



BMTB03 April 2015

INSTALLATION MANUAL

marlonClickfix VF|
Glazing Bar System for Facades & Cladding

THERMALLY BROKEN
SYSTEM FOR FACADES
& CLADDING



Marlon Clickfix1040 is the complete architectural glazing system comprising premium quality, 40mm multiwall modular panels manufactured from Brett Martin's Marlon polycarbonate. The modular panels provide quality natural light, superior thermal insulation and UV protection in addition to exceptional impact resistance and an outstanding strength to weight ratio. The modular design consists of interlocking panels which simply click and fix into place with a choice of aluminium glazing bars depending on application.

Marlon Clickfix VF is the thermally broken aluminium glazing bar system for use in vertical glazing applications. Fully weather tight, the Marlon Clickfix VF glazing bar frame is the perfect solution for creating seamlessly glazed facades and cladding. Installation is straightforward, the system simply clicks and fixes into place to create a striking architectural glazing feature. Marlon Clickfix VF is suitable for Marlon Clickfix1040 installations in vertically glazed façades, northlights, partitions and cladding, internally and externally.

A detailed installation video is available to view on the Marlon Clickfix1040 pages of our website www.brettmartin.com or by scanning the QR code on the back cover of this booklet. Installation training can be arranged on request.

Contents

	Page
General	3
Installation: Vertical Section	4
Profiles & Preparation	5
Profile Connectors	6
Panel Preparation	7
Installation Procedure	8
Finishing	10
High Openings	12
Maintenance	12
Panel Properties and Spanning	13
Accessories	14 - 15

General

Fitting of Marlon Clickfix1040 polycarbonate panels should be the last operation in completing the project. The structure should be finished with all components of the selected glazing system in place and wood preservatives, when used, thoroughly dry.

Marlon Clickfix1040 panels must always be installed with the ribs running vertically or up-slope.

Safety

Panels up to 3m long can be safely handled by one person but larger panels will require two or more people. When handling panels particular care must be taken in windy conditions. Any pallets of 6 metres or longer must be lifted using a spreader beam of adequate length (with no more than 2.5m unsupported at each end) or have the panels removed by hand (one or two at a time) and re-stacked on a suitable pallet.

NEVER WALK ON MARLON CLICKFIX1040 PANELS

Storage

Store panels 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 until the panels are to be installed into their final position. Storage is always preferable indoors. Store panels away from sources of heat. Do not stack other items on top of the panels.

