

Rover B

NC processing centre



When competitiveness
means reliable
manufacturing

B
Prover

Made In Biesse

The market demands

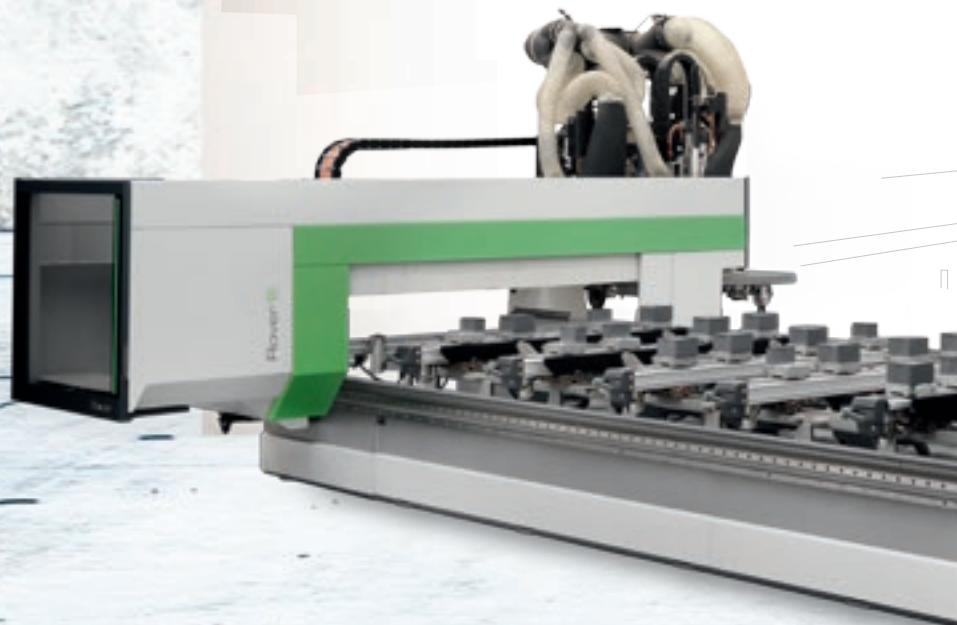
a change in manufacturing processes, which will enable companies to **accept the largest possible number of orders**. This is coupled with the need to maintain high quality standards whilst offering product customisation **with quick and defined delivery times**, as well as responding to the needs of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

Biesse meets these requirements

with **technological solutions** that enhance and support technical expertise as well as process and material knowledge. **Rover B** is the machining centre designed for both skilled craftsmen and large-scale industry. Configurable and high-performance, it ensures a quality finish and is reliable under all working conditions.

- ▶ **5 customisable configurations for the widest range of production needs.**
- ▶ **Unique technological solutions for optimal performance.**
- ▶ **Reduced tool changeover time.**
- ▶ **Maximum working precision maintained over time.**
- ▶ **Full workability with large panels.**

Rapid return
on investment



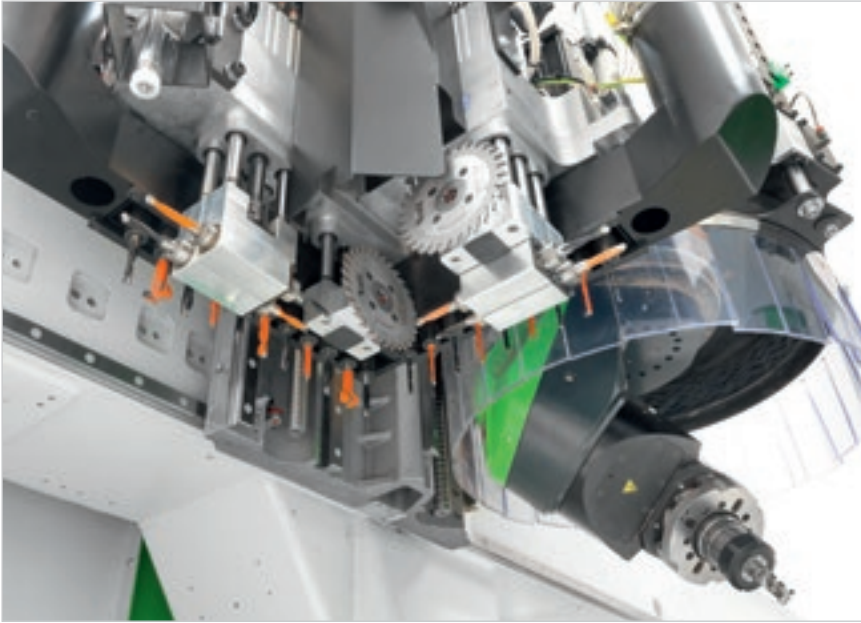
Rover B
NC processing centre



Customisable configurations in accordance with different production needs

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





The compact size of the fifth axis combined with the high drilling capacity allows users to perform operations in all production ranges, for processing simple and more complex structures.



This configuration is designed for optimum productivity. Simultaneous machining of two pieces in milling and boring is possible. Tool change can occur while the machine is running.



