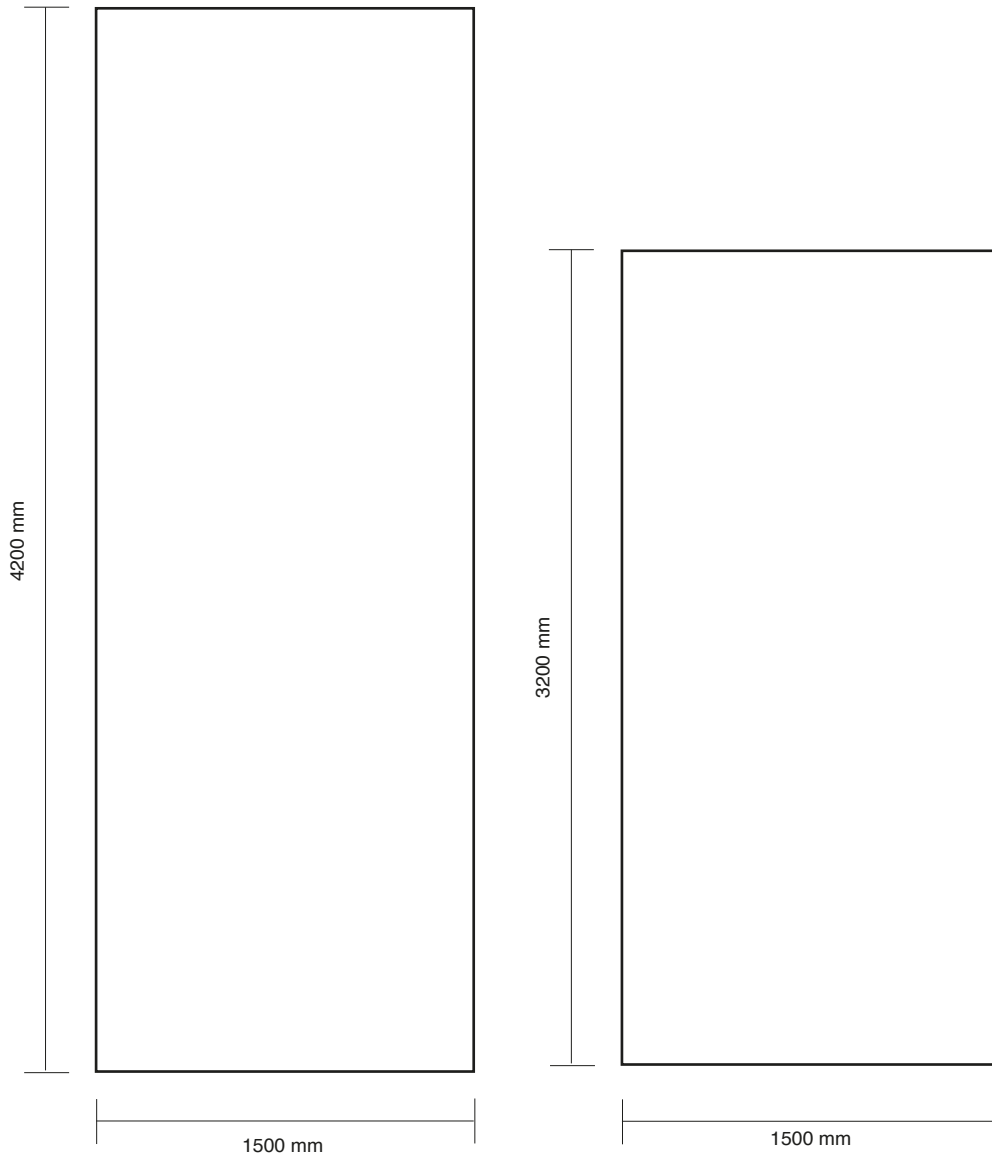


The GammaStone Glass AIR is an ultra lightweight panel of back-lacquered glass and can be easily mechanically installed. It also provides a high level of resistance against breakage by shock, far superior to traditional solutions with laminated glass. Available sizes up to 4200x1500 mm. The float or tempered glass is applied depending on the size and required application.



AIR GLASS GLASS

General data



Glass Types

Extra light
Float

Back-Lacquered

Lacquered
Reflective
Silk printed

Finish Glass

Polish
Sandblasted
Satin

Edge

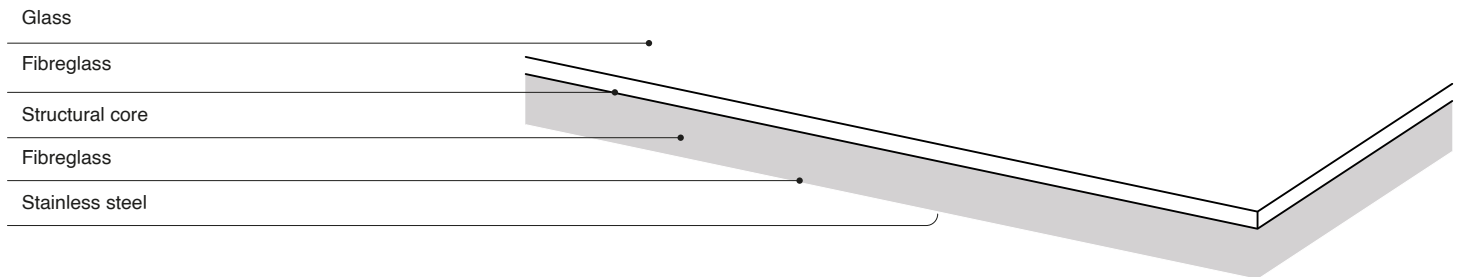
Rough edge
Matte edge
Tempered on request.

