

KRYSTALITE

Residential & Commercial Smoke & Natural Ventilation Systems

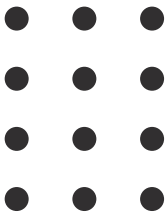


W W W . P O W R M A T I C . C O . U K

Smart Design. Safer Spaces.

Smoke & Natural Ventilator
Glazed Louvre Ventilator

Tested to
BS-EN12101:2



UK
CA

KRYSTALITE
Glazed Louvred Ventilator

TYPICAL APPLICATIONS

- High Rise Buildings
- Residential Blocks
- Schools & Universities
- Apartments
- Hotels & Care Homes
- Atriums
- Glazed Facades



VENT TYPE - SMOKE / NATURAL
TESTED TO - BS-EN 12101-2
FREE AREA - BESPOKE



Architectural Smoke Ventilation

TECHNICAL SPECIFICATION

Aerodynamic Free Area Range	Bespoke
Vent Width Min / Max (mm)	500 / 2500
Vent Height Min / Max (mm)	250 / 5000
U-Value	0.5W/ m²K
Voltage	24V
Opening °	85
Opening Speed	60seconds

TESTING

Reliability	RE-1000
Low Ambient Temperature	T (-5°)
High Temperature	B300
Wind Load	WL-2500

The Krystalite AOV Glazed Louvre Smoke Ventilator seamlessly combines advanced life safety technology with modern architectural design. Engineered for superior smoke and heat exhaust ventilation (N-SHEV), it ensures rapid smoke clearance in the event of a fire, improving evacuation safety and reducing property damage. Designed for high-rise buildings, residential blocks, schools, universities, apartments, hotels, care homes, atriums, and glazed facades, it offers essential life safety without compromising on aesthetics.

With high-performance airflow management and a discreet, stylish design, the Krystalite delivers an optimal balance of safety and sophistication. Its customisable sizing, glazing, and frame finishes ensure seamless integration into a variety of architectural styles, providing both functional excellence and visual harmony.

PRODUCT BENEFITS

- **Advanced Life Safety System** – Certified to EN 12101-2 for emergency smoke and heat extraction.
- **Seamless Architectural Integration** – Stylish aluminium framing with customisable glazing options.
- **Natural Ventilation** – Improves indoor air quality and comfort.
- **Customisable Sizing** – Designed to fit any building facade, atrium, or window system.
- **Energy Efficient** – Excellent U-values to maintain thermal performance.
- **Quiet & Effective** – Noise-reducing properties make it ideal for urban environments.

KEY FEATURES

- **Sleek & Contemporary Design** – Modern, minimalist appearance for seamless integration.
- **Flexible Glazing Options** – Single, double, or triple glazing for thermal and acoustic insulation.
- **Custom Frame Finishes** – Available in natural anodised or polyester powder-coated RAL colours.
- **Certified for Fire & Smoke Ventilation** – Ensures rapid extraction of smoke in emergencies.
- **Discreet Operating Mechanism** – Concealed within the frame for a clean, uninterrupted look.

CONTROL OPTIONS & CERTIFICATION

The following control options are tested to the below standards.

24v Electric Drive Open/Drive Close	EN-12101
Electric 230v Drive Open/Drive Close	Natural Vent Only
Manual	BS-7346

LOUVRE OPTIONS & TESTING

The following control options are tested to the below standards.

G6 / G8 Single Glazed	Natural Vent Only
G12 Single Glazed	EN-12101
TG24 / TG28 / TG32 Triple Glazed	EN-12101
Insulated Aluminium Panels	EN-12101

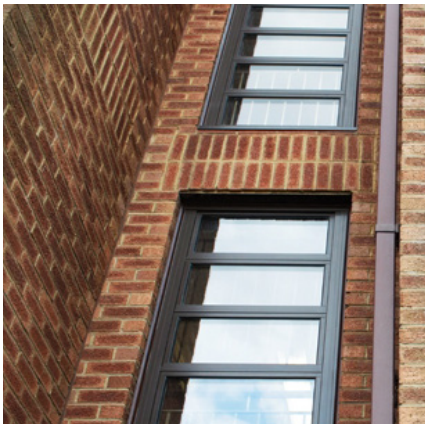
INSTALLATION

The Powrmatic Krystalite is supplied fully assembled ready for installation on site. It can be installed vertically into either of the following applications:

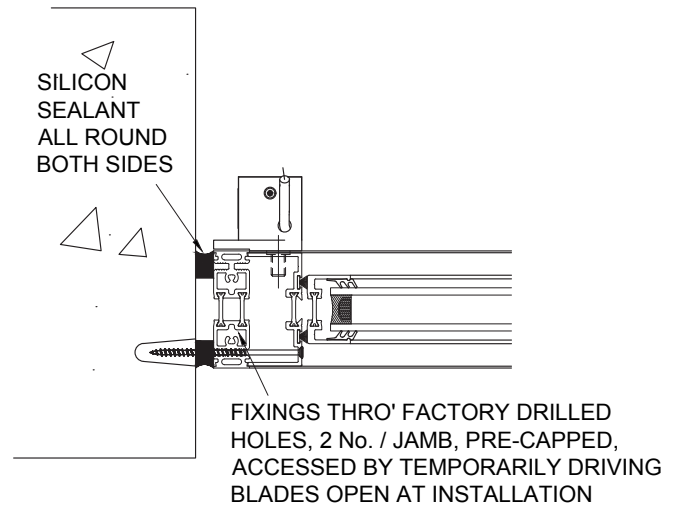
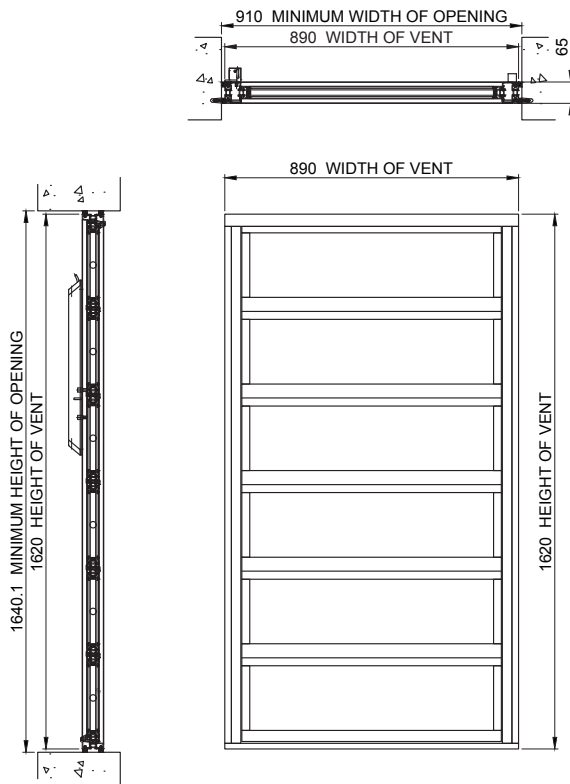
- **Glazing Systems & Facades**
- **Curtain Wall Frames**
- **Block Work Openings**

U-VALUES & dB(a)

The Krystalite offers excellent U- values to keep the buildings appropriately insulated. For example the DG24 offers U-Value of 1.1W/m²K whilst the TG34 offers U-Values of 0.5W/m²K. The Krystalite offers an impressive noise reduction of up to 41dB(a) which allows for far greater acceptance from building standards and authorities in modern buidlings.



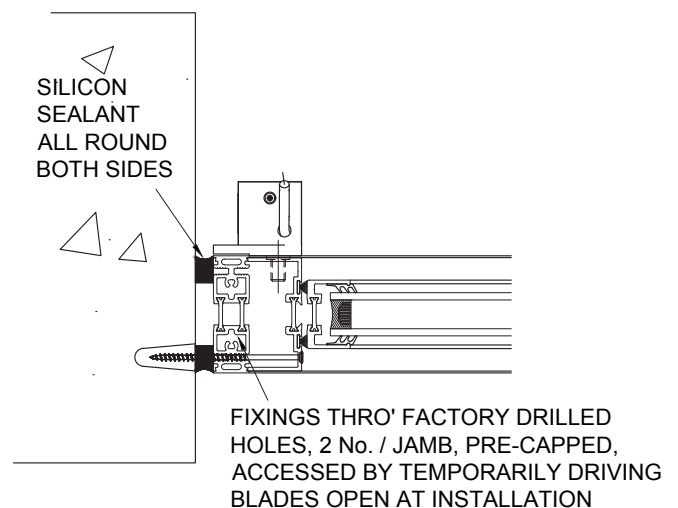
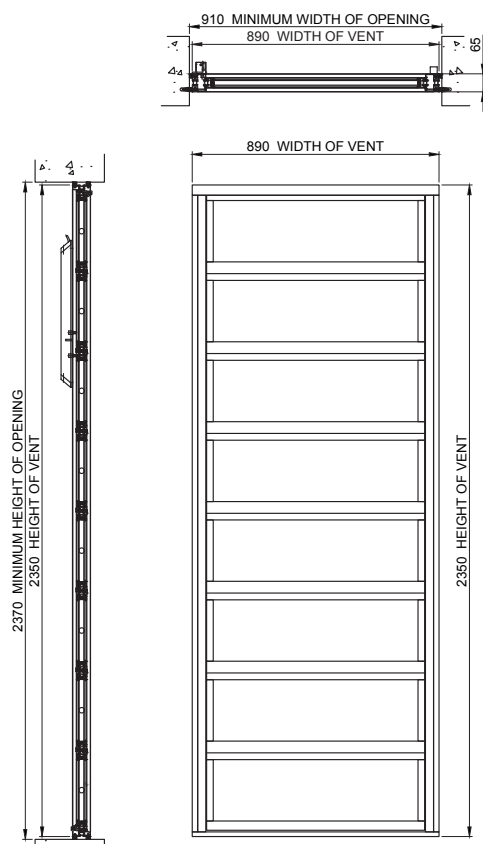
1M² Free Area GA



