

# PRO VER A12/15/18

NC PROCESSING  
CENTRE



 **BIESSE**



# COMPETITIVENESS FOR TECHNOLOGY AND PERFORMANCE



## THE MARKET EXPECTS

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 RESPONDS

with **technological solutions** that influence and support technical expertise as well as process and material knowledge. **Rover A 12/15/18** is the flexible new high-performance NC machining centre with a gantry structure, designed for customers who want to invest in a product that can process any type of element quickly but with excellent results. The Rover A 12-15-18 boasts a quality-competitiveness ratio without equal on the market, making it the ideal investment.





## **ROVER** A12/15/18

- ✓ OPTIMUM PERSONALISATION
- ✓ ERGONOMIC, COMPACT AND ROBUST
- ✓ TOP RANGE COMPONENTS  
TO ENSURE RELIABILITY WITHOUT COMPROMISES
- ✓ SIMPLE, QUICK AND SAFE TOOLING  
OF THE WORKING AREA



# SUITABLE FOR A WIDE RANGE OF MACHINING OPERATIONS WITH 3, 4 AND 5 AXES

No machining limits:  
the Rover A adapts to the production of every part, whether it be windows, doors, stairs, tops, furnishing elements or anything else.





# TECHNOLOGY BASED ON 5 INTERPOLATING AXES WITH CONTINUOUS ROTATION



The continuous rotation of the B and C axis of the 5-axis milling unit (obtained thanks to technologically advanced components) guarantees the maximum machining speed and optimum quality of the end product.



# ERGONOMIC, COMPACT AND ROBUST



An extremely compact machining centre designed to adapt to the production space in which it is installed. Enables the operator to safely access all sides of the machine at all times, with no obstacles on the ground.



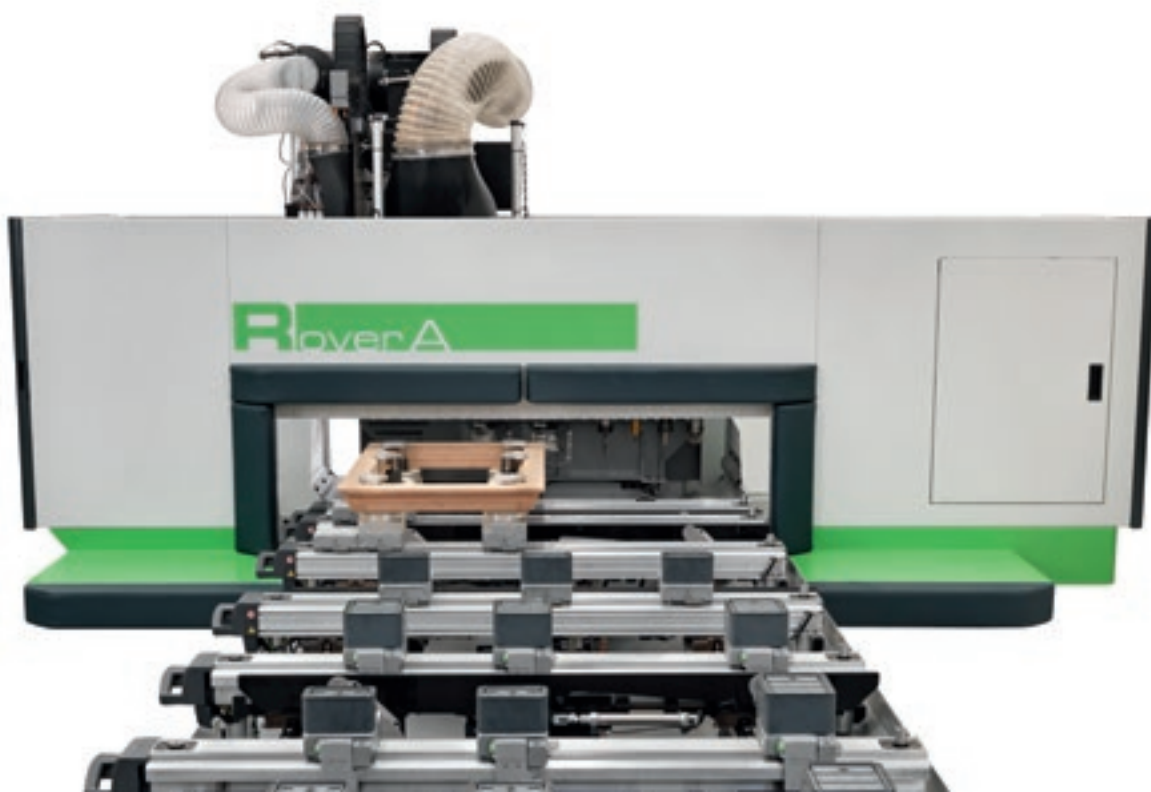
The new Rover A 12/15/18 is designed to offer maximum performance in an extremely compact solution with the minimum working dimensions.





The Rover A enhances its range, increasing its performance levels for solid wood machining.

Thanks to the gantry structure, inherited from the higher range, it can withstand notable machining strain whilst still guaranteeing optimum reliability and the typical precision of solid wood machining.





# TOP-OF-THE-RANGE COMPONENTS

The components of the Rover A 12/15/18 are the same as those for the top-of-the-range solutions, to ensure constant results over time.

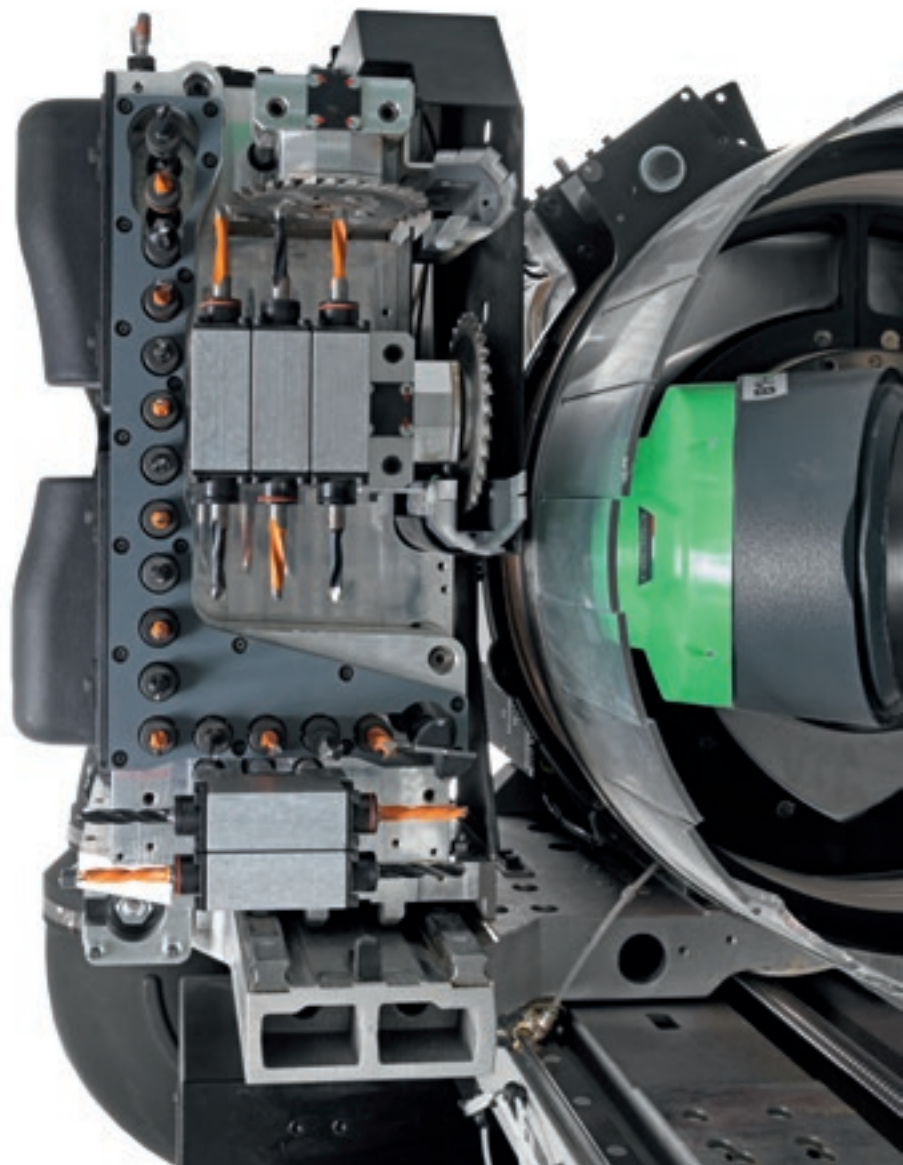
The new BH29 2L boring head is equipped with automatic lubrication and a highly efficient rigid suction cap for a cleaner environment. It's liquid-cooled for maximum precision.



