Daylighting for Industrial Refurbishment

DESIGNING FOR DAYLIGHT

Brett Martin

Injecting new life into industrial buildings

When industrial buildings become tired and in need of a new injection of life, refurbishing at roof level can provide the ideal way to literally bring a new dimension to a building.

The value this attaches comes in many layers including improving the appearance of the building, increasing its monetary value, enhancing thermal and safety performance and reduction of heating/insulation costs.

Whether you choose to replace the whole roof or simply replace the rooflights in an existing roof, Brett Martin will guide you to a suitable solution for the individual needs of your building.

Contents

02 Refurbishment for Industrial Rooflights
04 Daylight – The Essential Ingredient for Wellbeing
06 Why Rooflights?
08 Performance Guaranteed
10 Futureproof for Industry
12 Our Expert Recommendations
14 Product Range

- 14 Inplane Rooflights
- 16 Vaulted Rooflights
- 20 Northlights
- 22 Vertical Polycarbonate Cladding & Facades

Daylight – the essential ingredient for wellbeing

The increased focus on workplace wellbeing and the escalating body of evidence of the benefit to health & wellness that results from access to natural light have contributed to rooflights featuring more frequently as part of industrial refurbishment projects.

A focus on staff wellbeing is of greater importance now than ever. In a highly competitive era for recruitment and retention of staff, a brighter, healthy and comfortable working environment matters.

Replacing tired rooflights with bright modern alternatives allows diffused lighting to penetrate, providing an ideal working environment.

Improvement in daylight is one of the main benefits of industrial rooflights, but those benefits can extend beyond the individual to a whole organisation.

Increased daylight works with the circadian rhythm to improve alertness and concentration, leading to an uplift in productivity and ultimately to enhanced company performance.

Providing daylight in buildings is often a convenient way to achieve the benefits of daytime light in regulating circadian rhythms, resulting in improved health and mood.

BRE Lighting & Health FB74

Why rooflights?

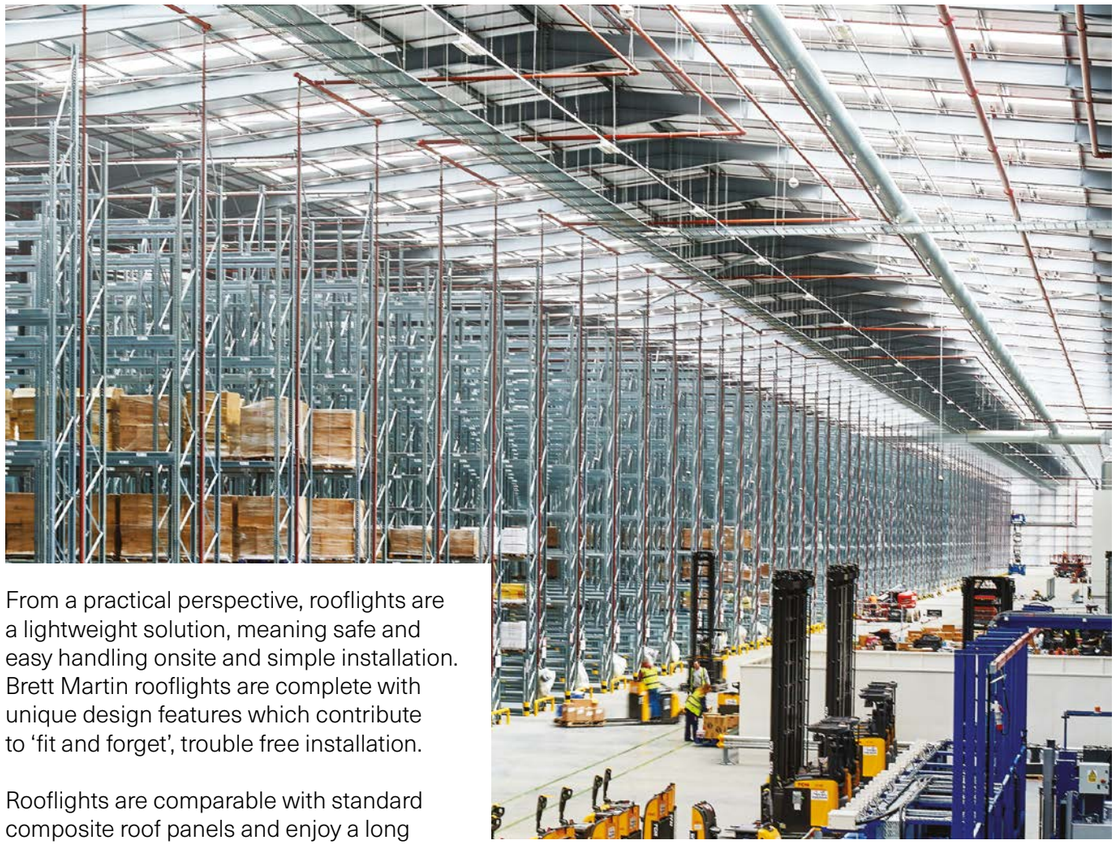
The benefits of natural light are abundant, but for the occupants of an industrial setting, sources of daylight are not as straightforward or plentiful as that provided by vertical windows in traditional office settings.

