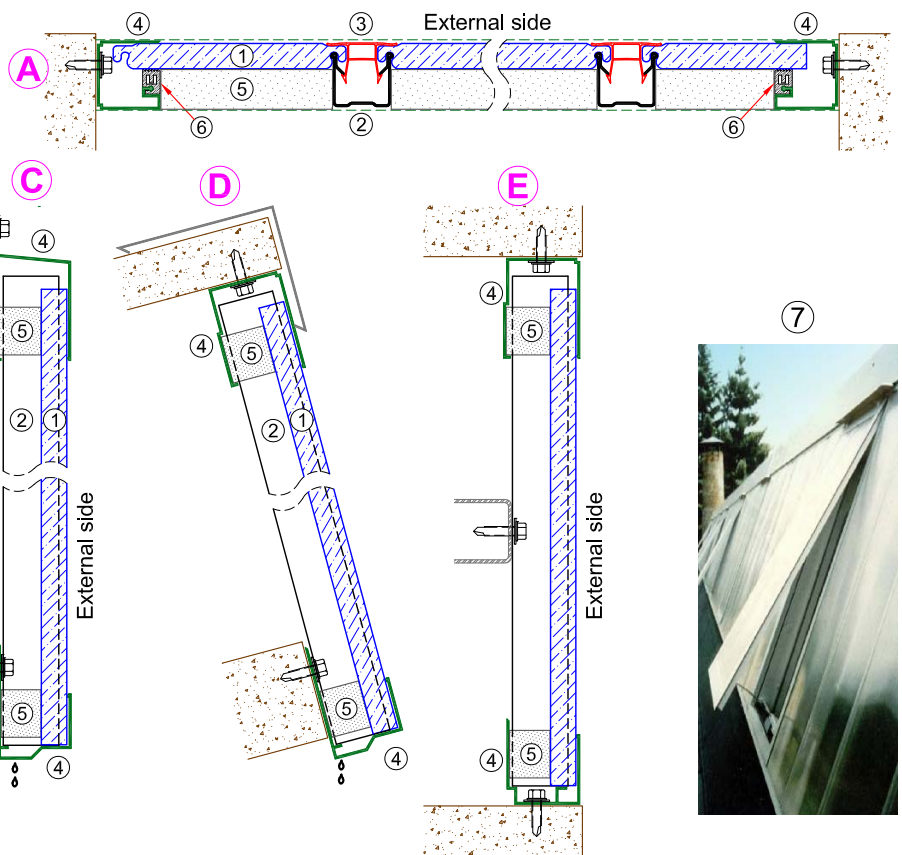
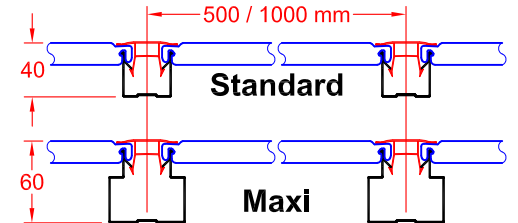
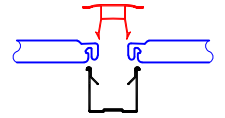


- ① **SUN MODUL** panel in UV protected polycarbonate
- ② **Steel channel**
- ③ **Clip profile** in UV protected polycarbonate
- ④ Framing profile in aluminium
- ⑤ PE-Inlay
- ⑥ Gasket
- ⑦ Aluminium window

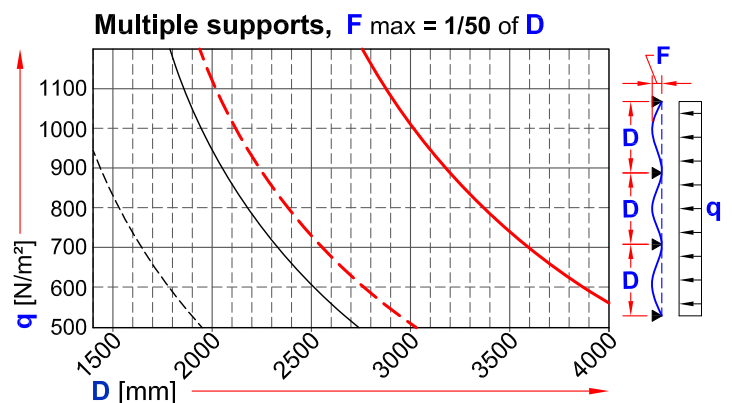
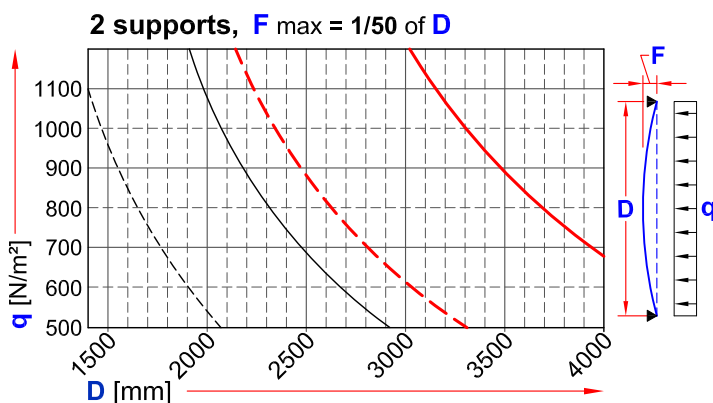


