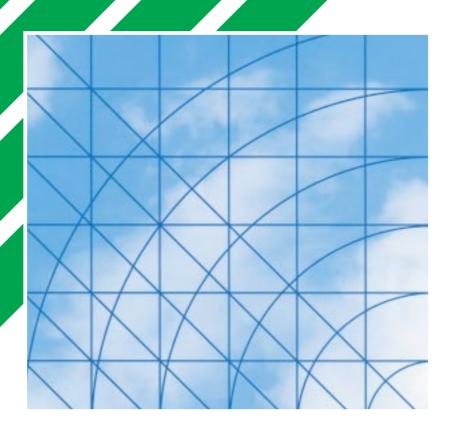




SYSTEMS IN CELLULAR POLYCARBONATE







polyù



FLAT SYSTEM

Polyù C2/10 - 10 mm

Self supporting flat system in polycarbonate with cellular structure for industrial glazings and coverings

Polyù KAPPA - 10 mm

Self supporting flat system in polycarbonate with cellular structure for industrial glazings and coverings

Polyù C3 - 16 mm

Self supporting flat system in polycarbonate with cellular structure for industrial glazings and coverings

CURVED SYSTEM

Polyù KAPPA Curved - 10 mm

Self supporting curved system with cellular structure for coverings, skylights and industrial tunnels.

Polyù C3 Curved - 16 mm Self supporting curved system with cellular structure for coverings, skylights and industrial tunnels.

OPENINGS

Top Hung Windows

For vertical glazings



CELLULAR POLYCARBONATE EXTRUSIONS









Founded in 1980, Polyù Italiana S.p.A. has evolved into one of the world's largest extruders of multiwall polycarbonate sheet, supplying countries throughout Europe, Africa, North and South America with a range of high performance, multiwall polycarbonate roofing and glazing systems.

Modern manufacturing techniques combined with a high level of technical ability allow Polyù to lead the way in the design and manufacture of industrial and commercial translucent glazing materials.

Continuous research into customer requirements and market direction allow Polyù to offer solutions to the most demanding requests of its customers in a continuously evolving market.

	POLYCARBONATE CH.	ARACTER	ISTICS	
CHARACTERISTIC	KIND OF TEST	UNIT	RULE	VALUES
	Extreme charge under stress	N/mm²	DIN 53455	>60
	Breaking resistance	N/mm²	DIN 53455	>70
MECHANICAL	Extension under stress	%	DIN 53455	6 8
CHARACTERISTICS	Extension under breaking	%	DIN 53455	<100
	Elastic module	N/mm²	DIN 53457	2300
	Carving IZOD crash resistance	J/m	ASTM D256	700
	Specific weight	g/cm³	DIN 53479	1.20
PHYSICAI	Refraction index		DIN 53491	1.59
CHARACTERISTICS	Water absorption (24 h - 23°C) in immersion	%	DIN 53495	0.36
	Steam permeability	g/cm³	DIN 53122	15
THERMAL CHARACTERISTICS	VST/B vicat heat resistence temperature	°C	DIN 53460	145 150
	Linear thermal expansion	1/°C	VDE 0304/1	6.7 X 10
	Thermal conductivity	Wm°C	DIN 52612	0.21

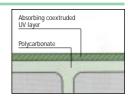


LIGHT TRANSMISSION

Due to the high optical properties of the polycarbonate raw material, Polyù sheets have excellent light transmission values.

U.V. PROTECTION

A protective U.V. layer is applied during the sheet extrusion, which ensures long life (10-year guarantee).



THERMO-INSULATING PROPERTIES

Due to the multiwall nature of Polyù sheet products, excellent insulation values are achieved.

AUTO-EXTINGUISHING PROPERTY

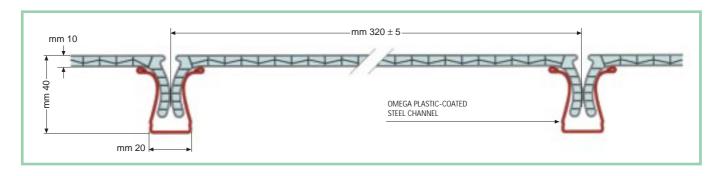
The material is self-extinguishing (class 1) and will not allow flame spread. Polyù sheet does not release toxic gases or allow material to drip during combustion.

