

Rover A

NC processing centre



When competitiveness
means meeting
all requirements

Prove

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** is the NC processing centre for the manufacturing of furniture and window/door frames. Thanks to its comprehensive range of sizes and configurations, it is ideally suited to small and large joineries that need to manufacture either odd-sized products or standard products in small batches.

- ▶ **Machine customisation depending on different production requirements.**
- ▶ **High finish quality.**
- ▶ **Reduced tool changeover time.**
- ▶ **Ability to process large sizes.**
- ▶ **High-tech becomes accessible and intuitive.**
- ▶ **Automatic feed with no operator input.**

A single processing
centre for all types
of machining
operations



Rover A
NC 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 operating section supports different machining operations whilst ensuring high product quality.



5-axis configuration.



The **5-axis** , high-tech operating section supports the processing of complex-shaped pieces, ensuring quality and precision.



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.



High finish quality



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



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



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



The new **BH30 2L boring head** is equipped with automatic lubrication and metal dust extraction cover to guarantee a longer life-span, and with liquid cooling to ensure maximum precision.

Optimal cleaning of machined piece and work area



Motorised conveyor belt for the removal of chips and waste.



NC-controlled **deflector** (chip conveyor).



Adjustable suction hood with 6 settings (for 4 axes) and 13 setting (for 5 axes).

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 with EPS sold.



Hyperclamp clamps
for rigid and precise blocking.



Uniclamp clamps
with pneumatic system.

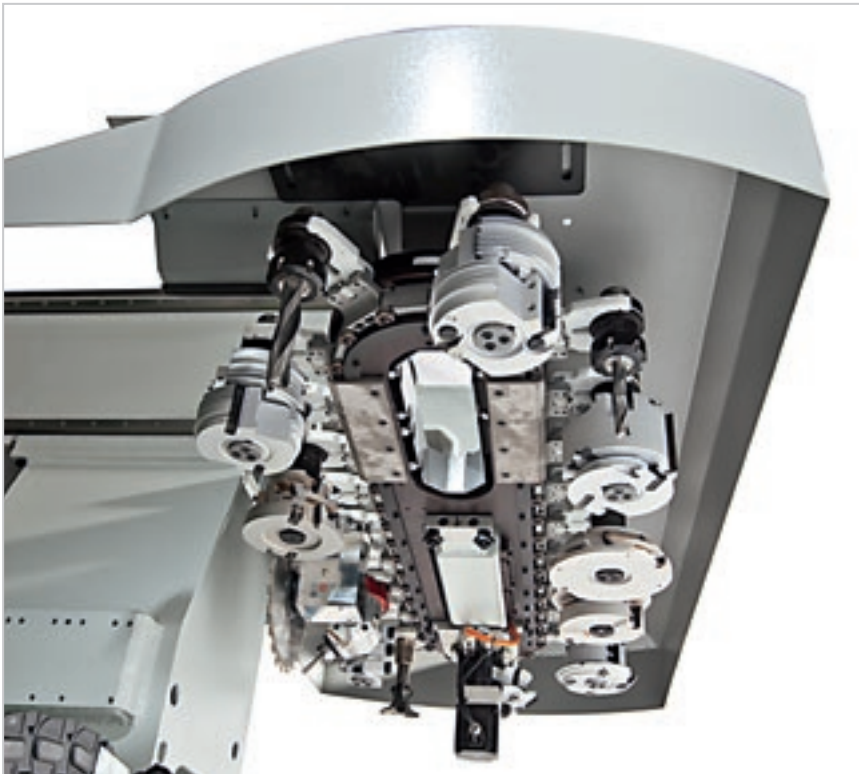


SA (Set Up Assistance)
The assisted set-up work table suggests to the operator how to position the panel, (indicating the position of work tables and blocking systems) and protects the work area from any collisions with the tool.



EPS (Electronic Positioning System)
supports the automatic rapid re-configuration of the entire work area. Positions work tables and carriages by means of separate engines, i.e. without engaging the operating section. The positioning of an area's work tables and carriages is performed during machining, whilst the machine is working on the opposite area.

The machine can house up to 98 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 at machine side.



