systron
GLASS TECHNOLOGIES

ALL-IN-ONE External and Internal Processing

- Edge Processing
- Milling and Drilling
- Optional Waterjet Cutting



systron proMD

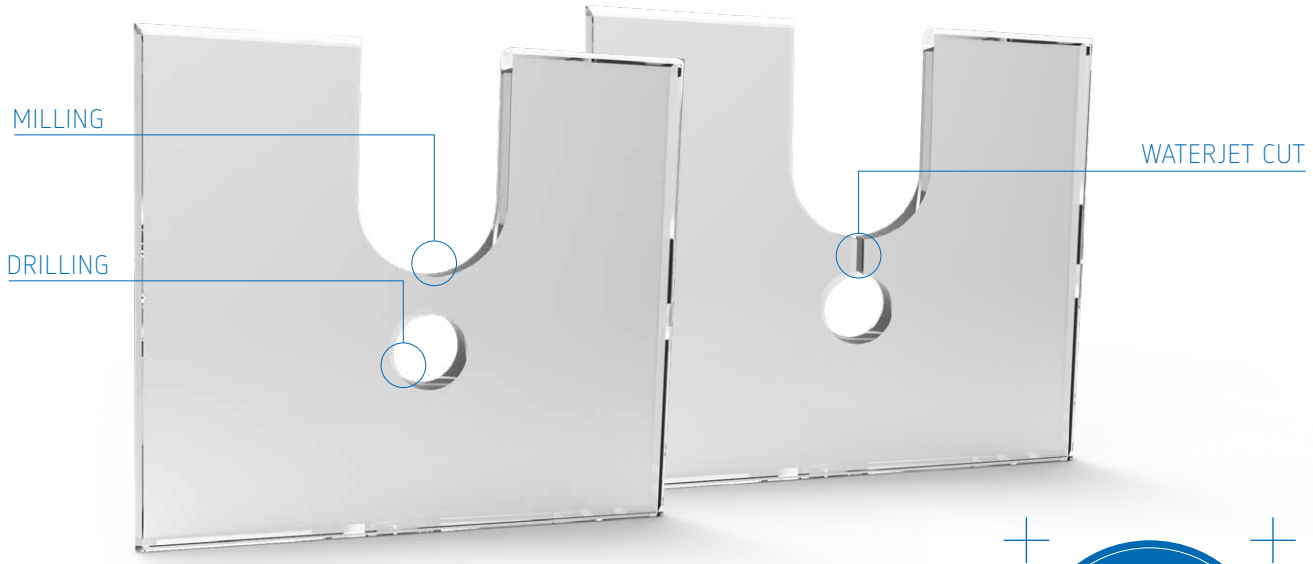
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systron proMD is a vertical ALL-IN-ONE processing centre. Milling, drilling, seaming, grinding and polishing of contours ccan be performed with **high precision** and **short cycle times** thanks to the machine's robust construction and our patented systems.
The open machine design ensures an ergonomic working position for the operator and provides easy access to all machine components.



Vertical Glass Processing
in Perfection!



HIGHEST PRECISION

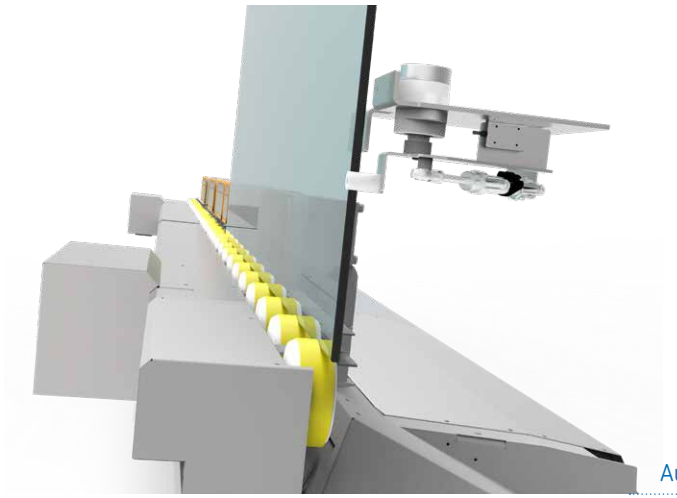
- **Seaming** (RAW EDGE), **grinding and polishing of internal and external contours**
- **Double-sided drilling and countersinking**
- **Milling of cut-outs**
- **Optional: Waterjet cutting**

systron sets new standards

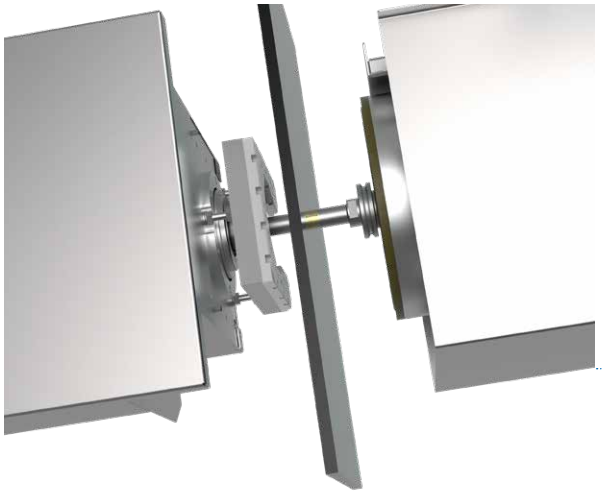
- Minimal machining tolerances, max. ±0.2 mm (±0.008 in) across the entire glass size
- Hardly any machining restrictions on contours and **special shapes**
- No set-up times between different glass thicknesses and types (only tool change)
- The highly rigid, vibration-free construction ensures excellent processing quality, even on angled edges and radii
- Open spare parts policy; components from premium manufacturers
- No mechanical contact when processing coated glass, making it ideal for Low-E glass
- With the waterjet option: Redundancy is ensured by combining conventional drilling and milling with waterjet technology

