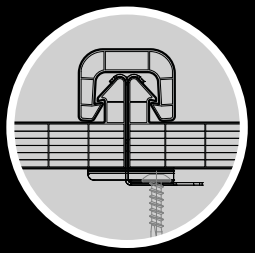
Marlon Toploc

CANOPY ROOFING SYSTEM

Brett Martin

Standing Seam
Polycarbonate
U-Panel System



DESIGNING FOR DAYLIGHT

Marlon Toploc

Marlon Toploc is a high-performance canopy roofing system comprising multiwall polycarbonate U panels with a polycarbonate top cap connection profile.

With over 60 years' experience, Brett Martin has earned a global reputation for the quality and performance of its polycarbonate glazing, cladding and roofing solutions.

Marlon Toploc is a complete canopy roofing system offering solutions for pitched and curved assemblies in a range of canopy roofing applications including commercial & retail buildings, education & healthcare, infrastructure and sports facilities.

CONTENTS

Brett Martin

Polycarbonate Top Cap

Aluminium U Profile

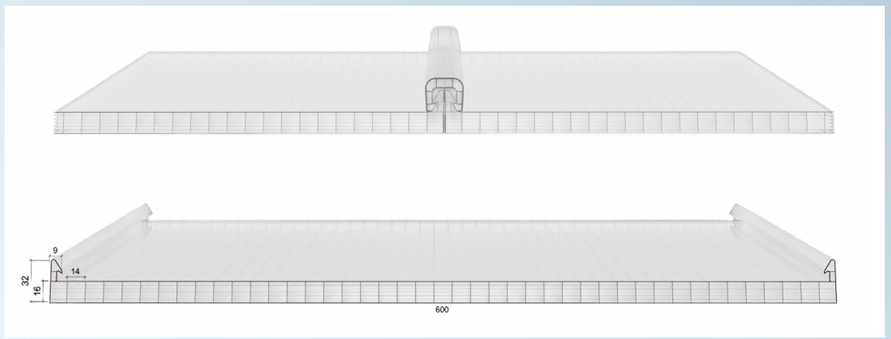
Breather Tape

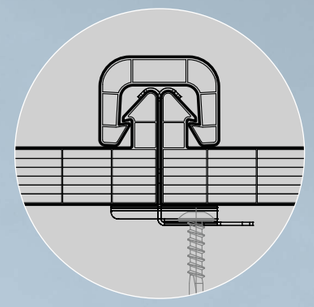
End Cap

Purlin Clip

Marlon Toploc

Marlon Toploc is a complete canopy roofing solution. The 16mm multiwall polycarbonate U panels are fixed with a unique fixing bracket and polycarbonate snap on connection profile creating a feature, standing seam finish in lengths up to 12m*.





Standing Seam Finish

* Longer panel lengths are available subject to specialist transport.

Marlon BioPlus

REDUCING EMBODIED CARBON

Brett Martin

Lower carbon solutions, available now

Specify the Marlon BioPlus option to reduce the embodied carbon in your project.

By switching from fossil based PC to resins certified as being produced from 89% bio-circular attributed material via mass balancing, we can offer Polycarbonate sheets with dramatically reduced impact on the environment.

This is in addition to our investment in dedicated wind and solar generated sustainable energy.

Marlon BioPlus sheets offer up to 97% lower carbon than standard Polycarbonate sheet options.

ISCC PLUS certified.
Climate neutral, bio-circular attributed resin.

97% Carbon saving (LCA A1-3).

100% Renewable energy attributed to resin and sheet production. ISCC Plus audited.

ISCC International Sustainability & Carbon Certification

Technical Performance

Marlon Toploc provides the complete canopy roof glazing solution.

- Quality natural light
- Thermal insulation
- Co-extruded UV protection
- Impact resistance
- Structural strength
- Suitable for cold curving
- Available in lengths up to 12m*

The modular design reduces installation time significantly compared to traditional glazing materials and with a full range of installation components there is a solution to realise any pitched or curved roof design concept.

Marlon Toploc has been designed and extensively tested to limit air and water permeability and is fully compliant with European Fire Regulations.

* Longer panel lengths are available subject to specialist transport.

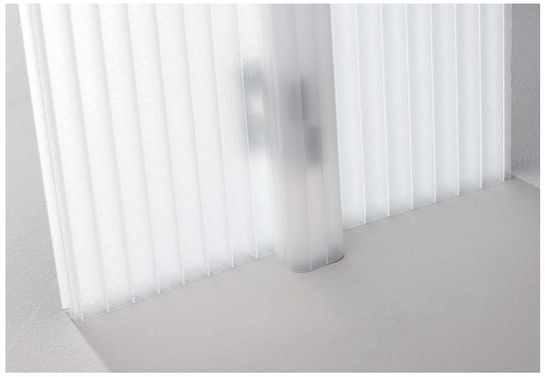
Specifying Daylight

Up to
64%
Light Transmission

Good quality natural daylight has been proven to be beneficial to the wellbeing and performance of those who occupy the building. Research proves that natural light has important physiological benefits resulting in brighter students, increased industrial productivity and higher retail sales.

Marlon Toploc is available in a range of tints. Choose clear for maximum daylight or pearlescent for a softer, diffused light.

Clear (g)



Pearlescent (g)

*(g) - glass effect

Special colours are available subject to minimum order quantities.

Design Versatility

Marlon Toploc provides solutions for a range of pitched and curved roofing applications. Create stunning seamed canopy roofing solutions up to 12m in unlimited run lengths.

Building designers can create contemporary architectural canopy style roofs in schools, industrial buildings, sports and retail facilities.

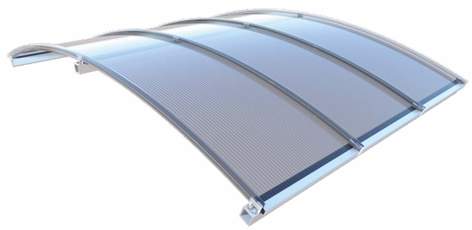
For specialist projects our Design Consultancy service provides expert advice from design right through to installation including:

- Material suitability
- Aesthetic design
- Construction feasibility

Application Assemblies

STANDING SEAM
External Polycarbonate Cap

Curved Canopy
Minimum cold curving radius 4000mm*



Pitched Canopy
Minimum pitch 10°

Surface Finish

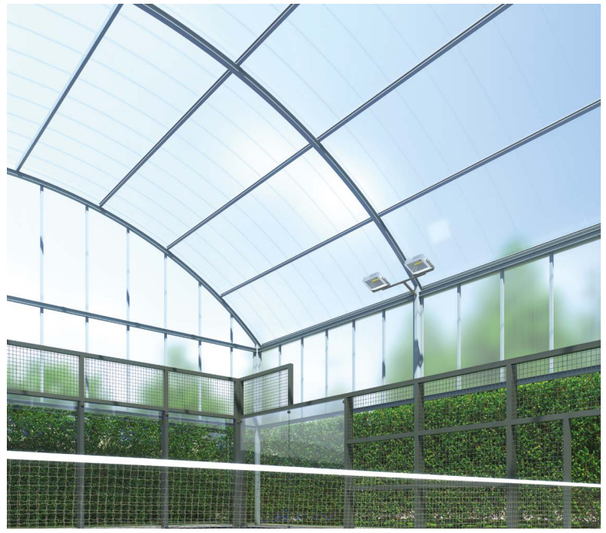
Standing Seam Finish

* For tighter radius please contact the Technical Department.

Applications

Marlon Toploc is a complete canopy roofing system offering solutions for pitched and curved roofs, canopies and walkways in a range of applications including sports facilities, retail and commercial buildings, infrastructure and horticulture.

