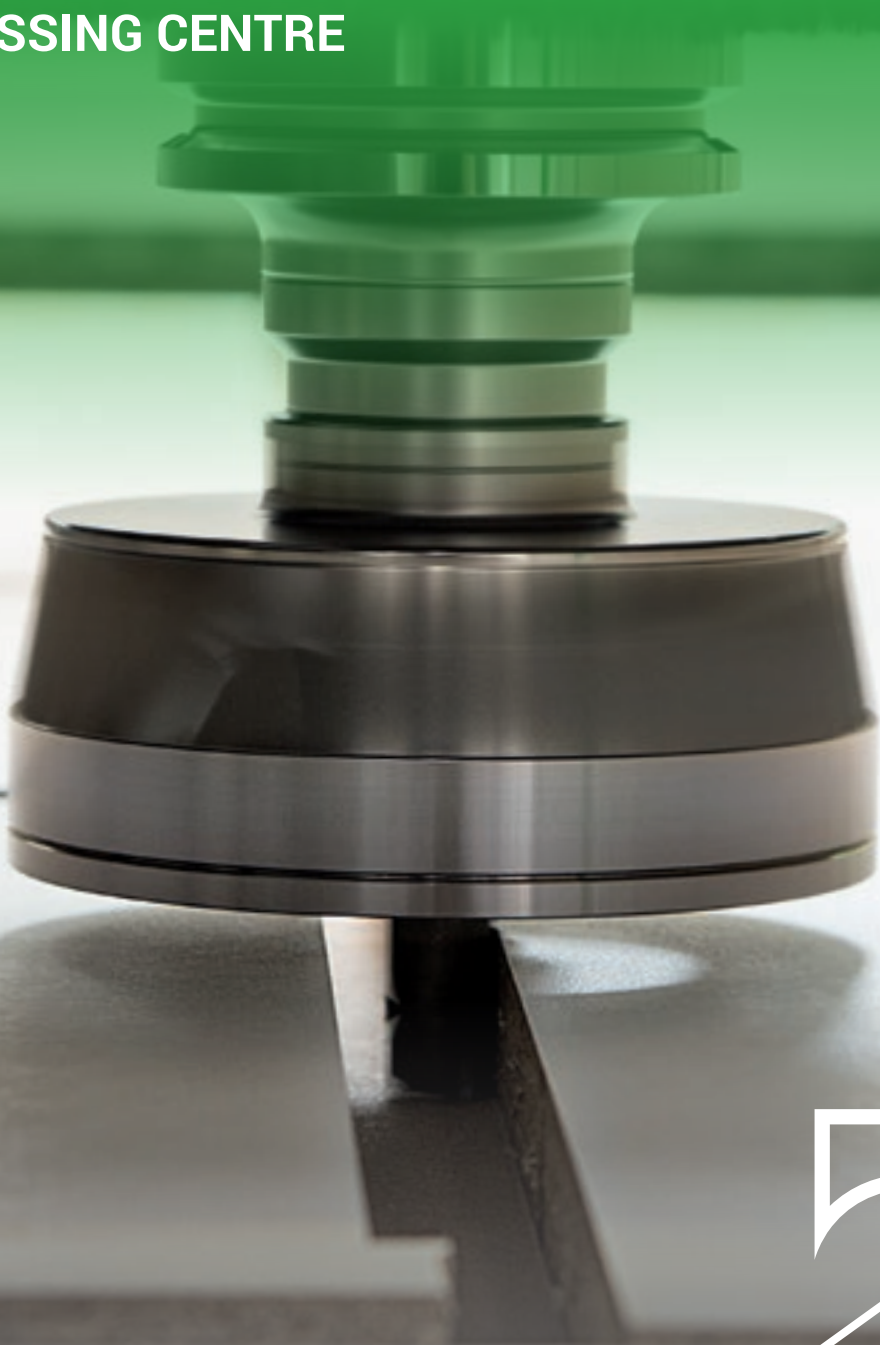


# RO VER AFT

NC PROCESSING CENTRE



 **BIESSE**

 YEARS  
 **BIESSEGROUP**

# LEADING TECHNOLOGY FOR QUALITY PRODUCTS



## 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.

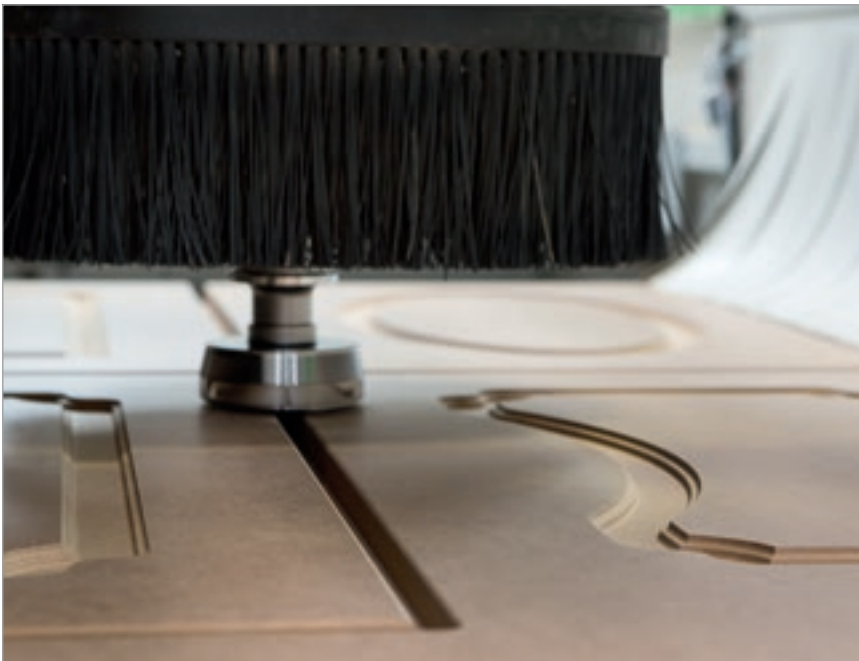


## **ROVER** AFT

- ▶ 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.