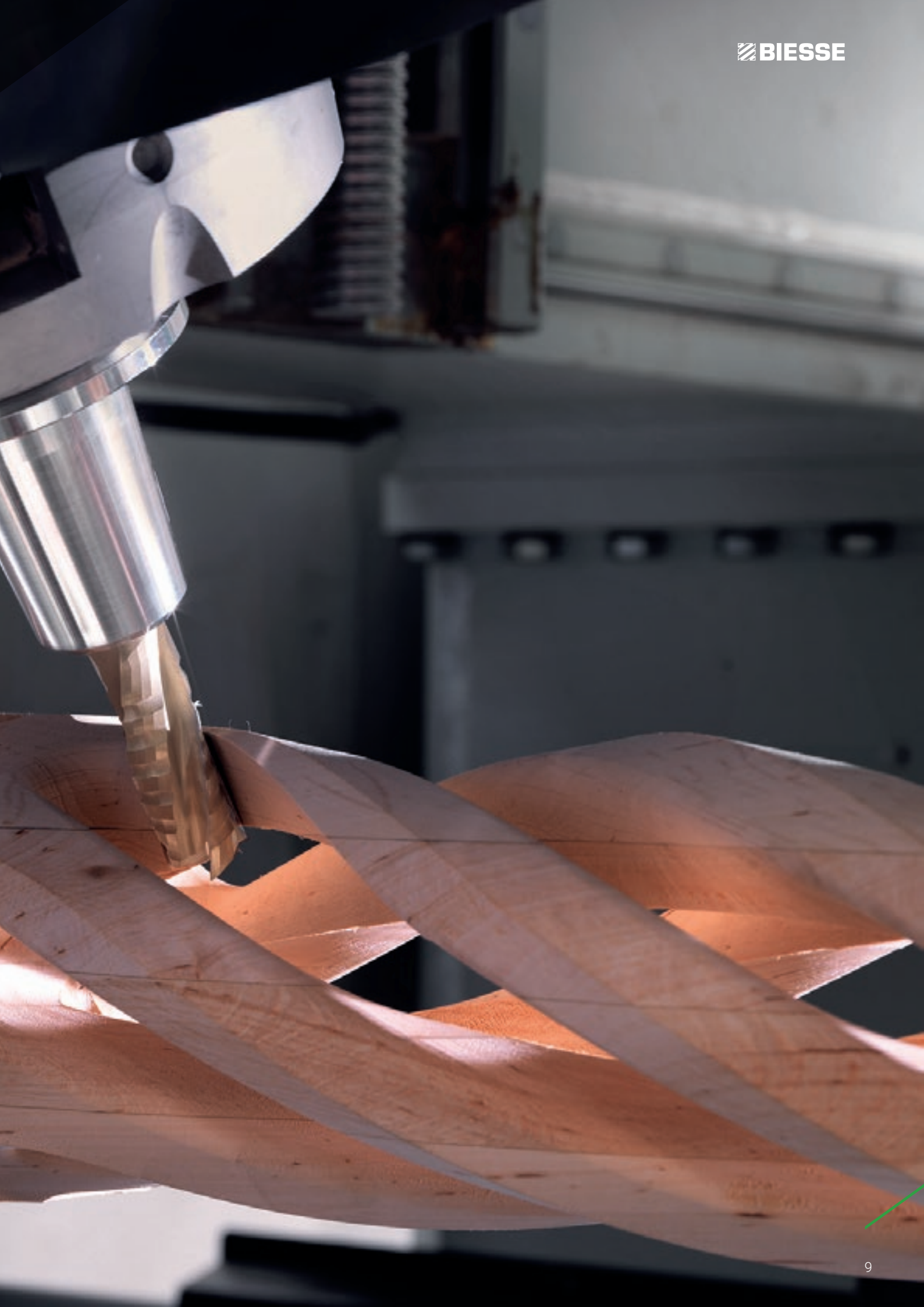
The combination of 5 axis together with 4 axis electrospindles allows for flexible production without sacrificing high rates of productivity.

User-friendly technology

The 5-axis operating head, equipped with 13 kW HSD spindle and with 360° continuous rotation on the vertical and horizontal axes, enables the machining of complex-shapes ensuring quality, precision and absolute long term reliability.

5 AXES

The high technological content of the world's most popular machining centres, meets the requirements of wood industry professionals. A perfect combination of Biesse innovation and Italian genius.



Unique technological solutions for optimal performance

For an accessible investment, Rover B boasts technologies which are unique to the market.

2 Y-axes for maximum productivity in all machining operations. It is possible to machine two panels at the same time, and to change the tool while the machine is still running, ensuring that there is always a tool working on the product.



Technological solutions designed to meet the needs of flexible production without sacrificing productivity. **Independent Y axes** to perform tool changes on board the X carriage, using the maximum number of tools available on the machine without affecting cycle timings.



Reduced cycle times due to the ability to carry out **tool changes while the machine is still running**, both on the chain magazine and on the revolvers.



New 16.5kW **5-axis head** designed for solid wood machining. Increased power and rigidity for larger tools and heavier removals.



The NC controlled **multi-function unit** can be infinitely positioned on a 360 (degree) rotation. It can also be used to house aggregates for specific machining operations such as pocketing for locks, hinges, deep horizontal holes and edge-trimming.



Horizontal motor with one or two outlets for the routing of locks and horizontal machining operations.



Fixed vertical motor dedicated to additional milling machining operations (slot, anti-splintering).

Reduced tool changeover time

The Biesse work table is guaranteed to hold the work piece securely and ensures quick and easy changeover of pod and clamps.

Over 1,500 processing centres with EPS sold worldwide.



Hyperclamp for rigid and precise locking.



Pneumatic **Uniclamp**.



