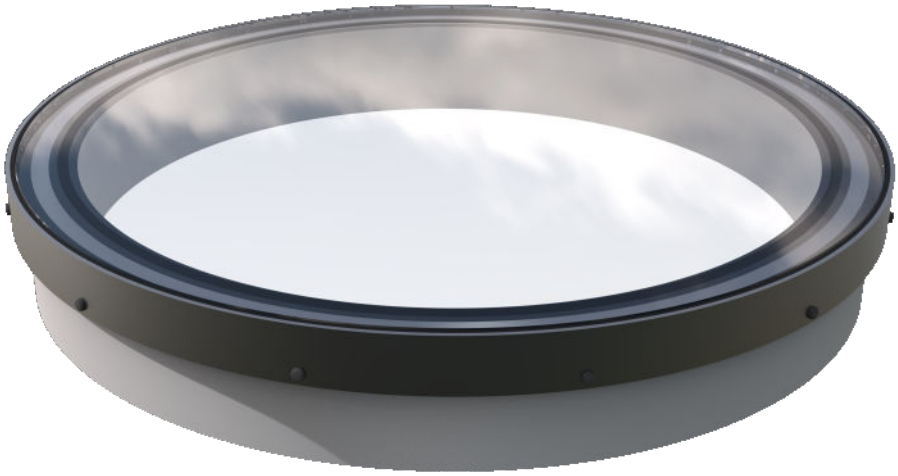
Circular Glass

TB426
Brett Martin Circular Glass
Datasheet

Product Description
Circular rooflights are used increasingly by architects to create visual impact in modern interior spaces. Brett Martin Circular Glass is a premium round rooflight specified for its distinct styling and is available in a range of sizes for mounting to builder's upstand or complete with pre-fabricated kerb.

This contemporary glazing unit gives a clean internal appearance, a minimal unobtrusive exterior and allows daylight to spread evenly through an interior space.

Design Features
- Modern and stylish circular flat glass rooflight design
- Elegant aluminium frame powder coated to RAL 7016
- U_r Value as low as 1.16 W/m^{2}K
- Safety of those below the rooflight assured thanks to a laminated inner pane
- Tested to be non-fragile to CWCT TN-67 for class 1 roofs and Class B non-fragile to ACR[M]001 when new and fully installed to Brett Martin Daylight Systems installation guides
- Available in a range of sizes, with 4 standard fixed sizes
- Suitable for mounting direct to a builder's upstand, or with robust insulated GRP kerb for new build and refurbishment applications



Composition
The double glazed glass panel is made up of: 6mm toughened outer, a 90% argon filled cavity, with a laminated inner (including PVB interlayer). All double glazed units include a soft coat Low E coating.

The frame is aluminium, with a powder coating (RAL 7016) to provide a premium appearance and highly appealing finish, and is thermally isolated to provide excellent thermal performance. The Glass and aluminium can be recycled at the end of useful product life.

Durability
Brett Martin Circular Glass units are expected to remain fit for purpose in normal industrial conditions for a period of 20 years (with a warranty availble providing a 10 year guarantee), i.e. they will not become perforated, lose significant structural integrity or distort to the extent of losing weather-tightness. Insulated glass used in the construction of the rooflight is guaranteed for 5 years.

Brett Martin Daylight Systems operates a policy of continuous product improvement, and reserves the right to alter specifications at any time without notice. Every effort has been taken to ensure all details contained in this document are correct at the time of going to press but this document should be used only as a guide and does not in any way form part of a contract or warranty. It is the customer's responsibility to ensure that the product is suitable for the actual conditions of use, which are beyond the control of Brett Martin Daylight Systems.

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Safety Requirements and CDM
Brett Martin Circular Glass achieves CWCT TN-67 non-fragility for class 1 roofs and ACR[M]001 class B non-fragility when new and fully installed in accordance with Brett Martin Daylight Systems' installation guides. Foot traffic on rooflights should always be avoided; impacts such as foot traffic or a falling person may cause damage which could necessitate rooflight replacement. All glass panels are BS EN12150, BS 14449 and BS 1279 compliant.

Security
All fixed Brett Martin Circular Glass units are fitted to a structural, insulated builders upstand or GRP kerb using fixings concealed using colour-matched cover caps.