For industrial buildings, rooflights provide the ideal opportunity to connect your staff to the outside world. Given the large footprint of these industrial settings, rooflights present the most effective means of injecting daylight into the spaces below.

The quality of light provided by rooflights presents a significant advantage over harsh strip lighting. Rooflights diffuse the light, allowing it to penetrate the room in a more gentle way and giving a more even spread of light across the space.

It also prevents common problems associated with poor lighting in the workplace, including headaches, eye strain and even workplace accidents.

In certain circumstances, ventilation can also be provided by rooflights. Powered opening ventilation panels provided by Brett Martin's Marvault panels, for example, create a comfortable ventilated internal environment, with all the benefits of fresh air.



From a practical perspective, rooflights are a lightweight solution, meaning safe and easy handling onsite and simple installation. Brett Martin rooflights are complete with unique design features which contribute to 'fit and forget', trouble free installation.

Rooflights are comparable with standard composite roof panels and enjoy a long lifespan with minimal maintenance required.

Benefits of rooflights

- Effective Daylight Option
- Diffused Light for Optimal Conditions
- Ventilation Options Available
- Lightweight & Easy to Handle

Performance guaranteed

Upgraded Safety Performance

A well-considered rooflight application should also contribute to the performance of a building and offer increased comfort to those occupying it.

The oldest rooflights may have been installed prior to the current legislation around non-fragility. Old and severely weathered rooflights may have become fragile.

For these reasons safety concerns may result from these aging products.