Highlights

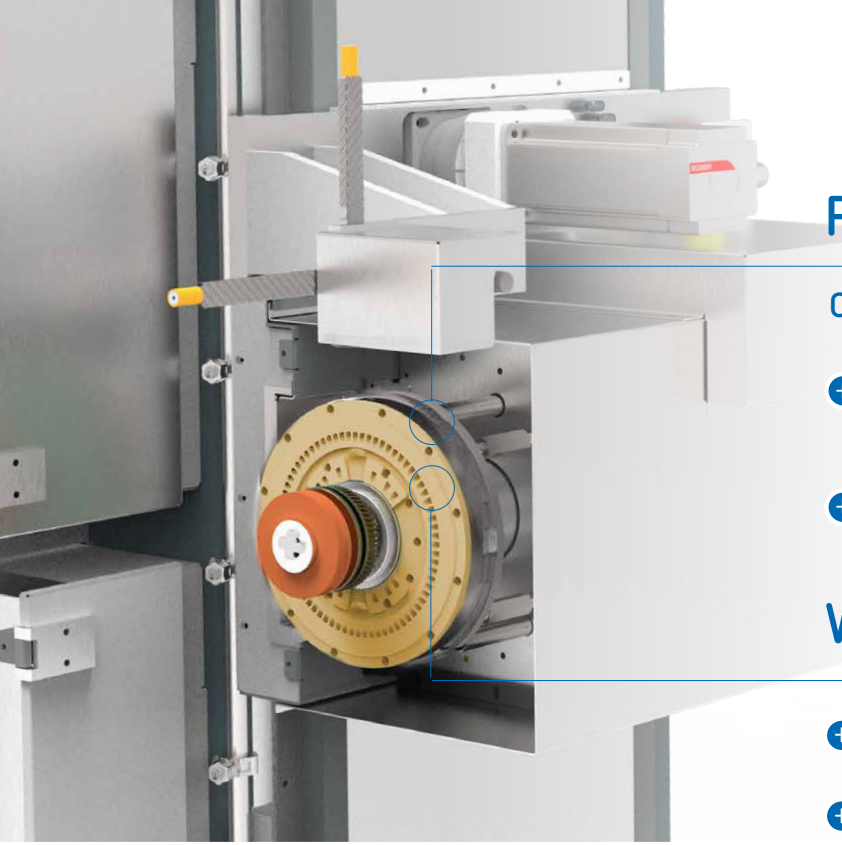
- **Constant polishing quality** thanks to precisely controlled polishing pressure
- Vibration-free processing **prevents chipping**
- Consistent **arris parallelism** thanks to **patented water cushion** guidance
- **High-pressure tool cooling** across the entire tool circumference
- **Automatic positioning of glass sheets,** including custom shapes
- **Continuously protected suction cups**
- **No mechanical contact** with coated glass surfaces
- **Easy operation** via an intuitive graphical user interface



Automatic glass measurement



Double-sided drilling



Processing Spindle

Optimal edge grinding and polishing quality

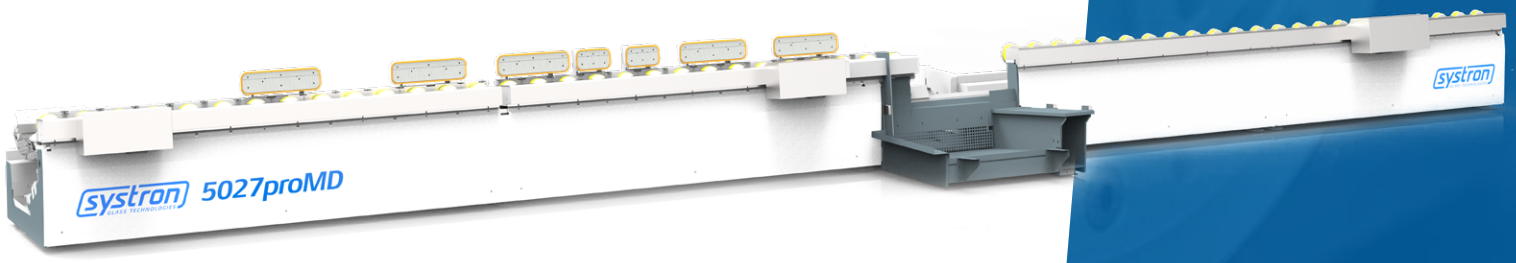
- 3 tools per tool holder (depending on glass thickness)
- Use of Ø100 mm (Ø3.9 in) tools
- Ample power reserves for a wide range of processing operations