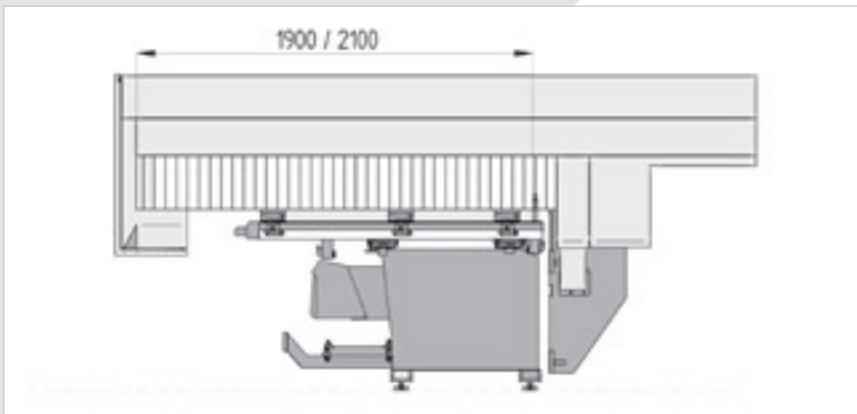
The **Pick Up** station supports automatic tool-holder rack tooling.



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 2,100 mm in y direction) onto the machine, thus enabling the pre-sectioning phase to be skipped or machining operations to be performed for non-standard productions.



A **comprehensive range of sizes** to machine panels of all sizes, from which users can choose the most suitable one.

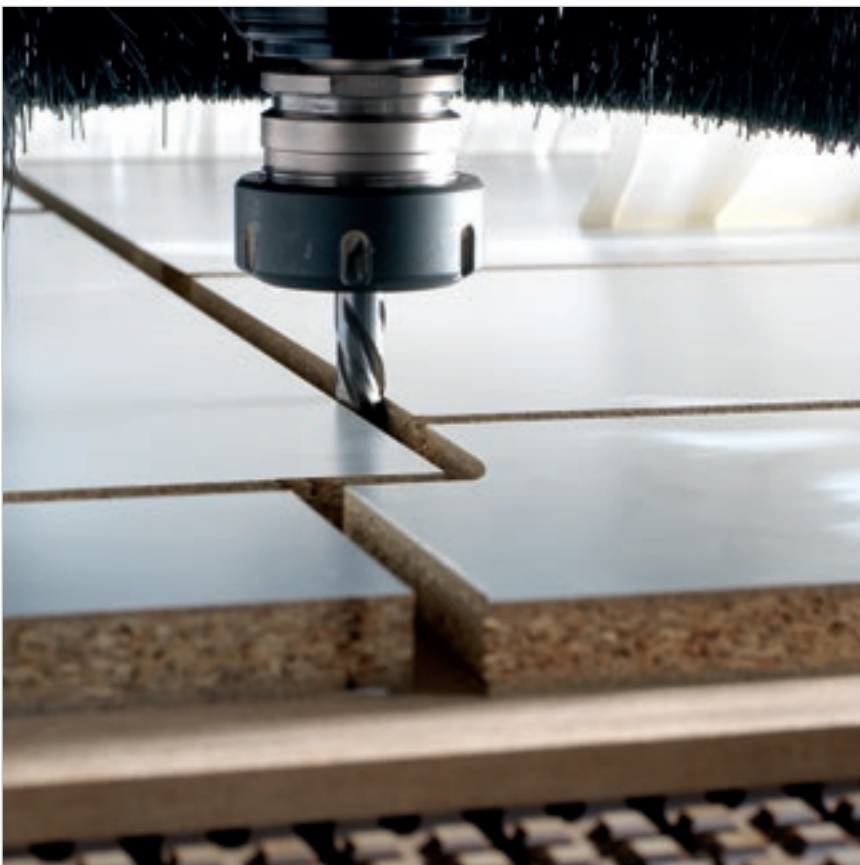
- Rover A 1432
- Rover A 1443
- Rover A 1459
- Rover A 1625
- Rover A 1632
- Rover A 1643
- Rover A 1659

With Rover A, a manufacturer can accept orders for thicker panels thanks to the 245 mm working height.

CFT: two machines in one



The full functionality and quality of a true pantograph table is guaranteed by the **CFT (Convertible Flat Table)**, which allows for the machining of thin panels, nesting and folding on a machine equipped with a roller bar table.