Acceptable Spans

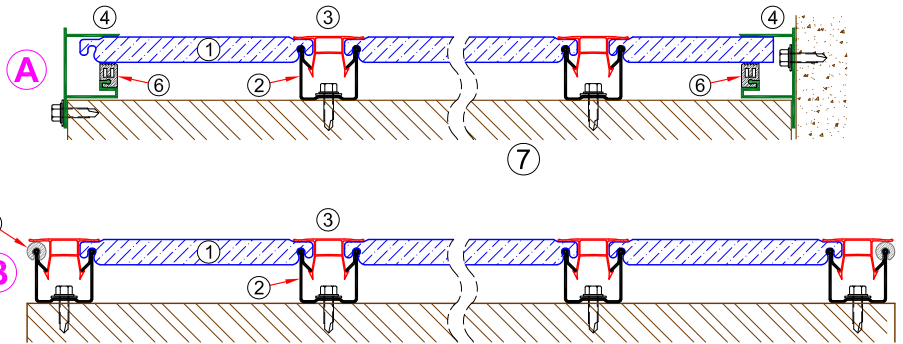
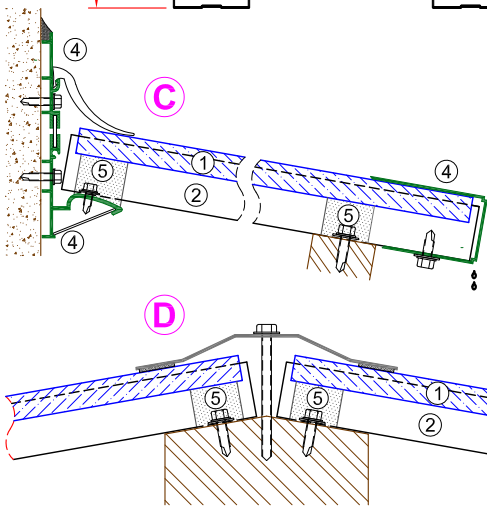
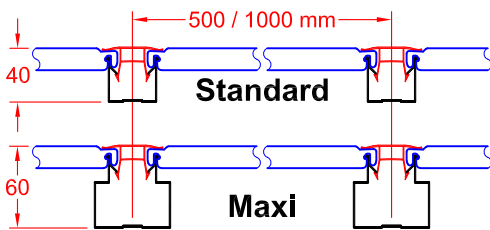
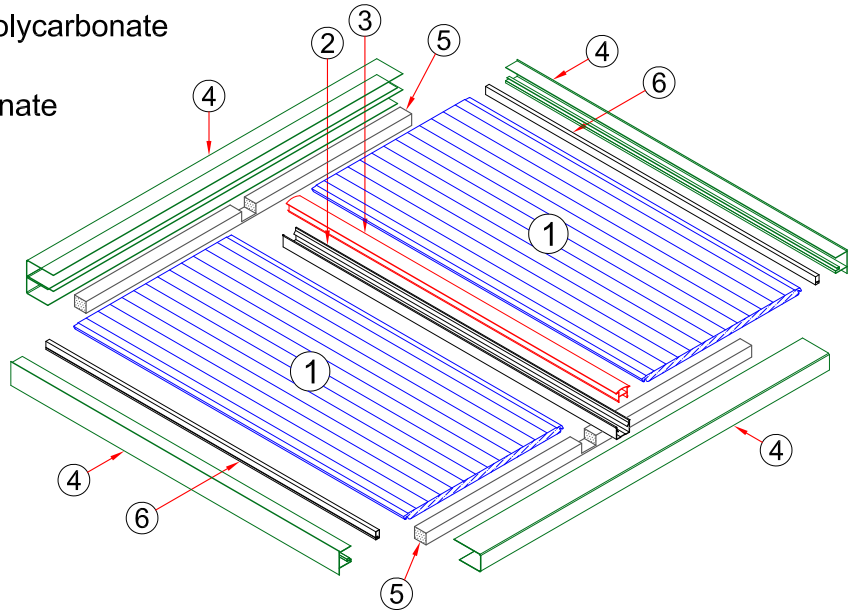
values according to EC3

- Standard module 500
- - - Standard module 1000
- Maxi module 500
- - - Maxi module 1000

Note: The span values indicated are referred to the conditions specified in each graph; for evaluations under different conditions please ask for a special verification.



- ① SUN MODUL panel in UV protected polycarbonate
- ② Steel channel
- ③ Clip profile in UV protected polycarbonate
- ④ Framing profile in aluminium
- ⑤ PE-Inlay
- ⑥ Gasket
- ⑦ Aluminium window



Minimum recommended inclination: 4° (7%)

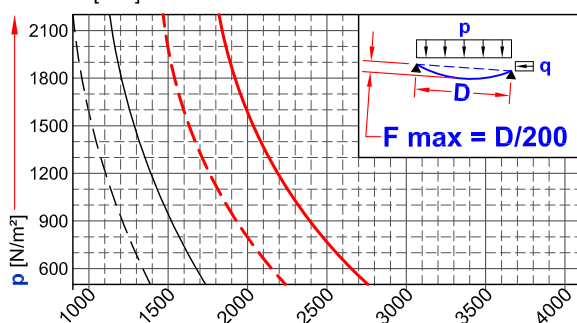
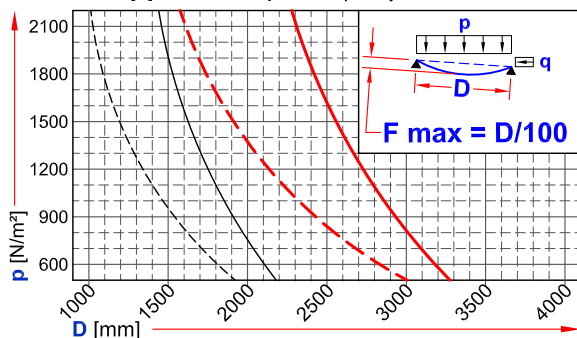


Acceptable Spans

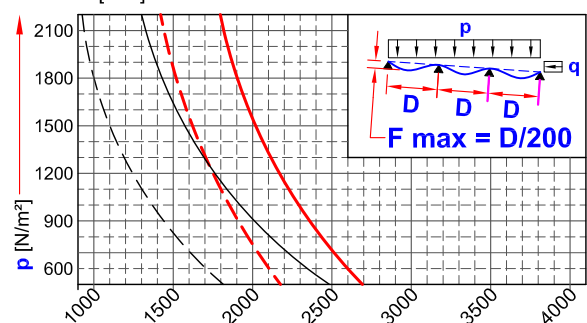
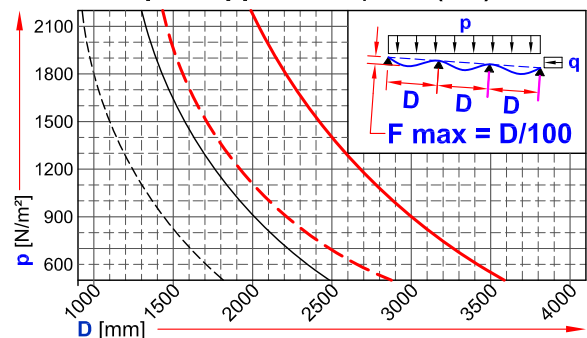
values according to EC3

- Standard module 500
- - - Standard module 1000
- Maxi module 500
- - - Maxi module 1000