Automatic lubrication boring head BH29 2L.



The cooling system reduces the thermal expansion of the borer and guarantees excellent reliability and precision.





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



THE C TORQUE AXIS HAS NO GEARS SO IT'S FASTER, MORE PRECISE AND MORE RIGID, AND NOT SUBJECT TO WEAR.



The 5-axis unit (16.5 kW), electrospindle (19.2 kW) and 6 large ceramic bearings guarantee top removal levels and the best finishing quality.



# ABILITY TO PROCESS LARGE SIZES

The entire working area is covered by all the milling and boring units to ensure optimum efficiency.

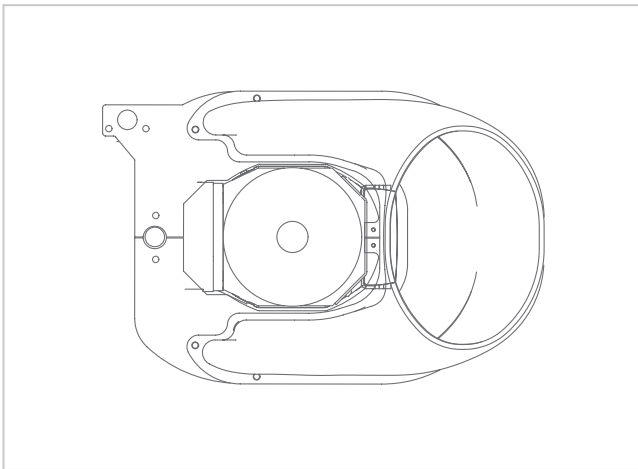
With the tools covering the entire X and Y working field, the Rover A is extremely flexible and can process complex pieces of considerable size.



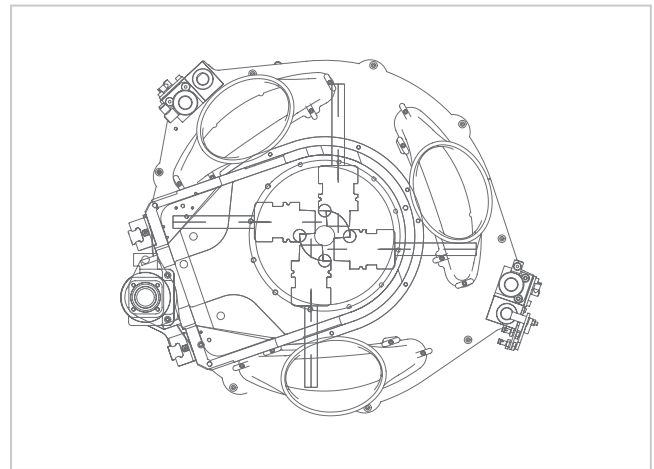
THE DOUBLE Z AXIS VERSION OF THE ROVER A ALLOWS PIECES WITH A THICKNESS OF UP TO 275 MM TO BE POSITIONED IN THE MACHINE, WHILE THE SINGLE Z AXIS VERSION ENABLES PIECES WITH A THICKNESS OF UP TO 245 MM TO BE PROCESSED.



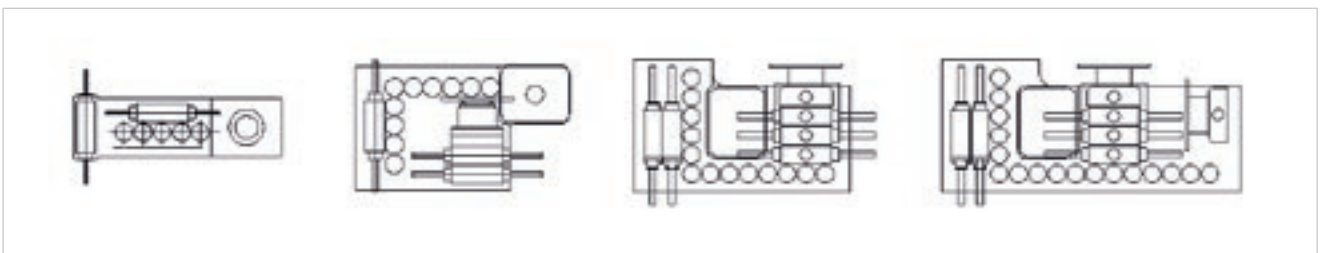
# WORKING UNIT CONFIGURATION



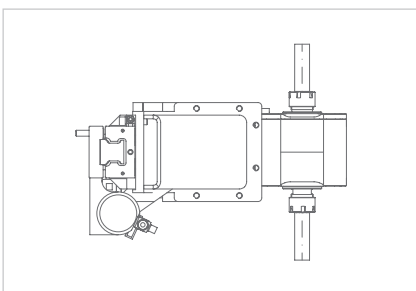
4-axis milling unit with air or liquid cooling and power levels up to 19.2 kW.



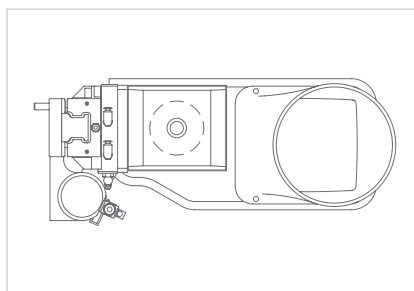
4-axis milling unit with power levels up to 16.5 kW.



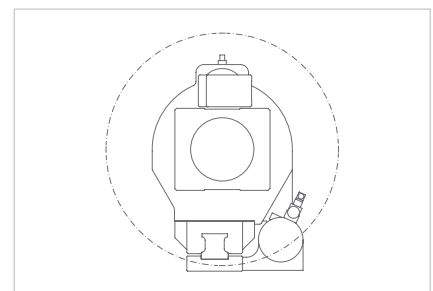
Available boring heads from 9 to 29 positions: BH9 - BH17 L - BH24 L - BH29 2L



**2 outlet horizontal milling unit**  
Motor power 6.0 kW. The liquid cooling system guarantees excellent reliability.



**Vertical milling unit**  
Motor power 7.2 kW.



Multi-function, with 360° rotation.



# NUMEROUS TOOLS ALWAYS READY IN THE MAGAZINE, FOR ANY TYPE OF MACHINING OPERATION



Rack tool magazine with 12 or 23 places, with integrated pick-up.



Revolver tool magazine with 8 places.



