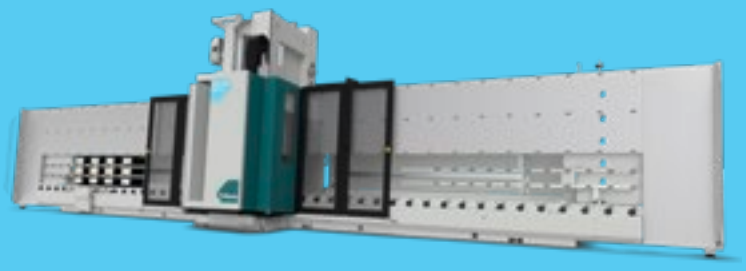
Biesse Machinery Glass

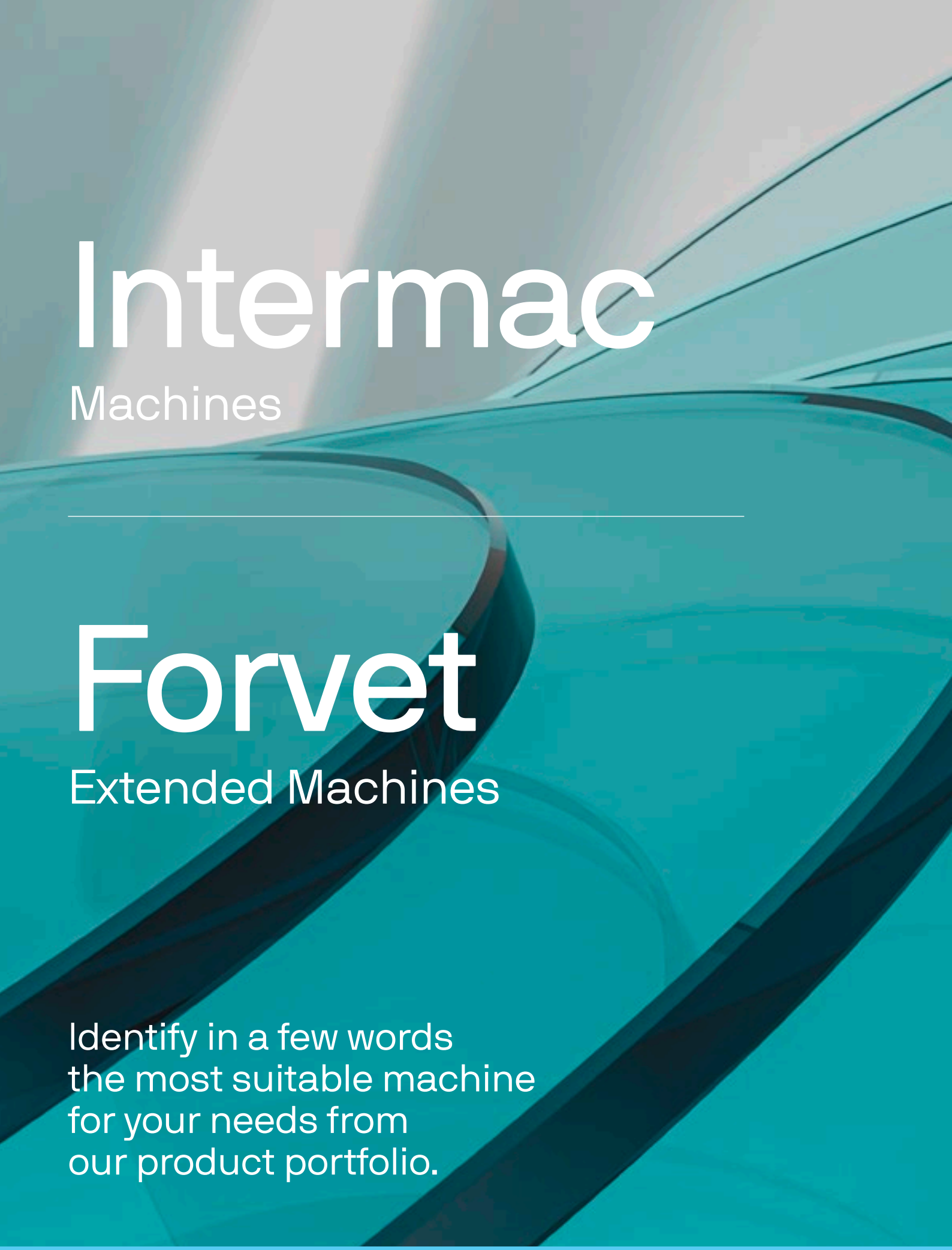
Intermac
Multi Pro M V0X

Multi-machining | Milling



Biesse

Biesse Machinery Glass



Intermac

Machines

Forvet

Extended Machines

Identify in a few words
the most suitable machine
for your needs from
our product portfolio.

Machining type

Cut Cutting

Edge Edging

Drill Drilling

Multi Multi-machining

Segment

Pro Distinctiveness and performance

Up Agility and expertise

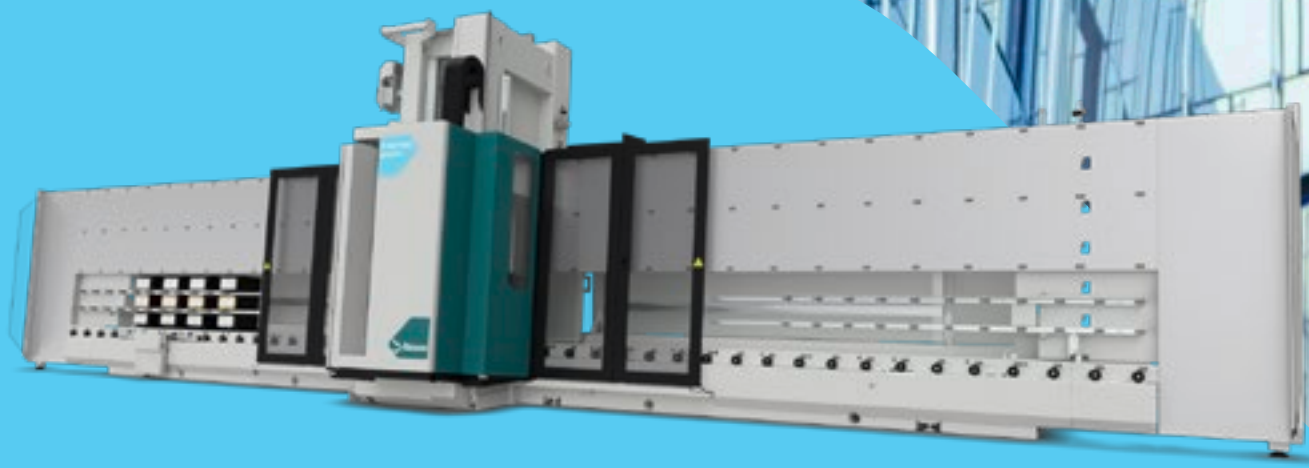
Go Simplicity and compactness

Find your perfect fit

Change your perspective: Outstanding productivity in a vertical dimension.