SA (Set Up Assistance)

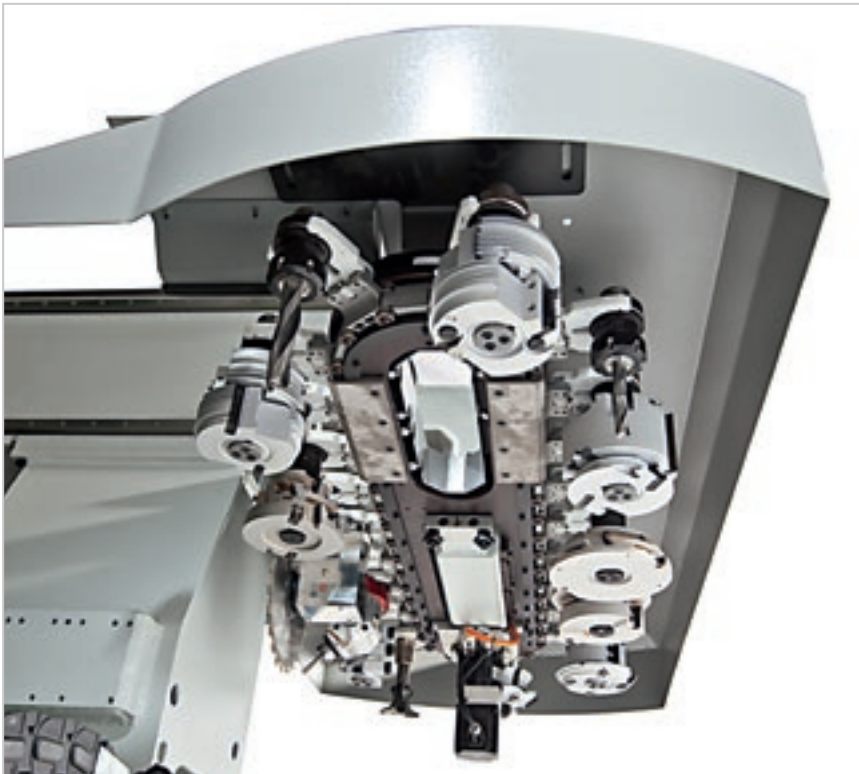
The assisted set-up system, indicates to the operator where to position the panel, pods and rails to avoid potential collisions with the tool.



EPS (Electronic Positioning System)

allows for rapid automatic re-configuration of the entire work area. Positions work tables and pods by means of separate motors, i.e. without engaging the operating section. The positioning of the pod and rail is performed during machining, whilst the machine is working on the opposite area.

The machine can house up to 91 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.



The automatic pick up station allows easy loading and changing of tools in the tool magazines.



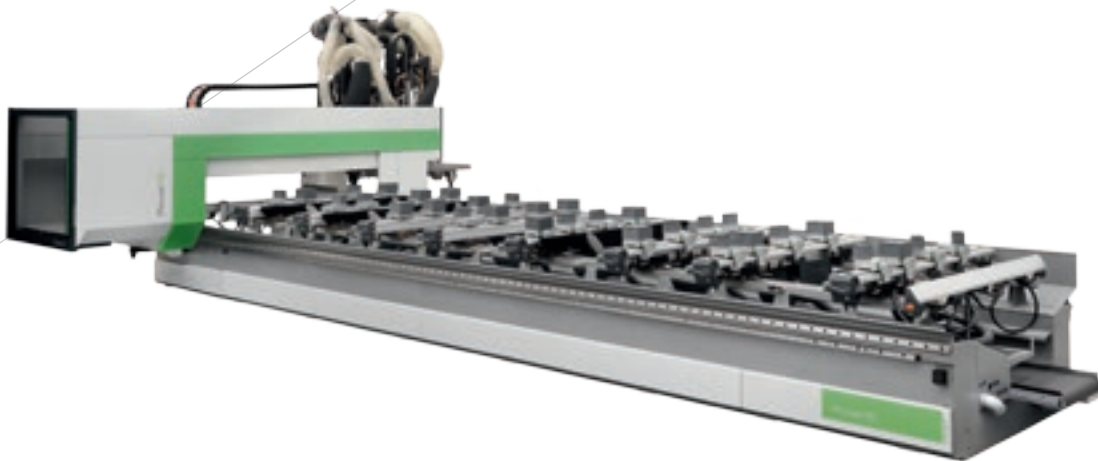
Easy access to the unit through the sliding door.

Full workability with large panels

The rigid structure of the machine and the width of the Y axis allows users to machine panel widths of up to 2230 mm with all available tools.



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



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 working precision maintained over time

The Gantry structure has been designed to improve the precision and reliability of machining operations.



Rigidity and absence of vibration ensures constant and reliable quality of the finished product.



Automated lubrication ensures the continuous lubrication of the machine's main moving parts without the need for operator intervention.



The **double X-axis motorisation** supports high speeds and accelerations whilst ensuring high precision and quality of the finished product.



Practical design

The transparent polycarbonate reinforced protection door is designed to guarantee maximum visibility for the operator. Fitted with 5-colour LEDs indicating machine status, it ensures that processing phases can be easily and safely monitored.

BIESSE IDENTITY

An innovative yet simple design is the hallmark of Biesse's distinctive identity. The perfect combination of Italian genius and taste.

ROVER

Optimal cleaning of machined components and work area

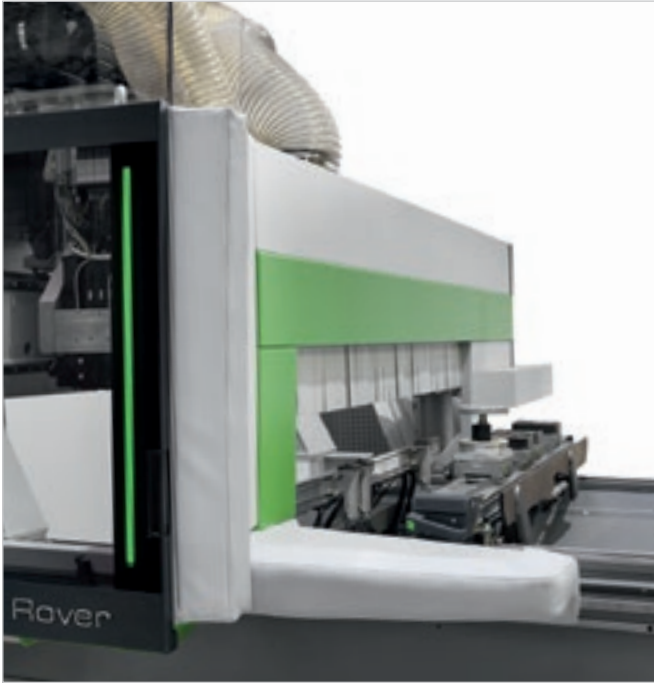


Motorised conveyor belt for the removal of chips and waste.

