







dott.gallina

POLYCARBONATE SYSTEMS & SHEETS

PLASTIC BUILDING CATALOGUE | PLASTIC BUILDING CATALOGUE | PLASTIC BU

We are the answer

**PLASTIC
BUILDING
CATALOGUE**

-  COMPANY PROFILE
-  MODULAR SYSTEMS
-  MULTIWALL SHEETS
-  SOLID SHEETS



dott.gallina



dott.gallina

INDEX

1

COMPANY PROFILE

1.1	Technology	page 06
1.2	Certification	page 07
1.3	Polycarbonate	page 08
1.4	Chemical resistance	page 09
1.5	Technical properties of multiwall sheets	page 10
1.6	Technical properties of modular systems	page 11
1.7	Special Treatment	page 12
1.8	Product with IR treatment	page 13
1.9	Energy saving	page 14
1.10	Use and maintenance	page 15

2

MODULAR SYSTEMS

2.1	Modular interlocking systems	
	arcoPlus324	page 18
	arcoPlus625	page 22
	arcoPlus344x	page 24
	arcoPlus347-547-549	page 28
	arcoWall5613	page 32
	Velario613	page 34
	Velario20-5	page 35
2.2	Modular connector systems	
	arcoPlus684-6104-6124	page 36
	arcoPlus684-6104-6124 Reverso	page 40
	arcoPlus626	page 44
	arcoPlus626 Reverso	page 48
	arcoPlus9207-9257-9327	page 52
	arcoPlus9207-9257-9327 Reverso	page 54
2.3	Modular overlapping systems	
	arcoPlus1000	page 56
	arcoPlus1000 curvo	page 60
	arcoPlusSUPER1000	page 62
	arcoPlusSUPER1000 curvo	page 64
	arcoPlusGrecaClick	page 66
	arcoPlusMiniGreca	page 68
	arcoPlusMiniGreca curvo	page 70
	arcoPlusOnda	page 72
	arcoPlusOnda curvo	page 74
2.4	Opening systems	page 76
2.5	Corrugated systems	
	TegoPlus	page 78

3

MULTIWALL SHEETS

3.1	Multiwall sheets	page 84
-----	------------------	---------

4

SOLID SHEETS

4.1	Solid sheets Policomp	page 90
4.2	Solid sheets Scudo	page 95

General terms and conditions of sale	page 96
--------------------------------------	---------





COMPANY PROFILE



Dott. Gallina S.r.l. was founded in 1960 by Pier Aulo Gallina, originally to manufacture profiles for the automotive industry. With developments in technology and the expansion of the market for thermoplastic materials, Dott. Gallina S.r.l. extended its range of products to include sectors such as construction and industry and is now a leading name on the international market.

The company currently has a workforce of some 170 people and production plants in Italy, Greece, Poland, the US and India.

Dott. Gallina S.r.l. manufactures plastic profiles for bodywork and upholstery for the automotive sector and supplies multiwall sheets, solid sheets and modular polycarbonate panels for roofing and glazing applications to the construction industry. These products are rapidly gaining ground in the marketplace for building materials due to their optical properties (transparency) similar to that of glass and superior mechanical and thermal characteristics.

Dott. Gallina S.r.l. is at the forefront of this development, committed to a policy of engineering and technological research, investing in leading-edge equipment and implementing strict quality control procedures.

The catalogue, with its new graphics and revised technical content, is a guide to our products and accessories that will help you choose the best solution depending on the type of application and technical specifications.

Our modular polycarbonate systems, multi-wall and solid polycarbonate sheets are innovative products and all guarantee good physical, mechanical and aesthetic properties.



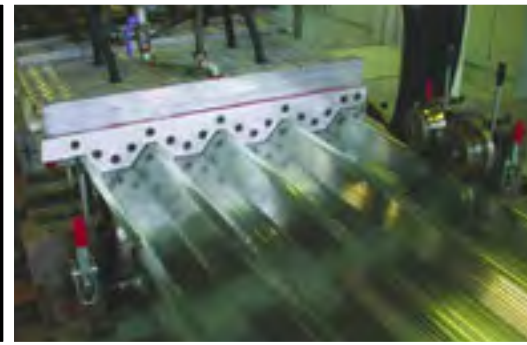
OFFICES AND PRODUCTIONS SITE

SITES	REGIONS
ITALY	LA LOGGIA (TURIN) - DOTT.GALLINA S.R.L. (*)
SPAIN	MADRID - AISLUX S.A.
GREECE	KILKIS - GA PLASTICS S.A.
POLAND	TYCHY - DOTT.GALLINA POLAND (*)
US	JANESVILLE (WISCONSIN) GALLINA USA LLC (*)
INDIA	NEW DELHI - GALLINA INDIA (*)
FRANCE	PARIS
GERMANY	EBERSTADT
BELGIUM	BRUGES
TURKEY	ISTANBUL - GALLINA EURASIA (*)

*PRODUCTION SITE



1.1 TECHNOLOGY



POLYCARBONATE IN THE CONSTRUCTION INDUSTRY

Polycarbonate is an innovative engineering plastic that is also versatile due to its transparency, good thermal insulation and impact strength. This makes it suitable for use in a wide range of residential and industrial building applications.

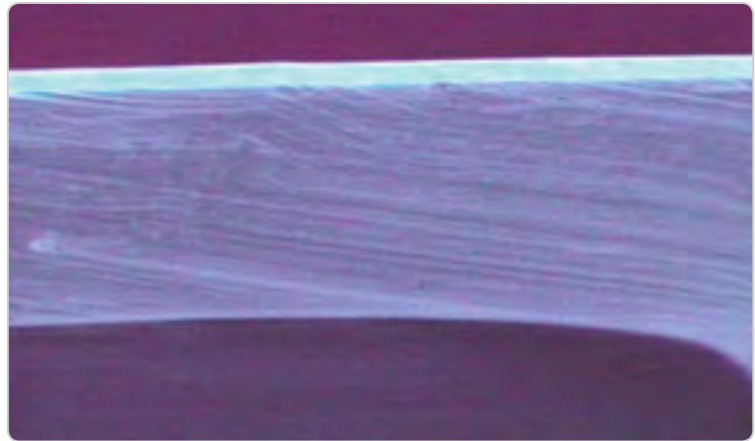
THE PRODUCTION PROCESS

Extrusion is a process used to produce continuously formed plastic multi-wall profiles and solid sheets.

U.V. PROTECTION

All products are co-extruded to ensure protection against exposure to ultraviolet radiation, extending their life and delaying the natural ageing of the material.

TECHNOLOGY



COEXTRUSION
Coextrusion observed with a microscope

PoliCarb®

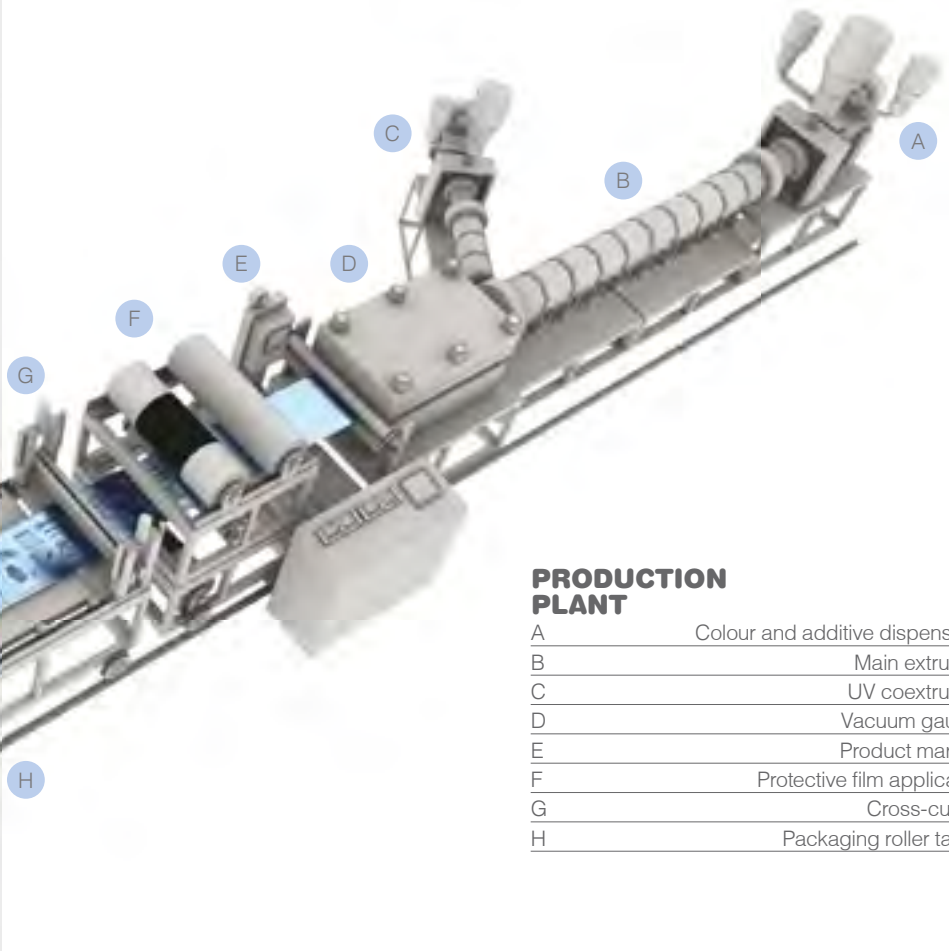
MULTIWALL SHEETS

PoliComp®

SOLID SHEETS

arcoPlus®

MODULAR SYSTEMS



PRODUCTION PLANT

A	Colour and additive dispensers
B	Main extruder
C	UV coextruder
D	Vacuum gauge
E	Product marker
F	Protective film applicator
G	Cross-cutter
H	Packaging roller table



1.2 CERTIFICATION

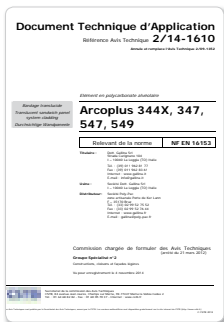
CERTIFICATION



PRODUCT CERTIFICATION

Products are certified by authoritative laboratories and international bodies.

For further information please visit our website, www.gallina.it.



CE MARKING

European Regulation 305/2011 for Construction Products regulates CE marking for all products which have harmonised technical standard.

Since 01/01/2015, according to harmonised european EN 16153: 2013, CE marking became mandatory on each polycarbonate multi-wall sheets.

By the item identification (ex: Polycarb 10mm) it will be possible to download the relevant DOP – declaration of performance – published on our website [DOWNLOAD DOP](#).

Declaration of Performance lists features of the product and its relevant values and performances. CE Marking and the referring harmonised standard will be also printed on pallet label mentioning all product contents.

QUALITY SYSTEM

The company operates a quality system certified to:

UNI-EN-ISO-900 1
UNI-EN-ISO-14001
ISO/TS 16949



1.3 POLYCARBONATE

LIGHTWEIGHT

Polycarbonate is a lightweight material that is used in the construction industry to reduce building costs while guaranteeing compliance with positive and negative wind load requirements.

TRANSLUCENT

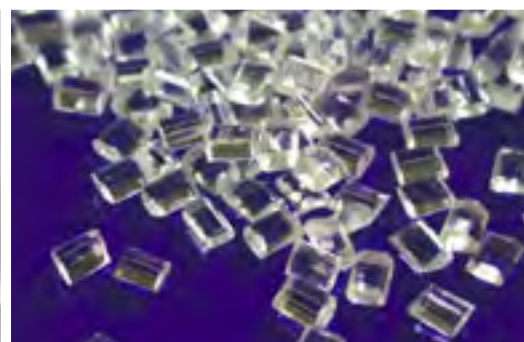
A key feature of polycarbonate is its transparency. The use of natural lighting, achieved by installing translucent polycarbonate roofing and walls, creates a more comfortable ambience while also ensuring good thermal insulation. Polycarbonate can be suitably tinted to modulate light transmission, optimise shading and thus reduce overheating inside the building. Coloured pigments are used to achieve pleasant colour effects to satisfy the most demanding aesthetic and architectural requirements.

VERSATILE

We supply an extensive range of products for use in the construction of translucent roofing and walls, skylights, fixed and openable insulated windows.

Our continuous research has led to the development of a series of steel and aluminium accessories to complete the range.

These are designed to make installation simple and safe and ensure compliance with the applicable fire and load strength ratings and safety of building requirements. Our products are all certified to the latest thermal insulation and energy saving standards.



POLYCARBONATE

PHYSICAL PROPERTIES

	VALUE	TEST METHOD
Density	1.200 Kg/m ³	ISO 1183
Water absorption	± 0.19 %	ASTM D570

OPTICAL PROPERTIES

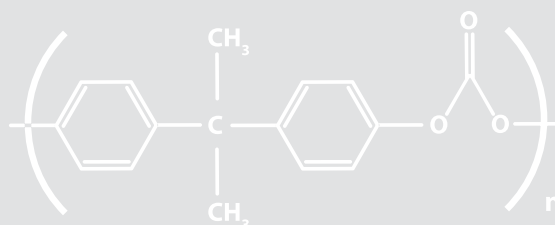
	VALUE	TEST METHOD
Light transmission	89 %	ASTM D570
Refraction index	1.58	ISO 489

MECHANICAL PROPERTIES

	VALUE	TEST METHOD
Resistance to tensile stress	66 MPa	ISO R527-2
Resistance to yield stress	60 MPa	ISO R527-2
Tensile modulus	2.300 MPa	ISO 178
Elongation at break	150 %	ISO R527-2
Izod impact	93 kJ/m ²	ISO 180/4A

THERMAL PROPERTIES

	VALUE	TEST METHOD
Application temperature	-40 +120°C	
Linear thermal expansion	0,065 mm/m°C	
Vicat (B/50)	151 °C	ISO 306



UV AND HAIL-RESISTANT

The exterior surface of the panel is co-extruded with high-performance UV-absorbing polycarbonate to ensure excellent protection against ultra-violet rays, hail and accidental impacts even after prolonged exposure to sunlight.

SAFE

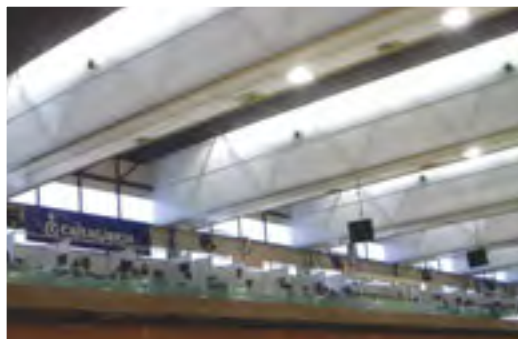
Polycarbonate has a particularly high impact strength. Our products are therefore highly resistant to accidental impacts and hail and meet the requirements of safety standards for translucent glazing in public and work environments.

AN ENVIRONMENTALLY FRIENDLY MATERIAL

The various phases of polycarbonate processing involve very low energy consumption and environmental impact.

Polycarbonate is an energy-efficient solution and is totally recyclable at the end of its life.





1.4 CHEMICAL RESISTANCE

CHEMICAL RESISTANCE

	AGENT	VARIATION
ALCOHOLS	Methyl alcohol	Cracking
	Ethyl alcohol 50%	Unchanged
	n-Butyl alcohol	Unchanged
	Ethylene glycol	Unchanged
ALKALI	Sodium hydrate 1%	Unchanged
	Sodium hydrate 10%	Clouding
	Ammonium hydrate 10%	Browning
	Calcium hydrate 10%	Unchanged
INORGANIC ACIDS	Hydrochloric acid 35%	Cracking
	Hydrochloric acid 10%	Unchanged
	Sulphuric acid 70%	Unchanged
	Sulphuric acid 30%	Yellowing
	Nitric acid 40%	Yellowing
	Nitric acid 10%	Yellowing
	Cromic acid 10%	Unchanged
INORGANIC SALTS	Sodium chloride 10%	Unchanged
	Potassium nitrate 10%	Unchanged
	Potassium Bicrom. 10%	Yellowing
	Sodium sulphate 10%	Unchanged
	Ammonium chloride	Unchanged
	Sodium carbonate 10%	Unchanged
	Sodium bicarbonate 10%	Cracking
LUBRICATING OILS	Silicon oil	Unchanged
	Paraffin oil	Unchanged
	Machine oil	Unchanged
PLASTIFIED	Tricresyl phosphate	Clouding
	Dioctyl Adipate	Unchanged
	Butyl Stearate	Unchanged
	Trimetil. foreign acid	Unchanged
ORGANIC ACIDS	Acetic acid 70%	Unchanged
	Acetic acid 10%	Unchanged
	Formic acid 30%	Unchanged
	Lactic acid 5%	Unchanged
	Oxalic acid 10%	Unchanged
	Benzoic acid 10%	Unchanged
	Oleic acid 100%	Unchanged
VARIOUS	Benzol	Fast dissolution
	Toluol	Fast dissolution
	Industrial petrol	Yellowing - Cracking - Opacification
	Kerosene	Unchanged
	Naphtha Diesel	Unchanged
	n Heptane	Unchanged
	Methylethylketone	Clouding - Softening
	Acrylonitrile	Fast dissolution
	Vinyl acetate	Clouding - Softening
	Styrene	Clouding - Softening
	Ethyl ether (5 °C)	Swelling
	Diethylenetriamine	Dissolution
	Ethylenediamine	Dissolution
	Triethanolamine	Cracking
	Phenol 5%	Yellowing - Opacification
Cresol 5%	Unchanged	
Formalin	Unchanged	

Polycarbonate has good resistance to most chemicals with which it is likely to come into contact during normal use.

Specific tests are recommended for applications where the material is likely to come into contact with aggressive chemicals.

It is essential to verify their compatibility prior to use. The table at the side provides a summary of reactions with some of the main products used.

1.5 MULTIWALL SHEETS PROPERTIES

PoliCarb®

LIGHT TRANSMISSION (LT)

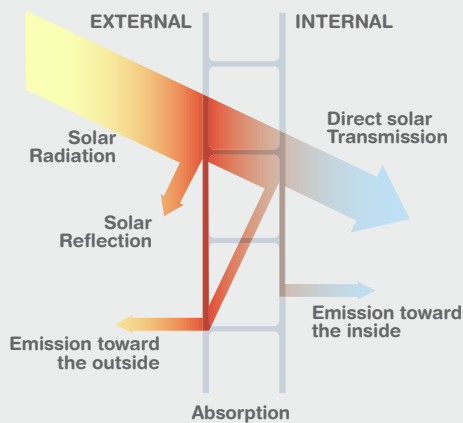
Different pigments are used to obtain different light transmission values.

The values indicated in the table are based on calculations performed at specialist laboratories.

SOLAR FACTOR (SF)

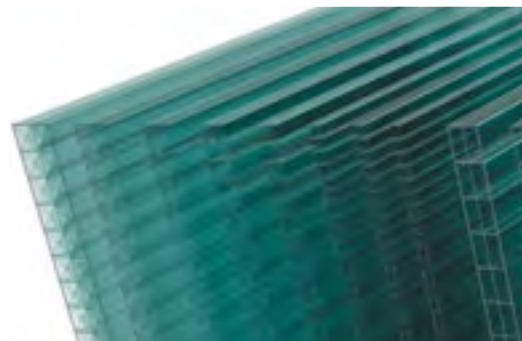
Incoming solar radiation is reflected, partially absorbed, and transmitted to the inside.

The solar factor indicated in the table is the ratio, expressed as a percentage, between the total energy transmitted to the inside and total solar radiation.



SHADING COEFFICIENT (SC)

The shading coefficient of a transparent sheet is the ratio between the sheet's solar factor and the solar factor of a clear sheet of glass with a thickness of 3mm ($SC = SF / 0.87$).



MULTIWALL SHEETS

Optical and Thermal properties (EN 16153)

PROFILE	LIGHT TRANSMISSION (LT) %	SOLAR FACTOR (SF) %	SHADING COEFFICIENT (SC)	THERMAL TRANSMITTANCE (U) W/m²K
Policarb 2P-4mm				
Crystal	80	79	0,91	3,9
Bronze	63	75	0,86	
Opal	50	66	0,76	
Policarb 2P-4,5mm				
Crystal	80	79	0,91	3,9
Bronze	63	75	0,86	
Opal	50	66	0,76	
Policarb 2P-6mm				
Crystal	82	81	0,93	3,6
Bronze	60	72	0,83	
Opal	50	66	0,76	
Policarb 2P-8mm				
Crystal	82	80	0,92	3,3
Bronze	65	75	0,86	
Opal	50	65	0,75	
Policarb 2P-10mm				
Crystal	81	80	0,92	3,0
Bronze	65	75	0,86	
Opal	50	64	0,74	
Policarb 16mm WIDE				
Crystal	85	83	0,95	2,5
Bronze	65	70	0,80	
Opal	50	65	0,75	
Policarb 3P-10mm				
Crystal	74	75	0,86	2,7
Bronze	65	72	0,83	
Opal	52	62	0,71	
Policarb 3P-16mm				
Crystal	74	76	0,87	2,3
Bronze	40	55	0,63	
Opal	52	57	0,66	
Blue	45	70	0,80	
Green	60	70	0,80	
Policarb 3P-20mm				
Crystal	74	75	0,86	2,1
Bronze	40	55	0,63	
Opal	52	63	0,72	
Policarb 4P-6mm				
Crystal	79	78	0,90	3,1
Opal	45	53	0,61	
Policarb 4P-8mm				
Crystal	79	78	0,90	2,7
Opal	45	53	0,61	
Policarb 4P-10mm				
Crystal	79	78	0,90	2,5
Opal	45	53	0,61	
Policarb 5P-16mm RDC				
Crystal	66	70	0,80	2,1
Bronze	30	45	0,52	
Opal	40	55	0,63	
Policarb 5P-20mm RDC				
Crystal	63	67	0,77	1,8
Bronze	28	43	0,49	
Opal	40	49	0,57	
Policarb 5P-25mm RDC				
Crystal	60	64	0,74	1,6
Bronze	27	41	0,47	
Opal	40	45	0,52	
Policarb 6P-16mm				
Crystal	60	62	0,71	1,8
Opal	40	45	0,52	
Policarb 6P-20mm				
Crystal	58	60	0,69	1,6
Opal	38	43	0,49	
Policarb 7P-25mm				
Crystal	58	62	0,71	1,4
Opal	40	45	0,52	
Reflecto	40	40	0,46	
Policarb 7P-32mm				
Crystal	57	61	0,70	1,2
Opal	39	43	0,49	
Reflecto	35	37	0,43	
Policarb 7P-40mm				
Crystal	55	59	0,68	1,1
Opal	35	39	0,45	
Reflecto	33	35	0,40	
Policarb 11W-25mm				
Crystal	45	52	0,60	1,3
Opal	33	44	0,50	
Policarb 11W-32mm				
Crystal	44	51	0,59	1,1
Opal	29	38	0,44	
Policarb 11W-40mm				
Crystal	43	50	0,57	1,0
Opal	25	34	0,39	



1.6 MODULAR SYSTEM PROPERTIES

arcoPlus[®]

MODULAR SYSTEM

Optical, Thermal and acoustic properties (EN 16153)

THERMAL INSULATION (U-VALUE)

Heat loss is normally defined as thermal transmittance and referred to in physics as the “U-value”. It is the rate of heat loss through a unitary surface per degree centigrade difference in temperature between the two sides and depends on the properties of the material of which the structure is made and the linear thermal transmittance conditions.

ACOUSTIC INSULATION

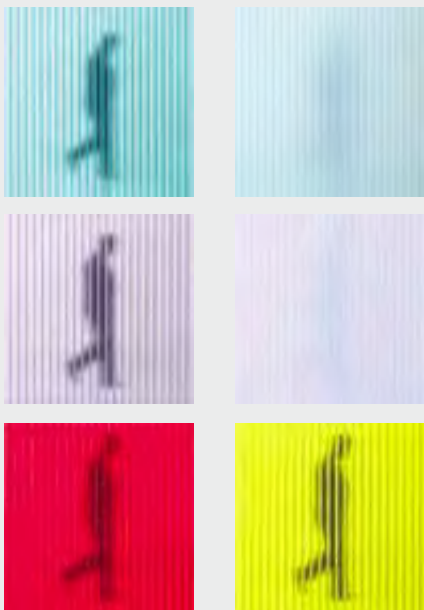
Sound insulation refers to the ability of the material to resist the transmission of impact sound. It varies according to the frequency and the physical properties, dimensions and installation constraints of the component.

PROFILE	LIGHT TRANSMISSION (LT) %	SOLAR FACTOR (SF) %	SHADING COEFFICIENT (SC)	THERMAL TRANSMITTANCE (U) W/m ² K	ACOUSTIC INSULATION dB
arcoPlus324				1.8	16
Crystal	70	74	0,85		
Green	65	70	0,80		
Bronze	60	67	0,77		
Opal	45	50	0,57		
arcoPlus625				1,7	16
Crystal	70	74	0,85		
Opal	52	57	0,66		
arcoPlus344x				1,7	19
Crystal	72	77	0,89		
Green	65	70	0,80		
Bronze	50	62	0,71		
Opal	49	60	0,69		
arcoPlus347-547				1,1	21
Crystal	54	58	0,67		
Green	60	65	0,75		
Bronze	40	47	0,54		
Opal	31	46	0,53		
arcoPlus549				1,0	21
Crystal	50	56	0,64		
Opal	28	46	0,53		
arcoWall5613				0,7	22
Crystal	37	45	0,52		
Opal	20	36	0,41		
arcoPlus684				3,3	18
Crystal	70	71	0,82		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	42	55	0,63		
arcoPlus6104				3,0	18
Crystal	70	70	0,80		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	38	53	0,60		
arcoPlus6124				2,7	19
Crystal	68	70	0,80		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	36	52	0,60		
arcoPlus6166				1,8	20
Crystal	59	63	0,72		
Green	49	54	0,62		
Bronze	41	46	0,53		
Opal	34	49	0,56		
arcoPlus626				1,7	20
Crystal	58	62	0,71		
Green	48	53	0,61		
Bronze	40	45	0,52		
Opal	33	48	0,55		
arcoPlus9207				1,7	20
Crystal	55	60	0,69		
Opal	43	53	0,61		
arcoPlus9257				1,4	20
Crystal	54	60	0,69		
Opal	43	53	0,61		
arcoPlus9327				1,3	21
Crystal	53	60	0,69		
Opal	41	52	0,60		
Velario 613				2,7	16
Crystal	76	81	0,93		
Opal	58	65	0,75		
Velario 20-5				1,7	16
Crystal	70	74	0,85		
Opal	52	57	0,66		
arcoPlus1000				2,7	16
Crystal	70	74	0,85		
Opal	40	45	0,52		
arcoPlusSUPER1000				1,8	16
Crystal	65	66	0,76		
Opal	37	40	0,46		
arcoPlusGrecaClick				3,0	16
Crystal	70	74	0,85		
Opal	45	50	0,57		
arcoPlusMiniGreca				3,0	16
Crystal	70	74	0,85		
Opal	45	50	0,57		
arcoPlusOnda - 6mm				3,2	16
Crystal	73	77	0,89		
Opal	45	50	0,57		
arcoPlusAislux Polivalente				1,3	21
Crystal	60	65	0,75		
Reflecto	40	40	0,46		
arcoPlusAislux Aisluxecure				1,4	21
Crystal	58	62	0,71		
Opal	40	45	0,52		
arcoPlusAislux Complet				1,3	21
Crystal	58	62	0,71		
Opal	35	40	0,46		
arcoPlusAislux PS				1,3	21
Crystal	58	62	0,71		
Opal	35	40	0,46		
arcoPlusAislux PSV				1,3 (25mm) - 1,4 (30mm)	21
Crystal	60	64	0,74		
Opal	40	45	0,52		



WE ARE THE
ANSWER

Special treatment
for the improvement
of the characteristics
of the products
in the construction
of roofs and facades
translucent, with
innovative design
solutions



PROJECT CALEIDO

To meet the requirements of architectural design is born the project Caleido oriented to create panels with customized colors. The arcoPlus® and arcoWall® panels can be produced with an infinite range of nuances, leaving the traditional few standard PC colors. Thanks to our production capacity, we can pull out the desired shade from a sample and re-create it in the polycarbonate mass. We produce the creativity shades!



THE TECHNOLOGY OF DOUBLE COLOR

The arcoPlus® panels can be produced also with different colors on the two sides, this is due to the extrusion of two different masses, one for the inner surface and another for the external one. The particular production's technology allows to manage simultaneously the light transmission and color effect, maximizing the projects visual impact.



UV-MATT TREATMENT

In order to avoid surface's glares that usually characterize the PC building covering and to get a new material sensation, we can coextrude a special matt and UV-protected finish on the outer wall arcoPlus®'s panels. It called UV-protected MATT. This treatment allows also a better distribution of natural light in the interiors and give a special one silk fill-touch.



UV-TECH TREATMENT

arcoPlus® with UV-TECH treatment is characterized by an extended warranty up to 15 years, due to a protective coextrusion on the external side, thanks to the special UV-absorbers more chemically stable and effective over time.



AR TREATMENT

arcoPlus® panels with AR coating are characterized by a kind of coextrusion on the inner wall which diffuses the sunlight. It reduces the passage of heat but moreover this innovative surface prevents glares or flash, thus improving the environment's visual comfort of the locations they are installed.



AR-ABSOLUTE TREATMENT

Colored opaque coextrusion, white or any other color, applied to the inner wall of panels (whose external side can have a different coloration or can be transparent), in order to block the view of any substructures or insulating materials when they are used to realize translucent glazing or façade cladding.



IR TREATMENT SOLAR CONTROL

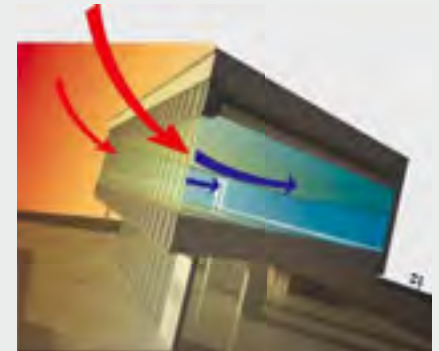
The panels spiked with IR treatment can absorb the portion of light corresponding to the infrared spectrum (780-1400nm), blocking solar heat but letting pass the brightness. Using these products, you can reduce up to 25% increase in the internal temperature caused by the greenhouse effect and you can keep the climate comfort.



ANTI-GRAFFITI ANTI-SCRATCH TREATMENT

arcoPlus® polycarbonate panels are virtually unbreakable and this property jointed with the insulation value makes them ideal for: façade, translucent window, skylights. If in the location where the polycarbonate panels are installed exists the risk of damage by vandalism as spray paint or kind of surface scratch, the better solution is the "AG-ANTIGRAFF" treatment. It create an anti-graffiti and anti-scratch surface, with a repellent barrier to oils and water prevents the "graffiti" to penetrate deeply into the substrate and will make it easy to remove. At the same time the arcoPlus® surface will be more resistant to the aggression of many chemical agents.

1.8 POLYCARBONATE LINE OF FILTER PROTECTION IR



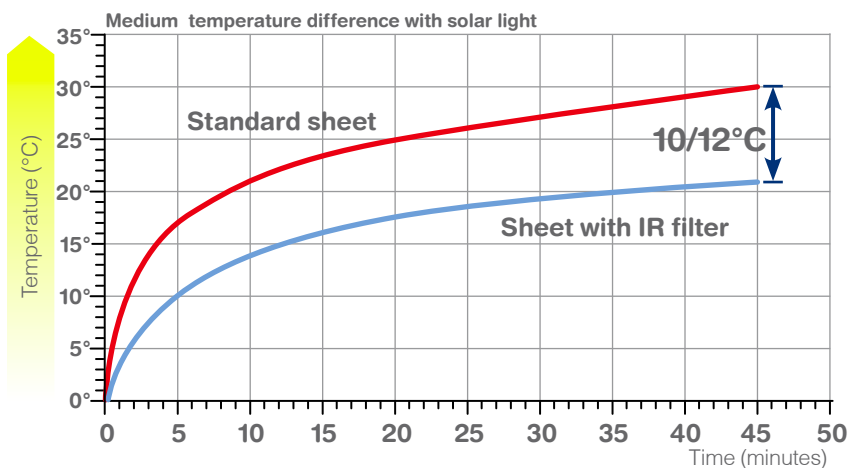
NEW PRODUCT RANGE

The PoliCarb® IR, PoliComp® IR sheets and arcoPlus® IR panels let light in but not heat. They make up Dott. Gallina's new product range for transparent coverings and windows with solar control. All products from the IR line offer innovative solutions for typical building applications where high levels of light are wanted while reducing the internal heating. The potential result: reduced energy

spending for cooling and for lighting as well as higher comfort. The multiwall sheets, and the modular arcoPlus® IR panels offer incredible design flexibility in applications such as skylights, windows, greenhouses, conservatories, and many others thanks to the wide range of available products.

SOLAR CONTROL TO DEFEAT THE HEAT

The control of the temperature and the management of heat are essential elements in maintaining a desired level of comfort within buildings. They are also critical elements for cost control and to maximize energy savings. The products of the IR line absorb the part of the light relative to the infra-red rays (from 780 to 1400nm), effectively blocking the solar heat, while letting the solar light through. The result is a reduction of the internal transmission of heat and a reduction of the cost for cooling the area. In fact all the products from the IR line can contribute to reducing the temperature increase up to 25 with respect to other window products.

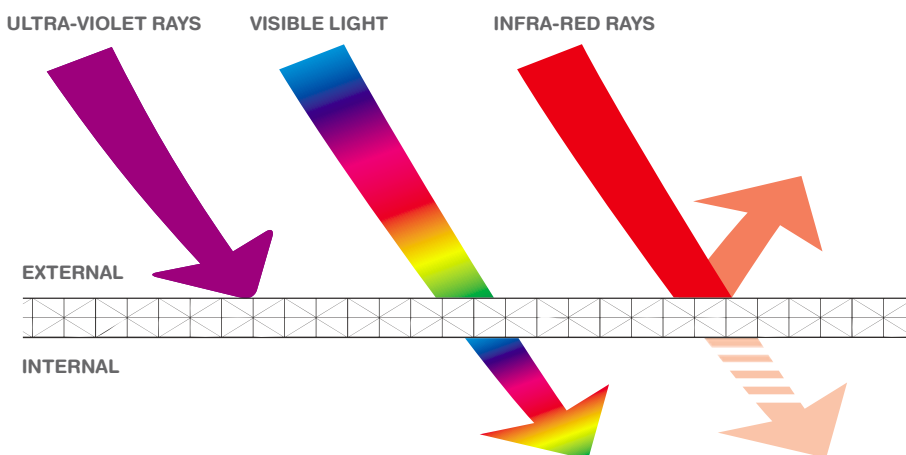


INTERNAL TEMPERATURE REDUCTION COMPARISON

Testing proves that products with a protective infra-red filter can significantly reduce internal heating.

NATURAL PROTECTION

The heat coming from solar heating is for the most part absorbed by the external surface, treated with IR absorbers, that limits radiation to the inside of the building and the consequent heating up.



U.V. PROTECTION
all products in polycarbonate by Dott. Gallina S.r.l. are UV protected and block out the harmful ultra-violet radiation

LIGHT TRANSMISSION
The PoliCarb®IR sheets and modular arcoPlus®IR panels transmit a higher quantity of light

INFRA RED ENERGY
The PoliCarb®IR sheets and modular arcoPlus®IR panels transmit to the inside less infra-red energy

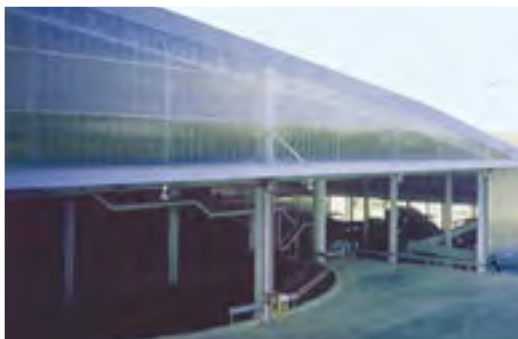
THE LASTING WARRANTY

All the products in the IR have a written guarantee of 10 year against the reduction of the properties of light transmission, yellowing and breakage caused by hail.

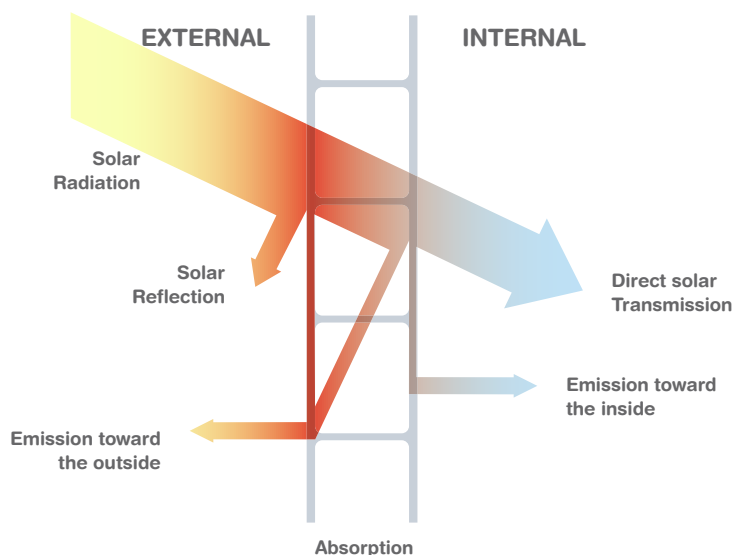
1.9 ENERGY SAVING

ENERGY SAVING

The multi-wall structure of Policarb® and arcoPlus® offers a real advantage in terms of thermal insulation. Calculated according to the guidelines of DIN 4701, there is a significant difference in fuel consumption between an industrial building with glass windows and the same building with multiwall polycarbonate glazing.



ENERGY SAVING



CALCULATION OF FUEL SAVING

The following formula is the calculation of fuel savings:

$$E = \frac{\Delta K \cdot S \cdot Gg \cdot 24}{Pt \cdot h}$$

Where:

E	Yearly fuel saving (Kg)
ΔK	Difference between thermal transmittance values of glass and polycarbonate (Kcal/hm ² °C)
S	Windows surface (m ²)
Gg	Seasonal heating factor (heated days per temperature average difference) (°C h)
24	Conversion factor
PT	Heating power of the employed fuel (Kcal/Kg)
h	Production of the heating plant (normal h=0,7)

ESTIMATE EXAMPLE : industrial shed

Location: Turin

(degree per day) 2570 • 24 = 61680 (degree per hour)

Gg • 24 = 61680 °C h

Surface: 1,40 (height) x 100 (boundary development)

S = 140 m²

Difference "ΔK": between U-GLASS 27 et arcoPlus344x (5,0 x 1,7) = 3,3 Kcal/hm² °C

$\Delta K = 3,3$ Kcal/hm²°C

Fuel: oil-fire 10.200 Kcal/Kg

Pt = 10.200 Kcal/Kg

Plant production

h = 0,7

Therefore the yearly fuel saving will be:

$$E = \frac{3.3 \times 140 \times 62.808}{10.200 \times 0.7} = 4.064 \text{ Kg}$$

LOWER HEATING POWER OF FUEL

Electric power	2.300	Kcal/KWh
Oil-fired heating	10.200	Kcal/Kg
Methane	8.200	Kcal/m ³

SEASONAL HEATING FACTOR (DEGREE PER DAY)

Milan	2.340	°C
Rome	1.440	°C
Turin	2.570	°C
Palermo	690	°C



1.10 USE AND MAINTENANCE

USE AND MAINTENANCE



NEVER STORE THE MATERIAL IN A PLACE WHERE IT IS EXPOSED TO SUNLIGHT WHILE WRAPPED IN ITS PROTECTIVE FILM



INSTALL THE MATERIAL WITH THE U.V. PROTECTED SIDE FACING THE EXTERIOR AND REMOVE THE PROTECTIVE FILM AFTER INSTALLING



ALLOW FOR THERMAL EXPANSION OF THE MATERIAL



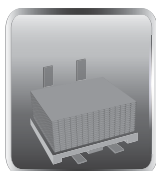
ONLY USE POLYCARBONATE-COMPATIBLE SILICONE IF NECESSARY



USE ADHESIVE ALUMINIUM TAPE TO SEAL THE AIR CELLS



USE WATER AND NEUTRAL SOAP TO CLEAN THE SURFACES



USE SUITABLE HOISTING EQUIPMENT TO HANDLE THE MATERIAL

CLEANING

To clean sheets and panels we recommend the use of water and neutral detergent only.

Do not use abrasive products.