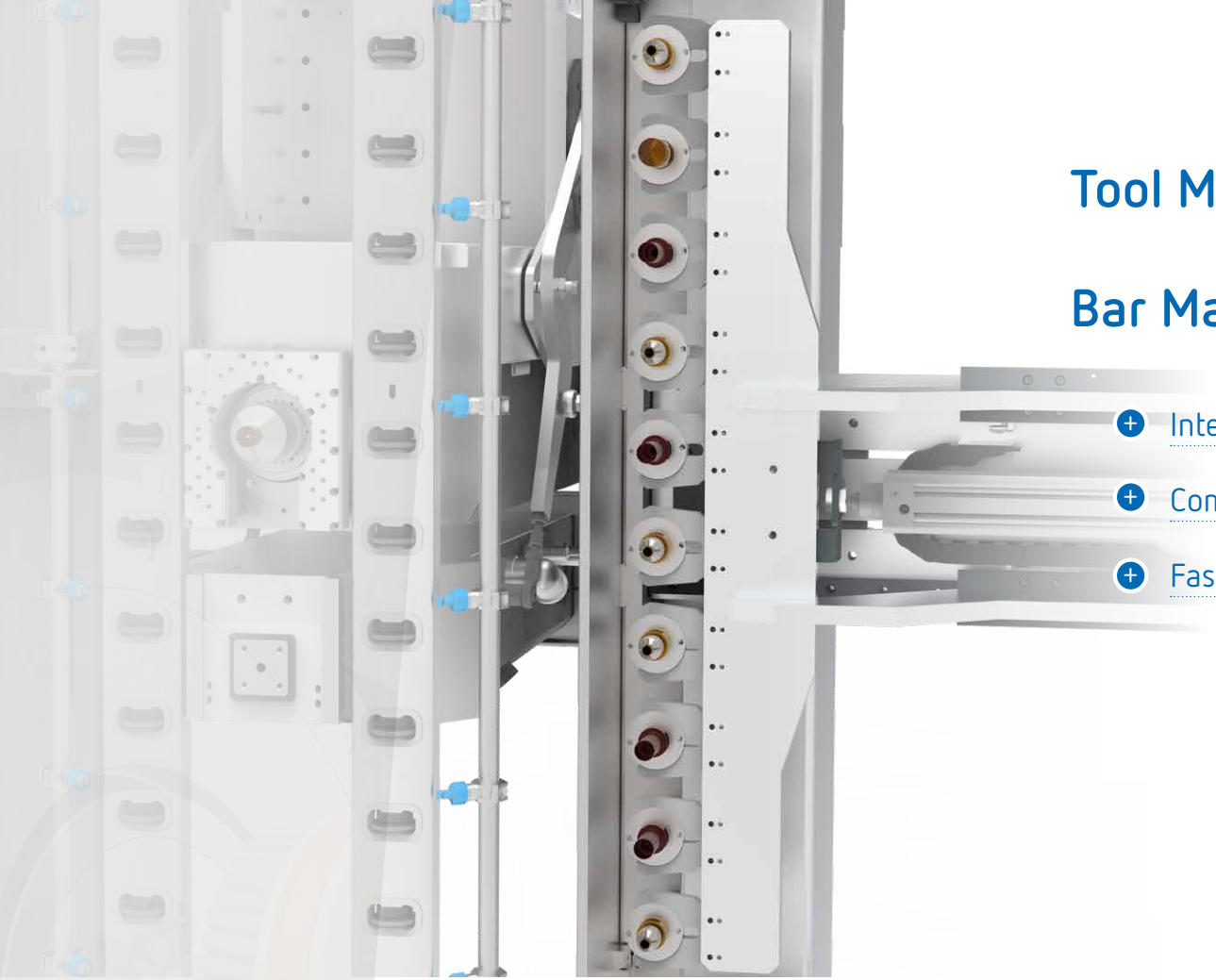
Water Cushion

- Patented process
- Follows the glass surface

Heavy, Vibration-Free Machine Construction

The heavy machine frame and **high-resolution servo axes** provide consistently high machining and polishing quality, even after years of multi-shift operation. The **modular machine-bed** design allows the system to be configured for different production requirements.





Tool Magazine – Rear Side

Bar Magazine for 10 Tool Holders

- Integrated rear-side bar magazine
- Compatible with all standard drilling and countersinking tools
- Fast tool changes for efficient processing

Water Cushion – Rear Side

- Acts as a counterholder during drilling and countersinking
- No mechanical contact with the glass
- Controlled counterpressure ensures safe and clean glass processing



Optional Tool Magazines – Front Side

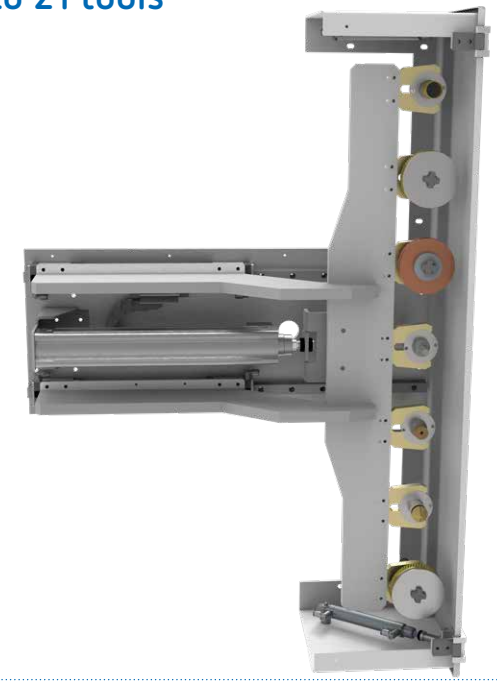
One or two tool changers can be mounted on the Y-axis

