



**Billco Teams**  
*A Distribution & Service Company*

# **VERTICAL IG LINES**

*VERTICAL INSULATED GLASS MACHINES,  
SPACERS, AUXILIARY EQUIPMENT,  
SEALING ROBOTS AND EXTRUDERS*

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# ABOUT US

At Billco, we strive to be a vital partner for manufacturers, helping them execute projects successfully while maximizing returns on investment and driving profitability.

Billco Teams is a forward-thinking initiative launched by the renowned Billco Manufacturing company. Leveraging our strong industry partnerships, we strive to elevate the glass industry by introducing cutting-edge equipment and cost-effective solutions.

Our trusted supplier has become a recognized global leader in flat glass processing solutions, offering over 30 main products and more than 200 derivatives.

Through our partnership, we offer direct access to our dedicated team of Billco Services Specialists, a group of dedicated experts providing 24 | 7 | 365 support and guidance.

Driven by a relentless pursuit of excellence and innovation, we continuously expand our capabilities and bring innovative solutions to market. With our extensive industry experience and unwavering commitment to customer satisfaction, we are confident in our ability to keep the glass industry moving forward.

ON CALL

24 | 7 | 365

MOVING

GLASS  
FORWARD



# VERTICAL INSULATED GLASS LINE

The Vertical IG Line is designed for automatic high-precision and high-speed washing, drying, assembly, and pressing of insulating glass units. The design allows you to configure the main components of the line according to the needs of your production.

★ LOW-E GLASS WASHING

⌚ LINE SPEED CONTROL

★ COATING DETECTION SENSOR (LOW-E)

🌿 INSULATED CHAMBERS OF BRUSHES

★ CONVEYOR LIGHTING (OPT.)

★ BLOWER CONTROL (OPT.)

★ STAINLESS STEEL BODY (OPT.)

⌚ WASHING OUTLET CONVEYOR SPEED CONTROL (OPT.)

📏 MEASURING GLASS DIMENSIONS AND FRAME THICKNESS (OPT.)

★ SAND FILTER (OPT.)

★ SELF-CLEANING FILTER (OPT.)

★ EASY CLEAN NOZZLES (OPT.)

🌿 AUTOMATIC POSITIONING OF BRUSHES AND AIR DRYING NOZZLES (OPT.)

⌚ BRUSH SPEED SYNCHRONIZATION (OPT.)

★ PRE-WASHING (OPT.)

★ RIGHT TO LEFT DIRECTION (OPT.)





## I VERTICAL IG LINE BREAKDOWN



The **Inlet Conveyor** is a specialized loading zone conveyor designed to efficiently feed glass lites into the washing line. It is equipped with loading support legs to accommodate large-size glass lites, ensuring safe and stable handling.

The system offers both step-by-step and continuous feed control modes, providing flexibility to meet various production requirements.



The **Washing and Drying Machine** is engineered to ensure high-quality cleaning and drying of glass lites. It features premium-grade washing brushes for thorough, streak-free washing and specially designed high-efficiency fans for reliable and complete drying. This system guarantees consistently clean and dry glass sheets, ready for further processing.



The **Outlet Conveyor** ensures the smooth and efficient transfer of glass lites from the Washing and Drying Machine to the next stage in the production process. It is designed to maintain alignment and stability of the glass during transfer, supporting seamless workflow integration.

## I PPL PANEL PRESS



DOUBLE GLAZED IG



DOUBLE CONVEYOR BELT  
(OPT.)



REMOTE ACCESS (OPT.)



MODULAR STRUCTURE



HYDRAULIC PANEL PRESS



ARGON GAS FILLING PRESS  
(OPT.)



ADJUSTABLE CONVEYOR  
HEIGHT (OPT.)



TILTING TABLE (OPT.)



DOUBLE SECTION  
MOUNTING FRAME (OPT.)



FRAME MOUNTING SYSTEM



SERVO PRESS (OPT.)



PRESSING OF VARIOUS  
SHAPES (SHAPE LIBRARY)



TRIPLE, QUADRUPLE AND  
STEPPED IG UNITS



ADDITIONAL SIDE WALLS  
(OPT.)



JUMBO FORMAT TANDEM  
PRESS (OPT.)



AIR CUSHION CONVEYOR  
(OPT.)

## I PPL BREAKDOWN



The **Assembly Conveyor** is designed to place spacer frames onto clean glass exiting the washer unit. Two system options are available:

1. Manual Frame Mounting System

A cost-effective solution for operations with moderate production volumes.

2. Double Section Frame Mounting System

An advanced option that increases productivity without expanding the overall line footprint. This system allows simultaneous processing, boosting output while maintaining space efficiency.



The **Pressing Unit** features a robust, reinforced frame and utilizes a hydraulic or servo-driven front panel system, ensuring consistent and high-quality production. By applying pressure from four distinct points, it delivers precise and reliable insulated glass units.

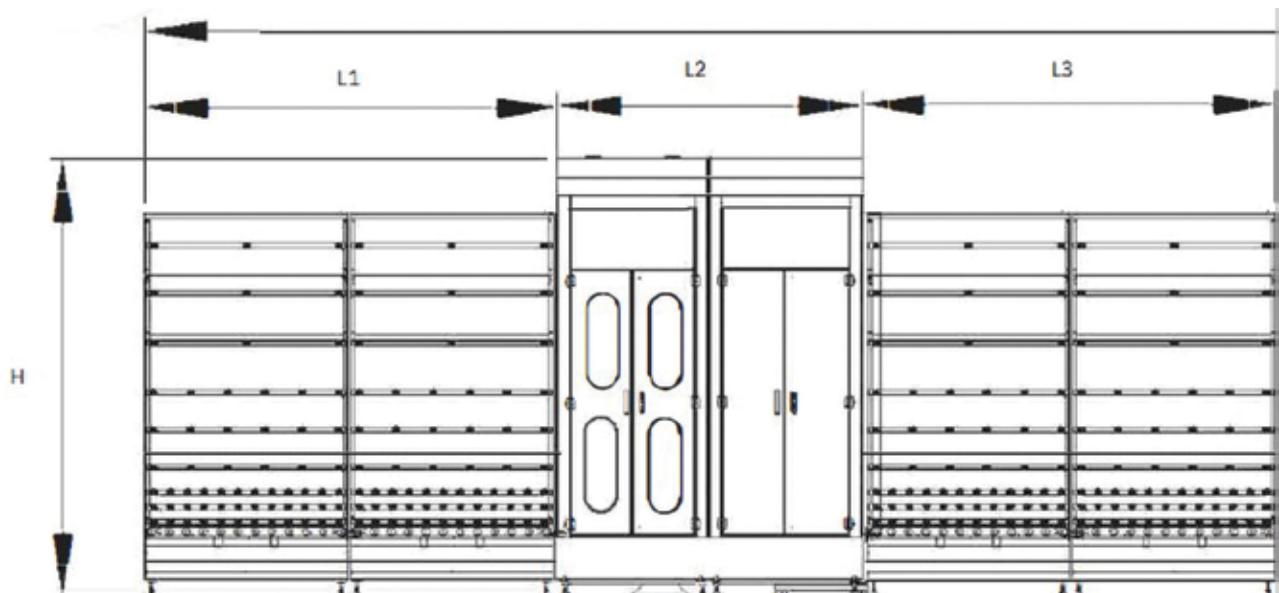
To maintain exact positioning during the pressing process, the system incorporates a high-speed automatic vacuum mechanism, securely holding the insulated glass units inside the press for maximum accuracy.



The **Press Outlet** is engineered to transfer the pressed insulated glass units to the secondary sealing station efficiently. Upon request, we can offer a Tilting Table as an alternative to the standard press output, tailored to your production requirements.

The Tilting Table is particularly useful for transitioning glass units from vertical to horizontal orientation. It is especially beneficial when working with oversized insulated glass units, facilitating easier and more precise sealing.

# I VGW SPECIFICATIONS



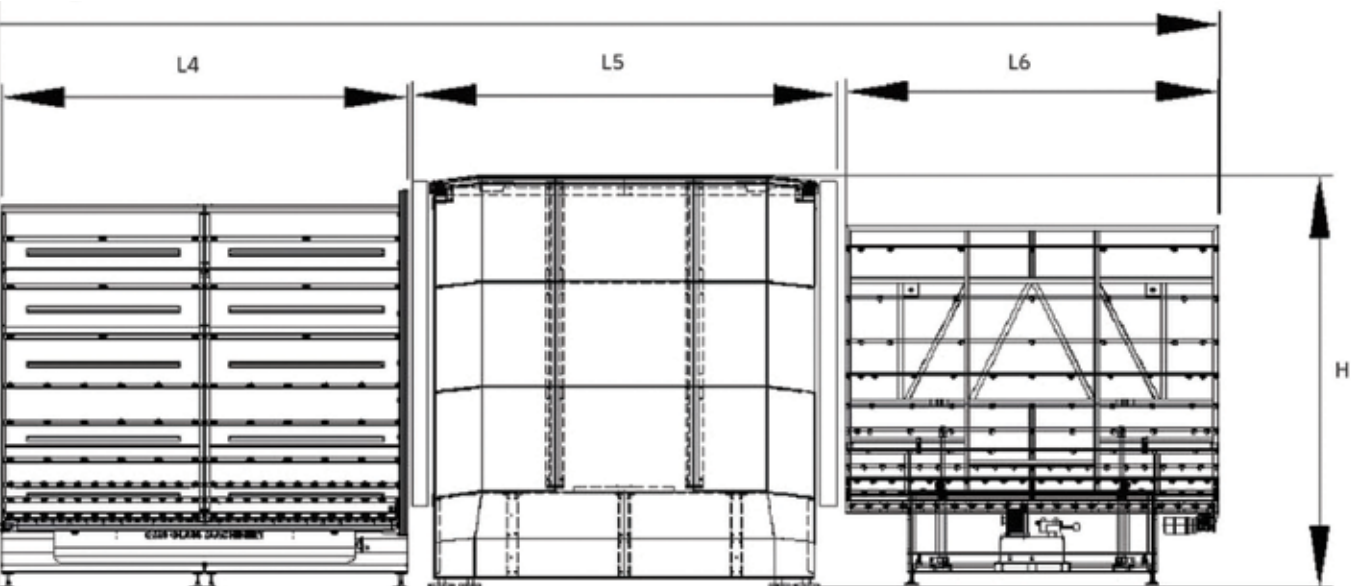
## MODEL SIZES

Glass Length	VGW	Glass Width (mm)				Machine Dimensions						
		2000	2500	2800	3300	L1	L2	L3	H1			
	3000	3020	3025	3028	3033	3260	2450	3260	2000	2500	2800	3300
	4000	4020	4025	4028	4033	4100	2450	4100	3050	3550	3850	4350
	5000	5020	5025	5028	5033	5300	2450	5300				
	Jumbo	XL20	XL25	XL28	XL33							
	Sizes											