SHOCK RESISTANCE

Extensive research and development ensure all Polyù systems have a high resistance to the harmful effects of the weather, accidental or deliberate damage. Polyù polycarbonate sheet has c. 200 times more impact resistance than glass.

POLYÙ (2 / 1 ()

SELF-SUPPORTING FLAT SYSTEM IN CELLULAR POLYCARBONATE FOR INDUSTRIAL GLAZINGS AND COVERINGS



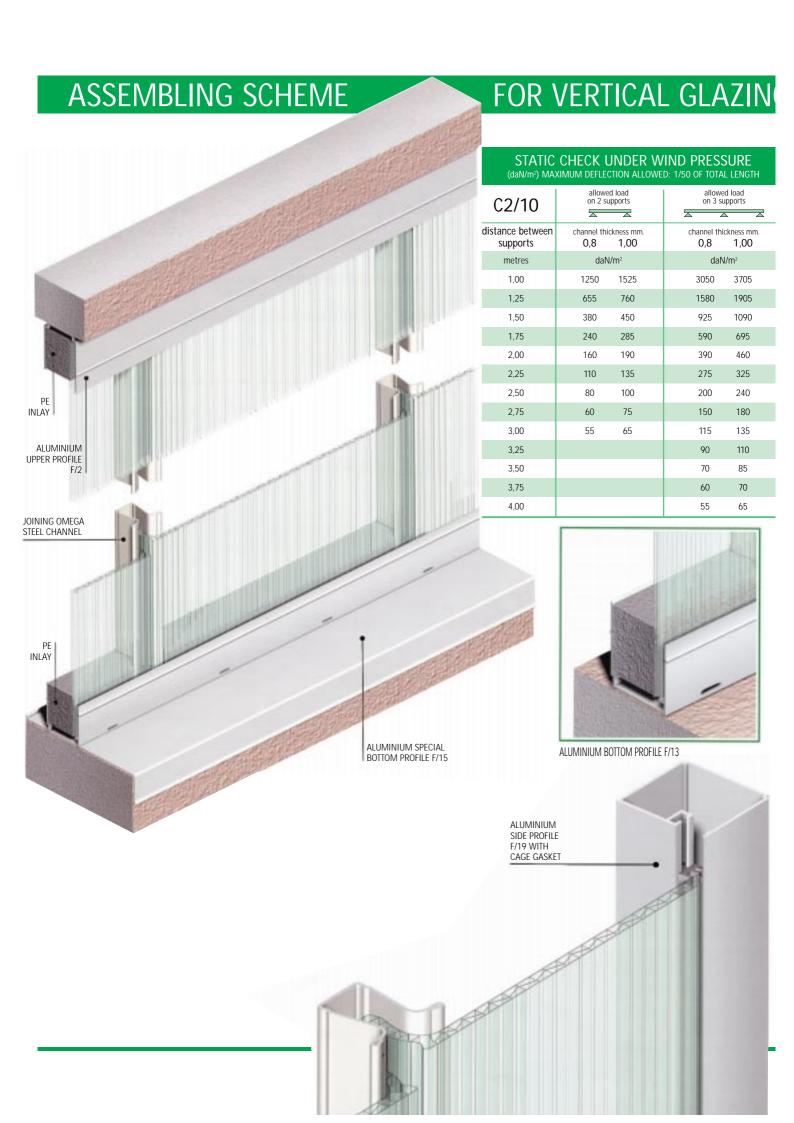












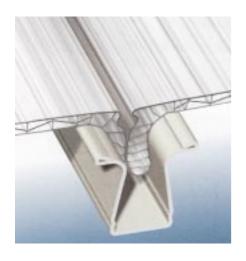
AND FLAT ROOFINGS





STATIC CHECK WITH SNOW LOAD - (daN/m²) MAXIMUM DEFLECTION ALLOWED 1/200 OF DISTANCE

C2/10	channel thickness	distance between supports (metres)										
02/10	mm.	metres	0,50	0,75	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75
allowed load on 2 supports	1,00	daN/m²	935	410	230	145	85	55	35	20		
	3,00	dalv/iii	1175	525	295	185	110	65	40	30		
allowed load on 3 supports	1,00	daN/m²	940	410	230	150	105	75	60	40	30	
	3,00		1175	525	295	185	130	100	70	45	35	30
allowed load on 4 supports	1,00	daN/m²	1175	525	295	185	130	90	60	40	30	20
	3,00	darim	1470	655	370	230	165	110	75	50	35	30



The POLYÙ C2/10 SYSTEM is the perfect choice for both rooflight and vertical glazing applications, incorporating 10 mm thick triplewall polycarbonate sheet and plastic coated, zinc plated glazing channels. The design of the system allows the sheet to simply snap down into the glazing channel, creating robust and attractive solutions that are very fast to assemble.

