







dott.gallina

POLYCARBONATE SYSTEMS & SHEETS

GENERAL CATALOGUE

PLASTIC BUILDING CATALOGUE

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



dott.gallina



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COMPANY PROFILE



The Dott.Gallina Srl was founded in 1960 in La Loggia, a town nearby Torino, thanks to the Dr. Pier Aulo Gallina entrepreneurial spirit, whose dynamism has provided an impetus to the profiles production for the automotive industry. It gave the solid foundation of a constant growth that has achieved the current business reality.

Today the company is a **renowned player in the Italian market about the production of sheets and polycarbonate systems**, used to build windows-roofing-façades for the construction industry; the Dott.Gallina represent also **an excellence in the extrusion of technical profiles** designed for industrial and automotive fields. Besides the Italian headquarters, several production units have been created abroad in the US, India, Greece and Turkey, allowing the company to act as competitors of multinational in worldwide markets.

The Dott.Gallina is characterized by a high technological know-how developed over the years thanks to the investments in **design and mechanics workshop in order to create “in house” the production lines and the equipment**, thereby allowing to satisfy the most stringent regulations and specific requests product customization.

Modular polycarbonate systems destined to building sector offer innovative application opportunities, such as to be used in architectural realizations with international reputation, ensuring to guarantee them high performance in terms of physical-mechanical characteristics, energy-saving and aesthetics.

On the other hand the extrusion of industrial profiles gain market shares in automotive sector, that require more and more elaborate accessories. By virtue of an optical quality similar to glass in terms of transparency and thanks to the extreme lightness combined with a better thermo-mechanical behavior, these products are increasingly gaining the building market... More and more worldwide sustainability architectural projects have been fulfilled using Dott.Gallina materials.



PRODUCTIONS SITE

ITALY	LA LOGGIA (TURIN) - DOTT.GALLINA S.R.L.	
US	JANESVILLE (WISCONSIN) GALLINA USA LLC	
GREECE	KILKIS - GA PLASTICS S.A.	
TURKEY	ISTANBUL - GALLINA EURASIA	
INDIA	NEW DELHI - GALLINA INDIA	

OFFICES

SPAIN	AISLUX S.A.	
FRANCE	POLYPAC	
UK	POLYPAC	
GERMANY - AUSTRIA		
BELGIUM - LUXEMBOURG		
SWEDEN - DENMARK		
AUSTRALIA		
MOROCCO		
UNITED ARAB EMIRATES		
COLOMBIA	SIGMA	



POLYCARBONATE IN THE CONSTRUCTION INDUSTRY

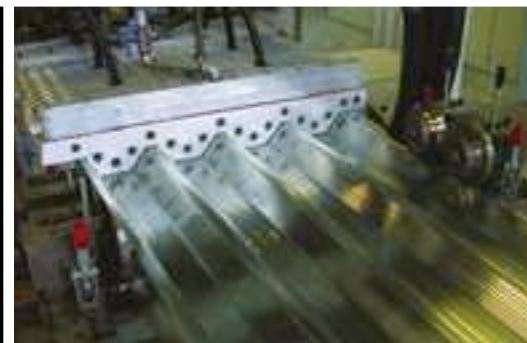
Polycarbonate is an innovative engineering plastic that is also versatile due to its transparency, good thermal insulation and impact strength. This makes it suitable for use in a wide range of residential and industrial building applications.

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®

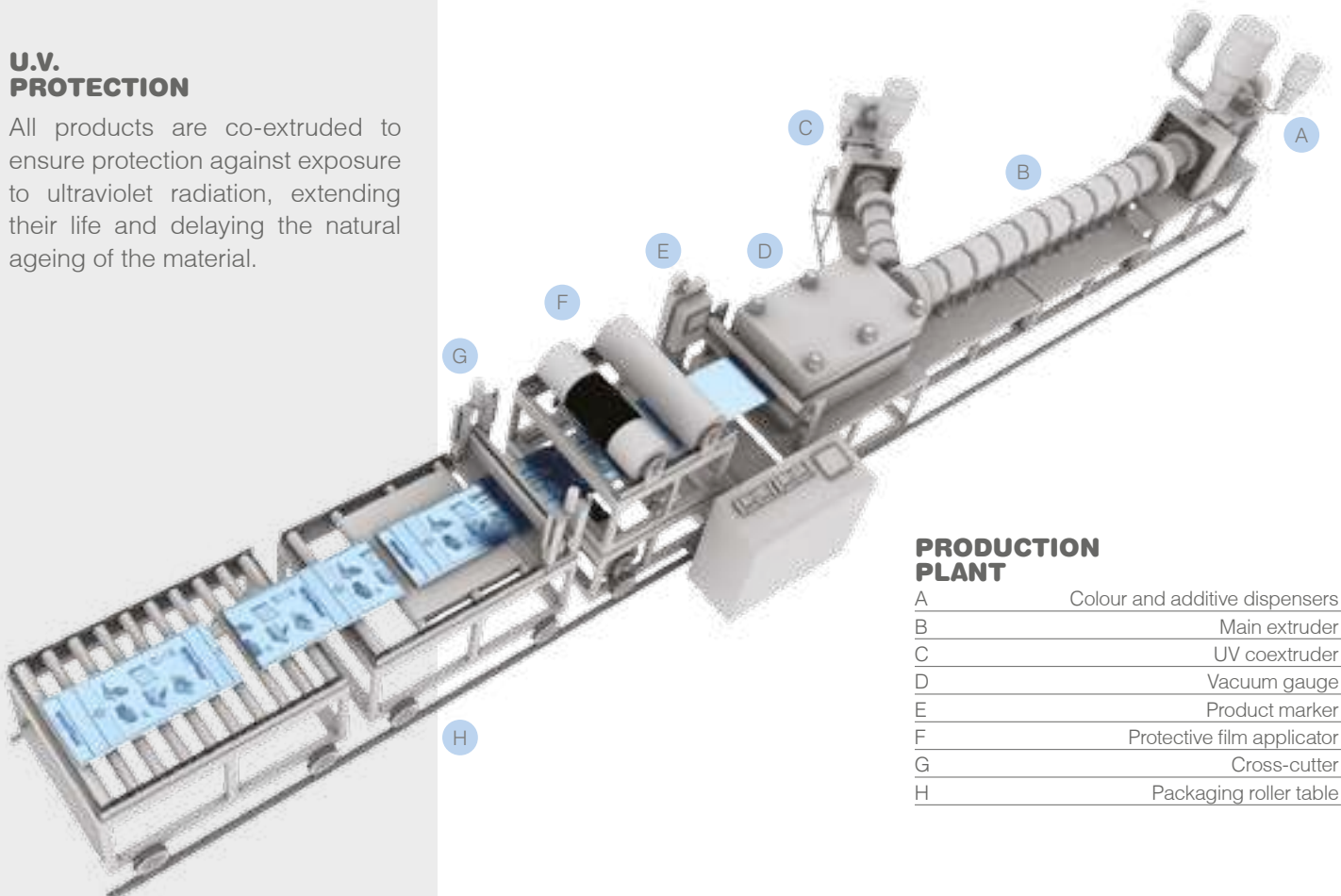
MULTIWALL SHEETS

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



CERTIFICATION



ASSOCIATION EPSE

Since 2003 the European Polycarbonate Sheet Extruders (EPSE), with the representative support of the leading manufacturers of polycarbonate sheets in Europe, has been working to promote this versatile plastic material and its numerous applications.

Aided by the expertise in its technical committee, EPSE has also been integral to the development of safety and quality standards for the industry.

EPSE was founded in 2003 as a sector group of EuPC, the European trade association for plastic converters.

EPSE is comprised of 10 full members, dott. gallina company forms an integral part of them since the constitution date, supported by 3 associate members.

Product innovations and market changes are periodically analyzed to ensure the commercialisation of certified and safe products.

QUALITY SYSTEM

The company operates a quality system certified to:

ISO 9001:2008
ISO 14001:2004
BS OHSAS 18001:2007



ISO 9001
Quality



ISO 14001
Environmental



OHSAS 18001
Health & Safety

1.2 CERTIFICATION

CE MARKING CE

European Regulation (EU) n.305/2011 (CPR - Construction Products Regulation) stipulates the issuance of a Performance Statement Document (DOP) and the affixing of the CE marking on each building product falling within the scope of an harmonized standard or designed in conformity with a European Technical Assessment.

DOP lists the essential characteristics of the product and its performance. Currently the products dott.gallina subjected to CE marking are:

- **PoliCarb®**, **arcoPlus®** and **arcoWall®**, flat sheets and flat panels in multiwall polycarbonate, according to EN 16153:2013+A1:2015
- **TegoLUX®**, solid corrugated polycarbonate panels, according to EN 1013:2012+A1:2014

Starting from 10th March 2018, both solid polycarbonate sheets PoliComp® and Scudo® will be required to be marked with CE earmark, in accordance with EN 16240:2013.

DOP documents can be downloaded directly from the DOWNLOAD area of our website:

<https://www.gallina.it/>

based on unique identification (eg PoliCarb® 10mm).

The CE mark and the reference standard are also printed on the pallet's label suggesting all the products contained inside.

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 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

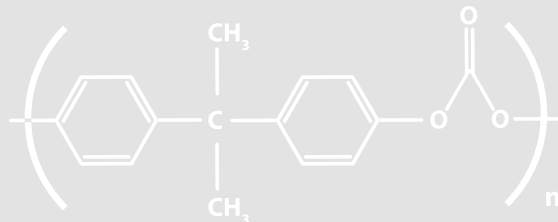
	VALUE	TEST METHOD
Light transmission	89 %	ASTM D570
Refraction index	1.586	ISO 489

MECHANICAL PROPERTIES

	VALUE	TEST METHOD
Resistance to tensile stress	66 MPa	ISO 527-2
Resistance to yield stress	60 MPa	ISO 527-2
Tensile modulus	2.300 MPa	ISO 527-2
Elongation at break	150 %	ISO 527-2
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	EN 16153
Vicat (B/50)	146÷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%	Yellowing
	Sulphuric acid 30%	Unchanged
	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 (τ_v)

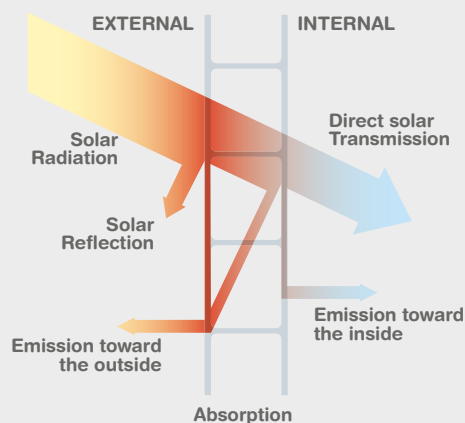
Different pigments are used to obtain different light transmission values.

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

SOLAR FACTOR (g)

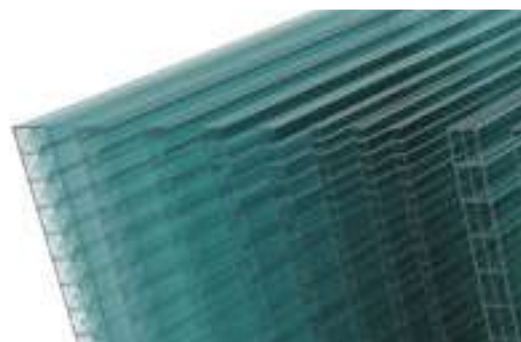
Incoming solar radiation is reflected, partially absorbed, and transmitted to the inside.

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 ($SC=g/0.87$).



MULTIWALL SHEETS

Optical and Thermal properties (EN 16153)

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



1.6 MODULAR SYSTEM PROPERTIES

arcoPlus®

MODULAR SYSTEM

Optical, Thermal and acoustic properties (EN 16153)

THERMAL TRANSMITTANCE (U-VALUE)

The thermal transmittance U, in building physics, identifies the building element attitude to transmit heat if subject to a temperature difference.

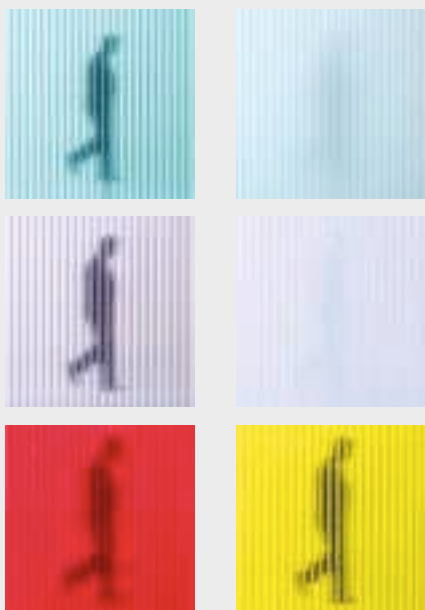
In particular, it is defined as the rate of heat loss through a unitary surface per degree centigrade difference in temperature between the two sides and depends on the material properties, on its structure and the linear thermal transmittance conditions.

ACOUSTIC INSULATION (R_w)

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 (τ _v) %	SOLAR FACTOR (g) %	SHADING COEFFICIENT (SC)	THERMAL TRANSMITTANCE (U) W/m²K	ACOUSTIC INSULATION (R _w) 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 - Velario 20-5				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				3,0	18
Crystal	70	71	0,82		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	42	55	0,63		
arcoPlus6104				2,7	18
Crystal	70	70	0,80		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	38	53	0,61		
arcoPlus6124				2,5	19
Crystal	68	70	0,80		
Blue	50	55	0,63		
Bronze	45	50	0,57		
Opal	36	52	0,60		
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		
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		
GrecaClick - MiniGreca				3,0	16
Crystal	70	74	0,85		
Opal	45	50	0,57		
arcoPlusGreca5				2,5	16
Crystal	72	76	0,87		
Opal	47	52	0,60		
arcoPlusOnda - 6mm				3,2	16
Crystal	73	77	0,89		
Opal	45	50	0,57		

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



**COLOR, TRANSPARENCY AND
SURFACE FINISHING**
Custom production for every particular design
requirement



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.



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.



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.



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.



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.



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.



AB-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



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.



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.

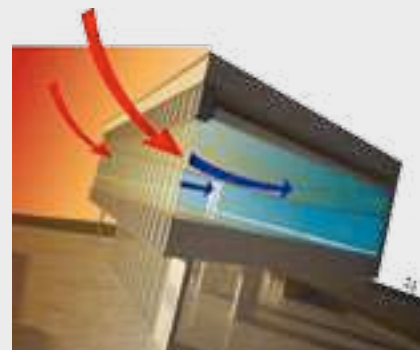
All products from the IR line offer innovative solutions for typical building applications where high levels of light are wanted while reducing the internal heating.

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.

1.8 POLYCARBONATE LINE OF FILTER PROTECTION IR

IR

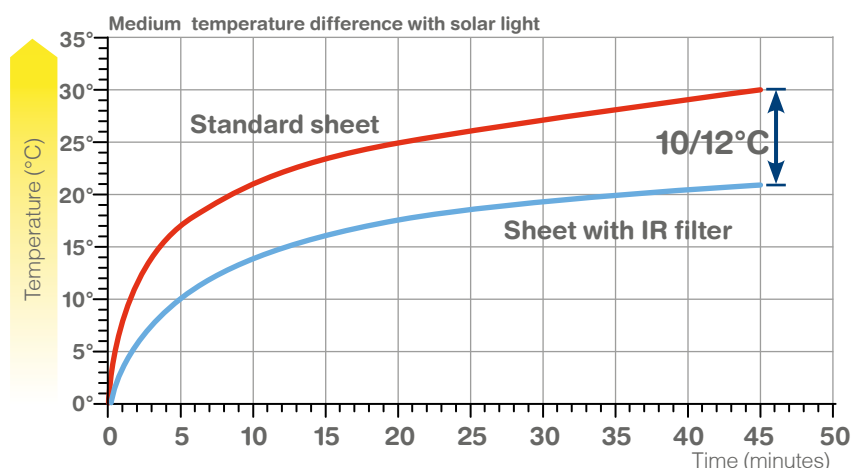


SOLAR CONTROL TO DEFEAT THE HEAT

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.

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.

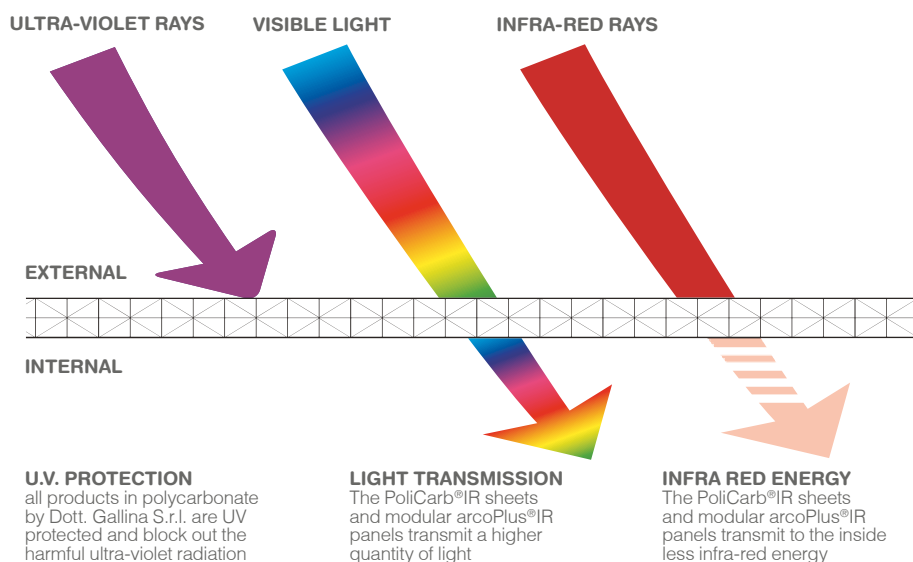


INTERNAL TEMPERATURE REDUCTION COMPARISON

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.



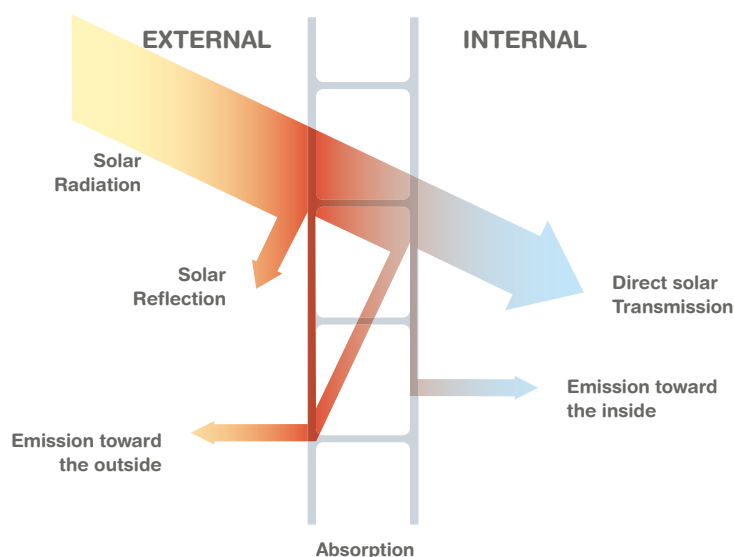
1.9 ENERGY SAVING

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)
ΔT	Average difference between indoor and outdoor temperature (14÷15 °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 = 62.808 °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

ΔK = 3,3 kcal/hm² °C

Fuel: oil-fire 10.200 kcal/kg

Pt = 10.200 kcal/kg

Plant production

h = 0,7

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

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



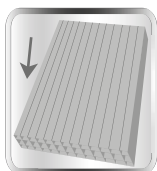
ALLOW FOR THERMAL EXPANSION OF THE MATERIAL



ONLY USE POLYCARBONATE-COMPATIBLE SILICONE IF NECESSARY



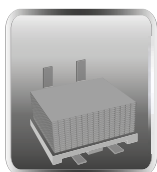
USE ADHESIVE ALUMINIUM TAPE TO SEAL THE AIR CELLS



ALWAYS PLACE THE SHEETS WITH THE AIR CELLS IN THE DIRECTION OF THE SLOPE



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.

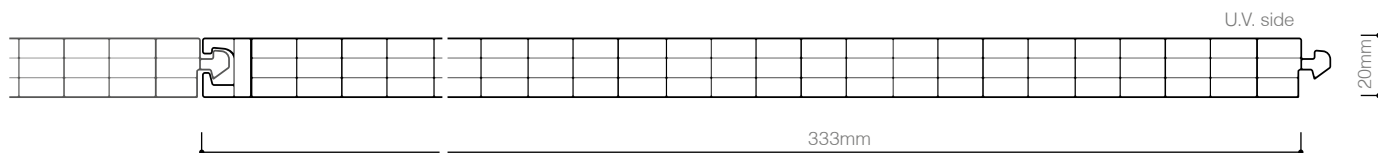
All arcoPlus® systems include aluminium profiles and anchor systems to guarantee resistance to positive and negative wind loads while allowing for linear expansion.





arcoPlus®
324

2.1 INTERLOCKING SYSTEMS



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	20mm
Structure	4 walls
Effective modular width	333mm
Panel length	no limit
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,8 W/m²K
Acoustic insulation Rw (ISO 717-1)	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®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.

ADVANTAGES

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

APPLICATIONS

- ▶ Vertical windows
- ▶ Translucent curtain walls

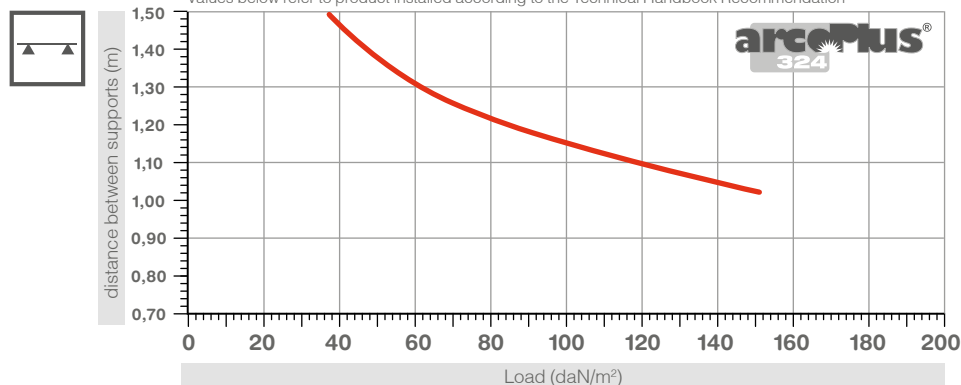




LOAD RESISTANCE

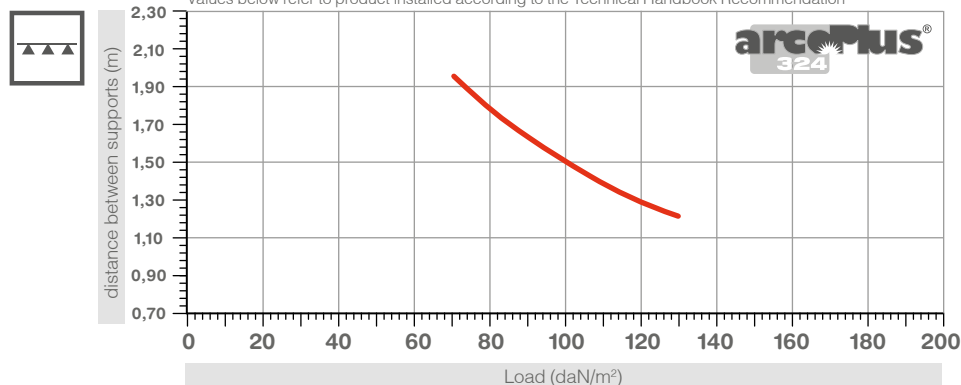
Maximum loads on two supports

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 arcoPlus® 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.

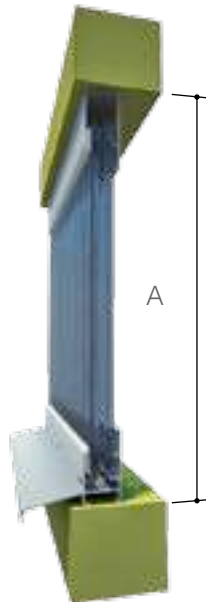


INSERTION OF PLATE

Insertion of stainless steel plates for anchorage to existing structures

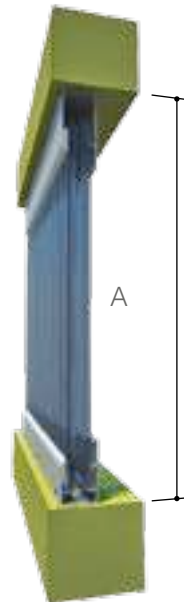


CALCULATION AND INSTALLATION EXAMPLES OF PANEL LENGTH (PL)



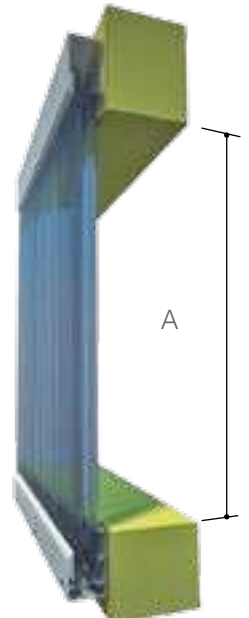
WITH EAVE

$PL = A - 50 \text{ mm}$
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.

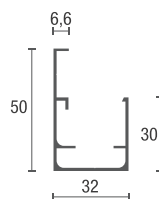


BASE PROFILE

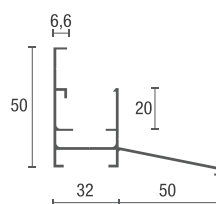
Insertion of curtain wall panels on base profile, with gasket

METAL PROFILES

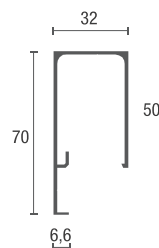
4062
Base AL profile



4064
Base AL profile with eave



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-coated rubber seal strip

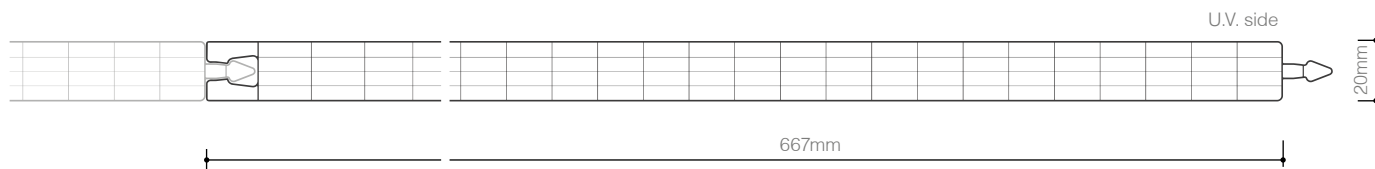


4063
Stainless steel bracket



4066
Taping surcharge

2.1 INTERLOCKING SYSTEMS



**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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7 W/m ² K
Acoustic insulation Rw (ISO 717-1)	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[®]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.



SPECIAL TREATMENT

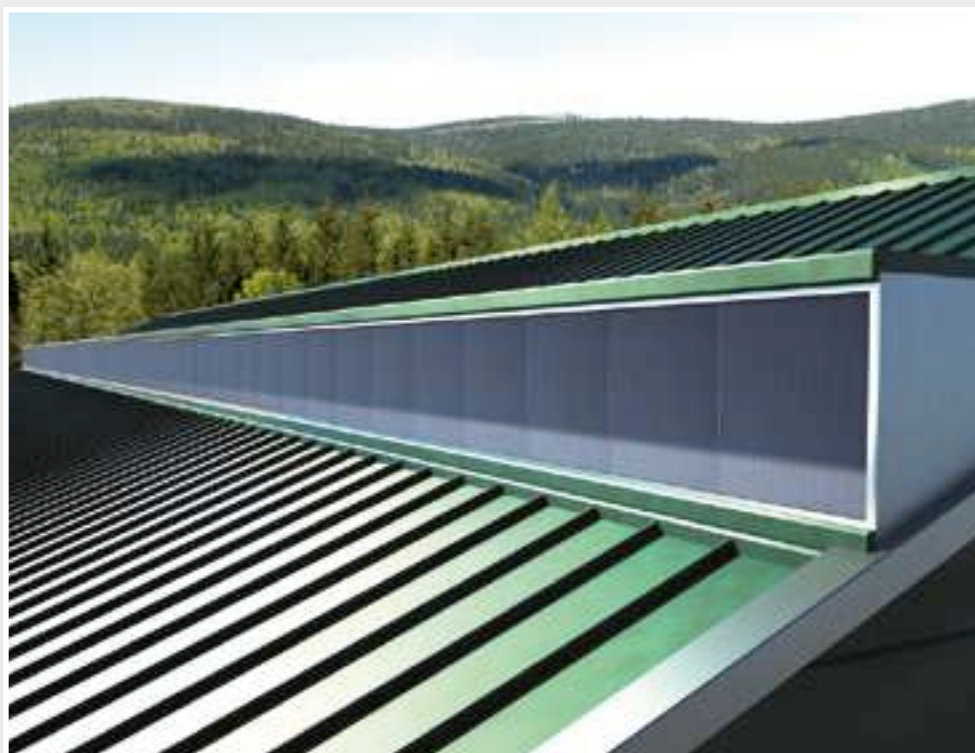
ADVANTAGES

- ❖ 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

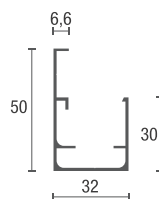
The system includes a complete range of aluminium profiles for installing the panels. The air cells of the polycarbonate panels must be sealed using vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.