THE POSSIBILITY TO SWITCH BETWEEN  
THE RACK MAGAZINE THE REVOLVER  
AND THE CHAIN MAGAZINES ONE SPEEDS UP  
TOOL CHANGE OPERATIONS, MAKING  
THE MACHINE MORE PRODUCTIVE.



Up to 56 tools can be automatically  
picked up from the magazines.



Revolver tool magazine  
with 13 or 16 places.



Chain magazines with 14/21 places  
and 22/33 positions.





# 5 AXES

## USER-FRIENDLY TECHNOLOGY

The high technological content of the world's most popular machining centres, meets the requirements of wood industry professionals.

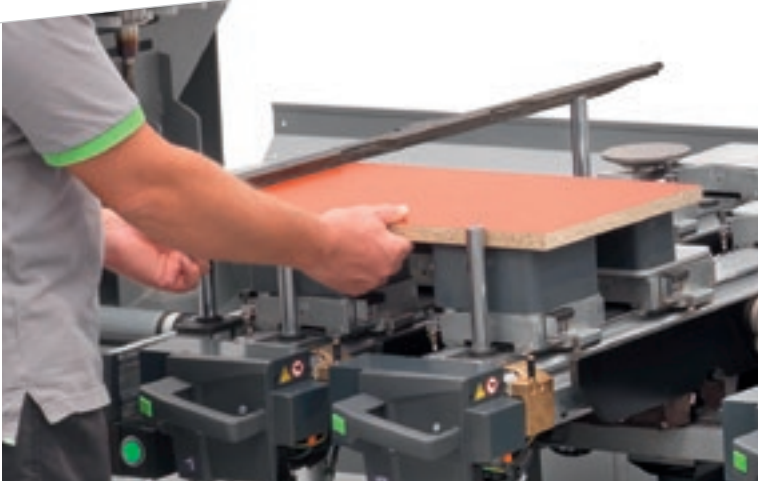
The 5-axis operating head, equipped with up to 16.5 kW HSD spindle and with 360° continuous rotation on the vertical and horizontal axes, enables the machining of complex-shapes ensuring quality, precision and absolute long term reliability.







# SIMPLE, QUICK AND SAFE TOOLING OF THE WORKING AREA



Locking systems **based on a vacuum**.



**Easyclamp** locking system for machining narrow pieces.



**Uniclamp** and **Hyperclamp** pneumatic locking systems with quick release, for firm and precise locking.



The working area guarantees the locking of pieces of any shape or size.  
The tooling of the working area is simple and quick.



#### **Easy Zone**

Supplementary vacuum system for the quick and easy clamping of several elements on the machine.

#### **Multi-area**

Allows several elements to be locked in a simple, fast manner using a vacuum or Uniclamps and Hyperclamps.



#### **Activation of locking systems**

Thanks to a line of photocells on the front side of the base, the locking systems can be activated from any point on the machine.



# DIFFERENT POSITIONING SYSTEMS IN THE WORKING AREA, TO SUIT EACH INDIVIDUAL PROCESS



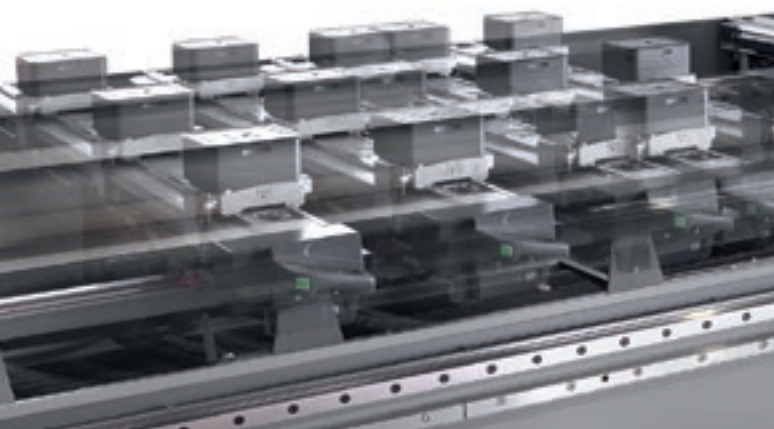
## **ATS (Advanced Table-Setting System)**

For the quick and easy manual positioning of the clamping systems.



## **SA (Set Up Assistance)**

For the quick, easy and controlled manual positioning of the clamping systems. The linear sensors in the work table, along with the collision control function, reduce the risk of collisions.



## **EPS (Electronic Positioning System)**

For the quick, automatic positioning of the clamping systems in the programmed positions. The motors, along with the collision control function, ensure controlled positioning movements to reduce the risk of collisions.

## **FPS (Feedback positioning system)**

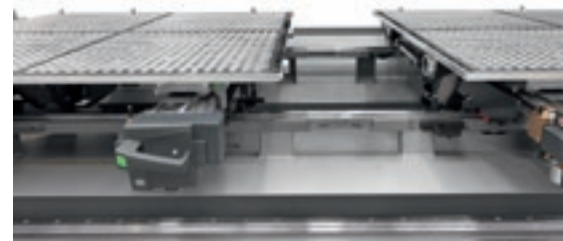
Evolution of the EPS system, with the addition of linear sensors that indicate the position of the carriages in real time, reducing the time needed to position them.



# CFT: TWO MACHINES IN ONE, COMPETITIVENESS GUARANTEED



The Rover A 12/15/18 with bar table (that can be converted on the machine with a continuous table) can handle work processes like Nesting, Folding, thin panels, etc.



The new CFT system designed by Biesse makes the machine extremely flexible, so any type of job order can be processed.

Passing from a machine with bar table to one with a continuous table is quick and easy thanks to the quick connection CFT modules.



Sectioning in nesting mode produces customised, squared pieces from a large panel. The individual pieces can be completed in the opposite working area, with all those machining operations that can't be carried out on the continuous work table (horizontal bores, undercut operations, etc.).

In the case of a work table with numerical control positioning, the vacuum modules and bar tables are positioned automatically, without the need for any manual intervention by the operator.



# MAXIMUM OPERATOR SAFETY

Biesse machines are designed to work in complete safety.

## VARIOUS SOLUTIONS AVAILABLE

- ✔ With the new “full bumper” solution, the work table can be accessed from every side - this is the most ergonomic solution.
- ✔ Solution with **mats** only, for speed and productivity.
- ✔ **Bumper plus photocells** solution, combining productivity with ergonomics



Total protection of the working unit. The wide hatch provides maximum visibility of the machining operations, as well as ensuring easy access to the working units.



Overlapping lateral curtain guards protect the working unit.



# MAXIMUM VISIBILITY OF THE WORKING UNIT TO WORK IN COMPLETE SAFETY



The internal LED lighting provides excellent visibility, guaranteeing safe working conditions.

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



## TECHNOLOGY AT THE SERVICE OF THE USER



New console with Windows real-time operating system and bSolid software interface, including anti-collision system.



# OPTIMAL CLEANING OF MACHINED PIECE AND WORK AREA



Motorised mat for chip removal.

The Rover A has various optional solutions for automatically cleaning both the panel and the area around the machine, saving time for the operator.



Carriage for collecting and removing chips and waste.



# REDUCED CLEANING TIMES TO ENSURE MAXIMUM PRODUCTIVITY



**Forced flow deflector** with a built-in blower that increases the movement speed of the chips inside the deflector, for better machine cleaning results.



**Multi-step 12-position** suction hood with automatic positioning via the program, or with **continuous numerical control positioning** (for milling units with 3/4 axes).



