



DANPAL®
Roofing system

www.danpal.com



SKYLIGHTS

Danpal®
Light Architecture

DANPAL SKYLIGHT SYSTEM

Danpal skylight systems allow you to explore new control of light intensity and energy consumption together with flexible installation

CONTENT

Controlite®

Danpal®
Roofing System Types

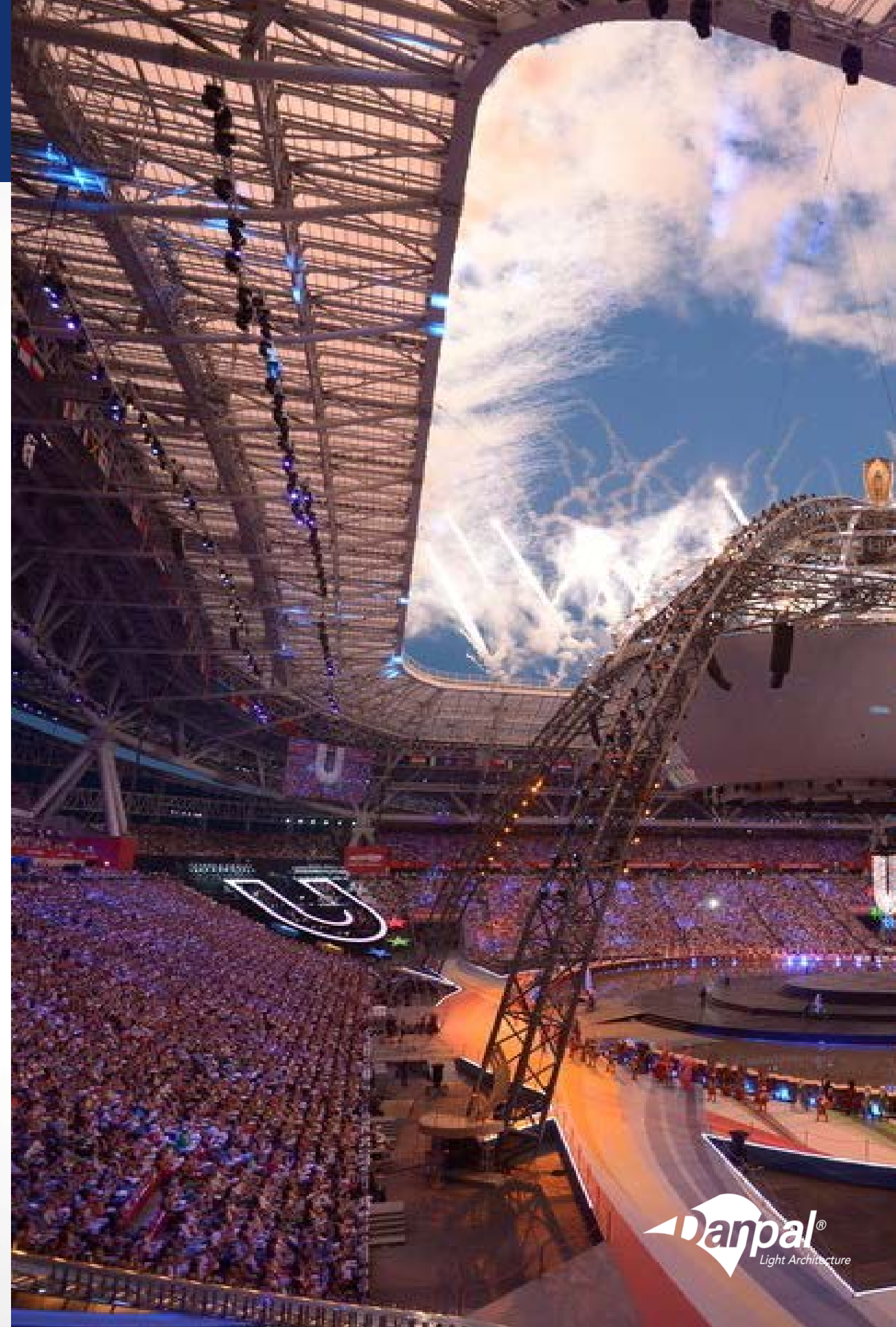
Danpavault

Technical information

Panels range

Glazing Material

finishing



CONTROLITE®

Intelligent Daylighting System

DESCRIPTION®

- Contains roof and shading system
- Most effective over large scale roofs
- Comfort light any time of the day and season
- Brings us to the upper level of system manufacturers

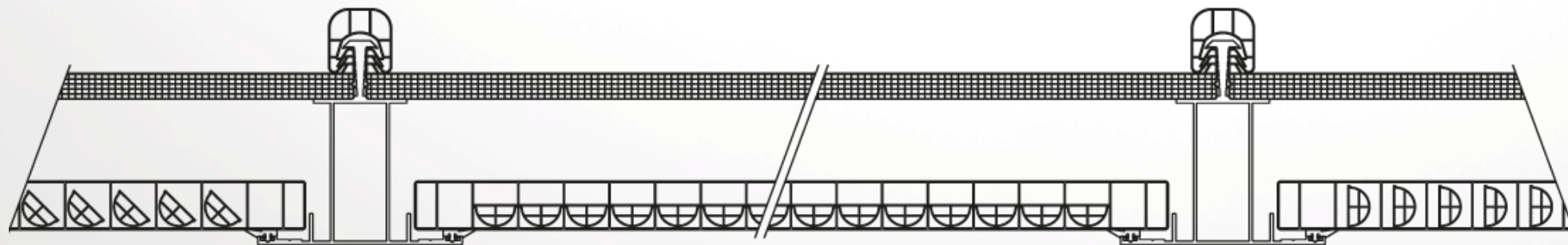


DESCRIPTION

Ready to install system, supplied as a full kit,
no further additions are required



- | | |
|--------------------------|----------------------------------------|
| 1. Controlite® Mechanism | 4. Controlite® Aluminum Glazing System |
| 2. Danpalon® U Connector | 5. Controlite® Louvres |
| 3. 16mm Danpalon® Panel | 6. 30mm Twinwall Danpalon® Panel |



