

Alfa Wall

20 mm / 40 mm

Structural mechanical properties

The Alfa Wall system comes in a practical shape and format, designed to meet specific needs in the creation of translucent glazing for industrial, commercial and domestic buildings. The special structure of the panel making up the system has been designed to give superior load bearing properties and provide ideal performances in all type of applications. The complementary accessories suggested to complete the system integrate its functional qualities.

Optical properties

Alfa Wall system owes its optical properties to the carefully selected raw materials it is made of. A monitored and certified quality production process is designed to ensure long lasting light performance to the highest quality standard.

Heat and sound insulation

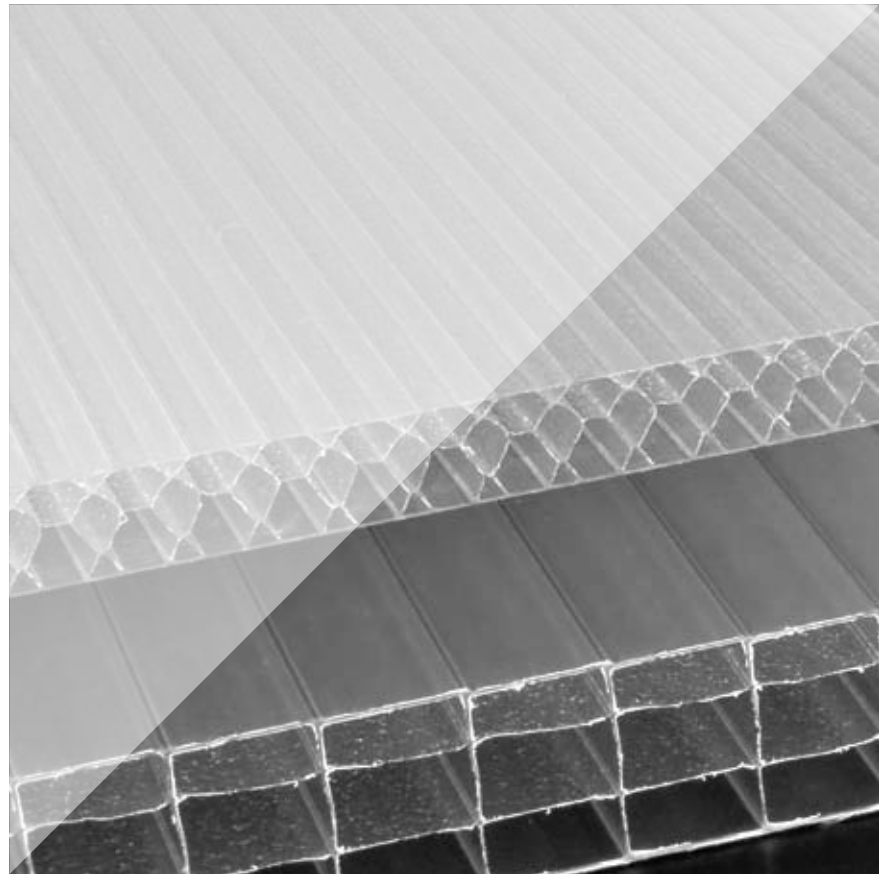
Heat insulation is a characteristic of primary importance in the building industry. Thanks to its multiwall structure, Alfa Wall achieves very high heat insulation values for excellent energy savings and offers considerable sound insulation for a more comfortable environment.

