

Double Edgers

Pencil edge



EN

Flat Glass Technology

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we • glass

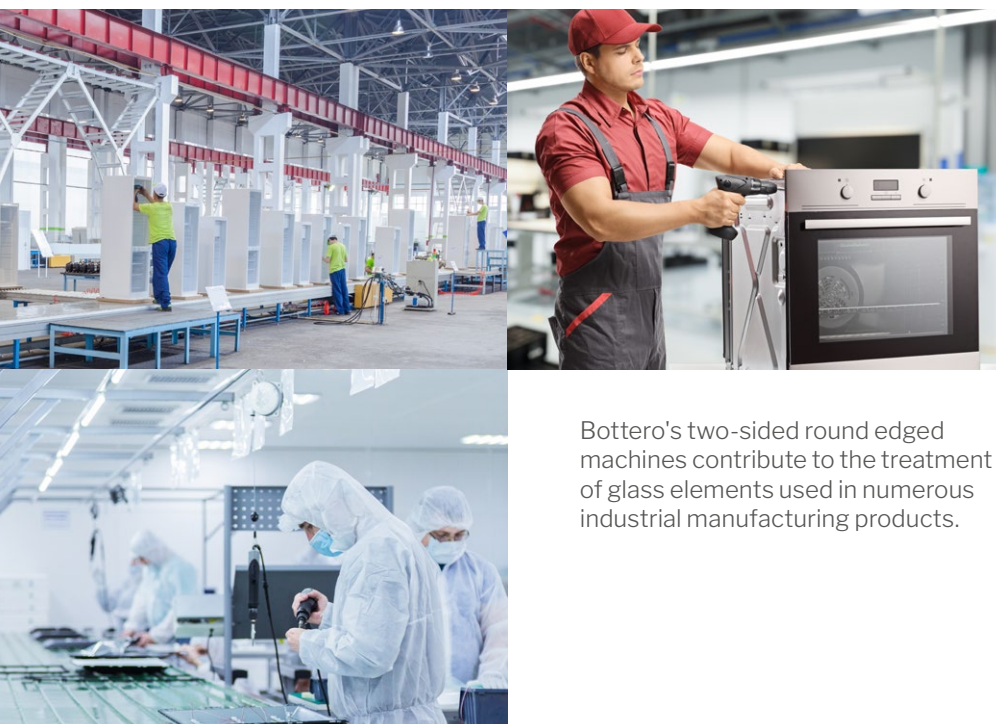
we • glass

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

Technology at the service of the industry

The Bottero round edged two-sided machines are the ideal machines for processing at high production rates, typical of the household appliance, automotive, industrial refrigeration, TV screen and solar panel production sectors. In these contexts, where the demand for productivity is accompanied by the need for reliability and automation, the solutions offered by Bottero are distinguished by having been chosen by some of the largest industrial groups in the world for the implementation of plants that can treat thousands of square metres of product per day.

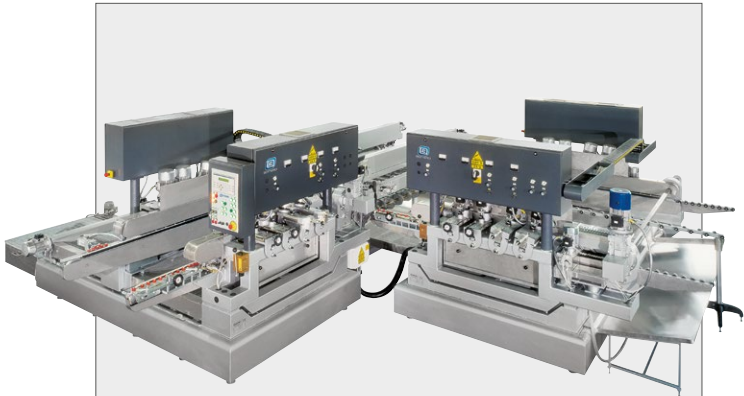


Bottero's two-sided round edged machines contribute to the treatment of glass elements used in numerous industrial manufacturing products.



The Range

The Bottero range of double edgers for pencil edge machining has been designed to guarantee high precision and to minimise maintenance.



Gemini

The Gemini double edger is a safe and reliable machine, designed to guarantee high precision and to limit maintenance as much as possible.

Type of processing	Round edge
Special edge processing	-
Maximum sheet dimensions	Up to Jumbo size
Automation level	★★★★●