MAXIMUM

<120>

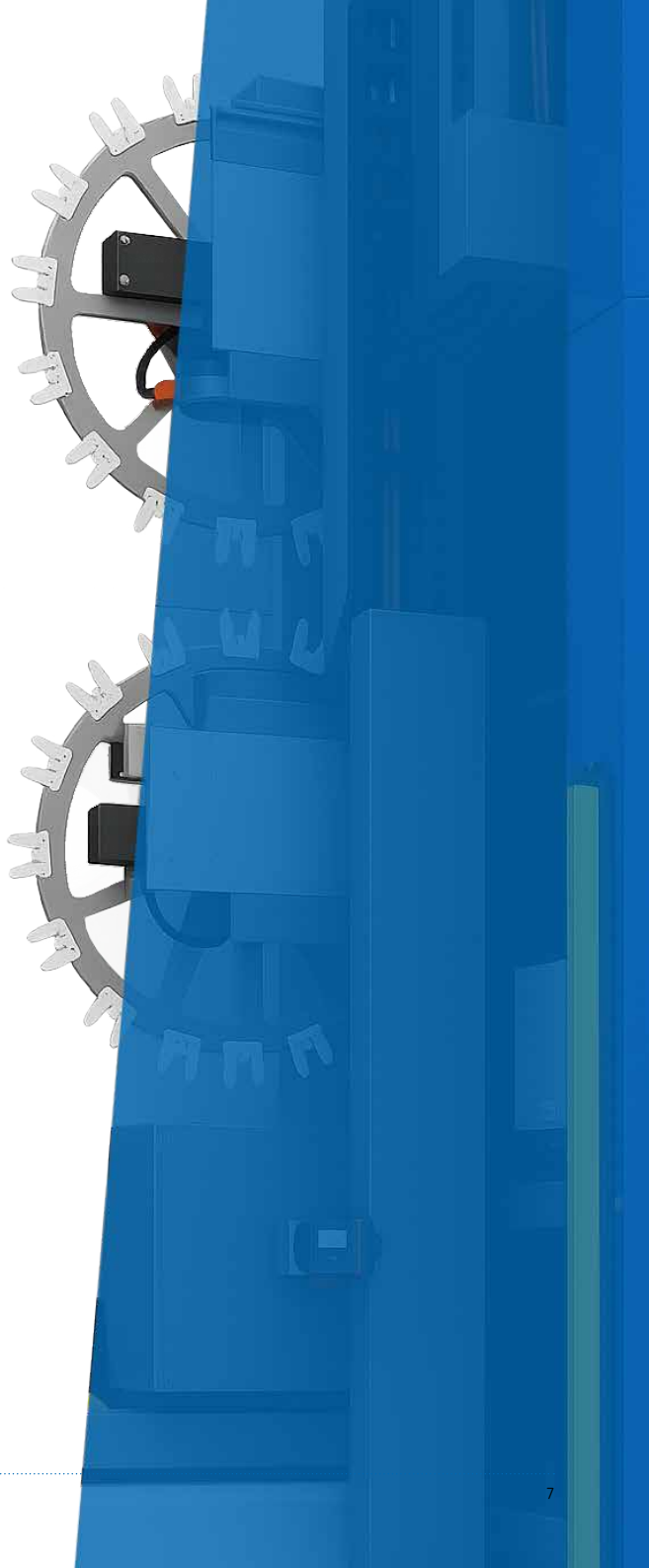
- Storage of the tools **outside the wet area**
- Fast exchange times
- Tool package width up to 62 mm / 2.44 in (max. 3 tools / position)
- Separation of the tool magazine from the wet area by a pneumatically controlled slide

Bar magazine for 7 tool holders - up to 21 tools



Tool magazine for 20 tool holders - up to 60 tools

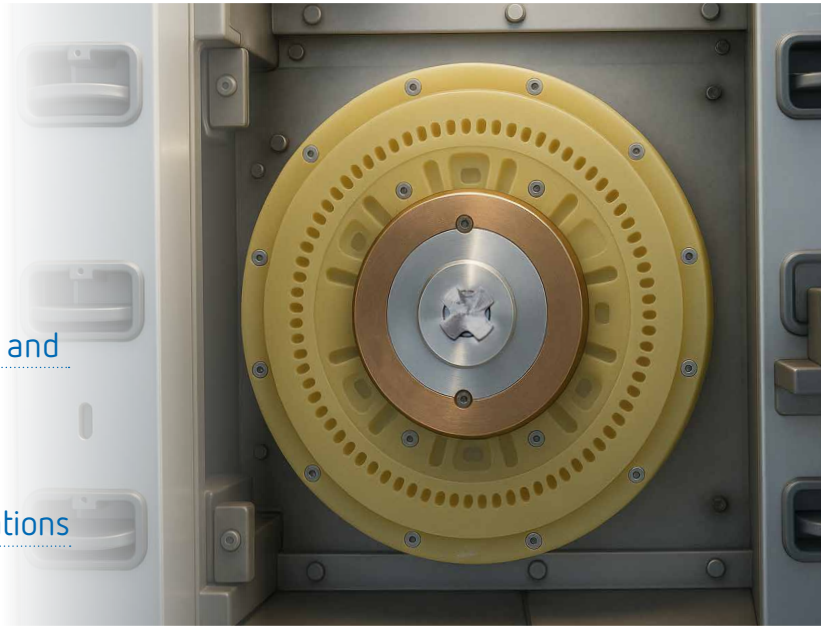


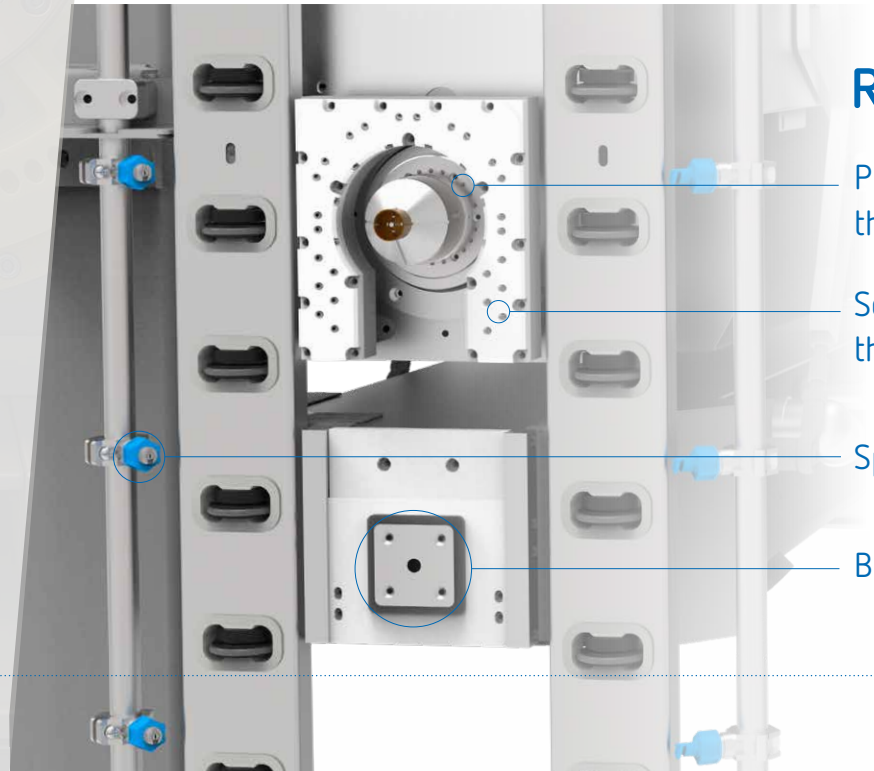


Highlights

Patented Water Cushion

- Continuous edge parallelism
- Consistent tool cooling across the entire processing zone
- Low-vibration glass processing for superior edge quality
- Glass is pressed against the rear roller wall to dampen vibrations and prevent chipping
- Contact-free processing protects sensitive surfaces
- Follows the glass surface, compensating tolerances and shape deviations
- Reduced tool wear





