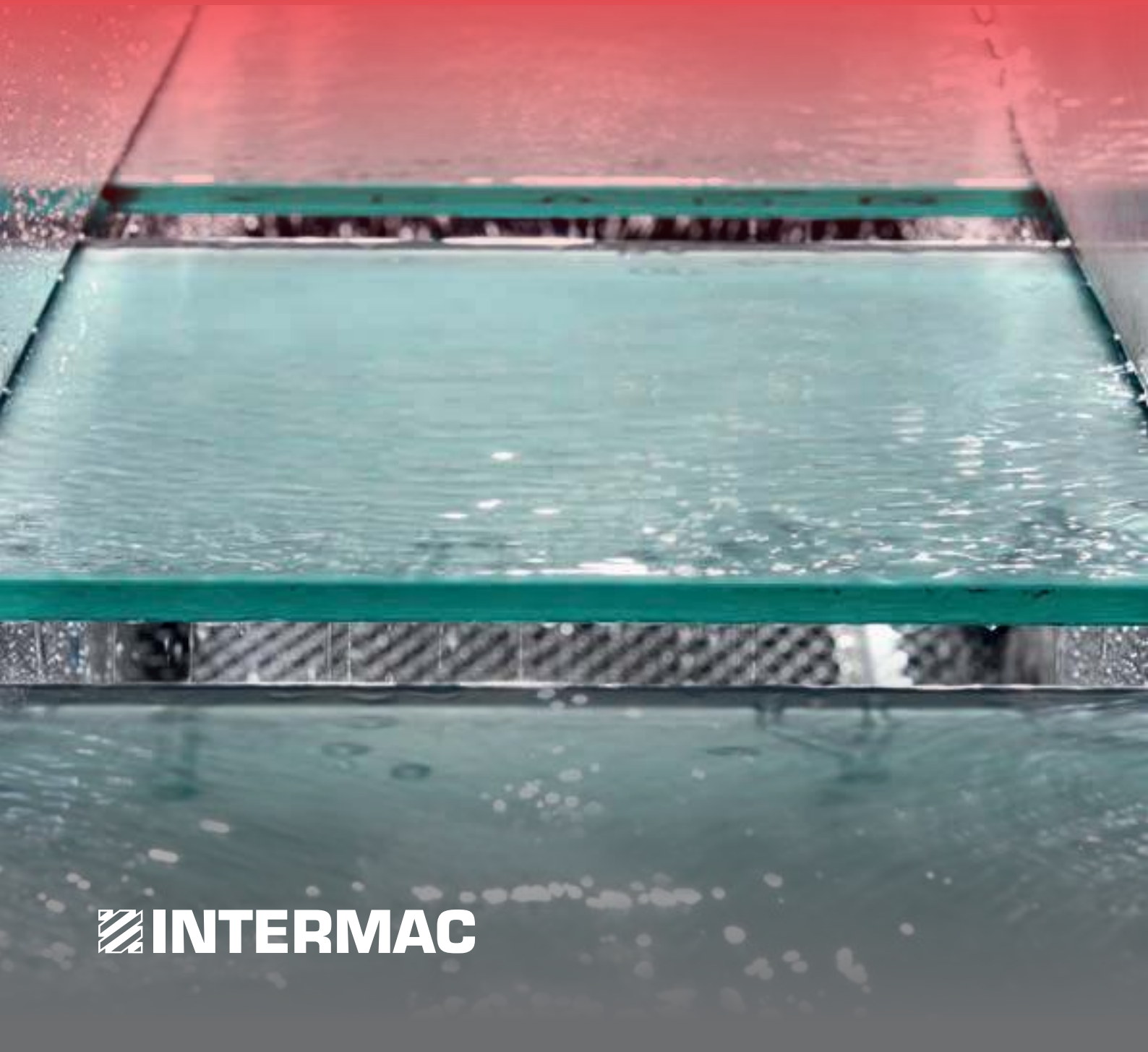
BUSETTI

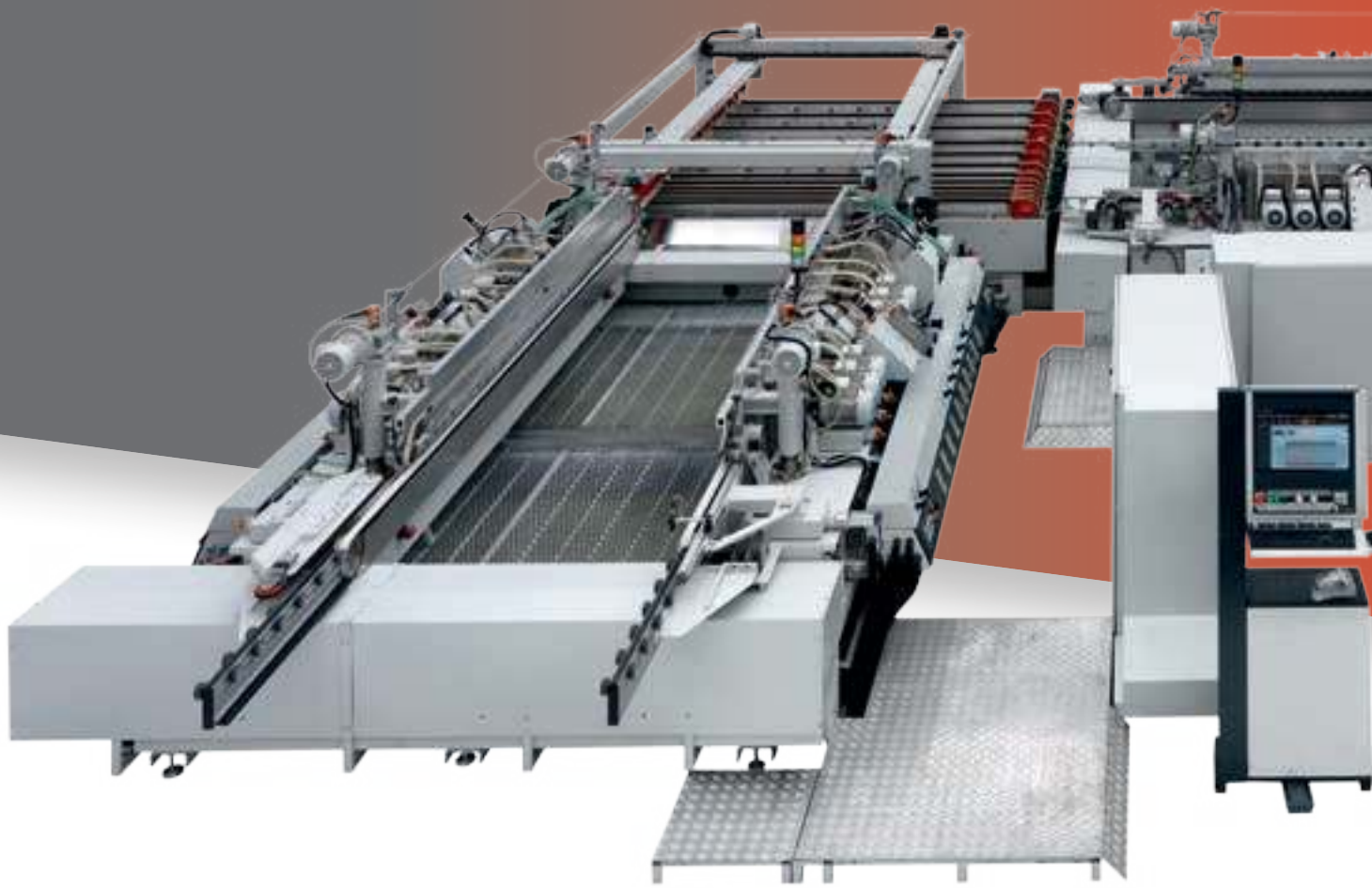
F-P SERIES

CNC DOUBLE-EDGING
MACHINES AND SYSTEMS



INTERMAC

LEADING TECHNOLOGY



THE MARKET DEMANDS

a change in manufacturing processes, enabling companies to accept the largest possible number of orders. This is coupled with the need to maintain high quality standards while offering product customisation with quick and defined delivery times, as well as satisfying the requirements of even the most highly-automated industries.

