BRETT MARTIN

Daylight Systems

marvault

VAULT ROOFLIGHT SYSTEM

The next generation in continuous vault rooflight systems

BRETT MARTIN
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Daylight maximised

Marvault is a versatile barrel vault rooflight system, glazed in solid or multiwall polycarbonate, with a variety of size, shape, thermal performance, solar control and ventilation options to suit a multitude of requirements.

The attention to detail is evident in the clean lines and minimalist styling of the Marvault framework. Daylight area is maximised through wide bay centres.

Available in mill finish aluminium, or powder coated to any RAL colour, the system is suitable for use in a variety of low pitch roof applications.

Marvault has hidden fixings, giving a clean appearance, and has a variety of height options to suit different glazing specifications and architectural requirements. The system spans up to 7m as standard, with larger spans also available.

marvault*trade* **marvault*ultra***

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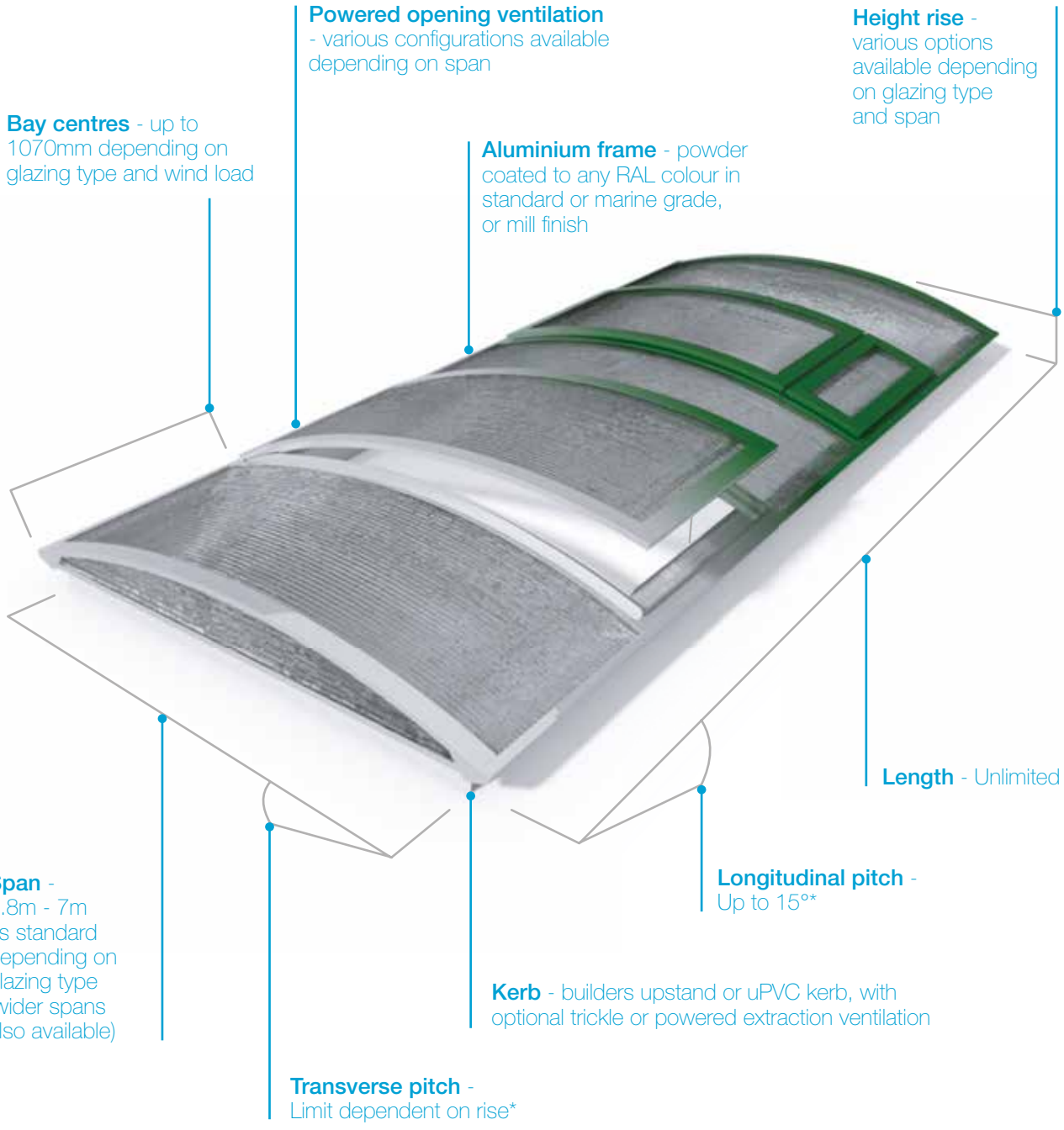
Aluminium frame - elegantly designed, precision engineered
Polycarbonate glazing - options for every application
Ultra option - enhanced airtightness and thermal performance
Opening ventilation - electrically operated discreet actuators