Rear Processing Area

Processing spindle for precise drilling and countersinking from the rear side

Second (rear) water cushion acts as a counterholder and stabilizes the glass during drilling and countersinking

Spray bar for continuous grinding dust removal

Beam absorber for waterjet operations

Clamping Beam Equipped with Suction Cups

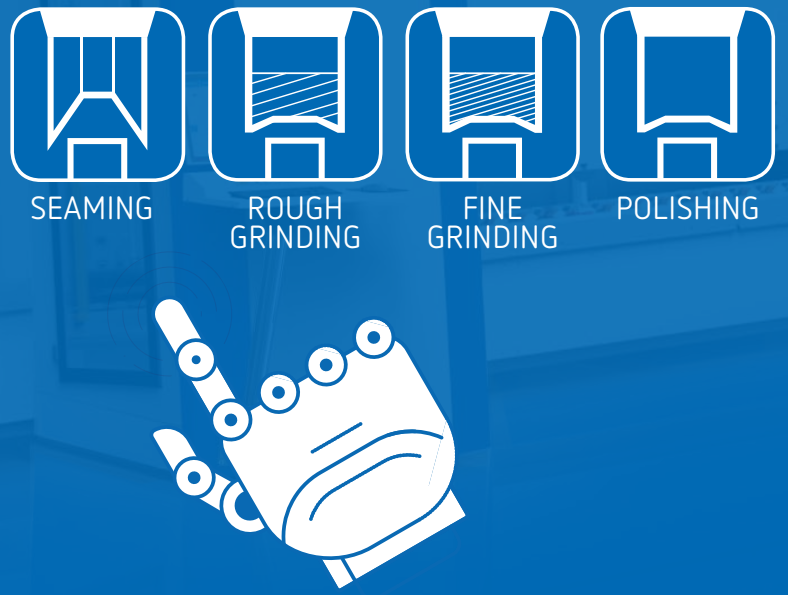
The X-axis is equipped with integrated tiltable suction cups. Only the required ones will be tilted out of the protected area.



Easy Mode (OPTION)

Easy Mode is a dedicated operating mode for the fully automatic processing of rectangular glass. The system measures the length, height and thickness of the glass automatically.

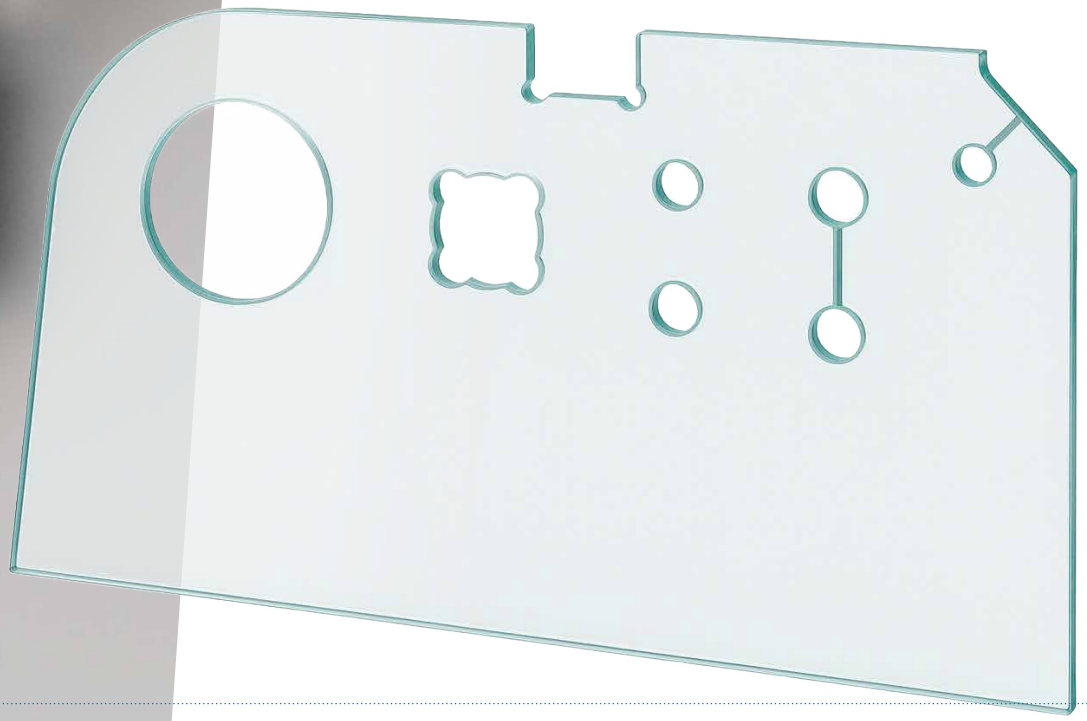
The material removal values for seaming, rough grinding, fine grinding and polishing only need to be defined once in the system. After the glass has been measured, a DXF file containing the required processing data is generated automatically. The glass is then processed according to the predefined settings without operator intervention.



OPTIONAL: Patented Waterjet Cutting Technology

A waterjet operating at pressures of up to 4,000 bar (~ 60,000 psi) enables extremely fast cutting of complex internal and external contours with high precision. The waterjet technology enables **particularly short cycle times.** High-quality waterjet-cut contours can be tempered **without post-processing.** Production time can be reduced **by up to 50%**.

