

WIN LINE

NUMERICAL CONTROL
MULTI-CENTRE



 **BIESSE**

AUTOMATION OF PRODUCTION



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 and customisation of products with **quick and defined delivery times**, as well as responding to the needs of highly creative designers.

BIESSE MEETS

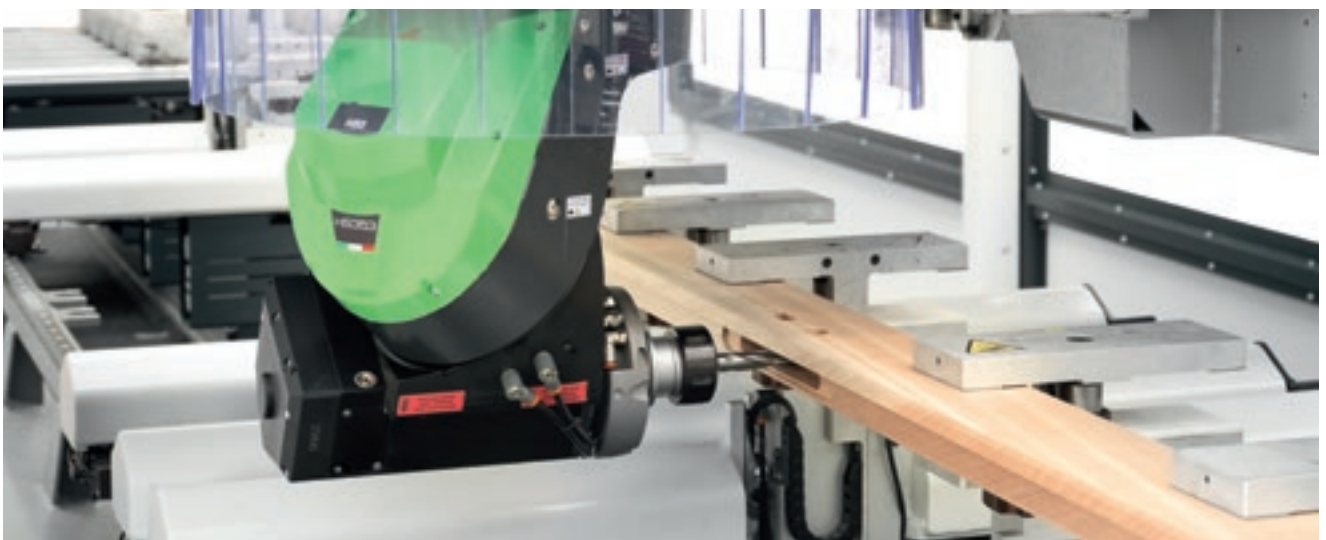
these requirements with **high-tech** and **user-friendly** solutions, which combine technical expertise with a deep understanding of processes and materials. **WinLine** is Biesse's new CNC multi-centre for the production of doors and windows, designed for artisans and small industries aiming to increase production and for medium and large industries who need to produce small batches of unusual size or remakes. The system produces both standard and special doors and windows with the utmost simplicity while the operator handles other tasks; the machine only takes up a small area and handles the loading, unloading and positioning of pieces autonomously and with extreme precision.



WINLINE

- ✔ EFFICIENT ACROSS ALL MACHINING OPERATIONS
- ✔ OPTIMAL CLAMPING OF THE COMPONENT FOR EXTREMELY PRECISE PROCESSING OPERATIONS
- ✔ HIGH TECHNOLOGY WITHIN EVERYONE'S REACH
- ✔ ELEVATED PRODUCTIVITY WITH A MINIMAL FOOTPRINT