INTERMAC RESPONDS

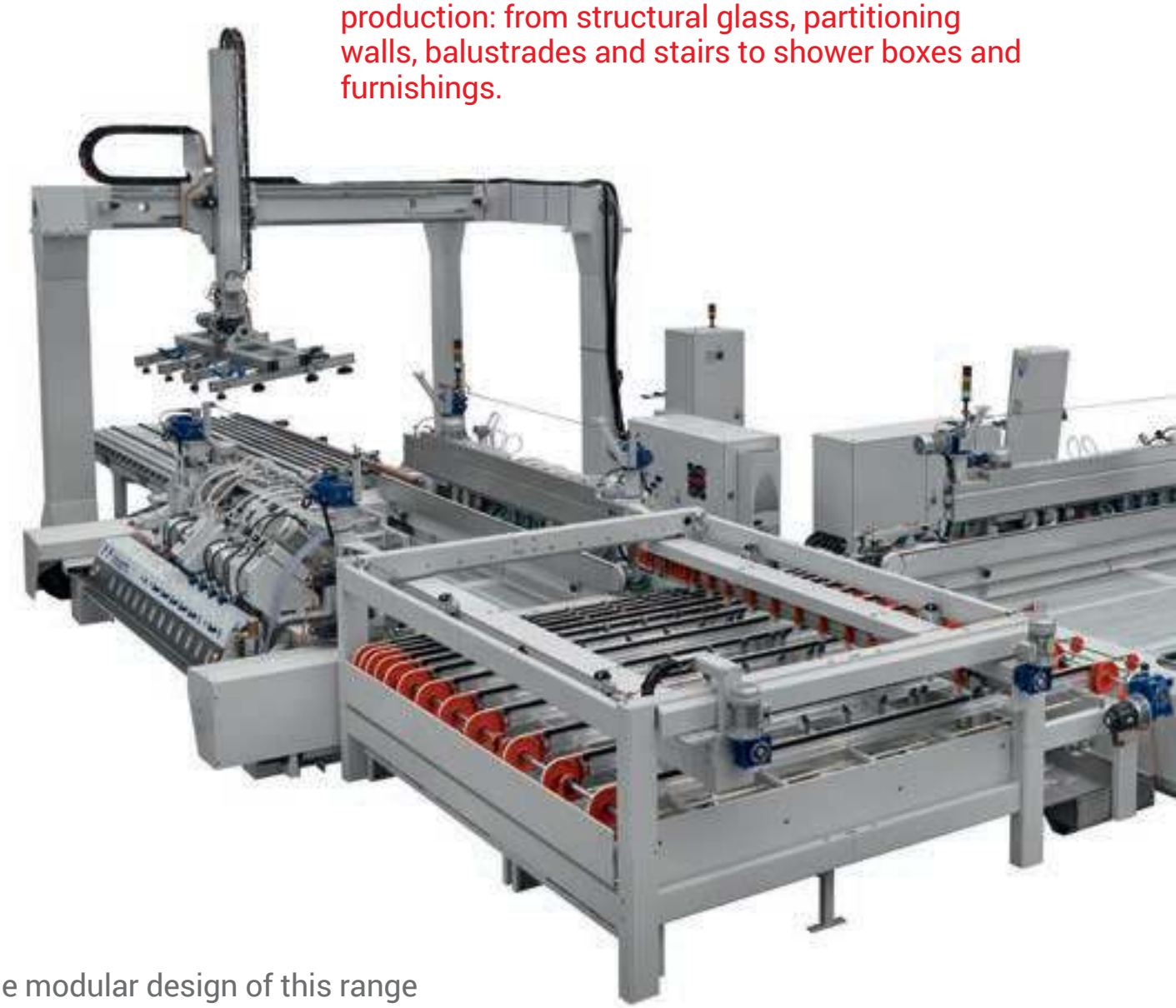
with technological solutions that guarantee high-quality, reliable performance over time.
The Busetti F and P series are two ranges of double-edging machines and systems that are ideal for applications such as structural façades, interior structural elements, glass for furnishings, household appliances and solar panels, which call for reliable and customisable solutions that provide for the highest quality and precision along with total flexibility, with minimum operator intervention.

BUSETTI F-P SERIES

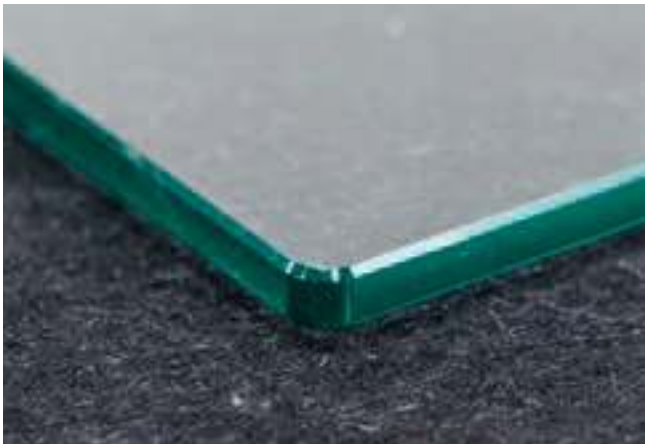
- MAXIMUM QUALITY AND PRECISION OF RESULTS.
- HIGH LEVELS OF FLEXIBILITY FOR “JUST IN TIME” PRODUCTION AND MAXIMUM PRODUCTIVITY IN PLANTS.
- LONG-TERM RELIABILITY.
- MECHANICAL AND ELECTRONIC TECHNOLOGIES THAT ARE UNIQUE IN THEIR FIELD.
- WIDE RANGE OF BUILD CONFIGURATIONS AND CUSTOMISATION OPTIONS.

