VGW
Vertical Glass Washing & Drying Line

CMS

✦ **CMS Simplicity**
Combined with Glass Clarity

Models & Sizes

Z2

Z1

L1 | L3 | L2 | L4
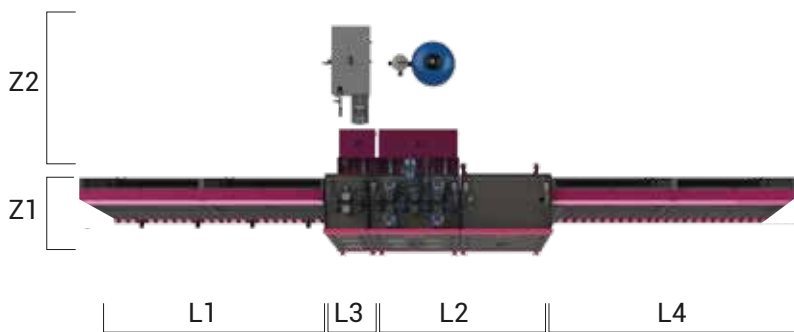
	Glass Thickness	Min. Glass Size	Brush Quantity	Low-E
VGW4.50	3-32 mm	350x170 mm	6	
VGW4.60	3-32 mm	350x170 mm	6	
	Automatic Brush Positioning			

VGW	Glass Width (W) (mm)				Machine Dimensions (mm)						
	2000	2500	2800	3300	L1	L2	L3	2000	2500	2800	3300
									H1		
3000	3020	3025	3028	3033	3260	2450	3260				
4000	4020	4025	4028	4033	4100	2450	4100	3050	3550	3850	4350
4500	4520	4525	4528	4533	4600	2700	4600				
5000	5020	5025	5028	5033	5300	2450	5300				
Jumbo	XL20	XL25	XL28	XL33	*Please contact your sales representative for different size requests.*						

Glass Length (L)

VGW Vertical Glass Washing & Drying Line

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System Configuration

VGW Series that is specially designed to wash and dry glass sheets automatically with high efficiency and performance, is also configurable according to your needs and your space. VGW series is upgradable in models and technology for your future needs.

A- Inlet Conveyor

The Inlet Conveyor is a loading zone conveyor that is designed to load glass sheets into the washing line.

+ Easy loading feature on big size glass sheets with loading support legs
+ Compatibility for Jumbo size glass sheets
+ Ability to add both functions and components with modular infrastructure
+ Step-by-step or continuous feed control *(Standard in 4.50 and 4.60 versions)*

B- Washing/Drying Machine

Washing and Drying Machine has been developed in order to wash the glass sheets with high quality washing brushes at maximum quality and to reliably dry the sheets with specially designed fans.

+ Maximum sensitivity, maximum quality
+ Long-lasting and maintenance-free washing system
+ Smooth drying performance
+ Vibration free working thanks to heavy and robust steel construction structure

C- Outlet Conveyor
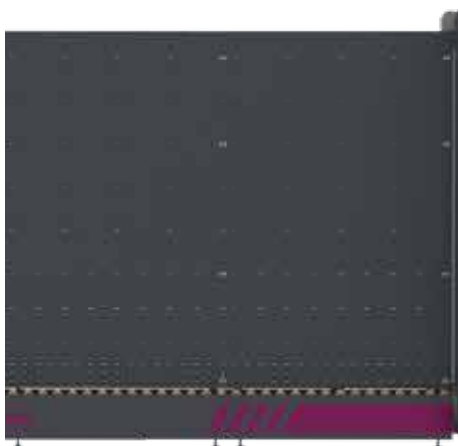
The Outlet Conveyor provides the transfer of glass sheets from washing and drying machines to the next process.

+ Compatibility for Jumbo size glass sheets
+ Ability to add both functions and components thanks to the modular infrastructure

Key Features

📶 **Adjustable Washing Speed (Line Speed)**

⚙️ **Configurable System Infrastructure**

✅ **Fast and Stainless Washing Performance**

🪥 **External Brush Cab**

External cabs provide safe & clear washing performance and the process can be watched by the help of observation windows.