THERMAL EXPANSION

Polycarbonate is subject to thermal expansion of 0.065 mm/m°C.

When installing polycarbonate sheets and panels always allow enough room for expansion.

If anchoring systems are used these must consist of the specific brackets and connectors provided for each product.

HANDLING

Take all the appropriate precautions when handling the material to avoid accidental impacts and scratches on the surface which could spoil the material's appearance and undermine its mechanical properties.

STORAGE

Avoid exposure to direct sunlight and rain to prevent any excessive build-up of heat in the packaging or the formation of condensation in the cells.

Do not remove the protective film before installing, but immediately after installation.

SEALING

Only use neutral, polycarbonate-compatible silicone for sealing.

MODULAR SYSTEMS

2.1 INTERLOCKING SYSTEMS

This group of modular systems all have a tongue and groove connector system. The structure is specifically designed to ensure a weatherproof finish.

All systems are supplied complete with a range of accessories to ensure correct installation.

They are particularly suitable for roofing applications, continuous translucent glazing and false ceilings.

2.2 CONNECTOR SYSTEMS

This group includes all the modular systems provided with a specific connector, depending on the type of application.

All systems are supplied complete with a range of accessories to ensure correct installation.

They are particularly suitable in roofing for covering large areas, translucent façades and glazing applications.

2.3 OVERLAPPING SYSTEMS

This group of wall and roofing products can be used in continuous applications or with other insulated metal panels and corrugated sheets or panels. Their structural design and the use of a specific range of accessories guarantee a weatherproof finish.

2.4 OPENING SYSTEMS

This group of products can be used with the modular interlocking systems to create opening windows.

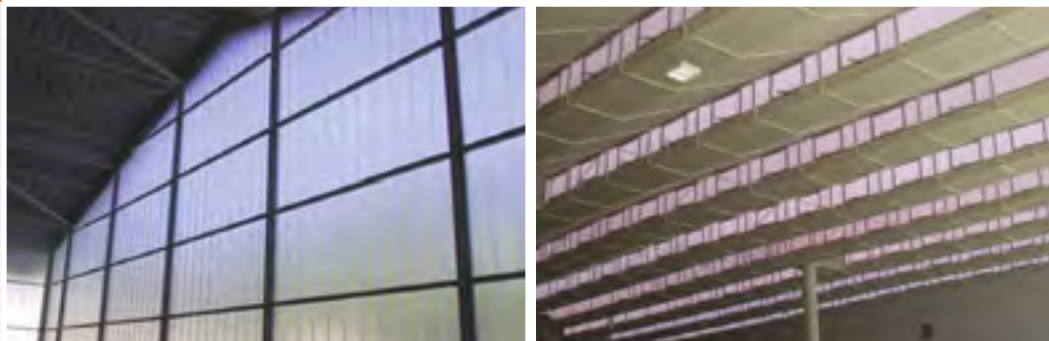
All arcoPlus® systems include aluminium profiles and anchor systems to guarantee resistance to positive and negative wind loads while allowing for linear expansion.



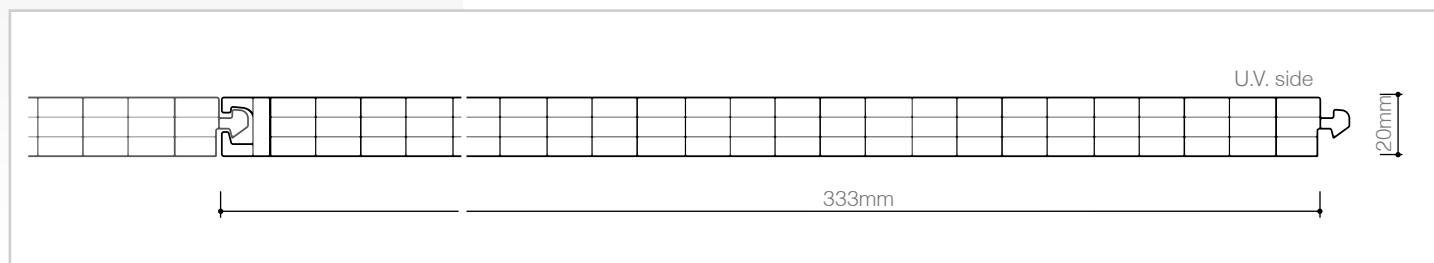


2.1 INTERLOCKING SYSTEMS

arcoPlus®
324



PROFILE



**Modular system of
UV protected multiwall
polycarbonate for
translucent curtain
walls and glazing
applications**

PRODUCTION STANDARDS

Thickness	20mm
Structure	4 walls
Effective modular width	333mm
Panel length	no limit
Colours available	see page 11

DESCRIPTION

arcoPlus®324 is a modular system of coextruded 4 walls polycarbonate panels with a thickness of 20mm, aluminium profiles, accessories and opening windows, designed for simple and versatile use.

arcoPlus®324 is not suitable for roofing applications.

TECHNICAL FEATURES

Thermal insulation	1,8 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0



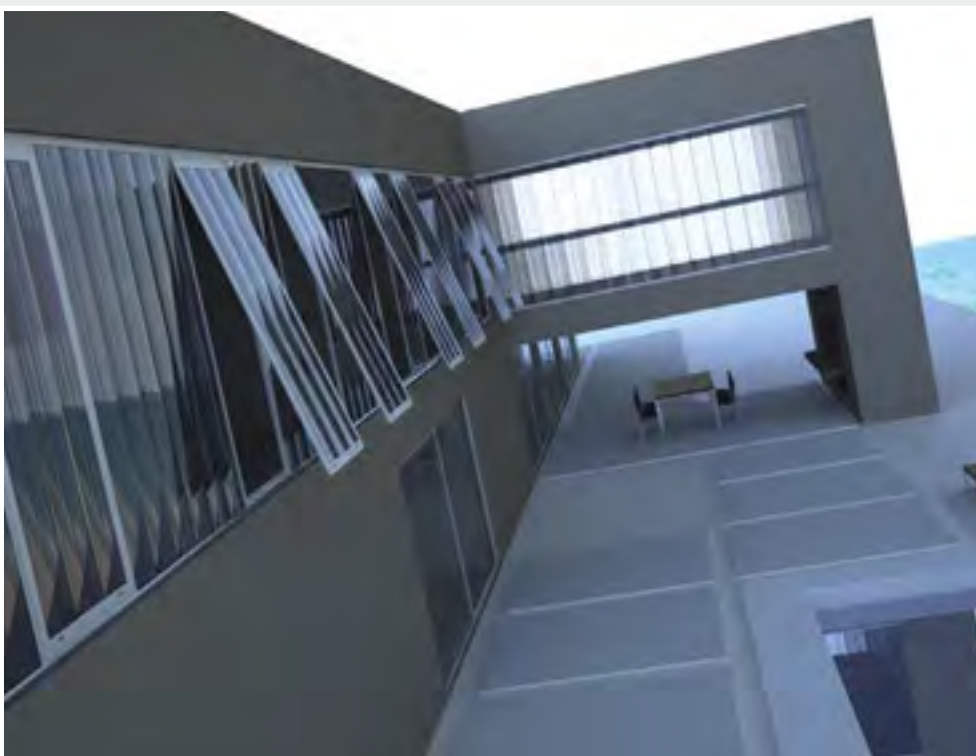
LIGHT MANAGEMENT

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation

APPLICATIONS

- ▶ Vertical windows

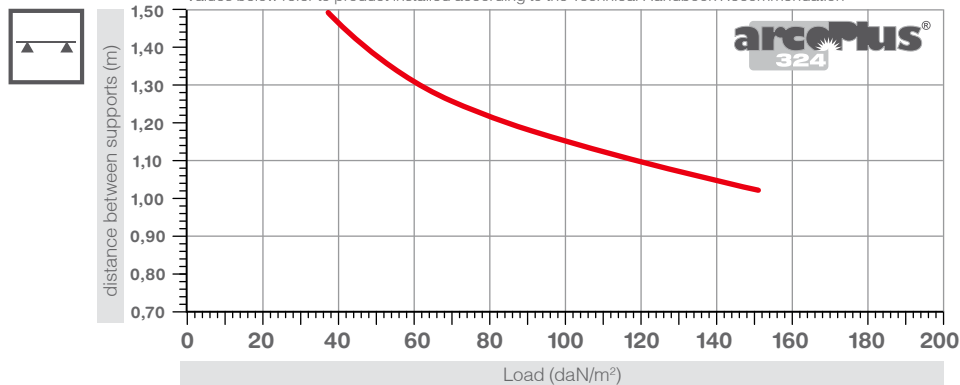




LOAD RESISTANCE

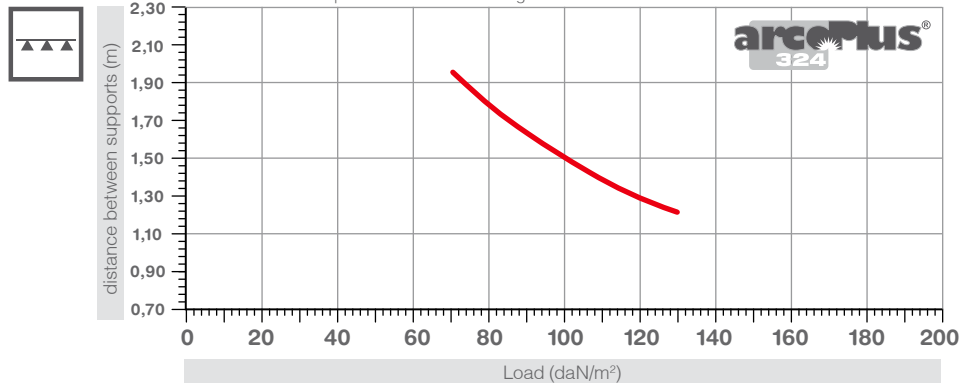
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



EASY AND LOW-COST INSTALLATION

The 20mm-thick, 4 walls structure with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames, thus eliminating heat loss due to the thermal bridges caused by these structures.

The modular connection ensures a watertight seal for glazing with an inclination of up to 30°.

For installations exceeding 1.5m, a suitable section-breaker profile must be installed to which the arucoPlus® panels can then be fixed (see load resistance graph). This is done using the specific brackets to give the system

the necessary resistance to negative wind load and permit sliding due to thermal expansion.

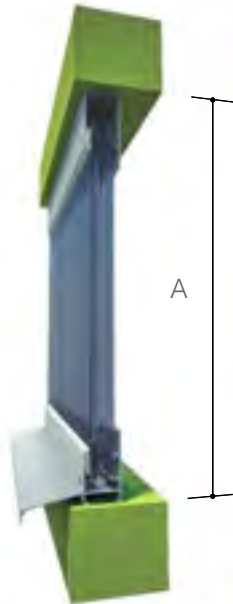


INSERTION OF PLATE

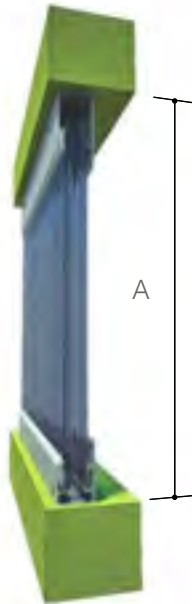
Insertion of stainless steel plates for anchorage to existing structures



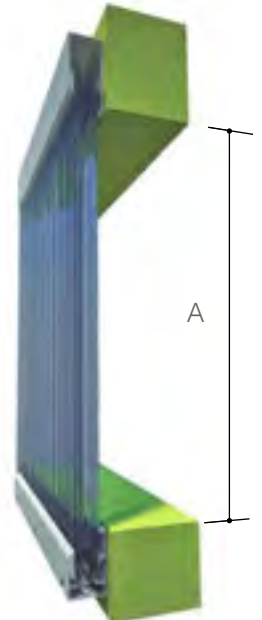
**CALCULATION AND INSTALLATION
EXAMPLES OF PANEL LENGTH (PL)**



**WITH
EAVE**
 $PL = A - 50 \text{ mm}$
 A = opening measure



**WITHOUT
EAVE**
 $PL = A - 40 \text{ mm}$
 A = opening measure



**OUTSIDE OF
THE BUILDING**
 $PL = A + 80 \text{ mm}$
 A = opening measure

VERTICAL GLAZING

Construction of continuous transparent glazing, with section-breaker profile





ACCESSORIES

The system includes a complete range of aluminium profiles for installing the panels.

The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.

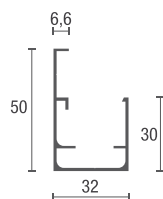


BASE PROFILE

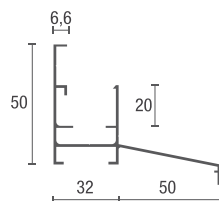
Insertion of curtain wall panels on base profile, with gasket

METAL PROFILES

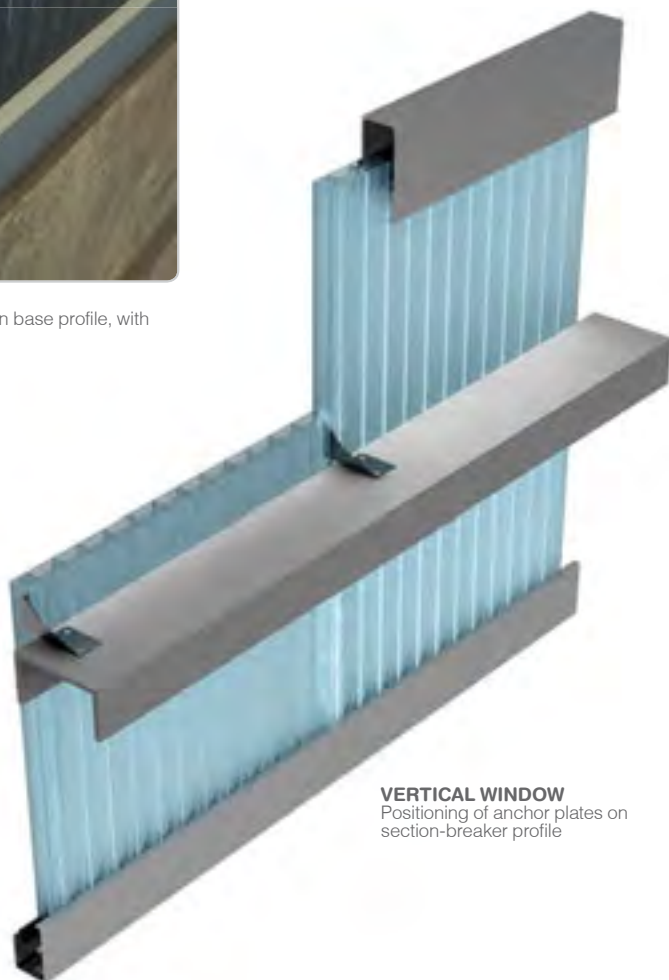
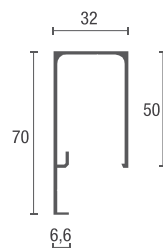
code 4062
Base AL profile



code 4064
Base AL profile
with eave



code 4061
Upper and side
AL profile



VERTICAL WINDOW

Positioning of anchor plates on section-breaker profile

ACCESSORIES



4062

Base AL profile



4064

Base AL profile
with eave



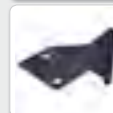
4061

Upper and side
AL profile



1169/B

Slip Coat Gasket



4063

Link plate



4066

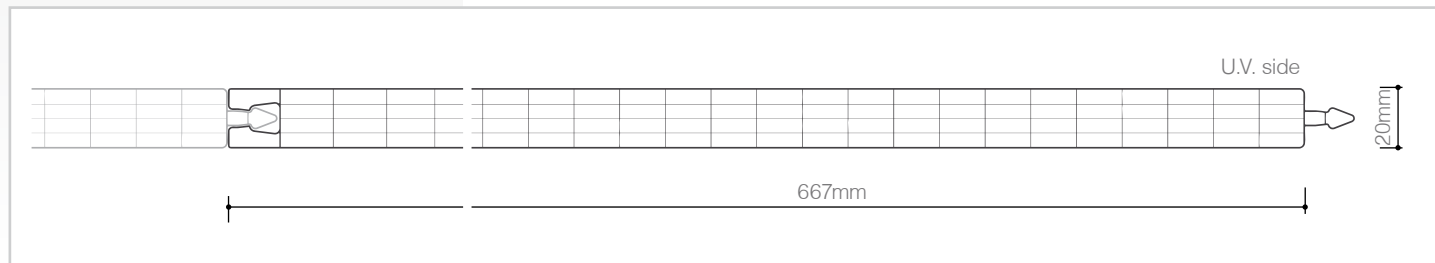
Additional sealing tape

2.1 INTERLOCKING SYSTEMS

arcoPlus®
625



PROFILE



Modular system of UV protected multiwall polycarbonate for vertical window applications

PRODUCTION STANDARDS

Thickness	20mm
Structure	5 walls
Effective modular width	667mm
Panel length	no limit
Colours available	see page 11

DESCRIPTION

arcoPlus®625 is a modular system of coextruded 5 walls polycarbonate panels with a thickness of 20mm, aluminium profiles, accessories and opening windows, designed for simple and versatile use. arcoPlus®625 is not suitable for roofing applications.

TECHNICAL FEATURES

Thermal insulation	1,7 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0



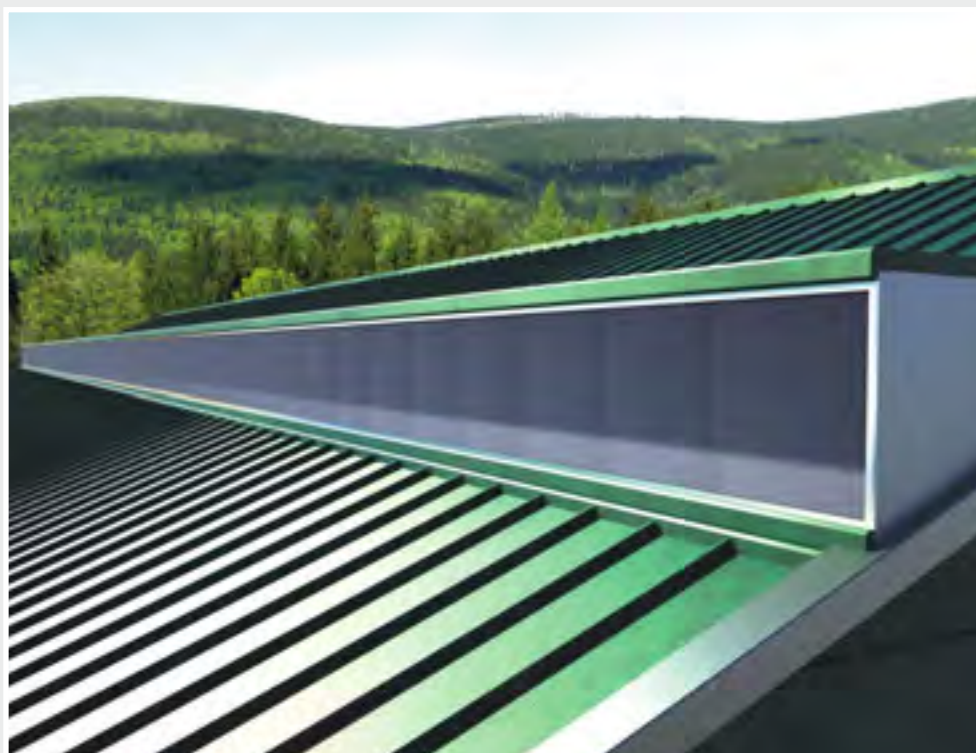
LIGHT MANAGEMENT

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation

APPLICATIONS

- ▶ Vertical windows

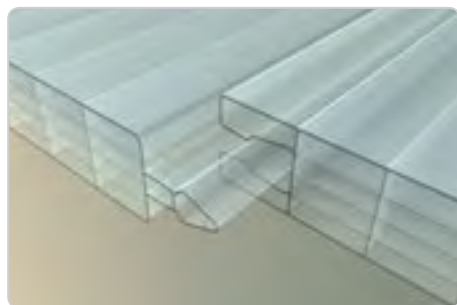


CONTINUOUS WINDOWS
Translucent continuous windows



ACCESSORIES

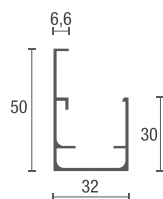
The system includes a complete range of aluminium profiles for installing the panels. The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.



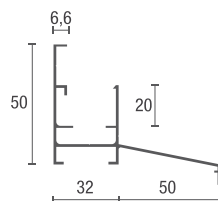
DETAIL JOINT
Detail joint male-female

METAL PROFILES

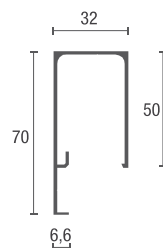
code 4062
Base AL profile



code 4064
Base AL profile
with eave



code 4061
Upper and side
AL profile



ACCESSORIES



4062
Base AL profile



4064
Base AL profile
with eave



4061
Upper and side
AL profile



1169/B
Slip Coat Gasket

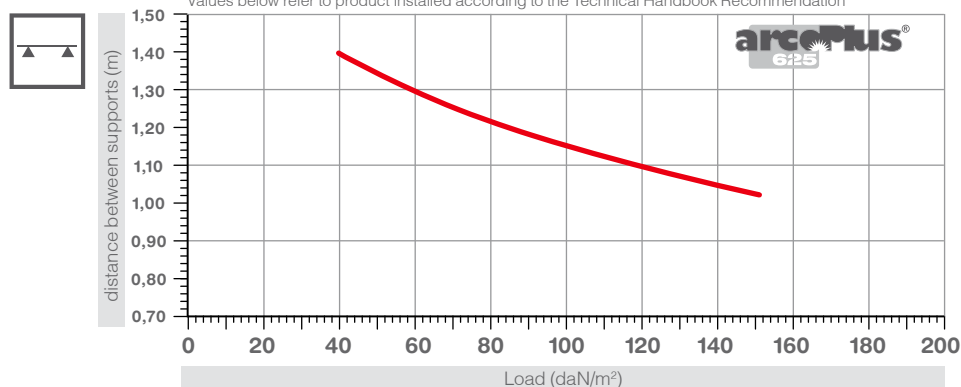


4327
Additional sealing tape

LOAD RESISTANCE

Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



EASY AND LOW-COST INSTALLATION

The 20mm-thick, 5 walls structure with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames, thus eliminating heat loss due to

the thermal bridges caused by these structures.

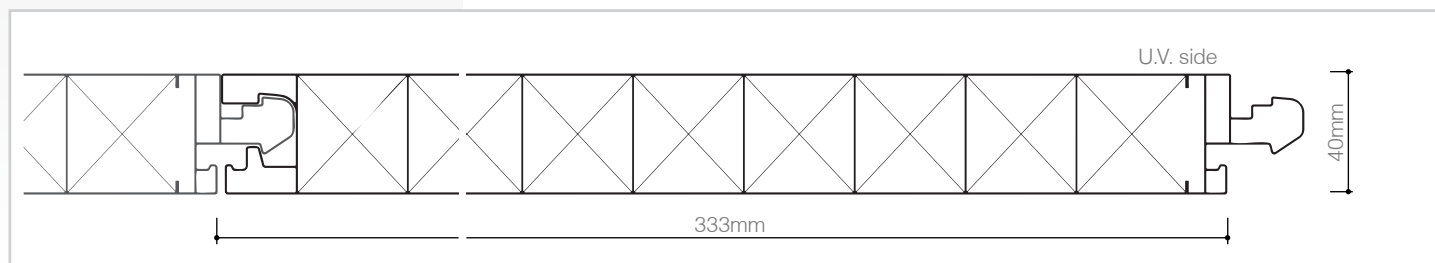
The modular connection ensures a watertight seal for glazing with an inclination of up to 30°.

2.1 INTERLOCKING SYSTEMS

arcoPlus®
344x



PROFILE



Modular system of multiwall UV protected polycarbonate for windows and translucent roofing applications

PRODUCTION STANDARDS

Thickness	40mm
Structure	4 walls
Effective modular width	333mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,7 W/m ² K
Acoustic insulation	19 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION

arcoPlus®344x is a modular system used in the residential and industrial building sectors. It is suitable for use in new buildings and for renovation and maintenance projects. The system consists of coextruded 4 walls polycarbonate panels with a thickness of 40mm, aluminium profiles, accessories and opening windows, designed for simple and versatile use.



arcoPlus®344x can be used for roofing applications with a minimum slope of 7%.

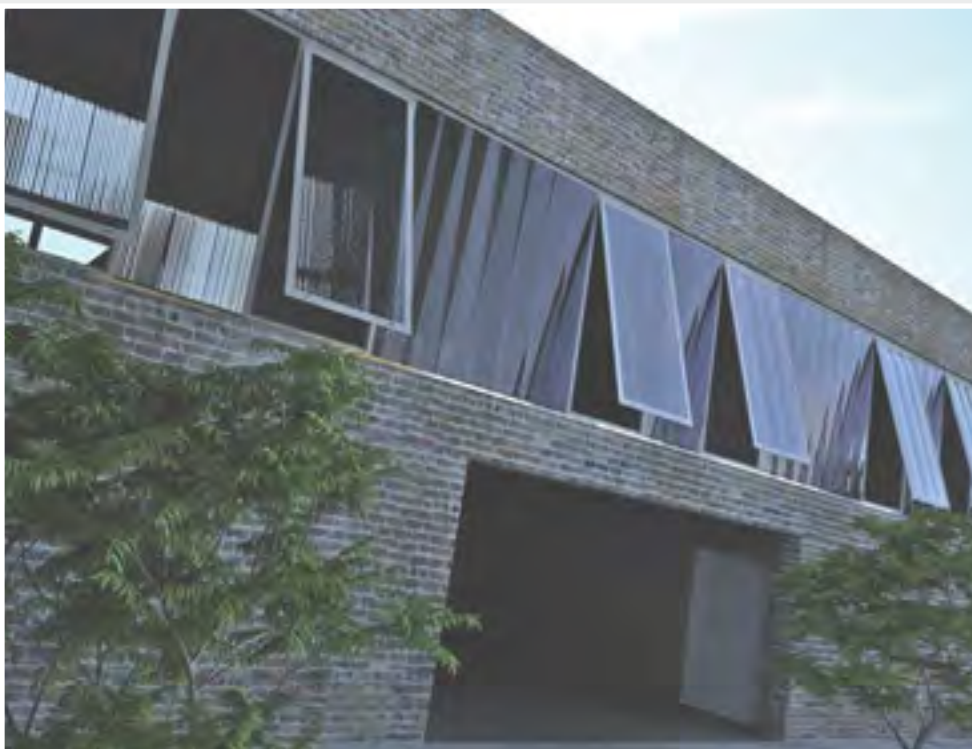


ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ High load resistance

APPLICATIONS

-  Vertical windows
-  Roofing

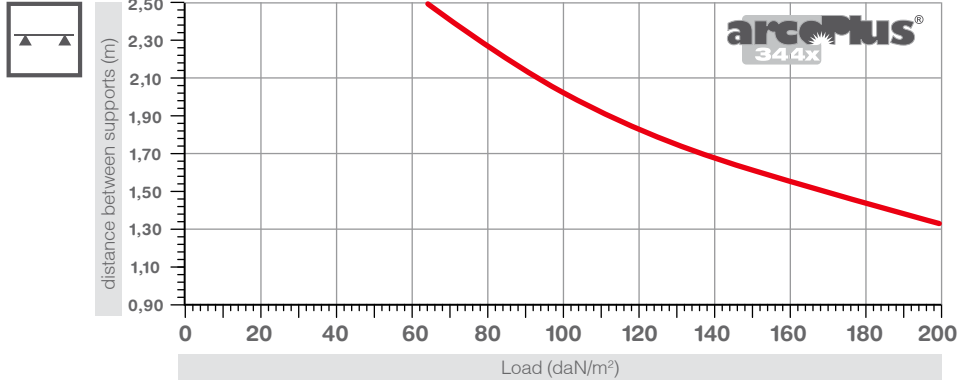




LOAD RESISTANCE

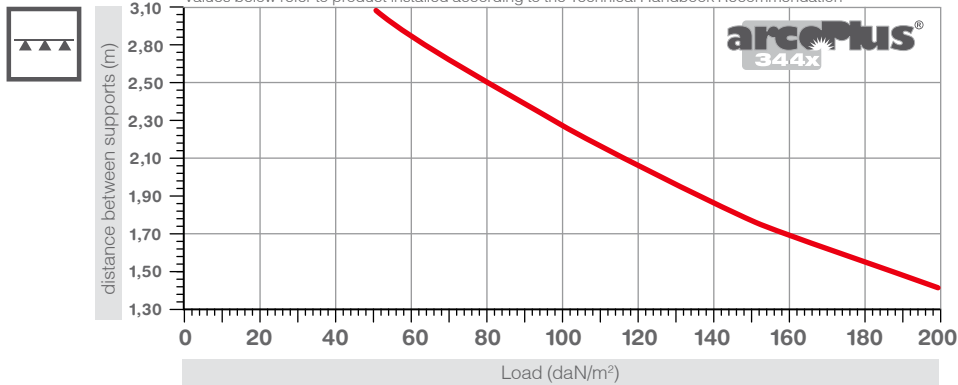
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



EASY AND LOW-COST INSTALLATION

The 40mm-thick, 4 walls design with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames (continuous windows), thus eliminating heat loss due to the thermal bridges caused by these structures (discontinuous windows).

For installations exceeding 2.2m, a suitable section-breaker profile must be installed to which the arcoPlus® panels can then be fixed.

This is done using the specific brackets to give the system the necessary resistance to negative wind load and permit sliding due to thermal expansion (see load resistance graph).



**CALCULATION AND INSTALLATION
EXAMPLES OF PANEL LENGTH (PL)**



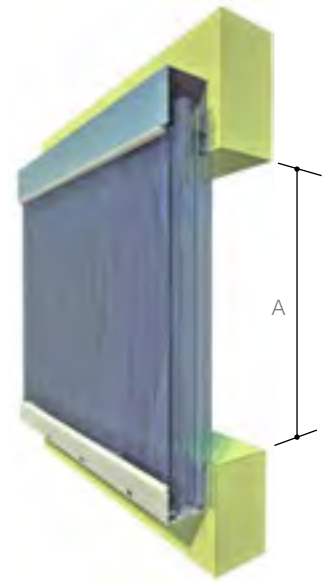
**WITH
EAVE**

LP = A - 50 mm
(base profile without TT)
LP = A - 70 mm
(base profile with TT)
A = opening measure



**WITHOUT
EAVE**

LP = A - 45 mm
(base profile without TT)
LP = A - 60 mm
(base profile with TT)
A = opening measure



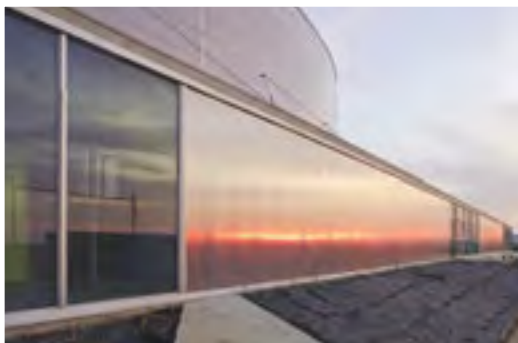
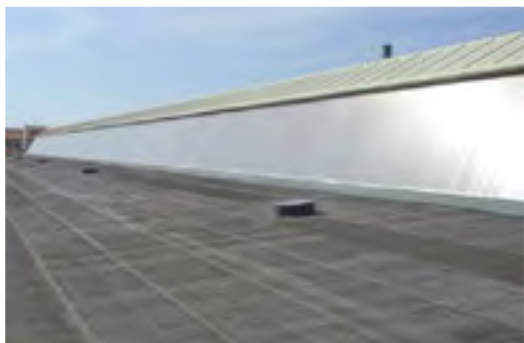
**OUTSIDE OF
THE BUILDING**

LP = A + 95 mm
(profile without TT)
A = opening measure

TRANSLUCENT CURTAIN WALLS

Realization vertical translucent curtain walls



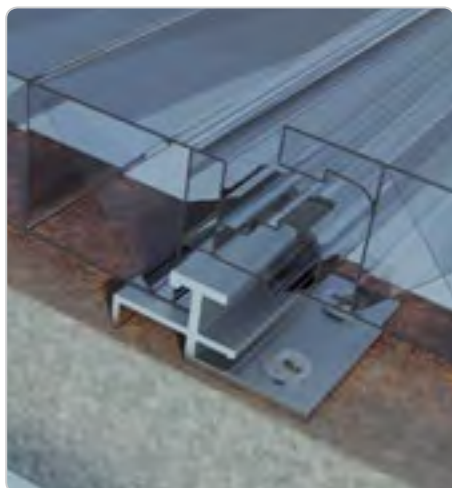


ACCESSORIES

In addition to a complete range of aluminium profiles (also available as thermally insulated) for installing the panels, the system also includes opening windows (manually operated or motorised) to ventilate the building.

The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape.

This allows correct ventilation and prevents soiling on the inside.



INSERTION OF PLATE

Insertion of aluminium plates for anchorage to existing structures

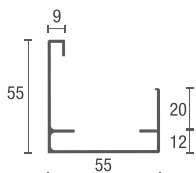


BASE PROFILE

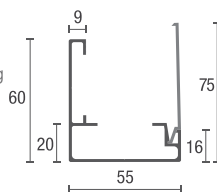
Detail of curtain wall, insertion in base profile

METAL PROFILES

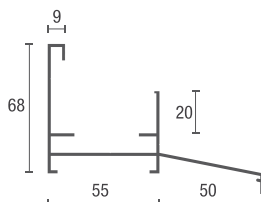
code 4047
Base AL profile



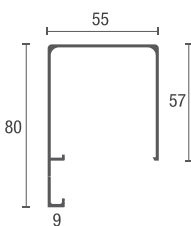
code 4140
Base AL profile
with frontal opening



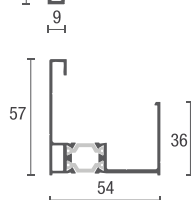
code 4046
Base AL profile
with eave



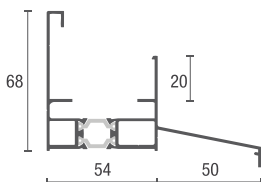
code 4045
Upper and side
AL profile



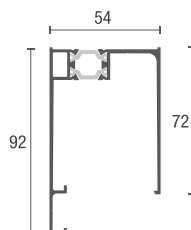
code 4587
Base profile TT
in AL



code 4590
Base profile TT
with eave in AL



code 4585
Upper and side
profile TT in AL



ACCESSORIES



4047

Base AL profile



4046

Base AL profile
with eave



4140

Base AL profile
with frontal opening



4045

Upper and side
AL profile



4587

Base profile TT
in AL



4590

Base profile TT
with eave in AL



4585

Upper and side profile
TT in AL



4050

Aluminium bracket



4052

Inox bracket



4312

Eclipse



1169/B

Slip Coat Gasket



4108

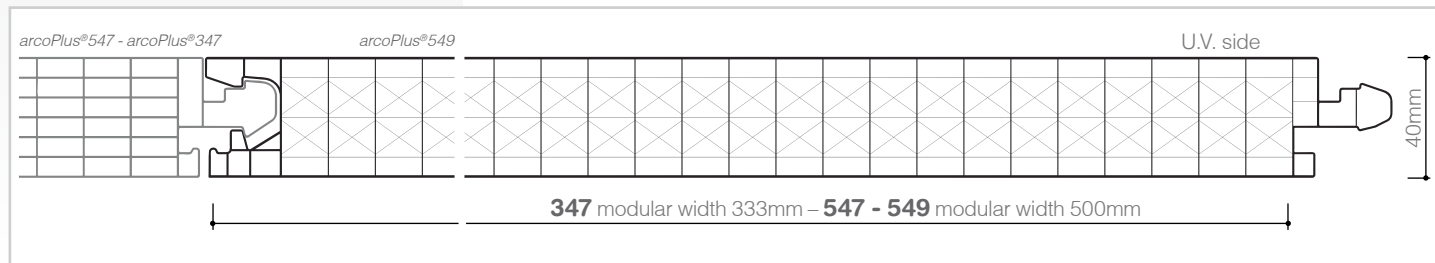
Additional sealing tape

2.1 INTERLOCKING SYSTEMS

arcoPlus®
347 547-549



PROFILE



Modular system of multiwall UV protected polycarbonate for windows and translucent roofing applications

PRODUCTION STANDARDS

Thickness	40mm
Structure	7 walls - 9 walls
Modular width	333mm (347)–500mm (547-549)
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,1 (347-547) - 1,0 (549) W/m ² K
Acoustic insulation	21 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION

arcoPlus®547 and arcoPlus®549 are modular systems of coextruded 7 walls and 9 walls polycarbonate panels with a thickness of 40mm, aluminium profiles, accessories and opening windows, designed for simple and versatile use.

All the systems can be used for roofing applications with a minimum slope of 7%.





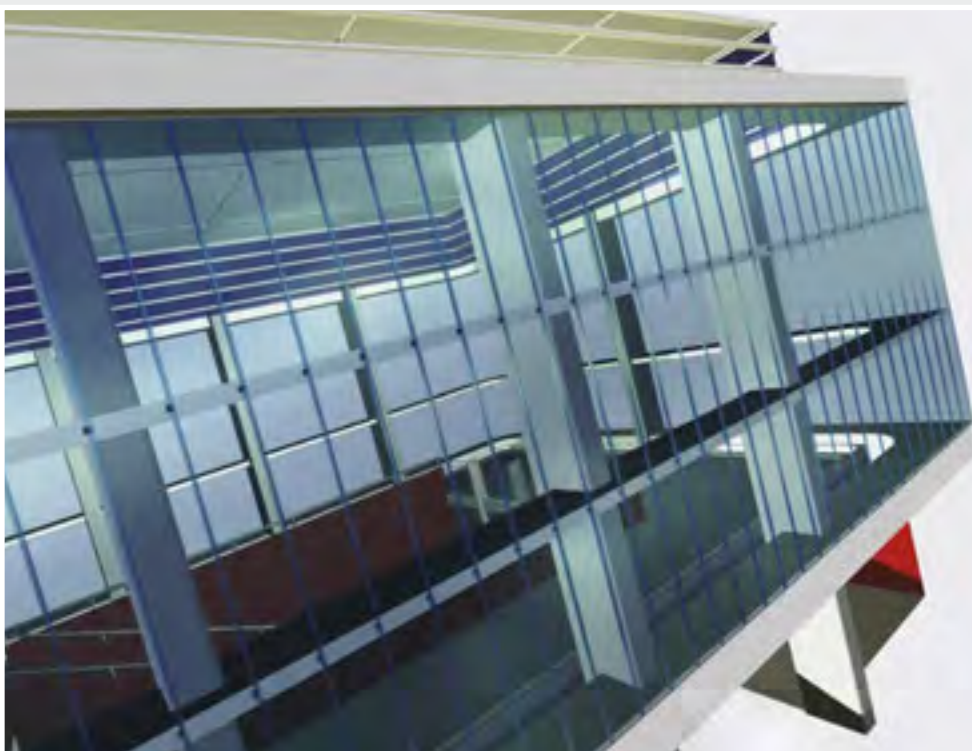
SPECIAL TREATMENT

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ High load resistance

APPLICATIONS

-  Vertical windows
-  Roofing

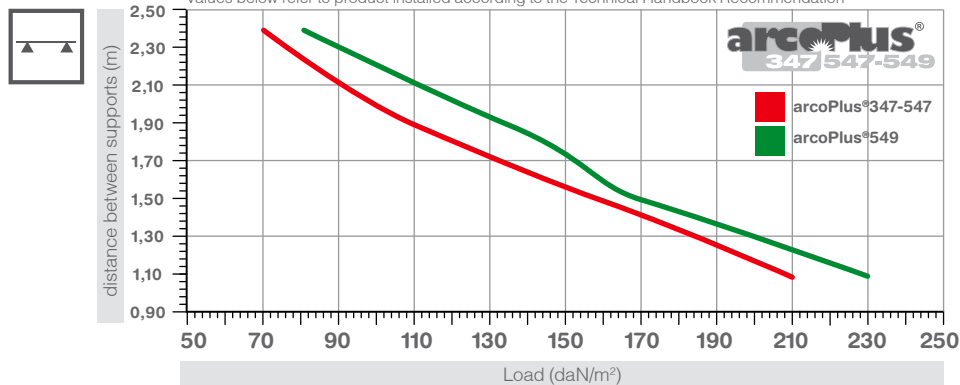




LOAD RESISTANCE

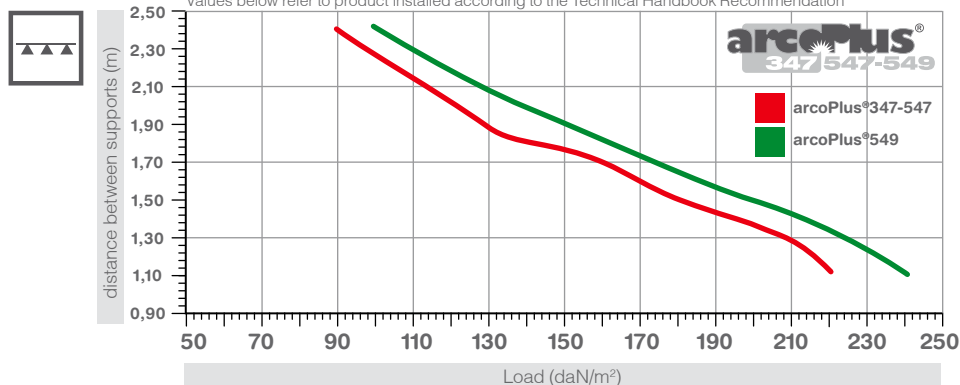
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

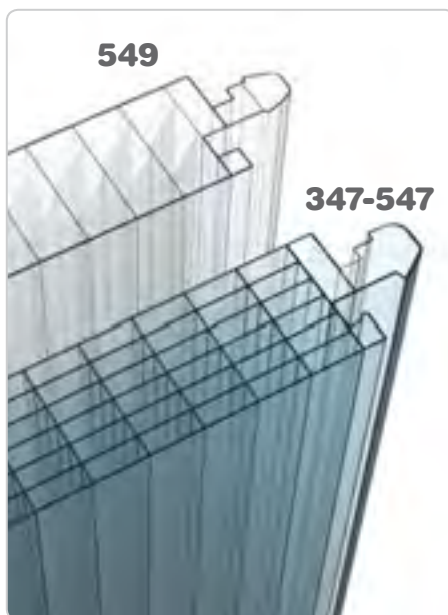
Values below refer to product installed according to the Technical Handbook Recommendation



EASY AND LOW-COST INSTALLATION

The 40mm-thick, 7 walls and 9 walls design with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames (continuous glazing), thus eliminating heat loss due to the thermal bridges caused by these structures (discontinuous glazing).