Fire performance

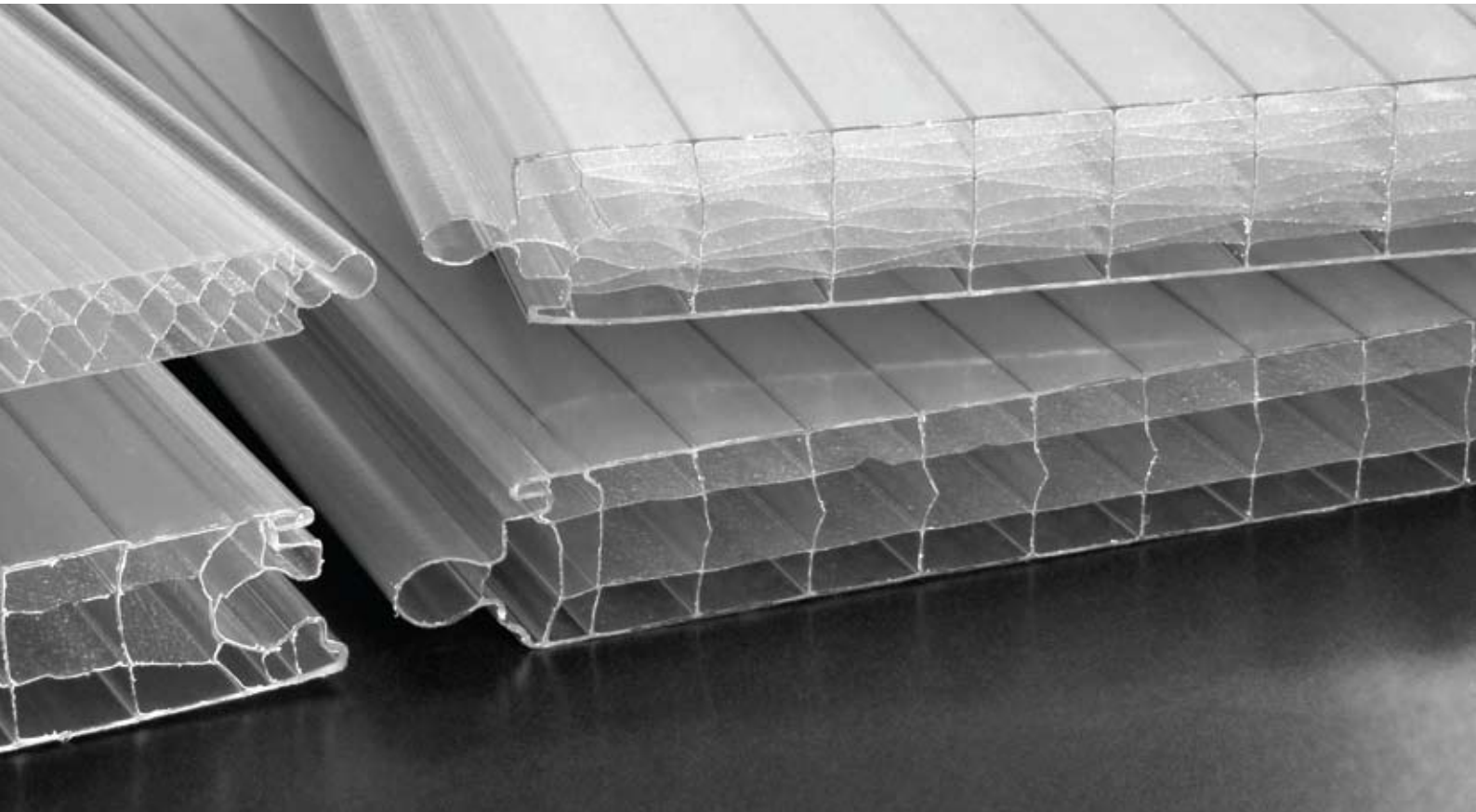
Fire safety is a fundamental requirement. Alfa Wall is provided with Euro class B s1 d0 certification issued by independent qualified laboratories. This means it does not contribute to flame spread and does not emit toxic fumes, in accordance with restrictive building regulations.

Behaviour to environmental conditions

Alfa Wall system panels are protected against the harmful effects of UV rays. This protection is provided by a special treatment applied in co-extrusion studied to ensure long lasting optical mechanical and performance qualities. In order to avoid impurities inside the structure, a proper tape is applied at panel's ends.



Alfa Wall is a polycarbonate system designed to be used in industrial, commercial and domestic building. This system is used to achieve vertical glazing. The panels that make up the system, developed using the most innovative and up to date co-extrusion technologies, come in 40 mm thickness, with 4 or 11-wall structures, and 20 mm in honey-combed structure. Alfa Wall meets the required needs in industrial, commercial and domestic building, finding application in a wide range of different sectors. Alfa Wall brings out the best of polycarbonate's mechanical and physical qualities, ensuring high standards of application, even in particularly innovative projects.



Alfa Wall system is used in vertical applications where there is a need to create translucent glazing. The system can be used in the latest building concepts as well as in industrial refurbishments. The system is composed by multiwall polycarbonate panels with a 4- or 11-wall or honeycomb structure. The standard 40 mm and 20 mm thickness options offer cost effectiveness, excellent structural performance and adaptability to meet the various design opportunities that are constantly foreseen in building projects, allowing to produce large translucent surfaces. The system is assembled by joining the sheets together endowed with a special tongue-groove structure that allows a perfect coupling.