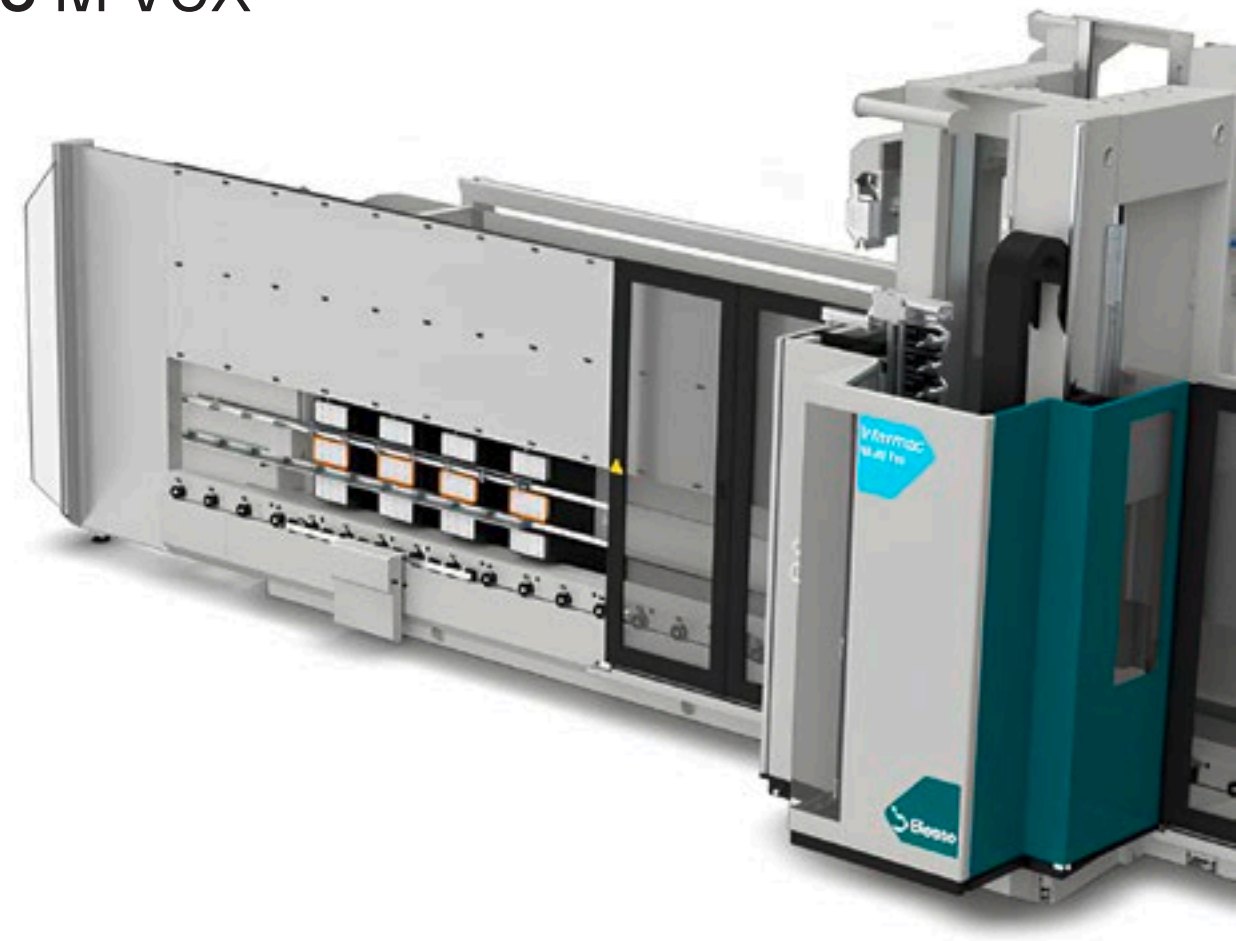
The vertical NC glass processing centre is capable to perform grinding, polishing, drilling, milling and arrising in a quick and easy way, with the most advanced solutions out on the market.

Boost your production with speed and quality, without any more need to setup the machine for processing. Ideal solution for doors, architectural glass, balustrades and batch one production.



Intermac

Multi Pro M V0X



Smart Shuttles

Intelligent shuttles and suction cups management make the glass movimentation precise and smooth. Automatic repositioning according to the glass shape without operator intervention with zero set time.
Thanks to intelligent suction cup management, we also manage glass scrap by automatically holding it in place with a suction cup, preventing it from falling off.

Automatic waste management system

Maximum efficiency, safety, and continuity during glass processing.

Human Machine Interface

A revolutionary interface enhances the user experience of Biesse machines, streamlining production processes like never before.

This innovative system achieves its goal through improved usability, clear communication, and intuitive guidance, empowering operators to work more efficiently and with greater confidence.

Helix drilling system

“Helix” your drill. Forget about limitations in drilling using Helix.

IC software : 5 steps to processing

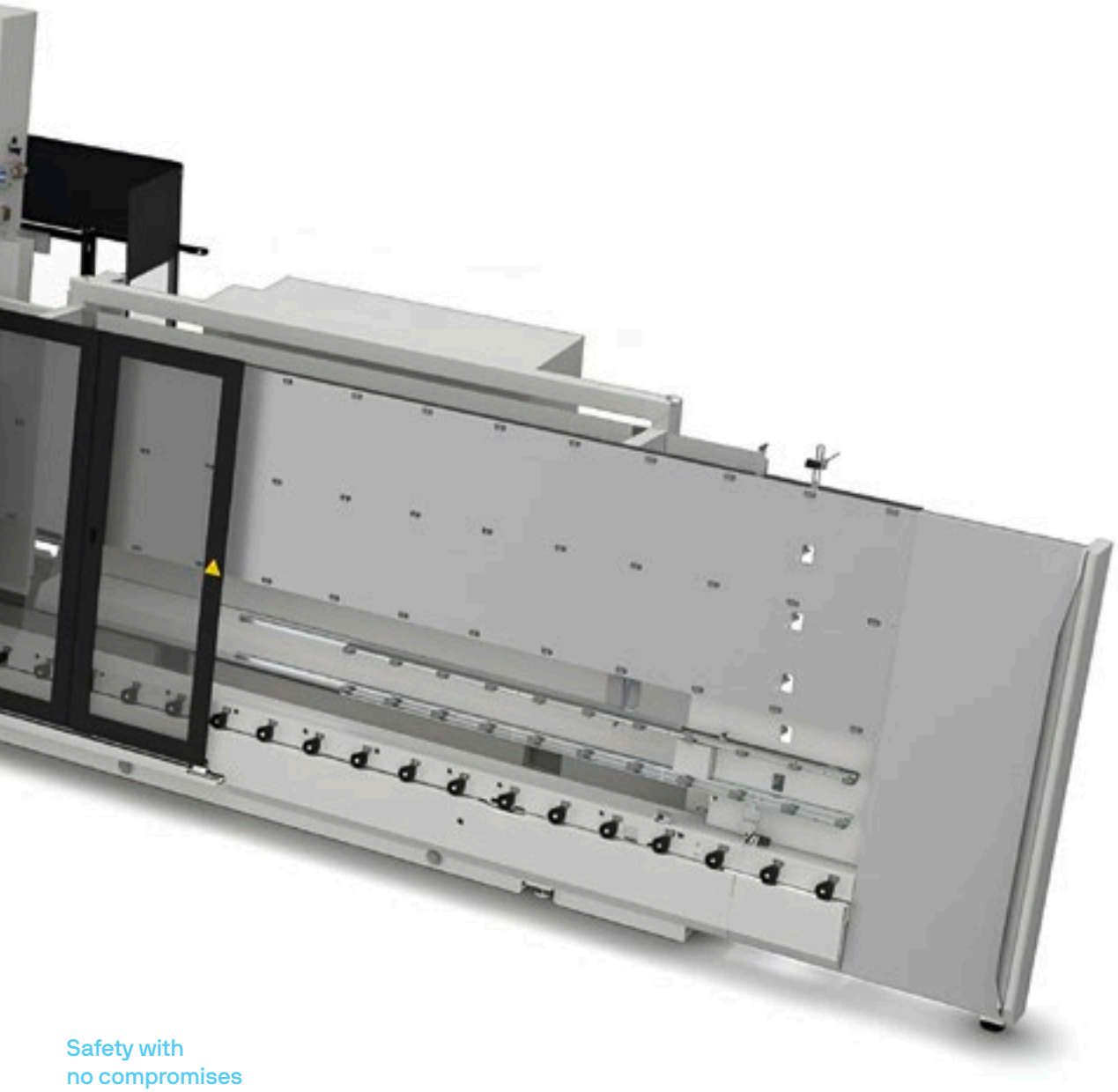
A comprehensive software package designed to simplify the programming phase, streamlining the process into just five intuitive steps.
User-friendly features enable powerful programming without the need for extensive training, helping operators avoid costly mistakes.

