

RO VER A 14/16

NC PROCESSING CENTRE



 **BIESSE**

 YEARS
 **BIESSEGROUP**

A SINGLE PROCESSING CENTRE FOR ALL TYPES OF MACHINING OPERATIONS



THE MARKET DEMANDS

a change in manufacturing processes which enables companies to **accept the largest possible number of orders**. This is coupled with the need to maintain high quality standards whilst offering product customisation with **quick and defined delivery times**, as well as responding to the needs of highly creative designers.

BIESSE RESPONDS

with **technological solutions** that influence and support technical expertise as well as process and material knowledge. **Rover A 14/16** is the NC processing centre for the manufacturing of furniture and window/door frames. Thanks to its comprehensive range of sizes and configurations, it is ideally suited to small and large joineries that need to manufacture either odd-sized products or standard products in small batches.



ROVER A14/16

- ✔ MACHINE CUSTOMISATION DEPENDING ON DIFFERENT PRODUCTION REQUIREMENTS
- ✔ HIGH FINISH QUALITY
- ✔ REDUCED TOOL CHANGEOVER TIME
- ✔ ABILITY TO PROCESS LARGE SIZES
- ✔ HIGH-TECH BECOMES ACCESSIBLE AND INTUITIVE
- ✔ AUTOMATIC FEED WITH NO OPERATOR INPUT.

MACHINE CUSTOMISATION DEPENDING ON DIFFERENT PRODUCTION REQUIREMENTS



4-AXIS CONFIGURATION

A full configuration of the operating section supports different machining operations whilst ensuring high product quality.

A team of specialised sales engineers can understand production requirements and suggest the optimal machine configuration.

5-AXIS CONFIGURATION



The continuous rotation of the B and C axes (made possible by the technologically advanced components) guarantees the maximum machining speed and optimum finished product quality.



HIGH PRECISION AND RELIABILITY OVER TIME



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



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.



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



INNOVATIVE GEAR-FREE C AXIS TORQUE - MORE PRECISE, MORE RAPID, MORE RIGID.

HIGH PRECISION AND RELIABILITY OVER TIME

The Biesse work table is guaranteed to hold the work piece securely in place and ensures quick and easy tool changeover.



Hyperclamp clamps for rigid and precise blocking.



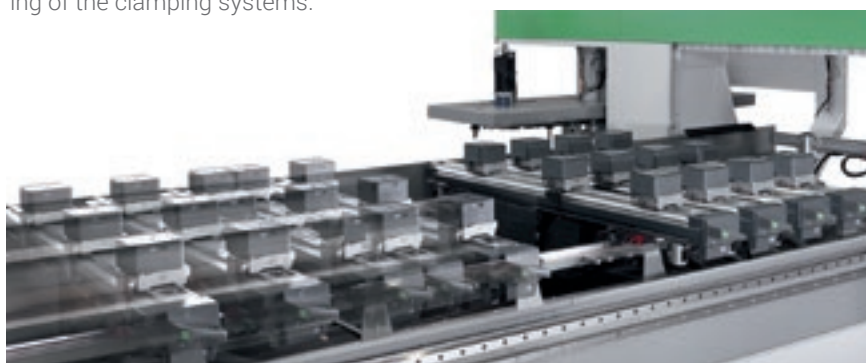
Uniclamp clamps with pneumatic system.



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

ATS (Advanced Table-Setting System)
For the quick and easy manual positioning of the clamping systems.



EPS (Electronic Positioning System)

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



Easy Zone

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



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 13 kW or 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.



REDUCED TOOL CHANGEOVER TIME

The machine can house up to 45 aggregates
and tools



It is possible to switch from one machining operation to the next with no need for operator intervention for tool changes, thanks to the large **number of tools and aggregates** available at machine side.



Facilitated access during tool change operations thanks to the openable front cowl.



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

OPTIMAL CLEANING OF MACHINED PIECE AND WORK AREA



Motorised conveyor belt for the removal of chips and waste.