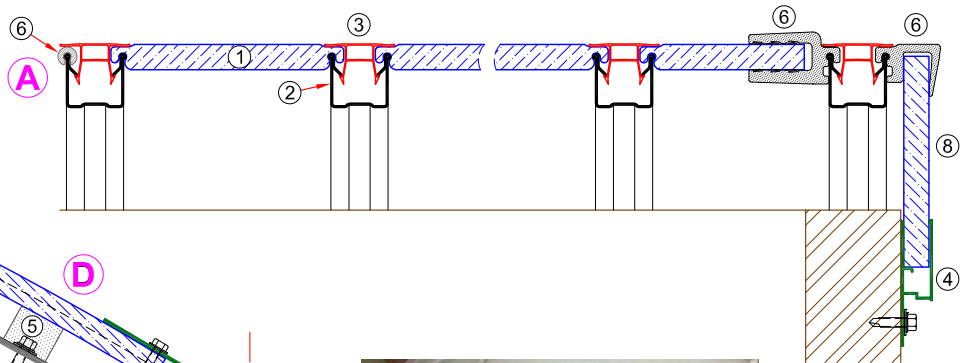
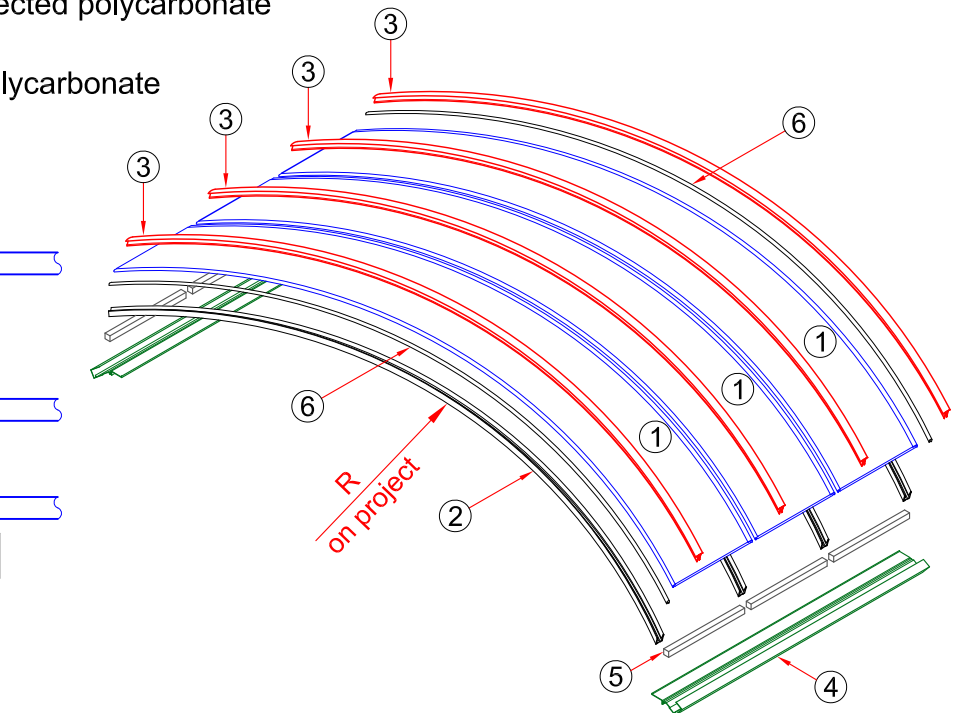
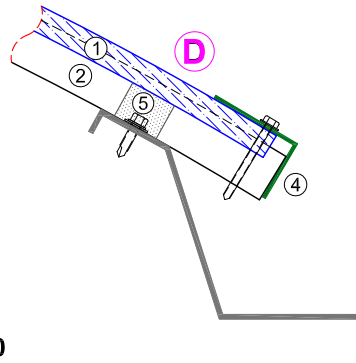
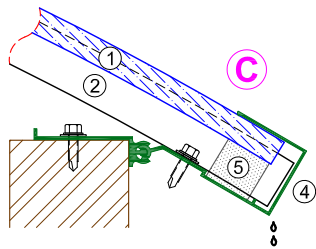
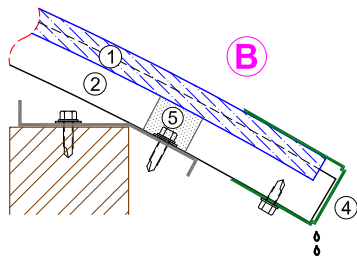
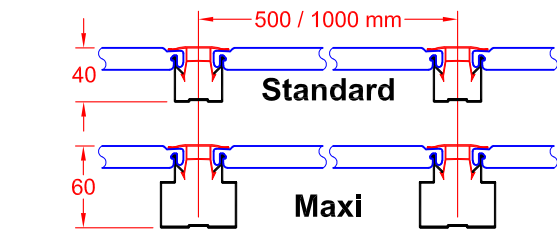
2 supports, slope 5° (9%)



Multiple supports, slope 5° (9%)



- ① SUN MODUL panel in UV protected polycarbonate
- ② Steel channel - curved
- ③ Clip profile in UV protected polycarbonate
- ④ Framing profile in aluminium
- ⑤ PE-Inlay
- ⑥ Gasket
- ⑦ Aluminium window
- ⑧ Front section panel



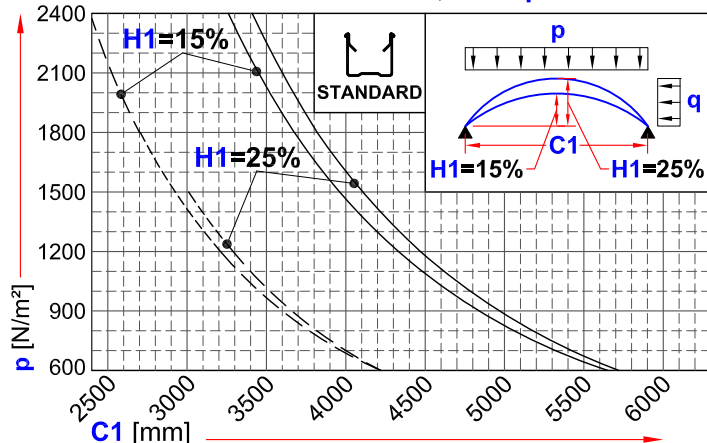
Acceptable Spans

values according to EC3

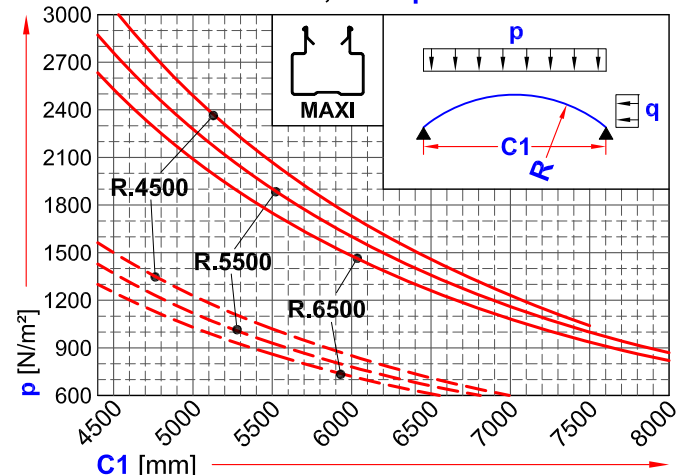
- Standard module 500
- - - Standard module 1000
- Maxi module 500
- - - Maxi module 1000

Note: The span values indicated are referred to the conditions specified in each graph; for evaluations under different conditions please ask for a special verification.

