VELUX®
Commercial

VELUX Commercial Dome Rooflights

Dome Rooflights for daylight and fresh air

Version 1.0

veluxcommercial.co.uk

Front cover: William Gilbert School, Belper

Above: Polycarbonate Dome Rooflights with opal glazing

Dome Rooflights for daylight and fresh air

As industry leaders in daylight solutions, VELUX Commercial is home to the widest and most innovative range of domes, rooflights and structural glass systems available to the commercial sector.

Our versatile and customisable Dome Rooflights are a perfect fit in commercial settings — from offices, schools and hospitals to transport hubs, shopping centres and industrial buildings. They are easy to install, aesthetically pleasing and can incorporate features such as fresh air ventilation and roof access. For smoke ventilation, automatic opening vents (AOVs) can also be specified.

Dome Rooflights are provided in polycarbonate, with flat glass and hybrid glazing options, which combine the benefits of polycarbonate and glass, also available. Shape options include dome, flat, pyramid, trapezoid, hexagonal and circular and specifiers can choose from a variety of glazing colours and different kerb constructions.

The flexibility of our Dome Rooflights means they can be configured to meet the design requirements of any new build or refurbishment project. They are suitable for flat roofs with pitches of up to 15° and compatible with all popular roofing membrane systems. Install individually for a single source of daylight and fresh air, or in multiples to create daylighting arrays that brighten up large interiors.

Dome Rooflights are thermally efficient with low U_d-values to meet the requirements of Building Regulations Part L. They also provide excellent fire performance and weather resistance. Products are BBA-certified and backed by our comprehensive end-to-end support and a 20-year guarantee.

Dome Rooflight
with opal polycarbonate glazing

Pyramid rooflight
with opal polycarbonate glazing

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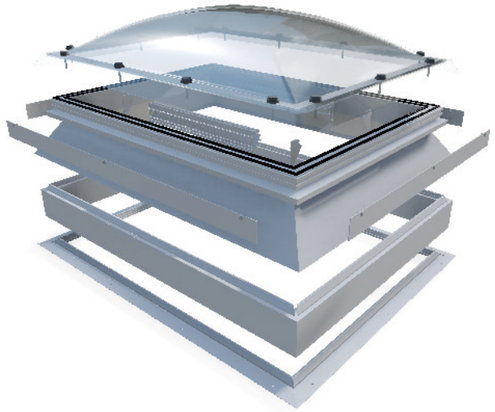
Options introduction

Dome Rooflights from VELUX Commercial are available in a wide range of dome materials, colours, shapes and sizes, with a choice of ventilation, access, enhanced security, kerbs and fixing options.

They are manufactured to order and customised to suit specific project requirements. Turnaround times are quick and the rooflights are delivered prefabricated for easy and efficient installation.

Materials and appearance



Polycarbonate Dome Rooflights
Polycarbonate is a thermoplastic that offers excellent weather resistance and strength. Lightweight, reliable and cost-effective, it offers excellent impact resistance and thermal performance, and is a popular choice for commercial buildings.

Polycarbonate Dome Rooflights are available in clear or diffused finishes; other colour options include opal and bronze.

As well as domes, polycarbonate rooflights can also be provided in shapes such as hexagonal and pyramid. Enhanced UV protection is included on all rooflights, prolonging the rooflight's lifespan and helping to keep harmful UV rays out of interiors.

Flat glass rooflights and hybrid systems
In addition to our polycarbonate Dome Rooflights, we can also provide flat glass rooflights and hybrid systems. All solutions can be customised to suit project requirements.

For more information or to discuss your project in detail, please contact VELUX Commercial.

Kerbs

Dome Rooflights can be fixed directly to the roof, or they can be used with an upstand for maximum weatherproofing. They are suitable for use with all standard roofing membrane systems on roofs with pitches of up to 15°.

PVCu kerbs feature an innovative interlocking and interchangeable design, enabling them to be raised or lowered to suit the depth of roof insulation. These are available with vertical or splayed kerbs. Other options include thermally broken aluminium and aluminium without thermal protection for unheated areas. Aluminium adapter kerbs are also available.

Dome Rooflights are typically supplied as complete units, but it is also possible to specify glazing only for fixing directly to a builders upstand.

Dome Rooflight kerb options:
- Splayed
- Vertical
- Adapter for builders upstand

Attachments to the roof:
- Flat board insulated roof
- Direct to roof deck
- Sleeve over existing kerb/upstand
- Plinth on existing builders kerb
- Builders upstand on existing sub-construction

Ventilation

As well as providing abundant amounts of daylight, Dome Rooflights can be used for comfort ventilation, improving the indoor environment for building occupants.

A choice of electric and manual controls is available. The ventilation systems can be permanent, manually operated, electrically operated or mechanically operated.

Dome Rooflight ventilation options:

- **Permanent vent**

- **Manual ventilation options**
  – Rota vent
  – Manual hinged vent
  – Hit and miss vent

- **Electrical ventilation options**
  – Electrical hinged vent
  – Vertical lift vent

- **Mechanical Ventilation options**
  – Power fan unit
  – A smaller fan mounted into the side wall of the kerb.

- **Automatic-opening Vent (AOV)**

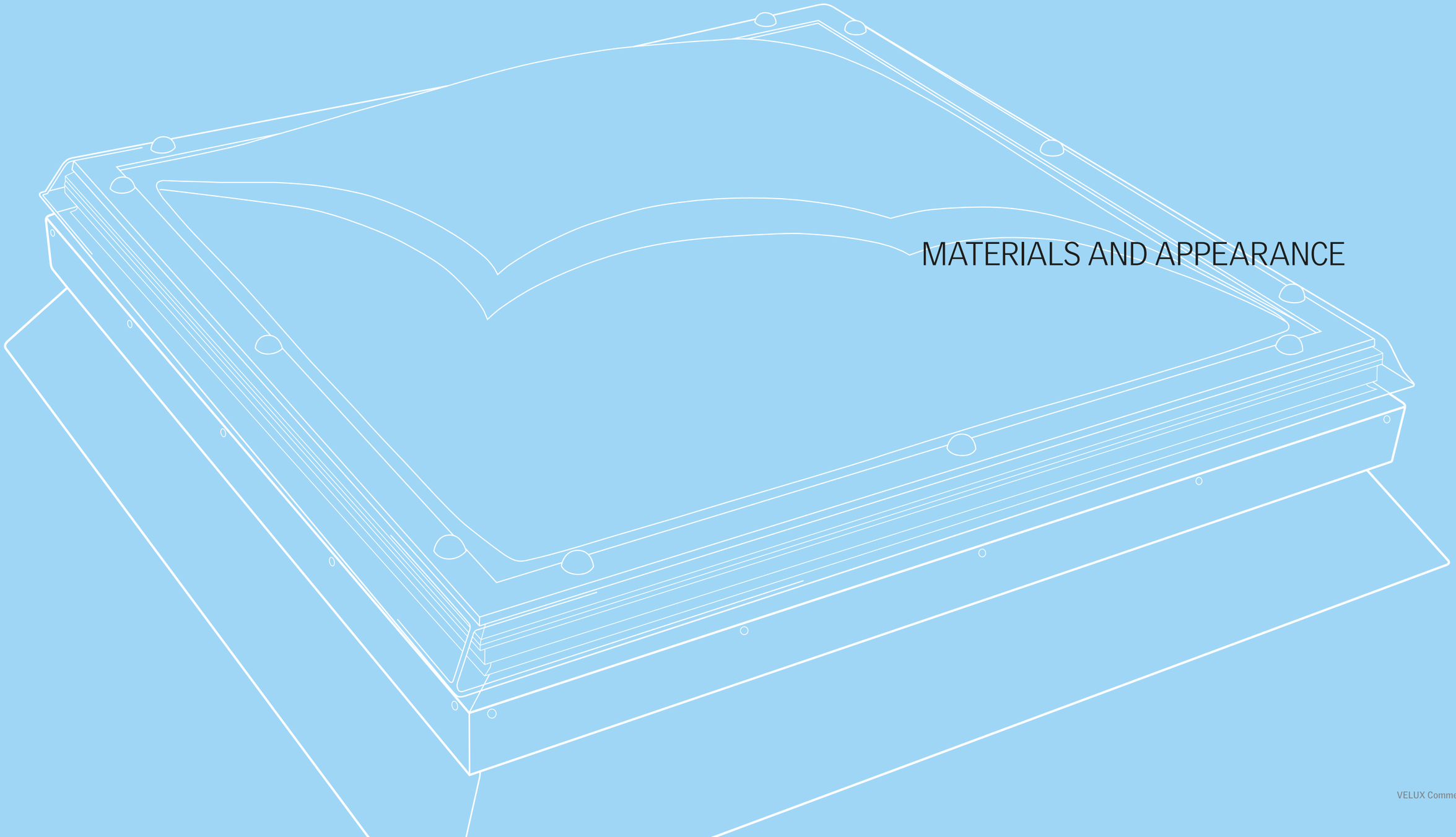
Access and security

Dome Rooflights can also be used to provide roof access, with a choice of enhanced security options to choose from.

