

Standard Flat Glass Rooflight Datasheet

July 2021

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PRODUCT DESCRIPTION

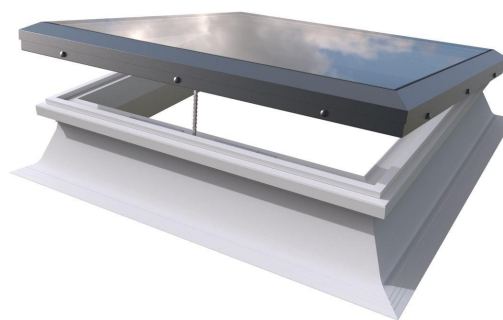
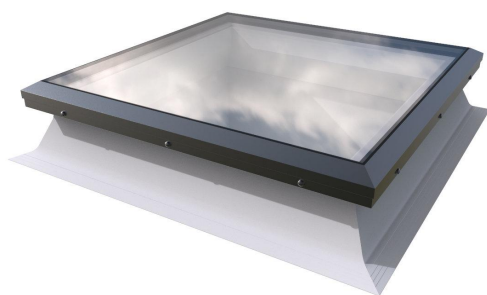
Individual glass rooflights intended for installation on flat roofs of all modern building types to provide natural light (and ventilation where specified). Rooflights are manufactured to ISO 9001 industry standards.

APPEARANCE

Sleek and contemporary design with a slimline powder coated frame and flush fitting glass panel.

DESIGN FEATURES

- Premium rooflight offering a robust build as well as protection against intrusion or vandalism.
- Components of powered opening rooflights (230V) are completely concealed for an unobstructed light well.
- For ease of installation, the tapered kerb foot does not require timber fillets and an integral clamp holds the roofing membrane in place and provides a clean external finish for all roofing types.
- Powder coated aluminium frame as standard (RAL 7016).
- Centre pane U-value of 1.1 W/m²K.
- Laminated inner pane for safety of anyone beneath the rooflight.
- Fragile (non-fragile options available)



PRODUCT OPTIONS SUMMARY (See page 2 onwards for details)

Hinged Opening

- Manual opening
- Powered with wall-switch (chain actuator)
- Optional Remote Controlled Operation
- Optional Rain Sensor Operation

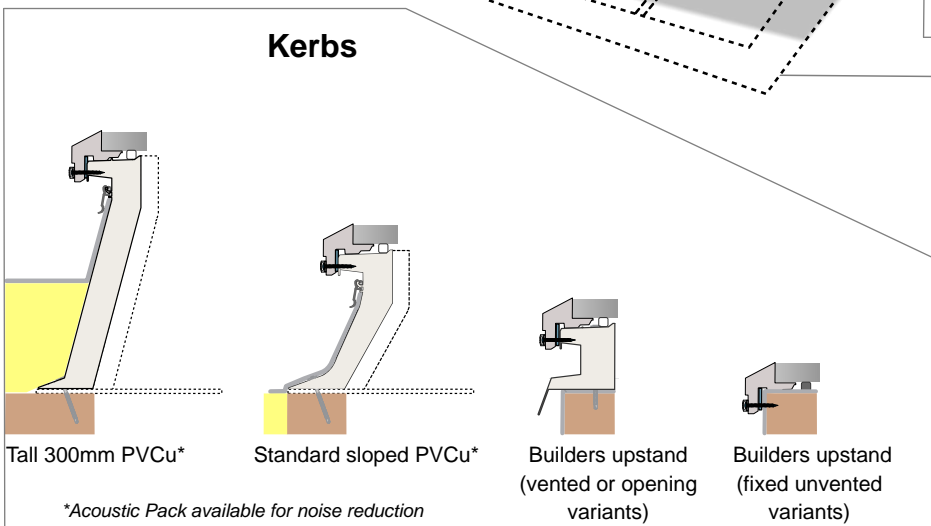
Optional Ventilation

- Manual Hit-and-Miss
- Automatic Humidity Controlled

Glazing Type

- Flat glass :
 - 6mm toughened outer, 90% Argon filled cavity, 6.4mm laminated soft coat Low E inner (NB - for very large sizes inner pane increases to 8.8,9.5 or 11.5mm)
 - Glass panel is P4A secure

Kerbs



Size (roof opening)

Standard range:
see Table 1 on Page 2
In square and rectangular combinations.

Optional Security Grille

*Acoustic Pack available for noise reduction

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COMPOSITION

The double glazed glass panel is made up of: 6mm toughened outer, a 90% argon filled cavity, with a 6.4mm laminated soft coat Low E inner. For larger sizes the inner pane thickness is increased to 8.8mm, 9.5mm or 11.5mm.