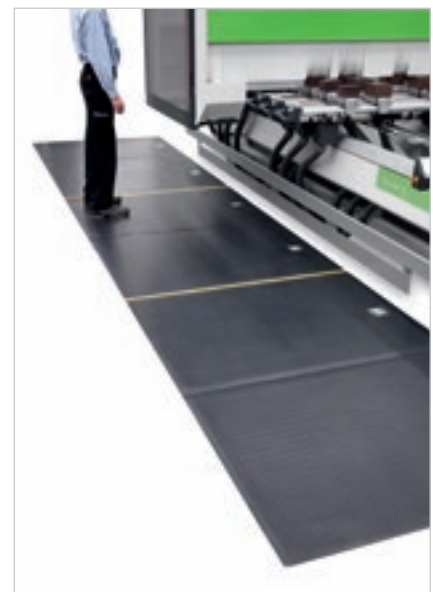


6-position (for 4 axes) and 13-position (for 5-axes) adjustable suction hood with deflector (chip conveyor) managed via NC.

Loading and unloading solutions



Biesse can provide bespoke solutions which are tailored to meet your specific productivity, automation and space requirements.



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

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



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.

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.

Loading and unloading solutions

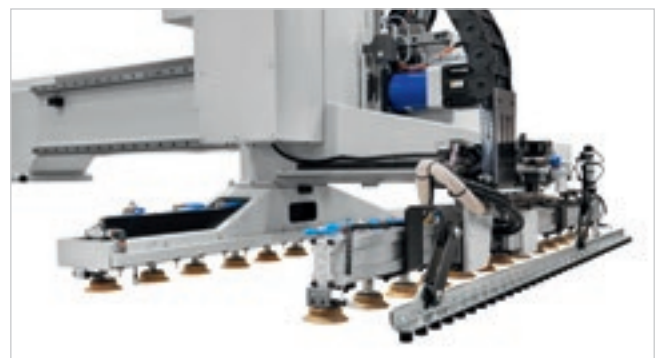
Automated cell for machining a batch of panels or doors.

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.

Service 4.0

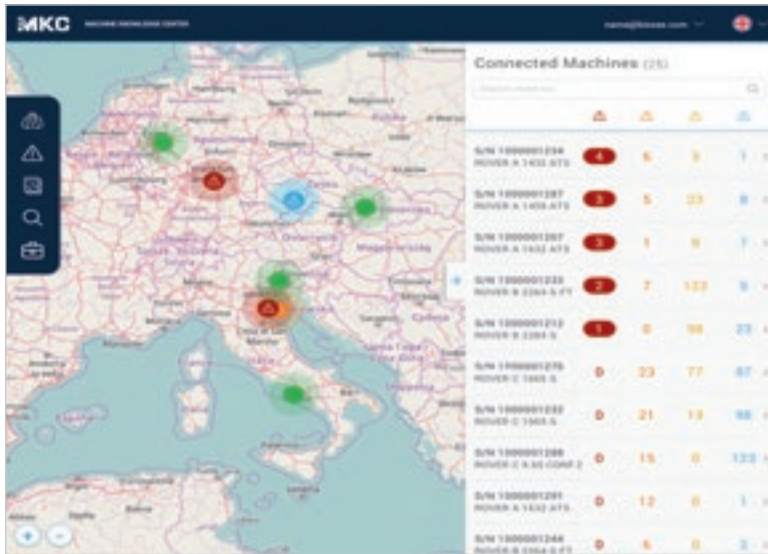
Biesse has developed a wide range of services to enhance machine performance and customer productivity, improving operational efficiency and lowering costs.

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%**.