- **Access hatches**
  Polycarbonate and glazed rooflights can all be designed to provide safe and reliable access to roof areas, so that essential works and maintenance can be carried out. They are also available with aluminium lids and fall protection systems.

- **Enhanced security options**
  Depending on site requirements, additional locking methods and security systems can be provided.

MATERIALS AND APPEARANCE

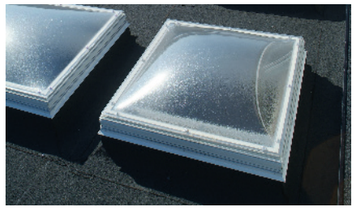


Materials and appearance

Polycarbonate Dome Rooflights

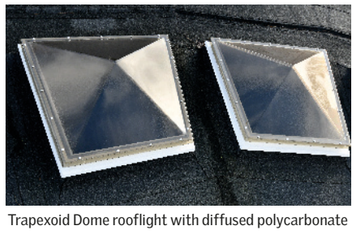
Lightweight, reliable and cost-effective, polycarbonate offers excellent impact resistance and thermal performance, and is a popular choice for commercial buildings.

Dome Rooflight



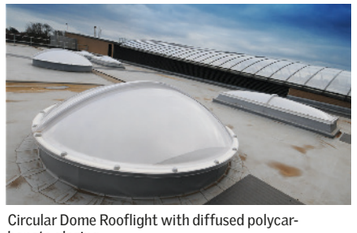
Dome Rooflight with diffused polycarbonate glazing

Dome Rooflight with opal polycarbonate glazing



Trapexoid Dome rooflight with diffused polycarbonate

Pyramid Rooflight with opal polycarbonate glazing

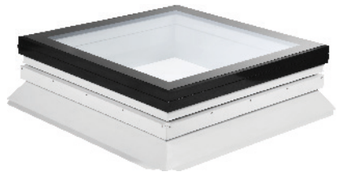


Circular Dome Rooflight with diffused polycarbonate glazing

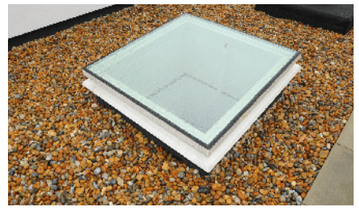
Dome Rooflight with security intruder grid

Flat glass rooflights and hybrid systems

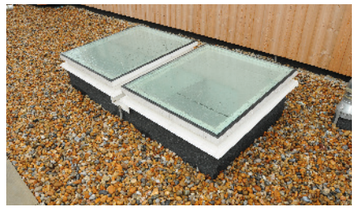
As well as our polycarbonate Dome Rooflights, we can also provide flat glass rooflights and hybrid systems. All solutions can be customised to suit project requirements.



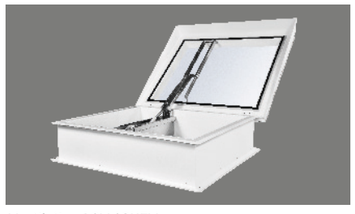
Flat glass rooflight



Flat glass rooflight

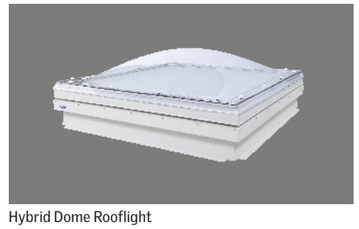


Dual rooflight with drainage gutter



Ventilation AOV / SHEV

Ridge dual rooflight with drainage gutter



Hybrid Dome Rooflight

Circular flat glass rooflight

Materials and appearance

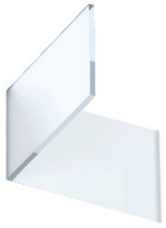
Glazing unit

Polycarbonate Dome Rooflights are usually supplied in clear or diffused finishes. Colour options include clear, diffused, opal and bronze.

Specifying Glazing only: If required, glazing-only options can be specified in polycarbonate or glass. Please contact VELUX Commercial for more information.

Appearance: Clear
Material: Glass

Appearance: Diffused
Material: Polycarbonate



Appearance: Opal
Material: Polycarbonate

Appearance: Bronze
Material: Polycarbonate

Appearance: Clear
Material: Polycarbonate

Kerb material – Finish, colours and design

PVCu kerbs feature an innovative interlocking and interchangeable design, enabling them to be raised or lowered to suit the depth of roof insulation. Other options include thermally broken aluminium and aluminium without thermal protection for unheated areas.

Appearance: White
Material: PVCu

PVCu standard colour:
Aluminium white 9910 gloss (powder coated)

Appearance: Grey
Material: Aluminium

Aluminium standard colour:
7016 satin grey

Appearance: White
Material: Aluminium

Aluminium standard colour:
9910 gloss white

Other colours are available on request.

Performance

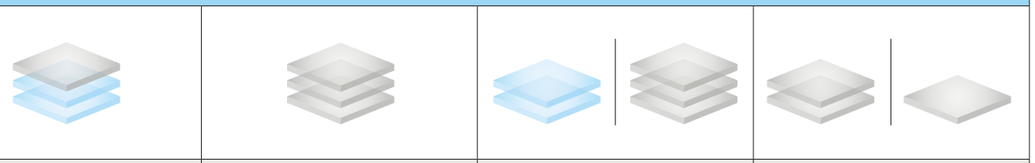
U_d-values and classifications

VELUX Commercial is committed to providing high-quality and attractive rooflights that also provide excellent fire performance characteristics, ensuring completed projects are compliant with relevant standards, legislation and industry recommendations.

Thermal efficiency – Dome Rooflights are designed to meet the requirements of Building Regulations Part L and can be provided with U_d-values as low as 1.2 W/m²K.

Safety – Our Dome Rooflights are classified as non-fragile and achieve a Class B rating to ACR [M] 001:2019. Flat glass rooflights are classified as non-fragile and CWCT Class 2 – tested to TN66/67

Fire performance – All Dome Rooflights have been tested to BS 476 Part 7 and achieved a Class 1 rating. They are also Tpa rated. When classified to EN 13501-1:2007 Dome Rooflights achieve a class B-s1, d0 and can be regarded as having a Broof (t4) classification.

Glazing / U_d-values – the four standards			
			
1.0 W/m²	1.6 W/m²	1.2-1.7 W/m²	3.6-5.4 W/m²
Glass x 2 + Polycarbonate x 1 PVCu kerb	Polycarbonate x 3 PVCu kerb	Glass x 2 or Polycarbonate x 3 Thermally broken aluminium kerb	Polycarbonate x 2 or Polycarbonate x 1 Aluminium kerb

Additional

Build your own U_d-value (Glazing by choice)

Performance

U_d-values for UK and ROI Building Regulations

Despite the complex array of building regulations that apply around the British Isles, those relating to energy saving and the reduction of carbon emissions are becoming more unified.

Primarily this is due to the need to conform to the European Directive on the Energy Performance of Buildings – 2010/31/EU.