H1 = 15% and 25% of C1, with $q = 500 \text{ N/m}^2$

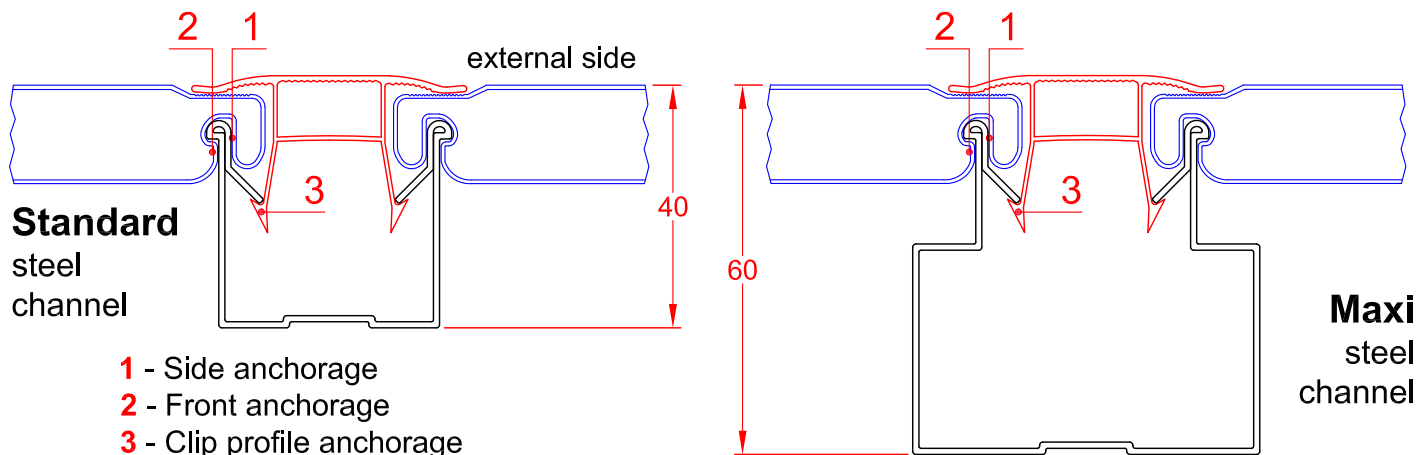


R constant, with $q = 500 \text{ N/m}^2$



ANCHORAGE

SUN MODUL guarantees stable and safe anchorage of the panels

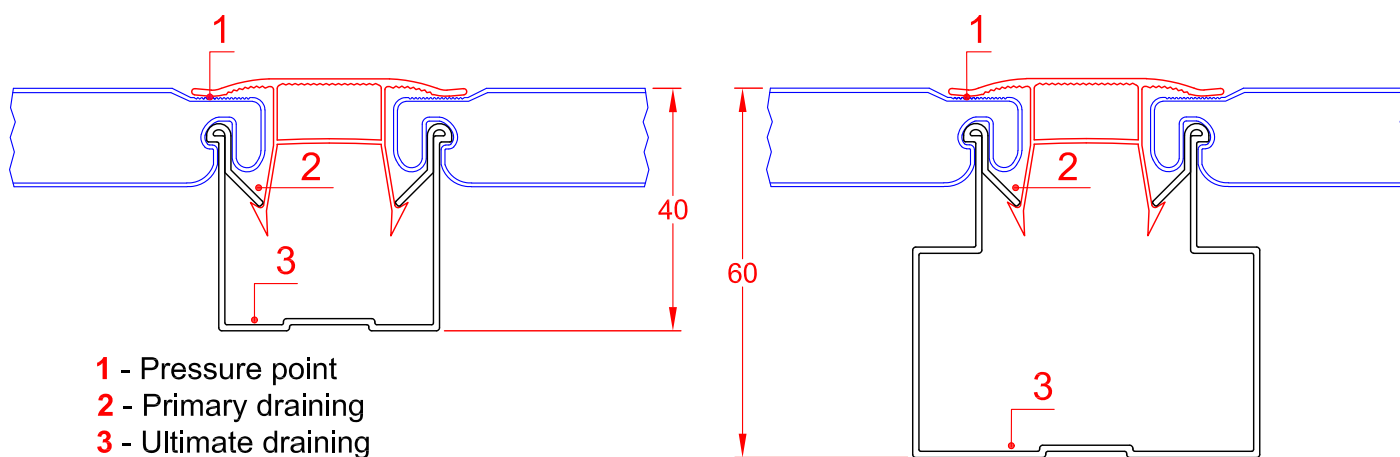


The anchorage of the polycarbonate **panels** is accomplished mainly by locking the polycarbonate **clip profile** into the **steel channel**.

The particular shape of the panels and the special profile of the steel channels keep the panels in their position in case of compressive or depressive forces. They remain perfectly in site with distributed load (wind and snow) and with concentrated load.