Technical Support
*Refer to Brett Martin Daylight Systems Ltd Technical Dept. for applications outside of the stated limits

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Elegantly designed, precision engineered aluminium framework

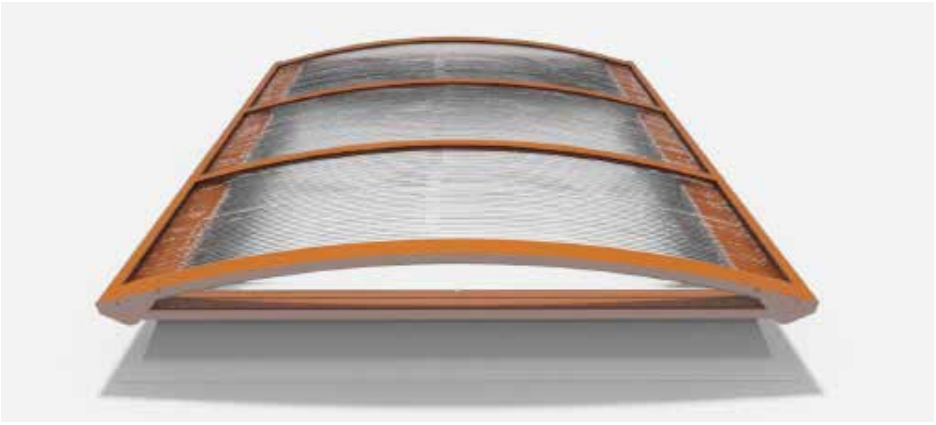
The attention to detail is evident in the clean lines and minimalist styling of the Marvault framework.

Daylight area is maximised through wide bay centres and no requirement for intermediate ‘tie bars’ on multiwall glazing - class B non-fragility is achieved through mechanical interlocking of glazing panels to glazing bars. A system of tensioning bolts mean that there are no external fixings through the outer glazing bars.

Available in mill finish aluminium, or powder coated to any RAL colour with marine-grade finish optional, the Marvault will make a striking difference to any low pitch roofing environment.

The clever framing system is also suitable for use on most curved standing-seam roof systems.

Designed with the installer in mind, the process is swift and straightforward.



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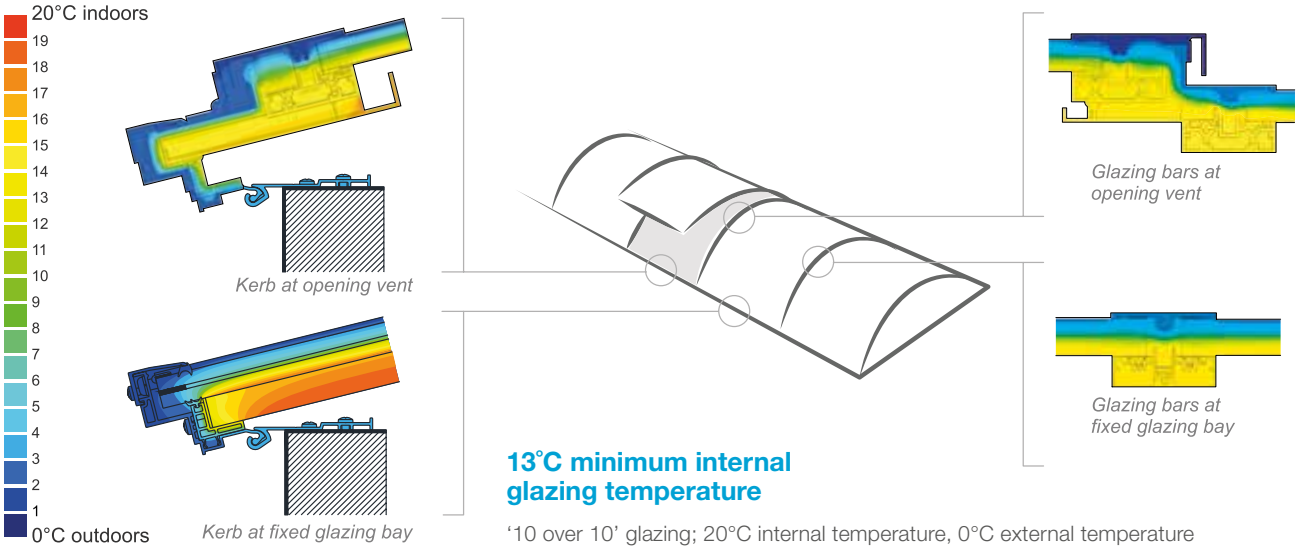
Choose Marvault Ultra and reduce your energy bills thanks to its enhanced airtightness and thermal performance