EFFICIENT ACROSS ALL MACHINING OPERATIONS



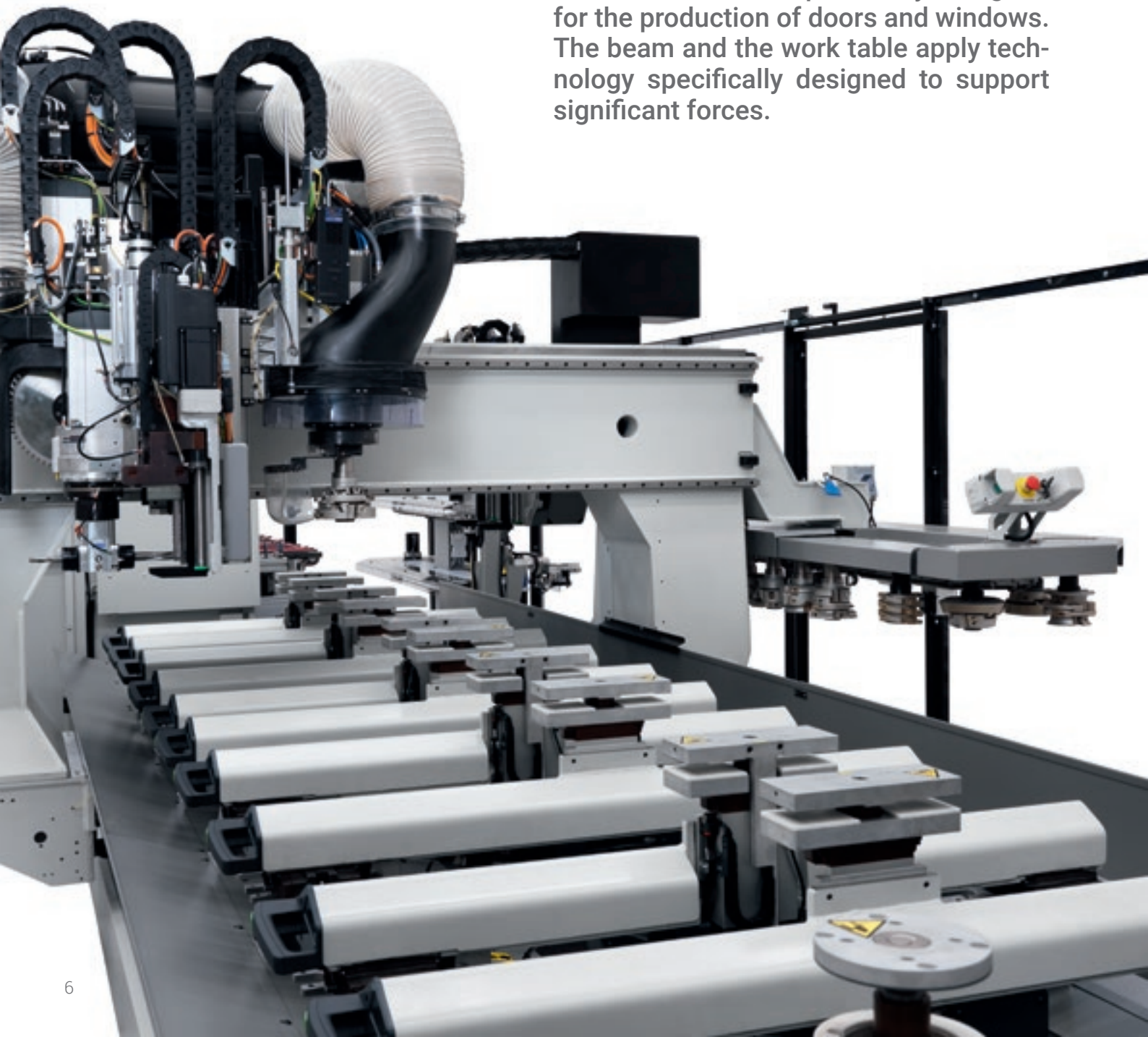
WINLINE ALLOWS FOR ALL MACHINING OPERATIONS, FOR BOTH STANDARD AND SPECIAL DOORS AND WINDOWS, TO BE CARRIED OUT ON THE SAME SYSTEM.



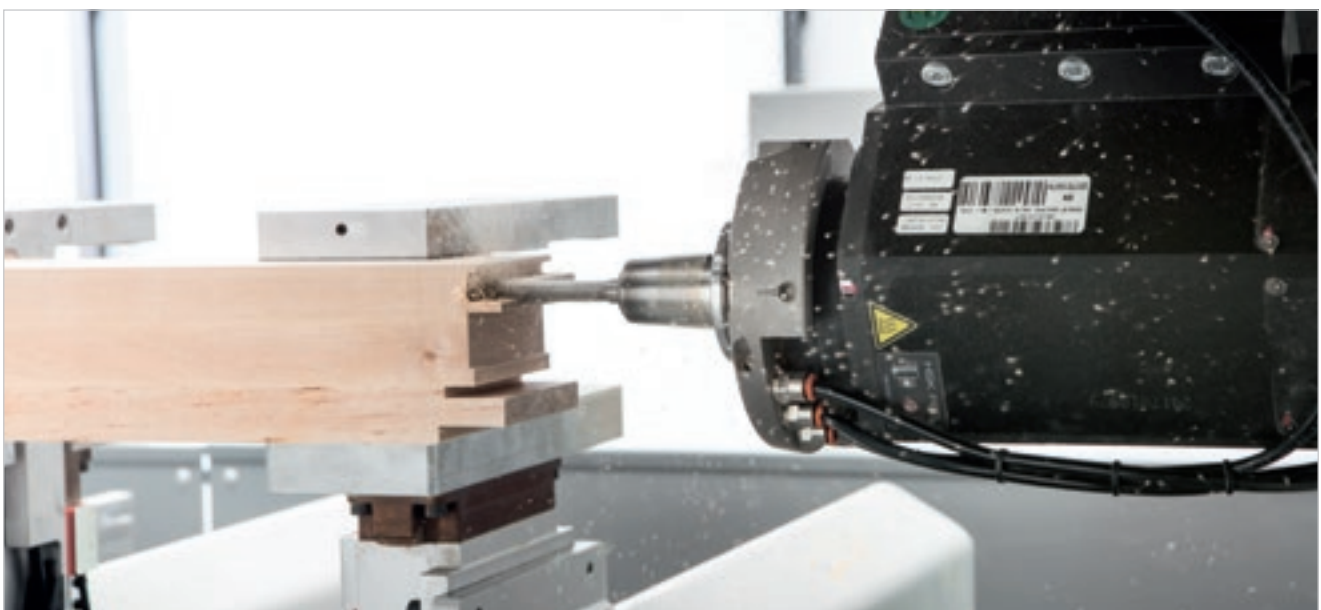
PRECISE AND RELIABLE

The new multi-centre has a double drive gantry structure, guaranteeing greater sturdiness and therefore precision.