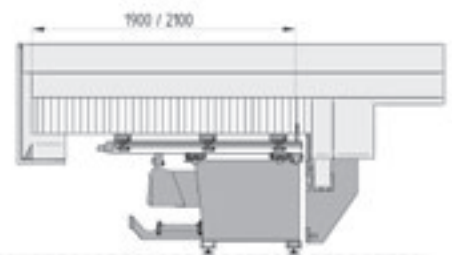
NC-controlled deflector (chip conveyor).



Adjustable suction hood up to 12 settings (opt).

ABILITY TO PROCESS LARGE SIZES

The open front cowl supports the loading of very-large sizes (up to 2,100 mm in y direction) onto the machine, thus enabling the pre-sectioning phase to be skipped or machining operations to be performed for non-standard productions.



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

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



The 245mm piece passage makes Rover A extremely flexible and able to process even considerably thick pieces.

CFT: TWO MACHINES IN ONE



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



MAXIMUM OPERATOR SAFETY

Safety and flexibility thanks to the new bumpers which, combined with the photocells, ensure a dynamic pendular system with no footprint.



Pressure-sensitive floor mats enable the machine to operate at constant maximum speed.



Perimeter guards with front access door.



Remote control panel for direct and immediate operator control.



Overlapping lateral curtain guards protect the working unit.

MAXIMUM VISIBILITY OF THE WORKING UNIT TO WORK IN COMPLETE SAFETY

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



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

IDENTITY

PRACTICAL DESIGN

An innovative yet simple design is the hallmark of Biesse's distinctive identity.

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

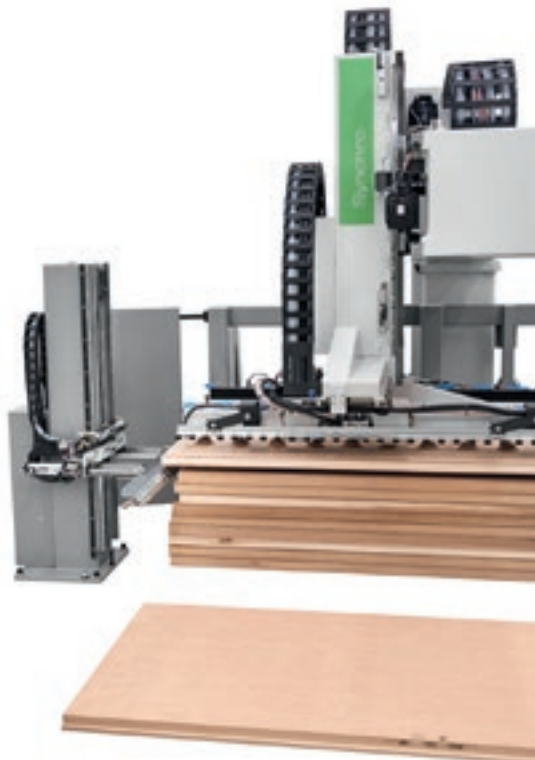
ROVER

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.



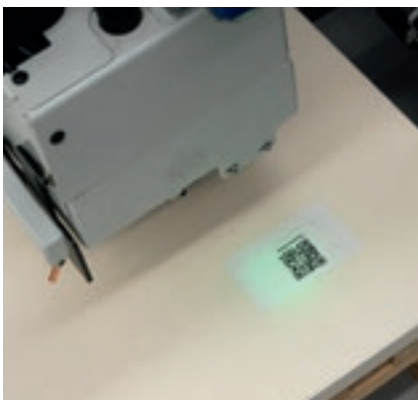
Panel pick-up device with automatic positioning of the suction cup holder rods

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.