13°C minimum internal glazing temperature

'10 over 10' glazing; 20°C internal temperature, 0°C external temperature

Marvault Ultra is available on all 'Part L' compliant and better glazing options.

Unlike many other vault rooflight systems on the market, the internal glazing bars are thermally isolated from the aluminium kerb, minimising the risk of condensation forming on the internal framework and glazing.

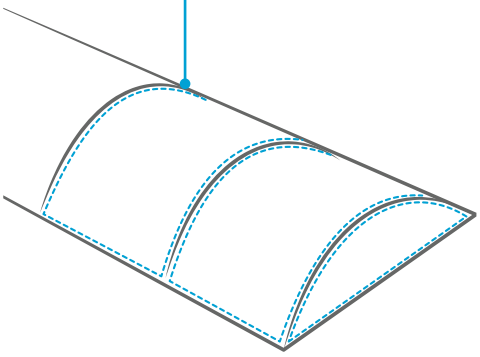
The novel water management system allows rainwater to drain between gaskets without compromising airtightness.

Where opening ventilation panels are incorporated, they are fully thermally broken and gasketted to ensure that the benefits of the Ultra features are maintained.

The airtight performance of Marvault Ultra is typically 1-5 $m^3/h.m^2$ of envelope area, depending on geometry.

Gaskets

- Continuous gaskets around the perimeter of each glazing panel provide enhanced air-tightness.



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Polycarbonate glazing options for every application

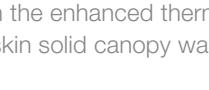
Marvault has a range of polycarbonate glazing options suitable for any situation. From the standard building regulations part L compliant options of 16mm 5-wall or triple skin solid, through the enhanced thermal performance of 2 layers of 16mm 5-wall offering a U-value of 1.05, to a single skin solid canopy walkway, Marvault provides a versatile daylighting solution.

Spec	Note	U-value (centre pane)
Standard Building Regulations Part L Compliant		
16mm 5-wall	Very low rise at narrow spans	1.9
Triple skin solid		1.88 trade / 1.83 ultra
Enhanced Thermal Performance		
16 over 16 5-wall	Very low rise at narrow spans	1.05
Canopies		
3mm solid		5.4
10mm twinwall		3.2
Alternative Part L Compliant Options		
10 over 10 twinwall	Allows higher rise at narrow spans	1.91

Gable end glazing is 25mm 7-wall as standard on all variants
U-values are vertical