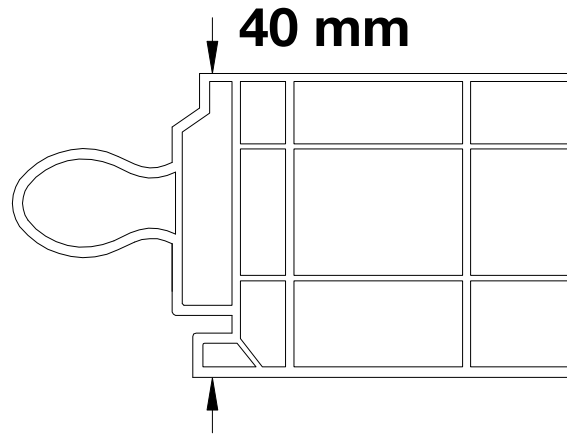
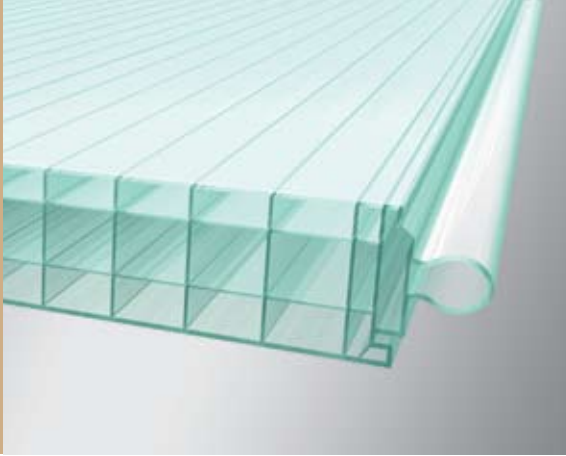
Anodized aluminium framing profiles complete the framing structure. The Alfa Wall system offers an excellent combination of performance properties, such as: high capacity to withstand evenly distributed loads; efficient heat insulation; effective resistance to critical weather conditions; quick and easy installation; economic transport costs. The product comes with its ends alu taped to reduce the condensation effect and entrance of impurities into the cells. Alfa Wall system is certified in conformity with the latest European industry standards. A number of optional accessories complete the Alfa Wall system product range, granting a user-friendly system, quick and easy to install.

Technical data

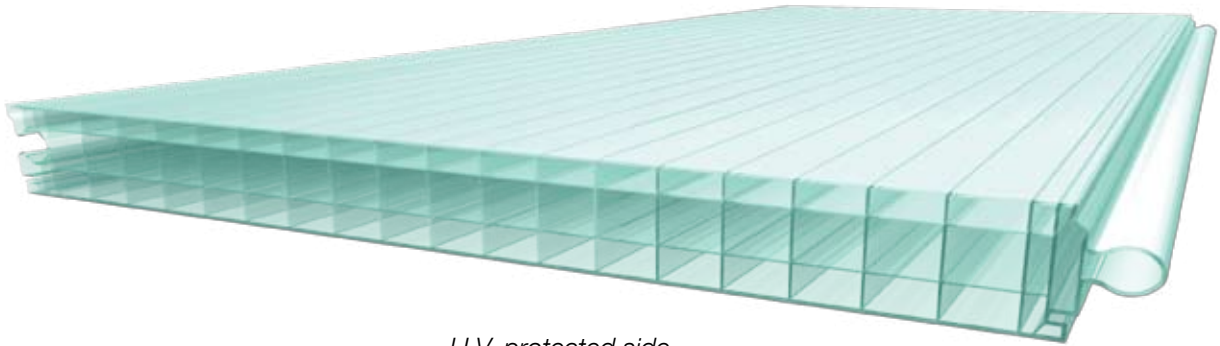


Alfa Wall

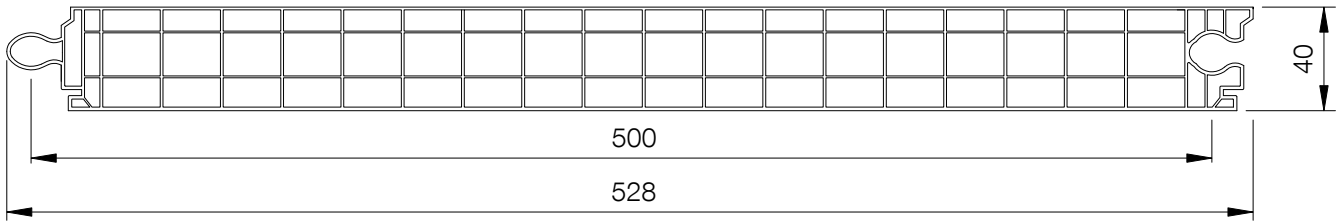
40 mm



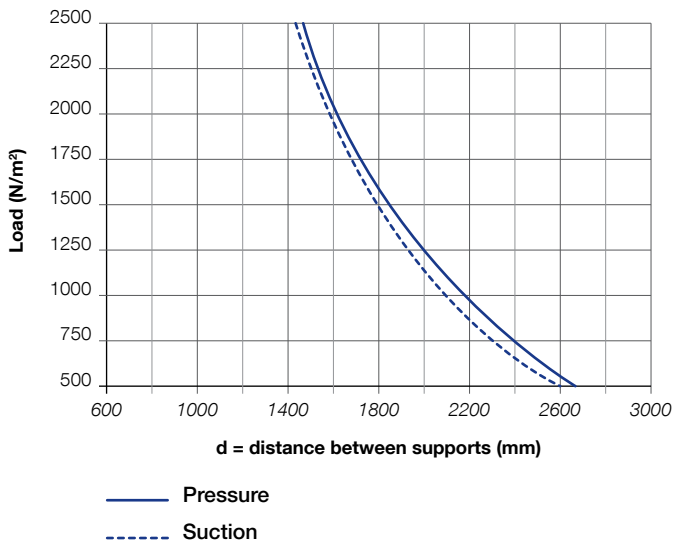
four walls (three chambers)



