

Flex Edge

Flat Edge Double Edgers



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Flat Glass Technology

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we • glass

we • glass

As a global leader in flat glass and hollow glass processing technology, we have been helping to shape one of the most beautiful and useful materials in the world for over 60 years. Its unique qualities, combined with the passion for technology and innovation, guide us in seeking for newer and more effective solutions to improve and expand its use.

We grind glass

The ideal choice for intensive applications

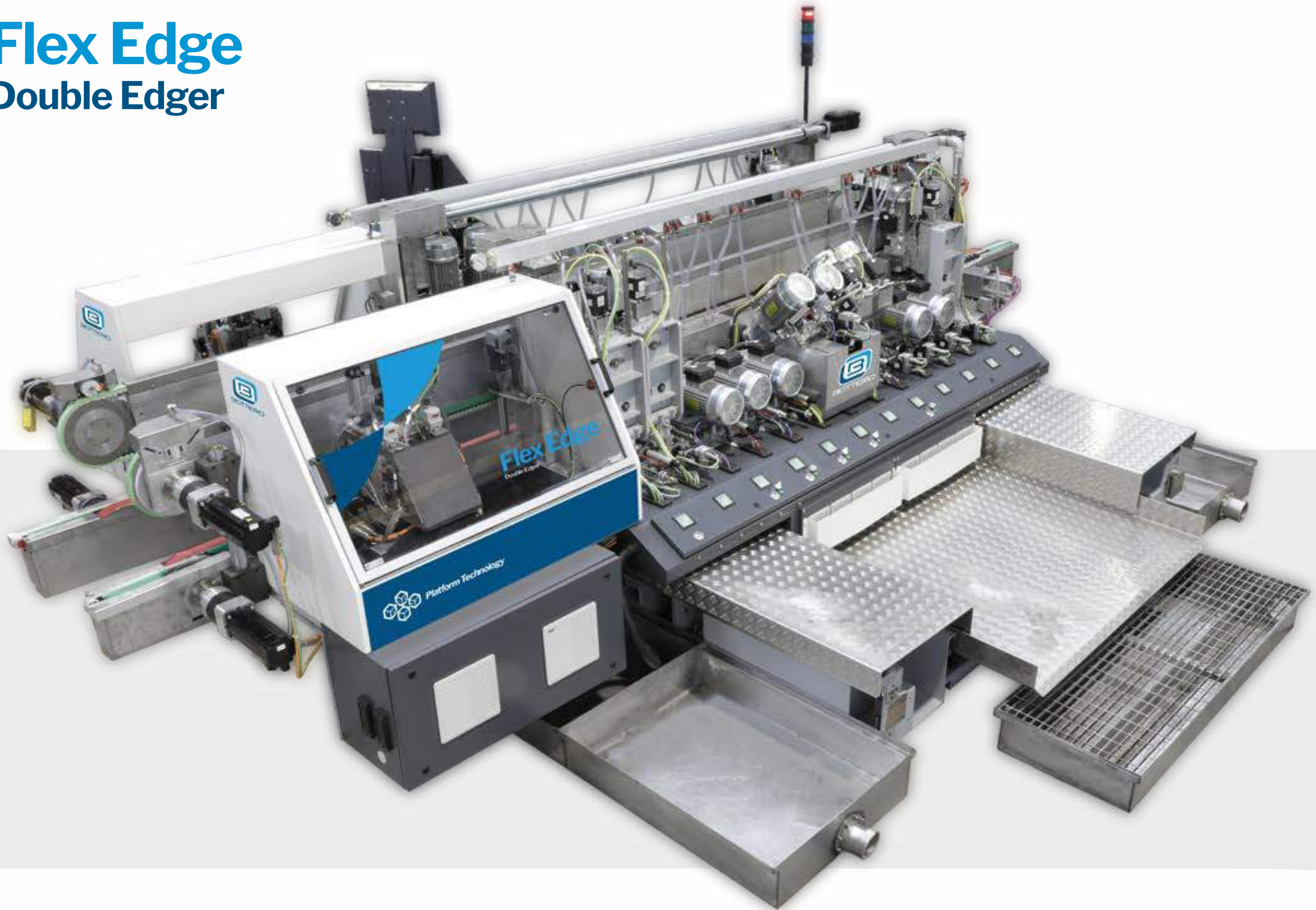
Bottero produces a complete range of solutions for flat edge two-sided grinding, which can satisfy the requirements of small, medium and large glass factories with fixed or flexible production, thanks to the vast possibilities of choice and configuration of the products.