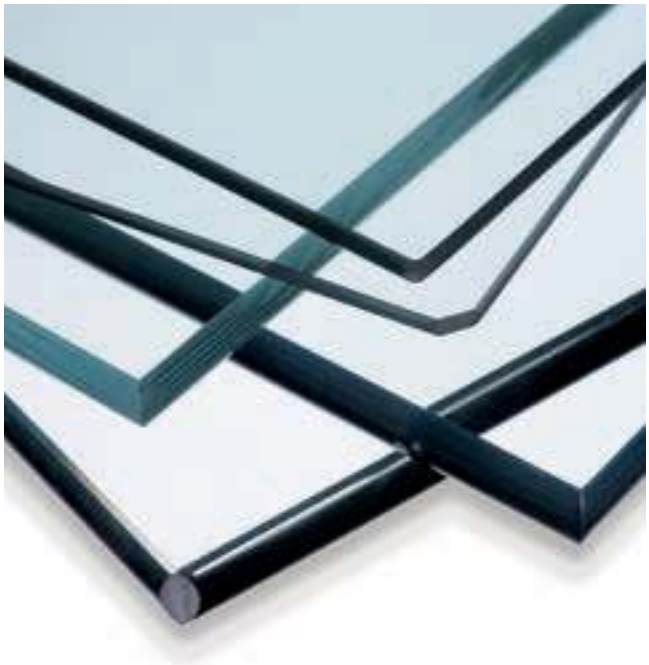
BUSETTI F SERIES: MAXIMUM FLEXIBILITY AND PRODUCTIVITY

The Busetti F series is the ideal solution for flat edge grinding operations with standard 2 mm or 15 mm arris with 45° profile, ideal for small, medium and large glassworks companies with flexible production: from structural glass, partitioning walls, balustrades and stairs to shower boxes and furnishings.



The modular design of this range of double-edging machines provides customers with a bespoke solution which boasts all the advantages of a highly-industrialised product.





Flat edge with arris.

Flat edge with increased 45° chamfer.

Flat edge with step.

Flat edge with edge grooving.

MAXIMUM PERFORMANCE FOR CUSTOMISED SOLUTIONS

Innovative solutions, even in terms of automation, make the production line flexible and highly productive, for small batches (batch-one production) and different thicknesses.

The F series of double-edging machines can also be used in stand-alone configuration.

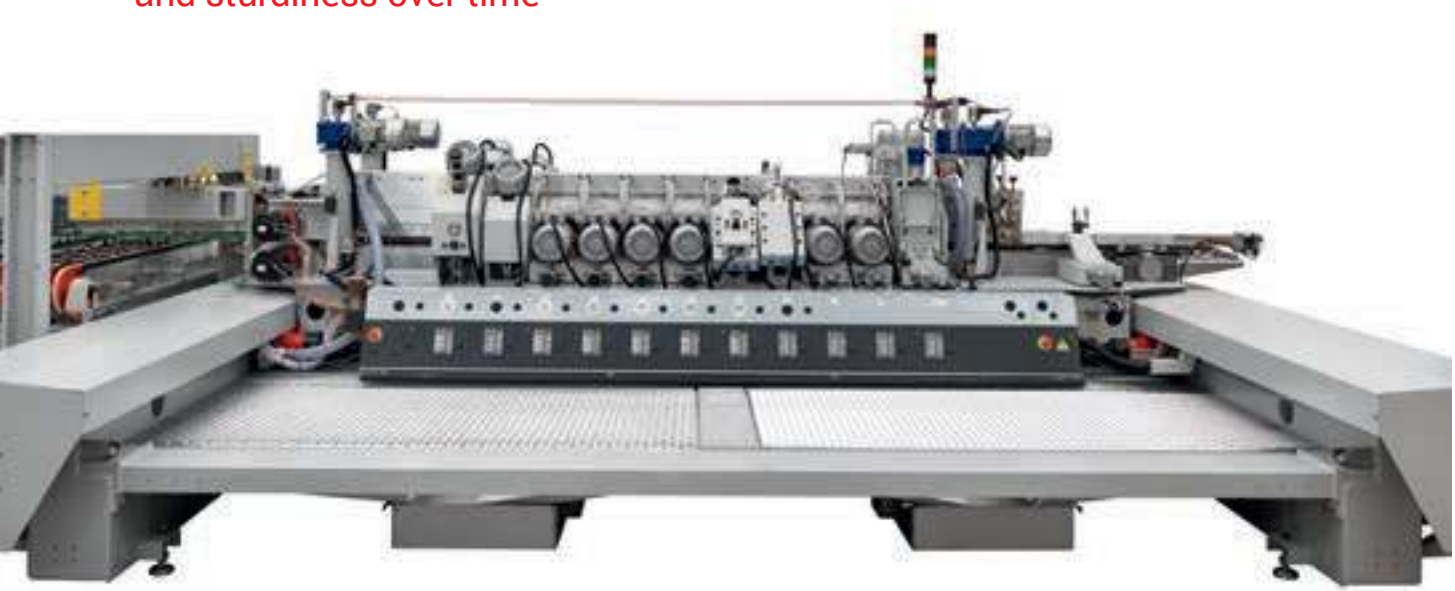
F series stand-alone machine equipped with loading and off-loading tilting tables.

U line which can be equipped with both manual and automatic loading and off-loading systems.

F series reverse line, ideal for companies with limited space.

MAXIMUM QUALITY AND PRECISION OF RESULTS

The highest precision of machining is guaranteed through the use of highly technological materials and technical solutions that ensure maximum reliability and sturdiness over time



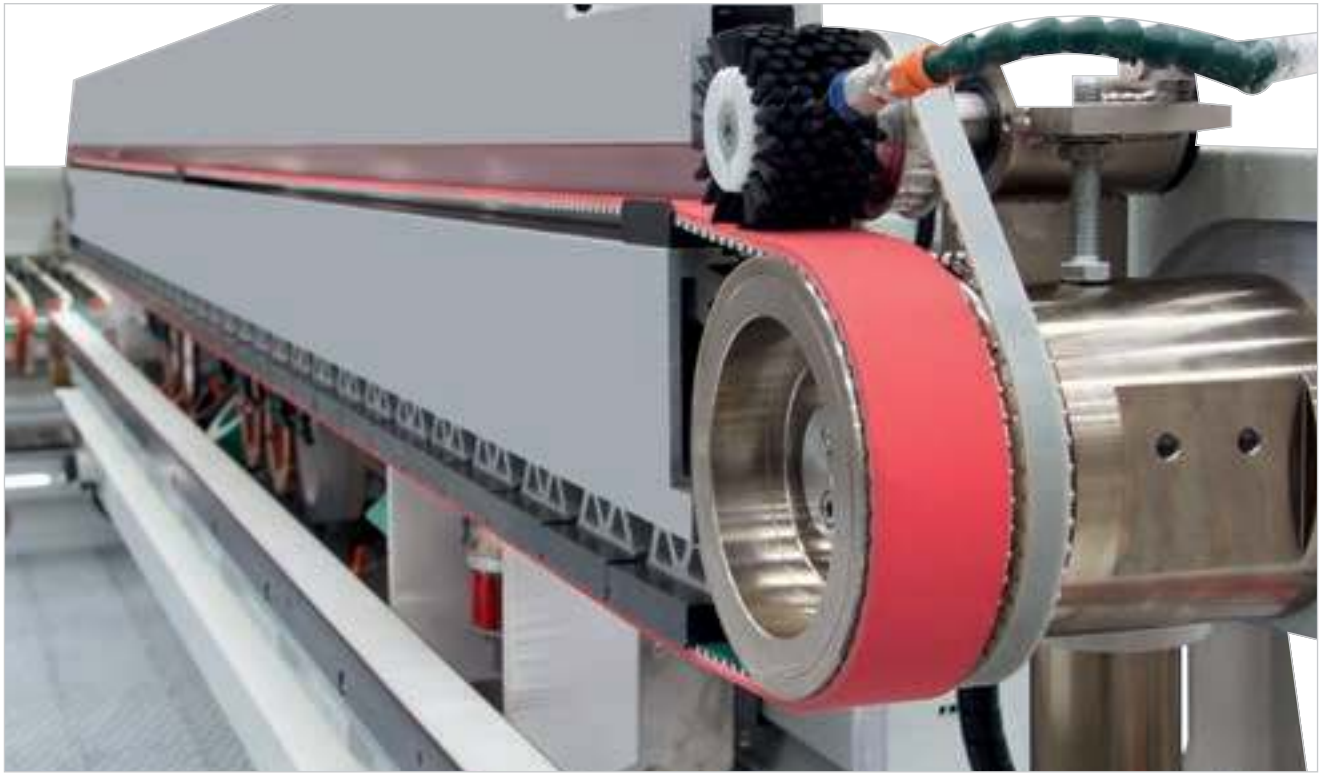
Basement with external guides to keep the guides away from the water, and to improve stability when moving the movable crosspiece, an essential element for ensuring maximum squaring precision on both small and large sheets.