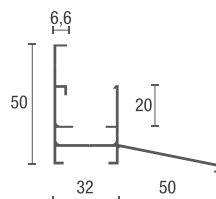
DETAIL JOINT
Detail joint male-female

METAL PROFILES

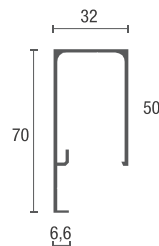
4062
Base AL profile



4064
Base AL profile with eave



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-coated rubber seal strip

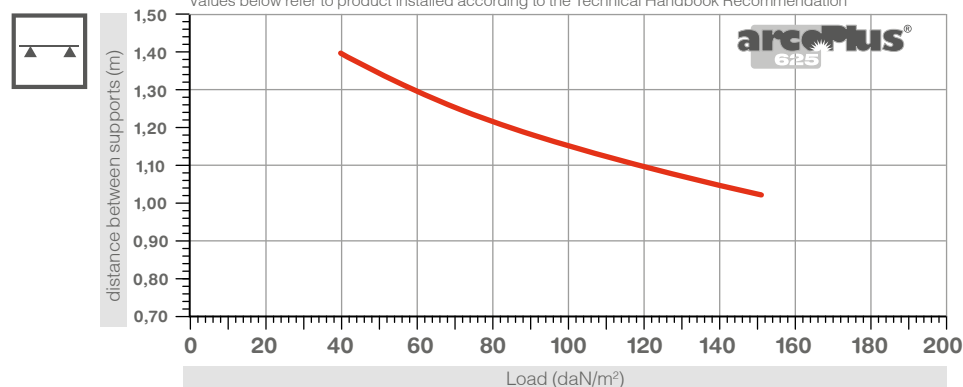


4327
Taping surcharge

LOAD RESISTANCE

Maximum loads on two supports

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



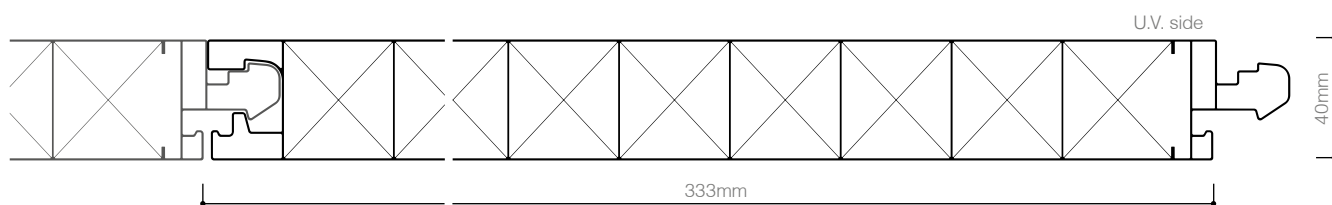
EASY AND LOW-COST INSTALLATION

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



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	40mm
Structure	4 walls
Effective modular width	333mm
Panel length	no limit
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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

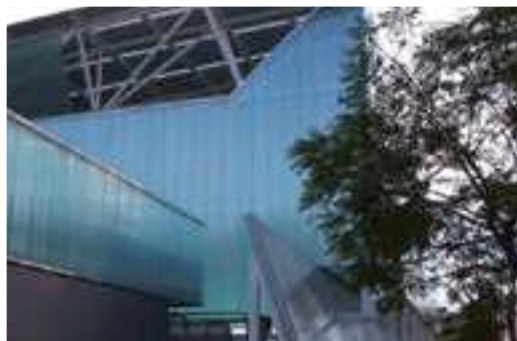
- ▶ Vertical windows
- ▶ Translucent curtain walls

CERTIFICATION



Document Technique d'Application
n°2/14-1610 *V1 published in 27/07/2016

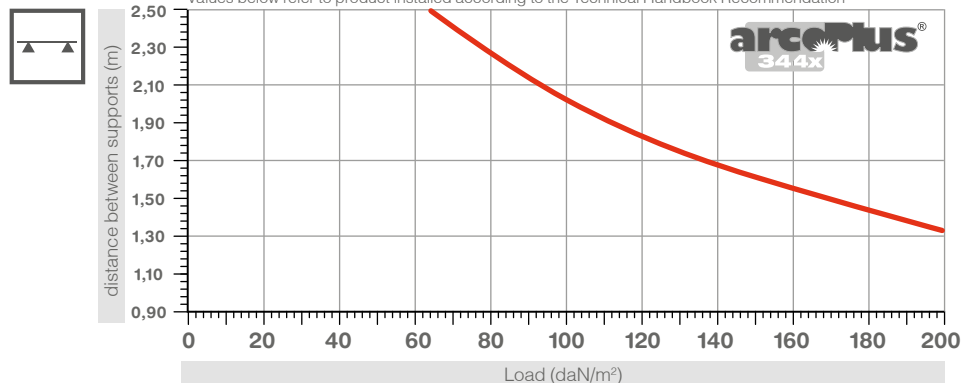




LOAD RESISTANCE

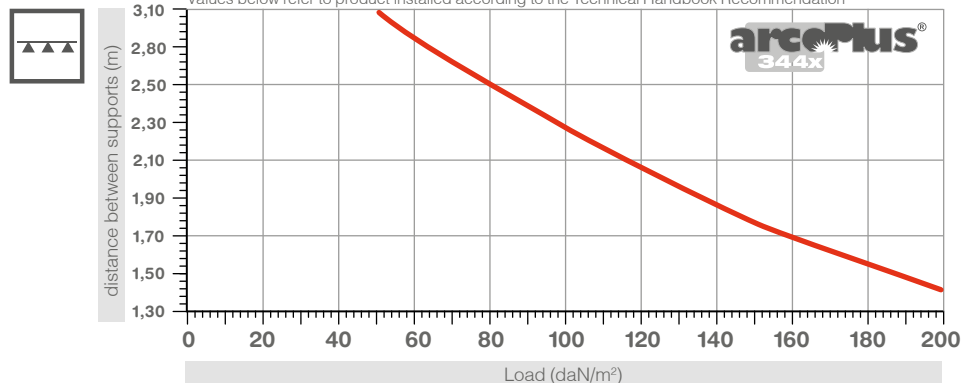
Maximum loads on two supports

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

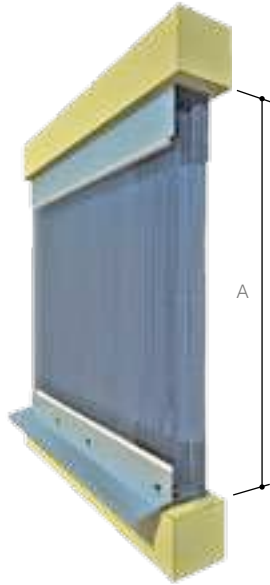
The 40mm-thick, 4 walls design with tongue and groove connection gives the panels remarkable flexural strength. It also allows the panels to be installed without the use of metal reinforcement frames (continuous windows), thus eliminating heat loss due to the thermal bridges caused by these structures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

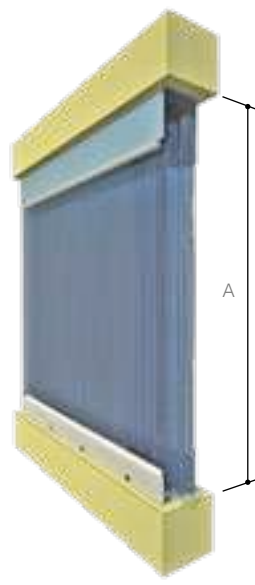


CALCULATION AND INSTALLATION EXAMPLES OF PANEL LENGTH (PL)



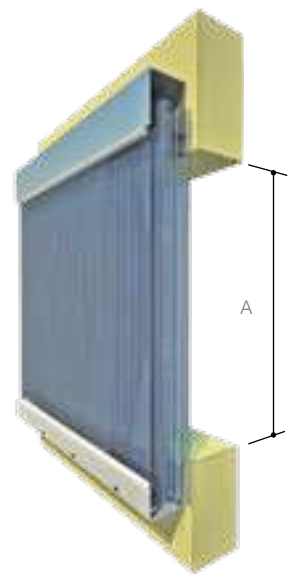
WITH EAVE

$LP = A - 50 \text{ mm}$
 (base profile without TT)
 $LP = A - 70 \text{ mm}$
 (base profile with TT)
 A = opening measure



WITHOUT EAVE

$LP = A - 45 \text{ mm}$
 (base profile without TT)
 $LP = A - 60 \text{ mm}$
 (base profile with TT)
 A = opening measure



OUTSIDE OF THE BUILDING

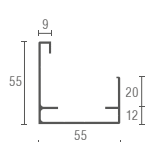
$LP = A + 95 \text{ mm}$
 (profile without TT)
 A = opening measure



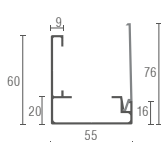
TRANSLUCENT CURTAIN WALLS
 Realization vertical translucent curtain walls



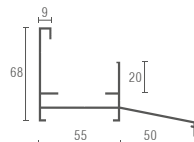
METAL PROFILES



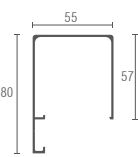
4047
Base
AL profile



4140
Base/side AL profile
with flap frontal opening

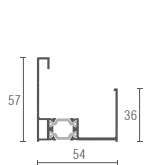


4046
Base AL profile
with drip sill

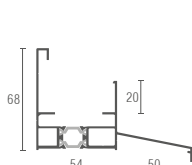


4045
Upper/side
AL profile

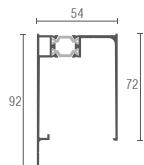
METAL PROFILES with thermal break



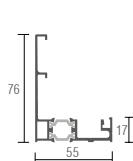
4587
Base
AL profile TB



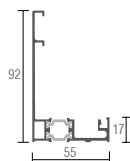
4590
Base AL profile TB
with drip sill



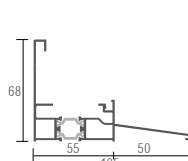
4585
Upper/side
AL profile TB



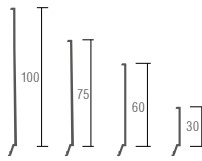
4597
Perimetral short
AL snap profile TB



4598
Perimetral high
AL snap profile TB



4595
Base AL snap profile TB
with drip sill



4275-4743-4742-4755
Flap AL for profiles:
4597-4595-4598

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.

IMPORTANT:

The fixing of the Flap profile 4725 must be carried out with adhesive seal tape 4329 and EN ISO 15481 4,2x13 A2 self-drilling screws.



INSERTION OF PLATE

Insertion of aluminium plates for anchorage to existing structures



BASE PROFILE

Detail of curtain wall, insertion in base profile

ACCESSORIES



4047
Base AL profile



4046
Base AL profile
with drip sill



4140
Base/side AL profile
with flap frontal opening



4045
Upper/side
AL profile



4587
Base
AL profile TB



4590
Base AL profile TB
with drip sill



4585
Upper/side
AL profile TB



4597
Perimetral short
AL snap profile TB



4595
Base AL snap profile TB
with drip sill



4598
Perimetral high
AL snap profile TB



4755 - H.30
4742 - H.60
4743 - H.75
4275 - H.100
Flap AL for profiles: 4597-4595-4598



4050
Alu bracket



4052
Inox bracket



4312
Joining eclipse
for base profile



1169/B
Slip-coated rubber
seal strip



1169/B/AGS
Overlap Slip-coated
rubber seal strip

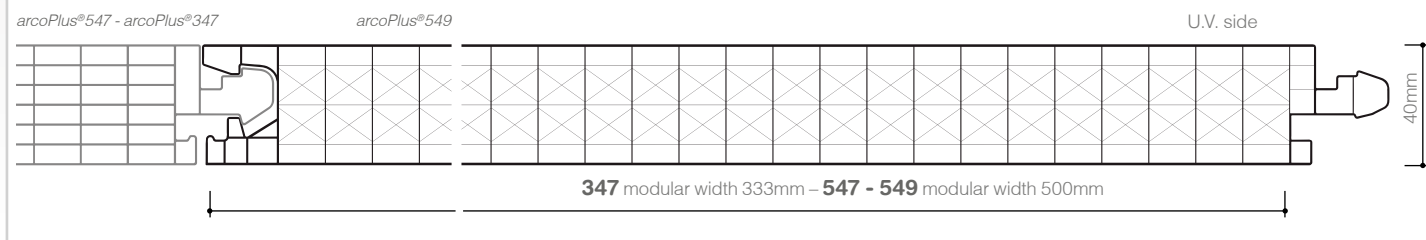


4329 (+4275)
Single-side self-adhesive
PE-LD seal strip 4*15



4108
Taping surcharge

2.1 INTERLOCKING SYSTEMS



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	40mm
Structure	7 walls (347-547) - 9 walls (549)
Modular width	333mm (347)–500mm (547-549)
Panel length	no limit
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,1 (347-547) W/m²K 1,0 (549) W/m²K
Acoustic insulation Rw (ISO 717-1)	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%.

ADVANTAGES

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

APPLICATIONS

- ▶ Vertical windows
- ▶ Translucent curtain walls

CERTIFICATIONS

arcoPlus347-547-549



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n°2/14-1610 *V1 published in 27/07/2016

arcoPlus547

DIBt Ab Zulassung
n°Z-10.-480 published in 23/12/2014

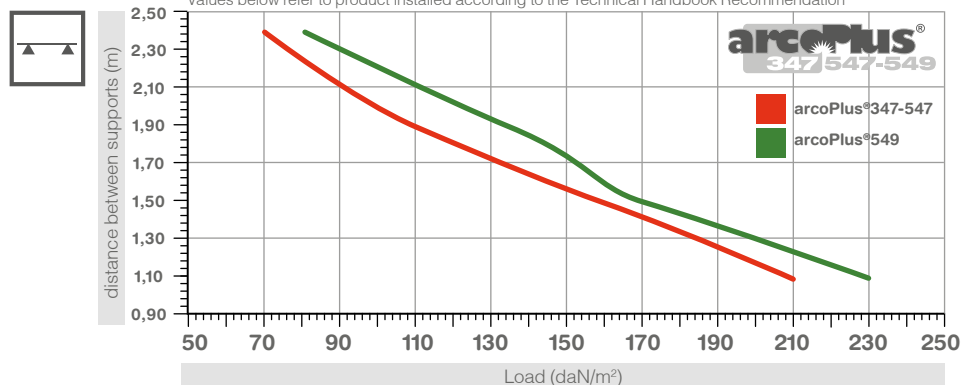




LOAD RESISTANCE

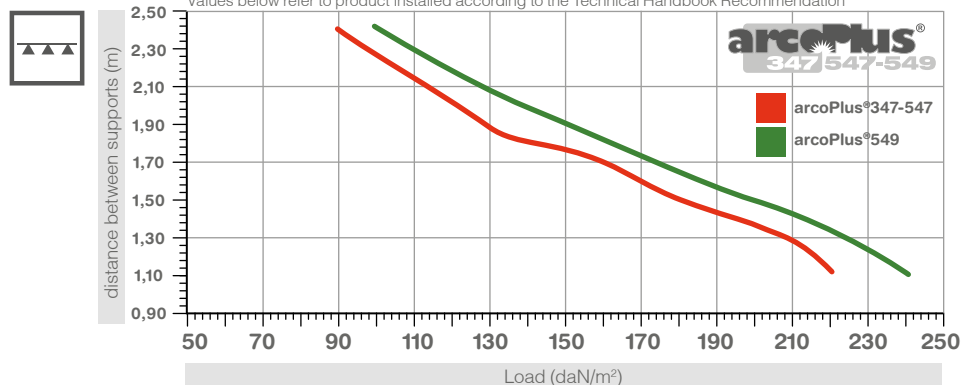
Maximum loads on two supports

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



Maximum loads on more supports

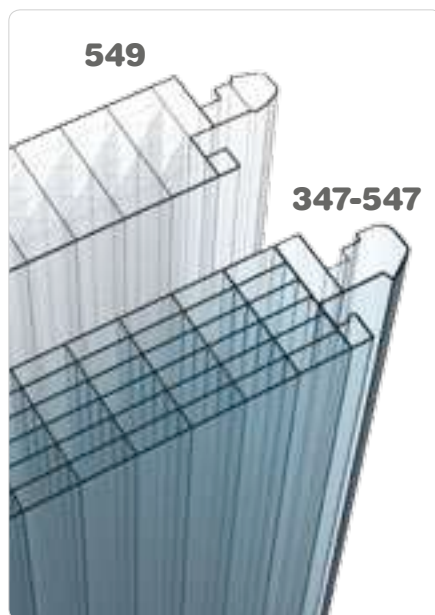
Values below refer to product installed according to the Technical Handbook Recommendation



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

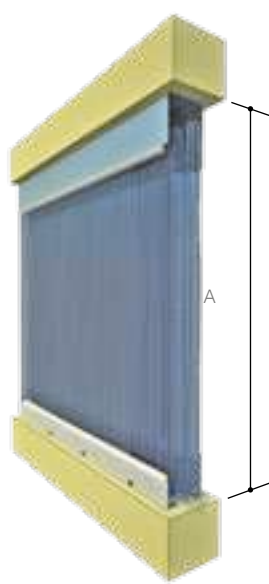


CALCULATION AND INSTALLATION EXAMPLES OF PANEL LENGTH (PL)



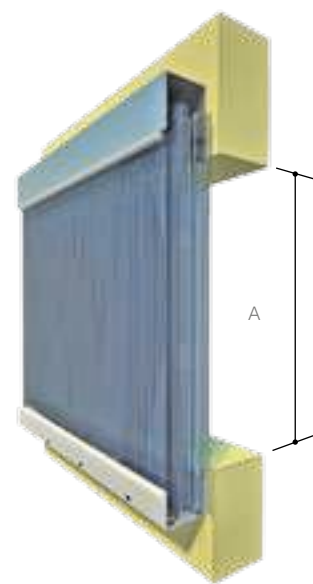
WITH EAVE

$LP = A - 50 \text{ mm}$
 (base profile without TT)
 $LP = A - 70 \text{ mm}$
 (base profile with TT)
 A = opening measure



WITHOUT EAVE

$LP = A - 45 \text{ mm}$
 (base profile without TT)
 $LP = A - 60 \text{ mm}$
 (base profile with TT)
 A = opening measure



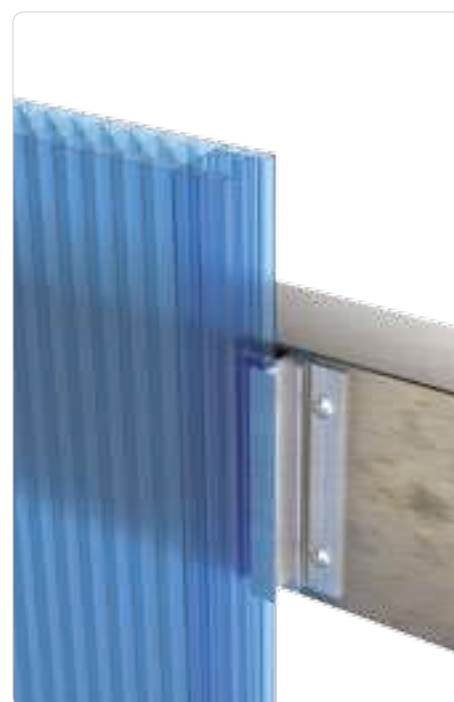
OUTSIDE OF THE BUILDING

$LP = A + 95 \text{ mm}$
 A = opening measure



ALUMINUM BRACKET JOINT

Anchorage to existing structures by inserting
 aluminum bracket code 4050/60

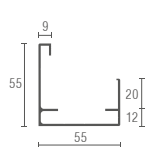


REINFORCED ALUMINUM BRACKET JOINT

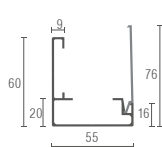
Anchorage to existing structures by inserting
 aluminum bracket code 4050/120



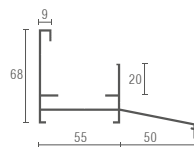
METAL PROFILES



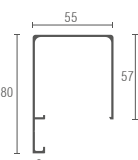
4047
Base
AL profile



4140
Base/side AL profile
with flap frontal opening

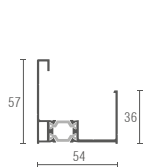


4046
Base AL profile
with drip sill

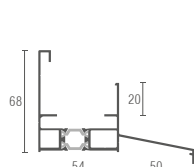


4045
Upper/side
AL profile

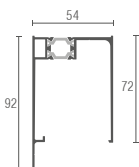
METAL PROFILES with thermal break



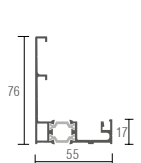
4587
Base
AL profile TB



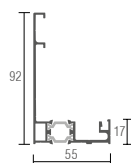
4590
Base AL profile TB
with drip sill



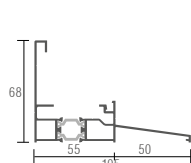
4585
Upper/side
AL profile TB



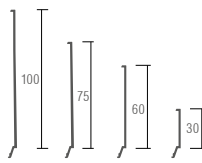
4597
Perimetral short
AL snap profile TB



4598
Perimetral high
AL snap profile TB



4595
Base AL snap profile TB
with drip sill



4275-4743-4742-4755
Flap AL for profiles:
4597-4595-4598

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.

IMPORTANT:

The fixing of the Flap profile 4725 must be carried out with adhesive seal tape 4329 and EN ISO 15481 4,2x13 A2 self-drilling screws.



SIDE PROFILE
Detail side profile TT in AL



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

ACCESSORIES



4047
Base AL profile



4046
Base AL profile
with drip sill



4140
Base/side AL profile
with flap frontal opening



4045
Upper/side
AL profile



4587
Base
AL profile TB



4590
Base AL profile TB
with drip sill



4585
Upper/side
AL profile TB



4597
Perimetral short
AL snap profile TB



4595
Base AL snap profile TB
with drip sill



4598
Perimetral high
AL snap profile TB



4755 - H.30
4742 - H.60
4743 - H.75
4725 - H.100
Flap AL for profiles: 4597-4595-4598



4050/60
4050/120
Alu bracket 60/120mm



4052
Inox bracket



4312
Joining eclipse
for base profile



1169/B
Slip-coated rubber
seal strip



1169/B/AGS
Overlap Slip-coated
seal strip

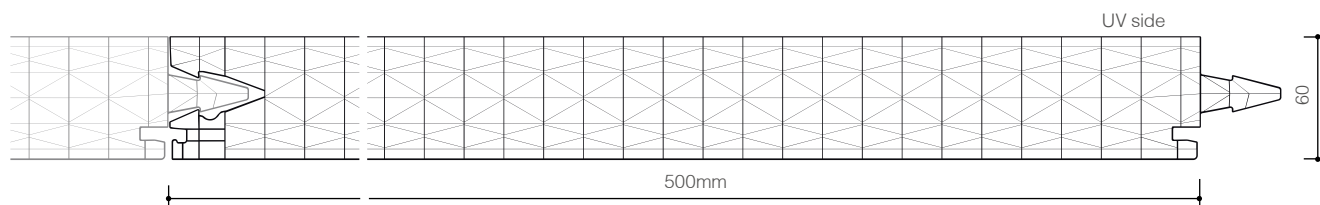


4329 (+4275)
Single-side self-adhesive
PE-LD seal strip 4*15



4108
Taping surcharge

2.1 INTERLOCKING SYSTEMS



Modular system of multiwall UV protected polycarbonate for vertical translucent walls



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	60mm
Structure	13 walls
Modular width	500mm
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	0,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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.

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

CERTIFICATIONS



Document Technique d'Application
n°2/16-1764 published in 05/06/2017

DIBt Ab Zulassung
n°Z-10.1-662 published in 18/05/2016





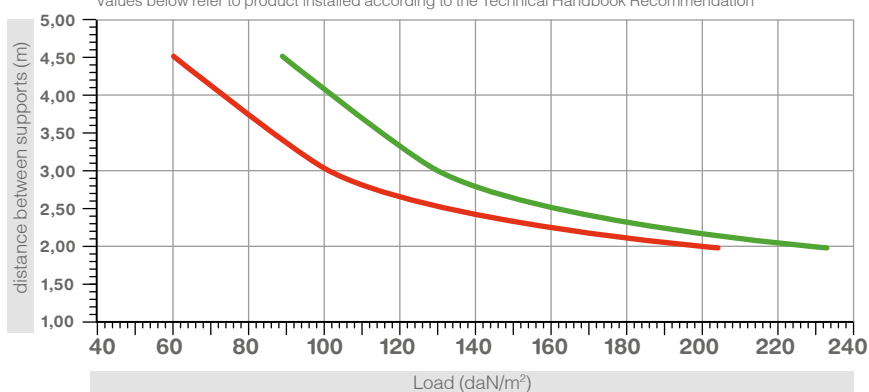
LOAD RESISTANCE

Maximum loads

arcoWall®
5613



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



WALL SYSTEM

arcoWall®5613 allows the realization of real “translucent walls” with high thermal and acoustic characteristics without width limits and without the need for secondary support structures for spans up to 3.5m in height.

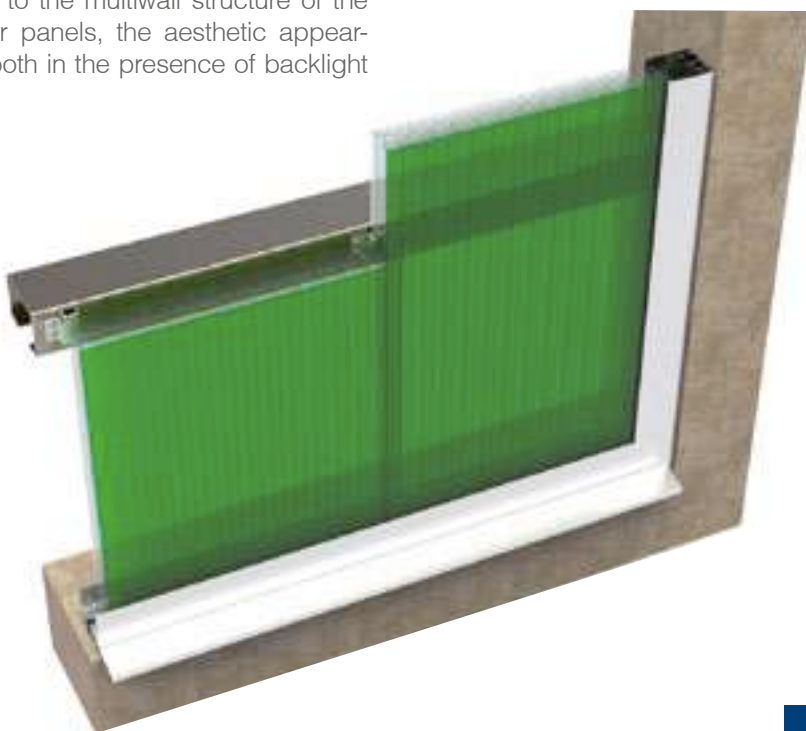
For installations exceeding 3.5m, a suitable section-breaker profile must be installed to which the arcoWall®5613 panels can then be fixed. It is done using the specific brackets to give the system the necessary resistance to negative wind load and permit sliding due to thermal expansion.

Thanks to the multiwall structure of the modular panels, the aesthetic appearance, both in the presence of backlight

and of grazing light, is extremely unique. The chromatic effects can be modulated endlessly in terms of coloring and of light transmission.

The external and internal surfaces can be of different colors, which allows managing the light filter according to the needs of natural lighting.

The inner surface can be coextruded with an anti-reflective treatment, which is highly effective in reducing the unpleasant effects of artificial light reflections.

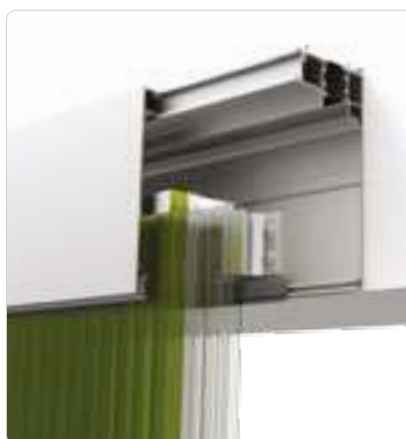




HIGHER AND HIGHER: arcoWall® SPECIAL SYSTEM TO ACHIEVE INFINITE VERTICAL FAÇADE

With the aim to best meet the design-building requirements, we present the new series of profiles conceived specifically for achieving translucent facades with extra height, which could be impossible to realize before now. Thanks to the new aluminum profiles, our polycarbonate pa-

nels arcoWall® become the ideal solution for vertical applications with **oversize heights...** Furthermore do not forget the infinite possibilities offered by special treatments to customize the coloring or surface finish of panels, giving freedom to architectural creativity.



UPPER PROFILE FOR OVERSIZE EIGHTS
With straight flap



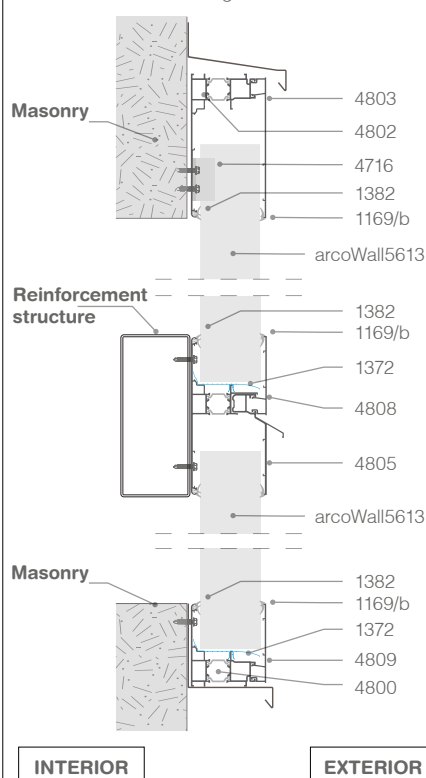
HORIZONTAL JOINING PROFILE
With straight flap



BASE/SIDE PROFILE
With straight flap

WALL SECTION EXAMPLE

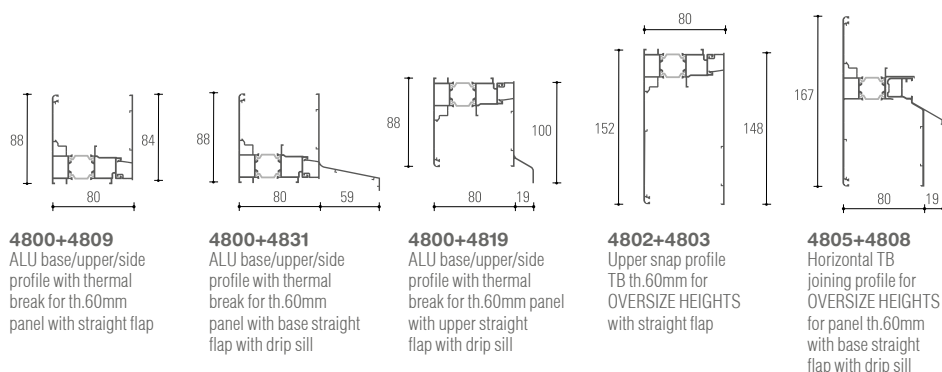
Walls with a maximum height of 16 meters



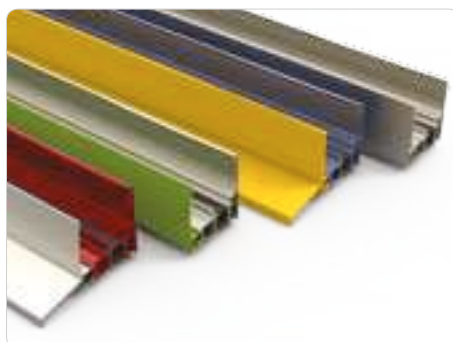
- Installing the special upper-profile in aluminium for **oversize lenght complete with the upper plane flap (cod. 4802+4803)**, you can realize translucent vertical curtain-walls with a maximum height of up to 16 meters, placing full size panels of such a length without any horizontal interruptions
- The additional inclusion in the façade-paneling of the horizontal joining profile (cod. 4802+4803+4808+4805) allows to achive facades with infinite height.