		ENGLAND (PART L)				SCOTLAND (SECTION 6)					WALES (PART L)				NORTHERN IRELAND (TECHNICAL BOOKLETS)				REPUBLIC OF IRELAND (PART L)		
	MEMBER STATE (DOCUMENT)	**L1A** (2013 with 2016 amends)	**L1B** (2013 with 2016 amends & 2018 amends)	**L2A** (2013 with 2016 amends)	**L2B** (2010 with 2016 amends)	**DOMESTIC** (2019)			**NON-DOMESTIC** (2019)		**L1A**	**L1B**	**L2A**	**L2B**	**TECHNICAL BOOKLET F1** (2012)		**TECHNICAL BOOKLET F2** (2012)		**CONSERVATION OF FUEL AND ENERGY - DWELLINGS** (2019)		**CONSERVATION OF FUEL AND ENERGY – BUILDINGS OTHER THAN DWELLINGS** (2008)
	Construction Classification	New Build Dwelling	Existing Dwelling	New Build Non-Dwellings	Existing Non-Dwellings	New Build	Extensions – Column A	Extensions – Column B	New Buildings	Alterations and Extensions	New Build Dwelling	Existing Dwelling	New Build Non-Dwellings	Existing Non-Dwellings	New Build Dwelling	Existing Dwelling	New Build Non-Dwellings	Existing Non-Dwellings	Section 1 – New Dwellings	Section 2 - Existing Dwellings	Non-Dwellings (New Build, and Extension / Refurbishment)
Maximum Values	**Area weighted average U_d-value ($W/m^2/°K$) for all rooflights**	2.0	1.6	2.2	1.8	1.6	1.4	1.6	2.0	1.6	1.4/1.6	1.6 ****	1.8/2.2	1.8 ****	2.0	1.6	2.2	1.8	1.6 *****	1.6 ******	2.2
	Individual element U_d-value ($W/m^2/°K$)	–	–	–	–	3.3	3.3	3.3	3.3	3.3	–	–	–	–	3.3	–	3.3	–	3.0	3.0	–
	Air Permeability ($m^3/hr/m^2$ @ 50 Pa)	10	–	10	–	10	10	10	10	10***	10	–	10	–	10	–	10	–	1.3.4.4 *******	–	–
Notional Building	**Target U_d values for the "notional" building - $W/m^2/°K$**	1.4	–	1.8	–	1.4	–	–	1.8	1.8	–	–	–	–	–	–	–	–	–	–	2.2
	Air Permeability ($m^3/hr/m^2$ @ 50 Pa)	5	–	3/5/7 **	–	7	–	–	5	5	–	–	–	–	–	–	–	–	5	5	10

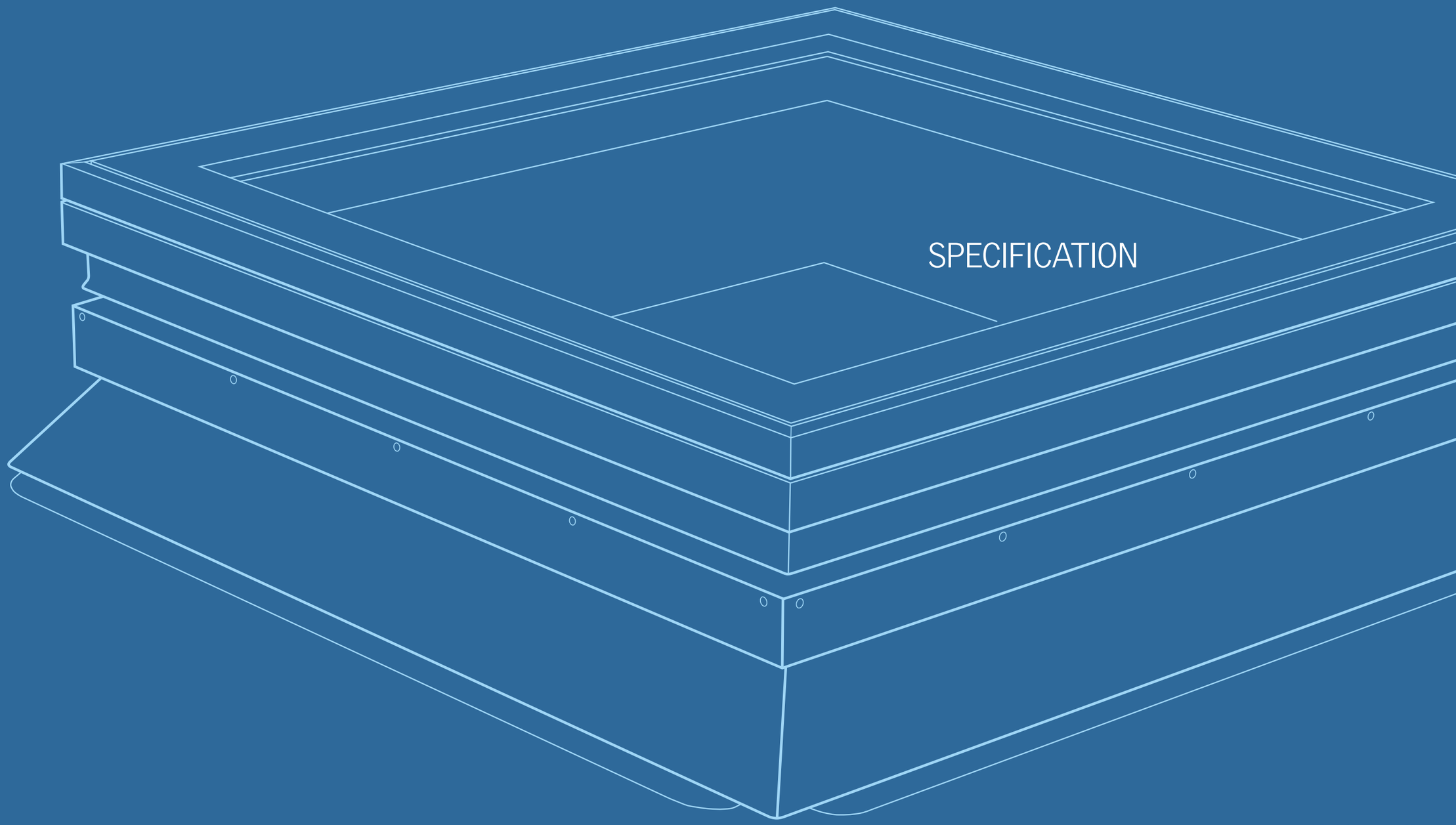
** Depending on gross volume of building
*** Shell buildings; 7
**** In areas of architectural or historic interest; a centre pane U-value of 1.2 is all that is required
***** for 25% of floor area (this permitted U-value can change depending on the amount of rooflights used – see table 2 of Part L – Dwellings)
****** for 25% of floor area (this permitted U-value can change depending on the amount of rooflights used – see table 6 of Part L – Dwellings)
******* Para 1.3.4.4 states a reasonable upper limit for air permeability of $7m^3/hr/m^2$ @ 50Pa.
Values of less than 5 are recommended for dwellings with mechanical ventilation systems.

It is important to remember that the maximum area weighted average U_d-values applies to the average insulation value of the entire rooflight; including any glazing bars, kerbs or other potential thermal bridges. Actual U_d-values for rooflights should be established in accordance with BRE publication BR 443 'Conventions for U-value calculations', which can be particularly difficult unless independent, accredited testing has been carried out.

The U_d-values for out-of-plane rooflights should be based on the developed area of the rooflight, rather than the aperture area. Details of how the developed area is defined and calculated are given in Assessment of thermal performance of out-of-plane rooflights – NARM Technical Document NTD 2 (2010).

Calculation of the proposed project's Building Emission Rate (BER) must be carried out by the use of a Simplified Building Energy Model (SBEM) or other such approved software tool. Once the designer is satisfied that all the input data accurately reflects the proposed buildings design, it must be shown that the BER is equal to, or less than the Target CO2 Emission Rate (TER) for a similar 'notional' building, in order for compliance to be achieved.