High-tech becomes accessible and intuitive



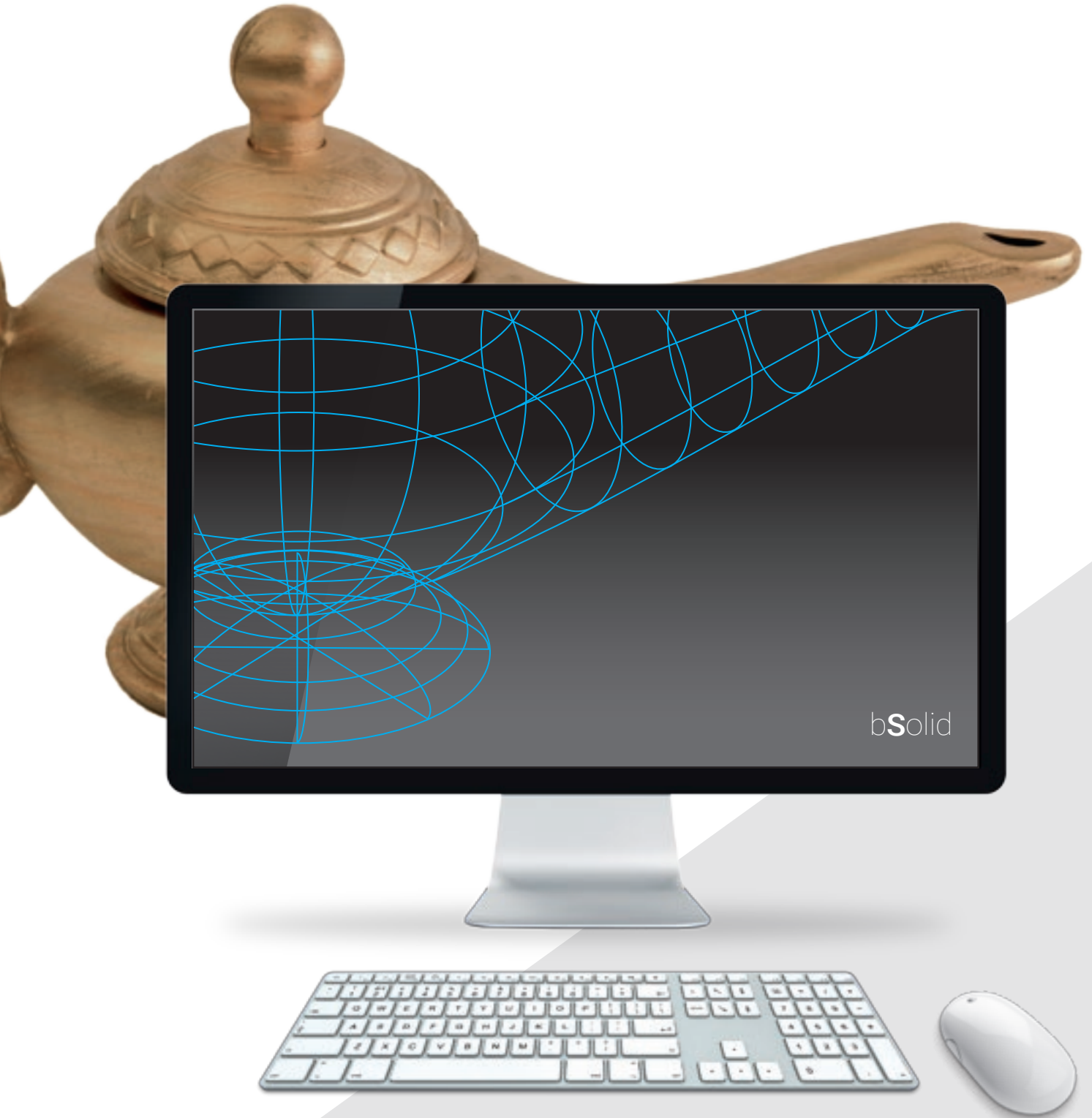
bSolid is a 3D cad cam software program that supports the performance of any machining operation thanks to vertical modules designed for specific manufacturing processes.

- ▶ **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



bSolid



Reduced time and waste

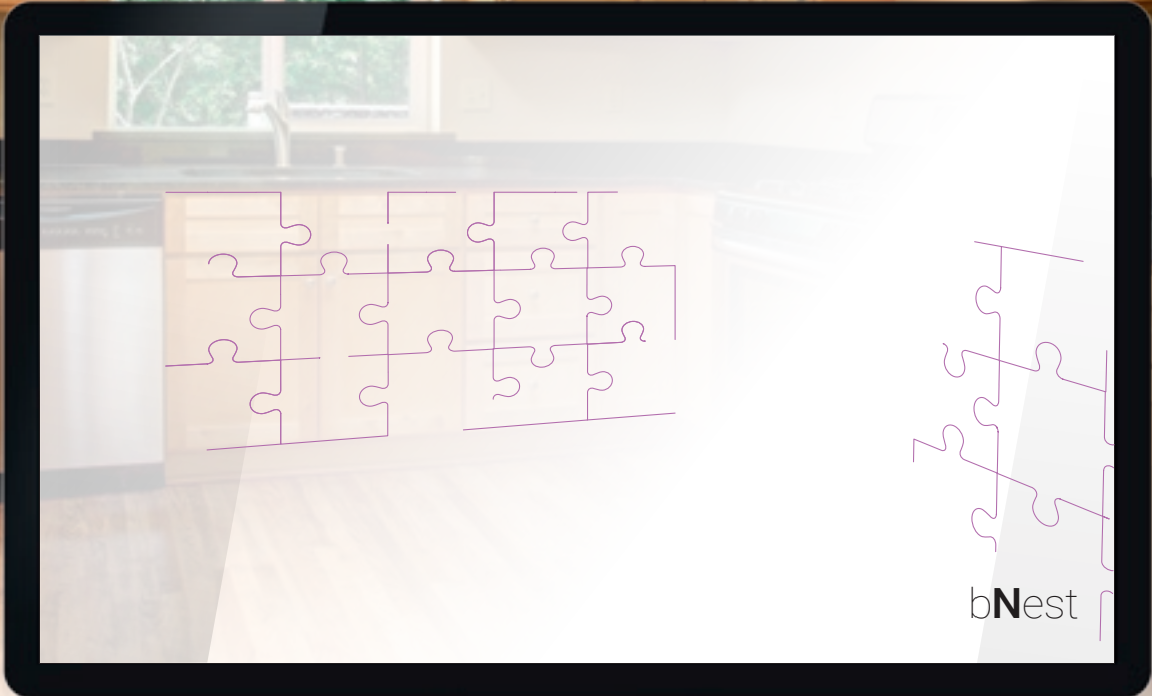


bNest is the bSuite plugin specifically for nesting operations. It allows you to organise your nesting projects in a simple way, reducing the material waste and machining times.

- ▶ **Reduced production costs.**
- ▶ **Simplified work for the operator.**
- ▶ **Integration with company software.**



bNest



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

Exceptional finish quality

Biesse uses the same high-tech components for all machines in the Rover range.



New **C Torque axis**: more precise, quicker and more rigid.

Electrospindles, boring heads and aggregates are designed and manufactured for Biesse by **HSD**, the global leader in the mechatronics sector.