METAL PROFILES



DIFFERENT TYPES OF FLAPS
Curved and straight flaps

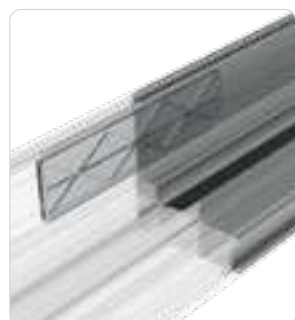


DIFFERENT COLORS OF PROFILES
Diversify the color between the inner and outer side

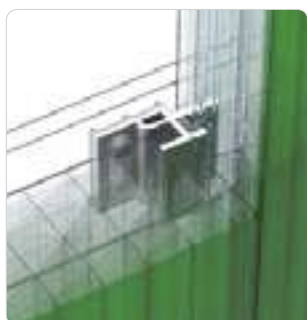
ACCESSORIES

The air cells of the polycarbonate panels must be sealed using vented aluminum tape. This permits correct ventilation and prevents soiling on the inside of the panels. In order to ensure maximum thermal insulation and respect for the Window-to-Wall Ratio (WWR), there are available openable systems arcoWall®5613 realized with innovative aluminum profiles with thermal break. Thanks to the modularity of frame profiles 4800/4832/4846, it is possible to choose both the shape and the color of the front

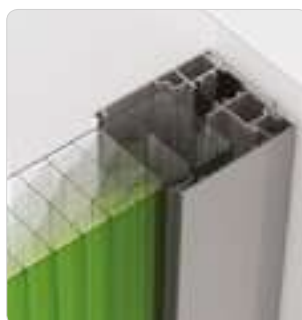
flap. While maintaining the same functionality, all 3 versions can be provided with curved or straight silhouette, depending on the design needs. In addition to standard anodized surface-finish, the profiles can be painted with any shade. Moreover an additional feature allows to diversify the color between the indoor and outdoor side by giving two different nuances for base profile (visible in indoor environments) and for flap (exposed to the outside).



JOINING PROFILES WITH FLAT ALIGNMENT
Flat aligner for base



ALU BRACKET COD.4715
For anchoring panels to intermediate structures



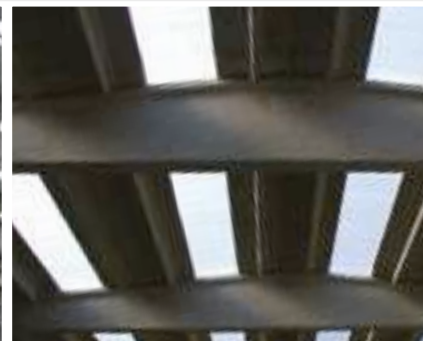
SIDE DETAIL COD.4800+4809
profile with straight flap

ACCESSORIES

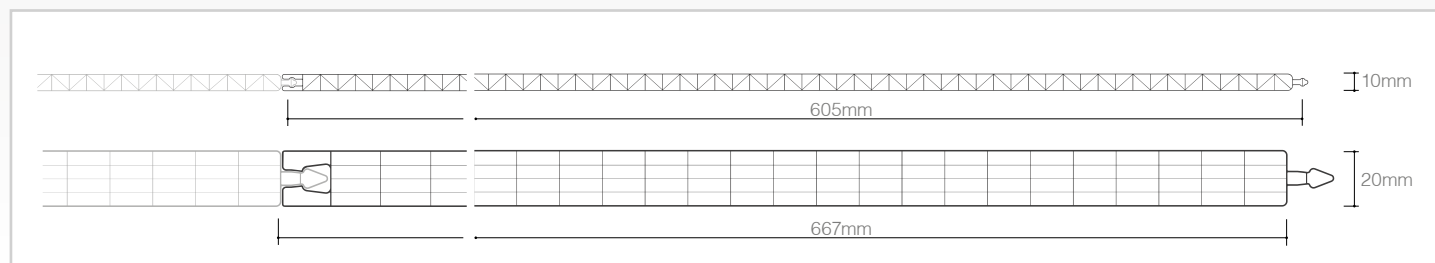


2.1 INTERLOCKING SYSTEMS

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 transmittance U	2,7 W/m²K	1,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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



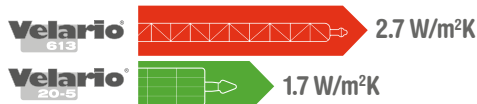
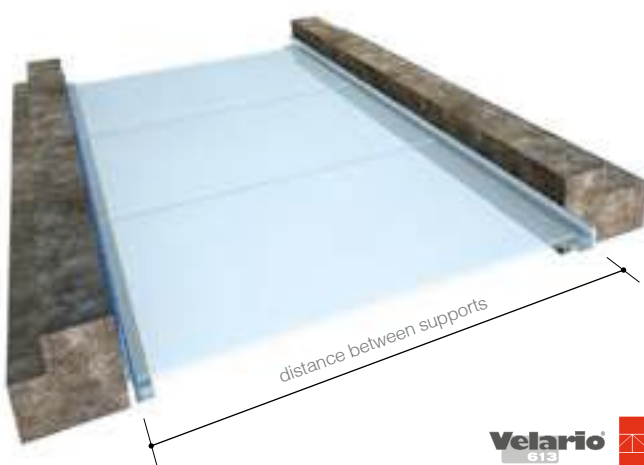
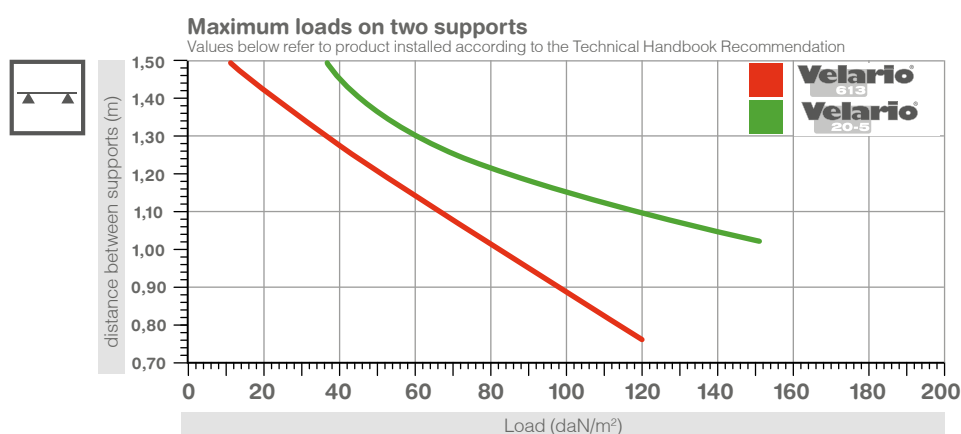


DESCRIPTION

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

4226 (Velario613)
Thermowelding

4073 (Velario613)
Aluminium tape

4327 (Velario20-5)
Aluminium tape



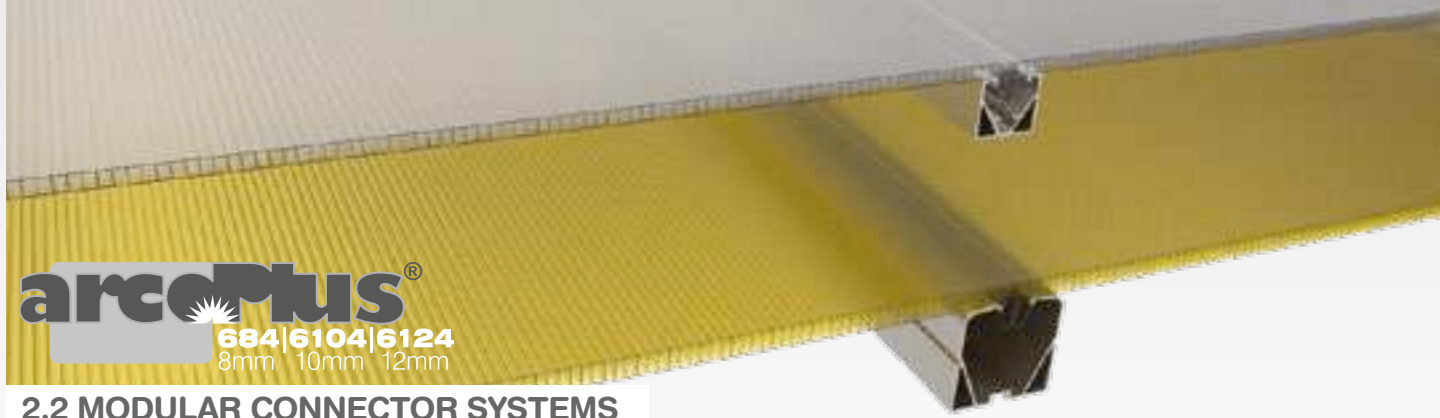
VELARIO
Detail Velario metal roofing



FALSE CEILING
detail anchorage panels

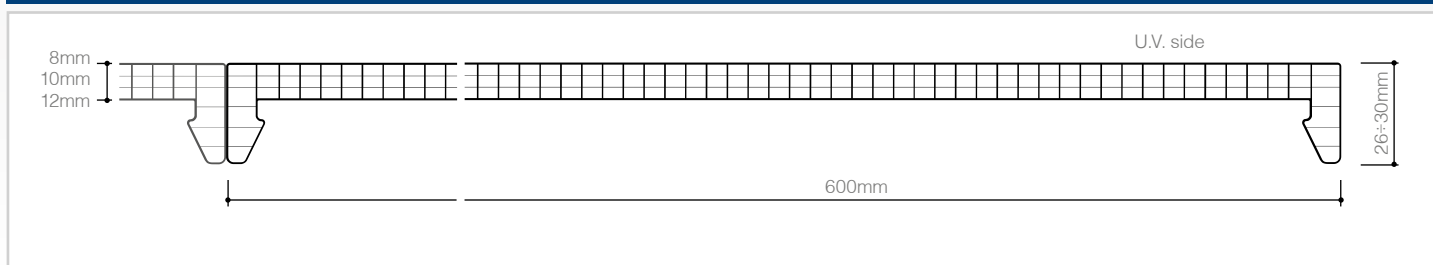
arcoplus®
613

Modular system of
UV protected
multiwall
polycarbonate for
vertical window
applications



arcoPlus®
684|6104|6124
8mm 10mm 12mm

2.2 MODULAR CONNECTOR SYSTEMS



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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	3,0 - 2,7- 2,5 W/m²K
Acoustic insulation	18 dB (th.8-10mm)
Rw (ISO 717-1)	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 coextruded 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

- Roofing
- Curved roofing
- Skylights
- Vertical windows

CERTIFICATIONS



Avis Technique
n°2.2/11-1485 *V1 published 31/07/2017



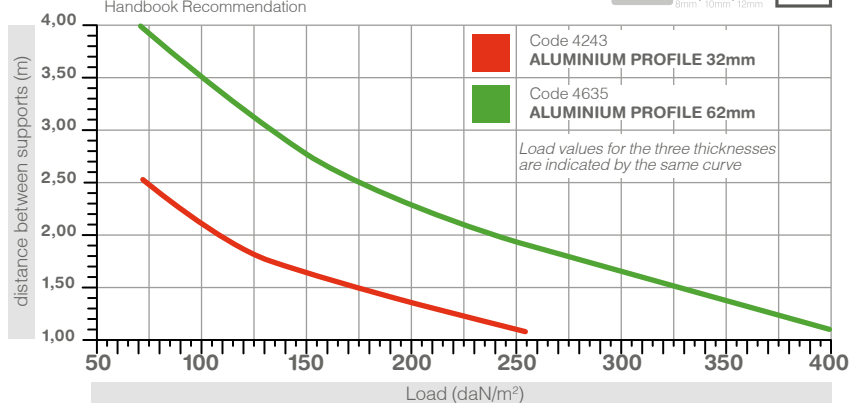
CONTINUOUS ROOFING
Model of tunnel with reinforced aluminium profil



FLAT SYSTEM LOAD RESISTANCE

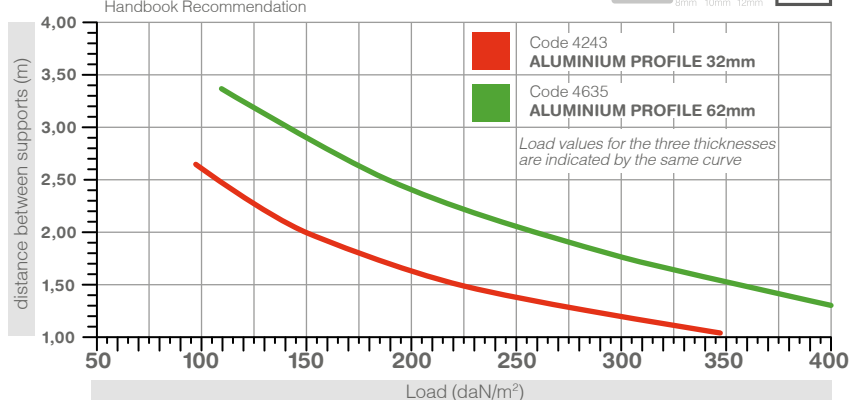
Maximum loads on two supports

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



Code 4243 (straight)
ALUMINIUM PROFILE 32mm



Code 4635 (straight)
ALUMINIUM PROFILE 62mm

FLAT SELF-SUPPORTING SYSTEM

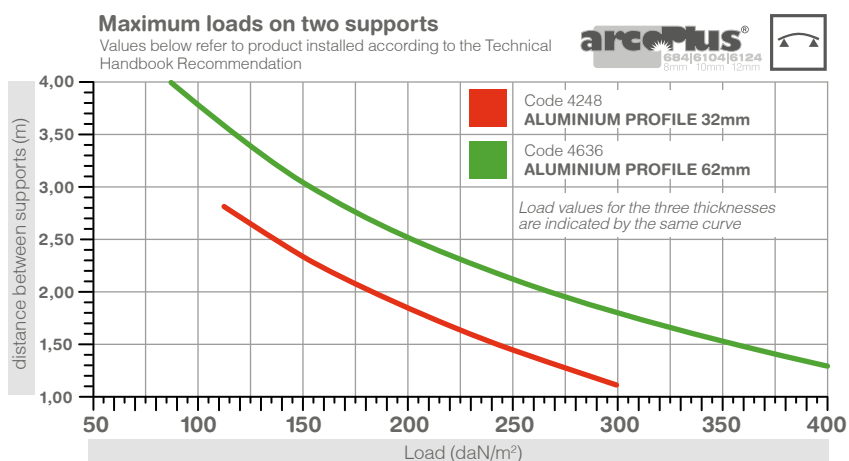
The arcoPlus®684-6104-6124 systems can be used for vertical walls and flat roofing applications.

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).



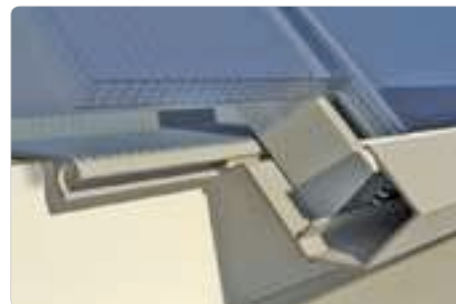
CURVED SYSTEM R.4.000mm LOAD RESISTANCE



Code 4248 (curved)
ALU PROFILE 32mm



Code 4636 (curved)
ALU PROFILE 62mm



SIDE SUPPORTS

Detail of insertion of the roof components on side supporting profiles

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

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.



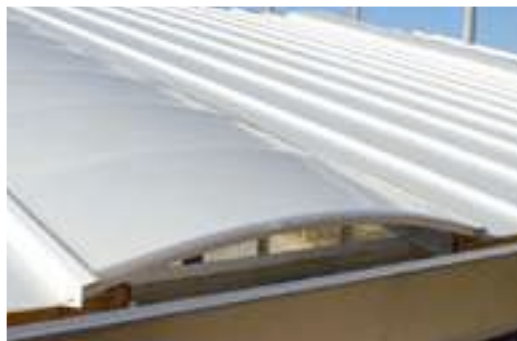
START PROFILE

Detail of insertion of start profile on roof



END PROFILE

Detail of insertion of section-breaker profile to complete roofing



ACCESSORIES

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



DETAIL DRIP-STOPPER "V" EAVE

In the joint profiles in roofing applications it is possible to insert suitable "V" profiles with flushing function.



DETAIL OF UPPER PROFILE

Upper profile with gasket and sealing pad



DETAIL FIXING OF ECLIPSE

Detail of the union of the profiles in aluminium with eclipse in aluminium



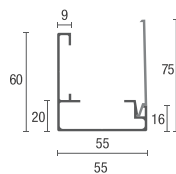
DETAIL OF BASE

Insertion of curtain wall profiles on removable base with front panel

METAL PROFILES

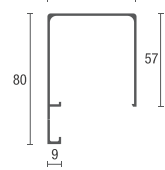
4140

Base/side Alu profile with flap frontal opening



4045

Upper/side Alu profile



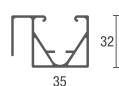
4243 (straight)

Alu tubular profile 32mm



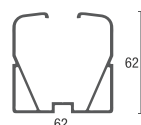
4244 (straight)

Alu edge profile



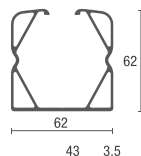
4635 (straight)

Alu tubular profile 62mm



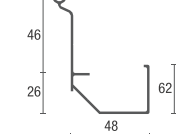
4636 (curved)

Alu tubular profile 62mm



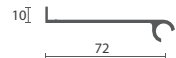
4245

Aluminium U-frame



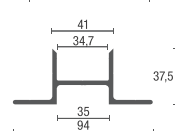
4252

Alu closing support for U-frame (+4245/4271)



4260

Fixing eclipse for chassis (+4243)



1400

Drip-stopper 'V' eave for tubular 4243/4248



1356

Drip-stopper 'V' eave for tubular 4635/4636



4327

Taping surcharge

ACCESSORIES



4243 (straight)

4248 (curved)

Alu tubular profile 32mm



4244 (straight)

4249 (curved)

Alu edge profile



4635 (straight)

4636 (curved)

Alu tubular profile 62mm



4140

Base/side Alu profile with flap frontal opening



4045

Upper/side Alu profile



4245

Aluminium U-frame



4252

Alu closing support for U-frame (+4245)



4589

Alu end profile



2147 th.8/10mm

2245 th.12mm

PC starter profile



2148 th.8mm

2265 th.10mm

2250 th.12mm

End profile in PC



1169/B

Slip Coat Gasket



1169/B/AGS

Overlap Slip-coated seal strip



4213 dim. 40x35x580

4221 dim. 40x70x570

LDPE foam pad



4260

Fixing eclipse for chassis (+4243)



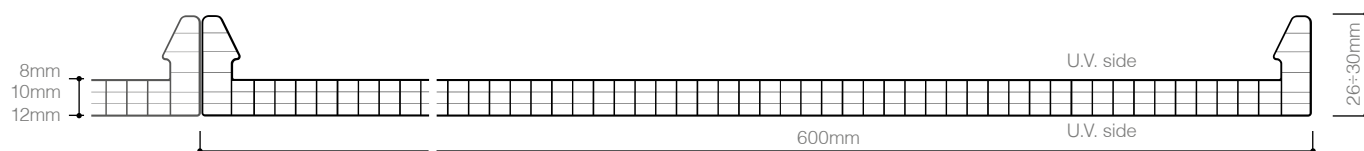
4970/600 th.8mm

4971/600 th.10mm

4972/600 th.12mm

Alu closing edge

2.2 MODULAR CONNECTOR SYSTEMS



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

Thickness	8-10-12mm
Structure	4 walls
Effective modular width	600mm
Panel length	no limit
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	3,0 - 2,7- 2,5 W/m²K
Acoustic insulation	18 dB (th.8-10mm)
Rw (ISO 717-1)	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

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.

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Bendability R.min=2,0m

APPLICATIONS



Roofing



Curved roofing

CERTIFICATIONS



arcoPlus Serie600 Reversò

Document Technique d'Application
 n°5/14-2374 published 28/05/2015



CONTINUOUS ROOFING

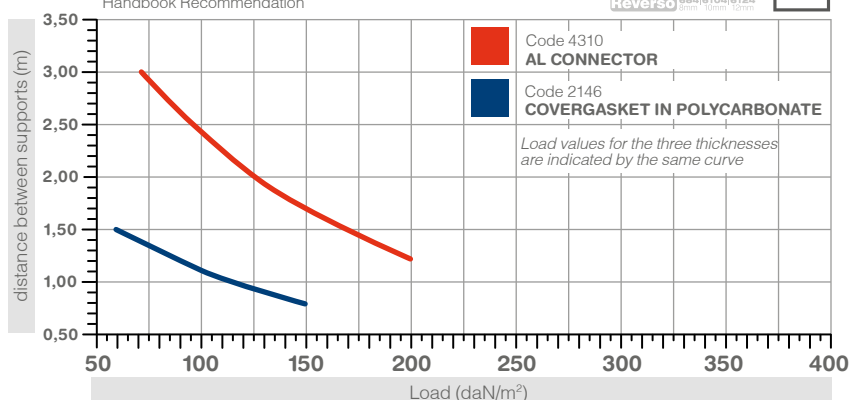
Example of roofing with polycarbonate cover plate



LOAD RESISTANCE

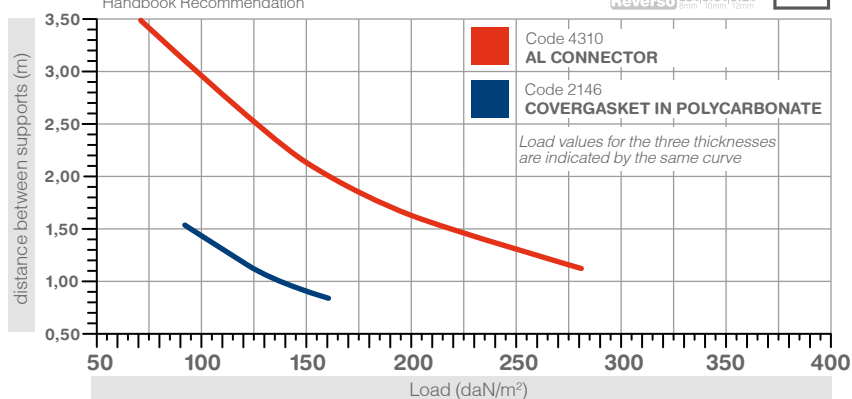
Maximum loads on two supports

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



Cod.2146
PC COVERGASKET



Cod.4310
ALU CONNECTOR



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



START PROFILE
Detail of insertion of start profile on roof



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



4303
PC cap for profile



2146
PC covergasket for Reverso panels



2147 - th.8/10mm
2245 - th.12mm
PC starter profile



2148 th.8mm
2265 th.10mm
2250 th.12mm
PC terminal profile



4310
Alu connector for Reverso



4319/200
Joining eclipse for Alu connector



4326 th.8mm
4350 th.10mm
4355 th.12mm
Flat fastening Alu bracket



4264
Vertical fastening alu bracket



4138
Flat fastening stainless steel bracket (th.8mm)



4970/600/RV th.8mm
4971/600/RV th.10mm
4972/600/RV th.12mm
Alu obturating strip drip Reverso



4213 dim. 40x35x580
LDPE foam pad



4318
LDPE foam pad for connector (+4310)



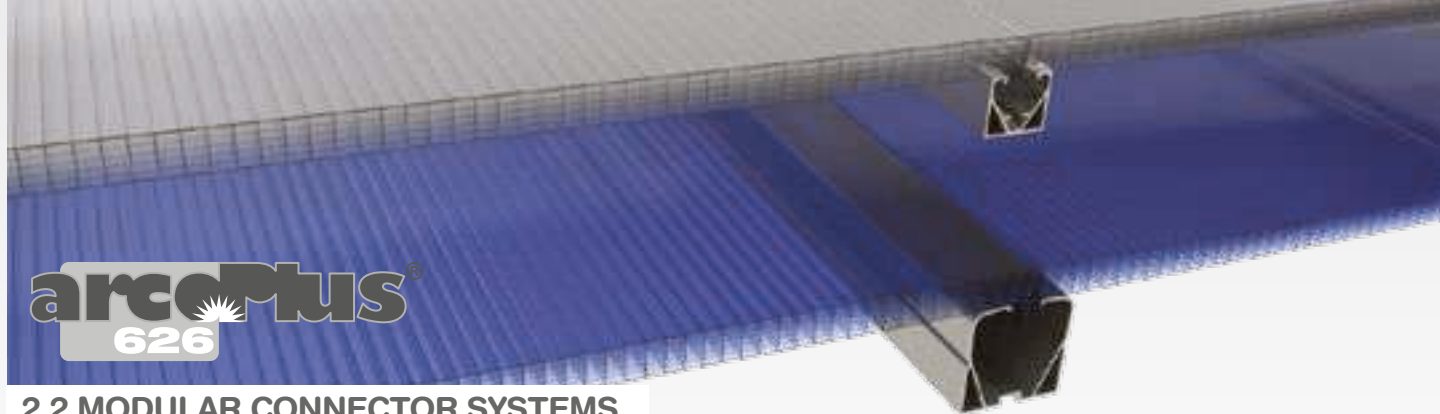
4329
LDPE foam seal strip 4x15mm



4316 M6 spheric acorn nut UNI 5721 A2
4315 Screw M6 x 20 ISO 4762 A2
Accessories for connector

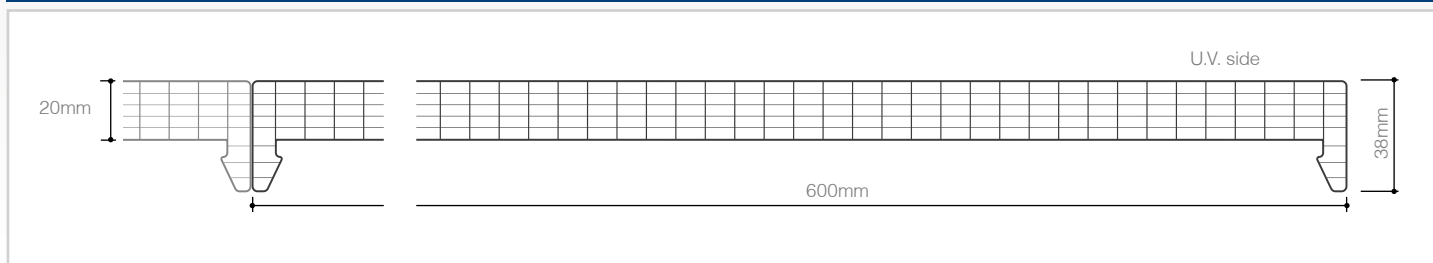


4327
Taping surcharge



arcoPlus®
626

2.2 MODULAR CONNECTOR SYSTEMS



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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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:





- **Curtain walls, flat roofing**
min. slope 5%

- **curved roofing**
arcoPlus®626 minimum radius 4,0m

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
-  Curtain walls

CERTIFICATION



arcoPlus626

Avis Technique
n°2.2/11-1485 *V1 published 31/07/2017

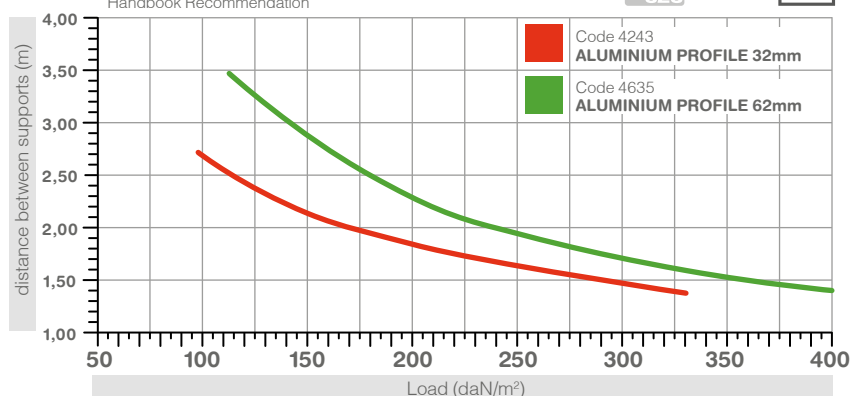




FLAT SYSTEM LOAD RESISTANCE

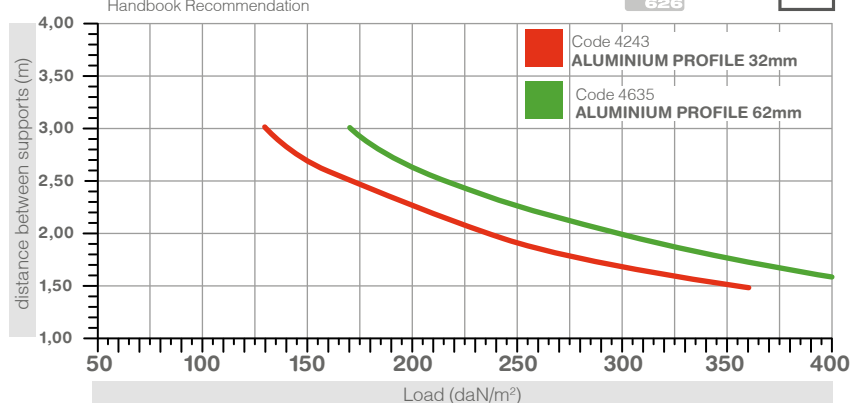
Maximum loads on two supports

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



Code 4243 (straight)
ALUMINIUM PROFILE 32mm



Code 4635 (straight)
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

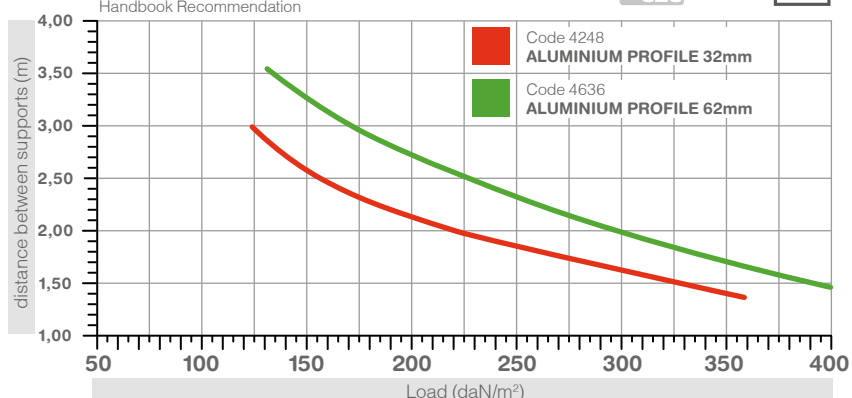
section-breaker profiles. The snap-on connection and complete range of accessories and aluminium perimeter profiles combine to guarantee a perfectly watertight seal and considerable wind load resistance.