Pilot system

Stay centered, stay stable.
Perfect glass finishing is garanteed by the pilot system.

Discover more

biesse.com



Safety with no compromises

Best safety solutions brought to the queen of the vertical machining, machine is protected 360° all around.

Hidden loading time

No stop production. Possibility to load and offload pieces in hidden time.

Materials

Mg Monolithic glass

Lg Laminated glass

Glass

We design and manufacture machines for glass processing in the furniture, construction, and automotive industries, with a comprehensive portfolio enhanced by the integration of Forvet, Bavelloni, and Intermac technologies.

The expertise of these historic brands continues to evolve within the two new macro-categories, Intermac and Forvet, created to provide a clearer and more accessible offering.

Doors

We can process squared glasses as well as shaped ones keeping in mind few restrictions such as a straight side and minimum radiuses. Thank to its 3 machine sizes to choose from, almost every design can be processed.

Balustrades

Ideal for any kind of balustrades. milling notches slots, edging the profile, do everuthing all at once.

Facade

We can process glasses up to 3300mm high and 6000mm long, meaning full jumbo glass size and up to 30mm thick- ness.

Batch One production

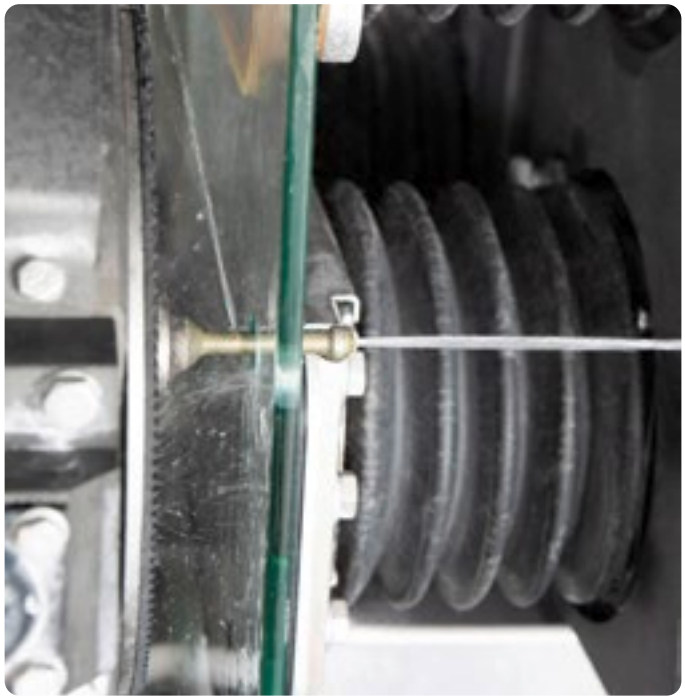
Balustrades production is one of the core job of Multi PRO M V0X, performing all the operations all at once. Holes, notches, perpheral edging, everything just works smooth and fast.

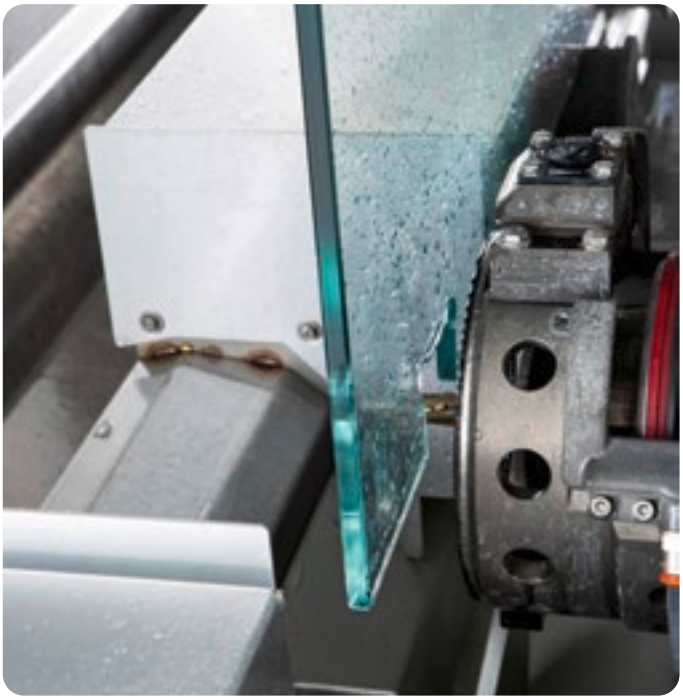
Grinding & Polishing

Grinding fast, the minimum glass removal for each side is 0.7 mm, and if the glass comes directly from the cutting table, the diagonal difference must be 0.15 mm/m or less.

Polishing process is available with Pilot system and without it.

Adaptive control tecnology to maintine the wheels pressure constant for all the shape.





Milling

Front head works for milling and notches . Milling process for small glasses may not be possible, because it is not compatible with the suction cups positioning.

Drilling

2 heads for a perfect hole. Their alignment is guaranteed by a solid, foolproof fixing system. The hole is made simultaneously by both heads and allows for an optimal result without the use of accessory tools and halving the production time.

Arrising

Arrising thanks to the new self learning logics and sensors. Arrising is for customer that needs a flexible machine that works 80% of the time to grinding and polishing and 20% to arrising.