Powrmatic Krystalite Glazed Smoke Ventilator

Vent, 890 wide x 1620 high
 LLA16-60 S12 24V dc, 1.2A, drive open/drive closed
 DOUBLE GLAZED UNIT, LAMINATED GLASS 33.1 INSIDE - 16mm
 CAVITY - TOUGHENED HEAT SOAKED GLASS 6mm OUTSIDE
 Free Area to Approved Document B = 1.01m²
 AvCv to BS EN 12101-2 = 0.70m²
 PPC finish to a Standrad RAL/BS colour & gloss level
 Fixings thro' pre-drilled holes in each Jamb

1.5M² Free Area GA



Powrmatic Krystalite Glazed Smoke Ventilator

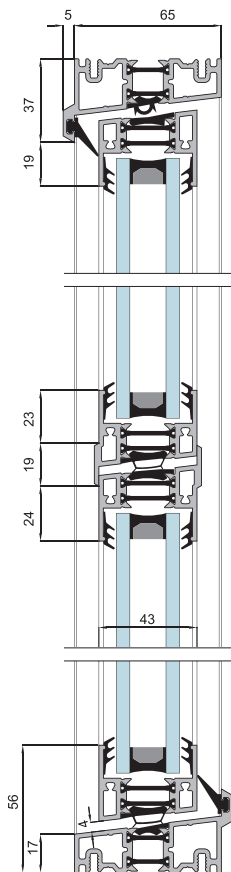
Vent, 890 wide x 2350 high
 LLA16-60 S12 24V dc, 1.2A, drive open/drive closed
 DOUBLE GLAZED UNIT, LAMINATED GLASS 33.1 INSIDE - 16mm
 CAVITY - TOUGHENED HEAT SOAKED GLASS 6mm OUTSIDE
 Free Area to Approved Document B = 1.51m²
 AvCv to BS EN 12101-2 = 1.01m²
 PPC finish to a Standrad RAL/BS colour & gloss level
 Fixings thro' pre-drilled holes in each Jamb

