Product Portfolio

Modular AOVs

The complete range of fully automatic opening vents for smoke and natural ventilation

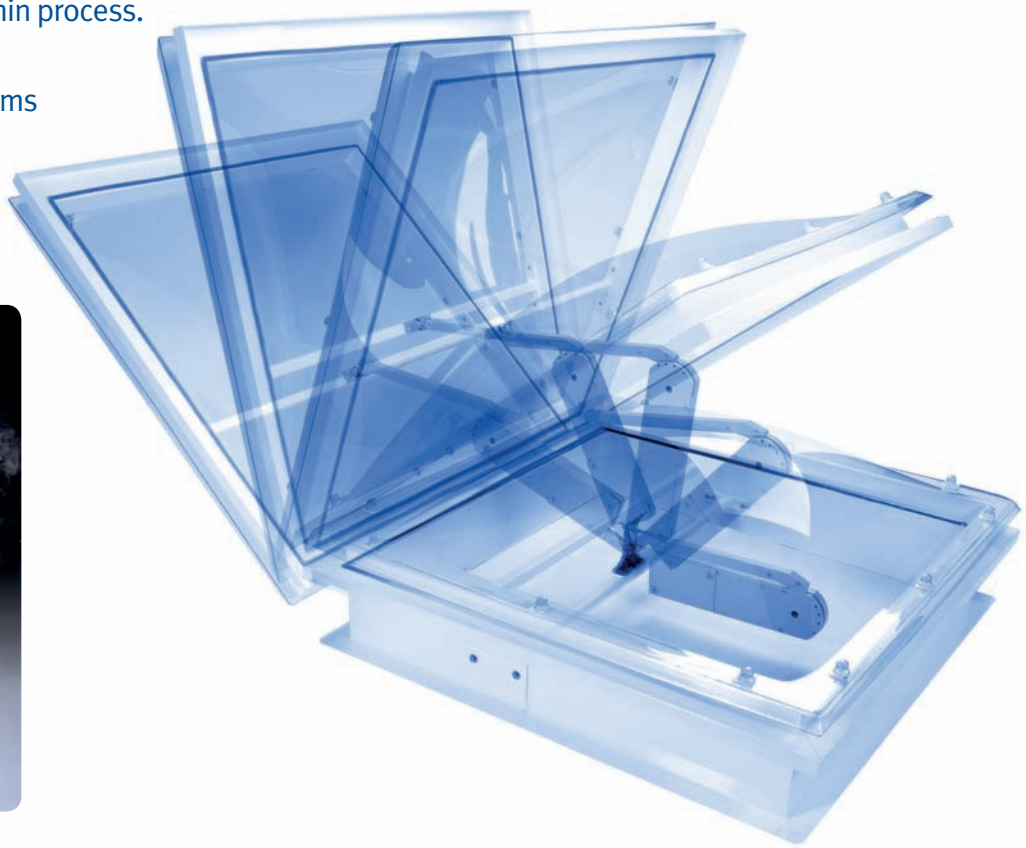
Xtralite
ROOFLIGHTS

Product Portfolio AOV Rooflights

Xtralite AOVs

Xtralite has developed a range of modular smoke vent AOVs (Automatic Opening Vents), used for natural and smoke ventilation. These products, traditionally supplied by specialist manufacturers, are designed specifically to mimic the standard range of Xtralite's modular rooflights. This gives specifiers the opportunity to maintain the external aesthetics of the building by having rooflights and AOVs supplied from a single source utilising the same underlying rooflight designs coupled with a simplified ordering and admin process.

Xtralite works in partnership with leading specialists in control systems to ensure that when operated the units meet the requirements of the building manager and/or fire and rescue services.

