



# Marval

SINCE 1985



INNOVATIVE **INSULATING GLASS** SOLUTIONS AND TECHNOLOGIES



AUTOMATIC ROBOTIC SEALING MACHINE  
**ROBO SEAL**



# AUTOMATIC ROBOTIC SEALING MACHINE

The automatic robotic sealing machine manufactured by Marval adds the **final seal** to already coupled and pressed rectangular insulating glass panels, thereby ensuring perfect corner sealing and maximum speed. "ROBO SEAL" is available in four versions: 2,000, 2,500, 2,800 and, on request, up to 3,250 mm long.

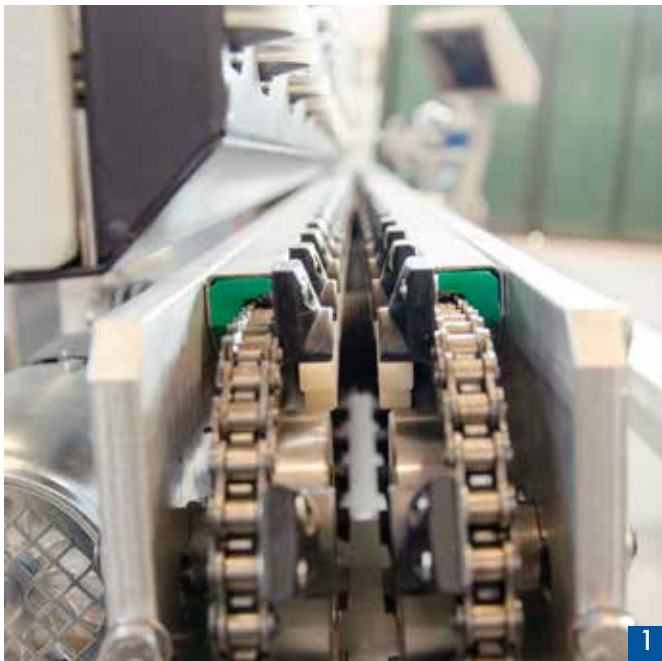
A **chain conveyor** system equipped with plugs to support the glass sheets prevents contact with the sealed part, while a front suction cup ensures that it moves precisely and correctly.

# ROBO SEAL

The extruder, the beating heart of this machine, can dispense **any type of sealant** – whether it is polyphosphide, silicone or polyurethane based – or other products on the market.

A multi-axis CNC controller programs and controls every step of the process, thus ensuring a perfect finish even if the spacer is not positioned correctly.

This high performance machine **can be implemented** in existing insulating glass production lines.



## Outfeed conveyor

[ 1 ]

The outfeed conveyor is made up of chains fitted with **special dowels**. They only support the glass on the external edge: this prevents the sealant applied on the bottom side of the glass from soiling the transport system and the following glass sheets as a result.

The outfeed conveyor is **split into two parts**, so as to allow the sealing of one glass while a second remains on the unloading station.



## Mobile suction cups

[ 2 ]

During the various processing phases, glass is transported and positioned by a pair of mobile suction cups moved by a linear actuator.

The numerically-controlled **brushless drive** moves the glass forward at variable speed in relation to the amount of sealant to be applied.

ROBOSEAL	2000	2500	2800
Work table height	700 +/- 30mm	700 +/- 30mm	700 +/- 30mm
Minimum glass sizes (height x length)	200mm x 400mm	250mm x 500mm	250mm x 500mm
Maximum glass sizes (height x length)	2,000mm x 4,000mm	2,500mm x 4,000mm	2,800mm x 4,000mm
Double glazing thickness	12mm to 40mm	12mm to 40mm	12mm to 40mm
Maximum triple glazing thickness	80mm	80mm	80mm
Installed power	6Kw	8Kw	10Kw
Variable speed	5 to 20m/min	5 to 20m/min	5 to 20m/min
Infeed frame (double drive)	4,200mm	4,200mm	4,200mm
Outfeed frame (double drive)	4,200mm	4,200mm	4,200mm
Compressed air	6 bar - 1/2'	6 bar - 1/2'	6 bar - 1/2'
Overall dimensions (height x length x depth)	3,200 x 9,500 x 2,000mm	3,700 x 9,500 x 2,250mm	4,000 x 9,500 x 2,500mm

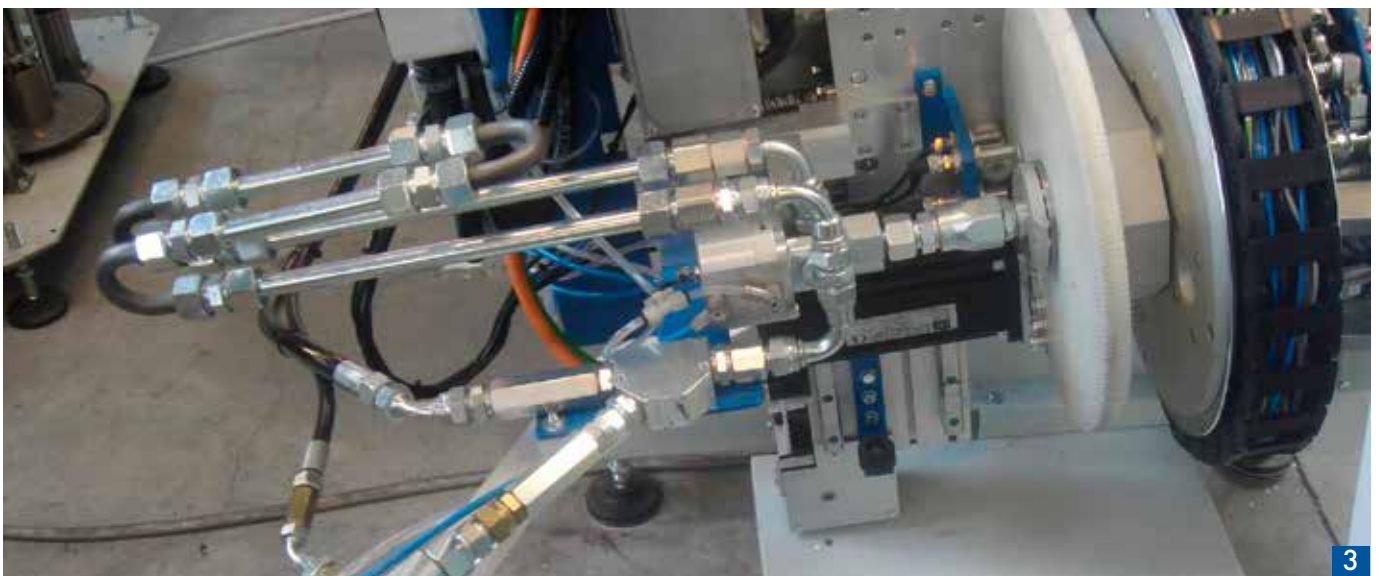
### Sealing head

The sealing head is the heart of the machine: this is where most of the equipment that ensures the correct application of the sealant is located.

The structure moves along a vertical axis controlled by a linear actuator that allows the sealing gun to apply the sealant on the two vertical sides of the glass.

[ 3 ]

It also features the **extrusion gun** with the related movement system to approach the glass; the **spatula** to finish the corners; the **depth sensor** that detects the distance from the edge of the glass to the groove and sends the information required to manage the product application speed to the numerical control. A dedicated **lifting system** vertically moves the pumps and the "pressing plates" inserted inside the drums containing the product.





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