- Cutting of complex internal & external contours in a single processing step
- Cold cutting without thermal stress and with minimal mechanical stress
- High precision for custom-defined geometries
- Suitable for glass thicknesses of 3 – 25 mm (0.12 – 0.98 in)

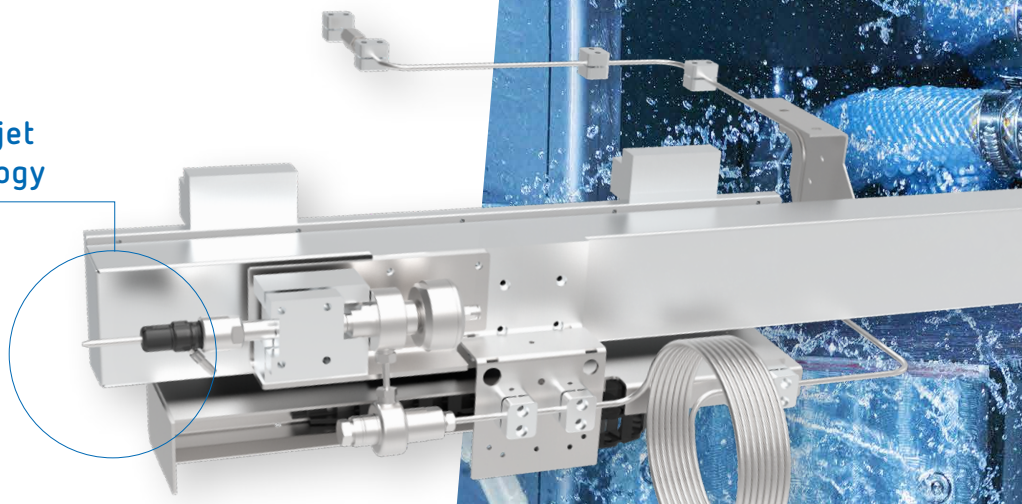


HIGHEST PRECISION

Two piercing methods for precise cuts

Piercing can be performed either directly with the **waterjet** or via a **pilot hole**. In the latter case, a defined breakthrough is created by drilling from both sides, serving as the starting point for the waterjet cut.

Patented waterjet cutting technology

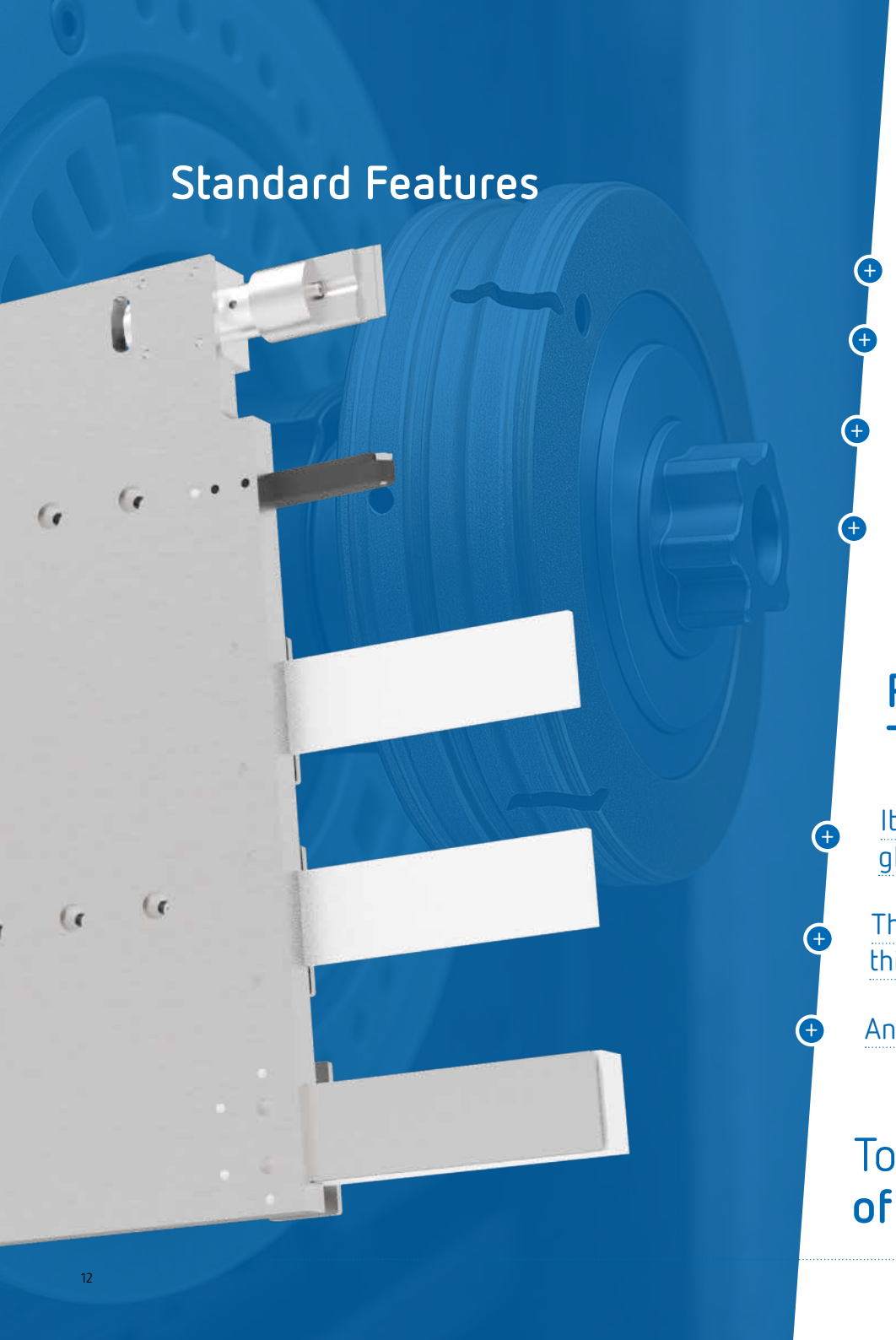




High-Pressure Pump
for optional waterjet operation

- Consistent cutting quality thanks to stable operating pressure up to 4000 bar (~60,000 psi)
- Low-pressure pulsation for stable processing results
- Modern and intuitive touch panel with customizable functions
- Robust and particularly maintenance-friendly design