CURVED SYSTEM LOAD RESISTANCE

Maximum loads on two supports R.4.000mm

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



Code 4248 (curved)
ALUMINIUM PROFILE 32mm

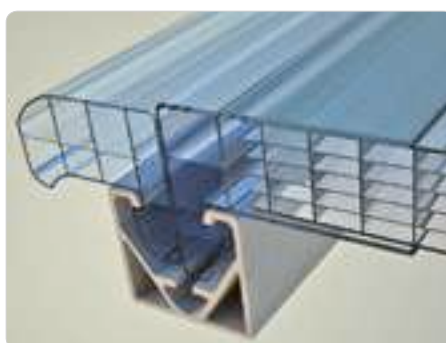
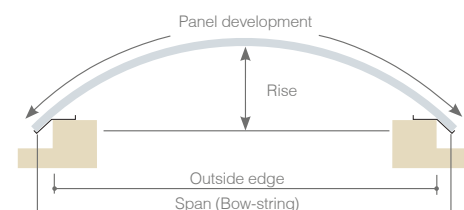


Code 4636 (curved)
ALUMINIUM PROFILE 62mm

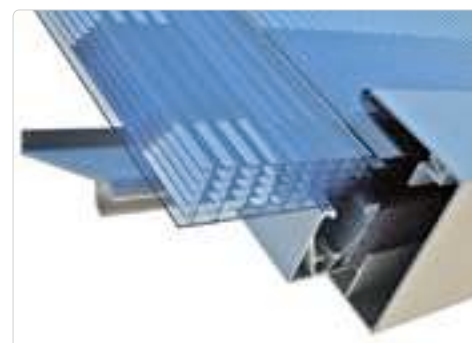
CURVED SELF-SUPPORTING SYSTEM

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 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 DRIP-STOPPER "V" EAVE

In the joint profiles in roofing applications it is possible to insert suitable "V" profiles with flushing function.



WALL SYSTEM

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

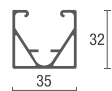


DETAIL CORNER

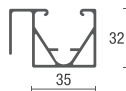
Click insertion of corner profiles in polycarbonate with aluminium profile

METAL PROFILES

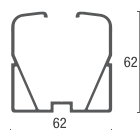
4243 (straight)
4248 (curved)
Alu tubular profile 32mm



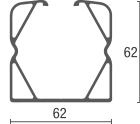
4244 (straight)
4249 (curved)
Alu edge profile



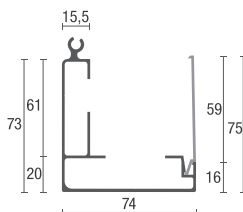
4635 (straight)
Alu tubular profile 62mm



4636 (curved)
Alu tubular profile 62mm



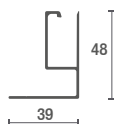
4271
Alu base/side profile (+4252)



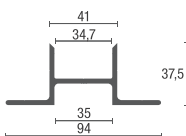
4588
Alu corner-profile (+2550)



4589
Alu end profile



4260
Fixing eclipse for chassis (+4243)



1400
Drip-stopper "V" eave
for tubular 4243/4248



1356
Drip-stopper "V" eave
for tubular 4635/4636



1169/B
Slip Coat Gasket



1169/B/AGS
Overlap Slip-coated
seal strip

ACCESSORIES



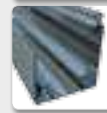
4243 (straight)
4248 (curved)
Alu tubular profile 32mm



4244 (straight)
4249 (curved)
Alu edge profile



4635 (straight)
4636 (curved)
Alu tubular profile 62mm



4271
Alu base/side profile
(+4252)



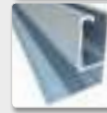
4252
Alu closing support
for U-frame (+4245/4271)



4260
Fixing eclipse for chassis (+4243)



4588
Alu corner-profile (+2550)



4589
Alu end profile



2179
PC starter profile



2180
PC terminal profile



2550
Corner 90° cover-profile
in PC (+4588/4738/4740)



4213 dim. 40x35x580
4221 im 40x70x570
LDPE foam pad



4974/600 th.20mm
Alu closing edge 20mm

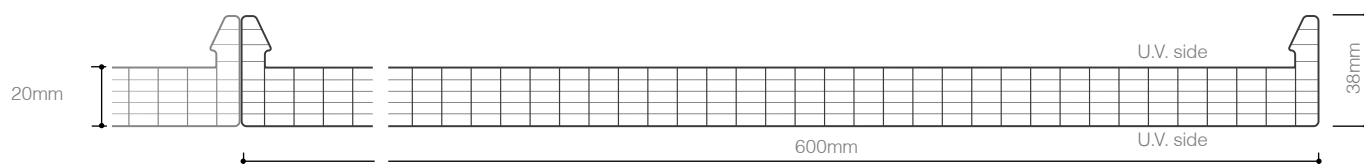


2182
PC block cover
for 20mm panel



4327
Taping surcharge

2.2 MODULAR CONNECTOR SYSTEMS



**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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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
- Skylights

CERTIFICATIONS



arcoPlus626 Reversò

Document Technique d'Application
n°5/14-2374 published 28/05/2015

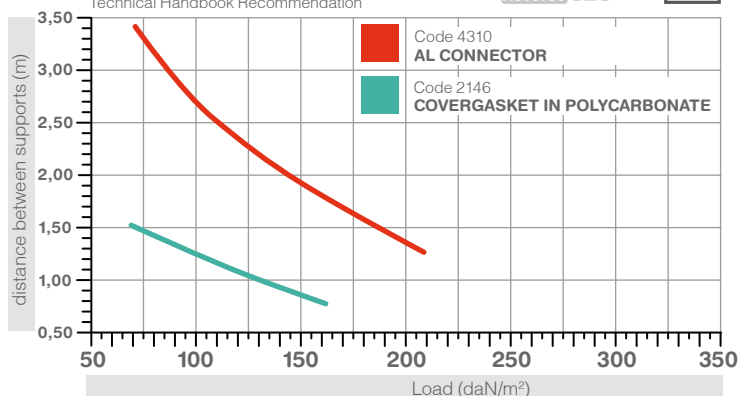




LOAD RESISTANCE

Maximum loads on two supports

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



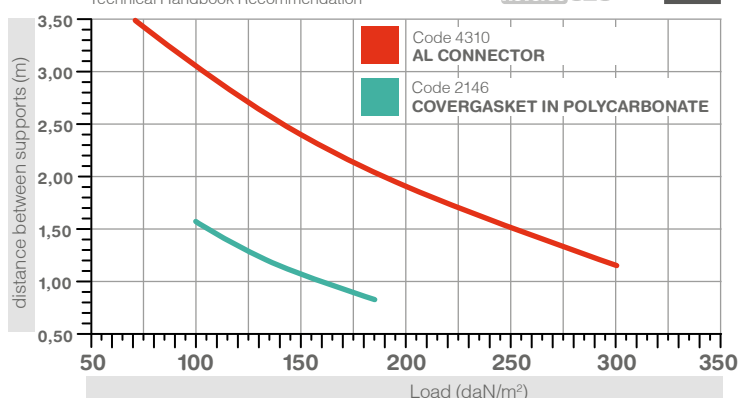
Cod.2146
PC COVERGASKET



Cod.4310
ALU CONNECTOR

Maximum loads on more supports

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



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.

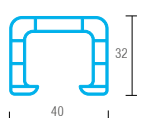
ACCESORIES

The arcoPlus® system includes a complete range of accessories to facilitate installation. The air cells of the panels must be sealed using a specific polycarbona-

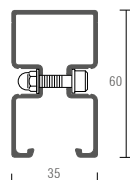
te profile or vented aluminium breather tape. This allows correct ventilation and prevents soiling on the inside.

PERFIL DE UNIÓN

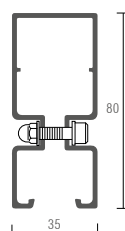
El sistema prevé la posibilidad de elegir un tipo distinto de perfil de unión, según las necesidades de resistencia exigidas.



Cod.2146
POLYCARBONATE
COVERGASKET



Cod.4310
ALUMINIUM
CONNECTOR



Cod.4499 - Twister
ALU REINFORCED
CONNECTOR



4303

PC cap for profile



2146

PC covergasket for
Reverso panels



2179 th.20 mm

PC starter profile



2180 th.20 mm

PC terminal profile



4310

Alu connector



4499 - twister

Alu reinforced connector



4319/200

Joining eclipse
for Alu connector



4328 th.20 mm

Flat fastening
Alu bracket



4264

Vertical fastening
alu bracket



4263

Flat fastening stainless steel
bracket



4213 dim. 40x35x580

LDPE foam pad



4329

LDPE foam seal strip
4x15mm



4316 M6 spheric acorn nut UNI 5721 A2



4315 Screw M6 x 20 ISO 4762 A2

Accessories for connector



2182

PC block cover



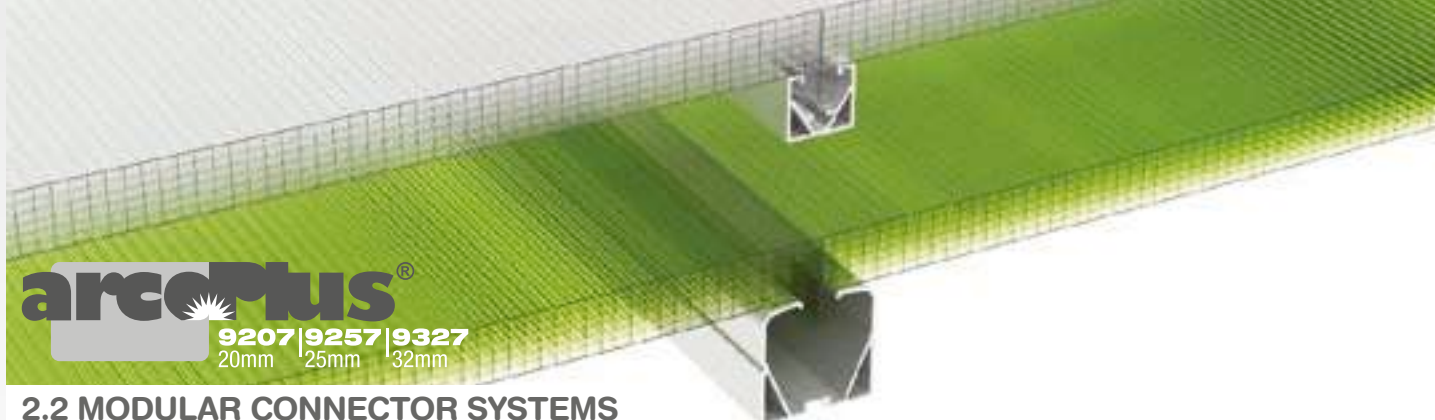
4974/600/RV th.20mm

Alu obturating strip
drip-free Reverso

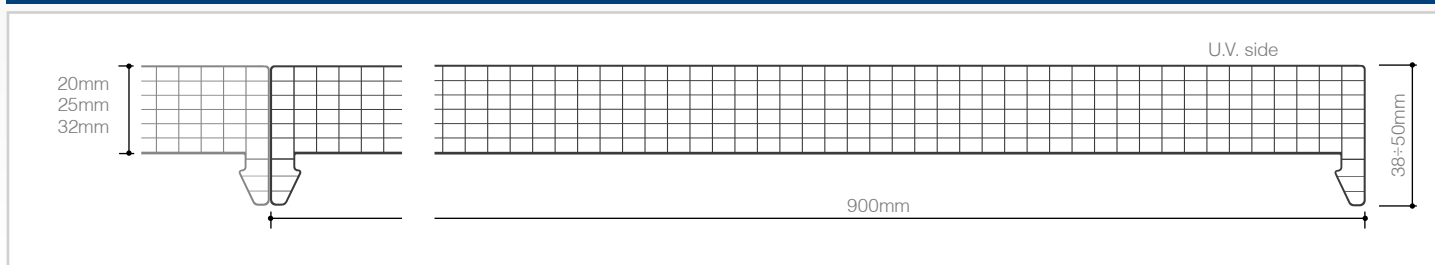


4327

Taping surcharge



2.2 MODULAR CONNECTOR SYSTEMS



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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7-1,4-1,3 W/m²K
Acoustic insulation Rw (ISO 717-1)	20 dB (20-25mm) 21 dB (32mm)
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).

- arcoPlus9207 th.20mm $R_{min} = 4.000mm$
- arcoPlus9257 th.25mm $R_{min} = 5.000mm$
- arcoPlus9327 th.32mm $R_{min} = 6.500mm$

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

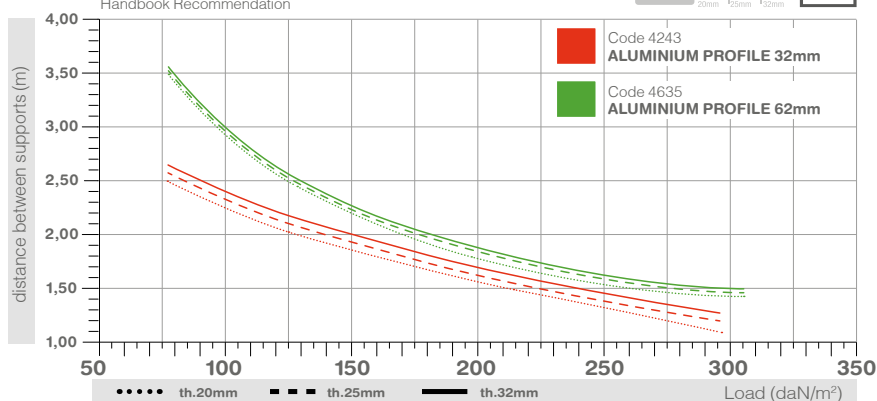




FLAT SYSTEM LOAD RESISTANCE

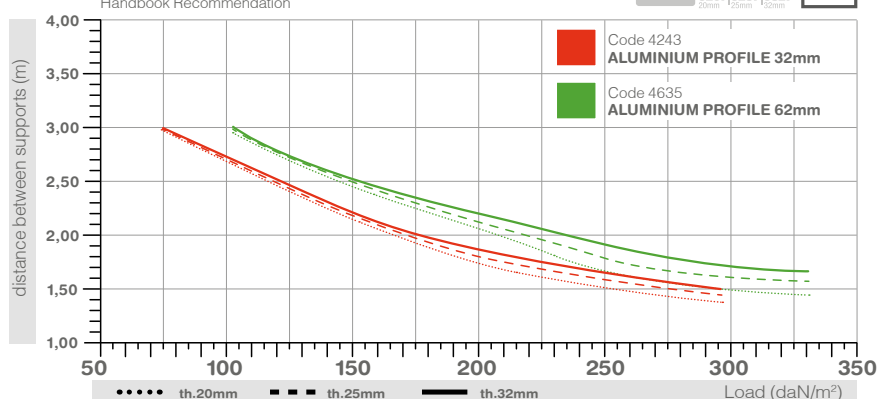
Maximum loads on two supports

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



Maximum loads on more supports

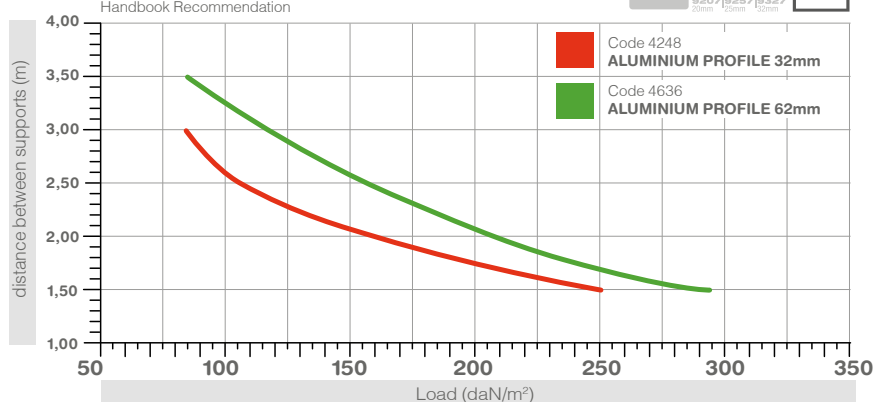
Values below refer to product installed according to the Technical Handbook Recommendation



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



Code 4243 (straight)
ALU PROFILE 32mm



Code 4635 (straight)
ALU PROFILE 62mm



Code 4248 (curved)
ALU PROFILE 32mm



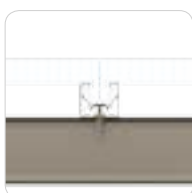
Code 4636 (curved)
ALU PROFILE 62mm



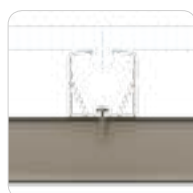
SELF-SUPPORTING SYSTEM

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.



1400
Drip-stopper eave
for cod. 4243



1356
Drip-stopper eave
for cod. 4635-4636



DETAIL DRIP-STOPPER "V" EAVE

In the joint profiles in roofing applications it is possible to insert suitable "V" profiles with flushing function.

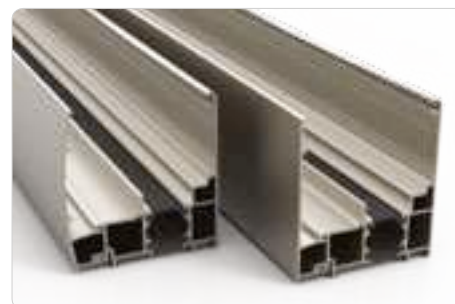
ACCESSORIES

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.

Thanks to the modularity of frame profiles 4800/4802/4805, it is possible to choose both the shape and the color of the front flap. While maintaining the same functionality, all 3 versions can be provided with curved or straight silhouette, depending on the design needs.

In addition to standard anodized surface-finish, the profiles can be painted with any shade. Moreover an additional feature allows to diversify the color between the indoor and outdoor side by giving two different nuances for base profile (visible in indoor environments) and for flap (exposed to the outside).



DIFFERENT TYPES OF FLAPS
Curved and straight flaps



DIFFERENT COLORS OF PROFILES
Diversify the color between the inner and outer side



Base 4271
and foam pad 4465



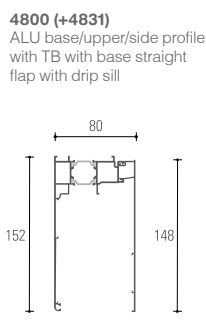
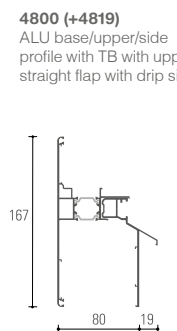
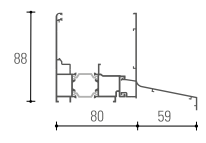
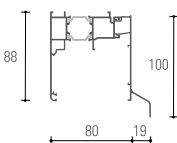
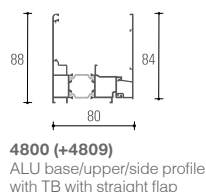
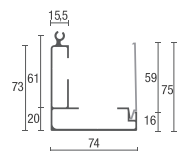
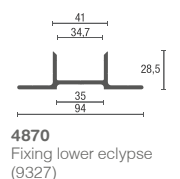
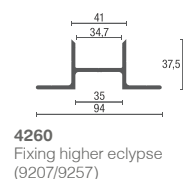
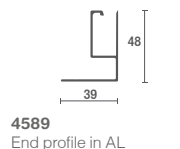
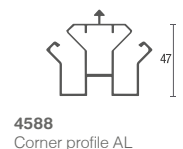
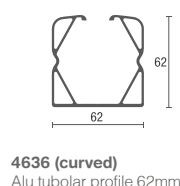
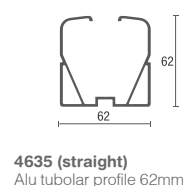
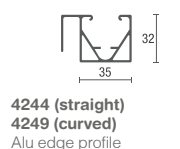
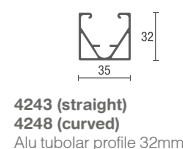
Base 4800 with straight flap 4809
and foam pad 4465



Base 4800 with straight flap 4809
and Alu closing edge 4899



METAL PROFILES

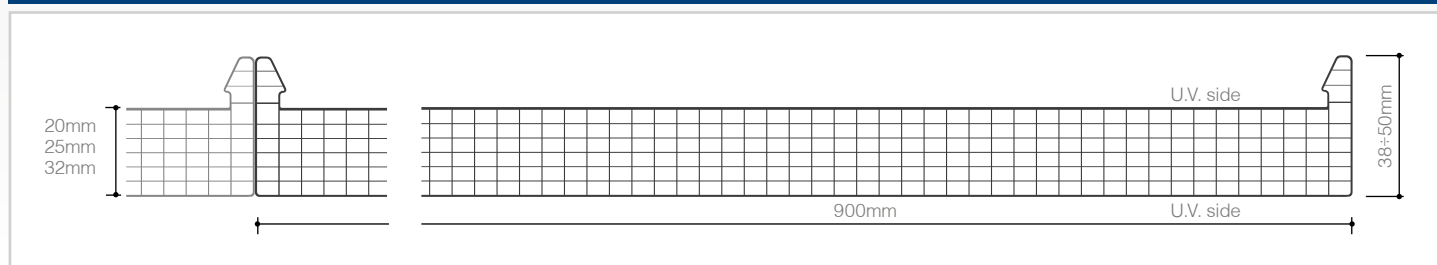


ACCESSORIES





2.2 MODULAR CONNECTOR SYSTEMS



**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
Standard colors	see page 11
Special colors	on demand

TECHNICAL FEATURES

Thermal transmittance U	1,7-1,4-1,3 W/m ² K
Acoustic insulation Rw (ISO 717-1)	20 dB (20-25mm) 21 dB (32mm)
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.

- arcoPlus9207 sp.20mm $R_{min} = 4.000mm$
- arcoPlus9257 sp.25mm $R_{min} = 5.000mm$
- arcoPlus9327 sp.32mm $R_{min} = 6.500mm$

ADVANTAGES

- ❖ Easy and low-cost installation
- ❖ Light transmission
- ❖ Resistance to U.V. rays and to hail
- ❖ Heat insulation
- ❖ Bendability $R_{min} = 4,0m$ (th.20mm)

APPLICATIONS



Translucent roofing



Curved roofing

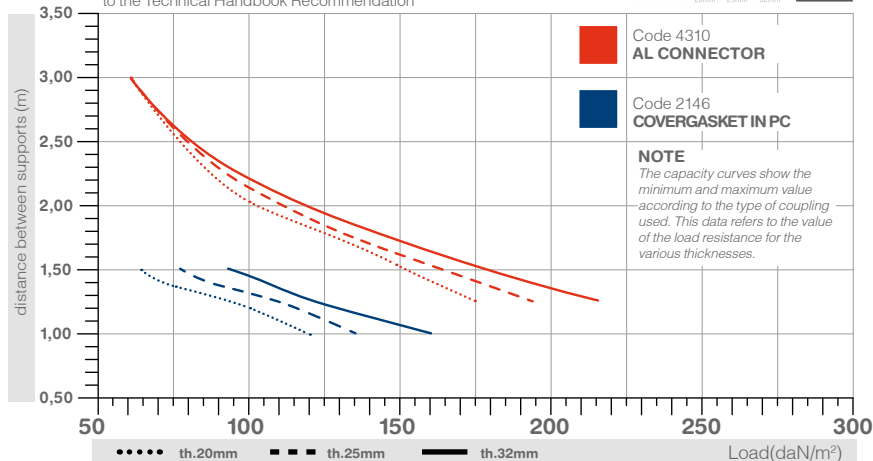




FLAT SYSTEM LOAD RESISTANCE

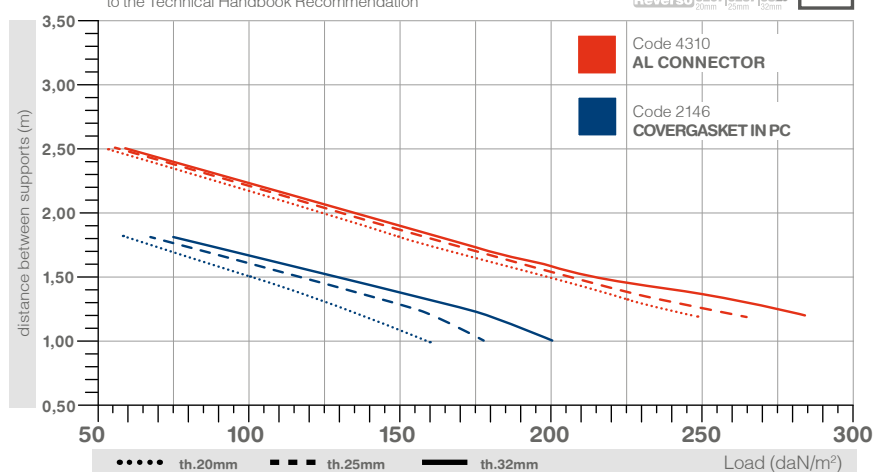
Maximum loads on two supports

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



Maximum loads on more supports

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



Cod.2146
PC COVERGASKET



Cod.4310
ALU CONNECTOR

COMPLETE SYSTEM FOR HIGH PERFORMANCE ROOFING

Suitable system to realize flat or curved roofings apps by means of multiwall modular connectable panels, that are anchored to the supporting sub-structures using special aluminum brackets to guarantee both the sealing of the load resistance. According to the project's required

needs the system can be provided with polycarbonate cover gasket profile in order to reduce the structure shadows for a maximum aesthetic surface uniformity or with an aluminum connector for ensuring more load/mechanical strength.

ACCESSORIES



4303

PC cap for profile



2146

PC covergasket for Reverso panels



2179 th.20 mm

2714 th.25 mm

2710 th.32 mm

PC starter profile



2180 th.20 mm

2716 th.25 mm

2712 th.32 mm

PC terminal profile



4310

Alu connector

4499 - twister

Alu reinforced connector



4319/200

Joining eclipse for Alu connector



4328 th.20 mm

4710 th.25 mm

4712 th.32 mm

Flat fastening Alu bracket



4465 dim. 50x35x875

LDPE foam pad



4318 (connector 4310)

4462 (connector 4499-twister)

LDPE foam pad for connector



4316 M6 spheric acorn nut UNI 5721 A2

4315 Screw M6 x 20 ISO 4762 A2

Accessories for connector



4329

LDPE foam seal strip 4x15mm



4950

Taping surcharge



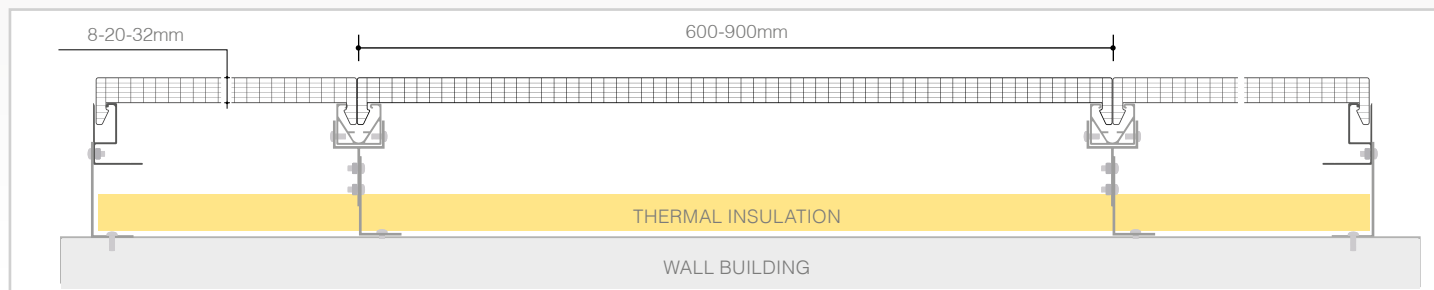
4974/900/RV th.20mm

4975/900/RV th.25mm

4976/900/RV th.32mm

Alu obturating strip drip-free Reverso

2.2 MODULAR CONNECTOR SYSTEMS



Modular system of UV protected multiwall polycarbonate for special facade installation



SPECIAL TREATMENT

PRODUCTION STANDARDS

Panel	684	626	9207	9327
Thickness (mm)	8	20	20	32
Structure (walls)	4	6	7	7
Effective modular width (mm)	600	600	900	900

TECHNICAL FEATURES

Thermal transmittance U (W/m²K)	3,3	1,7	1,7	1,3
Linear thermal expansion	0,065 mm/m°C			
Temperature range	-40°C +120°C			
U.V. rays protection	Coextrusion			
Fire reaction EN 13501-1	EuroClass B-s1,d0			

DESCRIPTION

ArcoPlus®VT facade is a range of 4 modular systems composed of multiwall polycarbonate panels with 3 thicknesses options 8-20-32mm and variable number of internal walls.

Panels are framed by special aluminum profiles set to guarantee flatness of PC cladding, whatever the wall surface to be covered.