## TECHNICAL DATA

	VGW 4.1	VGW 4.2	VGW 4.3
Glass Thickness	3-12 mm	3-19 mm	3-32 mm (Automatic Brush Positioning)
Maximum Speed	12 m/ min		
Brushes	6 pcs. (Opt. 8 pcs.)		
Working Height	520 (±50) mm		
Blowers	1 pcs.		
Washing Sections	2 pcs.		
Washing Low-E Glass	Applicable		
Minimum Glass Size	6.69 x 13.78 in (170 x 350 mm)		











# I PPL SPECIFICATIONS



## MODEL SIZES

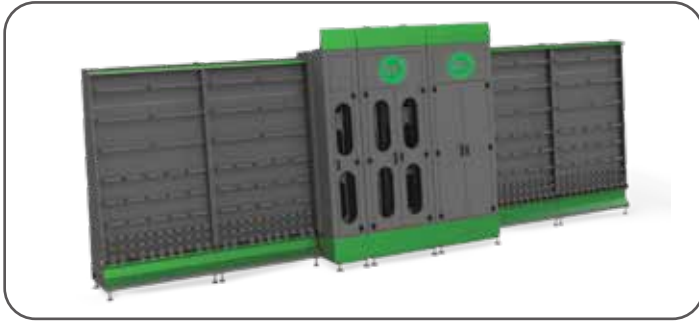
PPL	Glass Width (mm)				Machine Dimensions						
	2000	2500	2800	3300	L4	L5	L6	H1			
3000	3020	3025	3028	3033	3300	3200	3300	2000	2500	2800	3300
4000	4020	4025	4028	4033	4300	4200	4300	2750	3250	3550	4050
5000	5020	5025	5028	5033	5500	5200	5500				
Jumbo	XL20	XL25	XL28	XL33							
	Sizes										

## TECHNICAL DATA

	PPL 4.1			PPL 4.2		PPL 4.3	
Minimum Press Glass Size	6.69 x 13.78 in (170 x 350 mm)						
Minimum Press Glass Thickness	3 mm						
	Double Glazed Units	Opt 3: Triple Glass	Opt 4: Quadruple Glass	Opt. S: Step Glass	Panel Press	Maximum IG Thickness	Conveyor Type
PPL 4.1					Hydraulic (Opt. Servo)	60 mm	Roller
PPL 4.2					Hydraulic (Opt. Servo)	60 mm	Belt
PPL 4.3					Servo	60 mm (Opt 4. 100 mm)	Belt

# I VGW FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.

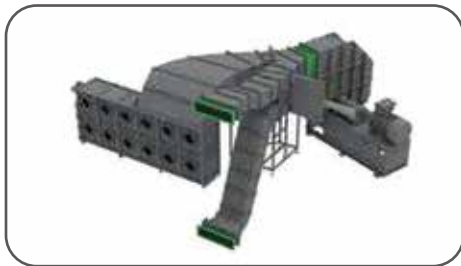


- ✓ Integration with sequential processes
- ✓ Automatic start/ stop system for brushes and blowers
- ✓ Possibility to increase productivity and upgrade

- ✓ All Surfaces in Contact with Water Are Stainless Steel
- ✓ Adjustable Washing Speed

- ✓ Configurable Structure
- ✓ Fast and Stainless Washing

- ✓ Low-E Glass Washing
- ✓ Easy Clean Nozzles



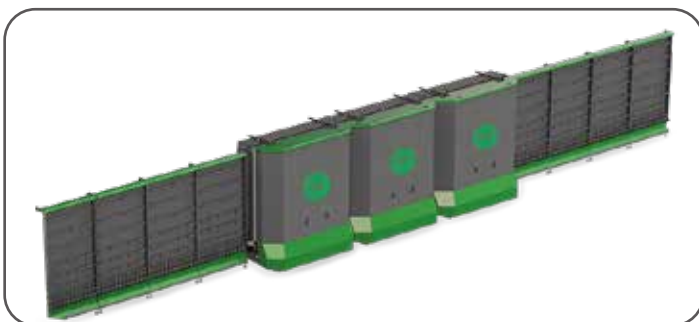
- ✓ Blower  
Soundproofed cabinet with adjustable temperature control, a resistive heating system, and an easy to clean, replaceable dust filter. Automatically stops the blower when no glass is present to save energy.



- ✓ External Brush Cab  
External cabinets ensure safe and efficient washing performance, with observation windows allowing clear visibility of the process.



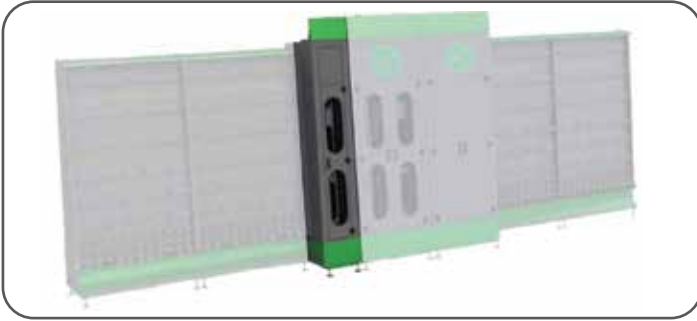
- ✓ Water Tank  
Critical water temperature and level control. Water distribution system to control the flow of water per brush.



- ✓ Jumbo and Tandem Glass Pressing Compatibility  
Modular design allows components to be added to the system to provide ability to wash Jumbo glass lites.



## I OPTIONAL FEATURES



### Pre-Washing

Ensures fast and effective cleaning by delivering optimal results at the start of the washing process.



### Additional Dust and Water Tank



### Automatic Water Filter (Self Cleaning)



### Stainless Steel Outer Body



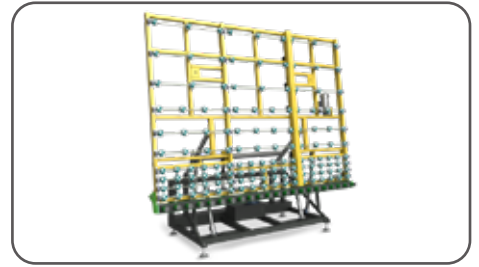
### Remote Access

Remote access feature provides advanced online assistance and troubleshooting. (Standard for GWL 4.2 and 4.3)



### Brush Speed Synchronization

Enables gentle yet effective washing of sensitive glass, including Low-E coated panels, by precisely controlling brush speed.



### Tilting Table

Transfer glass sheets from vertical processes to horizontal processes.



### Air Flow Control

Air distribution according to glass dimensions.

# I PPL FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



- ✓ Configure structure according to your preferences and needs
- ✓ Possibility of increasing functionality by adding options during operation
- ✓ Opening the front panel for service by 38 cm

- ✓ **Modular Structure**

- ✓ **Straight and Shaped Glass Pressing**

Straight and shaped glass pressing from shape library can be performed optimally.

- ✓ **Recipe Management**

Save data and settings, such as work order savings for servo machines and processing orders for future.

- ✓ **Sensitive 4 Points Pressing**

- ✓ **Operator Panel**

Take control of easy to control user operator panel.

- ✓ **Low-E Glass Pressing**

- ✓ **Remote Access**

Remote access feature provides advanced online assistance and troubleshooting.



- ✓ **Jumbo Compatibility**

Compatible integration with multiple pressing units for jumbo sized insulated glass lites in single operation. This compatibility allows you to upgrade your machine to jumbo/ tandem at any time with low cost.

## I OPTIONAL FEATURES



### Press Inlet

Easily prevent operator related delays and increase efficiency.



### Automatic Adjustment of Frame Mounting for Stepped IG Units (Standard for PPL 4.3)



### Tilting Table

Transfer insulated glass unit to sealing process. Vertical unit tilted down to horizontal position can be moved without an effort.



### Servo Press Front Panel

Delivers precise pressing by automatically adjusting pressure based on glass thickness and size.