**Multi-step 19-position** suction hood with automatic positioning via the program, or with **continuous numerical control positioning** (for milling units with 5 axes).





# 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



# LOADING AND UNLOADING SOLUTIONS

## Automated cell for machining a batch of panels or doors.

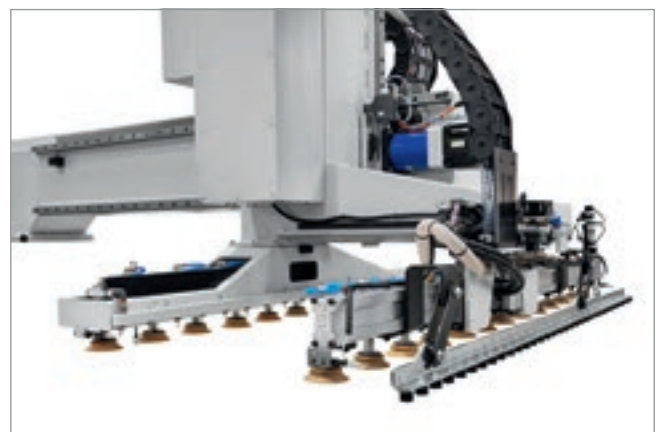
Synchro is a loading/unloading device that transforms the Rover machining centre into an automatic cell for producing a stack of panels autonomously (without the need for an operator):

- ✓ it eliminates the risk of damage in the case of heavy panels that need to be handled by 2 operators
- ✓ it's easy to use, because the machining centre program also contains the Synchro command instructions
- ✓ it has limited overall dimensions, and can be positioned to the left or right of the machining centre
- ✓ it comes with various configurations, depending on the size of the panels to be handled and the layout of the stacks.



### 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.

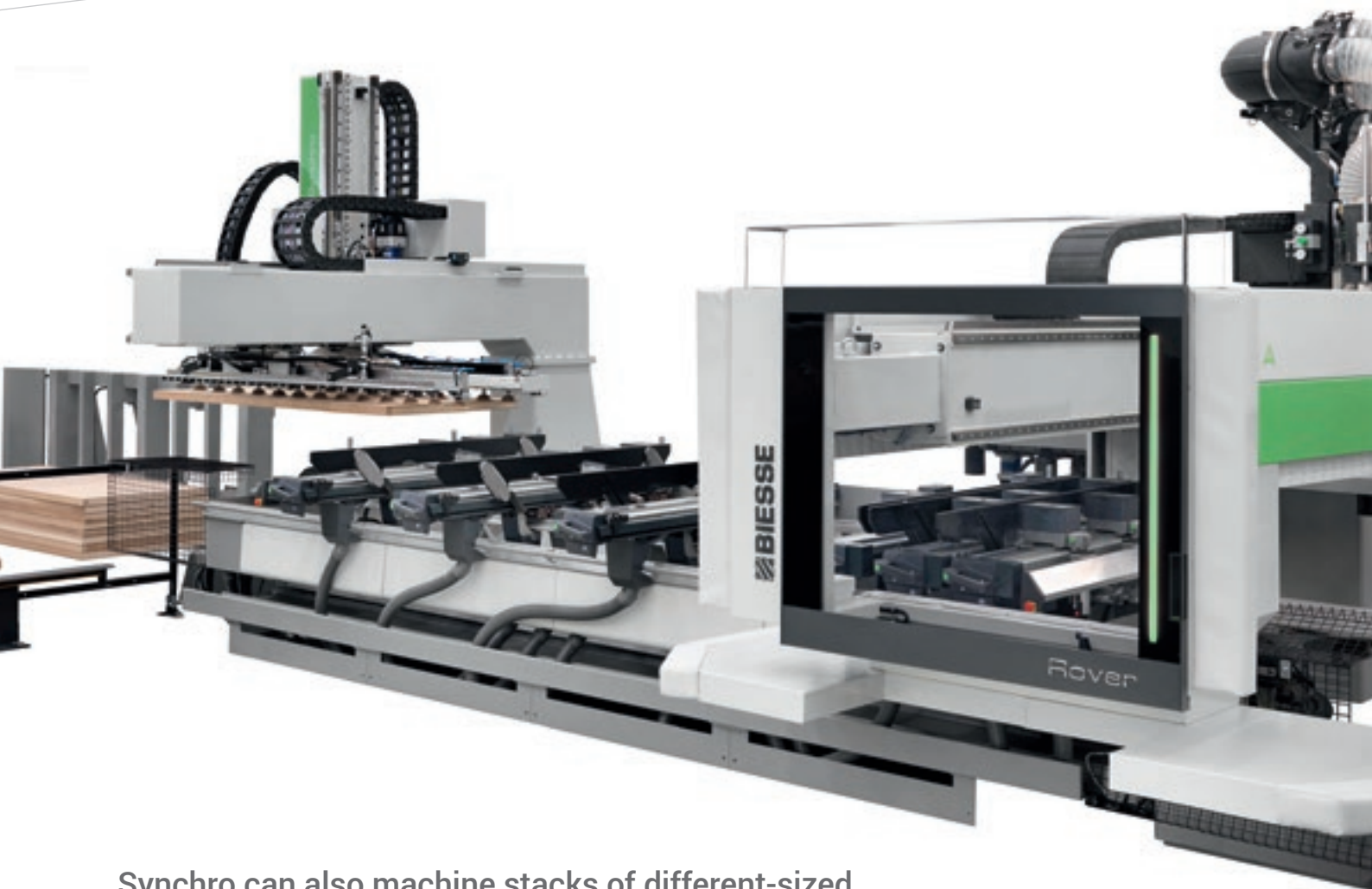


### Panel pick-up device with automatic positioning of the suction cup holder rods

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.



Bar code scanner for automatically sending the machining program of the Rover machining centre.