Sheets are 320 mm in width and can be produced to lengths in excess of 12 metres. To prevent dust entering the fluted structure, each sheet is manufactured to length and supplied with heat sealed ends.

The expressly designed modular width of each panel avoids the need for heavy supporting structures.

The C2/10 sheets are supplied with a 10-year warranty against loss of light transmission, yellowing and hail.



POLYÙ C2/10 FEATURES - 10 MM Thickness 10 mm Kg/m² 2,20 System weight PRODUCTION Structure Triple wall CHARACTERISTICS Useful pitch mm 320 \pm 5 Upon request (adviced length not beyond 7 m) Sheet length K=2,3 Kcal/m2 h° C - W=2,7 W/m2K Thermal-insulating properties PHYSICAL--40° C + 130° C Temperature working range THERMIC CHARACTERISTICS Linear thermal expansion 6,84 x 10⁻⁵ mm/mm° C Clear 78% LIGHT Opal 56% TRANSMISSION Smoky brown (bronze) **PROPERTIES** Green 75%



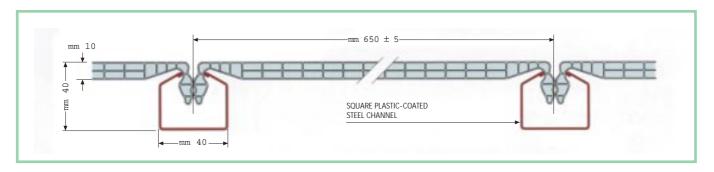
TECHNICAL SPECIFICATIONS

Production of vertical glazings and flat roofings with POLYÙ C2/10 SYSTEM, composed by:

- U-shaped cellular extruded polycarbonate sheets Thickness: 10 mm Selfextinguishing as per class 1 K value: 2,3 Kcal/m² h°C W: 2,7 W/m²K Colours: clear, opal, green and smoky brown (bronze) Module of 320 mm with heat sealed ends UV-protected Manufactured to length.
- Self-supporting joining steel channels Plastic coated 0,8 or 1 mm thick In grey or brown colours Positioned every 320 mm Manufactured to length.
- Wide range of alumininum profiles for framing Expanded PE inlays to ensure a perfect seal.

KAPPA

SELF-SUPPORTING FLAT SYSTEM IN CELLULAR POLYCARBONATE FOR INDUSTRIAL GLAZINGS AND COVERINGS

















ALUMINIUM SIDE PROFILE F/20

ALUMINIUM UPPER PROFILE F/2

STATIC CHECK WITH SNOW LOAD - (daN/m²) MAXIMUM DEFLECTION ALLOWED 1/200 OF DISTANCE											
KAPPA - 10 mm	channel thickness		distance between supports (metres)								
	mm.	metres	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00
Allowed load on 2 supports	1,00	daN/m²	210	135	80	50	35	20	15	10	
	3,00	darviiii	620	390	240	150	100	70	50	40	30
Allowed load on 3 supports	1,00	daN/m²	210	135	90	65	50	40	35	30	20
	3,00		620	390	275	200	150	120	100	80	70
Allowed load on 4 supports	1,00	daN/m²	265	170	120	85	65	55	45	35	25
	3,00	Garvin	775	495	345	250	190	150	120	95	70



Designed to cater for a wide range of translucent roofing and glazing applications, the Polyù Kappa system incorporates 10 mm triplewall polycarbonate sheet with either plastic coated or stove painted steel glazing channels. The result is a strong and extremely practical self-supporting system with excellent spanning capabilities. Manufactured to length, each sheet is supplied with heat sealed ends to avoid possible dust ingress, and is designed to simply snap into the open topped glazing channels. Easy to assemble, the system is complemented by a full range of components and finishing accessories.