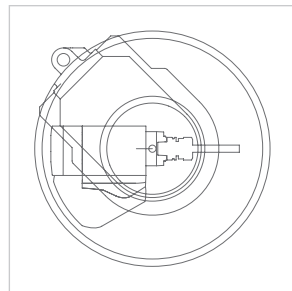
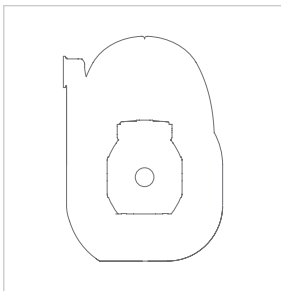


The new **BH30 2L boring head** is equipped with automatic lubrication and a metal dust extraction cover which, together with liquid cooling guarantees maximum precision and long term reliability.

A complete range of aggregates for all machining types.

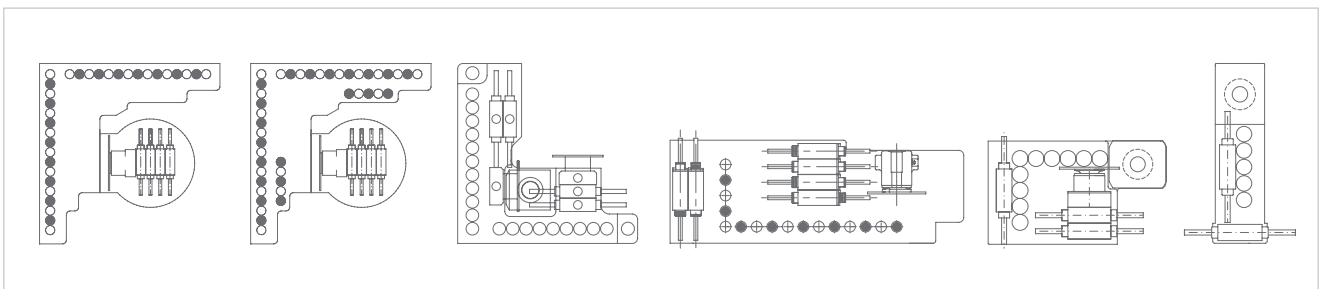


Working unit configuration

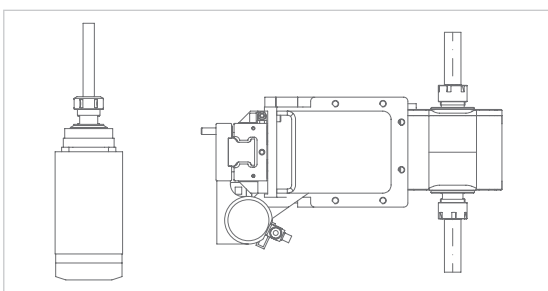


Electrospindle with air or liquid cooling and power options of up to 19.2 kW.

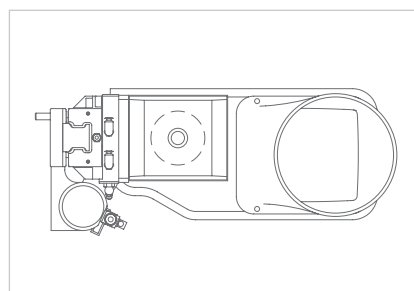
5-axis head with 13 to 16.5 kW power options.



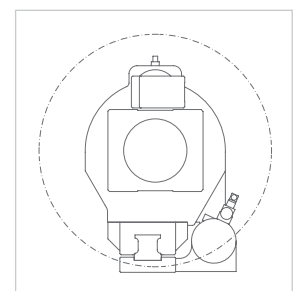
Available boring heads from 9 to 42 tools: BHC 32 – BHC42 - BH30 2L - BH29 - BH17 - BH9.



1 or 2 outlet horizontal milling units.

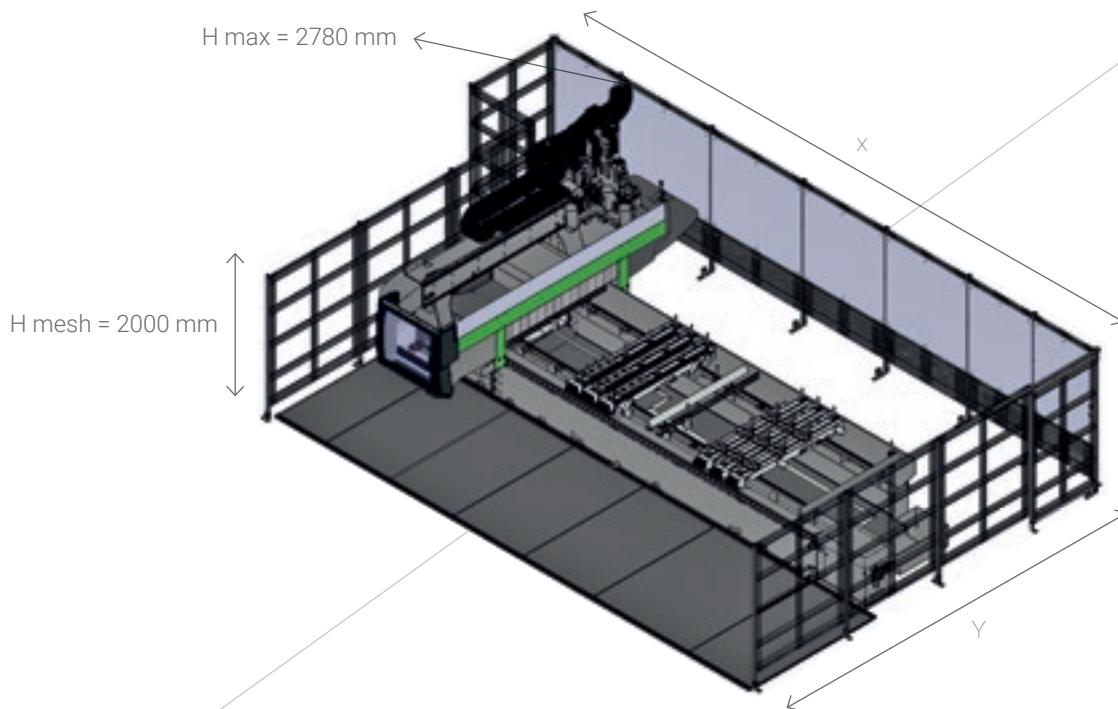


6 kW vertical milling unit.