For installations exceeding 2.2m, a suitable section-breaker profile must be installed to which the arcoPlus[®] panels can then be fixed. This is done using the specific brackets to give the system the necessary resistance to negative wind load and permit sliding due to thermal expansion (see load resistance graph).



PROFILES



**CALCULATION AND INSTALLATION
EXAMPLES OF PANEL LENGTH (PL)**



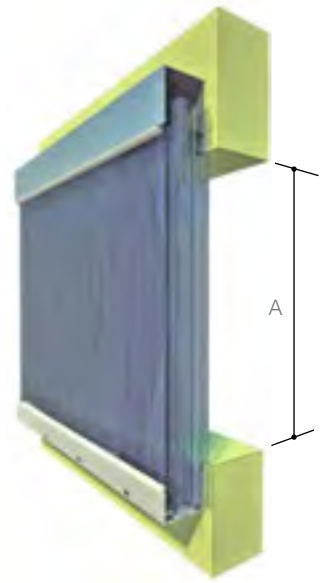
**WITH
EAVE**

LP = A - 50 mm
(base profile without TT)
LP = A - 70 mm
(base profile with TT)
A = opening measure



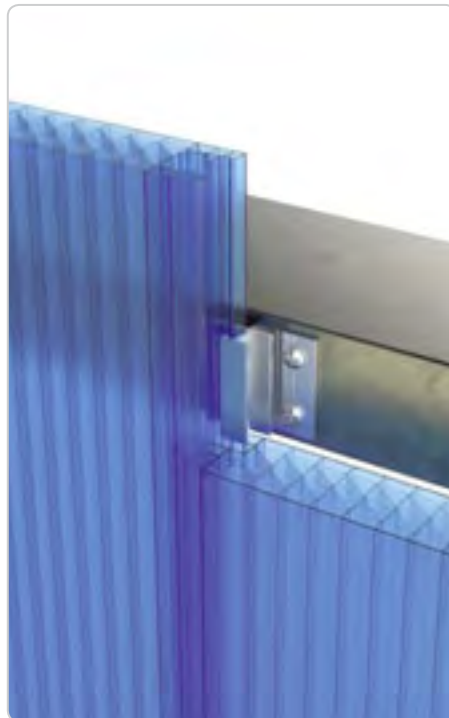
**WITHOUT
EAVE**

LP = A - 45 mm
(base profile without TT)
LP = A - 60 mm
(base profile with TT)
A = opening measure



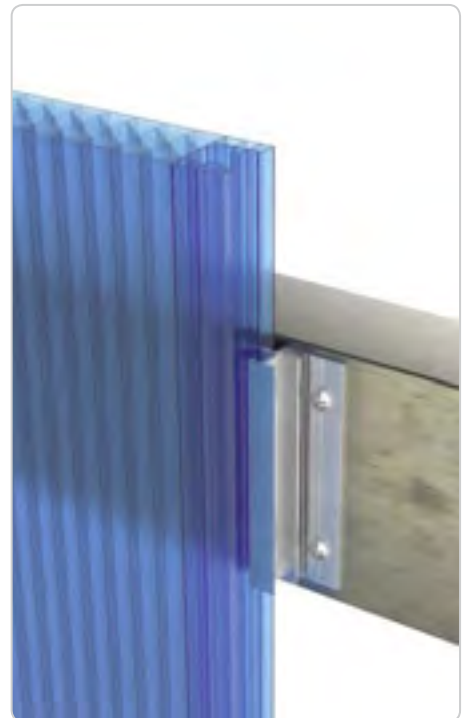
**OUTSIDE OF
THE BUILDING**

LP = A + 95 mm
A = opening measure



ALUMINUM BRACKET JOINT

Anchorage to existing structures by inserting aluminum bracket



REINFORCED ALUMINUM BRACKET JOINT

Anchorage to existing structures by inserting aluminum bracket



ACCESSORIES

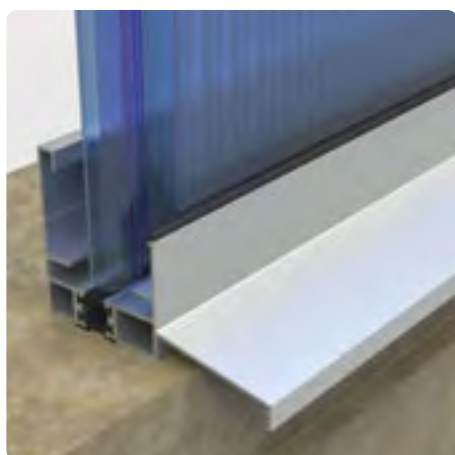
In addition to a complete range of aluminium profiles (also available as thermally insulated) for installing the panels, the system also includes opening windows (manually operated or motorised) to ventilate the building.

The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape.

This allows correct ventilation and prevents soiling on the inside.



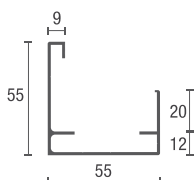
SIDE PROFILE
Detail side profile TT in AL



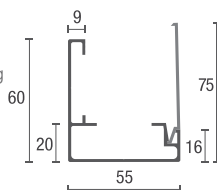
BASE PROFILE WITH TT
Detail base profile TT with eave in AL

METAL PROFILES

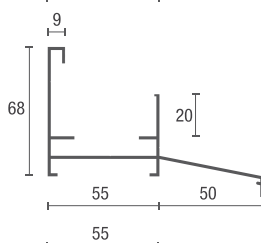
code 4047
Base AL profile



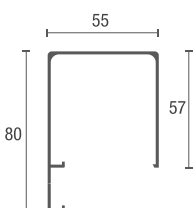
code 4140
Base AL profile
with frontal opening



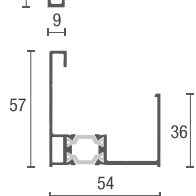
code 4046
Base AL profile
with eave



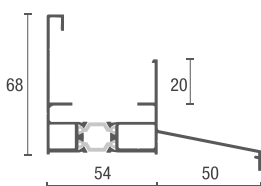
code 4045
Upper and side
AL profile



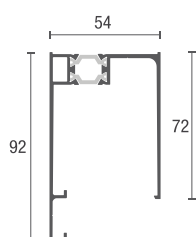
code 4587
Base profile TT
in AL



code 4590
Base profile TT
with eave in AL



code 4585
Upper and side
profile TT in AL



ACCESSORIES



4047
Base AL profile



4046
Base AL profile
with eave



4140
Base AL profile
with frontal opening



4045
Upper and side
AL profile



4587
Base profile TT
in AL



4590
Base profile TT
with eave in AL



4585
Upper and side profile
TT in AL



4050
Aluminium bracket



4050/B
Aluminium bracket



4052
Inox bracket



4312
Eclipse



1169/B
Slip Coat Gasket



4108
Additional sealing tape

2.1 INTERLOCKING SYSTEMS

arcoWall®
5613

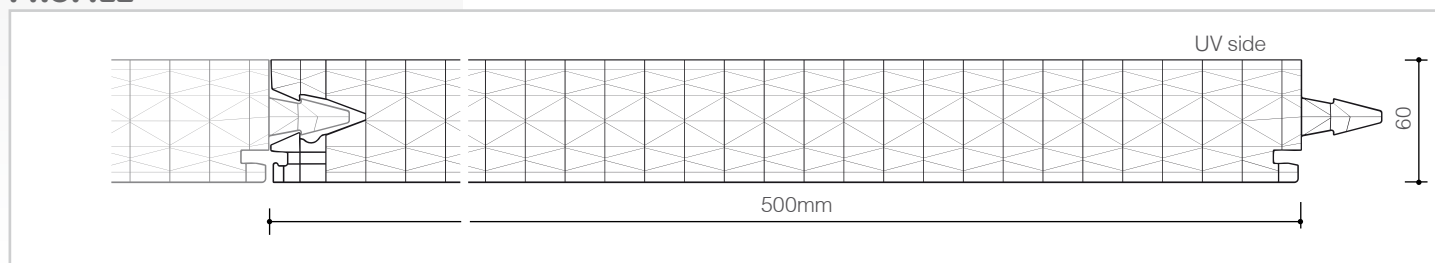


© Miguel de Guzmán. imagensubliminal.com



© Akunah – Bruno Raimin (photograph) and "Tomasini Design" (architect)

PROFILE



Modular system of multiwall UV protected polycarbonate for vertical translucent walls

PRODUCTION STANDARDS

Thickness	60mm
Structure	13 walls
Modular width	500mm
Panel length	no limits

TECHNICAL FEATURES

Thermal insulation	0,7 W/m ² K
Acoustic insulation	22 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
UV rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION

arcoWall®5613 is a modular system of coextruded 13 walls polycarbonate panels with a thickness of 60mm, and exclusive aluminum profiles for variable solutions that can be customized for the needs of any project.

The self-bearing translucent walls system, arcoWall®5613, comes from the experience of over 50 years of our company. We are constantly engaged in exploring alternatives in the building market as well as the creation of unique and innovative systems.



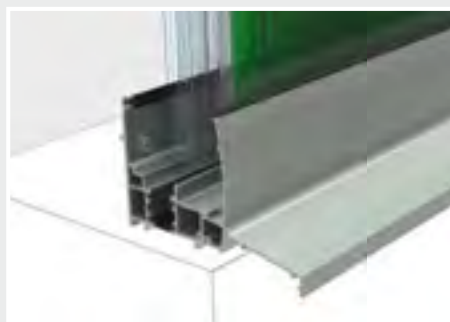
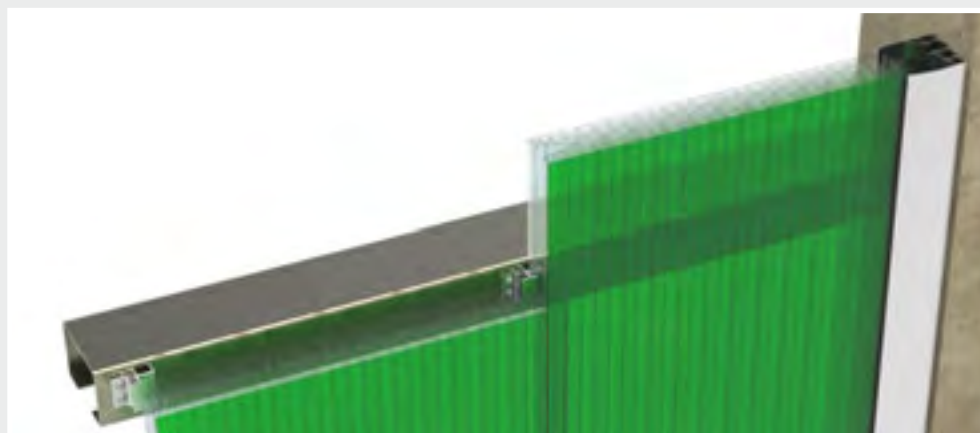
SPECIAL TREATMENT

ADVANTAGES

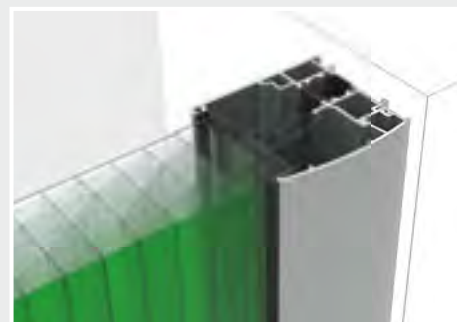
- ❖ Easy and low-cost installation
- ❖ Thermal bridge interruption
- ❖ Can be applied to the openable systems
- ❖ Light transmission
- ❖ High insulation coefficient
- ❖ High wind resistance
- ❖ Fire reaction EN 13501-1 EuroClass B-s1,d0

APPLICATIONS

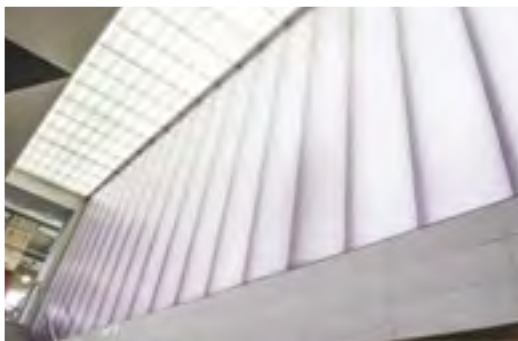
- ▶ High-performance continuous facades
- ▶ Vertical windows
- ▶ Translucent curtain walls



BASE PROFILE DETAIL
Removable base profile with thermal break



SIDE PROFILE DETAIL
Vertical glazing detail with the profile with thermal break



DESIGN AND EASY INSTALLATION

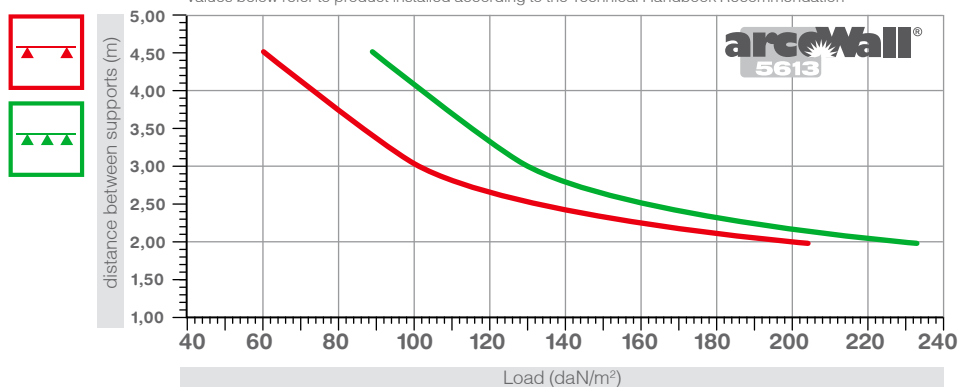
The 60 mm-thick, 13 walls design with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames, thus eliminating heat loss due to the thermal bridges caused by these structures.

For installations exceeding 3.5m, a suitable section-breaker profile must be installed to which the arcoWall®5613 panels can then be fixed. It is done using the specific brackets to give the system the necessary resistance to negative wind load and permit sliding due to thermal expansion (see load resistance graph).

LOAD RESISTANCE

Maximum loads

Values below refer to product installed according to the Technical Handbook Recommendation



DESIGN AND EASY INSTALLATION

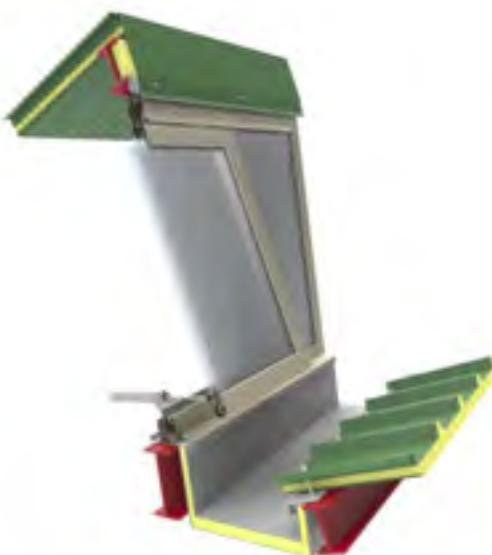
The 60mm-thick, 13 walls design with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames, thus eliminating heat loss due



to the thermal bridges caused by these structures. For installations exceeding 3.5m, a suitable section-breaker profile must be installed to which the arcoWall®5613 panels can then be fixed. It is done using the specific brackets to give the system the necessary resistance to negative wind load and permit sliding due to thermal expansion.

OPENABLE SYSTEM WITH THERMAL BREAK

There are available openable systems arcoWall®5613 realized with innovative aluminum profiles with thermal break.

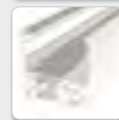


ACCESSORIES



cod. 4800

Upper and side AL profile with thermal break



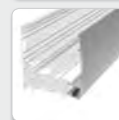
cod. 1372

Internal eave PE profile for base profile



cod. 4801

Drip edge AL profile for openable system



cod. 4804

Drip edge AL profile



cod. 4807

Drip edge AL profile with eave



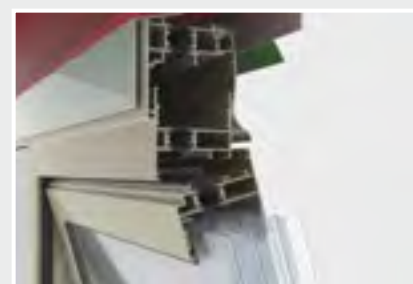
cod. 4715

Aluminium bracket



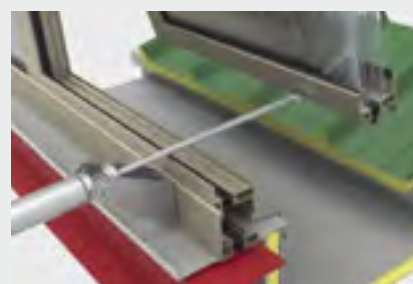
cod. 1169/b

Slip Coat Gasket



PROFILES WITH THERMAL BREAK

The use of new perimeter profiles with thermal break ensures perfect sealing against atmospheric agents thus avoiding the common occurrence of heat loss

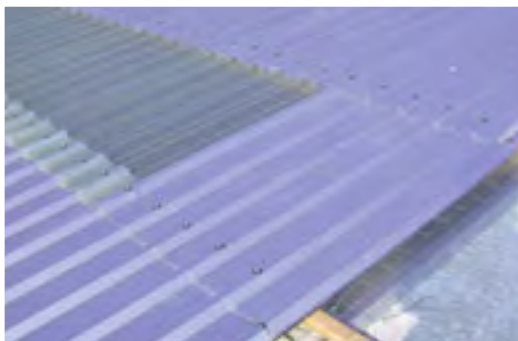


OPENABLE SYSTEM DETAIL

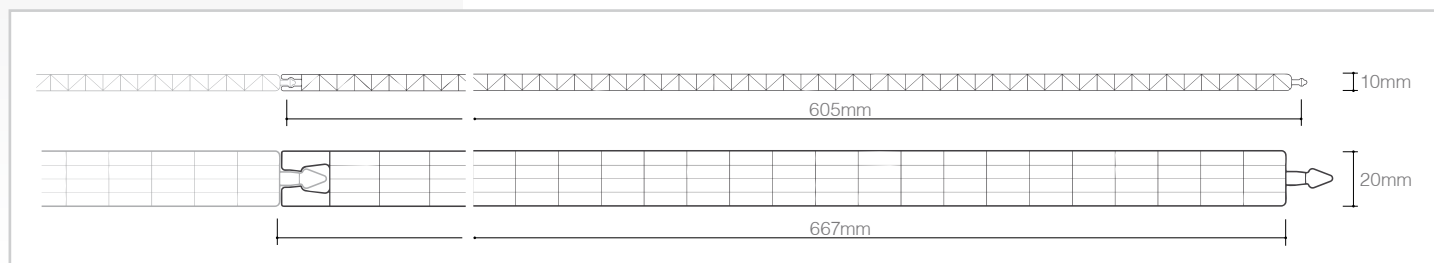
New aluminum profiles with thermal break allow creation of openable systems for ventilation of curtain walls

2.1 INTERLOCKING SYSTEMS

Velario®
613 | 10mm
20-5 | 20mm



PROFILE



Modular system of multiwall polycarbonate for false ceilings and partitions WITHOUT UV PROTECTION

PRODUCTION STANDARDS

	Velario®613	Velario®20-5
Thickness	10mm	20mm
Structure	3 walls	5 walls
Effective modular width	605mm	667mm
Panel length	no limit	no limit



TECHNICAL FEATURES

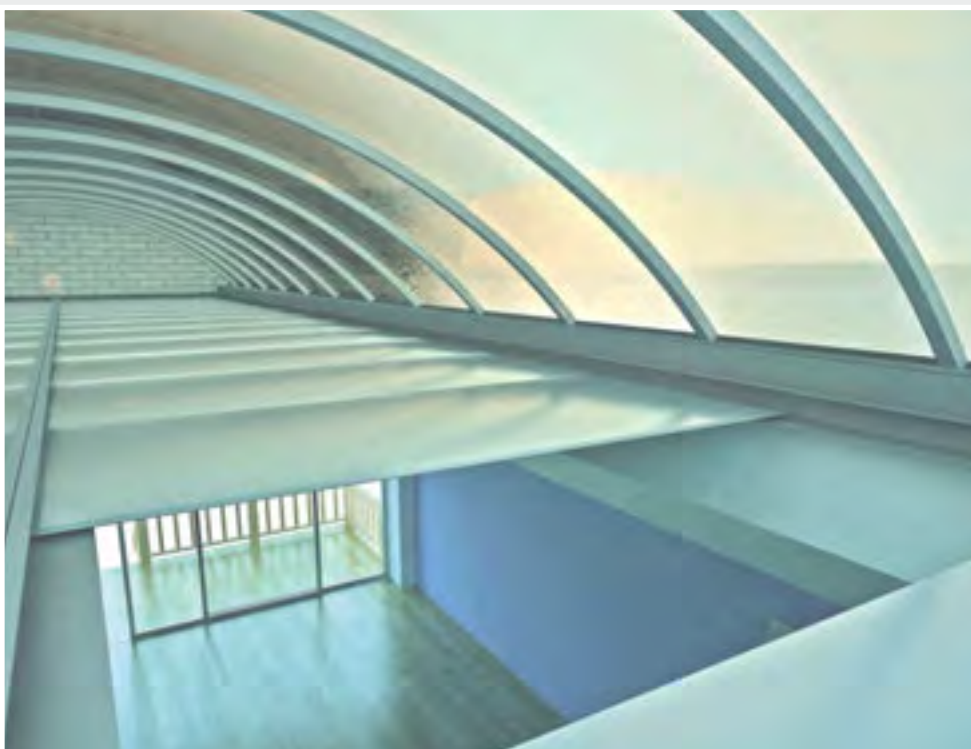
	Velario®613	Velario®20-5
Thermal insulation	2,7 W/m ² K	1,7 W/m ² K
Acoustic insulation	16 dB	16 dB
Linear thermal expansion	0,065mm/m°C	0,065mm/m°C
Temperature range	-40°C +120 °C	-40°C +120 °C
Fire reaction EN 13501-1	EuroClass B-s1,d0	EuroClass B-s1,d0

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Heat insulation
- ❖ Self-supporting

APPLICATIONS

-  Room partitions
-  False ceilings



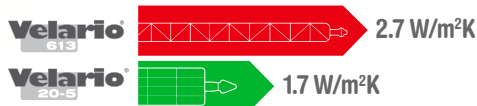
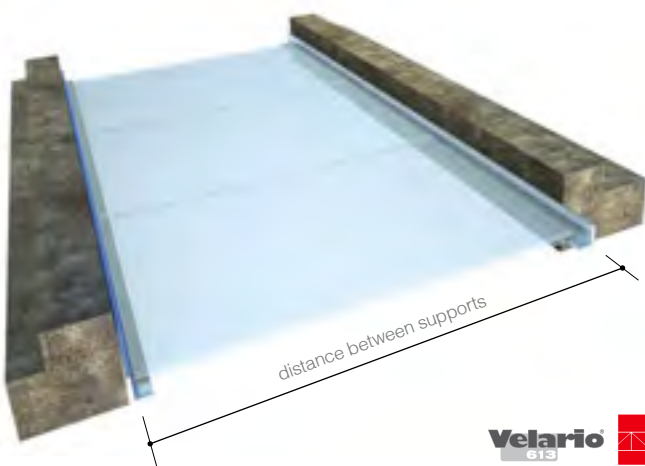
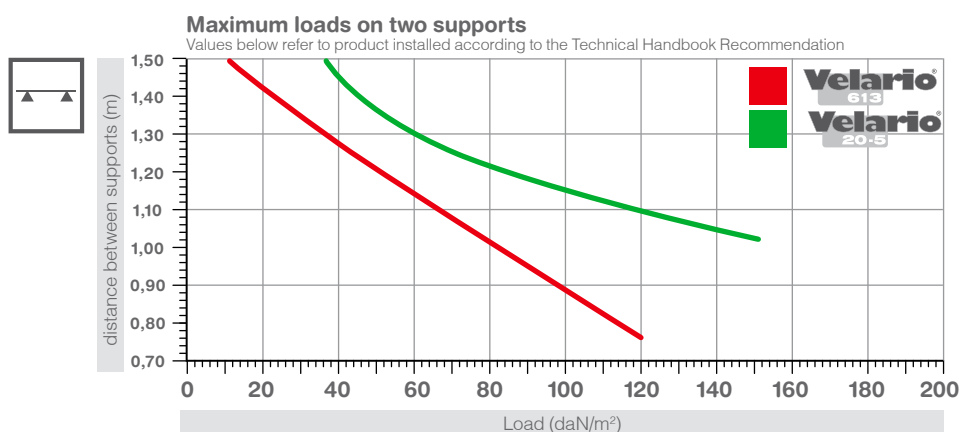


DESCRIPTION

Velario®613 and Velario®20-5, are modular systems used in residential and industrial buildings, for new buildings as well as for renovation and maintenance operations.

It consists of polycarbonate panels with male-female connection. They are ideal for all those cases where a thermal insulation is required with a rapid and simple installation.

LOAD RESISTANCE



THE CHOICE OF PROFILE

The indicated diagram shows the maximum recommended distance based on the type of profile used. The choice of the system to be used is therefore in function of the distance between the support and the value of insulation requested.

To avoid soiling the inside of the cells, it is recommended to request the product taped or thermowelded at the ends.

ACCESSORIES

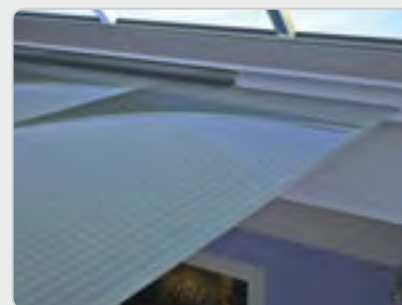
code 4226
Thermowelding

cod. 4073 (Velario613)
Aluminium tape

cod. 4327 (Velario20-5)
Aluminium tape



VELARIO
Detail Velario metal roofing



FALSE CEILING
detail anchorage panels



Modular system of UV protected multiwall polycarbonate for vertical window applications

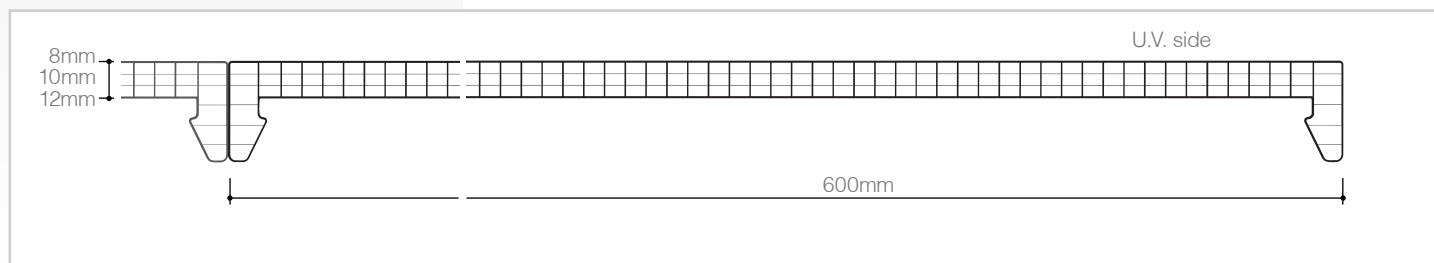
2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®

684 | 8mm
6104 | 10mm
6124 | 12mm



PROFILE



Modular system of UV protected multiwall polycarbonate for translucent curtain walls and roofing applications



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	8-10-12mm
Structure	4 walls
Effective modular width	600mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	3,3 - 3,0 - 2,7 W/m²K
Acoustic insulation	18 dB (th.8-10mm) 19dB (th.12mm)
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION




arcoPlus®684-6104-6124 are three modular systems consisting of co-extruded 4 walls polycarbonate panels with thicknesses of 8-10 and 12mm, inserted in aluminium profiles using a click-on system.

Used for vertical windows, flat roofing (min. slope 5%) and curved roofing (minimum radius 2,0m with profiles code 4248 and 4249; minimum radius 3,0m with reinforced aluminium profile code 4636).

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Self-supporting

APPLICATIONS

-  Vertical windows
-  Roofing
-  Curved roofing



CONTINUOUS ROOFING

Model of tunnel with reinforced aluminium profil

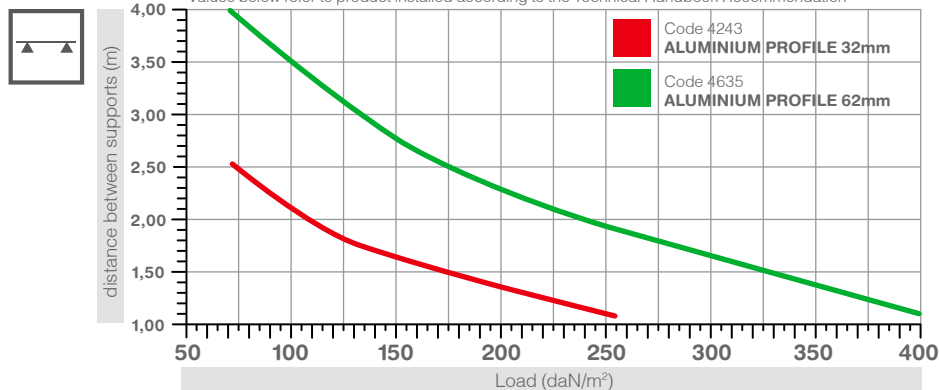


LOAD RESISTANCE



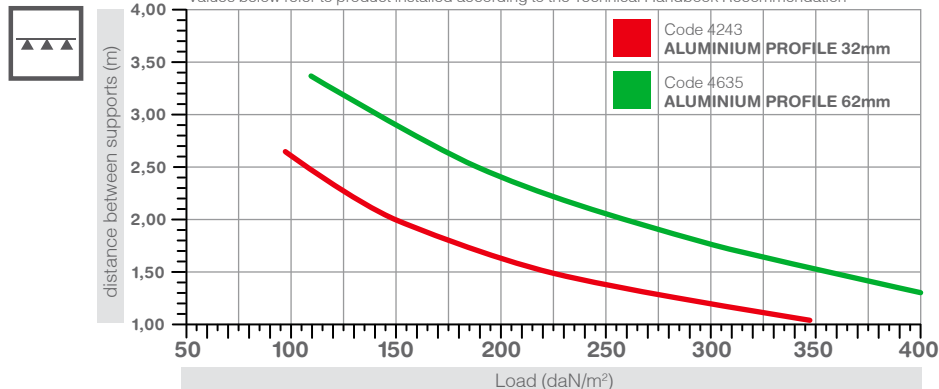
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



Code 4243 (straight)
Code 4248 (curved)
ALUMINIUM PROFILE 32mm



Code 4635 (straight)
ALUMINIUM PROFILE 62mm



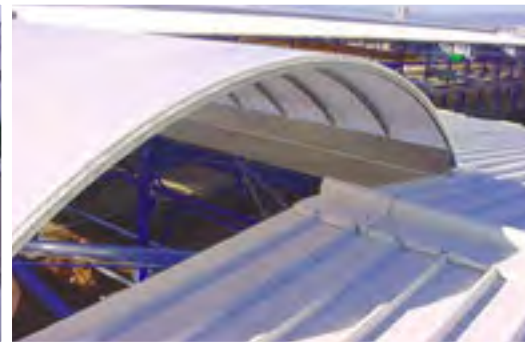
Code 4636 (curved)
ALUMINIUM PROFILE 62mm

FLAT SELF-SUPPORTING SYSTEM

The arcoPlus®684-6104-6124 systems can be used for vertical walls and flat roofing applications.

The panels are inserted on open joint metal tubes using a click-on

system. This ensures the necessary wind and snow load resistance properties (see load resistance tables).

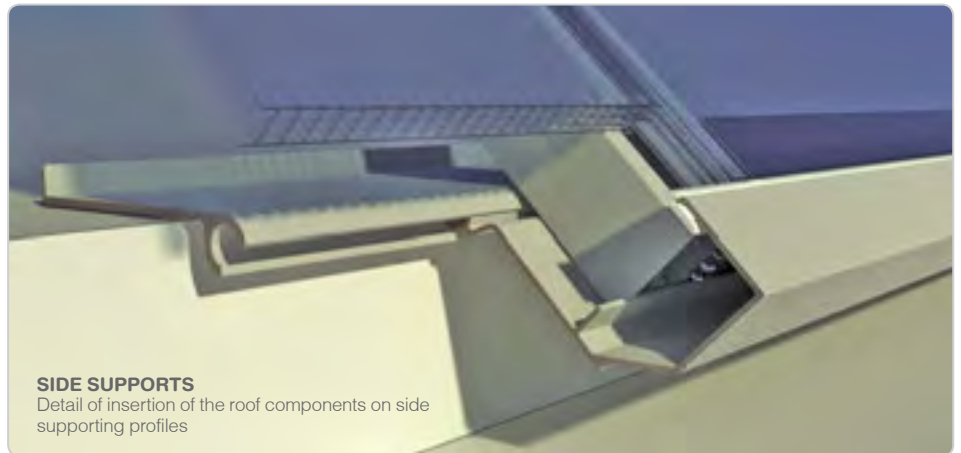
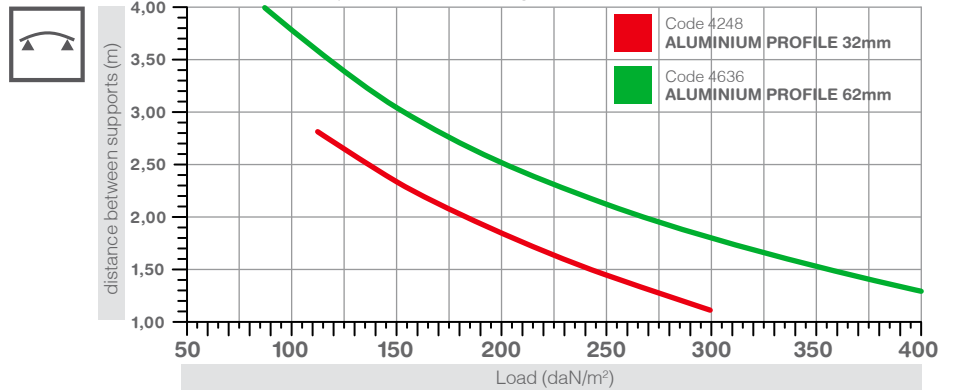


CURVED SYSTEM LOAD RESISTANCE



Maximum loads on two supports R.4.000mm

Values below refer to product installed according to the Technical Handbook Recommendation

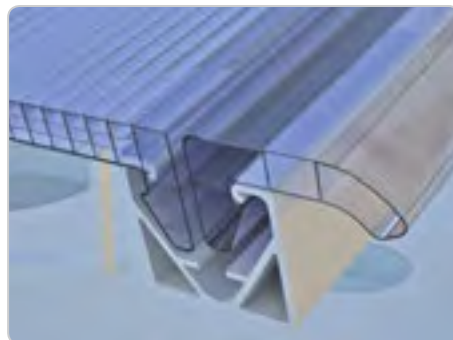


CURVED SELF-SUPPORTING SYSTEM

The metal reinforcement frames guarantee the load capacity of the entire system, while the polycarbonate staves create a continuous curtain walling effect. Special adjustable supports guarantee a complete seal.

Different types of reinforcement frames are available to guarantee the required load and wind resistance properties according to the relative load resistance values and conditions of use.

Minimum bend radius R.2.000mm



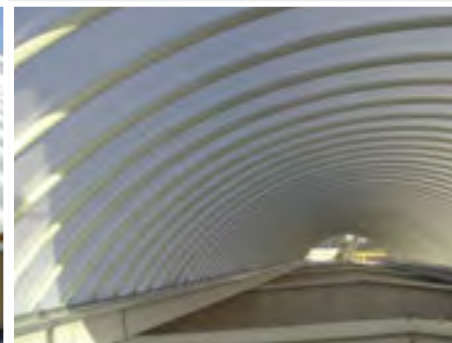
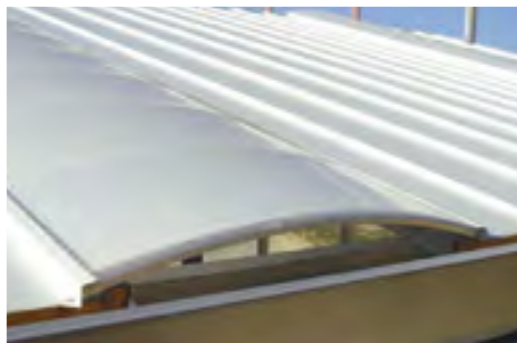
START PROFILE

Detail of insertion of start profile on roof



END PROFILE

Detail of insertion of section-breaker profile to complete roofing



EASY AND LOW-COST INSTALLATION

The 4 walls design with click-on connection to open joint tubes gives the panel remarkable flexural strength and is suitable for creating vertical walls and large areas of self-supporting roofing without the use of section-breaker profiles.

ACCESSORIES

arcoPlus® includes a complete range of accessories that guarantee a perfectly watertight seal and significant wind load resistance.