ADVANTAGES

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

APPLICATIONS

- ▶ Facade cladding
- ▶ Ventilated wall

CERTIFICATIONS



arcoPlus626 sistema VT facade
Avis Technique
n°2/13-1551 published 14/08/2013

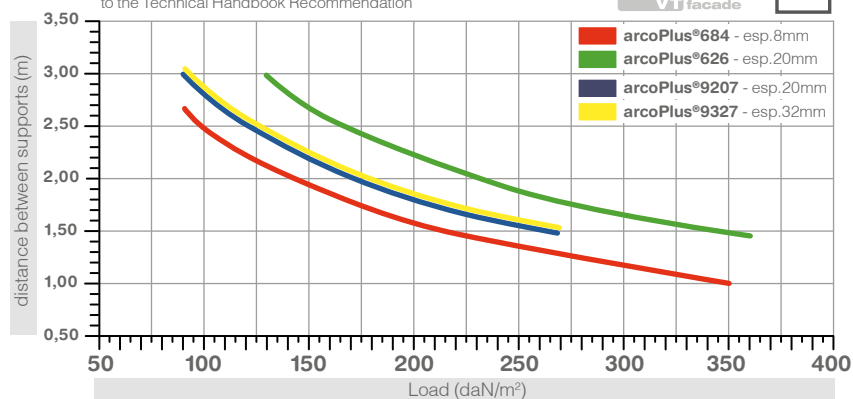




LOAD RESISTANCE

Maximum loads on more supports

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

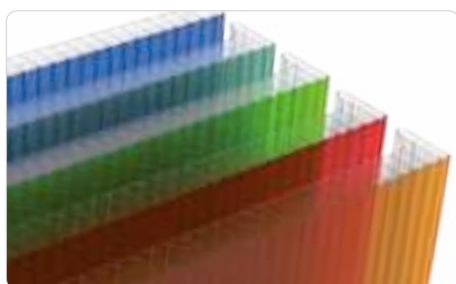
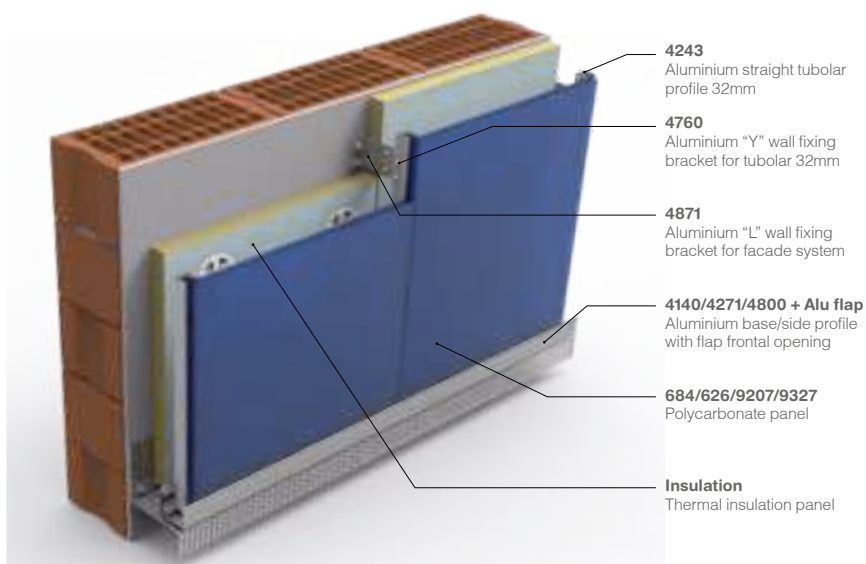


SPECIAL FACADE SYSTEM

The arcoPlus®VT facade system has been designed especially for meeting the new building requirement about thermal insulation performances in external coating (EWIS). For this reason the system provides all the frame elements, both perimeter ones and support ones, in order to realize

perfect installation and to guarantee water tightness related to an healthy ventilation into the cavity, even for wide dimensions applications.

Special treatments can give more benefits to the architectural project according to each environmental needs.



DOUBLE COLOR PANELS

for creating particular setting by playing with light transmission effects



ABSOLUT AB TREATMENT

Several examples of coloured panels with the white internal wall



ABSOLUT AB TREATMENT

PC panels used for ventilated facades can be customized with the AB-Absolut treatment that creates an opaque (white or coloured) surface on the side closer to the masonry wall and keeping translucent (crystal or coloured) the external side. So it is possible to cover any wall blemishes, giving new life to urban requalification project, taking advantage also from the infinite Caleido possibilities.

ACCESSORIES

The arcoPlus®VT facade system provides a complete range of accessories to manage all installation needs.

Furthermore it is recommended to close the air channels at the panels edge-end with the corresponding polycarbonate closing profiles or using micro-perforated aluminum adhesive tapes, which allow proper air-circulating and prevent the dirty accumulation.

IMPORTANT:

The fixing of the Flap profile 4725 must be carried out with adhesive seal tape 4329 and UNI EN ISO 15481:2001 4,2x13 A2 self-drilling screws.



DIFFERENT TYPES OF FLAPS
Curved and straight flaps



DIFFERENT COLORS OF PROFILES
Diversify the color between the inner and outer side



JUNCTION OF ADJACENT PANEL

Paneling direct fixing to the supporting wall, maintaining the cavity for insulation material placement and air-circulation



SEAMLESS CONTINUITY FOR WALL-CORNERS

Polycarbonate corner profile fixed to below special aluminum profile



CLADDING SIDE-END

Paneling closure using suitable aluminum terminal profile

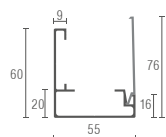


DETAIL OF CLADDING BASE

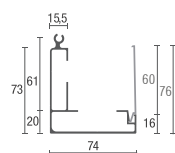
Installation of profile 4271 to create facade base-support using panels th.20mm



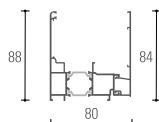
METAL PROFILES



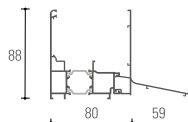
4140
Aluminium base/side profile with flap frontal opening



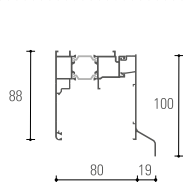
4271
Aluminium base/side profile



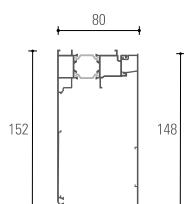
4800 + 4809
Aluminium base/upper/side profile with thermal break + straight flap



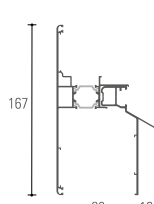
4800 + 4831
Aluminium base profile with thermal break + straight flap with drip sill



4800 + 4819
Aluminium upper profile with thermal break + straight flap with drip sill



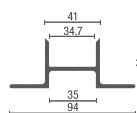
4802 + 4803
Aluminium upper snap profile with thermal break + straight flap for Oversize Heights



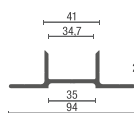
4805 + 4808
Aluminium horizontal joining profile with thermal break + straight flap for Oversize Heights



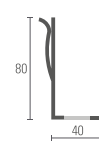
4243
Aluminium straight tubular profile 32mm



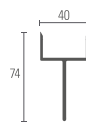
4260 (+4243)
Higher eclipse (684-626-9207)



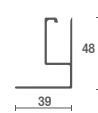
4870 (+4243)
Lower eclipse (9327)



4871 (+4760)
Aluminium "L" wall fixing bracket for facade system



4760 (+4871)
Aluminium "Y" wall fixing bracket for tubular



4589
Aluminium end-profile



1169/B
Slip-coated rubber seal strip



1169/B/AGS
Overlap Slip-coated seal strip



4213 dim. 40x35x580
4465 dim. 50x35x875
LPDE foam pad



4970/600 - th.8mm
4974/600 - th.20mm
Alu Obturating strip drip-free serie 600



4974/900 th.20mm
4976/900 th.32mm
Alu Obturating strip drip-free serie 900



1372
Internal PE base dripping eave (+4800)



4828
flat aligner for base TB profiles



4802+4803 (th.32mm)
Aluminium upper snap profile with thermal break + straight flap for Oversize Heights



4805+4808 (th.32mm)
Aluminium horizontal joining profile with thermal break + straight flap for Oversize Heights



4140 - th.8mm
Aluminium base/side profile with flap frontal opening



4899
Aluminium rear pad (th.32mm)



4760
Aluminium "Y" wall fixing bracket for tubular 32mm (+4871)



4871
Aluminium "L" wall fixing bracket for facade system (+4760)



4260
Higher eclipse +4243 (684-626-9207)
4870
Lower eclipse +4243 (9327)

ACCESSORIES



2147 th.8 mm
2179 th.20 mm
2710 th.32 mm
PC starter profile



2148 th.8 mm
2180 th.20 mm
2712 th.32 mm
PC terminal profile



4589
Aluminium end-profile



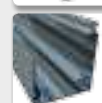
2550
Corner 90° cover profile in PC



4588 th.20 mm
4740 th.32 mm
Aluminium corner-profile



4243
Aluminium straight tubular profile 32mm



4271 th.20mm
Aluminium base/side profile



4800 th.32mm
Aluminium base/upper/side profile with thermal break



4755 - H.30
4275 - H.100
Snap-fixed Aluminium flap



4809 (+4800)
Base/upper/side straight flap



4831 (+4800)
Base straight flap with drip sill



4819 (+4800)
Upper straight flap with drip sill



4801 (+4800)
Upper curved flap with drip sill



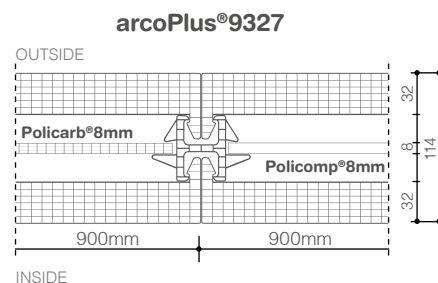
4804 (+4800)
Base/upper/side curved flap



4807 (+4800)
Base curved flap with drip sill



4327 th.8-20mm
4950 th.32mm
Taping surcharge



SPECIAL TREATMENT

Thickness	90-114 mm
Structure serie 600	6+(4)+6 walls
Structure serie 900	7+(4)+7 walls
Modular width	600-900 mm
Modular length	no limit

arcoPlus®DBconnect system is designed to create high-performance vertical translucent applications; it can be modulated with different arcoPlus® panels depending on the intended use, however, it is mainly promoted in 3 standard configurations using two arcoPlus® th.20mm panels joined each other by a special connector

Thermal transmittance U	0,7÷0,5 W/m²K
Acoustic insulation Rw (ISO 717-1)	25÷27 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

Thanks to its multi-wall panel structure, arcoPlus®DBconnect is the ideal solution for the realization of translucent vertical walls with very high thermal insulation benefits.

- ❖ Heat insulation
- ❖ Maximum light transmission
- ❖ Different interior/exterior colors

- Vertical windows
- Translucent curtain walls

arcoPlus626 Double Connector system
Document Technique d'Application
n°2/13-1582 *01Mod published in 06/10/2016

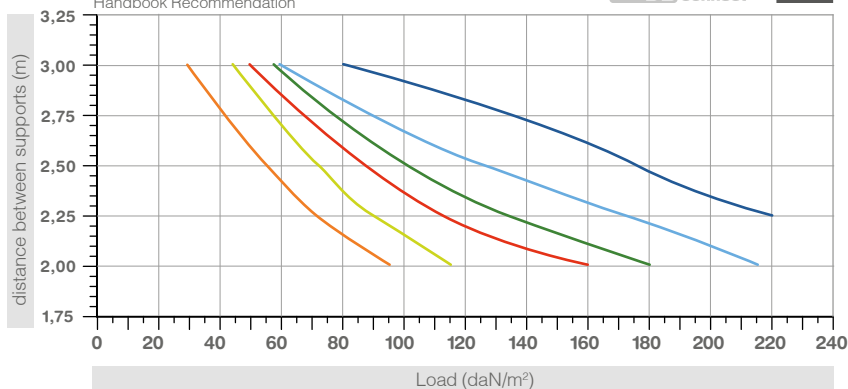




LOAD RESISTANCE

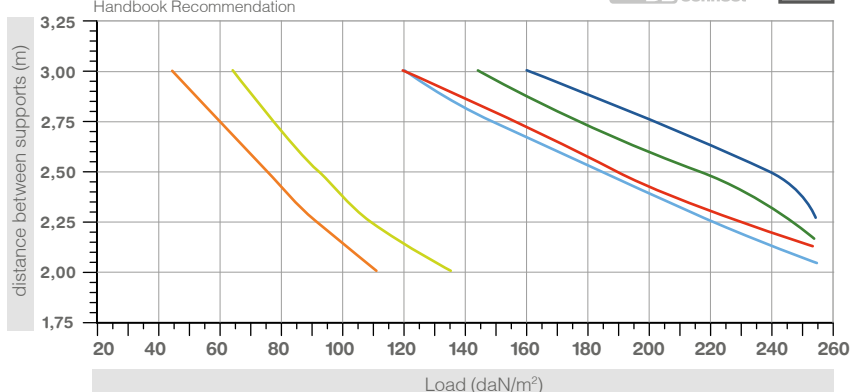
Maximum loads on two supports

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

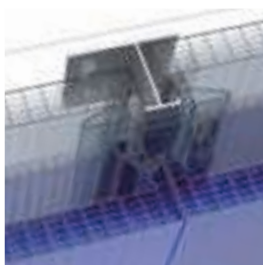


Maximum loads on more supports

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



The connection profile has been studied in two versions, polycarbonate and aluminium, with the aim to satisfy customized requirements about transmission effects and load resistance. Moreover, this snap-fitted system allows to not hole any panels ensuring aesthetic and functional advantages.



arcoPlus®626
20mm

arcoPlus®9207
20mm

arcoPlus®9327
32mm

POLYCARBONATE CONNECTOR THERMAL INSULATION

The wall system entirely made in PC, using the double polycarbonate connector cod.2282, reduces considerably the thermal dispersion of transparent facades, and maintains the harmony of large transparencies facades.

The span between horizontal substructure support should be about 2 m high.



arcoPlus®626
20mm

arcoPlus®9207
20mm

arcoPlus®9327
32mm

ALUMINUM CONNECTOR MECHANICAL RESISTANCE

The system realized with the aluminium double connector is characterized by an better resistance to mechanical stress, thus getting a larger span between fixing supports up to 3 m of distance.



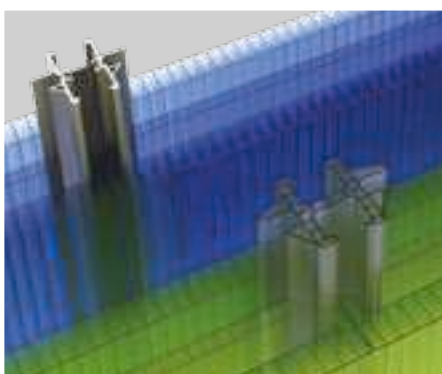
CHOOSE THE SUITABLE CONNECTOR

The choice between PC profile and Alu profile depends on final application needs and on its environmental context. Where it's required higher resistance to wind pressure the Alu one is recommended, whereas the PC solution is suitable to guarantee thermal insulation improvement.

DOUBLE CONNECTOR SYSTEM

The arcoPlus®DBconnect system allows the realization of modular walls of polycarbonate U.V. protected, with high coefficient of thermal insulation.

The polycarbonate system in the triple layer version, coupled with an exclusive Double Connector, significantly reduces the thermal dispersion of transparent facades.



CONNECTOR DETAIL
Aluminium and polycarbonate connector

UV RAYS PROTECTION

The external surface of each polycarbonate panels is coextruded with a high concentration of UV absorbers, in order to ensure good resistance against sun exposure damage or hail impact. Better results can be offered using the special UV-tech treatment that increases even more the surface hardness.

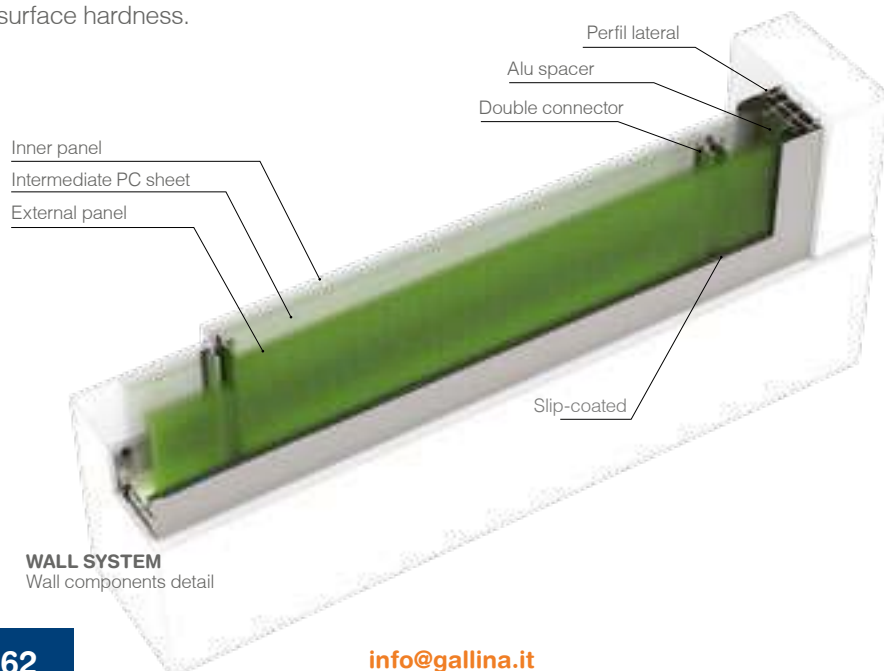
TRIPLE LAYER DB CONNECT SYSTEM

As mentioned above arcoPlus®DBconnect allows the realization wide translucent modular walls thanks to UV protected polycarbonate panels ensuring high thermal insulation performance.

To improve this feature the system can be customized adding a third inner translucent layer made of multiwall PC sheets th.8mm.

Otherwise the additional panelling could be achieved using solid PC sheets PoliComp® without reducing the light transmission benefit.

So inside this "multi-layer wall" there are two cavities that allow the natural air circulation and the formation of thermal convection flow.

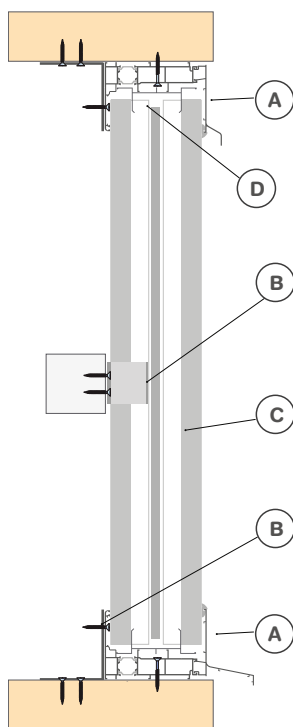


WALL SYSTEM
Wall components detail



WALL SECTION EXAMPLE

The arcoPlus®DBconnect system allows to build translucent vertical walls with high thermal insulation performance.



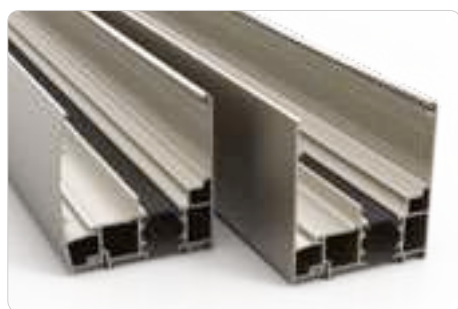
- a) Perimetral aluminum profile with thermal break
- b) Aluminium bracket/clamp for fixing the translucent system to the substructure support
- c) PC panels and PC start/end connection profiles to dial the façade
- d) Closing of edge-end of PC panels with micro-perforated Alu adhesive tapes.

ACCESSORIES

It is recommended to close the air channels at the panels edge-end using micro-perforated aluminium adhesive tapes, which allow proper air-circulating and prevent the dirty/dust accumulation.

IMPORTANT:

The fixing of the Flap profile 4725 must be carried out with adhesive seal tape 4329 and UNI EN ISO 15481:2001 4,2x13 A2 self-drilling screws.



DIFFERENT TYPES OF FLAPS
Curved and straight flaps



DIFFERENT COLORS OF PROFILES
Diversify the color between the inner and outer side



4844
Butterfly inner spacer for Double Connector 20+20mm



1169/B
Slip-coated rubber seal strip



1169/B/AGS
Overlap Slip-coated seal strip



1373
Internal PE base dripping eave for 32+32mm



4722 (arcoPlus626)
4723 (arcoPlus9207-9327)
Alu spacer for Double Connector



4328 th.20mm
4712 th.32mm
Flat fastening alu bracket



4263
Flat fastening stainless steel bracket



4329
Single-side self-adhesive PE-LD seal strip 4*15mm



4828
lat aligner for base TB profiles



4327 th.20mm
4950 th.32mm
Taping surcharge



ACCESSORIES



2282
Polycarbonate
Double Connector



4833
Aluminum
Double Connector



2179 th.20mm
2710 th.32mm
PC starter profile



2180 th.20mm
2712 th.32mm
PC terminal profile



2550
Corner 90°
cover profile in PC



4588 th.20mm
4740 th.32mm
Aluminium corner-profile (+2550)



4832
ALU perimeter profile with TB
for arcoPlus9327



4846
ALU perimeter profile with TB
for arcoPlus626-9207



4809 (+4832/4846)
Base/upper/side
straight flap



4831 (+4832/4846)
Base straight flap
with drip sill



4819 (+4832/4846)
Upper straight flap
with drip sill



4803 - H.150
Straight flap profile
for 4832-4846



4804 (+4832/4846)
Base/upper/side
curved flap



4807 (+4832/4846)
Base curved flap
with drip sill



4801 (+4832/4846)
Upper curved flap
with drip sill

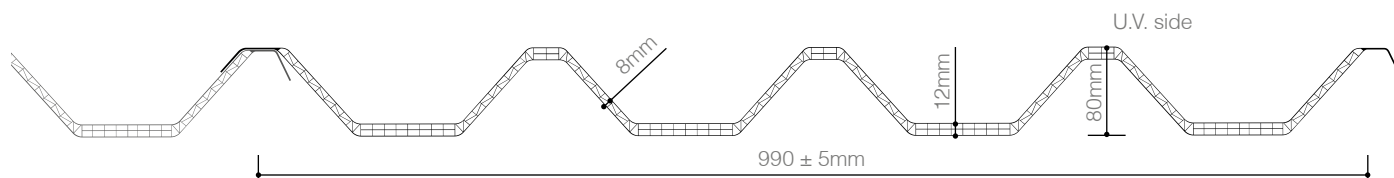


4274
Frame TB profile
for double connector



4755 - H.30
4742 - H.60
4743 - H.75
4275 - H.100
Snap-fixed Aluminium flap
for 4274 profile

2.3 MODULAR OVERLAPPING SYSTEMS



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



SPECIAL TREATMENT

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 U	2,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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 sky-lights 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

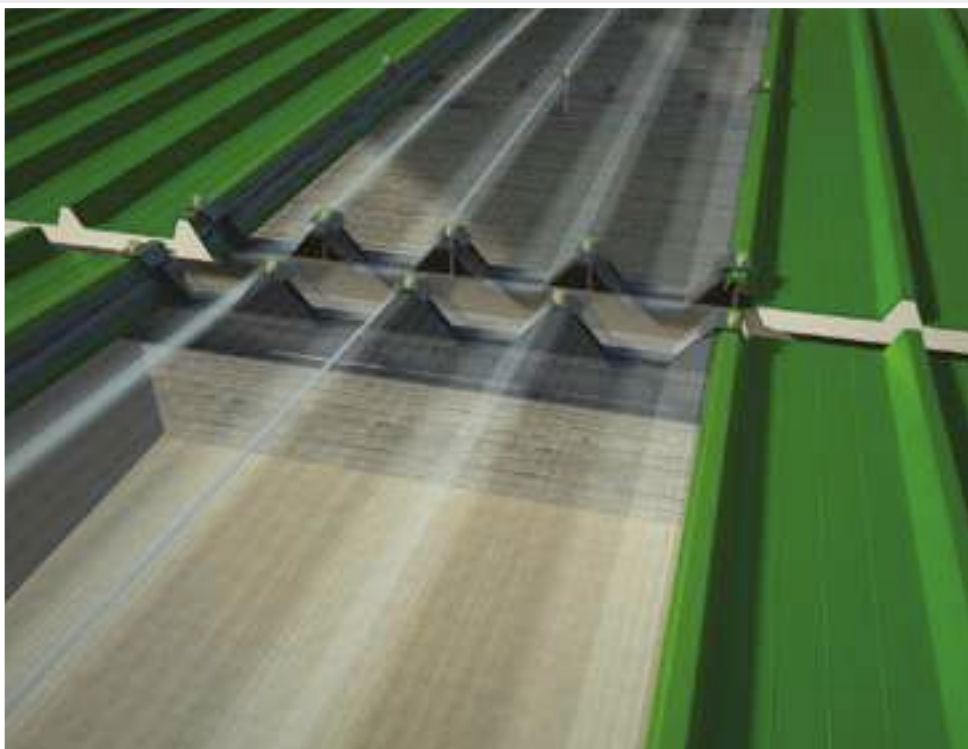
APPLICATIONS



Vertical windows

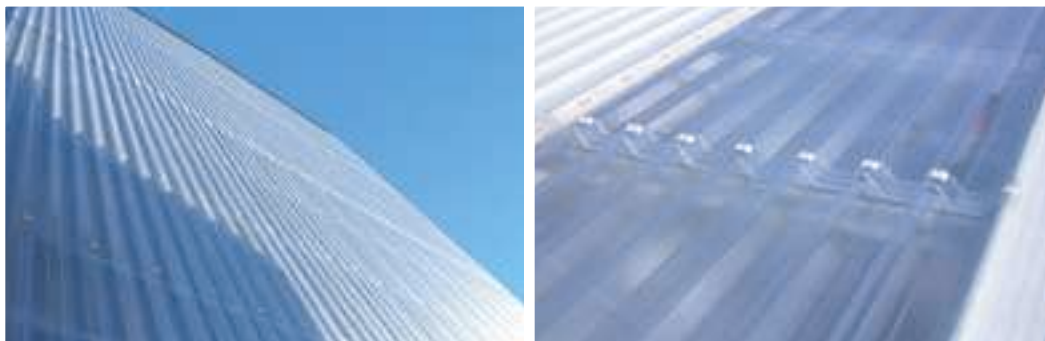


Roofing

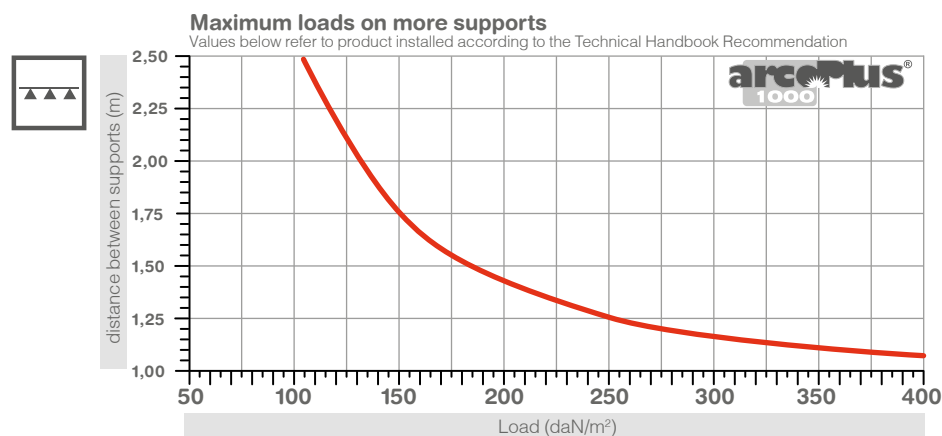


SKYLIGHT - PANEL APPLICATION

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



SHEET METAL RIDGE

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

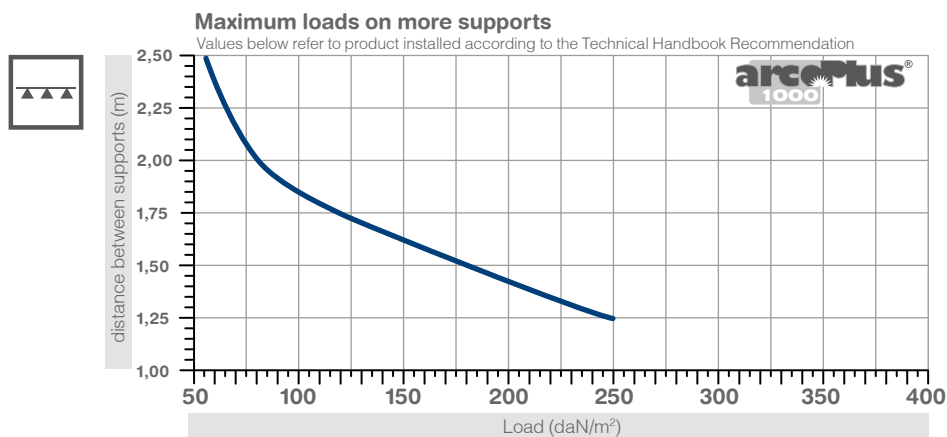


COVER FOOT

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 overlap-
ping of polycarbonate panels.

For roofing, recommended mini-
mum slope 7%.



CONTINUOUS ROOFING

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

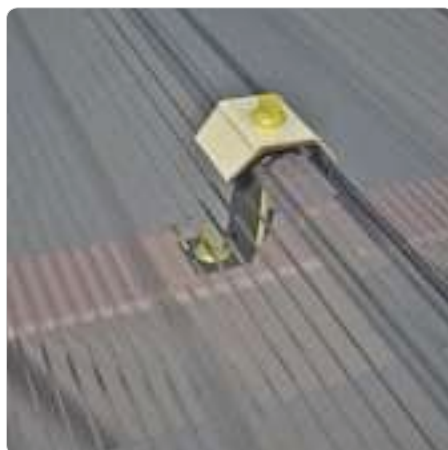


ACCESSORIES

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.