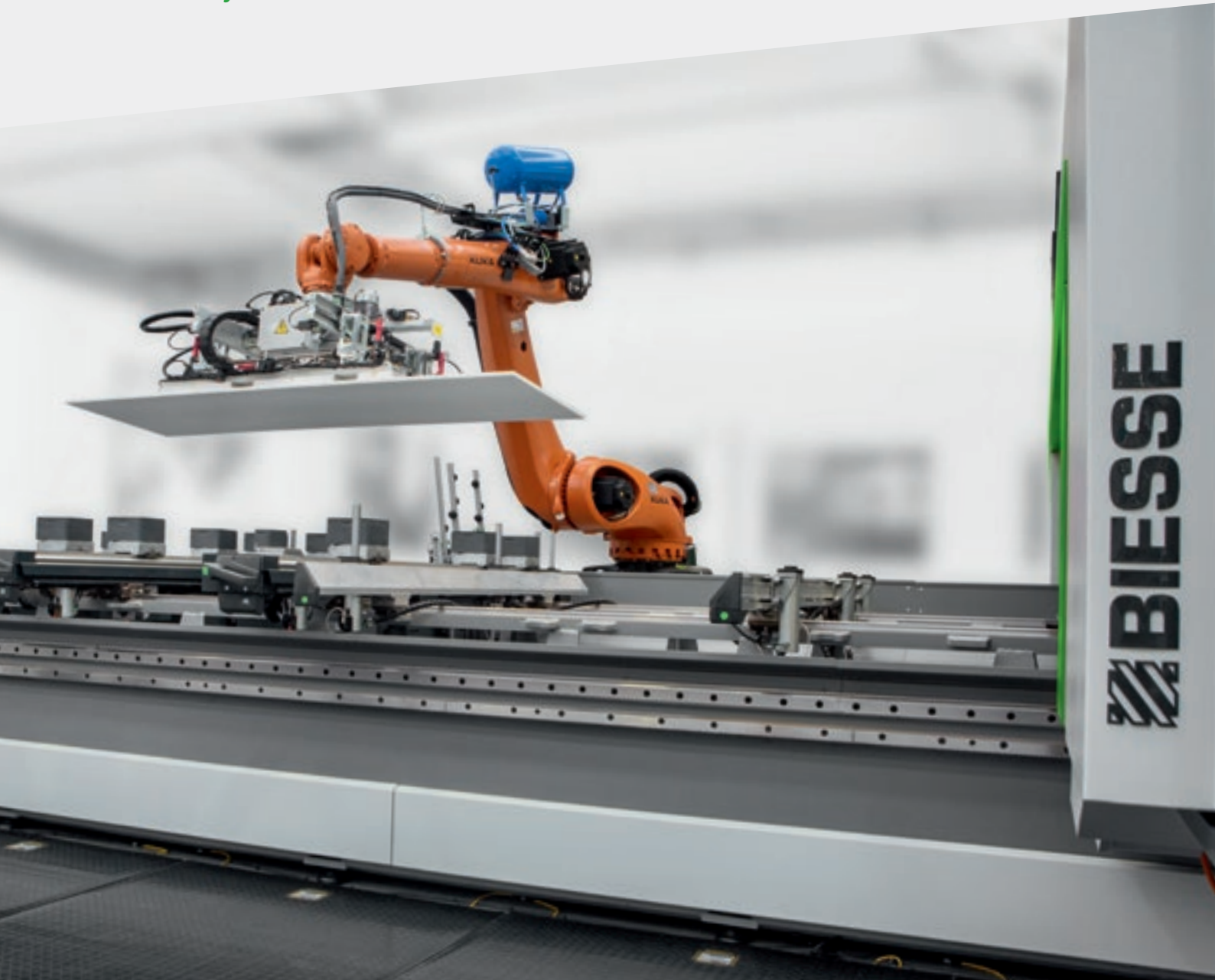
Dedicated configuration for the simultaneous loading/unloading of 2 panels, to maximise machining centre productivity:

- 0 operators
- 1 machining program
- 2 panels



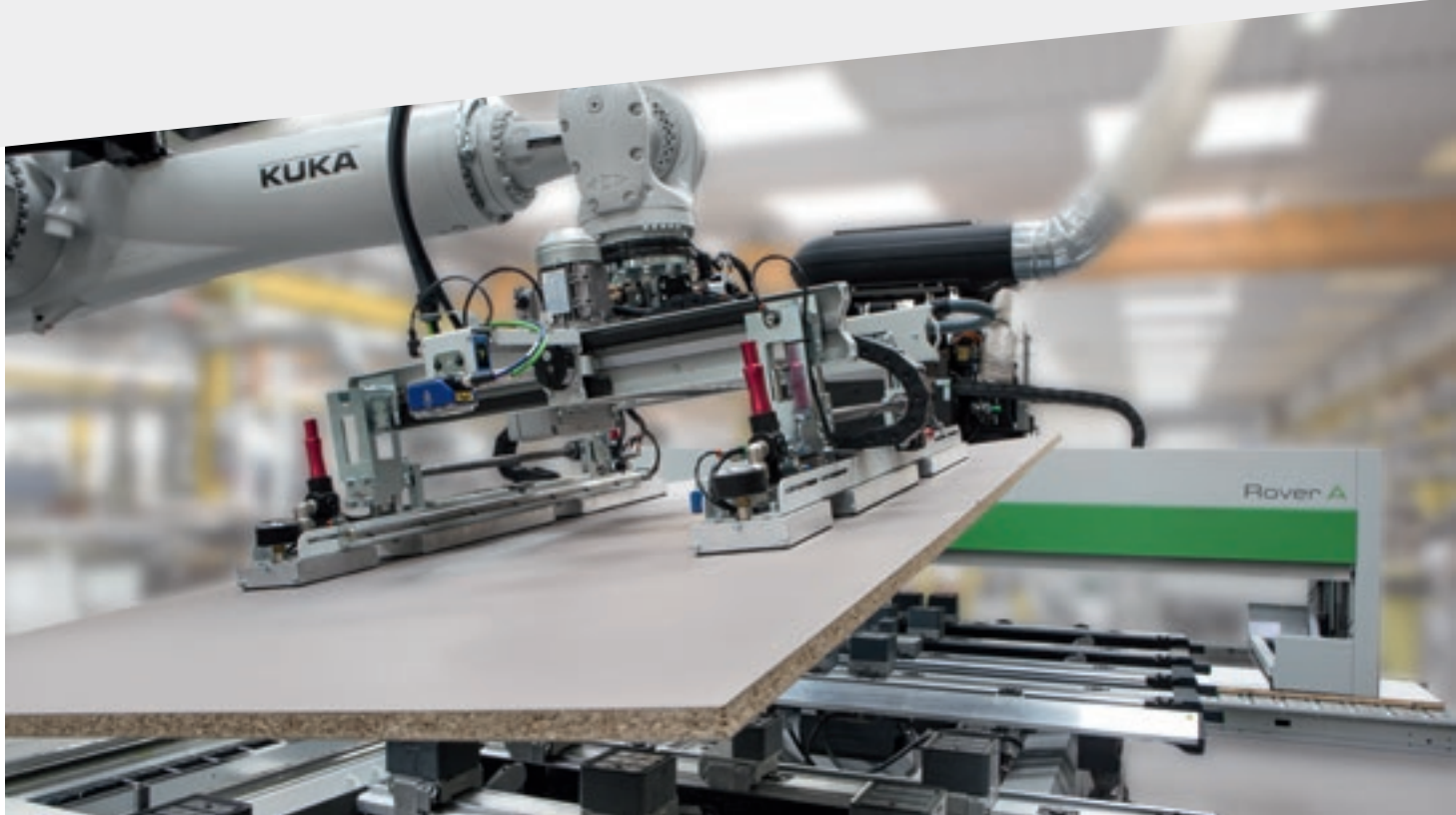
# EFFICIENT PRODUCTION, WITH NO LIMITS

Biesse offers its customers pragmatic solutions  
for factory automation



Rover A range 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.





## ROVER + ROS

- ✓ CONSTANT RELIABILITY OVER TIME
- ✓ OPTIMISATION AND SIMPLIFICATION OF THE PRODUCTION PROCESS
- ✓ VERSATILITY AND EFFICIENCY
- ✓ INTEGRATION IN THE PRODUCTION FLOW
- ✓ CONSISTENT QUALITY