Integration with loading device and unloading washing machines

Hidden loading time

Time saving to loading and unloading operations while machining.

Unstable Glass

It is still possible to process a glass where the center of gravity is in a position that makes it unstable.

A simple procedure helps the operator to reference the glass and lock it with the suction cups for processing.

After the work is done the machine will move the glass to the unloading position and waits for the operator to pick it up and unlock it.

Light glass

Thanks to a set of opposed suction cups it's possible to automatically load small and thin glass.

The device prevents glass from tipping during locking operation.

Small glass management

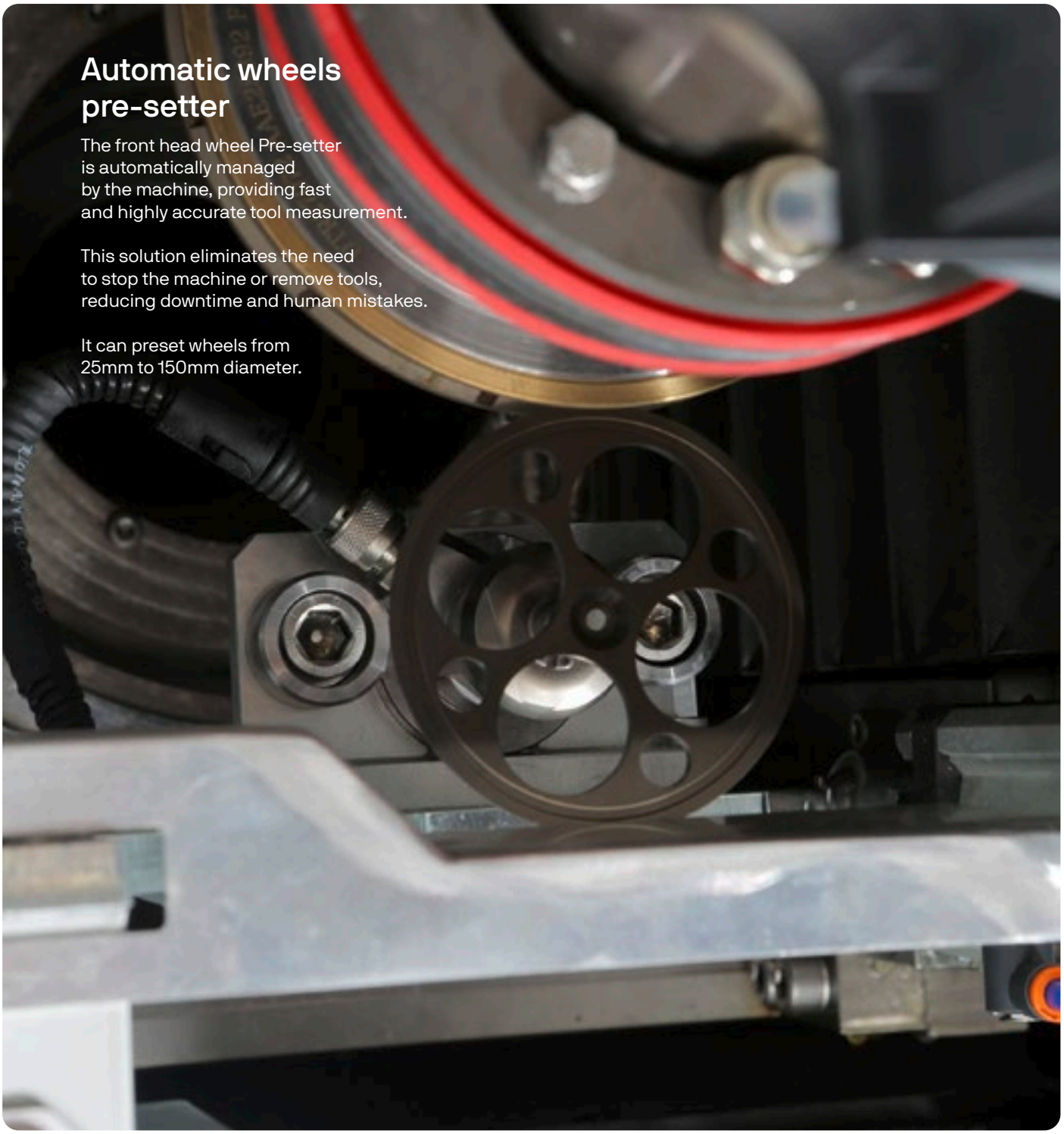
Glass clamping suckers optional system to process the minimum glass size 300x150 mm with 0,5 mm radius.

Maximum machinable thickness 10 mm with maximum wheel dimension 80mm.

Automatic waste management system

The Multi Pro M V0X scrap management system has been designed to ensure maximum efficiency, safety, and continuity during glass processing. Through a fully automated sequence, the machine handles scrap pieces intelligently, whether by repositioning, evacuating, or assisting the operator when manual removal is required.

This advanced solution minimizes downtime, optimizes production flow, and maintains high-quality standards across all operations.



Automatic wheels pre-setter

The front head wheel Pre-setter is automatically managed by the machine, providing fast and highly accurate tool measurement.

This solution eliminates the need to stop the machine or remove tools, reducing downtime and human mistakes.

It can preset wheels from 25mm to 150mm diameter.

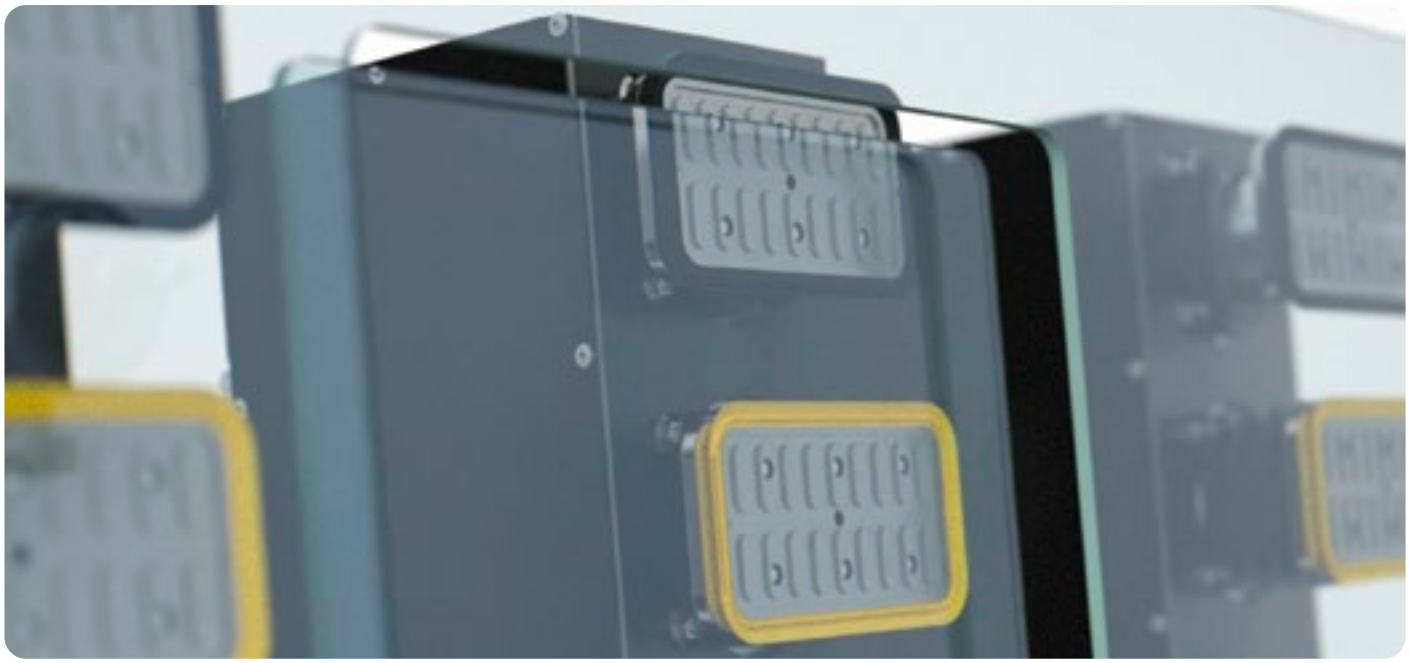
Front head polishing wheel dressing device

