Flat Glass Access Hatch

TB442

Skyseal Fixed Flat Glass Access Hatch Datasheet

Product Description

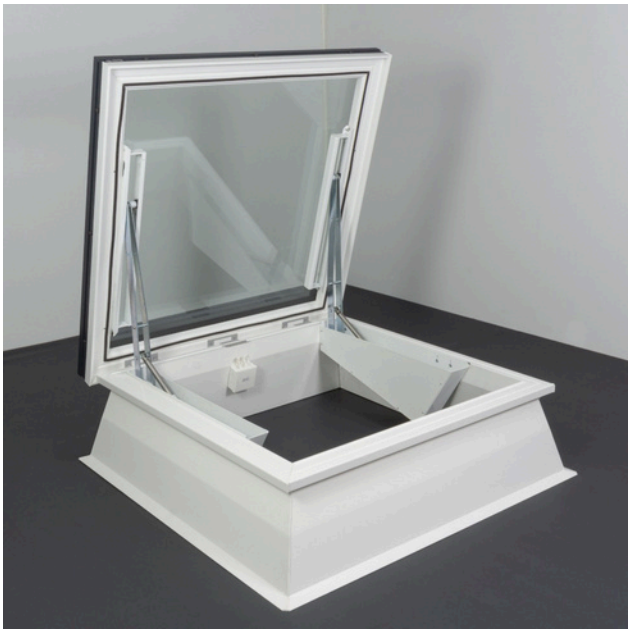
Skyseal's Flat Glass Access Hatch Rooflights are individual access hatch glass rooflights intended for installation on flat roofs of all modern building types to provide access to roofs and natural light. Skyseal Flat Glass rooflights are manufactured to ISO 9001 industry standards.

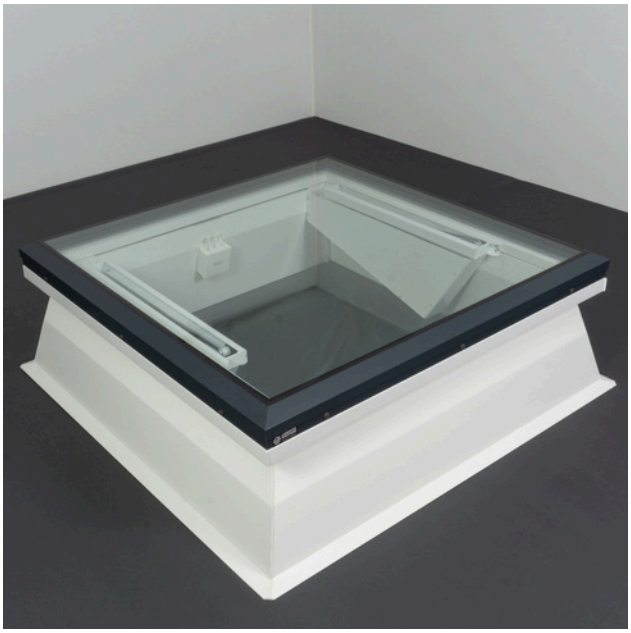
LAMINATED INNER PANE
ENDORSED BY THE ROOFLIGHT ASSOCIATION

Skyseal Flat Glass exhibits a sleek and contemporary design with a slimline powder coated frame and flush fitting glass panel.

Design Features

- 24V actuator opens to 77° or 93° depending on size
- Optional 230V AC to 24V DC transformer with rocker switch
- Optional wind and rain sensor
- Powder coated aluminium frame as standard (RAL 7016).
- U value to as low as 1.72 W/m^{2}K
- Tested to be non-fragile to CWCT TN-67 (for class 1 roofs)* and Class B non-fragile to ACR[M]001**.
- 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.





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). The inner pane thickness varies with rooflight size, see table on page 2. All double glazed units include a soft coat Low E coating.

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.

*Class 2 for large size rooflights, see table on page 2.
**When new and fully installed to Skyseal installation guides

Skyseal Brighter Inside

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TECHNICAL SUPPORT: For any technical information/queries please contact your supplier.