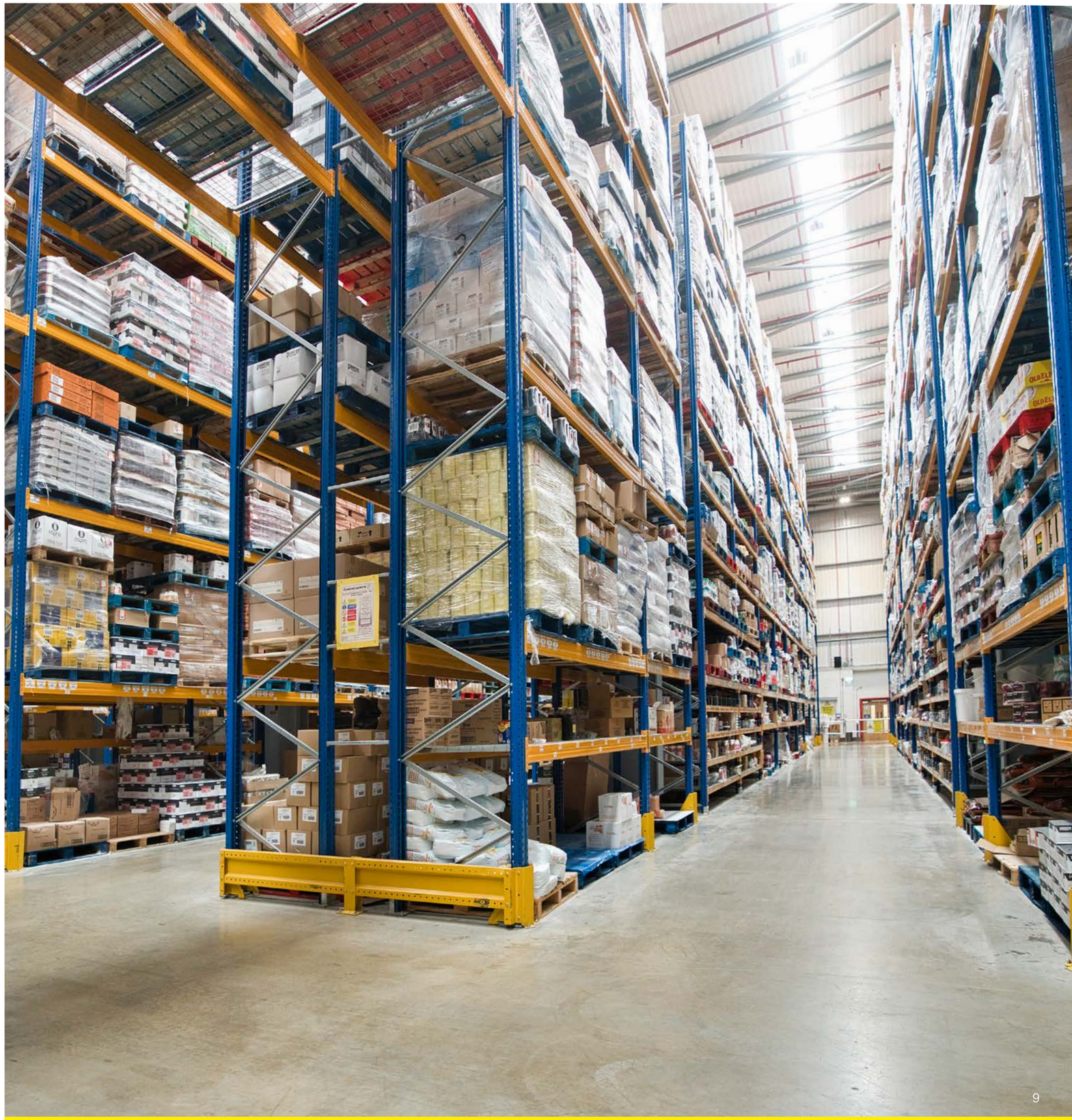
All correctly specified rooflights supplied by Brett Martin will achieve Class B non-fragile to ACR[M]001 as standard, giving you piece of mind that safety is assured.

Upgraded Thermal Performance

The thermal performance of rooflights has continually improved in line with building regulations in recent years, meeting the latest sustainability targets.

Replacing older specification rooflights with more thermally efficient options will improve the thermal performance of the building.

The solar gain achieved through the addition of rooflights can contribute significantly to a reduction in energy bills (for both heat and light) as well as a lower carbon footprint.



Futureproof for industry

Replacing ageing roof structures and introducing new rooflights can help improve the versatility of a building's use.

Repairing damage and improving the appearance of industrial spaces in this way will increase the value of a property to make it a viable commercial opportunity now and into the future. Futureproofing the use of the space makes commercial sense for building owners and occupiers alike.

Including rooflights in conjunction with PV panels also provides the opportunity to optimise daylighting. Such improvements can help a building's tenants to achieve their own sustainability goals.

Aging and energy inefficient buildings do not provide a viable option for companies committed to carbon reduction targets, so the benefits of rooflights for refurbishment extend far beyond the everyday benefits.

Dilapidations

In cases where industrial tenancies have come to an end, rooflight systems, sheets, vaults and domes can prove a cost-effective way to return a premises to their original standard. This also applies to cases in which a building is undergoing a change of use.

