BO BAFT

CNC MACHINING CENTRE



LEADING TECHNOLOGY FOR QUALITY PRODUCTS



WATCH THE VIDEO

THE MARKET EXPECTS

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 high-performance machining centre for nesting operations. Compact and efficient, with a gantry structure, the Rover A FT offers top-of-the-range technology and guarantees optimum precision in every machining operation.

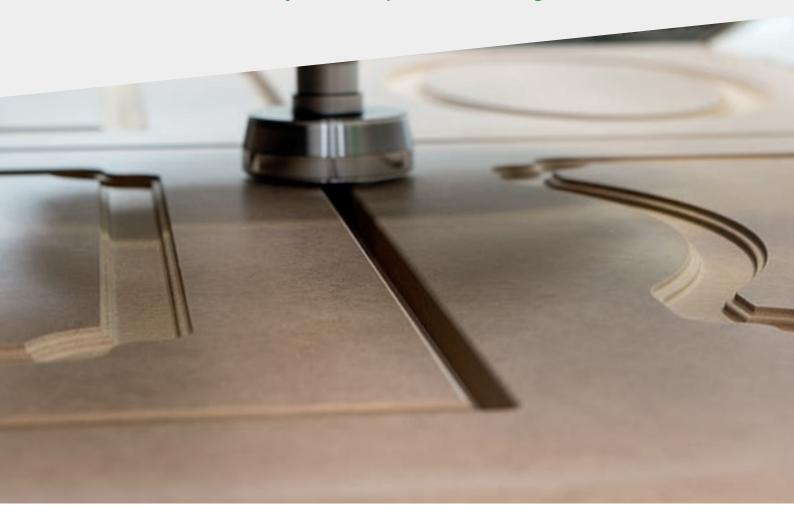


ROVER AFT

- **LONG TERM RELIABILITY AND PRECISION**
- TOP-OF-THE-RANGE TECHNOLOGY
- A WIDE CHOICE OF TOOLS, READY FOR ANY TYPE OF MACHINING OPERATION
- FUNCTIONAL DESIGN AND ERGONOMIC PROTECTION FOR OPTIMUM VISIBILITY AND MAXIMUM SAFETY DURING MACHINING

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.





THE EXTREME RIGIDITY OF THE STRUCTURE GUARANTEES AN OPTIMAL FINISH ON DECORATIVE PIECES AND FURNISHINGS.









The 5-axis unit with direct drive motor offers maximum flexibility in inclined and interpolated machining operations, with no need to fear excessive stress.

RELIABLE TECHNOLOGY

Rover A FT is composed of an extremely robust and well-balanced structure, designed to handle demanding machining requirements without compromising product quality.





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





The reinforced transmission guides lend the machine greater rigidity, boosting the level of precision and machining quality.





Higher motor power increases acceleration up to 4 m/s2 and speed up to 105 m/min, minimising waiting times and reducing cycle times.

WORK TABLES, UNIQUE ON THE MARKET.







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, without compromising the hold on the panel.

Two types of nesting table are available, based on different technologies depending on the application and the customer's end product: FT PLUS and HFT.





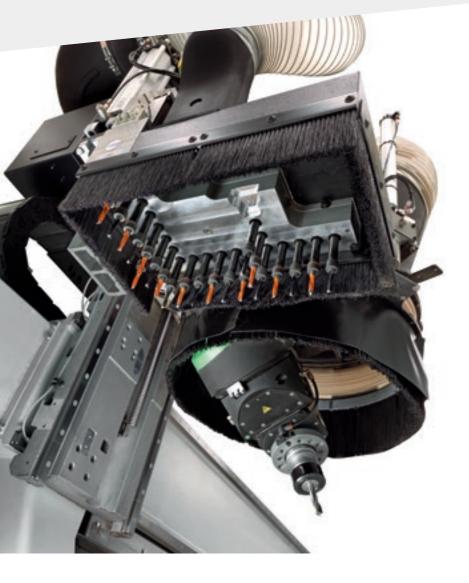
Allows Biesse clamps to be used to hold solid wood elements or complex, small pieces. The extensiveness and increase in payload provide maximum flexibility across machining operations.