The structure was specifically designed for the production of doors and windows. The beam and the work table apply technology specifically designed to support significant forces.



**NO MACHINING LIMITS:
WINLINE CAN PRODUCE ANY TYPE OF WINDOW/DOOR FRAME WITH ANY
TYPE OF JOINT (COUNTERPROFILE AND DOWEL, MECHANICAL JOINT, OPEN
TENON, CLOSED TENON, ETC.), BUT ALWAYS GUARANTEEING THE MAXIMUM
PRODUCTIVITY.**



FIRM CLAMPING OF THE PIECE, FOR HIGHLY PRECISE MACHINING OPERATIONS



WINLINE ALLOWS ALL MACHINING OPERATIONS, FOR BOTH STANDARD AND SPECIAL FRAMES, TO BE CARRIED OUT ON THE SAME SYSTEM.

Components are always positioned by the NC to ensure maximum positioning precision and a more efficient use of the machine.

Piece locking is guaranteed by finger clamps purposely designed for the linear elements of door and window frames. With a continuous stroke between 20 and 150mm, no type of set-up is required.

Finger Clamps always enable optimal clamping of the component. Even the shortest work piece is always secured using 2 clamps.

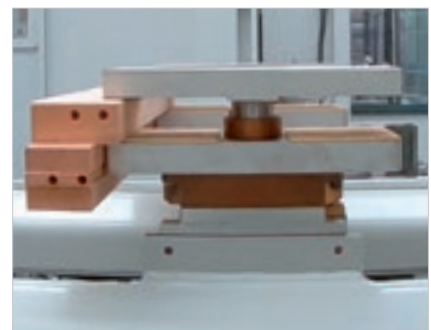
Blowers positioned on each clamp ensure that the component is held securely in place in a totally chip-free environment, thus supporting the processing of components that have already been sanded.



SIMPLE, QUICK AND SAFE TOOLING OF THE WORKING AREA.



Pressure regulators on the clamps provide control over the force applied to various pieces. This helps avoid any denting.



The **"Safe Locker"** sensor verifies that the piece is clamped. It allows the optimisation of cycle times and prevents the risk of collisions.

Continuous run to block 20-150 mm thick components. High clearance under the base of the piece allows the processing of more substantial windows and doors even with double tools.

Possibility to reposition the piece in Z, taking advantage of a different support base for optimum locking even in special conditions.



FINGERS DOUBLE LINE

Work table with fingers double line: twice the number of pieces (up to 12) can be loaded with the same number of tables, increasing machine productivity (opt.).



TWO MACHINES IN ONE

Apart from machining linear elements, part of the table can also be given over to the production of special door and window frames: arches, honeycomb sandwich panel doors, squaring (opt.).

Working area positioning via **EPS** (Electronic Positioning System).

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.

HIGH TECHNOLOGY WITHIN EVERYONE'S REACH

WinLine was designed to facilitate the operator's work. It requires no specific skills, and works with the utmost efficiency.



The operator loads the pieces into the machine following the software indications, and unloads the finished piece. The machine is fully autonomous, excluding any risk of human error.



