

# Rover A FT

NC processing centre



 **BIESSE**

When competitiveness  
means increasing  
productivity

Rover

Made In Biesse

## The market demands

a change in manufacturing processes that 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 **clearly-defined delivery times**.

## Biesse responds

with **high-tech, innovative** solutions for nesting operations. **Rover A FT** is the new NC processing centre for nesting machining operations able to satisfy the needs of mid and large size companies offering top-of-the-range technology.

- ▶ Long term reliability and precision.
- ▶ Biesse's experience for a continuous business growth.
- ▶ Compact footprint and superior ergonomic performance.
- ▶ Ability to handle both large and small panels of varying thickness.



Leading technology  
for quality products



Rover A FT  
NC processing centre





# A single processing centre for many types of machining operations

**Rover A FT enables users to carry out different types of machining operations and achieve a finished, fully-machined product with a single machine.**





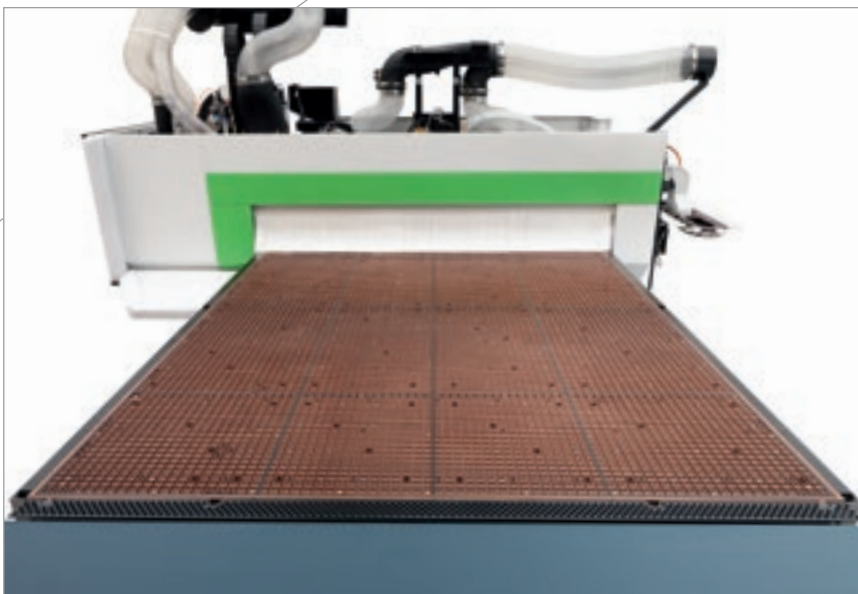


# High reliability and precision over time

Rover A FT has a robust and well-balanced structure, designed to handle demanding machining requirements without compromising product quality.



The heavy **monolithic base** guarantees solidity and absence of vibration, for consistent product quality over time.



The **Gantry structure** with dual X motors is designed to increase precision and reliability standards for the execution of machining operations.