Mercury

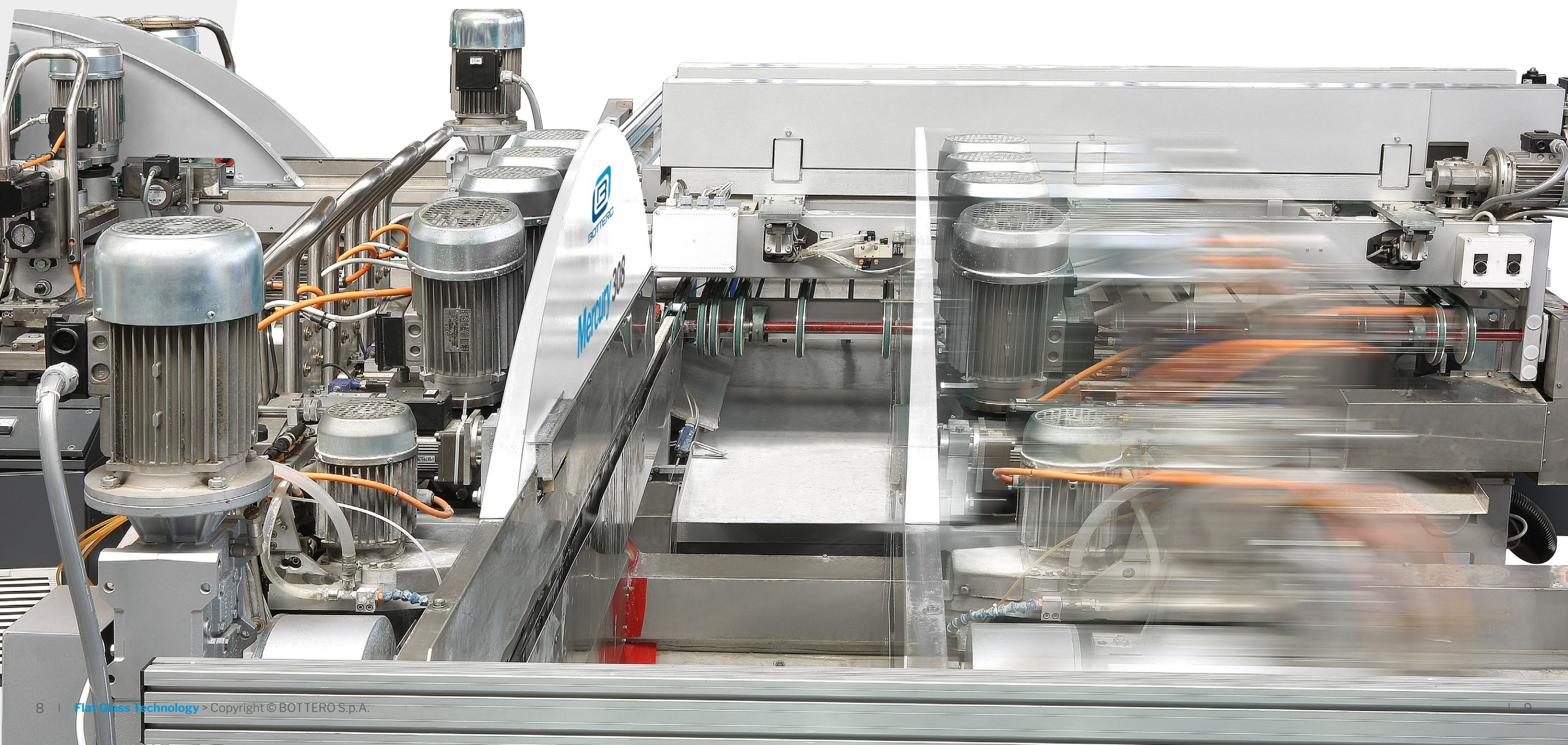
The machine Mercury can be adapted to one's own production requirements thanks to the possibility of choosing not only the number of spindles but the grinding wheel configuration as well.

Type of processing	Round edge
Special edge processing	-
Maximum sheet dimensions	Up to Jumbo size
Automation level	★★★★★

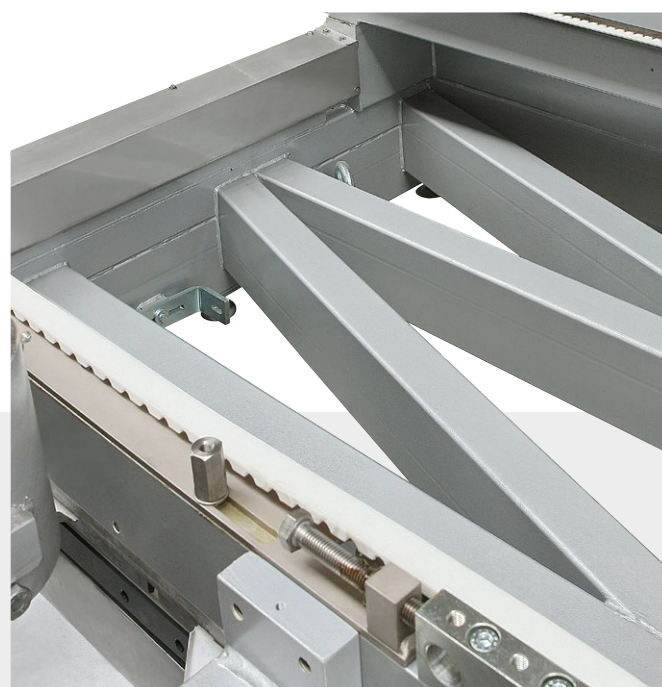
Evaluation based on comparison with other Bottero products of the same category.

Why choose them?

Why choose the Bottero pencil edge double edgers?



Because of their high build quality



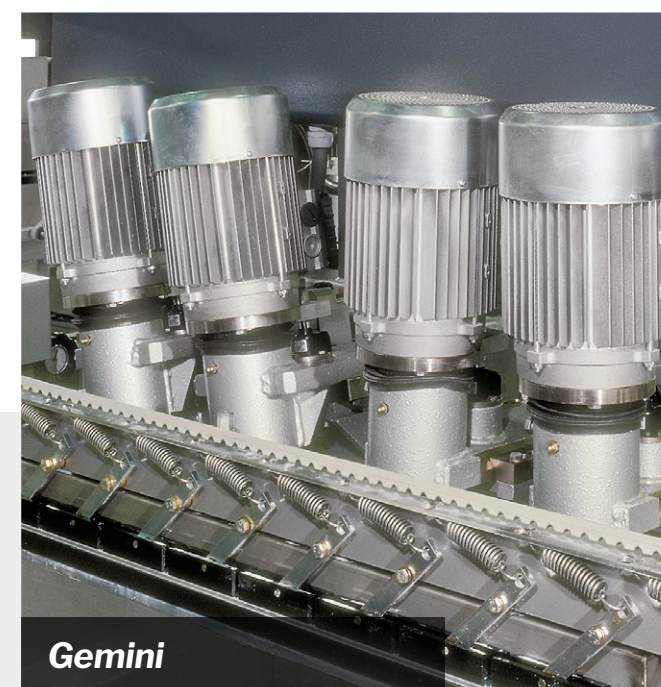
Gemini and Mercury edgers have a sturdy structure thanks to the electro-welded steel frame and the abundant use of anti-corrosion materials such as stainless steel and technical polymers.



