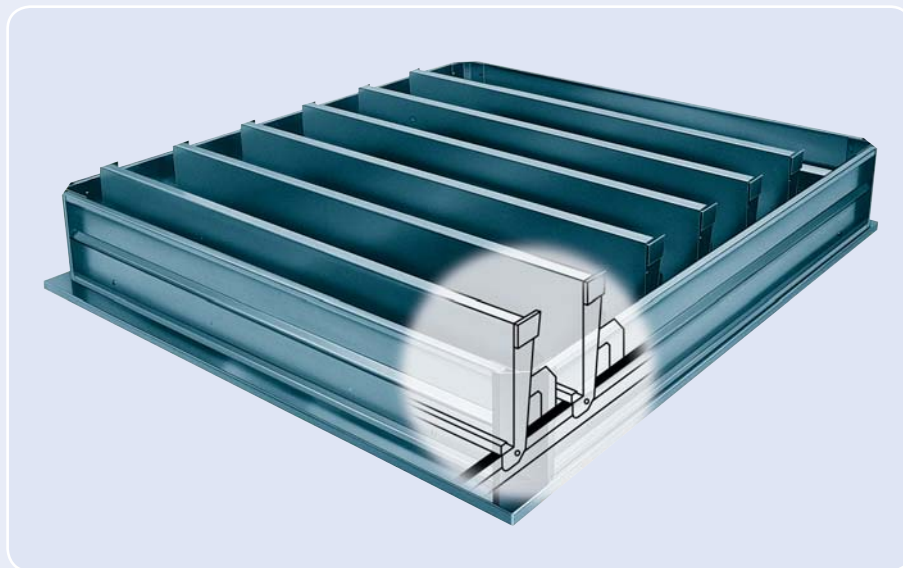


## Eura



### Multilateral louvre ventilator

The Eura is a louvre grid that extracts large volumes of warm air and smoke within a short period of time. The Eura is both suitable for air feed (facade) and air extraction (facade and roof). The fall-safe Eura is available with a variety of blade types, including a translucent design. The system offers a favourable price/performance ratio. Application: from industrial buildings and offices to shopping centres and atria.



### Materials

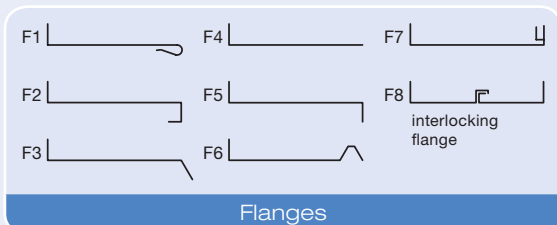
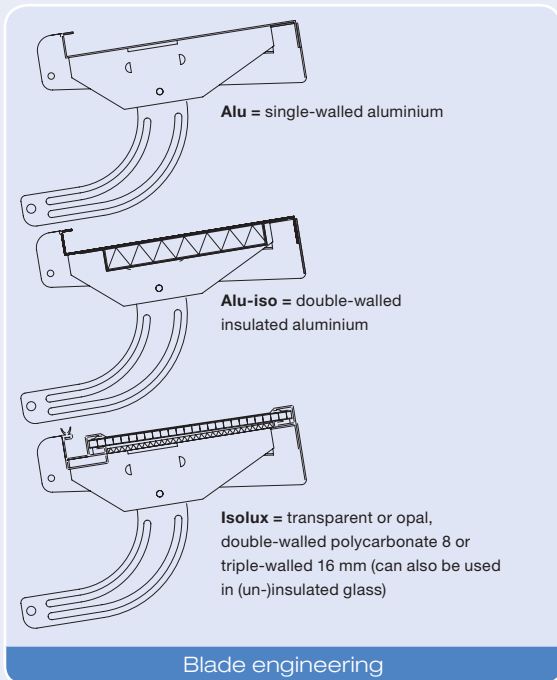
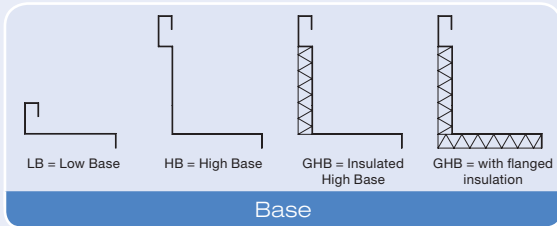
Aluminium; tempered, sea water- and corrosion-resistant AlMg3. Corrosion-resistant bearings. Seal incorporating a weather-resistant sealing strip longitudinally and energy strips. The seal is applied in such a manner that there is no risk of freezing and a high level of draft-proofness is guaranteed. The aluminium is completely corrosion-resistant and is supplied untreated as standard. If desired the Eura can be supplied in an anodised or powder-coated design (in any RAL colour you require). The Eura can also be designed to incorporate noise-damping wings and mesh grids.

## Controls

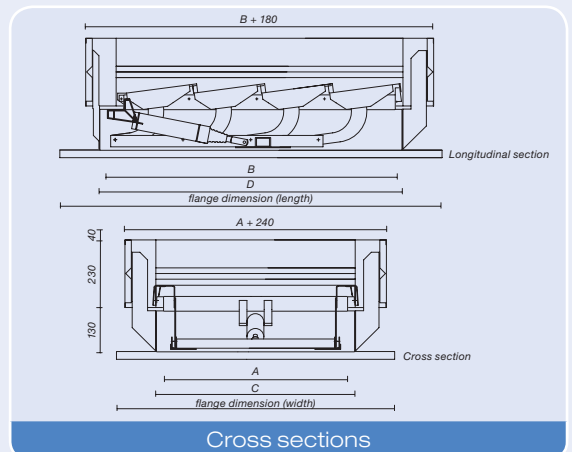
- P** single-action compressed air operation
- P2** double-action compressed air operation
- M** motor operation
- K** cable operation
- Extras: **B** including fire function
- FS** failsafe

## Regulations

The system is tested and certified in accordance with EN 12101-2.