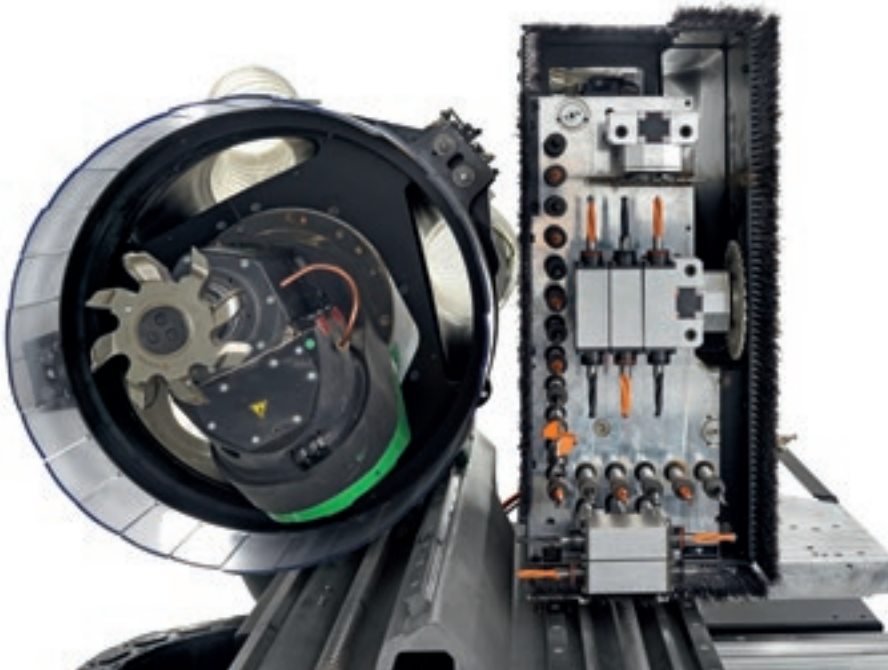


Bar code scanner for automatically sending the machining program of the Rover machining centre.

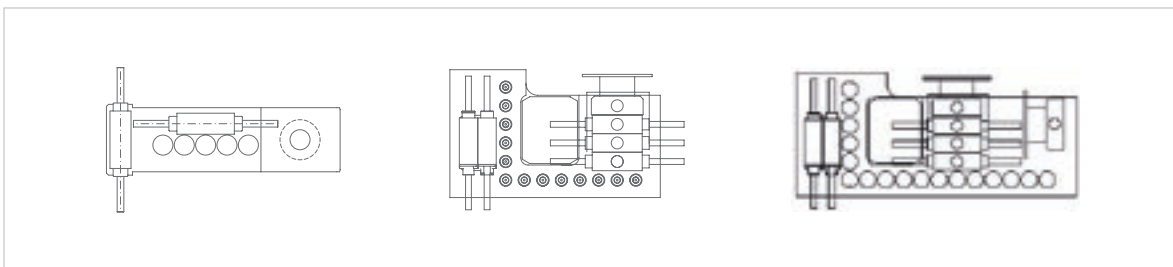
Dedicated configuration for the simultaneous loading/unloading of 2 panels, to maximise machining centre productivity:

- ✔ 0 operators
- ✔ 1 machining program
- ✔ 2 panels

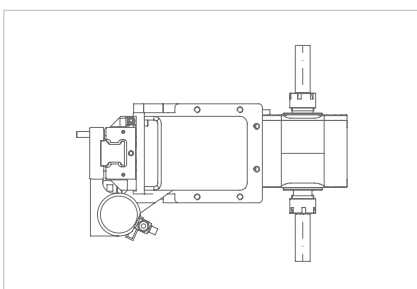
WORKING UNIT CONFIGURATION



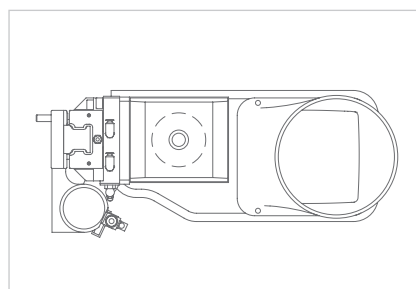
The machine can be configured with a vertical milling unit up to 19.2 kW, or with a 5-axis electrospindle with a power level of 13 kW or 16.5 kW.