The device includes a dressing stick and dedicated management software. It is automatically controlled by the machine, providing fast, safe, and highly accurate tool dressing.

It eliminates the need to stop the machine or remove tools, reducing downtime and enhancing productivity.

Drilling dressing and presetting device

Fully automated operations managed by the machine for better production cycle.



Advanced scrap management system that handles glass offcuts efficiently throughout the machining process.

Depending on the size and position of the scrap, the system can automatically reposition the piece, evacuate it after milling, or prompt operator intervention when necessary. The cycle is optimized to reduce idle times and ensure continuous workflow, even when dealing with shaped or irregular scraps.

Handling capabilities cover a wide range of dimensions:

Maximum thickness for waste management: 15mm

Minimum thickness for waste management: 6mm

Maximum scrap size held with single suction cup.

X:500 Y:500, the scrap does not rest on the rolls.

X:500 Y:2000, the scrap rests on the rolls.

Single waste management with withdrawal + grinding

When the glass scrap can be supported by a single suction cup, the machine automatically moves it backward to optimize the cycle, allowing the finishing operations on the main sheet to proceed without interruption.

In this configuration, the maximum scrap size that can be handled by a single suction cup is 500x500 mm, while the minimum is 320x150 mm.

The scrap will be removed when machining is finished. This mode handles glass scraps positioned along the Y-axis of the machine, with a distance from the glass support ranging between 70 mm and 650 mm.

Waste management without glass withdrawal

When it is not possible to move the scrap backward, the machine automatically evacuates the piece after milling, allowing the operator to remove the scrap and resume processing without compromising workflow continuity.

Automatic Work Cycle Overview

Scrap milling – The system performs milling of the scrap; shaped scraps can also be generated when required.

Scrap discharge – The scrap is discharged to the outlet area according to the standard procedure (operator intervention required).
Glass return – The usable glass sheet is automatically brought back to the working area.
Automatic origin detection – The machine updates the reference origins without operator input.
Next processing phase – The system proceeds automatically with the next machining steps.
Final unloading – Once processing is completed, the finished glass sheet is unloaded.

Helix drilling system

“Helix” your drill

Forget about limitations in drilling using Helix.

Our Helix tool offers numerous advantages with its innovative design, enabling precise drilling and countersinking of virtually any hole diameter.

Engineered for speed and exce ptional quality, it allows both operations to be performed without changing the tool. The optimized processing cycle by IC ensures seamless execution in a single step.

HSD Advanced motors

Precision Meets Power: Advanced Motors for Unmatched Performance

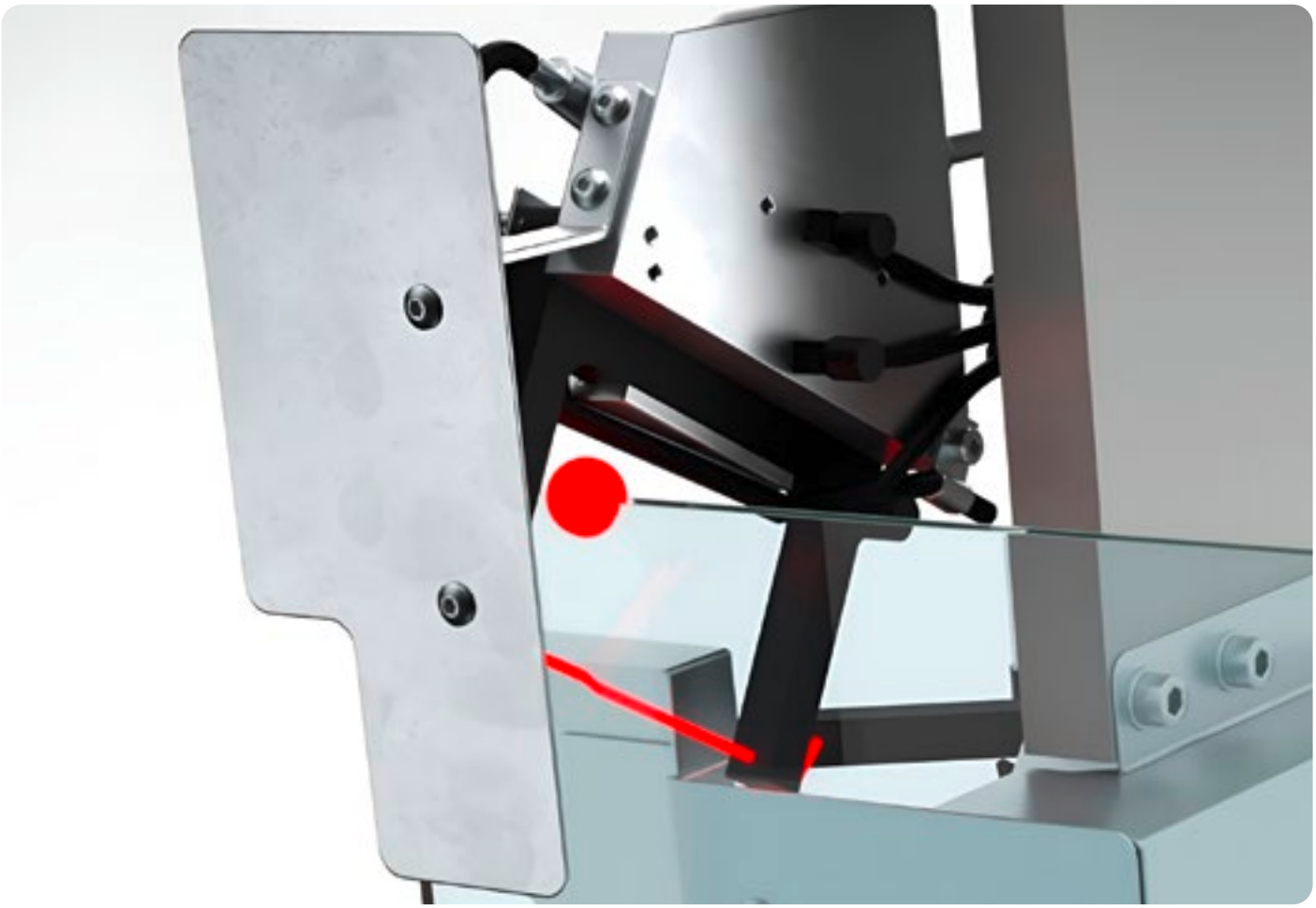
Model: HSD ES 796 14 kW Power: HSD’s powerful motors, designed specifically for vertical machines, can reach up to 12,000 RPM, making them ideal for all glass processing tasks, including routing. Featuring a stainless-steel shaft, ceramic bearings, and internal cooling, they ensure high performance and reliability. The pressurized shaft provides self-cleaning, minimizing maintenance time.