🚪 **Water Tank**

+ Critical water level control
+ Water temperature control
+ Sand filter

+ Stainless steel water tanks
+ Water hardness measurement (Opt.)
+ Automatic water drainage and renewal system (opt.)

🖼️ **Jumbo / Tandem Line Compatibility**

Compatible to be integrated with multiple pressing units to press jumbo sized insulated glass units in single operation. This compatibility allows you to upgrade your machine to tandem/jumbo pressing line any time with low costs.

❙ *Servo pressing option is required for compatibility*

✅ Integration with consecutive processes *(communication and speed integration)*

✅ Automatic start-stop system for washing brushes and glass drying valves

✅ Specially designed and low noise drying fan cabinet

✅ Possibility to upgrade capacity and version at any time

✅ Low energy consumption drying system

✅ Washing parts made of stainless steel

Optional Features

Opt. VGW. DFT
Additional Sand Filter
& Water Tank

Opt. VGW. SCF
Self Cleaning Water Filter

Opt. VGW. SSB
Stainless Steel Outer Body
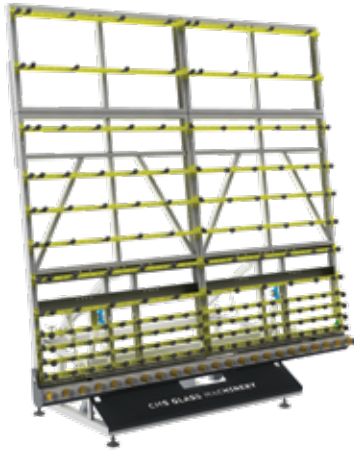
Opt. Tilting Table

Transfers glass sheets from vertical processes to horizontal processes

Opt. 8 Glass Conveying Height 650 mm (± 50)

✦ Standard working height 520mm ±50

Opt. VGW. BSS Brush Speed Synchronization

Sensitive glass washing results can be achieved in Low-E coated plates with the adjustable washing brush speed.

✦ Optional for version 4.5   ✦ Standard for version 4.6

Opt. RAF Remote Access

Remote access feature provides advanced online assistance and troubleshooting
✦ *Valid for VGW 4.5 and VGW 4.6 models.*

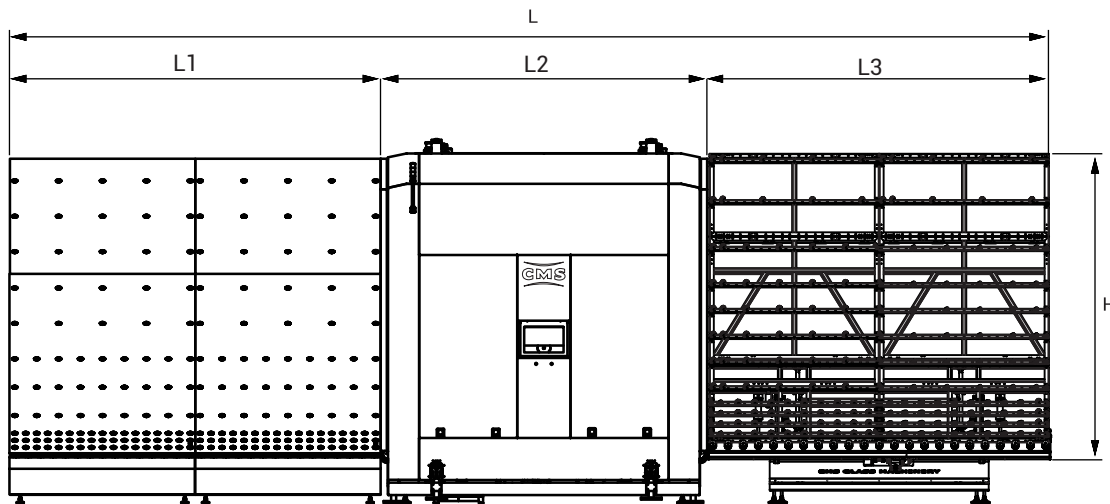### **VGW. LAS**
Low-E Glass Surface Detection