The inlet glass aligning units help the operator to position the glass correctly in the machine, thanks to a proper length of the glass inlet area

The crossbridges are designed to keep the water away from the spindle slides and their robustness guarantees maximum reliability and no vibration during grinding.

Fluidity and high speed in the cross-bridge movements ensure minimal set-up times. Absolute absence of vibration even in the most demanding workings thanks to the solidity of the basement structure

The glass clamping system consisting of a transport belt running on plastic pads and rubber pressers assures high-stability and low-maintenance.
This system provides an excellent clamping of the glass thanks to its large contact surface and it allows the replacement of worn parts only.

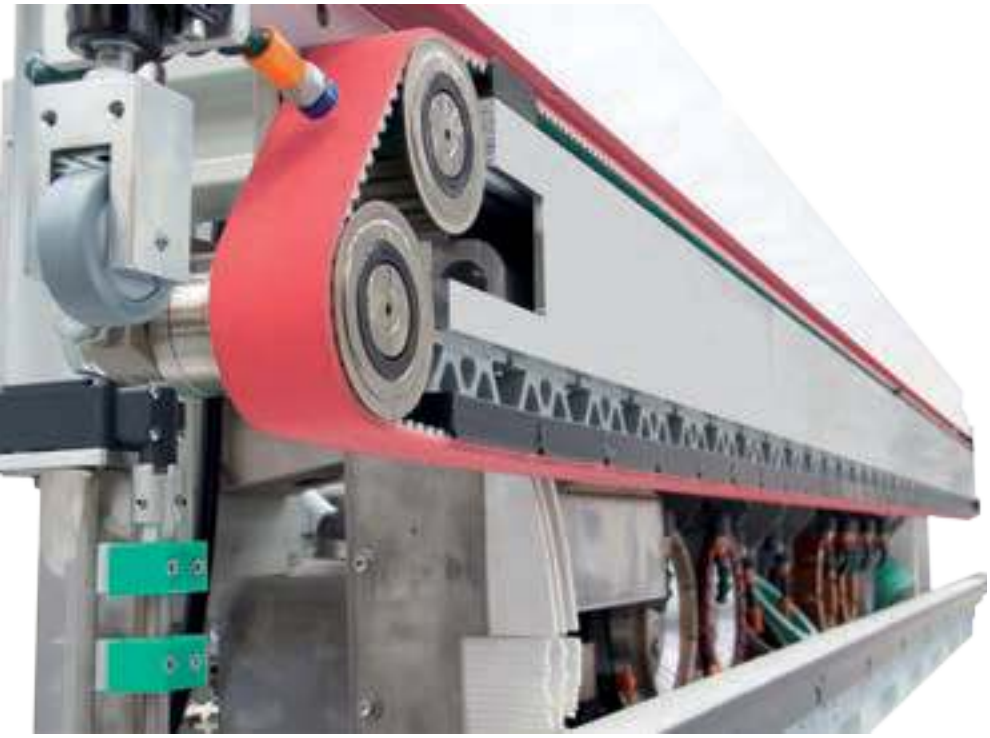


MINIMAL SET-UP TIMES

The simplicity and accessibility when changing the grinding wheels has been optimised, thanks to the possibility to raise the upper presser.

LONG-TERM RELIABILITY

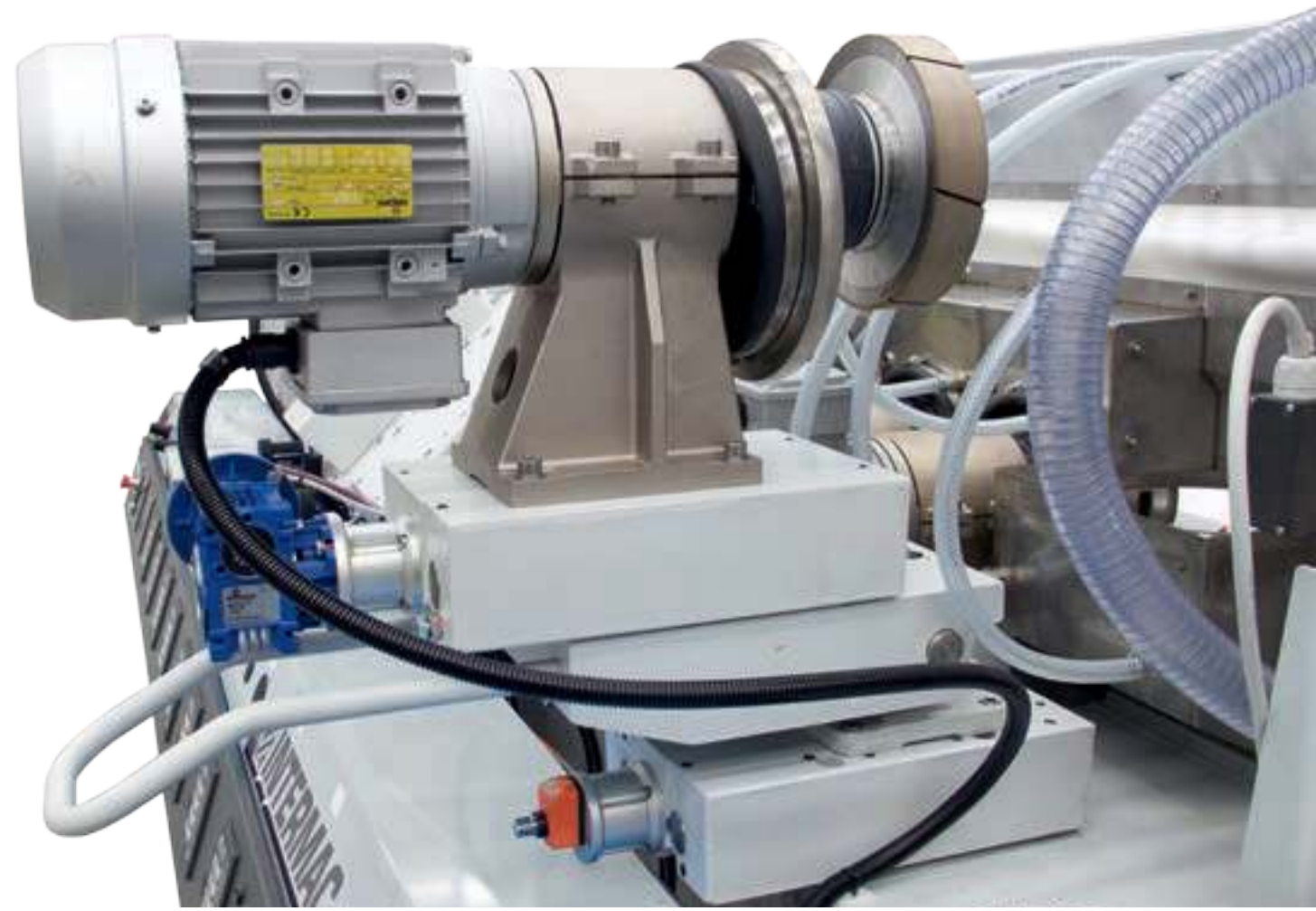
Busetti machines are guaranteed to last over time, enabling operators to work up to 3 shifts a day, with minimal machine maintenance required from the operator.