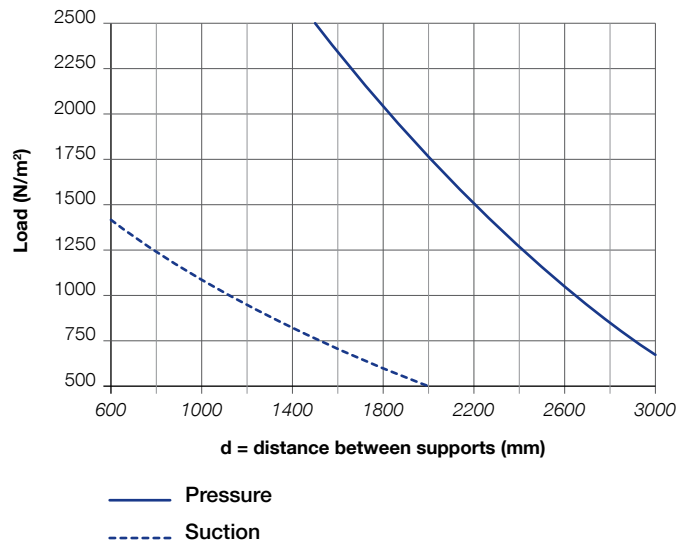
U.V. protected side



Two supports - load table



Three or more supports - load table



Characteristics	Units	Alfa Wall 40 mm
Geometric characteristics		
<i>thickness</i>	mm	40
<i>structure</i>	type	four walls (3 chambers)
<i>width</i>	mm	528
<i>module width</i>	mm	500
<i>sheet length</i>	mm	customized
Technical characteristics		
<i>thermal transmittance (U)</i>	W/m ² K	1,5
<i>service temperature range*</i>	°C	- 40 / + 130
<i>thermal expansion</i>	$\frac{\text{mm}}{\text{m } ^\circ\text{C}}$	0,065
<i>light transmission (LT) translucent clear</i>	%	74**
<i>light transmission (LT) translucent opal</i>	%	51**
<i>UV protection</i>	YES/NO	YES
<i>aluminium tape sealing</i>	YES/NO	YES
<i>warranty</i>	years	10

* The maximum service temperature is based on the RTI (Relative Thermal Index) according to UL 746B – typical value of high molecular weight polycarbonate -

** Values tested in-house

Specification

Translucent glazing for the realization of multiwall polycarbonate Alfa Wall system.