Roofing system

HOW IT WORKS

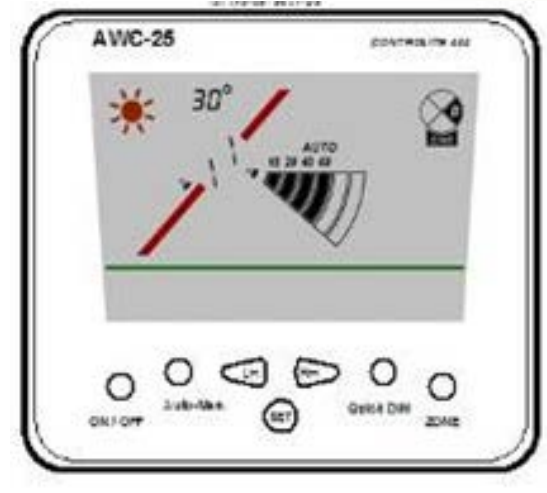
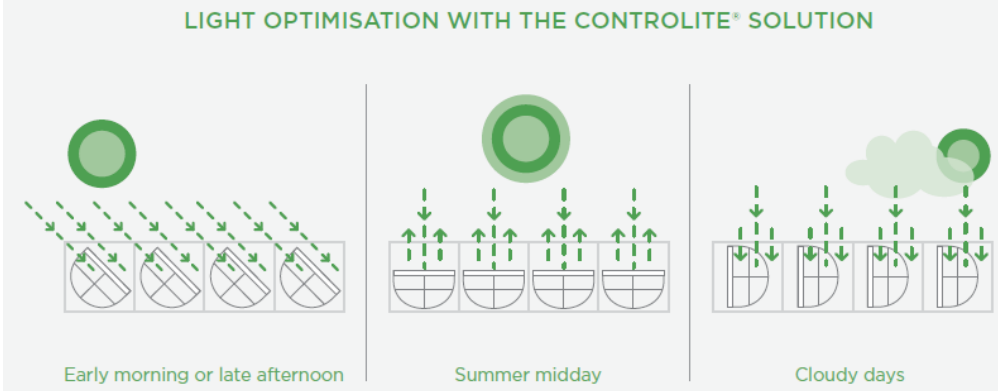


63%

5%

of visible daylight is transmitted through Controlite® panels in the OPEN position

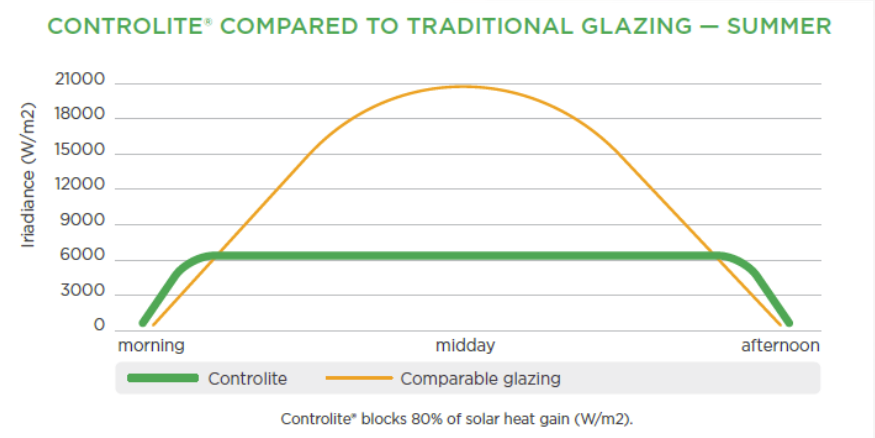
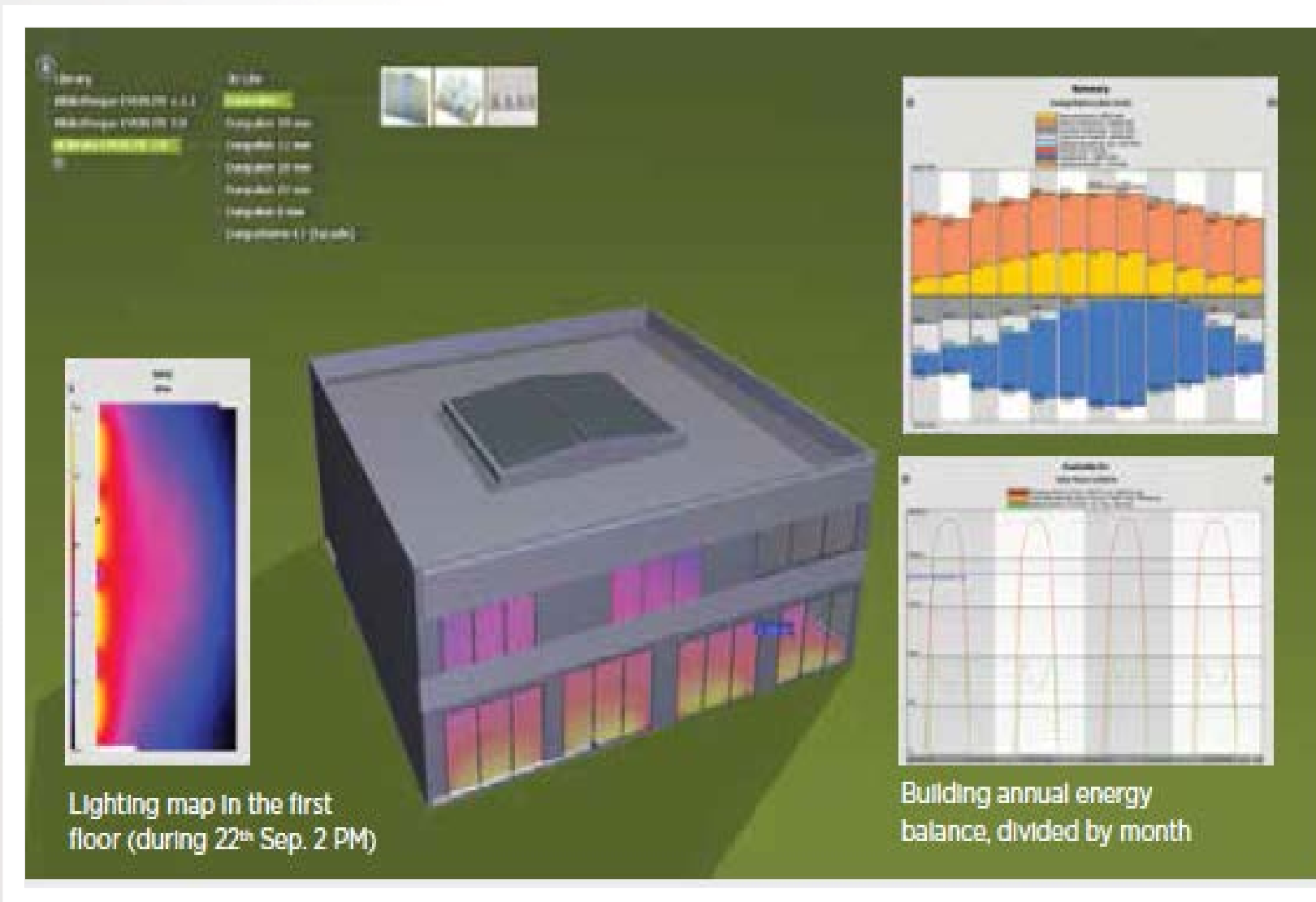
of visible daylight is transmitted through Controlite® panels in the CLOSED position



WALL CONTROLLER

WHAT IT DOES

The Controlite® Panel Optimizes Sunlight By Adjusting The Position Of The Louvers To Suit The Angle Of The Sun's Rays If Necessary.