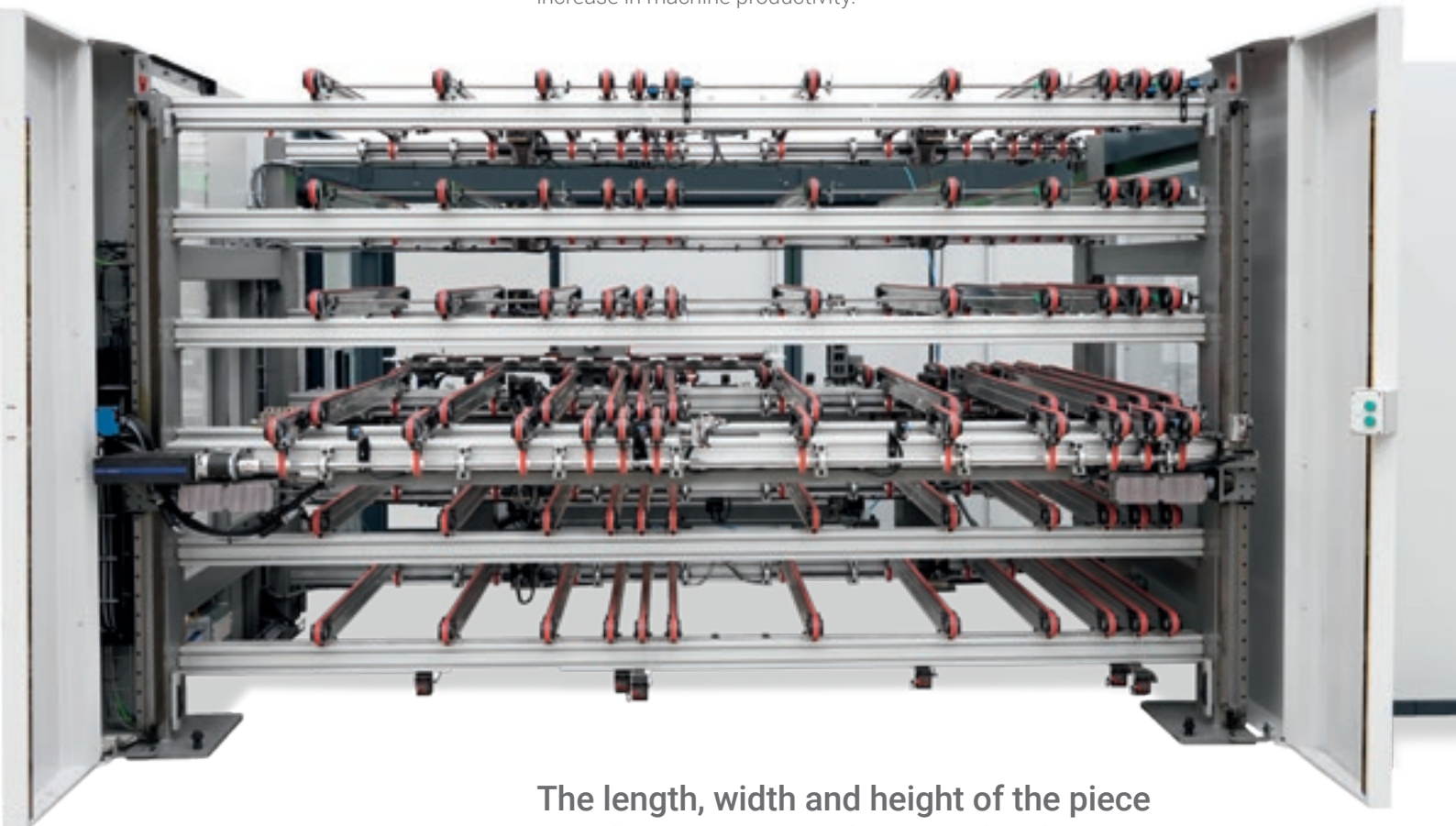
FROM ONE HOUR TO A WHOLE SHIFT OF TOTAL PRODUCTION AUTONOMY

Different types of loading pallets to suit the customer's needs: standard, twin or multi-level.

The standard loading pallet guarantees up to 1 hour of autonomy (depending on the type of frame).



The modular multilevel buffer is an automatic magazine (a solution exclusive to Biesse) which ensures long system autonomy. The operator can load/unload a very large number of components from a single access point during machine operation. Moreover, the operator can load the components and keep the system running without supervision also after the end of his/her shift, which results in a further increase in machine productivity.



The length, width and height of the piece are always measured prior to loading to ensure that the operator has loaded the correct piece.

WIN LINE

MODULAR SOLUTIONS

WinLine multi-centres for doors and windows are modular and can be integrated into multiple cells. A competitive advantage that makes Biesse's solutions beneficial for large companies with a focus on long-term investment.

Machining without direct supervision complemented with automatic loading and unloading systems, expandable solutions that meet production types and volumes dictated by the market.



TOOLING SIMPLICITY AND A MULTITUDE OF TOOLS READY TO HAND



Chain-type tool magazine 22 positions with 180 mm between centres.



Dual-level chain magazine with a total of 44 places.

Flexstore 44, 66, 88 positions with 180 mm between centres.



The **double electrospindle** allows for all changes to happen with no downtime, regardless of the working cycle. The two spindles, placed on either side of the carriage take turns tooling, one changes tools while the other works.

WinLine can produce up to 280 pieces per shift

THE ELECTROSPINDLES AND AGGREGATES ARE DESIGNED AND MANUFACTURED FOR BIESSE BY HSD, A GLOBAL LEADER IN THE MECHATRONICS SECTOR.



The NC **multi-function unit** can be infinitely positioned on a 360 (degree) rotation. It can also be used to house aggregates for specific machining operations (edge trimming, hardware boring, lock drilling etc.).



The **C Torque axis** has no gears so it's very rigid and ensures fast positioning, as well as being a highly precise technical solution because it's not subject to wear.



New **metal-reinforced collet** for loading tools up to 10 kg.