# 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.



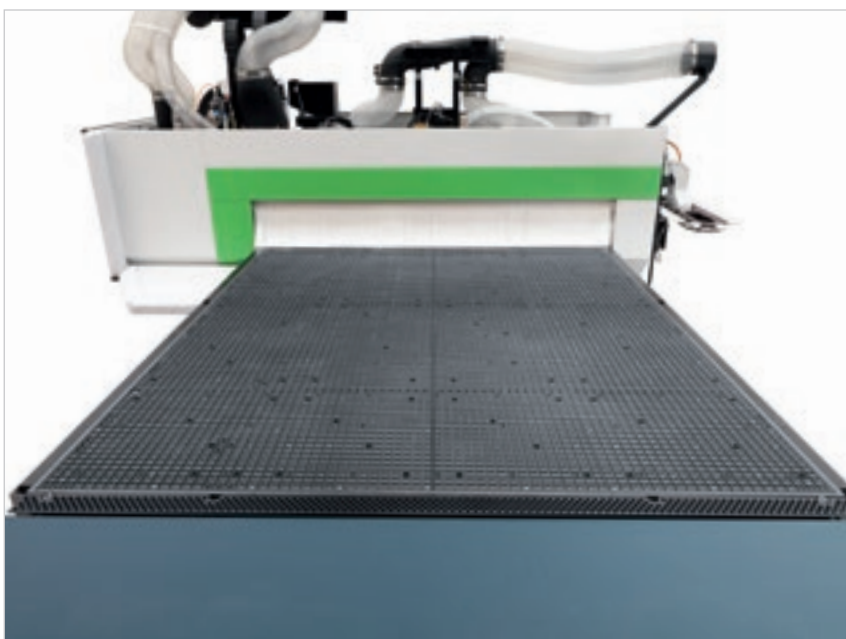


# HIGH RELIABILITY AND PRECISION OVER TIME

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 m/s<sup>2</sup> and speed up to 104 m/min.

**MACHINE BOTH LARGE AND SMALL  
PANELS OF VARYING THICKNESSES.**

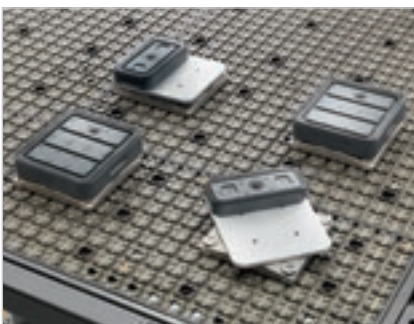


**Multi-zone technology seamlessly and automatically adapts the vacuum of the machine to the different board sizes that the customer has in his production.**

Tecnologia che concentra l'area più piccola di dimensioni per ridurre la perdita di vuoto.

Work table in phenolic laminate with vacuum system.

**HIGH FLOW WORK TABLE WITH HIGHLY EFFICIENT  
VACUUM DISTRIBUTION.**



The vacuum modules can be directly positioned on the support panel. The modules can be quickly and easily used, even without the auxiliary vacuum system.

# BIESSE'S EXPERIENCE FOR A CONTINUOUS BUSINESS GROWTH

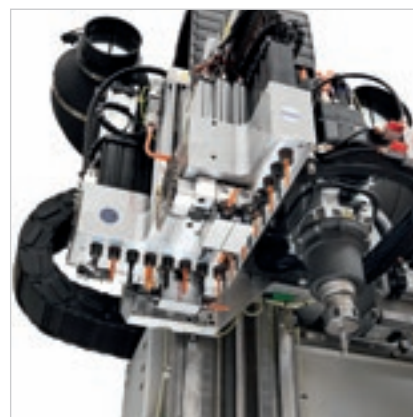


A specific Research & Development team creates pioneering solutions to meet the market requirements and offer cutting edge technology that's reliable and guarantees first class results. Biesse uses the same high-tech components for all machines in its product range.

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.



# NESTING MACHINING

## PRODUCTIVE ECONOMY

**Productivity and efficiency are increased, while maintaining high quality standards and fast delivery times.**

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.



# 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.

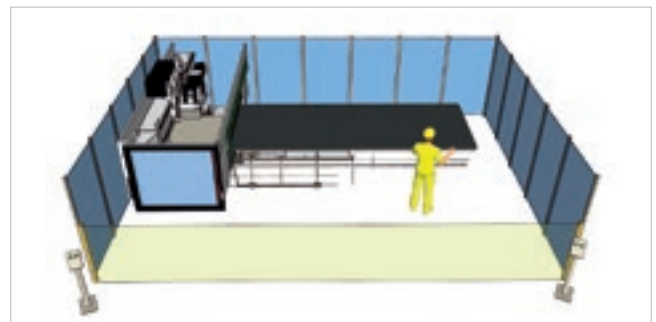


It enables the operator to access the machines' three sides, guaranteeing maximum ergonomic comfort and safety.

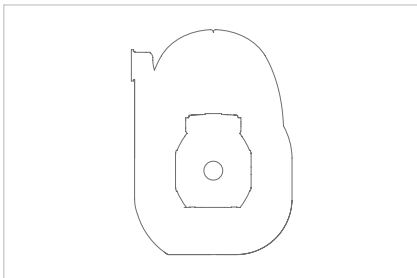


## INCREASING MANUFACTURING CAPACITY

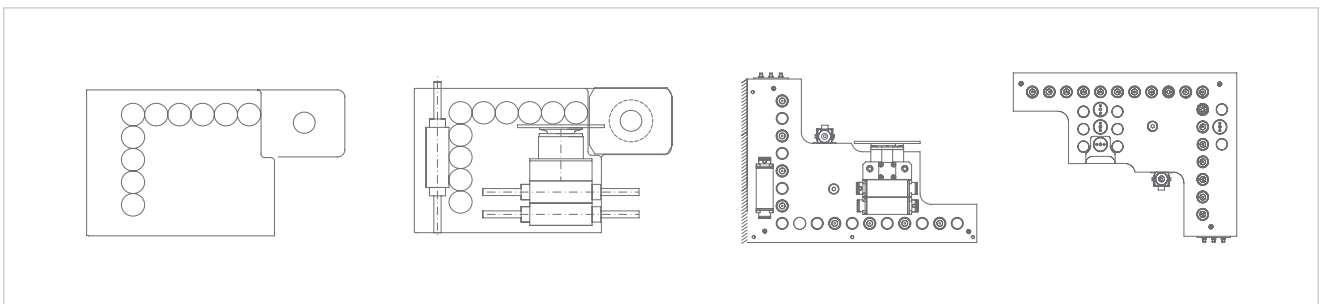
The machine can be configured with tandem loading in order to alternately process panels. This allows for loading or unloading to be carried out during machining operations.



# CONFIGURATION



Electrospindle with power from 13.2 to 19.2 kW.