Includes:

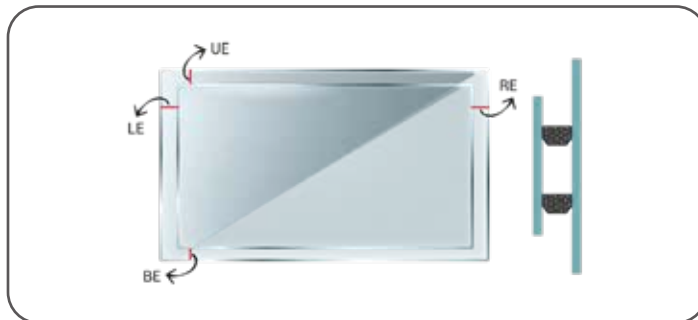
- Automatic Pressure Setting
- Automatic Time Setting



### Gas Filling System

Our intelligent software calculates the required gas volume based on glass length, height, and spacer thickness, ensuring efficient and accurate filling for every insulated glass unit.

- Flow Control
- Glass Height and Length Measurement
- Spacer and Thickness Measurement
- Narrowing and Press Area



### Step Glass Function

Highly controllable system with precisely positionable mechanisms, ensuring safe and stable pressing for structural, stepped, and façade glass units. Its advanced positioning technology and robust mechanical structure deliver reliable, high-quality production with user-friendly operation, ideal for any manufacturing facility.

# GLASS WASHING AND COMBINING LINE

The Glass Washing and Combining Line with Hydraulic Panel Press is capable of assembling and pressing double, triple, and structural insulating glass units, including stepped and façade glass, this fully automated system ensures high-efficiency production with consistent quality.



DOUBLE GLAZED IG



STAINLESS STEEL BODY  
(OPT.)



TILTING TABLE (OPT.)



LOW-E GLASS WASHING



LOW-E GLASS DETECTION  
(OPT.)



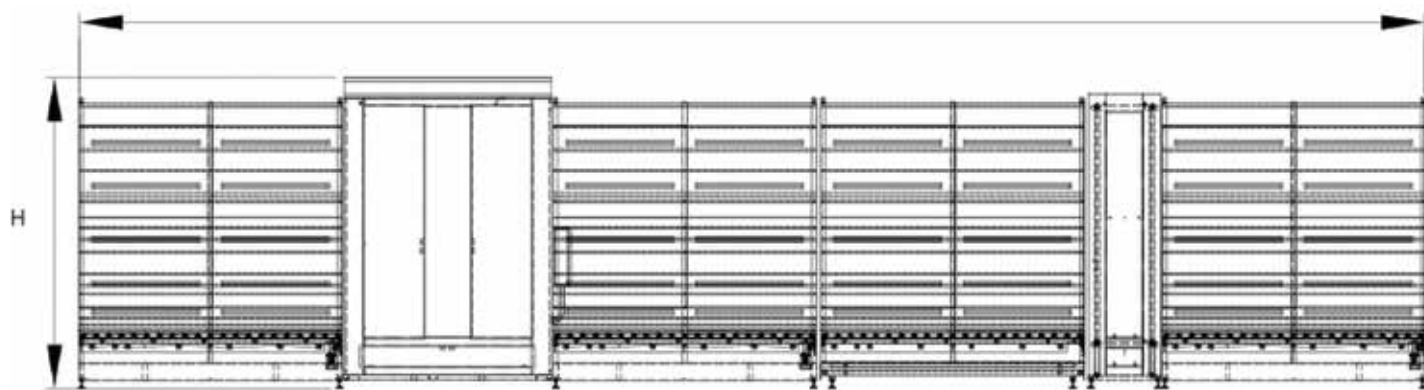
RIGHT TO LEFT WORKING  
DIRECTION (OPT.)



SAND FILTER (OPT.)



## I SPECIFICATIONS



### MODEL SIZES

DPYM	Length	Height
1700	590.55 in (15000 mm)	108.27 in (2750 mm)
2000	590.55 in (15000 mm)	120.08 in (3050 mm)
2500	590.55 in (15000 mm)	139.76 in (3550 mm)
2800	590.55 in (15000 mm)	159.45 in (4050 mm)

### TECHNICAL DATA

	DPYM 1700	DPYM 2000	DPYM 2500	DPYM 2800
Glass Thickness	2-10 mm			
Minimum Glass Size	6.69 x 13.78 in (170 x 350 mm)			
Speed	6 m/ min			
Maximum Glass Size	66.93 x 118.11 in (1700 x 3000 mm)	78.74 x 118.11 in (2000 x 3000 mm)	98.43 x 118.11 in (2500 x 3000 mm)	110.24 x 118.11 in (2800 x 3000 mm)
Brushes	4	6	6	6

# VERTICAL WASHING MACHINE

The Vertical Glass Washing machine features separate washing and drying cabinets, designed for automatic insulated glass production and pre-processing glass cleaning, ensuring optimal washing and drying performance.



LOW-E GLASS WASHING



STAINLESS STEEL BODY  
(OPT.)



TILTING TABLE (OPT.)



SAND FILTER (OPT.)



LOW-E GLASS DETECTION  
(OPT.)

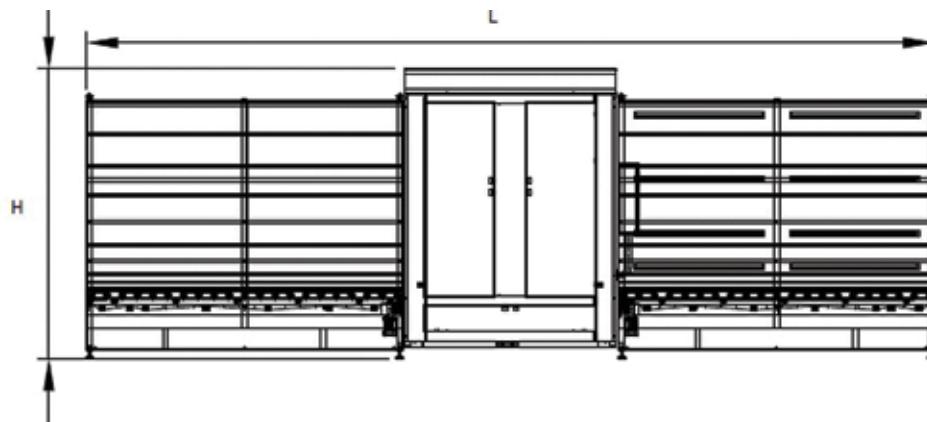


RIGHT TO LEFT WORKING  
DIRECTION (OPT.)





## I SPECIFICATIONS



### MODEL SIZES

CYM	Length	Height
1700	314.96 in (8000 mm)	108.27 in (2750 mm)

### TECHNICAL DATA

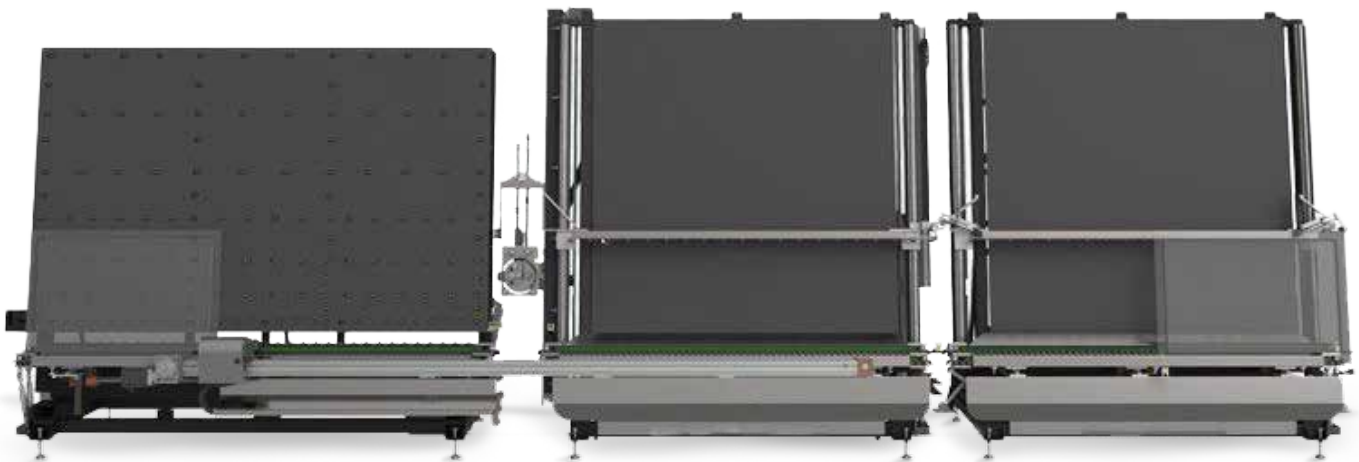
	CYM 1700/ 4	CYM 1700/ 6
Glass Thickness	2-10 mm	
Minimum Glass Size	6.69 x 13.78 in (170 x 350 mm)	
Speed	6 m/ min	
Maximum Glass Size	66.93 x 118.11 in (1700 x 3000 mm)	
Brushes	4	6

# AUTOMATIC SEALING ROBOT

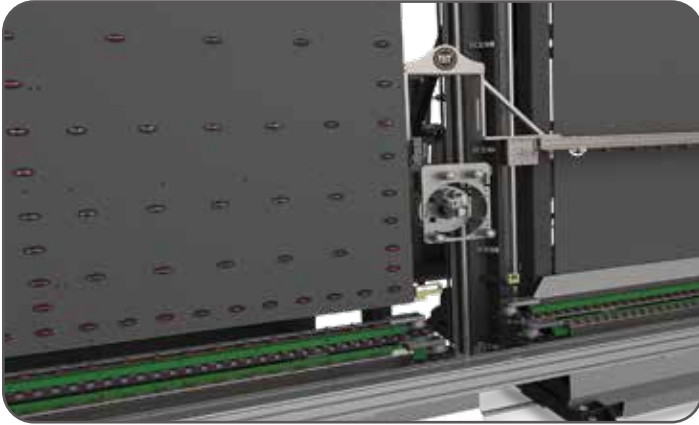
The servo motor driven Automatic Glass Sealing Robot performs the final sealing of insulated glass units with high precision and speed. Its advanced robotic design ensures accurate sealing at the corners and along the edges, delivering consistent quality across all units.