Bottero machines are ideal for processing structural glass, partition walls, shower cubicles, shelves, balustrades, steps and furnishing elements, providing productivity, precision and reliability over time to operate on multiple shifts, up to 24/7 service.



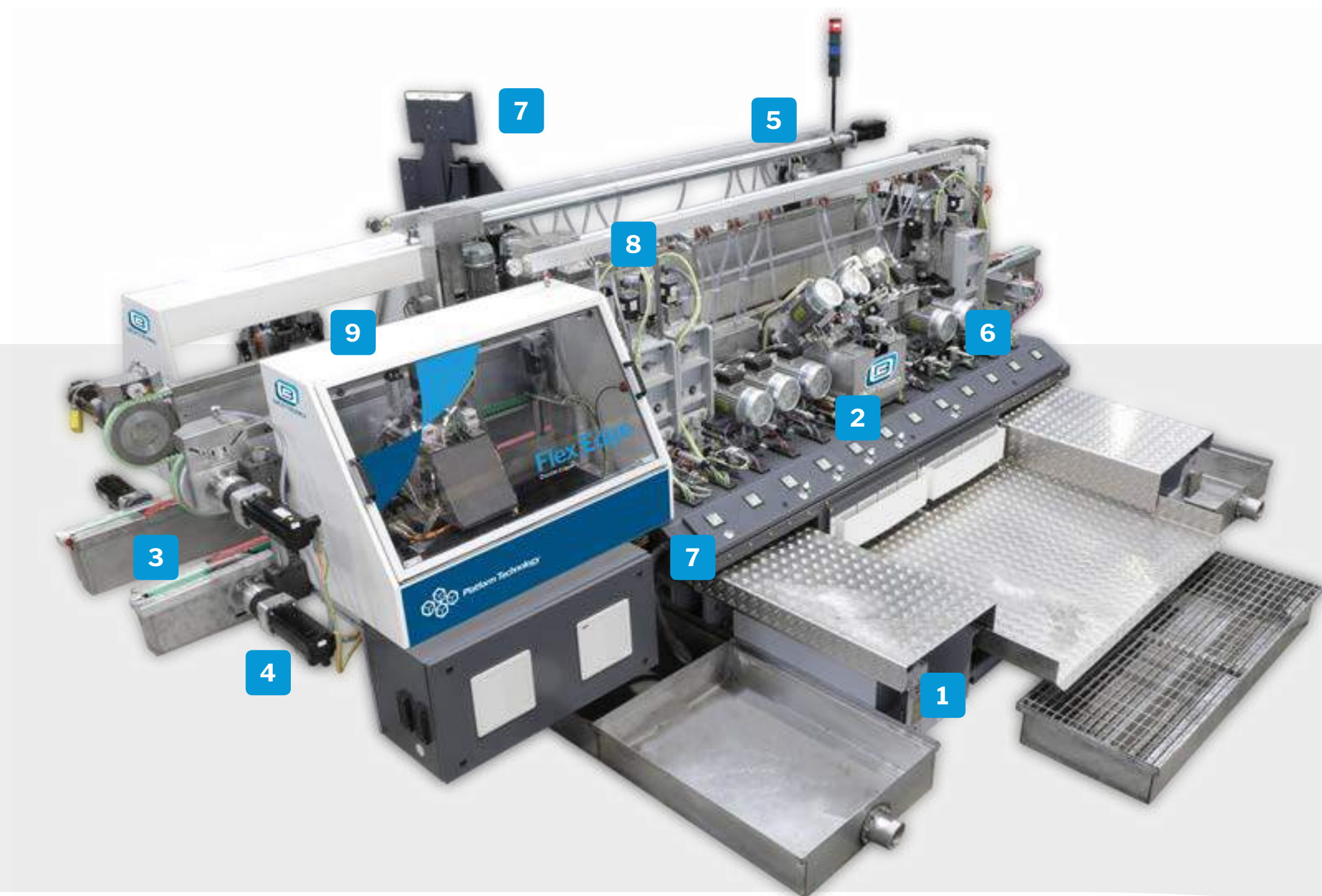
The Bottero flat edge two-sided machines are designed to support the high production flows typically required by the industry. Thanks to the significant flexibility, however, these machines are effective and profitable even when applied in small and medium glass factories with flexible production.