All parts in contact with water are made of stainless steel in order to prolong the working life of mechanical components.



Thanks to automatic lubrication, all mechanical components work in optimal conditions, minimizing wear caused by friction.



The spindles are equipped with three levels of special gaskets which protect the bearings from contact with water and assure them long life.

Because they guarantee quality

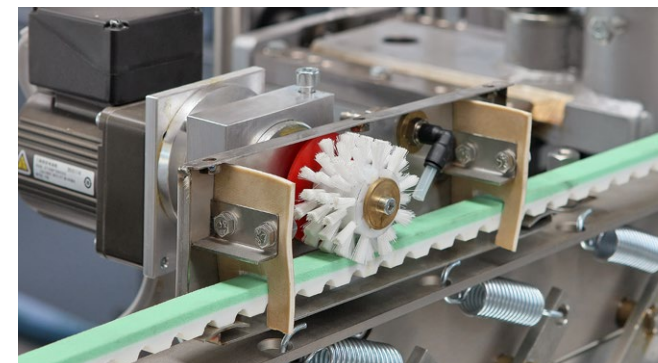


During the work phase, the glass sheet conveyor system operates with high resistance belts built with the “closed loop” technology. The presence of springs guarantees the right pressure of the top belts on the glass depending on its thickness. Glass advancement is constantly monitored by an encoder connected to a specific circuit board which sends a series of signals to the electropneumatic system so that the polishing wheels only switch on as the sheet passes allowing the tools to be used to their best.

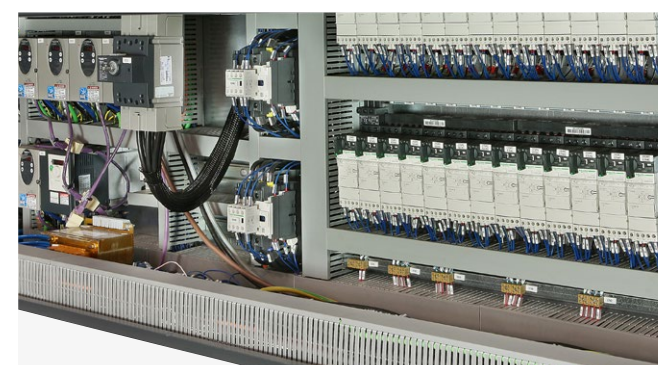


Transfer system studied specifically to manage thin sheets of glass at high speeds avoiding any type of breakage while conveying the glass from one machine to the other. The passage of glass from the upper transfer surface to the belts is assisted by a pneumatic wheel system that avoids any type of damage to the glass.

The belt cleaning system removes any residues, keeping them from depositing on the glass surface and damaging it. The possibility of using special belts with a cleaning system facilitates the processing of coated glass without damaging the surface.



All the electronic components are manufactured by important suppliers and guarantee a high quality level.



The blowers installed at the bottom of the machine prevent contamination of the washing machine water by grinding residues, thus increasing washing quality.



The possibility of choosing different corner dubbing systems allows to control the quality of the corner according to different speed in order to meet any type of requirement.



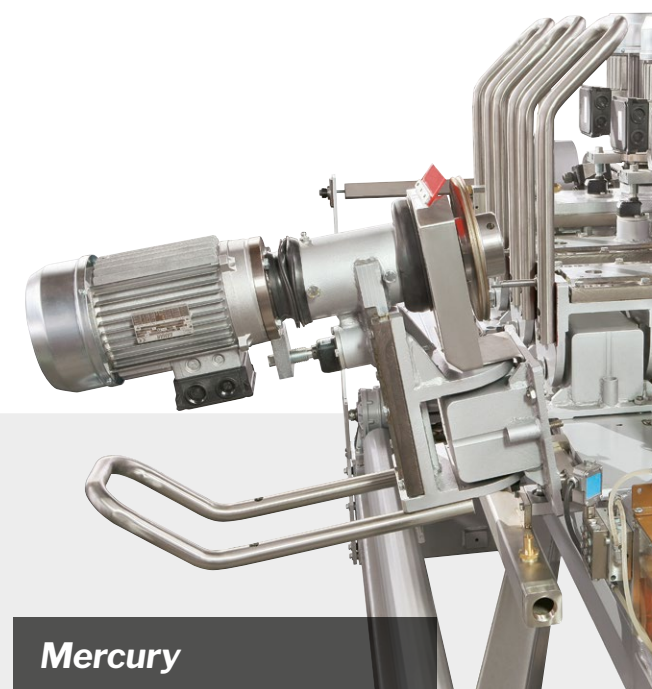
Because they make sense



Gemini

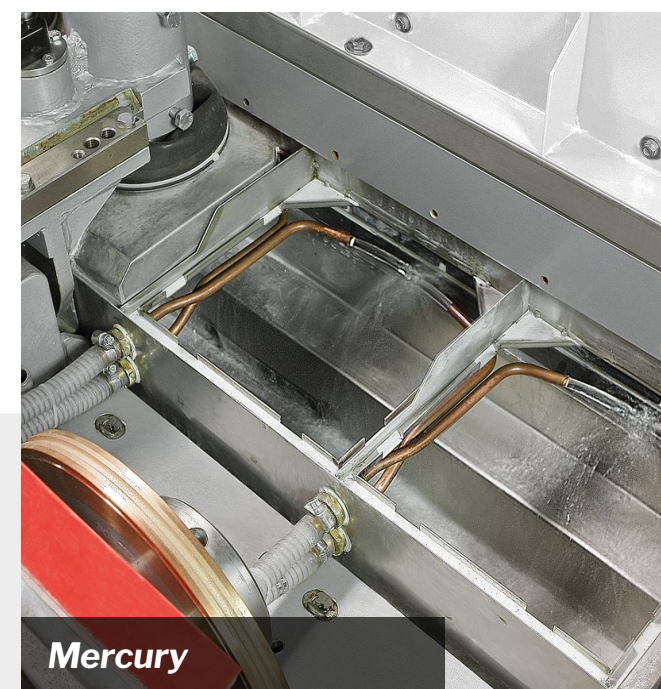
The opening and closing system of the mobile crosscut consists of trapezoidal screws designed to distribute strain at best and to reduce consumption to a minimum. The position of the mobile crosscut is controlled by an encoder which acts on the speed and precision of the final positioning.

