Rover C FT

NC processing centre

BIESSE

When competitiveness means being able to satisfy complex requirements

Made In Biesse

The market demands

a change in manufacturing processes, enabling 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 clearly-defined delivery times.

Biesse responds

with **technological solutions** to meet the requirements of companies that manufacture to order, with significantly reduced costs and cycle times. **Rover C FT** is the new stand-alone machining centre which has been designed not only for nesting, but also the processing of thick panels, mixed and complex production runs as well as machining of aluminium and other technological materials.

- **High-end technology for superior performance**
- **Machining quality**
- **Maximum precision**
- **Long term reliability**

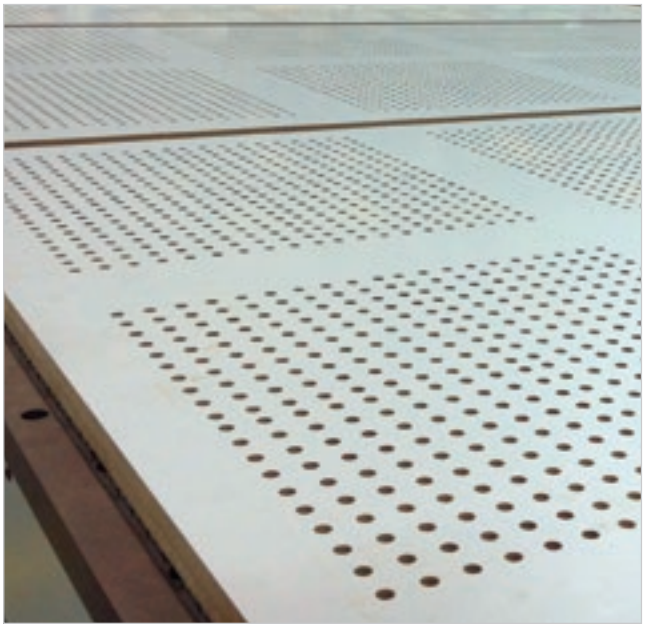
The machine for complex machining operations

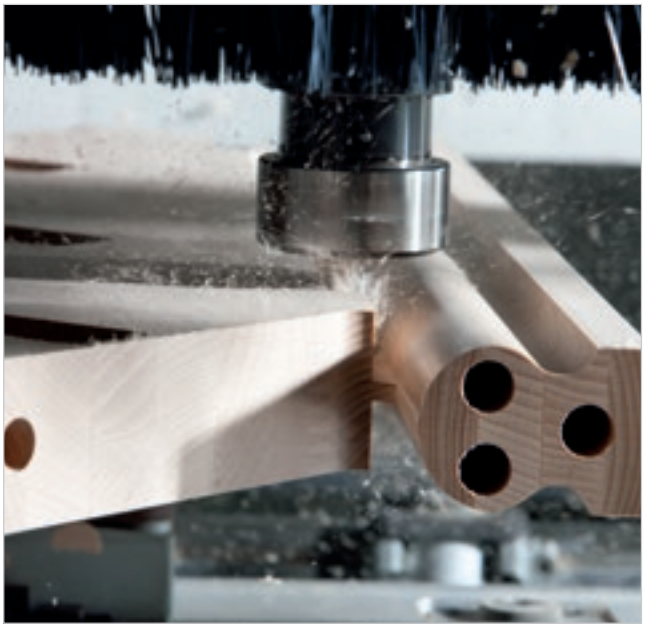
Rover C FT

NC processing centre

Infinite possibilities for machining operations

The new Rover C technology allows users to machine complex-shaped and extra-thick panels, guaranteeing quality, precision and absolute reliability over time.