DETAIL OF UPPER PROFILE
Upper profile with gasket and sealing pad



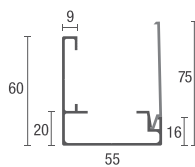
DETAIL FIXING OF ECLYPSE
Detail of the union of the profiles in aluminium with eclipse in aluminium



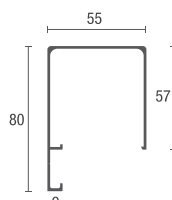
DETAIL OF BASE
Insertion of curtain wall profiles on removable base with front panel

METAL PROFILES

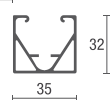
code 4140
Base AL profile
with frontal opening



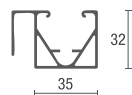
code 4045
Upper and side
AL profile



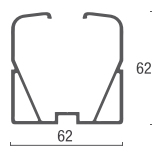
code 4243 (straight)
code 4248 (curved)
Reinforced AL profile



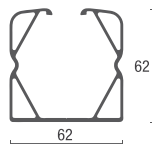
code 4244 (straight)
code 4249 (curved)
Gabled AL profile



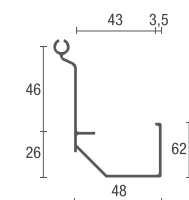
cod. 4635 (straight)
Reinforced AL
profile 62mm



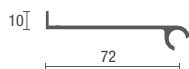
cod. 4636 (curved)
Reinforced AL
profile 62mm



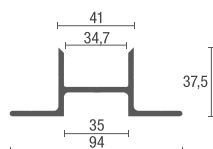
code 4245
U-shaped closing
support in AL



code 4252
Closing
support in AL



code 4260
Eclipse



ACCESSORIES



4140
Base AL profile
with frontal opening



4045
Upper and side
AL profile



**4243 (straight)
4248 (curved)**
Aluminium profile 32mm



**4244 (straight)
4249 (curved)**
Gabled AL profile



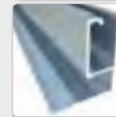
**4635 (straight)
4636 (curved)**
Aluminium profile 62mm



4245
U-shaped closing
support in AL



4252
Closing
support in AL



4589
End profile
in AL



2147 th.8/10mm
2245 th.12mm
Start profile 684-6104
in polycarbonate



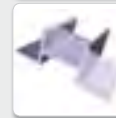
2148 th.8mm
2265 th.10mm
2250 th.12mm
End profile in PC



1169/B
Slip Coat Gasket



4213 dim. 40x35x580
4221 dim. 70x40x580
Pad PE-LD



4260
Eclipse



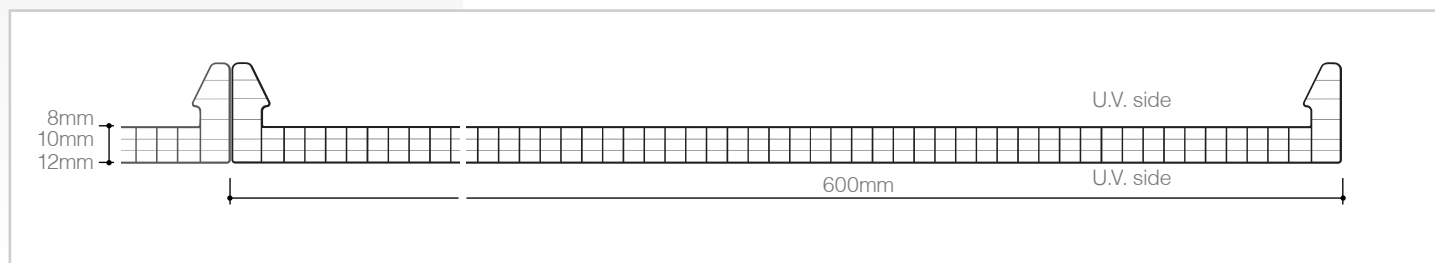
4665/600 th.8mm
4666/600 th.10mm
4667/600 th.12mm
Block cover AL profile

2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®
Reverso 684|6104|6124
8mm 10mm 12mm



PROFILE



Modular system of bi-protected multiwall polycarbonate for translucent roofing applications

PRODUCTION STANDARDS

Thickness	8-10-12mm
Structure	4 walls
Effective modular width	600mm
Panel length	no limit
Colours available	see page 11

DESCRIPTION

arcoPlus®684-6104-6124 reversò are three modular systems consisting of 4 walls polycarbonate panels with UV protection on two sides and thicknesses of 8-10-12mm. They are anchored to the existing structures using specific anchor brackets. The panels are joined together using a protected polycarbonate or aluminium cover plate profile assembled using a click-on system to guarantee a perfectly watertight seal.

TECHNICAL FEATURES

Thermal insulation	3,3 - 3,0 - 2,7 W/m²K
Acoustic insulation	18 dB (th.8-10mm) 19dB (th.12mm)
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	2 sides Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0





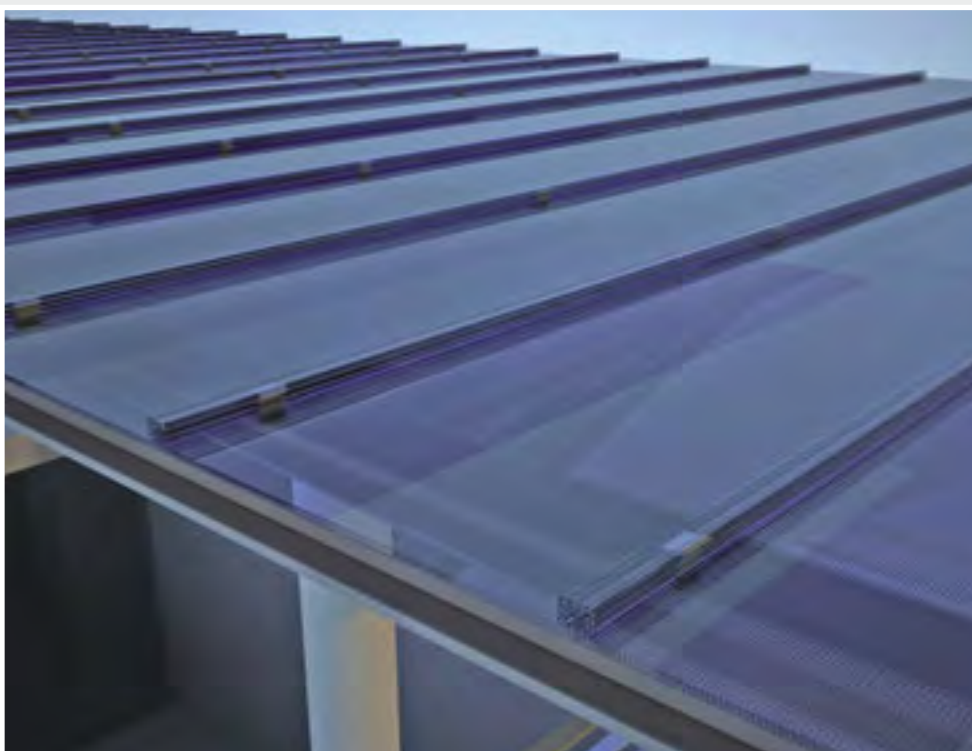
SPECIAL TREATMENT

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Bendability R.min=2,5m

APPLICATIONS

-  Roofing
-  Curved roofing



CONTINUOUS ROOFING

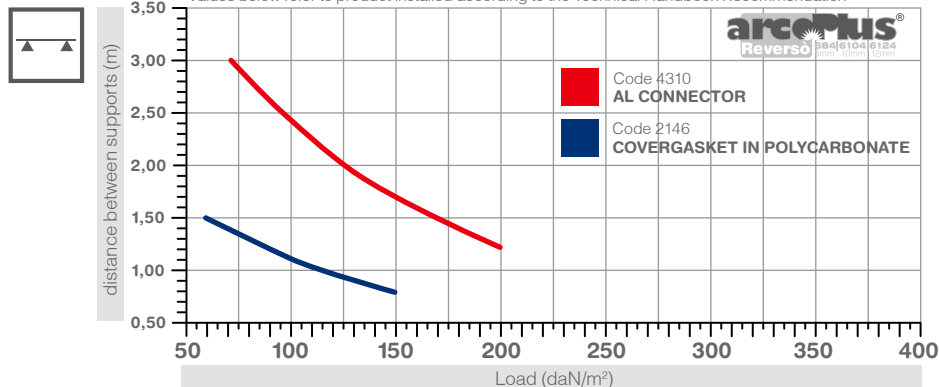
Example of roofing with polycarbonate cover plate



LOAD RESISTANCE

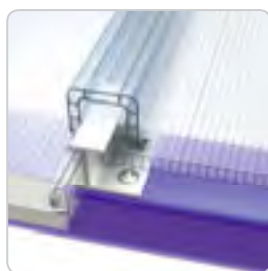
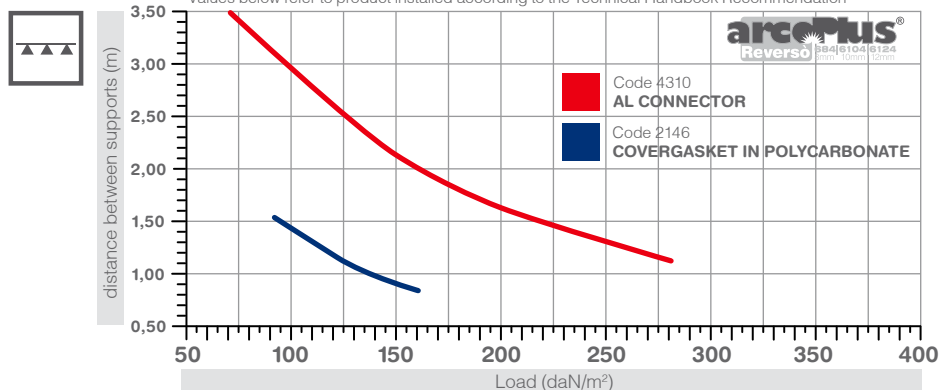
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation

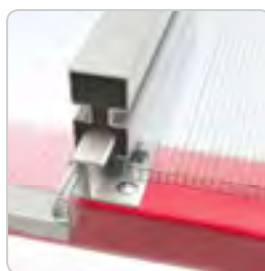


Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



SYSTEM WITH POLYCARBONATE COVERGASKET - CODE2146



SYSTEM WITH ALUMINIUM CONNECTOR CODE 4310

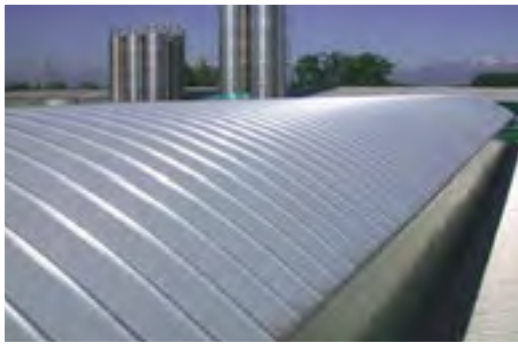
EASY AND LOW-COST INSTALLATION

To ensure compliance with snow load and negative wind load resistance requirements, anchor brackets should be fitted for each purlin.

The polycarbonate panels are fastened to the underlying structure using specific brackets, which must be anchored to the purlins using suitable

self-drilling/self-tapping screws (on metal structures) and tap bolts (for wooden structures). These screws and bolts are not supplied.

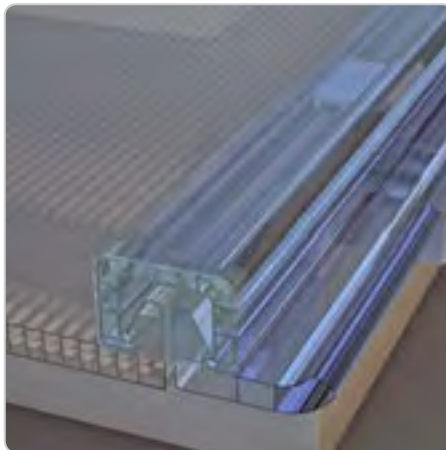
Different connector profiles can be used, depending on the required load specifications.



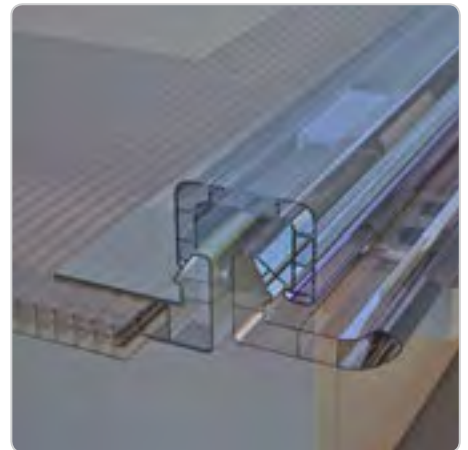
COMPLETE SYSTEM FOR ROOFING

The modular polycarbonate panels can be used to create flat or curved roofing. They are fixed to the supporting structures using specific aluminium brackets. Depending on the load capacity values

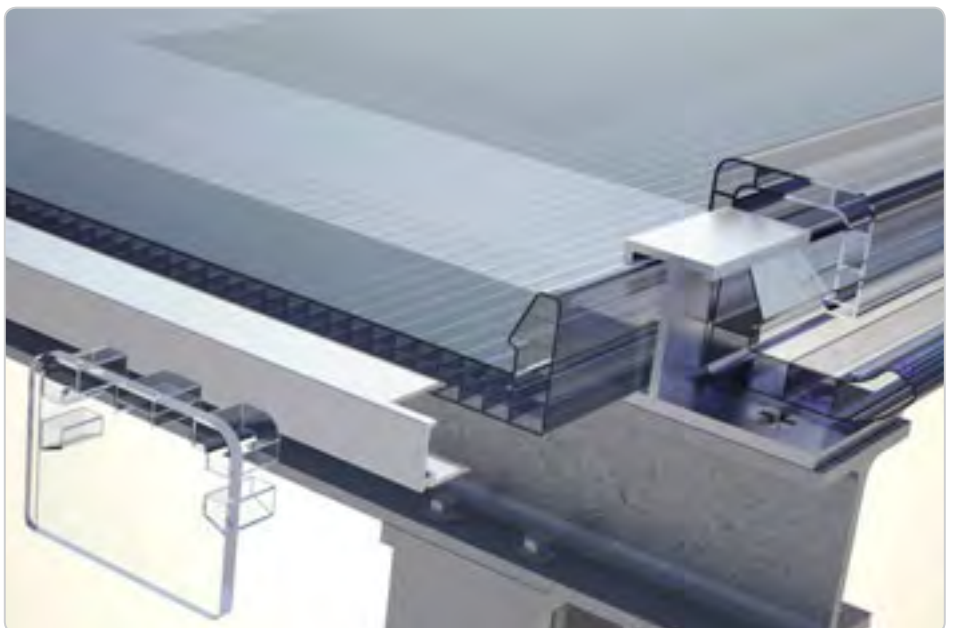
required, or the distance between the purlins of the underlying structures, either polycarbonate cover plates, aluminium connectors.



START PROFILE
Detail of insertion of start profile on roof



END PROFILE
Detail of insertion of section-breaker profile to complete roofing

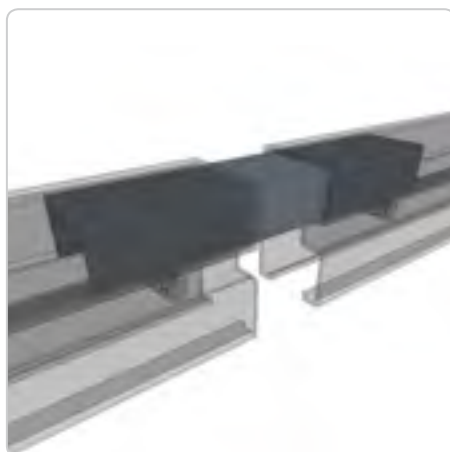


DETAIL OF COMPLETE SYSTEM
Start profile with panel, cover plate, plate and air cell cover profiles

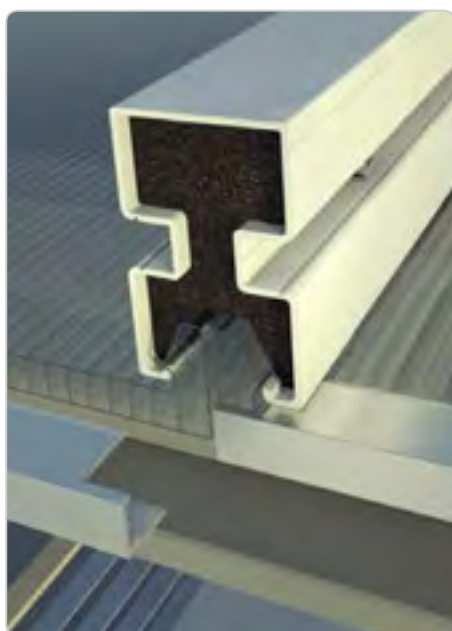


ACCESSORIES

The arcoPlus® system includes a complete range of accessories to facilitate installation. For correct installation the ends of the air cells in the panels must be heat-sealed to prevent soiling on the inside.



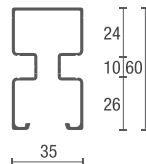
CONNECTOR JOINT
AL connector profiles with eclipse



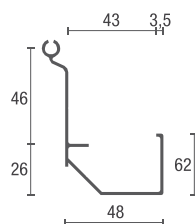
DETAIL OF CONNECTOR
Use of aluminium joint screwed down and end closed with PE-LD pad

METAL PROFILES

code 4310
Connector AL
profile with screw



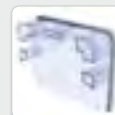
code 4245
U-shaped closing
support in AL



code 4252
Closing
support in AL



ACCESSORIES



4303
Covergasket
stopper



2146
Covergasket
in polycarbonate



2282
Double connector
in polycarbonate



2147
Start profile 684-6104
in polycarbonate



2245
Start profile 6124
in polycarbonate



2148 th.8mm
2265 th.10mm
2250 th.12mm
End profile in PC



4310
Connector AL
profile with screw



4245
U-shaped closing
support in AL



4252
Closing
support in AL



4319/200
AL eclipse
for connector



4326 th.8mm
4350 th.10mm
4355 th.12mm
AL plate



4264
Stainless steel plate
for vertical connection



4138
Stainless steel plate
for flat connection
(th.8mm)



4675/600 th.8mm
4676/600 th.10mm
4677/600 th.12mm
Block cover AL profile



4213 dim. 40x35x580
4221 dim. 70x40x580
Pad PE-LD



4318
Pad PE-LD
for connector



4329
Sealing tape PE-LD
4x15mm



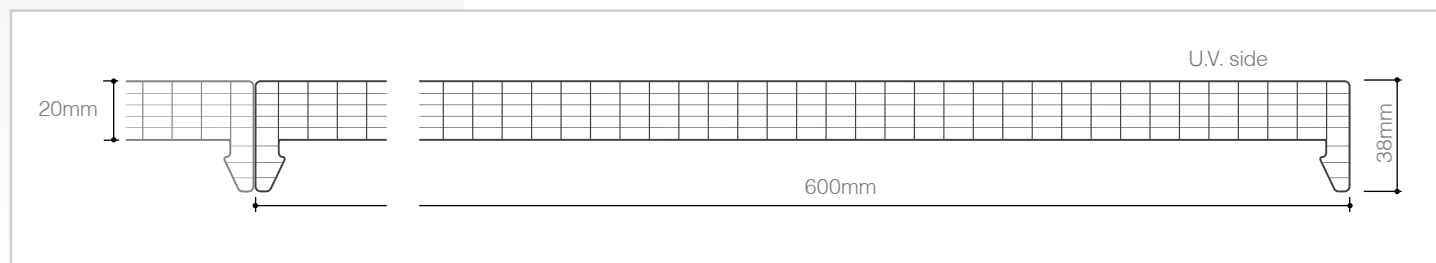
4316 M6 nut
4315 M6 x 20 screw
Accessories for connector

2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®
626 th.20mm



PROFILES



Modular system of UV protected multiwall polycarbonate for translucent curtain walls and roofing



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	20mm
Structure	6 walls
Effective modular width	600mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,7 W/m ² K
Acoustic insulation	20 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION




arcoPlus®626 is a modular system of co-extruded 6 walls polycarbonate panels with 600mm module, assembled using a click-on system to aluminium profiles.

Used for vertical glazing, flat roofing (min. slope 5%) and curved roofing (minimum radius 4m).

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Self-supporting

APPLICATIONS

-  Vertical windows
-  Roofing
-  Curved roofing



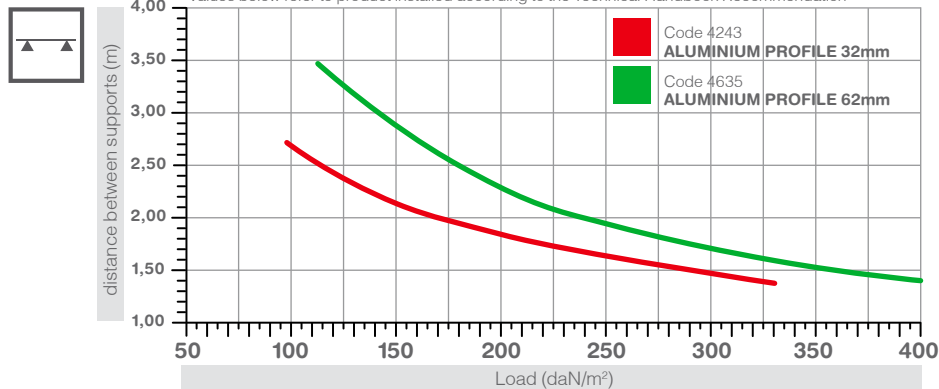


LOAD RESISTANCE

arcoPlus®
626

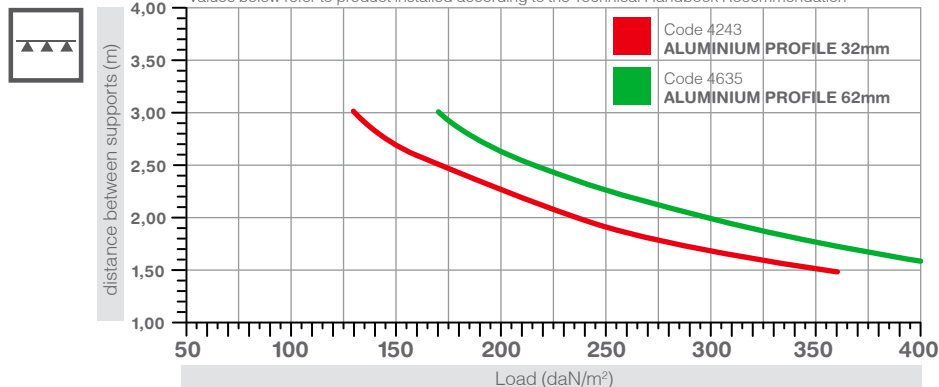
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



Code 4243 (straight)
Code 4248 (curved)
ALUMINIUM PROFILE 32mm



Code 4635 (straight)
ALUMINIUM PROFILE 62mm



Code 4636 (curved)
ALUMINIUM PROFILE 62mm

EASY AND LOW-COST INSTALLATION

The 6 walls design with snap-on connection to open joint tubes gives the panel remarkable flexural strength. It is suitable for vertical curtain walls and large areas of self-supporting roofing without the use of section-breaker profiles. The

snap-on connection and complete range of accessories and aluminium perimeter profiles combine to guarantee a perfectly watertight seal and considerable wind load resistance.

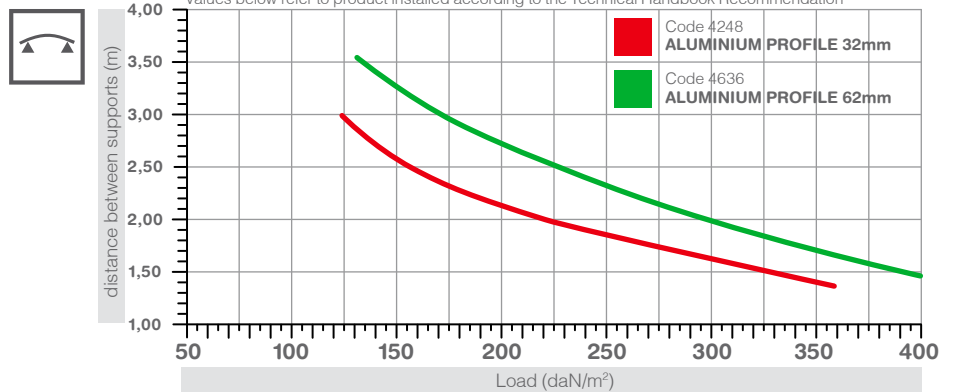


CURVED SYSTEM LOAD RESISTANCE

arcoPlus®
626

Maximum loads on two supports R.4.000mm

Values below refer to product installed according to the Technical Handbook Recommendation

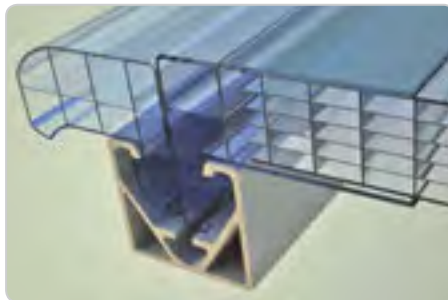


CURVED SELF-SUPPORTING SYSTEM

The metal reinforcement frames guarantee the load capacity of the entire system, while the polycarbonate staves create a continuous curtain walling effect.

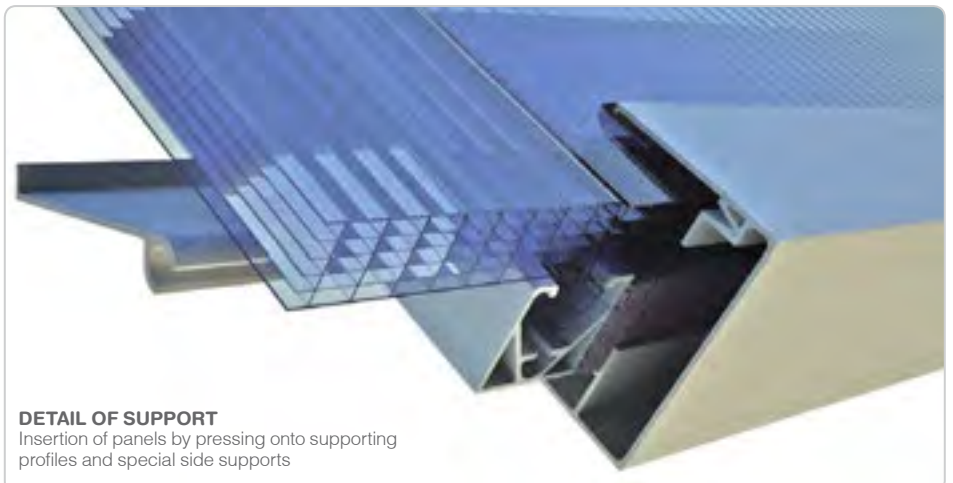
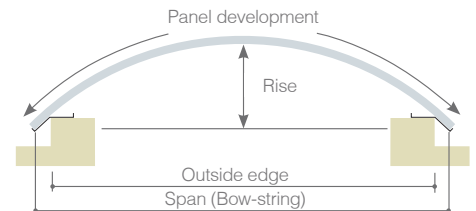
Special adjustable supports guarantee a complete seal. Different types of

reinforcement frames are available to guarantee the required load and wind resistance properties according to the relative load capacity values and conditions of use.



END PROFILE

Detail of insertion of section-breaker profile to complete roofing



DETAIL OF SUPPORT

Insertion of panels by pressing onto supporting profiles and special side supports

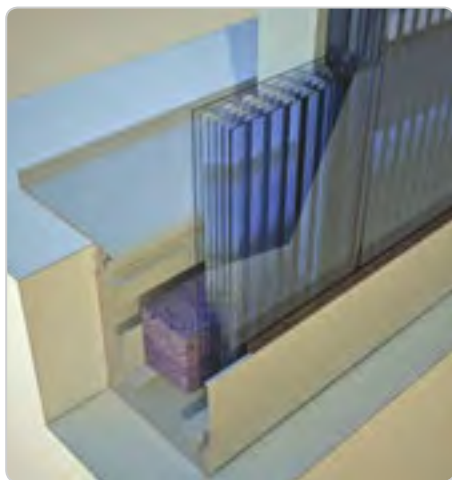


ACCESSORIES

The arcoPlus® system includes a complete range of accessories to facilitate installation.

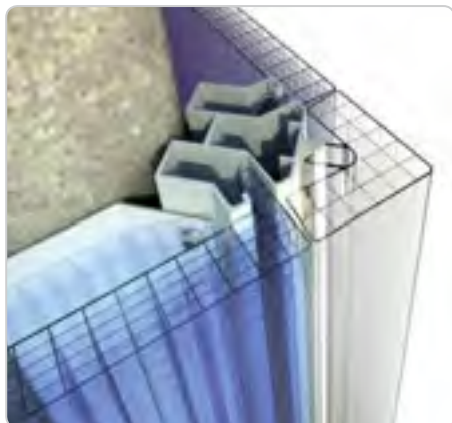
The air cells of the panels must be sealed using a specific polycarbonate profile or vented aluminium breather tape.

This allows correct ventilation and prevents soiling on the inside.



WALL SYSTEM

Construction of continuous transparent walls, with insertion on aluminium profile using a snap-on system

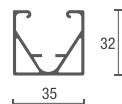


DETAIL CORNER

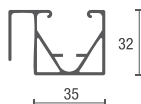
Click insertion of corner profiles in polycarbonate with aluminium profile

METAL PROFILES

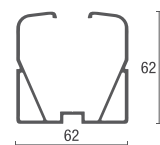
code 4243 (straight)
code 4248 (curved)
Aluminium profile 32mm



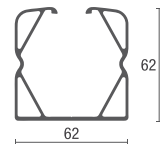
code 4244 (straight)
code 4249 (curved)
Gabled AL profile



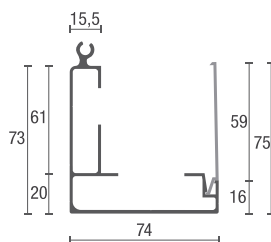
cod. 4635 (straight)
Aluminium profile 62mm



cod. 4636 (curved)
Reinforced AL profile 62mm



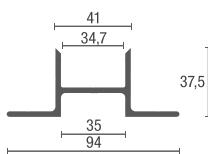
code 4271
Closing support in AL



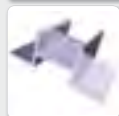
code 4260
Eclipse for connector 32mm



code 4260
Eclipse for connector 32mm



1169/B
Slip Coat Gasket



4260
Eclipse for connector 32mm



4668/600
Block cover AL 20



2182
Block cover

ACCESSORIES



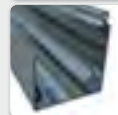
4243 (straight)
4248 (curved)
Aluminium profile 32mm



4244 (straight)
4249 (curved)
Gabled AL profile



4635 (straight)
4636 (curved)
Aluminium profile 62mm



4271
Base-side AL profile with frontal opening



4252
Closing support in AL



4588
Corner profile in AL



4589
End profile in AL



2179
Start profile in polycarbonate



2180
End profile in polycarbonate



2550
Corner profile in AL



4213 dim. 35x40x580
4221 im 70x40x580
Pad PE-LD



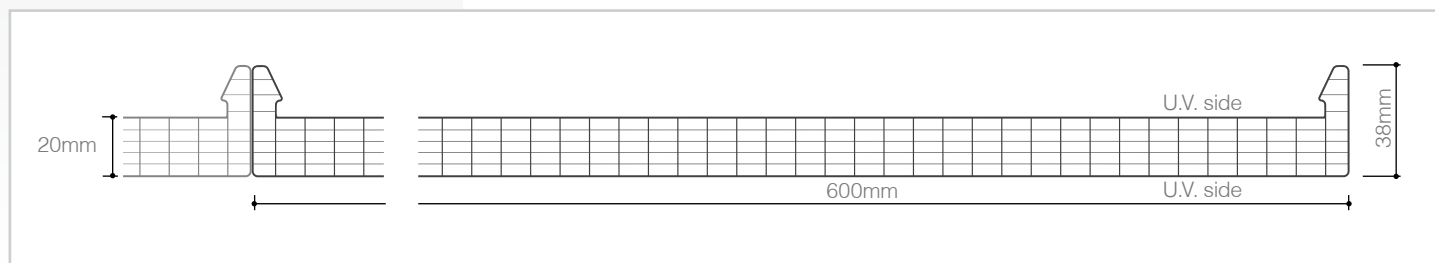
4327
Additional tape

2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®
Reverso 626 th.20mm



PROFILES



Modular system of bi-protected multiwall polycarbonate for translucent roofing applications



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	20mm
Structure	6 walls
Effective modular width	600mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,7 W/m ² K
Acoustic insulation	20 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	2 sides Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0




DESCRIPTION

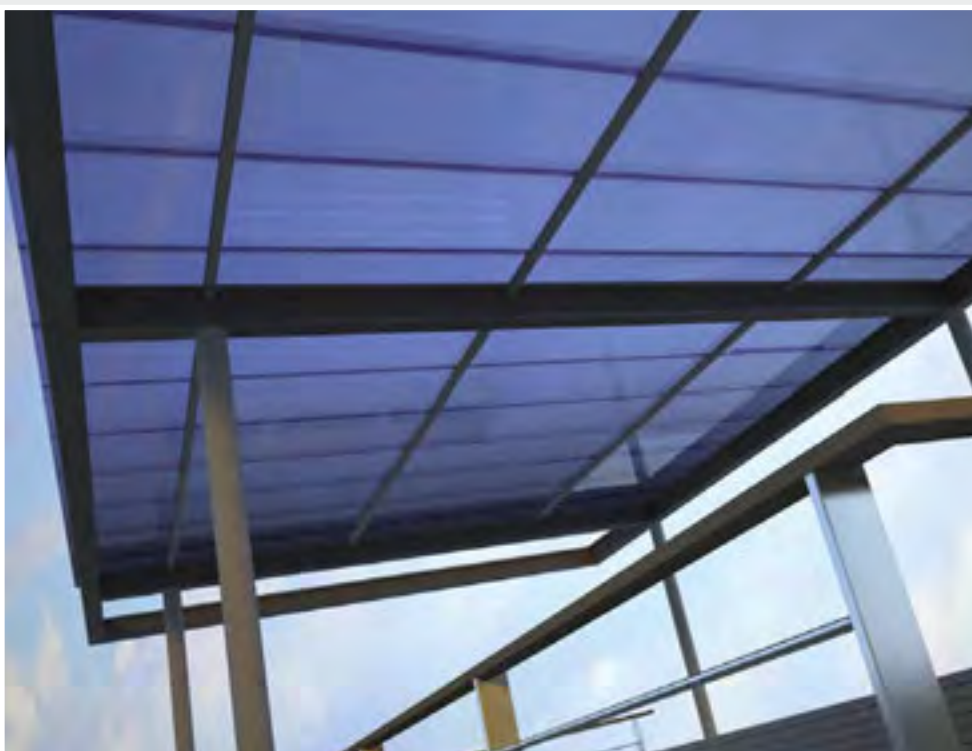
arcoPlus®626 is a modular system of co-extruded 6 walls polycarbonate panels with 600mm module. These are fixed to the existing structure using specific anchor brackets. The panels are joined together by a protected polycarbonate cover plate assembled using a click-on system, or by an aluminium connector, for a perfectly watertight seal.

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Bendability R.min = 4,0m

APPLICATIONS

-  Roofing
-  Curved roofing
-  Vertical windows

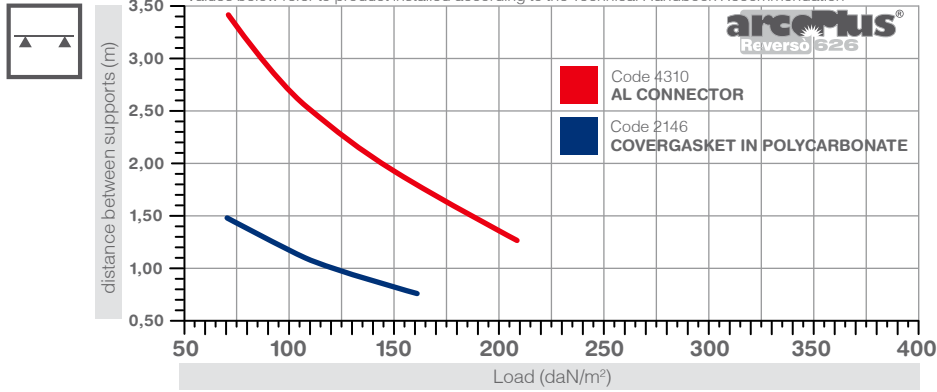




FLAT SYSTEM LOAD RESISTANCE

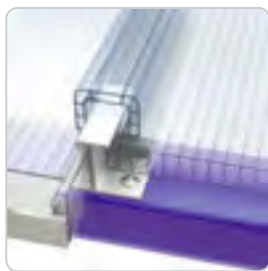
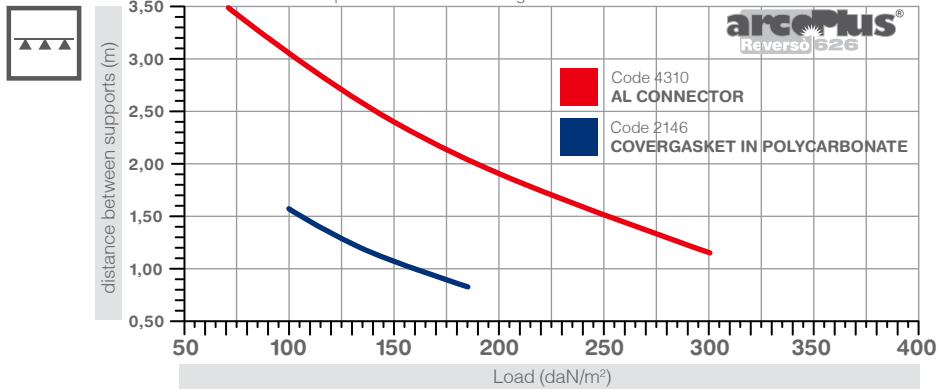
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation

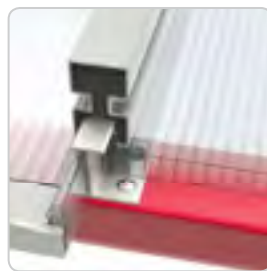


Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



SYSTEM WITH POLYCARBONATE
COVERGASKET - CODE 2146

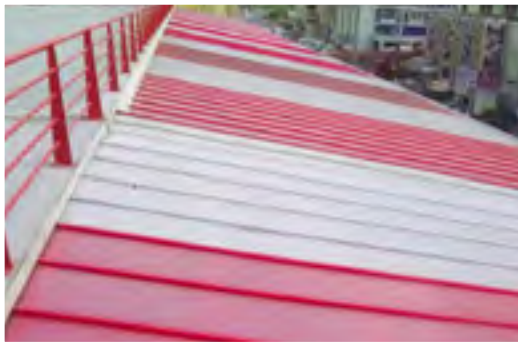


SYSTEM WITH ALUMINIUM
CONNECTOR CODE 4310

EASY AND LOW-COST INSTALLATION

To ensure compliance with snow load and negative wind load resistance requirements, anchor brackets should be fitted for each purlin. The polycarbonate panels are fastened to the underlying structure using specific brackets, which must be anchored to the purlins

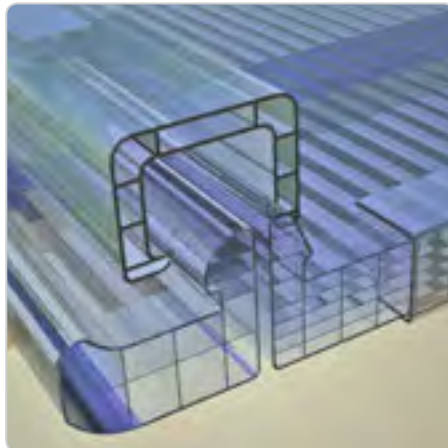
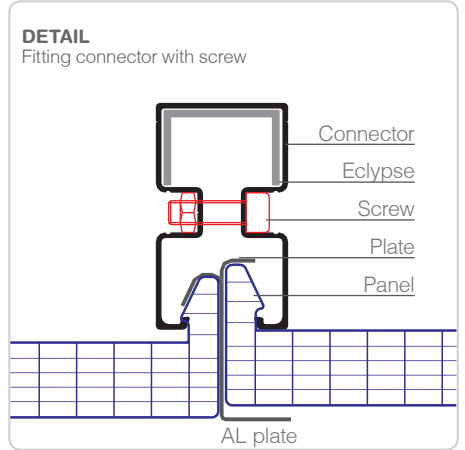
using suitable self-drilling/self-tapping screws (on metal structures) and tap bolts (for wooden structures). These screws and bolts are not supplied. Different connector profiles can be used, depending on the required load specifications.



COMPLETE ROOFING SYSTEM

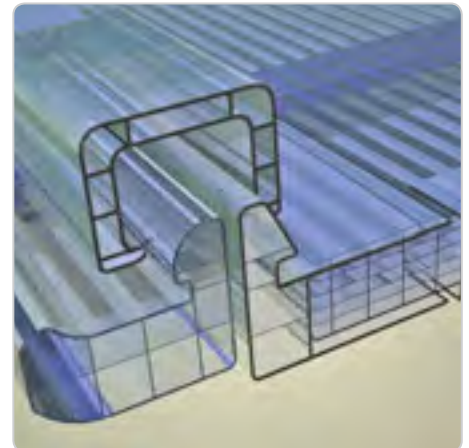
Modular multiwall polycarbonate panels for the construction of flat or curved roofing. The panels are anchored to the supporting structure using specific aluminium brackets to guarantee load strength.

Depending on the load capacity values required, or the distance between the purlins of the underlying structures, either polycarbonate cover plates can be used or, for greater strength, aluminium connectors.



