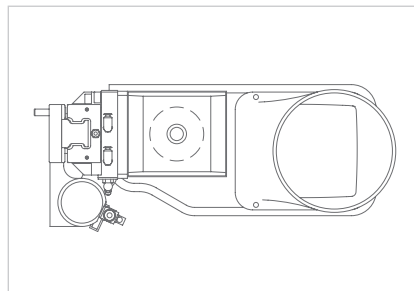
Available boring heads from 9 to 30 drill positions:  
BH30 2L - BH24 - BH17 L - BH9.



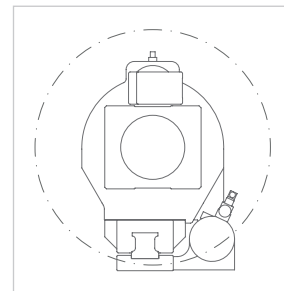
Milling unit with air or liquid cooling, ISO 30, HSK F63 and HSK E63 couplings and power from 13.2 to 19.2 kW.



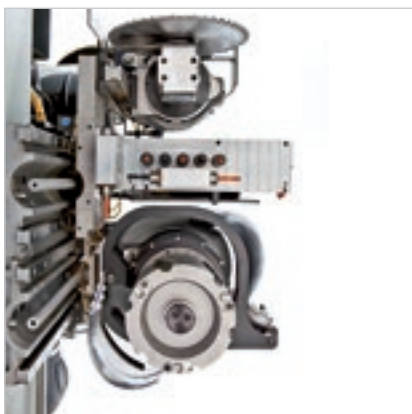
Horizontal 1 or 2 outlet milling units.



6 kW vertical milling unit.

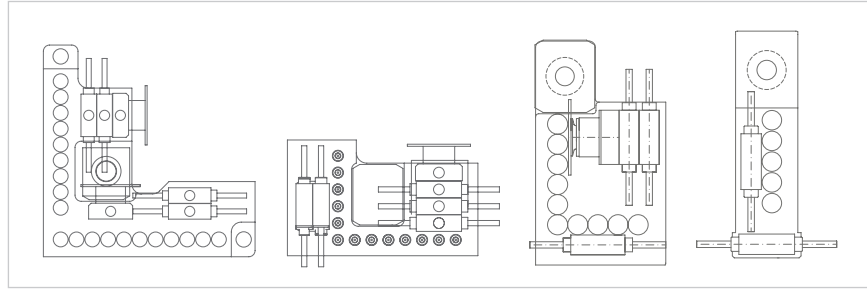
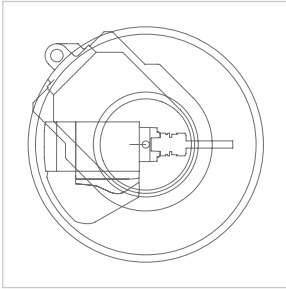


Multi-function, with 360° rotation.



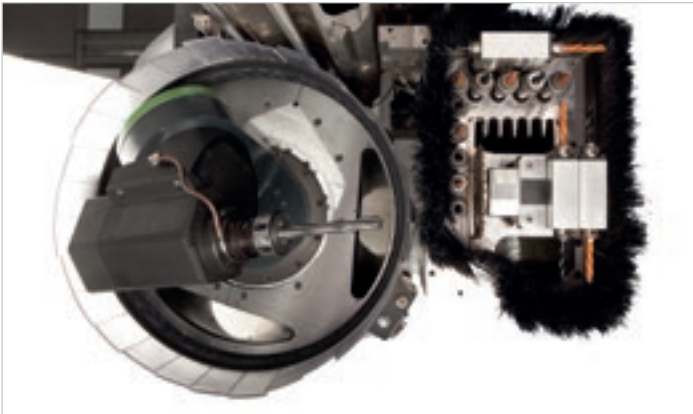


# 5-axis configuration.



5 axes 13 kW with 24000 rpm or 16 kW with 18000 rpm.

Available boring heads from 9 to 30 spindles: BH30 2L - BH24 - BH17 L - BH9.



# Loading and unloading solutions

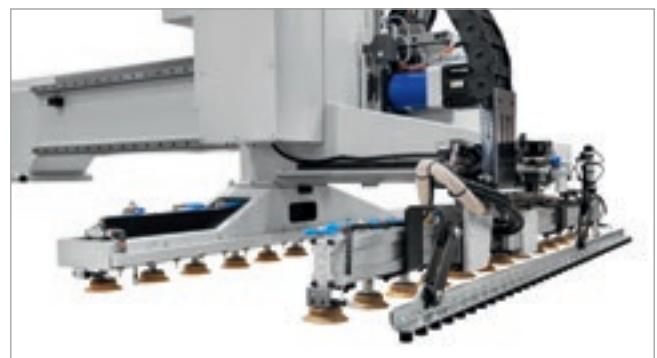
## Automated cell for machining a batch of panels or doors.

**Synchro** is a handling device with 4 controlled axes which are actioned by the Rover machining centre. It collects the panels to be machined from a stack, positions them in reference to a point of origin provided by the machining centre and, once the machining operation is complete, deposits them in an area designed to accommodate the stack of machined panels. The working cycle is executed in automatic mode until the entire batch to be processed is complete.



### Device for the removal of porous panels or those with special finishes

It increases the reliability and the repeatability of the automatic cell operation cycle, even when machining porous materials or those with special finishes, which are often supplied with a protective film.