Sports Facilities



Marlon Toploc provides the ideal solution for canopy roofs on a wide range of sports facilities. High light transmission, damage and impact resistance and the ability to cold curve on-site make Marlon Toploc the obvious choice. Create a complete canopy roof on a fully enclosed building or a partially open canopy to cover outdoor areas. Pitched and curved canopies, roofs and walkways keep players and spectators sheltered from the elements making the facilities suitable to use all year round.

- Padel & Tennis Courts
- Football & Rugby Pitches
- Golf Driving Ranges
- Hockey Pitches
- Bowling Greens
- Multi-use Sports Facilities

Retail & Commercial

Combining functionality with contemporary design, Marlon Toploc is the ideal solution for creating stylish, covered walkways and canopies in retail and commercial spaces. Designed to provide reliable protection from the elements, Marlon Toploc helps keep visitors and occupants comfortable throughout the year. High light transmission provides natural daylight, creating bright and welcoming spaces.

- Commercial Offices
- Retail Stores
- Shopping Centres
- Hotels
- Restaurants
- Food Courts

Infrastructure

Combining lightweight, modular construction with high light transmission, this versatile canopy system creates bright, welcoming covered spaces with panel lengths of up to 12m. Quick and easy to install, it provides effective weather protection while enhancing the user experience in public and commercial environments. Ideal for airports, train stations, bus terminals, recycling centres, schools and hospitals, it delivers practical shelter for walkways, outdoor areas and striking architectural canopy applications.

- Airports
- Train Stations
- Bus Terminals
- Recycling Plants
- Schools
- Hospitals

Garden Centres & Greenhouses

Marlon Toploc lightweight modular panels are quick and easy to install. Manufactured from premium Marlon polycarbonate, the panels are strong and impact resistant reducing the need for frequent costly repairs. High light transmission provides the ideal environment for growing plants while the co-extruded UV protection layer filters out 98% of harmful UV rays. For areas requiring a more diffused light such as covered outdoor café areas in garden centres, Marlon Toploc in pearlescent provides a softer light, minimising hotspots and glare.

- Commercial Garden Centres
- Commercial Greenhouses
- Domestic Greenhouses
- Outdoor Café Areas

Marlon Toploc

AVAILABLE IN
Marlon BioPlus

16mm multiwall polycarbonate U panel with standing seam connection cap.

The complete modular roof glazing solution. Create curved or pitched canopy style roofs, canopies and walkways using panels up to 12m in length. The modular U panels reduce installation time to create a thermally insulating roof with an attractive standing seam finish.

Lower embodied carbon with Marlon Toploc BioPlus. Available across the entire Marlon Toploc range to dramatically lower the environmental impact of a building. Its material and processing properties are identical to the standard product.

Applications

Pitched and curved:
- Canopy roofs
- Canopies
- Walkways

Key Features

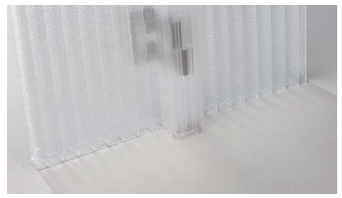
- Complete roofing system with a standing seam finish
- Modular panels for fast installation
- Light in weight yet structurally strong
- Thermally insulating multiwall structure
- Options of maximum light or diffused light

Product Range

Thicknesses
16mm Sevenwall

Specials
Double sided UV protection
Anti-glare (matt surface)

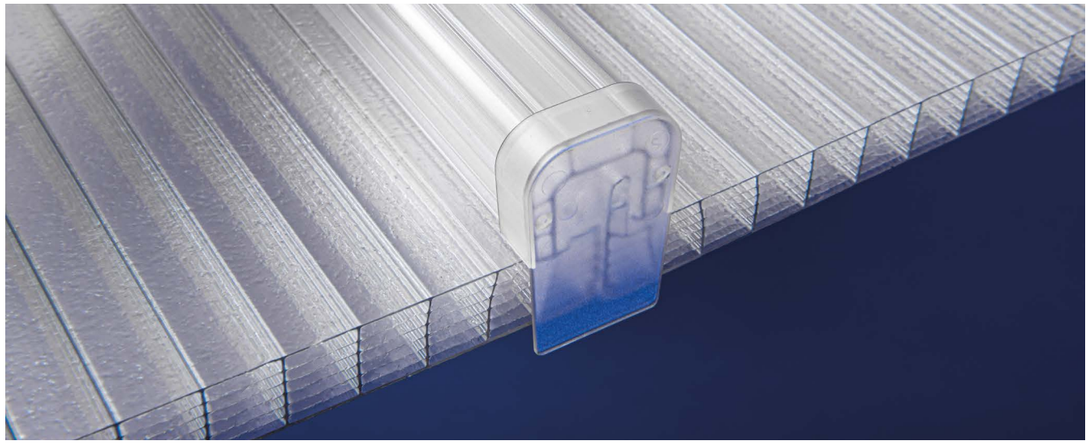
Standard Tints

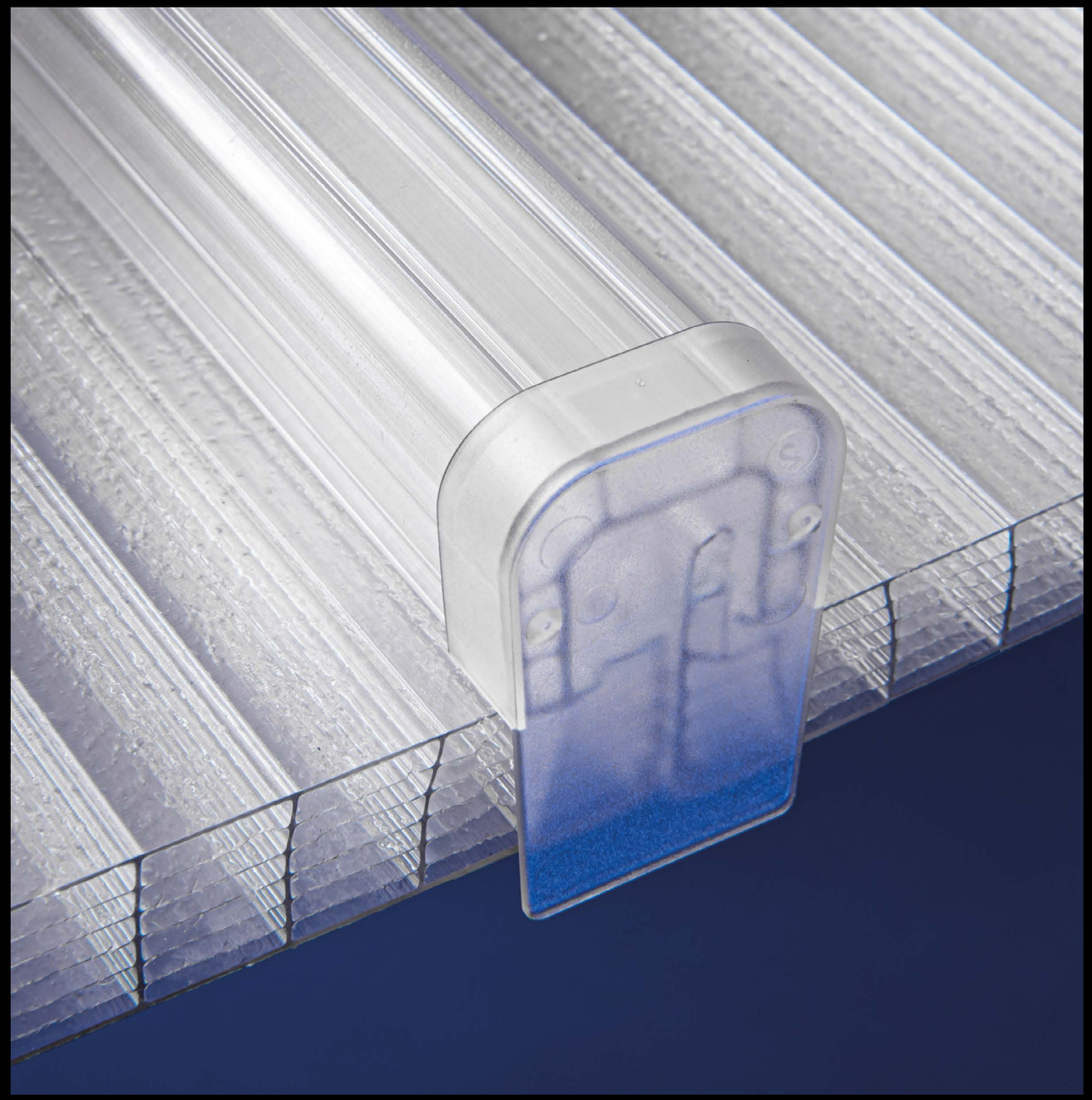


Clear (g)

Pearlescent (g)

Special colours are available subject to minimum order quantities.