There is a large grinding wheel compartment making it easy to access and the door is made of stainless steel. Each spindle can house up to 6 diamond grinding wheels simultaneously, for the machining of different thicknesses.



Mercury

The coaxial spindles guarantee vibration-free operation, The absence of belts and pulleys reduces the number of parts subject to wear and replacement.



Mercury

The water distribution system was designed to ensure optimal performance of the grinding wheels, making them longer-lasting even at high grinding speeds.

Because they are easy to use



The amperometers which read the current absorbed by the grinding wheels are positioned near the spindles, thereby making it easy to check the work conditions of the tools.



On demand, the double edger can be equipped with water system tank and pump. The stainless steel tank is located at the end of the base, at a convenient position for cleaning.



The control panel is located in a comfortable position for the operator, near the loading zone. Operations are controlled by a PLC consisting of a membrane keyboard and an LCD display which makes entering and viewing data extremely easy.

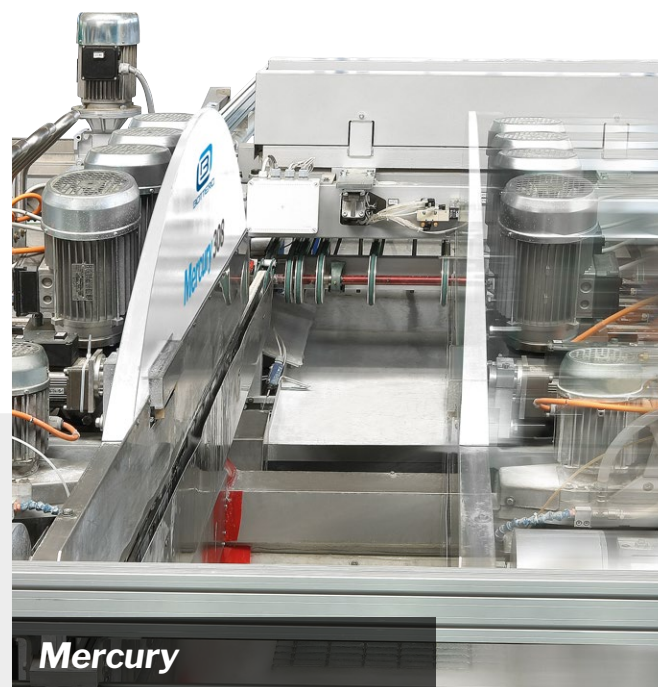


The operator interface with touch screen allows you to easily monitor all machine operations, to program it quickly and to perform real-time diagnostics.

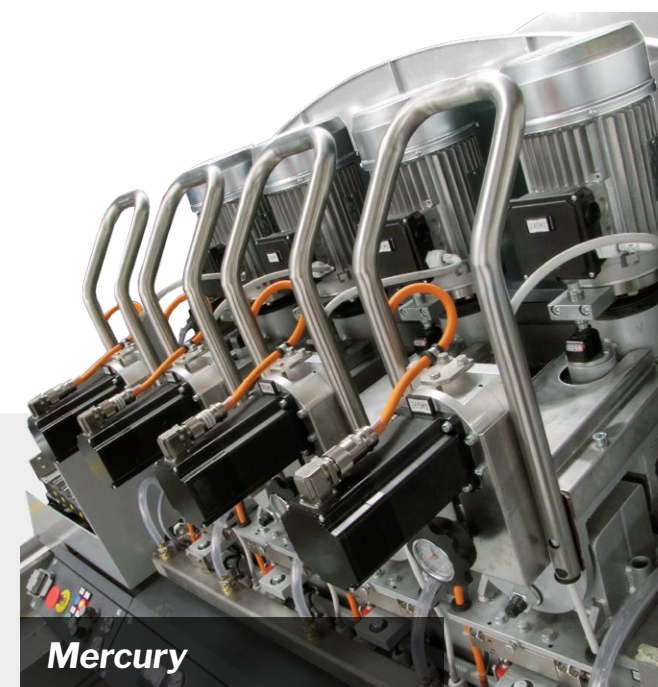
Performance



Thanks to the tilting spindle unit, wheel change times have been significantly reduced; in some configurations, wheel changes can be carried out while the machine is still working.



The handling speed of the mobile side up to 2.5 m/min reduces machine setup times.



The use of step motors allows to automatically recover grinding wheel wear; the use of the automatic glass dimension measurer makes the operation fully automatic.



With the possibility of adding the optional latest generation corner dubbing system, processing speeds of up to 20m/min are achievable, with corner dubbing.

Because they offer something extra

On demand, the double edger can be equipped with a corner dubbing system, consisting of two peripheral wheels (one on the each side) which process the four corners of the glass. There are three types of corner dubbing systems available:

- Pneumatic system up to 8 m
- Pneumatic system up to 12 m
- Servo assisted system up to 20 m.

In the HP versions, an inverter controls the motors of the diamond spindles, allowing their wheels to rotate up to 4200 rpm.

Gemini

The Bottero range of double edgers for pencil edge machining.

306 N | 306 HP

The series 306 pencil edge double edgers can provide a solid starting point for the most common productions of all glassworks.