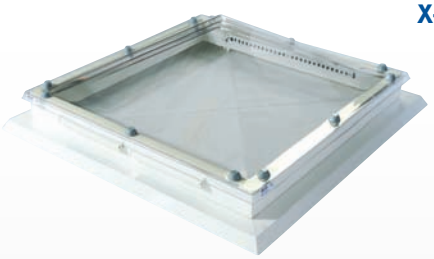


Consistent design principles

The modular AOV range of rooflights is based around the X-Two V, X-Three and X-Five variants of the standard Xtralite range which are distinguished by the kerbs being made of either uPVC or metal. X-Two and X-Three are double walled and meet the requirements of Part L.

X-Five denotes a single-walled metal construction AOV and so it is ideal for areas exempt from the requirements of Part L.

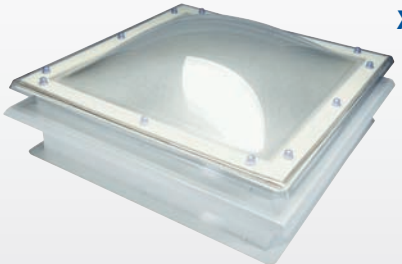
X-Two



Standard modular rooflight from the X2V range

AOV X2V rooflight

X-Three



Standard modular rooflight from the X3 range

AOV X3 rooflight

Product Portfolio AOV Rooflights
Specification Details

Roof Opening and Access

Smoke ventilation systems are designed to ensure a natural flow of smoke from the building into the atmosphere. AOVs may also be used for cooling where there is heat gain and airflow is required to maintain a comfortable environment.

The key issues the specifier must consider are:

Ventilation area:

- Most applications require either a 1 m^2 or 1.5 m^2 vent area as required by Approved Document Part B of the Building Regulations.
- Xtralite can manufacture non-standard sizes on request to meet your specific needs.

Opening angle of the rooflight. Xtralite have a range of opening options:

- 90˚—To comply with fire safety regulations under EN12101 two of these units must be used opposite each other with a centre gutter. For purely natural air ventilation purposes or access then single 90˚ units can be used.
- 140˚—These units comply with the European Standards EN12101 series.

Roof opening and installation

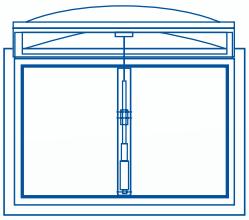
When considering the best solution for the intended roof opening, accurate dimensions must be supplied. These are highlighted in the diagrams shown.

Xtralite can provide a surveying and specification service working with industry partners. Email **sales@xtralite.co.uk**

All units are Class B non-fragile to ACR{M}001.2005(Red Book) Test.

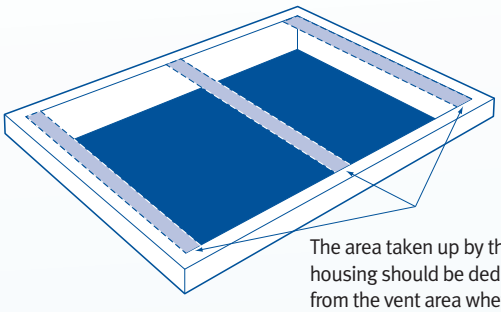
Vent area

When calculating the vent area, please utilise the plan drawing of the AOV which will show the space taken by the motors and their housing.



Typical plan drawing of rooflight

Xtralite's CAD drawings will show the vent area. For CAD drawings go to the downloads section of the Xtralite website: **www.xtralite.co.uk**



The area taken up by the motor housing should be deducted from the vent area whether side mounted or centrally mounted.

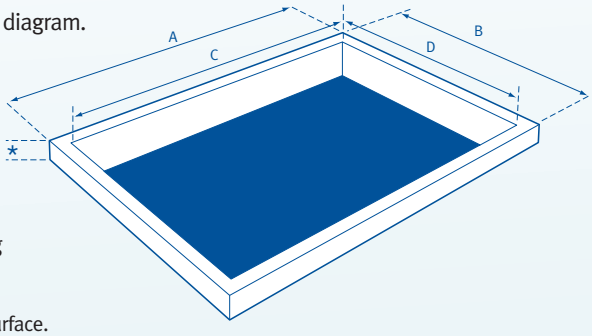
Fixing to a builder's kerb

The measurements required to fix a Xtralite AOV to a builder's kerb that has been pre-built are shown in the diagram.