KAPPA FLAT SYSTEM 10 MM - FEATURES

	Thickness	10 mm.		
	System weight	Kg/m² 4,00 ca		
PRODUCTION	Structure	Triple wall		
CHARACTERISTICS	Useful pitch	mm 650 ± 5		
	Sheet length	Upon request (adviced length not beyond 7 m)		
PHYSICAI -	Thermal-insulating properties	K = 2,3 Kcal/m ² h° C - W = 2,7 W/m ² K		
THERMIC	Temperature working range	-40° C + 130° C		
CHARACTERISTICS	Linear thermal expansion	6,7 x 10 ⁻⁵ mm/mm° C		
	Clear	75%		
LIGHT TRANSMISSION PROPERTIES	Opal	60%		
	Smoky brown (bronze)	58%		
	Green	71%		

TECHNICAL SPECIFICATIONS

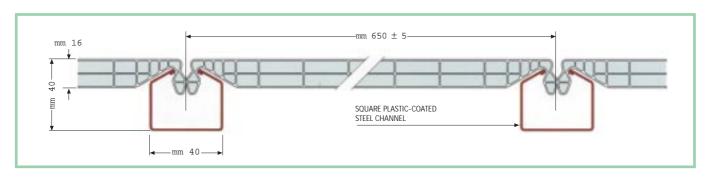
Production of vertical glazings and flat roofings with KAPPA FLAT SYSTEM, composed by:

- U-shaped cellular extruded polycarbonate sheets Thickness: 10 mm Self-extinguishing as per class 1 K value: 2,3 Kcal/m² h°C W: 2,7 W/m²K Colours: clear, opal, green, smoky brown (bronze) Module of 650 mm with heat sealed ends UV-protected Manufactured to length.
- Self-supporting joining steel channels Plastic coated, 1 mm thick, or stove painted, 3 mm thick In grey or brown colours Profile in squared shape with open gap, positioned every 650 mm Manufactured to length.
- Wide range of aluminium profiles in natural colour - Expanded PE inlays to ensure a perfect seal.