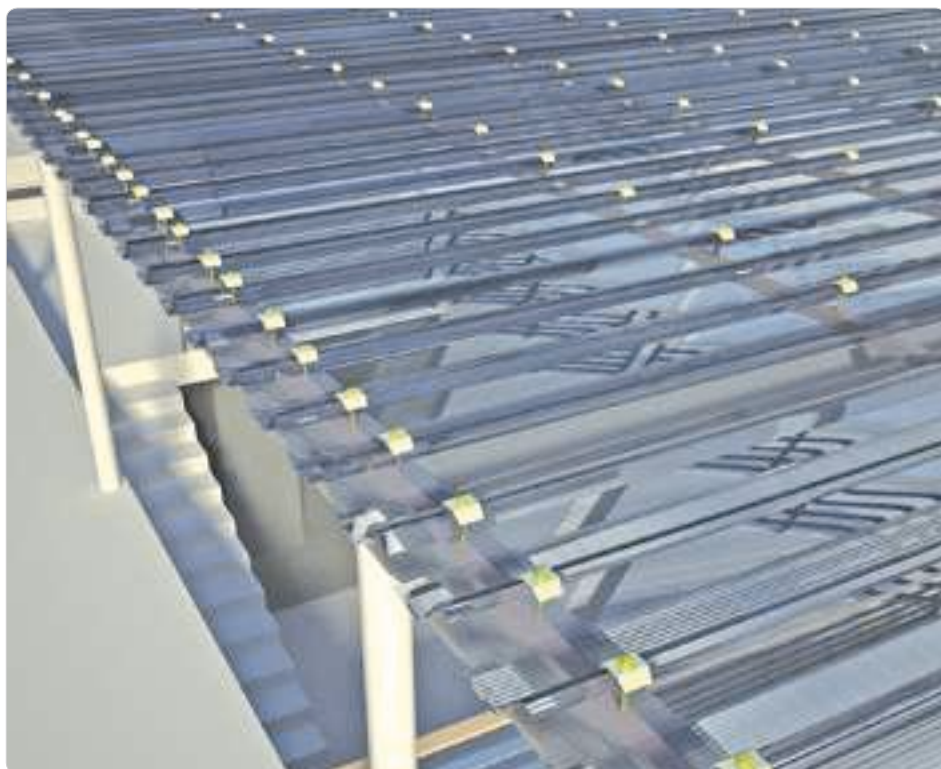
In addition to complete fastening assemblies, the system includes a tongue and groove seal, a flat strip for sealing overlap areas, a range of steel profiles including bracing brackets, and a special press-formed profile to be inserted as a reinforcement on the groove side of the panel.

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

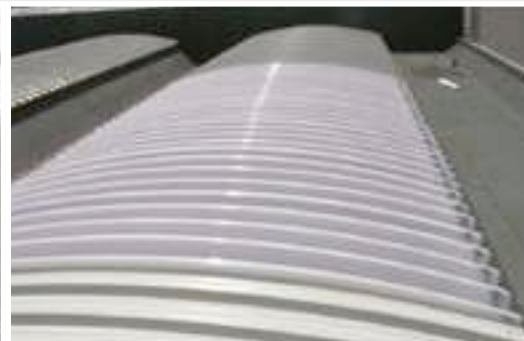
Roof profile (2 pieces)

NOTE:

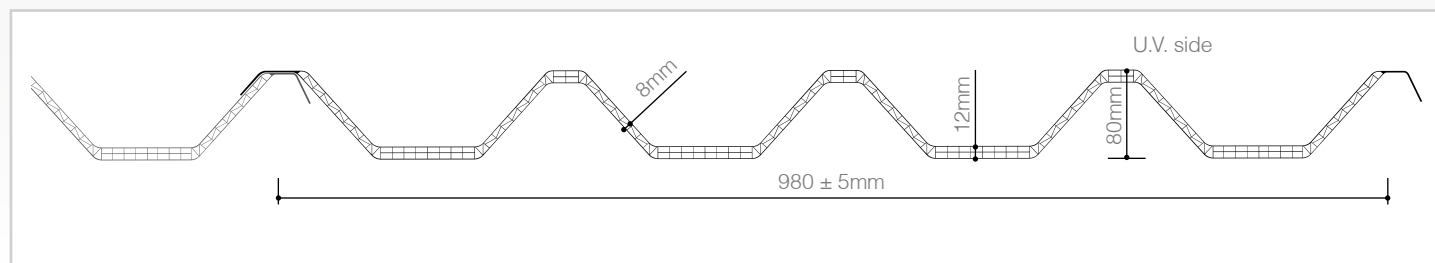
For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS

arcePlus®
1000Curvo



PROFILE



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

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

TECHNICAL FEATURES

Thermal transmittance U	2,7 W/m²K
Acoustic insulation Rw (ISO 717-1)	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.

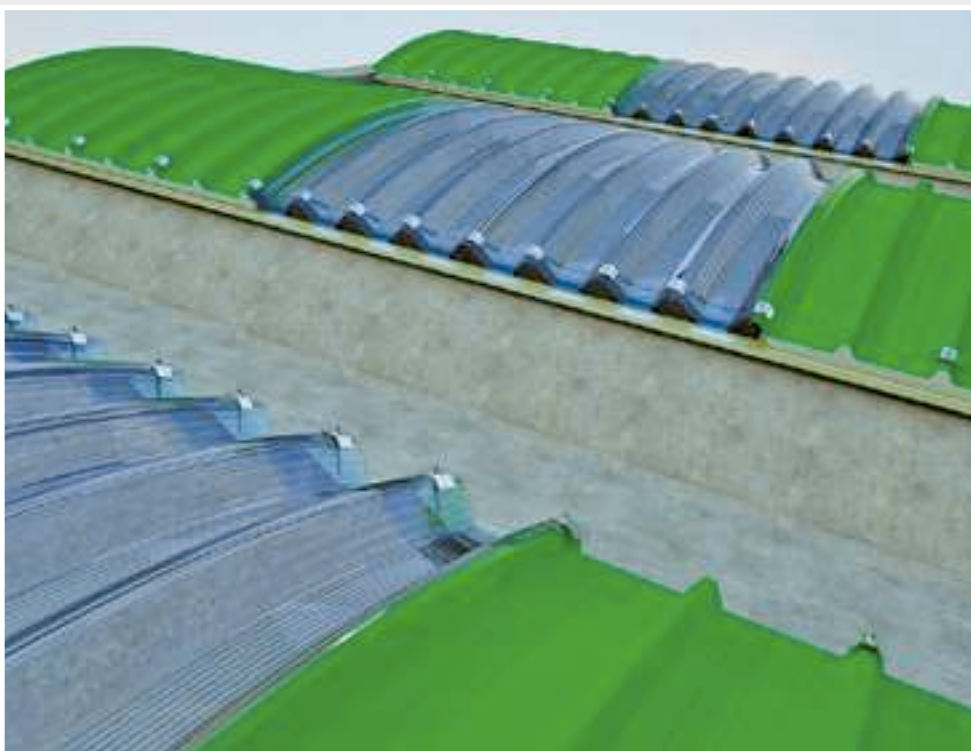
ADVANTAGES

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

APPLICATIONS

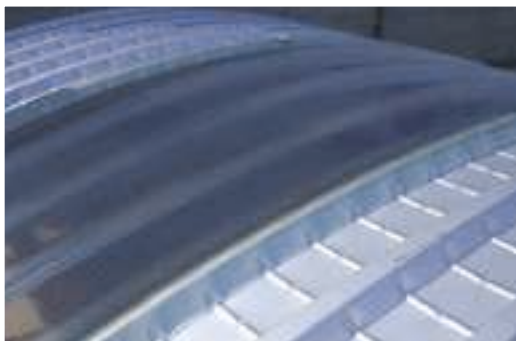


Curved roofing

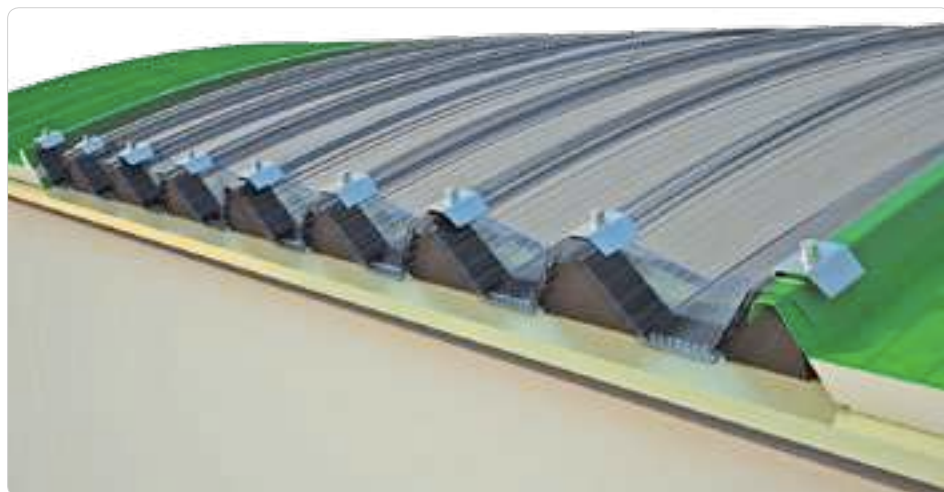
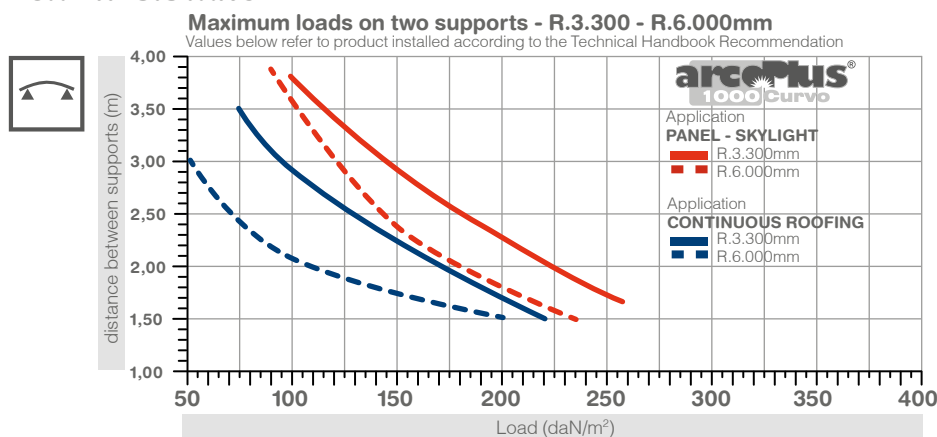


CURVED ROOFING

Detail of curved roofing in use with insulated metal panels



CURVED SYSTEM LOAD RESISTANCE

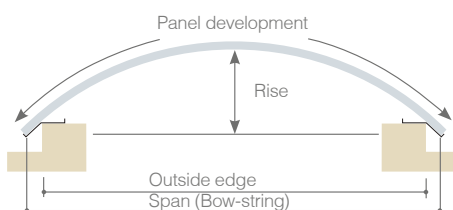


DETAIL OF ANCHORAGE

Detail of anchorage of panels to supporting structures

DEVELOPMENT TABLE

	R.3.300mm		R.6.000mm	
Span	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 Vippla
washer



4250
Gasket for gutter
PE-LD



4235
Central bracing
bracket



4232
Sealant tape
PE-LD 20x10

ACCESSORIES

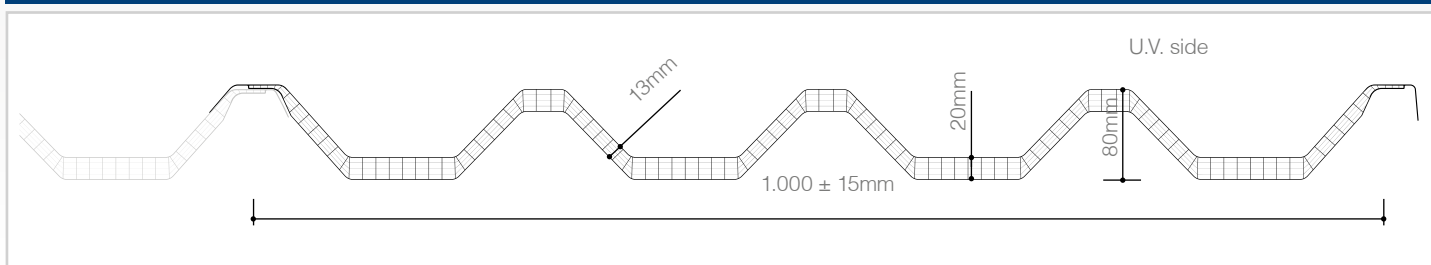
arcoPlus®1000 is a complete system for the construction of translucent roofing and includes a range of accessories that make it suitable for all purposes.

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

NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS



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



SPECIAL TREATMENT

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 transmittance U	1,8 W/m²K
Acoustic insulation Rw (ISO 717-1)	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

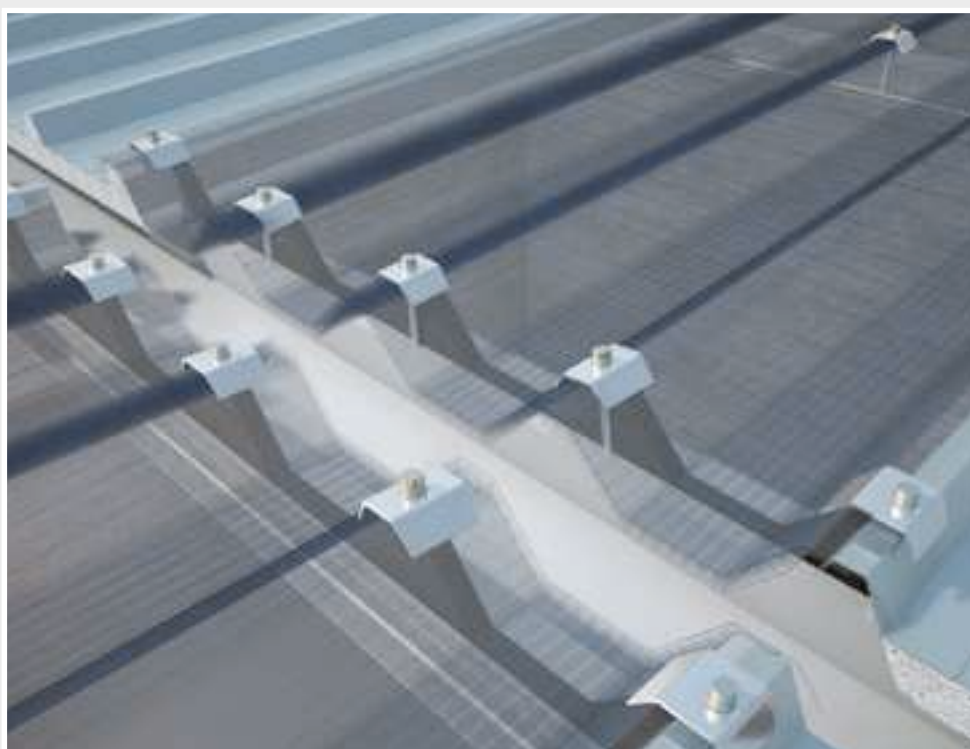
APPLICATIONS



Vertical windows



Roofing



SKYLIGHT - PANEL APPLICATION

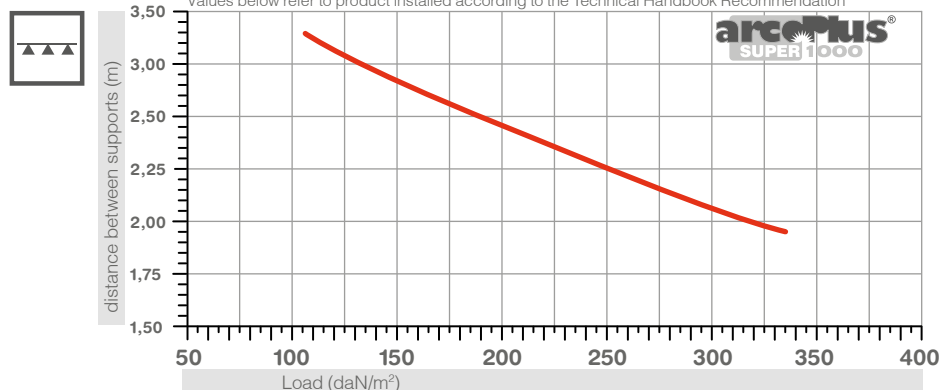
Construction of skylight with lateral overlapping of insulating roofing panels.
Detail of valley gutter



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

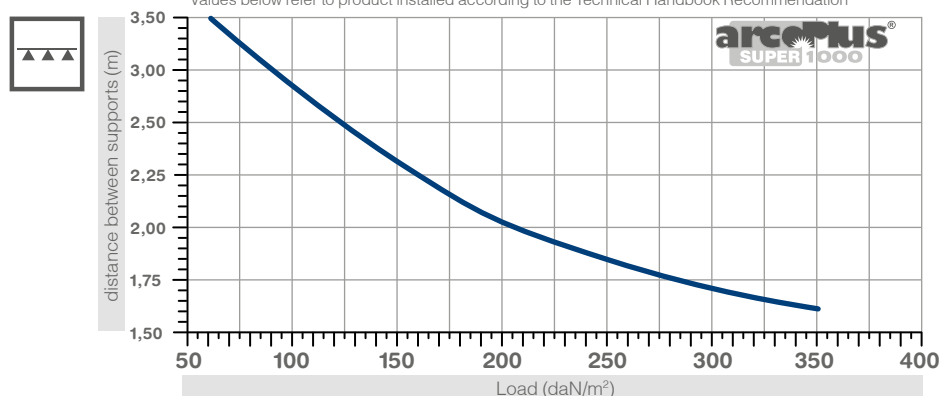
Panels laterally overlapping insulated corrugated metal roofing panels. Thanks to the specific design of the pro-

file 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%.

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 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



4482

Aluminium cap with gasket



4233

Screw with 6.3x120 Vipra 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)

NOTE:

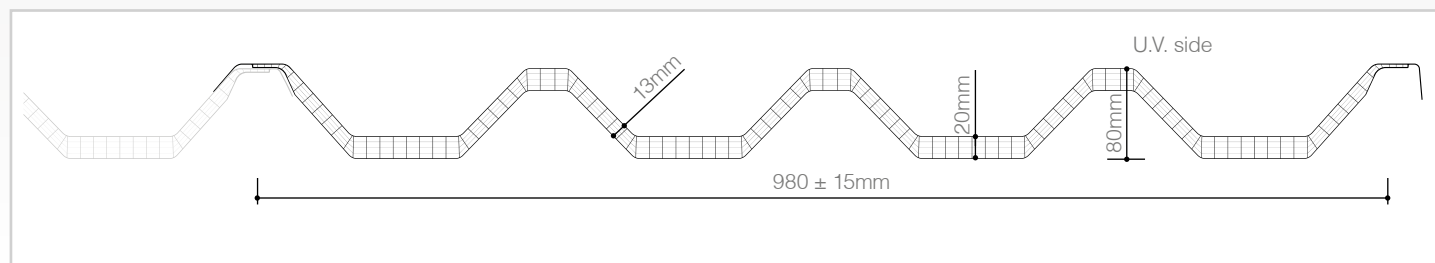
For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus®
SUPER 1000Curvo



PROFILE



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

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

TECHNICAL FEATURES

Thermal transmittance U	1,8 W/m²K
Acoustic insulation Rw (ISO 717-1)	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.

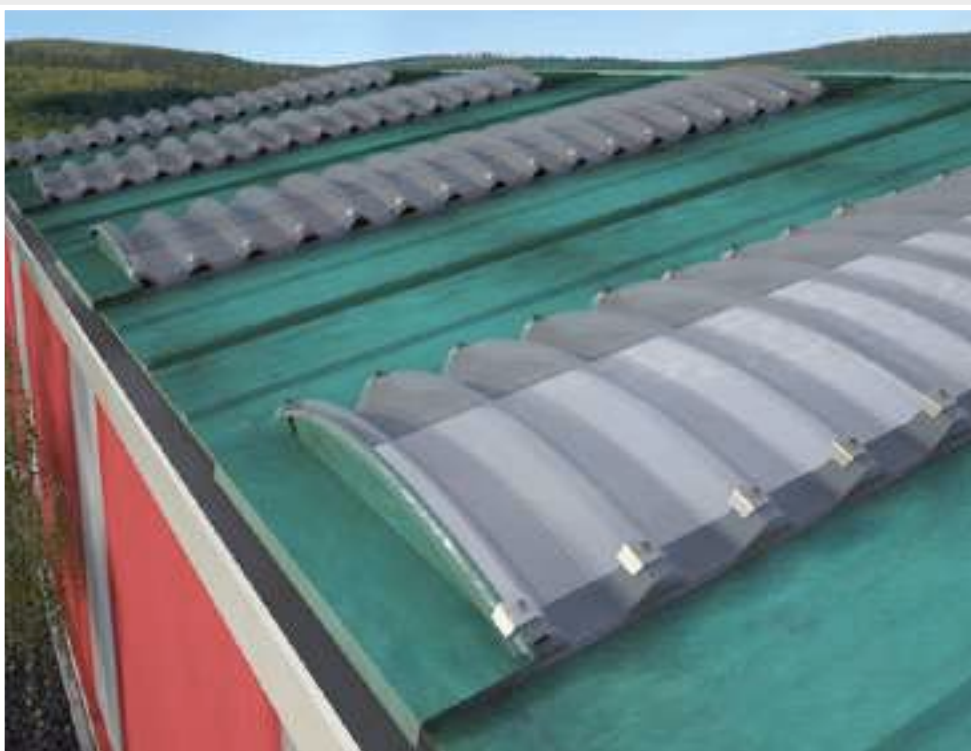
ADVANTAGES

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

APPLICATIONS

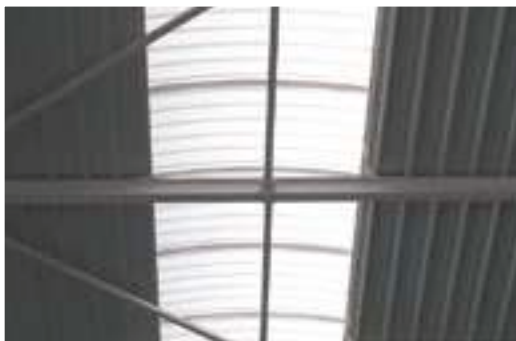


Curved roofing

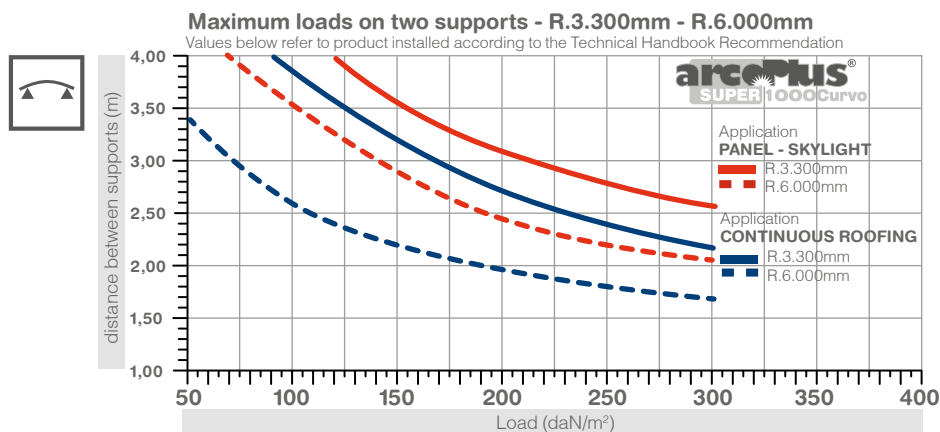


SKYLIGHT PANELS APPLICATION

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



CURVED SYSTEM LOAD RESISTANCE



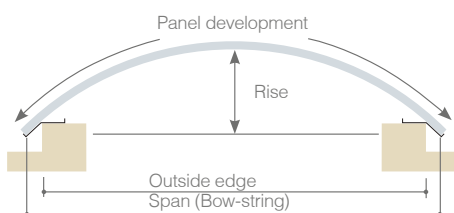
DETAIL OF ANCHORAGE

Detail of fixing panels to support structures



DEVELOPMENT TABLE

	R.3.300mm		R.6.000mm	
Span	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

ACCESSORIES

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.

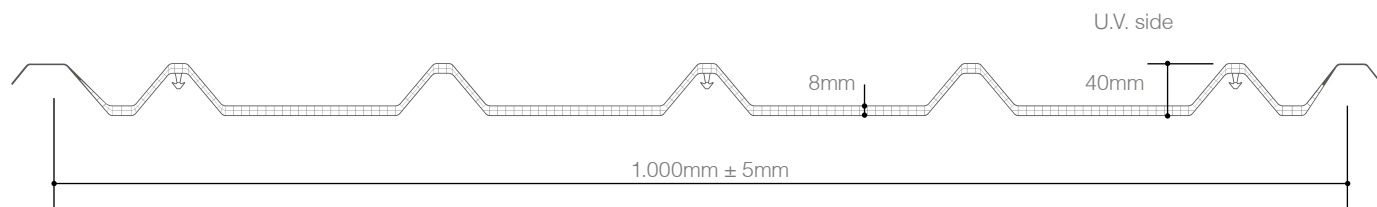
NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.



arcoPlus®
GrecaClick rippo

2.3 MODULAR OVERLAPPING SYSTEMS



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

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

TECHNICAL FEATURES

Thermal transmittance U	3,0 W/m²K
Acoustic insulation Rw (ISO 717-1)	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

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

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

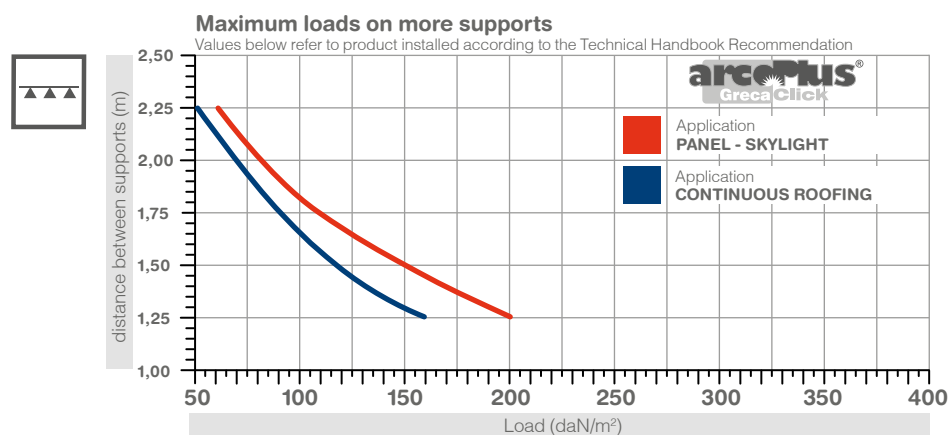
Skylight obtained by laterally overlapping with all types of foamed roofing panels or corrugated sheets. The special method of connection guarantees resistance to dynamic wind loads while at the same time allowing the material to expand. Recommended minimum slope 5%.

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

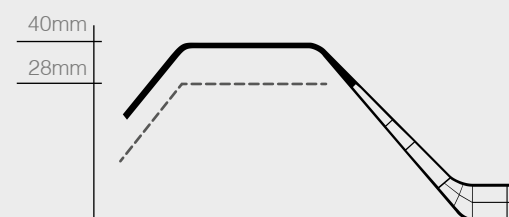
4407 Kit 20

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

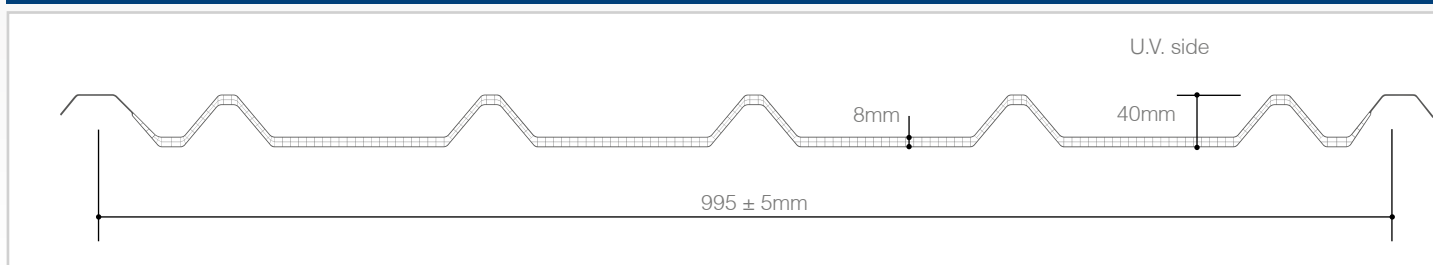
Insertion of upper sheet by pressing



DETAIL OF GUTTER

Detail of insertion of the PE-LD seal

2.3 MODULAR OVERLAPPING SYSTEMS



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



SPECIAL TREATMENT

PRODUCTION STANDARDS

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

TECHNICAL FEATURES

Thermal transmittance U	3,0 W/m ² K
Acoustic insulation Rw (ISO 717-1)	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

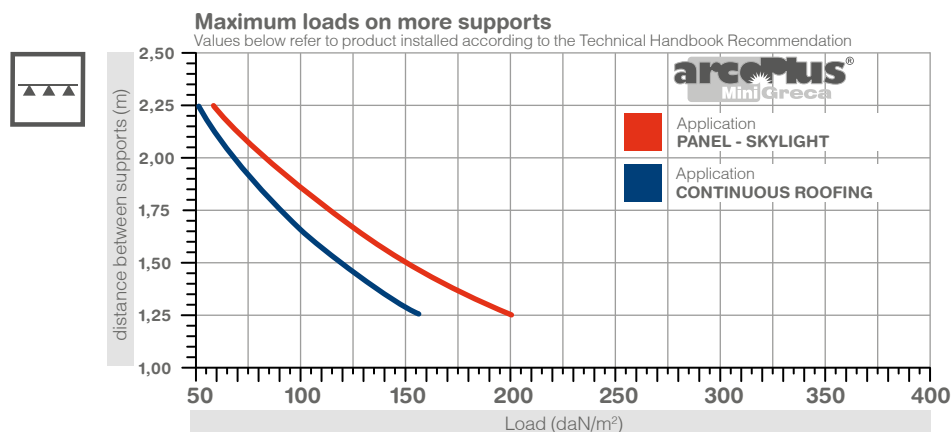
Skylight obtained by means of lateral overlapping with any type of corrugated roofing sheet.

Recommended minimum slope 5%.

CONTINUOUS ROOFING APPLICATION

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

LOAD RESISTANCE



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

ACCESSORIES



4433

Aluminium cap with gasket



4432

Screw with 6.3x80 Vipla washer



4406 Kit 0 - 40

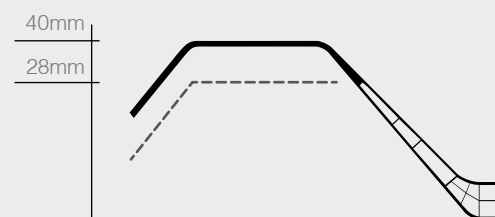
4404 Kit 21 - 28

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.

NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.



ANCHORAGE OF ROOFING

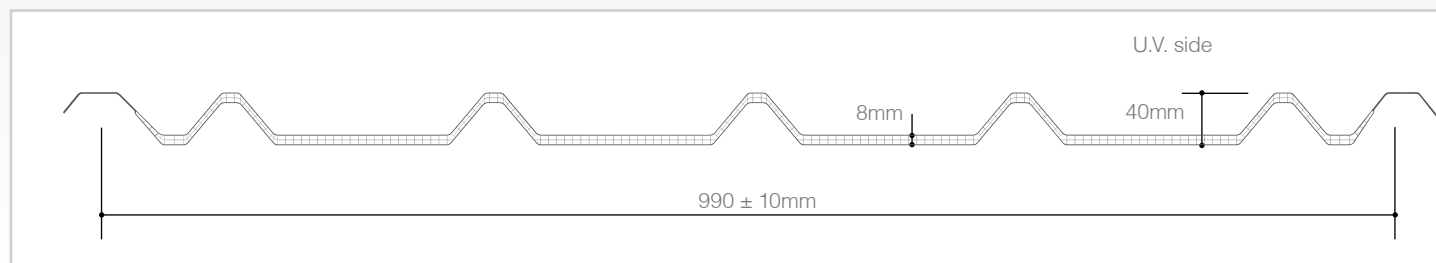
This is done by drilling and inserting a screw with Vipla washer and cap

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 transmittance U	3,0 W/m²K
Acoustic insulation Rw (ISO 717-1)	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.




SPECIAL TREATMENT

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

ADVANTAGES

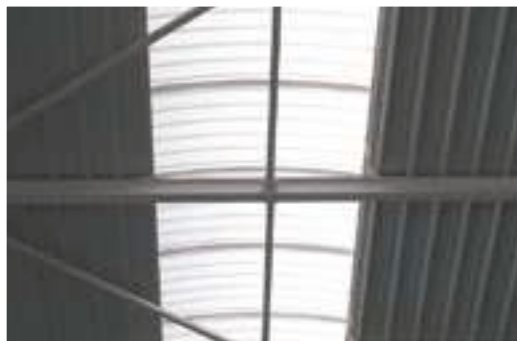
- ❖ Transverse and longitudinal overlap
- ❖ Resistance to U.V. rays and to hail
- ❖ Light transmission
- ❖ Thermowelded sheets
- ❖ Heat insulation

APPLICATIONS

 Roofing and skylights



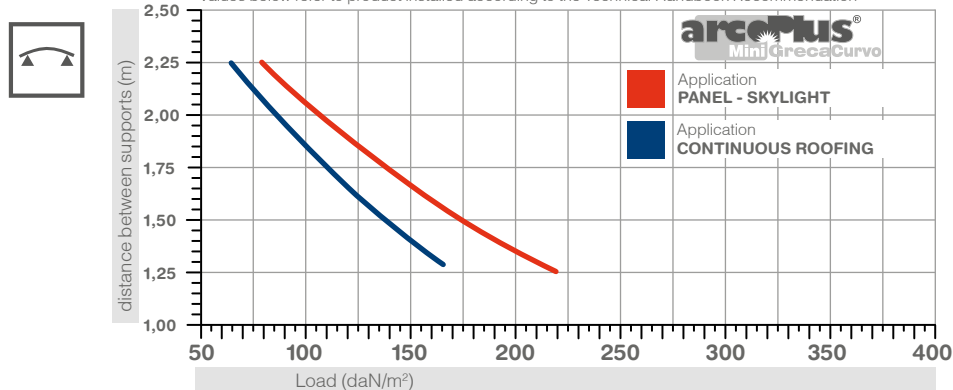
CONTINUOUS ROOFING APPLICATION
Industrial continuous roofing



CURVED SYSTEM LOAD RESISTANCE

Maximum loads on two supports - R.3.500mm

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

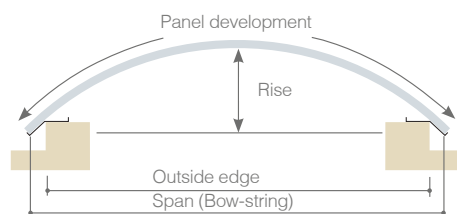


DETAIL OF OVERLAP

Detail of double anchor bracket anchored to roofing structure

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

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.

ACCESSORIES



4433

Aluminium cap with gasket



4432

Screw with 6.3x80 Vipla washer



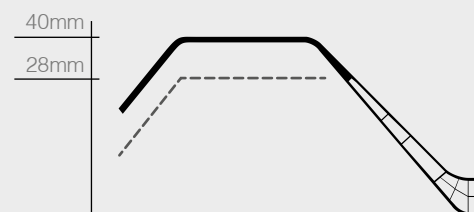
4405

Gasket for gutter PE-LD



ANCHORAGE OF ROOFING

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

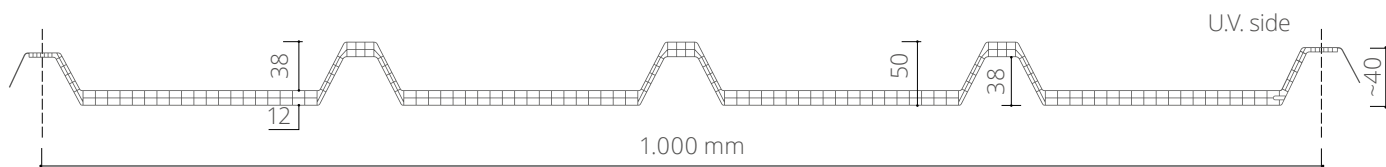


The ends of the sheets can be modified to fit the different types of roofing profile.

NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS



Modular system of corrugated UV protected multiwall polycarbonate for translucent roofing



SPECIAL TREATMENT

PRODUCTION STANDARDS

thickness	12mm
profile height	38mm
structure	3 walls
modular width	1.000mm
colours available	Crystal - Opal

TECHNICAL FEATURES

Thermal transmittance U	2,5 W/m²K
Acoustic insulation Rw (ISO 717-1)	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

Modular system consisting of overlapping corrugated panels suitable for translucent continuous roofing and gutter-ridge skylight.

Multiwall polycarbonate panels, coextruded with a UV protection absorbers, with a height of 40mm, a useful width of 1,000mm and a section profile characterized by 5 corrugations bumps, 3 walls with a thickness of 12mm in flat areas or 8mm for the inclined bumps surfaces. The thermal transmittance value of $U=2,5 \text{ W/m}^2\text{K}$.

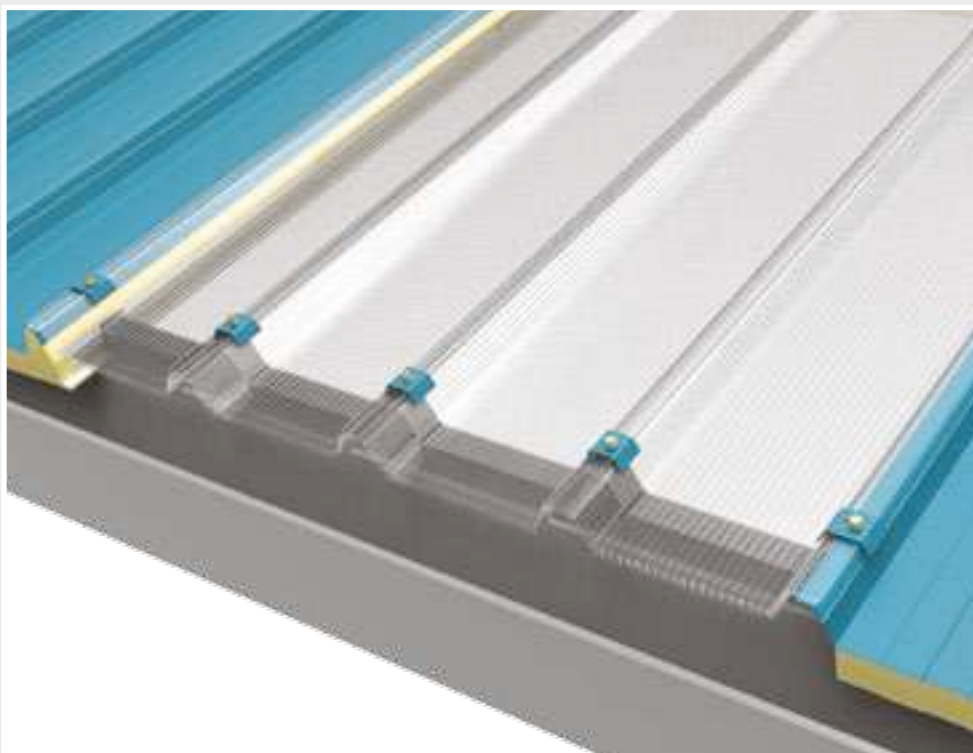
ADVANTAGES

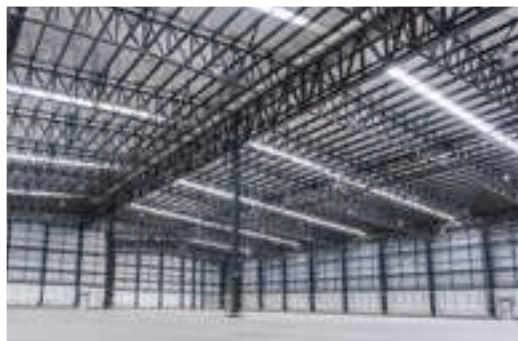
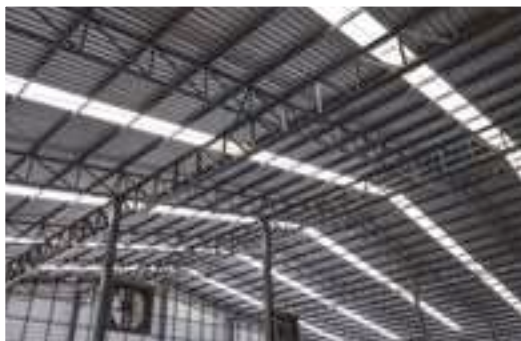
- ❖ Transverse and longitudinal overlap
- ❖ Resistance to U.V. rays and to hail
- ❖ Light transmission
- ❖ Thermowelded sheets
- ❖ Heat insulation

APPLICATIONS



Roofing and skylights





DESIGN AND EASY INSTALLATION

The arcoPlus®Greca5 panels allow to create both continuous translucent roofing and gutter-ridge skylight attached to common opaque corrugated covering systems. Taking into account the linear thermal expansion of the polycarbonate, it is recommended a maximum useful

length panel of 5,000mm in order to avoid any stress crack formation nearby the fixing holed points. For covering longer pitch roof face, the special profile design leads to achieve a perfect longitudinal overlapping of Greca5 panels in the event of backing with the underlying structure

SKYLIGHT GUTTER RIDGE APPLICATION

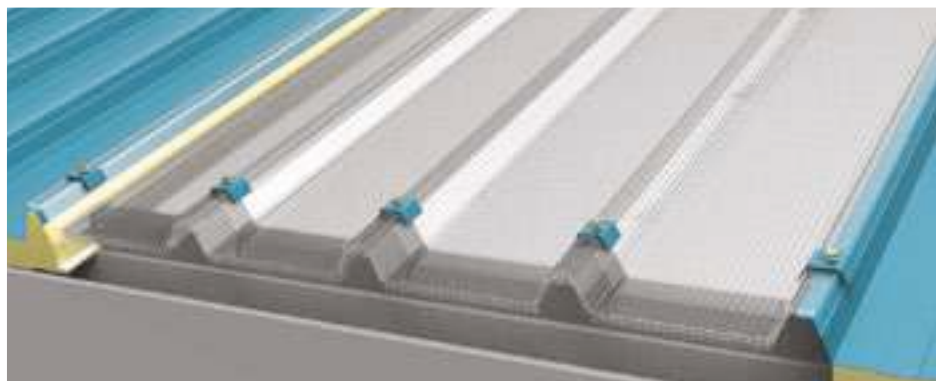
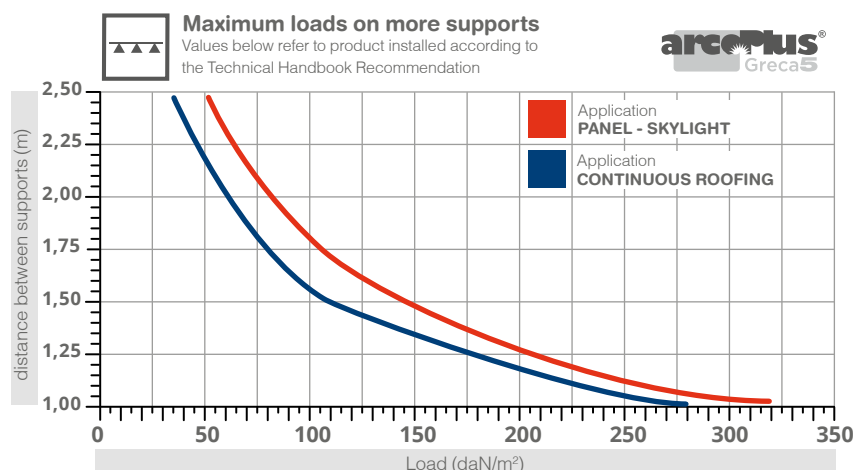
Skylight obtained by means of lateral overlapping with any type of corrugated roofing sheet.

Recommended minimum slope 5%.

CONTINUOUS ROOFING APPLICATION

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

LOAD RESISTANCE



THERMOWELDING

The panels can be supplied with edge ends sealed using heatwelding to avoid accumulation of dirt/bacteria into the air channels.

THERMOWELDING

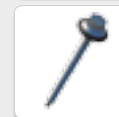
Standard panels are supplied with heat-sealed ends to prevent soiling inside the air cells.

ACCESSORIES

arcoPlus®Greca5 is a complete system for the construction of translucent roofing and 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.



4445
Aluminium cap with gasket



4432
Screw with Vipla washer



4403
Gasket for gutter PE-LD



4444
PE-LD GrecaClick ridge bird comb kit

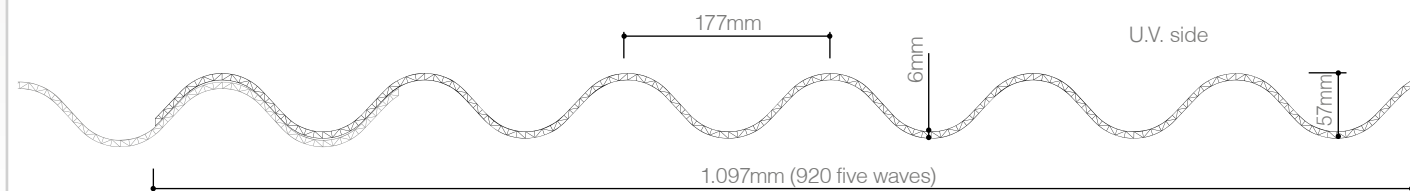


4231
Roof profile (2 pieces)

NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS



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



SPECIAL TREATMENT

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 transmittance U	3,2 W/m²K
Acoustic insulation Rw (ISO 717-1)	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





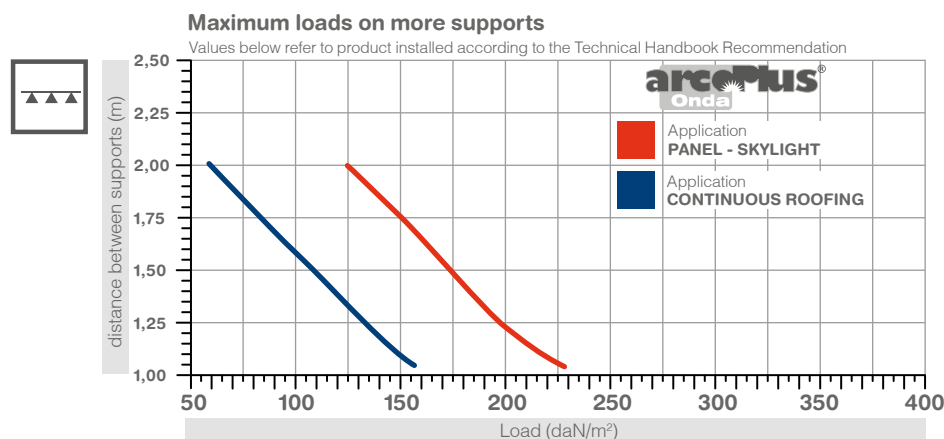
SKYLIGHT GUTTER RIDGE APPLICATION

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



EASY AND LOW-COST INSTALLATION

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

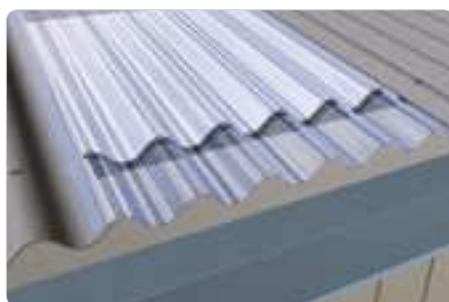
The panels must be installed with the UV protected side facing the exterior, to preserve the optical and mechanical properties of the material.

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.

NOTE:

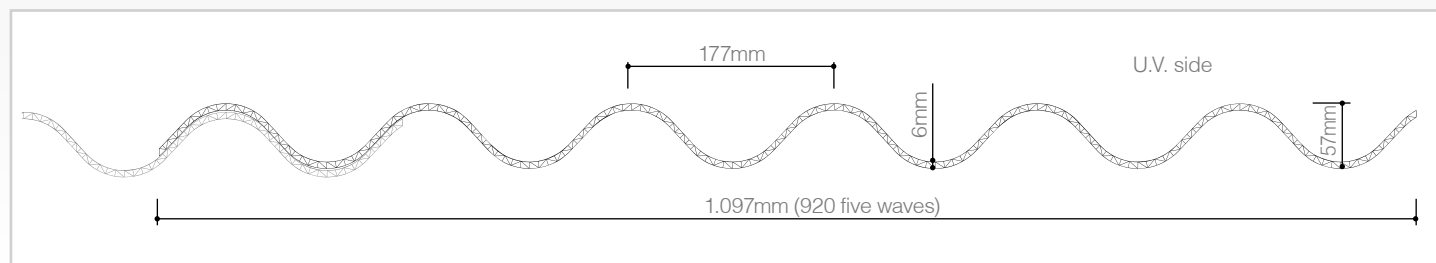
For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

2.3 MODULAR OVERLAPPING SYSTEMS

arcoPlus®
OndaCurvo



PROFILE



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



SPECIAL TREATMENT

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 transmittance U	3,2 W/m ² K
Acoustic insulation Rw (ISO 717-1)	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

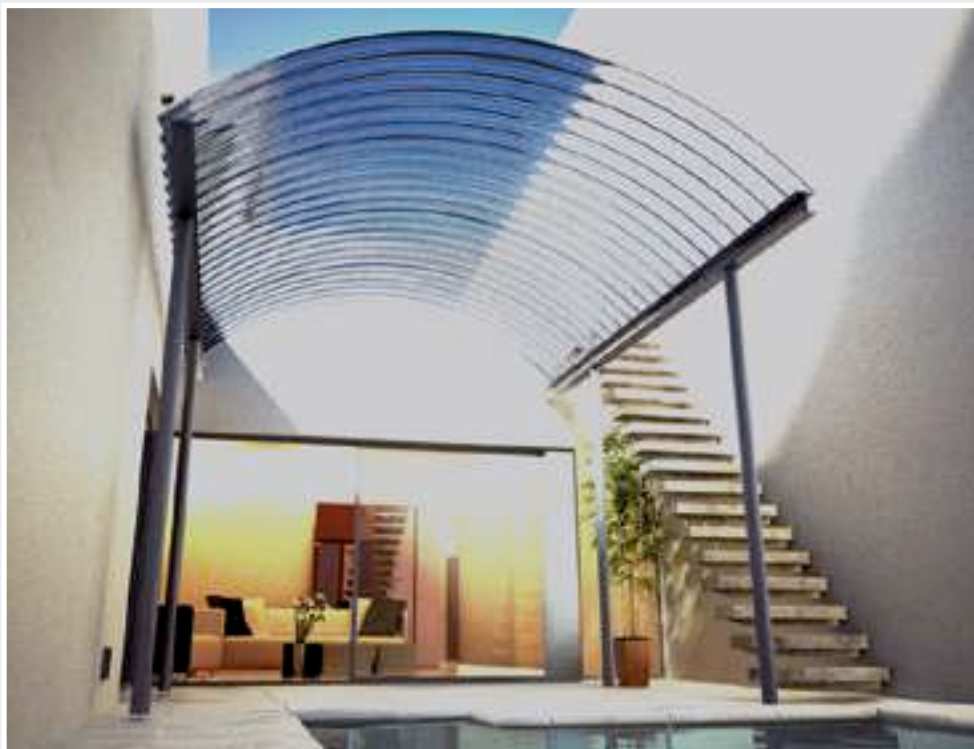
CURVED SYSTEM APPLICATION

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





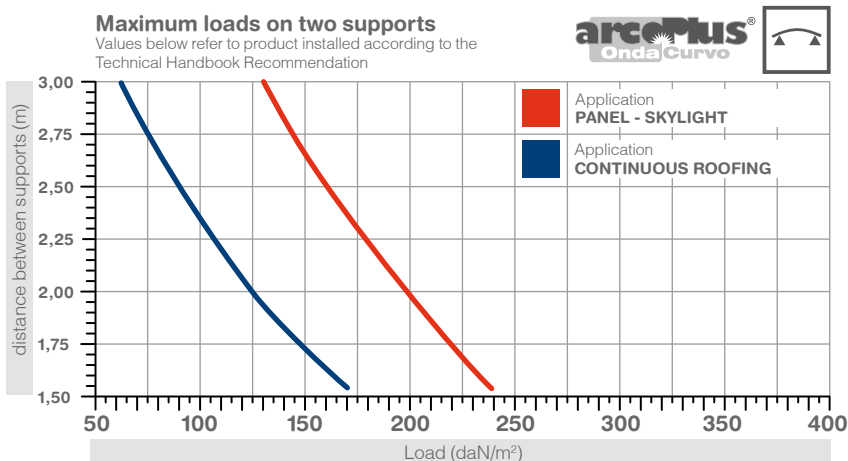
SKYLIGHT PANEL

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

CONTINUOUS ROOFING

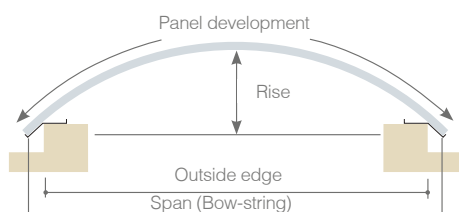
Construction of continuous roofing with continuous lateral overlapping of polycarbonate panels. Components are manufactured with a bend radius of R.3.500mm.

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	5.000 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.

NOTE:

For proper installation, it is advisable to drill in advance the panel with a hole diameter at least 3mm larger than the screw diameter in order to compensate the thermal expansion.

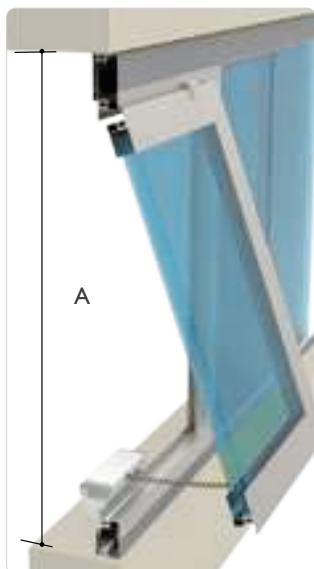


WINDOWS DIMENSION



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



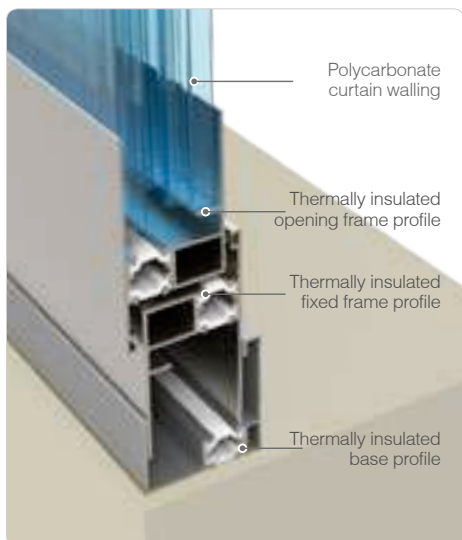
TOP PROFILE
Frame insertion



WITHOUT EAVE
Insertion on base profile



WITH EAVE
Insertion on base profile



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.



CHAIN ACTUATOR
New double knit motors for automatic opening of frames

ACCESSORIES



4547
Double knit chain actuator with single thrust point



4548
Double knit chain Syncro actuator with multiple thrust points



4553
Rack actuator 350 mm stroke



4554
Rack actuator 500 mm stroke



4209
Manually-operated handle



4210
Multi-function manual control

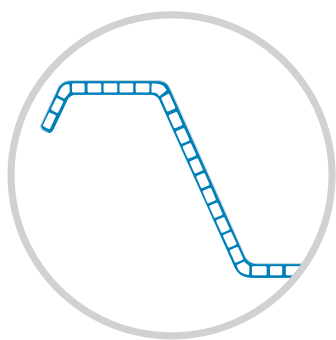


4309
External hinges for frame

* Please contact our Technical Office



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 transmittance U	4,6 W/m²K
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.

Note: TegoPlus[®] sheets could be supplied with heat-sealed ends.