The frame is extruded 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 kerbs are manufactured from Lead & Cadmium free un-plasticised PVC rigid multi-wall extruded profile, with internal white finish. The Glass, PVC-U and Aluminium which comprise the product can be recycled at the end of useful product life.

DURABILITY

Expected to remain fit for purpose in normal industrial conditions for a period of 20 years, i.e. they will not become perforated, lose significant structural integrity or distort to the extent of losing weather-tightness. Electrical actuators (where present), have a design life of at least 10,000 cycles.

SAFETY

These rooflights incorporate a laminated inner pane for the safety of anyone beneath the rooflight, minimising risk of glass falling into the space below if either glass pane should break, in accordance with industry recommendations. These rooflights are fragile (as defined by CWCT and ACR): they are not suitable for foot traffic and may not resist a person falling onto them; suitable precautions should be taken (by others, following a risk assessment) to ensure the safety of anyone accessing the roof area where the product is installed. Alternative specifications which are non-fragile for use on Class 2 roofs are available on request. All glass panels are BS EN12150, BS 14449 and BS 1279 compliant.

FIRE RATING

Building Regulations Approved Document B (2019 edition, amended 2020) sets out the rules for fire safety of buildings, which can be met by achieving specific fire ratings to European (BS EN 13501) test standards.

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). Flat Glass Rooflights are deemed to achieve Class B_{ROOF}(t4) to EN13501 part 5 by Approved Document B of the Building Regulations (see Approved document B1 paragraph 12.8 and Approved Document B2 paragraph 14.8).

These classification mean there is no restriction on where Flat Glass rooflights can be used on roofs of buildings in England.