Advanced technology for unmatched quality and productivity.

Self learning system: we do it for you

The self-learning system ensures the correct sequence of tools is applied and automatically adjusts the position and machining of internal cutting or hole profiles.

By detecting the glass thickness, it prevents programming errors, optimizing both productivity and flexibility.
The software automatically selects the appropriate tools based on the detected thickness.



This feature allows to avoid introducing glasses with the wrong dimensions which would cause damage and possible machine downtime.

It can work in 3 modes:

Mode 01

Measure And Verify

Check the workability of the rough glass compared to the loaded program.

Mode 02

Measure, Verify And Recalculate

Check the workability of the rough glass compared to the loaded program.
Automatically recalculates the machining toolpath in case of excessive material.

Mode 03

Measure And Work

Removes the same amount of material around the rough glass, regardless of its size.

Smart Shuttles

Intelligent shuttles and suction cups management
make the glass movimentation precise and smooth.

Shuttles positioning and re-positioning
Shuttle position optimization
Static Repositioning
Dynamic repositioning system

High-quality guides and a powerful motor system ensure smooth operation, while shuttles glide on solid, waterproof rails, minimizing friction and enhancing the precision of the machining process for superior glass finishing quality.

Pilot system: stay centered, stay stable

Perfect glass finishing is garanteed by the pilot system.

The pilot system is designed to securely hold the glass and follow its shape, reducing vibrations during grinding and polishing, which enhances the overall finish quality. Driven by the C Axis, the pilot system clamps the glass's outer perimeter. A pair of anti-friction copiers keeps the glass centered and stable, ensuring a consistent bevel and flawless finish.

Time saving tool change

The vertical tool magazine enables rapid tool changes, enhancing efficiency and streamlining production processes with a fully equipped setup.

Maximum efficiency, safety, and continuity during glass processing

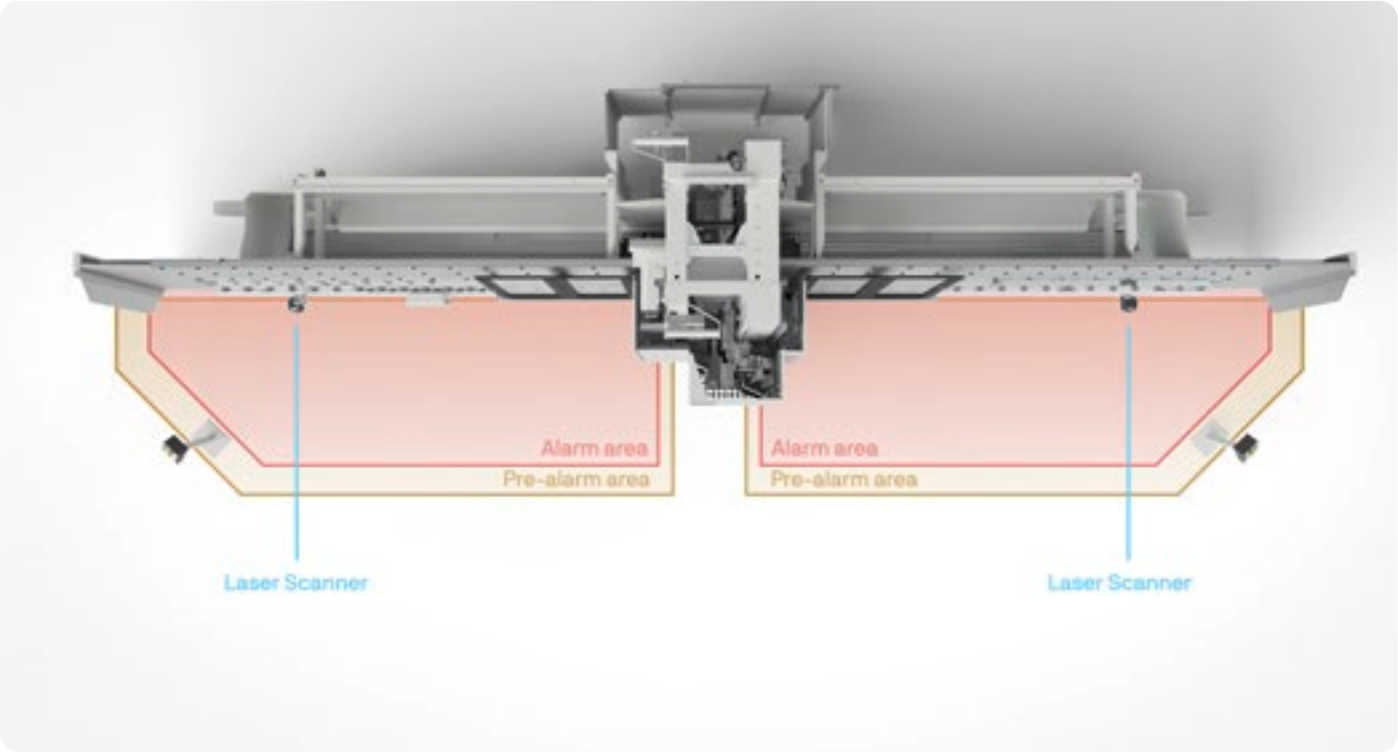
Safety with no compromises

Best safety solutions brought to the queen of the vertical machining, machine is protected 360° all around.

We feature advanced safety solutions, including LaserScanner protection that defines secure areas where no objects can enter while the operator works safely at the PC station.

If a foreign object or the operator enters the safety zone, the machine stops and power to the axes is cut. This ensures maximum operational safety.

The system complies with the EN ISO 13849-1 Functional Safety standard, supporting Performance Level requirements and it's PL-D compliant.



Laser Scan - Loading Area

Laser scanners protect the operator during the working phase, preventing he involuntarily entering the work area.

The system is designed with a “warning area” (Yellow) where the machine will not stop but the operator is warned by an acoustic signal and a “safe area” (Red) where the machine will stop to avoid potential collisions with the operator.

Laser Scan - Internal

The laser has the task of intercepting the presence of a person and avoiding any unintended start of the machine.

The accessible internal parts of the machine are protected by an additional laser scan to prevent the unintended start of the machine, especially during maintenance operation.