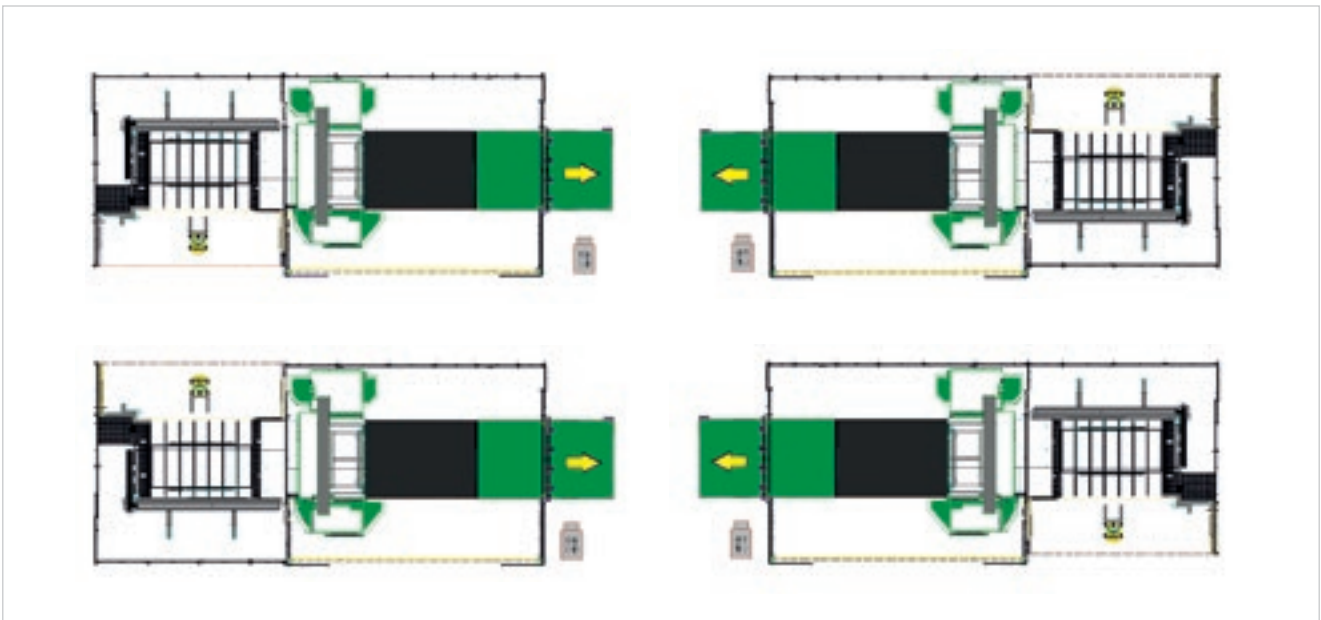
Boring heads available from 10 to 25 spindles: BH25 L - BH18 - BH17 - BH10.

# CAN BE FULLY INTEGRATED INTO A WORKING CELL

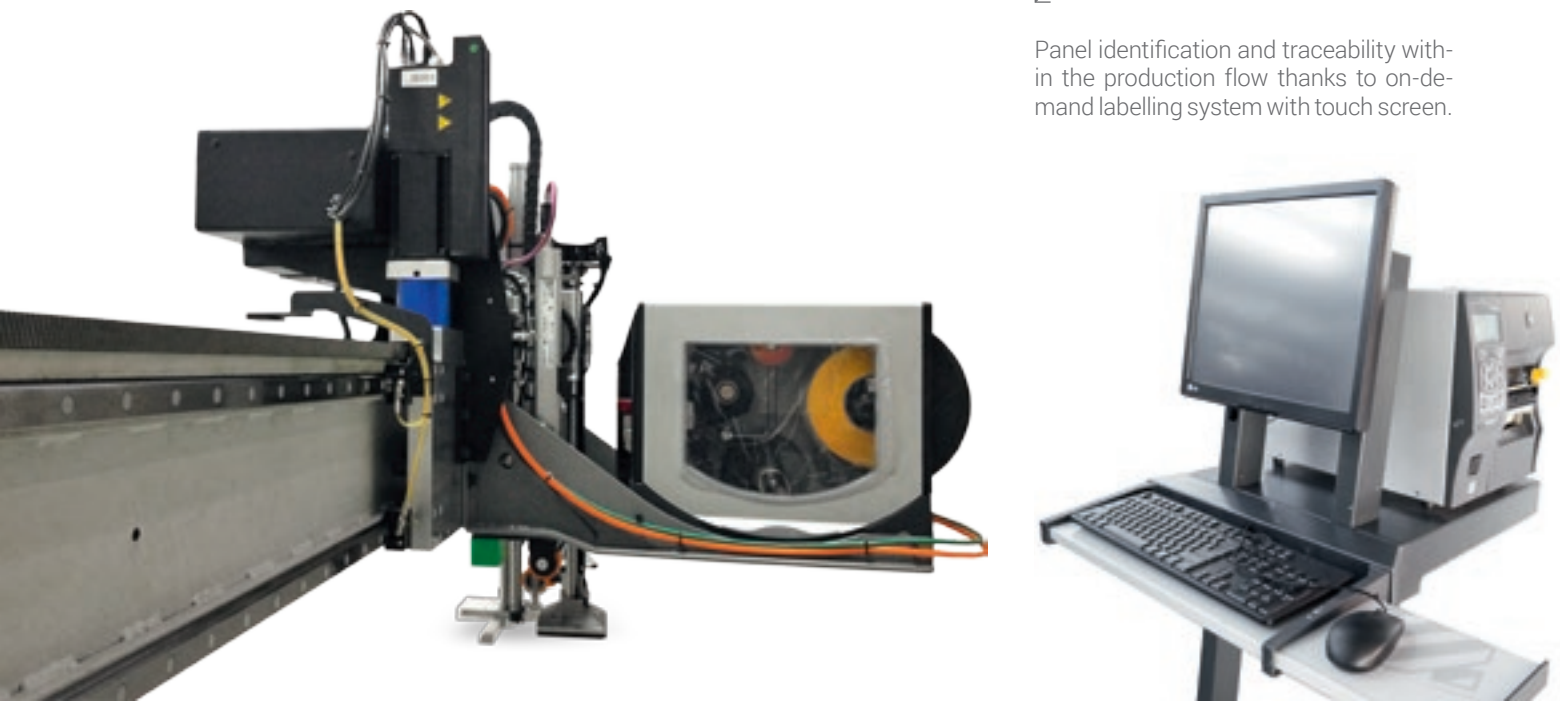
Rover A FT can be adapted according to work flow and in line with customer requirements.