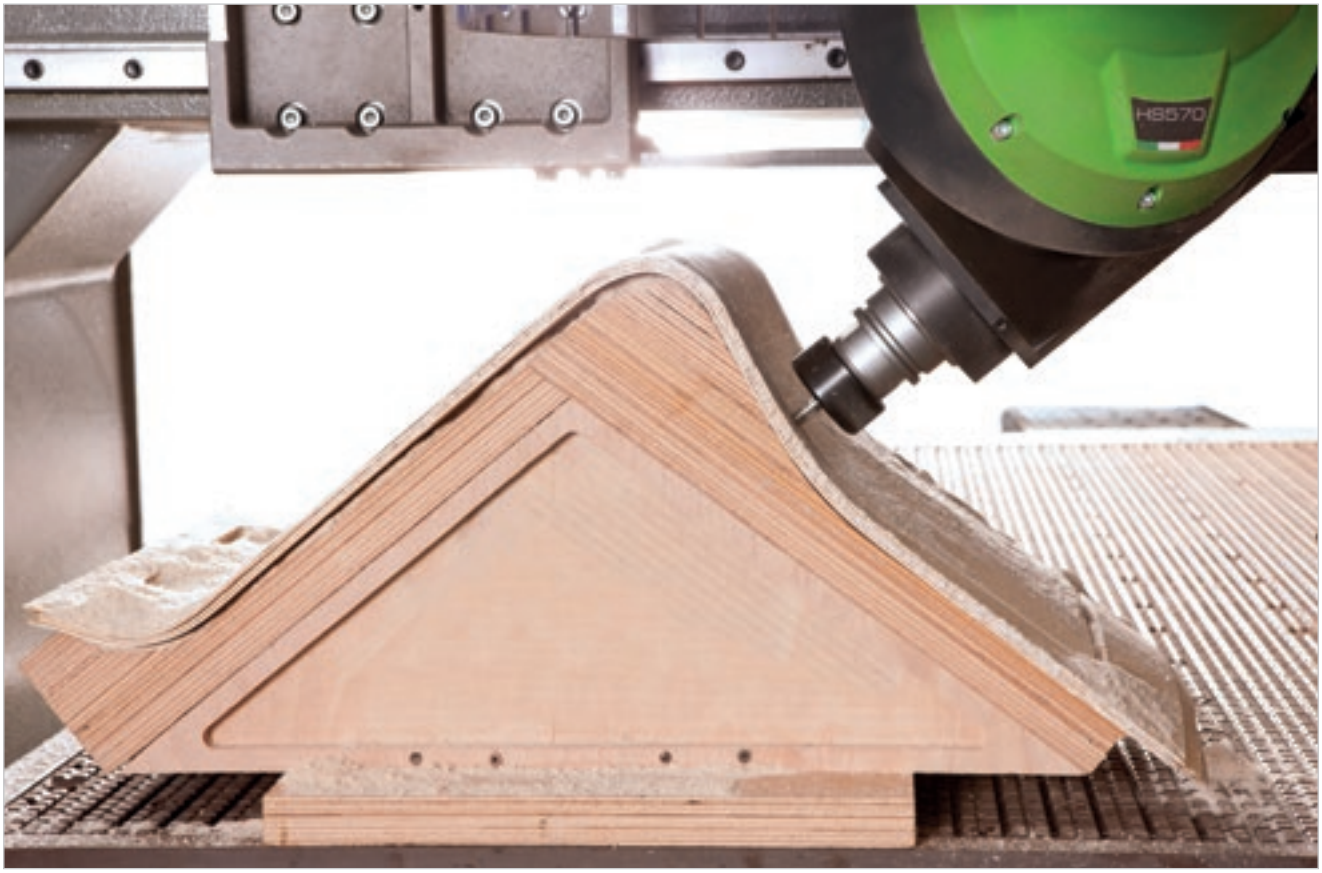
High-end technology for superior performance

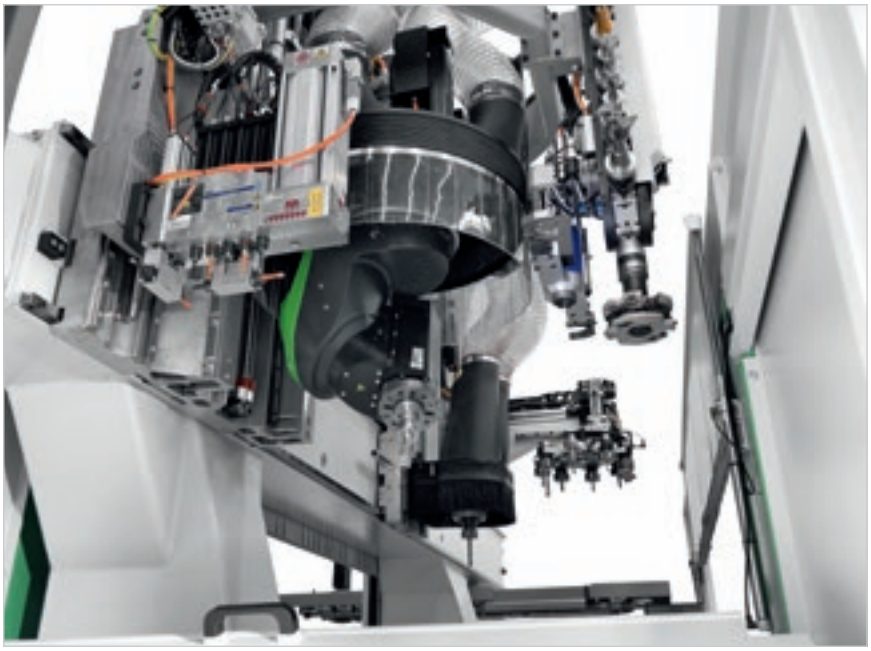
Unique technological solutions to meet the productivity and flexibility requirements of the most demanding manufacturers.

Operating section with five 21.5 kW/8000 rpm interpolating axes - the most powerful on the market - which supports complex processing operations whilst ensuring quality and precision.

The solutions developed for Rover C enable quick tool changes coupled with reduced cycle times.

Processing of very high components thanks to 400 mm working height.





The possible combination of 5-axes and 4-axes units enables the processing of any type of product. Independent Y axes support tool changes whilst the machine is running, using the largest possible number of tools available on the machine.

Axes vector speed from 124 to 156 m/min and acceleration from 3.5 to 5 m/sec² for high productivity.

Precise power

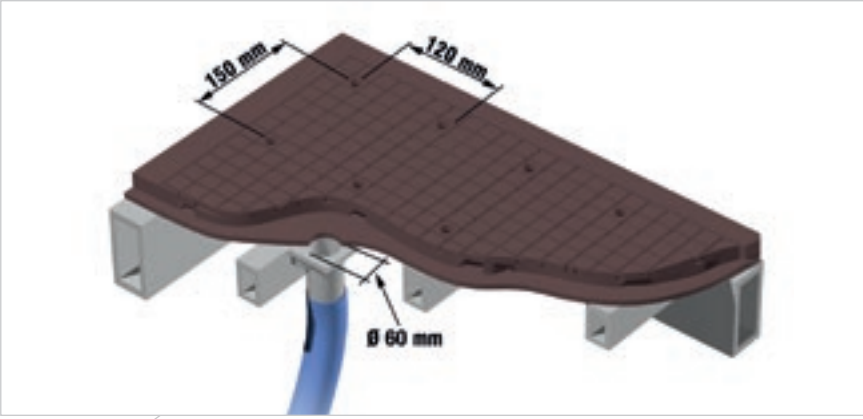
The new operating section with 5 interpolating axes supports complex processing operations whilst ensuring quality and precision. By combining 5 axes and 4 axes units it is possible to process any type of product. Independent Y axes, that enable users to carry out tool changes without affecting cycle times, and high axes speed and acceleration guarantee high productivity.