Maximum reliability is guaranteed, thanks to the quality of the materials and components selected.

The transport belts washing system prevents scratches on the glass surface.

Slides and spindles with high quality bearings and bigger diameters guarantee long life and excellent stability during the glass processing

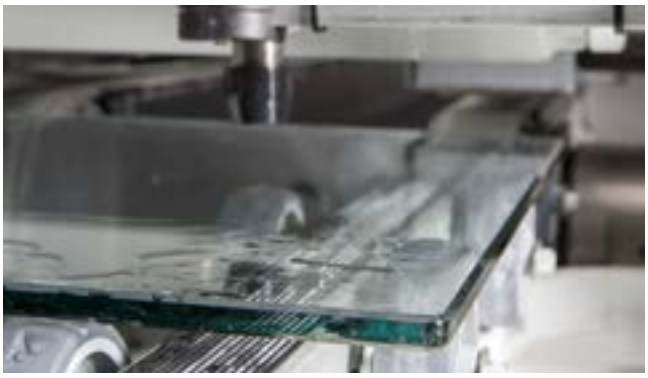


Possibility to pre-set the tools by making the setting operations simple and fast.

OPTIMISED RADIUS EXECUTION AND CHAMFERING

The corner-rounding units are patented Intermac devices which can execute either rounded or chamfered corners, both on diamond edge and on polished edge, from 1 to 5 mm on rounded corners and from 1 to 7 mm on chamfered corners.
With this innovative system, it is not necessary to stop the glass in the machine; the rounding or chamfering operation can be performed while the glass is being machined, with no need for additional equipment.

Thanks to this revolutionary solution, the Busetti range offers the opportunity to redesign the production process by opening new application horizons to the traditional double-edging lines.



Easy access for the replacement of the grinding wheels, simply by tilting up the spindle.

Interpolated axes actioned by brushless motors.

The corner-rounding system is fully integrated in the crosspiece structure.

WIDE RANGE OF CONFIGURATIONS

The wide configurability of the machine, completely customizable, up to 17 spindles on each side in the machine allows for special edge processings which are applied in many fields from furniture to structural glass and partition walls.

The machine opening dimensions vary in accordance with the specific requirements of the customer, and may range from 1000 to 8000 mm.

Intermediate bars with automatic positioning function
It is possible to automate the positioning of the bar or intermediate bars. Recommended solution for low serial production.

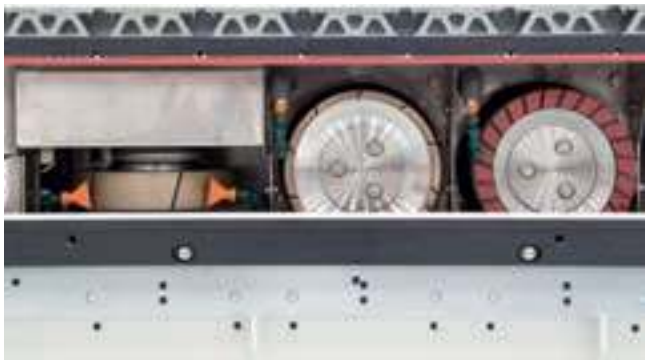
The proportional valves for automatically managing the pressure on the polishing tools in accordance with the thickness notably reduce the machine setting times

The automatic adjustment of the reference line to remove the glass according to the thickness prevents the operator from intervening manually.

The drainage of waste waters is carried out in a simple and effective way.

CUSTOMISATION IN ACCORDANCE WITH THE CUSTOMER'S PRODUCTION NEEDS

Innovative systems such as the diamond grinding wheel presetter, the automatic polishing pressure management system, the motorised reference lines and various other options allow to reduce the setting times of the lines simplifying their use.



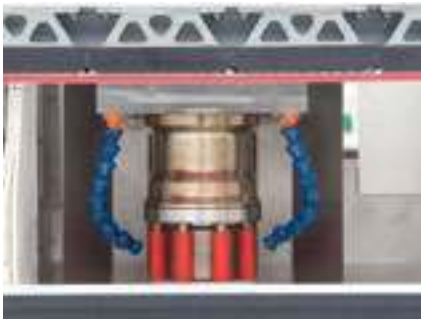
Diamond grinding wheel presetter
Possibility to equip the machine with the automatic motorisation of all diamond spindles, including the upper and lower arris, in order to ensure maximum control over the amount of material removed, as well as over tool wear.

Oscillating peripheral grinding wheel
The oscillating peripheral grinding wheel allows the optimal execution of all those operations that require big removals of material like in case of thick glass sheets and laminated or stratified glass. Vertical oscillation is controlled by NC according to the glass thickness and guarantees homogeneous consumption of the grinding wheel.

Partialized spraying unit, placed before the blower at the outlet of the line machine, helps to reduce the glass powder before entering the washing machine.

Belt cleaning brush for preventing scratches on the surface of the glass.

The glass width measuring system makes the measuring of large glass sheets easier and more accurate



The corner cutting unit removes the sharp corners of the glass sheets and it is available in the pneumatic and electronic version (patented).