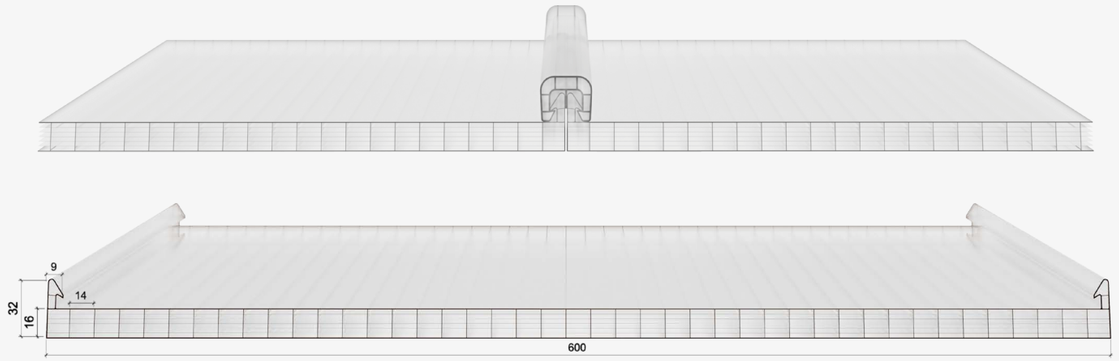




TECHNICAL INFORMATION & DETAIL DRAWINGS

For Technical advice on your specific project please contact technical@brettmartin.com

Panel Properties



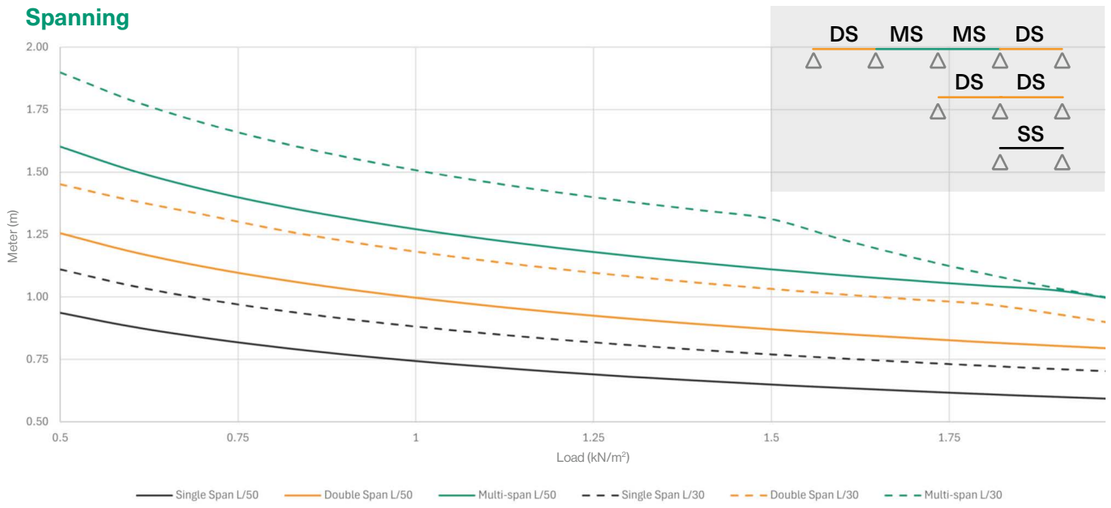
Panel Characteristics

Length	Width	Thickness	U-value	Min. Curve Radius	Fire Classification	Weight	UV Protection
Up to 5m -0/+10mm Over 5m -0/+25mm	-0/+8mm	+/-0.5mm	1.78 W/m²K	4000mm For tighter radius contact Techincal Dept	B-s1, d0 to EN13501-1	3.0kg	Single sided as standard Double sided optional

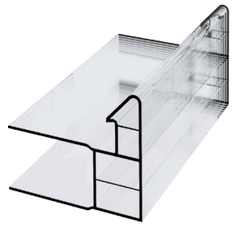
Light Solar Transmission

Colour	Direct Solar Transmission	Solar Energy Reflectance	Solar Energy Absorption	Solar Factor	Shading Coefficient	Solar Heat Gain Coefficient	Light Transmission
Clear (g)	60%	24%	16%	64%	0.74	0.64	64%
Pearlescent (g)	37%	33%	30%	45%	0.52	0.45	56%