WATER TIGHTNESS

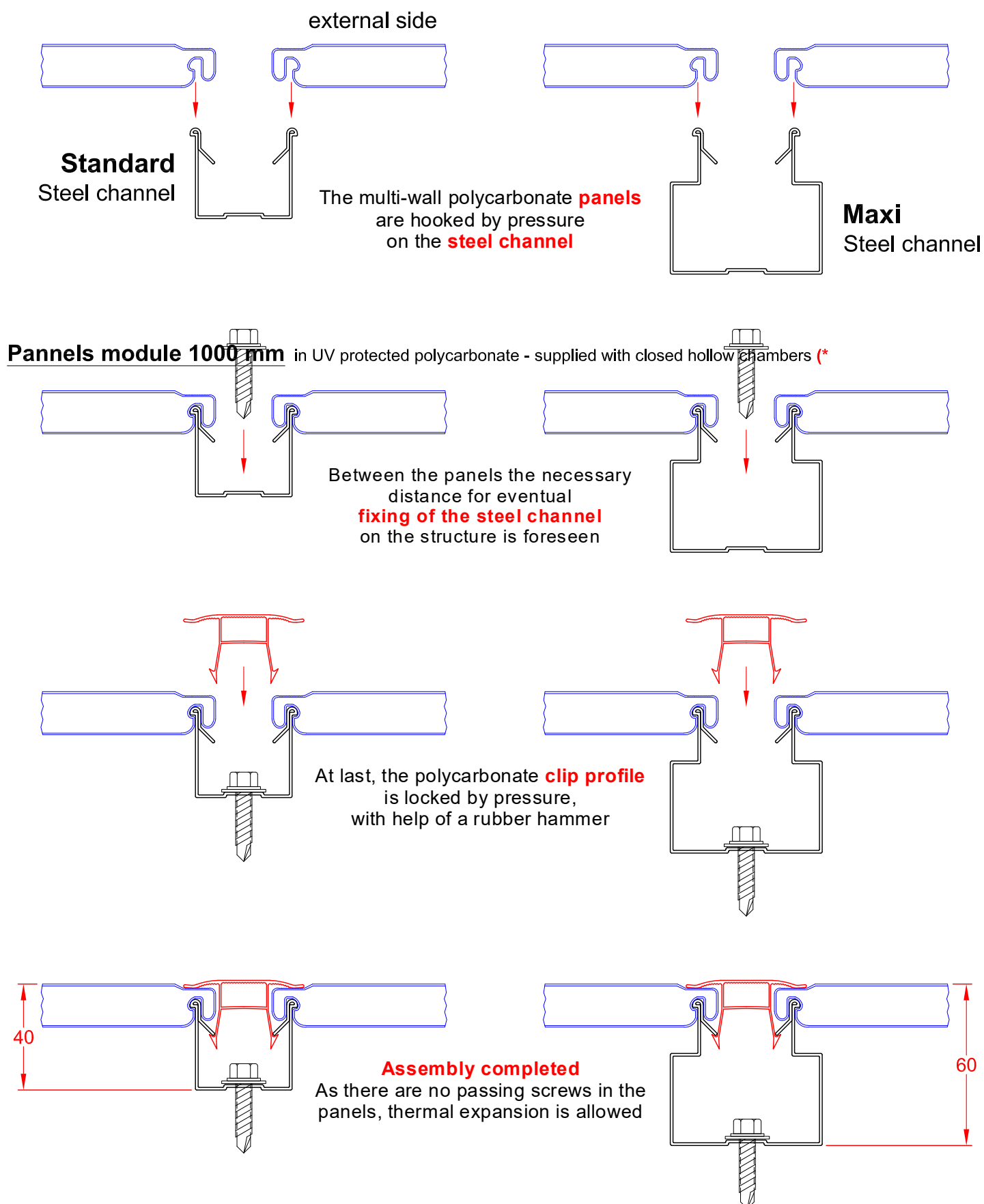
SUN MODUL guarantees excellent water tightness

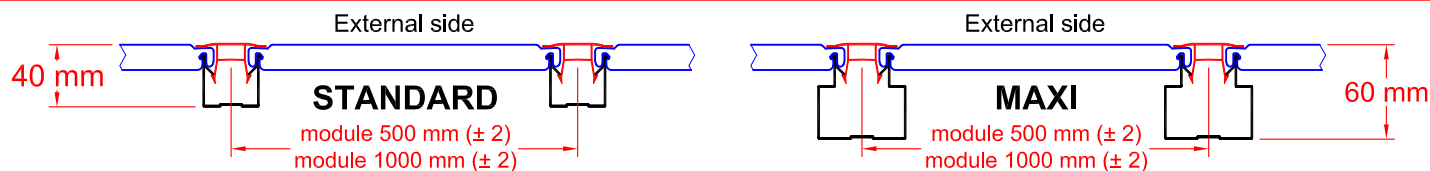


The anchorage of the polycarbonate **panels**, which is obtained by locking the polycarbonate **clip profile** into the **steel channel** without boreholes or screws on the panel, prevents infiltrations. Eventually penetrated microelements can flow outside by the primary draining.

The particular shape of the **steel channel** guarantees the ultimate draining of infiltrations and condensates, without interference with eventual fixing screws.

SUN MODUL allows simply and quick assembly

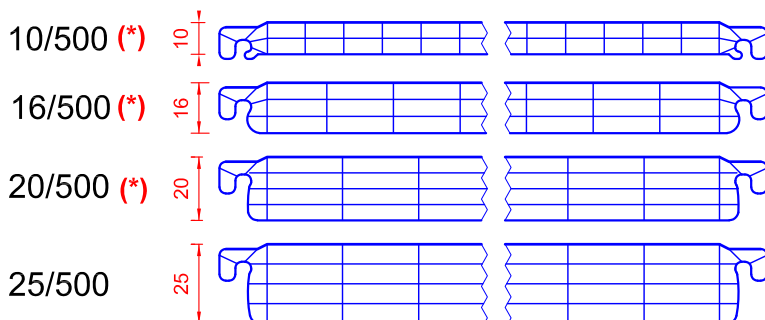




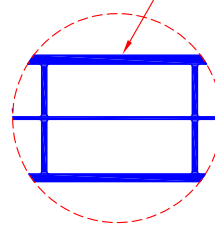
MAIN ELEMENTS

supplied with lenght on size - up to transportation limits (max 13500 mm)

Panels module 500 mm in UV protected polycarbonate - supplied with closed hollow chambers



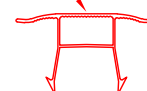
External wall reinforced with UV protection



Clip profile

in UV protected polycarbonate

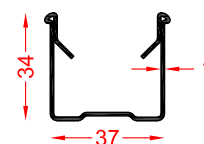
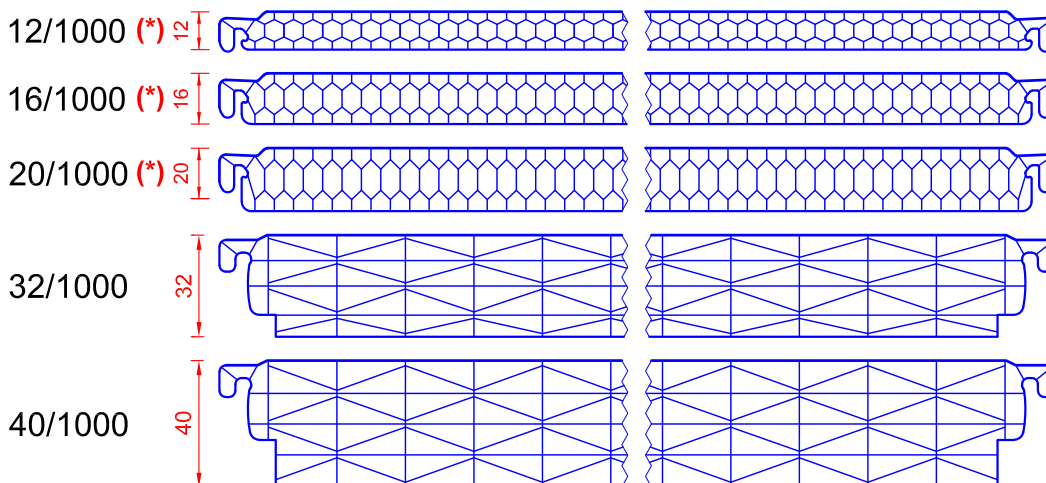
UV protection