HIGH TECHNOLOGY

Unique technological solutions to meet productivity and flexibility requirements of the most demanding manufacturers. A perfect combination of innovation and Italian genius.

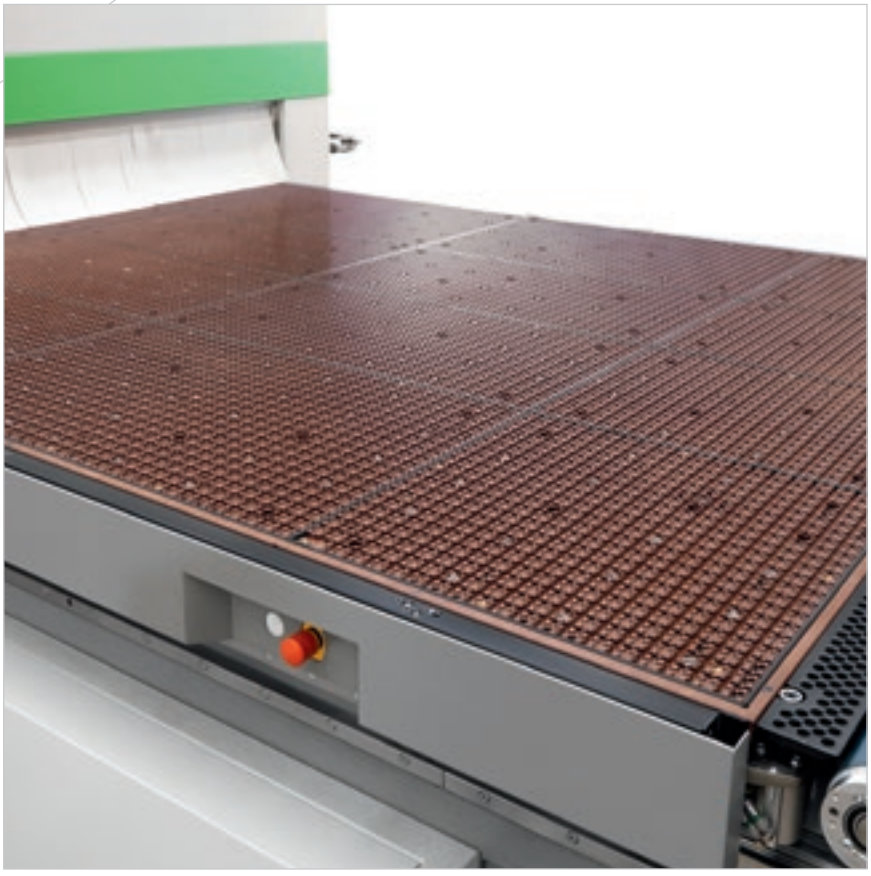
Maximum machining flexibility

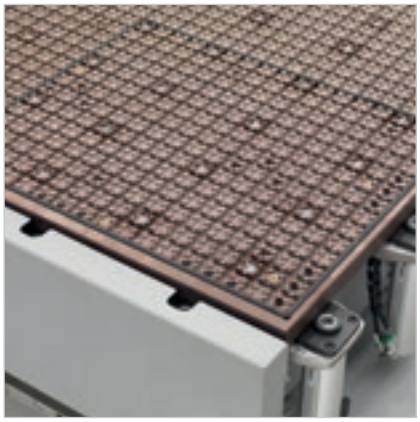
No limits with regard to securing panels. Biesse can provide multiple solutions, in line with specific customer needs.

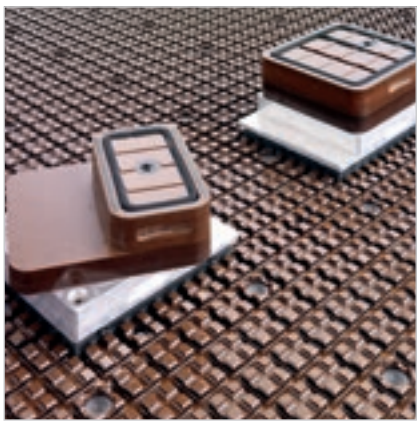


Maximum panel security thanks to an advanced distributed vacuum system within the work table.
Multi-zone technology able to concentrate the vacuum in smaller areas of the work table where required, in order to hold smaller components and reduce vacuum loss.

Advanced **work table** technology to machine panels of different types and sizes with the utmost reliability.







Vacuum modules can be freely positioned on the FT work table without the need for special connections.

Perfect securing of all panel types

Additional auxiliary vacuum and pneumatic output for securing panels with complex shapes.

Option to use Uniclamp vices or custom pneumatic locking systems.

Special vacuum-locking of panels positioned on the jig.

Maximum working precision maintained over time

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

Integral one-piece closed loop ring structure base.
The extremely robust, rigid design, which offers exceptional performance, was created specifically to ensure maximum processing quality, stability and precision when machining.