SYSTEM BENEFITS

- Increased comfort through “optimized” daylight
- Maximizes daylight in winter and on cloudy days
- Reflects solar heat at midday
- Effectively controls light, shading, and solar heat gain to block heat in summer and maximize daylight in winter
- Energy efficiency
- Significantly reduces energy use from air-conditioning, heating, and artificial lighting
- Reduces energy-related costs and greenhouse gas emissions
- Offers light-transmitting surfaces over large areas

DANPAL[®] ROOFING SYSTEM

Modular Glazing Solution For Roofs

DANPAL® ROOFING SYSTEM

Provides Right Solution For Irregularly Structure



DESCRIPTION

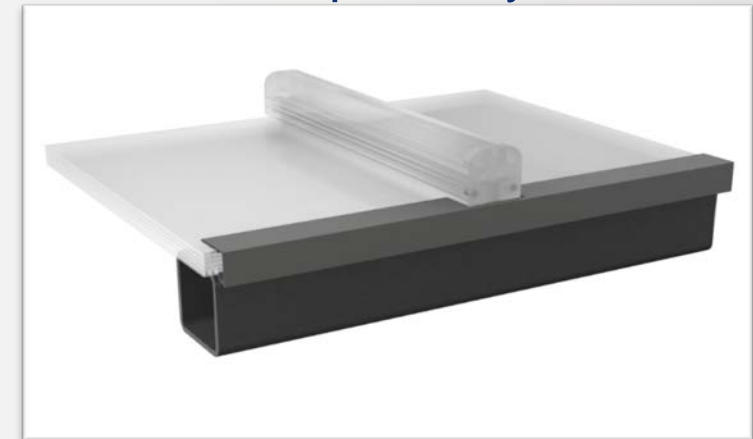
Unlike other systems roofing systems combines from some varieties of basic solutions which mainly contains the fixing elements of the panels to structure.

Those systems have to be completed with complementary accessories (aluminum or flashing) in order to create the perimeter

Traditional system



Aluminum Spacer system



Free span system



Reverse roof installation



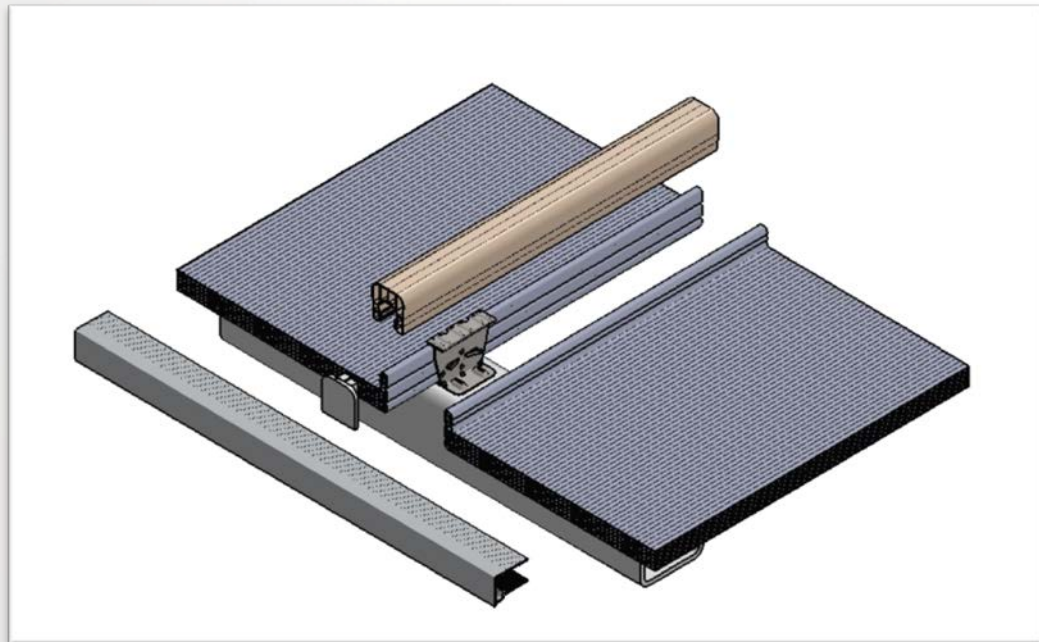
TRADITIONAL SYSTEM

First Danpal's invention and patent.

Made out of Fastener, and connector which can be PC or aluminum

Advantages:

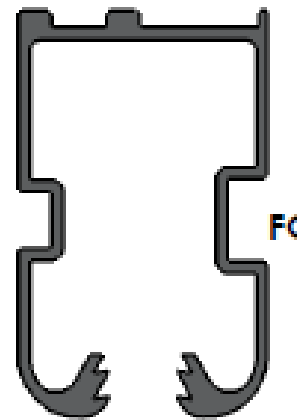
- The same type of connector suitable for all type of panels
- Cold curving on site (PC connector)
- Clean look from underneath, no visible aluminum
- Connectors (PC) up to approximately 34 meters long
- Aluminum connectors allows very high load resistance (Snow)