Interact in safety

Thanks to the handheld console, the operator can interact with the machine and perform maintenance operations without moving to the main console, making the job easier and reducing downtime.

Anti-fall device for lightweight glass

This system stabilizes the glass during vertical processing, preventing accidental tilting or detachment, especially critical for smaller or thinner panels that may not have sufficient weight to remain securely in position on their own.

Laser Scanner to protect you

The laser scanner protects the front of the machine by stopping the work cycle if any foreign object enters the protected area. This innovative feature sets us apart in the industry when it comes to safety.

All safety solutions makes the machine compliant to EN ISO 13849-1 – Functional safety standard, basis for performance level.

Total Accessibility

The machine has three wide service doors in the front and one in the back. They allow the operator to easily access the operating units and perform maintenance tasks or replace tools, easily and ergonomically.

Scheduled maintenance

Intermac Multi Pro M is equipped with a software alarm clock to prompt the operator in performing maintenance tasks and keep the machine running smoothly.

Y Axis Locking System

Pneumatic brakes automatically locks the Y axis when the machine is switched off or sent to an emergency.

It prevents any possible unintended movement of the axis, especially during maintenance operation when the operator could be in potential danger.

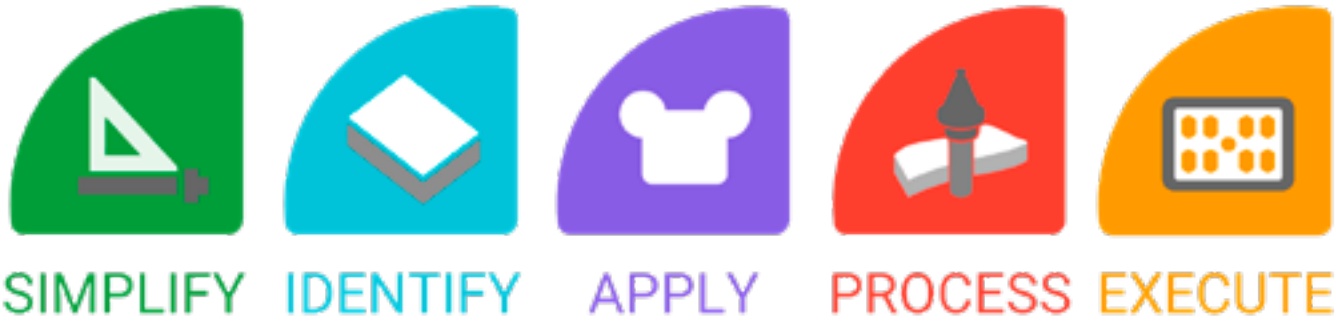
From idea to production in just 5 step

A comprehensive software package designed to simplify the programming phase, streamlining the process into just five intuitive steps.

Simple yet powerful programming

From drawing simplification to automatic tooling... Production is just few clicks away

A comprehensive software package designed to simplify the programming phase, streamlining the process into just five intuitive steps. User-friendly features enable powerful programming without the need for extensive training, helping operators avoid costly mistakes. This intuitive approach ensures a shorter learning curve and a faster production ramp-up, maximizing efficiency from the very start.



Seamless Programming in 5 Steps:

Simplify – Automatically correct and refine geometries.
Identify – Detect the drawing shape and generate the specific piece.
Apply – Parametrically position notches and hardware elements.
Process – Assign optimal machining sequences and drilling operations.
Execute – Calculate the complete process while preventing collisions between supports and tool paths.

Efficiency has never been this simple!

Transform your ideas into ready-to-run programs effortlessly.

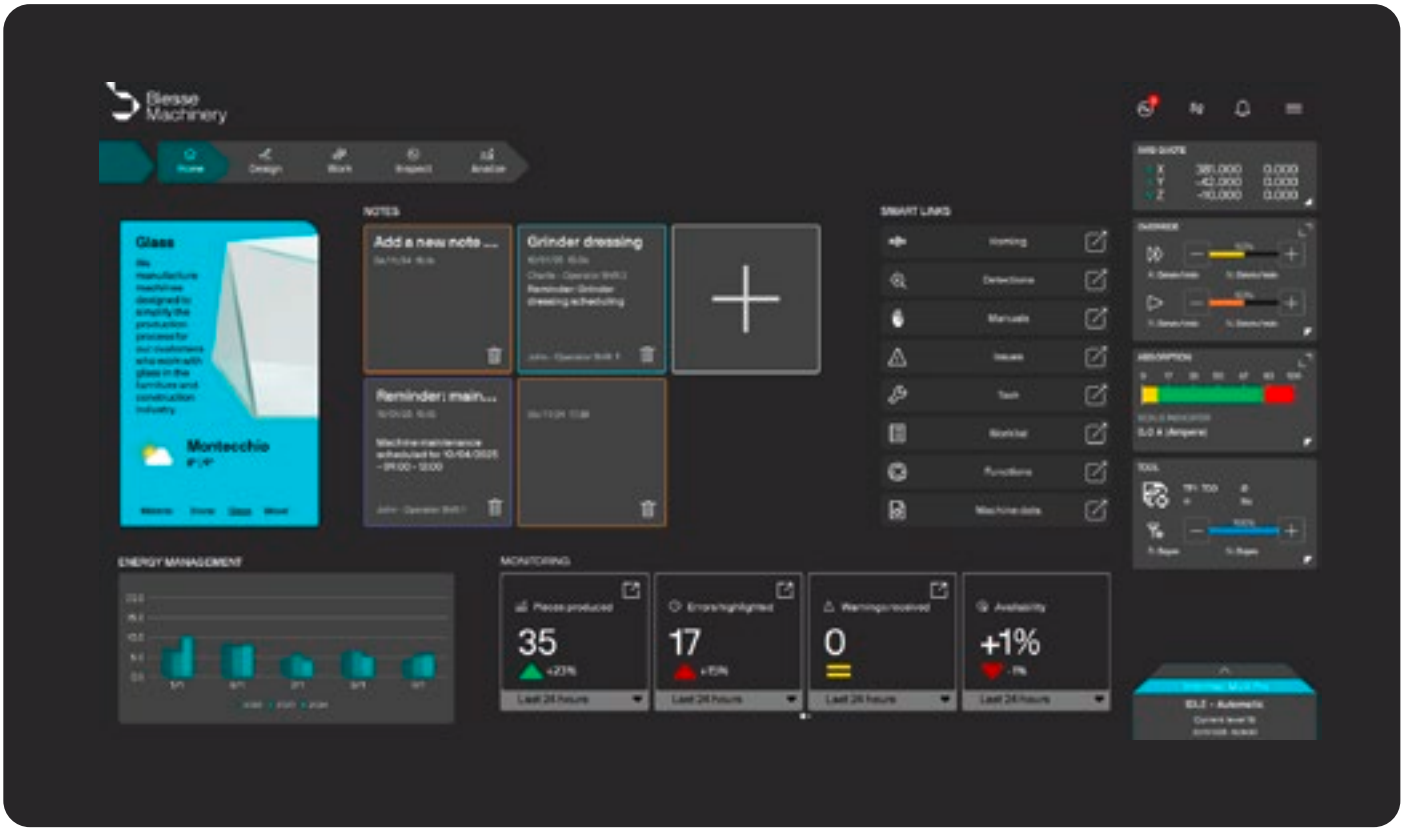
Our intelligent software identifies your part, applies machining operations, optimizes suction cup placement, and generates the machine program, so all you need to do is load the glass and start the cycle!