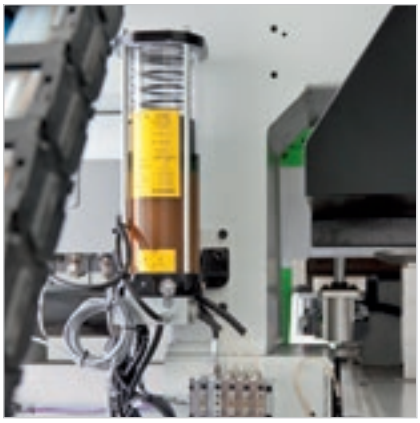
Choose from a comprehensive range **of bed sizes for machining panels of all sizes.**

ROVER C 1638 FT
ROVER C 1665 FT
ROVER C 1938 FT
ROVER C 1965 FT
ROVER C 2248 FT

Reliable technology

- **Automatic lubrication system for boring heads BH36-BHZ29-BHZ30 2L-BHC32-BHC42.**

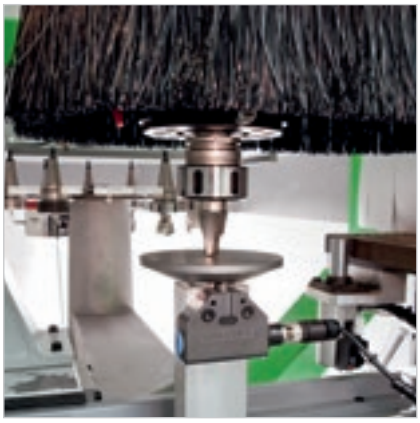
- **Liquid cooling system for boring heads BHZ30 2L-BH36- BHC32-BHC42 for improved reliability and increased machining precision.**



Automatic 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 quality precision and finish.

Protection of linear guides in all axes X, Y, Z via steel plates. Covered cable chains for X, Y, Z axes, to protection from dust and chips.



Elimination of operator error and reduction in tool change set-up time, thanks to the **contact pre-setter**, which automatically determines the length of the tool.

Boring head BHC32- BHC42, up to 42 independent vertical tools. Equipped with a sleeve for chip suction, which is automatically activated when the operating section is functional. Up to 8000 rpm, adjustable via inverter for rapid machining of a range of materials other than wood. TCH9L unit with 4 + 4 independent horizontal spindles and vertical blade D. 180 mm, driven by NC.

Cycle-time reduction for high productivity

Zero tool change set-up time thanks to new tool change solutions that make over 100 tools always available on the machine.

Double tool magazine on the X tool carriage with 44-66 positions which guarantee quick tool change and reduced machining times. It can accommodate a saw blade with a diameter of up to 400mm.

Vertical chain tool magazine on Y axis with 10-15 positions.

Independent Y axis allows tool changes whilst the machine is running, using the largest possible number of tools available in the magazine. The vertical chain **shuttle** in the magazine allows for rapid tool changes.

The **Pick Up** station supports automatic tool-holder rack tooling.

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.


BIESSE
Rover

Exceptional finish quality

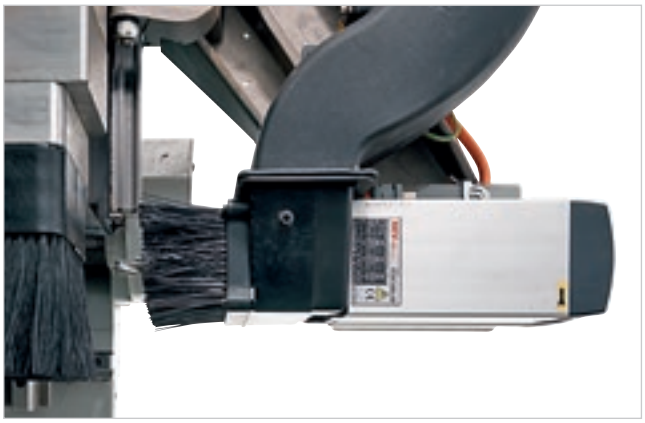
Electrospindles, boring heads and aggregates are designed and manufactured for Biesse by HSD, the global leader in the mechatronics sector.

New **C Torque axis**: with Direct Drive system. The absence of gears allows for maximum precision, reliability and speed. Continuous 360° rotation and the option to interpolate allows for the machining of pieces with complex shapes.

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.

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

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



Fixed horizontal motor for lock housing.

2-output liquid-cooled **horizontal motor.** Also available in NC tilting version for horizontal, tilting or vertical machining operations.