**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.



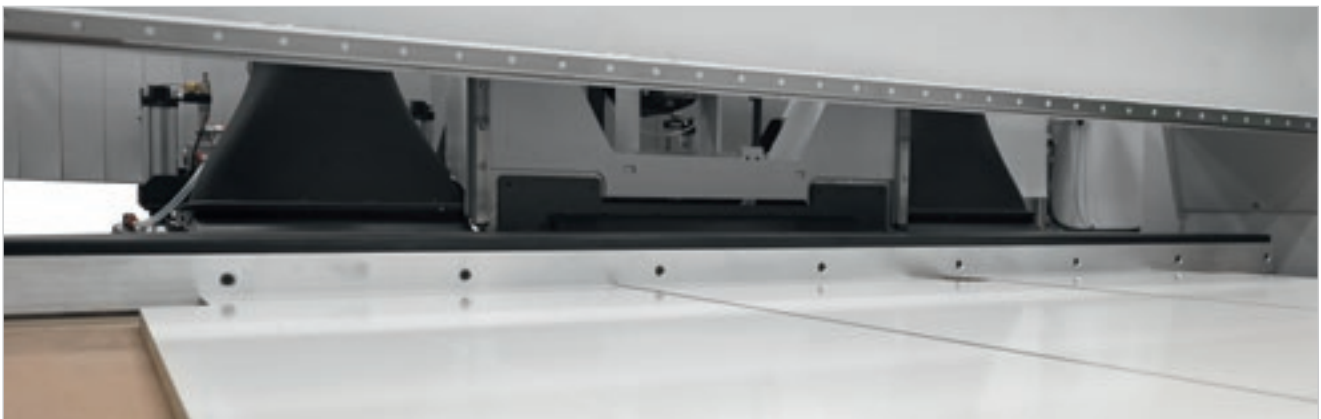
Panel identification and traceability within the production flow thanks to on-demand labelling system with touch screen.



# LOADING AND UNLOADING SOLUTIONS

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 9 mm, whilst also offering automatic labelling.



Sweeper arm with adjustable blade. Used to unload panels up to 3mm thick.



The separation systems can manage loads of breathable materials.



# PRODUCTION



## COMPETITIVE CUSTOMISATION

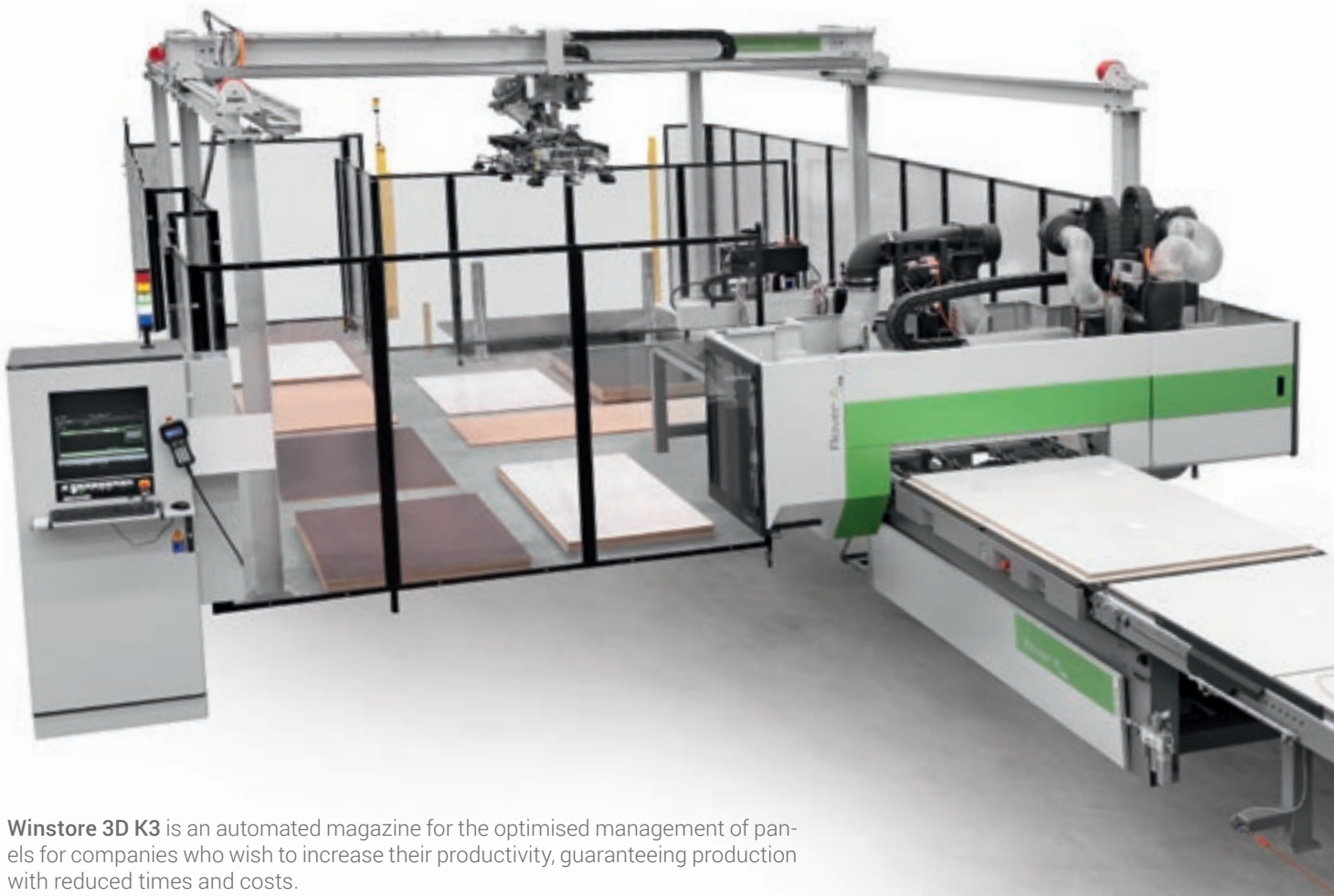
Made-to-measure turnkey factories, plus the integration of Biesse Group solutions with complementary software and machinery, with over 1000 systems installed worldwide.

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.