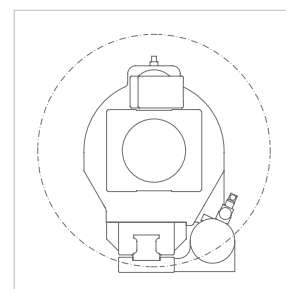
Available boring heads from 9 to 29 positions: BH9 – BH17 – BH24 – BH29 2L.



2 outlet horizontal milling unit.



6 kW vertical milling unit.



Multi-function, with 360° rotation.

A COMPLETE RANGE OF AGGREGATES



EXCEPTIONAL FINISH, INCREASED PRODUCTIVITY



Horizontal motor with two outlets for the routing of locks and horizontal machining operations.



Fixed vertical motor dedicated to additional milling machining operations (slot, anti-splintering, etc.).

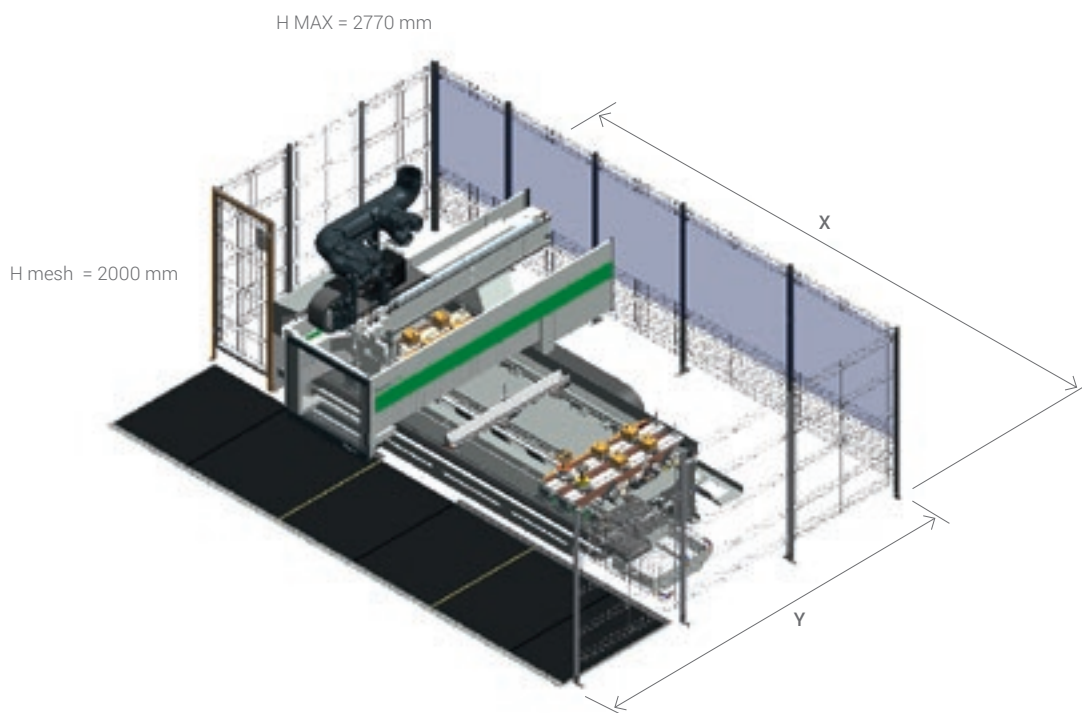


The multi-function unit, which can be continuously positioned over 360° by NC, can house aggregates used to carry out specific machining operations (pocketing for locks, hinge housings, deep horizontal bores, edge trimming, etc.).