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

C & D
Internal finished sizes including all well liners.

* Min 150 mm from finished roof surface.

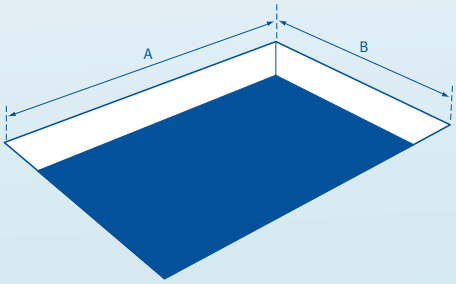


Should the built-up kerbs be insulated—please inform Xtralite of the insulation thickness to ensure a solid fixing point.

Rooflights that include a Kerb supplied by Xtralite

Care must be taken to ensure the fixing point of the rooflight kerb locates onto solid substrate to ensure a secure fixing.

A & B
The roof opening size.



Product Portfolio AOV Rooflights
Flexibility of Bespoke Production

All Xtralite rooflights are made to order which gives specifiers the flexibility to have the rooflights built to match the project requirement. This is often crucial on refurbishment projects where the roof opening size is predetermined. The table below shows the flexibility of the specification process by listing which options are available with the standard rooflight configurations:

	Code	1.8 Uvalue **X-Two V** **uPVC insulated construction**	2.2 Uvalue **X-Three** **metal insulated construction**	4.0 Uvalue **X-Five** **un-insulated metal construction**
Lid Options				
Polycarbonate	PC	•	•	•
Solid metal panel	SL	•		•
Insulated solid metal panel	ISL	•	•	
Glass single skin	GL			•
Glass double skin	IGL		•	
Multiwall polycarbonate	MW	•	•	•
Opening Option*				
Smoke Vent/AOV with dual-pitch opening	05-DP			•
Smoke Vent/AOV with 90° opener with S1 concealed motor	05-90-S1-CM		•	•
Smoke Vent/AOV with 140° opener with single folding-arm motor (cannot be used as concealed)	05-140-FA		•	•
Smoke Ventilator/AOV with 140° opener 2 folding-arm motors	05-140-FA2		•	•
Smoke Ventilator/AOV with 140° opener with 2 concealed folding-arm motors	05-140-FA2-CM		•	•
Smoke Ventilator/AOV with 140° opener with rotary 100 motor	05-140-R1-CM	•		
Fixing Options				
Kerb Direct to Roof	C	•	•	•
Kerb Adaptor	D	•	•	•
Security Options				
Security Frame	SF	•	•	•
Security Screws	SS	•	•	•

*Motor specification may change to suit specific application.

Xtralite use a product coding system to identify the key attributes of each individual product as highlighted in the example below. The full range of technical drawings can be viewed on the Xtralite website at **www.xtralite.co.uk** in the download section; or if further guidance is required email **sales@xtralite.co.uk**

The cutaway drawing of the rooflight shown is for an AOV of uPVC construction with an adapter kerb, upstand, 140° electrically-operated opening vent and triple-skin polycarbonate lid (1.5 m² free vent area).