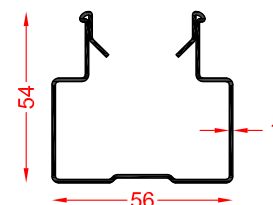
Steel channels

in galvanised steel external plasticized

Panels module 1000 mm in UV protected polycarbonate - supplied with closed hollow chambers



STANDARD

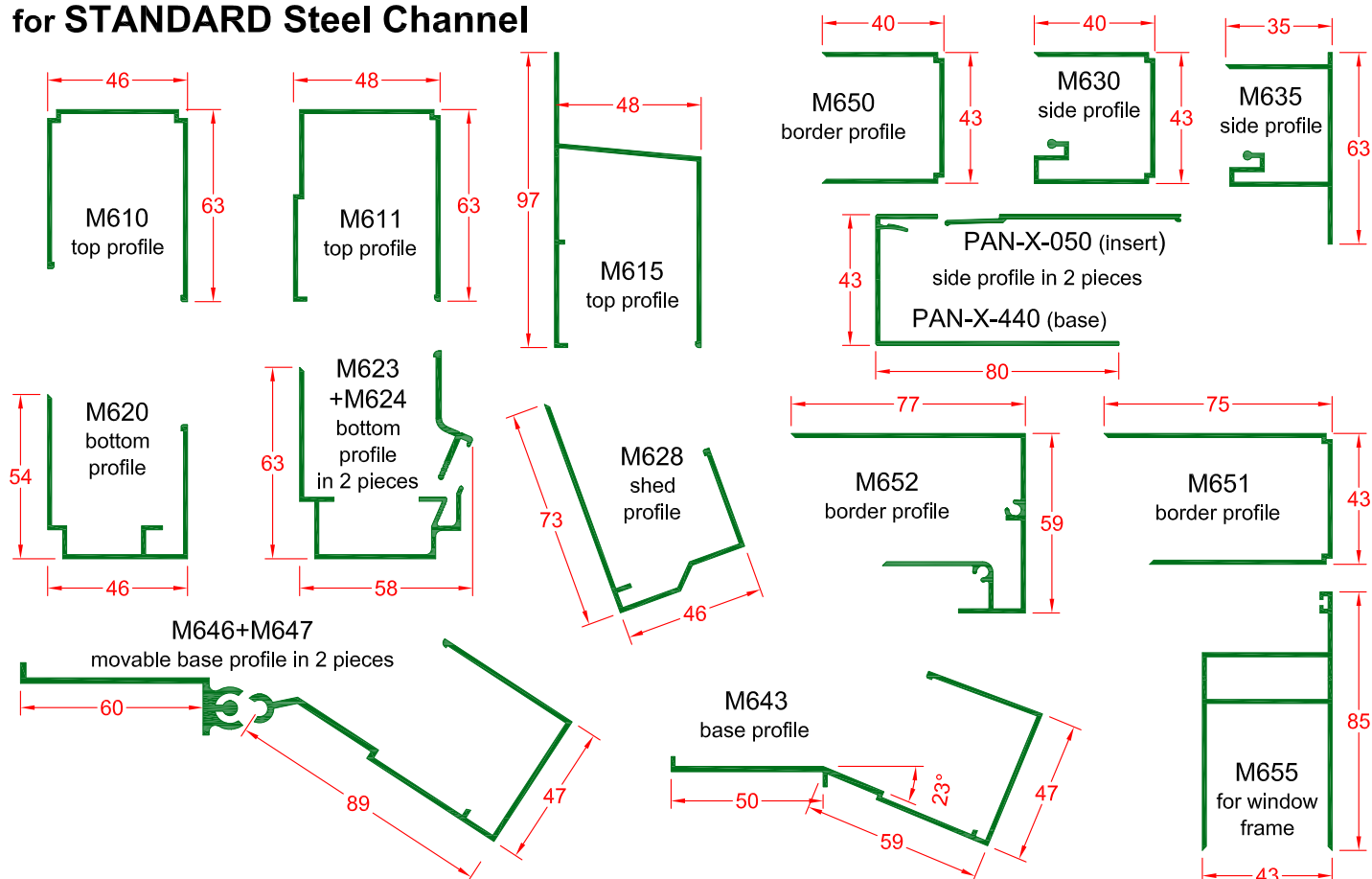


MAXI

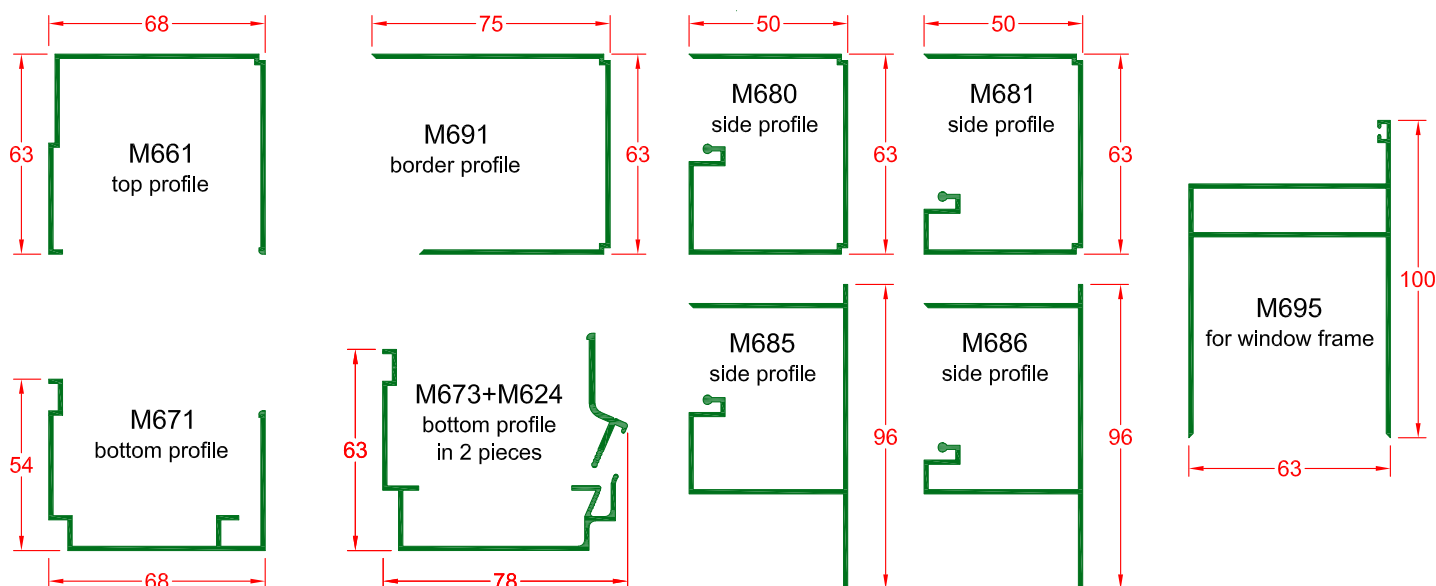
(*) Thermosealed hollow chambers at request for panels thickness 10-12-16-20 mm