HFT (HIGH FLOW TABLE)

Inspired by the experience of our customers. The high vacuum flow rate renders the work table ideal for machining operations on sheets with automatic loading and unloading.

TOP-OF-THE-RANGE COMPONENTS



Maximum results thanks to the option of equipping the machine with 5-axis technology.



The Rover A FT can be fitted with the same components used on other top-of-the-range models. The electrospindle, boring head and aggregates are designed and manufactured for Biesse by HSD, the global leader in this sector.

NEW BHZ 21 BORING HEAD FOR MAXIMUM BORING CAPACITY IN NESTING AND THE BEST PRODUCTIVITY IN ITS CLASS.



Electrospindles for every application:
- up to 19.2 kW HSD liquid-cooled with

automatic tool change HSK F63 1,000-24,000 rpm.



 \angle

C AXIS TORQUE: MORE PRECISE, QUICKER, GREATER RIGIDITY.



WIDE RANGE OF TOOLS READY TO USE ON THE MACHINE, MAXIMUM EASE OF TOOLING.

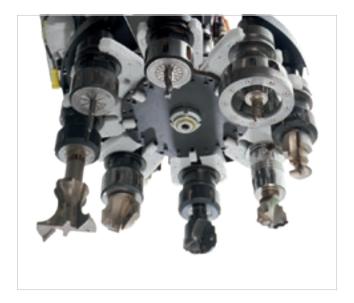
Tool change magazines with a total of up to 32 spaces. All tools and aggregates available at all times, with no need for operator intervention for tooling when switching from one machining operation to the next.



The rack magazine with 13/16 positions provides a simple and functional solution whilst keeping the overall dimensions of the machine as compact as possible.



8-position revolver integrated into the machine beam.





Revolver magazine with 8 overhead positions and 16 on the X carriage, enabling cycle times to be reduced to a minimum.

PRODUCTIVE ECONOMY

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

Biesse's machining 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.



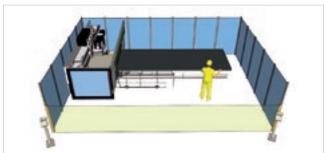
HIGH LEVELS OF VERSATILITY THANKS TO THE VARIOUS POSSIBLE CONFIGURATION TYPES



The full bumper solution is designed to adapt perfectly to the space dedicated to production. It allows the operator to access all sides of the machine at all times, in total safety with no obstacles on the ground.

PENDULAR CONFIGURATION: PRODUCTIVE AND SAFE





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.



The ROVER A FT range is unique in every sense:

- compact and high-performance,
- r accessible and user-friendly,
- r unique and unrivalled.

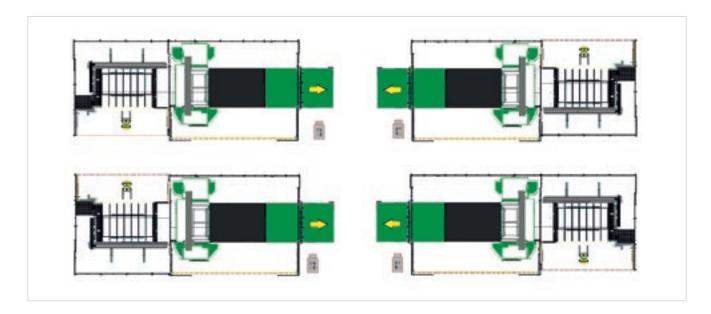
Rear access door to reduce tooling times.

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 whist the machine is already processing the next panel.





The technology of the independent suction cups for loading with detachment systems delivers a load flexibility that is unrivalled on the market.



INVERTED FLOW LOADING SYSTEM

The suction cup loading system is fitted in accordance with the customer's flow requirements, to optimise internal logistics.