Practical design

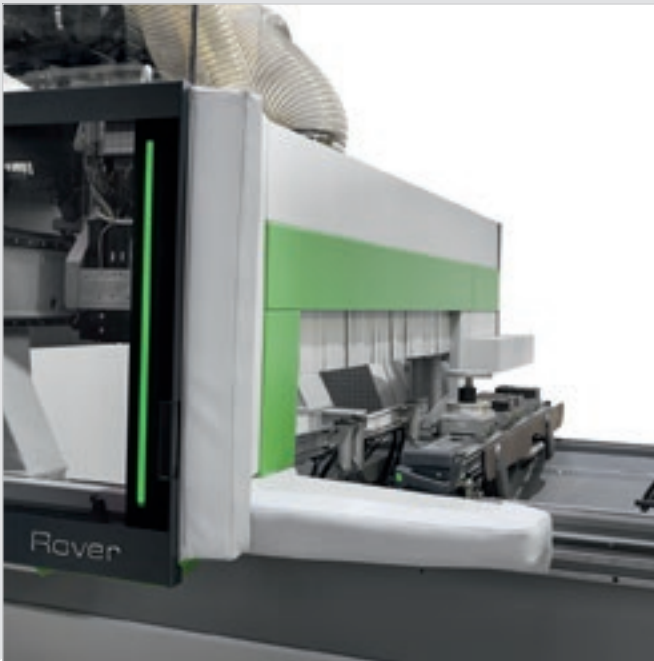
The transparent polycarbonate reinforced protection door is designed to guarantee maximum visibility for the operator. Fitted with 5-colour LEDs indicating machine status, it ensures that processing phases can be easily and safely monitored.

BIESSE IDENTITY

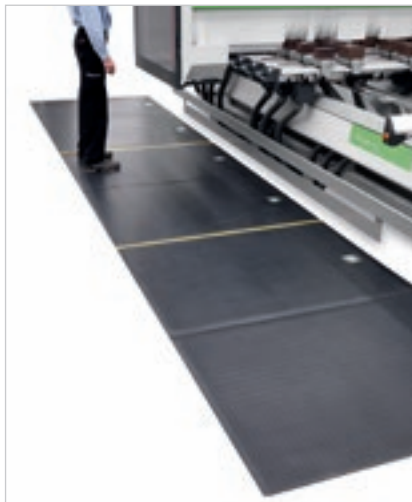
An innovative yet simple design is the hallmark of Biesse's distinctive identity. The perfect combination of Italian genius and taste.

ROVER

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.

Perimeter guards with front access door.





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.



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.