It is important to note that SBEM software recognises the need for greater use of electric lighting if rooflight areas are reduced; this increase in energy demand and carbon emissions can make it more difficult for a building to comply, with reduced natural light and rooflights. So, use of an appropriate quantity of rooflights with properly verified low U_d-values, combined with good artificial lighting control is an important step towards meeting the required TER.



SPECIFICATION

Specification and sizes

Specifying the unit

The ability to fully customise VELUX Commercial Dome Rooflights means that specification is simple. With a few measurements and a list of performance requirements, our team can configure the perfect daylight solution for your project.

Measurement Guide
To ensure each bespoke rooflight is correctly manufactured, the right measurements must be provided. The measurements required will depend on whether you need a complete unit with a kerb, or if there is an existing upstand.

Complete Dome Rooflight unit with kerb
To ensure a secure fixing, the rooflight should be located on a solid point on the roof. The measurements needed are the length and width of the roof opening (or the diameter for circular Dome Rooflights). The depth of the roof insulation should also be considered.

Specifying glazing only
The height of the existing kerb should be at least 150mm from the finished roof surface. Measure the overall length and width of the finished kerb, including all added insulation and weatherproofing finishes, then measure the internal finished dimensions, including all well liners.

Please contact the VELUX Commercial team for more information.

Glazing only and adaptor kerbs

To fit glazing (domes and pyramids) and rooflights with adaptor kerbs to a kerb that has been pre-built:

A&B
Overall finished kerb sizes including all added insulation and weatherproofing finishes.

C&D
Internal finished sizes including all well liners.

*Note: Minimum 150mm from the finished roof surface.

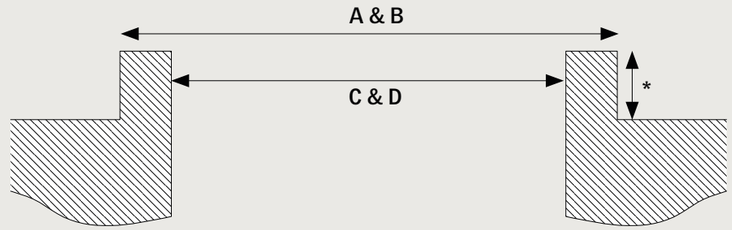
Rooflights that include a kerb

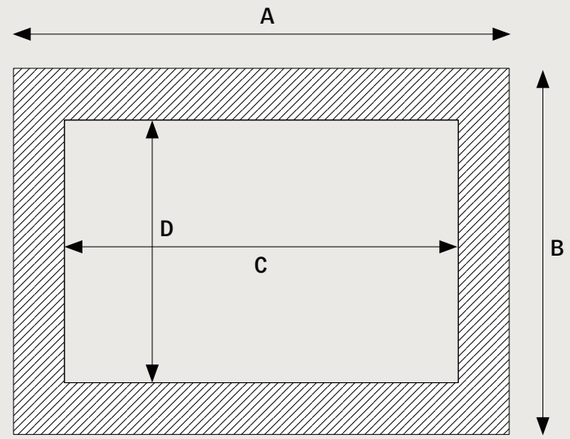
To ensure a secure fixing, care must be taken to ensure the fixing point of the rooflight kerb locates onto solid ground.

The required measurements are shown in the diagram:

C&D
The roof opening size.

To ensure the correct kerb height is supplied the depth of new insulation will need to be considered.