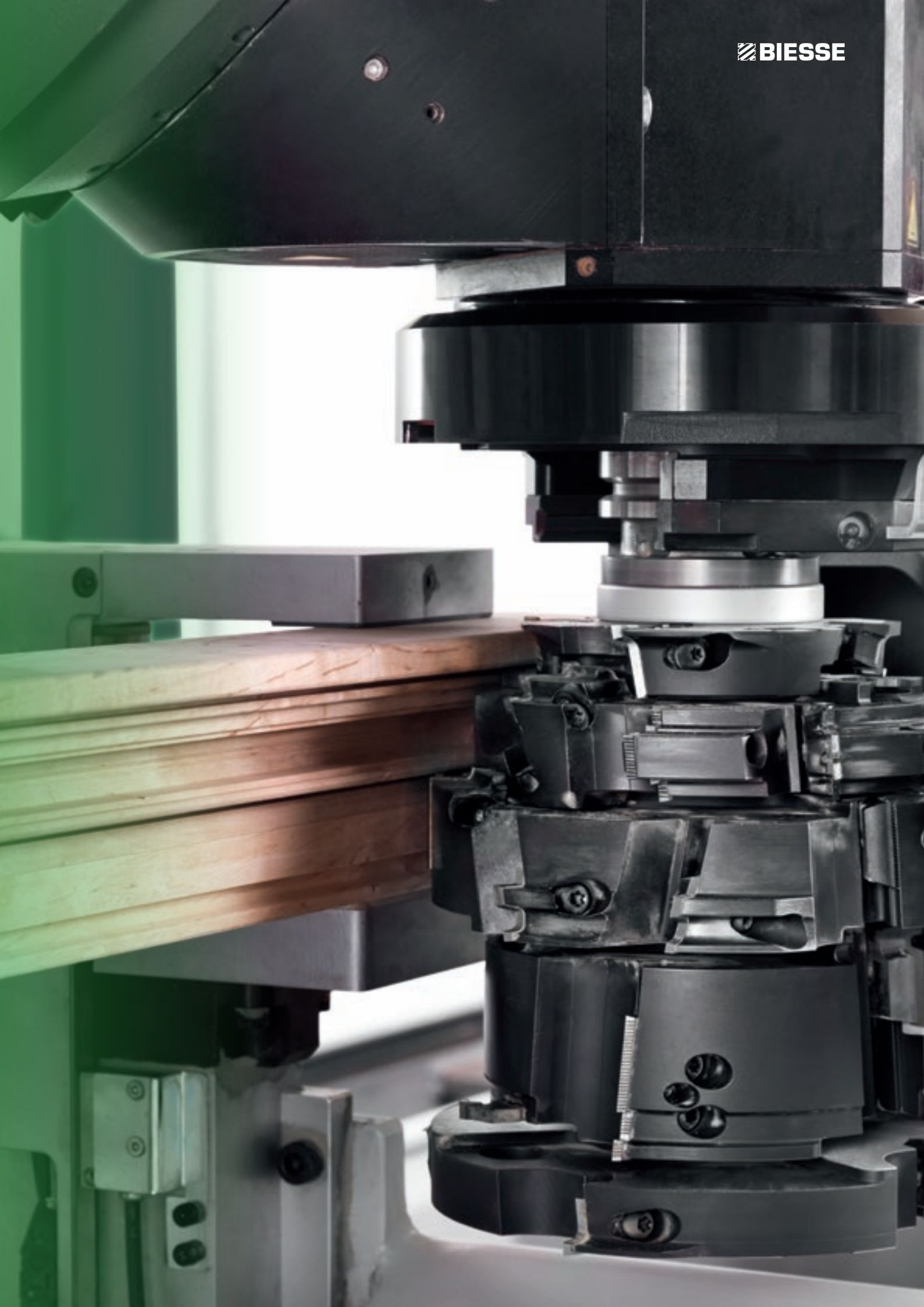
A 16.5 kW **5-axis head** aimed at the hardwood: powerful and sturdy for laborious cutting.

5 AXIS

COMPACT TECHNOLOGY

**High-level technology
for the best results
with maximum ease of use.**

The Winline multicentre with an HSD operating section with 5 interpolating axis (21.6 kW power) guarantees top performance even during machining operations with high quantities of material removed. Quality, precision and total reliability in an extremely compact and user-friendly solution.