Type	Clear width in mm				Aerodynamic surface (m <sup>2</sup> )		Weight Kg
	LG/GHB		HB		LG/GHB	HB	
	A	B	C	D			
060 - 3	600	720	640	760	0,26	0,29	19
060 - 4	600	940	640	980	0,34	0,38	23
060 - 5	600	1160	640	1200	0,42	0,46	27
060 - 6	600	1380	640	1420	0,50	0,55	30
060 - 7	600	1600	640	1640	0,58	0,63	33
060 - 8	600	1820	640	1860	0,66	0,71	36
060 - 9	600	2040	640	2080	0,73	0,80	39
060 - 10	600	2260	640	2300	0,81	0,90	42
060 - 11	600	2480	640	2520	0,89	0,98	45
060 - 12	600	2700	640	2740	0,79	1,05	48
060 - 13	600	2920	640	2960	1,05	1,14	51
120 - 3	1200	720	1240	760	0,52	0,57	28
120 - 4	1200	940	1240	980	0,68	0,73	33
120 - 5	1200	1160	1240	1200	0,84	0,89	38
120 - 6	1200	1380	1240	1420	0,99	1,06	42
120 - 7	1200	1600	1240	1640	1,15	1,22	47
120 - 8	1200	1820	1240	1860	1,31	1,38	51
120 - 9	1200	2040	1240	2080	1,47	1,57	56
120 - 10	1200	2260	1240	2300	1,65	1,74	60
120 - 11	1200	2480	1240	2520	1,82	1,91	65
120 - 12	1200	2700	1240	2740	1,94	2,04	69
120 - 13	1200	2920	1240	2960	2,10	2,20	74
180 - 3	1800	720	1840	760	0,78	0,84	36
180 - 4	1800	940	1840	980	1,02	1,08	42
180 - 5	1800	1160	1840	1200	1,25	1,32	48
180 - 6	1800	1380	1840	1420	1,49	1,57	54
180 - 7	1800	1600	1840	1640	1,73	1,84	60
180 - 8	1800	1820	1840	1860	1,97	2,09	66
180 - 9	1800	2040	1840	2080	2,24	2,33	72
180 - 10	1800	2260	1840	2300	2,48	2,58	78
180 - 11	1800	2480	1840	2520	2,72	2,83	84
180 - 12	1800	2700	1840	2740	2,92	3,02	90
180 - 13	1800	2920	1840	2960	3,15	3,27	96
240 - 3	2400	720	2440	760	1,04	1,11	45
240 - 4	2400	940	2440	980	1,35	1,43	52
240 - 5	2400	1160	2440	1200	1,67	1,76	59
240 - 6	2400	1380	2440	1420	1,99	2,08	66
240 - 7	2400	1600	2440	1640	2,34	2,44	73
240 - 8	2400	1820	2440	1860	2,66	2,77	80
240 - 9	2400	2040	2440	2080	2,99	3,10	87
240 - 10	2400	2260	2440	2300	3,31	3,42	94
240 - 11	2400	2480	2440	2520	3,63	3,75	101
240 - 12	2400	2700	2440	2740	3,89	4,01	108
240 - 13	2400	2920	2440	2960	4,20	4,33	115



Technical modifications reserved

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## Eura-R

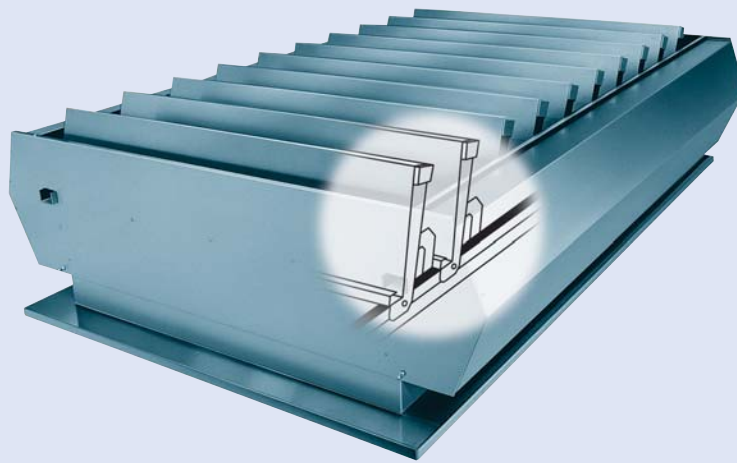


### Louvre ventilator with rain-proof side blades

The Eura-R is a variation of the standard Eura and is designed to incorporate rainproof side blades. The Eura-R is therefore ideal for all-weather day-to-day ventilation. The structure has integrated rain gutters for controlled water drainage.

Like the Eura this product can be customised with a variety of base and flange designs.

Applications: atria, shopping centres, industrial buildings, train stations and ports.



### Materials

Aluminium; tempered, sea water- and corrosion-resistant AlMg3. Corrosion-resistant bearings. Seal incorporating a weather-resistant sealing strip longitudinally and energy strips. The seal is applied in such a manner that there is no risk of freezing and a high level of draft-proofness is guaranteed. The aluminium is completely corrosion-resistant and is supplied untreated as standard. If desired the Eura-R can be supplied in an anodised or powder-coated design (in any RAL colour you require). The Eura-R can also be designed to incorporate noise-damping wings and mesh grids.