LOADING AND UNLOADING SOLUTIONS





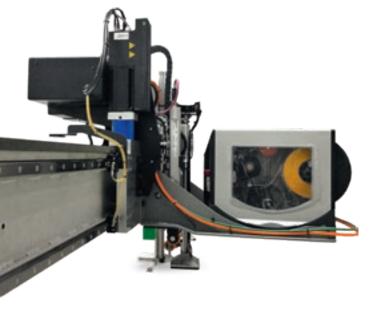
SOLUTIONS DEDICATED TO THE MANAGEMENT OF POROUS AND THIN MATERIALS

The new alignment system manages the detachment and aligned loading of porous and/or thin panels of up to 3 mm thick, or with strong bonding.





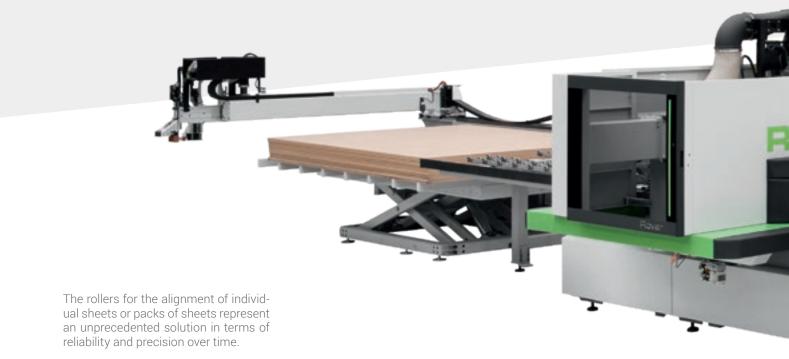
Panel loading system with scissor lift and automatic panel alignment. The system's ease of use ensures long term reliability. The loading pallet positioned close to the machine ensures the overall dimensions on the ground remain compact.





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

ADVANCED LOADING SOLUTIONS, UNPARALLELED RELIABILITY







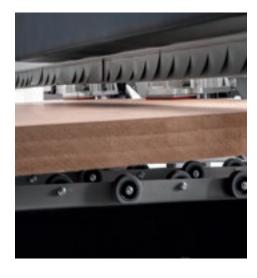
The numerically-controlled push system for packs of sheets introduces a totally innovative approach to loading flexibility.

Rollers for the alignment of panel on work table (optional).



HIGHLY-DEVELOPED AND PATENTED QUALITY

The patented loading system with grippers enables packs of panels to be inserted with precision and safety, significantly increasing productivity.









The **roller presser** allows the machining of up to 3 panels for the frames of armchairs or sofas and, in general, applications with overlapping sheets of breathable material. Highly effective system for machining on sheets of sub-formats much narrower than the area covered by the rollers.

LEAN, EFFICIENT PRODUCTION FLOWS



- RAPID RETURN ON INVESTMENT THANKS TO INCREASED PERFORMANCE AND REDUCED COSTS
- PRODUCTION FLOW OPTIMISATION
- INTEGRATION IN THE PRODUCTION LINE







The **Winstore** 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

PROTECTION AND SAFETY FOR ALL MACHINING OPERATIONS

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

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

The large hatch, which can be opened, facilitates access for tooling operations and for cleaning the front of the machine.



MAXIMUM VISIBILITY OF THE WORKING UNIT FROM ANY POSITION



LED bar with 5 colours, indicating the machine status in real time, allowing the operator to check the machine status at any point.

REDUCED CLEANING TIMES, TO ENSURE MAXIMUM PRODUCTIVITY





New suction hoods which can be adjusted to 12 positions (3 axis) or 19 positions (5 axis) and continuous coating of bristles. This solution enables fine, precise adjustments to be made to the position of the hood, significantly increasing suction capacity.



System with 2 to 4 suction hoods positioned above the unloading belt.



Intake manifold positioned at the end of the belt.