Our expert recommendations

Largest range on the market

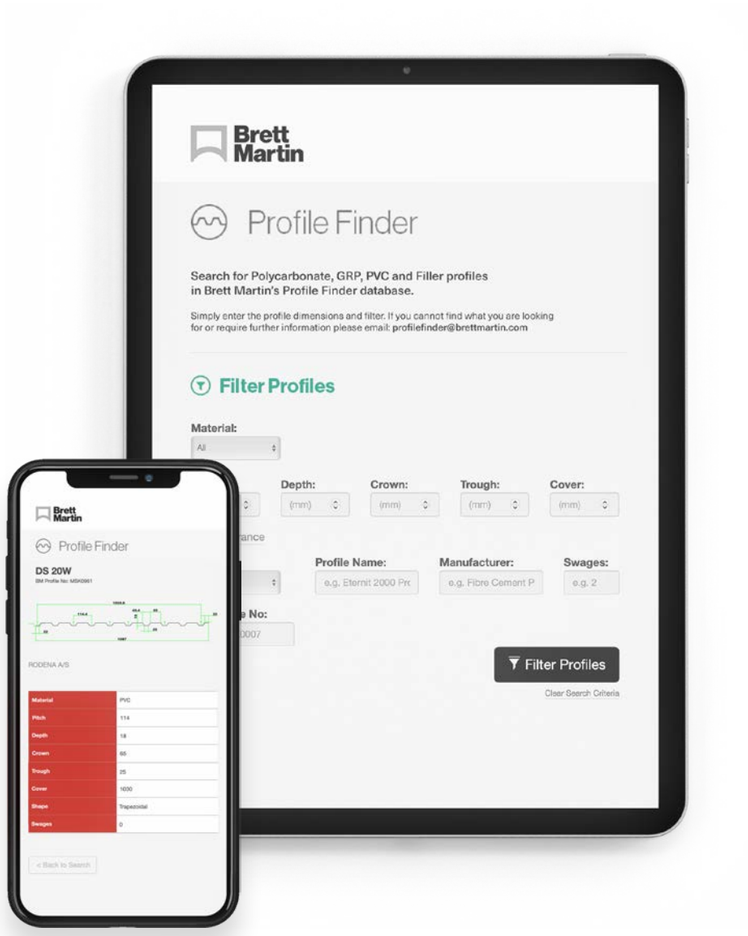
Market Leading Online Support

With over 3000 historic roofing types in the market, finding an existing roof's profile can seem an impossible task. Luckily Brett Martin's Online Profile Finder can help.

This long-trusted online manual is a go-to resource across the industry and achieves quick and easy access to the widest range of rooflight options on the market.

Searching for Polycarbonate, GRP, PVC and Filler profiles in Brett Martin's Profile Finder database could not be easier. Simply enter as few as two profile dimension details and filter to find appropriate rooflight options for your exact roof.

Scan to view our online profile finder



Consult Our Experts

Endless opportunities for rooflight options in existing buildings. Multiple configuration options are available to adhere to every brief and budget.

Whether you choose to completely re-roof your building, or upgrade existing roofing panels to include rooflights, our team will advise you of the best products or combination of products for your particular needs.