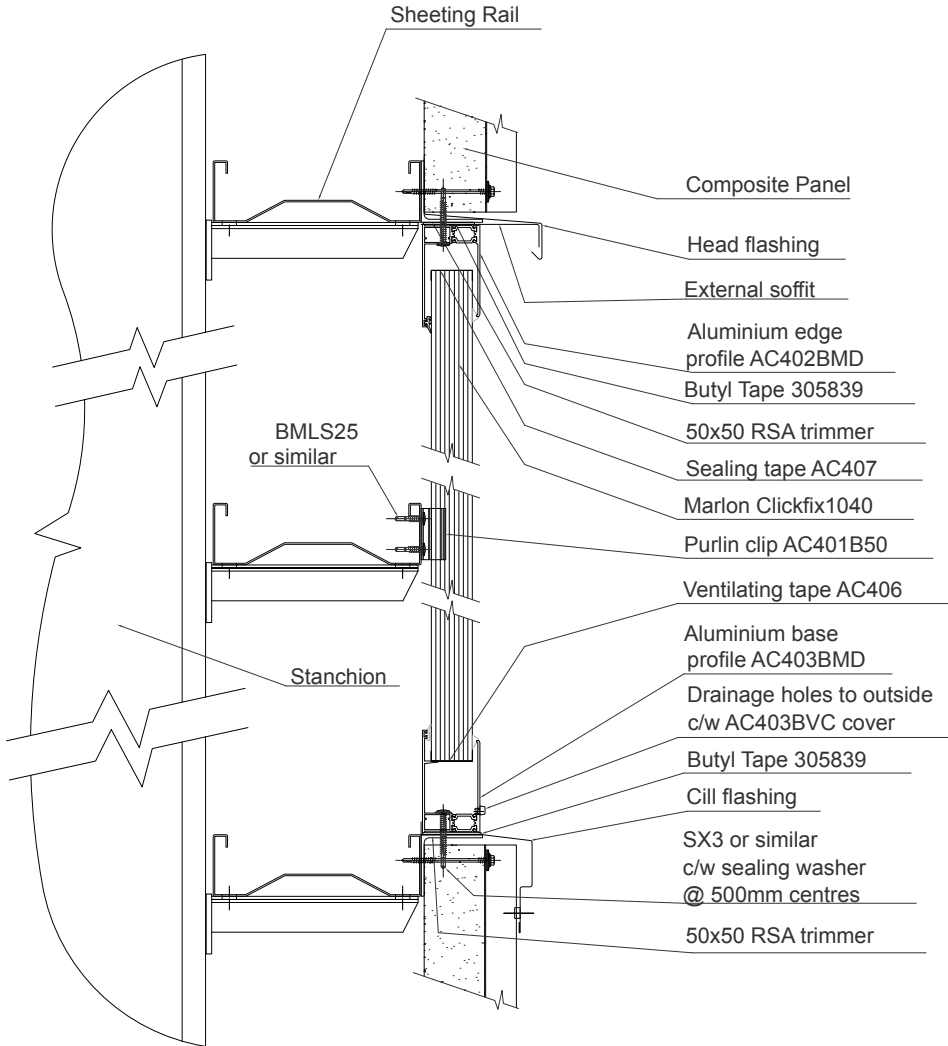
Installation

Ensure that the clearly marked UV protected surface of the Marlon Clickfix1040 panel is to the outside. About 50mm of protective film should be peeled back from the ends of the panel prior to installation and the residual film should only be removed after glazing is complete. Avoid excessive handling as this can cause scratching of the surfaces.

Only sealants and tapes supplied by Brett Martin, or those tested by Brett Martin are to be used with this system.

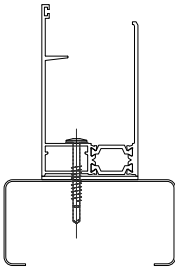
Marlon Clickfix1040 panels have been proven to be suitable for use with a substantial number of commercially available glazing compounds, building materials and profile systems. However, it is still vital that advice on chemical compatibility should be sought either from Brett Martin's Technical Department or the manufacturer of interfacing products.

Installation: Vertical Section

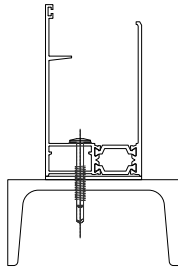


Profiles & Preparation

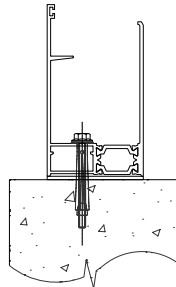
- Ensure the aperture to be glazed is secure, true and dimensionally accurate.
- Install head and sill flashings (not Brett Martin supply).
- The base profile has pre-machined slots on the external face of the base profile.
- Aluminium channel profiles can be either flush mounted within the opening or surface mounted to the outside of the frame.
- Trimmers and fixing hardware are not Brett Martin supply.
- Fix top, side and base profiles with screws suitable for the frame, typically Ø6mm at 0.5m centres through the pre-drilled holes.
- Profiles are connected using profile connectors to ensure joint alignment.
- It is good practice to insert butyl tape or similar between the profile and the frame to seal the assembly.
- The fixings should be either stainless steel or isolated from the aluminium profiles with a suitable washer. Sealing washers should be used for the base profile.
- Any joints in the aluminium profile must be sealed to prevent water ingress.
- **The bottom front edge of the base profile should not be sealed.**