Manifold for frames
An extremely sturdy solution at the end
of the belt dedicated to those working
with elements in packs and frames

T-JET PATENTED TECHNOLOGY

T-JET is the solution patented by Biesse, for removing chips and dust during milling operations, and it's the only one of its kind on the market. Together with the C torque axis, the device follows the trajectories perfectly, ensuring the total cleaning of the channels and side surfaces in one single movement. Effects guaranteed even in the narrowest corners or with changes of direction.

Combined with the new suction hoods and the C torque axis, it enables the perfect execution of machining operations in a smooth, precise manner, offering numerous advantages:

- LESS DUST AND FEWER CHIPS ON THE TABLE
- TOTAL CLEANING OF THE SIDE SURFACES OF THE PIECES
- FEFECTIVE SUCTION GUARANTEED EVEN AT HIGH FEED SPEEDS
- UNPRECEDENTED FINISHING OUALITY



THE MOST ADVANCED TECHNOLOGY CLOSE AT HAND

bTouch is an optional feature that can be purchased after purchase of the machine to enhance the functionality and the usage of the technology available.



bTouch is 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 B_SUITE 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. The screen has a maximum resolution of 1920×1080 (Full HD) at 60 Hz. Specifically, you can:

- r Create any CAD programme (including parametric programmes), with layouts and machining operations
- Move, rotate and increase the size of objects (panel, NC machine, tool etc.) present within the CAD/CAM area
- Quickly and simply complete warehouse tooling, by dragging the tools into their designated places
- Prepare the machine for the correct positioning of the panel (machine set-up), moving tables and carriages into the desired position
- Send a programme machining list, change the parameters and send it to the NC machine for processing
- Manage all the controls present in soft-console