AVAILABLE OPTIONS

Table 1 - Sizes of Rooflights

<i>Bold, black text indicates unit size, Italic grey text indicates daylight area (mm)</i>											
Note: Custom sizes are available on request. Please contact the supplier to discuss requirements.											
Standard minimum rooflight pitch of 2°										Minimum pitch of highlighted units is 4°	
Standard sizes											
600 x 600	<i>450 x 450</i>	750 x 750	<i>600 x 600</i>	900 x 900	<i>750 x 750</i>	1000 x 1000	<i>850 x 850</i>	1200 x 1200	<i>1050 x 1050</i>	1500 x 1000	<i>1350 x 850</i>
900 x 600	<i>750 x 450</i>	1200 x 600	<i>1050 x 450</i>	1200 x 900	<i>1050 x 750</i>						
Non-standard sizes											
750 x 600	<i>600 x 450</i>	1500 x 1050	<i>1350 x 900</i>	1800 x 1350	<i>1650 x 1200</i>	2100 x 1050	<i>1950 x 900</i>	2550 x 1350	<i>2400 x 1200</i>	3000 x 1650	<i>2850 x 1500</i>
900 x 750	<i>750 x 600</i>	1500 x 1200	<i>1350 x 1050</i>	1800 x 1500	<i>1650 x 1350</i>	2100 x 1200	<i>1950 x 1050</i>	2550 x 1500	<i>2400 x 1350</i>	3150 x 1050	<i>3000 x 900</i>
1050 x 600	<i>900 x 450</i>	1500 x 1350	<i>1350 x 1200</i>	1800 x 1650	<i>1650 x 1500</i>	2100 x 1350	<i>1950 x 1200</i>	2550 x 1650	<i>2400 x 1500</i>	3150 x 1200	<i>3000 x 1050</i>
1050 x 750	<i>900 x 600</i>	1500 x 1500	<i>1350 x 1350</i>	1800 x 1800	<i>1650 x 1650</i>	2100 x 1500	<i>1950 x 1350</i>	2700 x 1050	<i>2550 x 900</i>	3150 x 1350	<i>3000 x 1200</i>
1050 x 900	<i>900 x 750</i>	1650 x 600	<i>1500 x 450</i>	1950 x 750	<i>1800 x 600</i>	2100 x 1650	<i>1950 x 1500</i>	2700 x 1200	<i>2550 x 1050</i>	3150 x 1500	<i>3000 x 1350</i>
1050 x 1050	<i>900 x 900</i>	1650 x 750	<i>1500 x 600</i>	1950 x 900	<i>1800 x 750</i>	2250 x 1050	<i>2100 x 900</i>	2700 x 1350	<i>2550 x 1200</i>	3150 x 1650	<i>3000 x 1500</i>
1200 x 750	<i>1050 x 600</i>	1650 x 900	<i>1500 x 750</i>	1950 x 1050	<i>1800 x 900</i>	2250 x 1200	<i>2100 x 1050</i>	2700 x 1500	<i>2550 x 1350</i>	3300 x 1200	<i>3150 x 1050</i>
1200 x 1050	<i>1050 x 900</i>	1650 x 1050	<i>1500 x 900</i>	1950 x 1200	<i>1800 x 1050</i>	2250 x 1350	<i>2100 x 1200</i>	2700 x 1650	<i>2550 x 1500</i>	3300 x 1350	<i>3150 x 1200</i>
1350 x 600	<i>1200 x 450</i>	1650 x 1200	<i>1500 x 1050</i>	1950 x 1350	<i>1800 x 1200</i>	2250 x 1500	<i>2100 x 1350</i>	2850 x 1050	<i>2700 x 900</i>	3300 x 1500	<i>3150 x 1350</i>
1350 x 750	<i>1200 x 600</i>	1650 x 1350	<i>1500 x 1200</i>	1950 x 1500	<i>1800 x 1350</i>	2250 x 1650	<i>2100 x 1500</i>	2850 x 1200	<i>2700 x 1050</i>	3300 x 1650	<i>3150 x 1500</i>
1350 x 900	<i>1200 x 750</i>	1650 x 1500	<i>1500 x 1350</i>	1950 x 1650	<i>1800 x 1500</i>	2400 x 1050	<i>2250 x 900</i>	2850 x 1350	<i>2700 x 1200</i>	3450 x 1200	<i>3300 x 1050</i>
1350 x 1050	<i>1200 x 900</i>	1650 x 1650	<i>1500 x 1500</i>	1950 x 1800	<i>1800 x 1650</i>	2400 x 1200	<i>2250 x 1050</i>	2850 x 1500	<i>2700 x 1350</i>	3450 x 1350	<i>3300 x 1200</i>
1350 x 1200	<i>1200 x 1050</i>	1800 x 600	<i>1650 x 450</i>	1950 x 1950	<i>1800 x 1800</i>	2400 x 1350	<i>2250 x 1200</i>	2850 x 1650	<i>2700 x 1500</i>	3450 x 1500	<i>3300 x 1350</i>
1350 x 1350	<i>1200 x 1200</i>	1800 x 750	<i>1650 x 600</i>	2000 x 1000	<i>1850 x 850</i>	2400 x 1500	<i>2250 x 1350</i>	3000 x 1050	<i>2850 x 900</i>	3450 x 1650	<i>3300 x 1500</i>
1500 x 600	<i>1350 x 450</i>	1800 x 900	<i>1650 x 750</i>	2000 x 1500	<i>1850 x 1350</i>	2400 x 1650	<i>2250 x 1500</i>	3000 x 1200	<i>2850 x 1050</i>	3600 x 1500	<i>3450 x 1350</i>
1500 x 750	<i>1350 x 600</i>	1800 x 1050	<i>1650 x 900</i>	2000 x 2000	<i>1850 x 1850</i>	2550 x 1050	<i>2400 x 900</i>	3000 x 1350	<i>2850 x 1200</i>	3600 x 1650	<i>3450 x 1350</i>
1500 x 900	<i>1350 x 750</i>	1800 x 1200	<i>1650 x 1050</i>	2100 x 900	<i>1950 x 750</i>	2550 x 1200	<i>2400 x 1050</i>	3000 x 1500	<i>2850 x 1350</i>		

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SECURITY

All fixed units are fitted to a builders upstand or a PVC kerb using self-drilling fixings. All fixing heads are concealed using colour-matched cover caps. Optional security grilles are designed to fit beneath the foot of the kerb to provide additional security where required.

SIZE RESTRICTIONS

Please note that restrictions apply due to size, wind loadings and weight. For fixed units with a PVC kerb, the maximum size is 2000mm x 2000mm (square) and 2850mm x 1650mm (rectangle). For powered opening rooflights, size is normally restricted to a maximum of 1200mm x 1200mm (square) and 1500mm x 1000mm (rectangle). Size of the largest manual opening rooflight is restricted to 1200mm x 1200mm.

OPENERS

Units can also be opened on concealed hinges using actuators to create a large ventilation area. Opening rooflights can contribute to room ventilation as required by approved document F of the English Building Regulations.