POLYU

SELF-SUPPORTING FLAT SYSTEM IN CELLULAR POLYCARBONATE FOR INDUSTRIAL GLAZINGS **AND COVERINGS**

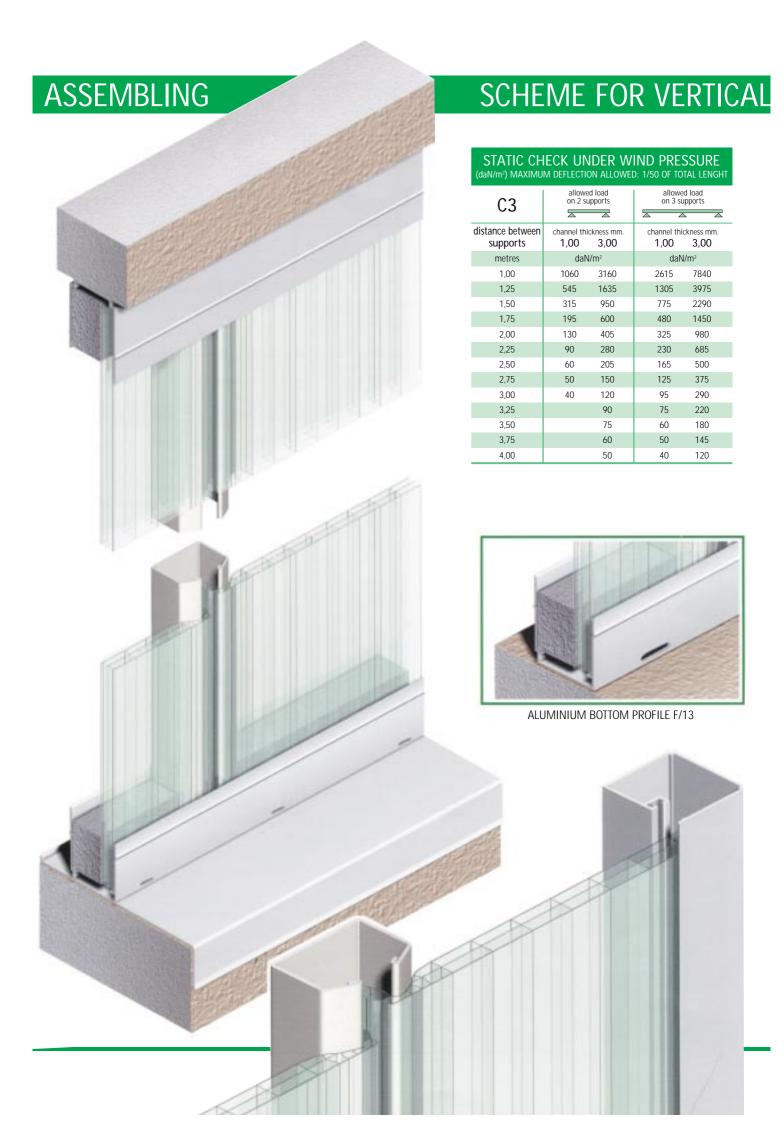
















STATIC CHECK WITH SNOW LOAD - (daN/m²) MAXIMUM DEFLECTION ALLOWED 1/200 OF DISTANCE

C3 - 16 mm	channel thickness		distance between supports (metres)								
	mm.	metres	1,00	1,25	1,50	1,75	2,00	2,25	2,50	2,75	3,00
Allowed load on 2 supports	1,00	daN/m²	210	135	80	50	35	20	15	10	
	3,00	GGIV/III	620	390	240	150	100	70	50	40	30
Allowed load on 3 supports	1,00	daN/m²	210	135	90	65	50	40	35	30	20
	3,00	darvini	620	390	275	200	150	120	100	80	70
Allowed load on 4 supports	1,00	daN/m²	265	170	120	85	65	55	45	35	25
	3,00	GG14/111	775	495	345	250	190	150	120	95	70



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	PHYSICAL- THERMIC CHARACTERISTICS LIGHT TRANSMISSION PROPERTIES	Temperature working ran Linear thermal expansion Clear Opal Smoky brown (bronze) Green
Designed to cater for a wide range of translucent roofing d glazing applications, the lyù C3 system incorporates 16 m triplewall polycarbonate eet with either plastic coated or ove painted glazing channels. He result is a strong and extretely practical self-supporting stem with excellent spanning pabilities. Manufactured to ngth, each sheet is supplied the heat sealed ends to avoid ssible dust ingress, and is desired to simply snap into the open oped glazing channels. Easy to semble, the system is completented by a full range of componits and finishing accessories. His the perfect solution for ojects requiring a higher speciation of glazing.		Green

POLYÙ C3 FLAT SYSTEM - 16 MM FEATURES

Thickness		16 mm			
	System weight	Kg/m² 4,50 ca.			
PRODUCTION	Structure	Triple wall			
CHARACTERISTICS	Useful pitch	mm 650 ± 5			
	Sheet length	Upon request (adviced length not beyond 7 m)			
PHYSICAL -	Thermal-insulating properties	K=1,9 Kcal/m² h° C - W=2,2 W/m² K			
THERMIC	Temperature working range	-40° C + 130° C			
CHARACTERISTICS	Linear thermal expansion	6,7 x 10 ⁻⁵ mm/mm° C			
	Clear	72%			
LIGHT TRANSMISSION PROPERTIES	Opal	52%			
	Smoky brown (bronze)	50%			
. No. Ellies	Green	68%			

TECHNICAL SPECIFICATIONS

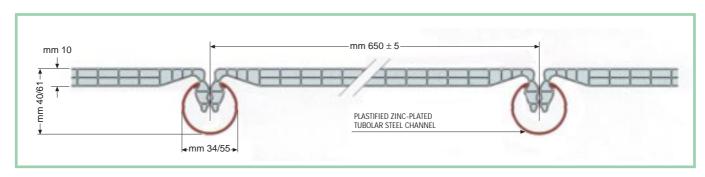
Production of vertical glazings and flat roofings with POLYÙ C3 FLAT SYSTEM, composed by:

- U-shaped cellular extruded polycarbonate sheets - Thickness: 16 mm - Selfextinguishing as per class 1 - K value: 1,9 Kcal/m² h°C - W: 2,2 W/m²K - Colours: clear, opal, green, smoky brown (bronze) -Module of 650 mm with heat sealed ends -UV-protected - Manufactured to length.
- Self-supporting joining steel channels -Plastic coated, 1 mm thick, or stove paited, 3 mm thick - In grey or brown colours -Profiled in squared shape with open gap -Positioned every 650 mm - Manufactured to length.
- Wide range of aluminium profiles in natural colour - Expanded PE inlays to ensure a perfect seal.