# 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.

INDUSTRY 4.0 READY

# MAXIMUM OPERATOR SAFETY

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



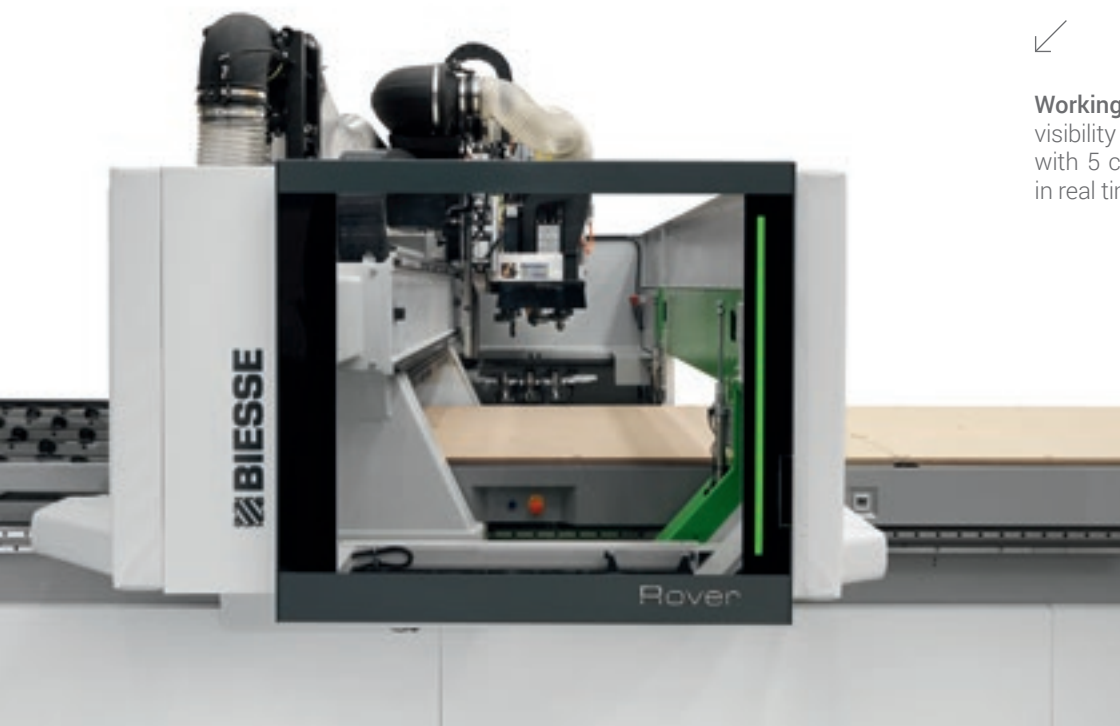
Overlaid layers of side curtain guards to protect the working unit, which are flexible to enable the machine to work at maximum speed in total safety.



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



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

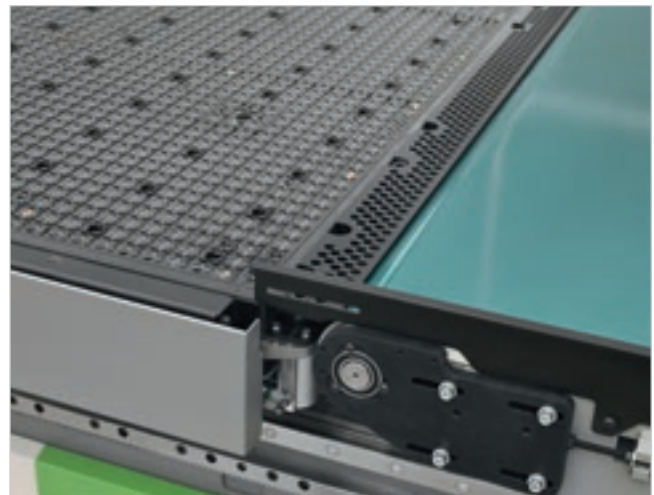


# OPTIMAL CLEANING OF MACHINED COMPONENTS AND WORK AREA

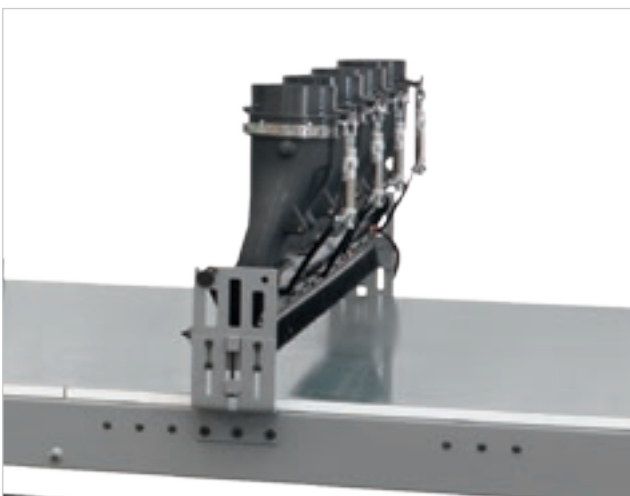
Various automatic machine and component cleaning options are available which saves operator time.



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.

# HIGH-TECH BECOMES ACCESSIBLE AND INTUITIVE



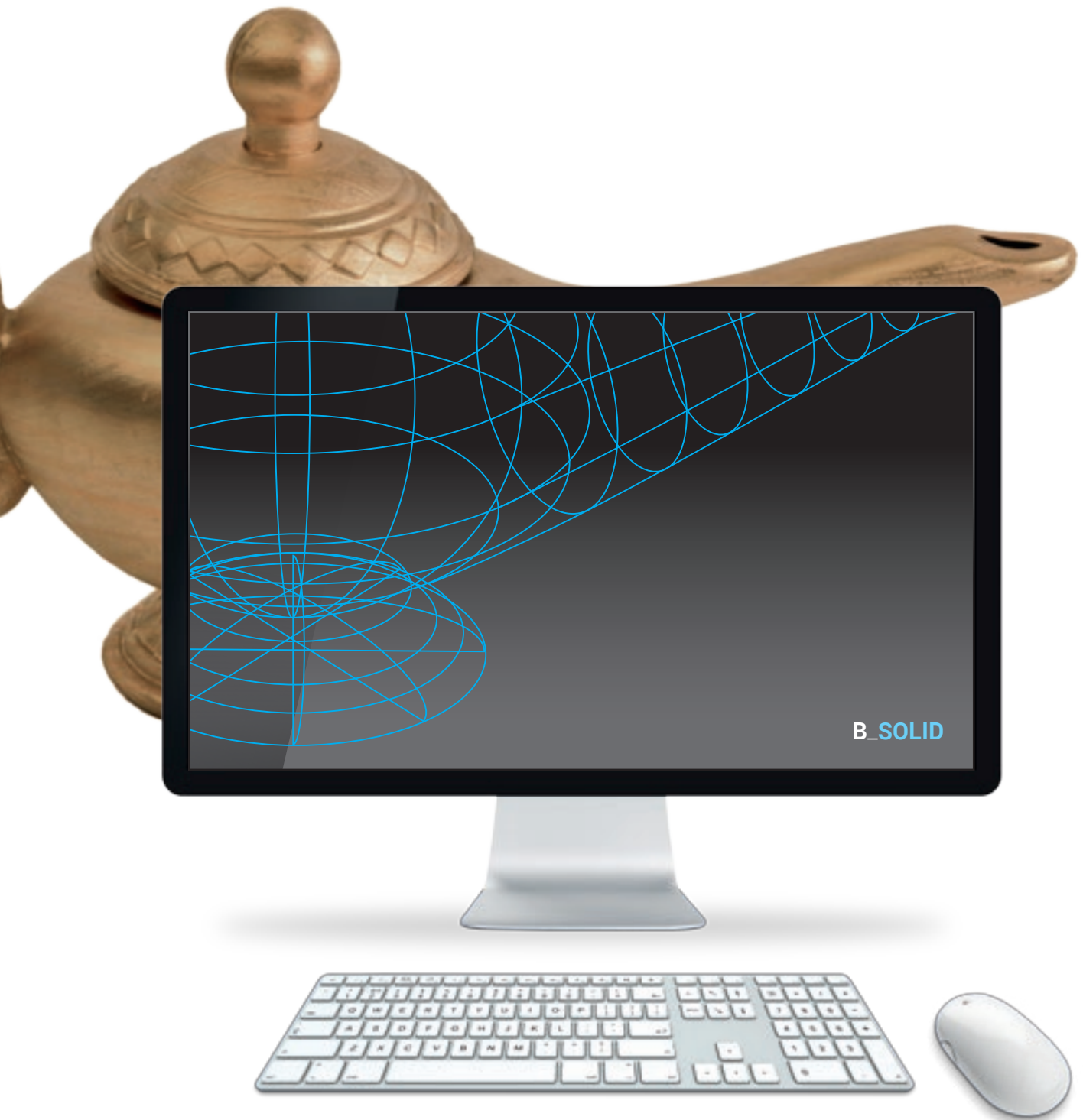
**B\_SOLID IS A 3D CAD CAM SOFTWARE PROGRAM THAT SUPPORTS THE PERFORMANCE OF ANY MACHINING OPERATION THANKS TO VERTICAL MODULES DESIGNED FOR SPECIFIC MANUFACTURING PROCESSES.**