# TECHNICAL SPECIFICATIONS

## WORKING FIELDS

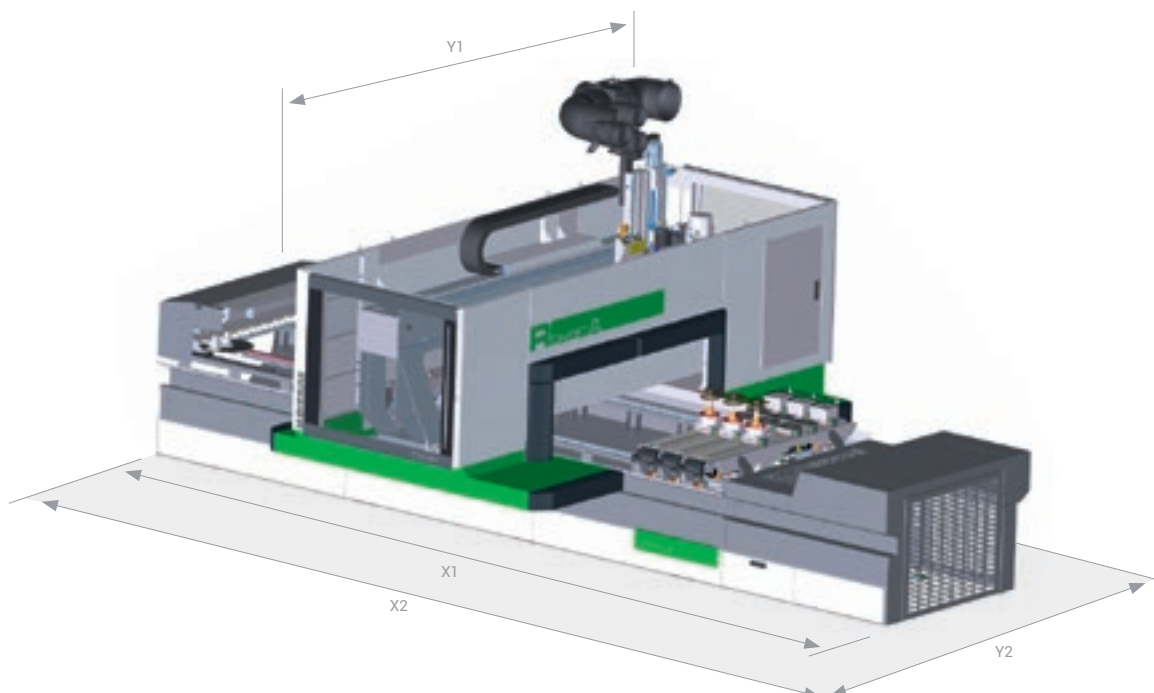
		X	Y	1 Z	2 Z
Rover A 1232	mm/inch	3140/124	1260/50	245/9.6	275/10.8
Rover A 1242	mm/inch	4140/163	1260/50	245/9.6	275/10.8
Rover A 1256	mm/inch	5540/218	1260/50	245/9.6	275/10.8
Rover A 1532	mm/inch	3140/124	1560/61	245/9.6	275/10.8
Rover A 1542	mm/inch	4140/163	1560/61	245/9.6	275/10.8
Rover A 1556	mm/inch	5540/218	1560/61	245/9.6	275/10.8
Rover A 1832	mm/inch	3140/124	1860/73	245/9.6	275/10.8
Rover A 1842	mm/inch	4140/163	1860/73	245/9.6	275/10.8
Rover A 1856	mm/inch	5540/218	1860/73	245/9.6	275/10.8

## AXIS SPEED

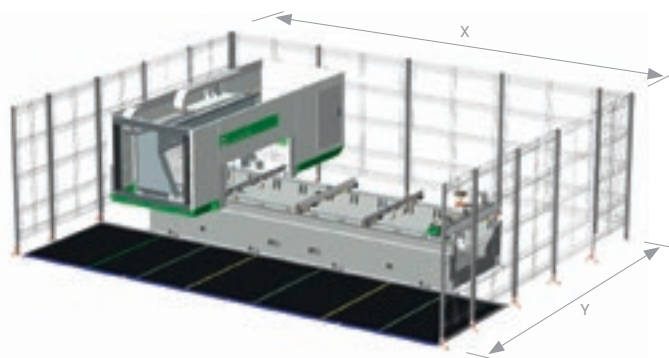
		X	Y	Vector speed
Mats	m/foot/min	60/197	60/197	85/279
Bumper + photocells	m/foot/min	60/25 - 197/82	60/197	85/65 - 279/213
Full bumper	m/foot/min	25/82	60/197	65/213

## FULL BUMPER FOOTPRINT

		Loadable panel	X1	X2	Y1	Y2
Rover A 1232	mm/inch	1350/53	6716/264	7116/280	3589/141	4589/181
Rover A 1242	mm/inch	1350/53	7716/304	8116/319	3589/141	4589/181
Rover A 1256	mm/inch	1350/53	9116/359	9516/375	3589/141	4589/181
Rover A 1532	mm/inch	1560/61	6716/264	7116/280	3889/153	4889/192
Rover A 1542	mm/inch	1560/61	7716/304	8116/319	3889/153	4889/192
Rover A 1556	mm/inch	1560/61	9116/359	9516/375	3889/153	4889/192
Rover A 1832	mm/inch	1880/74	6716/264	7116/280	4200/165	5200/205
Rover A 1842	mm/inch	1880/74	7716/304	8116/319	4200/165	5200/205
Rover A 1856	mm/inch	1880/74	9116/359	9516/375	4200/165	5200/205







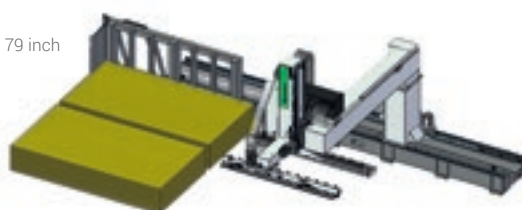
## OVERALL DIMENSIONS OF SAFETY FENCES AND CONTACT MATS

		Loadable panel	X	Y
Rover A 1232	mm/inch	1350/53	6475/255	4927/194
Rover A 1242	mm/inch	1350/53	7508/295	4927/194
Rover A 1256	mm/inch	1350/53	8908/351	4927/194
Rover A 1532	mm/inch	1560/61	6475/255	5227/206
Rover A 1542	mm/inch	1560/61	7508/295	5227/206
Rover A 1556	mm/inch	1560/61	8908/351	5227/206

## OVERALL DIMENSIONS PHOTOCELLS + BUMPER

		Loadable panel	X	Y
Rover A 1232	mm/inch	1350/53	7358/290	4927/194
Rover A 1242	mm/inch	1350/53	8358/329	4927/194
Rover A 1256	mm/inch	1350/53	9758/384	4927/194
Rover A 1532	mm/inch	1560/61	7358/290	5227/206
Rover A 1542	mm/inch	1560/61	8358/329	5227/206
Rover A 1556	mm/inch	1560/61	9758/384	5227/206
Rover A 1832	mm/inch	1880/74	7538/290	5536/218
Rover A 1842	mm/inch	1880/74	8538/329	5536/218
Rover A 1856	mm/inch	1880/74	9938/391	5536/218

H MAX = 2970 mm / 117 inch  
H fences = 2000 mm / 79 inch



## WORKING FIELDS SYNCHRO

Length (min/max)	mm/inch	400/3200 *- 16/ 126
Width (min/max)	mm/inch	200/2200 *- 8/87
Thickness (min/max)	mm/inch	8/150 - 0,3/6
Weight (1 panel/ 2 panels)	Kg	150/75
Useful height of stack	mm/inch	1000 - 39
Height of stack from ground (including 145 mm Europallet)	mm/inch	1145 - 45

(\*) the Min and Max values may vary in accordance with the configurations of Synchro and the Rover machining centre to which Synchro is linked.

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.

The correct noise pressure level, measured from the operator's workstation, is: LP = 78 dB (A), during boring. LP = 78.5 dB (A), during milling. The noise power level is: LWA = 93.5 dB, during boring. LWA = 95.5 dB, during milling. Uncertainty factor K = 4 dB.

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.