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

TECHNICAL SPECIFICATIONS



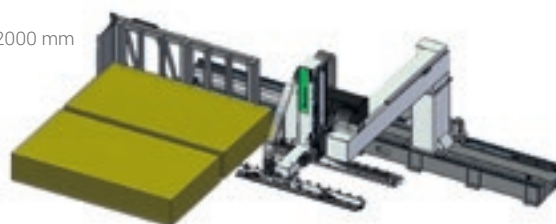
WORKING TABLE

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

WORKING TABLE SYNCHRO

Length (min / max)	mm / inch	400 / 3200 *
Width (min / max)	mm / inch	200 / 2200 *
Thickness (min / max)	mm / inch	8 / 150
Weight (1 panel / 2 panels)	Kg	150 / 75
Useful height of stack	mm / inch	1000 / 39.3
Height of stack from ground (including 145 mm Europallet)	mm / inch	1145 / 45

H MAX = 2970 mm
H mesh = 2000 mm



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

FOOT PRINT

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

	Loadable panel	X CE mats	Y CE mats	X CE photocells + bumper	Y CE photocells + bumper
	mm / inch	mm / inch	mm / inch	mm / inch	mm / inch
Rover A 1432	2100/83	6445/254	4874/191	6075/239	4674/184
Rover A 1443	2100/83	7465/294	4874/191	7155/281	4674/184
Rover A 1459	2100/83	9111/359	4874/191	8728/343	4674/184
Rover A 1632	1900/75	6445/254	4874/191	6075/239	4674/184
Rover A 1632	2100/83	6445/254	4874/191	6075/239	4674/184
Rover A 1643	1900/75	7465/294	4874/191	7155/281	4674/184
Rover A 1643	2100/83	7465/294	4874/191	7155/281	4674/184
Rover A 1659	1900/75	9111/359	4874/191	8728/343	4674/184
Rover A 1659	2100/83	9111/359	4874/191	8728/343	4674/184

X/Y/Z axis speed	m/min foot/min	80/60/20 (30, for 5 axis) 262/196/65 (98, for 5 axis)
Vector speed	m/min foot/min	100 328

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

A weighted sound pressure level (LpA) during machining for operator workstation on vane-pump machine Lpa=79dB(A) Lwa=96dB(A) A-weighted sound-pressure level (LpA) for operator workstation and sound power level (Lwa) during machining on cam-pump machine Lwa=83dB(A) Lwa=100dB(A) K measurement uncertainty dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746:2009 (sound power) and UNI EN ISO 11202:2009 (sound pressure levels at workstation) during panel machining. The noise levels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.