308 N | 308 HP



The series 308 double edgers are suitable for massive glass productions and also provide the possibility of a higher final quality thanks to the additional pair of spindles.

Wheel configuration

306 N | HP

308 N | HP



-  Diamond
-  Polishing

 Tangential grinding wheel



Technical features

Metric	306 N	306 HP	308 N	308 HP
Minimum glass dim	80 x 80 mm	80 x 80 mm	80 x 80 mm	80 x 80 mm
Glass thickness	2 ÷ 12 mm	2 ÷ 12 mm	2 ÷ 12 mm	2 ÷ 12 mm
Speed	1 ÷ 12 m/min	2 ÷ 20 m/min	1 ÷ 12 m/min	2 ÷ 20 m/min
Installed power	24,5 KVA (19,2 KW)	47,5 KVA (38KW)	28 KVA (22,4KW)	47,5 KVA (38KW)
Weight	2420 Kg*	2420 Kg*	2500 Kg*	2500 Kg*
Worktable height	900 ± 50 mm	900 ± 50 mm	900 ± 50 mm	900 ± 50 mm

*Max glass 1600 mm

Imperial	306 N	306 HP	308 N	308 HP
Minimum glass dim	3" 10/64 x 3" 10/64	3" 10/64 x 3" 10/64	3" 10/64 x 3" 10/64	3" 10/64 x 3" 10/64
Glass thickness	5/64" ÷ 30/64"	5/64" ÷ 30/64"	5/64" ÷ 30/64"	5/64" ÷ 30/64"
Speed	39 ÷ 472 ipm	39 ÷ 472 ipm	39 ÷ 472 ipm	39 ÷ 472 ipm
Installed power	34,7 A@480V	67,3 A@480V	39,7 A@480V	67,3 A@480V
Weight	5335,2 lbs*	5335,2 lbs*	5511,6 lbs*	5511,6 lbs*
Worktable height	35" 28/64 ± 1" 62/64	35" 28/64 ± 1" 62/64	35" 28/64 ± 1" 62/64	35" 28/64 ± 1" 62/64

*Max glass 62" 63/64



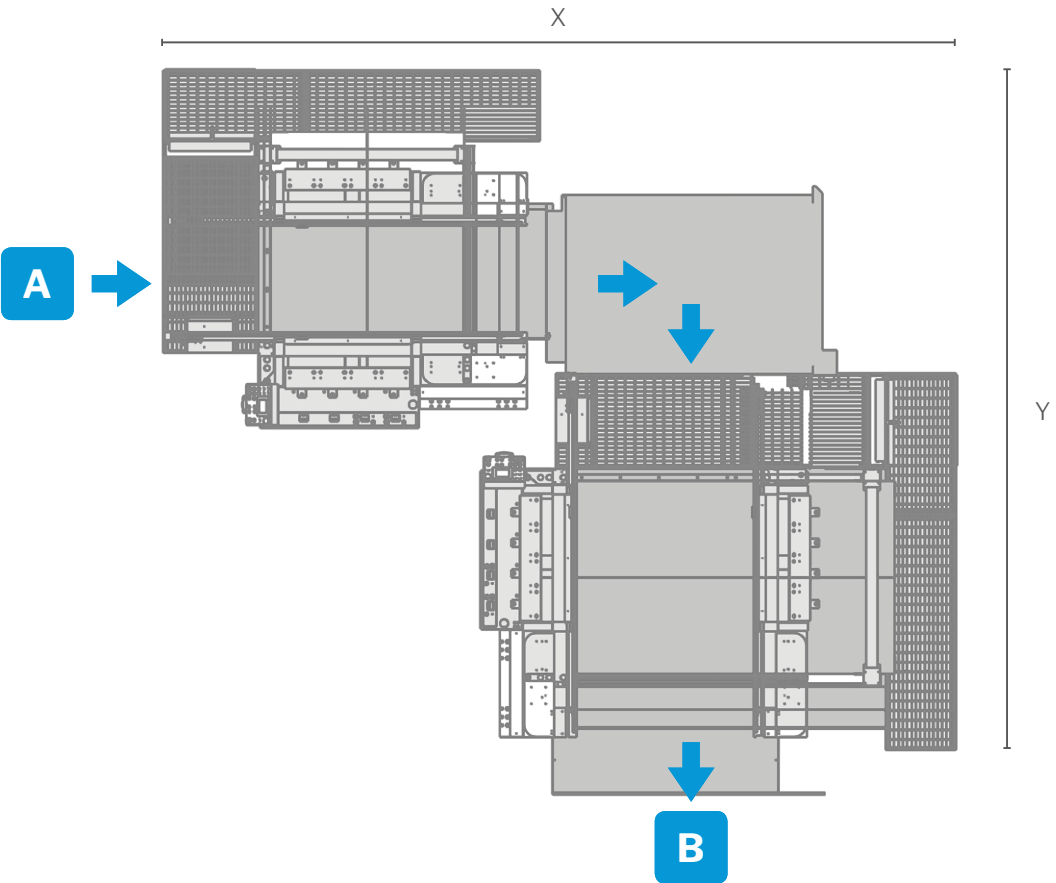
Machine overall dimensions

Metric

Dim. max. A	1000 mm	2000 mm	2000 mm	2000 mm	2600 mm
Dim. max. B	1000 mm	2000 mm	2600 mm	3000 mm	3000 mm
Y	6573,50 mm	7573,50 mm	7573,50 mm	7573,50 mm	8173,50 mm
X	5960 mm	6960 mm	7560 mm	7960 mm	7960 mm

Imperial

Dim. max. A	39" 3/8	78" 47/64	78" 47/64	78" 47/64	102" 23/64
Dim. max. B	39" 3/8	78" 47/64	102" 23/64	118" 7/64	118" 7/64
Y	258" 51/64	298" 11/64	298" 11/64	298" 11/64	321" 51/64
X	234" 41/64	274" 1/64	297" 41/64	313" 25/64	313" 25/64