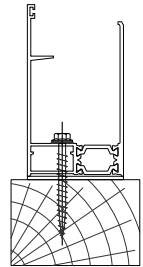
Fixed to Cold Rolled
Metal Section



Fixed to Hot Rolled
Metal Section



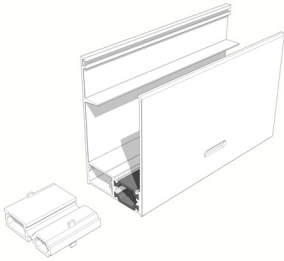
Fixed to Masonry



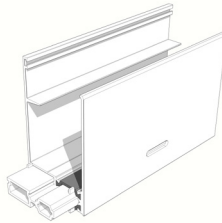
Fixed to Timber

Straight Connector

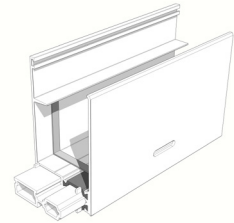
When joining profiles end to end an expansion gap of 4mm should be left. Connectors maintain the alignment of the profiles.



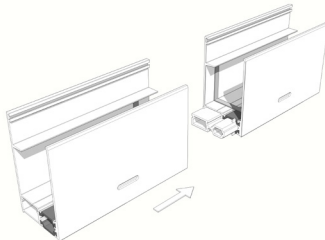
Insert the straight connector into profile



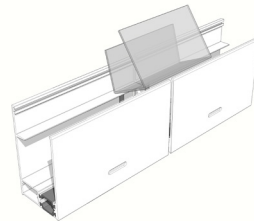
Apply mastic sealant to the connector and the cut edges of the profile



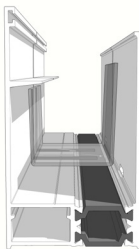
If joining the base profile apply a bead of sealant approximately 25mm back from the end of the profile



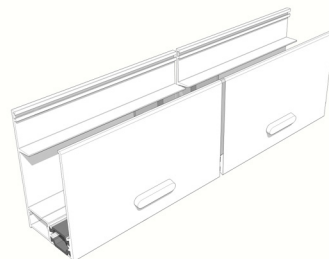
Apply mastic sealant to the cut edges of the second profile