HIGH-TECH BECOMES ACCESSIBLE AND INTUITIVE

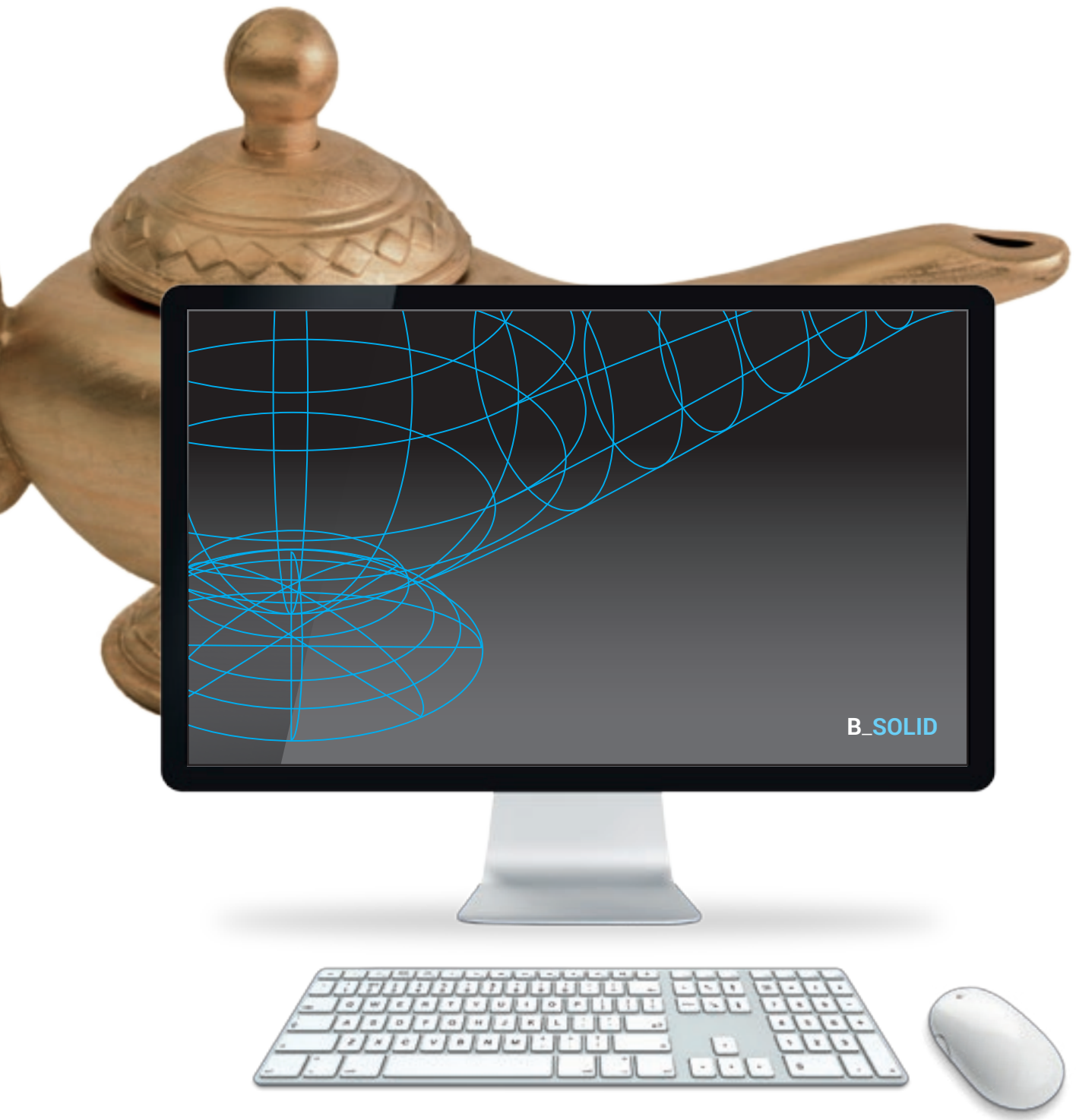


B_SOLID IS A 3D CAD CAM SOFTWARE PROGRAM THAT SUPPORTS THE PERFORMANCE OF ANY MACHINING OPERATION THANKS TO VERTICAL MODULES DESIGNED FOR SPECIFIC MANUFACTURING PROCESSES.

- 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



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, EDGE BANDING, 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**