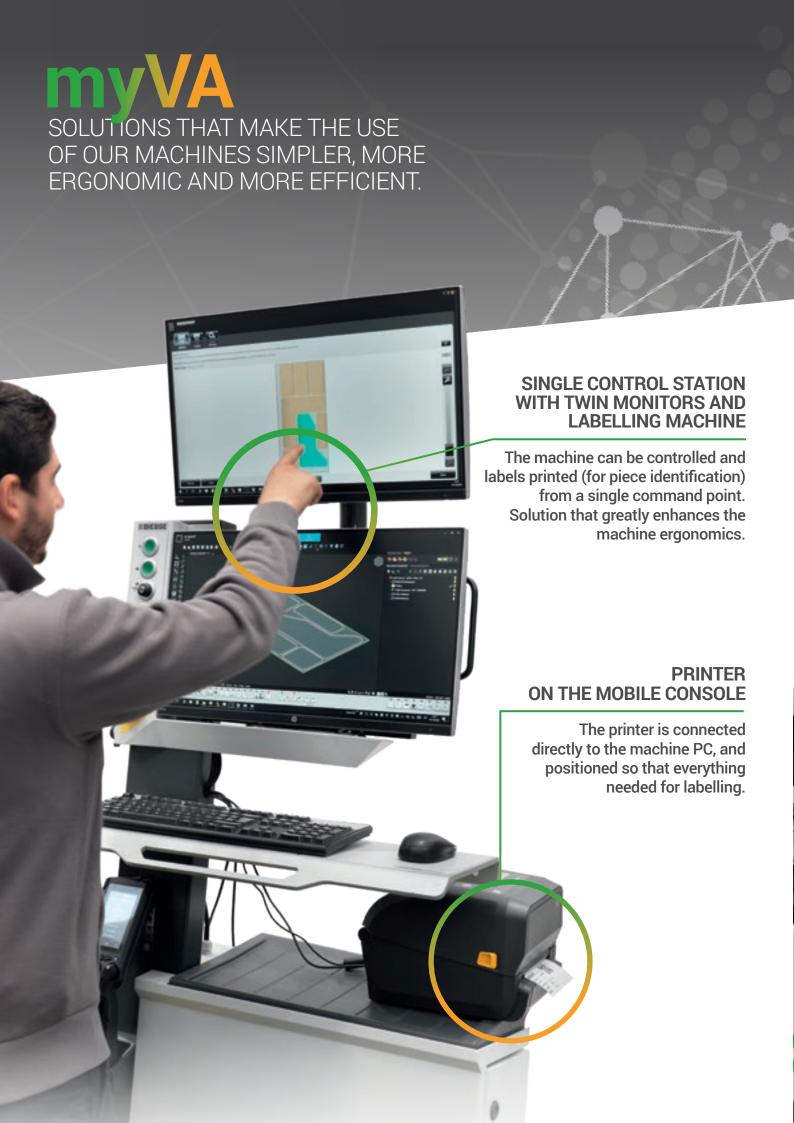
AUTOMATED, INTERCONNECTED PRODUCTION



Rover A FT can be perfectly integrated in a line with robots (ROS) and loading/unloading systems. The ROS robotised solutions ensure a marked increase in production and total reliability of both the production process and the loading/unloading operations, even in a wider context of industrial automation.

INCREASED PRODUCTIVITY AND REDUCED PRODUCTION COSTS, THANKS TO:

- The possibility of working with twin stations, with piece loading and unloading while the machine is running
- Reduced working time for the operator
- Simplification of work for the operator
- Machining operations that require no supervision and have no time limits (24/7)



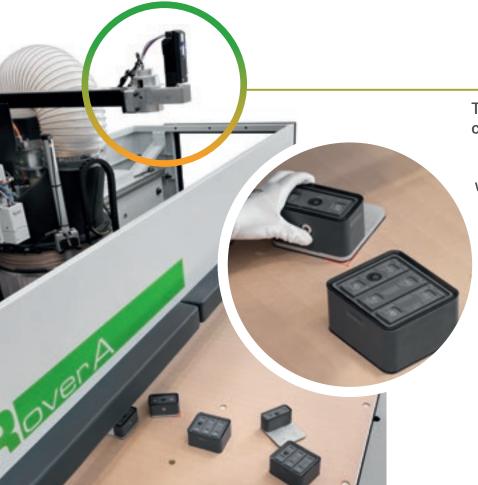


Biesse has developed a series of solutions that help the operator in the various work phases, making daily tasks easier. myVA is a virtual assistant for every operator.



WEARABLE BAR CODE AND QR SCANNER

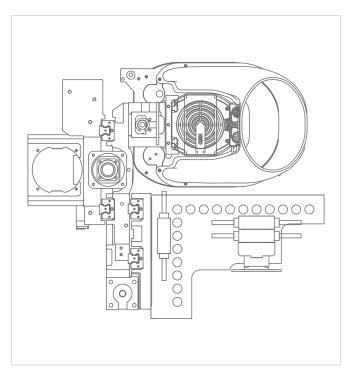
Used to upload programs in the work list, reading the information given on the label and activating the subsequent machining phases. QR codes or bar codes are read quickly and accurately, leaving the operator's hands free (unlike the classic scanner).



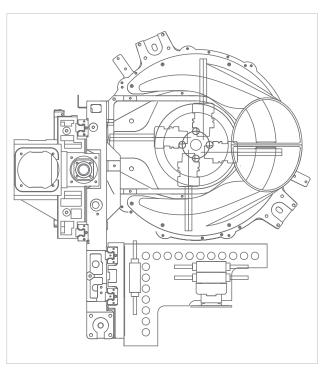
LED PROJECTOR FOR TOOLING THE WORK TABLE

The LED projector is used to identify the correct position of the vacuum modules on the work table, showing how they rotate as well. This solution saves on work area tooling time, and reduces the risk of mistakes by the operator.

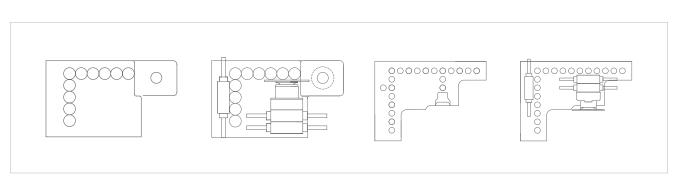
COMPOSITION OF THE WORKING UNIT







5-axis units with power of up to 16 kW with liquid cooling.