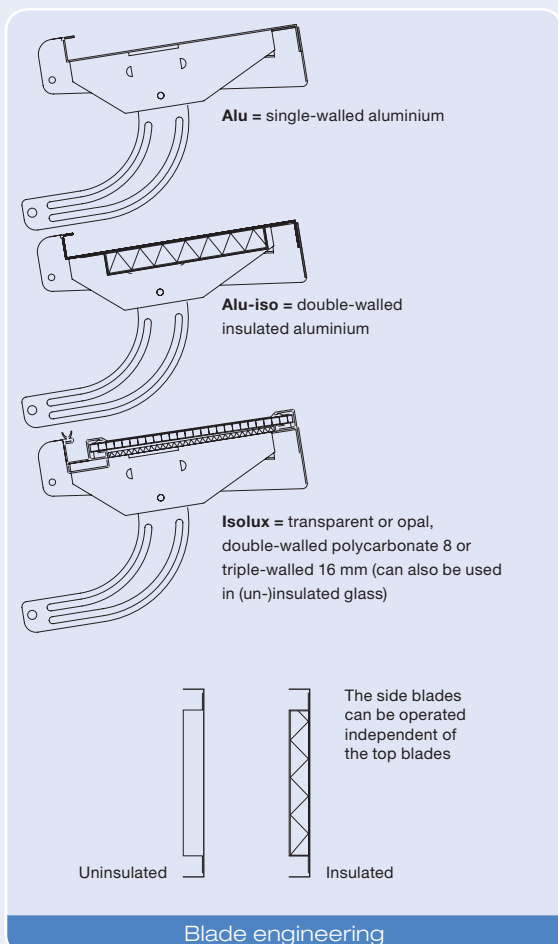
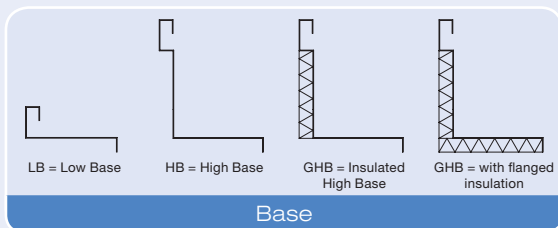
## Bediening

- P** single-action compressed air operation
- P2** double-action compressed air operation
- M** motor operation
- K** cable operation

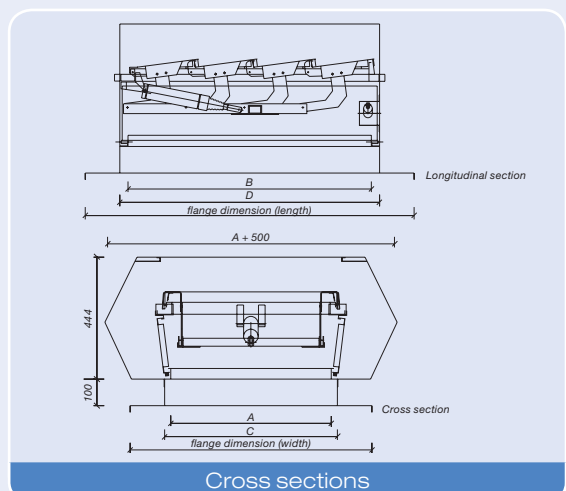
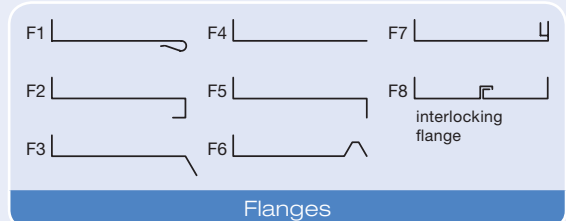
Extras: **B** including fire function  
**FS** failsafe

## Regulations

The system is tested and certified in accordance with EN 12101-2.



Type	Clear width in mm				Aerodynamic surface (m <sup>2</sup> )		Weight Kg
	LG/GHB		HB		LG/GHB	HB	
	A	B	C	D			
060 - 3	600	720	640	760	0,26	0,29	36
060 - 4	600	940	640	980	0,34	0,38	40
060 - 5	600	1160	640	1200	0,42	0,46	44
060 - 6	600	1380	640	1420	0,50	0,55	49
060 - 7	600	1600	640	1640	0,58	0,63	53
060 - 8	600	1820	640	1860	0,66	0,71	58
060 - 9	600	2040	640	2080	0,73	0,80	62
060 - 10	600	2260	640	2300	0,81	0,90	67
060 - 11	600	2480	640	2520	0,89	0,98	71
060 - 12	600	2700	640	2740	0,79	1,05	76
060 - 13	600	2920	640	2960	1,05	1,14	80
120 - 3	1200	720	1240	760	0,52	0,57	50
120 - 4	1200	940	1240	980	0,68	0,73	57
120 - 5	1200	1160	1240	1200	0,84	0,89	64
120 - 6	1200	1380	1240	1420	0,99	1,06	70
120 - 7	1200	1600	1240	1640	1,15	1,22	77
120 - 8	1200	1820	1240	1860	1,31	1,38	83
120 - 9	1200	2040	1240	2080	1,47	1,57	90
120 - 10	1200	2260	1240	2300	1,65	1,74	96
120 - 11	1200	2480	1240	2520	1,82	1,91	103
120 - 12	1200	2700	1240	2740	1,94	2,04	109
120 - 13	1200	2920	1240	2960	2,10	2,20	116
180 - 3	1800	720	1840	760	0,78	0,84	66
180 - 4	1800	940	1840	980	1,02	1,08	75
180 - 5	1800	1160	1840	1200	1,25	1,32	84
180 - 6	1800	1380	1840	1420	1,49	1,57	93
180 - 7	1800	1600	1840	1640	1,73	1,84	102
180 - 8	1800	1820	1840	1860	1,97	2,09	111
180 - 9	1800	2040	1840	2080	2,24	2,33	120
180 - 10	1800	2260	1840	2300	2,48	2,53	129
180 - 11	1800	2480	1840	2520	2,72	2,83	138
180 - 12	1800	2700	1840	2740	2,92	3,02	147
180 - 13	1800	2920	1840	2960	3,15	3,27	156