The machine automatically seals double, triple, and structural glass units, including stepped and façade configurations, with maximum efficiency and minimal manual intervention.

- ★ DOUBLE AND TRIPLE GLASS SEALING
- ★ CORNER CORRECTION
- ★ SCHÜCO PROFILE SEALING
- ★ STEPPED GLASS SEALING (OPT.)
- ★ STOCK CONVEYOR (OPT.)
- ★ CLEANING SYSTEM (OPT.)
- ★ DOUBLE PUMP SYSTEM (OPT.)
- ★ SERVO DRIVEN SYSTEM FOR PRESSURE CONTROL, FLOW RATE, AND PRECISE POSITIONING
- ★ REMOTE ACCESS



## I BREAKDOWN

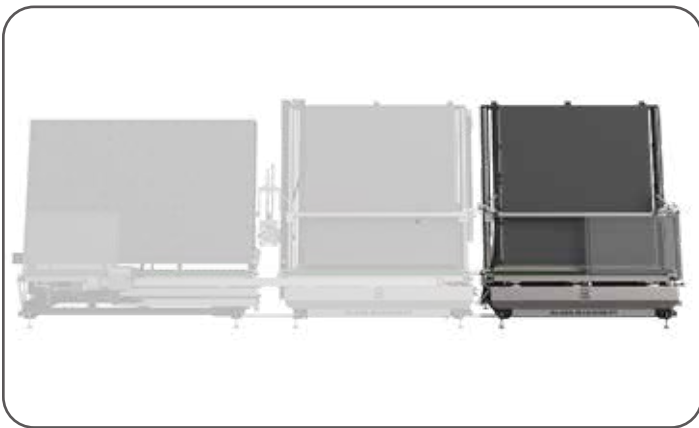


The **Sealing Unit** is developed by our expert team in robotic automation engineering, the sealing robot features advanced CNC infrastructure and multi-axis servo interpolation. It delivers precise and consistent sealing for both rectangular and shaped insulated glass units.

To ensure maximum quality and efficiency, the system continuously synchronizes speed, spacer depth, and sealant flow, maintaining perfect alignment and uniform application throughout the sealing process.

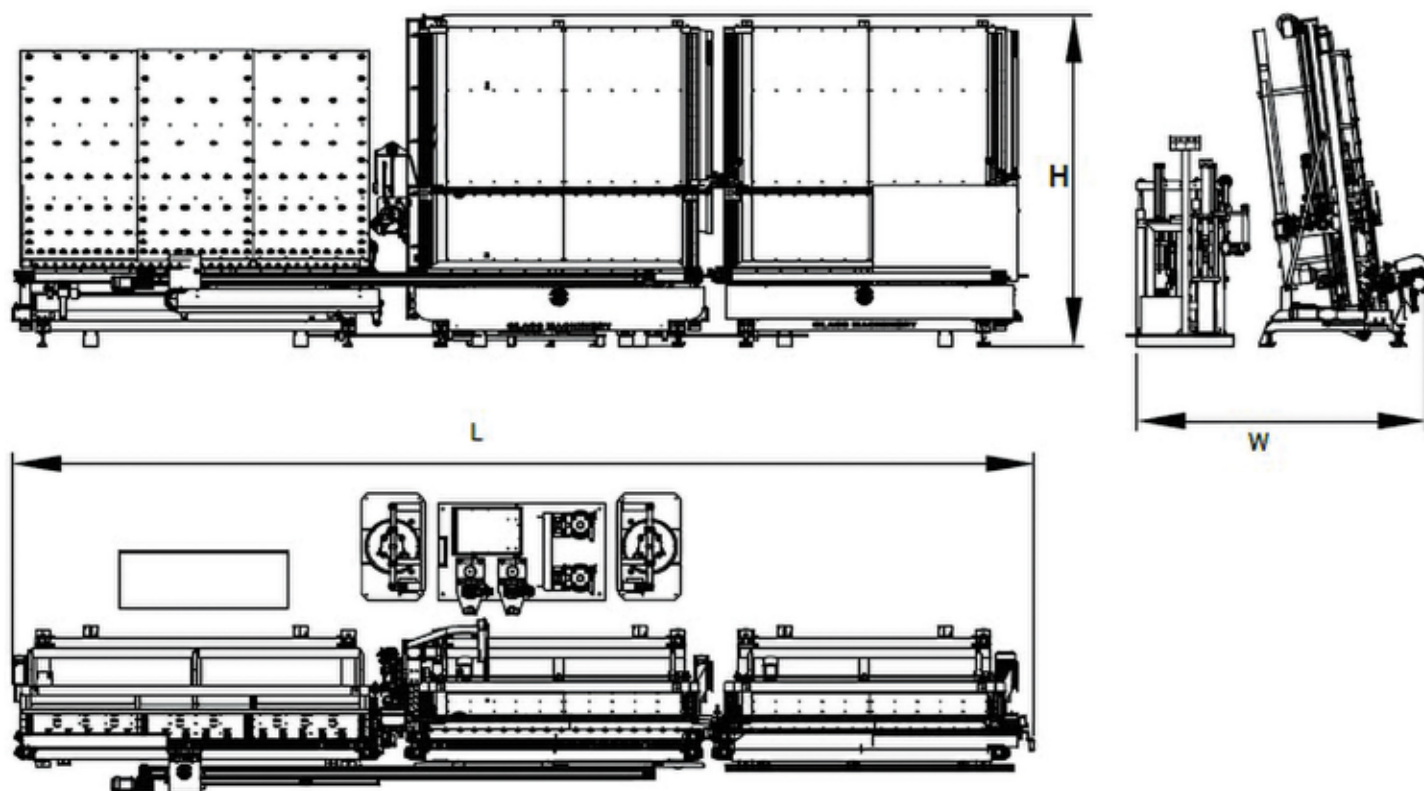


The **Servo Motor Control Hydraulic Pump System** allows for automatic adjustment of both material flow rate and dosage unit, ensuring precise control throughout the sealing process. This advanced feature guarantees a stable, consistent, and highly accurate automatic glass sealing solution, optimized for reliable and efficient production.



The **Outlet Conveyor** creates a dedicated stock area for finished products, enabling smoother workflow and reducing handling time. This enhancement further increases your production capacity and overall efficiency.

## I SPECIFICATIONS

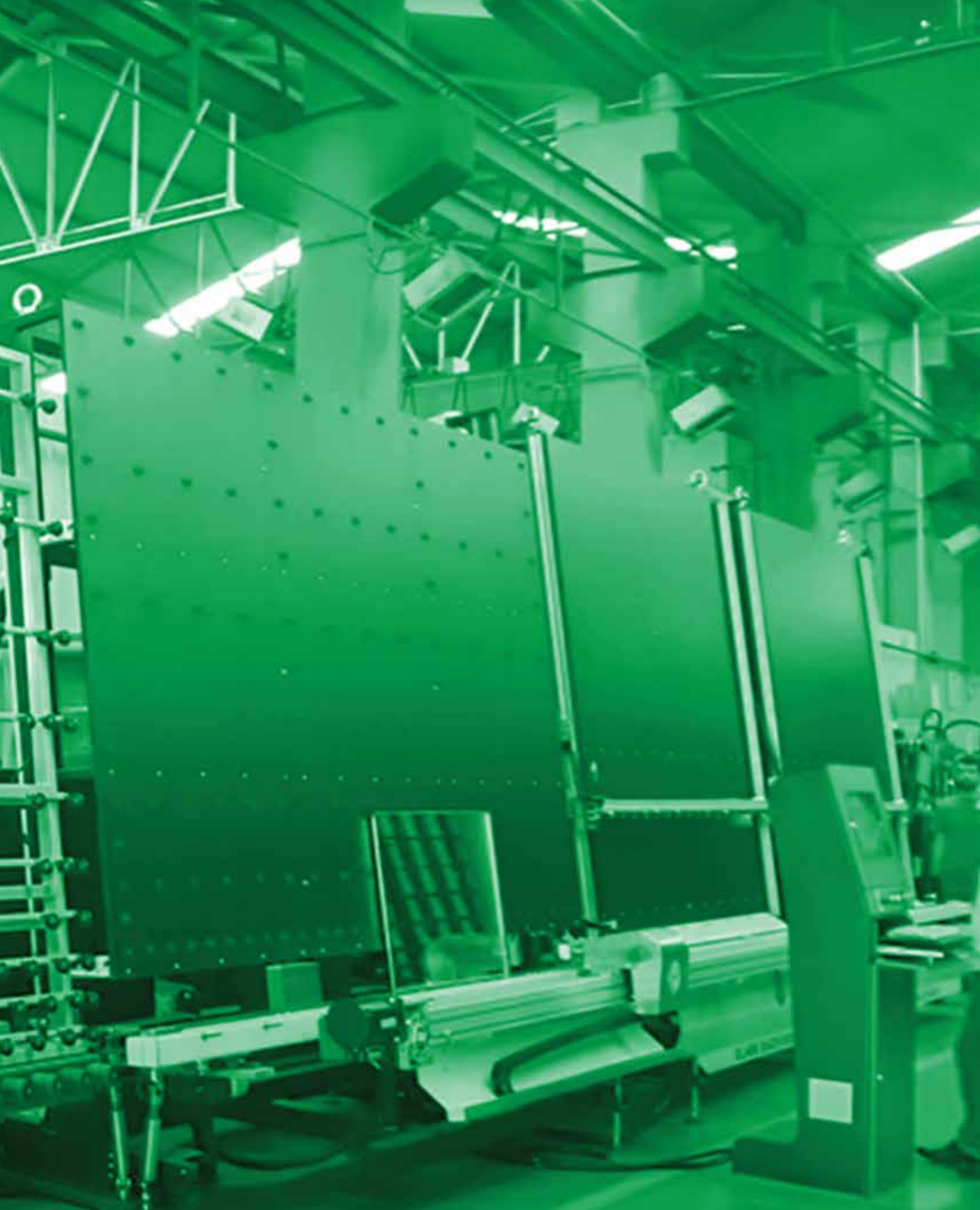


### MODEL SIZES

OTM	Length	Width	Height
2500	413.39 in (10500 mm)	118.11 in (3000 mm)	135.83 in (3450 mm)

### TECHNICAL DATA

	OTM
Frame Thickness	6-40 mm
Minimum Glass Size	19.66 x 11.42 in (500 x 290 mm)
Maximum Glass Size	118.11 x 98.43 in (3000 x 2500 mm)
Filling Depth	≤ 15 mm
Component Type	Polysulphide, Polyurethane, Silicone for Aluminum Frame Units
Processing Speed	6-40 mm
Pumps	1 unit (2 pcs. Opt.)





# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



- ✓ **Clean Chain Conveyor System**  
With the integrated chain system, vacuum glass holder, and servo motor drive technology controlling the entire process, the glass is positioned smoothly and precisely. This prevents the compound from spreading and ensures the system remains consistently clean in operation.

- ✓ **Smart Sealing System**
- ✓ **Serial Glass Sealing**
- ✓ **Automatic Corner Correction**
- ✓ **Fully Automatic Glass Sealing with Servo Motor Technology**
- ✓ **Easily Integrate with all Insulating Glass Production Lines**
- ✓ **Component Hose Heater for Cold Regions**
- ✓ **Recipe Management**  
Save data and settings, such as work order savings for servo machines and processing orders for future.
- ✓ **Operator Panel**  
Take control of easy to control user operator panel.
- ✓ **Remote Access**  
Remote access feature provides advanced online assistance and troubleshooting.



- ✓ **Automatic Glass Measuring System**  
Using a laser sensor system, we automatically measure the height, thickness, and spacer depth of the glass. This ensures the precise application of compound, reducing material costs, saving time, and increasing your production capacity.

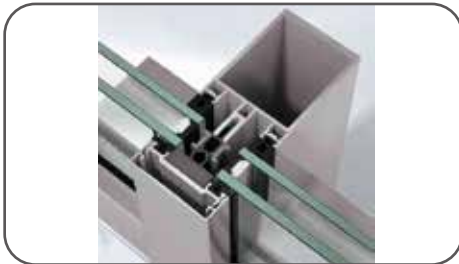


## I OPTIONAL FEATURES



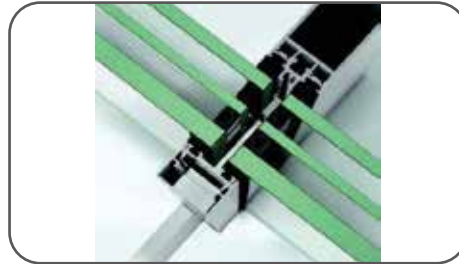
### ✓ Additional Pump System

Adding an extra pump to the system allows for the use of different types of compounds when needed. The second pump can also serve as a ready-to-use backup, minimizing downtime during barrel replacement. This ensures continuous production and adds a valuable layer of operational flexibility.



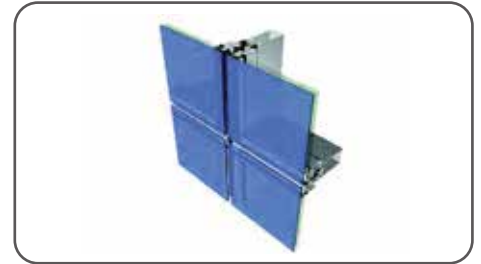
### ✓ Schüco Spacer Sealing

Easily perform sealing on Schüco spacers with precision and efficiency.



### ✓ Triple Glass Sealing

Apply triple glass sealing quickly, cost-effectively, and with maximum quality.



### ✓ Structural Glass Sealing

Designed specifically to seal the junction between the aluminum cassette and the glass in façade glass production. It helps you save time while achieving higher-quality results.



### ✓ Silicone Cleaning Pump

Designed to thoroughly clean the mixer system of glass sealing extruders using a high-pressure solvent.

- High pressure solvent cleaning system
- High quality cleaning with close circuit
- Working with air in case of power cuts
- Tank Capacity: 80 lt
- Hose Length: 2.5 m

# SEALING EXTRUDER

The glass Sealing Extruder is compatible with double-component silicone, polysulfide, or polyurethane materials, enabling efficient and reliable final sealing of insulated glass units.



HOSE HEATING SYSTEM



REMOTE ACCESS (OPT.)



HIGH PRESSURE WARNING SYSTEM



ADJUSTABLE MIXING RATIO



CONVENIENT SEALANT DELIVERY SYSTEM



SEALANT HARDENING PREVENTION SYSTEM



ADJUSTABLE HYDRAULIC WORKING PRESSURE



TELESCOPIC SUSPENSION



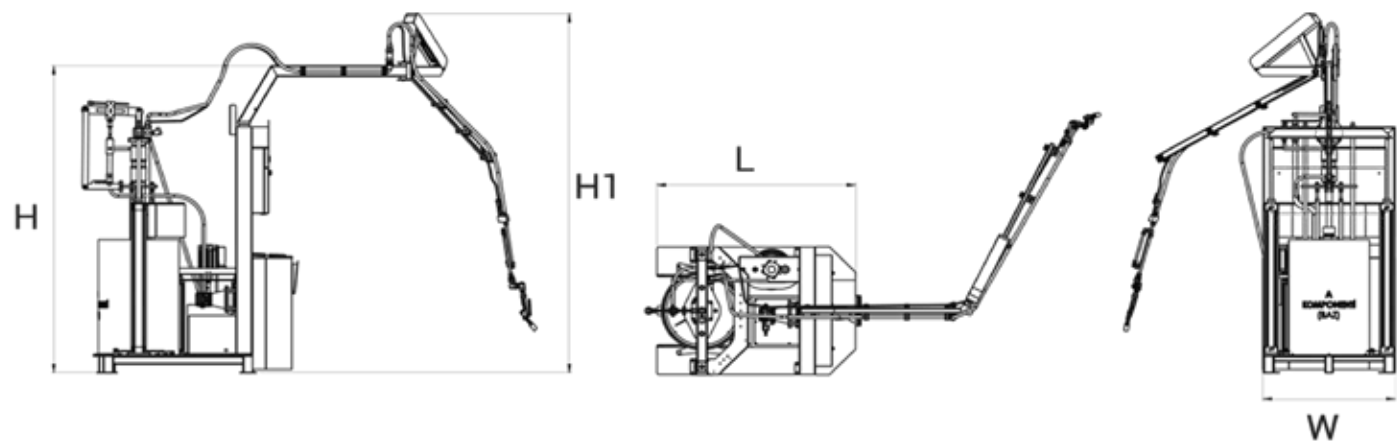
SEALANT LEVEL WARNING SYSTEM



APPLICATION GUN AND FREEZER WORKING HEIGHT CONTROL



# I SPECIFICATIONS



## MODEL SIZES

		Width	Length	L1	Height	H1
SET 1.0-T	Polysulphide/ Thiocol	38.39 in (975 mm)	59.06 in (1500 mm)	165.35 in (4200 mm)	92.52 in (2350 mm)	108.27 in (2750 mm)
SET 1.0-S	Silicone					
SET 1.0-PU	Polyurethane (Paste)					
SET 1.0-LPU	Polyurethane (Liquid)					

## TECHNICAL DATA

	SET 1.0
Mixing Ratio	1:5-1:15
Output Volume	0-3 lt/ min
Large Tank Capacity	200 lt/ min
Small Tank Capacity	20 lt/ min



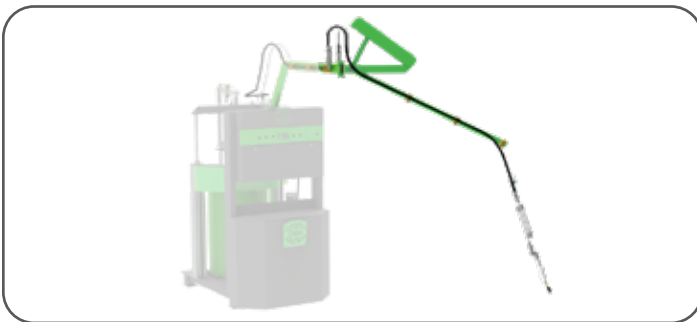
# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



- ✓ **Easy Drum Handling**  
The drum handling system, equipped with holes in the machine's body for a pallet truck, provides a fast and easy way to change and accurately center the new drum during material replacement.

- ✓ **Compact Design**
- ✓ **Adjustable Mixing Rate**
- ✓ **Adjustable Hydraulic Working Pressure**
- ✓ **Low Level Sensor System**  
Precisely monitor material levels throughout the sealing process. Accurate alerts enable proactive material management and ensure uninterrupted, seamless sealing of insulated glass units.
- ✓ **Freeze Warning System**  
Alerts the operator if ready-to-use material is unintentionally left in the mixer, helping prevent waste and ensuring safe, efficient operation.
- ✓ **High Pressure Safety System**  
Safeguard against unintended pressure increases by automatically cutting off the high-pressure source before reaching the set pressure limit, preventing risks associated with overpressure.