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Durability

Skyseal Flat Glass units are expected to remain fit for purpose in normal industrial conditions for a period of 20 years (with a warranty available 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. The available warranty also guarantees:

- Electrical actuators, for a period of 1 year (actuators have a design life of at least 10,000 cycles).
- Insulated glass used in the construction of the rooflight for 5 years.

Safety Requirements and CDM

Skyseal Flat 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 Skyseal's 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.

*Class 2 for large size rooflights, see table below.

All units are supplied with key operated isolator switch to provide a secure means of preventing operation while in use for access.

Security

All Skyseal Flat Glass Access Hatch units have a glazed top that is secured to the opening frame by self-drilling security screws, and which are themselves concealed by colour matched cover caps.The opening frame is mounted on concealed hinges, and operated by actuators with a locking force of 4kN which can only be operated from inside.

Fire Performance

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).

These rooflights are glazed with a 6mm toughened outer pane and can therefore be regarded as having a $B_{ROOF}(t4)$ classification as per building regulations.

Roof Applications

Flat Glass units are suitable for mounting at pitches of 2°-15°.

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

Available Sizes and Weights

Size (mm)	Opening Aperture (mm)	Opening Angle	Unit Weight (kg)	Packaging Weight (kg)
1000 x 1000	660 x 850	93°	97.2	45.3
1050 x 1050	710 x 900	93°	102.5	42.3
1200 x 1050	860 x 900	93°	110.6	45.7
1200 x 1200	860 x 1050	77°	119.6	45.1
1350 x 1050	1010 x 900	93°	118.7	47.7
1350 x 1200	1010 x 1050	77°	128.5	49.6
1350 x 1350	1010 x 1200	77°	138.3	49.3
1500 x 1000	1160 x 850	93°	123.2	45.3
1500 x 1050	1160 x 900	93°	126.8	49.6
1500 x 1200	1160 x 1050	93°	137.4	51.6
1500 x 1350	1160 x 1200	77°	148.1	53.5
1500 x 1500	1160 x 1350	77°	158.8	58.3

Size (mm)	Opening Aperture (mm)	Opening Angle	Unit Weight (kg)	Packaging Weight (kg)
1650 x 1050	1310 x 900	93°	134.8	51.6
1650 x 1200	1310 x 1050	77°	146.3	53.5
1650 x 1350	1310 x 1200	77°	157.9	55.5
1800 x 1050	1460 x 900	93°	142.9	57.9
1800 x 1200	1460 x 1050	77°	155.3	60.2
1800 x 1350	1460 x 1200	77°	167.7	62.6
1950 x 1050	1610 x 900	93°	151	59.8
2000 x 1000	1660 x 850	93°	149.1	60.6

Key		
Colour	Inner Pane Thickness	Non-fragile CWCT-67
	6.8, 7.5 or 9.5mm	Class 1 roofs
	9.5mm	Class 2 roofs

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Glazing Performance

Skyseal Flat Glass comes with a 6.8, 7.5mm or 9.5mm 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	77% - 79%	**G-Value**	0.56 - 0.59
Reflection	12%	**Shading coefficient**	0.64 - 0.68

Thermal Performance (England, Scotland and Wales)

There is currently no method set out for assessing the thermal performance of flat glass rooflights, so the method shown in Rooflight Association (formerly NARM) NTD2 has been adopted as the most appropriate. Thermal transmittance is defined as a U_{rc} value for a rooflight with a PVC kerb and a U_r value for a rooflight fitted to a builders upstand. The thermal transmittance values (assessed horizontally) are shown below.

Thermal Performance (England, Scotland and Wales)		
Size range	Surface:area ratio	U_r / U_{rc} value W/(m2.K)
1000 x 1000	2.65	1.73
2000 x 1000	2.23	1.72
1800 x 1350	2.07	1.72

*The overall thermal performance of rooflights is still referred to as a U_d-value in the building regulations, rather than U_r/U_{rc} value as per the calculation method. Values stated are therefore equivalent to a U_d-value assessed horizontally.