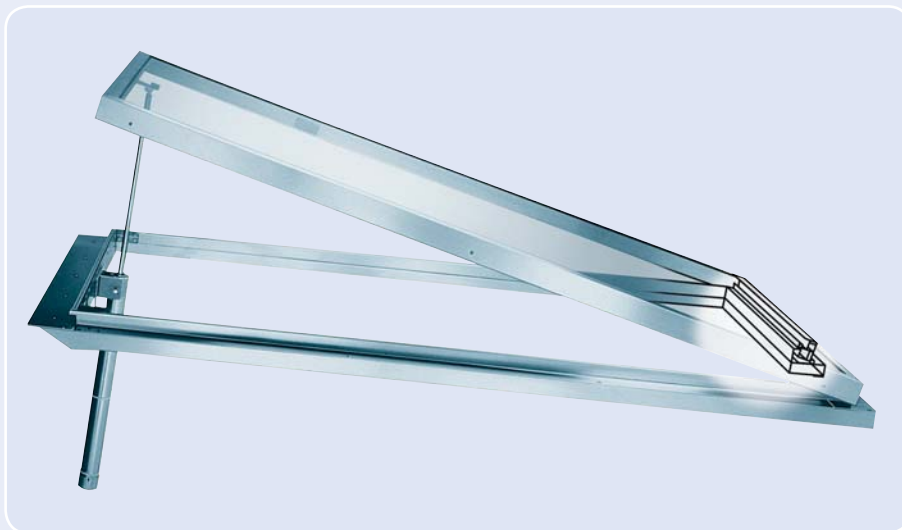
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## Ventria



### Stylish ventlight

This transparent top-hung window provides natural ventilation for both smoke and hot air. Thanks to its attractive external design the Ventria is often integrated into glazed facades and glazed roofs for air feed and air extraction. The Ventria is available in both a thermally insulated and standard insulated/uninsulated design and is suitable for all types of glass up to a thickness of 40 mm. Applications: from industrial to decorative glazed roof constructions.



### Controls

Compressed air cylinder, electric spindle motors or rotary spindle with control block. CO<sub>2</sub> control. Opening angle depends on the selected stroke length for the control mechanism. Brakel implements the compressed air controls with a double-action compressed air cylinder that is locked in its open and closed state.

## Designs

The Ventria is a hinged ventlight that can be incorporated into glazed roofs and glazed walls. The opening angle of the window in relation to the base structure is variable up to a maximum of 75°. The structure consists of tempered aluminium, sea water corrosion-resistant AlMg3.

Extruded material made of AlMg Si 0.5. The frame is sealed with EPDM rubbers to ensure optimal sealing.

The Ventria can be supplied both uninsulated (Ventria-O), insulated (Ventria G) and heat-insulated (Ventria TG).

The Ventria can be supplied in both untreated and anodised designs or powder-coated (in any RAL colour you require). Amongst other things, the following infills can be integrated into this ventlight: single- or double-walled aluminium panel, laminated glass, insulated glass, double-walled and triple-walled polycarbonate.

## External appearance, dimensions, weight etc.

Any rectangular shapes are possible as standard with a:

- maximum height of 2700 mm
- maximum width of 2000 mm
- maximum surface area of 3.5 m<sup>2</sup>
- maximum weight of the panel is 35 kg/m<sup>2</sup>

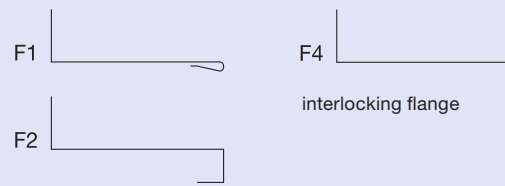
Alternative dimensions, panels and shapes can be supplied on demand.

The weight depends on dimensioning and panel.

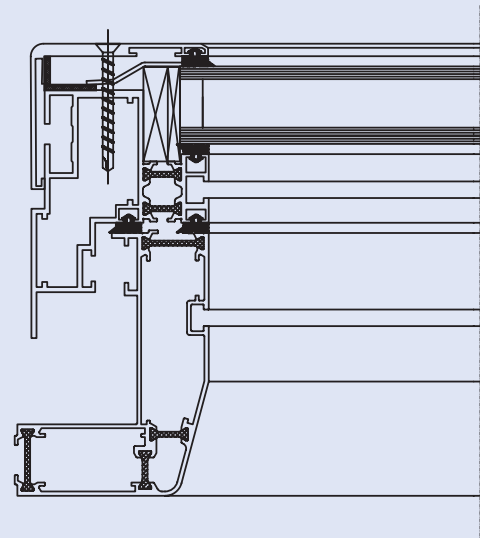
The maximum weight of the panel is 35 kg/m<sup>2</sup>.

## Regulations

The system is tested and certified in accordance with EN 12101-2.