- Planning in just a few clicks.
- 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.
- Machining operation simulation with a calculation of the execution time.





# B\_SOLID



# REDUCED TIME AND WASTE



**B\_NEST IS THE B\_SUITE 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.





# IDEAS TAKE FORM AND SHAPE



**B\_CABINET IS A UNIQUE SOLUTION FOR MANAGING FURNITURE PRODUCTION FROM THE 3D DESIGN PHASE TO PRODUCTION FLOW MONITORING.**

**IT'S NOW POSSIBLE TO PLAN THE DESIGN OF A SPACE AND QUICKLY PASS FROM CREATING THE SINGLE ELEMENTS TO GENERATING PHOTO-REALISTIC CATALOGUE IMAGES, FROM GENERATING TECHNICAL PRINTS TO PRODUCING REQUIREMENT REPORTS, AND ALL IN ONE SINGLE ENVIRONMENT.**

**B\_CABINET FOUR (SUPPLEMENTARY MODULE) MAKES IT EASY TO MANAGE ALL THE WORK PHASES (CUTTING, MILLING, BORING, EDGEBANDING, ASSEMBLY, PACKAGING), JUST WITH A CLICK.**

**B\_CABINET FOUR INCLUDES AN ENVIRONMENT DEDICATED TO THE REAL TIME MONITORING OF THE PROGRESS OF THE PRODUCTION PHASES. THAT MEANS COMPLETE CONTROL OF THE ORDER STATUS, STEP BY STEP, THANKS TO CHARTS AND 3D IMAGES.**

# B\_CABINET



# SOPHIA

GREATER VALUE FROM MACHINES



SOPHIA is the IoT platform created by Biesse in collaboration with Accenture which enables its customers to access a wide range of services to streamline and rationalise their work management processes.

It allows alerts and indicators to be sent to the customer in real time, in relation to production, the machines used and the type of process carried out. These are detailed instructions for more efficient use of the machine.

□ **10% CUT IN COSTS**

□ **50% REDUCTION  
IN MACHINE DOWNTIME**

□ **10% INCREASE  
IN PRODUCTIVITY**

□ **80% REDUCTION IN PROBLEM  
DIAGNOSTICS TIME**

**SOPHIA TAKES THE INTERACTION BETWEEN  
CUSTOMER AND SERVICE TO A HIGHER LEVEL.**

**iOT**  
SOPHIA

IoT - SOPHIA provides a comprehensive overview of the specific machine performance features, with remote diagnostics, machine stoppage analysis and fault prevention. The service includes a continuous connection with the control centre, the option of calling for assistance from within the customer app (such calls are managed as priorities), and an inspection visit for diagnostic and performance testing within the warranty period. Through SOPHIA, the customer receives priority technical assistance.

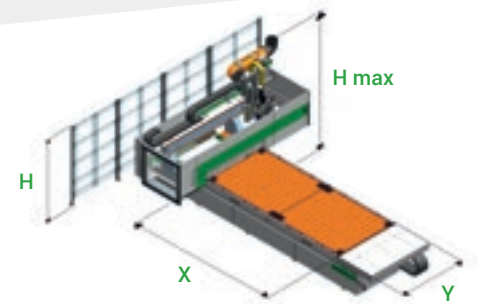
**PARTS**  
SOPHIA

PARTS SOPHIA is the easy new, user-friendly and personalised tool for ordering Biesse spare parts. The portal offers customers, dealers and branches the chance to navigate within a personalised account, consult the constantly updated documentation of the machines purchased, and create a spare parts purchase basket indicating the real time availability in the warehouse and the relative price list. In addition, the progress of the order can be monitored at all times.

 **BIESSE**

in collaboration with  **accenture**

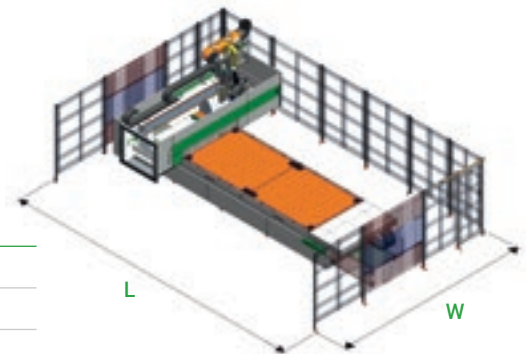
# TECHNICAL SPECIFICATIONS



## WORKING FIELDS AND HEIGHT Z

		X	Y	Pendular NO suspension	Z	H	H max
Rover A FT 1224	mm	2465	1260	-	170	980	2445
Rover A FT 1531	mm	3100	1560	1120	170	980	2445
Rover A FT 1536	mm	3765	1560	1450	170	980	2445
Rover A FT 1836	mm	3765	1875	1450	170	980	2445
Rover A FT 2231	mm	3100	2205	1120	170	980	2445
Rover A FT 2243	mm	4300	2205	1720	170	980	2445