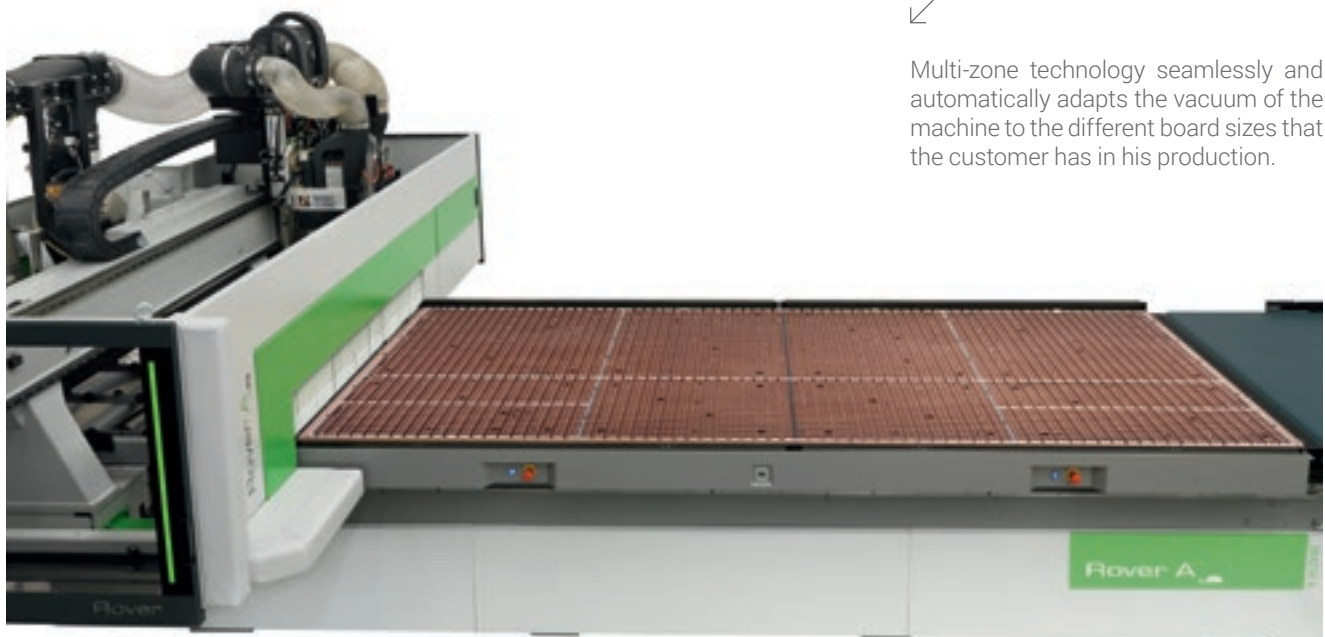


Higher motor power increases acceleration up to  $4 \text{ m/s}^2$  and speed up to 104 m/min.

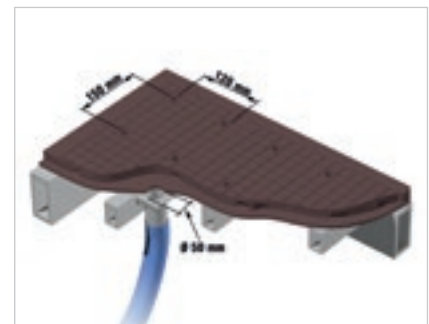
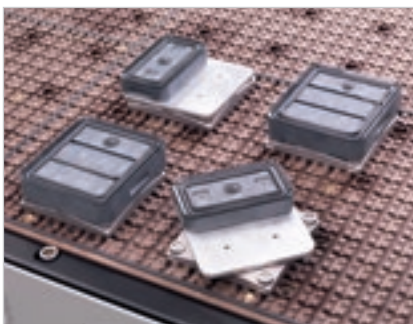


Machine both large and small panels of varying thicknesses.

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



Multi-zone technology seamlessly and automatically adapts the vacuum of the machine to the different board sizes that the customer has in his production.



**Vacuum modules** freely positionable on the FT work table without the need for dedicated connections.

High flow work table  
with highly efficient vacuum distribution.

# Biesse's experience for a continuous business growth

A specific Research & Development team creates pioneering solutions to meet the market requirements and offer cutting edge technology that's reliable and guarantees first class results. Biesse uses the same high-tech components for all machines in its product range.



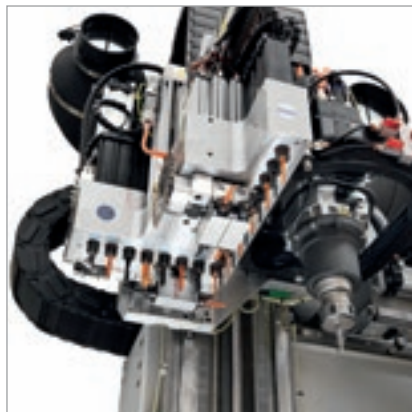
The electrospindle, boring head and aggregates are designed and manufactured for Biesse by HSD, the global leader in this sector.