THE COMPACT SOLUTION FOR EVERY NEED

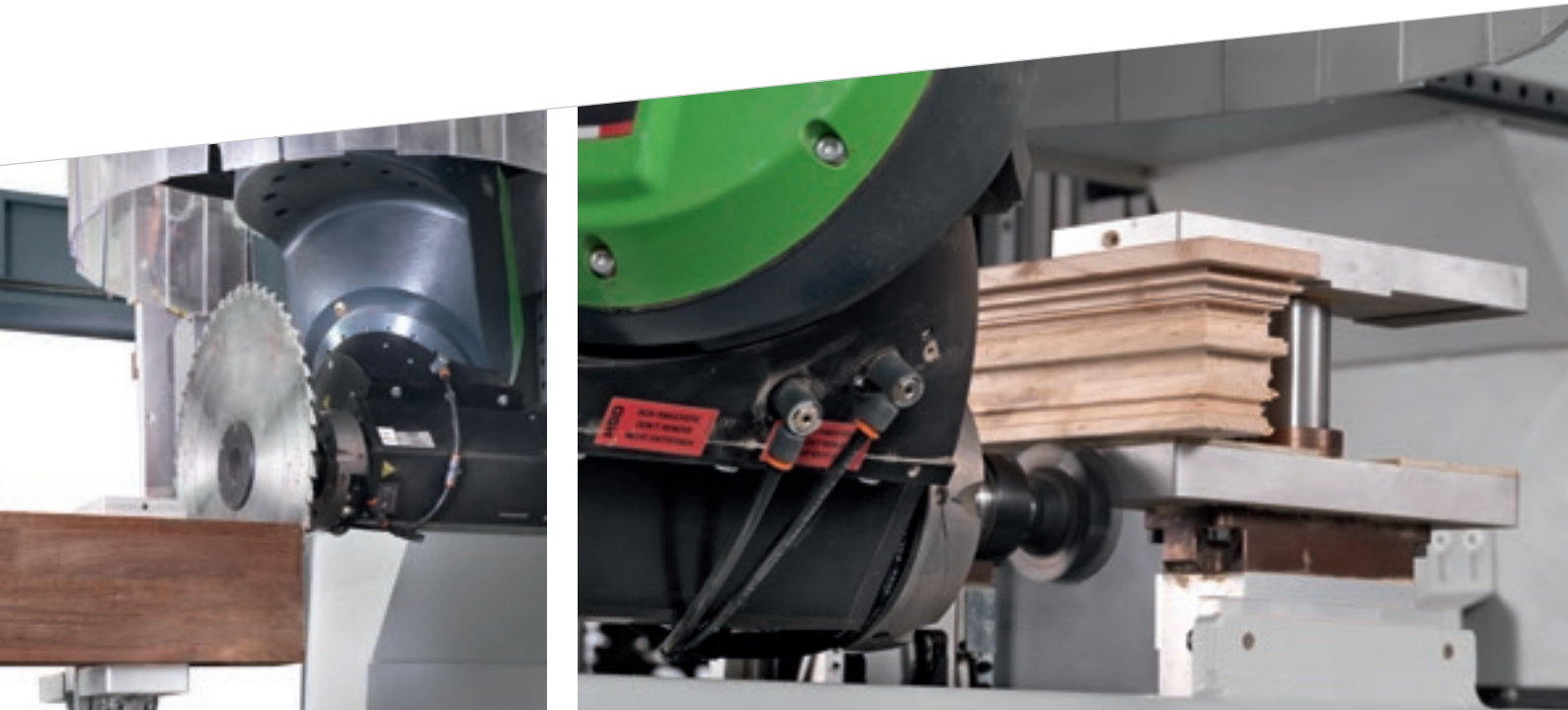
The WinLine configuration with only a 5-axis working unit is extremely compact, designed to fit into any production context. With its ergonomic, streamlined design, complete with all the necessary functions, WinLine is the ideal solution for companies asking for top performance and easy use with a limited investment.



- ✔ Compact and high-performing
- ✔ Accessible and easy to use
- ✔ Reliable and powerful

THE ROBUST STRUCTURE THAT DISTINGUISHES WINLINE ENSURES TOTAL MACHINING RELIABILITY AND EXCELLENT RESULTS.

HIGH PERFORMANCE LEVELS WITH LIMITED OVERALL DIMENSIONS



The 5-axis milling unit (21.6 kW) is extremely rigid and powerful, guaranteeing optimum removal levels and compact dimensions while at the same time ensuring excellent finishing standards.

SOLUTIONS DESIGNED FOR DAILY WORK



LED: the user identifies the machine's status from the colour of the LED bar.

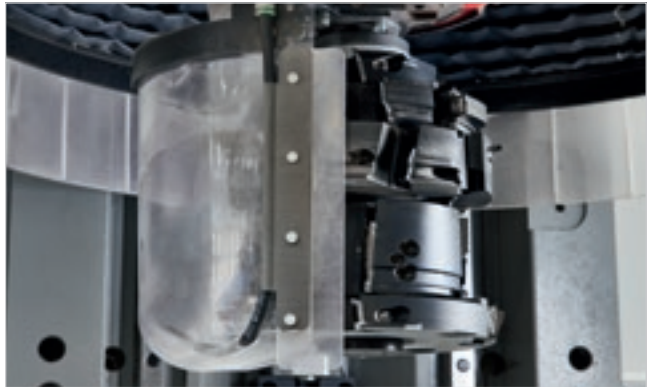
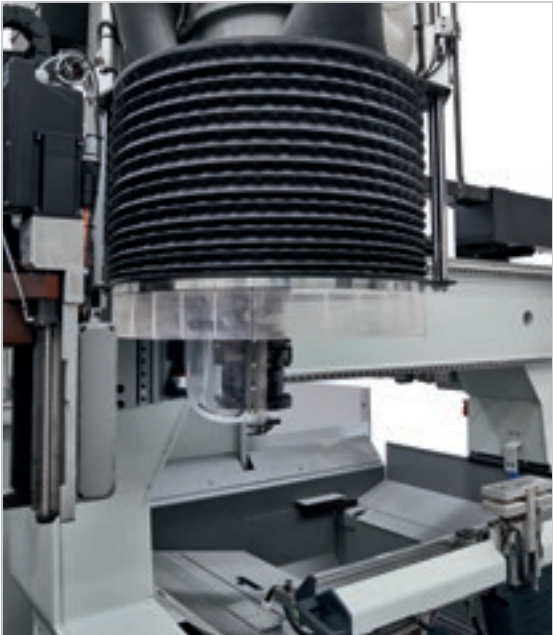


Motorised conveyor belt for the removal of chips and waste.