Flex Edge Double Edger

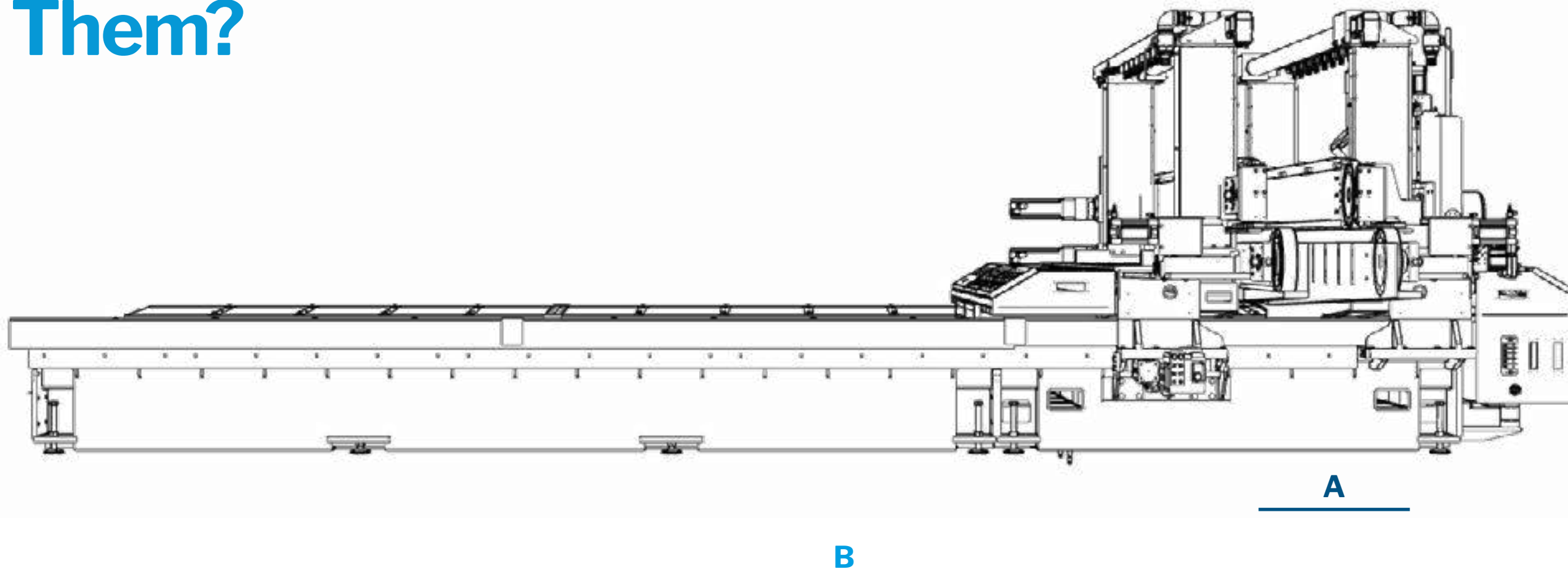


Why Choose Them?

- 1 Platform Technology for machine opening and spindle configuration.
- 2 Coaxial spindles guarantee vibration-free.
- 3 Endless polyurethane belts with stainless steel cords.
- 4 4x4 Motion.
- 5 A large number of tools with automatic wearing recovery control systems.
- 6 Digital ammeters.
- 7 Easy to use and user friendly operator interface.
- 8 Servo motors for automatic diamond tool wear recovery.
- 9 New fully servo finishing unit with radius corner capabilities.



Why Choose Them?