A complete range of aggregates

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/biessegroup

bSolid

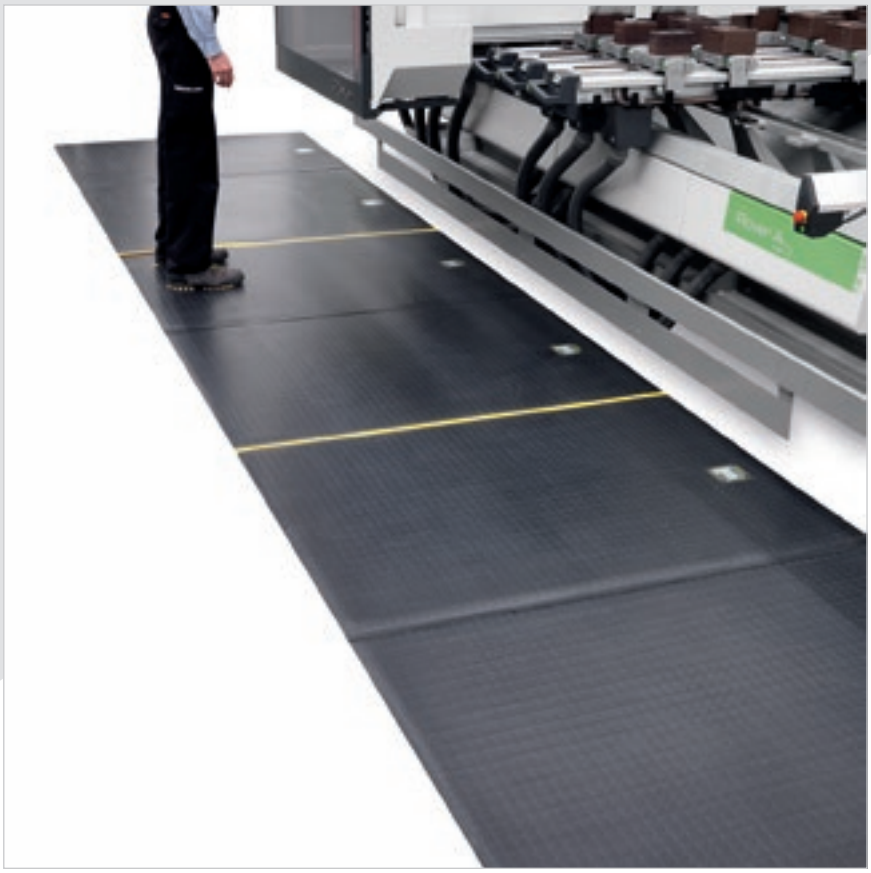
Reduced time and waste

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.**

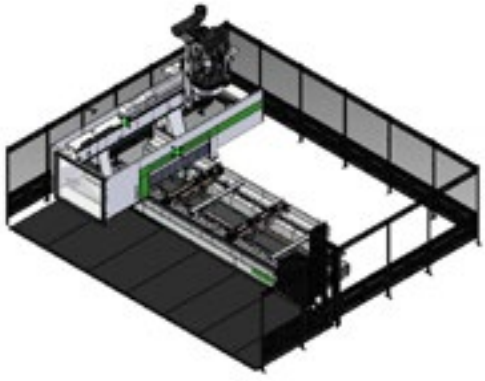
bNest

Maximum operator safety



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

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



Perimeter guards with front access door.

Side curtain guards to protect the working unit, which can be moved 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. Facilitated access during tool change operations thanks to the openable front hood.

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.

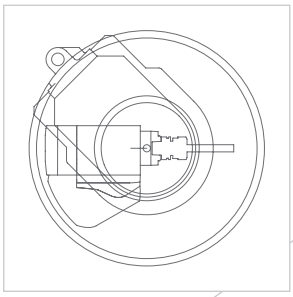
bPad and bTouch are an optional feature which can also be bought after purchasing the machine, in order to improve the functionality and application of the technology available.

Industry 4.0 ready

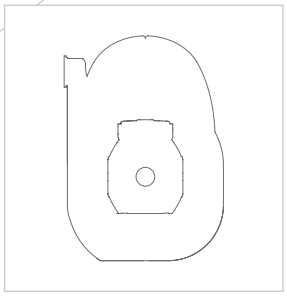
Industry 4.0 is the new industry frontier, based on digital technologies and on machines that speak to companies. The products driving this revolution can communicate and interact independently within production processes, which in turn are connected via intelligent networks.

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.

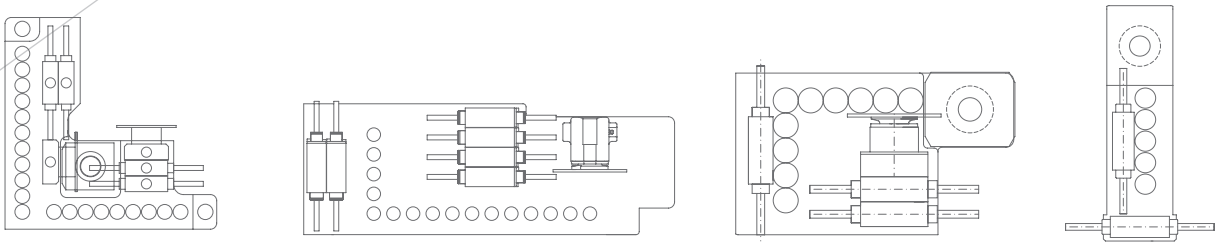
Customisable configurations depending on different production needs



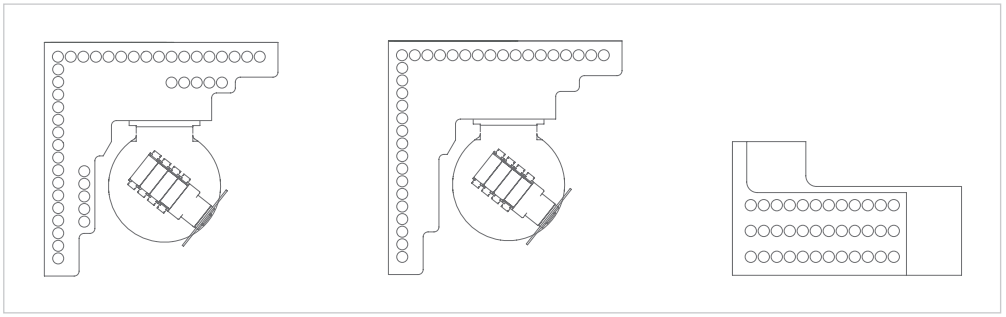
5-axis milling unit with power up to 21.5 kW.