**C Axis Torque:** more precise, quicker, greater rigidity.



**New BH18 / 25L boring head** for the highest drilling capacity and productivity in its class.



A complete range  
of aggregates.



**Up to 32 tools and aggregates** available in the tool changer, which are loaded automatically when switching from one machining operation to the next.



**The rack magazine** with 6/8 positions supplies a simple and functional solution with minimum footprint.





# Productive economy

Biesse's processing centres for nesting and carving operations allow to achieve a finished produced machined on a single, compact machine at a competitive price. The robust and well-balanced structure of the machine is ideally suited for withstanding greater processing stresses without compromising the quality of the piece and for ensuring the best finish on different types of materials.

## NESTING SOLUTIONS

Productivity and efficiency are increased, while maintaining high quality standards and fast delivery times. A perfect combination of Biesse optimisation and Italian genius.





# Compact footprint and superior ergonomic performance



The stand-alone version of Rover A FT is one of the most compact solutions on the market.



Rear access door to reduce tooling times.



It enables the operator to access the machines' three sides, guaranteeing maximum ergonomic comfort and safety.



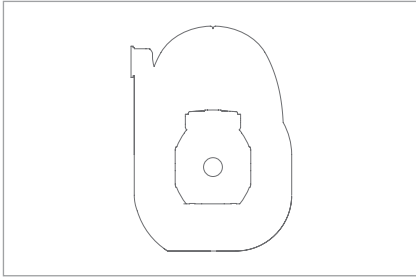
## Increasing manufacturing capacity

The machine can be configured with **tandem loading** in order to alternately process panels. This allows for loading or unloading to be carried out during machining operations.

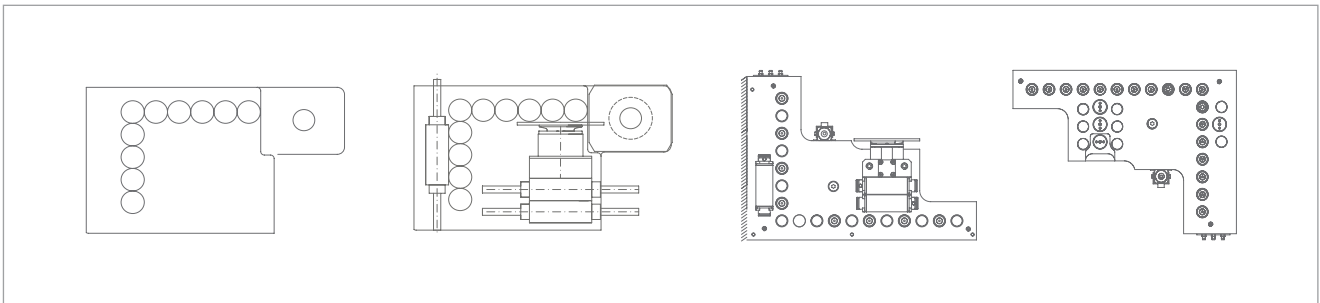




# Configuration



Electrospindle with power from 13.2 to 19.2 kW.