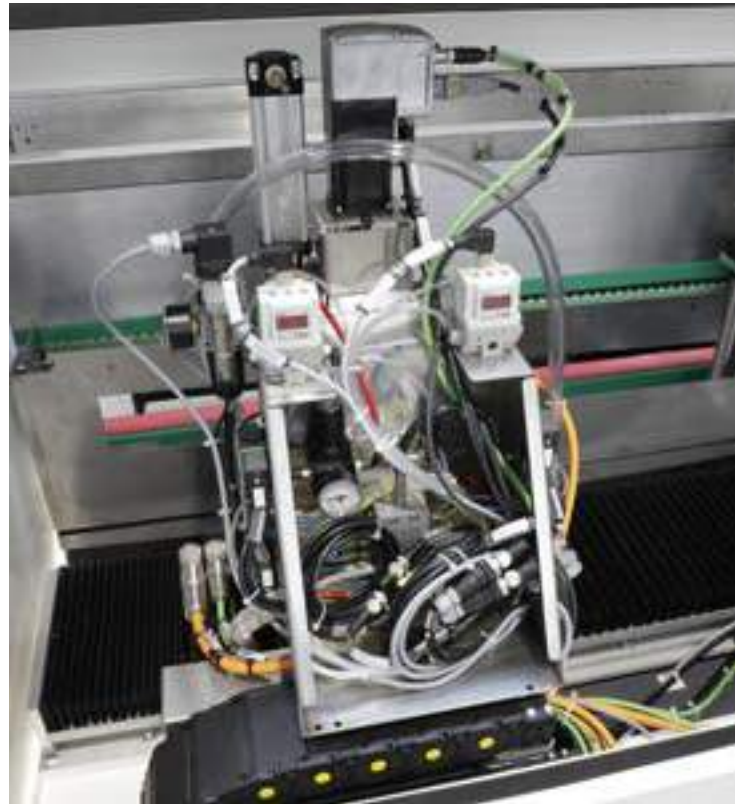


Platform Technology
In machine width and spindle configuration

Machine Opening	Machine Dimension
Nominal [A]	Total Base [B]
2000	3355
2600	3955
3000	4435
3300	4675
4000	5515
4600	6115
5000	6355
5600	6955
6000	7435
>6000*	Pitch of 1.100

*Up to 9000 mm (with centralized water system)

Finishing unit



The new automatic dubbing facility enables the finished pieces to be transferred immediately to the toughening process. The dubbed corners are also safer to handle.

In the double edger model the finishing unit can be:

- **Pneumatic** (standard model): manual tracking speed adjustment and manual edge dimension adjustment (without changing the size of the wheel).
- **Servo-Pneumatic**: manual tracking speed adjustment and motorised edge dimension adjustment from control panel (without changing the size of the wheel).
- **Fully servo for radius and chamfers**: motorized tracking speed adjustment and motorised edge dimension adjustment from control panel (without changing the size of the wheel) Including double grinding tools (diamond & polishing). The high quality of the polishing is guaranteed by the automatic control of the pressure of the proportional valves (**Patent Pending**).
 - maximum **radius 5 mm** regardless of the glass thickness
 - maximum working speed with polished finishing **3 m/min**
 - maximum **chamfer 7 mm**
 - maximum glass **thickness 30 mm**

Bottero double edgers platform for the processing of flat edge.

The double sided edging machine can be configured with 10, 12, 14,15 or 17 grinding wheels.
The machine is particularly suited to process large sizes and thickness and double edger platform can be integrated with totally automatic lines for flexible productions, in small or large batches, with automatic dimension changes managed by the dedicated software.

Peripheral wheel profiles

Engraving wheels	
Wheels for engraving on arrises	
Peripheral wheels for step and edge	
Pencil edge peripheral wheels	
Wheels for over 45°	
Wheels for under 45°	
Edge grinding cup wheels	

Wheel configuration

220 BUS



220 LAM



220 SHFT



220 STD



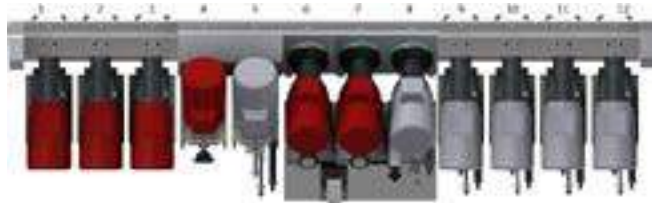
222 BEV



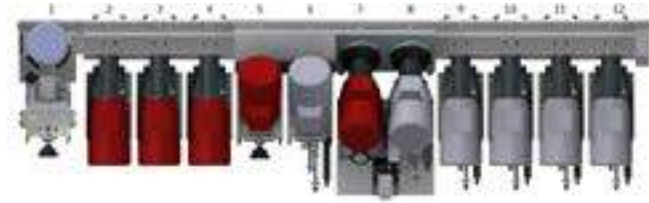
222 HQ



224 BEVHQ



224 LAMHQ



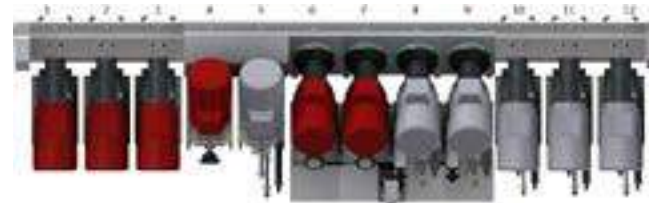
224 LAMR



224 R



224 SBEV



228 BEVR



230 LAMHQPEN



230 LAMPEN



234 LAMSBEVHQPEN



Why Choose Them?