Thickness 40 mm

Width 528 mm, module width 500 mm

UV protection

Taped ends

Clear or opal colour, with satin effect

U value: 1,5 W/m² K

Fire performance, Euro classe B s1 d0

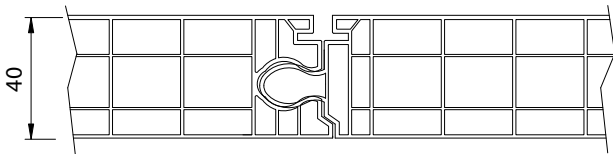
Full range of accessories

Opening frame option

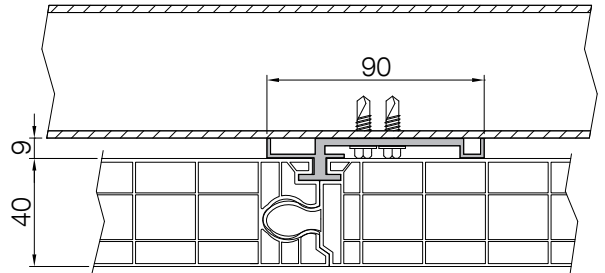
Applications

Alfa Wall

40 mm

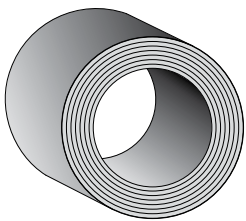


Detail of sheet/sheet joining

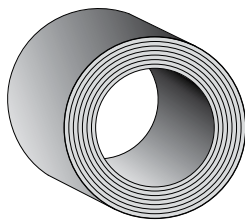


Detail of sheet/clamp/sheet coupling

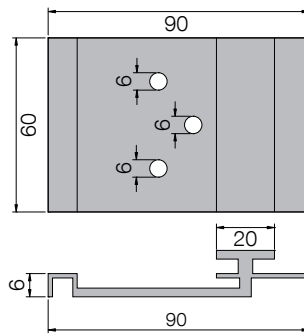
Accessories



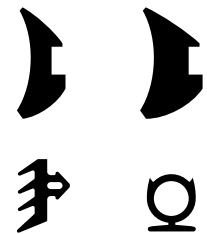
Aluminium adhesive tape
70 mm x 50 m



Aluminium adhesive breathing tape
70 mm x 50 m



Aluminium clamp



EPDM gaskets for air tightness



Solution wall-to-wall with lower profile



Solution wall-to-wall with lower profile with cover-wall



Solution external wall with lower profile

Aluminium frame profiles



Upper/side anodized aluminium profile



Upper "high" anodized aluminium profile



Lower anodized aluminium profile

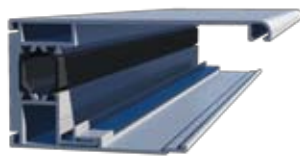


Lower anodized aluminium profile with cover-wall

Thermal-break aluminium frame profiles



Upper anodized aluminium profile



Side anodized aluminium profile



Lower anodized aluminium profile



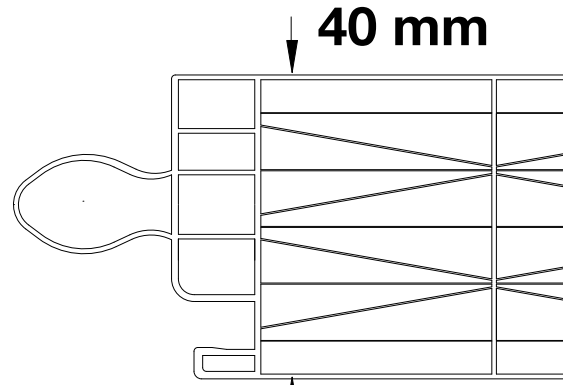
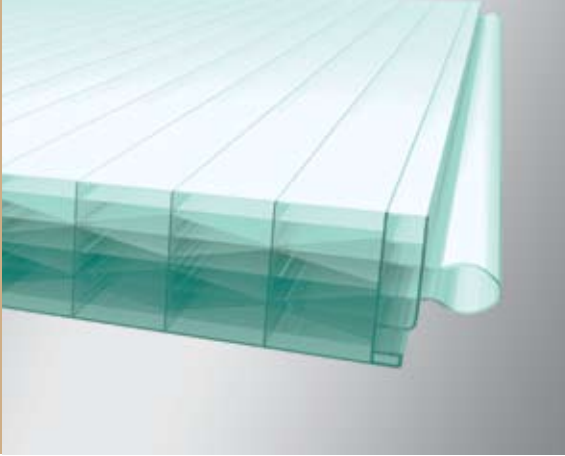
Lower anodized aluminium profile with cover-wall