INDUSTRY 4.0 READY

High-tech becomes accessible and intuitive



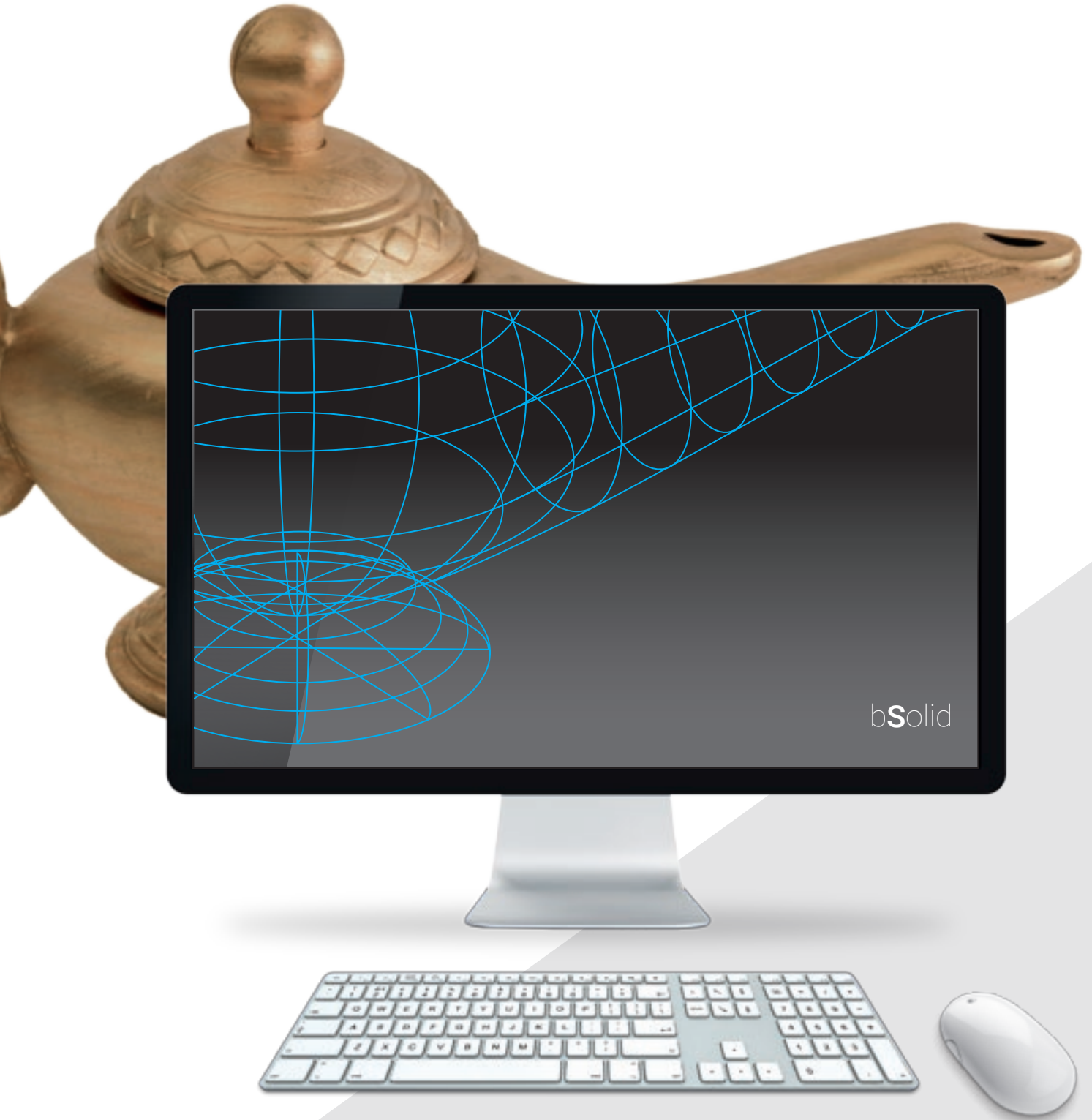
bSolid is a 3D cad cam software program that supports the performance of any machining operation thanks to vertical modules designed for specific manufacturing processes.

- ▶ **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



Service 4.0

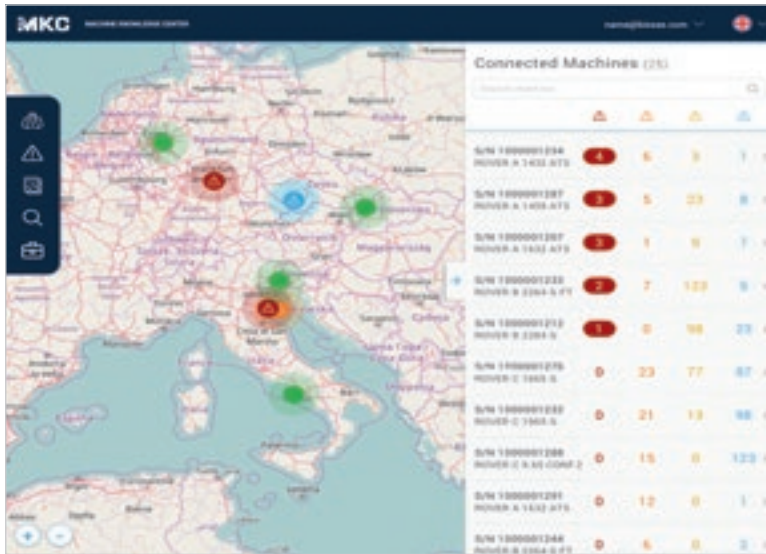
Biesse has developed a wide range of services to enhance machine performance and customer productivity, improving operational efficiency and lowering costs.

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.

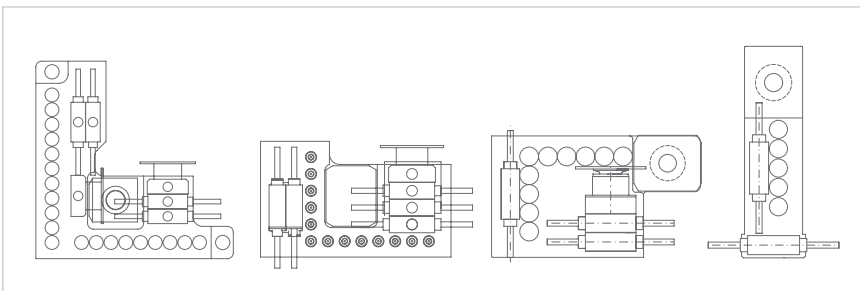
80% reduction in the time required for the diagnostics process.