Fire Ratings
Building Regulations Approved Document B: Fire Safety (volume 1 for dwellings and volume 2 for buildings other than dwellings) sets out the fire safety rules for buildings, which can be met by achieving specific European Class reaction to fire ratings to the relevant standard EN 13501-1.

Section B2 (volumes 1 and 2) concerns internal fire spread and defines the classification of linings dependent on building type and size:

	Volume 1 - dwellings (see paragraph 4.1 & table 4.1)	**Volume 2 - non dwellings** (see paragraph 6.1 & table 6.1)
Classification	**Location**	**Location**
D-s3,d2	Small rooms max floor area 4m² Garages (as part of dwelling) max floor area 40m²	Small room in non-residential accomodation max 30m²
C-s3,d2	Other rooms (including garages) Circulation spaces within a dwelling	Other rooms (including garages)
B-s3,d2	Other circulation spaces (including the common areas of blocks of flats)	Other circulation spaces

Section B4 (volumes 1 and 2) concerns external fire spread and defines limitations on the roof coverings. Coverings with a designation of $B_{ROOF}(t4)$ can be used at any distance from a relevant boundary. It also states that when used in rooflights, unwired glass a minimum of 4mm thick can be regarded as having a $B_{ROOF}(t4)$ classification (see: volume 1 – paragraph 12.8; volume 2 – paragraph 14.8)

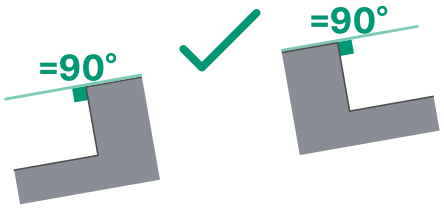
Glass is designated Class A to EN13501 part 1, as it is included in the list of CWFT (classified without further test) materials published in the Official Journal of the EU (see European Commission Decision 96/603/EC).

Brett Martin Circular Glass rooflights can therefore be regarded as Class A (CWFT) to EN13501-1. All Brett Martin Circular Glass units are glazed with a 6mm toughened outer pane and therefore can also be regarded as having the $B_{ROOF}(t4)$ classification defined in section B4

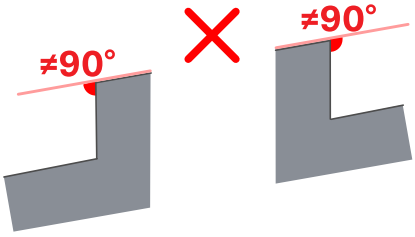
Roof Applications
Brett Martin Circular Glass units are suitable for flat roof applications with a pitch of 2°-15°.

A minimum pitch of 2° is required to prevent water ponding on the glass leading to rapid dirt build up.

If a roof is less than the minimum recommended pitch, the builder's upstand must be built with a slope to ensure that the installed pitch of the rooflight is the minimum recommended pitch or greater.



Builder's upstands for BMCG must be built with the flat top of the upstand perpendicular to the sides.



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Available Sizes

- Available in a range of sizes from 600mmø to 1500mmø
- 4 stocked sizes available*
- Bespoke sizes also available

Rooflight size (mm ø)	Daylight size (mm ø)
***600**	450
750	600
***900**	750
1050	850
***1200**	1050
1350	1200
***1500**	1350

Kerb and Fixing Options

Glazed unit only
Simply screw fixes to existing builder's upstand

Insulated GRP Kerb
Provides 150mm roof membrane termination height

Glazing

- Glazed with Low-E insulated double glazed glass unit of 31.5mm thickness
- 6mm toughened outer, 90% Argon filled cavity, 7.5mm laminated soft coat Low E inner with 1.5mm PVB interlayer
- Centre pane U value* of 1.1W/m²K

*Centre pane U-value is a measure of the thermal efficiency of the glazing type

Glazing Performance
Brett Martin Circular Glass comes with a 7.5mm laminate inner as standard. Other glazing options are available on request. If non-standard glass is used, glazing performance may differ from the table shown.

Overall Glazing Performance			
Light		**Solar Energy**	
Transmission	79%	**G-Value**	0.61
Reflection	12%	**Shading coefficient**	0.71

Thermal Performance
Thermal transmittance of rooflights is assessed in the horizontal plane for compliance with Part L of building regulations.