16mm 5-wall

16 over 16 5-wall

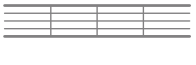


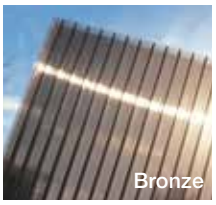
3mm solid

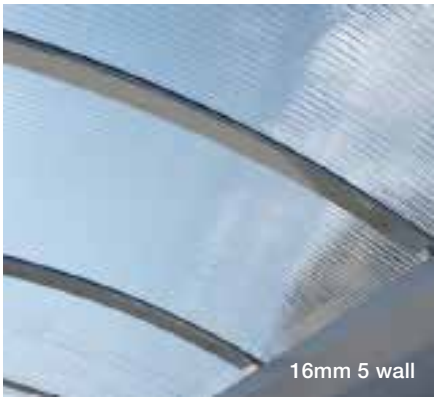
Triple skin solid

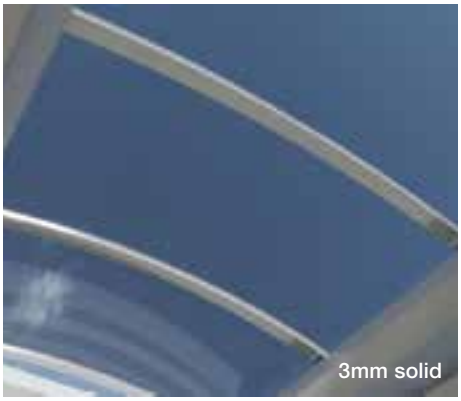
10mm twinwall

10 over 10 twinwall









Glazing Type	Maximum Bay Centres
Multiwall	1073mm
3mm solid canopy	1048mm
Triple skin solid	705mm

marlon st LONGLIFE

Polycarbonate Multiwall Glazing

marlon fsx LONGLIFE

Solid Polycarbonate Sheet

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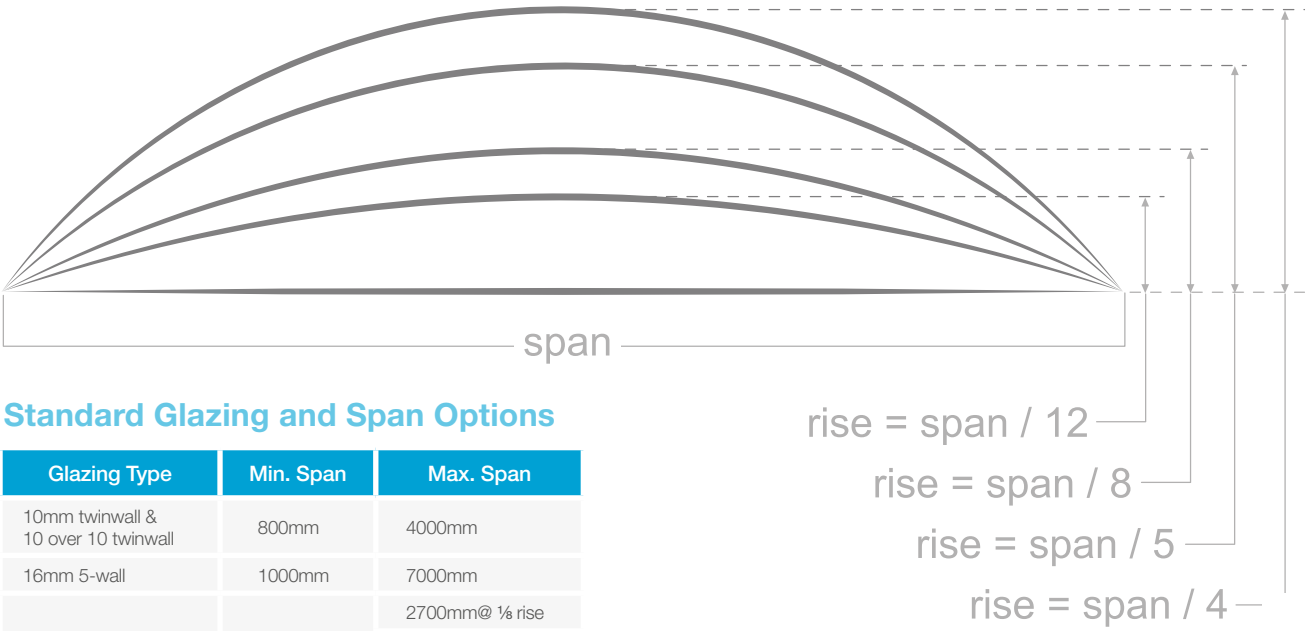
Versatile frame provides choices for shape and glazing specification



Standard Glazing and Span Options

Glazing Type	Min. Span	Max. Span
10mm twinwall & 10 over 10 twinwall	800mm	4000mm
16mm 5-wall	1000mm	7000mm
Triple skin solid & 3mm solid	1000mm	2700mm@ ⅛ rise
		2500mm @ ⅕ rise
		2300mm @ ¼ rise
16 over 16 5-wall	1000mm	4000mm

Other special glazing and span combinations are available - *please call to discuss your requirements*

The Marvault's flexibility in shape provides architects and designers with greater freedom to specify products that harmonise with their surroundings.