REDUCED CLEANING TIMES,
TO ENSURE MAXIMUM PRODUCTIVITY

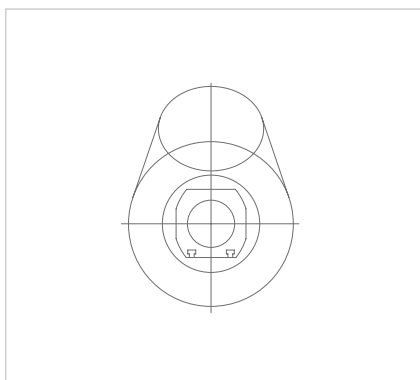


Suction hood with continuous positioning, always allowing the best position to be chosen on the basis of the specific machining operation.

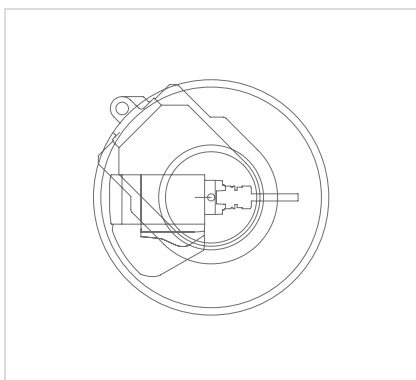


Forced flow deflector with a built-in blower that increases the movement speed of the chips inside the deflector, for better machine cleaning results.

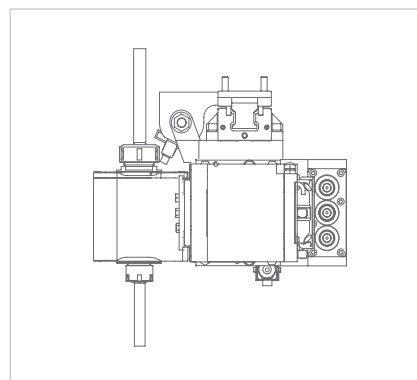
CONFIGURATIONS



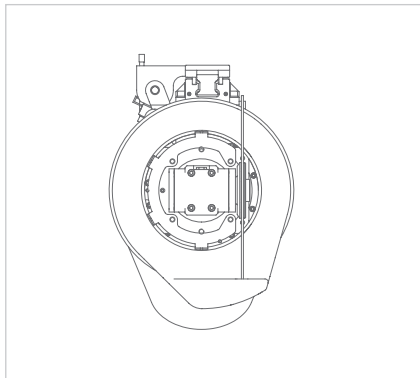
Electrospindle 19.2 kW (30 kW opt).



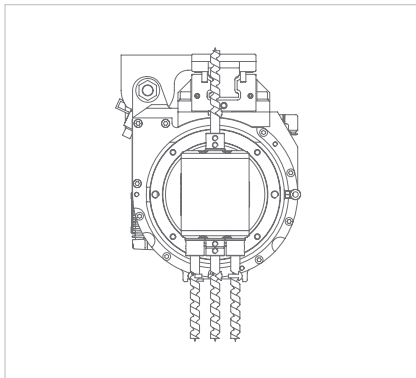
5-axis milling unit with 16.5 kW or 21.6 kW powers.



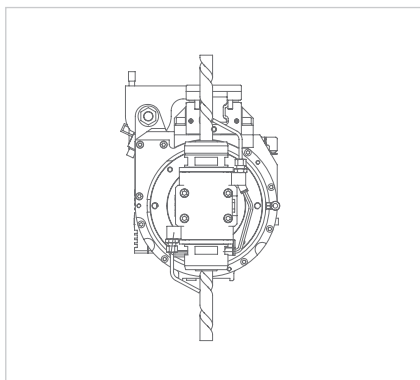
FlexyWood Plus Unit.



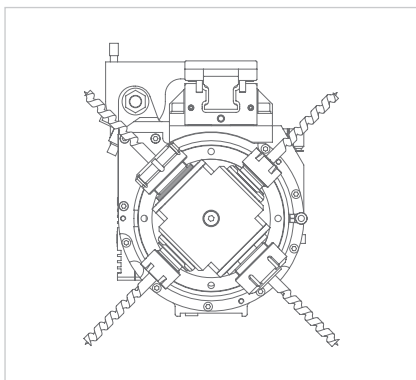
D300 blade unit.



Unit 3+1.