**Table 2
Opening Options**

Opening Type	Description	Geometric Ventilation Area	
		Min	Max
Manual Opening (MLD)	Hinged opening rooflight which is operated manually via a worm gear drive with an extension pole	0.300 m ²	0.683 m ²
Powered Opening (PCD/PCR)	Powered hinged opening rooflight with completely concealed operating mechanism. Opened and closed using a control switch or remote control	0.211 m ²	0.725 m ²
Sensor Controlled Powered Opening (PCS)	Powered hinged opening rooflight which includes rain sensors for automatic operation	0.211 m ²	0.725 m ²

SECURITY GRILLE

Designed to fit beneath the foot of the kerb to provide additional security where required. It is powder coated in a white finish, and available in all sizes where a PVC kerb is an option.

GLAZING OPTIONS & TRANSMISSION VALUES

The glazing used achieves the following values:

Table 3

Light		Solar Energy	
Transmission	79%	G-value	0.61
Reflection	12%	Shading Coefficient	0.71

ACOUSTIC PERFORMANCE:

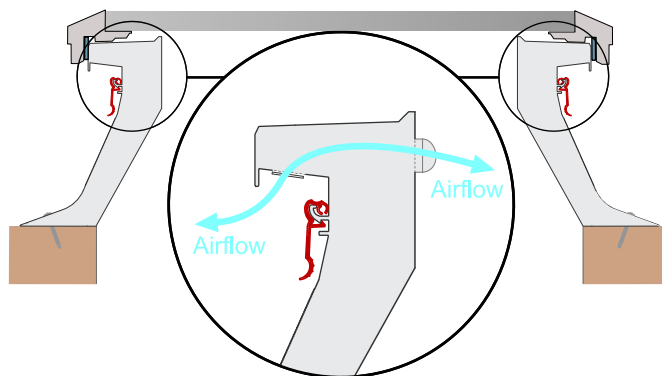
Units achieve a direct airborne sound insulation value of 37db (Rw). This value can be improved further by the fitting of a kerb acoustic pack. The acoustic pack is not available with vented or opening options.

ROOF APPLICATIONS

Units are suitable for flat roof applications with a pitch of 2°-15°. 2° is typical for a 'flat roof'. If a roof is less than 2°, packers (not supplied) will need to be placed under the kerb of the unit or on the top of a builders upstand to raise to the minimum 2°. This is to prevent water ponding on the glass leading to rapid dirt build up. A minimum of 4° pitch is required for sizes where both the length and width are larger than 1650mm.

VENTILATION

Ventilation can help reduce humidity, and reduce risk of condensation and should be considered in any areas of high humidity. Flat glass rooflights may be unvented or can incorporate vents. These can either be hit-and-miss manually controlled trickle vents or automatic humidity controlled vents and are available in all sizes where a PVC kerb is an option.



**Table 4
Ventilation Options**

Ventilation Type	Description	Rating
Trickle Ventilation (Hit-and-Miss)	Manually operated trickle ventilation provides background ventilation to the interior	Provides 8400mm ² Equivalent Area Ventilation
Automatic Humidity Controlled Trickle Ventilation	Humidity controlled trickle ventilation is sensor controlled to open and close in response to room humidity levels	Provides 7822mm ² Equivalent Area Ventilation and provides superior protection against condensation

THERMAL PERFORMANCE

Standard flat glass units achieve a Ud-value (defined in accordance with NARM NTD02 of 1.16 to 1.66 W/m²K and a centre pane U-Value of 1.1 W/m²K which exceeds requirements of Part L building Regulations

**Table 5
Standard Flat Glass Rooflight Thermal Efficiency**

	Size	Centre Pane U-Value (W/m ² K)	U _f -Value (W/m ² K)
Rooflight fixed to Builder's Upstand	600 x 600	1.1	1.66
	3600 x 1650	1.1	1.24
Rooflight With Sloped Kerb	600 x 600	1.1	1.29
	2850 x 1650	1.1	1.20

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GENERAL PRODUCT DIMENSIONS

Differing kerb options available depending on project specification. When the rooflight is to be fitted to an existing upstand, fixed unventilated rooflights can be fitted directly, and opening or ventilated options are supplied complete with an adapter kerb.

Where no upstand exists, units can be supplied with 150mm PVC kerb (for mounting at roof surface level) or 300mm PVC kerb (for mounting below insulation).