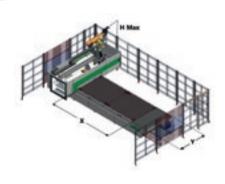


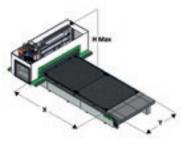
Boring heads available from 10 to 25 spindles: BHZ 10 -BHZ 17 L -BHZ 21 -BHZ 25 L.

A COMPLETE RANGE OF AGGREGATES



TECHNICAL SPECIFICATIONS





WORKING FIELDS AND HEIGHT Z

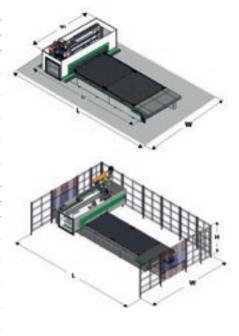
		х	Υ	Pendular 4/5 axes NO suspension	Z	H max
Rover A FT 1224	mm / inch	2465 / 97	1260 / 50	809/751 - 32/30	170(*)/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 1531	mm / inch	3100 / 122	1560 / 61	1126/1069 - 44/42	170*/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 1536	mm / inch	3765 / 148	1560 / 61	1459/1401 - 57/55	170*/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 1564	mm / inch	6450 / 254	1560 / 61	2801/2743 - 110 /108	170*)/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 1836	mm / inch	3765 / 148	1875 / 74	1459/1401 - 57/55	170*/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 2231	mm / inch	3100 / 122	2205 / 87	1126/1069 - 44/42	170*/200/250 - 6,7*/8/10	2750 / 108
Rover A FT 2243	mm / inch	4300 / 169	2205 / 87	1726/1669 - 68/66	170*/200/250 - 6,7*/8/10	2750 / 108

SPEED

		Х	Υ	Z	Vector
Full bumper	m/min	25	60	20	65
	ft/min	82	197	66	213
High speed	m/min	85	60	20	105
	ft/min	279	197	66	213

OVERALL stand alone **DIMENSIONS**

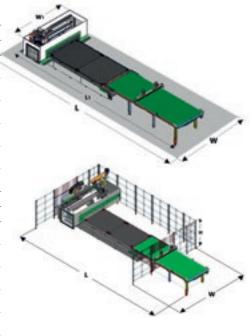
Full Domeston		L	L1	W	W1	
Full Bumper		CE/NCE				
Rover A FT 1224	mm	6380 (6640)*	5379 (5644)*	4136	3136	
	inch	251 (261)*	212 (222)*	163	123	
Rover A FT 1531	mm	7020 (7300)*	6019 (6304)*	4436	3436	
	inch	276 (287)*	237 (248)*	175	135	
Rover A FT 1536	mm	7680 (7960)*	6680 (6964)*	4436	3436	
	inch	302 (313)*	263 (274)*	175	135	
Rover A FT 1836	mm	7680 (7960)*	6680 (6964)*	4752	3752	
	inch	302 (313)*	263 (274)*	187	148	
Rover A FT 2231	mm	7020 (7300)*	6015 (6305)*	5082	4082	
	inch	276 (287)*	237 (248)*	200	161	
Rover A FT 2243	mm	8210 (8500)*	7215 (7505)*	5082	4082	
	inch	323 (334)*	284 (295)*	200	161	
High Chood		I	L	W		
High Speed		CE	NCE(**)	CE	NCE(**)	
Rover A FT 1224	mm	6525	6475	4734	4752	
	inch	257	254	186	187	
Rover A FT 1531	mm	7155	7075	5064	5052	
	inch	282	278	199	198	
Rover A FT 1536	mm	7828	7772	5064	5052	
	inch	308	305	199	198	
Rover A FT 1564	mm	10494	10420	5082	5052	
	inch	413	410	200	198	
Rover A FT 1836	mm	7828	7775	5334	5247	
	inch	308	306	210	206	
Rover A FT 2231	mm	7155	7075	5724	5547	
	inch	282	278	225	218	
Rover A FT 2243	mm	8338	8320	5724	5547	
	inch	328	327	225	218	



(*) With Sweeping Arm (**) In the NCE version, the height of the protective elements is 1.1 metres.