- ✓ **Telescopic Arm (Opt.)**  
Specifically designed for our glass sealing extruders, the telescopic arm unit allows for more convenient, faster, and easier sealing of large-sized insulated glass units.

- ✓ **Hose Heating System (Opt.)**
- ✓ **Drum Carrying Unit (Opt.)**
- ✓ **Remote Access (Opt.)**

# ROTARY TABLE

The Rotary Table is equipped with a double suction plate, the rotary table securely holds elements in place, ensuring optimal stability during the sealing of insulated glass units.



SUPPORT FOR LARGE  
IG UNITS



HEAVY GLASS HANDLING



ROTATION SPEED  
CONTROL



2 WORKING MODES



4 WORKING MODES



SUPPORT SETTING

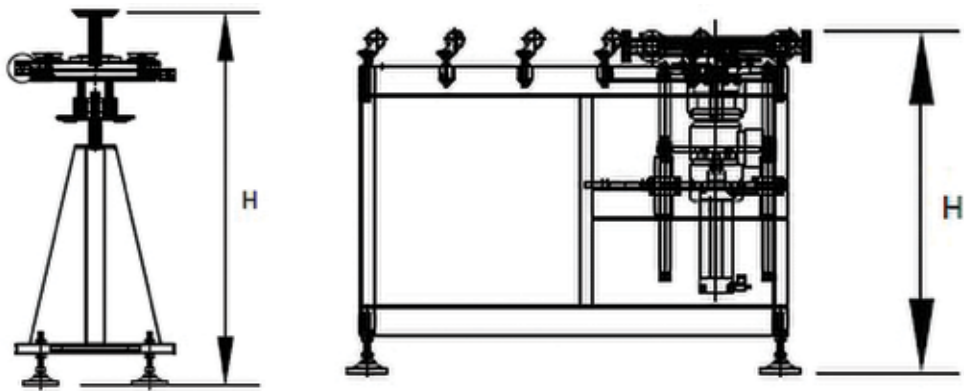


DIRECTION CONTROL



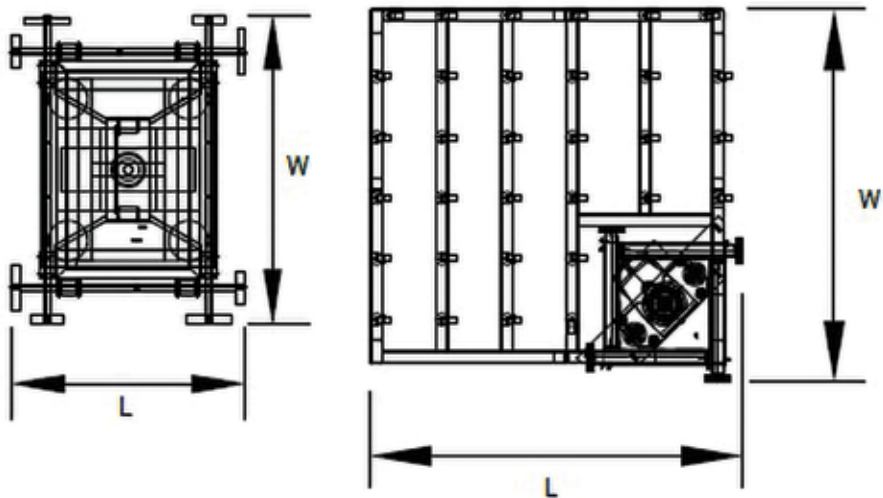


I SPECIFICATIONS



MODEL SIZES

DTM	Width	Length	Height
	33.46 in (850 mm)	25.59 in (650 mm)	45.28 in (1150 mm)



MODEL SIZES

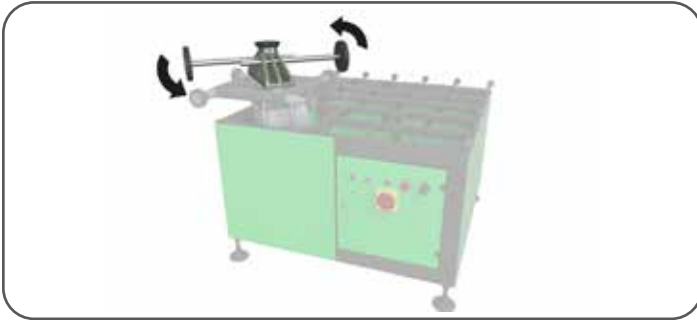
RTB	Width	Length	Height
	48.23 in (1225 mm)	48.23 in (1225 mm)	36.42 in (925 mm)

TECHNICAL DATA

	DTM	RTB
Minimum Glass Size	5.91 x 5.91 in (150 x 150 mm)	7.87 x 7.87 in (200 x 200 mm)
Maximum Glass Size	59.06 x 59.06 in (1500 x 1500 mm)	78.74 x 78.74 in (2000 x 2000 mm)

# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



## ✓ Adjustable Rotation Speed

Operators can customize the rotation speed to match their preferred working pace, enhancing control and improving overall efficiency with flexible speed settings.

(Only available for RTB model)

## ✓ Compact Design



## ✓ High Pneumatic Suction Force

## ✓ Easy Usage with Foot Pedal



## ✓ Small Size Glass Sealing

Our easily detachable auxiliary suction cup offers a convenient and efficient solution for sealing small-sized insulating glass units, streamlining the process for optimal handling.

## ✓ Large Size Glass Sealing

Our system is specially designed to handle and seal large insulating glass units efficiently. It ensures precise, reliable sealing for bigger surfaces, meeting the demands of large-scale production with ease.



## ✓ Different Rotation Options

We offer multiple turning options—90°, 180°, 360°, or continuous rotation—designed to provide your operator with easy, fast, and convenient operation.

# CLEANING PUMP AND FREEZER

The Silicone Cleaning Pump is used to clean the interior of the mixer in silicone glass sealing extruders. The Freezer unit is designed for two-component extruders (silicone, polysulfide, or polyurethane) to prevent material in the mixing group from curing during standby periods longer than ten minutes.



WORKING WITH AIR IN  
CASE OF POWER CUT

## MODEL SIZES

SC	Width	Height
	119.29 in (3030 mm)	59.06 in (1500 mm)

## TECHNICAL DATA

	SC
Tank Size	15.75 x 26.57 in (400 x 675 mm)
Tank Capacity	80 lt
Hose Length	2.5 m



STAINLESS STEEL



ADJUSTABLE WORKING  
TEMPERATURE



## MODEL SIZES

TF	Width	Length	Height
	27.56 in (700 mm)	27.56 in (700 mm)	43.31 in (1100 mm)

## TECHNICAL DATA

	TF
Working Temperature	-35 °C/ +50 °C

# AUTOMATIC DESICCANT FILLING MACHINE

The Automatic Desiccant Filling machine simultaneously fills both sides of the spacer frame with desiccant, ensuring fast and efficient preparation for insulated glass unit production.



6-30 MM FRAME FILLING



WORKING HEIGHT  
ADJUSTMENTS



FILLING CONTROL



AUTOMATIC DRILLING AND  
SEALING



FULLY AUTOMATIC FILLING



BUTYL TANK



REMOTE ACCESS



DESICCANT TANK



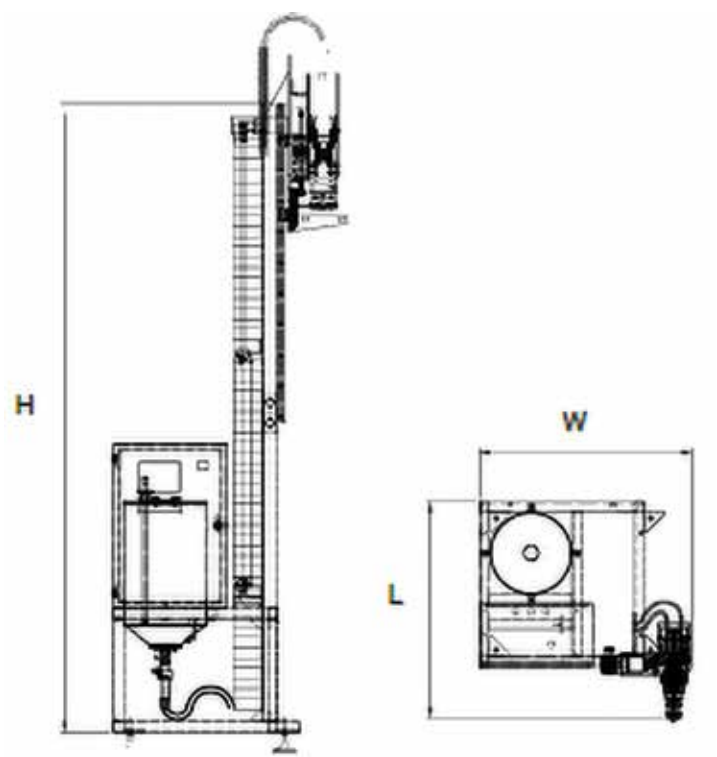
PLC CONTROL



VOLUME CONTROL



# I SPECIFICATIONS



## MODEL SIZES

ADF	Width	Length	Height
	43.31 in (1100 mm)	43.31 in (1100 mm)	137.80 in (3500 mm)

## TECHNICAL DATA

	ADF
Minimum Frame Size	9.84 x 9.84 in (250 x 250 mm)
Maximum Frame Size	78.74 x 78.74 in (2000 x 2000 mm)
Frame Thickness	6-24 mm
Silica Gel Diameter	0.5-0.8 mm

# DESICCANT FILLING MACHINE

The Desiccant Filling Machine is designed to fill spacer bars with desiccant material, effectively preventing moisture buildup inside insulated glass units.