BUSETTI P SERIES: THE IDEAL SOLUTION FOR WORKING WITH THIN MATERIALS

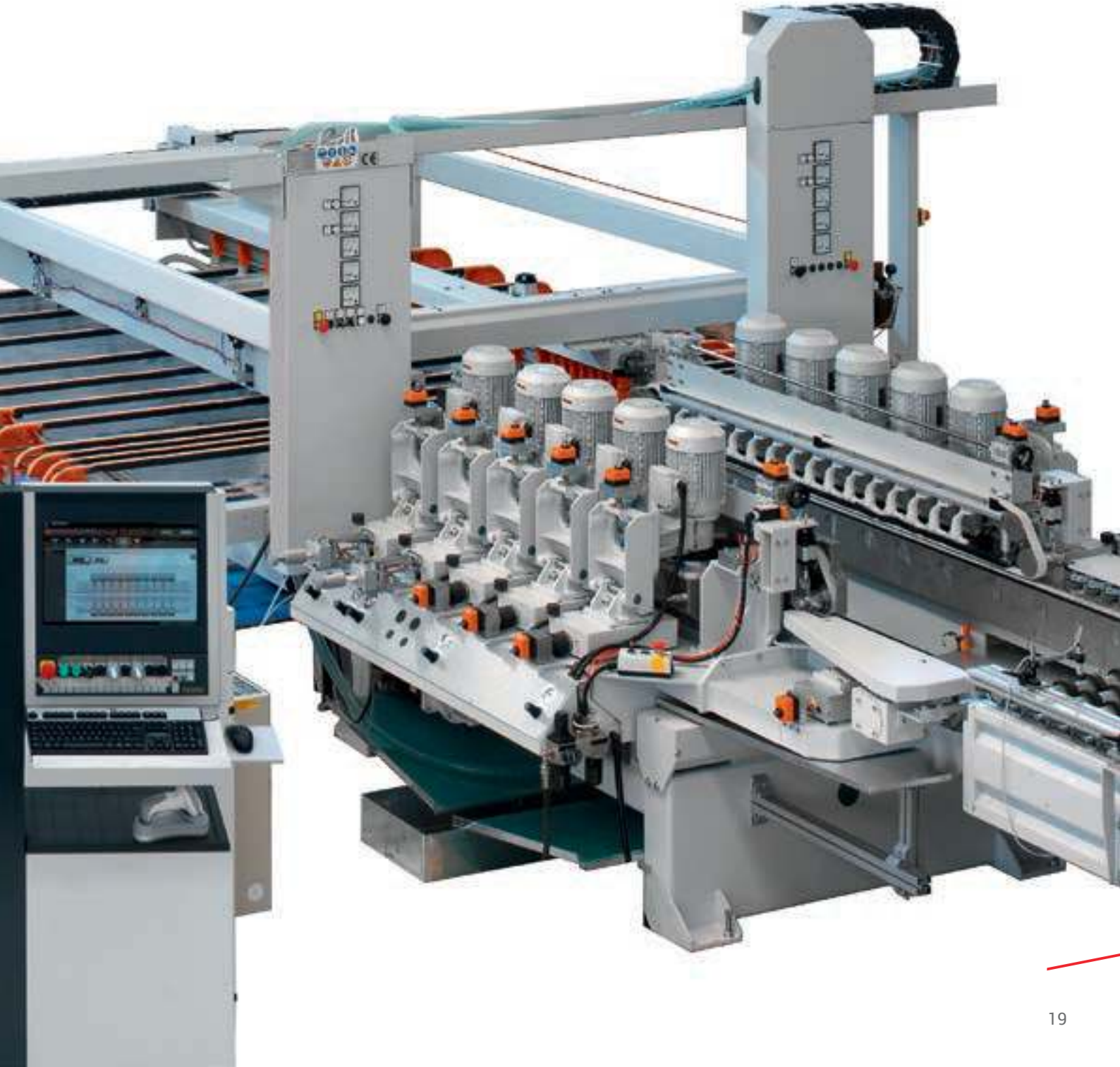
The Busetti P series is the range of machines for the processing of pencil edge and flat edge with arris and allow to work thinner thicknesses from 2 to 12 mm.

Pencil edge.

Pencil edge with grooving on the surface.

Flat edge with arris.

Pencil edge with arris.



HIGH-QUALITY COMPONENTS

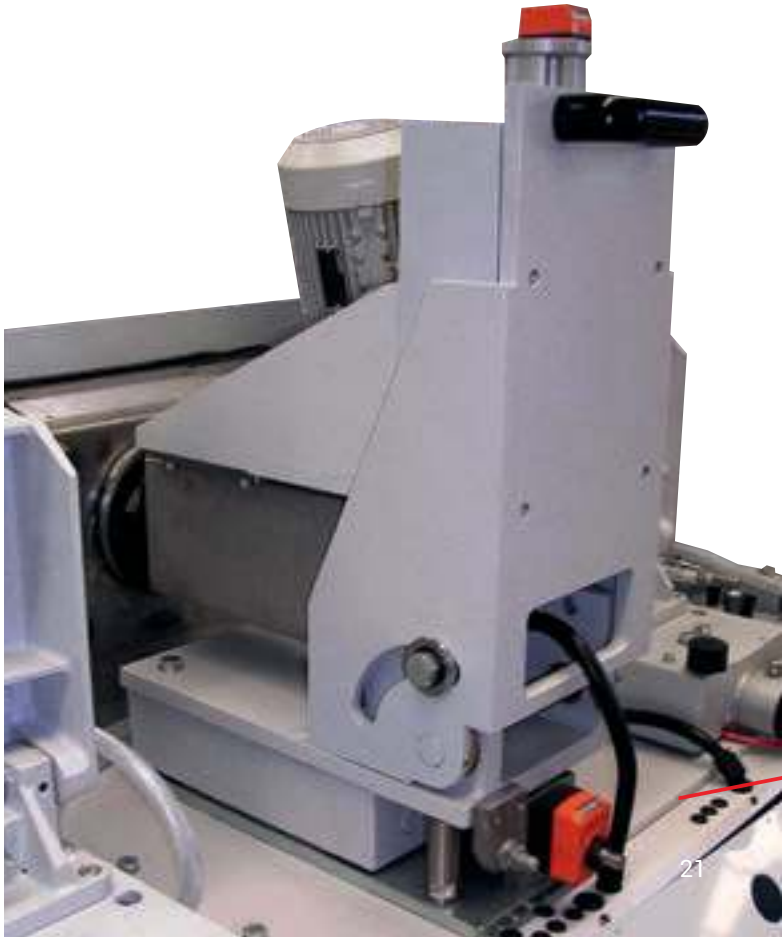
P series spindles are built with the same components of the F series spindles.

Cross-bridges from 2 to 6 grinding wheels, with quick, easy-access tool changes.

Working up to 10 m/min
Electronic corner cutting spindles to execute chamfers and corners up to 10m/min.

Maximum flexibility thanks to the possibility of creating a version with up to 4 over-stuck grinding wheels, to allow a quick thickness change of the glass to process.

Grooving spindle for engraving on glass surface



INTEGRATED SOFTWARE THAT IS BOTH INTUITIVE AND EASY TO USE

When integrated with smart software, Intermac solutions serve to minimise operator intervention, ensuring a clearer overview of the entire process, as well as greater levels of safety. A product which leading glassworks facilities would struggle to do without.

The Busetti range has evolved over time, transforming itself into a smart solution, which, thanks to the software integration, is able to control itself autonomously.

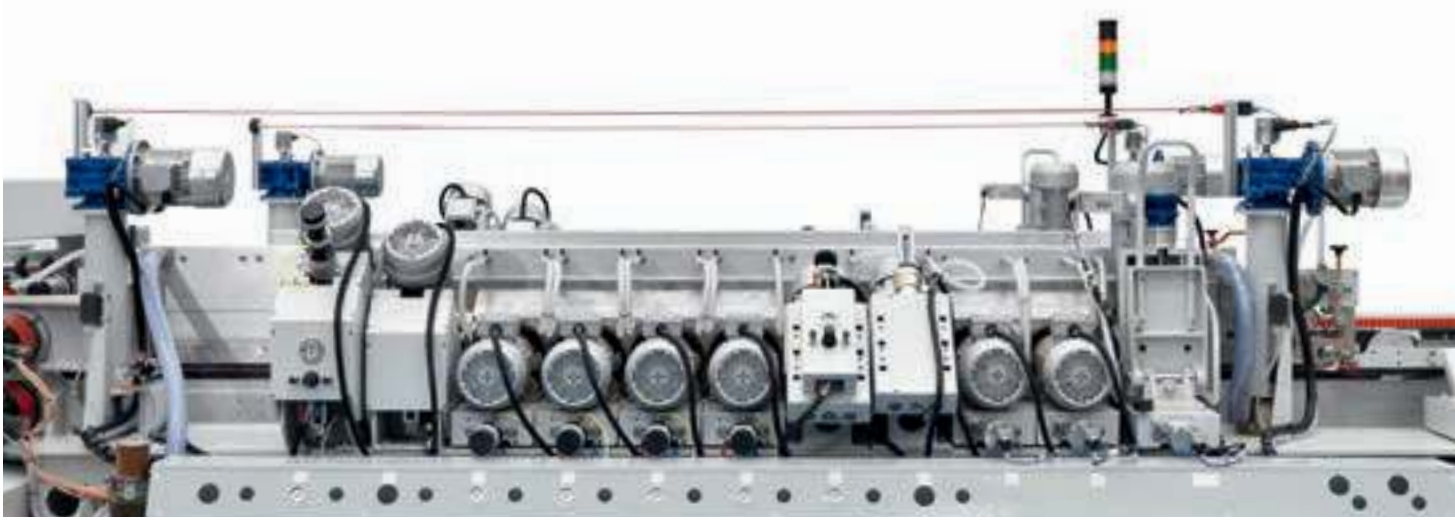
- It allows to calculate in advance the production times of a working list required by the Customer.
- It optimizes programme and machining operation change-over time.
- Possibility to apply bar-code reading systems that can be interfaced with management systems.
- Fundamental in low-serial production to estimate cost and time of a production batch.