✦ *It is used for warning in faulty glass feeds.*

Opt. AY1 Conveyor Lighting

Opt. DSB Washing Outlet Stock Management
✦ *Standard for VGW4.50 and VGW4.60 versions.*

PPL Panel Press Line

CMS

★ Glass Thickness : Min. 3 mm

★ Min. Glass Dimension: 350x170 mm

	PPL4.5	PPL4.6
Minimum Glass Size for Press	170 x 350 mm	
Minimum Glass Thickness for Press	3 mm	
Maximum Conveyor Carrying Capacity	250 kg/m	

	Double Glazed Units	Opt. 3: Triple Glass	Opt. 4: Quadruple Glass	Opt.S: Step Glass	Panel Press	Max. IG Thickness	Conveyor Type
PPL4.5			-	-	Hydraulic (Opt. Servo)	60 mm	Belt
PPL4.6					Servo	60 mm (100 mm for Opt.4)	Belt

Images are representative only

PPL	Glass Width (W) (mm)								Machine Dimensions (mm)			
Glass Length (L)	**2000**	**2500**	**2800**	**3300**	**L**	**L1**	**L2**	**L3**	**2000**	**2500**	**2800**	**3300**
											H	
3000	3020	3025	3028	3033	9800	3300	3200	3300				
4000	4020	4025	4028	4033	10800	4300	4200	4300	2750	3250	3550	4050
4500	4520	4525	4528	4533	11300	4800	4700	4800				
5000	5020	5025	5028	5033	12000	5500	5200	5500				
Jumbo	XL20	XL25	XL28	XL33	Please contact to your sales representative for different size requests.							

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* Units of measurement - mm.

System Configuration

PPL4.0 Serie is designed for homogenious pressing process in order to produce high-capacity insulated glasses. PPL4.0 Serie is configurable according to your preferences and needs.

A- Assembly Conveyor

A1

A2
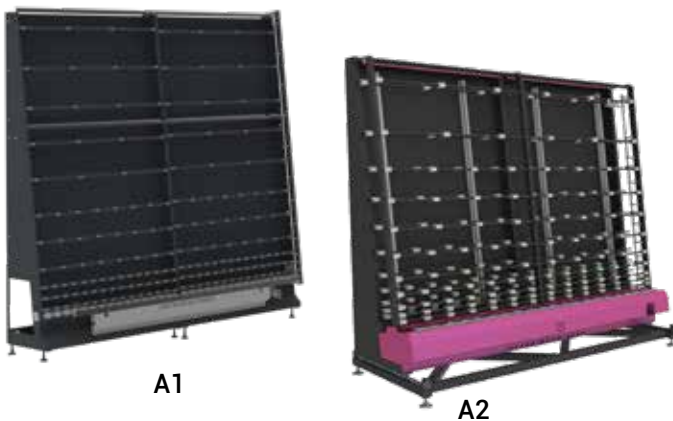
Assembly conveyor is designed to place spacer frames on the clean glass coming from washing unit.

A1 - Manual Frame Mounting System

✦ Manual Positioning
✦ Automatic Positioning (Opt.) for 4.6 (Std.)
✦ Spacer Alignment From Top for Big Sized Glasses (Opt.)

A2 - Double Section Frame Mounting (Opt.): Increase productivity without increasing line's length.

✦ Manual Positioning
✦ Automatic Positioning (Opt.) for 4.6 (Std.)
✦ Spacer Alignment From Top for Big Sized Glasses (Opt.)

B- Pressing Unit

Pressing unit is a product of technology, experience and industry experts coming together.
The system can be configured according to your present and future needs.