Spanning



Installation Accessories



Verge Trim - Polycarbonate
AC498

Verge - Polycarbonate
AC497

Top Cap - Polycarbonate
AC253

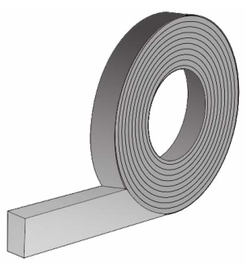
Fixing Bracket - Stainless Steel
AC252

End Cap - Polycarbonate
AC251

U Profile - Aluminium
AC242

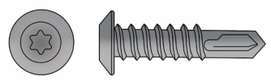
F Profile - Aluminium
AC241

Ventilating & Sealing Tapes
AC043 & AC041



Expanding Foam Tape
AC 612

Fixed Point Anchor
AC083



4.8mm A2 SS self-drill low profile dome T15 head fastener (box 100)
AC084

Marlon Toploc Foam Filler
AC 611

Abutment Detail 1:2

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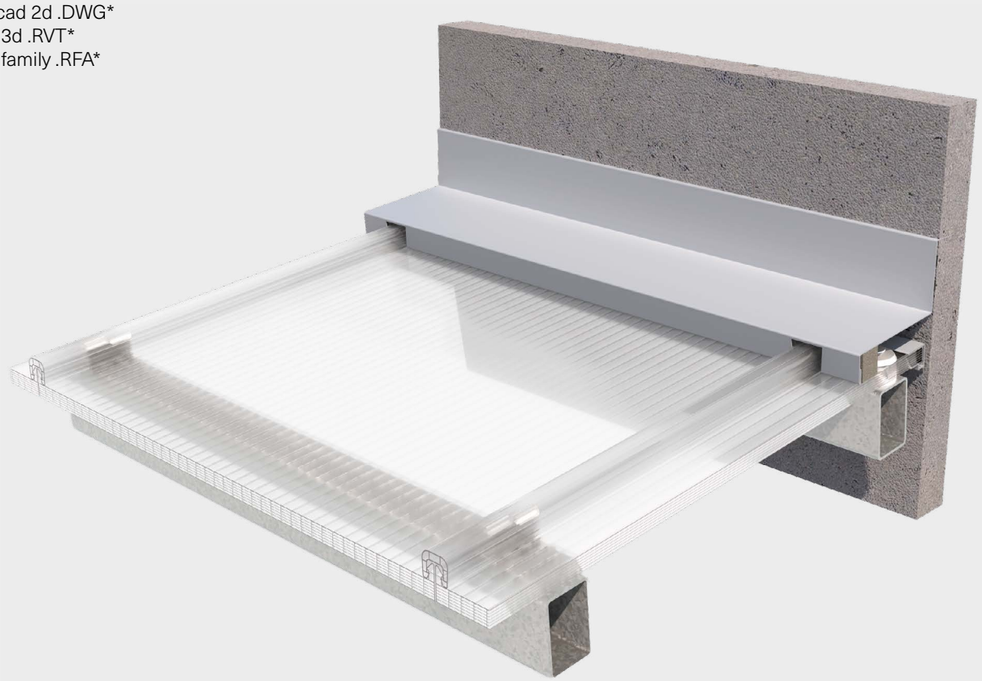
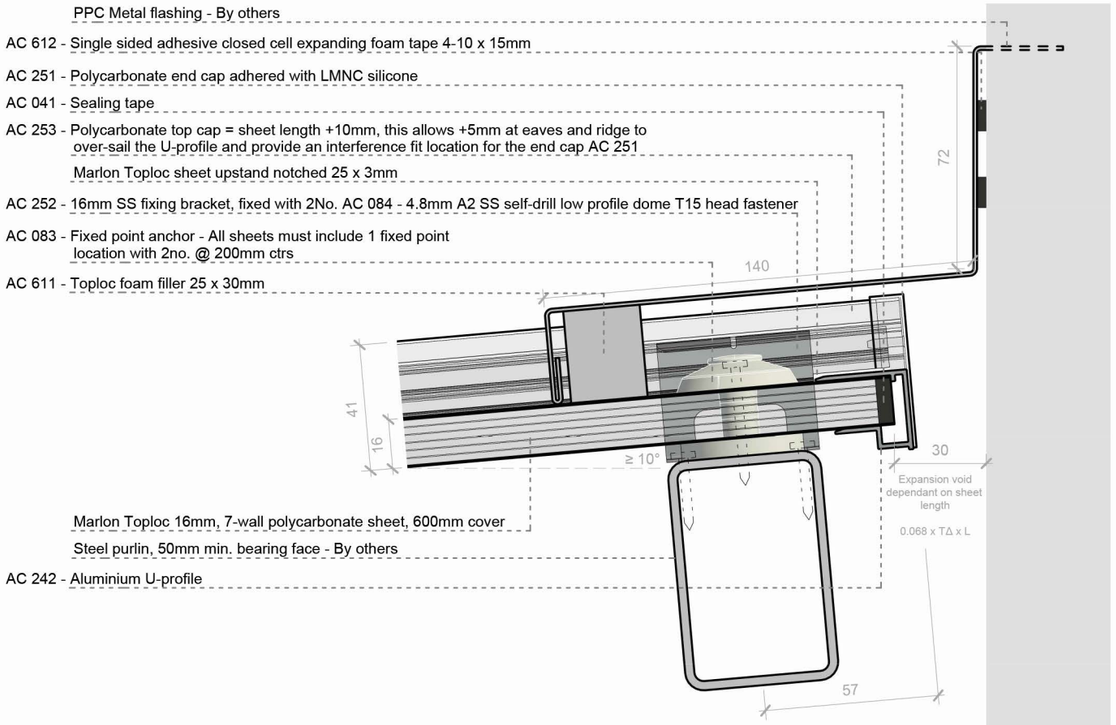
Revit family .RFA*





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Overlap Detail 1:2

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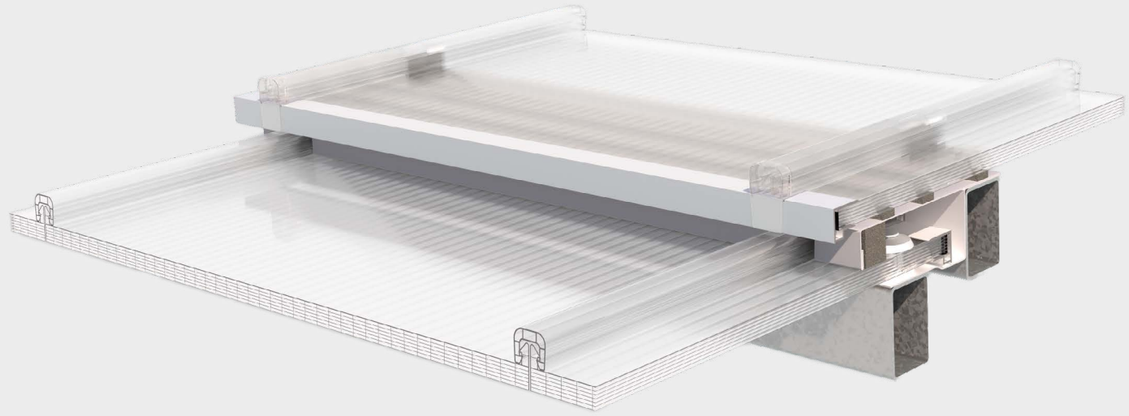