PNEUMATIC VIBRATION



STORAGE TANK



FILLING CONTROL



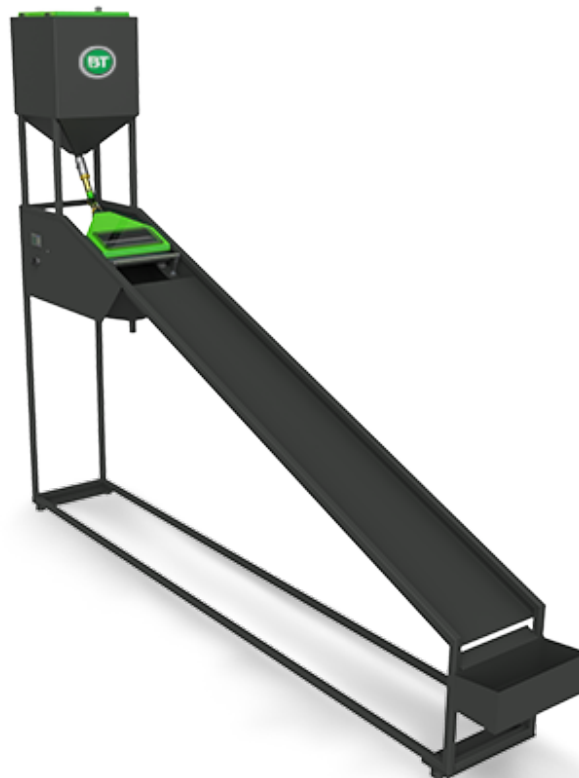
ELECTRIC HEATING



MAIN TANK

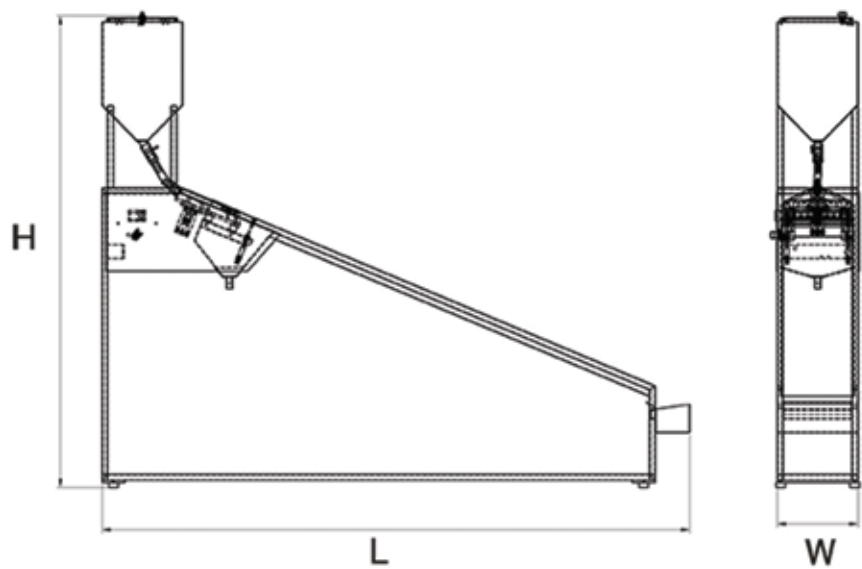


SIMULTANEOUS CUTTING  
OF FRAMES





I SPECIFICATIONS



MODEL SIZES

	Width	Length	Height
SM	15.75 in (400 mm)	100.39 in (2550 mm)	78.74 in (2000 mm)

TECHNICAL DATA

	SM
Main Tank Capacity	25 kg

# AUTOMATIC SPACER BENDING MACHINE

Designed for fully automatic bending of bendable aluminum spacers in various thicknesses, this machine streamlines the production of insulated glass units. Integrated optimization software minimizes spacer waste for efficient and cost-effective operation.



AUTOMATIC SPACER  
ADDING



SERVO MOTOR DRIVEN  
MOVEMENT SYSTEM



THICK SPACER BENDING  
FOR 6-30 MM (OPT.)



MULTIFUNCTIONAL  
BENDING HEAD



COMMUNICATIONS WITH  
GLASS CUTTING TABLE



SHAPE BENDING (OPT.)



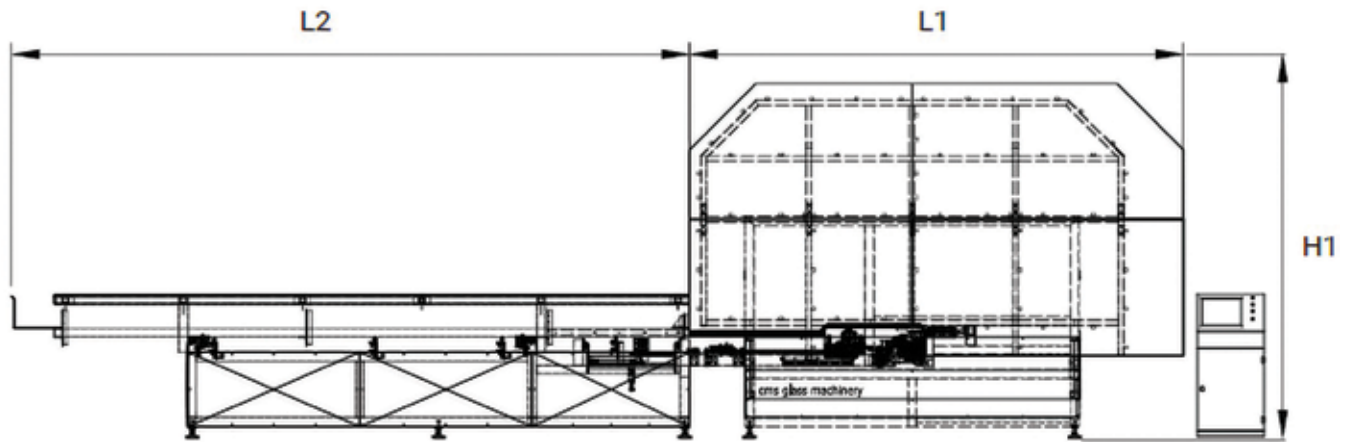
REMOTE CONTROL



GAS FILLING HOLE



# I SPECIFICATIONS



## MODEL SIZES

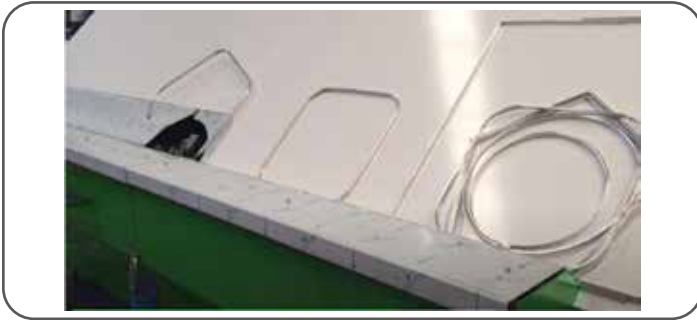
	T-Spacer	L-Spacer	W-Spacer	L1	L2	H1
APB	0.24-0.94 in (6-24 mm)	78.74 in (2000 mm)	98.43 in (2500 mm)	173.23 in (4400 mm)	239.37 in (6080 mm)	102.36 in (2600 mm)

## TECHNICAL DATA

	APB
Minimum Frame Size	9.84 x 9.84 in (250 x 250 mm)
Maximum Frame Size	78.74 x 78.74 in (2000 x 2000 mm)
Frame Thickness	6-24 mm
Minimum Frame Wall Thickness	0.3 mm
Cutting Length	9.84-157.48 in (250-4000 mm)
Frame Storage Shelves	4
Bending Allowance	±0.3 mm

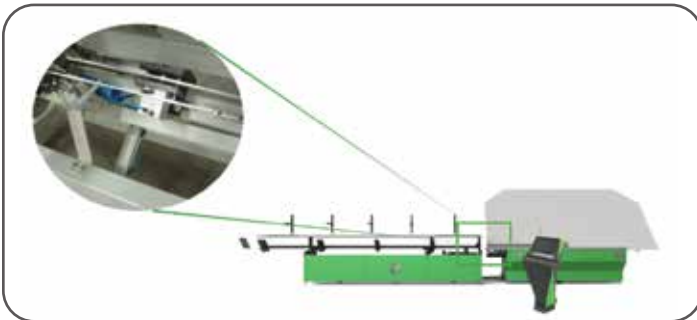
# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



- ✓ **Servo Motor Technology**  
Bends spacers to your desired sizes at maximum speed. The system ensures precise angles and dimensions every time, with minimal spacer waste for optimal efficiency.

- ✓ **Rectangular and Shaped Spacer Bending**
- ✓ **Serial Production**
- ✓ **Bending Optimization**
- ✓ **Recipe Management**  
Save data and settings, such as work order savings for servo machines and processing orders for future.
- ✓ **Operator Panel**  
Take control of easy to control user operator panel.
- ✓ **Remote Access**  
Remote access feature provides advanced online assistance and troubleshooting.
- ✓ **Stock Magazine**  
Various spacer types and thicknesses can be stored with ease. Magazines can be changed at any time based on the required spacer type for bending. Designed for convenience and efficiency, the system also helps save valuable space in your production area.