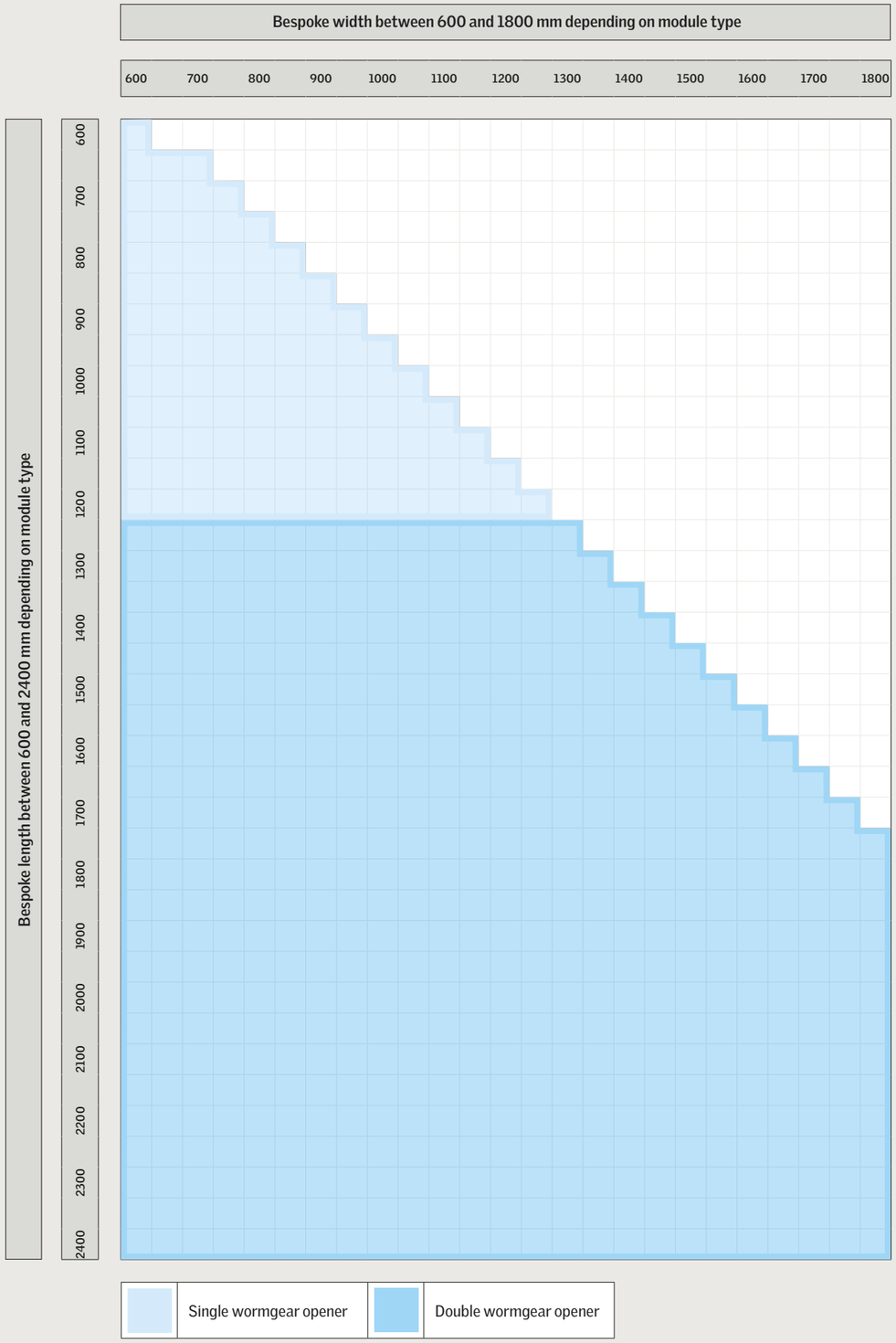




Size grids

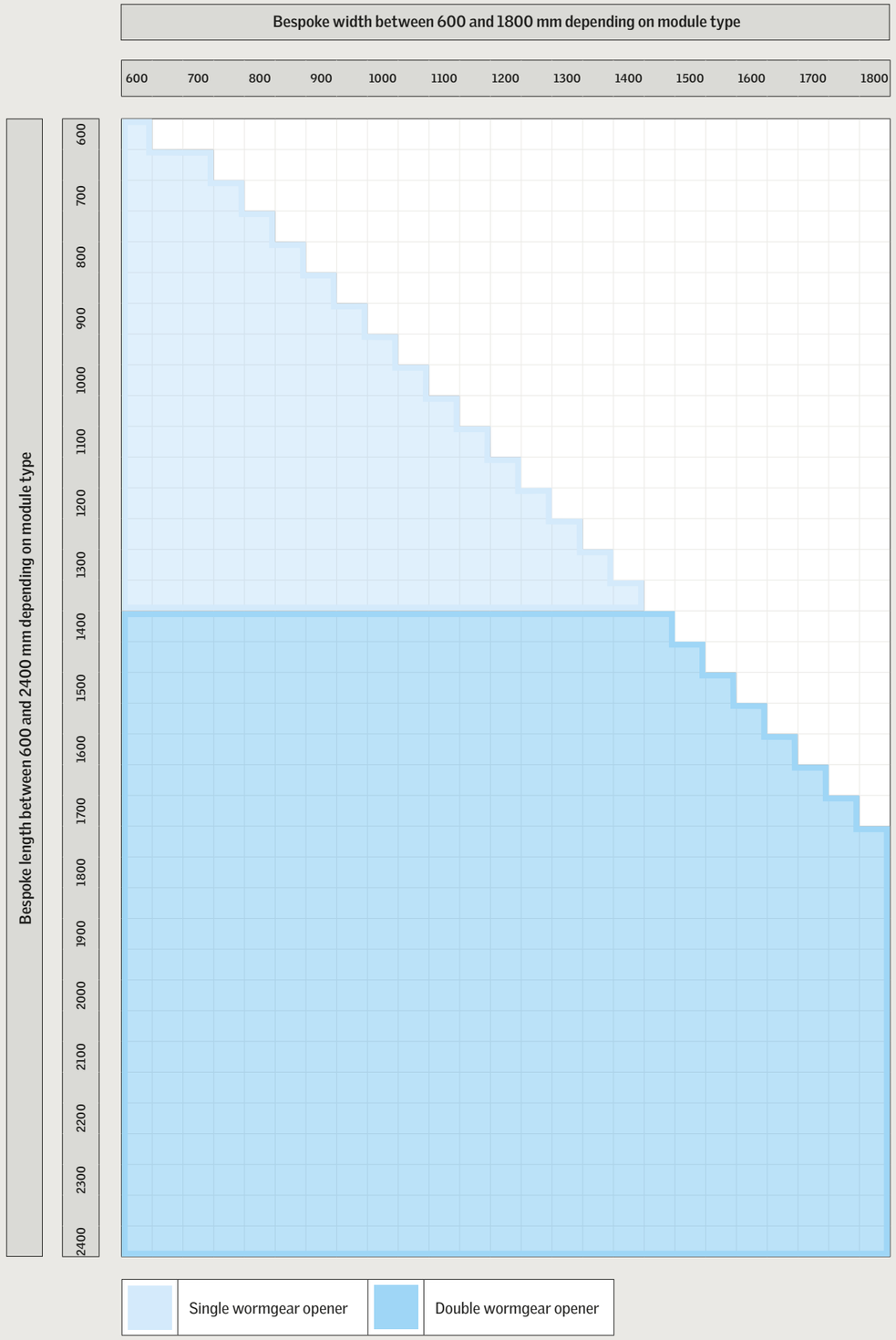
Polycarbonate rooflights with vertical kerb fixing

Standard dimensions are available with edge lengths ranging from 600 to 2400mm.



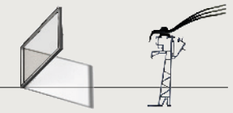
Polycarbonate rooflights with splayed kerb fixing

Standard dimensions are available with edge lengths ranging from 600 to 2400mm.

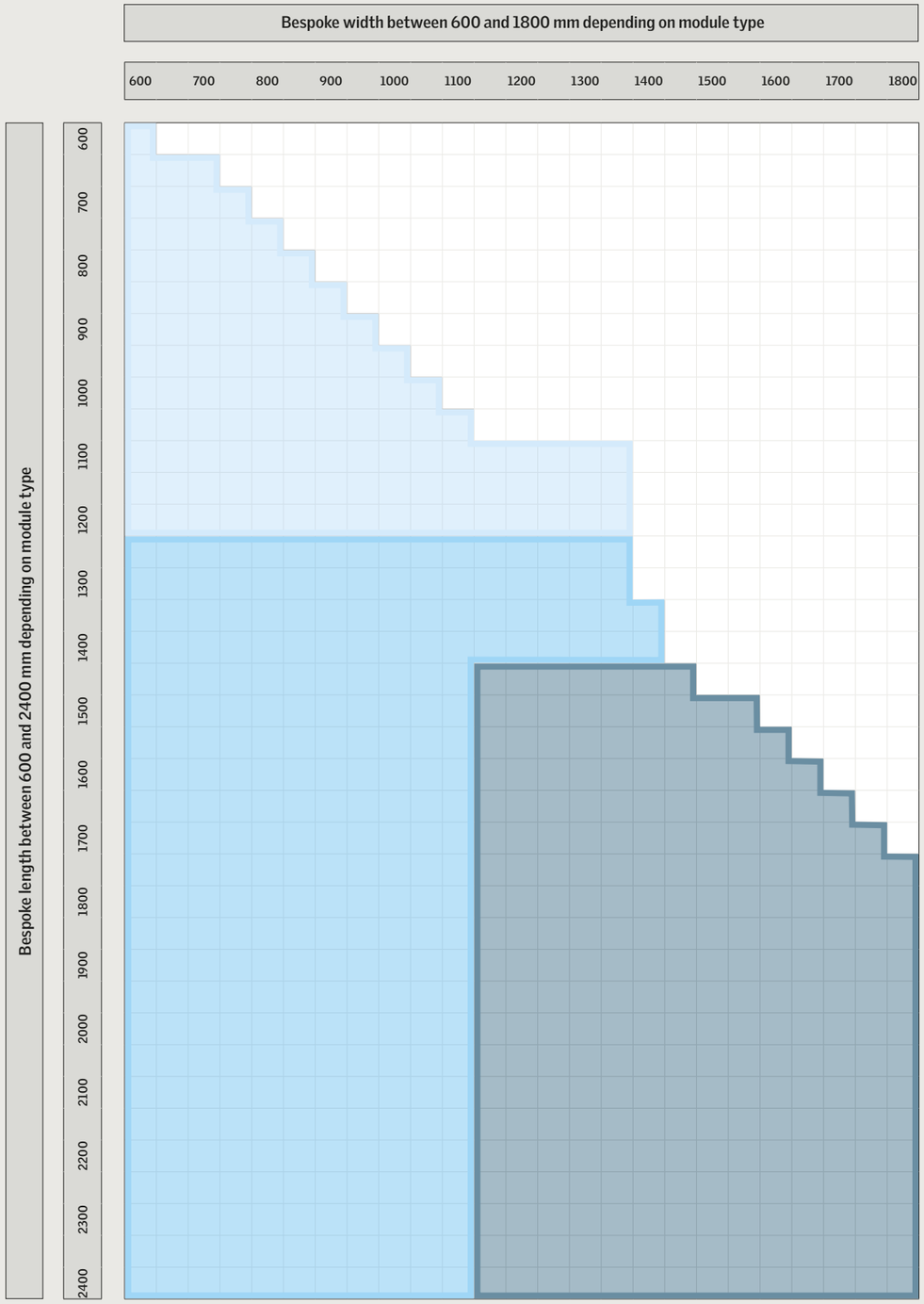


Size grids

Flat glass rooflights with vertical kerb fixing



Standard dimensions are available with edge lengths ranging from 600 to 2400mm.