X/Y/Z axis speed	m/min	85 / 60 / 20
Vector speed	m/min	104



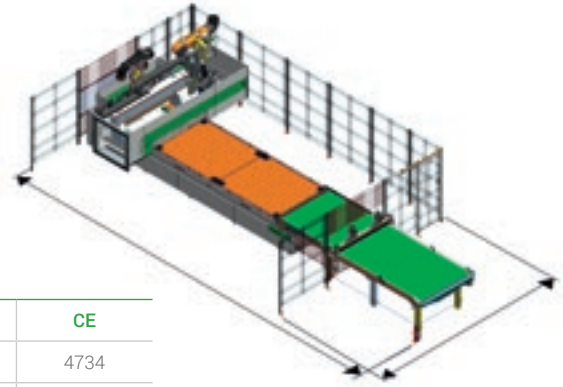
## OVERALL stand alone DIMENSIONS

Access on 3 sides		NCE	CE	NCE	CE
Rover A FT 1224	mm	6309	6567	4760	5117
Rover A FT 1531	mm	6949	7207	5010	5387
Rover A FT 1536	mm	7609	7867	5010	5387
Rover A FT 1836	mm	7609	7867	5210	5687
Rover A FT 2231	mm	6949	7207	5510	6060
Rover A FT 2243	mm	8130	8385	5510	6060
Front access		NCE	CE	NCE	CE
Rover A FT 1224	mm	6475	6525	4502	4734
Rover A FT 1531	mm	7075	7155	5002	5064
Rover A FT 1536	mm	7775	7828	5002	5064
Rover A FT 1836	mm	7775	7828	5197	5334
Rover A FT 2231	mm	7075	7155	5497	5724
Rover A FT 2243	mm	8320	8338	5497	5724

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.

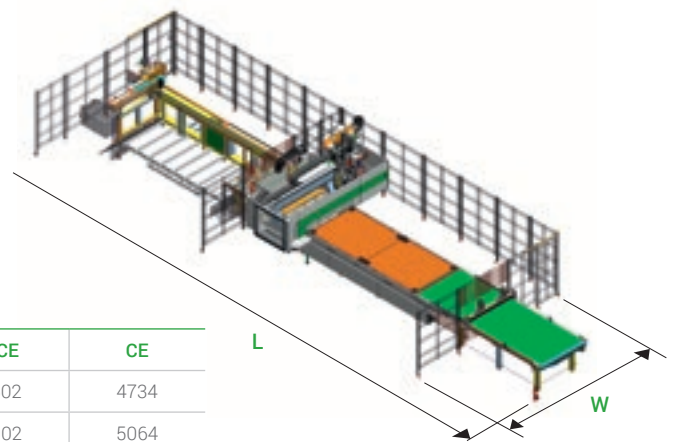
Weighted sound pressure level A (LpA) during machining at the operator's workstation on the vane-pump machine Lpa=79dB(A) Lwa=96dB(A) Weighted sound-pressure level A (LpA) at the operator's workstation and sound power level (Lwa) during machining on the cam-pump machine Lwa=83dB(A) Lwa=100dB(A) Measurement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





### OVERALL DIMENSIONS of unloading belt only

Unloading belt		NCE	CE	NCE	CE
Rover A FT 1224	mm	8135	8155	4502	4734
Rover A FT 1531	mm	9280	9339	5002	5064
Rover A FT 1536	mm	10644	10674	5002	5064
Rover A FT 1836	mm	10644	10674	5197	5334
Rover A FT 2231	mm	9280	9339	5497	5724
Rover A FT 2243	mm	11701	11729	5497	5724



### OVERALL DIMENSIONS of nesting cell

Nesting cell - Type A		NCE	CE	NCE	CE
Rover A FT 1224	mm	10065	10011	4502	4734
Rover A FT 1531	mm	12420	12440	5002	5064
Rover A FT 1536	mm	13769	13773	5002	5064
Rover A FT 1836	mm	13780	13773	5197	5334
Rover A FT 2231	mm	11787	11814	5497	5724
Rover A FT 2243	mm	15451	15398	5497	5724
Nesting cell - Type B		NCE	CE	NCE	CE
Rover A FT 1224	mm	13255	12887	4807	4795
Rover A FT 1531	mm	15620	15280	5107	5102
Rover A FT 1536	mm	16959	16619	5107	5102
Rover A FT 1836	mm	16959	16619	5307	5372
Rover A FT 2231	mm	15054	14690	5802	5804
Rover A FT 2243	mm	18666	18304	5802	5804

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**

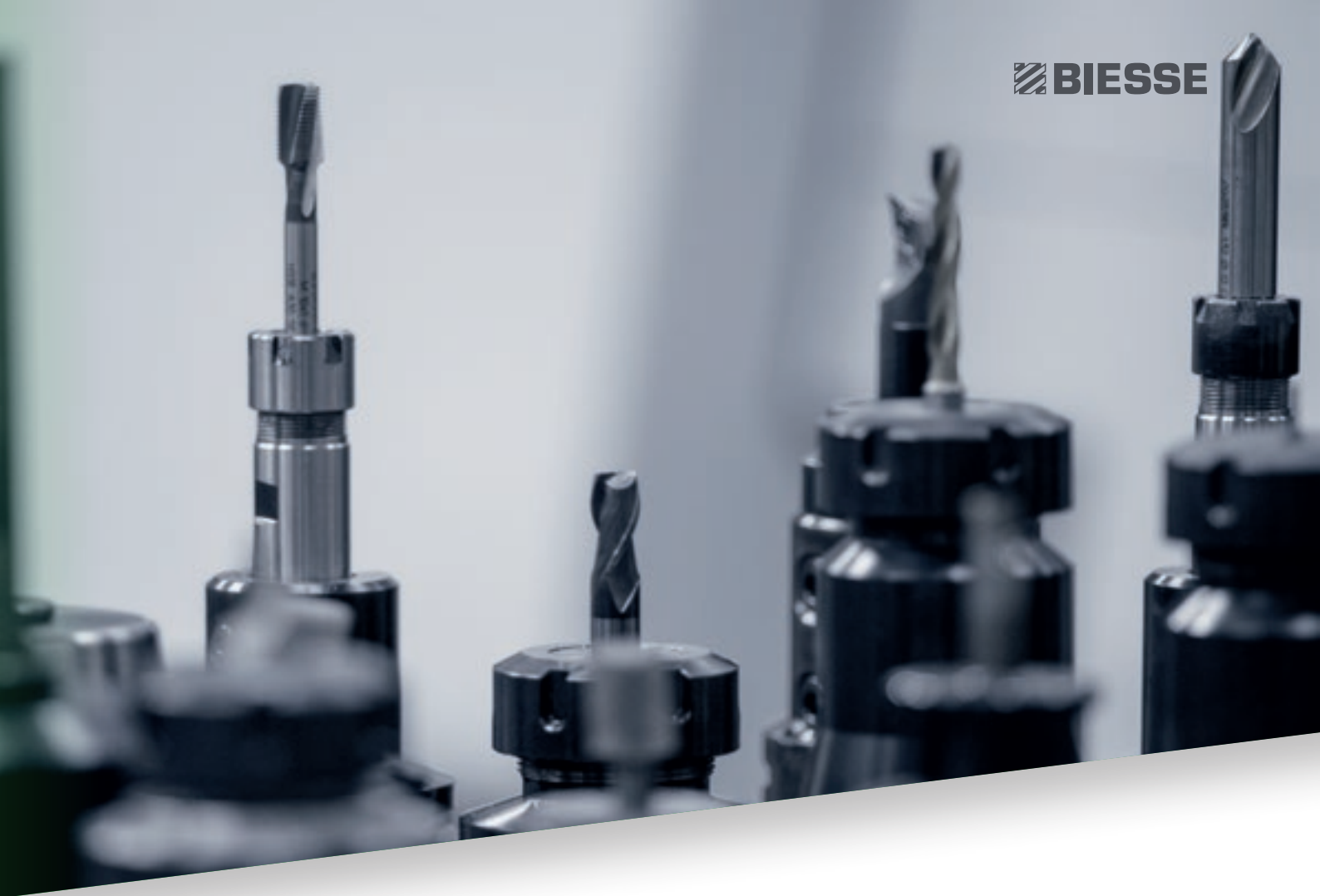
Biesse engineers manning a Teleservice Centre.