Align the profiles and push together



The butt strap will spring into place and the sealant will be compressed

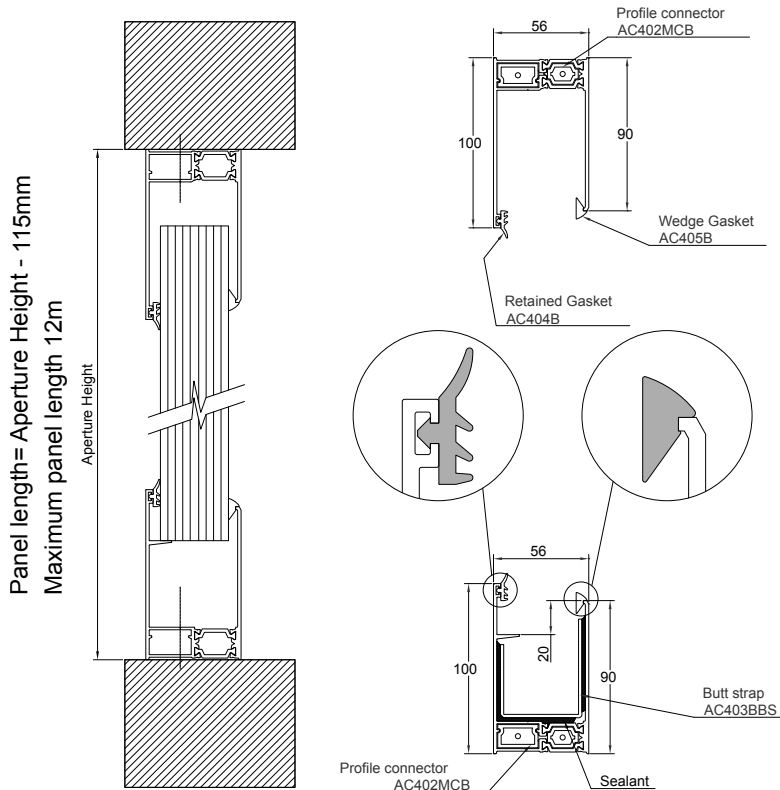


Covers snap into place over the pre-machined drainage slots

Panel Preparation

Cutting

Cutting lengths are shown in the diagram below. Marlon Clickfix1040 can be cut with a fine tooth circular saw or hand saw held at a shallow angle. Dust **MUST** be removed from the flutes using a vacuum cleaner or dry compressed air. It is necessary to support the panel close to the cut and to hold it firmly to prevent stress and vibration.

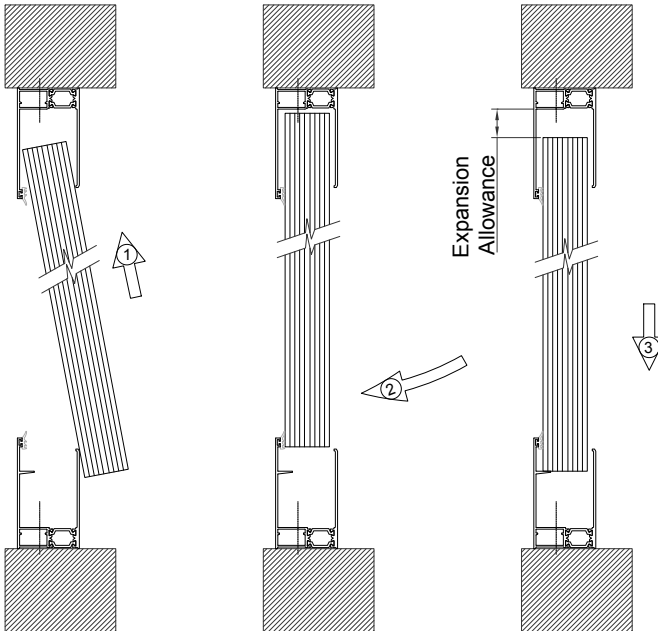


Tapes

Both open ends of the polycarbonate panel must be taped. A breather tape applied at the bottom end of the panel permits air to move freely. This helps minimise condensation by equalisation of the air vapour pressure with its environment. The breather tape prevents ingress of moisture, dust and insects. A sealing tape applied to the top end of the panel prevents water ingress.

Installation Procedure

- It is best practice to measure the overall opening width and determine the approximate width of the last panel. If the last panel is too narrow (less than 100mm) it becomes difficult to handle. If this is the case it is advisable to trim the width of the first panel to allow a larger finishing panel width.
- Insert 'E' gasket into the groove in the aluminium profiles. Avoid stretching the gasket as it may shrink back from corners after installation.
- Rest the top of the panel on the inside of the top profile (see below).
- Lift the panel up until it is fully engaged.
- Rotate the panel until it engages in the base profile.
- Lower the panel until it rests on the panel stop.
- A small amount of silicone lubricant applied to the interlock feature can ease assembly.
- Continue fitting panels following the same procedure until approaching the end of the run. The last and penultimate panels require a special sequence.

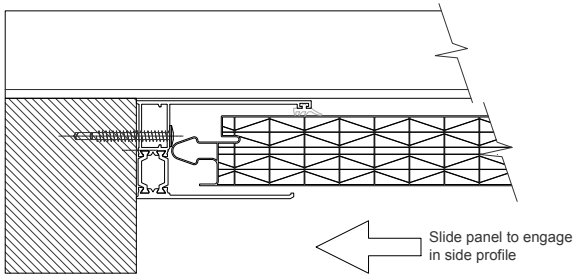


Locate panel in
top profile and
slide up.

Rotate panel to
rest against
base profile.