CURVED

SELF-SUPPORTING CURVED SYSTEM IN CELLULAR POLYCARBONATE FOR INDUSTRIAL COVERINGS, SKYLIGHTS AND TUNNELS





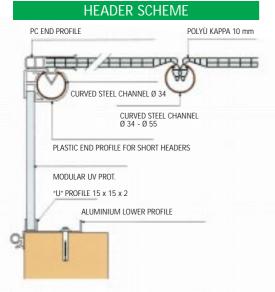


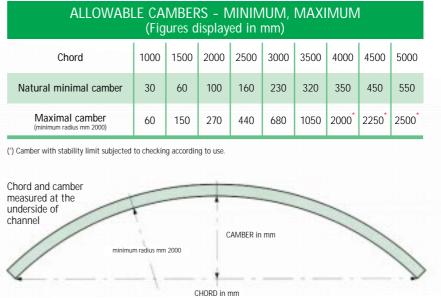




ASSEMBLING SCHEME FOR CURVED COVERING

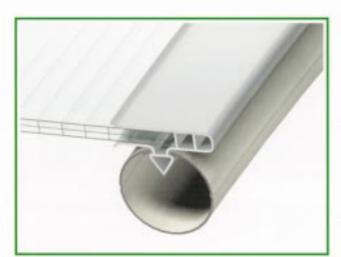












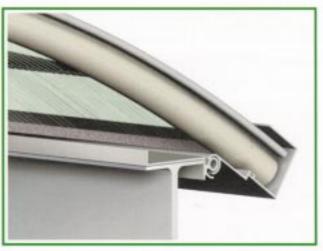
POLYCARBONATE END PROFILE



SOLUTION WITH ALUMINIUM SIDE PROFILES F/34 AND F/35 (external view)



SOLUTION WITH POLE-PLATE PLUS CLAMP (side view)



SOLUTION WITH ALUMINIUM SIDE PROFILES F/34 AND F/35 (internal view)



Ideal material for curved roof coverings such as rooflights, canopies and covered walkways, the Polyù Kappa Curved system incorporates 10 mm triplewall polycarbonate sheet with either 34 mm or 55 mm diameter, plastic coated, steel glazing channels. Excellent free-spanning capabilities, the Kappa sheet is pre-curved during extrusion to avoid micro cracks and retain a high level of flexibility. The same easy to install modular design as the standard Kappa system, Kappa Curved can also be supplied with polycarbonate glazed ends.

	KAPPA CURVED	10 MM - FEATURES				
	Thickness	10 mm				
	System weight	Kg/m² 4,00 ca.				
PRODUCTION CHARACTERISTICS	Structure	Triple wall				
	Useful pitch	mm 650 ± 5				
	Sheet length	Upon request (adviced length not beyond 7 m)				
PHYSICAI -	Thermal-insulating properties	K=2,3 Kcal/m² h° C - W=2,7 W/m² K				
THERMIC	Temperature working range	-40° C +130° C				
CHARACTERISTICS	Linear thermal expansion	6,7 x 10 ⁻⁵ mm/mm° C				
	Clear	75%				
LIGHT TRANSMISSION PROPERTIES	Opal	60%				
	Smoky brown (bronze)	58%				
	Green	71%				



TECHNICAL SPECIFICATIONS

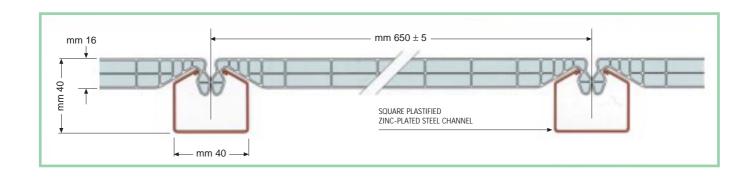
Production of vertical glazings and flat roofings with KAPPA CURVED SYSTEM, composed by:

- U-shaped cellular extruded polycarbonate sheets Thickness: 10 mm Self-extinguishing as per class 1 K value: 2,3 Kcal/m² h°C W: 2,7 W/m²K Colours: clear, opal, green and smoky brown (bronze) Module of 650 mm, with heat sealed ends UV-protected Manufactured to length.
- Self-supporting joining steel channels Plastic coated, 1 mm thick, or stove painted, 3 mm thick In grey or brown colours Profiled in squared shape with open gap Positioned every 650 mm Manufactured to length.
- Wide range of aluminium profiles in natural colour Expanded PE inlays to ensure a perfect seal.