Glazing Profile & Dimension Calculation

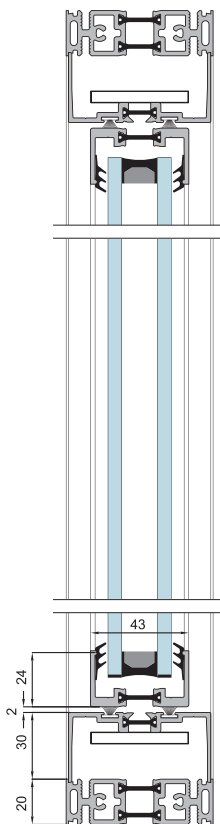
POWRMATIC

DOUBLE GLAZED DG24

Double Glazed 24mm
EN12101-2 Tested



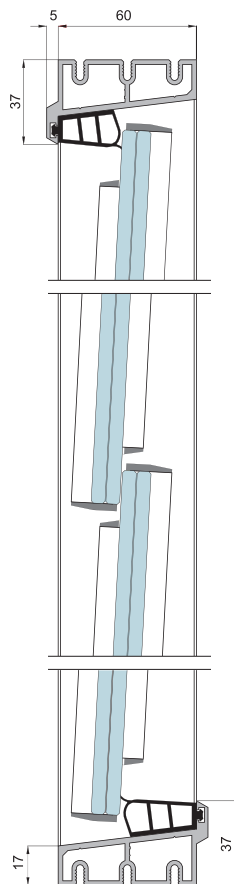
Vertical
Section



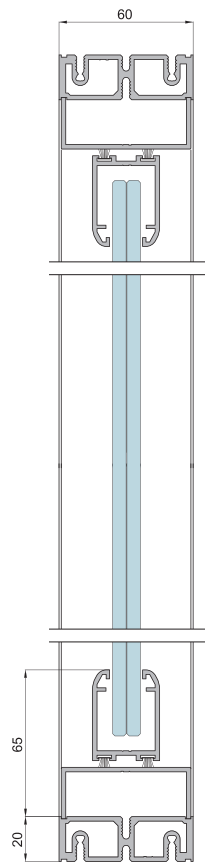
Horizontal
Section

SINGLE GLAZED G12

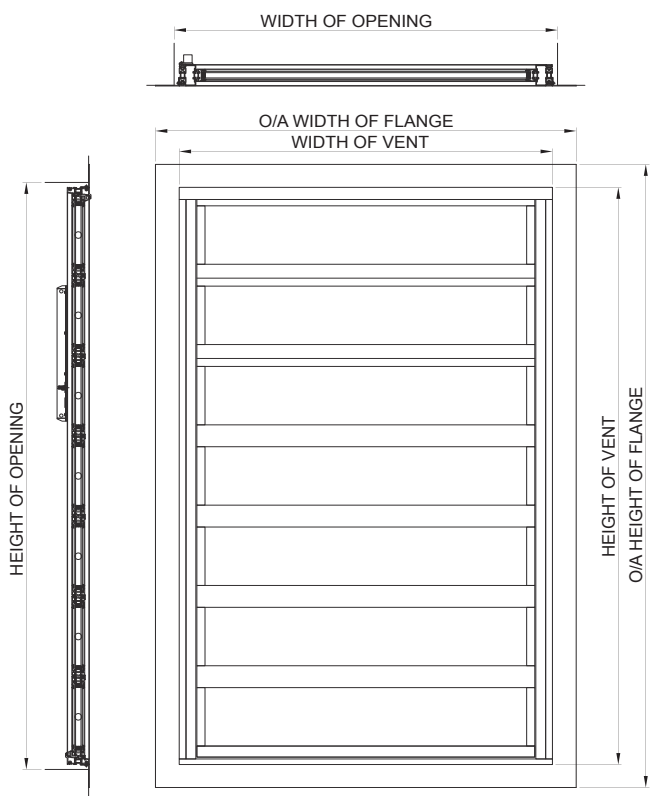
Single Glazed 12mm
EN12101 -2 Tested



Vertical
Section



Horizontal
Section



Smoke ventilation systems are not just a legal requirement, they are critical in ensuring the safety of building occupants during emergencies.





THE IMPORTANCE OF BUILDING FIRE SAFETY

A smoke ventilation system is designed to effectively remove smoke, heat, and combustion products from areas affected by fire in a building. It plays a crucial role in ensuring the safety of occupants and protecting the structure by reducing the spread of smoke and allowing for safe evacuation routes.

The main purpose of a smoke ventilation system is to manage smoke generated by a fire, as opening windows alone may not be sufficient to effectively remove smoke from the building. By venting the smoke and heat produced during a fire, smoke ventilation systems help to improve visibility, minimise the risk of asphyxiation, and create a safer environment for occupants.

Smoke ventilation systems aid firefighters by removing smoke from a building, improving visibility and allowing them to navigate and carry out their operations more effectively. Additionally, these systems help to reduce heat and toxic gases, creating a safer environment for both firefighters and building occupants during rescue operations.

In addition to providing fire safety, these systems are often designed to complement building design and architectural aesthetics.

INDUSTRY STANDARD TESTING

BS-EN12101:2 testing validates the reliability and effectiveness of smoke ventilators, ensuring optimal fire safety and smoke extraction capabilities.



NATURAL VENTILATION SYSTEMS

IAQ (Internal air quality) is vital for our health and well-being, and one effective solution to improve this is through the use of natural ventilation systems. These systems harness the power of nature to create a steady flow of fresh air indoors. By incorporating natural ventilation, we can reduce the concentration of pollutants, such as volatile organic compounds (VOCs) and harmful chemicals such as CO² that can accumulate in enclosed spaces.

Natural ventilation systems utilise strategically placed vents to facilitate the exchange of stale indoor air with clean outdoor air. This not only improves air quality but also helps regulate temperature and moisture levels, creating a comfortable and healthy indoor environment.

By embracing natural ventilation systems, we can harness the power of nature to enhance our internal air quality, creating spaces that promote our well-being and productivity.

Indoor air quality is just as important as outdoor air quality.



BESPOKE CAPABILITIES

Powrmatic has the expertise to design a system that perfectly aligns with the unique requirements of your project. Whether you need integrated solutions for day-to-day ventilation or a hybrid system combining natural and mechanical ventilation, Powrmatic can deliver the optimal solution.

POWRMATIC

LET'S TALK

About your next project.

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