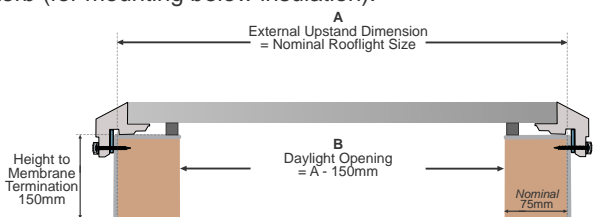


Figure 1: Fixed & Unventilated option directly fixed to builders upstand

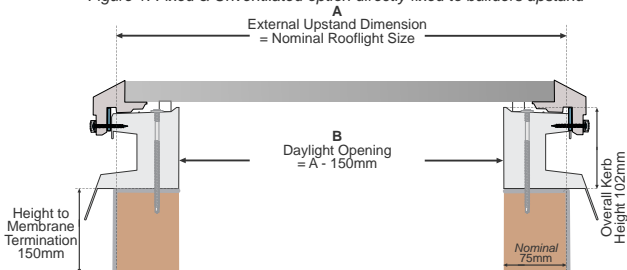


Figure 2: opening / ventilated rooflight on builders upstand

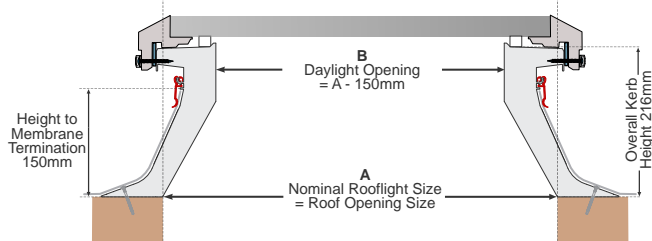


Figure 3: Rooflight with 150mm PVC kerb

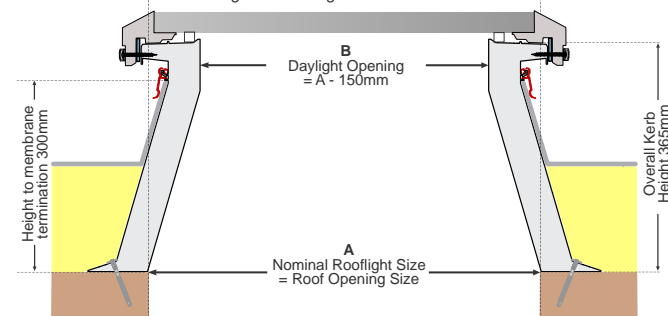


Figure 4: Rooflight with 300mm PVC kerb

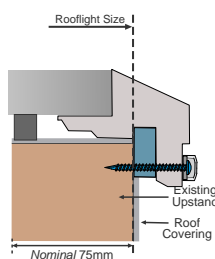


Figure 5: rooflight with builders upstand detail

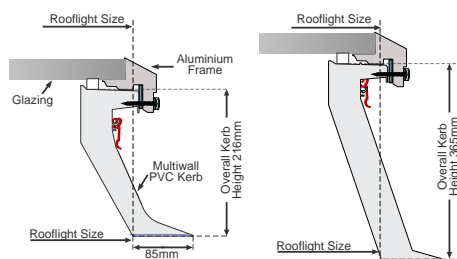


Figure 6: rooflight with 150mm PVC kerb detail

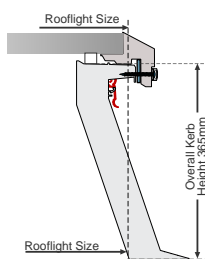


Figure 7: rooflight with 300mm PVC kerb detail

WIND AND SNOW LOAD

Units have been tested to show that, when correctly fitted in accordance with our instructions, they will resist wind loads calculated in accordance with BS EN 1991-1-4: 2005, and imposed loads in accordance with BS EN 1873: 2005 as shown in Table 6.

Table 6

Resistance to Snow and Wind Loads (figures in excess of)

Snow Load (N.m ²)	Wind Load (N.m ²)
1200	2400

Table 7

Product Overall Height & Weight

	Nominal Dome Size (mm)	Builders upstand H(mm) W*(Kg)	Sloped Kerb H(mm) W*(Kg)	300mm Kerb H(mm) W*(Kg)
Fixed unvented standard flat glass rooflight*	Min 600 x 600	82 18	259 25	407 28
	Max 3600 x 1650	82 264	259 -	407 -
Opening standard flat glass rooflight* (when closed)	Min 600 x 600	185 25	259 28	407 30
	Max 2400 x 1500	185 179	259 188	407 195

*Contact supplier for weights of unit sizes not listed above
#Product weights given above exclude packaging weights

INSTALLATION, HANDLING, MAINTENANCE & STORAGE

Full installation details, maintenance and product care details, can be found in the relevant Technical Bulletins.

Table 8

Technical Bulletins

Technical Bulletin	Technical Bulletin Description
TB400	Installation Standard Flat Glass Rooflight Fixed
TB401	Installation Standard Flat Glass Rooflight Powered Opening
TB402	Installation Standard Flat Glass Rooflight Manual Opening

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