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

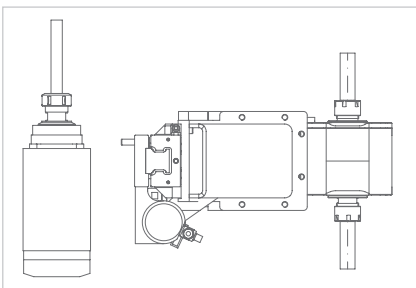
Working unit configuration

4-axis configuration.

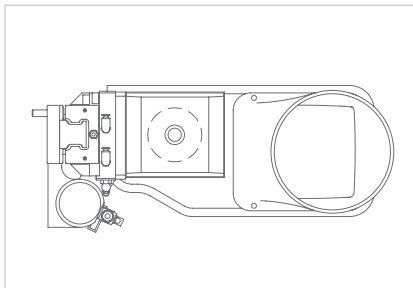
5-axis configuration available for Rover A 16XX.



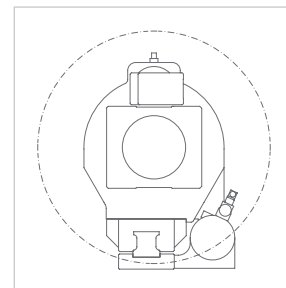
Available boring heads from 9 to 30 positions:
BH30 2L - BH24 - BH17 - BH9.



1 or 2 outlet horizontal milling units.



6 kW vertical milling unit.



Multi-function, with 360° rotation.

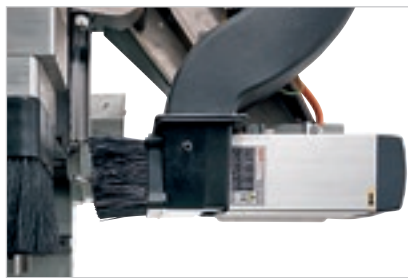
A complete range of aggregates



Exceptional finish, increased productivity



The **multi-function unit**, which can be continuously positioned over 360° by NC, can house aggregates used to carry out specific machining operations (pocketing for locks, hinge housings, deep horizontal bores, edge trimming, etc.).



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, etc.).



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

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.

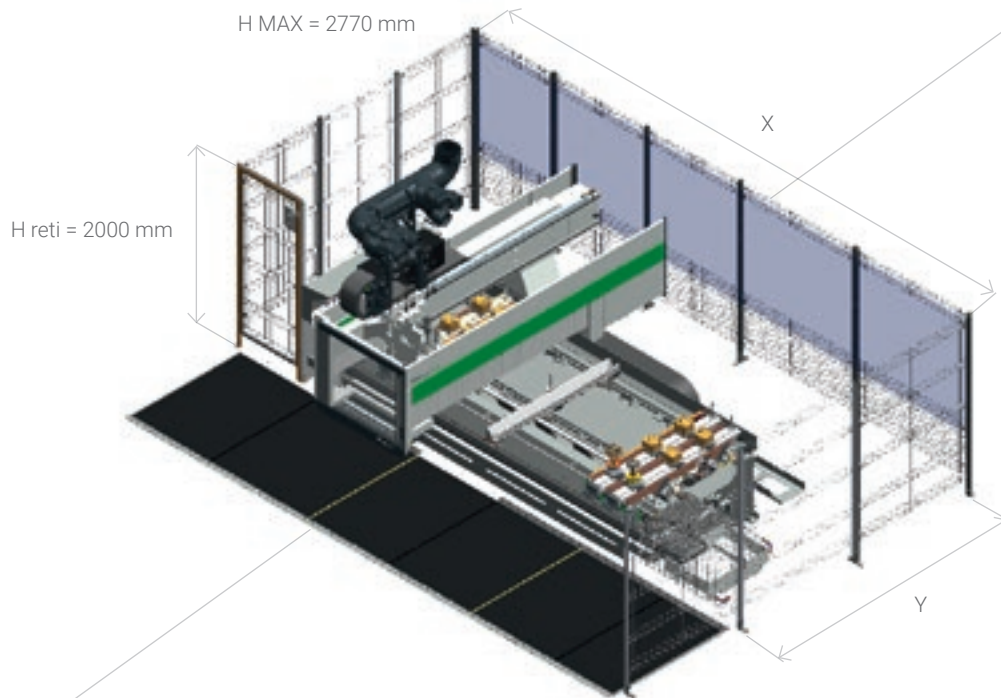


Synchro can also machine stacks of different-sized panels, thanks to stack reference device and the panel pre-alignment cycle, which is performed while the machine is running, while the Rover machining centre processes the previous panel.