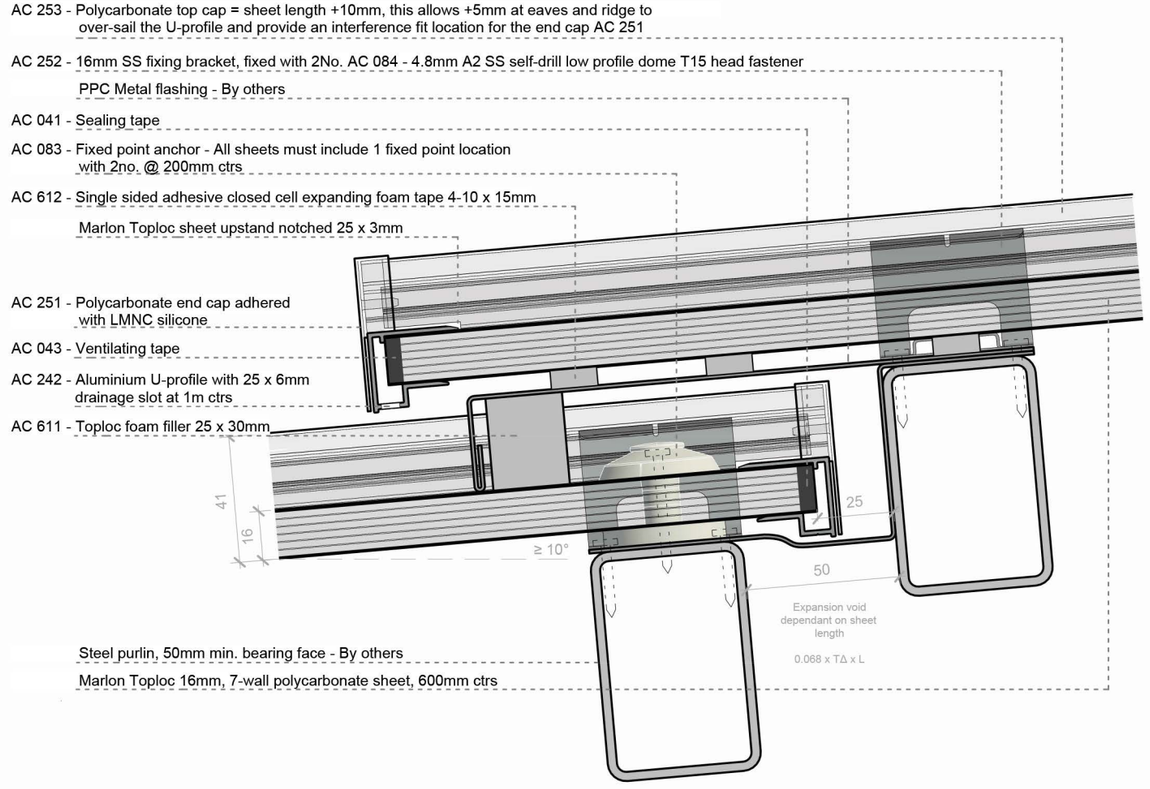

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Ridge Detail 1:2

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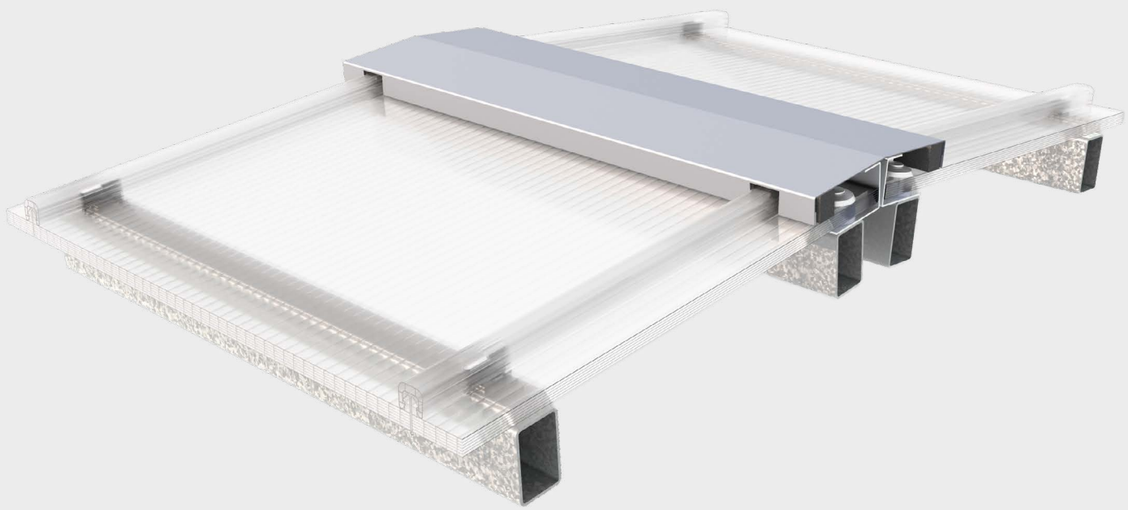

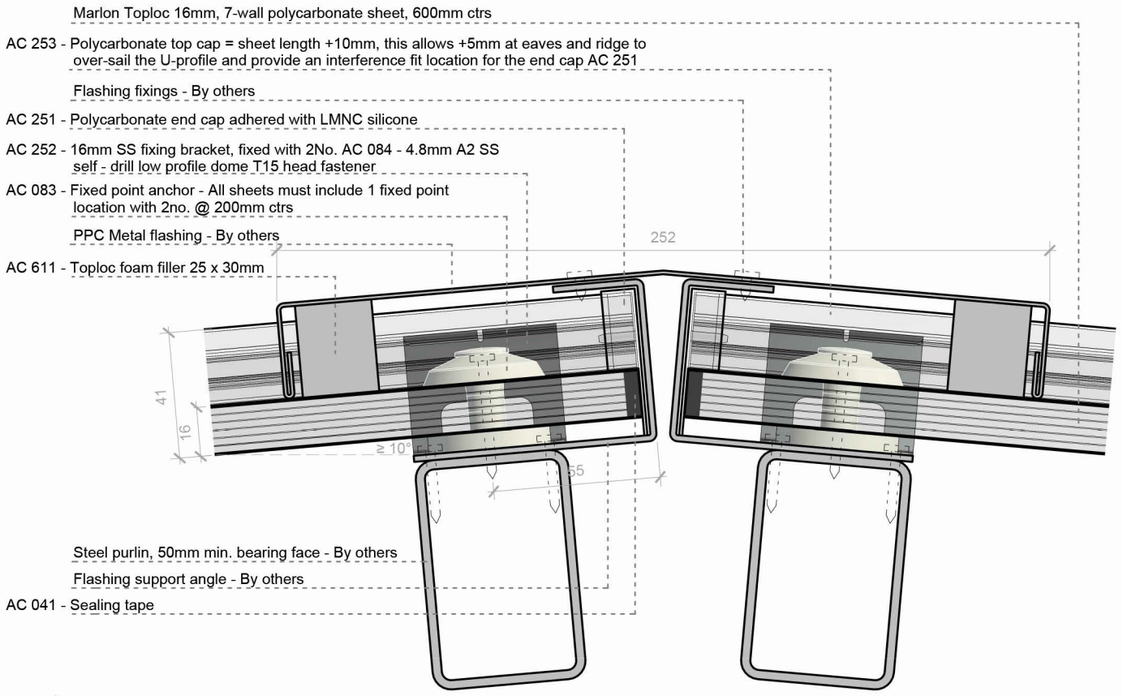

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Eaves Detail 1:2

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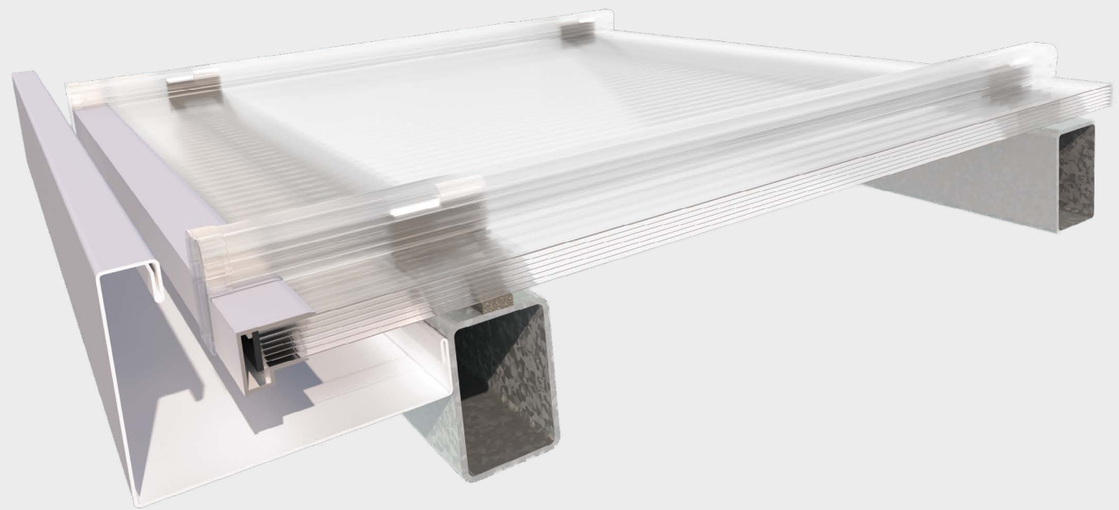