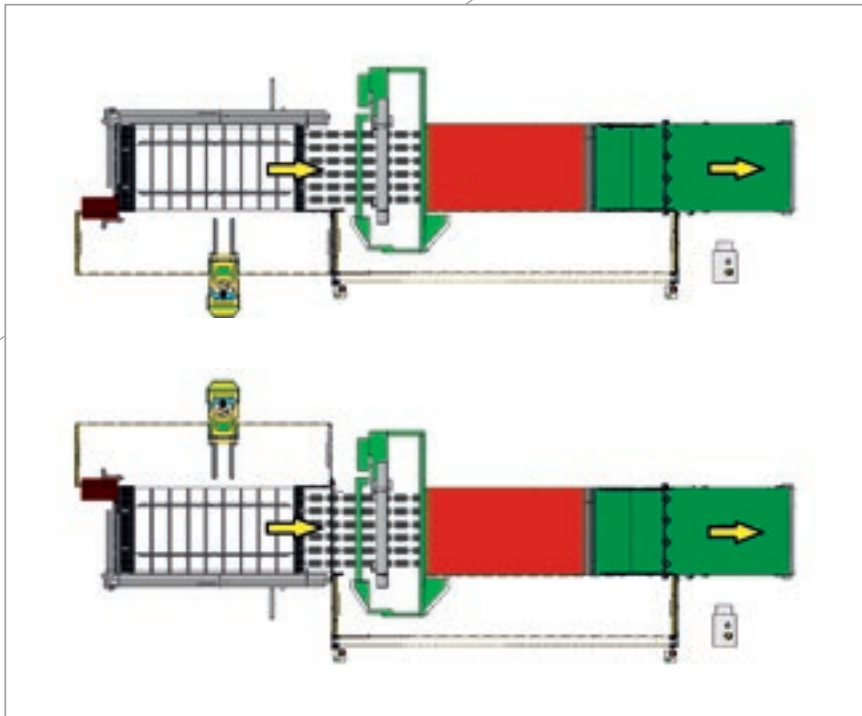


Boring heads available from 10 to 25 spindles: BH25 L - BH18 - BH17 - BH10.



# Can be fully integrated into a working cell

Rover A FT can be adapted according to work flow and in line with customer requirements.



**Loading/unloading operations** are carried out simultaneously, allowing the operator to remove completed components from the unloading station in the utmost safety whilst the machine is already processing the next panel.



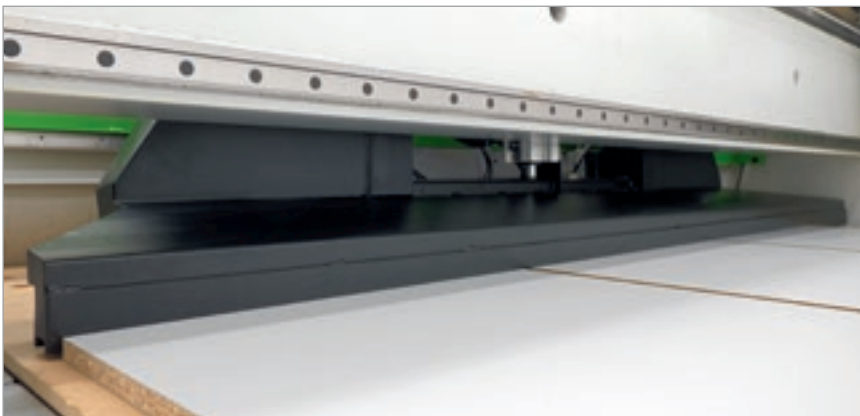
Panel identification and traceability within the production flow thanks to **on-demand labelling system with touch screen**.



The maximum Z workability  
is guaranteed even with sweeper arm.

Panel loading system with **scissor lift** and automatic panel alignment. The system's ease of use ensures long term reliability.

The **loading system** enables the handling of both porous and non-porous materials of thicknesses greater than 9mm, whilst also offering automatic labelling.



Machine efficiency is dramatically increased due to the **unloading belt**, which enables the removal of completed components outside the machine's work area.



# Competitive customisation

Biesse Systems is a team of highly trained engineers for large scale production processes. Biesse Systems offers integrated cells and systems that are capable of maximising customer competitiveness by combining mass production techniques with a high degree of customisation to meet customers' exact requirements.

## PRODUCTION LINES

Made-to-measure turnkey factories, plus the integration of Biesse Group solutions with complementary software and machinery, with over 300 systems installed worldwide. A perfect combination of Biesse Group's experience and Italian genius.



# Lean, efficient production flows



**Winstore 3D K3** is an automated magazine for the optimised management of panels for companies who wish to increase their productivity, guaranteeing production with reduced times and costs.