OVERALL DIMENSIONS of unloading belt only

		L	1.1	W	W1
Full Bumper		L	L1		VV I
			CE/	NCE	
Rover A FT 1224	mm	8680	7680	4136	3136
	inch	342	302	163	123
Rover A FT 1531	mm	9870	8965	4436	3436
	inch	389	353	175	135
Rover A FT 1536	mm	11210	10306	4436	3436
	inch	441	406	175	135
Rover A FT 1836	mm	11210	10307	4752	3752
	inch	441	406	187	148
Rover A FT 2231	mm	9870	8965	5082	4082
	inch	389	353	200	161
Rover A FT 2243	mm	12270	11367	5082	4082
	inch	483	448	200	161
11: 1 0 1		L		W	
High Speed		CE	NCE(**)	CE	NCE(**)
Rover A FT 1224	mm	8155	8135	4734	4752
	inch	321	320	186	187
Rover A FT 1531	mm	9339***	9280***	5064	5052
	inch	368***	365***	199	198
Rover A FT 1536	mm	10674***	10644***	5064	5052
	inch	420***	419***	199	198
Rover A FT 1836	mm	10674	10644	5334	5247
	inch	420	419	210	206
Rover A FT 2231	mm	9328***	9284***	5724	5547
	inch	368***	365***	225	218
Rover A FT 2243	mm	11730***	11700***	5724	5547
	inch	461***	460***	225	218



OVERALL DIMENSIONS of Nesting Cell

		J				
Nesting Cell - Type A			L	W		
Nesting Cell - Type A		CE	NCE	CE	NCE(**)	
Rover A FT 1224	mm	10010	10065	4730	4730	
	inch	394	396	186	186	
Rover A FT 1531	mm	11820***	11770***	5064	5052	
	inch	465***	463***	199	198	
Rover A FT 1536	mm	13773***	13769***	5064	5052	
	inch	542***	542***	199	198	
Rover A FT 1836	mm	13714	13780	5334	5247	
	inch	539	542	210	206	
Rover A FT 2231	mm	11814***	11787***	5724	5547	
	inch	465***	464***	225	218	
Rover A FT 2243	mm	15400***	15451***	5720	5547	
	inch	606***	608***	225	218	
Nesting Call Type D		L		W		
Nesting Cell - Type B		CE	NCE(**)	CE	NCE(**)	
Rover A FT 1224	mm	12887	13255	4813	4807	
	inch	507	521	189	189	
Rover A FT 1531	mm	14700***	15080***	5102	5216	
	inch	579***	593***	200	205	
Rover A FT 1536	mm	16619***	16959***	5102	5107	
	inch	654***	667***	200	201	
Rover A FT 1836	mm	16620	16960	5372	5307	
	inch	654	667	211	208	
Rover A FT 2231	mm	14690***	15054***	5804	5802	
	inch	578***	592***	228	228	
Rover A FT 2243	mm	18304***	18666***	5804	5802	
	inch	721***	734***	228	228	

^(**) In the NCE version, the height of the protective

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

Weighted sound pressure level A in: Operator workstation LpfA 76 dB (A). Loading unloading position LpfA 72 dB (A). Uncertainty factor K = 4 dB (A). Operating conditions: milling operations at a speed of 20 m/min, 20000 rpm.