Thermal Performance (Republic of Ireland and Northern Ireland)

The thermal performance of Flat Glass is assessed in the vertical plane and declared as a U_d value of the glazing system. (The glazing used in Flat Glass achieves a centre pane U value of 1.1W/m²K)

Thermal Performance (Republic of Ireland, Northern Ireland)	
Size range	U_d value
1000 x 1000	1.22
2000 x 1000	1.21
1800 x 1350	1.20

Acoustic Performance

Skyseal Flat Glass units achieve a direct airborne sound insulation value of 38db (Rw).

Wind and Snow Loads

Skyseal Flat Glass Access Hatch has been tested to show that, when correctly fitted in accordance with our instructions and unit is closed, will resist wind loads calculated in accordance with BS EN 1991-1-4: 2005, and imposed loads in accordance with BS EN 1873: 2005.

Flat Glass Access Hatch is not designed to be operated with any snow built up on top surface.

Resistance to Snow and Wind Loads	
Snow Load (N/m²)	1200
Wind Load (N/m²)	1000

Annealed, Laminated Inner Pane

These Flat Glass rooflights are manufactured using double glazing which includes an inner pane of annealed, laminated safety glass, which prevents falling glass in the event of accidental breakage, for the safety of those below the rooflight. In addition, a laminated inner pane is essential for non-fragile rooflights.

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 including ventilation in the rooflight specification.

More detailed guidance can be obtained upon request.

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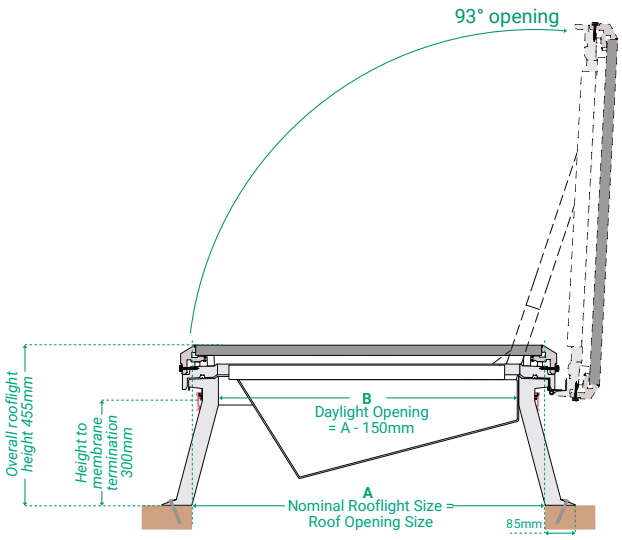
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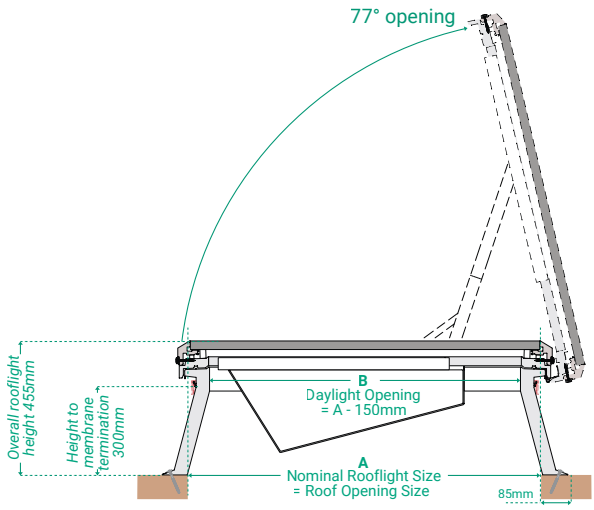
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Product Dimensions



Powered Access Hatch widths 1000 - 1199mm



Powered Access Hatch widths 1200 - 1500mm

Installation, Handling, Maintenance & Storage

Full installation details, maintenance and product care details are available on request.

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