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

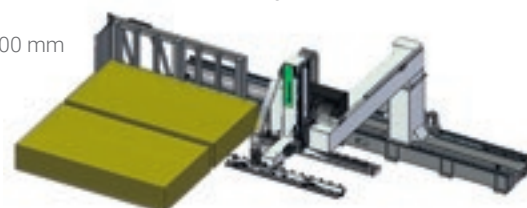
	X	Y	Z
	(mm / inch)	(mm / inch)	(mm / inch)
Rover A 1432	3280/129	1320/52	245/9.6
Rover A 1443	4320/170	1320/52	245/9.6
Rover A 1459	5920/233	1320/52	245/9.6
Rover A 1625	2500/98	1580/62	245/9.6
Rover A 1632	3280/129	1580/62	245/9.6
Rover A 1643	4320/170	1580 /62	245/9.6
Rover A 1659	5920/233	1580/62	245/9.6

Working table Synchro

		Min	Max
Length	mm	500/19.6	2500/98.4
Width	mm	200/7.8	1350/53.1
Thickness	mm	16/0.62	60/2.3
Weight	Kg	-	100
Useful height of stack	mm	-	1000/39.3
Height of stack from ground (including 145 mm Europallet)	mm	-	1145/45

H MAX = 2970 mm

H mesh = 2000 mm



Foot print

	loadable panel	X CE photocells	Y CE photocells	X NCE photocells	Y NCE photocells
	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)
Rover A 1625	1900/75	5712/225	4865/191	5423/214	4805/189
Rover A 1625	2100/83	5712/225	4865/191	5423/214	4805/189

	loadable panel	X CE photocells + bumper	Y CE photocells + bumper	X NCE photocells + bumper	Y NCE photocells + bumper
	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)
Rover A 1432	2100/83	7050/278	5034/198	6923/272	4830/190
Rover A 1443	2100/83	8080/319	5034/198	7956/313	4830/190
Rover A 1459	2100/83	9684/382	5034/198	9530/375	4830/190
Rover A 1632	2100/83	7050/278	5034/198	6923/272	4830/190
Rover A 1643	2100/83	8080/319	5034/198	7956/313	4830/190
Rover A 1659	2100/83	9684/382	5034/198	9530/375	4830/190

	loadable panel	X CE mats	Y CE mats	X NCE mats	Y NCE mats
	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)	(mm / inch)
Rover A 1432	2100/83	6445/254	4874/191	6075/239	4674/184
Rover A 1443	2100/83	7465/294	4874/191	7155/281	4674/184
Rover A 1459	2100/83	9111/359	4874/191	8728/343	4474/176
Rover A 1632	1900/75	6445/254	4674/184	6075/239	4474/176
Rover A 1632	2100/83	6445/254	4874/191	6075/239	4674/184
Rover A 1643	1900/75	7465/294	4674/184	7155/281	4474/176
Rover A 1643	2100/83	7465/294	4874/191	7155/281	4674/184
Rover A 1659	1900/75	9111/359	4674/184	8728/343	4674/184
Rover A 1659	2100/83	9111/359	4874/191	8728/343	4474/176

X/Y/Z axis speed	80/60/20 m/min - 262/196/65 foot/min
Vector speed	100 m/min - 328 foot/min

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.

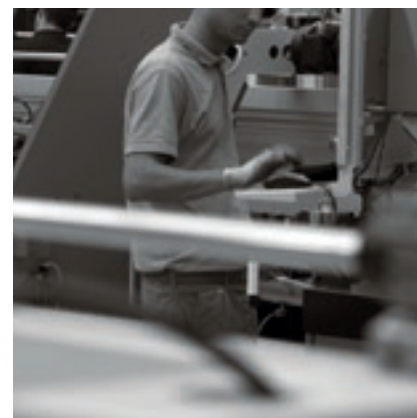
50 / Biesse engineers manning a Teleservice Centre.

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 prod-

ucts, 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 capabil-

ities 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".

*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