Flanges



Thermisch gescheiden

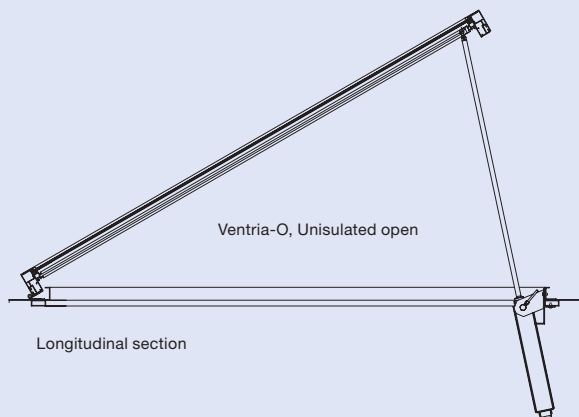
Ventria-TG, Thermally insulated shut

Cross section



Ventria-O, Uninsulated open

Longitudinal section



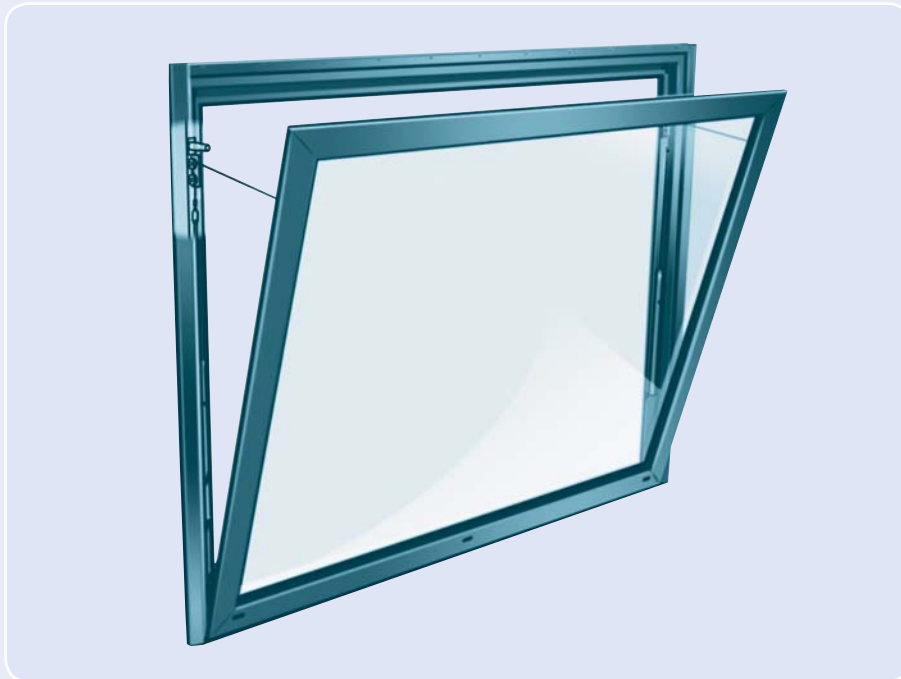
Cross sections

## Inova



### Stylish ventlight for facade application with concealed controls

The Inova is a natural ventlight that is suitable for natural, day-to-day ventilation and for fire ventilation. The Inova - with its slim profile - is an aesthetic, high-grade ventlight for facade applications. The controls for the frame have been completely embedded in the structure. Applications: atria, shopping centres, train stations and airports.



### Options

The Inova can be supplied untreated, anodised or powder-coated (in any RAL colour you require). The following designs can be supplied in the ventlight: single-walled aluminium, double-walled aluminium insulated, laminated glass, insulated glass and double-walled polycarbonate.

## Designs

The Inova has an extremely slim profile which means that the system is ideally suited for use in facades. The mounting angle is 90°, the opening angle in relation to the base structure is 30° as standard. The Inova is used for both day-to-day ventilation and fire ventilation. The structure consists of a completely thermally insulated aluminium profile section.

The design ensures that the external appearance has also been perfectly finished in detail. The frame is sealed with EPDM rubbers.

## Regulations

The system is tested and certified in accordance with EN 12101-2.

## Flanges

The flange thickness of the Inova can be varied from 5 mm to 55 mm.

## External appearance

Any rectangular shapes are possible as standard with:

- frame height of 600 to 2000 mm
- frame width of 600 to 2500 mm
- maximum panel surface area of 3.5 m<sup>2</sup>
- glass thickness 6-40 mm
- opening angle of 30° as standard  
(variations by agreement)

The weight depends on dimensioning and panel.

The maximum weight of the panel is 45 kg/m<sup>2</sup>.