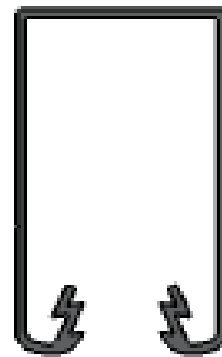
TRADITIONAL SYSTEM - CONNECTORS TYPES

Single glazing Traditional system

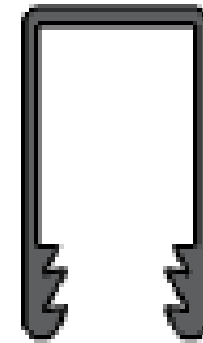
U5



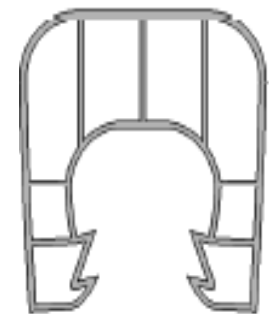
U HD



U Aluminium

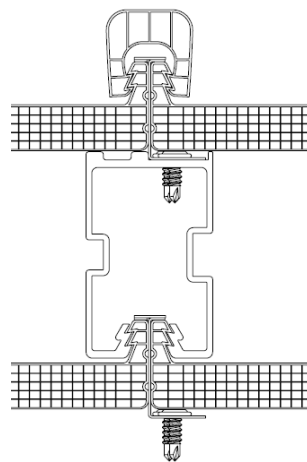


U2



Double glazing Traditional system

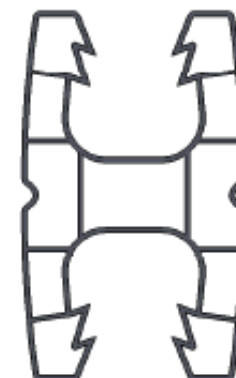
U5



H 80



H 275

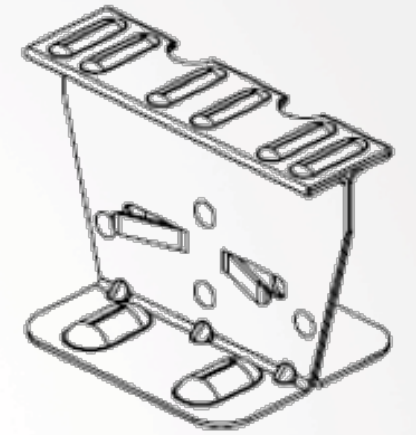


TRADITIONAL SYSTEM

NEW

Expansion fastener

Danpal's new patented (Pending) product.
Allows better and easier expansion movements.
Easy and faster installation .

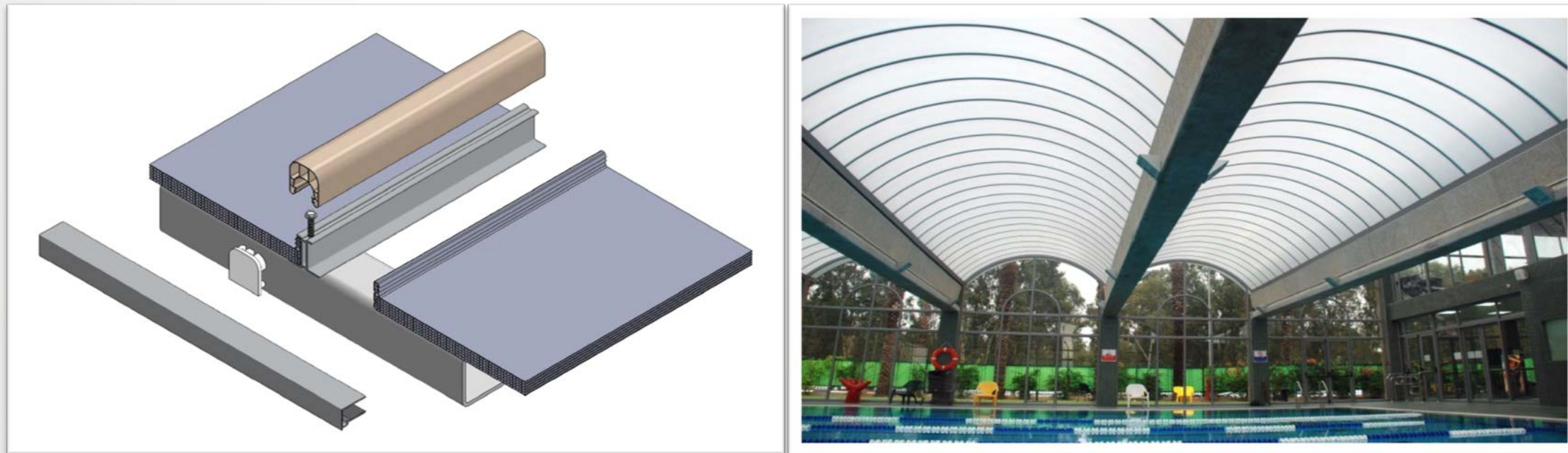


ALUMINUM SPACER SYSTEM

Made out of aluminum spacer and PC connector

Advantages:

1. Mechanically curving is relatively easy
2. Self supporting system
3. Less sensitive for slope limitation
4. Panels installed on purlins, no lateral deflection
5. Clean look from underneath

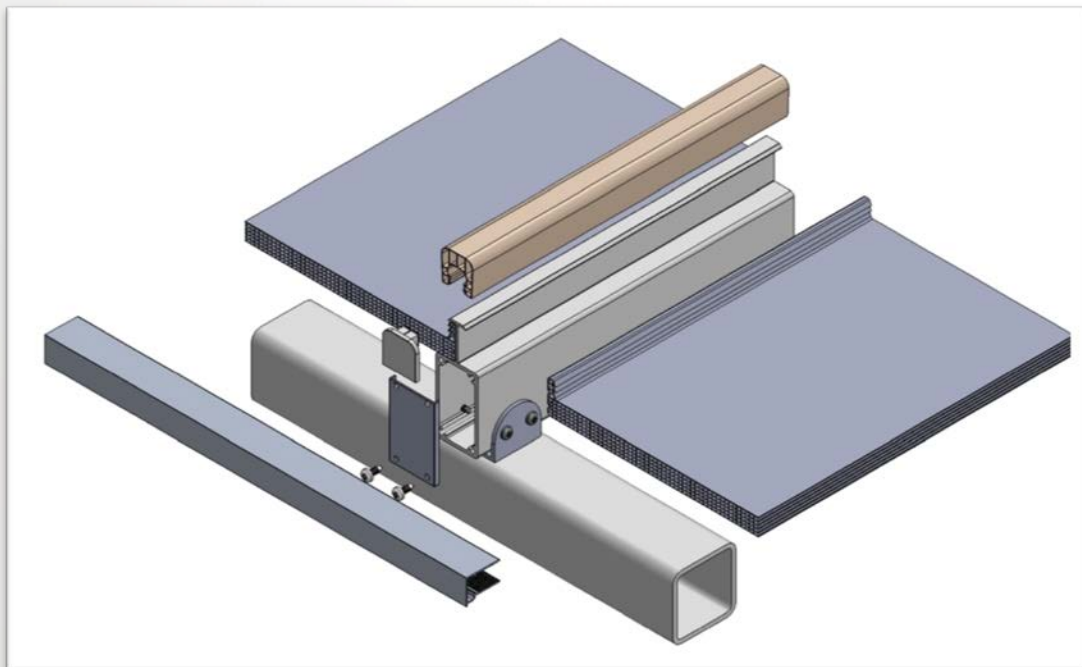


ALUMINUM DP BAR SYSTEM

Made out of aluminum spacer, PC U2 connector and saddle bracket for purlins connection