Glass Air - Max Panel Sizes

4200x1500 mm (6,30 m²)
165.35"x59.06" (67.81 ft²)

3200x1500 mm (6,30 m²)
128.98"x59.06" (51.67 ft²)

Panel Structure



Colors

Any other color is available on request



Colors

Any other color is available on request



General and Geometrical tolerance

Glass Air - 6 mm

TECHNICAL DATA	EU	USA	PANEL STRUCTURE
Max panel sizes	4200x1500 mm (6,300 m ²) 3200x1500 mm (4,800 m ²)	165.35"x59.06" (67.81 ft ²) 128.98"x59.06" (51.67 ft ²)	
Total Panel Thickness	17 mm	≈ 43/64"	
Glass Thickness	6 mm	≈ 15/64"	
Panel weight	21 kg/m ²	4.3 lb/sqft	

Dimensional deviations

(sizes in mm)

Up to 1.000	More than 1.000 Up to 2.000	More than 2.000 Up to 4.000
± 1	± 1.5	± 2

Dimensional deviations of monolithic assembled returns

(sizes in mm per each assembled return)

Up to 500	More than 500 Up to 1.000	More than 1.000 Up to 2.000
-1 +2	-1 +2.5	-1.5 +3

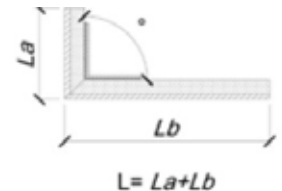
(sizes in mm per duple assembled return)

Up to 500	More than 500 Up to 1.000	More than 1.000 Up to 2.000
-1 +3	-1 +3.5	-1.5 +4

Edge tolerances for monolithic assembled returns

Limit deviations refer to the total length in mm of the panels on the sides of the return

L Up to 500	L More than 500 Up to 1.000	L More than 1.000
± 1°	± 0°30'	± 0°20'



Edges for monolithic assembled returns

Dimension of the bevel or radius of the monolithic edge

Glass	Max 5 mm
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Thickness

The thickness tolerance of the Air Panel is strictly linked to the material used because it is determined by the sum of the Glass tolerance + the tolerance of the AIR panel laminated to the slab of Glass.

Material Thickness deviation (mm)**Maximum Thickness deviation of AIR Panel (Σ Deviation in mm)**

Glass	tsv	$\pm 0,20$	$\pm 1,20$
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Deviation from the diagonals of the single non assembled panels**Diagonal Dimension D1**

Up to 1000 mm

Between 1000 and 2000 mm

Above 2000 mm

Difference with Diagonal D2

2 mm

3 mm

5 mm

ATTENTION: Deviating from the above specifications requires written agreement between both parties

Technical data sheet

FIRE TEST

Test	Description	Result
UNI 9177:2008 UNI 8457:2010 UNI 9174:2010	Reaction to fire	Classe 1
UNI EN 13501-1:2009	Fire classification - glass side	B - s2, d0
UNI EN 13501-1:2009 UNI EN 13823:2010 UNI EN ISO 11925-2:2005	Fire classification - steel side	B - s1, d0
ASTM E 84 (UL 723)	Surface burning characteristics	Class A
ASTM E 136	Behavior of materials at 750°C (1382°F)	Non-combustible
CAN/ULC-S114 ASTM E1530:2006	Test for Non-Combustibility	Non-combustible
ASTM C297/C297M - 16	Standard Test Method for Flatwise Tensile Strength	1,37 \pm 0,05 MPa
NFPA 285	Fire test	Passed
BS8414-1	Fire test	Passed

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EUROPEAN TESTS

Test	Description	Result
UNI EN 12089:2013	Determination of bending behavior	84053 kPa
UNI EN 13049:2004	Determination of impact strength	No damage
UNI EN 826:2013	Determination of compression behavior	2135 kPa
ETAG 004:2013	Heat-Rain 80 cycles and Heat-Cold 5 cycles	No fault
UNI EN ISO 10545-8:2014	Determination of linear thermal expansion	4.2 (<0.2 mm/600 mm)
UNI EN 772-14:2003	Determination of moisture movement	0.0 mm/m
UNI EN ISO 10545-4:2012	Determination of modulus of rupture and breaking strength	23.2 ± 0.9 N/mm ²
UNI EN ISO 10545-4:2012	Breaking strength Heat-Rain 80 cycles + Heat-Cold 5 cycles	23.2 ± 0.9 N/mm ²
Rif. Test Certimac POI	Determination of bond strength by pull-off	1.56 ± 0.19 N/mm ²
Rif. Test Certimac POI	Bond strength by pull-off results – sample “after immersion” (21 days)	1.24 ± 0.28 N/mm ²
UNI EN ISO 10545-3:2000	Determination of water absorption	0.2%
UNI EN ISO 10545-9:2013	Determination of resistance to thermal shock	No fault
UNI EN ISO 10545-12:2000	Determination of frost resistance	No fault
ETAG 034-1:2012	Wind depression load resistance	4610 Pa
UNI EN 12664:2002	Determination of thermal conductivity	0.118 ± 0.123 W/mK
MED 2014/90/EU	Determination of calorific value	Passed
MED 2014/90/EU	Determination of the limited ability to propagate the flame	Passed

The results are based on tests made on a GammaStone Glass AIR panel in enameled tempered, glass, 6mm thick. The complete list of tests can be found on gammastone.com



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GLASS AIR