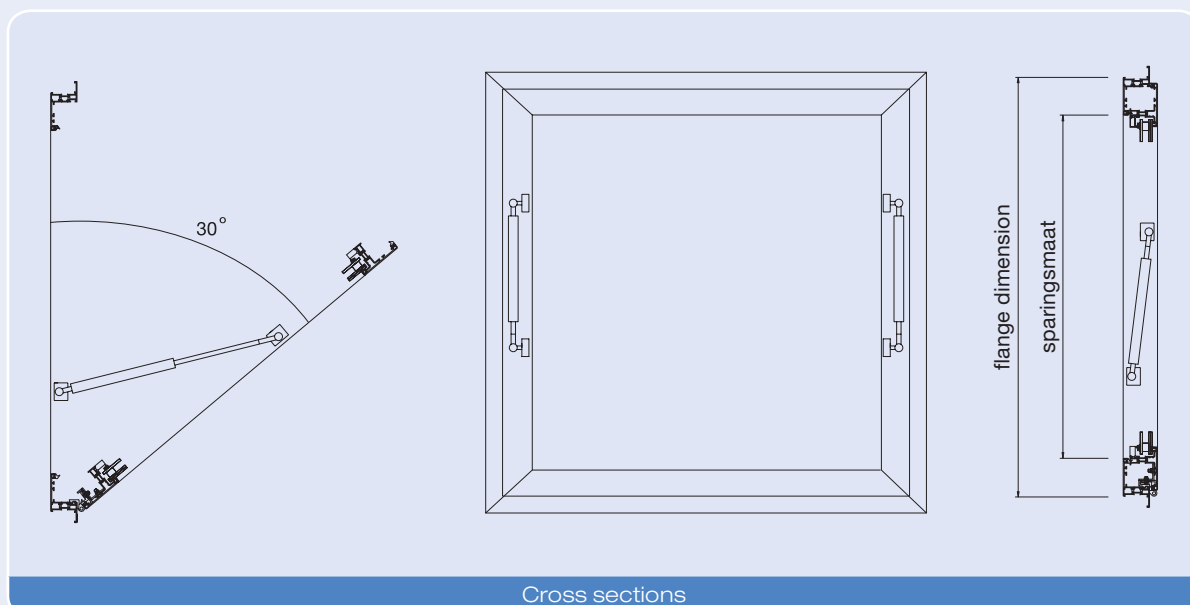
## Control system

The entire control system for the Inova is completely concealed inside the structure in its closed state. Cylinders, gas springs or motors are not therefore visible, which means that the Inova can be used in any situation. It is also possible to very easily clean the window.

**P** single-action compressed air operation

**M** motor operation

Extras: **FS** failsafe



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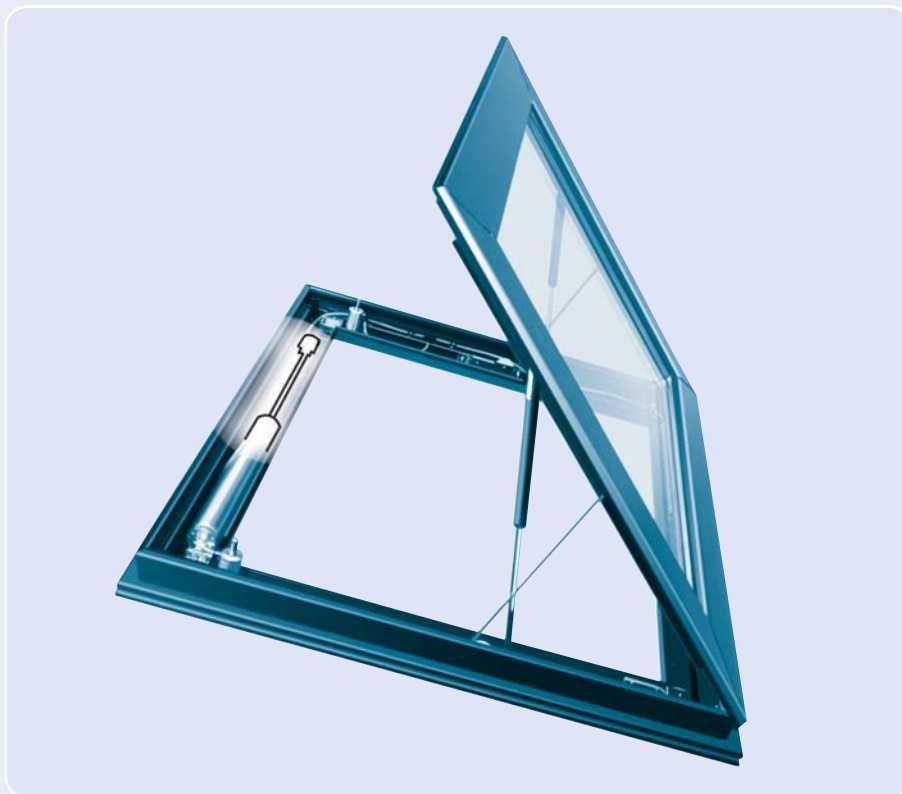
## Luma



### Stylish ventlight for roof applications with concealed controls

The Luma aesthetic (fire) ventlight is suitable for roof applications in which case both the internal and external appearance play an important role. The Luma has a small mounting height and in its closed position the controls are completely embedded in the frame.

The Luma has thermally insulated profile sections. Applications: atria, shopping centres, train stations and airports.



## Designs

The Luma is suitable for applications in roofs, with a mounting angle of 10-90°. The opening angle of the Luma is a maximum of 90° in relation to the base structure.

The structure consists of completely thermally insulated aluminium profile sections. The design ensures that the external appearance has also been perfectly finished in detail. The frame is sealed with EPDM rubbers.

The structure is completely thermally insulated, ensuring a high insulation value for the window.

## Options

The Luma can be supplied both untreated, anodised or in any RAL colour you require. The following designs are possible in the ventlight: single-walled aluminium, double-walled aluminium insulated, laminated glass, insulated glass and double-walled polycarbonate.

## Regulations

The system is tested and certified in accordance with EN 12101-2.

## Flanges

The flange thickness of the Luma is a minimum of 24 mm.

## External appearance

Any rectangular shapes are possible as standard with:

- frame height of 600 to 2000 mm
- frame width of 600 to 2500 mm
- maximum panel surface area of 3.5 m<sup>2</sup>
- glass thickness 6-40 mm
- mounting angle of 10°-90°
- opening angle of a maximum of 90°

The Luma can also be supplied in a triangular shape.

The weight depends on dimensioning and panel.

The maximum weight of the panel is 45 kg/m<sup>2</sup>.

## Control system

The entire control system for the Luma is completely concealed inside the structure in its closed state.