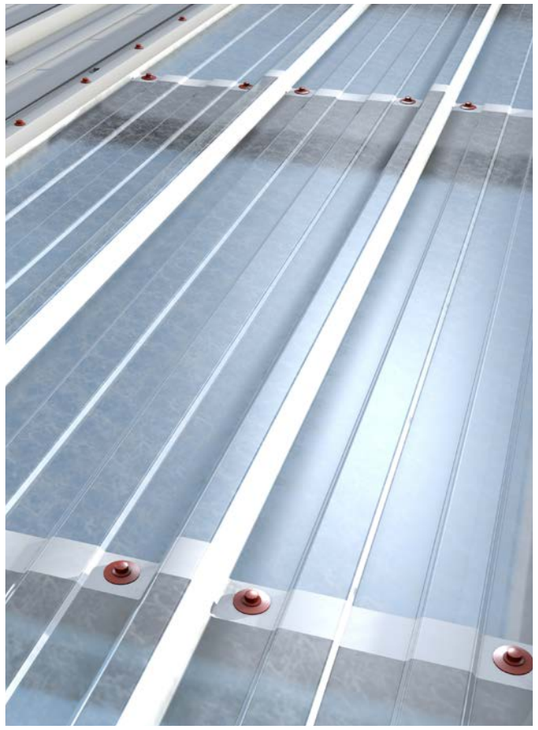
EnergySaver FAIRs

GRP

Overview

Triple skin Factory Assembled Insulating Rooflights.

Manufactured from GRP, these innovative composite panels rooflights offer the best quality diffused natural daylight, thermal performance and ready-to-fit convenience for wide-span buildings.



Benefits

- Excellent quality diffused natural light transmission
- Compatible with standard roof panels
- Rapid ‘fit and forget’ trouble free installation
- Easy onsite handling
- Long lifespan and minimal maintenance requirement
- Safety and fire ratings to meet all requirements
- Can be tailored to meet specification

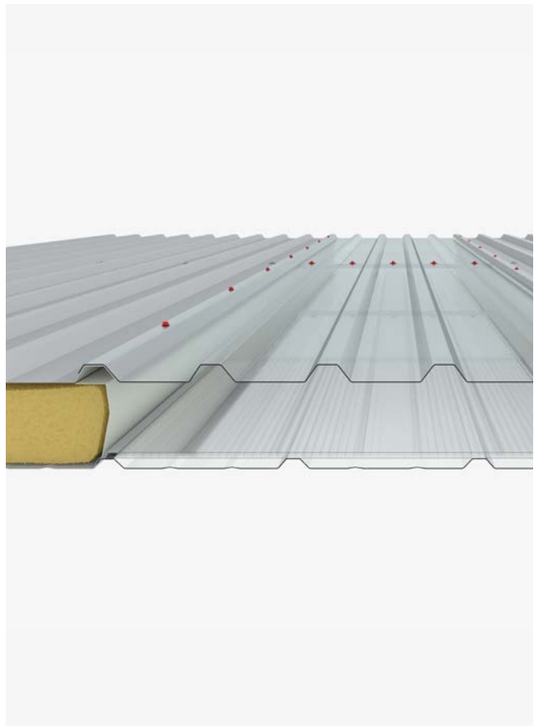
Product Specification	
Span	Typically 1.8m
Length	8m (can end lap for longer lengths)
U-Value	- 1.9 to 0.9 W/m²K (assessed vertically) - 2.1 to 1.0 W/m²K (assessed horizontally)
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Diffused. Light transmission of 65-75% (55-65% for heavier sheets)
Life Expectancy	At least 25 years (Trilite 30+ and Diamond Protection 30+)
Additional Features	BRE globally verified Environmental Product Declaration Superlife™ enhanced UV surface protection available Optional Diamond protection against weathering, degradation and chemical attack

Site Assembled

GRP

Overview

Site Assembled rooflight systems are manufactured in GRP and offer a wide range of options and product performance options. With single and multi-skin options available, all sheets achieve the highest levels of profile accuracy and cover a range of safety levels, U-values and fire ratings. The system is quick and easy to install into surrounding corrugated sheeting.