The double edger comprises of a heavy duty electrowelded steel structure. Anti-corrosion materials such as technical polymers are extensively used. The automatic lubrication system guarantees perfect work conditions of the machine and reduce maintenance operations.



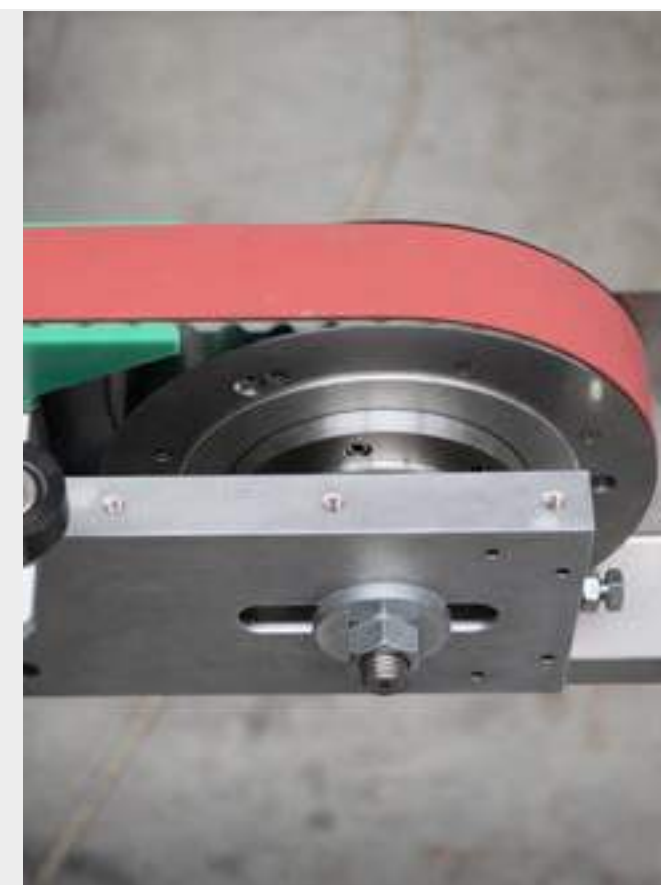
Components coming into contact with water are constructed from stainless steel. This in order that we are able to guarantee the durability of the components.

Because they guarantee quality

The coaxial spindles guarantee vibration-free operation and as a result maximum grinding efficiency. The absence of belts and pulleys reduces the number of parts subject to wear and replacement. The choice of mechanical and electronic trade components by leading manufacturers ensures reliability and availability over time.



The belts are made in polyurethane with stainless steel inner cables and ground on the back and sides to ensure high precision of glass advancement. The width of the belts is modular, depending on the type and weight of the glass to be conveyed. The large-sized pulleys enable the specific load to be divided when working with heavy glass. This means longer lifespan for the belts.





The automatic squaring device guarantees the squareness and parallelism of the processed pieces.



A large number of tools and automatic wearing recovery control systems guarantee high quality polishing and finishing on any type of profile.



4x4 Motion
Utilization of an individual motor for each gripping belt eliminates the need for transmission shafts. As a result access to the machine is improved and maintenance operations are also made easier.



Easy access is made available to the operator for maintenance operations, thanks to the ascent of the pressers and the simultaneous opening of the mobile carriage. Replacement of tools is extremely quick thanks to the use of only one screw to fasten the tools.



The diamond spindle slides are equipped with servo motors to automatically adjust the work position when the glass is approached. The wheels reset cycle is therefore rapid and does not require an operator.



The brushless motors to open the carriage are connected to an electric axis. The motors are controlled via a closed loop drive thus making high speed traversing, movement fluidity, and optimal positioning precision possible.