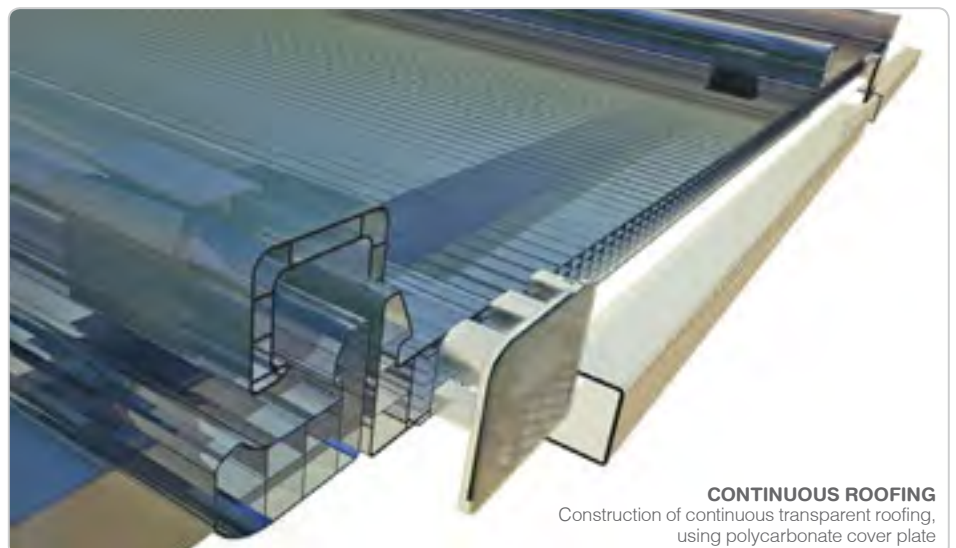
DETAIL OF START PROFILE

Start profile with panel, cover plate, plate and air cell cover profiles



DETAIL OF END PROFILE

Detail of insertion of section-breaker profile to complete roofing



CONTINUOUS ROOFING

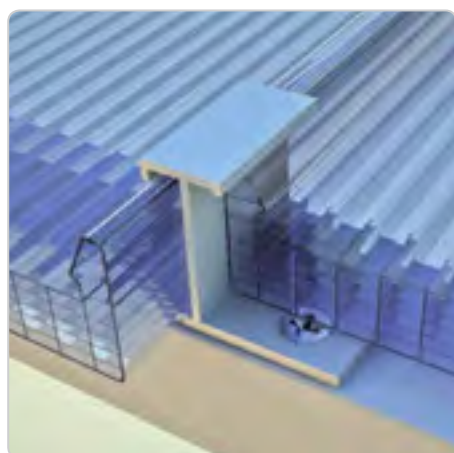
Construction of continuous transparent roofing, using polycarbonate cover plate



ACCESSORIES

The arcoPlus® system includes a complete range of accessories to facilitate installation.

The air cells of the panels must be sealed using a specific polycarbonate profile or vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.



DETAIL OF ANCHORAGE

Profiles anchored to supporting structures using aluminium plates

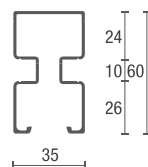


DETAIL DOUBLE CONNECTOR

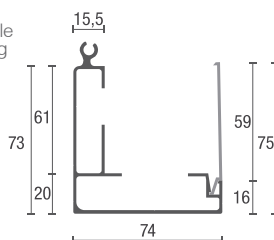
Detail of the interlocking system with the Double Connector

METAL PROFILES

code 4310
Connector AL
profile with screw



code 4271
Base-side AL profile
with frontal opening



code 4252
Closing
support in AL



CONNECTOR JOINT

AL connector profiles with eclipse



4329
Sealing tape PE-LD
4x15mm



4316 M6 nut
4315 M6 x 20 screw
Accessories for connector



2182 (626)
Block cover

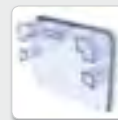


4327
Additional tape



4678/600 th.20mm
Block cover AL 20
Reverso

ACCESSORIES



4303
Covergasket
stopper



2146
Covergasket
in polycarbonate



2282
Double connector
in polycarbonate



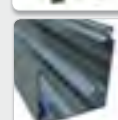
2179 th.20 mm
Start profile in polycarbonate



2180 th.20 mm
End profile in polycarbonate



4310
Connector AL
profile with screw



4271
Base-side AL profile
with frontal opening



4252
Closing
support in AL



4319/200
AL eclipse
for connector



4328 th.20 mm
AL plate



4264
Stainless steel plate
for vertical connection



4263
Stainless steel plate
for flat connection



4213 dim. 40x35x580
4221 dim. 70x40x580
Pad PE-LD



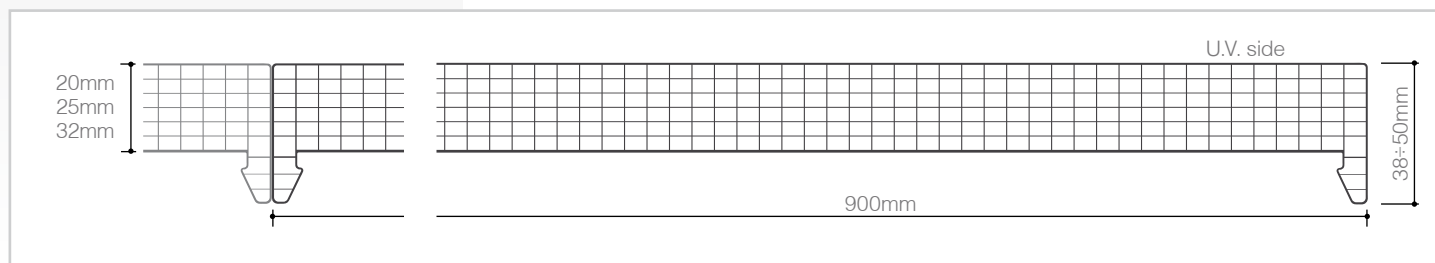
4318
Pad PE-LD
for connector

2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®
9207 | 9257 | 9327
20mm | 25mm | 32mm



PROFILES



Modular system of UV protected multiwall polycarbonate for translucent curtain walls and roofing



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	20-25-32mm
Structure	7 walls
Effective modular width	900mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,7-1,4-1,3 W/m ² K
Acoustic insulation	20 dB (9207-9257) 21 dB (9327)
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION





arcoPlus®9207-9257-9327 are three modular systems consisting of co-extruded 7 walls polycarbonate panels with thicknesses of 20-25 or 32mm with 900mm module, assembled using a click-on system to aluminium profiles.

Used for vertical glazing, flat roofing (min. slope 5%) and curved roofing (minimum radius 4,0m with 20mm thickness).

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Self-supporting

APPLICATIONS

-  Cladding
-  Vertical glazing
-  Self supporting roofing
-  Curved roofing

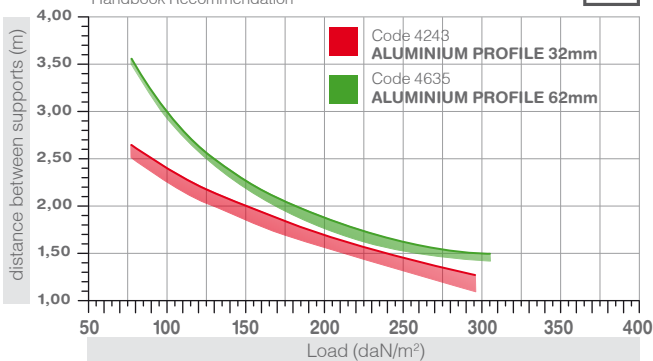




STRAIGHT SYSTEM LOAD RESISTANCE

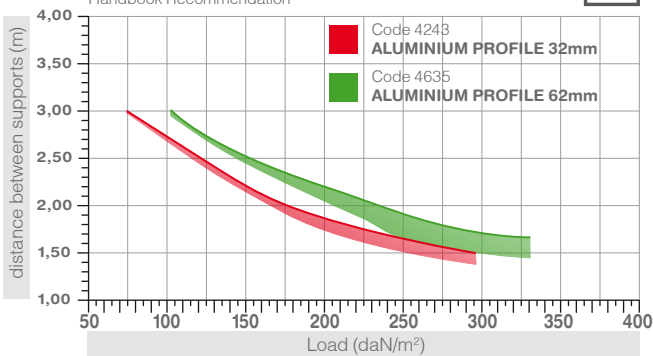
Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



Maximum loads on more supports

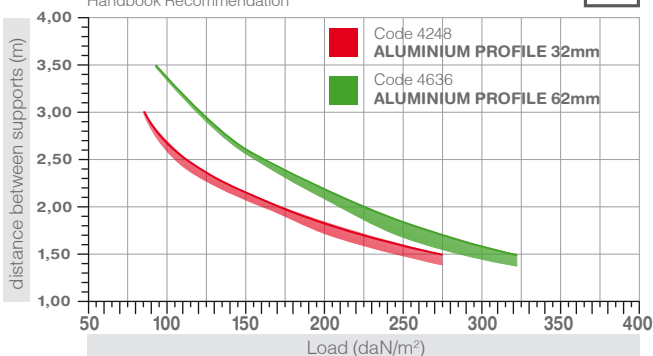
Values below refer to product installed according to the Technical Handbook Recommendation



CURVED SYSTEM LOAD RESISTANCE

Maximum loads on two supports R.4.000mm*

Values below refer to product installed according to the Technical Handbook Recommendation



*only for th.20mm. For higher thickness refer to the straight system

EASY AND LOW-COST INSTALLATION

The 7 walls design with snap-on connection to open joint tubes gives the panel remarkable flexural strength. It is suitable for vertical curtain walls and large areas of self-supporting roofing without the use of section-breaker profiles.

The snap-on connection and complete range of accessories and aluminium perimeter profiles combine to guarantee a perfectly watertight seal and considerable wind load resistance.

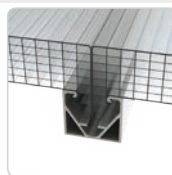
arcplus® SERIE 900

9327 th.32mm
9257 th.25mm
9207 th.20mm

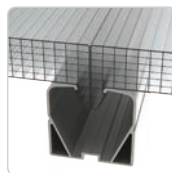
NOTE

The capacity curves show the minimum and maximum value according to the type of coupling used. This data refers to the value of the load resistance for the various thicknesses.

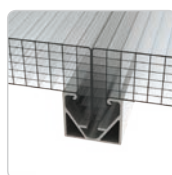
— th.32mm —
— th.20mm —



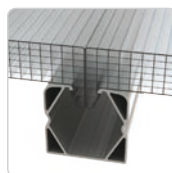
Code 4243 (straight)
ALUMINIUM PROFILE
32mm



Code 4635 (straight)
ALUMINIUM PROFILE
62mm



Code 4248 (curved)
ALUMINIUM PROFILE
32mm



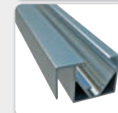
Code 4636 (curved)
ALUMINIUM PROFILE
62mm

ACCESSORIES



4243 (straight)
4248 (curved)

aluminium profile 32mm



4244 (straight)
4249 (curved)

Gabled AL profile



4635 (straight)
4636 (curved)

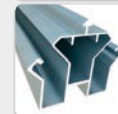
aluminium profile 62mm



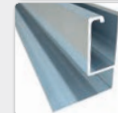
4271
Base-side AL profile
with frontal opening



4252
Closing
support in AL



4588
Corner profile
in AL



4589
End profile
in AL



2179 th.20 mm
2714 th.25 mm
2710 th.32 mm
Start profile in polycarbonate



2180 th.20 mm
2716 th.25 mm
2712 th.32 mm
End profile in polycarbonate



2550
Corner profile
in AL



4465 dim. 40x35x875
4476 im 70x40x870
Pad PE-LD



4327
Additional tape



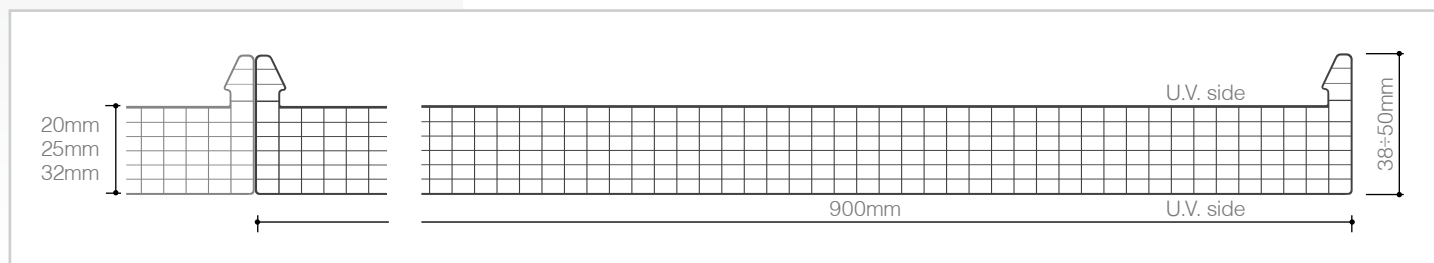
4668/900/TR th.20mm
4730/900/TR th.25mm
4732/900/TR th.32mm
Block cover AL Reverso

2.2 MODULAR CONNECTOR SYSTEMS

arcoPlus®
Reverso 9207 | 9257 | 9327
20mm | 25mm | 32mm



PROFILES



**Modular system
of bi-protected
multiwall
polycarbonate for
translucent roofing
applications**



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	20-25-32mm
Structure	7 walls
Effective modular width	900mm
Panel length	no limit
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,7-1,4-1,3 W/m²K
Acoustic insulation	20 dB (9207-9257) 21 dB (9327)
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	2 sides Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0



DESCRIPTION

arcoPlus®9207-9257-9327 reversò are three modular systems consisting of co-extruded 7 walls polycarbonate panels with thicknesses of 20-25 or 32mm with 900mm module. These are fixed to the existing structure using specific anchor brackets. The panels are joined together by a protected polycarbonate cover plate assembled using a click-on system, or by an aluminium connector, for a perfectly watertight seal.

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Bendability R.min = 4,0m

APPLICATIONS

-  Translucent roofing
-  Curved roofing

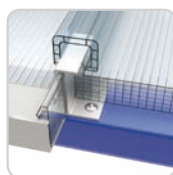
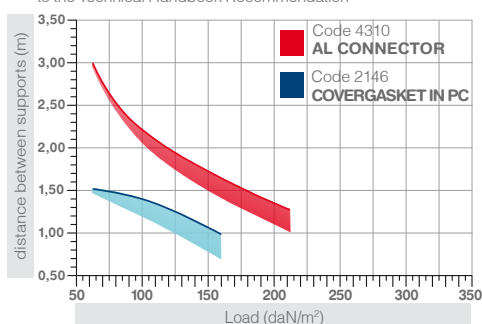




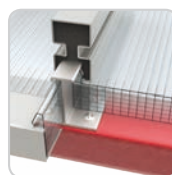
FLAT SYSTEM LOAD RESISTANCE

Maximum loads on two supports

Values below refer to product installed according to the Technical Handbook Recommendation



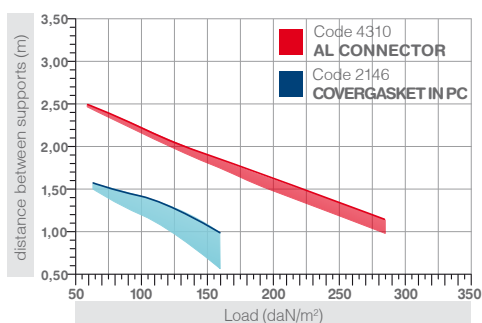
Cod. 2146
**POLYCARBONATE
COVERGASKET**



Code 4310
**ALUMINIUM
CONNECTOR**

Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



arcoPlus®
SERIE 900

9327 th.32mm
9257 th.25mm
9207 th.20mm

NOTE

The capacity curves show the minimum and maximum value according to the type of coupling used. This data refers to the value of the load resistance for the various thicknesses.

— th.32mm
— th.20mm
— th.32mm
— th.20mm

EASY AND LOW-COST INSTALLATION

To ensure compliance with snow load and negative wind load resistance requirements, anchor brackets should be fitted for each purlin. The polycarbonate panels are fastened to the underlying structure using specific brackets, which must be anchored to the purlins using suitable self-drilling/self-tapping screws (on metal structures) and tap bolts (for wooden structures). These screws and bolts are not supplied. Different connector profiles can be used, depending on the required load specifications.

ACCESSORIES

The arcoPlus® system includes a complete range of accessories to facilitate installation. The air cells of the panels must be sealed using a specific polycarbonate profile or vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.

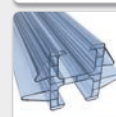
ACCESSORIES



4303
Covergasket
stopper



2146
Covergasket
in polycarbonate



2282
Double connector
in polycarbonate



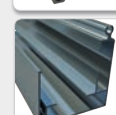
2179 th.20 mm
2714 th.25 mm
2710 th.32 mm
Start profile in polycarbonate



2180 th.20 mm
2716 th.25 mm
2712 th.32 mm
End profile in polycarbonate



4310
Connector AL
profile with screw



4271
Base-side AL profile
with frontal opening



4252
Closing
support in AL



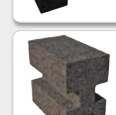
4319/200
AL eclipse
for connector



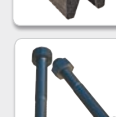
4328 th.20 mm
4710 th.25 mm
4712 th.32 mm
AL plate



4465 dim. 35x40x875
4476 dim. 70x40x870
Pad PE-LD



4318
Pad PE-LD
for connector



4316 M6 nut
4315 M6 x 20 screw
Accessories for connector



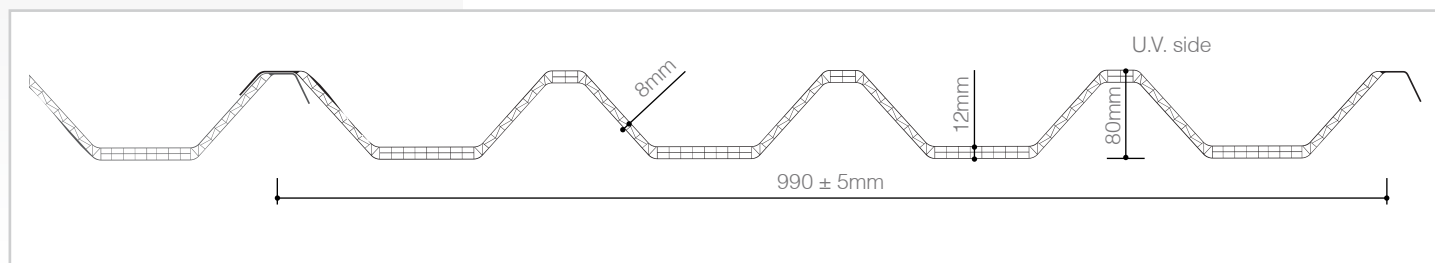
4678/900/TR th.20mm
4734/900/TR th.25mm
4736/900/TR th.32mm
Block cover AL Reverso

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus®
1000



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
translucent curtain
walls and roofing**

PRODUCTION STANDARDS

Thickness	variable 8÷12mm
Profile height	80mm
Structure	3 walls
Modular width	990 ± 5mm
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	2,7 W/m²K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass Bs1d0
Accidental shock resistance	1.200 Joule



DESCRIPTION

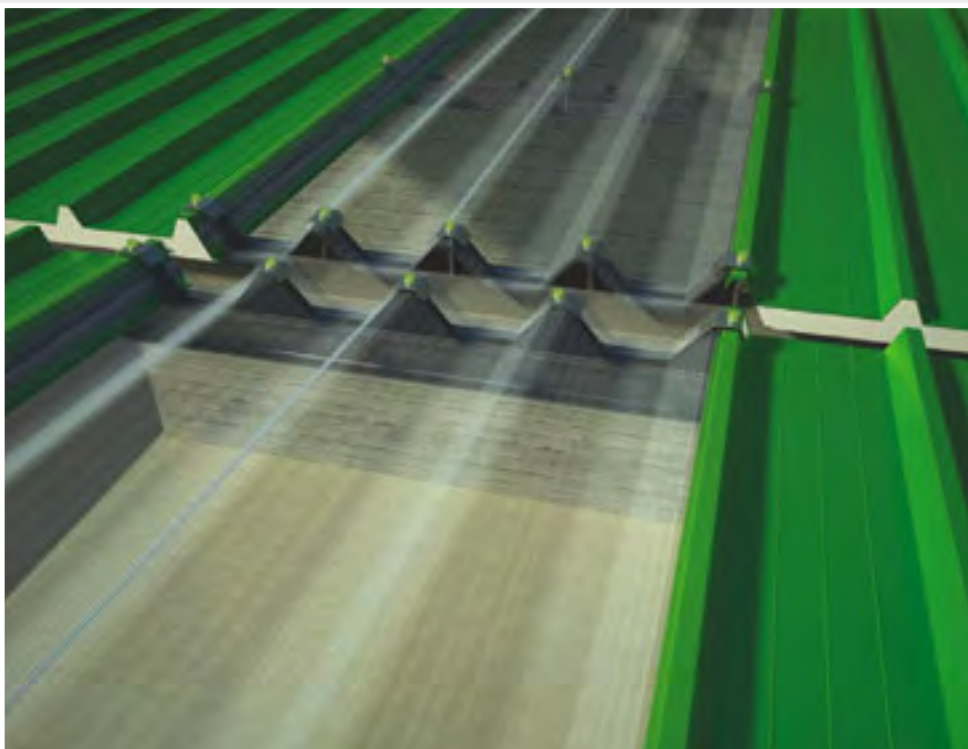
arcoPlus1000® is a modular corrugated system consisting of 3 coextruded polycarbonate walls, in 8÷12mm thickness, perfectly overlapping lengthwise and enabling continuous coverage and skylights filled gutter. Considering the linear thermal expansion of polycarbonate, to avoid cracks at the through fixings the recommended maximum length is 5,000mm.

ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal overlap
- ❖ Transverse overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation

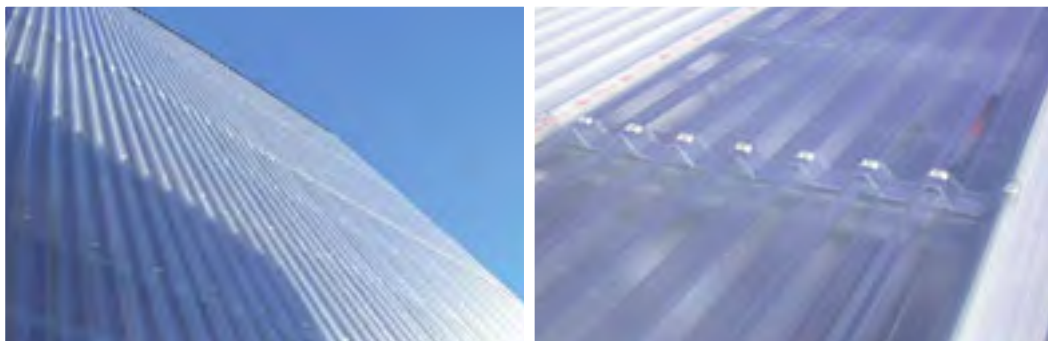
APPLICATIONS

-  Vertical windows
-  Roofing

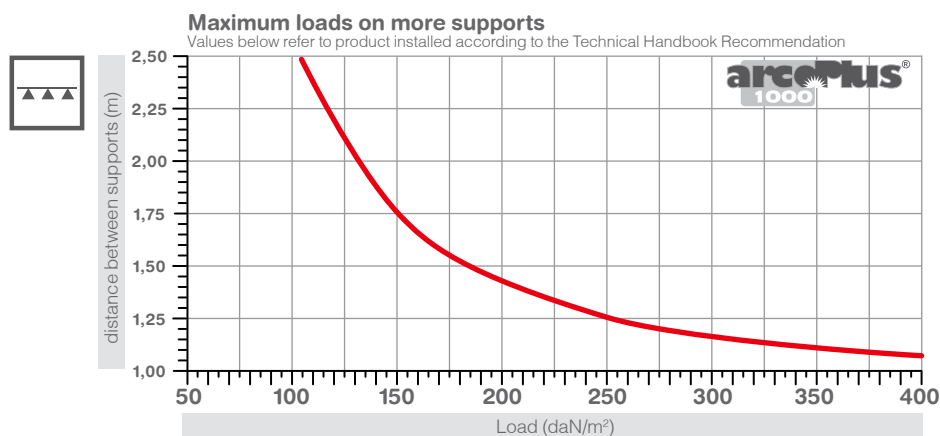


SKYLIGHT - PANEL APPLICATION

Construction of skylight with lateral overlapping of insulating roofing panels.
Detail of valley gutter



LOAD RESISTANCE SKYLIGHT - SINGLE PANEL SYSTEM



SKYLIGHT GUTTER RIDGE APPLICATION

Panels laterally overlapping insulated corrugated metal roofing panels. Thanks to the specific design of the profile the system is perfectly compat-

ible for overlapping all the main types of panel. Minimum slope 5%.



SHEET METAL RIDGE

Pre-painted galvanized steel sheet ridge profile, consisting of two half-ridges

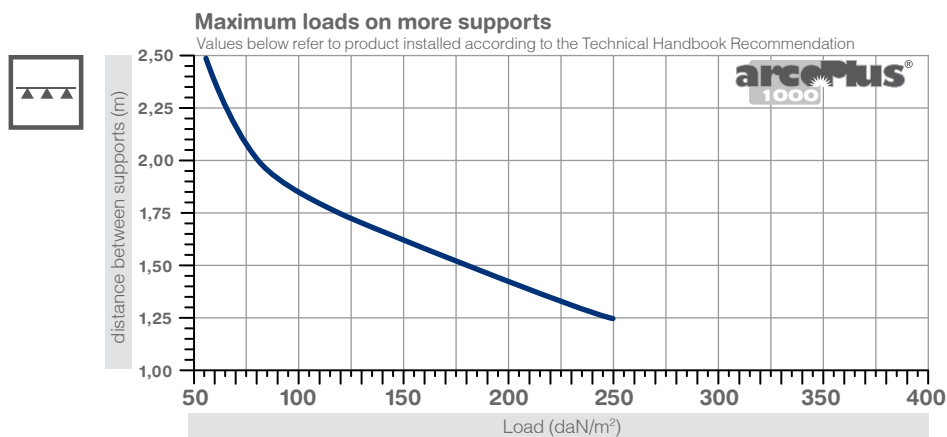


COVER FOOT

Detail of lateral overlapping with insulated metal panels. Fastening of cover foot



LOAD RESISTANCE OF MULTIPLE PANEL CONTINUOUS ROOFING SYSTEM



APPLICATION ON CONTINUOUS ROOFING

Construction of continuous roofing/wall with continuous lateral overlapping of polycarbonate panels.

For roofing, recommended minimum slope 7%.



CONTINUOUS ROOFING

Construction of continuous translucent roofing, with overlapping of panels. Recommended minimum slope 7%

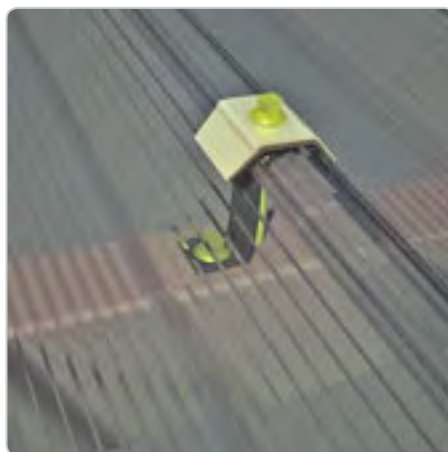


ACCESSORIES

arcoPlus®1000 is a complete system for the construction of translucent curtain walls/roofing. It includes a range of accessories that make it suitable for all purposes.

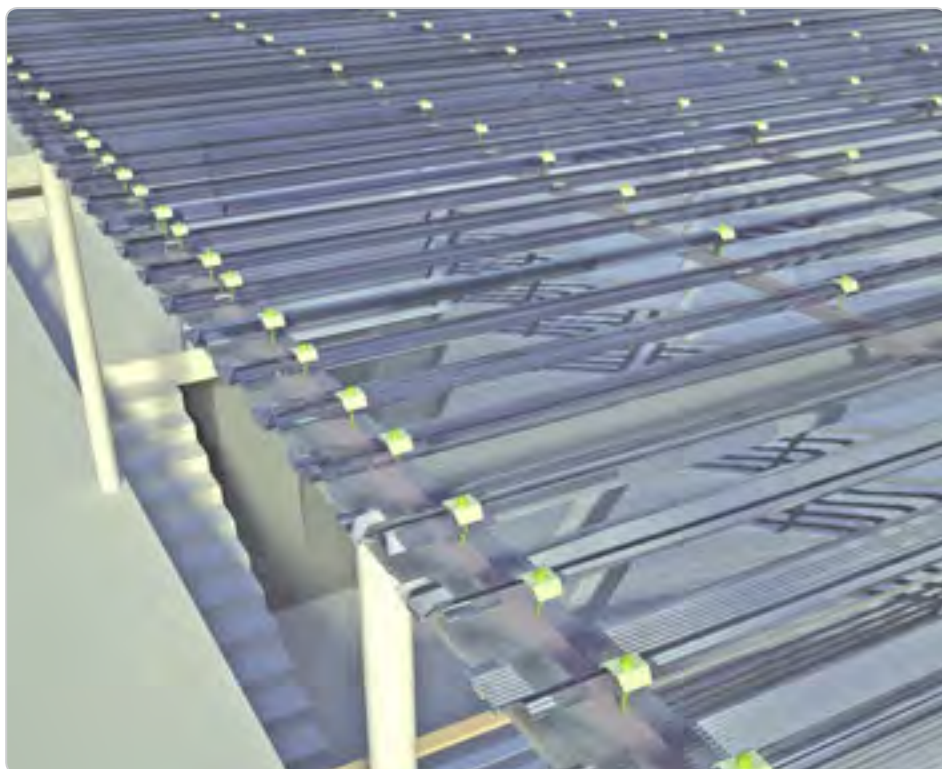
In addition to complete fastening assemblies, the system includes a tongue and groove seal, a flat strip for sealing overlap areas, a range of steel profiles including bracing brackets, and a special press-formed profile to be inserted as a reinforcement on the groove side of the panel.

For continuous roofing the panels are arranged with a continuous lateral overlap. A flat ridge to place over the adjacent ridge profiles completes the range of accessories. Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.



ANCHORAGE OF ROOFING

This is done using an aluminium cap with Vipla washer and self-drilling screw



ACCESSORIES



4234

Aluminium cap with gasket



4233

Screw with 6.3x120 Vipla washer



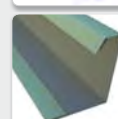
4229

Tongue and groove gasket in PE-LD



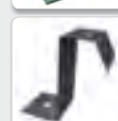
4250

Gasket for gutter in PE-LD



4236

Protected steel profile



4235

Central bracing bracket



4232

Sealant tape PE-LD 20x10

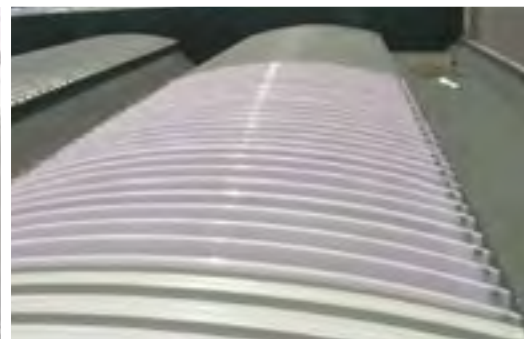
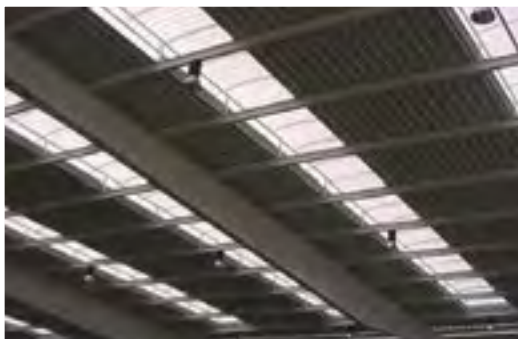


4231

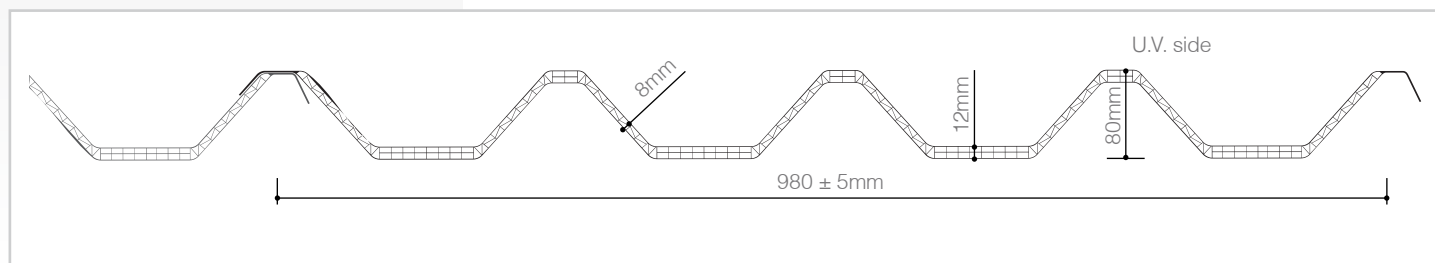
Roof profile (2 pieces)

2.3 MODULAR OVERLAPPING SYSTEMS

arcoplus[®]
1000Curvo



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
curved translucent
roofing**

PRODUCTION STANDARDS

Thickness	variable 8÷12mm
Profile height	80mm
Structure	3 walls
Modular width	980 ± 5mm
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	2,7 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0
Accidental shock resistance	1.200 Joule

SKYLIGHT PANEL

Creation of skylights, achieved by means of lateral overlapping of translucent components with curved metal insulated panels.

CONTINUOUS ROOFING

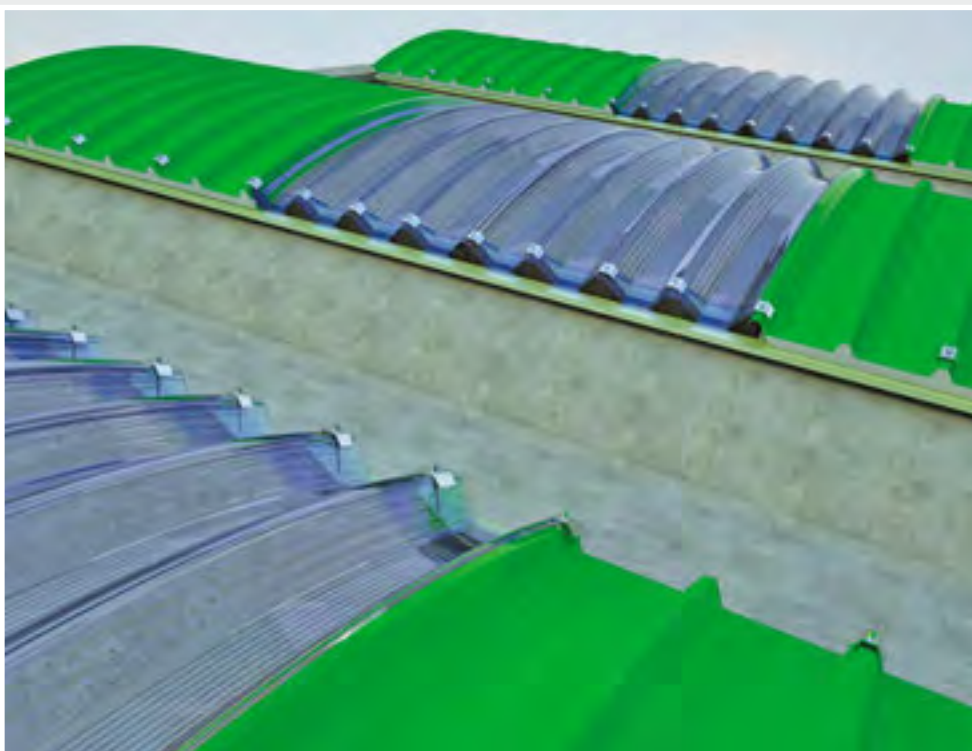
Creation of continuous roofing, achieved by means of continuous lateral overlapping of polycarbonate panels. Components are manufactured with a bend radius of R.3,300mm or R.6,000mm.

ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Thermal insulation

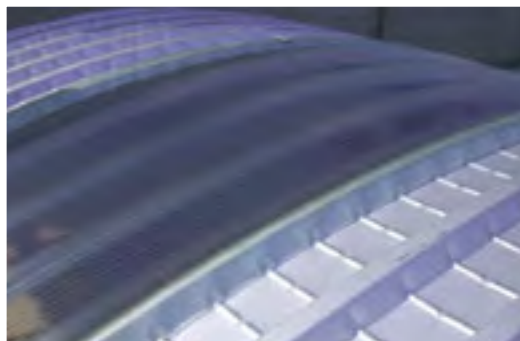
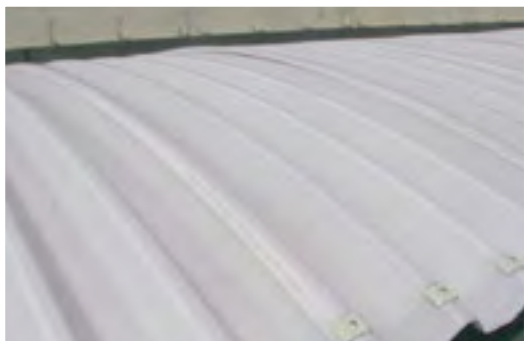
APPLICATIONS

 Curved roofing



CURVED ROOFING

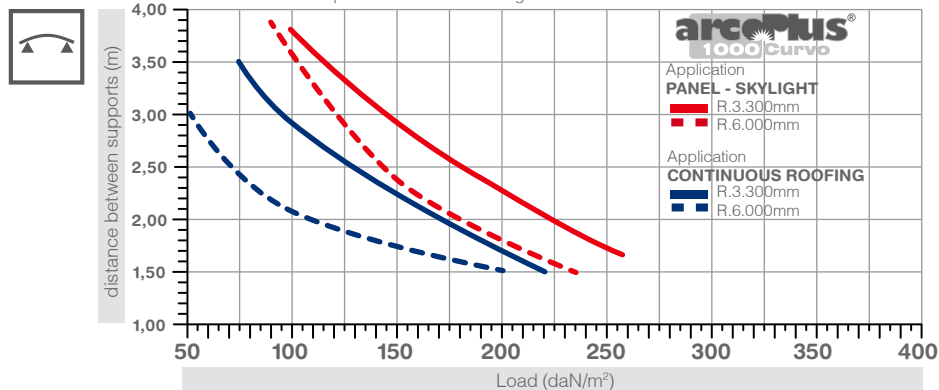
Detail of curved roofing in use with insulated metal panels



CURVED SYSTEM LOAD RESISTANCE

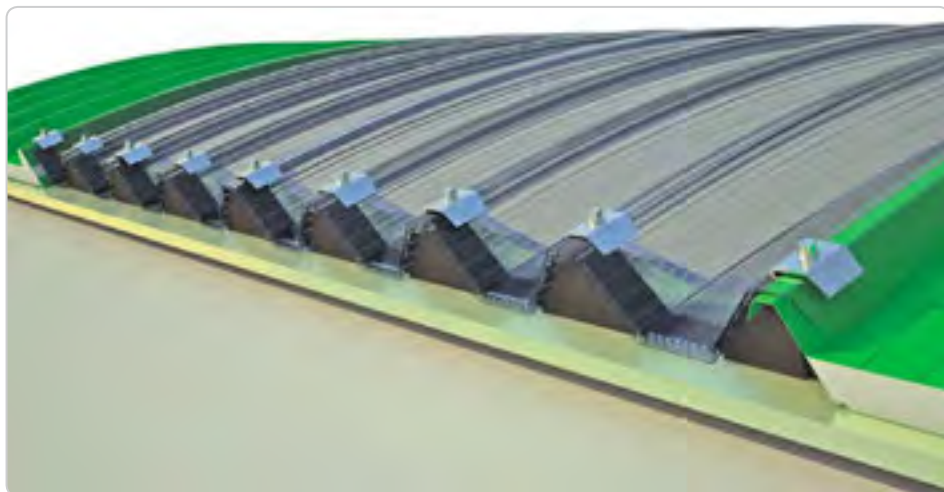
Maximum loads on two supports - R.3.300 - R.6.000mm

Values below refer to product installed according to the Technical Handbook Recommendation



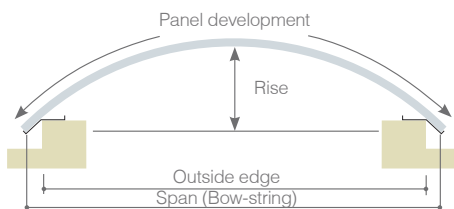
DETAIL OF ANCHORAGE

Detail of anchorage of panels to supporting structures



DEVELOPMENT TABLE

Span	R.3.300mm		R.6.000mm	
	Rise	Development	Rise	Development
1.000	38	1.016	21	1.008
1.200	55	1.221	30	1.210
1.400	75	1.428	41	1.413
1.600	98	1.636	54	1.615
1.800	125	1.845	68	1.819
2.000	155	2.057	84	2.023
2.200	189	2.270	102	2.227
2.400	226	2.486	121	2.432
2.600	267	2.705	143	2.638
2.800	312	2.927	166	2.845
3.000	361	3.152	191	3.052
3.200	414	3.381	217	3.261
3.400	472	3.615	246	3.470
3.600	534	3.854	276	3.681
3.800	602	4.098	309	3.892
4.000	675	4.349	343	4.105
4.200	754	4.608	380	4.319
4.400	840	4.875	418	4.535
4.600	934	5.151	458	4.752
4.800	1.035	5.440	501	4.971



MAXIMUM DEVELOPMENT

Radius	3.300 mm	6.000mm
Development	5.000 mm	5.800mm

ACCESSORIES



4234
Aluminium cap
with gasket



4233
Screw with 6.3x120 Vipla
washer



4250
Gasket for gutter
PE-LD



4235
Central bracing
bracket



4232
Sealant tape
PE-LD 20x10

ACCESSORIES

arcoPlus®1000 is a complete system for the construction of translucent roofing and includes a range of accessories that make it suitable for all purposes.