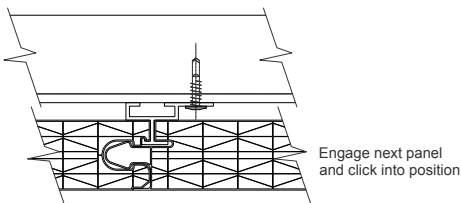
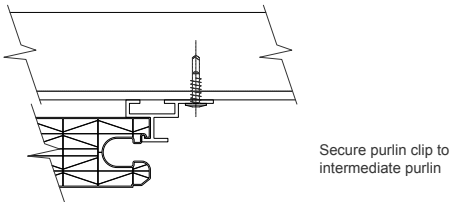
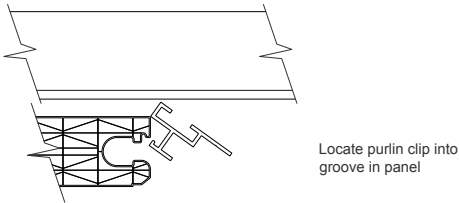
Slide panel down
onto sheet stop.

INSTALLATION MANUAL



Slide the panel side ways until it is fully engaged in the side profile.

If using purlin clips on longer panel lengths these must be fixed as the panels are installed. They cannot be fitted later.



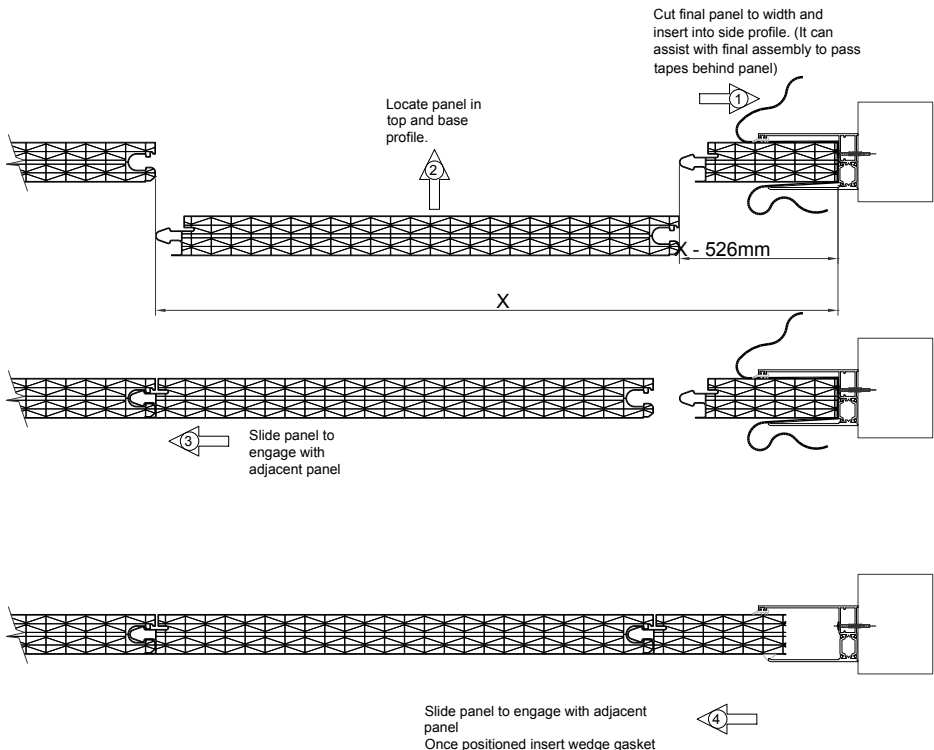
Finishing

There are alternative methods of installing the final panels.

Two of these are detailed below.

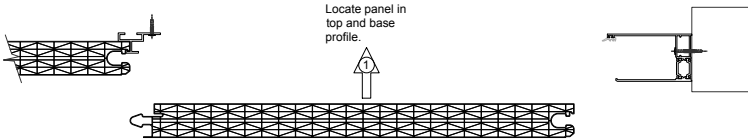
Method 1

- Measure the remaining width to the back of the aluminium side profile. Subtract 526mm from this value to get the last panel width.
- Cut this panel to width and insert it in the top and base profiles as for previous panels. Slide this panel fully into the side profile.
- Insert the remaining full width panel. Engage it into the already secured panel and click into position. If necessary insert and secure purlin clips.
- Slide back the last panel and click into position.