PROTECTION AND SAFETY FOR ALL MACHINING OPERATIONS

Intermac has always paid the utmost attention to the health and safety of its customers. The protection of every operator during the use of the machine is of vital importance, preventing any possible distraction or error that could lead to inconvenience or even accidents.

The movement of the crosspiece is protected by an external anti-collision bumper.

One indispensable condition for obtaining any sort of financing is the respect of the machinery directives and workplace health and safety regulations.



Internal anti-crush cables during the movement of the crosspiece.

All dangerous moving parts are protected by safety grid barriers, and ensure maximum operator safety.

AUTOMATED LOADING AND OFF-LOADING SOLUTIONS

The loader automates the process of loading the glass into the machine, and represents the ideal solution for companies that need a high rate of production. A range of loading and unloading devices is available, to meet the various performance requirements.
Rotating platforms which minimise pallet change times are also available.

The tilting table allows sheets of larger dimensions to be loaded and off-loaded.

Transfer systems
Extensive experience in the development of dedicated solutions for handling structural glass plates of 3210 x 8000 mm.

Deviator transfer on out-feed
It allows the pieces that have just been processed to be transported towards a washing machine.

SERVICE & PARTS

Direct, immediate coordination of service requests between Service and Parts. Support for key customers from specific Intermac personnel, in-house and/or at the customer's site.

INTERMAC SERVICE

- Machine and line installation and start-up.
- Training centre for Intermac field technicians and subsidiary/dealer personnel; customer training directly at the customer's site.
- Overhaul, upgrade, repairs and maintenance.
- Remote diagnostics and troubleshooting.
- Software upgrade.

85
Intermac field technicians in Italy and worldwide.

20
Intermac technicians working in Teleservice Centre.

35
certified dealer technicians.

50
training courses in a variety of languages every year.

The Biesse Group promotes, cares and develops direct and constructive relationships with the customers to meet their needs, improve after-sales products and services through two dedicated areas: Intermac Service and Intermac Parts. With its global network and highly specialised team, the company offers on-site and on-line assistance and spare parts for machines and components anywhere in the world, 24/7.

INTERMAC PARTS

- Original Intermac spare parts and spare parts kits customised to suit the machine model.
- Spare part identification support.
- Offices of DHL, UPS and GLS couriers located within the Intermac spare parts warehouse, with multiple daily pick-ups.
- Optimised order dispatch time, thanks to a global distribution network with de-localised, automated warehouses.

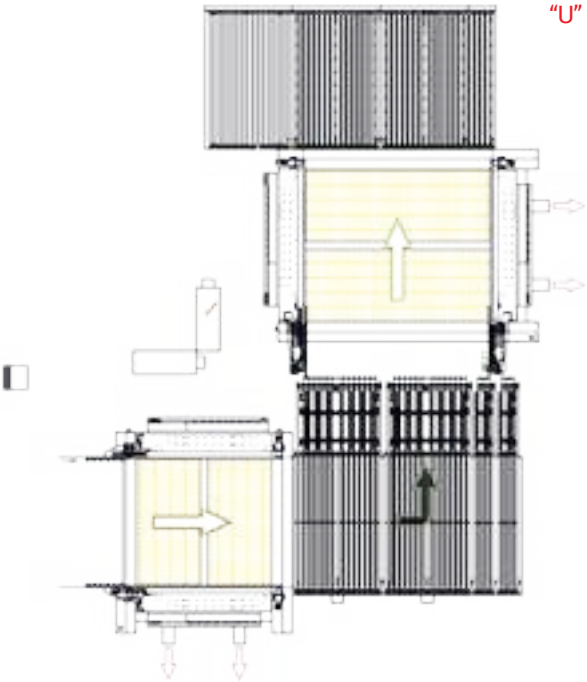
95%
of machine downtime orders dispatched within 24 hours.

95%
of orders dispatched on time.

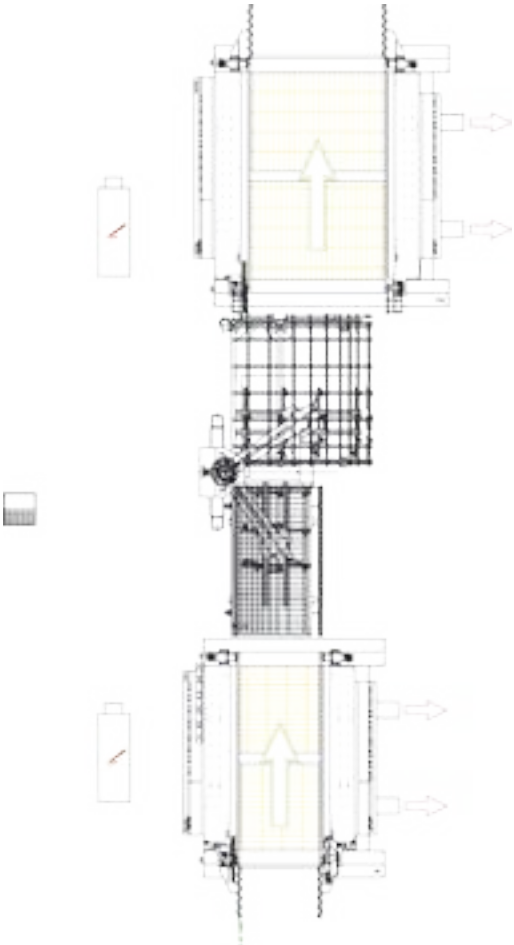
30
spare parts staff in Italy and worldwide.

150
orders processed every day.