Multi-function, with 360° rotation.

Technical specifications



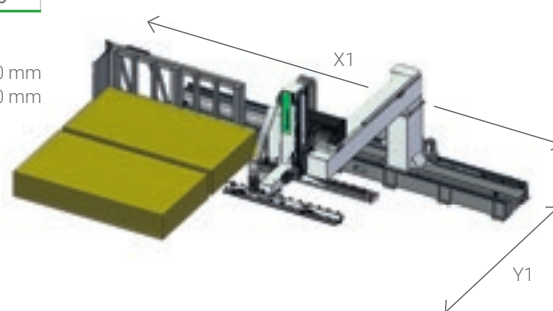
Working table

	ROVER B		SYNCHRO		CELL		
	Mats	Bumper	X1	Y1	X + X1		
Working table CE (mm)	X	Y	X	Y	X1	Y1	X + X1
Rover B 16.38 conf. 1 - 3	7881	5657	8181	5647	4170	5215	12051
Rover B 16.50 conf. 1 - 3	9094	5657	9364	5647	4170	5215	13264
Rover B 16.67 conf. 1 - 3	10757	5657	11057	5647	4170	5215	14927
Rover B 16.84 conf. 1 - 3	12480	5657	12720	5647	4170	5215	16650
Rover B 19.38 conf. 1 - 3	7881	5857	8181	5797	4170	5215	12051
Rover B 19.50 conf. 1 - 3	9094	5857	9364	5797	4170	5215	13264
Rover B 19.67 conf. 1 - 3	10757	5857	11057	5797	4170	5215	14927
Rover B 19.84 conf. 1, 1 - 3	12480	5857	12720	5797	4170	5215	16650
Rover B 22.38 conf. 1, 1 - 3	7881	6740	8181	6680	4170	5215	12051
Rover B 22.50 conf. 1 - 3	9094	6740	9364	6680	4170	5215	13264
Rover B 22.67 conf. 1 - 3	10757	6740	11057	6680	4170	5215	14927
Rover B 22.84 conf. 1 - 3	12480	6740	12720	6680	4170	5215	16650
Rover B 16.38 conf. 4 - 5	7941	6210	8241	6200	4170	5215	12111
Rover B 16.50 conf. 4 - 5	9154	6210	9424	6200	4170	5215	13324
Rover B 16.67 conf. 4 - 5	10817	6210	11117	6200	4170	5215	14987
Rover B 16.84 conf. 4 - 5	12480	6210	12720	6200	4170	5215	16650
Rover B 19.38 conf. 4 - 5	7941	6410	8241	6350	4170	5215	12111
Rover B 19.50 conf. 4 - 5	9154	6410	9424	6350	4170	5215	13324
Rover B 19.67 conf. 4 - 5	10817	6410	11117	6350	4170	5215	14987
Rover B 19.84 conf. 4 - 5	12480	6410	12720	6350	4170	5215	16650
Rover B 22.38 conf. 4 - 5	7881	6740	8181	6680	4170	5215	12051
Rover B 22.50 conf. 4 - 5	9094	6740	9364	6680	4170	5215	13264
Rover B 22.67 conf. 4 - 5	10757	6740	11057	6680	4170	5215	14927
Rover B 22.84 conf. 4 - 5	12480	6740	12720	6680	4170	5215	16650

Foot print

Working table NON CE (mm)	Mats		Bumper	
	X	Y	X	Y
Rover B 16.38 conf. 1 - 2 - 3	7881	5457	8181	5497
Rover B 16.50 conf. 1 - 2 - 3	9094	5457	9364	5497
Rover B 16.67 conf. 1 - 2 - 3	10757	5457	11057	5497
Rover B 19.38 conf. 1 - 2 - 3	7881	5657	8181	5647
Rover B 19.50 conf. 1 - 2 - 3	9094	5657	9364	5647
Rover B 19.67 conf. 1 - 2 - 3	10757	5657	11057	5647
Rover B 16.38 conf. 4 - 5	7941	6010	8241	6050
Rover B 16.50 conf. 4 - 5	9154	6010	9424	6050
Rover B 16.67 conf. 4 - 5	10817	6210	11117	6050
Rover B 19.38 conf. 4 - 5	7941	6210	8241	6200
Rover B 19.50 conf. 4 - 5	9154	6210	9424	6200
Rover B 19.67 conf. 4 - 5	10817	6210	11117	6200