Standard Features



Tool Measurement and Sharpening System

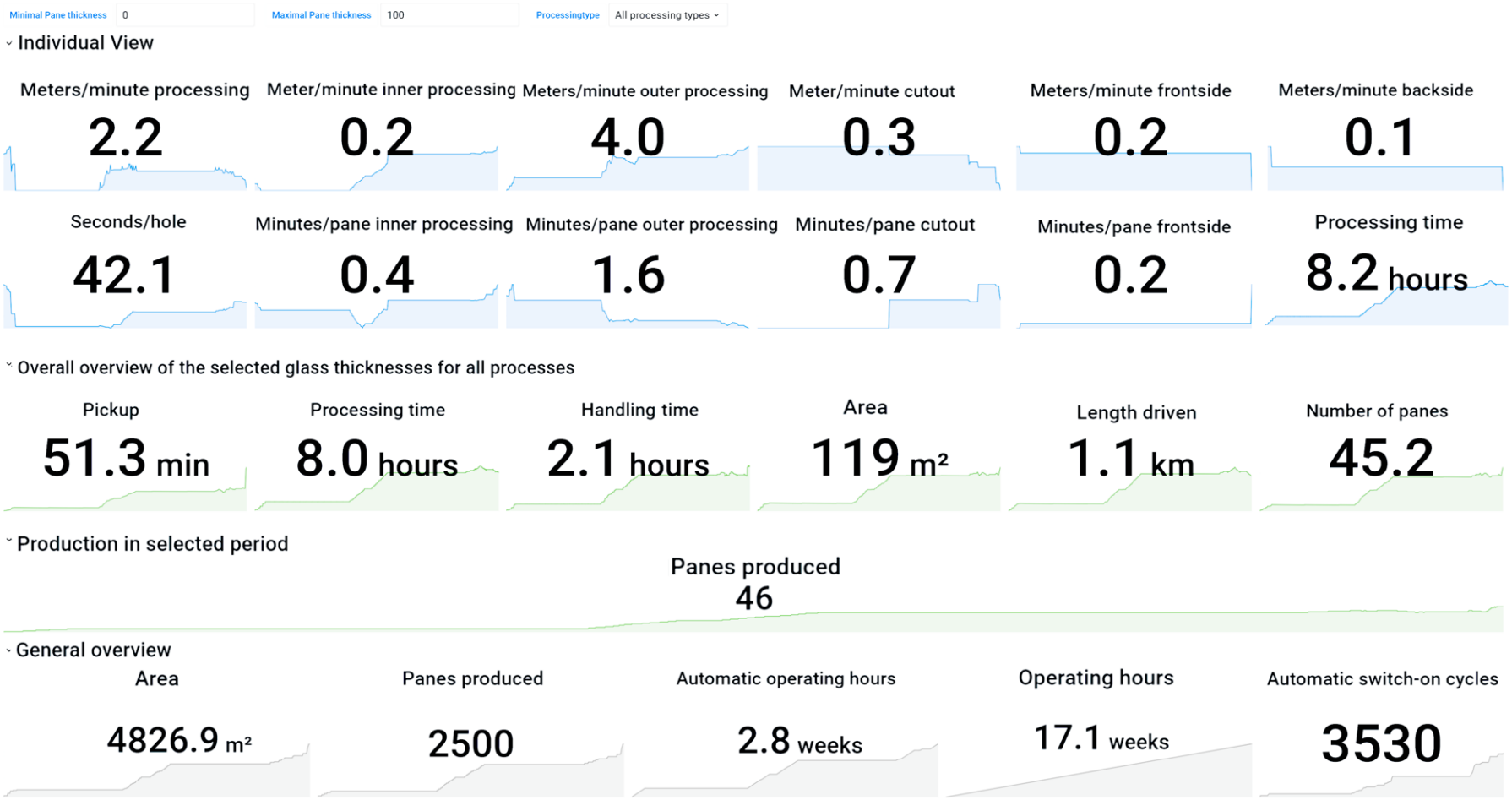
- Each tool is automatically measured at operator-defined intervals.
- The stored tool diameter is automatically updated
- To ensure consistent material removal performance, tools are sharpened at predefined intervals.
- Separate front and rear sharpening stones automatically sharpen the drills and countersinks.

Profiling and Dressing Device for Polishing Tools

- It enables the use of a single unprofiled polishing wheel type for multiple glass thicknesses, thereby reducing inventory costs.
- The required groove profile is created automatically according to the glass thickness.
- Any remaining profile material is automatically removed by the dressing device.

Tool sharpening and profiling with almost **NO loss of cycle time** (performed during glass pickup and move-out)

Software Option: Production Data Statistics and Analysis



This software option includes the installation and configuration of a system for recording and analysing production data over selected periods. The dashboard provides a general overview as well as detailed statistics by glass thickness, including:

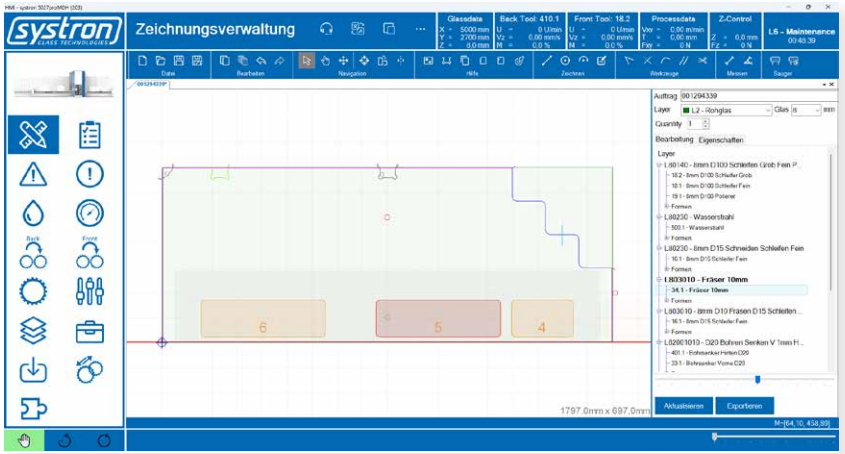
- » Processed glass area (m² / sq ft)
- » Number of panes produced
- » Time allocation
- » Grinding length, broken down into
  - Rough grinding
  - Fine grinding
  - Polishing