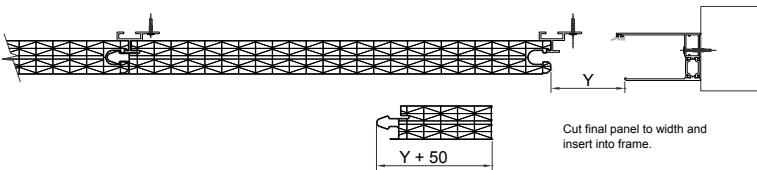


Method 2

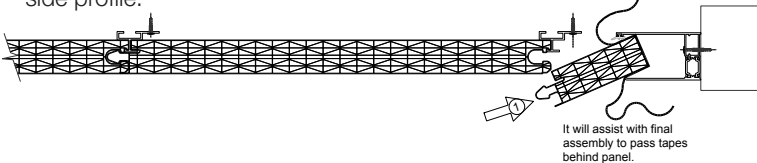
- Install the penultimate panel.



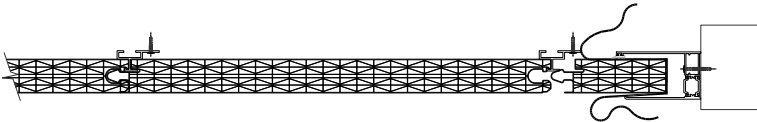
- Cut the last panel to width = $(Y+50)$ mm.



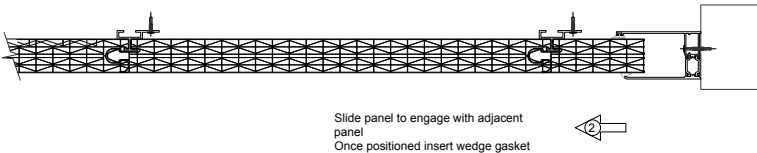
- Insert the top corner of the panel into the top corner of the frame at an angle so that it engages in the top profile. Rotate the panel to hang vertically and engage it in the side profile.



- Push the panel into the side profile and let it drop onto the base profile.



- Slide back the last panel and click into position.

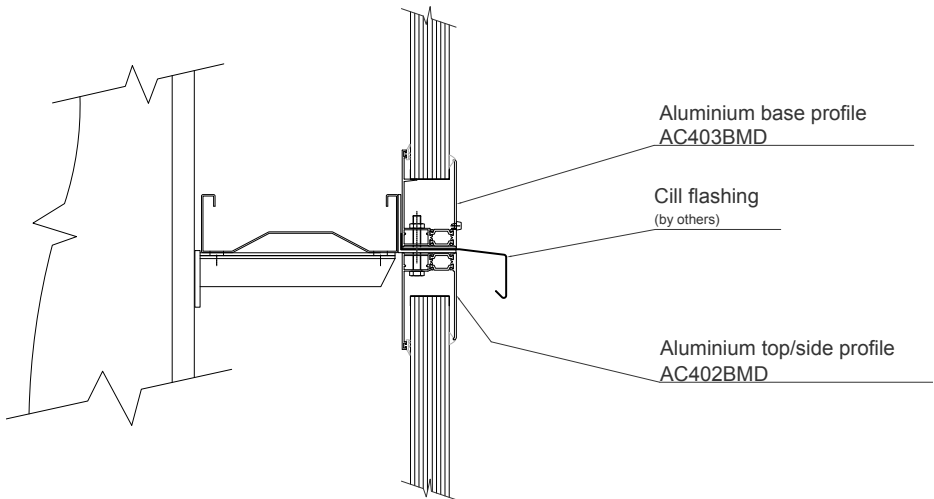


- Once all panels have been installed remove the installation tapes and insert the wedge gasket around the frame perimeter.
- Avoid stretching the gasket as it may shrink back from corners after installation.