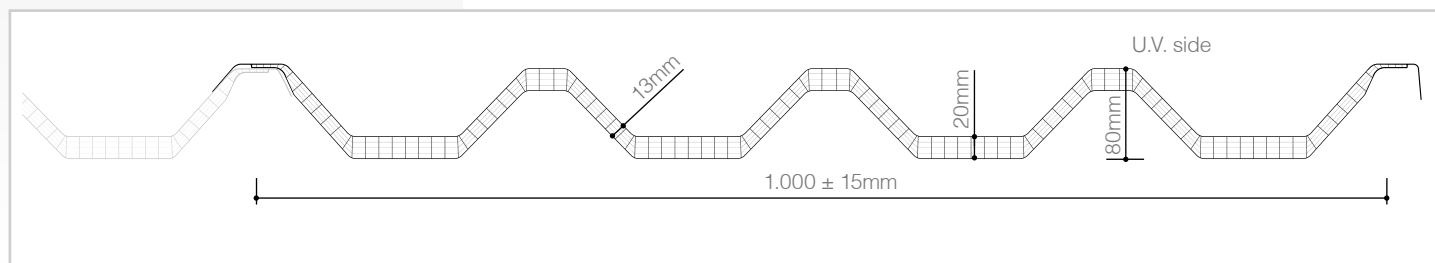
Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus®
SUPER 1000



PROFILE



Modular system of corrugated UV protected multiwall polycarbonate for translucent curtain walls and roofing

PRODUCTION STANDARDS

Thickness	variable 13÷20mm
Profile height	80mm
Structure	5 walls
Modular width	1.000 ± 15mm
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,8 W/m ² K
Acoustic insulation	18 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0
Accidental shock resistance	1.200 Joule

DESCRIPTION

arcoPlus®SUPER1000 is a modular corrugated system consisting of 5 co-extruded polycarbonate walls, in 13÷20mm thickness, perfectly overlapping lengthwise and enabling continuous coverage and skylights filled gutter. Considering the linear thermal expansion of polycarbonate, to avoid cracks at the through fixings the recommended maximum length is 5,000mm.

For higher length of the pitch is better the use of multiple overlapping panels.

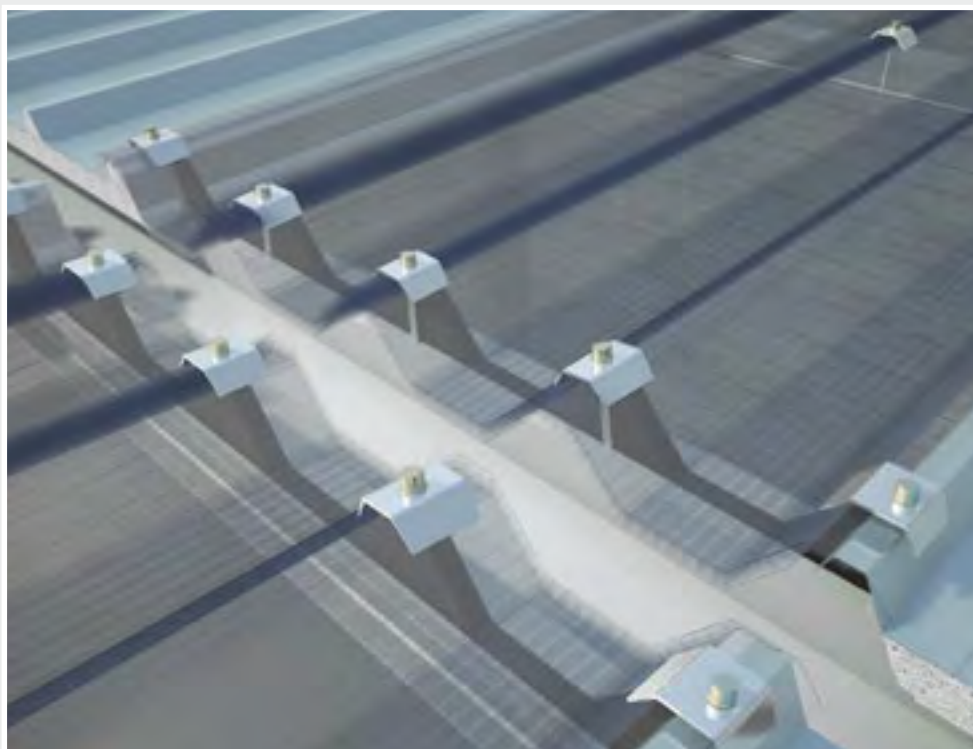
ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal overlap
- ❖ Transverse overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation

APPLICATIONS

 Vertical windows

 Roofing



SKYLIGHT - PANEL APPLICATION

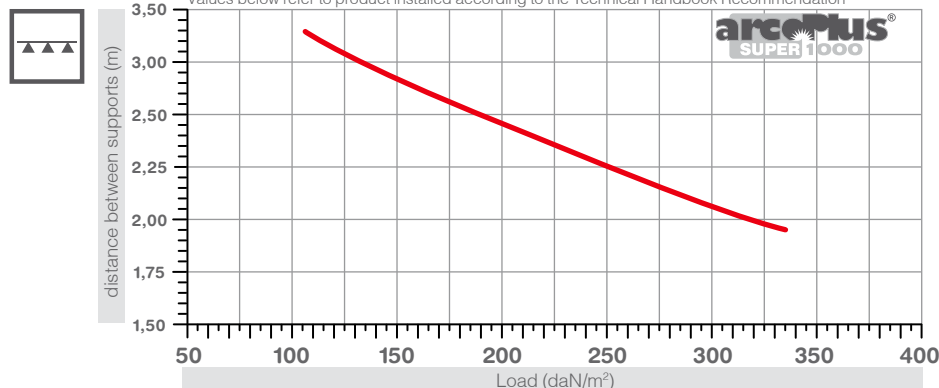
Construction of skylight with lateral overlapping of insulating roofing panels.
Detail of valley gutter



LOAD RESISTANCE SKYLIGHT - SINGLE PANEL SYSTEM

Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



SKYLIGHT GUTTER RIDGE APPLICATION

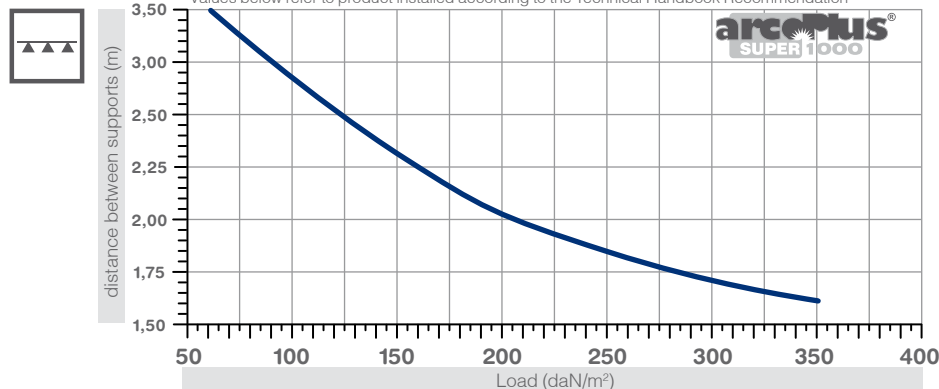
Panels laterally overlapping insulated corrugated metal roofing panels. Thanks to the specific design of the

profile the system is perfectly compatible for overlapping all the main types of panel. Minimum slope 5%.

LOAD RESISTANCE OF MULTIPLE PANEL CONTINUOUS ROOFING SYSTEM

Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



APPLICATION ON CONTINUOUS ROOFING

Construction of continuous roofing/wall with continuous lateral overlapping of polycarbonate panels. For roofing, recommended minimum slope 7%.

tongue and groove seal, a flat strip for sealing overlap areas, a range of steel profiles including bracing brackets, and a special press-formed profile to be inserted as a reinforcement on the groove side of the panel. For continuous roofing the panels are arranged with a continuous lateral overlap.

A flat ridge to place over the adjacent ridge profiles completes the range of accessories. Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.

ACCESSORIES

arcoPlus®SUPER1000 is a complete system for the construction of translucent curtain walls/roofing. It includes a range of accessories that make it suitable for all purposes. In addition to complete fastening assemblies, the system includes a

ACCESSORIES



4482
Aluminium cap with gasket



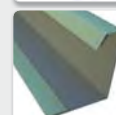
4233
Screw with 6.3x120 Vipla washer



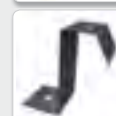
4655
Tongue and groove gasket in PE-LD



4658
Gasket for gutter in PE-LD



4236
Protected steel profile



4235
Central bracing bracket



4232
Sealant tape PE-LD 20x10



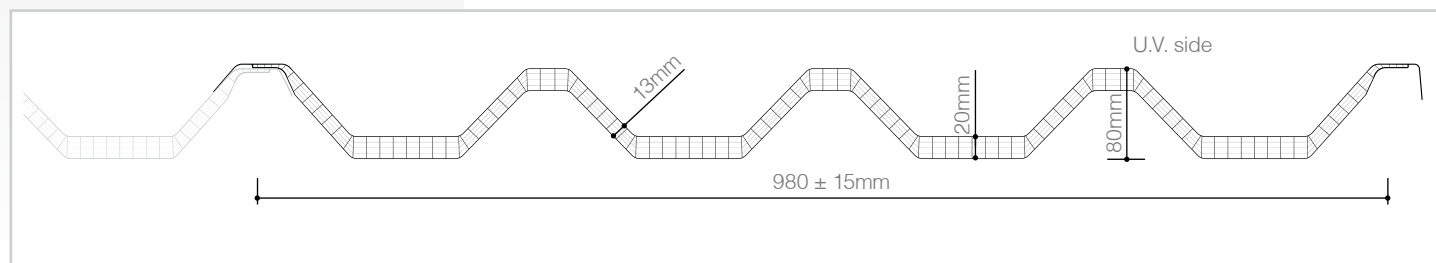
4231
Roof profile (2 pieces)

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus[®]
SUPER 1000 Curvo



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
curved translucent
roofing**

PRODUCTION STANDARDS

Thickness	variable 13÷20mm
Profile height	80mm
Structure	5 walls
Modular width	980 ± 15mm
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	1,8 W/m ² K
Acoustic insulation	18 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0
Accidental shock resistance	1.200 Joule

SKYLIGHT PANEL

Creation of skylights, achieved by means of lateral overlapping of translucent components with curved metal insulated panels.

CONTINUOUS ROOFING

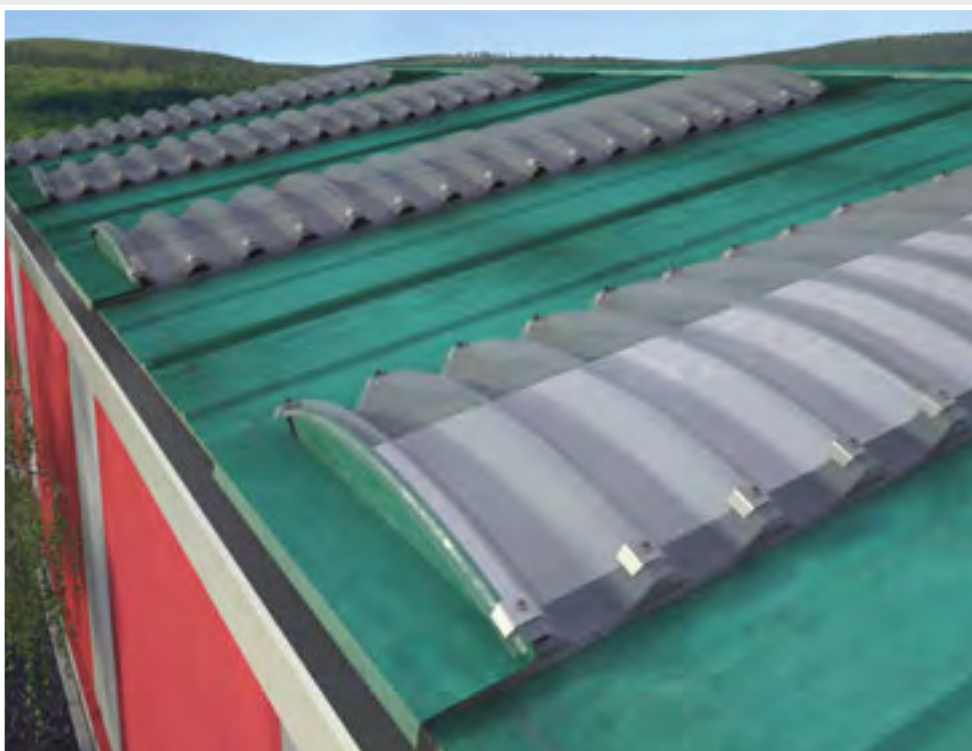
Creation of continuous roofing, achieved by means of continuous lateral overlapping of polycarbonate panels. arcoPlus[®]SUPER1000 is produced with a radius of curvature R.3.300mm and R.6.000mm.

ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Thermal insulation

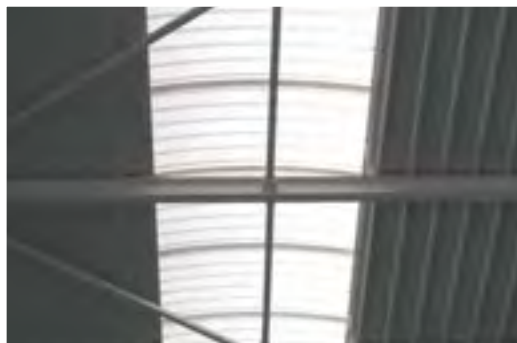
APPLICATIONS

 Curved roofing

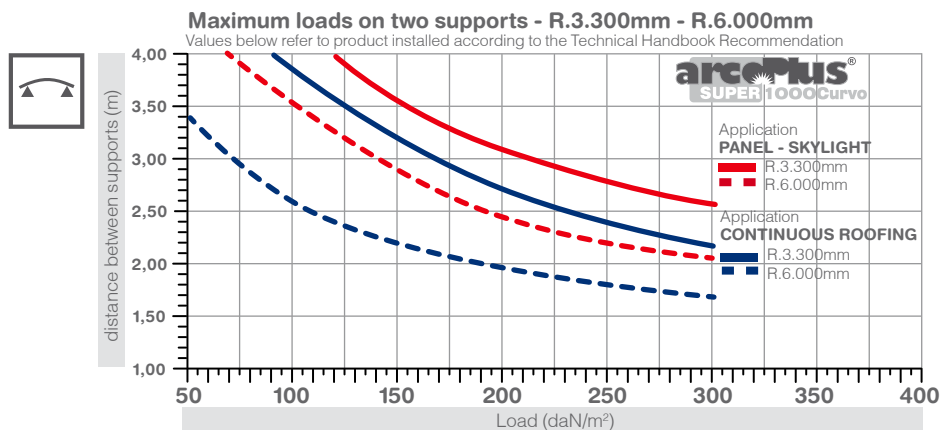


SKYLIGHT PANELS APPLICATION

Skylight gutter ridge application with cross disposition of the bent panels in polycarbonate

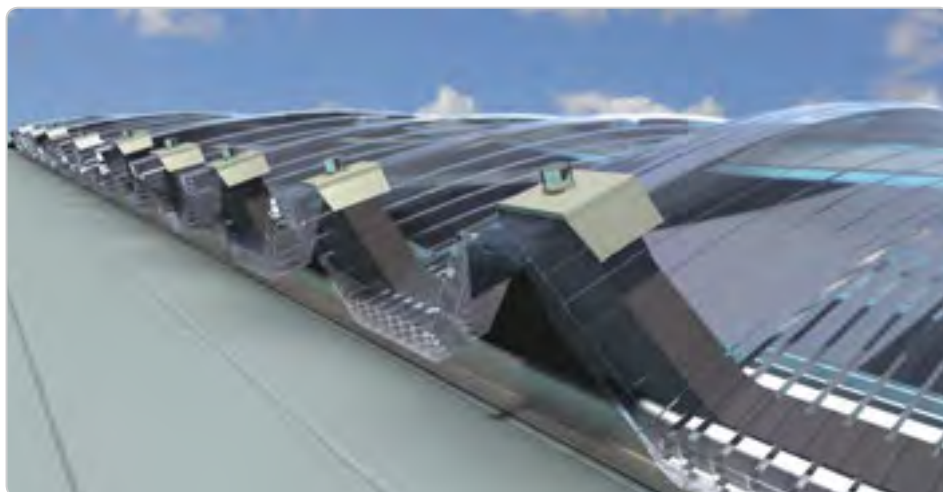


CURVED SYSTEM LOAD RESISTANCE



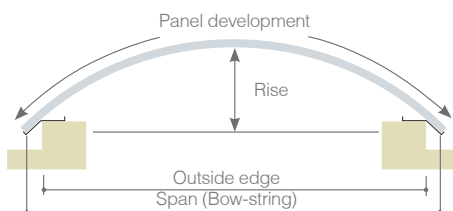
DETAIL OF ANCHORAGE

Detail of fixing panels to support structures



DEVELOPMENT TABLE

Span	R.3.300mm		R.6.000mm	
	Rise	Development	Rise	Development
1.000	38	1.016	21	1.008
1.200	55	1.221	30	1.210
1.400	75	1.428	41	1.413
1.600	98	1.636	54	1.615
1.800	125	1.845	68	1.819
2.000	155	2.057	84	2.023
2.200	189	2.270	102	2.227
2.400	226	2.486	121	2.432
2.600	267	2.705	143	2.638
2.800	312	2.927	166	2.845
3.000	361	3.152	191	3.052
3.200	414	3.381	217	3.261
3.400	472	3.615	246	3.470
3.600	534	3.854	276	3.681
3.800	602	4.098	309	3.892
4.000	675	4.349	343	4.105
4.200	754	4.608	380	4.319
4.400	840	4.875	418	4.535
4.600	934	5.151	458	4.752
4.800	1.035	5.440	501	4.971



MAXIMUM DEVELOPMENT

Radius	3.300 mm	6.000mm
Development	5.000 mm	5.800mm

ACCESSORIES



4482
Aluminium cap
with gasket



4233
Screw with 6.3x120
Vipla washer



4658
Gasket for gutter
PE-LD



4235
Central bracing
bracket



4232
Sealant tape
PE-LD 20x10

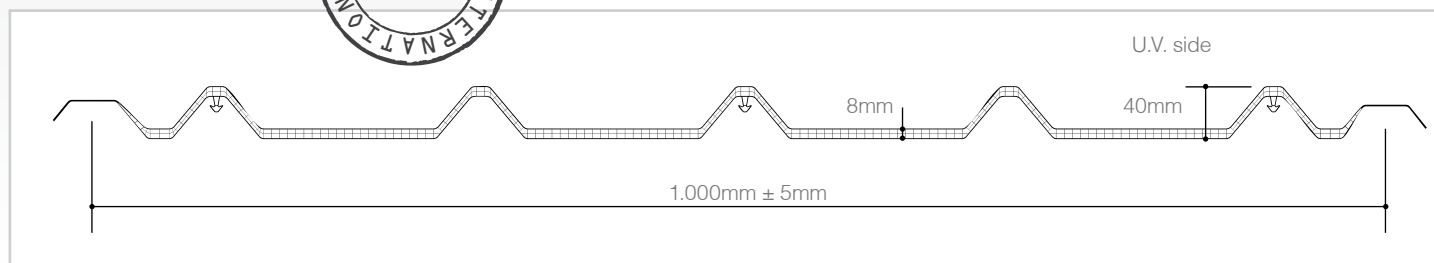
arcoPlus®SUPER1000 is a complete system for the construction of translucent roofing and includes a range of accessories that make it suitable for all purposes. Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus[®]
GrecaClick



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate,
assembled using
a snap-on system
without drilling for
translucent curtain
walls and roofing**

PRODUCTION STANDARDS

Thickness	8mm
Profile height	40mm
Structure	3 walls
Modular width	1.000mm ± 5mm
Colours available	see page 11

DESCRIPTION

Innovative patented roofing system, anchored by pressing it onto specific anchor brackets that allow the polycarbonate sheets to expand without undermining load strength.

TECHNICAL FEATURES



Thermal insulation	3,0 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

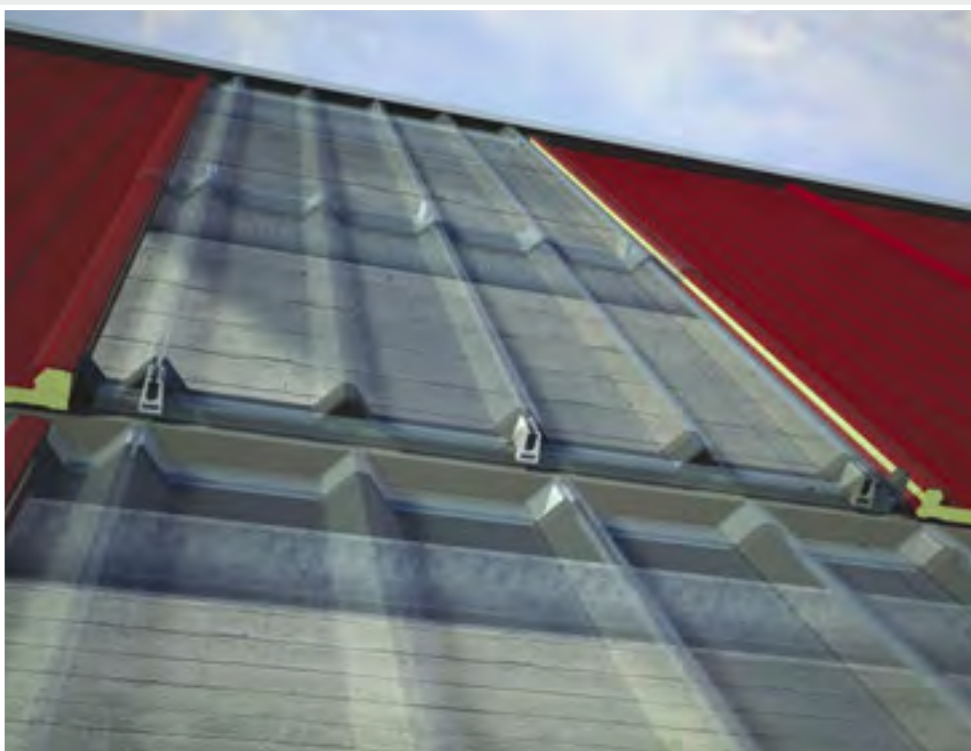
N.B. arcoPlus[®]GrecaCLICK
supplied with thermowelded ends

ADVANTAGES

- ❖ Pressed on without drilling holes in panels
- ❖ Anchor brackets hidden in the structure
- ❖ Transverse and longitudinal overlap
- ❖ Resistance to U.V. rays and to hail
- ❖ Light transmission
- ❖ Thermowelded sheets
- ❖ Heat insulation

APPLICATIONS

-  Roofing and skylights
-  Vertical windows



SKYLIGHT - PANEL APPLICATION
Skylight gutter ridge application



SKYLIGHT GUTTER RIDGE APPLICATION

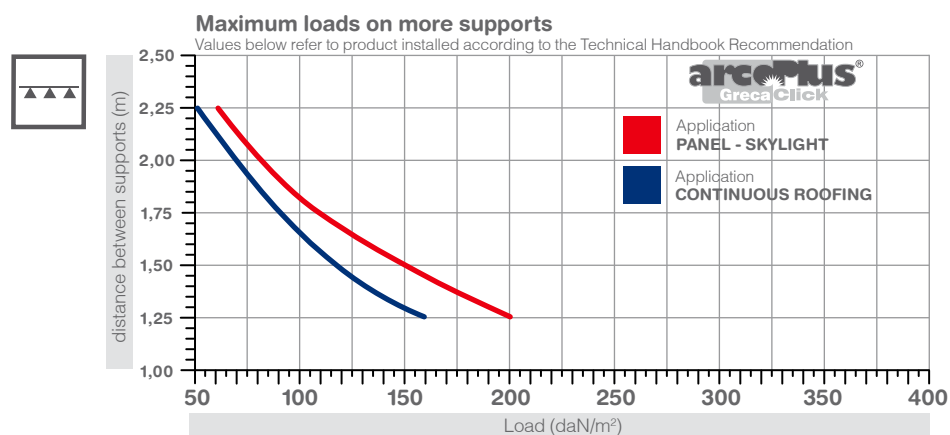
Skylight obtained by laterally overlapping with all types of foamed roofing panels or corrugated sheets. The special method of connection guarantees resistance to dynamic wind loads while at the same time allowing the material to expand. Recommended minimum slope 5%.

CONTINUOUS ROOFING APPLICATION

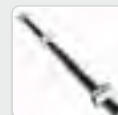
Construction of continuous roofing with continuous lateral overlapping of components.

Recommended minimum slope 7%.

LOAD RESISTANCE



ACCESSORIES



4420 Kit 20
4423 Kit 30
4424 Kit 40
 GrecaClick connection kit

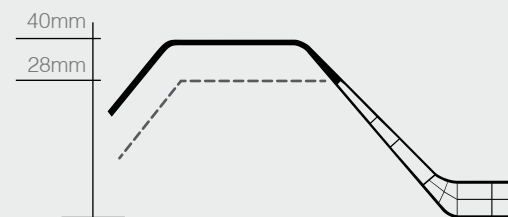


4425 Kit 20
4427 Kit 30
4429 Kit 40
 GrecaClick overlap kit



4406 Kit 0
4407 Kit 20
4408 Kit 30
4409 Kit 40
 PE-LD GrecaClick ridge bird comb kit

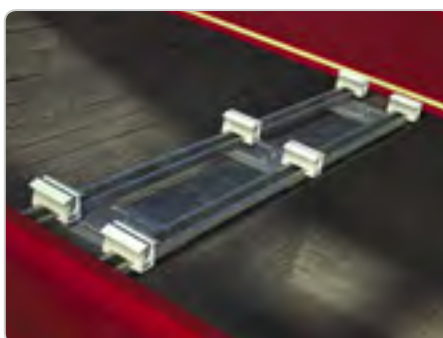
N.B. arcoPlus® GrecaCLICK supplied with thermowelded ends



The ends of the sheets can be modified for use with different roofing profiles.



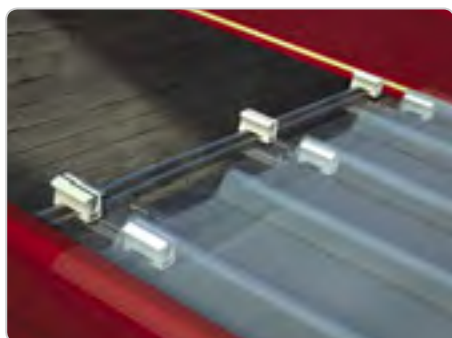
DETAIL OF RIDGE
Detail of ridge with PE-LD seal



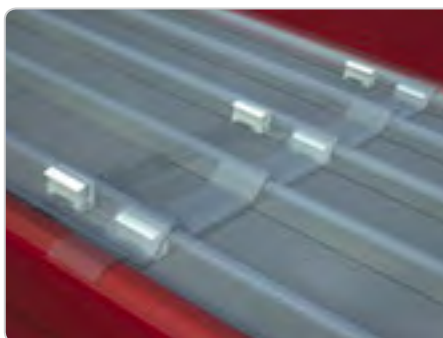
OVERLAP - STEP 1
Detail of double anchor bracket anchored to roofing structure



ANCHORAGE OF ROOFING
This is done by pressing onto the anchor bracket



OVERLAP - STEP 2
Insertion of lower sheet by pressing



OVERLAP - STEP 3
Insertion of upper sheet by pressing



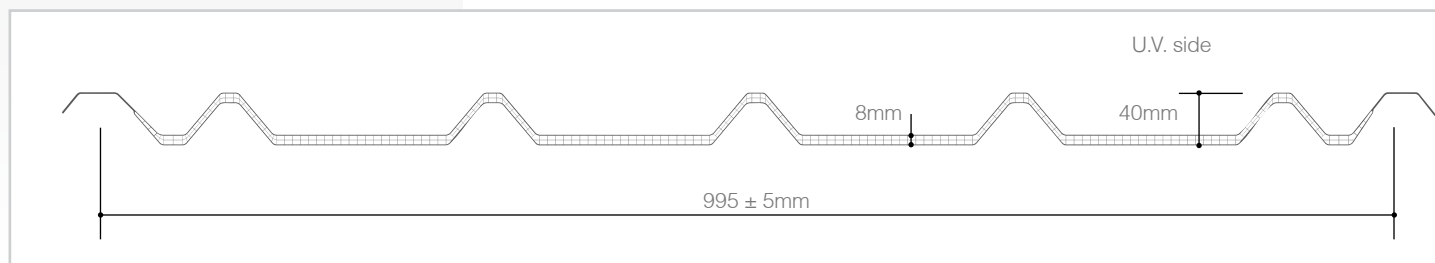
DETAIL OF GUTTER
Detail of insertion of the PE-LD seal

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus[®]
MiniGreca



PROFILE



Modular system of corrugated UV protected multiwall polycarbonate for translucent curtain walls and roofing applications

PRODUCTION STANDARDS

Thickness	8mm
Profile height	40mm
Structure	3 walls
Modular width	995 ± 5mm
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	3,0 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION


arcoPlus[®]MiniGreca, is a complete system for the construction of translucent curtain walls and roofing and includes a range of accessories that make it suitable for all purposes. Thanks to the specific design of the profile the system is perfectly compatible with all the main types of panel.

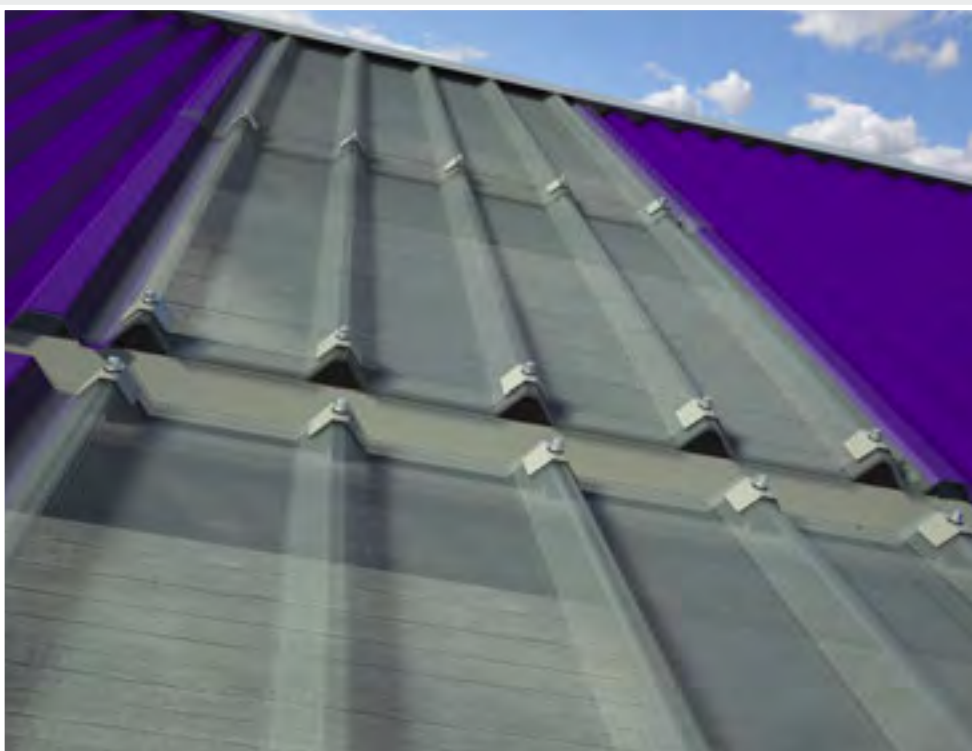
N.B. arcoPlus[®]MiniGreca supplied with thermowelded ends

ADVANTAGES

- ❖ Transverse and longitudinal overlap
- ❖ Resistance to U.V. rays and to hail
- ❖ Light transmission
- ❖ Thermowelded sheets
- ❖ Heat insulation

APPLICATIONS

 Roofing and skylights



SKYLIGHT - PANEL APPLICATION
Skylight gutter ridge application



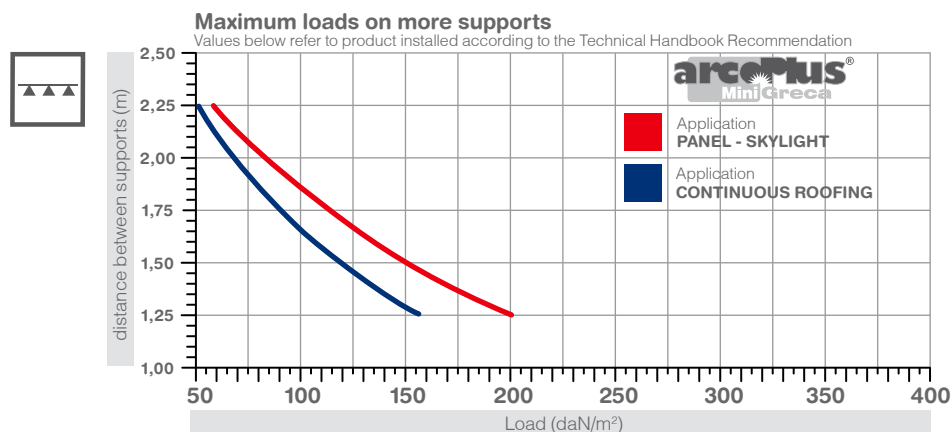
SKYLIGHT GUTTER RIDGE APPLICATION

Skylight obtained by means of lateral overlapping with any type of corrugated roofing sheet.
Recommended minimum slope 5%.

CONTINUOUS ROOFING APPLICATION

Construction of continuous roofing with continuous lateral overlapping of panels.
Recommended minimum slope 7%.

LOAD RESISTANCE



ACCESSORIES



4433
Aluminium cap with gasket



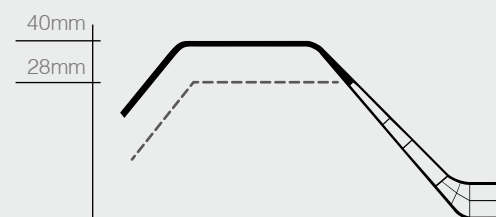
4432
Screw with 6.3x80 Vipla washer



4406 Kit 0 - 40
4404 Kit 21 - 28
PE-LD GrecaClick ridge bird comb kit



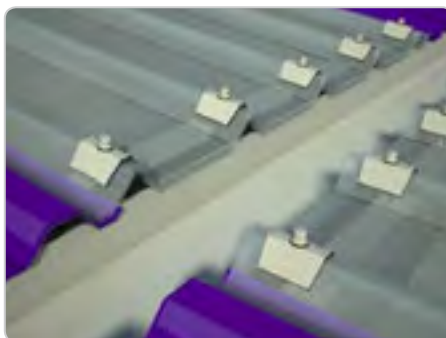
4405
Gasket for gutter PE-LD



The ends of the sheets can be modified to fit the different types of roofing profile.



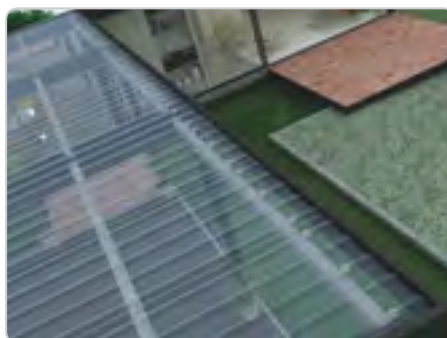
DETAIL OF OVERLAP
Detail of double anchor bracket anchored to roofing structure



DETAIL OF GUTTER
Detail of insertion of the PE-LD seal



CONTINUOUS ROOFING
Creation of large areas of transparent roofing



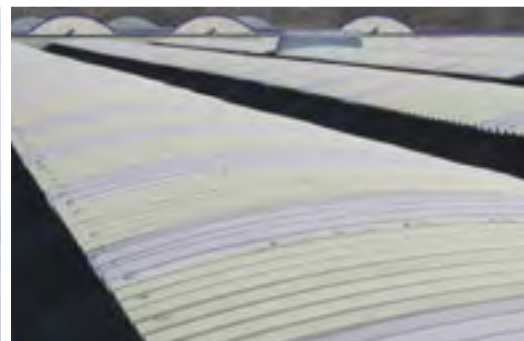
CONTINUOUS ROOFING
Anchorage of roof components



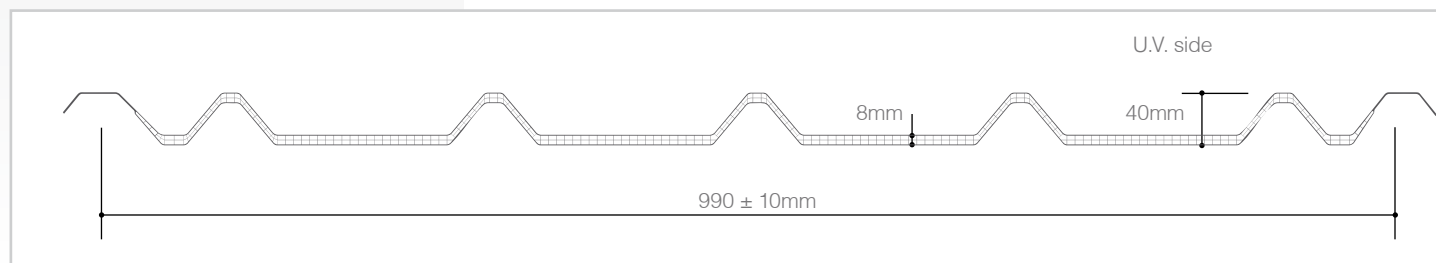
ANCHORAGE OF ROOFING
This is done by drilling and inserting a screw with Vipla washer and cap

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus[®]
MiniGrecaCurvo



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
curved translucent
roofing**

PRODUCTION STANDARDS

thickness	8mm
profile height	40mm
structure	3 walls
modular width	990 ± 10mm
colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	3,0 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

EASY AND LOW-COST INSTALLATION


Creation of continuous roofing, or skylight, achieved by means of continuous lateral overlapping of polycarbonate panels with curved metal insulated panels. Available only the 3.500mm radius.