TECHNICAL DATA		module 500 mm (± 2)				module 1000 mm (± 2)					
Panel thickness (nominal)		10	16	20	25	12	16	20	32	40	mm
Number of walls		3	4	5	5	[4]	[4]	[4]	9	9	
Thermal transmission [U]		2,73	2,04	1,71	1,55	2,20	1,99	1,81	1,27	1,13	W/m²K
Light transmission	Trasparent	~ 73	~ 66	~ 62	~ 61	~ 70	~ 69	~ 67	~ 53	~ 52	%
	Opaline	~ 63	~ 57	~ 54	~ 51	~ 53	~ 52	~ 43	~ 46	~ 44	%
Total weight of the system	with Standard channel	~ 4,3	~ 4,7	~ 4,8	~ 5,1	~ 3,2	~ 3,8	~ 3,9	~ 4,5	-	kg/m²
	with Maxi channel	-	~ 5,9	~ 6,0	~ 6,3	-	~ 4,4	~ 4,5	~ 5,1	~ 6,0	kg/m²
Minimum bending radius	with Standard channel	2000	3500	4500	5500	2000	3000	3700	6400	-	mm
	with Maxi channel	-	4500	4500	5500	-	4500	4500	6400	-	mm
Fire classification EN 13501-1		B s1 d0 o B s2 d0									
Temperature range		-40 / +120 °C			Thermal expansion					0,065 mm/mK	
<div>COMBINATIONS Panel / Steel channel</div> <div>● admitted (depending on foreseen snow and wind loads)</div> <div>- not admitted</div>											
for Wall / Northlight	with Standard channel	●	●	●	●	●	●	●	●	-	
	with Maxi channel	-	●	●	●	-	●	●	●	●	
for Flat Roof	with Standard channel	●	●	●	●	-	●	●	●	-	
	with Maxi channel	-	●	●	●	-	●	●	●	●	
for Domed Skylight	with Standard channel	●	●	●	●	●	●	●	-	-	
	with Maxi channel	-	●	●	●	-	-	●	-	-	

for STANDARD Steel Channel



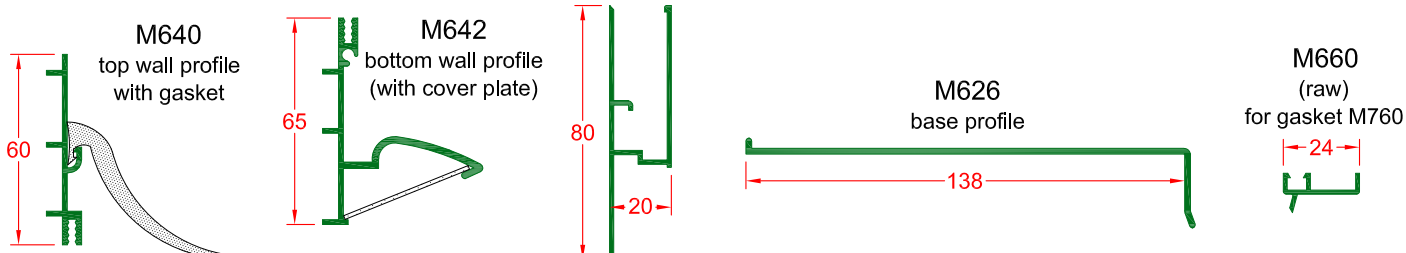
for MAXI Steel Channel



for general use

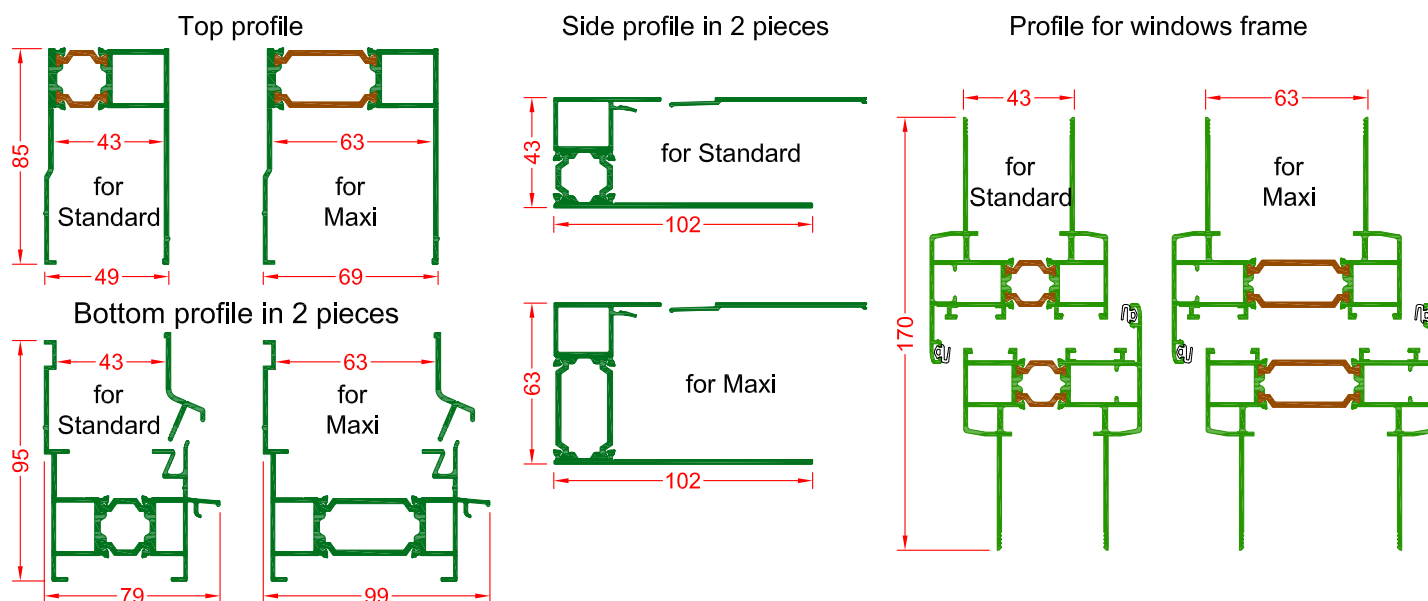
M658

for curved front sections



THERMAL CUT PROFILES

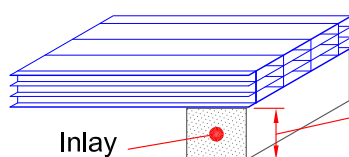
in anodized aluminium - lenght 6,5 m



INLAYS

in PE foam

drawings
not to scale



- Thickness of the inlay variable, depending on panel thickness and type of steel channel Standard or Maxi