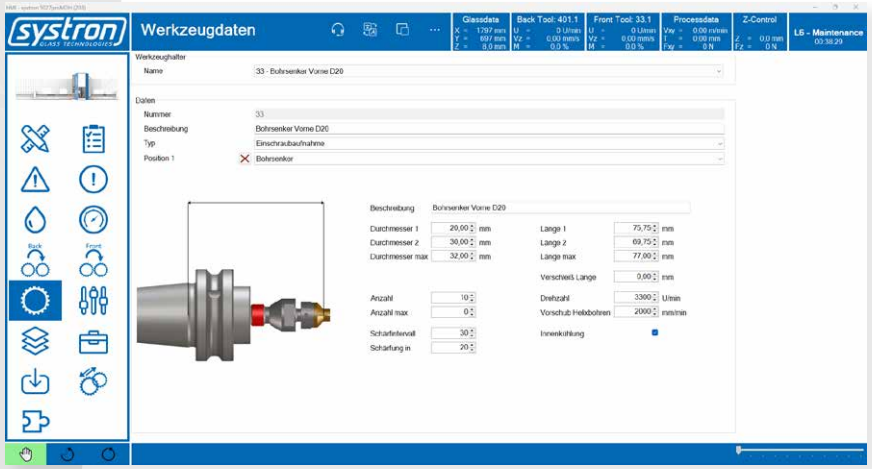
Control & Software

CAD-Software

The shape catalogue integrated into the CAD program enables the quick creation of production drawings. More complex shapes can be imported directly as DXF files.

For improved control, the positions of the vacuum suction cups as well as the tool paths of the individual processing steps are displayed in advance.





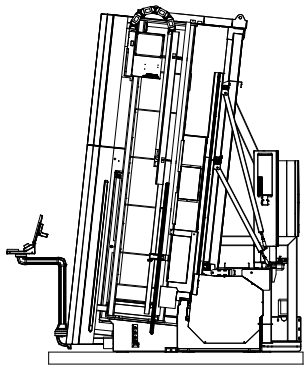
Machine Control System

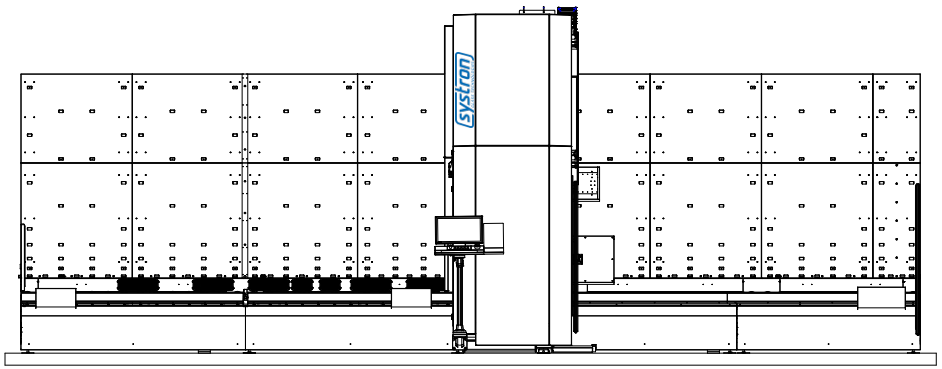
The intuitive machine control interface is displayed on a **multi-touch panel**. A new **operating concept** allows **fast and accurate axis positioning** in manual mode.

Example tool data: After the tool holder data has been entered, the tool assembly on the taper is displayed graphically. All associated adjustment parameters are clearly shown on a single screen.

Technical Data

		3525 proMD	5027 proMD	6033 proMD
General technical data				
Max. glass size	mm | in	3500 x 2500 | 138 x 98	5000 x 2700 | 197 x 106	6000 x 3300 | 236 x 130
Min. glass size	mm | in	600 x 200* | 24 x 8*	600 x 200* | 24 x 8*	600 x 200* | 24 x 8*
Glass thickness	mm | in	(3) 4 – 25 | (0.12) 0.16 - 0.98	(3) 4 – 25 | (0.12) 0.16 - 0.98	(3) 4 – 25 | (0.12) 0.16 - 0.98
Weight per suction cup	small / large	60 / 130 kg | 132 / 287 lb	60 / 130 kg | 132 / 287 lb	60 / 130 kg | 132 / 287 lb
Glass transport height	mm | in	780 | 30.7	780 | 30.7	780 | 30.7
Sheet inclination	degrees	6°	6°	6°
Max. grinding speed		25 m/min | 82 ft/min	25 m/min | 82 ft/min	25 m/min | 82 ft/min
Automatic central lubrication		☑	☑	☑
Automatic tool measurement		☑	☑	☑
Automatic tool dressing device		☑	☑	☑
Automatic profiling device for polishing wheels		☑	☑	☑
Dimensions				
Machine length	mm | inches	9180 | 361	11320 | 446	13320 | 524
Machine height	mm | inches	4200 (4550**) | 165 (179**)	4500 (4750**) | 177 (187**)	5100 (5350**) | 201 (211**)





☑ standard ○ option

Larger sizes available on request

* Suction cup heights 120 or 160 mm (4.7 or 6.3") available on request

** With optional waterjet



systron
GLASS TECHNOLOGIES

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