- **Rapid return on investment thanks to increased performance and reduced costs.**
- **Production flow optimisation.**
- **Integration in the production line.**





The **Winstore 3D K3** ensures that the panels to be machined are easily accessible at all times, so it is possible to substantially increase cell productivity compared to manual loading methods using a forklift truck, without frequent stack changes.

- Reduced delivery times.
- Reduced warehouse space required.
- Reduced labour.
- Waste reduction.
- Less risk of damaging panels.

# 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.



# SOPHIA

**GREATER VALUE FROM MACHINES**



**SOPHIA IS THE BIESSE IOT PLATFORM WHICH ENABLES CUSTOMERS TO ACCESS AN EXTENSIVE RANGE OF SERVICES TO STREAMLINE AND RATIONALISE THEIR WORK MANAGEMENT PROCESSES.**

**IT IS BASED ON THE ABILITY TO SEND REAL-TIME INFORMATION AND DATA ON THE TECHNOLOGIES IN USE, OPTIMISING THE PERFORMANCE AND PRODUCTIVITY OF MACHINES AND SYSTEMS. IT CONSISTS OF TWO AREAS: IOT AND PARTS.**

- ❑ **REDUCED PRODUCTION TIME**
- ❑ **LOWER COSTS**
- ❑ **REDUCTIONS IN MACHINE DOWNTIME**
- ❑ **OPTIMISATION OF THE PRODUCTION PROCESS**
- ❑ **INCREASE IN PRODUCTIVITY**
- ❑ **MAXIMUM QUALITY OF DAILY WORK**

The various functions of the **iOT** app offer a comprehensive overview of the specific machine performance features, with remote diagnostics, machine stoppage analysis and fault prevention.

**PARTS** is the new replacement parts web portal which allows users to navigate within a personalised account, providing access to all the information on purchases and enabling a replacement parts shopping cart to be submitted, and the progress of orders to be monitored.