High Openings

In applications where the panel height exceeds 12m or if the panels need to be joined length wise for reasons of handling or access the opening should be split into smaller framed areas with the appropriate support steel.

This detail may also be used when a horizontal emphasis is needed to facilitate a fenestration design.



Maintenance

As a condition of ensuring that Marlon Clickfix1040 performs at optimum throughout its service life, it is recommended that the panel be cleaned periodically using suitable household cleaning agents. The recommended cleaning instructions are as follows:

- use lukewarm water to rinse panel and soften dirt
- make up a solution of lukewarm water and ordinary household cleaner or a mild soap and use this to wash 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 thoroughly

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WARNING!

Care should be taken to observe the following precautions:

1. Do not scrub Marlon Clickfix1040 panels with brushes or sharp instruments.
2. Avoid contact with the UV protected surface of Marlon Clickfix1040 by Butyl Cellosolve, Isopropanol or any other solvent.
3. Avoid any abrasives or cleaners of a highly alkaline composition.

It is generally advisable in all instances to test any cleaner on a sample piece of Marlon Clickfix1040 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 Marlon Clickfix1040.

Gaskets and any sealants should be inspected periodically to ensure they have not deteriorated or become dislodged.

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Properties			
Thickness	40mm ±0.5mm		
Structure	10 wall		
Modular Width	500mm ±2.5mm		
Overall Width	526mm ±2.5mm		
Weight	4.3kg/m ² ±5%		
Thermal Insulation	0.99W/m ² K EN 673		
Impact Resistance	Class B non Fragile to ACR(m)001:2005 At Rail / Purlin Centres of 1200mm		
Minimum Recommended Pitch	10°		
Fire Class	B-s1, d0 EN 13501-1		
Air Permeability:	@+50Pa 0.18m ³ /h.m ² @-50Pa 0.21m ³ /h.m ² (BS EN 12114:2000)		
Colour	LT	SHGC	SC
Clear	52%	0.42	0.48
Clear (g)	52%	0.42	0.48
Pearlescent	44%	0.28	0.32
Green (g)	43%	0.34	0.39
Blue (g)	15%	0.40	0.46
Red (g)	16%	0.43	0.49