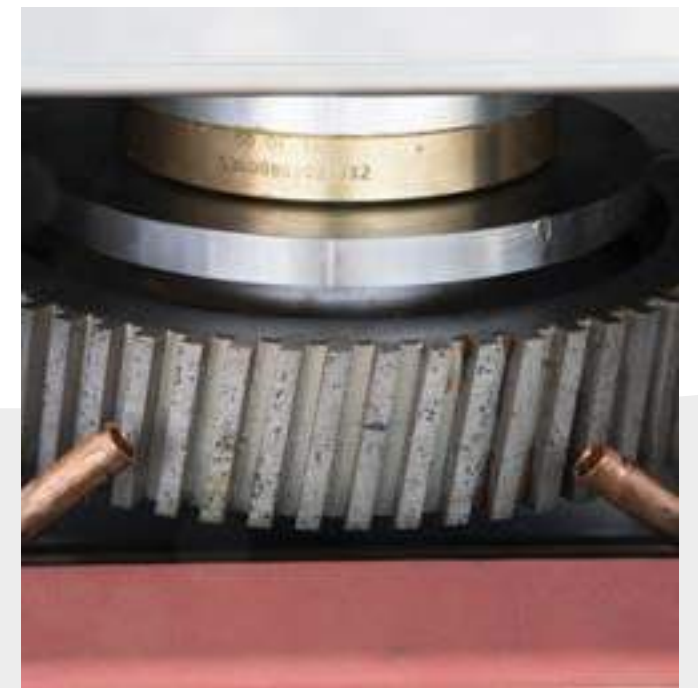
Because they make sense



The air knives installed at machine exit, avoids contaminated water from the grinding process being transferred to the washing machine. This improves wash quality.



The ammeters to detect the current absorbed by the processing motors have been placed next to the corresponding spindles in order to facilitate readings by the operator engaged in adjusting the wheels.

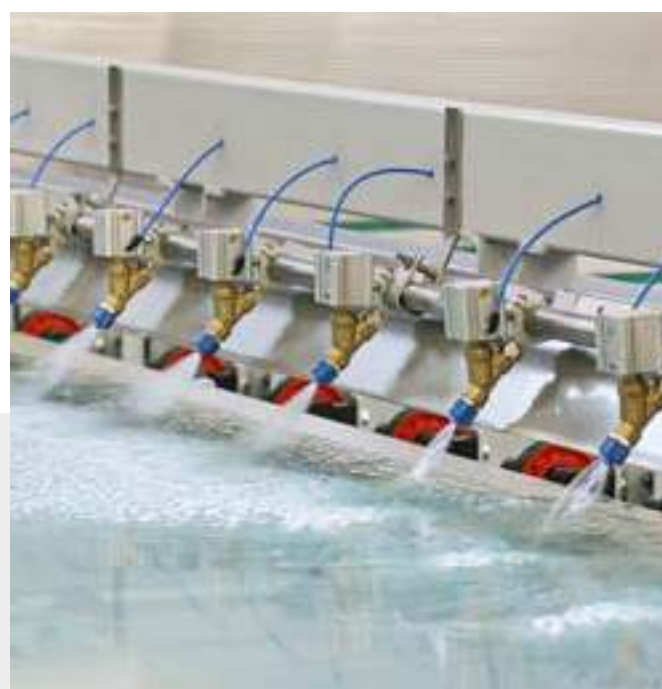


Safe glass processing with pvb
The casings containing the wheels are extremely large in size to easily discharge plastic residues, while special, easily removed separation filters enable you to recover plastic material and prevent it from being sucked in by the recirculation pumps.

Performance



All machine axis are simultaneously executed, resulting in extremely efficient machine set-up times being achieved.



As an option, a tube washing sprayer can be installed, consisting of a bar with nozzles spraying clean water, which are automatically activated according to the width of the glass exiting the machine.