Benefits

- Excellent diffused natural light transmission levels
- Wide selection of over 1000 profiles available
- Ability to meet individual requirements for non-fragility, fire rating and U-value
- Long lifespan with minimal maintenance required
- Simple to install and cost effective

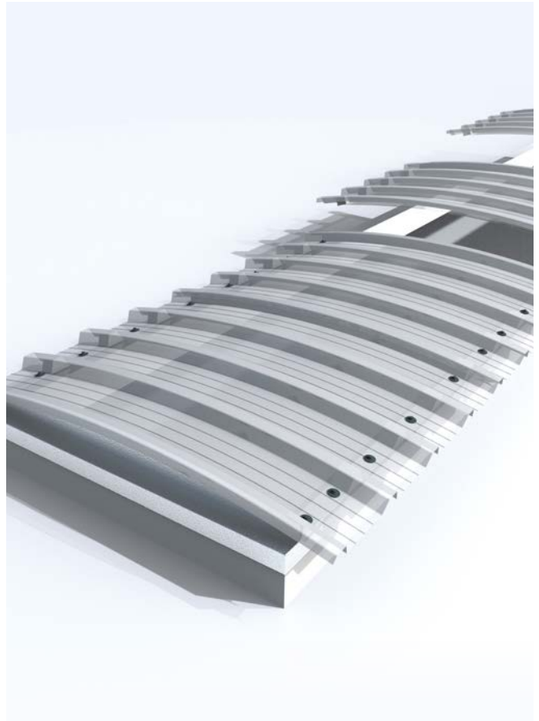
Product Specification	
Span	Typically 1.8m
Length	10m (longer possible for specific applications)
U-Value	- 1.3 to 0.9 W/m²K (assessed vertically) - 1.5 to 1.0 W/m²K (assessed horizontally)
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Diffused
Life Expectancy	At least 25 years (Trilite 30+ and Diamond Protection 30+)
Additional Features	BRE globally verified Environmental Product Declaration Superlife™ enhanced UV surface protection as standard on weathersheets Optional Diamond protection against weathering, degradation and chemical attack

Multivault GRP

GRP

Overview

Multivault GRP rooflights lap together to form unlimited lengths, with spanning capabilities up to 4 metres. They are delivered to site in a factory assembled, ready to install form and are ideal for all roof types. Fitted onto separate kerbs, Multivault requires no fixings penetrating the roof covering, therefore preserving the principle of secret fix.



Benefits

- Delivers high levels of diffused natural light transmission
- Versatile design from 1m-4m wide
- Modular units allow for unlimited run lengths
- Suitable for integration into all flat, curved, standing seam, standard and low pitch roofs
- Part L compliant – thermally efficient with no thermal bridging
- Hardpak side fillers provide greater support for fasteners ensuring reliable installation

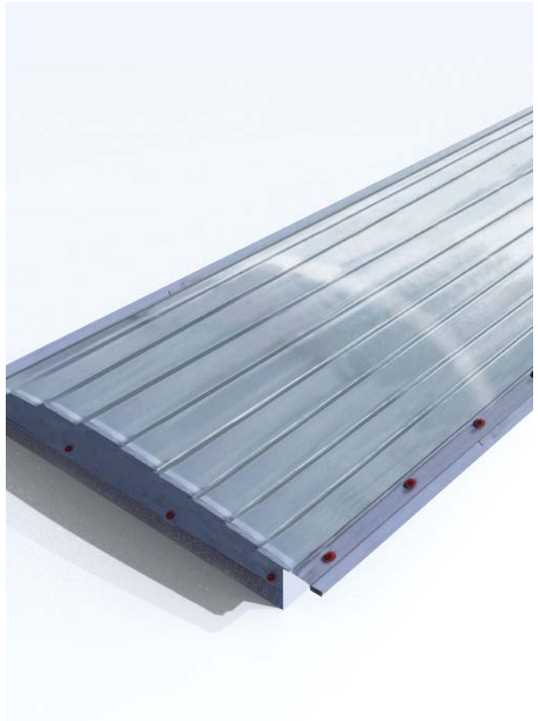
Product Specification	
Span	1-4 metres
Length	Unlimited
U-Value	- 1.3 W/m²K (assessed vertically) - 1.6 W/m²K (assessed horizontally)
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Diffused
Life Expectancy	25 years
Additional Features	20 year warranty Manufactured from durable industrial grade GRP with different fire rating options

Multivault Nova

GRP

Overview

Specifically developed for flat or low pitch applications, Multivault Nova is a UV protected GRP barrel vault skylight system. The factory assembled triple skin is comprised of a corrugated translucent GRP outer sheet, intermediate Cleartherm layer and GRP liner bonded together with Hardpak internal spacers.