Advantages:

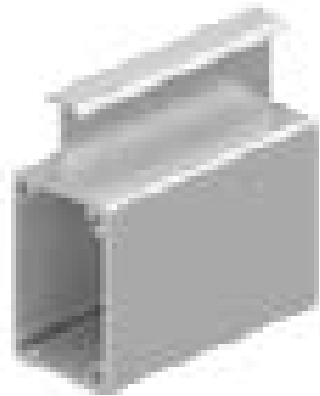
- Almost unlimited load capacity or distance between purlins
- Very clean look from underneath
- Relatively easy for machinery curving
- Can be use with very long panels



ALUMINUM DP BAR SYSTEM - BARS TYPES



50mm
bar



60mm
bar



70mm
bar



80mm
bar



100mm
bar



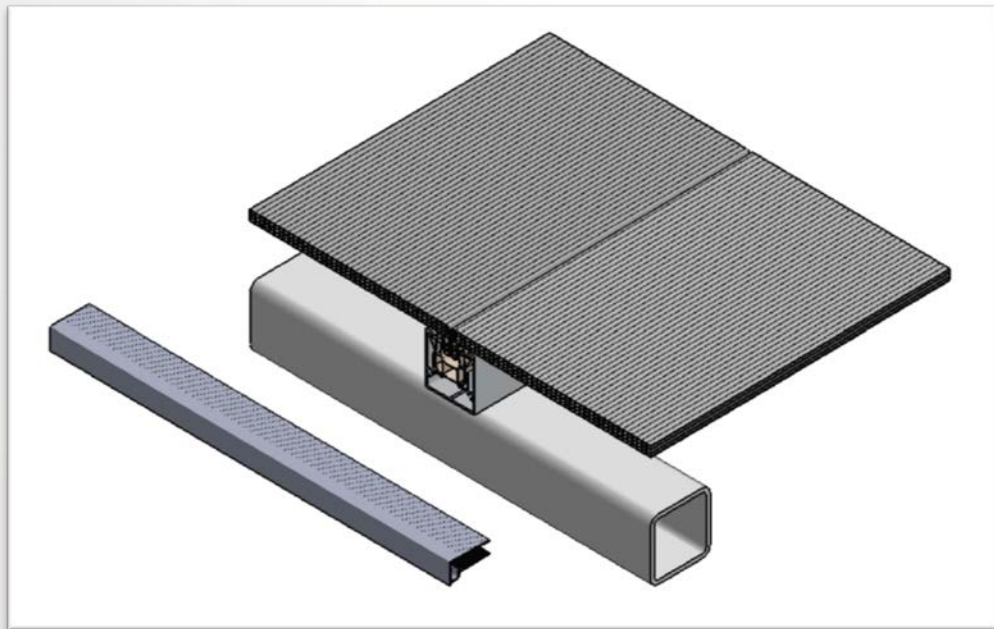
150mm
bar

REVERSE INSTALLATION SYSTEM

Made out of aluminum expansion connector

Advantages:

1. Almost unlimited load capacity or distance between purlins
2. The same type of connector suitable for all type of panels
3. Flush external finish
4. Easy and free expansion
5. Patented (pending) new connector



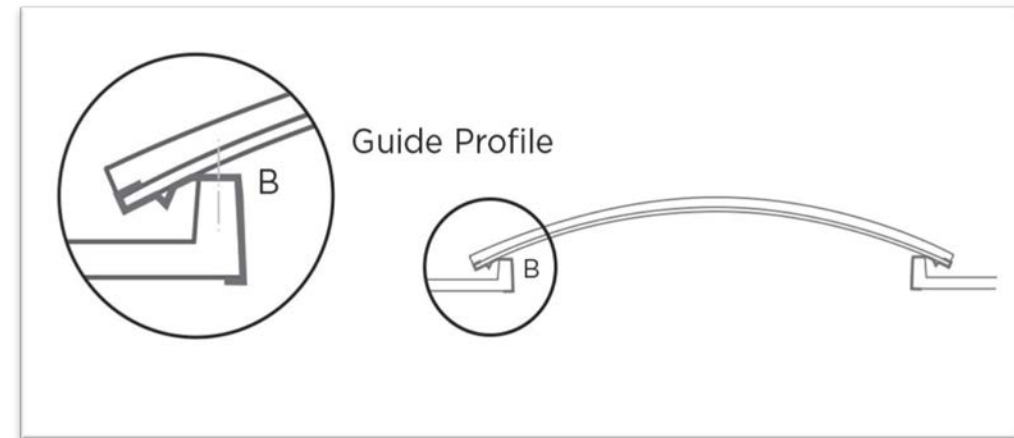
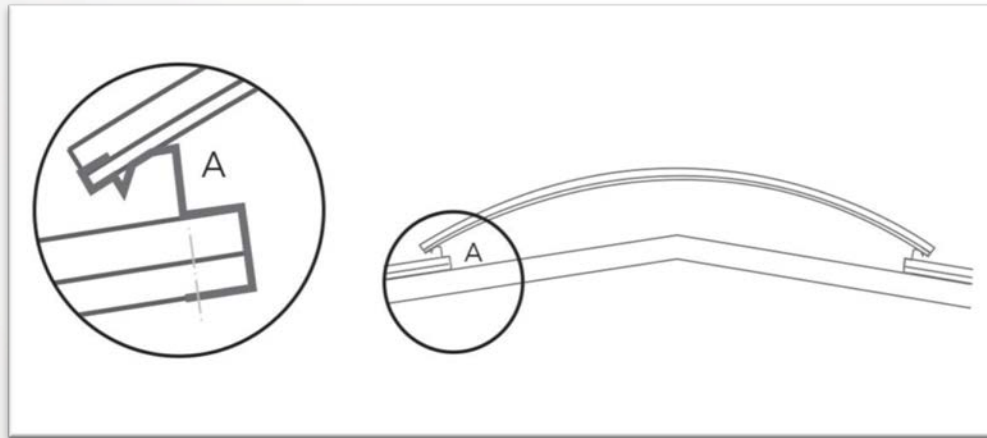
DANPAVAULT

Barrel Vault Skylight System

DESCRIPTION

1. An existing market in large scale buildings
2. Self supporting system with unlimited length
3. Suitable to any type of roof
4. solution based on traditional system
5. In addition we can supply side accessories