✦ Modular Chassis and Functions
✦ Strong and Sturdy Chassis
✦ Precise pressing from 4 points
✦ Hydraulic / Servo front panel drive system
✦ High speed automatic vacuum system

C- Press Output

C1

C2
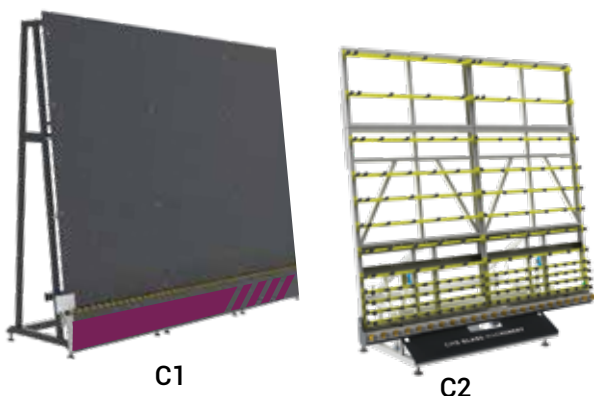
The Press Output is designed to transfer the pressed insulated glass unit for secondary sealing application

✦ Configurable
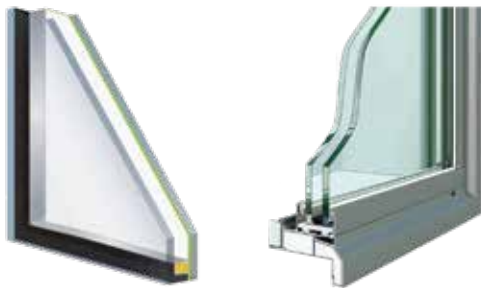✦ Communication protocol that enables synchronization with consecutive systems

C1 - Conveyor (Std.)

C2 - Tilting Table (Opt.)

Structural Glass Support System (Ops.)

PPL | Panel Press Line

CMS

Key Features

Low-E
Glass Pressing

Modular
Infrastructure

Sensitive
4 Point Pressing

Straight and Shaped Glass Pressing

Straight and shaped glass pressing from CMS Shape Library can be performed optimally.

Recipe Management

Save your datas and settings

Operator Panel

Take control under favor of user friendly operator panel

Remote Access

Remote access feature provides advanced online assistance and troubleshooting

Jumbo / Tandem Line Compatibility

Compatible to be integrated with multiple pressing units to press jumbo sized insulated glass units in single operation. This compatibility allows you to upgrade your machine to tandem/jumbo pressing line any time with low costs.

(Servo Pressing Option is Required for compatibility)

✓ Modular infrastructure that will provide you the solution you are looking for with its versions and options.

✓ Possibility to increase your production capacity at minimum cost in the future thanks to the smart modular system

✓ Minimum transportation cost

Optional Features

Opt. PPL. PGK Press Inlet

The easiest way to compensate for operator-induced delays and increase efficiency in the assembling system

Opt. PPL. 4PC Tilting Table

It is suitable for transferring the insulated glass unit to the sealing process. The insulated glass unit in the vertical position can be moved to the horizontal position easily and with minimal effort.

Opt. Automatic Adjusment of Frame Mounting for Structural IG Units

Standard for PPL4.6 structural glass models.

Opt. SPP Servo Press Front Panel

Servo front panel drive system provides precise pressing by applying different pressure to glasses of different thickness and size.

+ Automatic Pressing Pressure Setting
+ Automatic Pressing Time Setting

Available as standard in PPL4.6 models.

Opt. PPL. GPP Gas Filling System

The system is equipped with software infrastructure (mathematical model) and equipment that provides the best gas filling performance at high speed. It provides minimum gas consumption with gas filling application from the bottom edge.

+ Smart functions
+ Mathematical flow control technology
+ Glass height measurement
+ Glass length measurement
+ Narrowing the press area
+ Spacer and glass thickness measurement

Opt. SPP Servo Front Panel drive comes together.

+ *Gas filling of all IG, Units except stepped IG, for* **models 4.5**
+ *Gas filling of all IG Units and stepped IG, for* **models 4.6**

Opt. FS Step Glass (Structural Glass) Function

Developed using precisely positionable mechanisms for safe and stable pressing of facade glass

+ Precise Positioning
+ Strong Mechanical Structure
+ BE, LE, RE, UE: Max: 150 mm