No more mistakes

The integrated CAM simulation enables operators to preview tool paths and virtually run programs before real machining, preventing programming errors and possible suction cup collisions.

Real-time axis positions and machining speeds are displayed for a realistic, detailed representation of the process.

Human Machine Interface



A revolutionary interface enhances the user experience of Biesse machines, streamlining production processes like never before.

This innovative system achieves its goal through improved usability, clear communication, and intuitive guidance, empowering operators to work more efficiently and with greater confidence.

Your digital co-worker

The new Biesse Human Machine Interface.
A simple and unique interface for Biesse machines.

A revolutionary interface enhances the user experience of Biesse machines, streamlining production processes like never before. This innovative system achieves its goal through improved usability, clear communication, and intuitive guidance, empowering operators to work more efficiently and with greater confidence.

One solution, multi machinings

A standardized interface across all machines simplifies operation, ensuring seamless user experience and smooth transitions between different models.

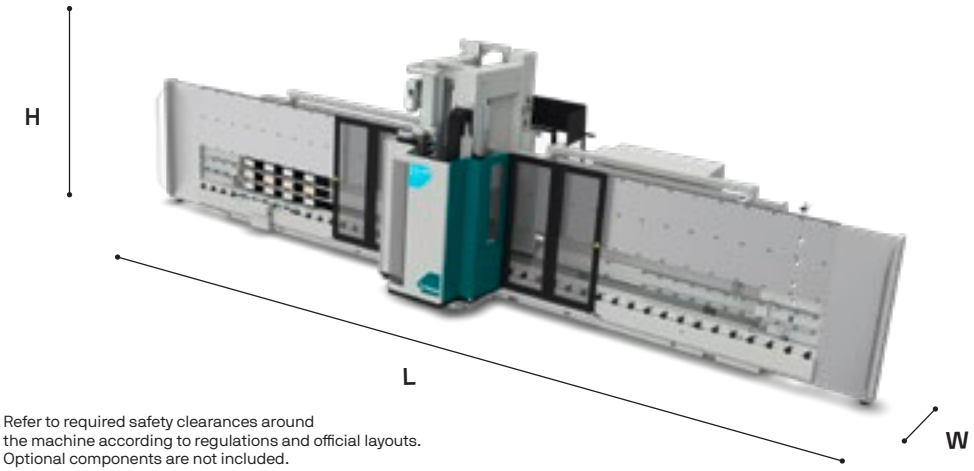
This consistency significantly reduces the learning curve for operators, especially helpful in high-turnover environments.

Configurations

This document includes information about optional features.
Scan the QR Code to access the configuration scheme
and verify standard and optional equipment.

Technical Specifications

		22	28	33
Max working dimension	[mm] [in]	3500 X 2200 137.80 x 7.87	5100 X 2800 200.79 x 110.24	6000 X 3300 236.22 x 129.92
Max glass height	[mm] [in]	2400 94.49	3000 118.11	3300 129.92
Front operator unit	[Kw]	6	14	14
Rear operator unit	[Kw]	6	6	6
Max glass thickness	[mm] [in]	19 (25-30 opt.) 0.75 (0.9-1.18)	30 1.18	30 1.18
Min glass thickness	[mm] [in]	4 0.16	4 0.16	4 0.16
Shuttles		2 (3rd and 4rd opt)	4	4
Front tool racks		10 (+5 opt)	10 (+10 opt)	15 (+10 opt)
Rear tool racks		10	10 (+5 opt)	10 (+10 opt)



Refer to required safety clearances around
the machine according to regulations and official layouts.
Optional components are not included.

Overall dimensions

		22	28	33
H	[mm] [in]	12900 508.66	16330 643.70	18310 720.47
L	[mm] [in]	4325 170.47	4900 192.91	5400 212.60
W	[mm] [in]	4500 177.17	4500 177.17	4500 177.17

The detected sound pressure levels are indicated in the table. The values indicated may vary according to certain parameters: the nature and size of the machined materials, the type of tool Operating conditions: boring, milling and grinding Reference Standards: UNI EN ISO 11202 and subsequent modifications Measurement uncertainty K = 4 dB (A) Weighted surface sound pressure level A (LpA) The noise levels indicated are output levels and do not necessarily represent safe operating levels.

Even though there is a relation between emission levels and exposure levels, this cannot be reliably used to establish whether further precautions are necessary. The factors determining the actual noise levels to which the operating personnel are exposed include the length of exposure, the characteristics of the work environment, other emission sources (e.g. the number of machines and machining operations nearby). This information allows the machine user to make a better assessment of the risks and dangers. Control station 83 dB (A), Maximum value in other work stations 79 dB (A)

Biesse

Customer Care

Beyond machines. Value that works longer.

Biesse Customer Care delivers global expertise and local support, every day, everywhere, to protect your investment and enhance long-term machine performance.

Biesse

Services

- Installation & Warranty
- Remote assistance
- On-site assistance
- IoT Services

Maintenance

- Machinery maintenance
- Components maintenance

Components

- Spare parts
- Upgrades & Modernization
- Tooling
- Software

Training

- In-person coaching
- Customized education
- Remote training

Founded in Italy in 1969
International natives

We simplify y
manufacturi
to make the p
of any materi

We are an international company that manufactures lines, machinery and components for making products, enhancing the potential of a wide range of materials.

Thanks to our rooted competence nurtured by an ever-growing worldwide network, we support your business evolution - empowering your imagination.

Master of materials

our
ng process
otential
al shine

Join the
Biesse world.

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Biesse Material·HUB

Network

Biesse Material Hubs are multi-material spaces designed to experience our company and our complete product portfolio in a unique and engaging way.

A place to explore technologies, share ideas and find the right solution for you.

The world map reflects our identity as 'International Natives', showcasing our global presence through Biesse Material Hubs and showrooms worldwide.

Biesse Material Hub **Showroom**

Reserve your visit in one of our multi-material spaces around the world

Canada | **Toronto**

Portugal | **Porto**

Join the Biesse
Material Hub
experience

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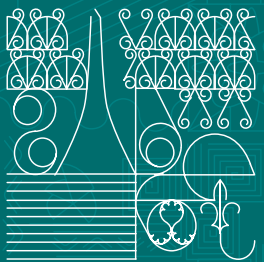
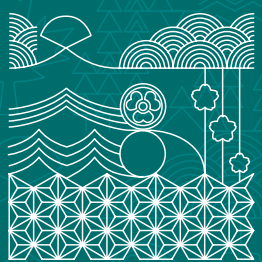
Italy | **Pesaro**



France | **Lyon**



Japan | **Osaka**

Australia | **Sydney**

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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.

Biesse

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