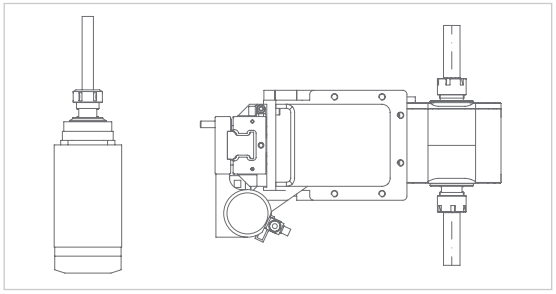
Milling head with air or liquid cooling and power up to 19.2 kW.



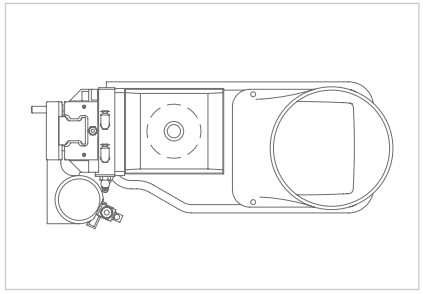
Boring heads from 9 to 30 tools: BHZ30 2L – BHZ 29 –BHZ17-BHZ9 up to 6000 rpm.



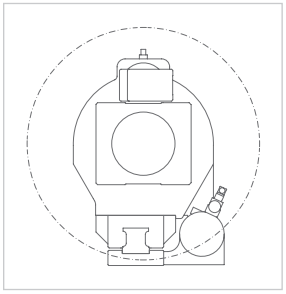
Boring heads BHC42 - BHC32 - BH36 up yo 8000 rpm.



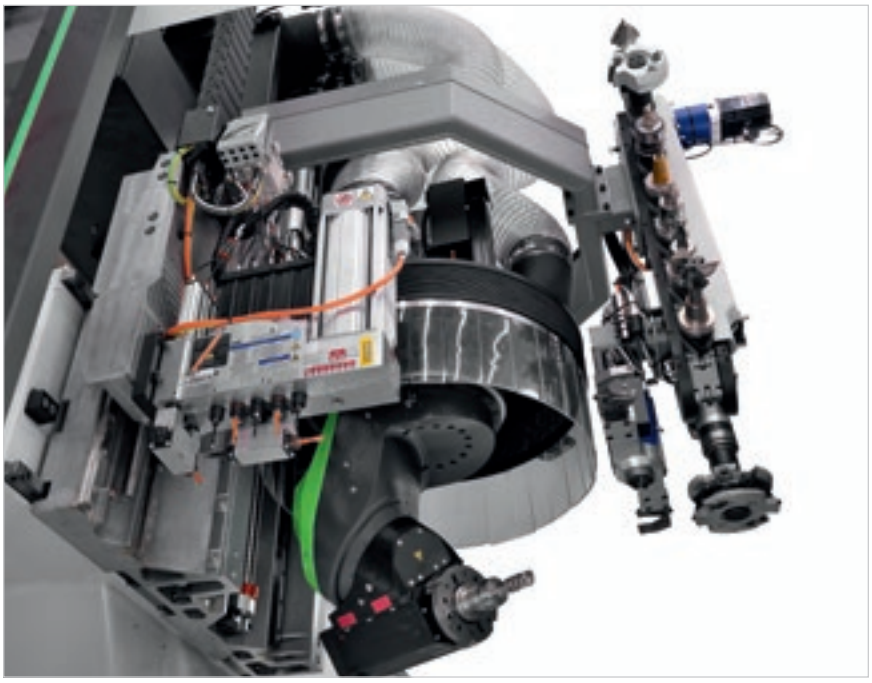
1 or 2 outlet horizontal milling units.

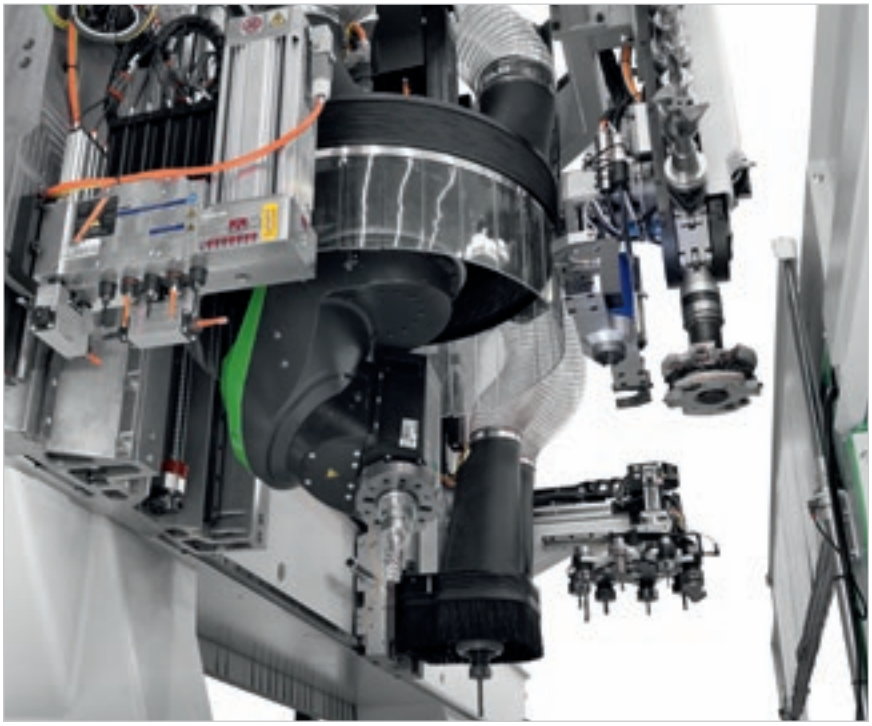


6 kW vertical milling unit.