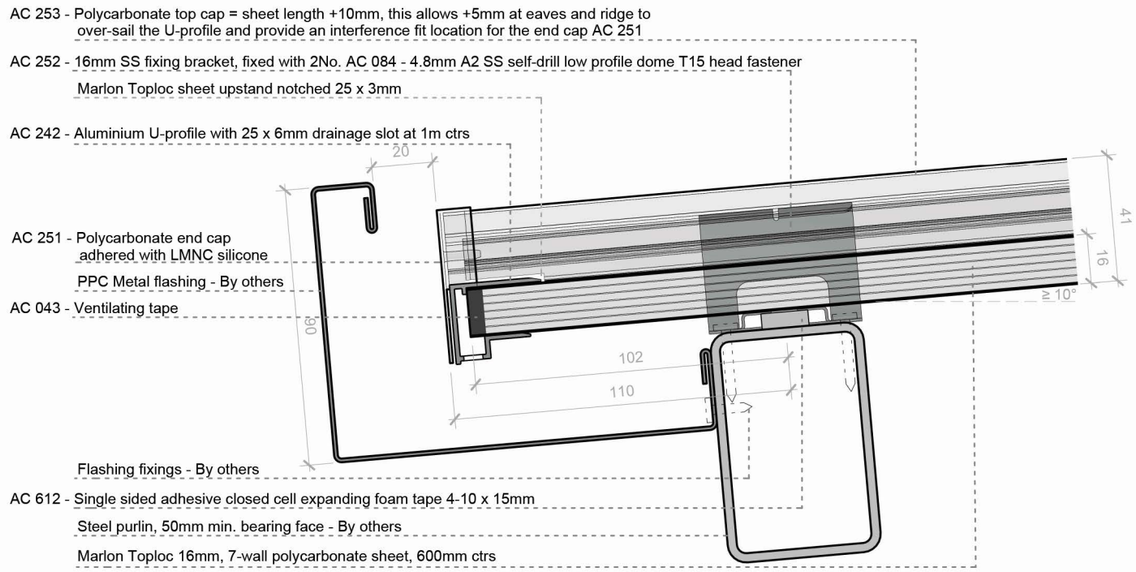

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Verge Curved Detail 1:2

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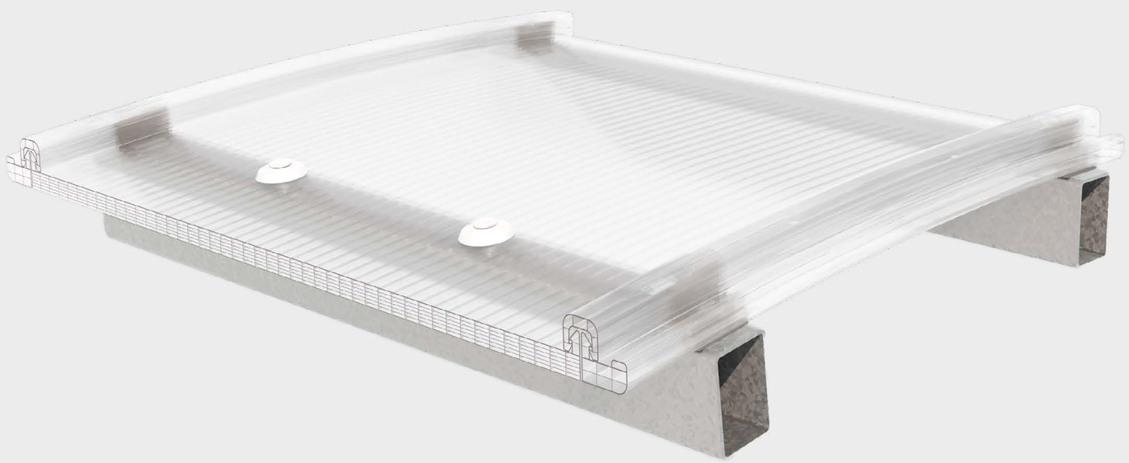
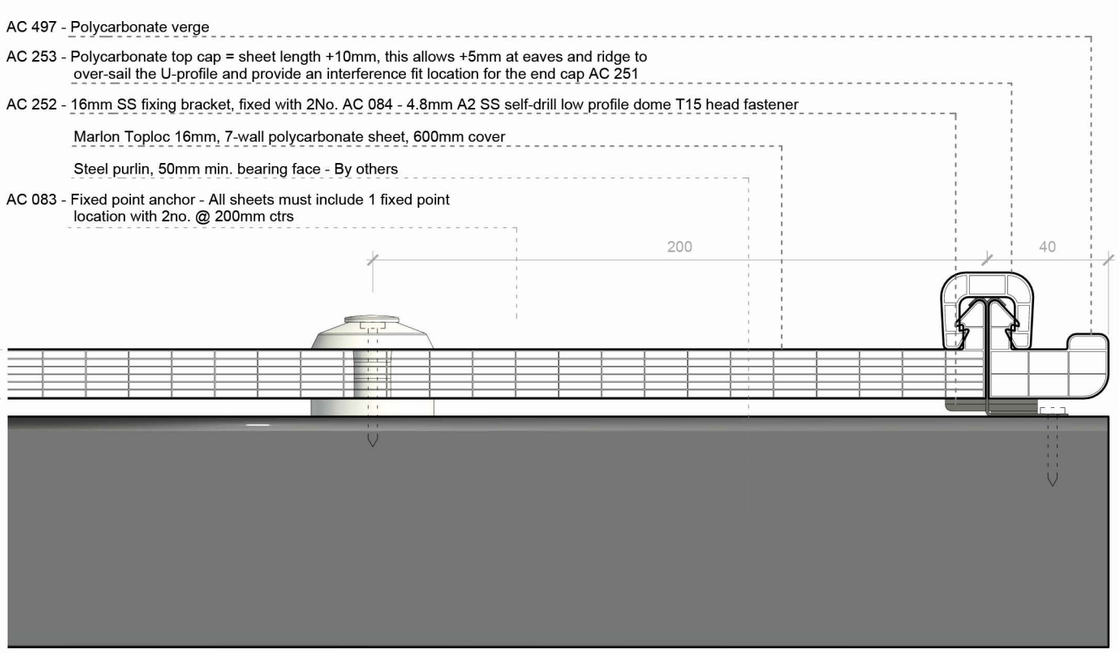
Revit 3d .RVT*
Revit family .RFA*





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Verge Curved Trimmed Detail 1:2

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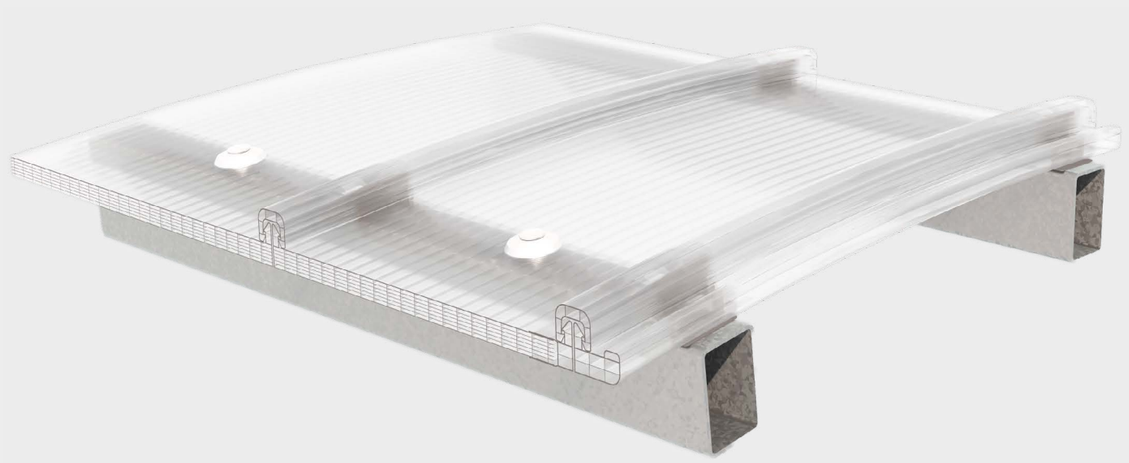