H max = 2970 mm
H mesh = 2000 mm



Working table Rover B

Working table CE (mm)	X	Y	Z
Rover B 16.38 conf. 1 - 3	3855	1650	245 / 290
Rover B 16.50 conf. 1 - 3	5055	1650	245 / 290
Rover B 16.67 conf. 1 - 3	6735	1650	245 / 290
Rover B 16.84 conf. 1 - 3	8415	1650	245 / 290
Rover B 19.38 conf. 1 - 3	3855	1930	245 / 290
Rover B 19.50 conf. 1 - 3	5055	1930	245 / 290
Rover B 19.67 conf. 1 - 3	6735	1930	245 / 290
Rover B 19.84 conf. 1, 1 - 3	8415	1930	245 / 290
Rover B 22.38 conf. 1, 1 - 3	3855	2230	245 / 290
Rover B 22.50 conf. 1 - 3	5055	2230	245 / 290
Rover B 22.67 conf. 1 - 3	6735	2230	245 / 290
Rover B 22.84 conf. 1 - 3	8415	2230	245 / 290
Rover B 16.38 conf. 4 - 5	3855	1650	245 / 290
Rover B 16.50 conf. 4 - 5	5055	1650	245 / 290
Rover B 16.67 conf. 4 - 5	6735	1650	245 / 290
Rover B 16.84 conf. 4 - 5	8415	1650	245 / 290
Rover B 19.38 conf. 4 - 5	3855	1930	245 / 290
Rover B 19.50 conf. 4 - 5	5055	1930	245 / 290
Rover B 19.67 conf. 4 - 5	6735	1930	245 / 290
Rover B 19.84 conf. 4 - 5	8415	1930	245 / 290
Rover B 22.38 conf. 4 - 5	3855	2230	245 / 290
Rover B 22.50 conf. 4 - 5	5055	2230	245 / 290
Rover B 22.67 conf. 4 - 5	6735	2230	245 / 290
Rover B 22.84 conf. 4 - 5	8415	2230	245 / 290

Working table Synchro

		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

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.

Service & Parts

Direct, seamless co-ordination of service requests between Service and Parts.
Support for Key Customers by dedicated Biesse personnel, either in-house and/or at the customer's site.

Biesse Service

- ▶ Machine and system installation and commissioning.
- ▶ Training centre dedicated to Biesse Field engineers, subsidiary and dealer personnel; client training directly at client's site.
- ▶ Overhaul, upgrade, repair and maintenance.
- ▶ Remote troubleshooting and diagnostics.
- ▶ Software upgrade.

500 / Biesse Field engineers in Italy and worldwide.

50 / Biesse engineers manning a Teleservice Centre.

550 / certified Dealer engineers.

120 / training courses in a variety of languages every year.


The Biesse Group promotes, nurtures and develops close and constructive relationships with customers in order to better understand their needs and improve its products and after-sales service through two dedicated areas: Biesse Service and Biesse Parts.


With its global network and highly specialised team, it offers technical service and machine/component spares anywhere in the world on-site and 24/7 on-line.




Biesse Parts

- ▶ Original Biesse spares and spare kits customised for different machine models.
- ▶ Spare part identification support.
- ▶ Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- ▶ Order fulfilment time optimised thanks to a global distribution network with de-localised, automated warehouses.

87%  of downtime machine orders fulfilled within 24 hours.

95%  of orders delivered in full on time.

100  spare part staff in Italy and worldwide.

500  orders processed every day.

Made **With** Biesse

Biesse Group technologies join forces with Lago's innovation and total quality management processes.

In the crowded world of domestic design, Lago takes its place as an emerging brand, thanks to a collection of stimulating products and a corporate philosophy that embraces the interaction between business and art, coupled with on-going research into sustainable development.

"We created a number of projects, or rather, concepts - states Daniele Lago - that have shaped Lago as we see it today: we saw design as a cultural vision that applies not only to individual products, but rather to the entire business chain".

"Flexibility is the key word here at Lago" says Carlo Bertacco, Manufacturing

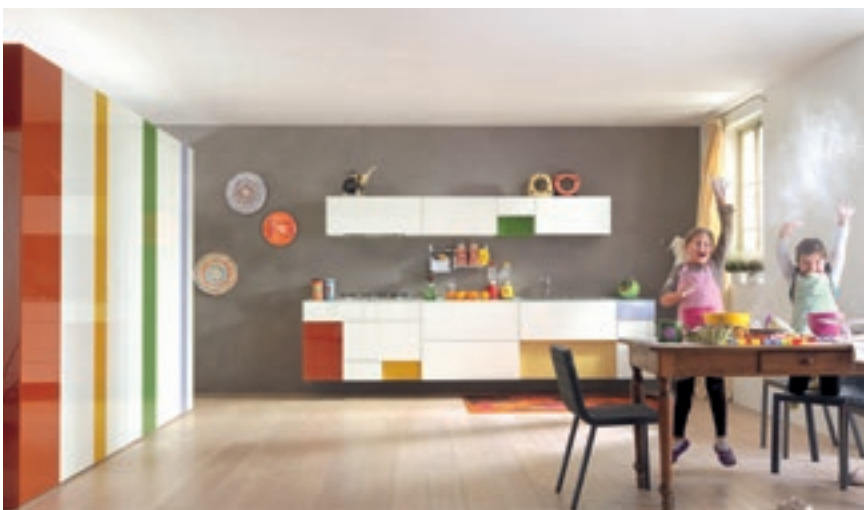
Manager. "We started to introduce the concept of processing only outstanding orders, which enabled us to reduce our footprint and empty the site from the very beginning".

"The machinery that we purchased - states Bertacco - is great, it entailed a limited investment versus the capabilities it offers and is linked to a specific manufacturing approach. What I am talking about is a given manufacturing volume with Lago-standard quality levels and the possibility of customising as late as possible, at the customer's request: in short, the very basic principles of lean manufacturing".

The flexibility offered by Lago has al-

lowed us to provide clients with a modular alphabet with which to build a personal space in keeping with his or her own personal needs. The "Lago Interior Life" company philosophy is focused on generate a sense of understanding and empathy between the interior and the people who live within it, combining environmental and personal well-being.

*Source: IDM Industria del Mobile
Lago, our customer since 1999, is one of most prestigious Italian furniture brands in the world.*



<http://www.lago.it>



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