Multi-function unit with 360° rotation.





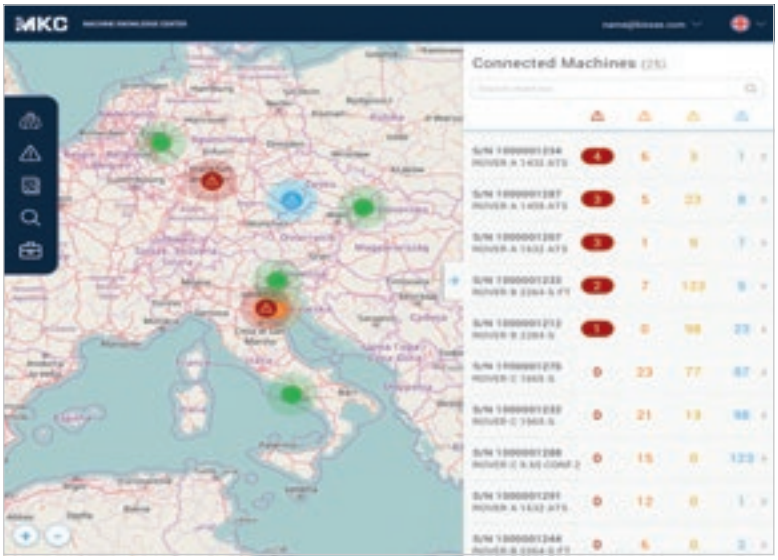
Service 4.0

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%.**

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.

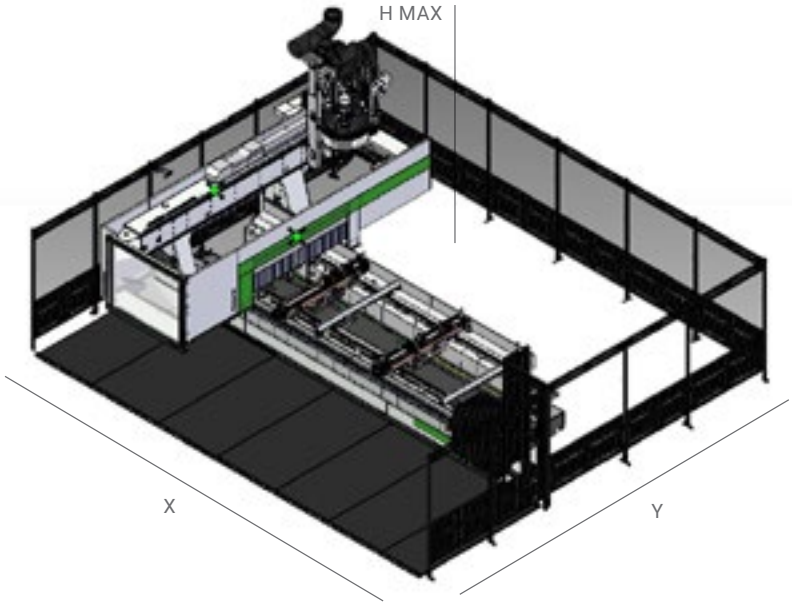
500 orders processed every day.

Optimal cleaning of machined components and work area

NC controlled chip **deflector.**

6-position (for 4 axes)
and 13-position (for 5-axes) adjustable
suction hood.

Technical specifications



CE working dimensions

	X CE mats	Y CE mats	X CE Bumper	Y CE Bumper	H MAX 5 axles
	mm	mm	mm	mm	mm
ROVER C 1638 FT	8121	6547	8361	6530	3370
ROVER C 1665 FT	11027	6547	11267	6530	3370
ROVER C 1938 FT	8121	6567	8361	6530	3370
ROVER C 1965 FT	11027	6567	11267	6530	3370
ROVER C 2248 FT	9320	7120	9574	7064	3370

Working fields

	X	Y	Z
	mm	mm	mm
ROVER C 1638 FT	3765	1560	400
ROVER C 1665 FT	6450	1560	400
ROVER C 1938 FT	3765	1875	400
ROVER C 1965 FT	6450	1875	400
ROVER C 2248 FT	4801	2205	400

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.