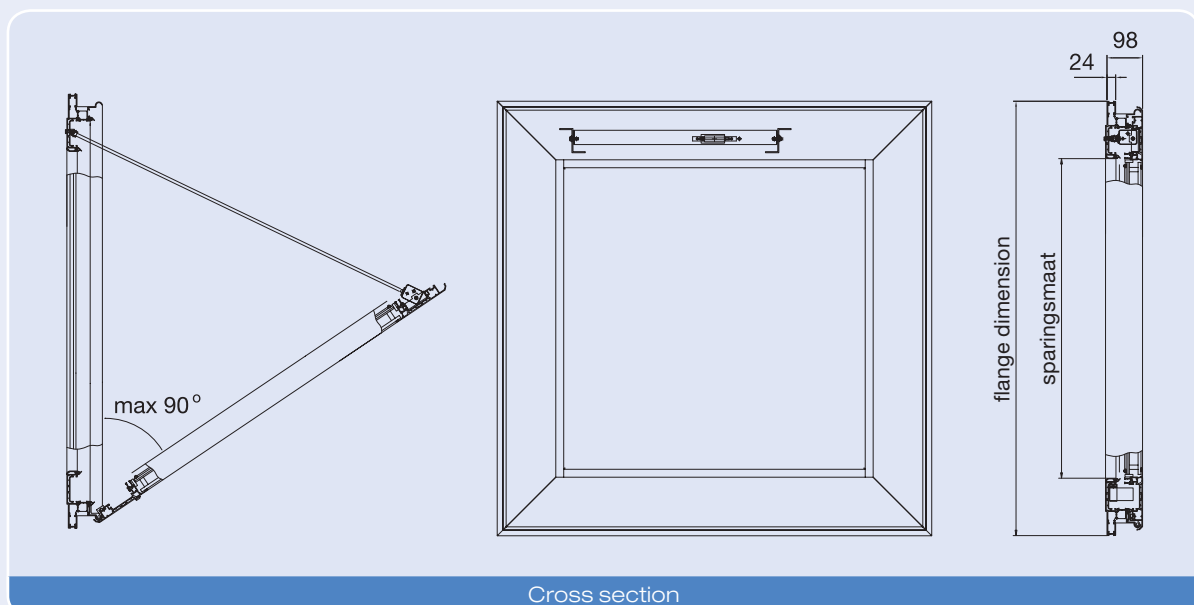
Cylinders, gas springs or motors are not therefore visible, which means that the Luma can be used in any situation.

It is also possible to very easily clean the window.

**P** single-action compressed air operation

**M** motor operation

Extras: **FS** failsafe



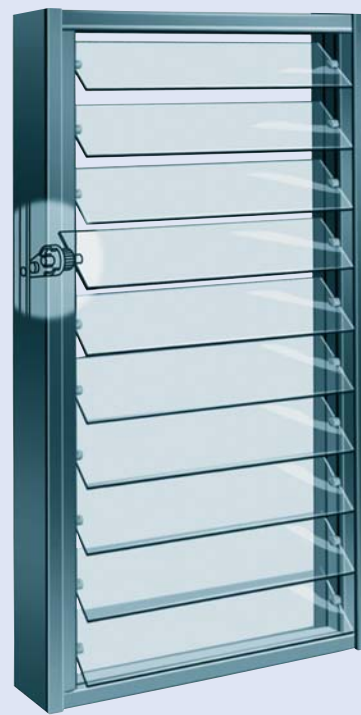
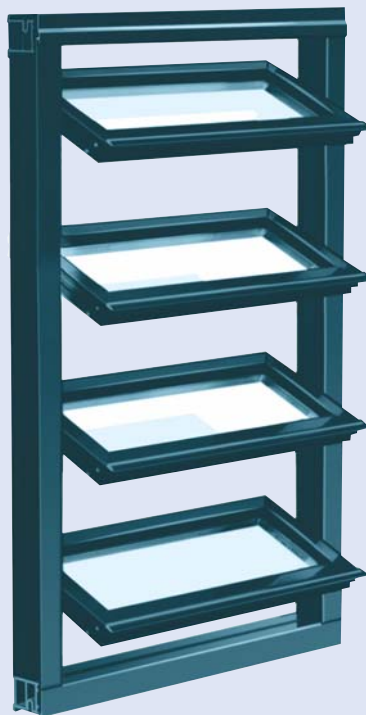
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## Estra



### Translucent louvre ventilator

The Estra is a translucent louvre system that is applied vertically and is suitable for both day-to-day ventilation and smoke and heat extraction. The Estra is an attractive and sleek structure and really comes into its own in situations incorporating a lot of glass. The Estra has thermally insulated profile sections and is designed with both insulated glass and single glazed glass. Applications: atria, shopping centres, industrial buildings and offices.



## Materials

Extruded aluminium, unfinished, enamelled or anodised. The blades have a pivoting design. Seal dependent on type of glass on glass or closure by means of mohair brushes.

## Designs

### Single glazing design:

The uninsulated design is fitted with single glazed, toughened glass with a thickness of 6, 8 or 10 mm, depending on the width. The frame is designed in a thermally insulated profile section.

### Doubled glazing design:

The insulated design fitted with insulated glass is completely thermally insulated. The blades are fitted with a thermal profile section incorporating insulated glass. The glass thickness is 24 mm. Glass composition as required.

## Details

The blade height can be selected to vary between 100 mm and 300 mm (single glazing) or 150 mm to 300 mm (double glazing). The blade height is adapted to the total height for each design. In this way all blades are equal for each design, which means that no adapters are required. Determining of the blade height for each project certainly enhances the aesthetics.

## Controls

The controls of the Estra can be implemented with different variants.