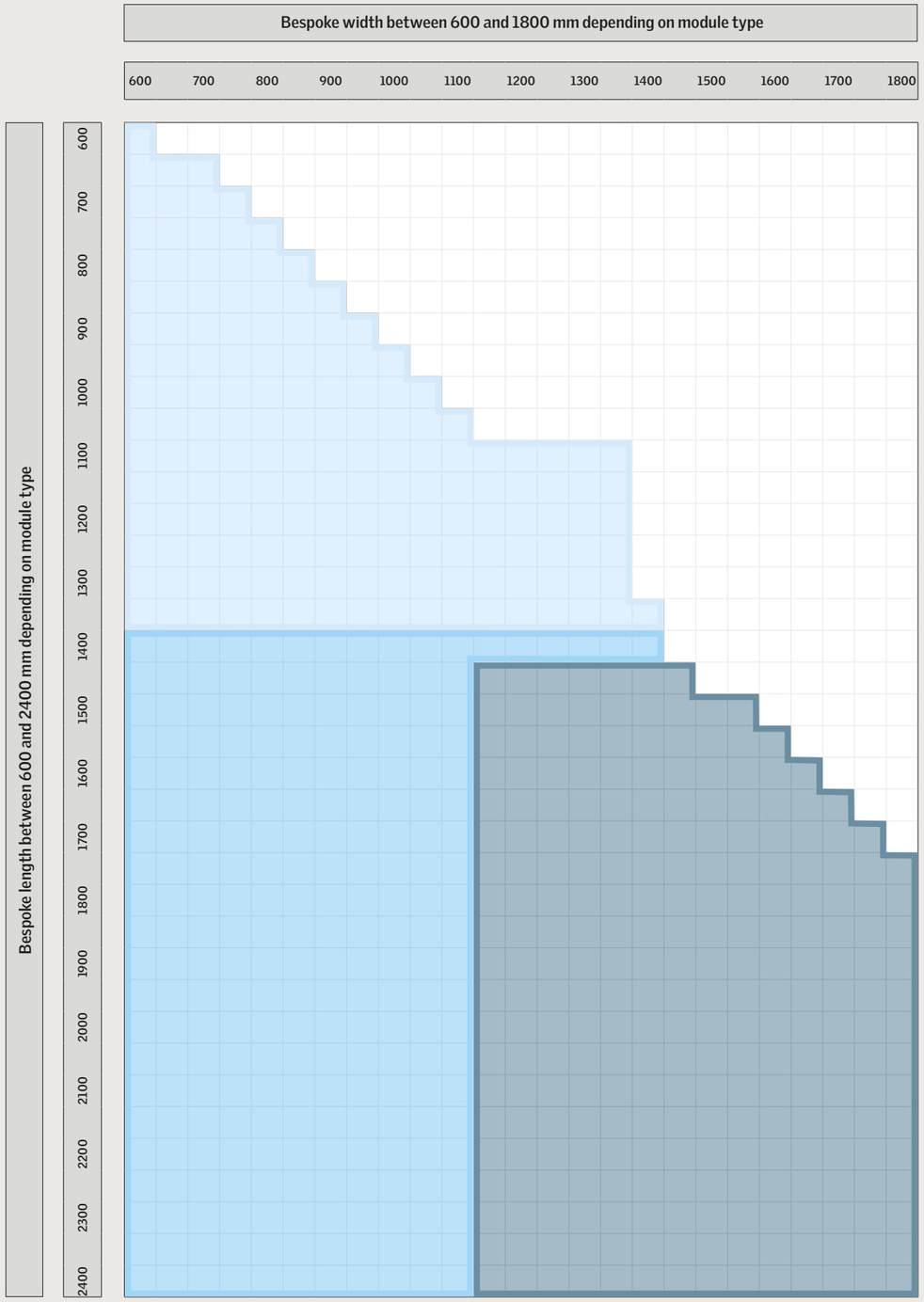
Single wormgear opener

Double wormgear opener

Contact VELUX Commercial as units of this size require additional consideration

Flat glass rooflights with splayed kerb fixing

Standard dimensions are available with edge lengths ranging from 600 to 2400mm.



Single wormgear opener

Double wormgear opener

Contact VELUX Commercial as units of this size require additional consideration

Size grids

Standard sizes for circular. All sizes can be manufactured as bespoke.

Ø mm	600	900	1200	1500	1800
600					
900					
1200					
1500					
1800					

* Above messurements are standard.
All messurements can be made between Ø 600 and 1800 mm

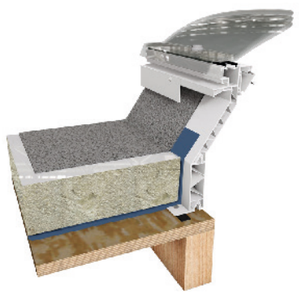
Roof attachment options

All Dome Rooflights are compatible with all standard roofing materials and can be installed on roofs with pitches of up to 15˚.

They can be fixed directly to the roof or an existing upstand for maximum weatherproofing and fast closure of the building envelope. Vertical, splayed and adapter kerbs are available, with options including:

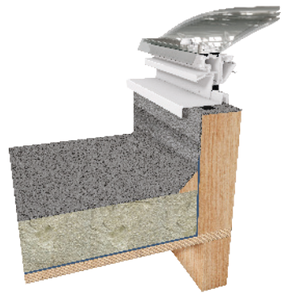
- PVCu - With an interlocking and interchangeable design, these can be raised or lowered to suit roof insulation thickness.
- Thermally broken aluminium kerbs
- Aluminium kerbs with no thermal protection for unheated areas

Kerb fixings



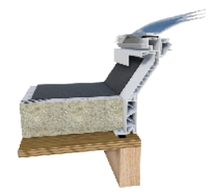
Splayed

Vertical



Adapter
(Fits on builders upstand)

Roof attachment options



Flat board insulation

Tapered insulation schemes

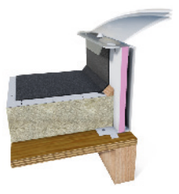
Fixing to cold roof

Fixing direct to an existing or new builders kerb.

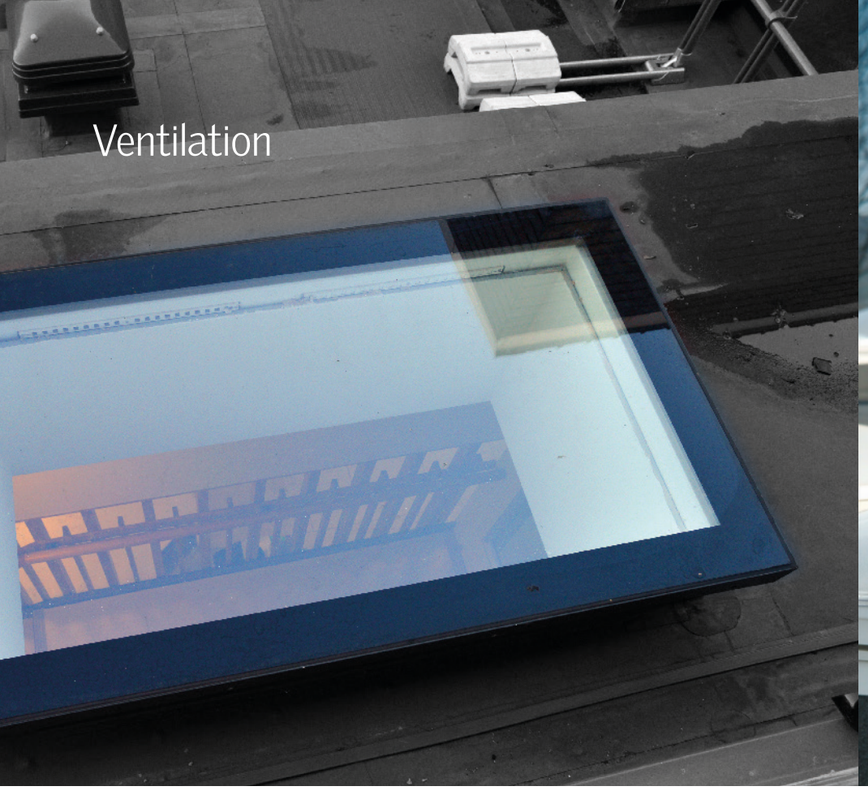
Newly constructed timber ground

"Sleeving over" existing rooflight kerb

Fixing to an existing builders kerb or plinth



Flat board insulation (Aluminium kerb)



Ventilation options

As well as providing abundant amounts of daylight, Dome Rooflights can be used for comfort ventilation, improving the indoor environment for building occupants.