# 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](https://youtube.com/biessegroup)





# bSolid



# Reduced time and waste

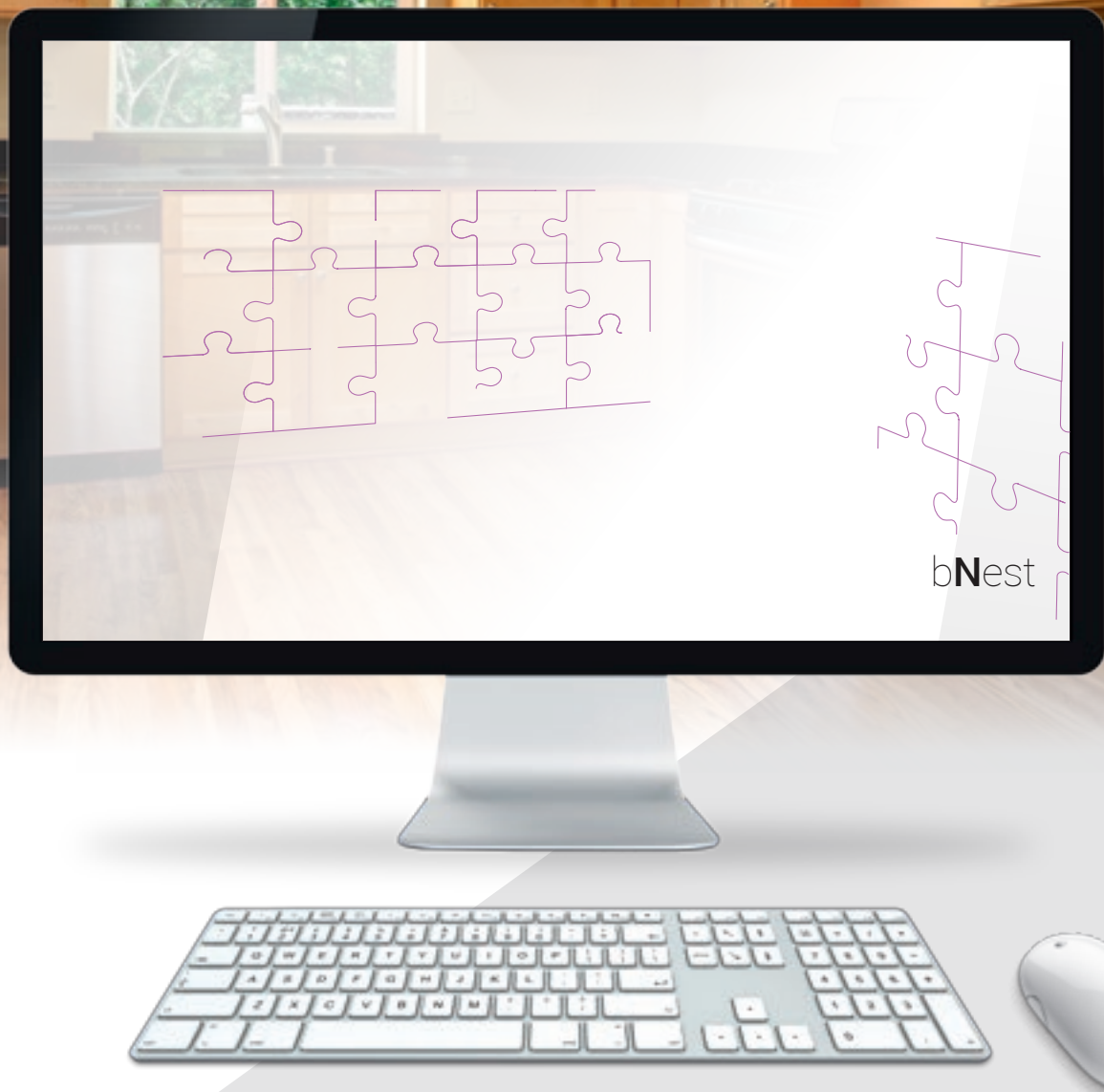


**bNest** is the bSuite plugin specifically for nesting operations. It allows you to organise your nesting projects in a simple way, reducing the material waste and machining times.

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



# bNest





# 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.

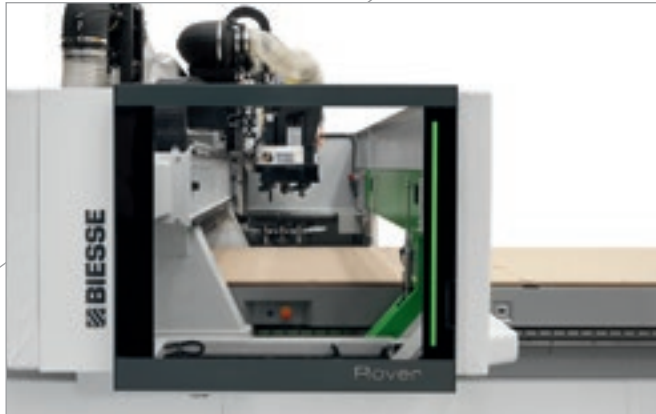
- ▶ With the new plugin, it is easy to draw both individual items of furniture and complete furnishings for a range of spaces.
- ▶ Offering optimal integration with bSuite, users can move from design to manufacturing in just a few clicks.
- ▶ Total control and maximum optimisation of the furniture design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

# bCabinet

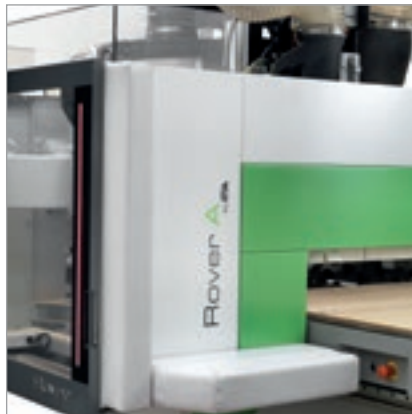


# Maximum operator safety

Biesse machines are designed to enable operators to work in complete safety.