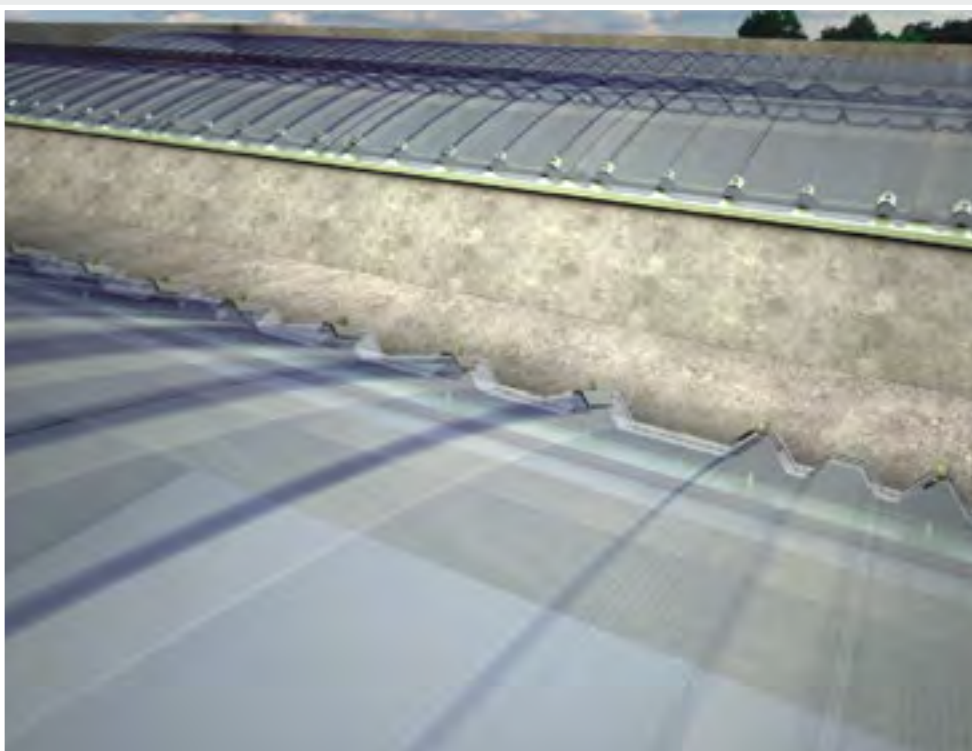
N.B. arcoPlus[®]MiniGreca supplied with thermowelded ends.

ADVANTAGES

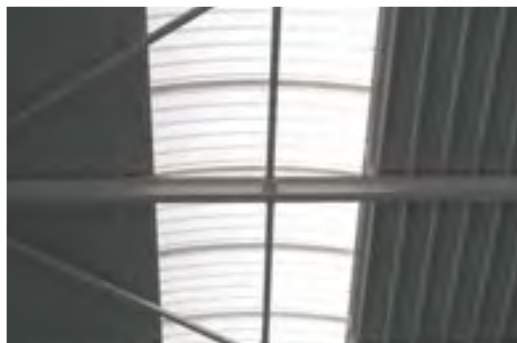
- ❖ Transverse and longitudinal overlap
- ❖ Resistance to U.V. rays and to hail
- ❖ Light transmission
- ❖ Thermowelded sheets
- ❖ Heat insulation

APPLICATIONS

 Roofing and skylights



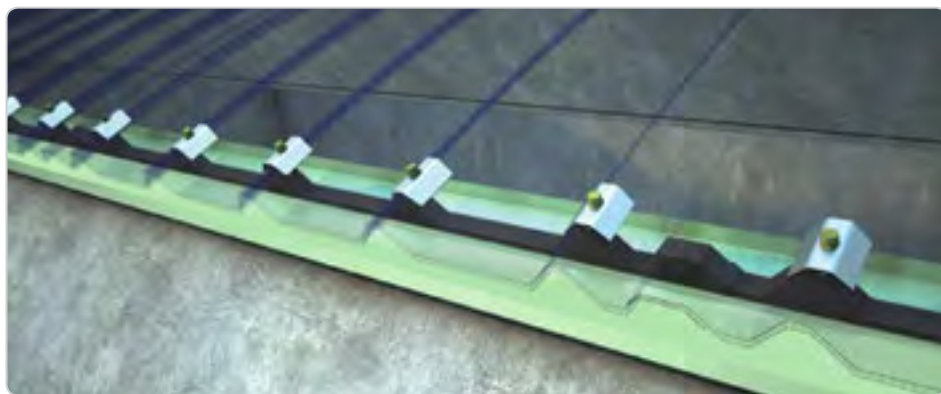
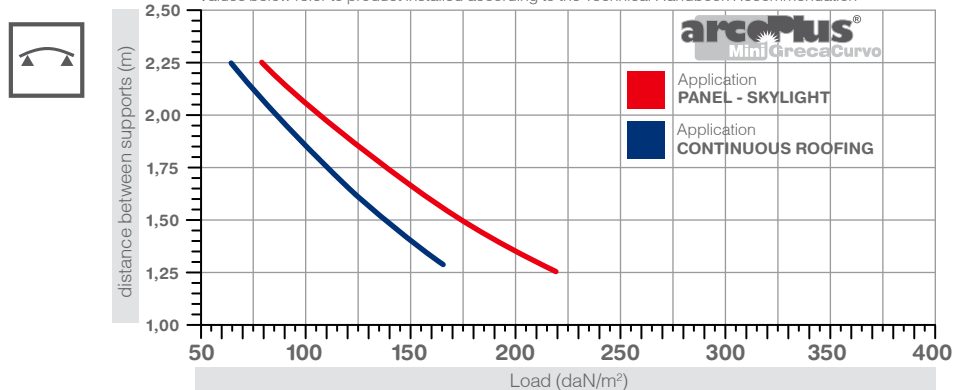
CONTINUOUS ROOFING APPLICATION
Industrial continuous roofing



CURVED SYSTEM LOAD RESISTANCE

Maximum loads on two supports - R.3.500mm

Values below refer to product installed according to the Technical Handbook Recommendation



DETAIL OF OVERLAP

Detail of double anchor bracket anchored to roofing structure

ACCESSORIES



4433

Aluminium cap with gasket



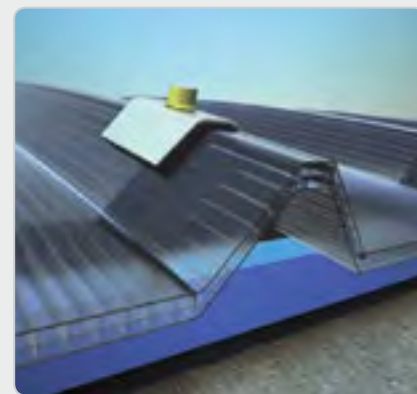
4432

Screw with 6.3x80 Vipla washer



4405

Gasket for gutter PE-LD

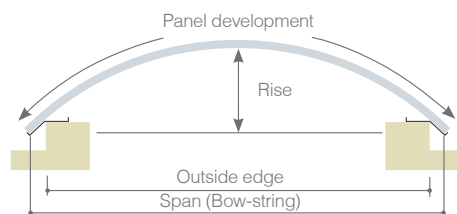


ANCHORAGE OF ROOFING

This is done by drilling and inserting a screw with Vipla washer and cap

DEVELOPMENT TABLE R.3.500 mm

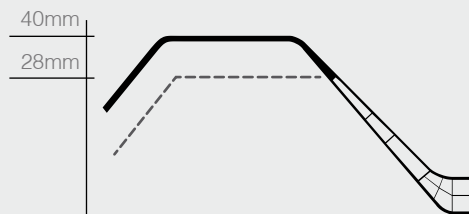
Span	Rise	Development
1.000	36	1.009
1.200	52	1.213
1.400	71	1.418
1.600	93	1.623
1.800	118	1.831
2.000	146	2.040
2.200	177	2.251
2.400	212	2.466
2.600	250	2.679
2.800	292	2.897
3.000	338	3.118



MAXIMUM DEVELOPMENT

Radius **3.500 mm**

Development **5.000 mm**



The ends of the sheets can be modified to fit the different types of roofing profile.

ACCESSORIES

arcoPlus®MiniGreca is a complete system for the construction of translucent roofing and includes a range of accessories that make it suitable for all purposes.

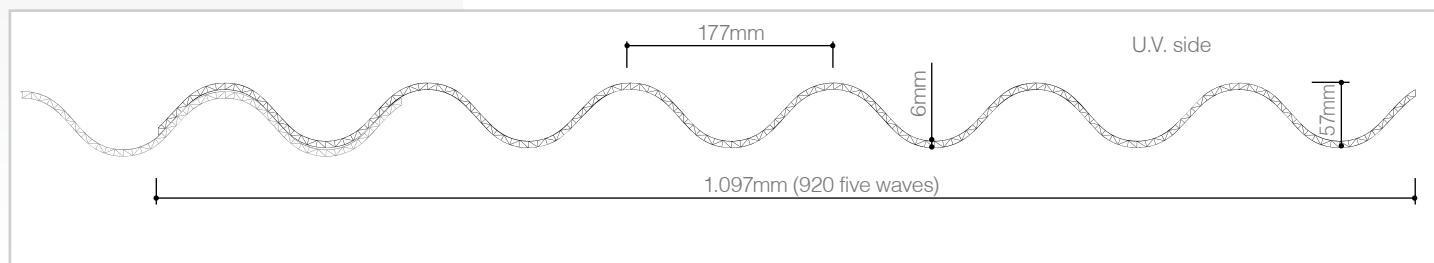
Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.

2.3 MODULAR OVERLAPPING SYSTEMS

arcPlus[®]
Onda



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
vertical walls and
roofings translucent
and opaque**

PRODUCTION STANDARDS

Thickness	6mm
Profile height	51mm
Corrugation pitch	177mm
Structure	3 walls with "N" structure
Modular width	1.050mm (875 on request)
Length	5.000mm (max adviced length)
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	3,2 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0
Accidental shock resistance	1.200 Joule



OVERLAP
Detail of overlapping components

ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal and lateral overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Easy to install

APPLICATIONS

 Vertical windows

 Roofing





SKYLIGHT GUTTER RIDGE APPLICATION

Panels laterally overlap insulated corrugated roofing panels, or fibre cement sheets. Recommended minimum slope 7%.



ROOFING-CONTINUOUS WALL APPLICATION

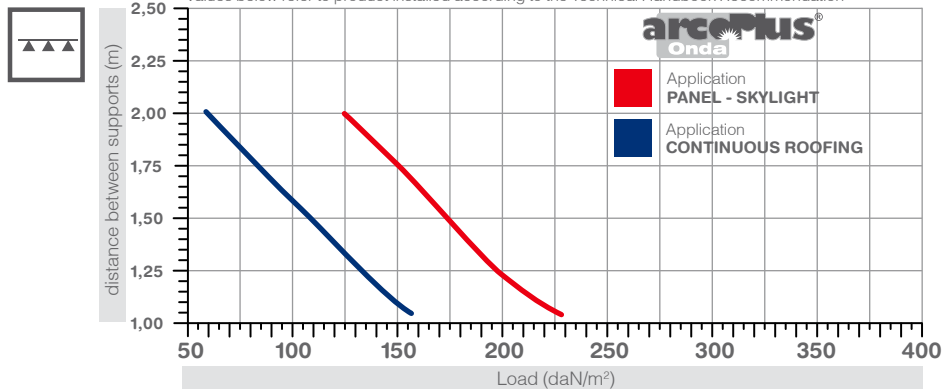
Construction of continuous roofing/wall with continuous lateral overlapping of polycarbonate panels.



FLAT SYSTEM LOAD RESISTANCE

Maximum loads on more supports

Values below refer to product installed according to the Technical Handbook Recommendation



EASY AND LOW-COST INSTALLATION

The arcoPlus®Onda Piano system can be used to construct continuous translucent roofing or combined with fibre cement sheets.

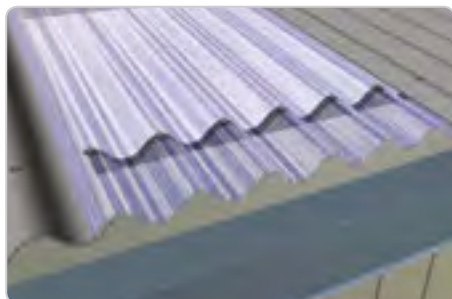
The panels must be installed with the UV protected side facing the exterior, to preserve the optical and mechanical properties of the material.

If one or more transverse overlaps are

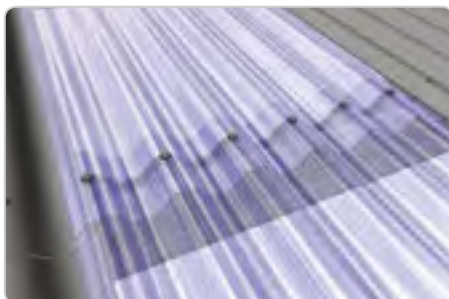
required, installation must start from the cover foot (bottom) and then proceed upwards towards the ridge following the slope of the roof.

In particularly windy areas, two-flute overlaps are advisable.

Overlapping can be used to create gutter ridge skylights and continuous skylights with lateral panel overlap.

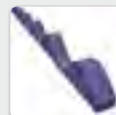


COVER FOOT
Detail of gutter line with gasket



DETAIL OF OVERLAP
Detail of overlapping components

ACCESSORIES



4256
Gasket for gutter
PE-LD



4262 6,3 x 20
4261 6,3 x 90
4374 6,3 x 120
Fixing screw with Batz



4232
Sealant tape
PE-LD 20x10

ACCESSORIES

arcoPlus®Onda, system has a complete set of accessories enabling simple installation.

The structure has fixing elements, and gaskets in order to increase resistance in overlapped areas.

arcoPlus®Onda is delivered, as a standard product, with thermowelded extremities.

THERMOWELDING

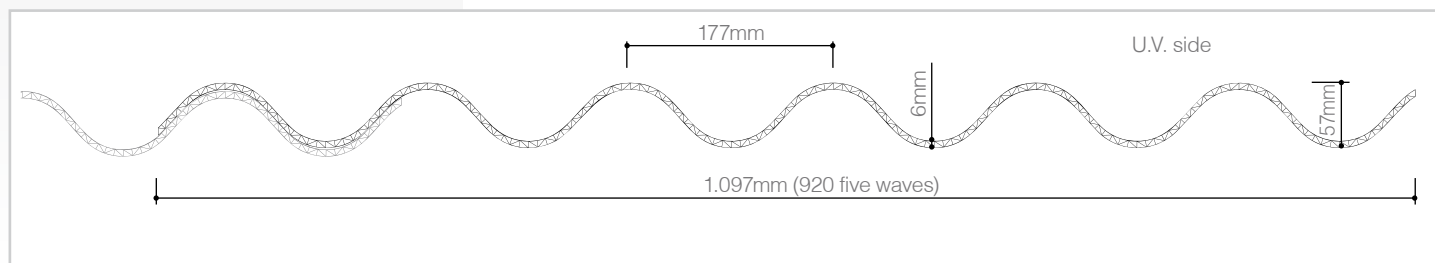
arcoPlus®Onda is delivered, as a standard product, with thermowelded extremities, up to a max length of 5.000mm.

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus®
Onda Curvo



PROFILE



**Modular system
of corrugated UV
protected multiwall
polycarbonate for
curved translucent
and opaque roofing**

PRODUCTION STANDARDS

Thickness	6mm
Profile height	51mm
Corrugation pitch	177mm
Structure	3 walls with "N" structure
Modular width	1.050mm (875 on request)
Length	5.000mm (max advised length)
Colours available	see page 11

TECHNICAL FEATURES

Thermal insulation	3,2 W/m ² K
Acoustic insulation	16 dB
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0
Accidental shock resistance	1.200 Joule

CURVED SYSTEM APPLICATION

The arcoPlus®Onda Curvo system can be used to create continuous translucent roofing or used, by means of lateral overlapping, with curved fibre cement sheets or insulating panels with a curve radius of R.3,500mm.

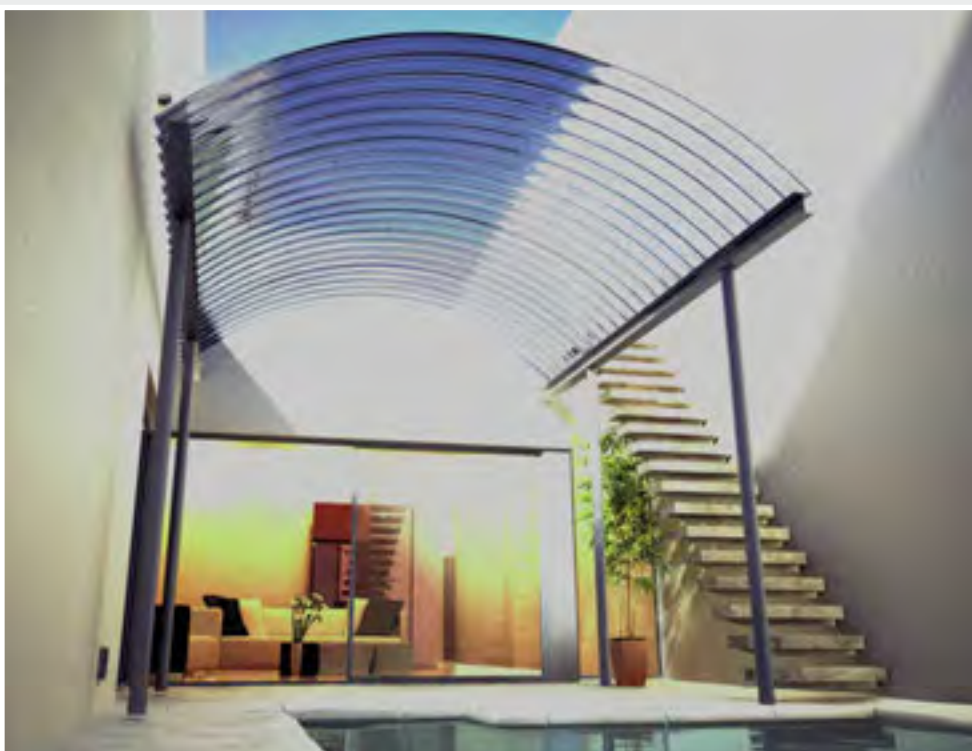
The arcoPlus®Onda profile must be installed with the UV protected side facing the exterior, to preserve the optical and mechanical properties of the material.

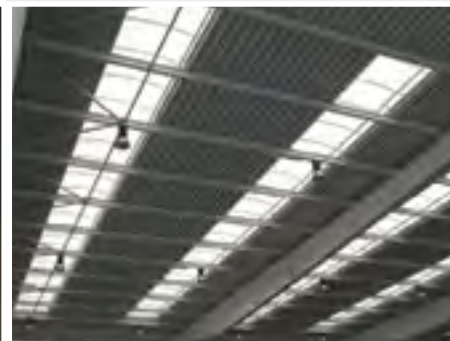
ADVANTAGES

- ❖ High load resistance
- ❖ Longitudinal and lateral overlap
- ❖ Thermowelded panels
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation

APPLICATIONS

 Curved roofing





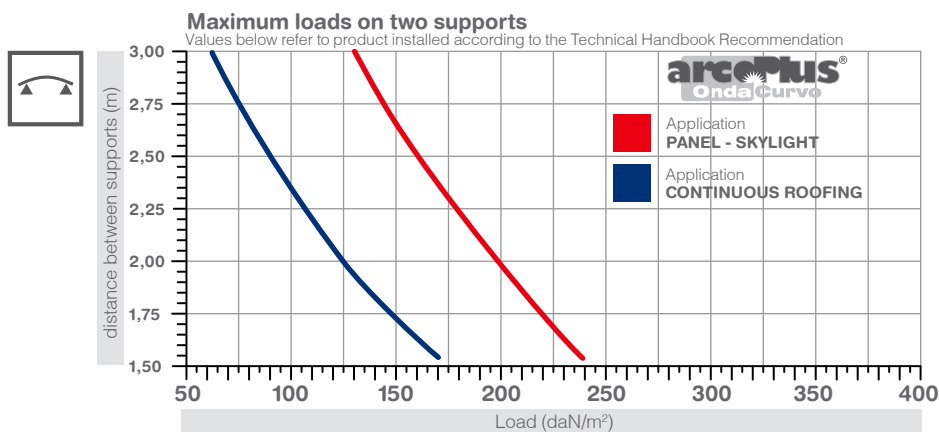
SKYLIGHT PANEL

Panels laterally overlap insulated corrugated roofing panels, or fibre cement sheets.

CONTINUOUS ROOFING

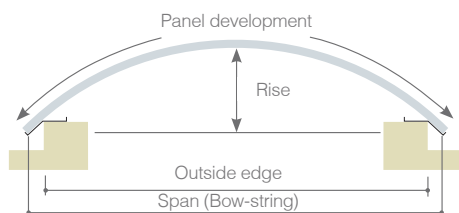
Construction of continuous roofing with continuous lateral overlapping of polycarbonate panels. Components are manufactured with a bend radius of R.3.500mm.

CURVED SYSTEM LOAD RESISTANCE R.3.500



DEVELOPMENT TABLE R.3.500 mm

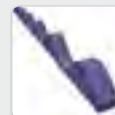
Span	Rise	Development
1.000	36	1.015
1.200	52	1.220
1.400	71	1.420
1.600	93	1.630
1.800	118	1.835
2.000	146	2.045
2.200	177	2.255
2.400	212	2.470
2.600	250	2.685
2.800	292	2.905
3.000	338	3.125



MAXIMUM DEVELOPMENT

Radius	3.500 mm
Development	5.300 mm

ACCESSORIES



4256
Gasket for gutter
PE-LD



4262 6,3 x 20
4261 6,3 x 90
4374 6,3 x 120
Fixing screw with Batz



4232
Sealant tape
PE-LD 20x10

ACCESSORIES

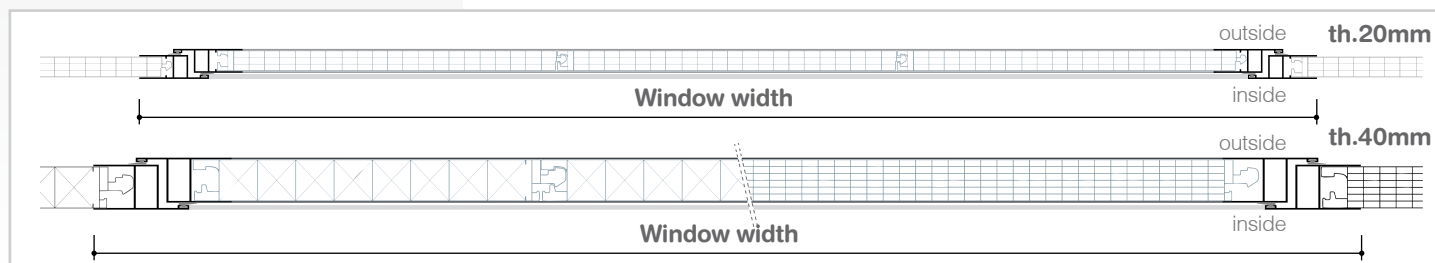
arcoPlus®Onda, system has a complete set of accessories enabling simple installation. The structure has fixing elements, and gaskets in order to increase resistance in overlapped areas. arcoPlus®Onda is delivered, as a standard product, with thermowelded extremities.

2.4 OPENING SYSTEMS

arcoPlus®
Openable System



PROFILE



Openable windows in UV protected polycarbonate to ventilate buildings

DESCRIPTION

With the arcoPlus® opening systems, manually or motor-operated windows can be fitted into the curtain walling to ventilate the building.

These consist of suitably sized aluminium frames, which are housed in the same base profile used for the fixed part. The frames th.20mm are supplied complete with compass hinges for widths of up to 4 staves. External hinges are provided for widths of more than this (th.40mm).

The windows are supplied complete with gaskets.

The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape.

This allows correct ventilation and prevents soiling on the inside.

CE EN 14351 -1

ADVANTAGES

- ❖ High load resistance
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Thermal insulation
- ❖ Easy to install

APPLICATIONS

 Vertical openable windows



PRODUCTION STANDARDS

WINDOW HEIGHT	WINDOW WIDTH			
	3 panels	4 panels	5 panels	6 panels
till 1.000mm	*	*	*	*
1.250mm	*	*	*	*
1.500mm	*	*	*	*
1.750mm	*	*	-	-

NB: Opening systems with a thickness of 20mm that are more than 1.513mm (4 staves) wide, are supplied with external hinges.

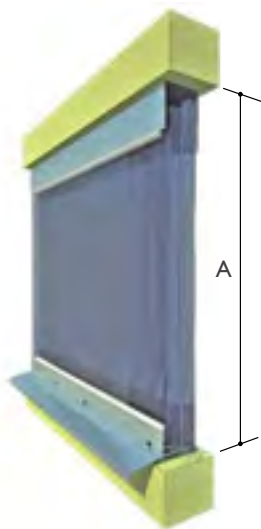
WINDOW HEIGHT	WINDOW WIDTH			
	3 panels	4 panels	5 panels	6 panels
till 1.000mm	*	*	*	*
1.250mm	*	*	*	*
1.500mm	*	*	*	*
1.750mm	*	*	-	-
2.000mm	*	*	-	-
2.250mm	*	*	-	-
2.500mm	*	*	-	-

WINDOW HEIGHT	WINDOW WIDTH		
	2 panels	3 panels	4 panels
till 1.000mm	*	*	*
1.250mm	*	*	*
1.500mm	*	*	*
1.750mm	*	*	-
2.000mm	*	*	-
2.250mm	*	*	-
2.500mm	*	-	-

NB: Manually-operated opening systems with a thickness of 40mm are only supplied with the multi-function control.



WINDOWS DIMENSION



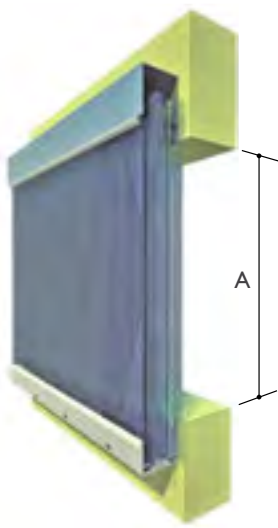
WITH EAVE

H. window th.20*
H. window th.40 = A-50mm
H. window (TT) th.40 = A-80mm



WITHOUT EAVE

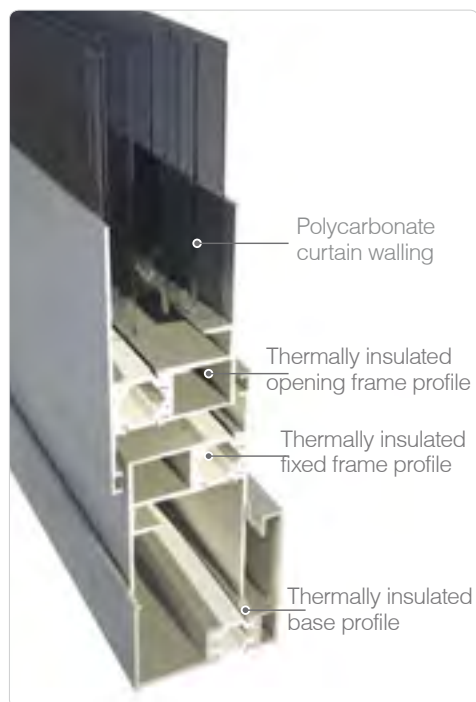
H. window th.20*
H. window th.40 = A-45mm
H. window (TT) th.40 = A-70mm



OUTSIDE OF THE BUILDING

H. window th.20*
H. window th.40 = A + 95mm

* Please contact our Technical Office



HINGED FRAMES WITH THERMAL ISOLATION

In order to guarantee the maximum thermal isolation and respect the air/light relation, hinged frame systems in arcoPlus® with thermally isolated aluminium profiles are available.

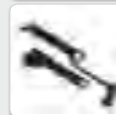
ACCESSORIES



4208
Electric motor



4209
Manually-operated handle

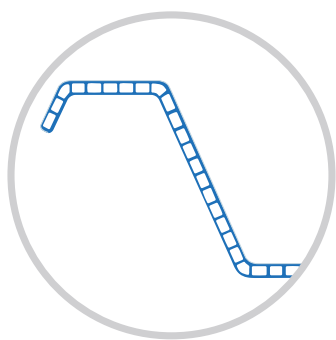


4210
Multi-function manual control



4309
External hinges for frame

UV protected polycarbonate corrugated sheets with "microalveolare" structure for roofing and transparent curtain walls



Detail "microalveolare" structure



TECHNICAL FEATURES

Thickness	2,5 - 3,0 mm
Thermal insulation	4,6 W/m ² K
Light transmission	Crystal 85% - Opal 70%
Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. rays protection	Coextrusion
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION

TEGOPLUS® corrugated sheet of polycarbonate "microalveolare" structure produced in different profiles for the construction of skylights, walls, transparent roofs also in combination with cover plates and insulated panels. The versatility of this product allows you to create skylights, gutter-ridges or eave inter-layers.

LIGHT TRANSMISSION

TEGOPLUS® versatility in the roofing applications makes it ideal to optimize light diffusion within the building.

PROFILE RANGE

The profiles drawings of polycarbonate "microalveolare" structure sheets TEGOPLUS® hereby included are just examples of products available from stock. Please check the full list available online.

With the new production technology any kind of requested profile could be obtained.



UV PROTECTION

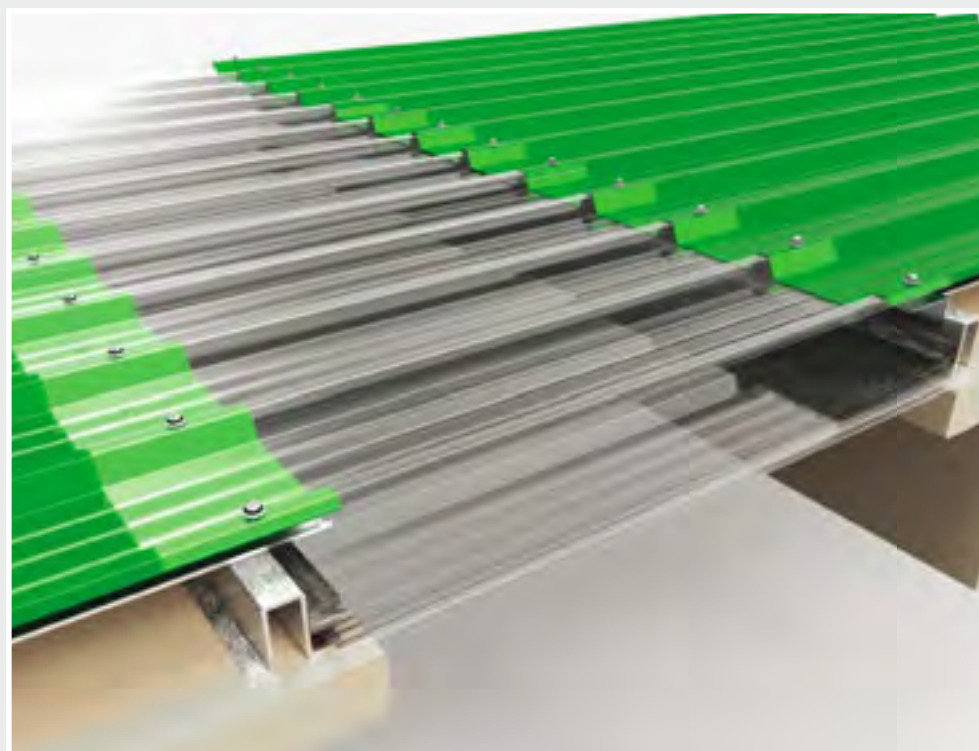
TEGOPLUS® sheets are produced with external protection against UV rays. This treatment gives the product a better guarantee of durability, mechanical properties and optical properties over time.

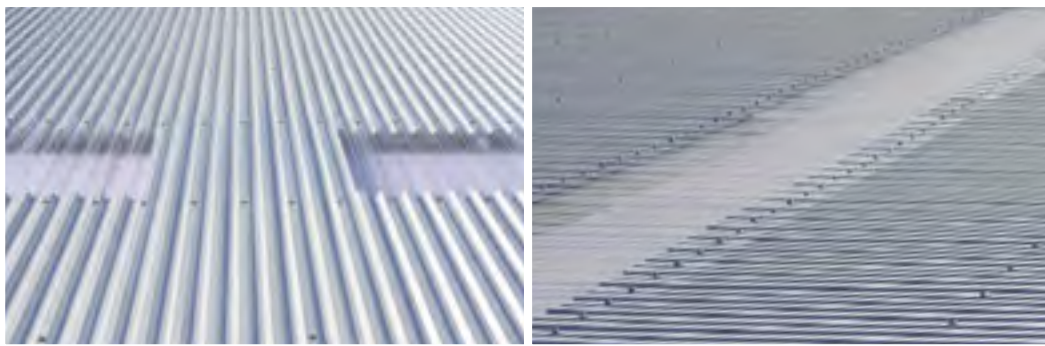
ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Longitudinal and transverse overlap
- ❖ Fire reaction EN 13501-1 EuroClass B-s1,d0

APPLICATIONS

-  Curtain walls
-  Covering and skylights

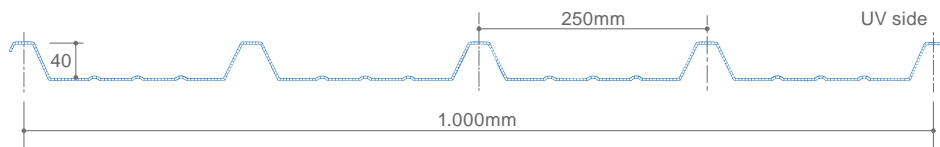




CORRUGATED PROFILES

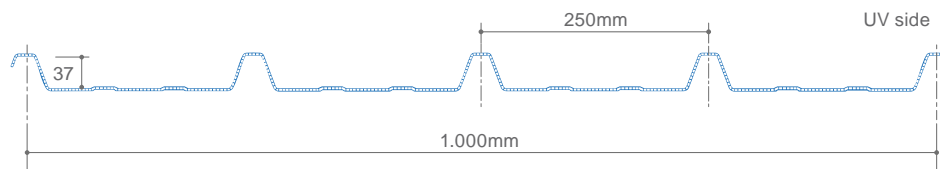
TegoPlus® 2682

compatible with **ISOLPACK DELTA 5***



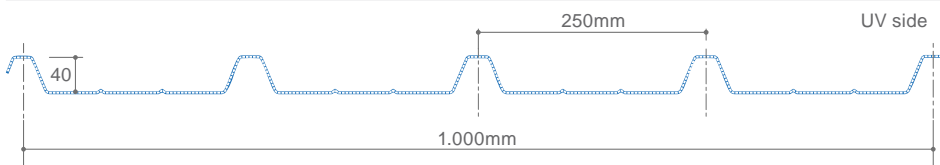
TegoPlus® 2683

compatible with **LATTONEDIL EURO 5***



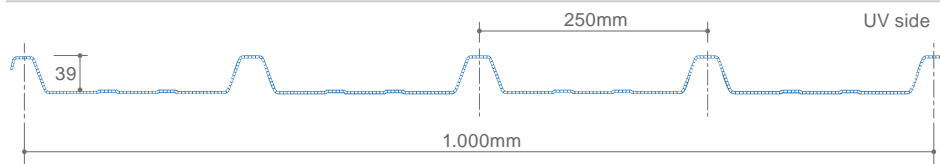
TegoPlus® 2685

compatible with **ISOPAN ISOCOP 5-1000***



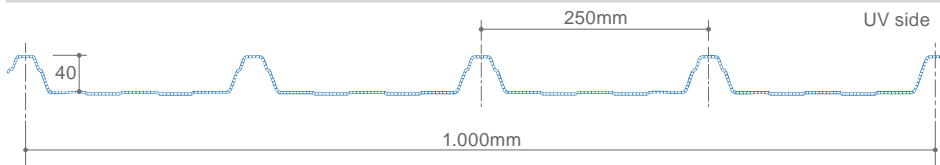
TegoPlus® 2688

compatible with **MARCEGAGLIA TD 5***



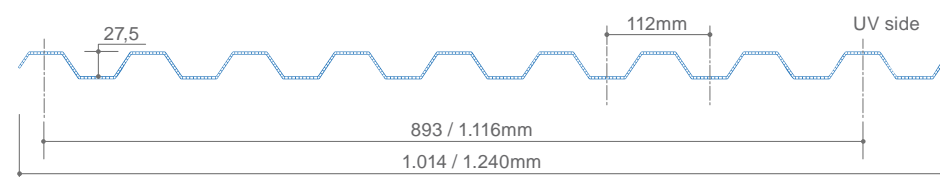
TegoPlus® 2687

compatible with **ITALPANNELLI PENTA 01***



TegoPlus® 2681 - 2684

compatible with **ALUBEL 28***



Note: TEGOPLUS® sheets could be supplied with heat-sealed ends.

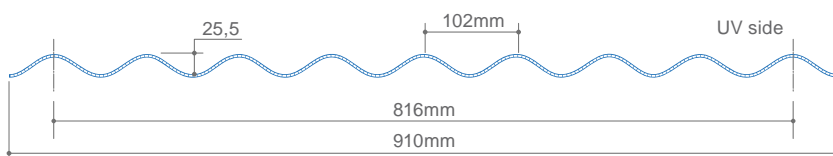
* This is a registered trademark not of dott.Gallina S.r.l. property



WAVE PROFILES

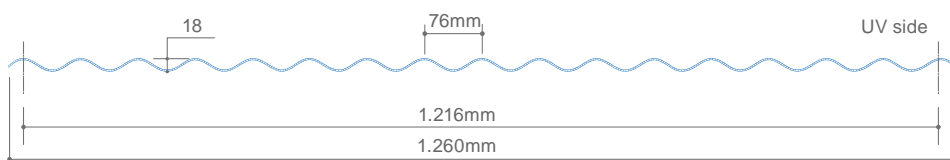
TegoPlus® 2680

compatible with ONDA 102/25



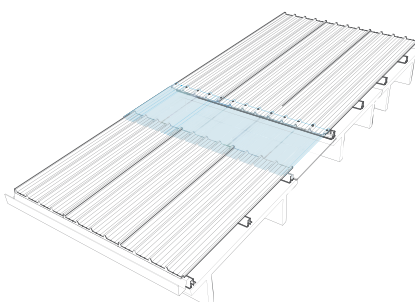
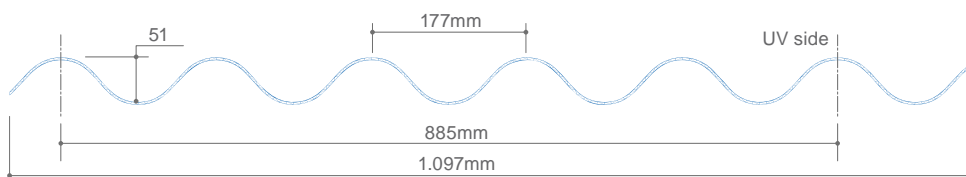
TegoPlus® 2686

compatible with ONDA 76/18

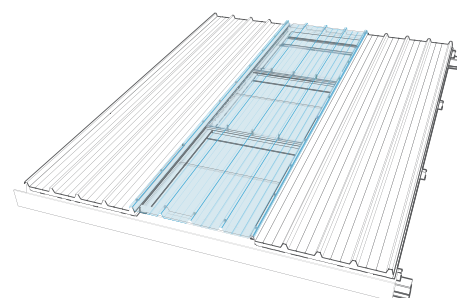


TegoPlus® 2495

compatible with ONDA 177/51



TRANSVERSAL SKYLIGHT
Implementation of transversal skylights coupled with monolithic panels



SKYLIGHT GUTTER RIDGE APPLICATION
Construction of ridge-eave skylights with added curtain on the inside

TRANSVERSAL SKYLIGHT

The different sections of TEGOPLUS® sheets compatible with most of the insulated panels and corrugated sheets on the market, make this product suitable for the realization of transverse inter-layer skylights.

During installation you must install the panels on the roof in reverse order to the direction of prevailing winds.

SKYLIGHT GUTTER RIDGE APPLICATION

TEGOPLUS® sheets allow a perfect side overlapping with all roofing systems granting the realization of ridge-eave skylights.

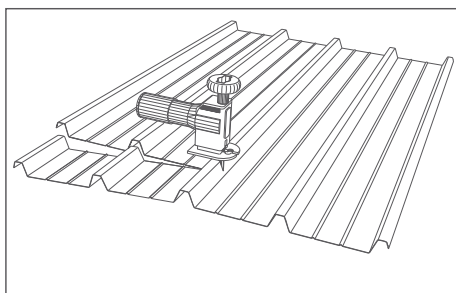
To avoid cracks in correspondence to the fixing, due to thermal linear expansion, the maximum useful length of TEGOPLUS® sheets is recommended at 5,000mm.



Detail of overlapping components

SHEET CUTTING

TEGOPLUS® sheets can be cut with a circular saw, small-toothed, at high speed of rotation, being careful to advance slowly. You can also use jig saws or shears. In any case, it is important to support the sheet in the vicinity of the point of cutting and to eliminate the dust generated by cutting.