The measurement was carried out in compliance with UNI EN ISO 3746, UNI EN ISO 11202, UNI EN 848-3 and subsequent modifications. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Even though there is a relation between emission levels and exposure levels, this cannot be used reliably to establish whether further precautions are necessary. The factors determining the noise levels to which the operative personnel are exposed include the length of exposure, the characteristics of the work area, as well as other sources of dust and noise, etc. (i.e. the number of machines and processes concurrently operating in the vicinity). In any case, the information supplied will help the user of the machine to better assess the danger and risks involved.

elements is 1.1 metres

(***) The overall dimensions are increased by 460 mm in the presence of the dust collector grid on the ouput conveyor belt for overlapping panels

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.

- Flexibility with reduced production times and costs.
- Optimisation for every type of product.
- Management of articles, sheets and labels.
- Integration with company software.

B_NEST



MANAGING PRODUCTION IN A SIMPLE, USER-FRIENDLY MANNER

SMARTCONNECTION
Powered by Retuner





SMARTCONNECTION IS A SOFTWARE PACKAGE FOR MANAGING JOB ORDERS WITHIN THE COMPANY - FROM THE GENERATION PHASE TO SCHEDULING AND ACTUAL PRODUCTION START-UP - IN JUST A FEW SIMPLE, INTUITIVE STEPS.

THANKS TO SMARTCONNECTION, THE PRODUCTION SITE MACHINES CAN BE LINKED UP TO TRANSFORM THE COMPANY INTO A 4.0 ENTITY...



MANAGE THE JOB ORDER

PLAN

SCHEDULE

WORK



Biesse is extending SmartConnection across all geographical areas.

To check availability in your country, get in touch with your commercial contact.

S - PHIA

GREATER VALUE FROM MACHINES



The Biesse IoT platform which enables customers to access an extensive range of services to streamline and rationalise their work management processes.

□ SERVICES
□ PROACTIVITY
□ ANALYSIS





CUSTOMER CARE IS WHO WE ARE

SERVICES is a new experience for our customers, to offer not just excellent technology but the added value of an increasingly direct connection with the company, the professionals who work there and the experience they embody.



ADVANCED DIAGNOSTICS

Digital channels for remote interaction online 24/7. Always ready to intervene on-site seven days a week.



A WORLDWIDE NETWORK

39 branch offices, over 300 certified agents, retailers in 120 countries, and spare parts warehouses in America, Europe and the Far East.



SPARE PARTS AVAILABLE IMMEDIATELY

Identification, shipping and delivery of spare parts for every need.



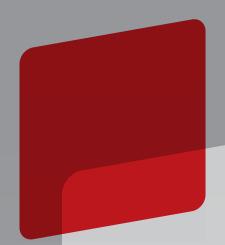
EVOLVED TRAINING OPPORTUNITIES

Lots of on-site, online and classroom training modules for personalised growth.



VALUABLE SERVICES

A wide range of services and software packages to help our customers achieve continuous improvements in performance.



AN EXCELLENT LEVEL OF SERVICE

+550

HIGHLY SPECIALISED
TECHNICIANS AROUND
THE WORLD, READY TO HELP
CUSTOMERS WITH EVERY
NEED

90%

OF MACHINE DOWN CASES WITH RESPONSE TIME UNDER 1 HOUR

+100

EXPERTS IN DIRECT CONTACT THROUGH REMOTE CONNECTIONS AND TELESERVICE

92%

OF SPARE PARTS ORDERS FOR MACHINE DOWNTIME PROCESSED WITHIN 24 HOURS

+50.000

ITEMS IN STOCK IN THE SPARE PARTS WAREHOUSES

+5.000

PREVENTIVE MAINTENANCE VISITS

80%

OF SUPPORT REQUESTS SOLVED ONLINE

96%

OF SPARE PARTS ORDERS DELIVERED IN FULL ON TIME

88%

OF CASES SOLVED WITH THE FIRST ON-SITE VISIT



MADE WITH BIESSE

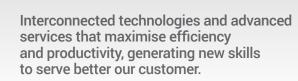
THE SAGRADA FAMÍLIA SITE BETS ON BIESSE

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 Família site shall manage to be effective, timely and accurate thanks to the on-line service that the company offers to its customers.







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