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

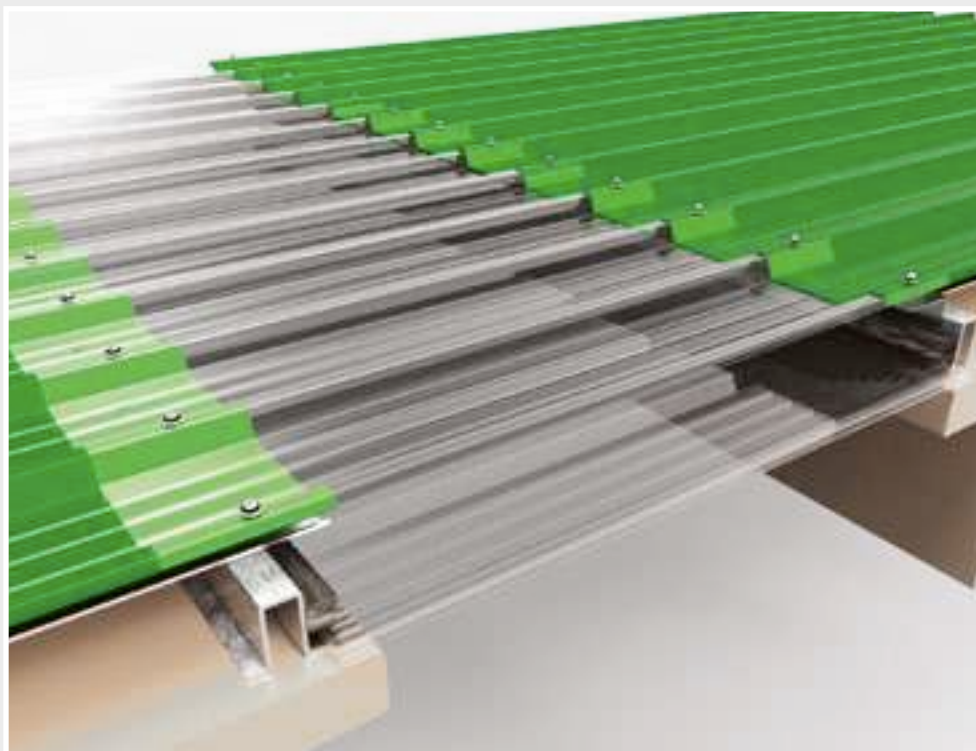
APPLICATIONS



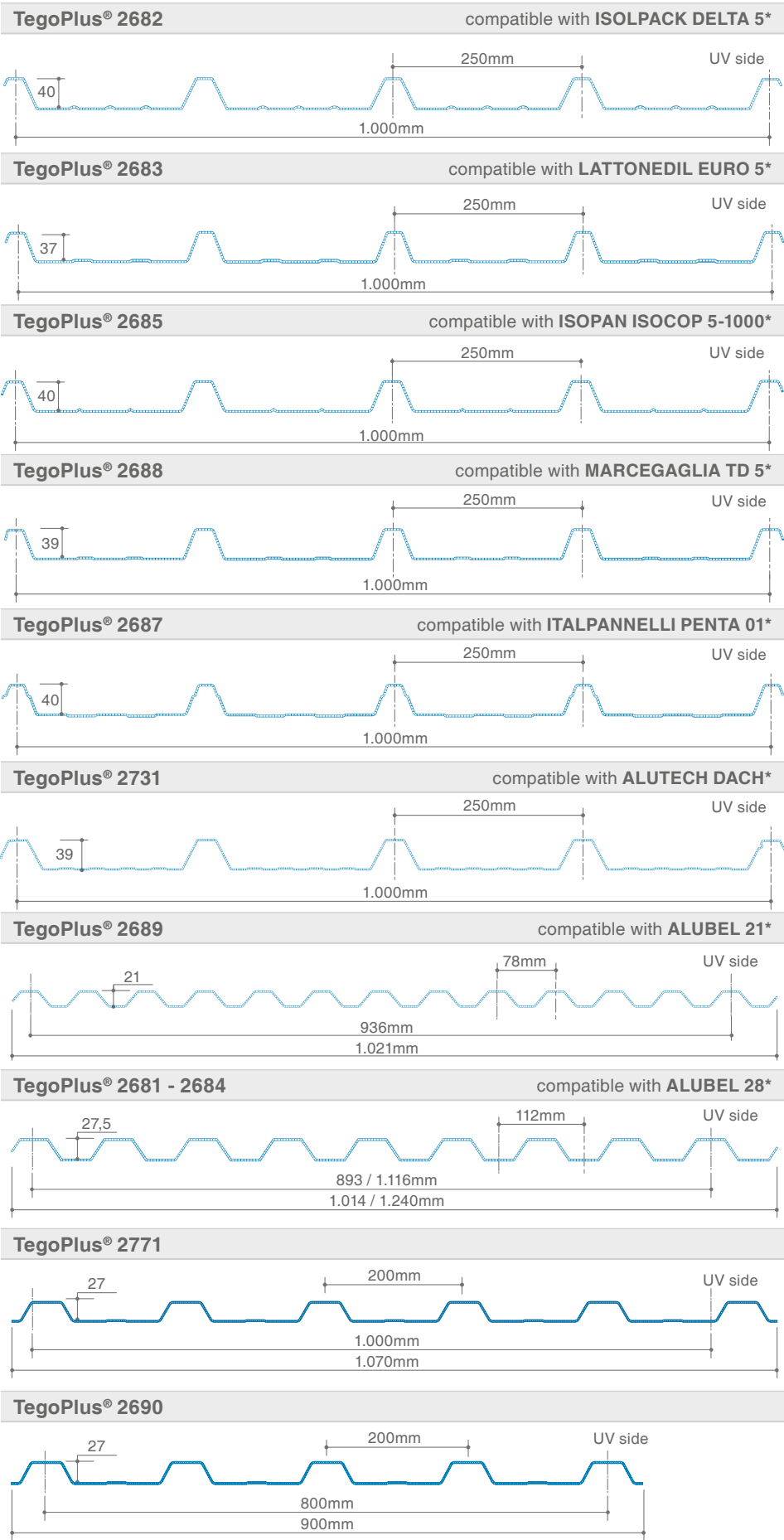
Curtain walls



Covering and skylights



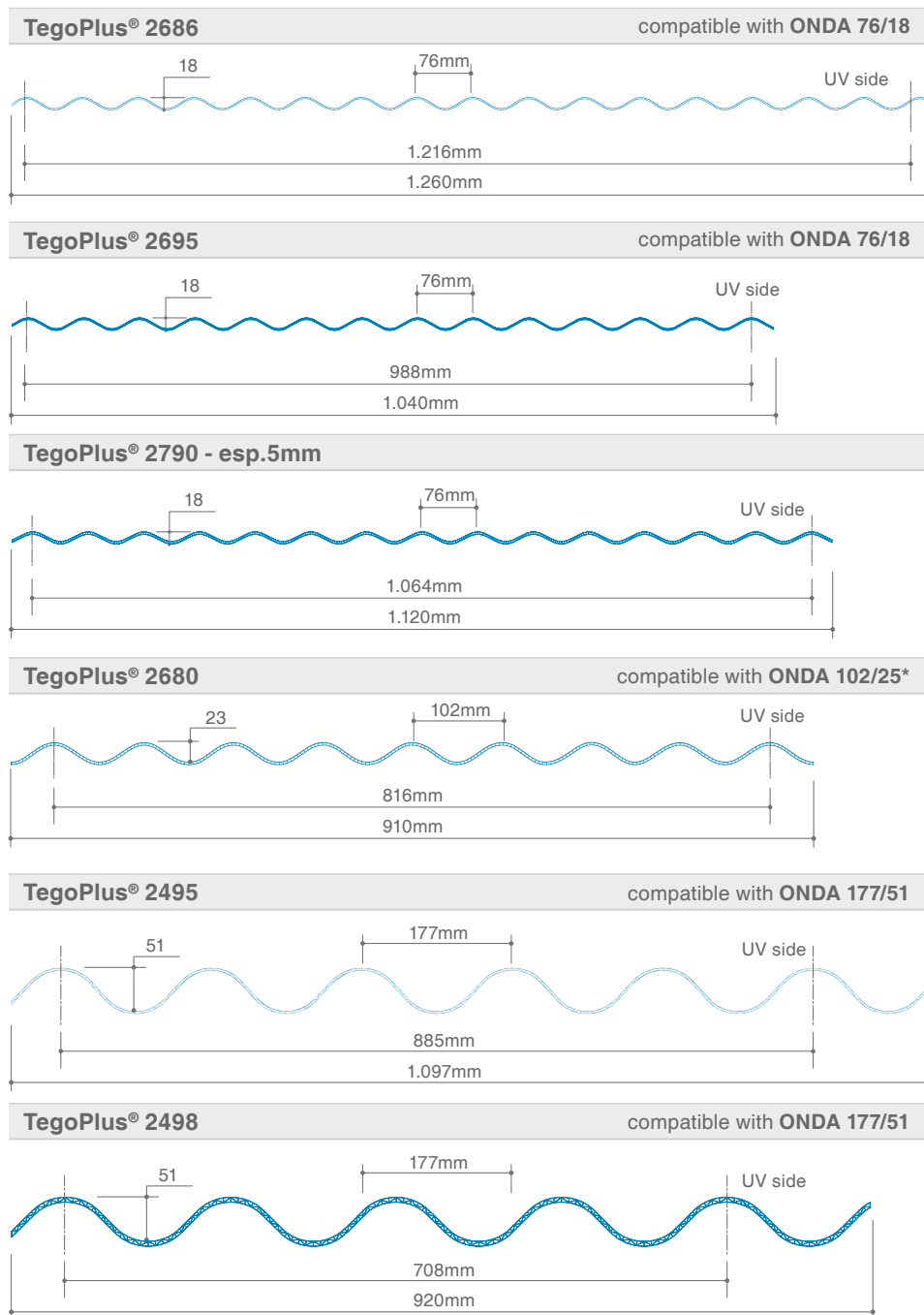
CORRUGATED PROFILES



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



WAVE PROFILES



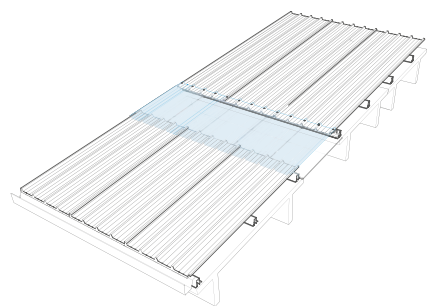
Note: Please refer to the TegoPlus® product page on the website www.gallina.it to view the updated range of profiles



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.

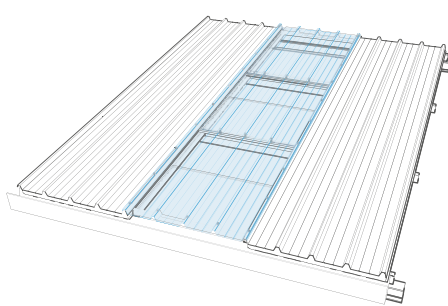


TRANSVERSAL SKYLIGHT
Implementation of transversal skylights coupled with monolithic panels

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.



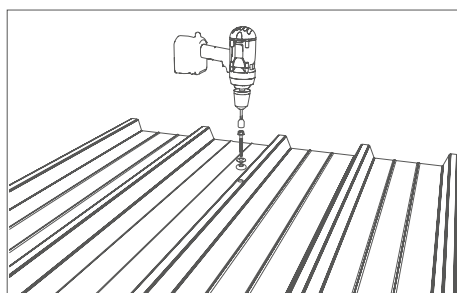
SKYLIGHT GUTTER RIDGE APPLICATION
Construction of ridge-eave skylights with added curtain on the inside

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.

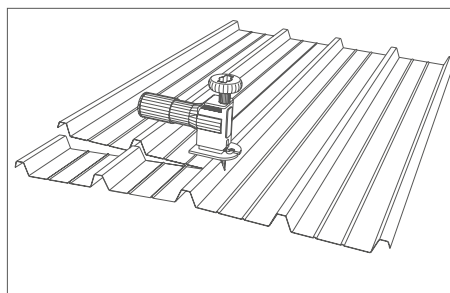
For the fastening a pre-drilling is advisable, made with a metal tip with a diameter greater than 3 mm to that of the screw. The excessive tightening of the fasteners, preventing movement of the plates due to thermal expansion, may compromise the seal.



Drilling and fastening with screwdriver

SHEET CUTTING

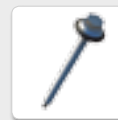
TegoPlus® sheets can be cut with a circular saw, small-toothed, at high speed of rotation, being careful to advance slowly. You can also use jig saws or shears. In any case, it is important to support the sheet in the vicinity of the point of cutting and to eliminate the dust generated by cutting.



Cutting sheets with jigsaw

Detail of overlapping components

ACCESSORIES



4432
Screw with gasket
6,3 x 80 mm

CHEMICAL RESISTANCE

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

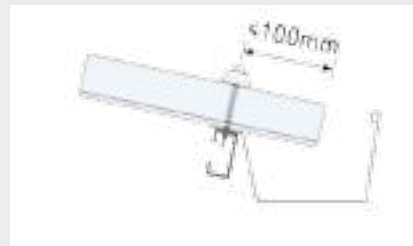
Avoid contact between TegoPlus® plates and fresh paint or other substances that are incompatible and could damage the sheets.

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 120mm



END PROTRUSION

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

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.



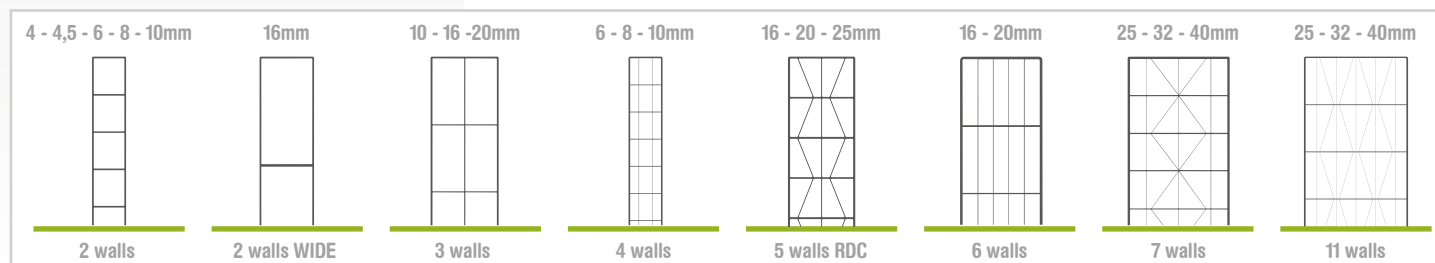


3.1 MULTIWALL SHEETS

PoliCarb®



PROFILES



Multiwall U.V. protected polycarbonate sheets



SPECIAL TREATMENT

NOTE:
AG TREATMENT ONLY FOR WIDTH UNTIL 1.250MM

ADVANTAGES

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

APPLICATIONS

- Vertical windows
- Roofing
- Curved roofing
- Ceiling

CERTIFICATION



Document Technique d'Application
n°6/15-2251 *V1 published 14/09/2016

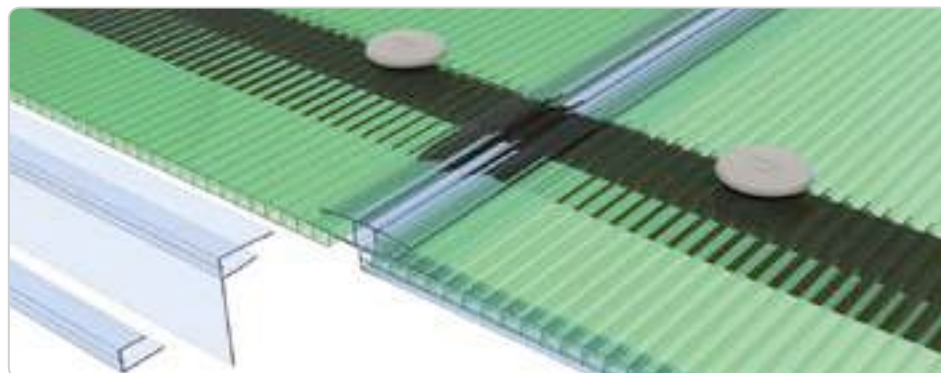


ITB Aprobata Techniczna
n°AT-15-9334/2014 published 16/06/2014

produced in accordance with EN 16153

PRODUCTION STANDARDS

	structure	thickness	weight	U value	width	length
	walls	mm	kg/mq	W/m²K	mm	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	3,70	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	3,30	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	3,50	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	1,30	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 PoliCarb® is coated with U.V. protection (on request both sides) warranting resistance to aging due to atmospheric agents and UV rays. PoliCarb® 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".

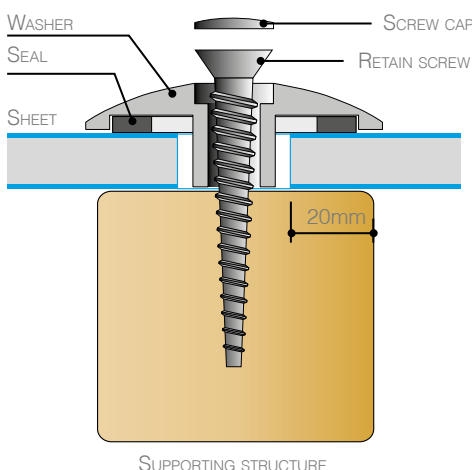
It is the rate of heat loss through a unitary surface per degree centigrade difference in temperature between the two sides and depends on the properties of the material of which the structure is made and the linear thermal transmittance conditions.

SELF-EXTINGUISHING

PoliCarb® sheets have EuroClass B-s1,d0 fire rating according to EN 13501-1.

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.



THERMOWELDING

PoliCarb® 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.



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

PoliCarb® 2P-6mm					
Lenght (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					
Lenght (m)	Width (m)				
	1.20	1.00	0.90	0.70	0.50
1.00	60	70	85	100	190
1.50	40	65	75	95	185
2.00	30	60	70	80	180
2.50	25	60	65	75	170
3.00	25	55	60	75	175

PoliCarb® 3P-16mm					
Lenght (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					
Lenght (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					
Lenght (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					
Lenght (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					
Lenght (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® 11W-32mm					
Lenght (m)	Width (m)				
	1.20	1.10	1.00	0.90	
1.50	150	185	200	225	
2.00	120	140	150	175	
2.50	100	115	120	145	
3.00	95	100	110	135	

PoliCarb® 2P-10mm					
Lenght (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					
Lenght (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					
Lenght (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					
Lenght (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					
Lenght (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					
Lenght (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-25mm					
Lenght (m)	Width (m)				
	1.20	1.10	1.00	0.90	
1.50	145	180	195	210	
2.00	105	120	130	150	
2.50	75	85	95	110	
3.00	70	75	80	100	

PoliCarb® 11W-40mm					
Lenght (m)	Width (m)				
	1.20	1.10	1.00		
1.50	175	190	205		
2.00	140	155	175		
2.50	110	140	160		
3.00	100	135	155		

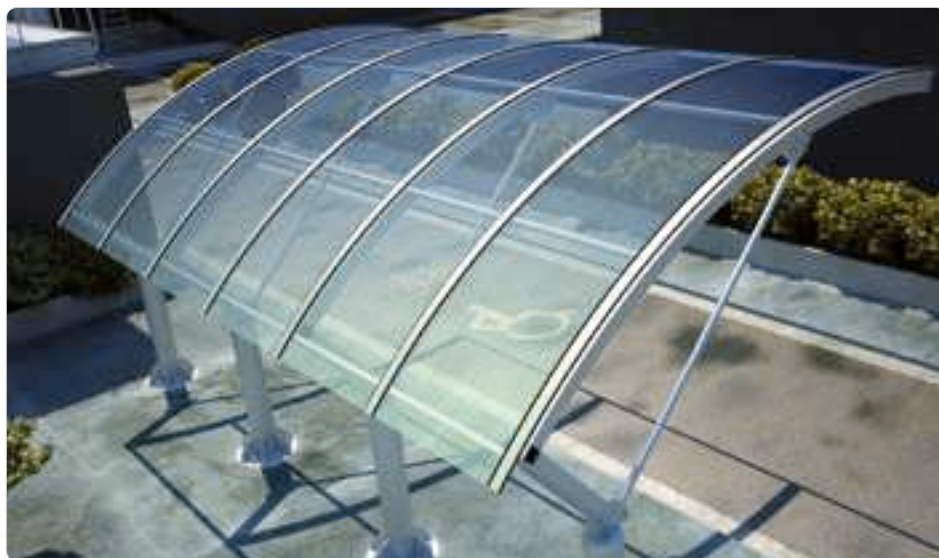


PLANES SHEETS APPLICATION

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.

COLD BENDED SHEET APPLICATION

In particular PoliCarb® is used to build integral are structures green house tunnel type since its cell structure increases the rigidity of the sheet longitudinally bent at its ribs.



MINIMUM RADIUS OF CURVATURE

Sheets th.	4,5-2P	6-2P	8-2P	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	1.500	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

Sheet thickness (mm)																						
	6	8	10	16	16RDC	6	8	10	16	16RDC	6	8	10	16	16RDC	6	8	10	16	16RDC		
Radius (m)	Width sheet (m)																					
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/m²						100 daN/m²						120 daN/m²						140 daN/m²			

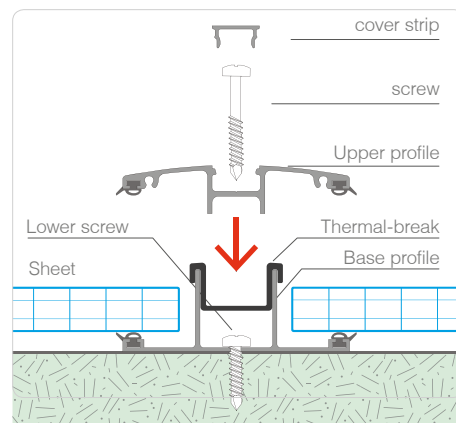


ALUMINIUM PROFILES FOR MULTIWALL SHEETS



COD. 4893+4896+4890

Junction solution to connect sheets each other, where fixing screws are visible, useable for multiwall



MOUNTING DESIGN

Sequenza di fissaggio lastre alveolari con profili in alluminio e vite nascosta



COD. 4894+4891+4892

Aesthetic junction solution to connect sheets each other, where fixing screws are hidden, useable for

WIDE RANGE OF APPLICATION OPTIONS

PoliCarb® multiwall sheets are widely used in the window/roofing system thanks to their lightness and insulation characteristics. Besides others application possibilities can be found in fitting -exhibit-display field in order to realize internal partitions, backlit walls, decorative furniture, advertising display and visual communication elements thanks to the possibility to be printed by direct printing. This infinite list of installation fields is due to the wide range of thicknesses and shapes in which sheets can be provided. The ease of customizing/manufacturing the product combined with a complete range of accessories, make it possible to use plates for countless applications in a wide range of industries.



COD. 4895+4891+4892

Aesthetic junction solution to connect sheets each other, where fixing screws are hidden, useable for



EXHIBIT & FITTING

Ampia versatilità di utilizzo delle lastre alveolari nel settore dell'allestimento e per la stampa diretta



ACCESSORIES

PoliCarb® multiwall sheets can be fitted with a complete set of accessories for easy installation. To achieve a proper installation it is advisable to plug the panel edges with a special polycarbonate profile or with micro-perforated aluminium adhesive tapes, allowing ventilation into the air-channels and avoiding accumulation of dirt/bacteria.



TRANSLUCENT ROOFING

Multiwall sheets used for outdoor verandas, canopies, shelters



COD. 4898

Positioning of PC closing cap to block and protect the edge-end of H Alu connecting profiles

METAL PROFILES

cod. 4890

Upper Aluminium profile with visible fixing screws



cod. 4891

Upper Aluminium profile for hidden screws



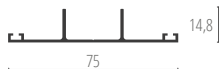
cod. 4892

Aluminium covering strip to hide screws



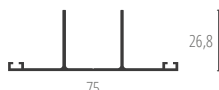
cod. 4893

Alu Base H profile for sheet th.2-12 mm



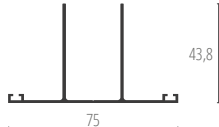
cod. 4894

Alu Base H profile for sheet th.16-20-25 mm



cod. 4895

Alu Base H profile for sheet th.32-40 mm



4077 th.4-6mm

4076 th.8-10mm

4087 th.16mm

4761 th.25mm

4762 th.32mm

Washer with gasket



4285 th.10mm

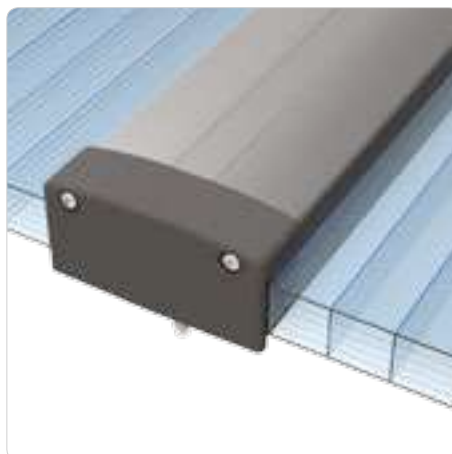
4286 th.16mm

"U" aluminium profile



4898

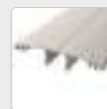
PC closing cap for Alu H profiles



DETAIL

cod.4898- Grey PC closing cap for Alu H profiles fixed with face screws

ACCESSORIES



4890

Upper Aluminium profile with visible fixing screws



4891 (+4892)

Upper Aluminium profile for hidden screws



4892 (+4891)

Aluminium covering strip to hide screws



4893

Alu Base H profile for sheet th.2-12 mm



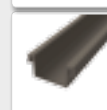
4894

Alu Base H profile for sheet th.16-20-25 mm



4895

Alu Base H profile for sheet th.32-40 mm



2761

Thermal-break inner spacer for Alu H profiles



2760

Hollow rubber seal for H upper profile



2191 th.8-10mm

2192 th.16mm

Profiles "R" U.V. protected



2193 th.8-10mm

2194 th.16mm

Profiles "F" U.V. protected



1162 th.6mm

1298 th.8mm

1164 th.10mm

1165 th.16mm

1300 th.20mm

Profiles "H" U.V. protected



1158 th.6mm

1296 th.8mm

1160 th.10mm

1161 th.16mm

2184 th.20mm

2260 th.32mm

Profiles "U" U.V. protected



4970 th.8mm

4971 th.10mm

4973 th.16mm

4974 th.20mm

4975 th.25mm

4976 th.32mm

4977 th.40mm

Alu Obturating strip drip-free

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[®]





4.1 SOLID SHEETS

PoliComp®
← 2.500mm →

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. Scudo® sheets, no UV protected ideal for industrial applications.

PRODUCTION STANDARDS

Thickness (mm)	2	3	4	5	6	8	10	12	15
Weight (kg/m²)	2,4	3,6	4,8	6,0	7,2	9,6	12,0	14,4	18,0
Width (mm)	2.050 - 2.500								
Length (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.

8

10

12

15

PHYSICAL PROPERTIES

	Value	Unit	Test metod
Density	1.200	kg/m 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	146-151	°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	15
Color									
transparent	91	90	90	89	88	86	83	80	78
bronze	70	60	51	43	41	33	29	23	15
light blue	-	62	57	52	47	42	-	-	-
opal	60	53	48	42	38	30	22	16	11
green	83	79	75	71	67	59	51	43	-

THERMAL TRANSMITTANCE U (W/m²K)

Thickness (mm)	2	3	4	5	6	8	10	12	15
PoliComp®	5,60	5,40	5,30	5,10	5,00	4,80	4,50	4,30	4,10
Glass	-	5,87	5,82	5,80	5,77	5,71	-	-	-

ACOUSTIC INSULATION (R_w) (dB)

Thickness (mm)	2	3	4	5	6	8	10	12	15
Value	25	26	27	28	29	31	33	34	37

WEIGHT (kg/m²)

Thickness (mm)	2	3	4	5	6	8	10	12	15
PoliComp®	2,4	3,6	4,8	6,0	7,2	9,6	12,0	14,4	18,0
Glass	5	7,5	10	12	15	20	25	30	-

The solid polycarbonate sheets in the extensive PoliComp® 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. PoliComp® 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

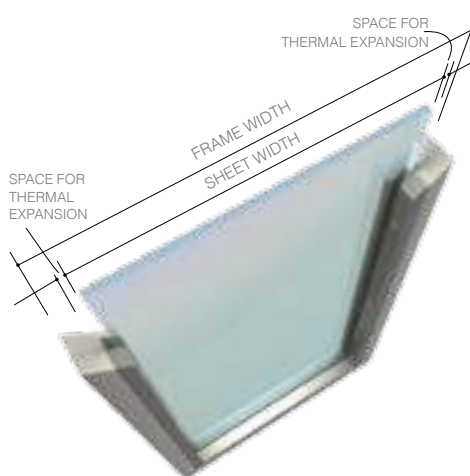
When cutting sheets to allow for thermal expansion special care must be taken to avoid applying stress to the material.

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 expand 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.

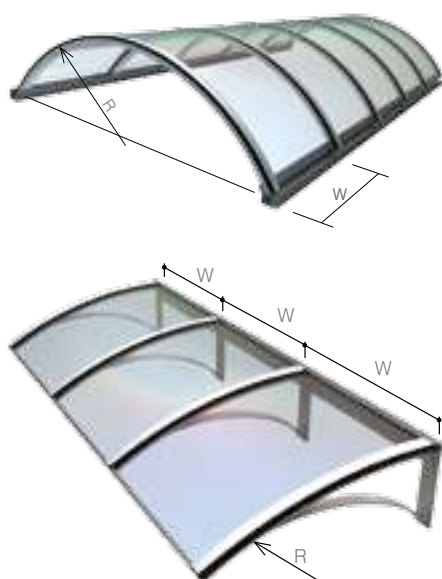
The minimum bend radius is 150 times the thickness of the sheet.

Example:

Sheet thickness: 3mm

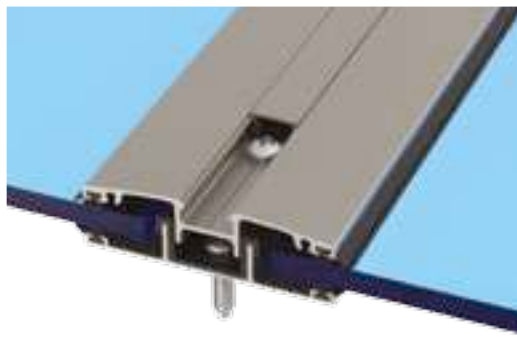
Min. radius = 3 x 150 = 450mm

The choice of sheet thickness depends on the bend radius R but also on the width of the sheet W. The length L must always be greater than the width W.



MINIMUM BEND RADIUS

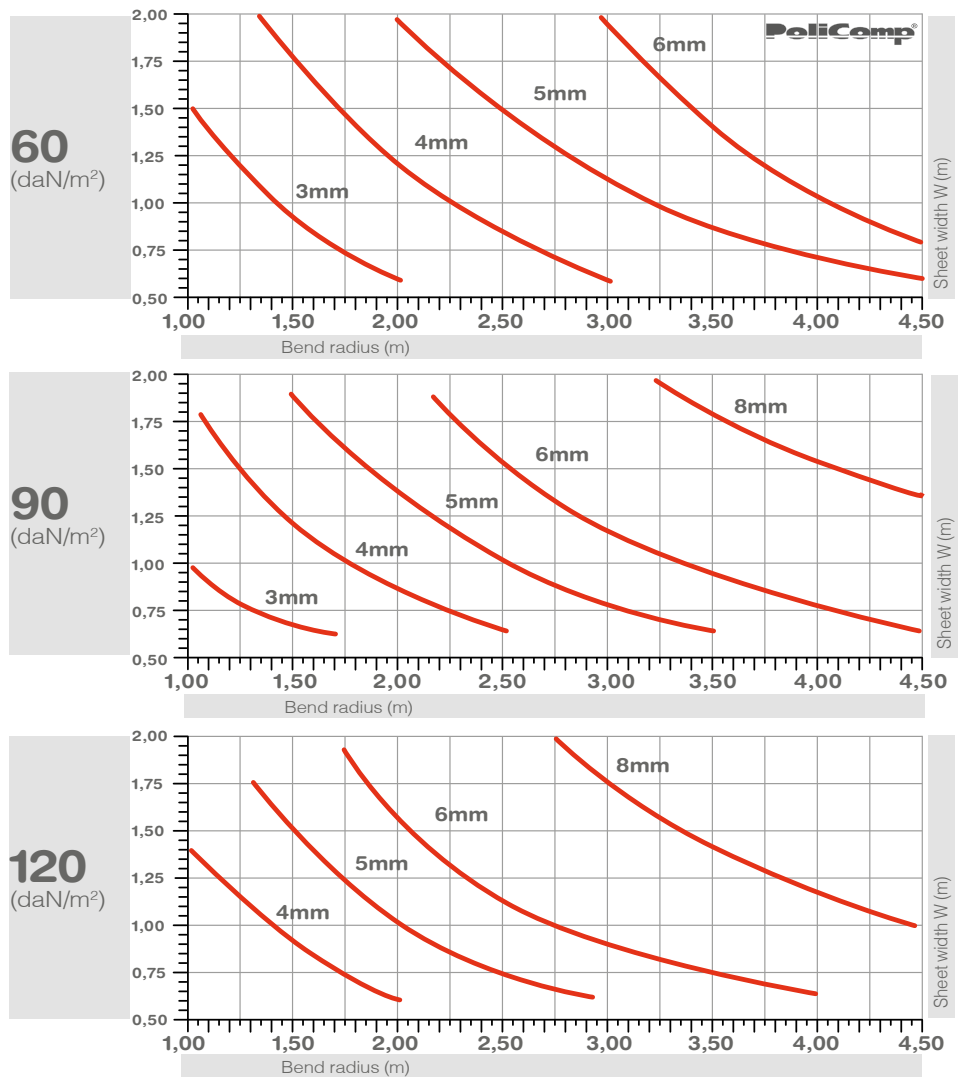
Thickness (mm)	2	3	4	5	6	8	10	12
Radius (mm)	300	450	600	750	900	1.200	1.500	1.700



LOAD RESISTANCE

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.



ACCESSORIES



4890
Upper Aluminium profile with visible fixing screws



4892 (+4891)
Aluminium covering strip to hide screws



2760
Hollow rubber seal for H upper profile



4891 (+4892)
Upper Aluminium profile for hidden screws



2761
Thermal-break inner spacer for Alu H profiles



4898
PC closing cap for Alu H profiles



4893
Alu Base H profile for sheet th.2-12 mm



4.2 SOLID SHEETS

Scudo®

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

produced in accordance with EN 16240

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, as stipulated by Legislative Decree No 192/2012, the interest will be charged and calculated on the basis of BCE reference rate plus 8 percentage points, from the scheduled payment date up until the actual date on which payment is actually made, with an additional amount of 40 euros for damages. 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.

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