**Working unit total protection.** Maximum visibility of machining operation. LED bar with 5 colours showing machine status in real time.



Long term safety and reliability thanks to the new **bumpers combined with photocells** with no footprint or mechanical wear.



**Overlaid layers of side curtain guards** to protect the working unit, which are flexible to enable the machine to work at maximum speed in total safety.



# Optimal cleaning of machined components and work area

Various automatic machine and component cleaning options are available which saves operator time.



Adjustable **suction hood** with 6 settings.



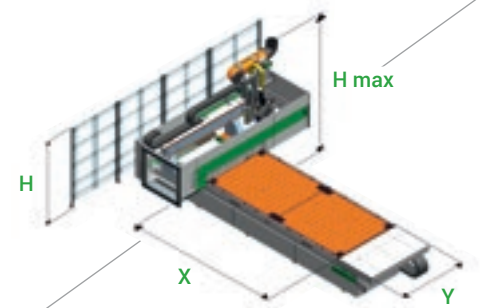
**Dust intake manifold** between machine and unloading belt.



**Additional dust intake manifold kit for unloading belt** consisting of 2 suction hoods, on the top and one at end of the belt.

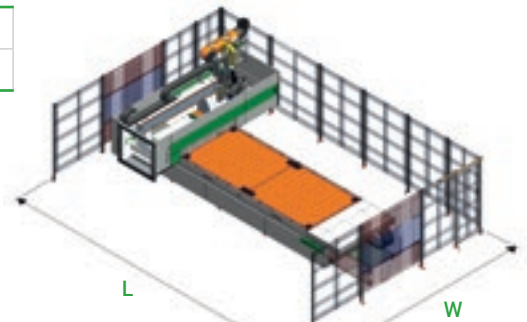
# Technical specifications

## Working fields and height Z



	X		Y		Pendular NO suspension		Z		H		H max	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	2465	97	1260	50	-	-	170	7	980	39	2445	96
Rover A FT 1531	3100	122	1560	61	1120	44	170	7	980	39	2445	96
Rover A FT 1536	3765	148	1560	61	1450	57	170	7	980	39	2445	96
Rover A FT 1836	3765	148	1875	74	1450	57	170	7	980	39	2445	96
Rover A FT 2231	3100	122	2205	87	1120	44	170	7	980	39	2445	96
Rover A FT 2243	4300	169	2205	87	1720	68	170	7	980	39	2445	96

X/Y/Z axis speed	m/min	85 / 60 / 20	ft/min	279/ 197/ 66
Vector speed	m/min	104	ft/min	341

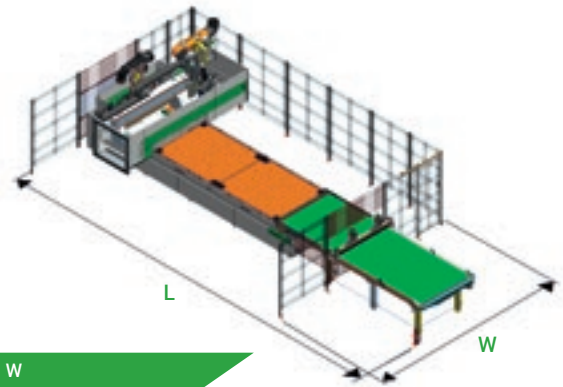


## Overall stand alone dimensions

	L				W			
	NCE		CE		NCE		CE	
	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	6309	248	6567	259	4760	187	5117	201
Rover A FT 1531	6949	274	7207	284	5010	197	5387	212
Rover A FT 1536	7609	300	7867	310	5010	197	5387	212
Rover A FT 1836	7609	300	7867	310	5210	205	5687	224
Rover A FT 2231	6949	274	7207	284	5510	217	6060	239
Rover A FT 2243	8130	320	8385	330	5510	217	6060	239
Front access	NCE		CE		NCE		CE	
	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	6475	255	6525	257	4502	177	4734	186
Rover A FT 1531	7075	279	7155	282	5002	197	5064	199
Rover A FT 1536	7775	306	7828	308	5002	197	5064	199
Rover A FT 1836	7775	306	7828	308	5197	205	5334	210
Rover A FT 2231	7075	279	7155	282	5497	216	5724	225
Rover A FT 2243	8320	328	8338	328	5497	216	5724	225