Benefits

- Delivers high levels of diffused natural light transmission
- Metal reinforcement as standard at each under lap end to ensure reliable installation
- 3 lengths lap together for continuous runs

Product Specification	
Span	1m or 1.2m widths
Length	Unlimited units of 3 metres
U-Value	- 1.3 W/m²K (assessed vertically) -1.6 W/m²K (assessed horizontally)
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Diffused
Life Expectancy	25 years plus
Additional Features	25 year warranty Superlife™ enhanced UV surface protection available UV stabilised resin system protects against discolouration and degradation

Multivault SSR

Polycarbonate

Overview

Multivault SSR is a site assembled profiled polycarbonate vault rooflight specifically designed for use with standing seam roofs. Multivault SSR's design – which has been approved by leading standing seam manufacturers – means it is installed onto a kerb which can be created from standing seam verge components and forms a completely watertight roof covering.

Benefits

- Delivers high levels of diffused natural light with aesthetic comparable to standing seam roofing
- Modular units for unlimited run lengths
- Thermally efficient – no thermal bridging, contributing to Part L compliance
- Minimal maintenance required
- No through fixings with no roof penetrations when correctly fitted to standing seam roofing
- Units supplied as Down Slope, Continuation, Up Slope or Crown Units for any combination of run type

Product Specification	
Span	1.2 metres
Length	Unlimited run length
U-Value	- 1.3 W/m²K (assessed vertically) - 1.5 W/m²K (assessed horizontally)
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Clear/direct. Diffused options available
Life Expectancy	20 years
Additional Features	20 year warranty

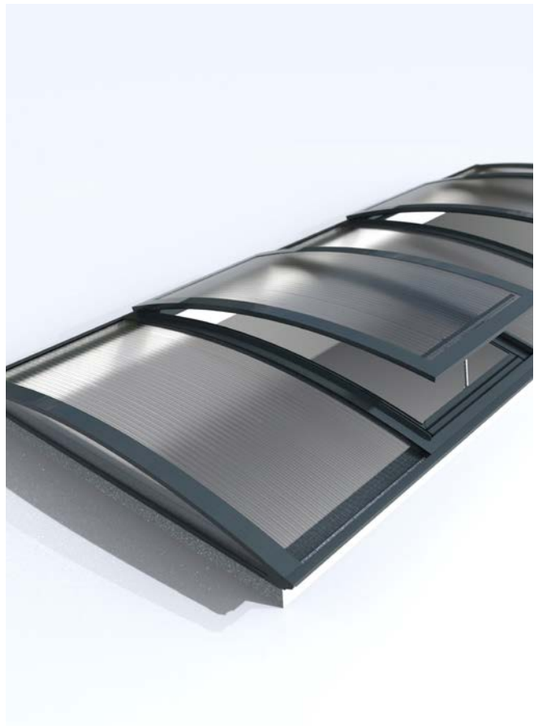
Marvault

Polycarbonate

Overview

Marvault is a versatile, elegant aluminium framed polycarbonate glazed barrel rooflight system suitable for a wide range of applications, including low-pitch, curved and flat roofs.

Daylight area is maximised through wide bay centres and unlimited lengths. This precision engineered system is easy to install, with clean, uncluttered lines guaranteed by discreet external and internal fixings.



Benefits

- Large glazed areas with maximum daylight with spans up to 7m and glazing centres up to 1070mm
- Premium internal and external appearance with elegant framework, discreet fixings and powder coating available to any RAL colour
- Optimal architectural, performance and cost requirements with options for solid or multiwall glazing and adjustable height rise
- Comfortable ventilated internal environment created by ventilation panels
- Exceptional impact resistance and surface protection

Product Specification	
Span	1-7 metres
Length	Unlimited run length
U-Value	Range of U-Values available. Standard value 1.9W/m²K.
Fragility Rating	Class B non-fragility to ACR[M]001 when fully installed
Light Class	Clear/direct. Multiple glazing options available including diffused options.
Life Expectancy	20 years
Additional Features	10 year guarantee

Northlight Glazing

GRP, Polycarbonate

Overview

Traditionally glazed in single skin wired glass, multiple replacement options for Northlights exist in both single skin and insulated configurations.