- ✓ **Automatic Spacer Insertion System**  
Feeds long spacer bars directly from the magazine and joins them to create endless spacers. This ensures a continuous supply to the bending system, minimizing spacer waste and maximizing production efficiency.

## I OPTIONAL FEATURES



### ✓ Automatic Argon Gas Hole Drilling

Optionally integrate into our automatic spacer bending machine upon request. It is designed to drill precise holes in spacers for argon gas filling, making them compatible with manual argon filling devices used in insulating glass production.

### ✓ Data Transfer

Allows the bending machine to receive spacer information directly for automatic bending. While it is specifically designed to integrate seamlessly with our glass cutting machines, it is also compatible with most other glass cutting systems and can be connected through your ERP system.

### ✓ Shaped Spacer Bending

Optionally bend spacers into various shapes using our in-house developed shape library. The software includes a wide range of pre-loaded, commonly used shapes for insulating glass production, making the process efficient and user-friendly.

# BUTYL EXTRUDER

The butyl extruder is designed for the primary sealing of spacer bars with varying thicknesses, ensuring reliable bonding for insulated glass units.



ON/ OFF TIMER



AUTOMATIC TEMPERATURE  
CONTROL



FRAME FIXING

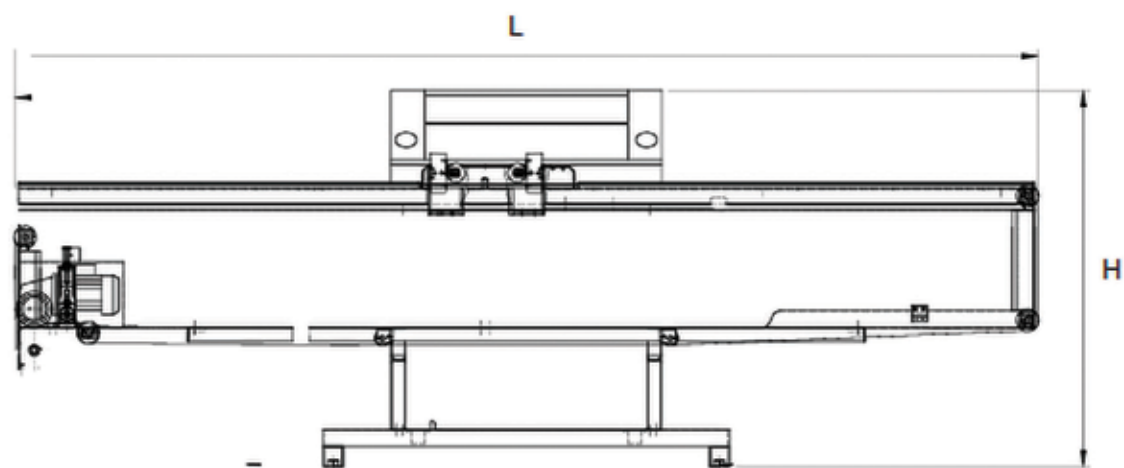


LOGO CONTROLLER





# I SPECIFICATIONS



## MODEL SIZES

	Length	Height	H1
BM7	119.29 in (3030 mm)	43.70 in (1110 mm)	35.43 in (900 mm)

## TECHNICAL DATA

	BM7
Tank Capacity	7 kg
Bank Speed	22 m/min
Minimum Spacer Thickness	6 mm
Maximum Spacer Thickness	24 mm (Opt. 30 mm)

# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.



- ✓ **Operator Panel**  
Our state-of-the-art, ergonomic control panel puts you in command of the entire butyl drawing process—automatically and effortlessly. Designed with advanced software, it ensures precision, consistency, and ease of use, streamlining operations while keeping you in full control.

- ✓ **Heat Insulated Butyl Tank**
- ✓ **High Pressure Safety**
- ✓ **Adjustable Material Flow Rate and Pressure**
- ✓ **Automatic and Manual Operation**
- ✓ **Precise Temperature Control**  
Features a Proportional-Integral-Derivative (PID) controller to precisely maintain the preset temperature of the material, ensuring consistent performance and optimal application conditions.



- ✓ **Always Ready to Work (Opt.)**  
With the integrated timer system, you can schedule the exact days and times your machine will automatically begin heating and when it will shut down. This intelligent feature ensures that your machine is fully heated and ready for butyl application when the workday begins, and it automatically switches to cooling mode and powers off at the end of the day, saving both time and energy.



# SPACER CUTTING MACHINE

The Spacer Cutting Machine is equipped with a high-performance, durable circular saw designed for precise cutting of long spacer bars used in insulated glass units. This ensures clean cuts, consistent lengths, and reliable operation in high-demand environments.



DIGITAL CONTROLLER



SHELF RACK



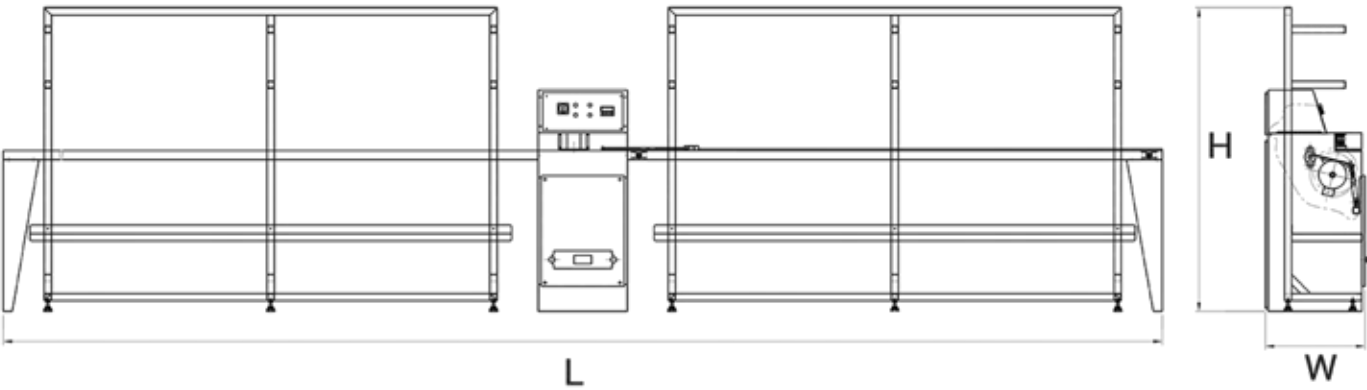
SIMULTANEOUS CUTTING  
OF FRAMES



ADJUSTABLE DISTANCE  
BETWEEN FRAMES



# I SPECIFICATIONS



## MODEL SIZES

	Width	Length	Height
PKM 2800	22.05 in (560 mm)	225.91 in (6500 mm)	66.93 in (1700 mm)

## TECHNICAL DATA

	PKM 2800
Minimum Spacer Length	3.94 in (100 mm)
Maximum Spacer Length	110.24 in (2800 mm)

# I FEATURES

The main functions and features included as standard in our machines are structured to respond quickly and effectively to user needs.

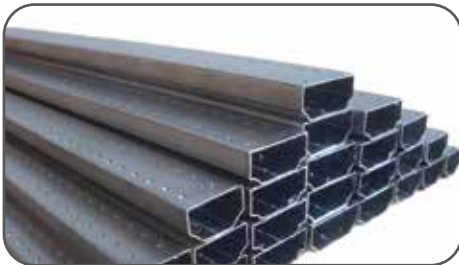


- ✓ **Comfortable Cut with Spacer Fixing**  
Our pneumatic-controlled clamping system securely holds spacers in place during cutting, ensuring each cut is precise and consistent in quality.

- ✓ **Adjusting Distance Between Frames**

- ✓ **Foot Pedal**

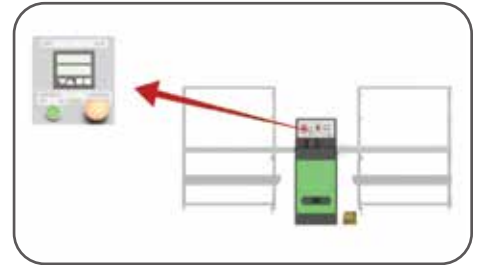
- ✓ **Easy Operation**



- ✓ **Burr-Free Spacer Cutting**  
Our specially designed circular saw ensures high-quality, burr-free cutting of spacers—delivering perfect results with every use.



- ✓ **Multiple Spacer Cutting**  
Simultaneous cutting of several frames of a given size.



- ✓ **Digital Measurement Indicator**  
Easily monitor and verify the dimensions of the spacer to be cut using the integrated digital measurement indicator, ensuring accuracy and control throughout the cutting process.



# HOTMELT EXTRUDER AND SPACER FRAME CARRIER

The Hotmelt Extruder is designed for the final sealing of insulated glass units using hotmelt material. Featuring an ergonomic hose and gun system, it allows for smooth, accurate, and effortless application, ensuring a proper seal every time. Its aluminum tank is built to withstand high temperatures, offering long-term durability and reliable performance. Positioned between the butyl extruder and the insulated glass production line, the Spacer Frame Carrying Unit holds finished spacer frames that are already coated with butyl in an organized manner, helping maintain a continuous and efficient workflow.



TEMPERATURE CONTROL SYSTEM

## MODEL SIZES

HM	Width	Length	Height
	29.53 in (750 mm)	35.43 in (900 mm)	64.96 in (1650 mm)

## TECHNICAL DATA

	HM
Tank Capacity	50 kg



PHOTOCELL MOTION SENSOR



## MODEL SIZES

PTU	Width	Length	Height
	135.83 in (3450 mm)	118.11 in (3000 mm)	108.27 in (2750 mm)

## TECHNICAL DATA

	PTU
Frame Capacity	120 pcs.



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