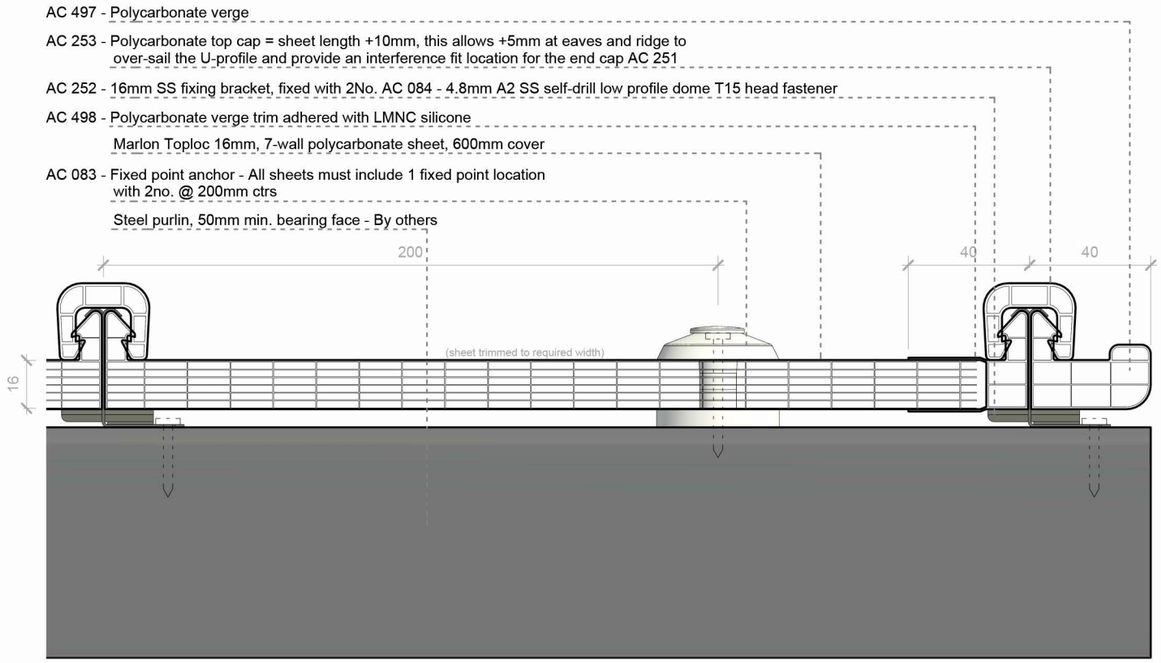

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Verge Flat Detail 1:2

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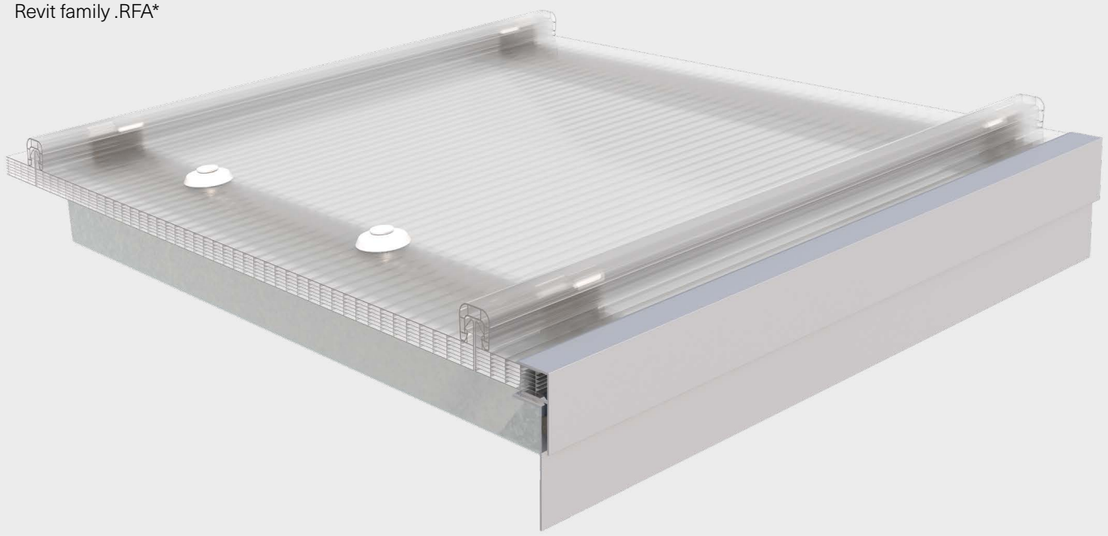
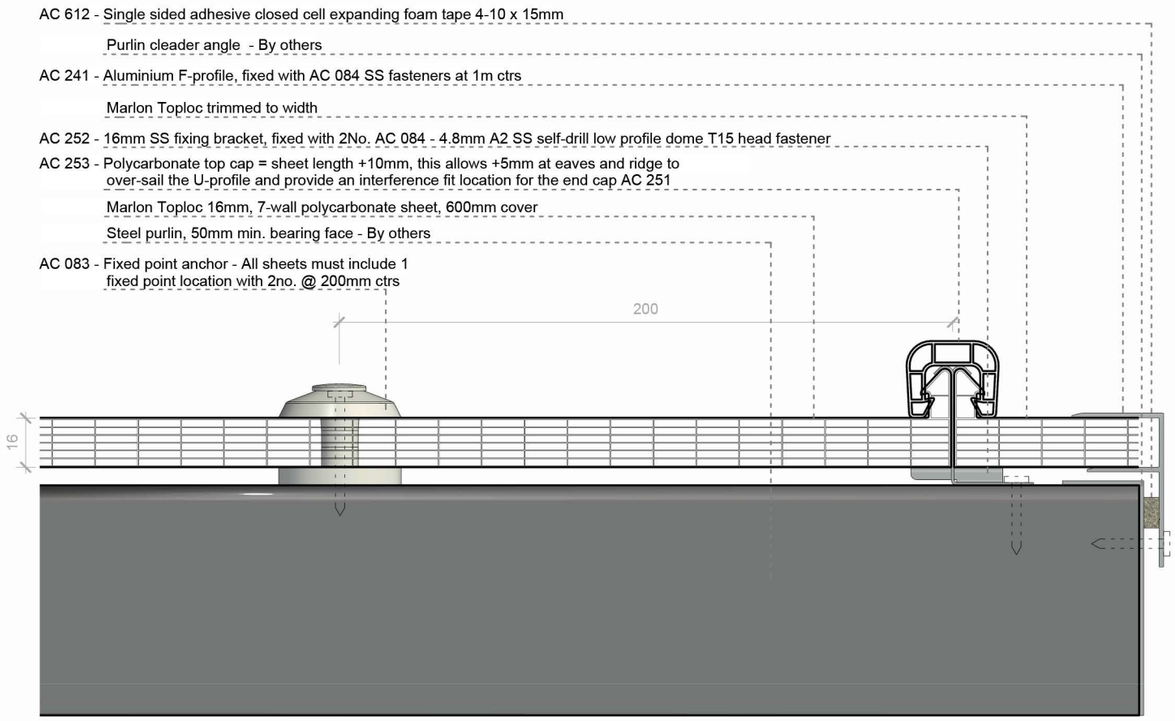
Revit 3d .RVT*
Revit family .RFA*





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Verge Flat Trimmed Detail 1:2

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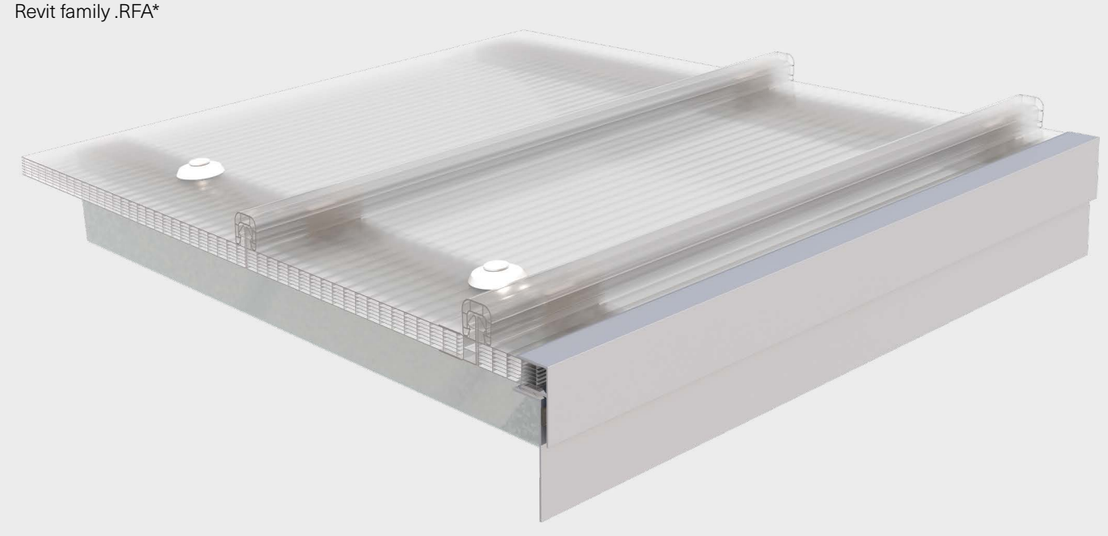