Using Brett Martin's triple skin FAIRs achieves an excellent result for Northlight upgrades. As shown in this example, this can vastly improve the light being transmitted to the spaces beneath, as well as improving the thermal performance of the building.

Replacing tired and dull Northlights can have a transformative effect on any space, reinstating soft light for optimum daylight conditions in factories and warehouses. With modules installed at angles of up to 90 degrees, direct daylight is avoided thus achieving a glare-free solution.

Multiple options exist for Northlights, including polycarbonate, GRP, aluminium bar and Clickfix configurations.

GRP double skin northlight

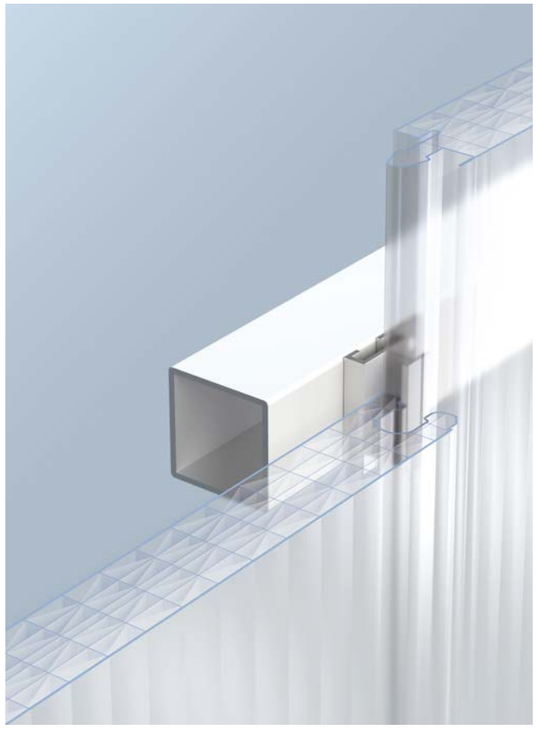
Polycarbonate northlight

Marlon Clickfix

Polycarbonate

Overview

Marlon Clickfix is a complete architectural multiwall polycarbonate panel glazing system with all the impact resistance, resilience and structural strength inherent in polycarbonate. Its modular design means interlocking panels simply click and fix into place, providing a seamless glazing option. Panels are used with glazing bar frames including the VF70 and VF90 polycarbonate glazing frames which are suitable for vertical facades, northlights, cladding and partitioning applications internally and externally.



Benefits

- Fully thermally broken system
- Seamless glazing aesthetic
- Lightweight and easy to use – quick onsite installation
- Maximum air tightness
- Good acoustic performance
- Weatherable and UV resistant
- Superb spanning capabilities
- Can be specified as BioPlus with low carbon credentials

Product Specification	
Width	Unlimited
Height	Up to 8m (VF70), up to 12m (VF90)
U-Value	0.99 W/m^{2}K
Fragility Rating	N/A
Light Class	Clear/direct. Diffused options available
Life Expectancy	20 years
Additional Features	10 year guarantee Enhanced (double sided) UV protection options available Multiple colour options

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

t: +44 (0) 24 7660 2022
f: +44 (0) 24 7660 2745
e: daylight@brettmartin.com

Ireland
Brett Martin Ltd
24 Roughfort Road
Newtownabbey, Co. Antrim
Northern Ireland, BT36 4RB

t: +44 (0) 28 9084 9999
f: +44 (0) 28 9083 6666
e: technical@brettmartin.com
commercial@brettmartin.com

For the latest information visit
brettmartin.com

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