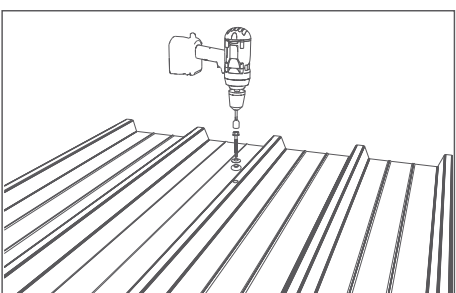
Cutting sheets with jigsaw

MOUNTING THE PANELS

The fixing of the plates TEGOPLUS® must take place in correspondence of the structures of each high ridge, with screws 6,3 x 80 mm, fitted with sealing provided by dott.Gallina.

The use of other types of fasteners may alter the resistance of the sheets. For the fastening a pre-drilling is advisable, made with a metal tip with a diameter greater than 2 mm to that of the screw.

The excessive tightening of the fasteners, preventing movement of the plates due to thermal expansion, may compromise the seal.



Drilling and fastening with screwdriver

CHEMICAL RESISTANCE

If necessary for installation, use only neutral sealants and adhesives compatible with polycarbonate.

Avoid contact between TEGOPLUS® plates and fresh paint or other substances that are incompatible and could damage the sheets.

The use of sealants or adhesives not supplied by dott.Gallina requires the explicit approval of the same.



ELEMENT OVERLAPPING

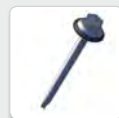
The minimum overlap of the TEGOPLUS® sheets in width should be 120 mm



END PROTRUSION

At the end of the covering the sheets must not protrude more than 100 mm above the gutter

ACCESSORIES



4432

Screw with gasket
6,3 x 80 mm

3

MULTIWALL SHEETS

By concentrating on technological innovation and continuous research into the choice of raw materials and new methods of achieving UV protection, we have been able to develop a wide range of multiwall sheets, each with its own specific properties, to meet the demands of the various market sectors.

The multiwall structure combined with the properties of polycarbonate ensure superior thermal insulation and excellent impact strength.

Policarb® sheets have UV protection on the side facing the exterior (both sides upon request) for good ageing resistance even after prolonged exposure to the sun and atmospheric agents.

Policarb® multiwall sheets are used for roofing, glazing, greenhouses, skylights, verandas, gazebos, shelters and false ceilings.



PoliCarb®

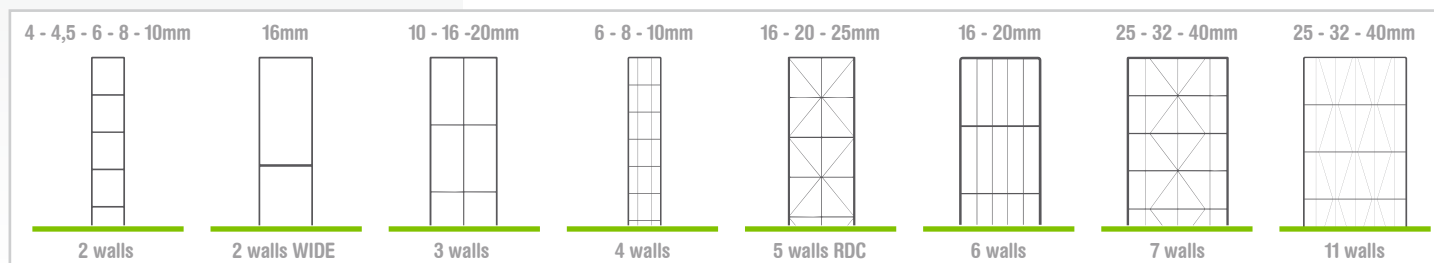


3.1 MULTIWALL SHEETS

PoliCarb®



PROFILES



Multiwall U.V. protected polycarbonate sheets



SPECIAL TREATMENT

ADVANTAGES

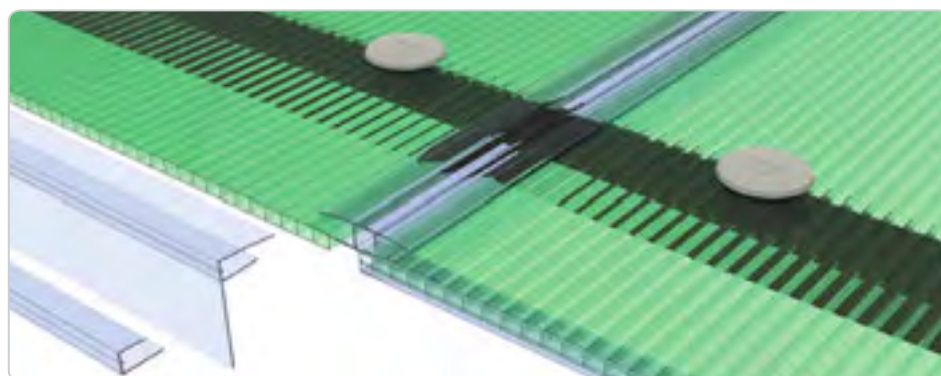
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Energy saving
- ❖ Economical
- ❖ Versatile

APPLICATIONS

- Vertical windows
- Roofing
- Curved roofing
- Ceiling

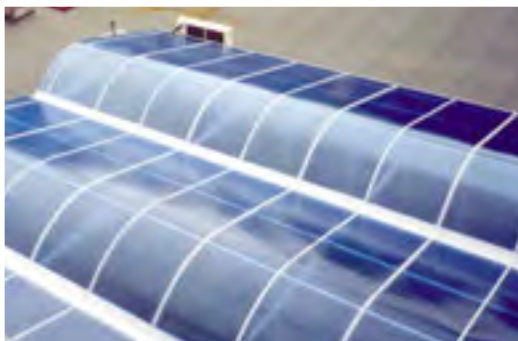
PRODUCTION STANDARDS

	structure walls	thickness mm	weight Kg/mq	U value W/m²K	width mm	length mm
2 WALLS						
Policarb 2P-4mm	2	4	0,80	3,90	2.100	6.000
Policarb 2P-4,5mm	2	4,5	1,00	3,90	2.100	6.000
Policarb 2P-6mm	2	6	1,30	3,60	2.100	6.000
Policarb 2P-8mm	2	8	1,50	3,30	2.100	6.000
Policarb 2P-10mm	2	10	1,70	3,00	980-1.250-2.100	6.000
Policarb 16mm WIDE	2	16	3,90	2,50	980-1.250	6.000
3 WALLS						
Policarb 3P-10mm	3	10	2,10	2,70	980-1.250-2.100	6.000
Policarb 3P-16mm	3	16	2,70	2,30	980-1.250-2.100	6.000
Policarb 3P-20mm	3	20	3,20	2,10	980-1.250-2.100	6.000
4 WALLS						
Policarb 4P-6mm	4	6	1,40	3,10	2.100	6.000
Policarb 4P-8mm	4	8	1,55	2,70	2.100	6.000
Policarb 4P-10mm	4	10	1,75	2,50	2.100	6.000
5 WALLS						
Policarb 5P-16mm RDC	5	16	2,55	2,10	980-1.250-2.100	6.000
Policarb 5P-20mm RDC	5	20	3,10	1,80	980-1.250-2.100	6.000
Policarb 5P-25mm RDC	5	25	3,10	1,60	980-1.250-2.100	6.000
6 WALLS						
Policarb 6W-16mm	6	16	2,80	1,80	980-2.100	6.000
Policarb 6W-20mm	6	20	3,10	1,60	980-2.100	6.000
7 WALLS						
Policarb 7W-25mm	7	25	3,40	1,40	1.250	6.000
Policarb 7W-32mm	7	32	3,70	1,20	1.250	6.000
Policarb 7W-40mm	7	40	3,90	1,10	1.250	6.000
11 PARETI						
Policarb 11W-25mm	11	25	3,40	1,26	2.100	6.000
Policarb 11W-32mm	11	32	3,70	1,10	2.100	6.000
Policarb 11W-40mm	11	40	4,20	1,00	2.100	6.000



CONTINUOUS ROOFING

Detail of roof with H-shaped connector and air cell end profiles



TECHNICAL FEATURES

Linear thermal expansion	0,065mm/m°C
Temperature range	-40°C +120 °C
U.V. protection	Coextrusion (both sides upon request)
Fire reaction EN 13501-1	EuroClass B-s1,d0

DESCRIPTION

The characteristic structure of the multi-wall sheets with air space inside guarantees good thermal insulation and excellent resistance to crash stress.

The external side of Polycarb® is coated with U.V. protection (on request both sides) warranting resistance to aging due to atmospheric agents and UV rays. Polycarb® is used for roofing, windows, skylights, greenhouses, porches, gazebos, ceilings.

LIGHT TRANSMISSION

High-resistance pigments (opal, bronze and green) are added to the polycarbonate to achieve different light transmission values.

For values see the table on page 10.

SOLAR FACTOR

The solar factor is closely linked to the sheet structure.

It is the ratio, expressed as a percentage, between the total energy transmitted to the inside and total solar radiation.

THERMAL INSULATION

Heat loss is normally defined as thermal transmittance and referred to in physics as the "U-value".

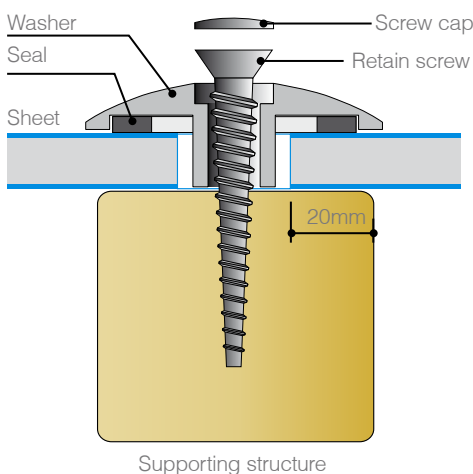
It is the rate of heat loss through a unitary surface per degree centigrade difference in temperature between the two sides and depends on the properties of the material of which the structure is made and the linear thermal transmittance conditions.

SELF-EXTINGUISHING

Polycarb® sheets have Class 1 type approval and meet the EuroClass B-s1,d0 fire rating.

LOCK WASHERS

The sheets must be fastened to the structure using specific washers with a seal to guarantee a watertight finish and allow the material to expand due to changes in temperature.



Supporting structure

THERMOWELDING

Polycarb® sheets can be supplied welded at their ends, (up to 10mm th.) ensuring throughout time the cleanliness on the inside of the cells and greater transparency.

CLOSING TAPES

Adhesive steel tapes of varying heights for the closing of the cells are available:

- H. 19mm for sheets th. 4,5-6mm.
- H. 25mm for sheets th. 8-10mm.
- H. 38mm for sheets th. 16mm.
- H. 60mm for sheets th. 25-32-40mm.



PLANES SHEETS APPLICATION

The choice of sheet thickness is based on the requested values of snow/wind loads and on sheet dimensions.

The indicated values in the following charts are in pressure and in depression.

LOAD RESISTANCE (daN/m²) FIXED PLANE SHEET ON 4 SIDES

Policarb 2P-6mm					
Length (m)	Width (m)				
	0.70	0.60	0.50	0.40	
1.00	50	80	105	120	
1.50	45	75	105	110	
2.00	40	70	100	110	
2.50	35	65	90	100	
3.00	35	65	90	100	

Policarb 4P-10mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.70	0.50
1.00	60	70	85	90	145
1.50	40	65	75	80	140
2.00	30	60	70	75	135
2.50	25	60	65	70	130
3.00	25	55	60	70	115

Policarb 3P-16mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	105	135	150	175	230
1.50	70	125	140	150	220
2.00	70	120	135	140	150
2.50	70	110	110	135	145
3.00	60	90	100	130	140

Policarb 5P-20mm RDC					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	140	155	180	230	280
1.50	120	140	170	200	255
2.00	100	130	140	160	205
2.50	80	120	130	140	165
3.00	80	100	100	130	160

Policarb 6W-16mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	170	190	210	240	270
1.50	130	180	200	220	250
2.00	105	125	130	150	190
2.50	75	110	125	130	155
3.00	75	90	100	110	150

Policarb 7W-25mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.50	180	240	315	385	390
2.00	170	200	240	280	275
2.50	145	170	195	215	240
3.00	140	165	190	210	235

Policarb 7W-40mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.50	240	255	330	400	450
2.00	180	215	265	315	355
2.50	155	190	230	265	280
3.00	150	185	215	245	255

Policarb 2P-10mm					
Length (m)	Width (m)				
	1.20	1.00	0.80	0.70	0.50
1.00	70	80	100	110	170
1.50	50	75	90	100	165
2.00	40	70	85	90	165
2.50	30	70	75	85	160
3.00	30	65	70	80	140

Policarb 2P-16mm WIDE					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	175	205	220	240	275
1.50	130	185	205	220	265
2.00	110	130	145	155	200
2.50	75	110	110	120	160
3.00	75	95	95	110	155

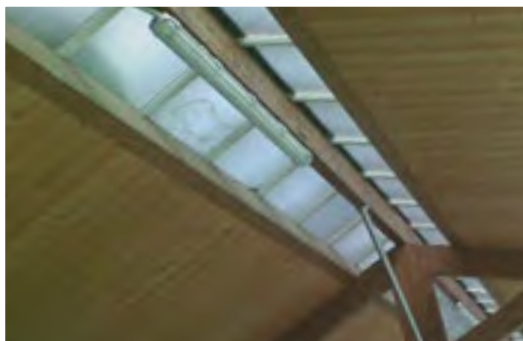
Policarb 5P-16mm RDC					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	120	140	160	200	250
1.50	100	130	150	190	230
2.00	90	120	130	140	180
2.50	70	100	100	110	145
3.00	70	85	85	100	140

Policarb 5P-25mm RDC					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	200	220	285	350	350
1.50	180	210	275	340	350
2.00	130	170	175	180	210
2.50	100	140	145	150	165
3.00	90	130	135	140	160

Policarb 6W-20mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.00	190	210	230	270	300
1.50	160	200	220	240	290
2.00	120	150	150	170	205
2.50	90	130	140	145	165
3.00	80	110	110	135	160

Policarb 7W-32mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.50	220	250	325	395	430
2.00	170	210	260	305	330
2.50	145	190	225	255	270
3.00	140	180	210	235	250

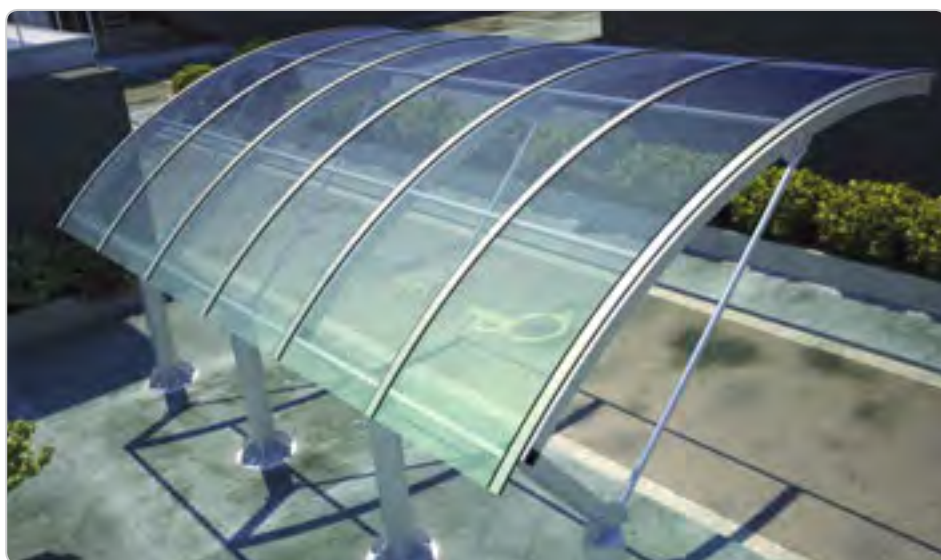
Policarb 11W-32mm					
Length (m)	Width (m)				
	1.20	1.00	0.90	0.80	0.60
1.50	170	170	175	-	-
2.00	125	130	140	-	-
2.50	115	115	115	-	-
3.00	85	95	110	-	-



COLD BENDED SHEET APPLICATION

In particular Polycarb® is used to build integral arc structures green house tunnel type since its cell structure increases the

rigidity of the sheet longitudinally bent at its ribs.



MINIMUM RADIUS OF CURVATURE

Sheet tk	4,5-2P	6-2P	10-2P	10-4P	16-3P	16-RDC	16-6W	20-RDC	20-6W	25/32/40-7W	25/32/40-11W
Radius (mm)	750	1.000	1.750	2.000	2.800	3.500	2.800	4.000	3.400	DO NOT BEND	

LOAD CAPACITY (daN/m²) FIXED SHEETS COLD BENDED ON 4 SIDES

Radius (m)	Sheet thickness (mm)																						
	6				8				10				16				16RDC						
	Width sheet (m)				6				8				10				16				16RDC		
1.00	1.80				1.50				1.25								1.07						
1.20	1.50				1.25				1.00								0.90						
1.40	1.20	1.90			0.96	1.70			0.83	1.30							0.72 1.10						
1.60	1.00	1.65			0.82	1.27			0.68	1.06							0.60 0.92						
1.80	0.80	1.23	1.68		0.64	1.00	1.38		0.58	0.84	1.18						0.73 1.02						
2.00	0.75	1.15	1.60		0.60	0.92	1.28		0.55	0.78	1.08						0.68 0.93						
2.20	0.67	0.98	1.35		0.82	1.12			0.70	0.95							0.82						
2.40	0.60	0.88	1.23		0.70	1.00			0.84								0.74						
2.60		0.75	1.07			0.90																	
2.80			0.93	1.92			1.58				1.33						1.15						
3.00			0.88	1.78			1.45				1.21						1.06						
3.20			0.83	1.62			1.32				1.11						0.97						
3.40			0.75	1.48			1.24				1.07						0.95						
3.60				1.40	1.60		1.20	1.25			1.04	1.15					0.92 1.00						
3.80				1.30	1.50		1.15	1.20			1.00	1.12					0.90 1.00						
4.00				1.20	1.38		1.10	1.15			1.05						0.97						
4.20				1.20	1.35			1.10			1.00						0.95						
4.40				1.12	1.28			1.07			0.98						0.95						
4.60					1.20			1.05			0.98						0.93						
4.80					1.15			1.00			0.95						0.90						
Load	80 daN/m ²				100 daN/m ²				120 daN/m ²				140 daN/m ²										

ACCESSORIES



1298 th.8mm
1164 th.10mm
1165 th.16mm
1300 th.20mm
 Profiles "H" U.V. protected



1296 th.8mm
1160 th.10mm
1161 th.16mm
2184 th.20mm
2260 sp.30mm
 Profiles "U" U.V. protected



2191 th.8-10mm
2192 th.16mm
 Profiles "R" U.V. protected



2193 th.8-10mm
2194 th.16mm
 Profiles "F" U.V. protected



4285 th.10mm
4286 th.16mm
 "U" aluminium profile



4272 th.2-10mm
4279 th.16-20mm
 Upper aluminium profile



4273 th.2-10mm
4280 th.16-20mm
 Side aluminium profile



4077 th.4-6mm
4076 th.8-10mm
4087 th.16mm
 Washer with gasket



4276 th.3-6mm
4324 th.8-20mm
 Gasket for aluminium profile

4

SOLID SHEETS

The solid polycarbonate sheets offer a combination of unsurpassed features: resilience, transparency, lightness. As clear as glass weigh half as much and are 250 times more impact resistant. They have also better thermal and acoustic insulation properties.

For this reason they have a high versatility and can be worked either hot or cold, thus becoming eligible for all interventions in the Construction sector and Industry.

ADVANTAGES OF SOLID SHEETS:

- transparency
- extreme impact strength
- good fire reating

PoliComp[®]
Scudo[®]







Polycarbonate solid sheets with U.V. protection on both sides

DESCRIPTION

The development of extrusion technology have allowed the construction of a plant unique in Europe for the production of solid polycarbonate sheets with width of 2,500 mm of various thicknesses and colors.

The polycarbonate product range is divided into solid Policomp® sheets, with UV protection on both sides. And Scudo® sheets, no UV protected ideal for industrial applications.

PRODUCTION STANDARDS

Thickness (mm)	2	3	4	5	6	8	10	12
Weight (Kg/m ²)	2,4	3,6	4,8	6,0	7,2	9,6	12,0	14,4
Width (mm)	2.050 - 2.500							
Lenght (mm)	6.100							







SPECIAL TREATMENT

ADVANTAGES

- ❖ Only plant that produces up to 2.500 width
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Impact strength
- ❖ Easy to process

APPLICATIONS

-  Vertical windows
-  Roofing
-  Curved roofing
-  False ceiling

SAFETY

Scudo® sheets are used in safety glazing applications, for machine tool guards. Policomp® sheets are used instead for build roof, vertical windows and advertising signs.

LIGHTNESS

Compared to normal glass structures, Policomp® and Scudo® sheets considerably reduce the weight of the structures. A solid polycarbonate sheet weighs 50% less than a sheet of glass of the same thickness.

LIGHT TRANSMISSION

Policomp® sheets have good light transmission properties and are also available in bronze and opal.

ENERGY SAVING

Policomp® sheets provide excellent thermal insulation, an important factor in reducing fuel consumption for heating buildings.

DURABILITY

Policomp® sheets are guaranteed for durability. (see terms of warranty)

COEXTRUSION

A layer of high-performing UV absorber is coextruded onto both sides of Policomp® sheets. This filters the light and protects the polymer against the effects of ageing, ensuring excellent impact strength even after prolonged exposure to sunlight.

UV PROTECTION ON TWO SIDES

Policomp® sheets have UV protection on both sides.

SELF-EXTINGUISHING

The solid polycarbonate sheets have Class1 type approval in thickness from 8mm to 12mm, and meet the EuroClass B-s2,d0 fire rating in accordance with the European legislation EN 13501-1 for thickness from 2mm to 6mm.



PHYSICAL PROPERTIES

	Value	Unit	Test metod
Density	1,2	gr/cm ³	ISO 1183
Moisture absorption 23°C	0,15	%	ISO 62-4
Refractive index 20°C	1.586	-	ISO 489

MECHANICAL PROPERTIES

	Value	Unit	Test metod
Resistance to tensile stress	>60	MPa	ISO 527-2
Elongation at yield	6	%	ISO 527-2
Elongation at break	>70	%	ISO 527-2
Elastic modulus	2.300	MPa	ISO 527-2
Limiting flexural stress	ca.90	MPa	ISO 178
Impact strength (Charpy, unnotched)	no break	KJ/m ²	ISO 179
Impact strength (Charpy, notched)	ca.11	KJ/m ²	ISO 179

THERMAL PROPERTIES

	Value	Unit	Test metod
Vicat softening temperature	148	°C	ISO 306
Thermal conductivity	0,2	W/m°C	ISO 8302
Linear thermal expansion	0,065	mm/m°C	ISO 11359-2

ELECTRICAL PROPERTIES

	Value	Unit	Test metod
Dielectric strength	35	kV/mm	IEC 60243-1
Volume resistivity	1E14	Ohm/m	IEC 60093
Surface resistivity	1E16	Ohm	IEC 60093

LIGHT TRANSMISSION (%)

Thickness (mm)	2	3	4	5	6	8	10	12
Color								
transparent	91	90	90	90	88	86	80	80
bronze	70	60	51	43	41	33	29	-
green	-	78	74	70	67	61	56	-
light blue	-	62	57	52	47	42	-	-
opal	-	53	50	40	38	29	24	-

THERMAL INSULATION U (W/m²K)

Thickness (mm)	2	3	4	5	6	8	10	12
Polycomp	5,56	5,41	5,26	5,13	5,00	4,76	4,55	4,35
Glass	-	5,87	5,82	5,80	5,77	5,71	-	-

ACOUSTIC INSULATION (dB)

Thickness (mm)	2	3	4	5	6	8	10	12
Value	25	26	27	28	29	31	33	34

WEIGHT (Kg/m²)

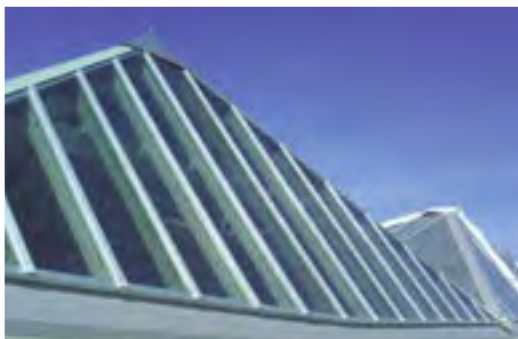
Thickness (mm)	2	3	4	5	6	8	10	12
Polycomp	2,4	3,6	4,8	6,0	7,2	9,6	12,0	14,4
Glass	5	7,5	10	12	15	20	25	30

The solid polycarbonate sheets in the extensive Polycomp® range offer extreme transparency.

They are ideal for applications that require superior thermal and sound insulation combined with a

lightweight structure with good impact strength.

Polycomp® sheets are as clear as glass, weigh half as much and are 250 times more impact resistant.



APPLICATION OF FLAT SHEETS

Solid polycarbonate sheets can be installed in most PVC, wood, steel and aluminium structures and frames.

The frame must hold the sheet in place while allowing it to expand. The choice of sheet thickness depends on the load value required. According to the size of the sheet, from table A, the effective area and also the thickness will be calculated.

Table B can be used to calculate the thickness of the sheet to be used according to the size of the sheet (AREA) and the required load value.

The values shown in table B (positive and negative loads) have been calculated for sheets fixed on four sides, with a maximum bend value (rise) of 50mm.



SHEET SIZE

	Sheet width (m)							
	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00
0.25	A1	A1	A1	A1	A1	A1	A1	A1
0.50	A1	A2	A3	A4	A4	A4	A4	A4
0.75	A1	A3	A5	A6	A7	A7	A7	A7
1.00	A1	A4	A6	A8	A9	A9	A10	A10
1.25	A1	A4	A7	A9	A10	A11	A12	A13
1.50	A1	A4	A7	A9	A11	A13	A14	A15
1.75	A1	A4	A7	A10	A12	A14	A16	A17
2.00	A1	A4	A7	A10	A13	A15	A17	A18
2.25	A1	A4	A7	A10	A13	A16	A18	A19
2.50	A1	A4	A7	A10	A14	A16	A19	
2.75	A1	A4	A7	A11	A14	A16	A19	
3.00	A1	A4	A7	A11	A14	A17	A19	
3.25	A1	A4	A7	A11	A14	A17		
3.50	A1	A4	A7	A11	A14	A17		
3.75	A1	A4	A7	A11	A14	A17		
4.00	A1	A4	A7	A11	A14	A17		
4.25	A1	A4	A7	A11	A14	A17		
4.50	A1	A4	A7	A11	A14	A17		
4.75	A1	A4	A7	A11	A14	A17		
5.00	A1	A4	A7	A11	A14	A17		

TABLE A

CHOICE OF THICKNESS

AREA	Load (daN/m ²)				
	60	80	100	120	140
A1	3	3	3	3	3
A2	3	3	4	4	4
A3	4	4	4	4	5
A4	4	4	5	5	6
A5	5	5	5	5	6
A6	5	6	6	6	8
A7	6	6	8	8	8
A8	6	6	8	8	8
A9	8	8	8	8	10
A10	8	8	10	10	10
A11	10	10	10	10	12
A12	10	10	10	12	12
A13	10	10	10	12	
A14	10	12	12		
A15	10	12	12		
A16	10	12	12		
A17	12	12			
A18	12	12			
A19	12				

TABLE B



INSTALLATION GUIDELINES

When cutting sheets to allow for thermal expansion special care must be taken to avoid applying stress to the material.

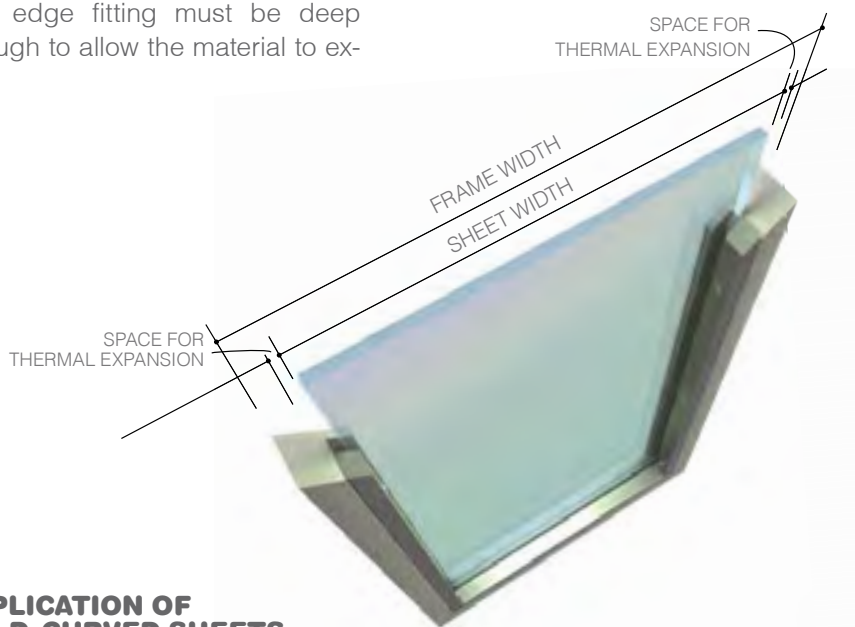
Tolerance must be provided both widthwise and lengthwise.

The table at the side shows the sheet cutting values, depending on the size of the frame, in order to allow for thermal expansion.

The edge fitting must be deep enough to allow the material to ex-

pand and also to prevent the sheet from escaping from the frame.

Frame (mm)	Sheet cut (mm)
300 - 1.000	3
1.000 - 1.300	4
1.300 - 1.700	5
1.700 - 2.000	6
2.000 - 2.300	7
2.300 - 2.700	8
2.700 - 3.000	9



APPLICATION OF COLD-CURVED SHEETS

Policomp® is ideal for building integral arch or tunnel structures.

The minimum bend radius is 150 times the thickness of the sheet.

The choice of sheet thickness depends on the bend radius R but also on the width of the sheet

Example:

Sheet thickness: 3mm

Min. radius = $3 \times 150 = 450\text{mm}$

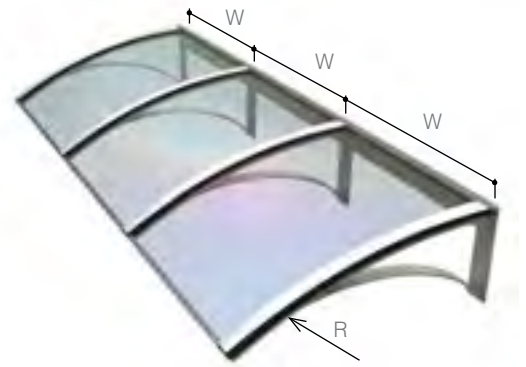


MINIMUM BEND RADIUS

Thickness (mm)	2	3	4	5	6	8	10	12
Radius (mm)	300	450	600	750	900	1.200	1.500	1.700

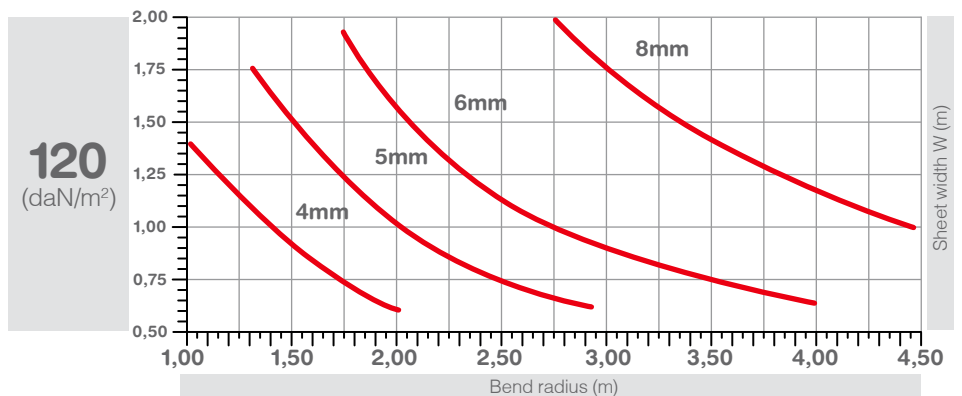
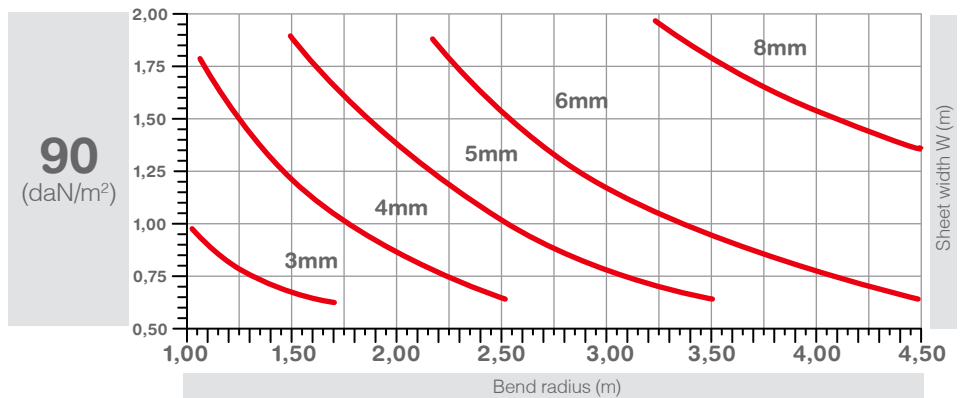
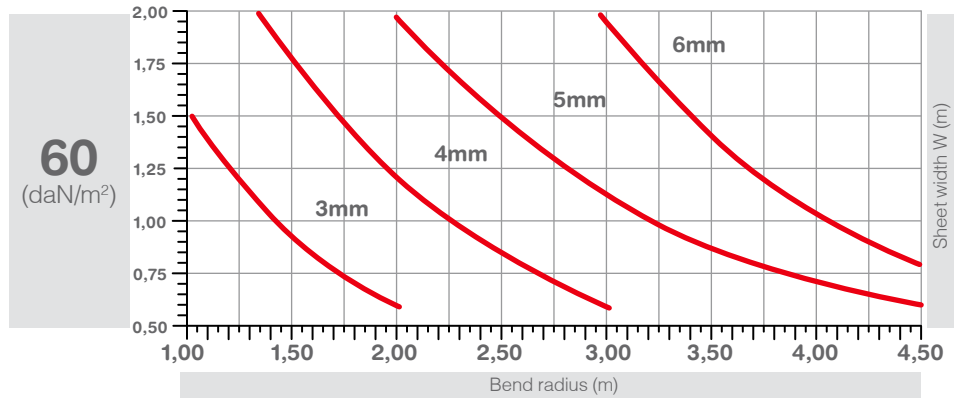


W. The length L must always be greater than the width W.
 The graphs indicate the appropriate sheet thickness, for different bend radii, under different load conditions.
 These values have been calculated with sheets fixed on three sides.



LOAD RESISTANCE

PoliComp®





MATERIAL PROCESSING

CUTTING

Policomp® and Scudo® sheets can be cold-formed mechanically using standard high-speed tools to perform cutting, bending and drilling. Notches, which undermine the me-

chanical properties of the polycarbonate, are not recommended.

	Circular saw	Belt saw	Milling machine
Rake angle	20°- 30°	20°- 30°	20°- 30°
Angle of inclination	15°	0,5°	0°- 5°
Cutting speed (m/min)	1.800 - 2.400	600 - 1.000	100 - 500
Feed speed (m/min)	19 - 25	20 - 25	0,1 - 0,5
Distance between teeth (mm)	2 - 5	1,5 - 2,5	-

DRILLING

Policomp® and Scudo® sheets can be drilled using standard drilling machines that meet the following specifications:

Parameter	Value
Rake angle α	5°-8°
Angle of tip φ	90°-130°
Angle of blade β	approx. 30°
Angle of inclination γ	3°-5°
Cutting speed	10-60 m/min
Tip speed	0,1-0,5 mm/rev

Drill sheets as follows to avoid any damage during machining:

Drill the hole at a distance from the edge of the sheet equal to at least 1.5 times the diameter of the hole.

Do not use cutting oil.

Use threading if there is no other alternative. Sheets could break after drilling.

GLUING SHEETS

Neutral and compatible with polycarbonate adhesives should be used to glue the solid polycarbonate sheets.

THERMOFORMING AND HOT-CURVING

Remove the protective film before thermoforming and pre-heat the material to 120°C to eliminate any moisture that has been absorbed. The use of an air circulating oven with temperature control is recommended.

The air must circulate between the sheets.

Pre-heating times can be reduced by one third by storing the sheets in a dry place. Since the dry sheets start to re-absorb moisture as soon as they cool down to below 100°C, thermoforming must be performed immediately after drying.

Hot curving must be performed at a temperature of between 155°C and 165°C.

CLEANING OF SURFACES




We recommend the use of warm water and a soft cloth to clean Policomp® and Scudo® sheets.

Polycarbonate solid sheets WITHOUT UV PROTECTION

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Heat insulation
- ❖ Self-supporting

APPLICATIONS

-  Room partitions
-  False ceilings
-  Machinery protection guards

GENERAL TERMS AND CONDITIONS OF SALE



dott.gallina

1) ORDERS:

Orders are only valid if they refer to the price-list currently in force and are signed by way of the buyer's full acceptance of these terms and conditions of sale. The order is binding on the buyer and may only be cancelled with the written consent of Dott. Gallina S.r.l., subject to repayment of all costs claimed by the latter. The order becomes effective upon receipt of the confirmation of order signed by the buyer. All measurements in the order are taken as having been checked and verified by the buyer and are the responsibility thereof. Likewise, the buyer is responsible for controlling and verifying the qualities and purchase prices agreed upon with the seller.

2) DELIVERY:

The delivery date specified in the order and in the confirmation of order is indicative and thus not binding on Dott. Gallina S.r.l. Delays in delivery shall not give rise to any refund, compensation for damages or cancellation of the order. The buyer may not refuse to accept the goods until 45 days after the scheduled delivery date. After that date the buyer may cancel the order or insist upon delivery; in either case, notwithstanding the provisions of the law, the parties expressly waive any claims for compensation. Dott. Gallina S.r.l. shall not be answerable for delays due to unforeseeable circumstances, including accidents, machine breakdowns, strikes, lack of deliveries of raw materials, etc.

3) PACKAGING:

Unless otherwise expressly requested all materials shall be supplied in white polyethylene packaging and closed at the top. Where possible, but not necessarily, materials shall be strapped to pallets.

4) TRANSPORTATION:

Goods are transported at the buyer's risk, even though they are delivered free to destination and unloaded from the vehicle. Any complaints in connection with differences in the goods supplied, shortage of packages or damage must be reported to the carrier immediately at the time of delivery and clearly indicated in the transport document. Any complaints, including those in connection with orders made through an intermediary, must be made in writing directly to Dott. Gallina S.r.l. and sent by means of registered post to reach the latter within 8 days from the date of delivery.

5) WARRANTY:

(See terms and conditions of warranty). The warranty period starts from the date of invoice and the warranty is valid in accordance with the terms set forth in the certificates issued by the company. Dott. Gallina S.r.l. reserves the right to make any changes it deems necessary and without prior notice and shall not be liable for any direct or indirect loss or damage to persons or property arising in connection with the use of the product.

6) TOLERANCE:

Unless otherwise specified, sizes may vary by ± 2 mm/m with a minimum of ± 5 mm. Under no circumstances are product weights binding. Weights are provided to assist customers in their choice of product.

7) PAYMENT:

Dott. Gallina S.r.l. shall only accept new orders if all previous materials supplied have been paid for. Payments shall be made according to the agreed terms of payment and shall not be suspended or postponed for any reason or in connection with any claim. In the event of delayed payment interest will be charged at the equivalent of the three-month Euribor rate plus seven percent applicable as from the scheduled payment date up until the actual date on which said payment is made. Only under exceptional circumstances may the buyer request to postpone the contractual and confirmed delivery date, in which case the buyer shall agree to the goods being invoiced and to the relative payment falling due as from the date on which the goods become ready, in addition to sustaining all costs of handling and storage and any other related charges

8) DISPUTES:

Any disputes arising in connection with these terms and conditions of sale shall be brought exclusively before the Court of Turin for settlement.

Disclaimer:

All the information contained in this document are reliable, non-binding for the producer and can be subject to change without notice.

For more information, refer to the installation manual or write to info@gallina.it



dott.gallina s.r.l.

strada Carignano 104 - 10040 La Loggia (TO) Italia - tel. +39 011 9628177 - fax +39 011 9628361
mail: info@gallina.it - web: www.gallina.it