Made With Biesse

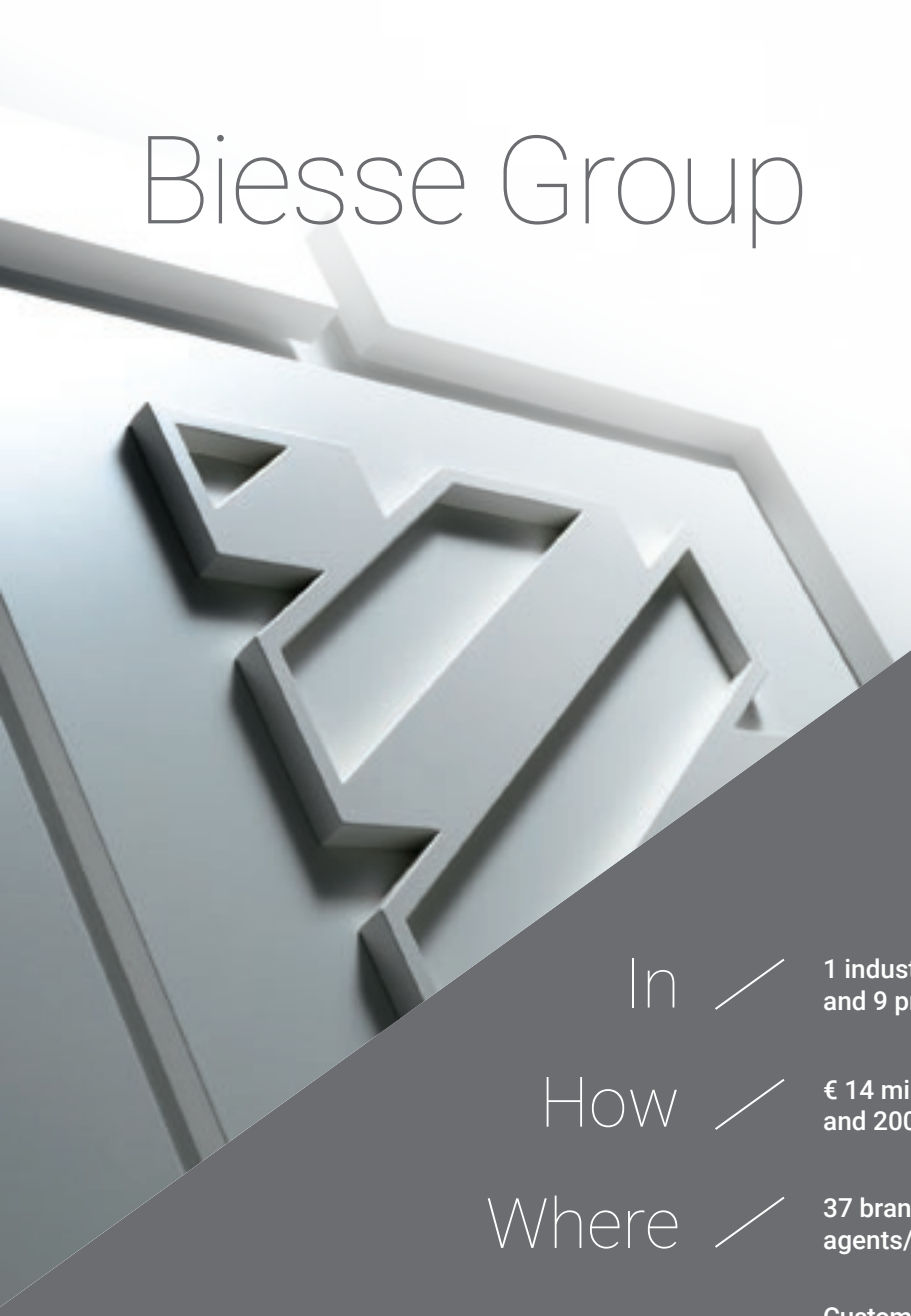
Maton and Biesse make music together.

With more than 1200 models of guitars made for thousands of professional musicians, Maton Guitars confirms its worldwide presence, becoming a truly great Australian success story. "The best guitar is the one that the market demands," states Patrick Evans, Head of Product Development at Maton. The evolution in production techniques and research into the most efficient software continues, prompting Maton to hunt for new solutions that can better respond to emerging needs. In 2008, after considering the pros and cons of a range of manufacturers, Maton chose Biesse. Maton's production needs incorporate technological requirements and artisan skills; the right balance of these two allows them to achieve the highest levels of quality and performance. A great guitar is both a work of art and a fine musical instrument. To obtain these results, the right tools are crucial - both for heavy machining operations and delicate processes, to create 3D shapes and work with minimal tolerances. Biesse has provided Maton with a range of advanced solutions for machining processes, not only adding quality to the products, but also providing the skilled craftsmen with more time to devote to manual finishes, ensuring that every product is unique. In 1995, the company installed their first CNC machine. They now have two nesting centres in tandem. The Rover C is the ideal machine for high-precision nesting operations, but also for creating complex shapes, such as the body of Maton's unique guitars. The machine's newly-designed cabin provides excellent visibility of all working units. Biesse is much more than a manufacturer of machinery for producing kitchens. Their impressive range of machines can process an astounding range of materials and products. "In creative hands," commented Patrick Evans, "Biesse becomes the instrument of a true craftsman. The key is to identify the right machine for the job. We found we can accomplish much more than we thought on a Biesse machine." Maton also uses the two Biesse machines to create new product prototypes; the most complex shapes, and almost every individual part which makes up a Maton guitar. Patrick confirms that Maton uses the Biesse CNC machine at high speeds even on the most complex parts, such as the magnificent fingerboard. "We need enough flexibility to be able to switch from one model to another very quickly, and Biesse allows us to do this very effectively." Biesse gives users the creative freedom to produce virtually any concept, both quickly and efficiently. "With the Biesse's CNC machine," Patrick continues, "you can turn your ideas into reality much faster. Thanks to the flexibility provided by Biesse machines, we can produce two fingerboard prototypes in seven minutes! If we made them by hand, it would take a whole day. Using Biesse machines has allowed us to create eight new guitar models this year alone." Using Biesse machines has allowed Maton to devote more time to the quality of the finish, wasting less time on processing individual pieces. Each Maton guitar is hand-finished by a dedicated and qualified team of luthiers. Maton has demonstrated that it is possible to produce a guitar in Australia with a worldwide reputation for quality, using Australian timber and technologies. Maton knows exactly how to design and build a unique, one-of-a-kind product, a well-made guitar, and with Biesse as valued partner, the best guitars in the world are brought to life.

Taken from an interview with Patrick Evans, head of Product Development at Maton Guitars - Australia

http://www.maton.com.au

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 elements 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

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