Just as importantly, the multiple glazing options available for Marvault means that the system needs to accomodate each one's ability to form over a curve or 'minimum bend radius'.

The articulated kerb profile makes both of these possible, meaning that higher rise vaults with solid polycarbonate, and lower rise with more economic multiwall polycarbonate, are equally possible within the same framing system.


Articulated kerb

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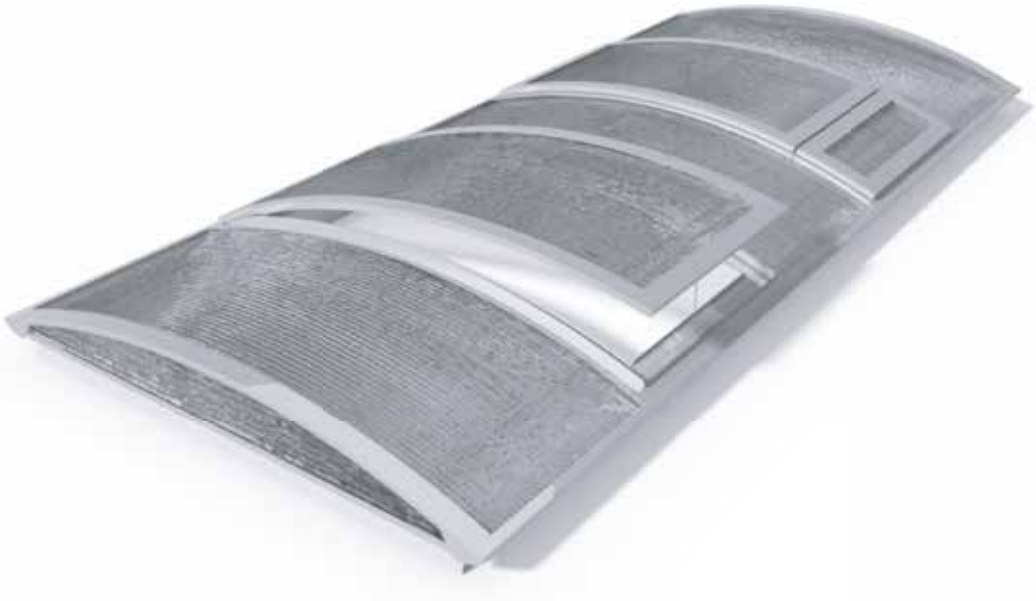
Opening ventilation for a comfortable environment

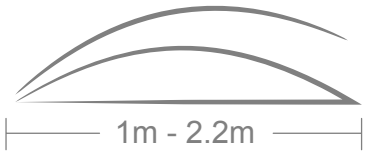
Opening ventilation panels, powered by discreet chain actuators, allow comfort ventilation to be neatly integrated into the Marvault rooflight.

Available on all Building Regulations Part L compliant and better glazing specifications, opening vents can be used in conjunction with the Marvault Ultra without compromising its enhanced thermal performance and airtightness.

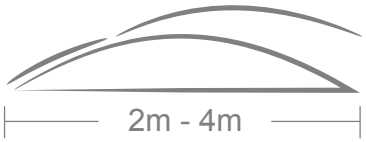
Configuration options allow the balance between economy and performance to be optimized, providing the necessary levels of ventilation specific to any project at an affordable price.

Actuators can be supplied as 24V or 230V, with optional wind and rain sensors (which Brett Martin recommend), and are suitable for integration into building management systems.

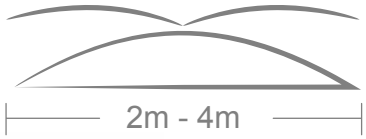




1 opening lid



2 lids, 1 opening



2 opening lids

3 lids, 1 opening

3 lids, 2 opening

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Further technical specifications

Light Levels

Rooflights have a major impact on the energy efficiency of a building: installing rooflights to 15% or more of the roof area is a practical solution to ensure the lighting levels within the building are adequate, which can greatly reduce the artificial lighting requirement and a buildings CO_2 emissions, particularly when used in conjunction with automatic lighting system control. The notional building used in Part L Building Regulations incorporates 12% roof area in rooflights, together with proportional automatic control of the electric lighting systems; research demonstrates that installing less than this amount will make Part L compliance much more difficult.