Technical data

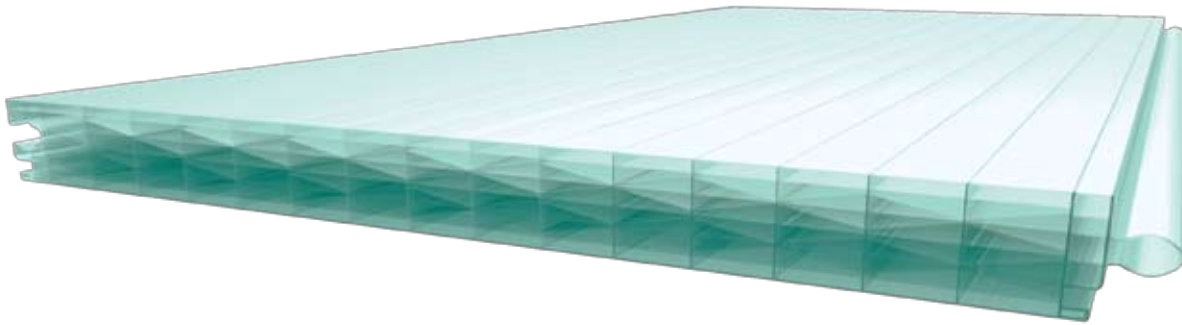


**Alfa
Wall**
40/11W

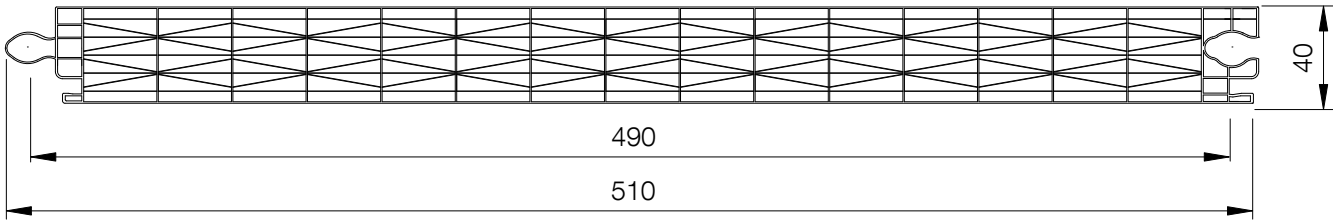
40 mm



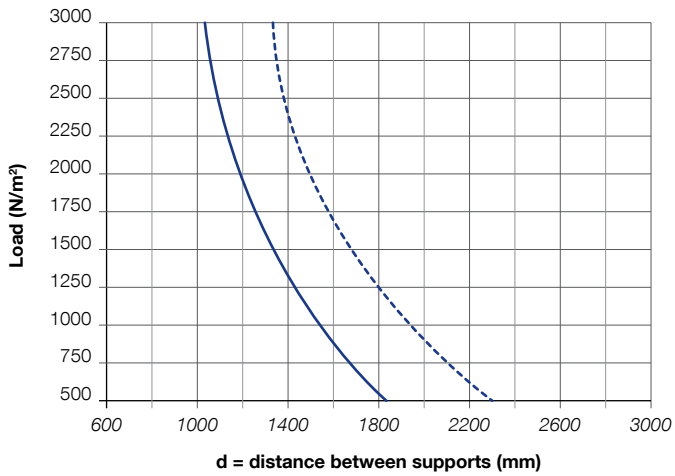
eleven walls (ten chambers)



U.V. protected side

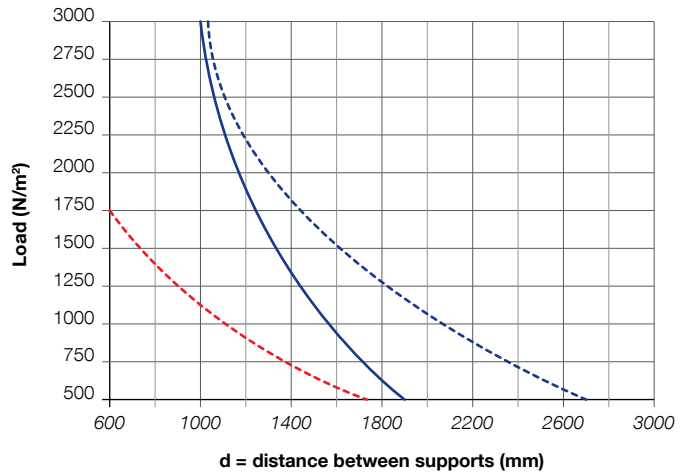


Two supports – load table*



- Deflection limit 1/100 of distance between supports
- - - Deflection limit 1/50 of distance between supports

Three or more supports – load table*



- Deflection limit 1/100 (pressure)
- - - Deflection limit 1/50 (pressure)
- - - Deflection limit 1/100 (suction)

Characteristics	Units	Alfa Wall 40/11W
Geometric characteristics		
<i>thickness</i>	mm	40
<i>structure</i>	type	eleven walls (ten chambers)
<i>width</i>	mm	510
<i>module width</i>	mm	490
<i>sheet length</i>	mm	customized
Technical characteristics		
<i>thermal transmittance (U)</i>	W/m ² K	0,97
<i>service temperature range*</i>	°C	- 40 / + 130
<i>thermal expansion</i>	$\frac{\text{mm}}{\text{m } ^\circ\text{C}}$	0,065
<i>light transmission (LT) translucent clear</i>	%	40**
<i>light transmission (LT) translucent opal</i>	%	n/a (not available)
<i>UV protection</i>	YES/NO	YES
<i>aluminium tape sealing</i>	YES/NO	YES
<i>warranty</i>	years	10

* The maximum service temperature is based on the RTI (Relative Thermal Index) according to UL 746B – typical value of high molecular weight polycarbonate -

** Values tested in-house

Specification

Translucent glazing for the realization of multiwall polycarbonate Alfa Wall 40/11W system.