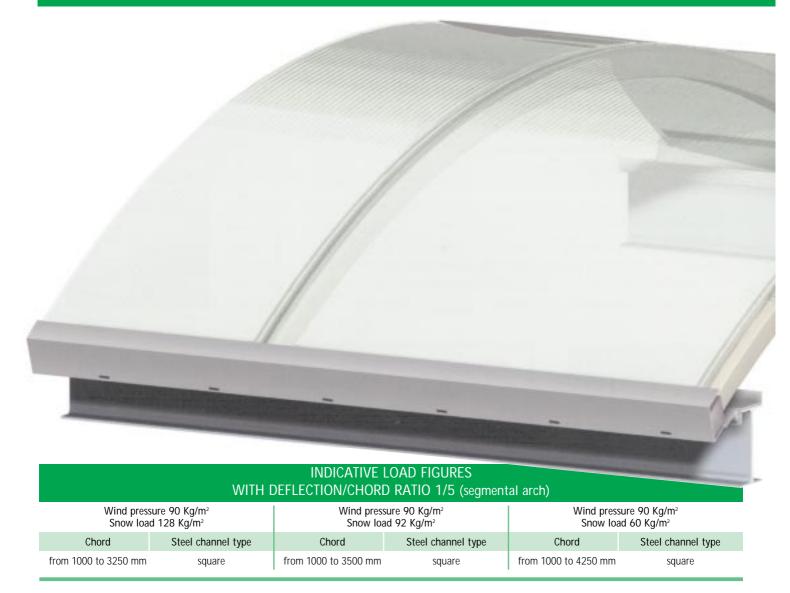
C3CURVED

SELF-SUPPORTING CURVED SYSTEM IN CELLULAR POLYCARBONATE FOR INDUSTRIAL COVERINGS





ASSEMBLING SCHEME FOR CURVED COVERING



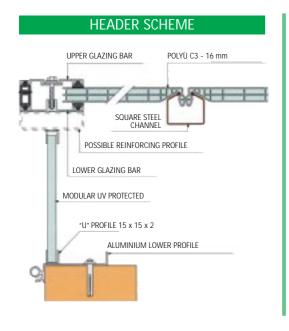
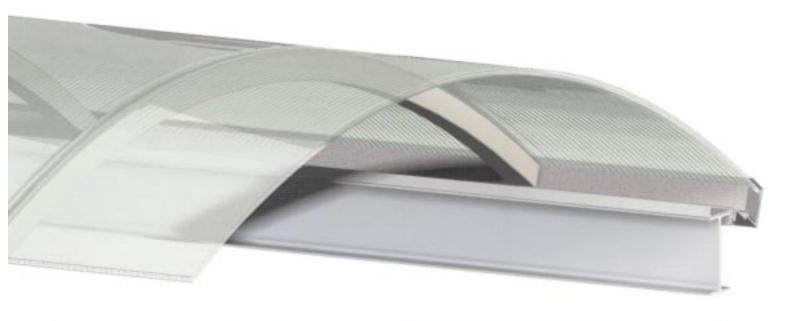


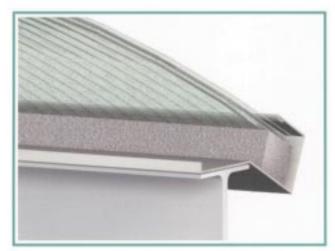
TABLE OF DEVELOPMENT - FIXED RADIUS 3500 mm (Figures displayed in mm) **CAMBER** DEVELOPMENT Figures are displayed in mm and data are purely indicative

CAMBER in mm

CHORD in mm

SKYLIGHTS AND TUNNELS OUTUBER OUTUBER





SOLUTION WITH ALUMINIUM SIDE POLE-PLATE (internal view)



SOLUTION WITH ALUMINIUM SIDE POLE-PLATE (external view)



SOLUTION WITH ALUMINIUM SIDE PROFILES F/34 AND F/35 (internal view)