# HIGH-TECH BECOMES ACCESSIBLE AND INTUITIVE



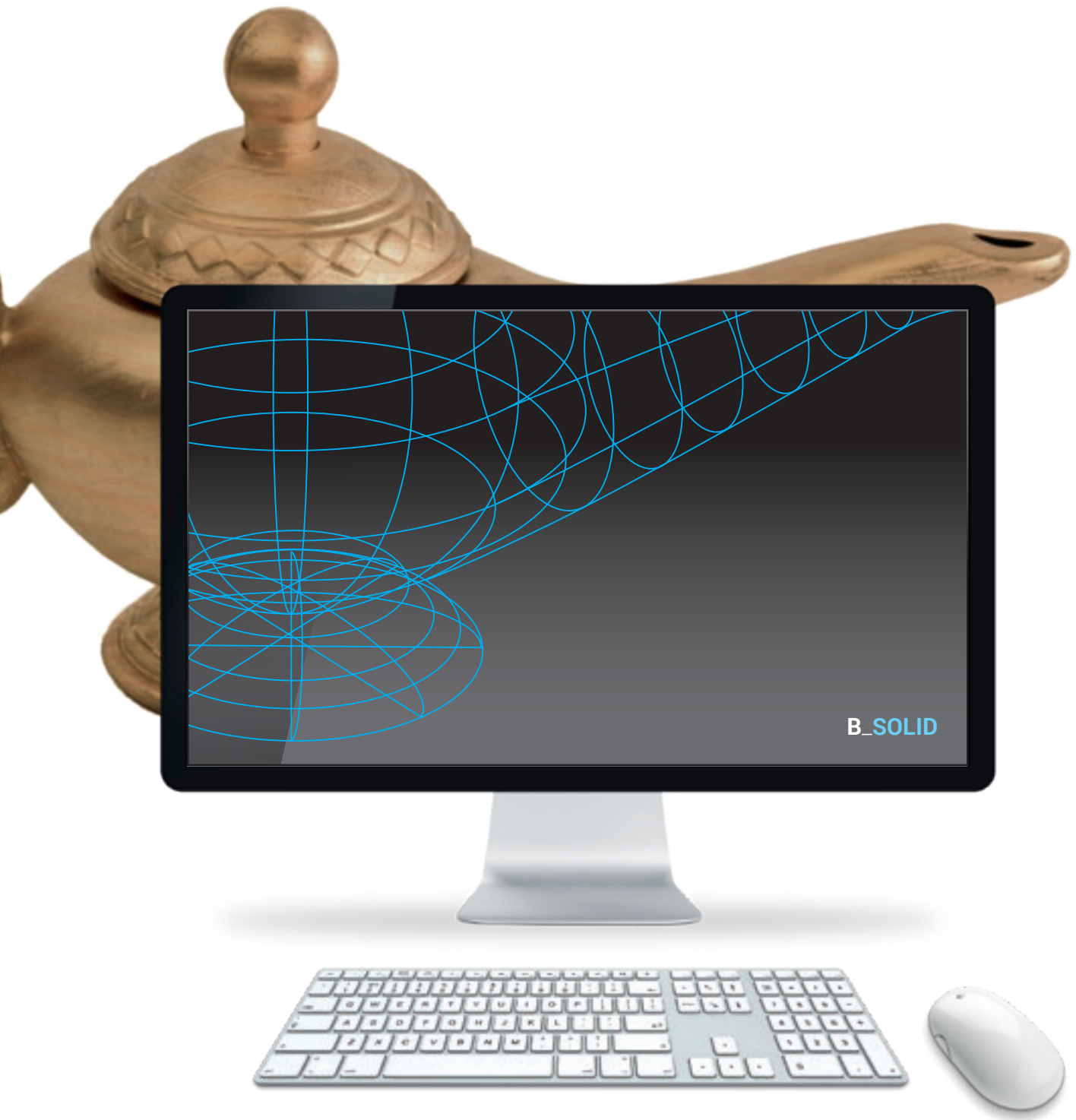
**B\_SOLID IS A 3D CAD CAM SOFTWARE PROGRAM THAT SUPPORTS THE PERFORMANCE OF ANY MACHINING OPERATION THANKS TO VERTICAL MODULES DESIGNED FOR SPECIFIC MANUFACTURING PROCESSES.**

- 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.





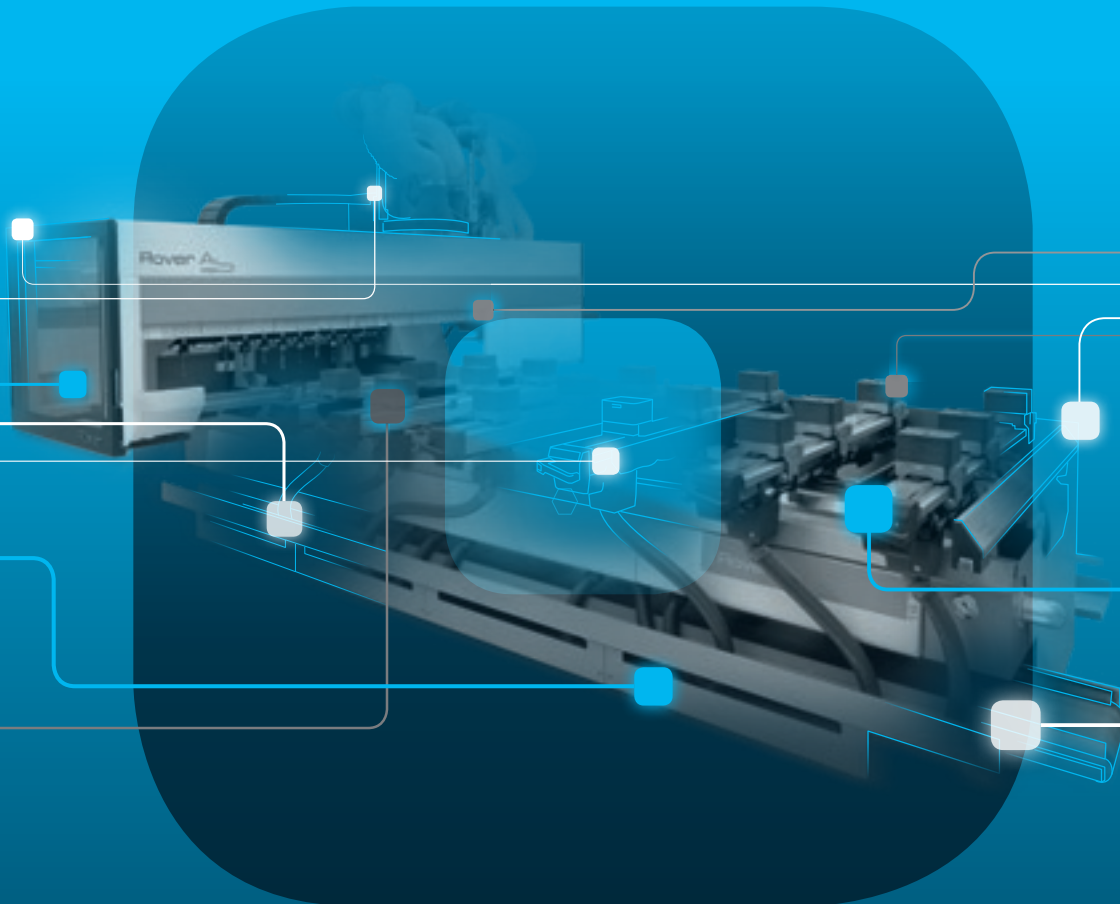
B\_SOLID





# SOPHIA

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

 **BIESSE**

in collaboration with **accenture**



# IDEAS TAKE ON A SHAPE AND SUBSTANCE WITH B\_CABINET SUITE



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

- ✓ **EASY MANAGEMENT OF ALL THE WORK PHASES (CUTTING, MILLING, BORING, EDGE BANDING, ASSEMBLY, PACKAGING), JUST WITH A CLICK.**
- ✓ **DEDICATED ENVIRONMENT FOR 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.**
- ✓ **MANAGEMENT, SUB-DIVISION, ORGANISATION AND SENDING OF ALL THE DATA NEEDED BY THE PROCESS, WITHOUT ANY FURTHER MANUAL INTERVENTION.**
- ✓ **VISUALISATION OF THE STATE OF PRODUCTION PROGRESS OF EACH COMPONENT, IN A SINGLE ENVIRONMENT.**
- ✓ **OPTIMISATION OF THE PRODUCTION PROCESS.**