### Panel pick-up device with automatic positioning of the suction cup holder rods

In accordance with the size of the panel to be picked up:

- ▶ no operator intervention is required to attach or remove the suction cup holder rods
- ▶ Idle time during format change operations is dramatically reduced
- ▶ the risk of collisions caused by incorrect tooling operations is reduced.



Synchro can also machine stacks of different-sized panels, thanks to stack reference device and the panel pre-alignment cycle, which is performed while the machine is running, while the Rover machining centre processes the previous panel.

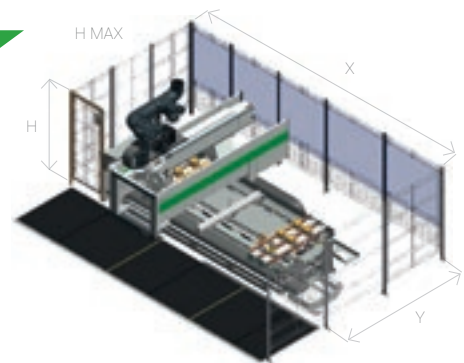
Synchro can be positioned to the left or right of the machining centre.  
Flow of materials that are consistent with the customer facility production cycle.

- ▶ Prevents damage caused by manual handling of materials;
- ▶ extremely simple user interface, integrated into the machining centre programming functions.

# Technical specifications

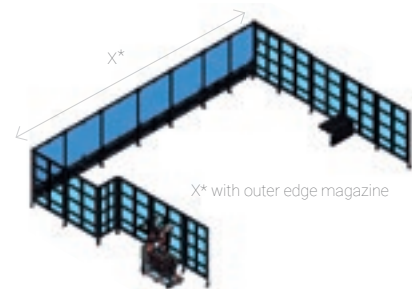
## Working table

		X1 milling	Y1 milling	X2 edgebanding	Y2 edgebanding	Z1 milling (H74 modules)	Z2 milling (H29 modules)
Rover A Edge 1632	mm	3228	1580	2300	1500	200	245
	inches	127,1	62,2	90,6	59,1	7,9	9,6
Rover A Edge 1643	mm	4320	1580	3300	1500	200	245
	inches	170,1	62,2	129,9	59,1	7,9	9,6
Rover A Edge 1659	mm	5920	1580	4900	1500	200	245
	inches	233,1	62,2	192,9	59,1	7,9	9,6



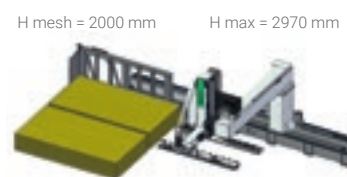
## Foot print

CE	Loadable panel	X	X with outer edge magazine	Y	H	H max 4 axis	H max 5 axis
Rover A Edge 1632	belt operated 2100	7045	7884	5387	2000	2400	2700
	with bumper and photocells 2100	7045	7884	5437	2000	2400	2700
Rover A Edge 1643	belt operated 2100	8078	8917	5387	2000	2400	2700
	with bumper and photocells 2100	8078	8917	5437	2000	2400	2700
Rover A Edge 1659	belt operated 2100	9681	10520	5387	2000	2400	2700
	with bumper and photocells 2100	9681	10520	5437	2000	2400	2700



## Working table Syncro

		Min	Max
Length	mm	500	2500
Width	mm	200	1350
Thickness	mm	16	60
Weight	Kg	-	100
Useful height of stack	mm	-	1000
Height of stack from ground (including 145 mm Europallet)	mm	-	1145



X/Y/Z axis speed	m/min	80 / 60 / 20
Vector speed	m/min	100

The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

A weighted sound pressure level (LpA) during machining for operator workstation on vane-pump machine Lpa=79dB(A) Lwa=96dB(A) A-weighted sound-pressure level (LpA) for operator workstation and sound power level (LwA) during machining on cam-pump machine Lwa=83dB(A) Lwa=100dB(A) K measurement uncertainty dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

# Biesse CNC Edgbanding Range

## CNC - EDGEBANDING



ROVER A EDGE



ROVER B EDGE



ROVER C EDGE



ROVER EDGE LINE

# Made **With** Biesse

## The Biesse Group's technology supports the manufacturing efficiency of the world's largest furniture manufacturers

"We were looking for a solution that would be so innovative that it would satisfy all our needs at the same time," states the manufacturing manager of one of the world's largest furniture manufacturers.

"Most of our production was already made using numerical control tools, but now everything that we produce is made with these technologies.

This is why it was necessary to increase our production capacity. Biesse offered

a solution that we liked very much, a veritable range of processing centres and automatic magazines. Innovative, fascinating and decidedly powerful.

With Biesse we defined a "turnkey" solution to be planned, built, tested, installed, inspected and commissioned within a precisely defined schedule".

*Source: excerpt from an interview to the manufacturing manager of one of the world's largest furniture manufacturers.*



# Biesse Group

In / 1 industrial group, 4 divisions  
and 9 production sites.

How / € 14 million p/a in R&D  
and 200 patents registered.

Where / 37 branches and 300  
agents/selected dealers.

With / Customers in 120 countries (manufacturers of furniture,  
design items and door/window frames, producers of ele-  
ments for the building, nautical and aerospace industries).

We / 3,800 employees throughout the world.

**Biesse Group** is a multinational leader in the technology for processing wood, glass, stone, plastic and metal.

Founded in Pesaro in 1969, by Giancarlo Selci, the company has been listed on the STAR sector of Borsa Italiana since June 2001 and is currently a constituent of the FTSE IT Mid Cap index.

 **BIESSEGROUP**

 **BIESSE**

 **INTERMAC**

 **DIAMUT**

**MECHATRONICS**