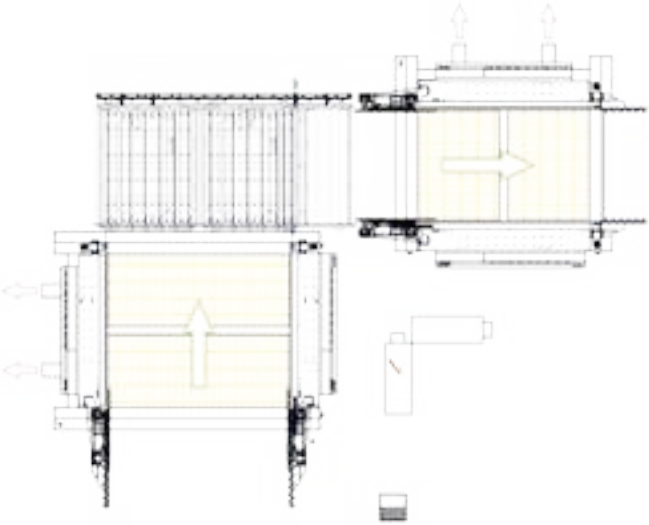
IN-LINE INTEGRATION



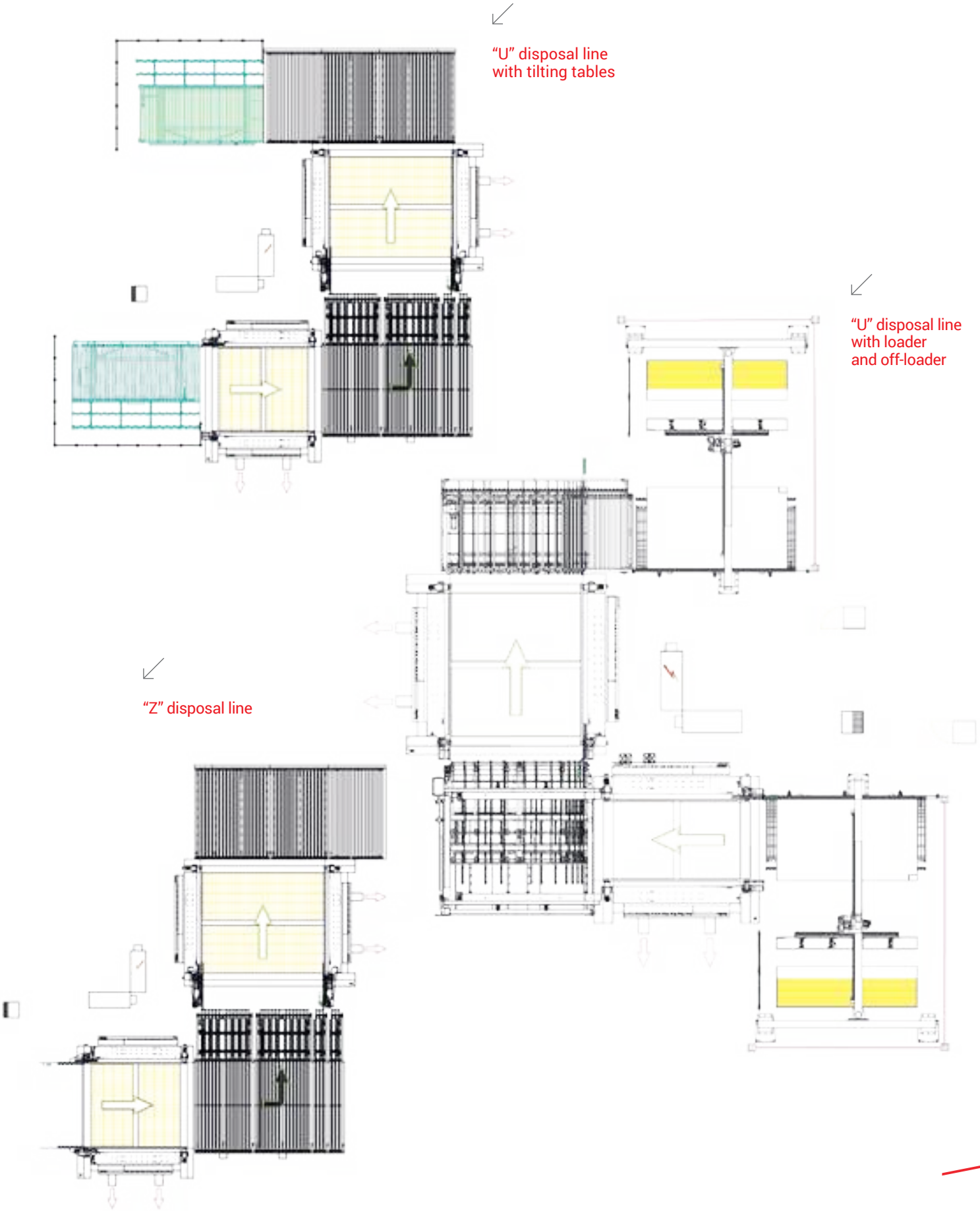
"U" disposal line



Straight line



Reverse Line


"U" disposal line
with tilting tables
"U" disposal line
with loader
and off-loader
"Z" disposal line

INDUSTRY 4.0 READY

Industry 4.0 is the latest industry frontier, based on digital technologies and machines that speak to the companies. The products can be interconnected with the production processes via smart networks.

Intermac's commitment is to transform our customers' factories with real-time technology, ready to guarantee digital manufacturing opportunities, with smart machines and software packages becoming vital tools that facilitate the daily tasks of people all over the world processing glass, stone, metal and more. Our philosophy is a practical one: to supply entrepreneurs with solid data that can help them to lower their costs, optimize their processes and improve their results.

And that means being 4.0 ready.

COMPLETE RANGE OF SOLUTIONS FOR GLASS

INTERMAC

TABLES FOR FLOAT GLASS CUTTING

Genius RS-A

Genius CT-A series

Genius CT-RED series

TABLES FOR LAMINATED GLASS CUTTING

Genius LM series

Genius LM-A series

MACHINES FOR CUTTING LAMINATED AND FLOAT GLASS

Genius Comby Lines

LINES FOR CUTTING FLOAT OR LAMINATED GLASS

Genius Lines & Systems

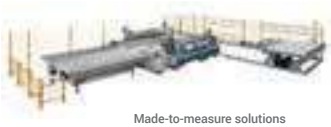
WATER JET CUTTING SYSTEMS

Primus series

MACHINES AND SYSTEMS FOR DOUBLE-EDGING GRINDING

Busetti F series

Busetti P series


Made-to-measure solutions

PROCESSING CENTRES

Master 23

Master 30

Master 33.3-38.3-45.3

Master 33.5-38.5-45.5- 45.5Plus

SPECIAL PROCESSING CENTRES AND AUTOMATIC CELLS

Master 63-65

Master 95

Master 185

Master with belts

SPECIAL PROCESSING CENTRES AND AUTOMATIC CELLS

Master work cells

PROCESSING CENTRE FOR SCORING OPERATIONS

Master 34

VERTICAL PROCESSING CENTRES

Vertmax series

V-Loader

TOOLS FOR GLASS

Diamut tools

MOVETRO

STORAGE SYSTEMS

Classifiers

HANDLING

Loaders

Loaders

Arpa

Telescopic loaders

Telescopic loaders

HANDLING

Navette

Navette

Navetta Lite

MADE WITH INTERMAC

MORNAGO GLASS CUSTOMISED TECHNOLOGY

With the innovative grinding, vertical boring and in-line milling system, designed by Intermac specifically for Mornagoglass, the Varese-based company is able to produce glazing solutions for a wide range of applications, via an extremely flexible and reliable production process

"Normally, double-edging machines work horizontally, and so glassworks companies tend to buy horizontal drilling machines, leaving them with two separate solutions that have usually been supplied by different manufacturers: we, however, decided to place our trust in the inspired idea that Intermac offered us - a complete and fully-integrated island for grinding, vertical boring and milling, specially designed for our applications."

MORNAGOGLASS.IT

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.

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