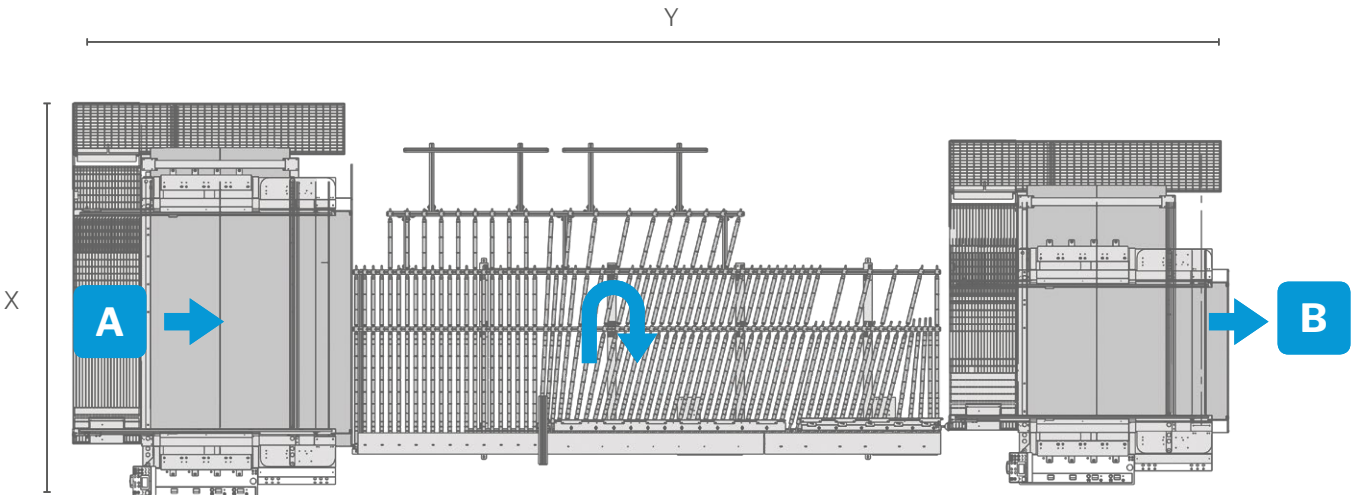
Rotator unit size

Metric

Dim. max. A	1000 mm	2000 mm	2000 mm
Dim. max. B	1000 mm	1000 mm	2000 mm
Y	10240,5 mm	12230 mm	13567 mm
X	3348 mm	4358 mm	4358 mm

Imperial

Dim. max. A	39" 3/8	78" 47/64	78" 47/64
Dim. max. B	39" 3/8	39" 3/8	78" 47/64
Y	403" 11/64	481" 1/2	534" 9/64
X	131" 52/64	171 37/64"	171 37/64"



Mercury

The Bottero range of double edgers for pencil edge machining.

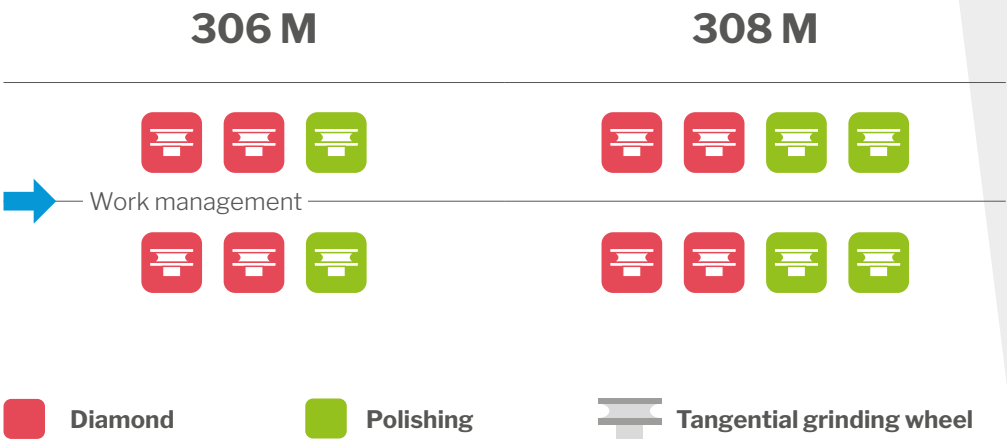
306 M

The series 306 Mercury pencil edge double edgers are dedicated to glassworks with high productivity and continuity of production.

308 M

The series 308 Mercury pencil edge double edgers allow high productivity and maximum production flexibility combined with an excellent finishing quality.