Thickness 40 mm

Width 510 mm, module width 490 mm

UV protection

Taped ends

Clear or opal colour, with satin effect

U value: 0,97 W/m² K

Fire performance, Euro class B s2 d0

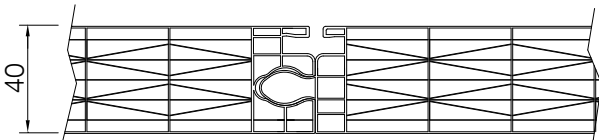
Full range of accessories

Opening frame option

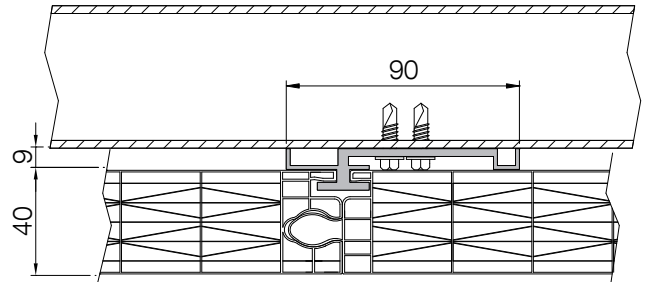
Applications

**Alfa
Wall**
40/11W

40 mm

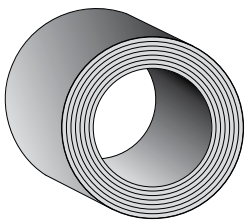


Detail of sheet/sheet joining

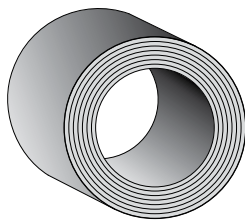


Detail of sheet/clamp/sheet coupling

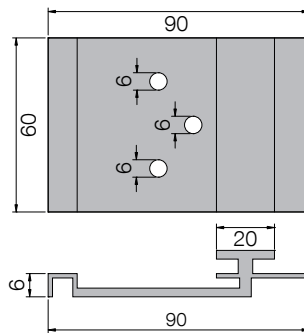
Accessories



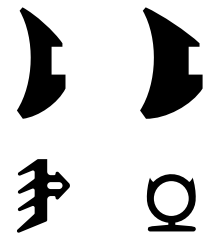
Aluminium adhesive tape
70 mm x 50 m



Aluminium adhesive breathing tape
70 mm x 50 m



Aluminium clamp



EPDM gaskets
for air tightness



Solution wall-to-wall with lower profile



Solution wall-to-wall with lower profile with cover-wall



Solution external wall with lower profile

Aluminium frame profiles



Upper/side anodized aluminium profile



Upper "high" anodized aluminium profile



Lower anodized aluminium profile

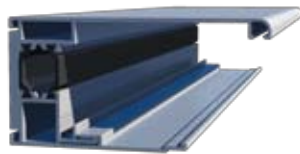


Lower anodized aluminium profile with cover-wall

Thermal-break aluminium frame profiles



Upper anodized aluminium profile



Side anodized aluminium profile



Lower anodized aluminium profile



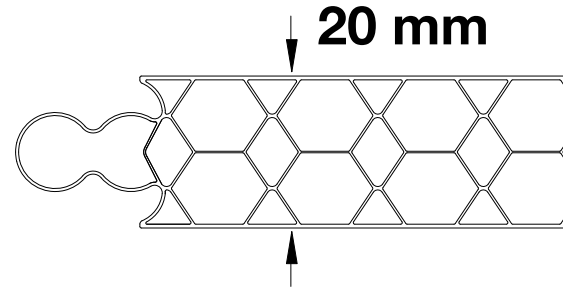
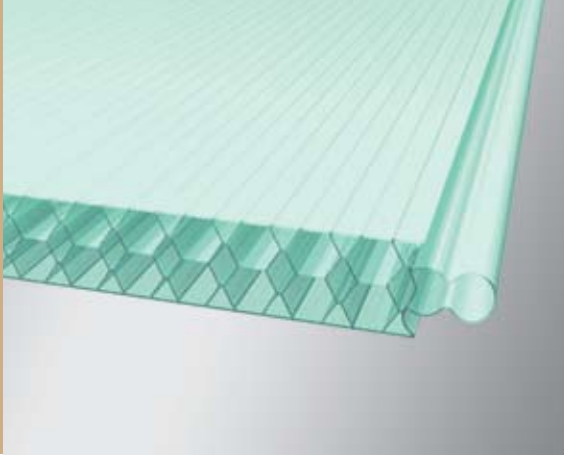
Lower anodized aluminium profile with cover-wall

Technical data

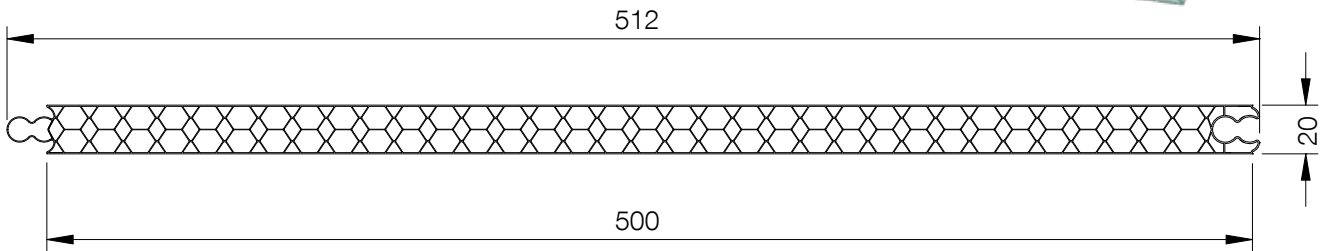
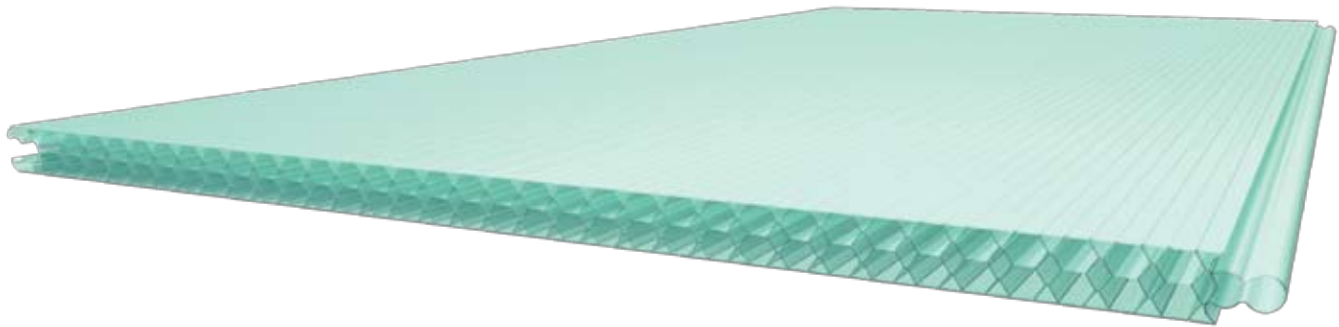