There is currently no method set out for assessing the thermal performance of flat glass rooflights, so the method shown in NARM NTD2 has been adopted as the most appropriate. Thermal transmittance is defined as a U_{rc} value for a rooflight with a GRP kerb and a U_r value for a rooflight fitted to a builders upstand. All variants of Brett Martin Circular Glass have a better thermal transmittance than the limiting value in Part L of 2.2 W/m²K. The thermal transmittance values (assessed horizontally) are shown below. For U_d values calculated in the vertical plane please contact Brett Martin Daylight Systems.

Rooflight Variant		Size range	Surface:area ratio	U_r / U_{rc} value W/(m².K)
Fixed Rooflight on Builders Upstand	(U_r)	ø600	2.12	1.48
		ø1500	1.23	1.64
Rooflight with standard 150mm GRP Kerb	($U_{rc\ 150}$)	ø600	2.09	1.16
		ø1500	1.45	1.39

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Acoustic Performance
Brett Martin Circular Glass units achieve a direct airborne sound insulation value of 38db (Rw).

Wind and Snow Loads
Brett Martin Circular Glass has been tested to show that, when correctly fitted in accordance with our instructions, will resist wind loads calculated in accordance with BS EN 1991-1-4: 2005, and imposed loads in accordance with BS EN 1873: 2005.

Resistance to Snow and Wind Loads (Figures in excess of)	
Snow Load (N.m²)	1200
Wind Load (N.m²)	1800

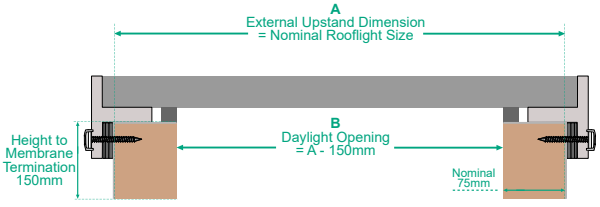
Thermal Fractures
Brett Martin Circular Glass rooflights are manufactured using double glazing which includes an inner pane of annealed, laminated safety glass, which is essential for ensuring the safety of those above the rooflight through non-fragility, and those below the rooflight through the prevention falling glass from accidental breakage.

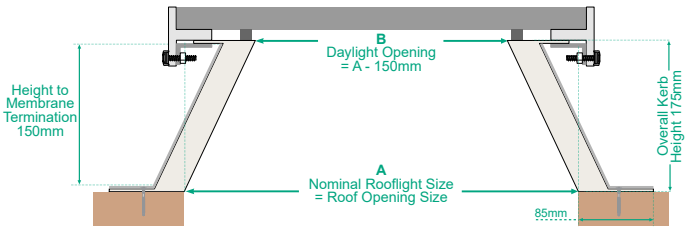
In some circumstances, annealed, laminated safety glass can be subject to thermal stress fracture in the event of uneven heat build-up directly under the glass. Installation of blinds, or any other alterations made to the lightwell below the rooflight, must be done so with consideration to the risk of thermal stress fracture. In the case of blinds, the risk of thermal stress fracture can never be fully removed, but it can be reduced by choosing light coloured blinds, positioning them as far away from the glass as possible, and adding ventilation to the rooflight specification.

More detailed guidance can be obtained upon request - please contact the technical department.

Product Dimensions
Brett Martin Circular Glass offers differing kerb options depending on project specification. When the rooflight is to be fitted to an existing upstand, the rooflight can be fitted directly. Where no upstand exists, Brett Martin Circular Glass can be supplied with 150mm GRP kerb (for mounting at roof surface level).

Product Overall Height & Weight			
Rooflight Variant	**Nominal Size**	**Height (mm)**	**Weight (kg)**
Unvented, Fixed Rooflight on Structural, Insulated Builder's Upstand	600 ø 1500 ø	82	17 87
Rooflight With 150mm Kerb	600 ø 1500 ø	259	22 99





Installation, Handling, Maintenance & Storage
Full installation details, maintenance and product care details, can be found in the relevant Technical Bulletins.

Technical Bulletins	
Code	**Description**
TB209	Datasheet Glass Product Care
TB425	Installation Brett Martin Circular Glass

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