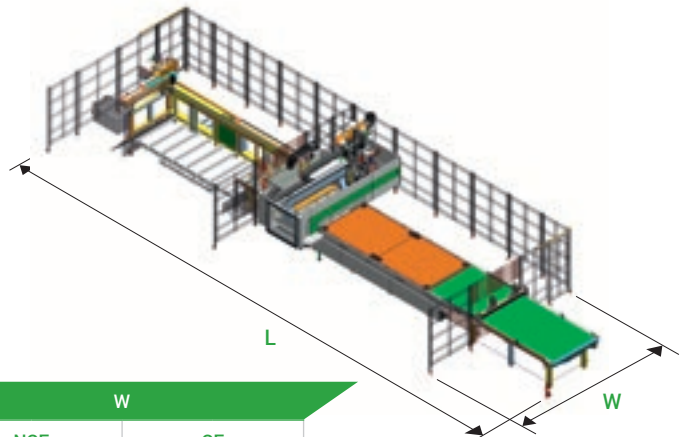
The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

Weighted sound pressure level A (LpA) during machining at the operator's workstation on the vane-pump machine LpA=79dB(A) LwA=96dB(A) Weighted sound-pressure level A (LpA) at the operator's workstation and sound power level (LwA) during machining on the cam-pump machine LwA=83dB(A) LwA=100dB(A) Measurement uncertainty K dB(A) 4.



## Overall dimensions of unloading belt only

Unloading belt	L				W			
	NCE		CE		NCE		CE	
	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	8135	320	8155	321	4502	177	4734	186
Rover A FT 1531	9280	365	9339	368	5002	197	5064	199
Rover A FT 1536	10644	419	10674	420	5002	197	5064	199
Rover A FT 1836	10644	419	10674	420	5197	205	5334	210
Rover A FT 2231	9280	365	9339	368	5497	216	5724	225
Rover A FT 2243	11701	461	11729	462	5497	216	5724	225



## Overall dimensions of nesting cell

Nesting cell - Type A	L				W			
	NCE		CE		NCE		CE	
	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	10065	396	10011	394	4502	177	4734	186
Rover A FT 1531	12420	489	12440	490	5002	197	5064	199
Rover A FT 1536	13769	542	13773	542	5002	197	5064	199
Rover A FT 1836	13780	543	13773	542	5197	205	5334	210
Rover A FT 2231	11787	464	11814	465	5497	216	5724	225
Rover A FT 2243	15451	608	15398	606	5497	216	5724	225
Nesting cell - Type B	NCE		CE		NCE		CE	
	mm	inch	mm	inch	mm	inch	mm	inch
	mm	inch	mm	inch	mm	inch	mm	inch
Rover A FT 1224	13255	522	12887	507	4807	189	4795	189
Rover A FT 1531	15620	615	15280	602	5107	201	5102	201
Rover A FT 1536	16959	668	16619	654	5107	201	5102	201
Rover A FT 1836	16959	668	16619	654	5307	209	5372	211
Rover A FT 2231	15054	593	14690	578	5802	228	5804	229
Rover A FT 2243	18666	735	18304	721	5802	228	5804	229

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.

92% /

of downtime machine orders fulfilled within 24 hours.

96% /

of orders delivered in full on time.

100 /

spare part staff in Italy and worldwide.

500 /

orders processed every day.

# 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 ele-  
ments for the building, nautical and aerospace industries).

We

4,000 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**