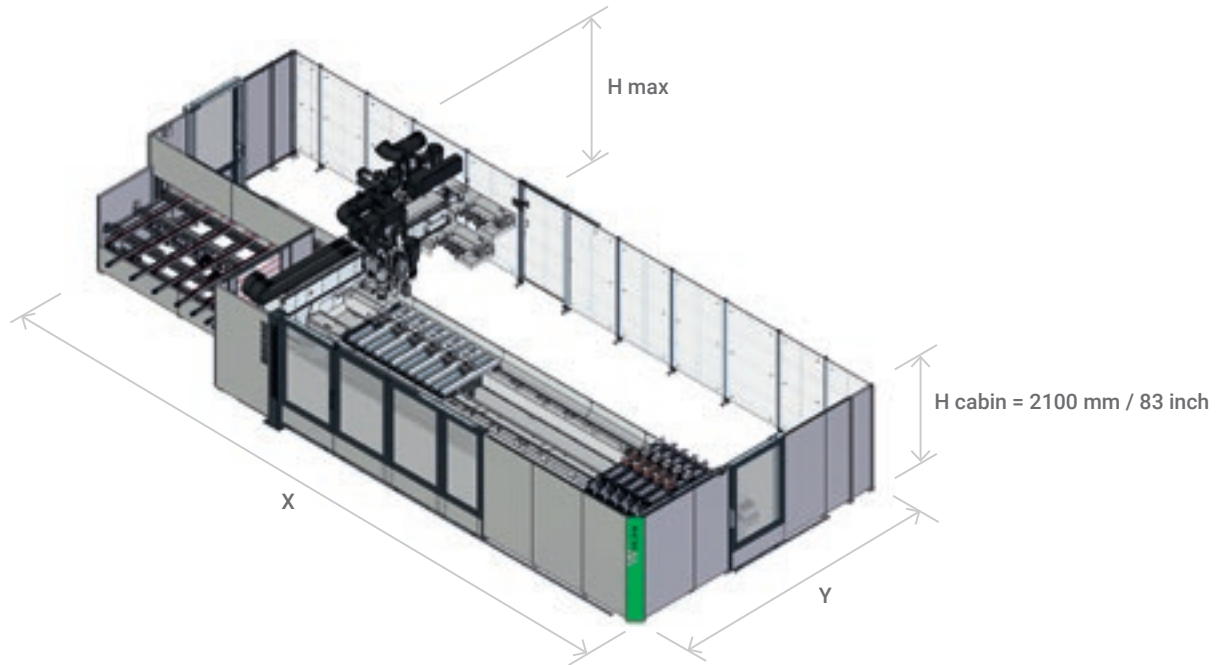


Milling unit with 2 horizontal outlets.



Drilling unit with 4 horizontal outlets.

TECHNICAL SPECIFICATIONS



	X	Y	H max conf 1/4/5*	H max conf 3
	mm/inch	mm/inch	mm/inch	mm/inch
WinLine 1638 - 13 pieces	10158/400	5534/218	2604/102	3032/119
WinLine 1638 - 30 pieces	10158/400	6843/269	2604/102	3032/119
WinLine 1650 - 13 pieces	11360/447	5534/218	2604/102	3032/119
WinLine 1650 - 30 pieces	11360/447	6843/269	2604/102	3032/119
WinLine 1667 - 13 pieces	13023/513	5534/218	2604/102	3032/119
WinLine 1667 - 30 pieces	13023/513	6843/269	2604/102	3032/119

* Conf 4 and 5 available for sizes 1650 and 1667 only

Component machining thickness	mm/inch	20/0,7 - 150/6
Component machining length	mm/inch	210 - 3200/4500* 8 - 126/177*
Component machining width	mm/inch	25/0,9 - 260/10

* Minimum loadable rough piece - 300 mm/12 inch. The maximum length depends on the configuration

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 at: operator's workstation LpA 82 dB; loading/unloading station LpA 79 dB. Measurement uncertainty K=4dB (A).

Measurements taken in accordance with UNI EN ISO 11202:210 - suction activated during profiling operations on solid alder wood, 78mm thick. 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.



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**

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

DOOR AND WINDOW MULTI-CENTER

Door and window manufacturer Michael Leopold, CEO of Leopold in Rosenfeld, has also invested in a new plant. He changed production with the new year by investing roughly half a million euros in Biesse's numerical control multi-centre, WinLine 16.67. It's the first to commence operation in Europe. "The new centre will increase our standard productivity and guarantees respect for our elevated quality standards over the long term," stated Leopold. Each shift the system machines from 150 to 180 pieces loaded, depending on shape, material and composition. The stability of machining operations is guaranteed by special blocking equipment. Even the shortest pieces can be blocked with two clamps.

What Leopold admires most about the system is the elevated flexibility it offers,

making it particularly suited to the production of arches, squaring and special machining operations.

"Any specialist knows how challenging rounded shapes can be," the CEO explained. "That's why we are perfectly equipped for the future". Leopold pointed out that, contrary to the past, rounded and angled doors and windows, as well as arches for doors, are now part of everyday work: "The requests companies make are far more unusual than they were in the past, both in terms of design and of the manufacturing itself". Architects and designers don't focus exclusively on function any more, they're interested in the aesthetic appeal as well. The multi-centre, with its 5 by 15 metre base, meets all these expectations.

"We have taken a giant leap into the future", the door and window manufac-

turer pointed out. Thanks to the new system, our customers can benefit from high quality and a good price/quality ratio, while architects will benefit from timely delivery throughout the project, thanks to the rapid production cycles. Orders, Leopold stated, have poured in, up to capacity. Especially given the fact that the company has for years now been producing for several carpentry shops all over southern Germany who no longer handle production internally, besides orders from the company's traditional customers.

Source: German magazine GFF alle Var Glas. "Artisans and industries prepare for the future"



LIVE THE EXPERIENCE



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**