Rooflights don't just improve the external environment. They improve the internal environment too. People prefer natural light to electric light and there is a growing body of scientific evidence to suggest that it helps us perform better. Studies have shown that school children learn better, hospital patients recover faster, factory workers are more productive and shoppers linger longer, spending more.

Non-fragility

Marvault Trade and Ultra achieve class B non-fragility when tested to ACR[M]001.

Weathertightness

Tested to BS EN 14963

Trickle and Powered Extraction Ventilation

Trickle ventilation (manual or automatic humidity controlled), or powered extraction ventilation, can be incorporated into our PVC ventilation frame or kerb profiles.

Fire Performance

EN 13501-1	B,s1-d0
BS 476: Part 7	Class 1Y

NB Marlon ST (multiwall) will in most cases meet these classifications but is subject to structure and thickness. For further details please contact our technical department.

Longevity

Marvault Trade and Ultra are designed for a service life in excess of 25 years, and are guaranteed to remain fit for purpose for at least 20 years. They are glazed with high quality UV stable Marlon ST Longlife and Marlon FSX Longlife polycarbonate sheet, with the assurance of a 10 year guarantee and specific light transmission and impact properties.

CE Marking

Marvault is CE marked to BS EN 14963 and a declaration of performance is available.

Compatibility

Polycarbonate is an extremely strong material, but should always be treated with care. The material must not be scratched, and contact with abrasive materials must be avoided. Polycarbonate is not compatible with certain materials, including some chemicals, paints, solvents, sealants and plasticisers, and contact with any other materials should be avoided unless compatibility has been confirmed.

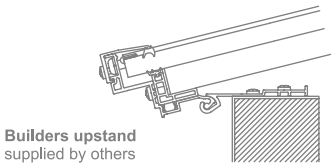
Maintenance & Cleaning

The general conditions of units and all accessories, particularly security of fixings and sealants, should be checked periodically. Abrasive and alkali cleaning materials should be avoided. Copious quantities of warm water with a mild detergent and soft rag or sponge can be used to remove surface dirt.

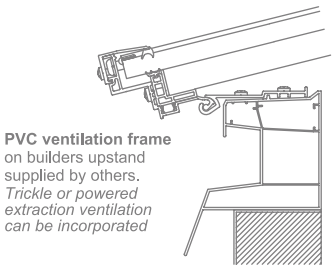
Technical Support

Please contact Brett Martin Daylight systems for further guidance, including technical bulletins on installation, handling and maintenance, COSHH data sheets, NBS product specification clauses and CPD seminars.

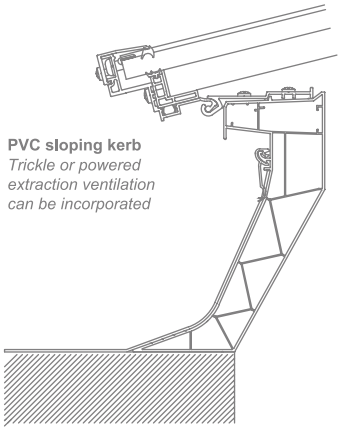
Upstand and Kerb Options



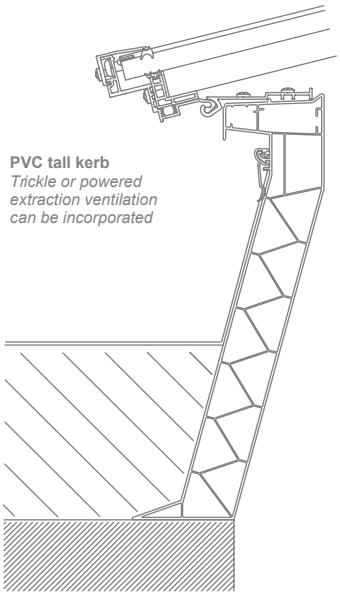
Builders upstand
supplied by others



PVC ventilation frame
on builders upstand supplied by others.
Trickle or powered extraction ventilation can be incorporated



PVC sloping kerb
Trickle or powered extraction ventilation can be incorporated



PVC tall kerb
Trickle or powered extraction ventilation can be incorporated

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Brett Martin Daylight Systems Ltd,
Sandford Close,
Aldermans Green Industrial Estate,
Coventry,
West Midlands CV2 2QU

Tel: +44 (0) 24 7660 2022
Fax: +44 (0) 24 7660 2745
Email: daylight@brettmartin.com
www.brettmartin.com

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