# MADE WITH BIESSE

## FOR A REVOLUTIONARY BUT CONSCIOUS DESIGN

**Conscious design that understands society and skilfully changes it for the better. That's the mission at the heart of Lago, a furniture company founded in 1976 with two simple concepts encoded in its DNA: curiosity and doing things well.**

The common ground for the Biesse Group and Lago, which reinforces the historic partnership between the furniture and carpentry sectors, is the Alliance project: a collection of brands, people and businesses that have decided to join the design company from Veneto on a journey of respect for our planet, ourselves and our future. The historic partnership is borne out by the innovative production plant that Biesse developed with Lago, completely restructuring the manufacturing site. The result is the inclusion of a new Batch One facility within the existing production context, in the spirit of personalisation, speed and flexibility.

The facility has a new square-edging cell with Stream MDS and Winner W1, a new drilling cell with Skipper 130 and a new Selco WNR 650 sizing centre connected to Win-

store 3D K1, which intelligently manages all the material to be processed.

"Including the 'batch one' process bolsters the 'just in time' objective set by Lago, reducing the warehouses needed for semi-finished products and raw materials, as well as reducing scrap material and elevating product quality. What's more, it improves efficiency, reduces time to delivery and offers complete control over the production flow," explains Mauro Pede, Biesse Systems Sales Director.

"The new investments have led us to a new productive flexibility that we will continue to implement, for a renewed production speed and even greater customisation of the range," adds Daniele.

Carlo Bertacco echoes the sentiment, "We are completing a 2,500 m2 expansion, to be even faster and more flexible while maintaining the extremely high level of quality that Lago is known for. It's an equation that relies heavily on technology: I'm referring to one of the particularly valuable machines we purchased from Biesse – a small 'Brema Eko' – not only is it extremely flexible, it allows us

to greatly simplify some steps, since we can process painted pieces without worrying about damaging them.

It's proof that with clear ideas and a precisely organised work flow one can find simple solutions that produce excellent results."

**LAGO BELIEVES  
THAT DESIGN MUST  
BE GUIDED BY MAN,  
BY HUMANITY AND  
EMPATHY**



**Daniele Lago**  
*Founder*



**LAGO.IT**



# MATCH WITH

 **BIESSE**

Biesse is the ideal partner throughout the entire production process. Courtesy of a complete range of cutting-edge products combined with the ongoing development of latest-generation technologies, Biesse is ready to respond to even the most complex requirements of companies within the sector.

We are on hand to recommend the ideal technologies to support your business, for efficient and competitive production: machining centres, panel saws, edgebanding machines, vertical and horizontal boring machines, sanders and handling and assembly solutions.

## SELCO WN6

THE RESULT OF TECHNOLOGICAL RESEARCH  
FOR TOP CLASS PERFORMANCE



SELCO WN 6 is the result of a project developed with the latest technologies, adopting revolutionary technical solutions that increase yield and overall machining quality

## AKRON 1400

THE IDEAL SOLUTION FOR INCREASING PRODUCTION

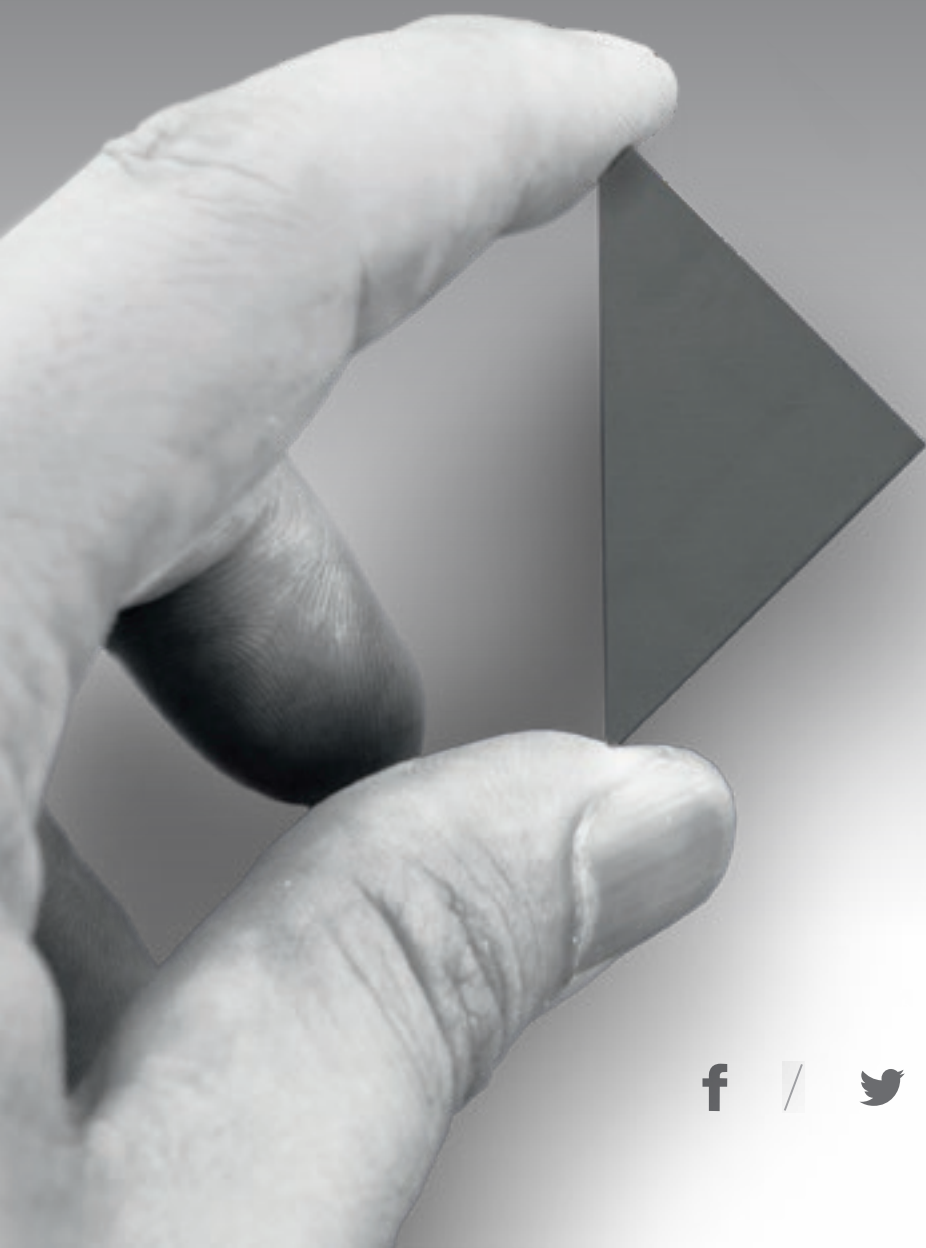


The Akron 1400 is a range of single-sided edgebanding machines for the application of edging in either rolls or strips. Compact working units designed to simplify the preparation operations are available with various configurations to suit specific production requirements.

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