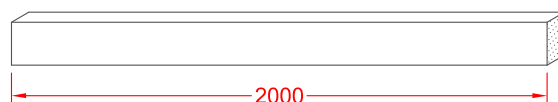
single for module 500 mm



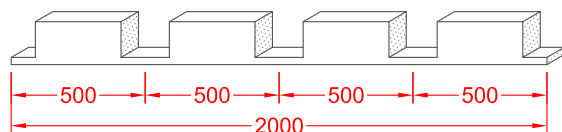
single for module 1000 mm



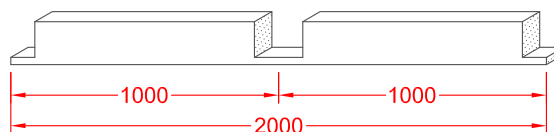
universal



shaped for module 500 mm



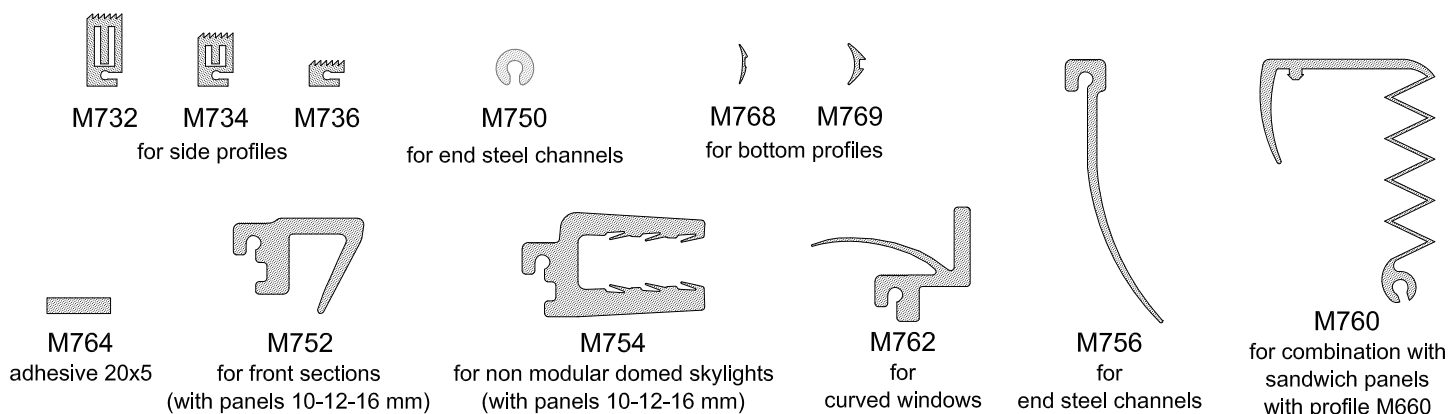
shaped for module 1000 mm



GASKETS

in EPDM

scale 1:2,5



SPECIFICATION TEXT

Choose between alternatives marked by • and verify admissible combinations panel / steel channel and minimum bending radius in the table **TECHNICAL DATA** at § 1.3.

• Wall; • Northlight; • Flat roof; • Curved roof

realised with selfcarrying modular system type **SUN MODUL®** by Akraplast Sistemi, including:

- 1) UV protected multi-wall polycarbonate panels
 - thickness 10 mm, modular width 500 mm, 3 walls, thermal transmission $U=2,73 \text{ W/m}^2\text{K}$
 - thickness 16 mm, modular width 500 mm, 4 walls, thermal transmission $U=2,04 \text{ W/m}^2\text{K}$
 - thickness 20 mm, modular width 500 mm, 5 walls, thermal transmission $U=1,71 \text{ W/m}^2\text{K}$
 - thickness 25 mm, modular width 500 mm, 5 walls, thermal transmission $U=1,55 \text{ W/m}^2\text{K}$
 - thickness 12 mm, modular width 1000 mm, honeycomb, thermal transmission $U=2,20 \text{ W/m}^2\text{K}$
 - thickness 16 mm, modular width 1000 mm, honeycomb, thermal transmission $U=1,99 \text{ W/m}^2\text{K}$
 - thickness 20 mm, modular width 1000 mm, honeycomb, thermal transmission $U=1,81 \text{ W/m}^2\text{K}$
 - thickness 32 mm, modular width 1000 mm, 9 walls, thermal transmission $U=1,27 \text{ W/m}^2\text{K}$
 - thickness 40 mm, modular width 1000 mm, 9 walls, thermal transmission $U=1,13 \text{ W/m}^2\text{K}$
 - colour • transparent; • opal-white; • others
- 2) U shaped channels in galvanized steel with plasticized external surface
 - type Standard for total thickness of the system 40 mm
 - type Maxi for total thickness of the system 60 mm
 - colour • grey; • white
- 3) Clip profiles in UV protected polycarbonate for stable anchorage of the panels on the steel channels
 - colour • as panels; • others
- 4) Profiles for framing of the perimeter in natural anodized aluminium; PE inlays, gaskets and what else is necessary for perfect tightness of the system.

WARRANTIES

SUN MODUL® panels and clip profiles are protected against UV rays on the external side.

In Europe they are covered by **10 YEARS WARRANTY** from the date of purchase against yellowing and weather damages (hail etc.).

For Extra-European Countries the warranty may have a different duration. For further details, please ask for the Warranty Certificate.

CERTIFICATIONS

A series of tests have been carried out on the **SUN MODUL®** system, in order to confirm it's most significant properties. The below listed test and certificates are available. For further details, please ask for a copy of the Certificate.

Type of test / Certificate

Durability:	Evolution during time of light transmission and impact strength
Tightness:	Air tightness Water tightness
Mechanical properties:	Resistance to compressive and depressive loads Resistance of fixing to tearing and deformation
Thermal properties:	Coefficient of thermal conductivity
Solar properties:	Energy transmission Light transmission and reflection
Acoustic properties:	Coefficient of acoustic insulation
Fire classification:	Certificates for European Standard EN13501-1, and National Standards for several Countries
Licences of the system:	In several Countries according to respective standards

TECHNICAL HANDBOOK

A **Technical Handbook** is available with detailed information and examples about the following topics:

PROPERTIES and ELEMENTS of the SYSTEM - APPLICATIONS - ASSEMBLY INSTRUCTIONS

The use of the handbook is recommended for architects for elaboration of projects foreseeing application of the system, and for the companies doing the installation.

Responsibility clause: all information and technical advice given are made in good faith and based on the best of our knowledge; but having no control over the use of their material, we accept no responsibility for their applications. These indications do not exempt the customer from its controls to determine compliance of materials and installation procedures to their needs and standards.

AKRAPLAST Sistemi reserves the right to change specifications at any time.