**550**

certified Dealer engineers.

**120**

training courses in a variety of languages every year.

A close-up photograph of several metal drill bits and tool components, arranged in a row. The bits are of different sizes and designs, some with black coatings. The background is a soft, out-of-focus grey.

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 specialized 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 customized 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 fulfillment time optimized thanks to a global distribution network with de-localized, 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.

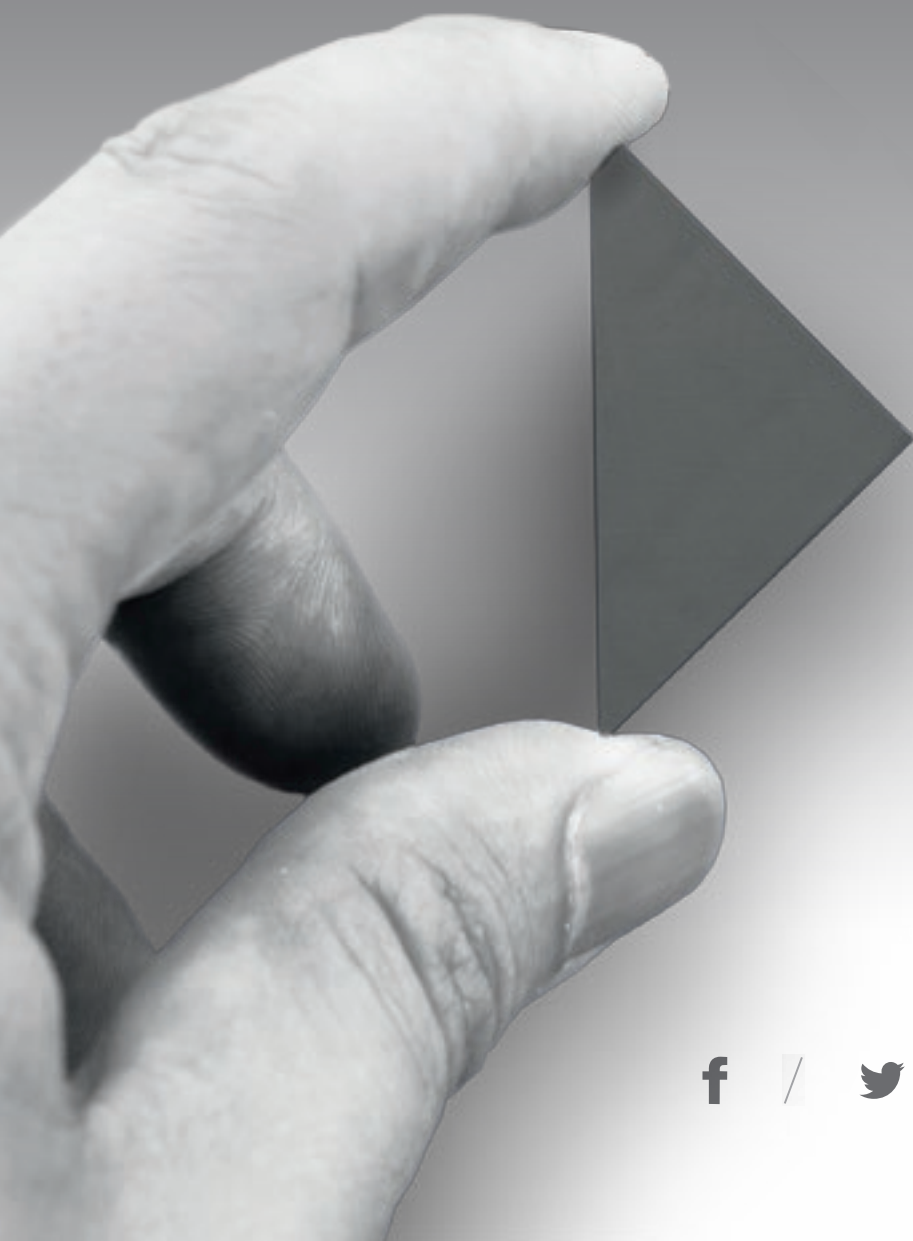
*Taken from an interview with Patrick Evans, head of Product Development at Maton Guitars - Australia*

## THE SAGRADA FAMILIA SITE BETS ON BIESSE

The carpentry workshop of the majestic cathedral designed by Antoni Gaudí has purchased a BIESSE processing centre mainly to develop moulds for the production of stone, marble and concrete elements, as well as shuttering modules. Salvador Guardiola, a highly experienced carpenter specialised in ship-building and responsible for recreating one of the two Caravels used by Columbo during his voyage to America, has been in charge of the Sagrada Familia site for 19 years. "We have chosen

BIESSE for the quality of their processing centre and their technical service", states Guardiola. "The machine cannot stop: some days, it works 24 hours over 24 and, therefore, we needed someone who is able to immediately react to any emergencies". As a matter of fact, BIESSE's technical service for the Sagrada Familia site shall manage to be effective, timely and accurate thanks to the on-line service that the company offers to its customers.

# LIVE THE EXPERIENC



BIESSEGROUP.COM

E



Interconnected technologies and advanced services that maximise efficiency and productivity, generating new skills to serve better our customer.

**LIVE THE BIESSE GROUP EXPERIENCE AT OUR CAMPUSES ACROSS THE WORLD.**

 **BIESSEGROUP**