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

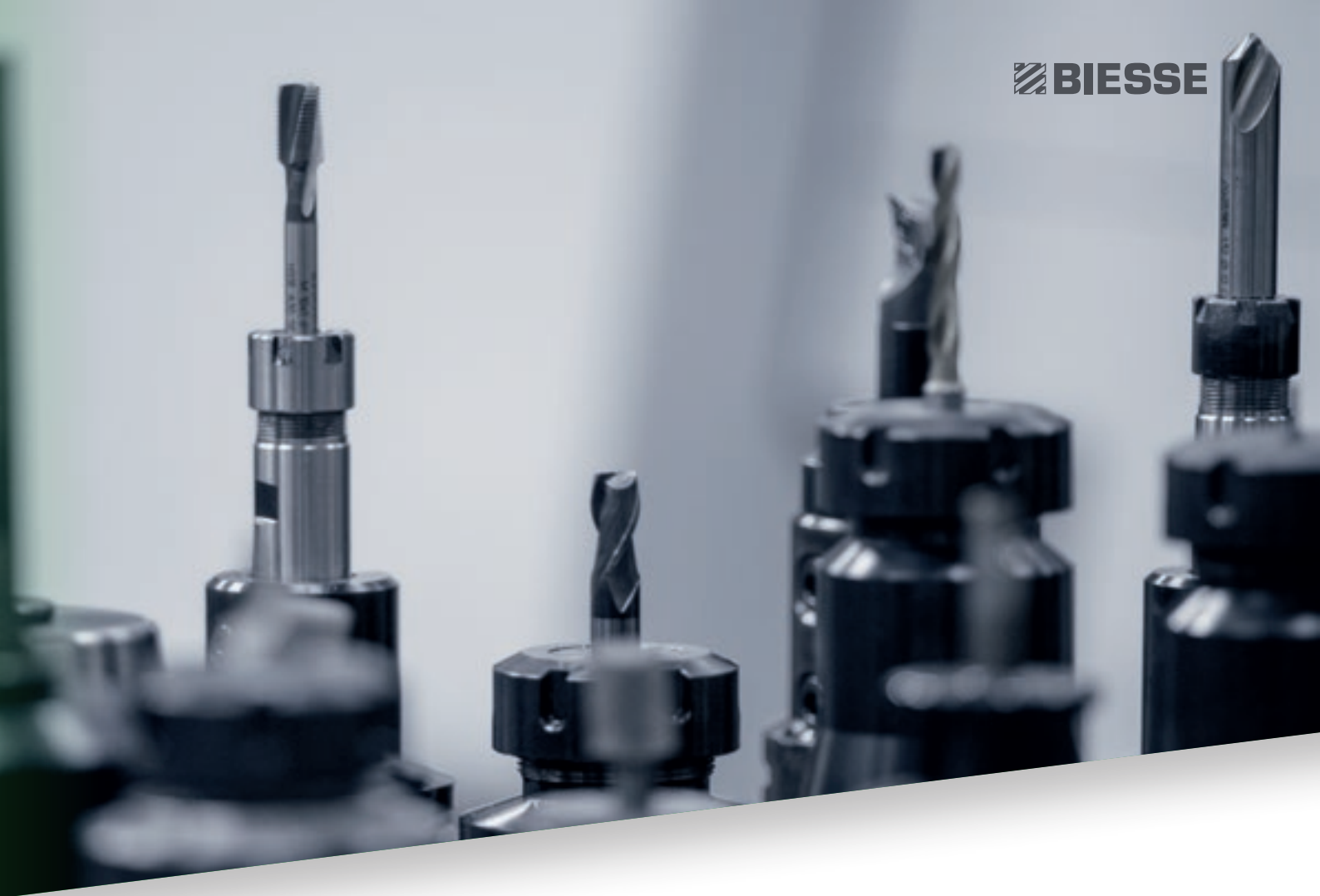
Biesse engineers manning a Teleservice Centre.

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 standard double-flute and others with more complex, multi-fluted designs. They are set against a blurred background, highlighting their metallic texture and sharp edges.

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

BIESSE GROUP TECHNOLOGIES JOIN FORCES WITH LAGO'S INNOVATION AND TOTAL QUALITY MANAGEMENT PROCESSES.

In the crowded world of domestic design, Lago takes its place as an emerging brand, thanks to a collection of stimulating products and a corporate philosophy that embraces the interaction between business and art, coupled with on-going research into sustainable development. "We created a number of projects, or rather, concepts - states Daniele Lago - that have shaped Lago as we see it today: we saw design as a cultural vision that applies not only to individual products, but rather to the entire business chain". "Flexibility is the key word here at Lago" says Carlo Bertacco, Manufacturing Manager. "We started

to introduce the concept of processing only outstanding orders, which enabled us to reduce our footprint and empty the site from the very beginning". "The machinery that we purchased - states Bertacco - is great, it entailed a limited investment versus the capabilities it offers and is linked to a specific manufacturing approach. What I am talking about is a given manufacturing volume with Lago-standard quality levels and the possibility of customising as late as possible, at the customer's request: in short, the very basic principles of lean manufacturing".

*Source: IDM Industria del Mobile
Lago, our customer since 1999, is one of most prestigious Italian furniture brands in the world.*



LIVE THE EXPERIENCE

BIESSEGROUP.COM



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