Wheel configuration



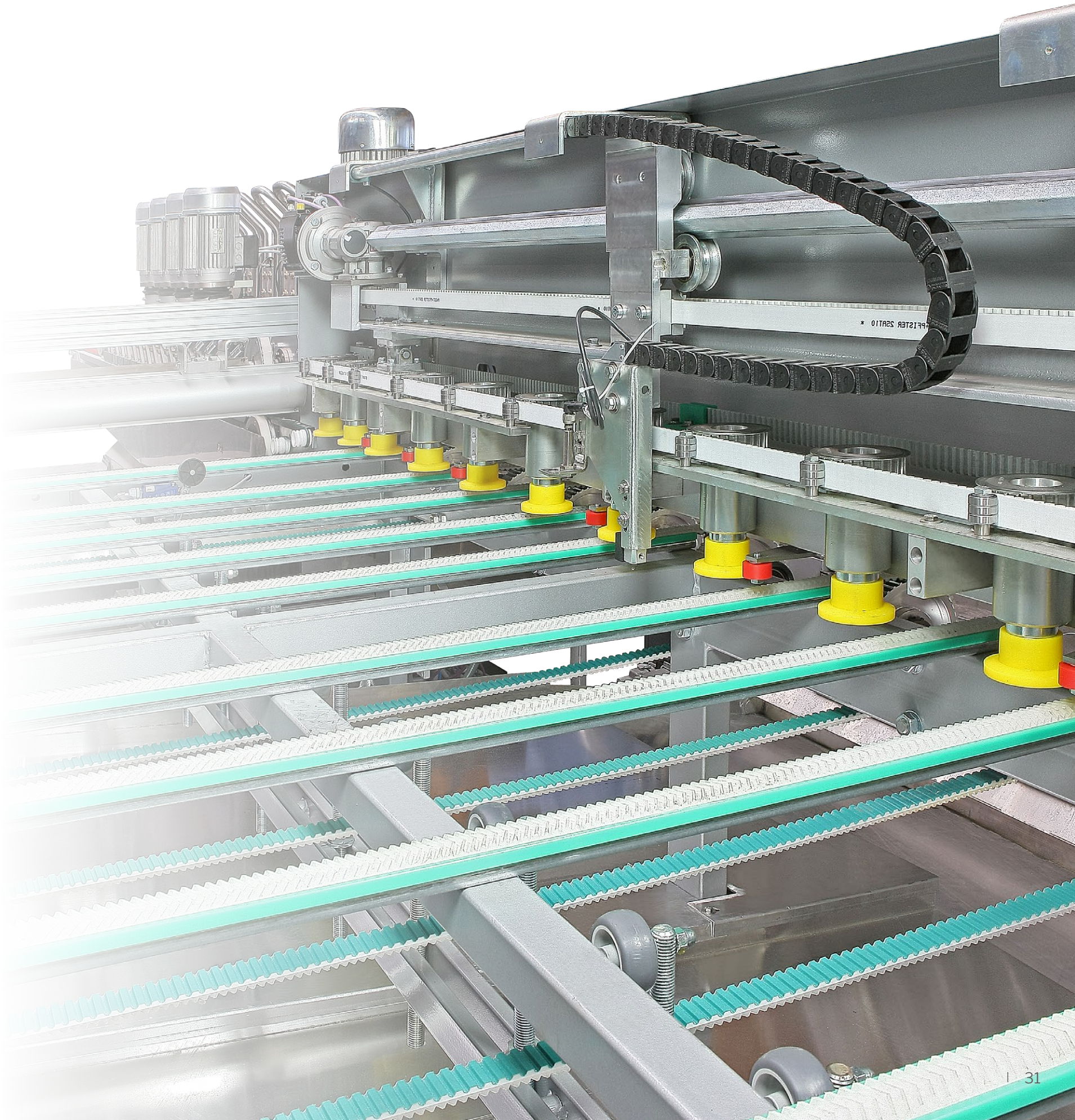
Technical features

Metric	306 M	308 M
Minimum glass dim	90 x 90 mm	90 x 90 mm
Glass thickness	2 ÷ 12 mm	2 ÷ 12 mm
Speed	0,5 ÷ 20 m/min	0,5 ÷ 20 m/min
Installed power	23,7 KVA (19 KW)	28,6 KVA (22,9 KW)
Weight	2720 Kg*	2800 Kg*
Worktable height	940 ± 20 mm	940 ± 20 mm
Max opening speed	2,5 m/min	2,5 m/min

*Max glass 2000 mm

Imperial	306 N	306 HP
Minimum glass dim	3" 35/64 x 3" 35/64	3" 35/64 x 3" 35/64
Glass thickness	5/64" ÷ 30/64"	5/64" ÷ 30/64"
Speed	20 ÷ 787 ipm	20 ÷ 787 ipm
Installed power	33,6 A@480V	40,5 A@480V
Weight	5996,6 lbs*	6172,9 lbs*
Worktable height	37" 1/64 ± 50/64"	37" 1/64 ± 50/64"
Max opening speed	98 ipm	98 ipm