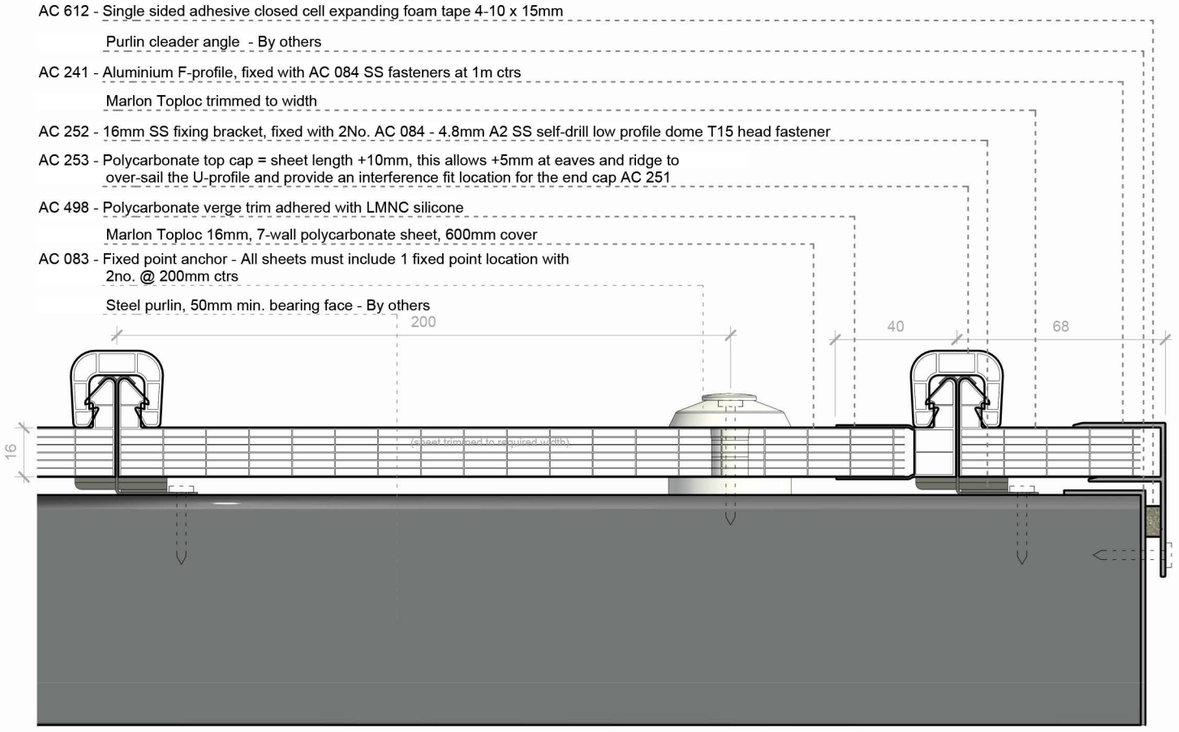

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Polycarbonate Mechanical Properties

Strength & Damage Resistance

Damage to glazing can be hazardous and expensive but our Marlon Toploc multiwall polycarbonate panels offer excellent protection against hailstones, vandalism and accidental damage with an impact resistance up to 200 times greater than glass. This characteristic is maintained over a broad temperature range and prolonged service life. The Marlon Toploc panels will retain their physical properties in extreme weather conditions making them the ideal glazing solution for projects throughout the world. Marlon Toploc polycarbonate can withstand temperature extremes from -20ºC to 100ºC (-40 to 212ºF) long term and up to 130ºC short term. No other glazing material can offer this combination of impact resistance and wide working temperature range.

UV Protection

Our Marlon Toploc polycarbonate panels are co-extruded with a UV absorption layer. This protective layer prevents damaging UV radiation from penetrating the panel for long term optical clarity and mechanical strength.

Chemical Resistance

Polycarbonate has good resistance to many chemicals (with the exception of solvents and strong alkalis) so is often suitable for use in aggressive environments.

Fire Performance

Our Marlon Toploc panels exhibit excellent fire performance and in the event of a fire will soften and open, allowing smoke, heat and gases produced by the fire to escape. This 'venting' property means that damage within buildings can be limited. For details of fire ratings please contact our Technical department.

Warranty

Marlon Toploc panels are manufactured under Quality Management Systems registered to BS EN ISO 9001:2015. The panels carry limited warranty. For full warranty details please contact our Technical department.

Testing

Marlon Toploc panels are designed and tested to the relevant industry standards and performance criteria. For further information please contact our Technical department.

Marlon Toploc BioPlus

Marlon Toploc BioPlus, made with bio-circular attributed resin, is available across the entire Marlon Toploc range. Its material and processing properties are identical to the standard product.

Properties		Test Method	Value	Units
Mechanical	Tensile strength at yield	DIN 53455	>60	MPa
	Tensile strength at break	DIN 53455	>70	MPa
	Modulus of elasticity	DIN 53457	>2300	MPa
Physical	Specific gravity	DIN 53479	1.20	
Thermal	Softening temperature - Vicat 'B'	DIN53460	148	ºC
	Linear thermal expansion	DIN53752	6.8×10^{-5}	m/m.K
	Maximum service temperature	Permanent	100	ºC
	- no loading	Short term	130	ºC

Polycarbonate General Guidelines

Installation

Ensure all materials in direct contact with polycarbonate are tested for compatibility. All support must be designed to adequately transfer applied loads, be light in colour, meet local design factor limits and be coplanar. Spanning information (pg20) assumes sheets are correctly installed with 2No. A2 stainless steel fasteners per bracket adequately fixed and specified for substrate to resist 1kN pull-out each. Ensure all coefficients are included in the calculation of applied design loads and correct deflection limit is used for specific installation type.

Tapes & Sealants

It is recommended that the ends of the Marlon Toploc panels are sealed to minimise the build-up of moisture or dust contamination within the channels. A sealing tape, preferably aluminium, is applied at the top of the panel to prevent ingress of moisture, dust and insects. A breather tape applied to the bottom end of the panel permits air to move freely in and out of the panel, helping minimise condensation.

Thermal Expansion

Polycarbonate has a greater coefficient of thermal expansion than many typical construction materials and import to ensue this is considered both at design and installation stage. Sheets are retained with a hooked bracket and should be anchored with AC083 at one location allowing free movement in one direction. Sheet expansion/ contraction in millimetres can be calculated by: Sheet length (m) x Temperature range (Degrees Celsius) x 0.068.

Storage

Store sheets on flat surfaces or wooden bearers with 100mm minimum bearing surface placed at centres not exceeding 1m. Use an opaque cover, tightly secured, to protect from wind, rain and sun. Storage is always preferable indoors.

Cleaning

- Use lukewarm water to rinse the panel and soften dirt.
- Make up a solution of lukewarm water and ordinary household cleaner or a mild soap and use this to wash the panel.
- A sponge or soft cloth should then be used to gently remove dirt and grime.
- The cleaning process should then be repeated and the panel rinsed and dried with a soft cloth.
- For larger areas clean the surface with a high-pressure water cleaner.

Warning

Care should be taken to observe the following precautions:

1. Do not scrub Marlon Toploc panel with brushes or sharp instruments.
2. Avoid any abrasives or cleaners of a highly alkaline composition.
3. It is generally advisable in all instances to test any cleaner on a sample piece of the Marlon Toploc panel first and it should also be remembered that cleaners and solvents which state that they are suitable for cleaning polycarbonate may not be safe for use on the UV protective surface of the panel.

For installation guidelines watch the installation video.

Marlon Toploc

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