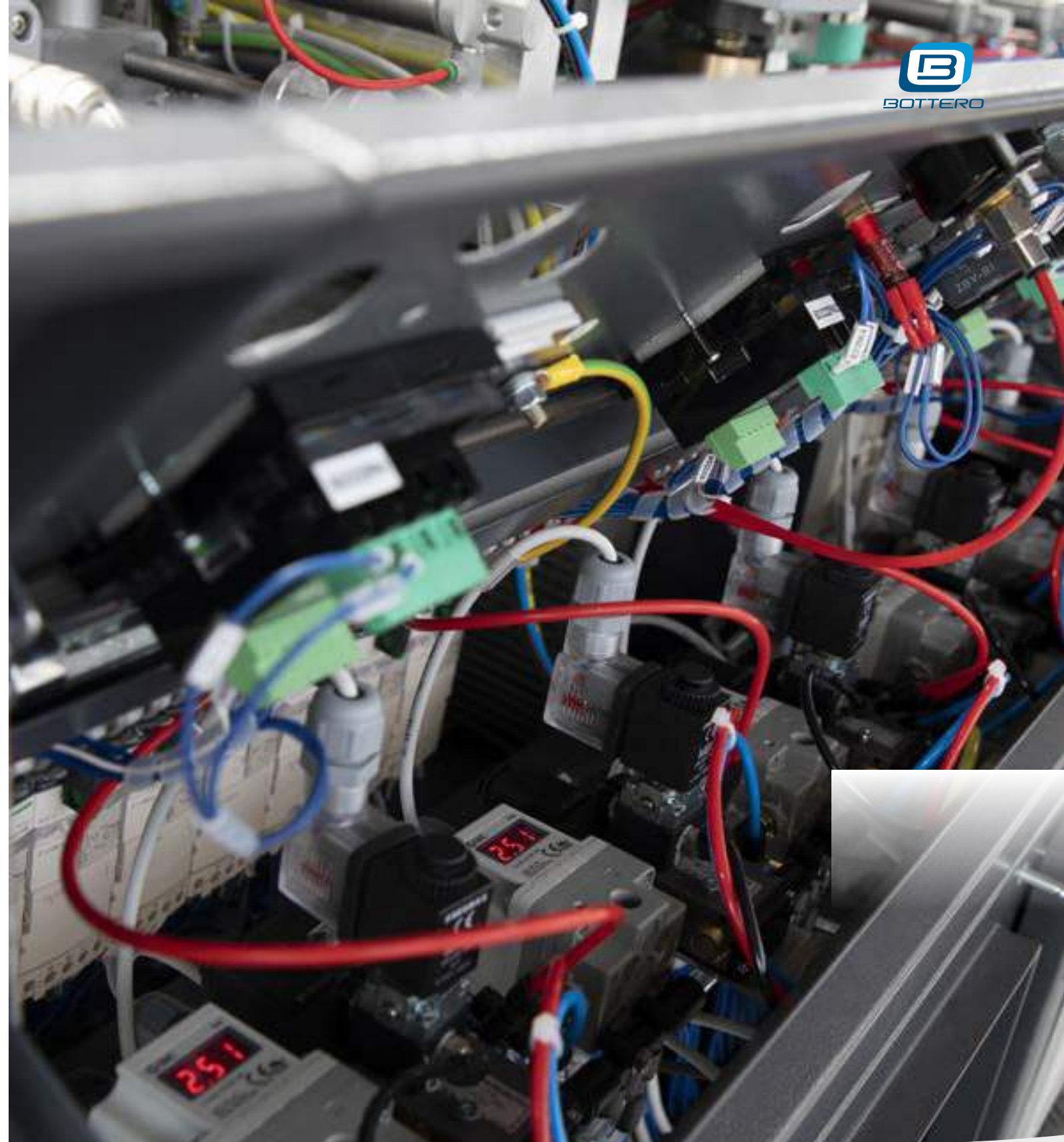
The diameter of the diamond wheels, 175 mm, ensures powerful removal capacity, complete flatness of the ground edge, and longer tool life.
The diameter of polishing wheels, 175 mm, ensures high quality polishing grade.
Proportional valves on polishing spindles.

Coolant water is delivered to the wheels by copper tubing. As copper is not affected by the grinding residues, greater longevity of the components are achieved.

Technical features

Minimum glass dim*	115 x 115 mm
Glass thickness	3 ÷ 40 mm
Speed	up to 12 m/min
Max glass weight	1000 Kg
Worktable height	970 ± 50 mm
Max opening speed	30 m/min

* the minimum glass dimension can change depending on options included



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With us, you have all the experience and technology that we use to serve the largest industries

With Bottero, you don't simply buy products but the entire experience, the technology and the organisational skills of a company that can provide very high productivity glass processing plants, and the selected supplier of some of the most important companies in the world.

more than 50.000 installations all over the world



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Above and to the side: some high-productivity lines manufactured by Bottero.

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For photographic reasons the products is often shown complete with accessories that are not part of the standard equipment of the machine.

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