*Max glass 78" 47/64



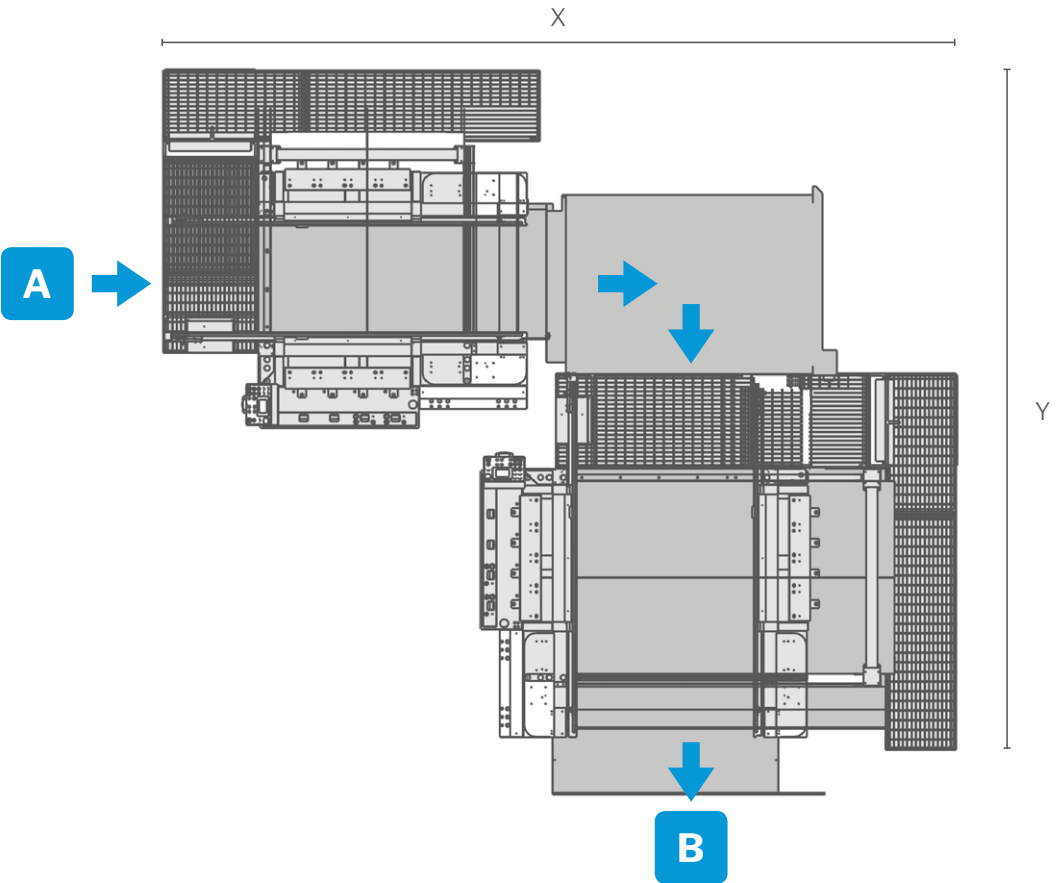
Machine overall dimensions

Metric

Dim. max. A	1000 mm	2000 mm	2000 mm	2000 mm
Dim. max. B	1000 mm	2000 mm	2600 mm	3600 mm
Y	5747 mm	6747 mm	7347 mm	7747 mm
X	6193 mm	7193 mm	7193 mm	7193 mm

Imperial

Dim. max. A	39" 3/8	78" 47/64	78" 47/64	78" 47/64
Dim. max. B	39" 3/8	78" 47/64	102" 23/64	118" 7/64
Y	226" 17/64	265" 5/8	189" 1/4	305"
X	243" 13/16	283" 3/16	283" 3/16	283" 3/16



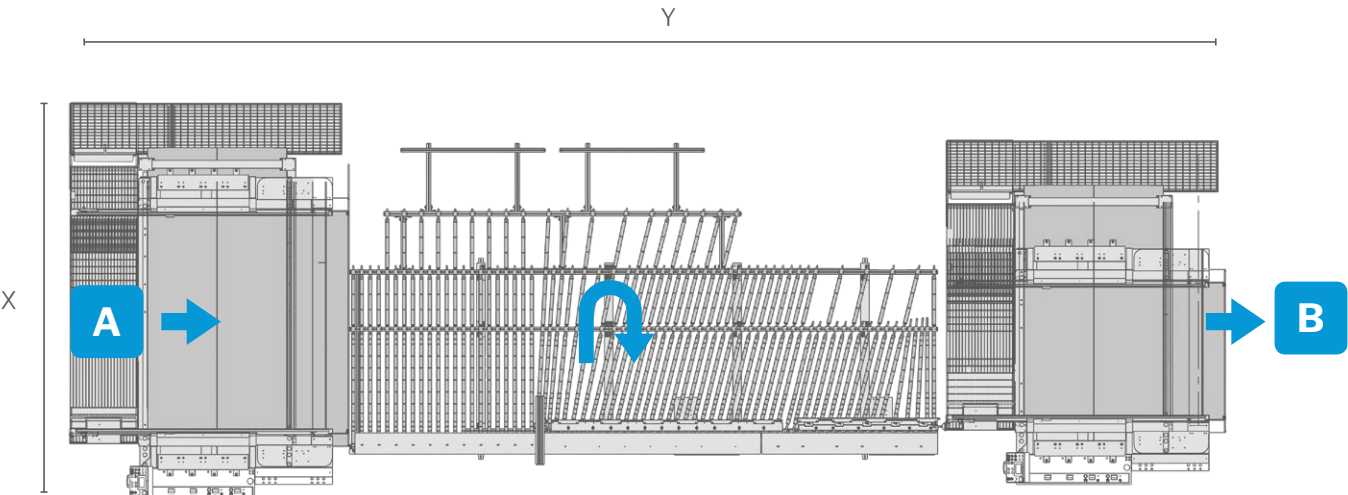
Rotator unit size

Metric

Dim. max. A	1000 mm	2000 mm	2000 mm
Dim. max. B	1000 mm	1000 mm	2000 mm
Y	3209 mm	4209 mm	4209 mm
X	10680 mm	12580 mm	13980 mm

Imperial

Dim. max. A	39" 3/8	78" 47/64	78" 47/64
Dim. max. B	39" 3/8	39" 3/8	78" 47/64
Y	126" 11/32	165" 45/64	165" 45/64
X	420" 15/32	495" 9/32	550" 25/64



Bottero, the choice of the greatest

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



With thousands of installations spread all over the world, Bottero guarantees first-class technical and commercial assistance.

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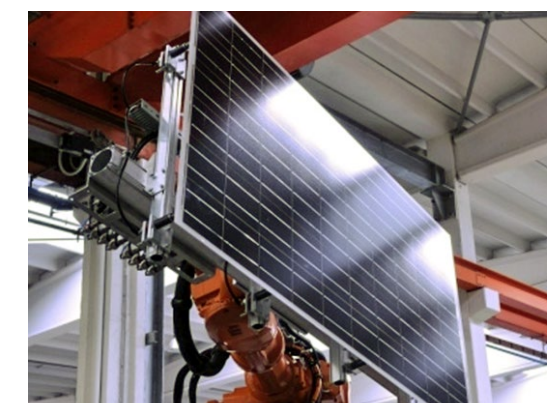
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Bottero Flat Glass Inc.
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Shanghai - China



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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- Float Cutting
- Glass Stock Management
- Straight Line Edgers & Bevellers
- Double Edgers
- Drilling
- CNC
- Laminated Lines

- Coating Lines
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- Solar Lines

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