Overhead roof or on ridge



TECHNICAL INFORMATION

SYSTEM	Span In (mm) for 100 kg/m ² wind load single span										
	Panel width (mm)	600					900				1040
	Panel thickness (mm)	8	10	12	16	22	12	16	22	30	16
Traditional System	Polycarbonate connector	600	700	800	900	1000	N/A	900	1150	1600	850
	Alu U HD	1,900					1,550				1,400
	Alu U 5	3,200					2,600				2,450
ALU Spacer System		1,100	1,150	1,200	1,300		950	1,100			1,000
Freespan BAR System	Freespan 50		2,550	2,550	2,600		2,100	2,100			1,950
	Freespan 60	2,900	2,900								
	Freespan 70	3,350	3,350								
	Freespan 80		3,700	3,700			3,000				
	Freespan 100				4,400			3,600			3,350
	Freespan 150				6,000			5,000			4,650
'Seamless' (or Reverse) Installation	Expansion connector	1,450					1,200				1,100

Aluminium alloy is 6063 T5

Safety Factor is 1.5

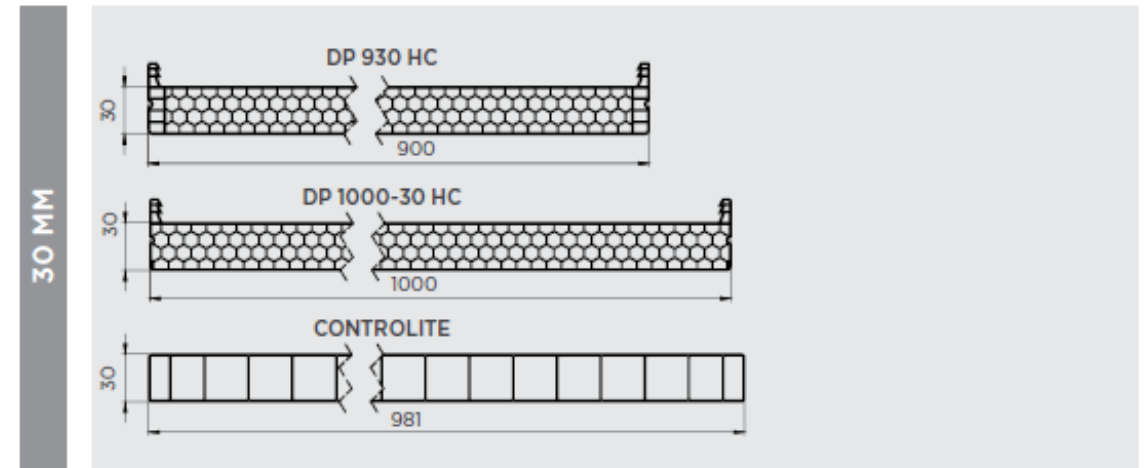
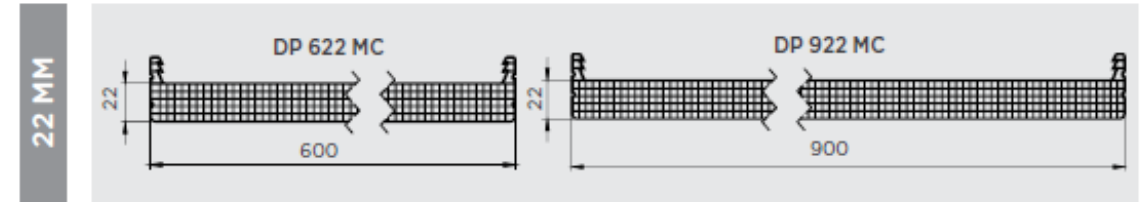
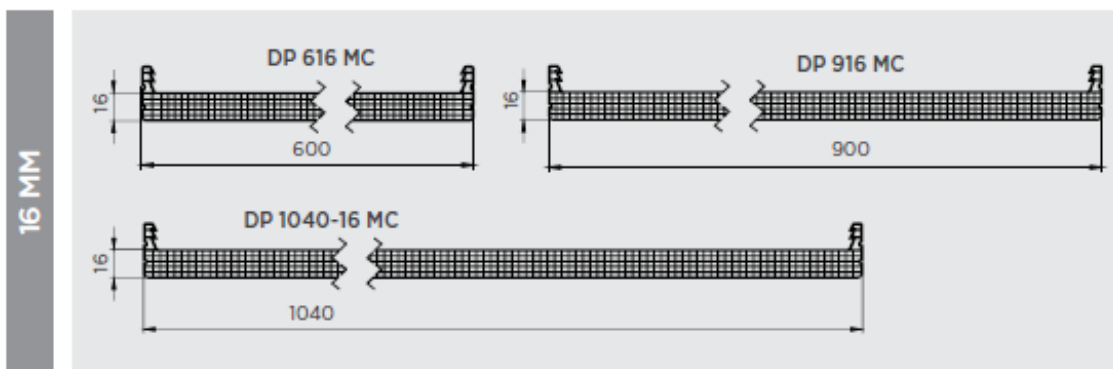
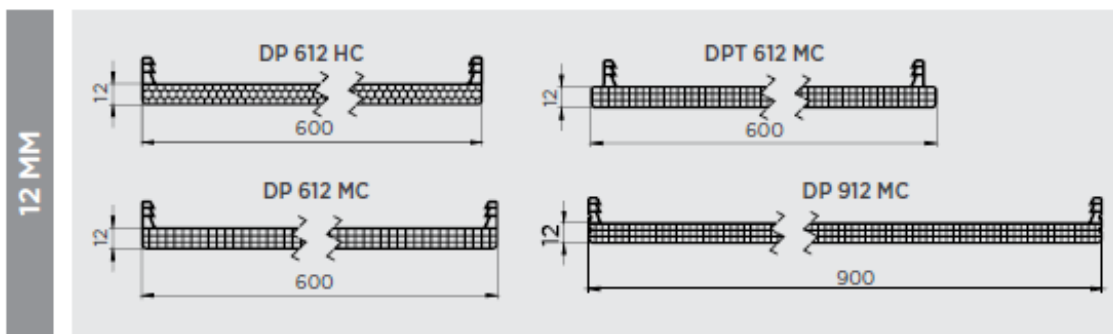
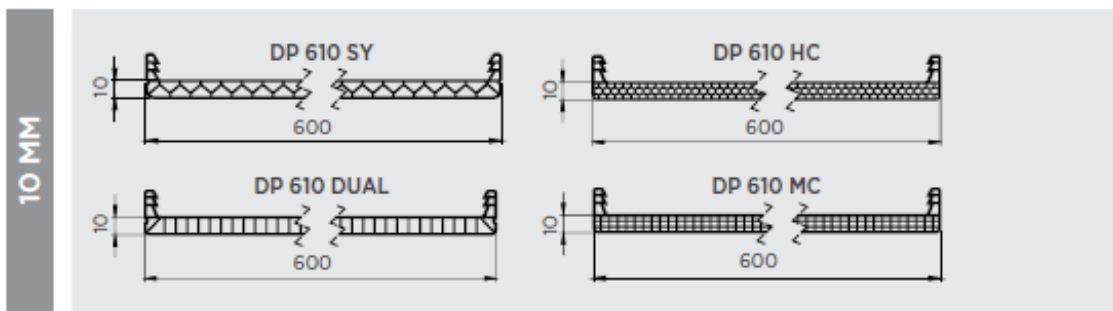
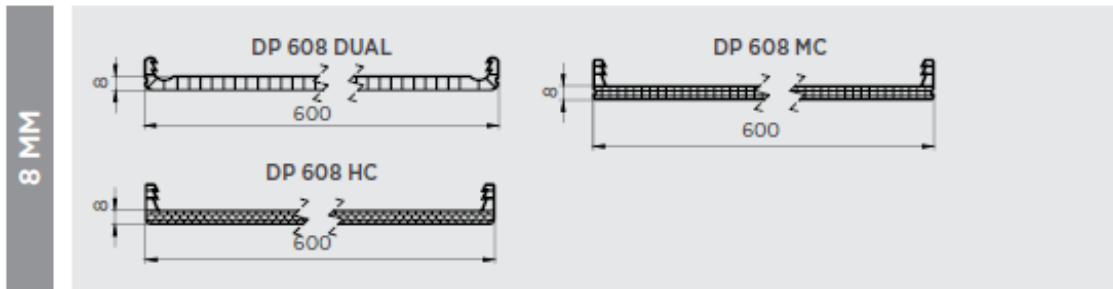
Deflection criteria is span / 50 and no more than 50mm.