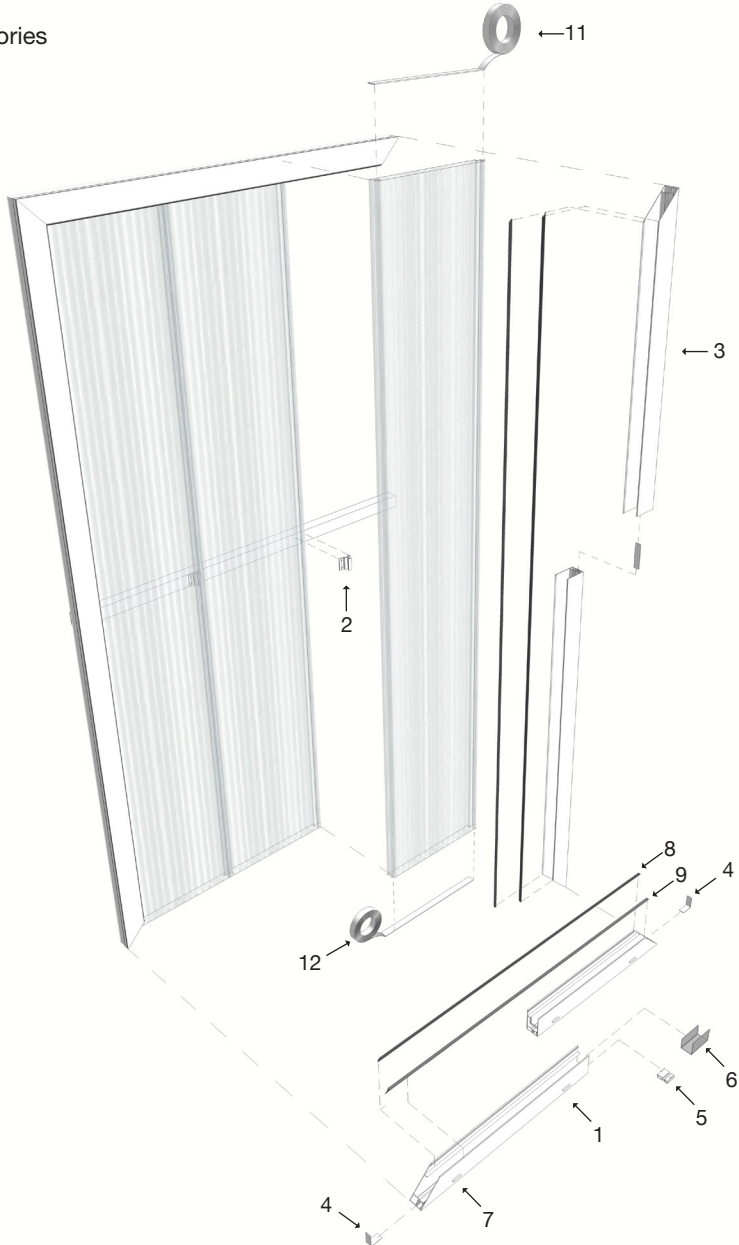
(g) glass effect

+/- Load (kN/m ²)	Span (m)
0.6	2.2
0.8	2.1
0.9	2.0
1.0	1.9
1.2	1.8
1.5	1.7
1.8	1.6
2.0	1.5

Note: spanning based on deflection limit of 50mm or span/40 whichever is the lower

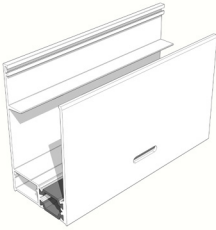
A detailed installation video is also available. To view the video visit the Marlon Clickfix1040 section on our website www.brettmartin.com

Accessories



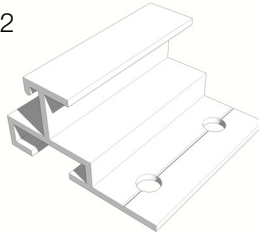
INSTALLATION MANUAL

1



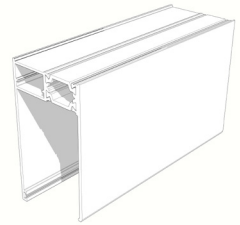
AC 403 BMD
Thermally broken
Base Profile Slotted

2



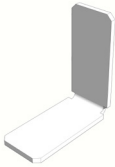
AC 401 E50
Purlin Clip

3



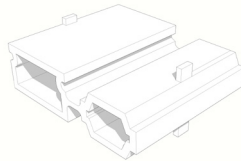
AC 402 BMD
Thermally broken
Top & Side Profile

4



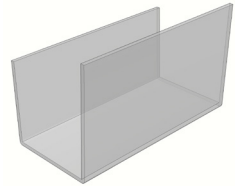
AC 402 CCB
Corner connector

5



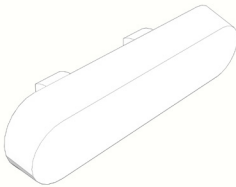
AC 402 MCB
Straight profile connector

6



AC403 BBS
Butt Strap Connector

7



AC 403 BVCG
Drainage Slot Vent Covers

8



AC 404 B
Interior "E" Gasket

9



AC 405 B
Exterior Wedge Gasket

10



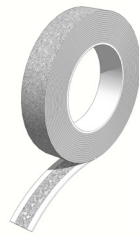
305 839
Click Seal Butyl Mastic

11



AC 406 E
Sealing Tape

12



AC 407 E
Ventilating Tape

Brett Martin's Marlon brand of polycarbonate includes ranges of solid, profiled and multiwall sheets.



Plastic Sheets

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Email: daylight@brettmartin.com

For the latest information visit the company's website:

www.brettmartin.com



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