

# GLASS — AIR

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.**

# GLASS — AIR

[EU]

Max panel sizes: 4200x1500 mm (6,30 m<sup>2</sup>); 3200x1500 mm (4,80 m<sup>2</sup>)

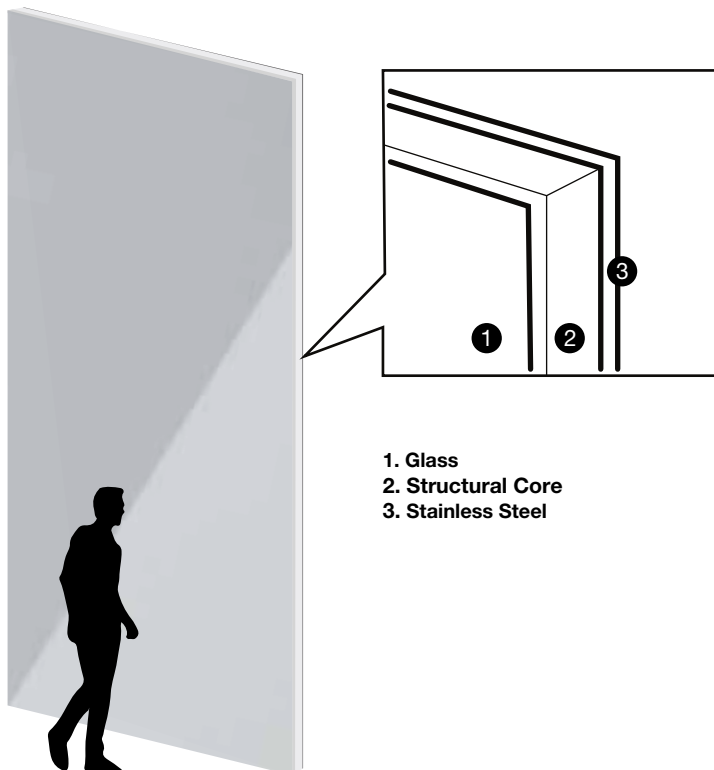
Total panel thickness	Glass thickness	Panel weight
17 mm	6 mm	21 kg/m <sup>2</sup>

[USA]

Max panel sizes: 165-23/64"x59-1/16" (67.81 ft<sup>2</sup>); 125-63/64"x59-1/16" (51.67 ft<sup>2</sup>)

43/64"	15/64"	46,3 lb/sqft
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## PANEL STRUCTURE



# Technical data sheet

Test	Description	Result
UNI EN 12089:2013	Determination of bending behavior	84053 kPa
UNI EN 13049:2004	Determination of impact strength	No damage
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
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 <sup>2</sup>
UNI EN ISO 10545-4:2012	Breaking strength Heat-Rain 80 cycles + Heat-Cold 5 cycles	23.2 ± 0.9 N/mm <sup>2</sup>
Rif. Test Certimac POI	Determination of bond strength by pull-off	1.56 ± 0.19 N/mm <sup>2</sup>
Rif. Test Certimac POI	Bond strength by pull-off results – sample “after immersion” (21 days)	1.24 ± 0.28 N/mm <sup>2</sup>
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
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 ± 0,05 MPa
NFPA 285	Fire test	Passed
BS8414-1	Fire test	Passed
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](http://gammastone.com).



# General and geometrical tolerances

**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

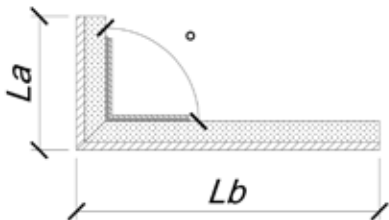
(sizes in mm per double assembled returns)

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 1000	L More than 1000
± 1°	± 0°30'	± 0°20'



$L = La + Lb$

# General and geometrical tolerances

## 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	± 0,20	±1,20

## Deviation from the diagonals of the single non assembled panels

Diagonal Dimension D1	Difference with Diagonal D2
Up to 1000 mm	2 mm
Between 1000 and 2000 mm	3 mm
Above 2000 mm	5 mm

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