SOLUTION WITH ALUMINIUM SIDE PROFILES F/34 AND F/35 (external view)



Pre-curved to a fixed 3500 mm radius, the Polyù C3 Curved system has excellent loading capabilities. 16 mm triplewall polycarbonate sheets, combined with 1 mm thick, plastic coated, zinc plated steel glazing channels give the system a pleasing aesthetical appearance as well as providing a strong, modular freespanning structure. The C3 Curved sheet simply snaps into the open topped glazing channel keeping installation times (and costs) to a minimum. The system allows for the possible insertion of manual or electrical openings, and comes complete

with a range of accessories desi-

gned in order to guarantee an air

/ watertight seal.

POLYÙ C3 CURVED SYSTEM 16 MM - FEATURES

	Thickness	mm 16
	System weight	Kg/m² 4,50 ca.
PRODUCTION	Structure	Triple wall
CHARACTERISTICS	Useful pitch	mm 650 ± 5
	Sheet length	Upon request (adviced length not beyond 7 m)
PHYSICAI -	Thermal-insulating properties	K=1,9 Kcal/m² h° C - W=2,2 W/m² K
THERMIC	Temperature working range	-40° C +130° C
CHARACTERISTICS	Linear thermal expansion	6,7 x 10 ⁻⁵ mm/mm° C
	Clear	72%
LIGHT	Opal	52%
TRANSMISSION PROPERTIES	Smoky brown (bronze)	50%
	Green	68%

TECHNICAL SPECIFICATIONS

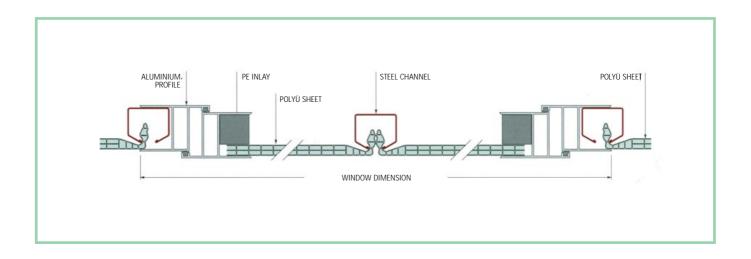
Production of vertical glazings and flat roofings with POLYÙ C3 CURVED SYSTEM, composed by:

- U-shaped cellular extruded polycarbonate sheets Thickness: 16 mm Selfextinguishing as per class 1 K value: 1,9 Kcal/m² h°C W: 2,2 W/m²K Colours: clear, opal, green, smoky brown (bronze) Module of 650 mm with heat sealed ends UV-protected Manufactured to length.
- Self-supporting joining steel channels Plastic coated, 1 mm thick, or stove painted In grey or brown colours Profiled in squared shape with open gap Positioned every 650 mm Manufactured to length.
- Wide range of aluminium profiles in natural colour - Expanded PE inlays to ensure a perfect seal.



SYSTEM WINDOW FRAMES

To aid the ventilation of certain buildings, Polyù systems can also incorporate manually or electrically driven openings. The openings, both for vertical glazing and curved coverings are manufactured to the required dimension and preassembled in our factories. All Polyù openings are supplied with a range of components, gaskets, hinges, etc., which allow trouble free installation and maintain a perfect seal to the elements. Polyù's technical departement is always available to answer queries on the use and application of the openings.

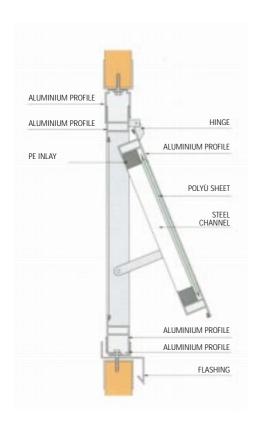




TOP HUNG WINDOWS FOR VERTICAL GLAZINGS









NOTES



RECOMMENDATIONS FOR USE

- Peel off the anti-scratch polyethylene film.
- Observe the approved loads and minimum radii of curvature.
- Keep the cellular sheets in a vertical position to allow natural drainage by gravity.
- Do not use PVC plastified seals; it is recommended to use seals compatible to elastomer, EDPM type or compatible silicone.
- The sheets must be mounted so as to allow movement due to thermal expansion.
- Cutting may be performed by standard tools for iron and wood.





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