XT-X2V-D-05-140-SS

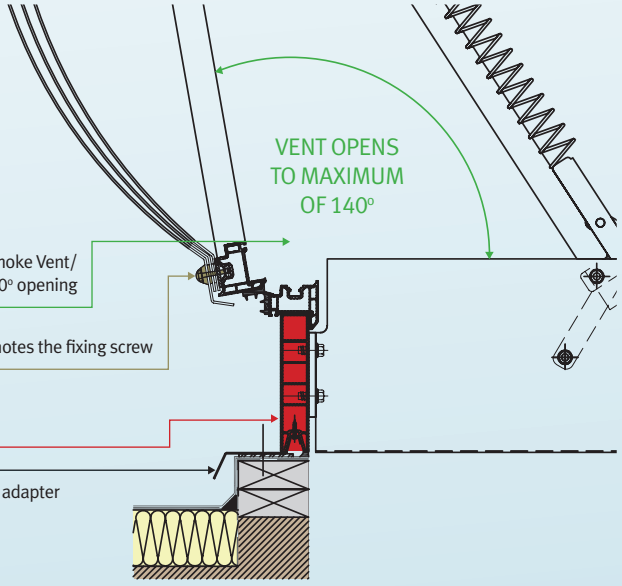
Denotes an Xtralite product.
This part of the code will not change.

Denotes the uPVC construction

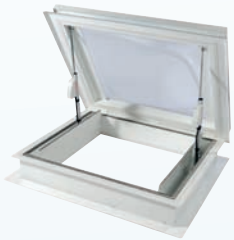
Denotes the kerb adapter

Denotes the Smoke Vent/ AOV with 140° opening

Denotes the fixing screw

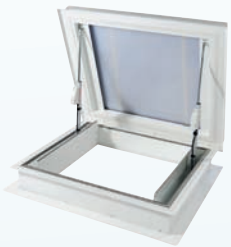


Lid options



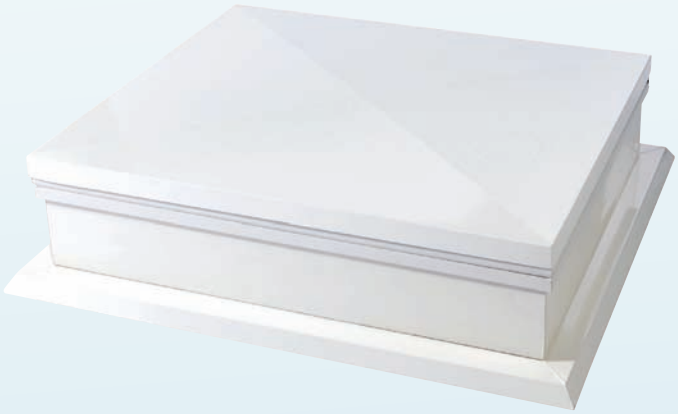
Triple-skin polycarbonate

Thermoformed from enhanced UV-protected polycarbonate.



Multiwall polycarbonate

Multiwall polycarbonate is a cost effective, lightweight, low profile lid solution.



Solid aluminium

Solid aluminium is used where there is no requirement for light or thermal insulation, typically at the top of smoke shafts.

Insulated aluminium

Insulated aluminium is typically used where there is a thermal requirement but no light or acoustic requirement.

Lid options

90° double-pitched unit with solid top

Centrally-based unconcealed motors with 90˚ or 140˚ opening depending on the requirement.

90° double-pitched unit with double glazing in glass

Glass gives a more pleasing aesthetic finish though weight is a consideration.

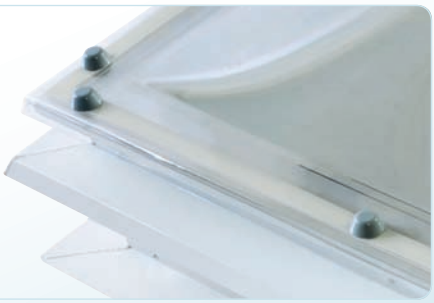
90° double-pitched unit with polycarbonate glazing

Triple-skinned polycarbonate provides thermal efficiency and is a low weight alternative to glass.