Alfa Wall

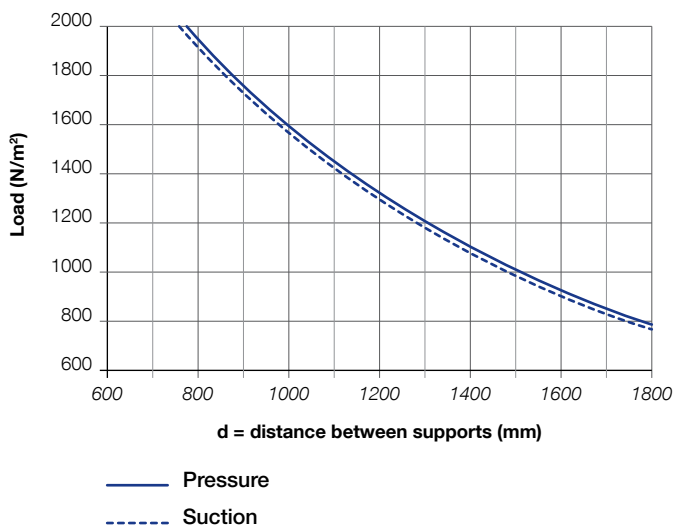
20 mm



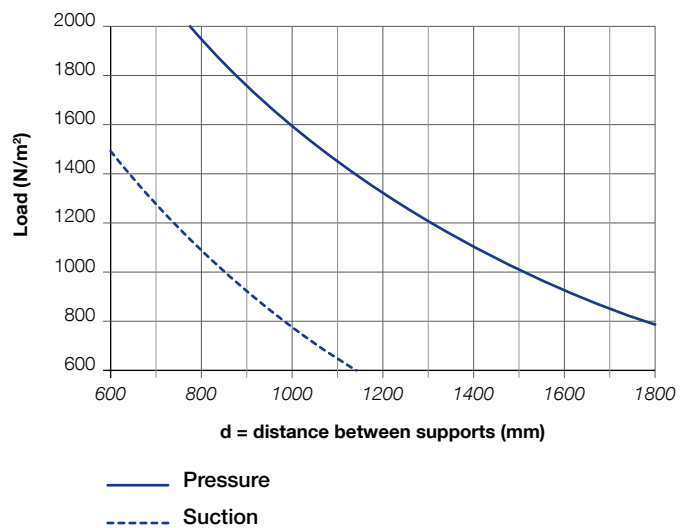
honeycomb structure



Two supports – load table



Three or more supports – load table



Characteristics	Units	Alfa Wall 20 mm
Geometric characteristics		
<i>thickness</i>	mm	20
<i>structure</i>	type	honeycomb structure
<i>width</i>	mm	512
<i>module width</i>	mm	500
<i>sheet length</i>	mm	customized
Technical characteristics		
<i>thermal transmittance (U)</i>	W/m ² K	2,0
<i>service temperature range*</i>	°C	- 40 / + 130
<i>thermal expansion</i>	$\frac{\text{mm}}{\text{m } ^\circ\text{C}}$	0,065
<i>light transmission (LT) translucent clear</i>	%	52 ^{**}
<i>light transmission (LT) translucent opal</i>	%	31 ^{**}
<i>UV protection</i>	YES/NO	YES
<i>aluminium tape sealing</i>	YES/NO	YES
<i>warranty</i>	years	10

* The maximum service temperature is based on the RTI (Relative Thermal Index) according to UL 746B – typical value of high molecular weight polycarbonate -

** Values tested in-house

Aluminium frame profiles and accessories



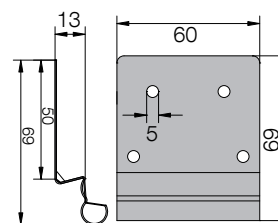
Upper/side anodized aluminium profile



Lower anodized aluminium profile



Lower anodized aluminium profile with cover-wall



Steel clamp



EPDM gasket for air tightness



Specification

Translucent glazing for the realization of multiwall polycarbonate Alfa Wall system.

Thickness 20 mm

UV protection

Width 512 mm, module width 500 mm

Taped ends

Clear or opal colour, with satin effect

U value: 2,0 W/m² K

Fire performance, Euro class B s1 d0

Full range of accessories

Opening frame option