A choice of electric and manual controls is available. The ventilation systems can be permanent, manually operated, electrically operated or mechanically operated.

1 **Permanent vent**
As the name suggests, permanent vents are always open. They are shielded from the elements with an outer skin of polycarbonate.
* This option is only available with PVCu kerbs.

2 **Manual ventilation options**
Rota vent – the pole-operated rota vent directs air flow upwards towards the glazing, reducing the risk of condensation and preventing cold draughts, whilst resisting 'in-blown' roof debris and water ingress.
* This option is only available with PVCu kerbs.

3 **Manual hinged vent** – Operated by a winding rod, the whole Dome Rooflight top hinges to allow ventilation through the rooflight.

4 **Hit and miss vent** – These simple, pole-operated manual vents provide low-level ventilation for background air changes.

Electrical ventilation options

5 **Electrical hinged vent** – The whole Dome Rooflight top hinges to allow ventilation through the rooflight.

6 **Vertical lift vent** – Ideal for spaces with limited room, a Dome Rooflight with Vertical Lift Vent provides ventilation by lifting the lid vertically up.
* This option is only available with metal kerbs.

7 **Mechanical Ventilation options**
Mechanical ventilation can also be integrated into our polycarbonate rooflight solutions by fitting a power fan to the rooflight unit. There are two options:

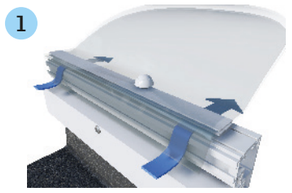
Power fan unit built into the polycarbonate glazing. This option allows either a 150 mm or 225 mm power fan to be specified.

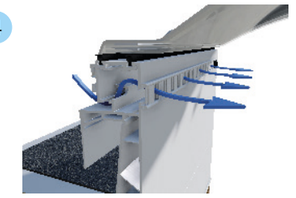
A smaller fan mounted into the side wall of the kerb. With this option, the kerb will be higher to provide the 150 mm clear upstand height to the base of the fan unit.

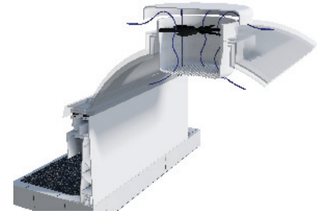
8 **Automatic-opening Vent (AOV)**
For smoke and heat exhaust ventilation (SHEV), we also offer electrically operated vents that are designed to open automatically when needed. See page 32 for more information.

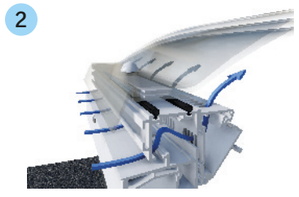
9 **Penthouse Louvre**
Penthouse Louvres are non-insulated ventilation units designed to provide natural ventilation in unheated spaces such as above lift shafts or stairwells in public and commercial buildings.

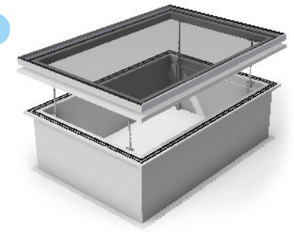
*Please note that the wiring to the motor and switch in electrically operated systems is not completed by VELUX Commercial.











Technical information

Permanent vents, Manual ventilation options, Electrical ventilation options – performance chart

Rooflight Clearlight Size	Permanent	Hit and Miss	Rota	Hinged – 200 mm stroke length (Worm Gear or Chain Motor) [1]	Vertical Lift 350 mm stroke [1]
mm	cm^2	cm^2	cm^2	m^2	(m^2)
600 x 600	50	50	76	0.24	0.24
750 x 750	50	50	86	0.30	0.41
900 x 900	73	73	86	0.36	0.63
1050 x 1050	73	73	128	0.42	0.89
1200 x 1200	100	100	128	0.48	1.20
1350 x 1350	100	100	128	0.54	1.55
1500 x 1500	100	100	128	0.60	1.95
1800 x1800	146	146	173	0.72	2.38
900 x 600	73	73	86	0.30	0.42
1200 x 600	100	100	128	0.36	0.60
1200 x 900	100	100	128	0.42	0.90
1350 x 900	100	100	128	0.45	1.03
1500 x 900	100	100	128	0.48	1.17
1500 x 1200	100	100	128	0.54	1.56
1800 x 900	146	146	173	0.54	1.44
1800 x 1200	146	146	173	0.60	1.92
2000 x 1000	146	146	173	0.60	1.80
2400 x 12000	218	218	256	0.72	2.38

1) Please note that not all glazing options may be possible with larger hinged, or vertical lift rooflights due to lifting capability of actuators. Please contact us for specific queries.

Mechanical ventilation performance chart

Fan options	Extract volume when positioned vertically		Extract volume when positioned horizontally and fitted with a roof cowl		Sound
	Litres/Second	m^3/hr^2	Litres/Second	m^3/hr^2	dB (A)[2]
150 mm power fan – side mounted	105	380	97	350	49.6
230 mm power fan – side mounted	194	700	150	540	43.6
300 mm power fan – side mounted	458	1650	347	1250	53.6

Penthouse louvre ventilation performance chart

Rooflight Clearlight Size	QTY of active blades (adapter kerb includes one "false" blade) (Height of adapter kerb version / height above finished roof level on direct to roof version)				
	1 blade AK* = 270 mm DTR** = 278 mm	2 blades AK = 365 mm DTR = 373 mm	3 blades AK = 460 mm DTR = 468 mm	4 blades AK = 555 mm DTR = 563 mm	5 blades AK = 555 mm DTR = 563 mm
mm	m^2	m^2	m^2	m^2	m^2
600 x 600	0.148	0.296	0.444	0.59	1.48
750 x 750	0.185	0.37	0.555	0.74	1.85
900 x 900	0.222	0.444	0.666	0.89	2.22
1050 x 1050	0.259	0.518	0.777	1.04	2.59
1200 x 1200	0.296	0.592	0.888	1.18	2.96
1350 x 1350	0.333	0.666	0.999	1.33	3.33
1500 x 1500	0.371	0.742	1.113	1.48	3.71
1800 x1800	0.445	0.89	1.335	1.78	4.45
900 x 600	0.185	0.37	0.555	0.74	1.85
1200 x 600	0.222	0.444	0.666	0.89	2.22
1200 x 900	0.259	0.518	0.777	1.04	2.59
1350 x 900	0.278	0.556	0.834	1.11	2.78
1500 x 900	0.296	0.592	0.888	1.18	2.96
1500 x 1200	0.333	0.666	0.999	1.33	3.33
1800 x 900	0.333	0.666	0.999	1.33	3.33
1800 x 1200	0.371	0.742	1.113	1.48	3.71
2000 x 1000	0.371	0.742	1.113	1.48	3.71
2400 x 12000	0.445	0.89	1.335	1.78	4.45

* **AK**: Adaptor Kerb
** **DTR**: Direct to Roof

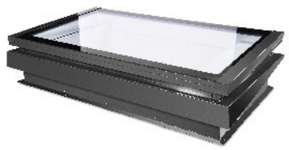
AOV

The Automatic Opening Vent (AOV) is an electrically operated, 140° opening Natural Smoke and Heat Exhaust Ventilator (NSHEV), which has been tested and certified to EN 12101-2:2003 as a legal requirement under the Construction Products Regulation 2013.

The AOV kerb and lifting frame is fabricated from aluminium, which can be insulated and thermally broken, for use within a heated space.

The lid of the AOV can be assembled from either double glazed glass, triple skin polycarbonate, or an insulated aluminium lid. The Automatic Opening Vent is available to order in custom sizes (within the tested size parameters given in the matrix below) to suit your project.