90° double-pitched can be glazed in either multiwall polycarbonate or with a solid aluminium lid

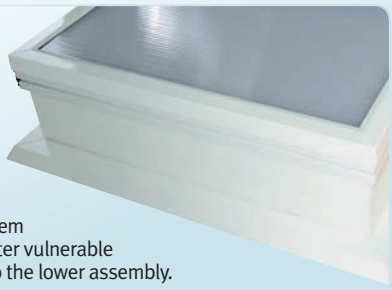
Lightweight AOV with centrally-based motors and a choice of lids.

Security options



Security fixings

Multi-part assemblies are tamper resistant.



Security frame

A purpose-designed, robust, extruded aluminium framing system that encloses and secures the outer vulnerable edge of the glazing and clips onto the lower assembly.

Motor options

Double-sided unconcealed

140˚ dual motor options are suitable for smoke ventilation, motors can be concealed or unconcealed depending on aesthetics.

Middle concealed

Centrally-based concealed motor, 90º or 140˚ opening depending on the requirement.

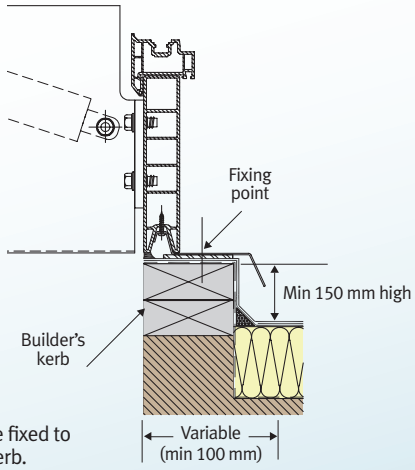
Double-sided concealed

This dual concealed motor version only opens to 90º and is therefore utilised as a powered access hatch or natural ventilation unit.

Middle unconcealed

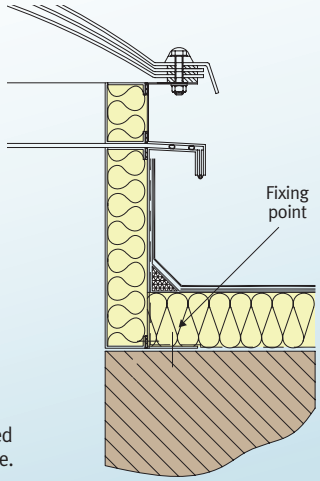
Centrally-based unconcealed motor, 90º or 140˚ opening depending on the requirement.

Fixing options



Builder's kerb

Allows the rooflight to be fixed to new/existing builder's kerb.



Direct to roof

Allows for the kerb to be attached direct to the supporting structure.

Ordering Advisory Note

The rooflight installation includes opening vents believed to be for the purpose of natural fresh air and/or smoke ventilation.

Consideration should be given at the earliest opportunity as to the required performance of the opening vents within the rooflight in conjunction with other automated aspects of the building.

Regardless of the voltage of the electric actuator attached to the opening vent (24 V DC or 230 V AC) the principle of its operation remains the same, an electric window actuator supplied by Xtralite will be of a reverse polarity or “power open” and “power close” nature.

Permanent power should never be left on a mains voltage electric actuator.

Our experience tells us that often there is a lack of co-ordination between trades, and these crucial aspects are neglected.

The basic considerations are as follows:-

- How many zones do the opening lights need to open in—are they all opening together or in separate areas?
- Is there a requirement for them to respond to locally-placed thermostats, or external rain sensors?
- Is there a requirement for the opening vents to be controlled by a Building Management System?

The practical considerations are as follows:-

- The proximity of the junction box and the electric actuator, which ideally, should be near to each other.
- What is the required cable specification?

Through Xtralite’s controls partner, assistance on these important points is available.

Xtralite ROOFLIGHTS

XTRALITE (Rooflights) Limited
Spencer Road
Blyth Riverside Business Park
Blyth, Northumberland
NE24 5TG

Tel: +44 (0)1670 354157
Fax: +44 (0)1670 364875
E-mail: sales@xtralite.co.uk
Website: www.xtralite.co.uk