SPECIFICATION

	MC/HC 8mm	MC/HC 10mm	MC/HC 12mm	MC 16mm	MC 22mm	HC 30mm
U Value (w/m ² c°) EN ISO 10211, 100772-2 and 6946	3.0	2.6	2.4	1.9	1.5	1.4
Min Cold Bending Radius (mm)	2000	2500	2600	2900	3500	4200
Panel Width (e.g. 600mm) Installed Module Width (e.g. 602mm)	600	600	600/900	600/900 /1040	600/900	900
Minimum slope from the horizontal	5°	5°	5°	5°	5°	5°
Sound Absorption dBA	17	21	21	21	21	N/A

PANELS RANGE FOR ALL SYSTEMS

PANELS



TECHNICAL FEATURES

	DANPALON® 4mm	DANPALON® 8mm	DANPALON® 10mm	DANPALON® 12mm	DANPALON® 16mm	DANPALON® 22mm	DANPALON® 30mm	3DLITE
Number of walls		4	4	4	6	6	6	4
Structure	Solid 4mm	Multicell/ Honeycombe	Multicell/ Honeycombe	Multicell/ Honeycombe	Multicell	Multicell	Honeycombe	Multicell
Width (mm)	600	600	600	600 900	600 900 1040	600 900	900	600
U _g (W/m².K) CSTB calculated values	5.2	3	2.6	2.4	1.9	1.5	1.4	1.76
Reaction to fire	B-s1,d0							B-s2,d0
Span between support		Up to 1.60m	Up to 2m	Up to 2m	Up to 2.5m	Up to 2.8m	Up to 3.2m	Up to 2m
Minimum slope specific test	5° (or 9%)							5° (or 9%)
Minimum radius for cold bending	3.2m	2.5m	2.7m	2.8	3.1m	3.5m	4m	5.0m
Manufactured according to certification	ISO 9001 ISO 14001							
Ten-year warranty	Yes							
Impact and shock resistance	SOFT AND HARD BODY IMPACT D1-10J - M50,300J - M50,400J							
Technical Book	Specialised reviews to EN standards throughout by SOCOTEC / CSTB Technical Assessment Department of cladding and roofing / Annual monitoring of the production factory by CSTB							

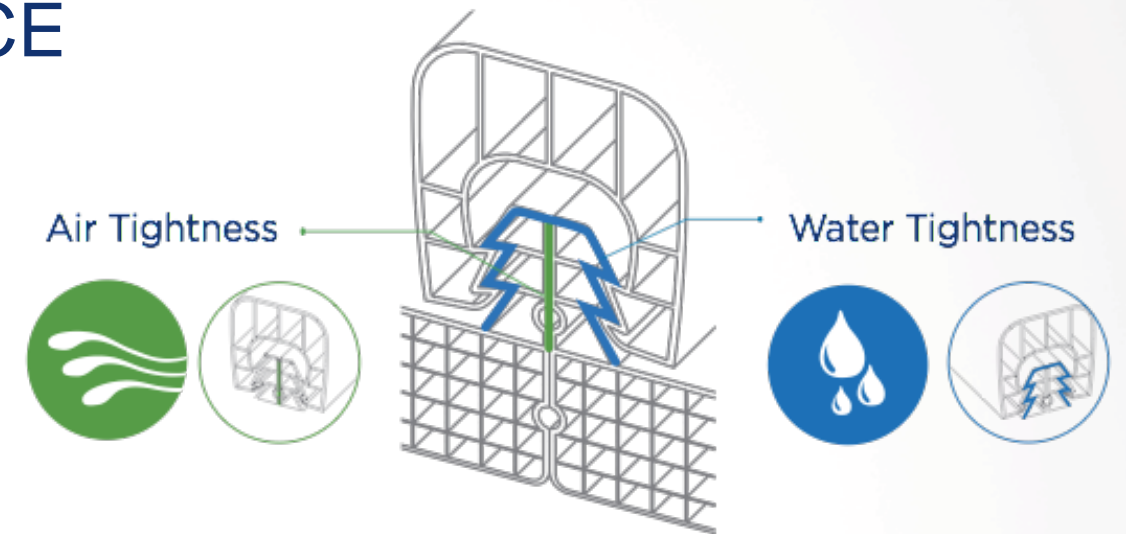
The values in this table are subject to change over time. Please contact Danpal® for more information www.danpalon.com.
Danpalon® panels are designed with multiple dimensions and cell structures, in order to offer solutions that match your requirements

GLAZING MATERIAL

DANPALON® PANEL EXTRA INSULATION, IMPACT AND WEATHER RESISTANCE

Benefits:

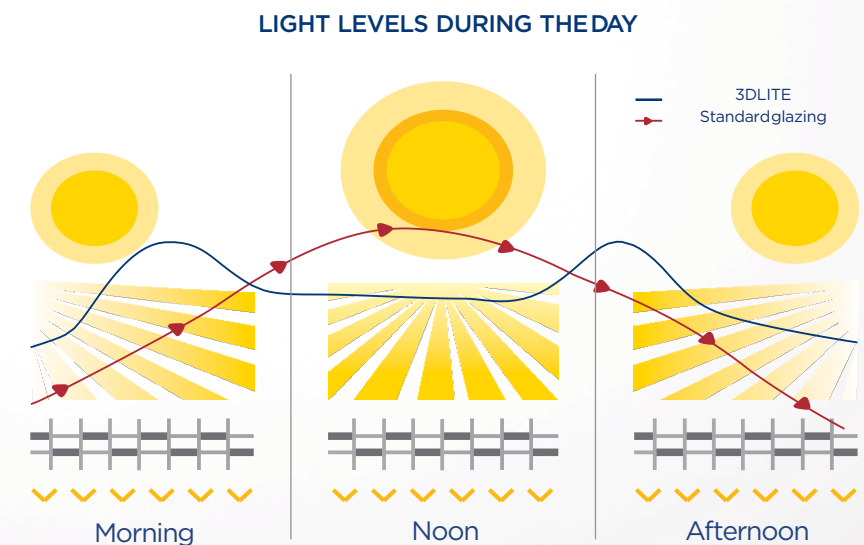
- 100% leakproof
- Free thermal movement
- Easy installation
- Superior impact resistance
- Exceptional thermal insulation
- Quality diffused daylight
- Cold bending of panels on site
- Reduced substructure



3DLITE SPECIAL DESIGN AND LIGHT TRANSMISSION PERFORMANCE

Benefits:

- Dynamic look
- Flexible solution for summer and winter
- Optimises daylight throughout the day
- Wide variety of colours
- Part of the Danpalon® System



PANEL SURFACE FINISH

We Offer a Range of Panel Surface Finishes According to Environmental Conditions and Architectural Requirements

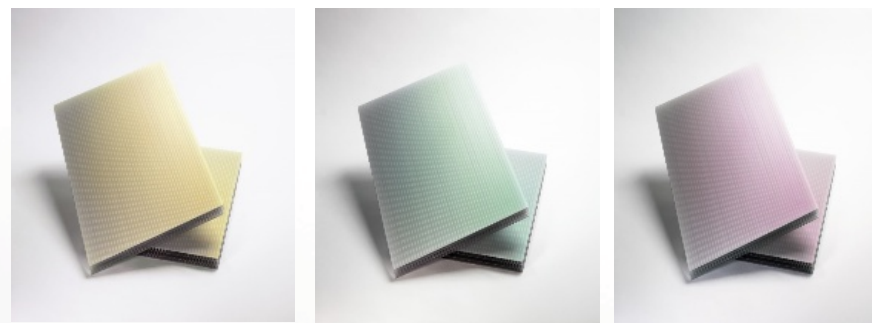
SOFTLITE FOR VISUAL COMFORT

Softlite finishing greatly diminishes glare effects. Softlite is a 100% permanent matt finish applied by co-extrusion on Danpalon® panels of any thickness and colour. The Softlite finishing performance is independently validated to



LOW-E

Infrared treatment is a co-extruded finish that can be applied in all panels. It can significantly limit solar heat gain without affecting light transmission levels.



HP HIGH PROTECTION TREATMENT

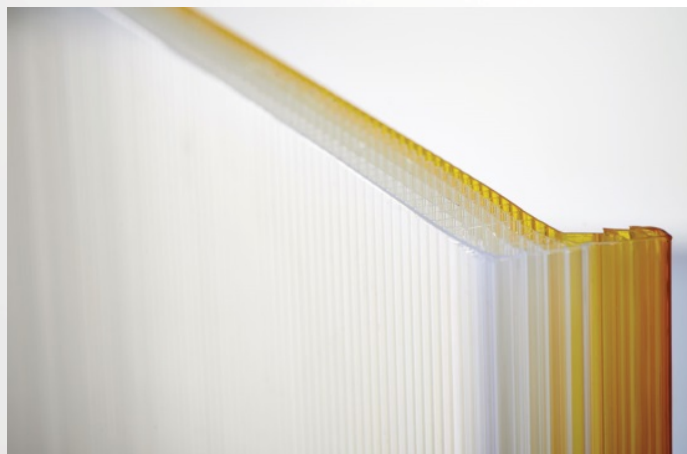
Danpalon® HP is an advanced surface treatment that enables higher performance in areas of graffiti removal and protection against environmental pollution.



PANEL SURFACE FINISH

BI-COLOR

Our bicolour option enables you to perfectly adapt your facades to the effect you desire, both inside and outside. It is available in the colours of your choice for all Danpal® systems



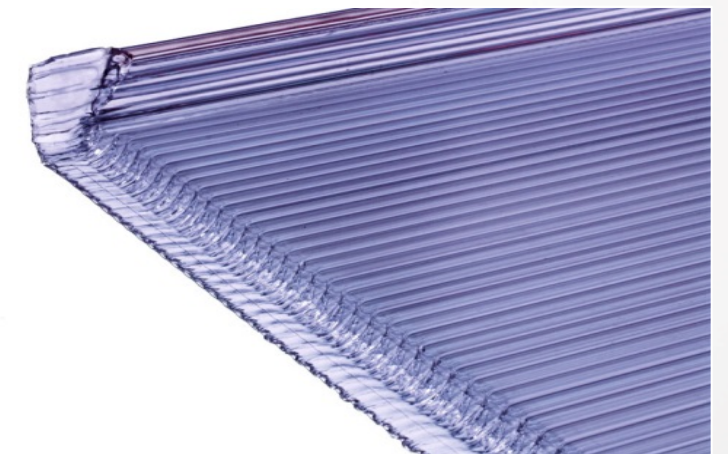
OPAQUE AND TRANSLUCENT

For bright colours with a metallic, lacquered appearance, choose the opaque panels available in a wide range of tints. With Danpal's translucent range, the appearance of the building changes with the light and reflections projected onto the facade at different times of day.



HOT WELDED EDGE

The welded edges provide a clean and effective solution that prevents water, dirt or insects from getting inside the microcells.



VARIETY OF COLORS

<http://danpal.com/architects-inspiration/color/>



SUMMARY

Our strengths:

1. Wide range of connecting systems and panels
2. Know how and experience
3. Thousands of references
4. Supporting technical office and documentation

Sign Your Signature With Light



www.danpal.com