Glass lid Automatic Opening Vent



Glass lid AOV with weather cowl in closed position

Glass lid AOV with weather cowl opened for comfort centilation

Glass lid AOV fully opened for smoke ventilation

Polycarbonate lid Automatic Opening Vent

Polycarbonate lid AOV with weather cowl in closed position

Polycarbonate lid AOV with weather cowl opened for comfort centilation

Polycarbonate lid AOV fully opened for smoke ventilation

Solid lid Automatic Opening Vent

Solid lid AOV with weather cowl in closed position

Solid lid AOV with weather cowl opened for comfort centilation

Solid lid AOV fully opened for smoke ventilation

AOV unit size

The AOV is available in both standard and custom sizes (within the tested size parameters in the table below) to suit project requirements. If the existing aperture or kerb is slightly larger than the available size, a splayed aluminium kerb (insulated or uninsulated, depending on requirements) can be provided. This allows the AOV to be fit to the roof while keeping within the CE-certified dimensions.

Kerb and glazing	Min width	Max width	Min length	Max length
	mm	mm	mm	mm
Aluminium kerb with glass lid	700	1500	600	2500
Aluminium or PC / PVC kerb with polycarbonate lid	700	1500	600	2500
Aluminium or PC / PVC kerb with aluminium lid	700	1200	700	2400

Thermal performance and water resistance

VELUX Commercial AOVs are designed to be thermally efficient (as required) and resistant to wind and rain ingress. The thermally broken insulated aluminium kerbs are suitable for use above heated spaces and can provide U-values as low as 1.0 W/m²K.

A weather cowl is provided as standard, which reduces the risk of rain or debris entering the building during adverse weather conditions when the AOV is used for natural ventilation. The maximum opening angle is 20° and tested to RE 10,000 cycles.

Thermal performance	
1000 x 1000mm AOV with glass top	1.25 W/m²K
1000 x 1000mm AOV with triple skin polycarbonate top	1.54 W/m²K
1000 x 1000mm AOV with insulated aluminium top	1.66 W/m²K
Uninsulated aluminium kerb (for unheated spaces only)	–

Performance values	
Aerodynamic free area (C_v):	0.40 (According to: EN 12101-2:2003, Annex B, B1)
Reliability (R_e):	1000
Snow load (SL):	600
Low ambient temperature (T):	-15°
Wind load (WL):	1500
Resistance to heat (B):	300

Electrical information

Concealed actuators and wiring provide an unobstructed view through the rooflight. All AOVs are fitted with two actuators, each with the following specifications.

Compatible control panels and sensors are available in a range of options, depending on the application and requirements. For more information about wiring and electrical details, please contact us.

Electrical values	
Actuator reference:	SA power single, SA power mini
Actuator type	Rotating arm
Actuator stroke/rotation:	0-155°
Voltage:	24 V DC
Current draw:	2 amps, 4 amps, 6 amps (to suit size of AOV)
Consumption under load:	72 W
Switching:	2 No micro-switches
Flex type:	2 core silicone cable (Brown = P, Blue = N)
Opening time:	50 second (±/-5 seconds)

Roof access and security

Access hatches

Dome Rooflights can also be used to provide roof access, with a choice of enhanced security options to choose from.

Access hatches – Polycarbonate and glazed rooflights can all be designed to provide safe and reliable access to roof areas, so that essential works and maintenance can be carried out. They are also available with aluminium lids and fall protection systems.

Enhanced security options – Depending on site requirements, additional locking methods and security systems can be provided.

Access hatch features
1.7 mm aluminium construction
40 mm insulation with a U-value of 0.5W/m²K
300 mm curb as standard
45 mm thermal break with 40mm insulation

Size chart	
750 x 900	1000 x 1000
750 x 240	1000 x 1500
900 x 900	1000 x 1800
900 x 1200	1200 x 1200

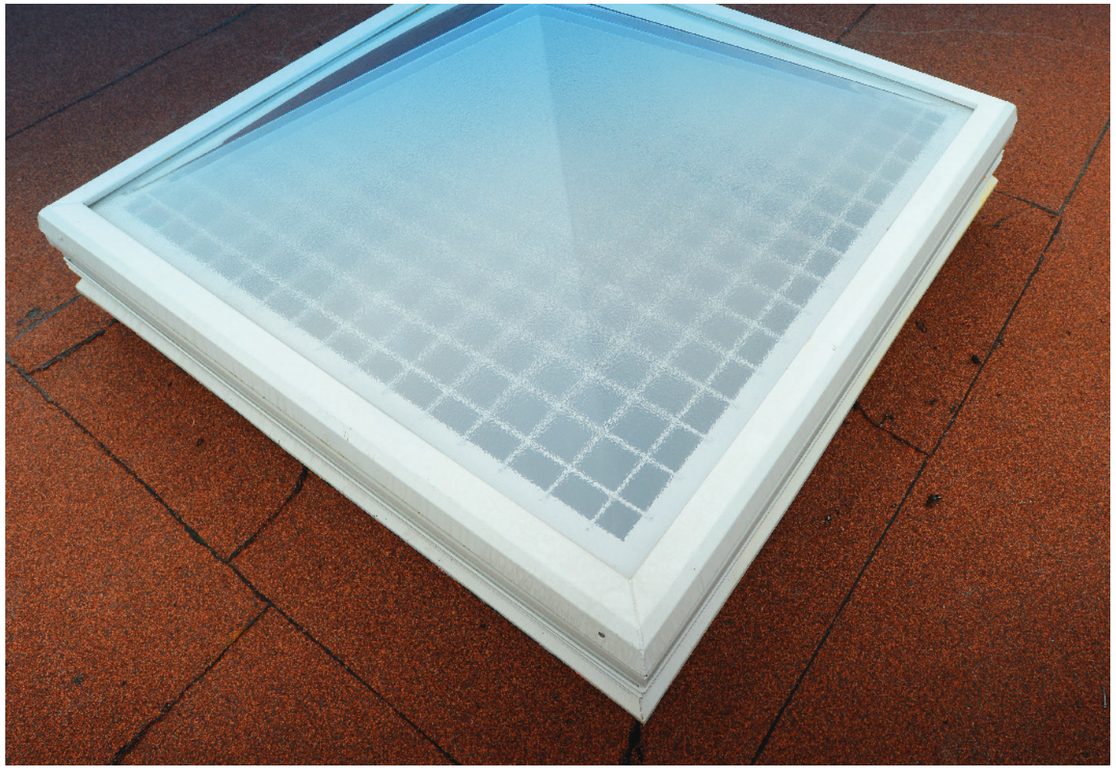
Available with mill finish aluminium or polyester powder coated. Fully sealed lid. Gas spring assisted manual opening with stay hold feature

Variable internal and external push pad locking options

Security

Can be supplied complete with an intruder grid which locates between the rooflight kerb attachment and roof to reduce the risk of unwelcome intruders.
Security can be expanded further by using the following:

- Security Screws and Tamper Resistant System
- Security Frame
- Intruder Grid



Service

End-to-end support for specifiers and installers

Drawing on 80 years of rooflight expertise, VELUX Commercial's team of daylighting specialists can provide a true end-to-end service that is unique to the commercial daylighting market.

Our experts are dedicated to ensuring that specifiers and contractors can provide their customers with long-lasting and reliable Dome Rooflights.

Fully comprehensive site surveys

A member of our technical team can visit your site to help you determine the best locations to install Dome Rooflights, as well as advise on other rooflight options. The team will work with you to create a daylight plan that meets specific project requirements and guide you through the rest of the specification process.

Technical advice

Whether you're trying to determine the optimal amount of ventilation for a building, calculate U-values or decide on a control system, our technical advice team is on-hand to provide assistance and help to ensure that the Dome Rooflights you choose provide the desired functionality and performance.

Planning and delivery

- Consultancy and site surveys
- Design and specification
- Delivery and logistics
- Technical documentation

Installation

- Installation manuals
- VELUX Commercial installation teams

Daily operation

- After sale
- User guidance
- Product service

20 YEARS GUARANTEE

Guarantee

Dome Rooflights are backed by a 20 year guarantee.

Reference Cases

Trapexoid Dome Rooflights, Hinckley Parks Primary School, Hinckley

Polycarbonate Dome Rooflights, Bulwell Academy, Nottingham

Bulwell Academy, Nottingham

Hybrid Dome Rooflight, De Haviland School, Hatfield

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