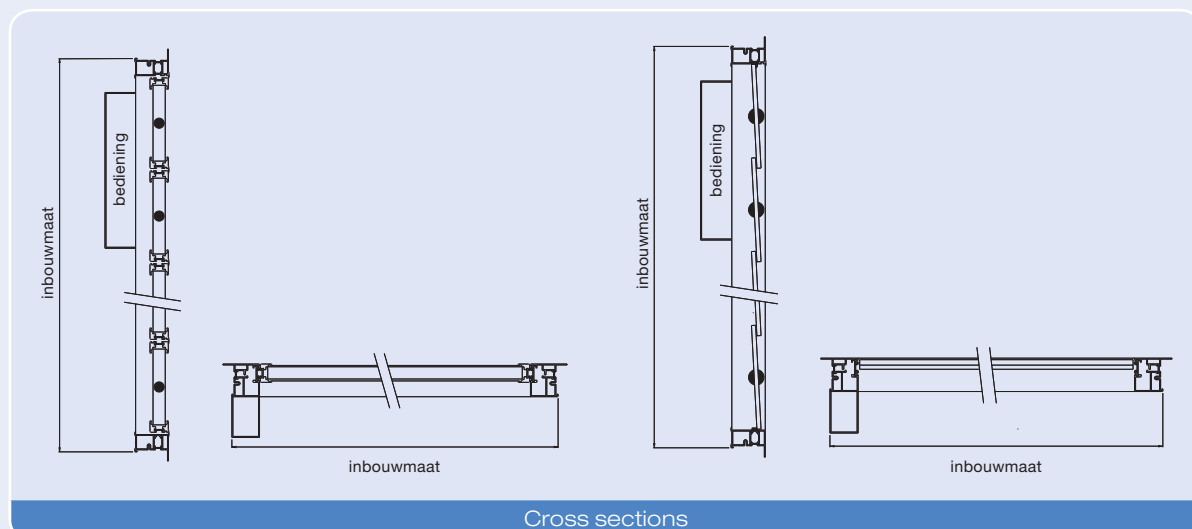
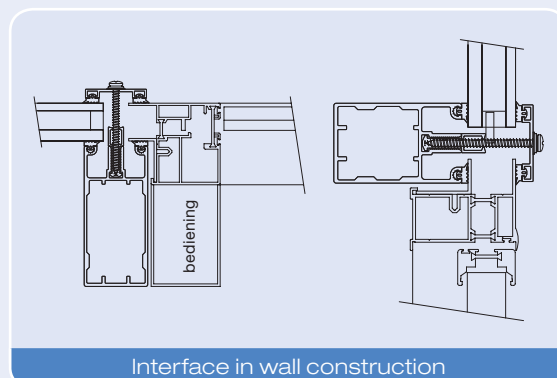
- Pneumatic controls
- Electrical controls (24/230V)
- Manual controls

## Dimensions

- A minimum of 400 x 700 (width x height)
- A maximum of 1600 x 3000 (width x height)
- Height: 700 to 3000 mm
- Width: 400 to 3000 mm (incorporating a vertical mullion from 1500 mm)

## Regulation

The system is tested and certified in accordance with EN 12101-2.



For more information please refer to our web site: [www.brakelaluminium.com](http://www.brakelaluminium.com)

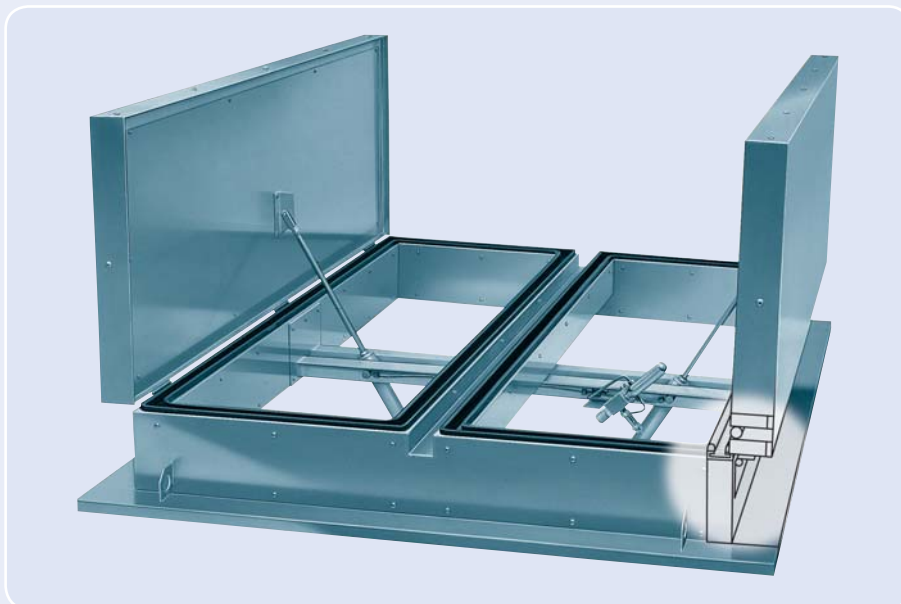
## Duo Therma



### Cold bridge-free, thermally insulated

The Duo Therma is a twin flap system and is ideally suited for buildings in respect of which stringent requirements are stipulated in respect of air sealing and thermal and/or acoustic insulation, and for buildings with a high moisture level. To minimise the formation of condensation the Duo Therma can be supplied in a thermally insulated design.

This product is available insulated, uninsulated, translucent and with a single flap (Mono Therma). Applications: atria, shopping centres, industrial buildings and offices.



### Materials

Tempered aluminium; sea water- and corrosion-resistant AlMg3. Sealing around with coated EPDM-rubbers, which prevent freezing and guarantees a high level of air sealing. As standard, the aluminium is untreated or if required enamelled in any RAL colour you require. The Duo Therma is also available with 44 dB noise-damping flaps, mesh grids and thermally insulated upstands.

## Controls

**P2** double-action compressed air operation

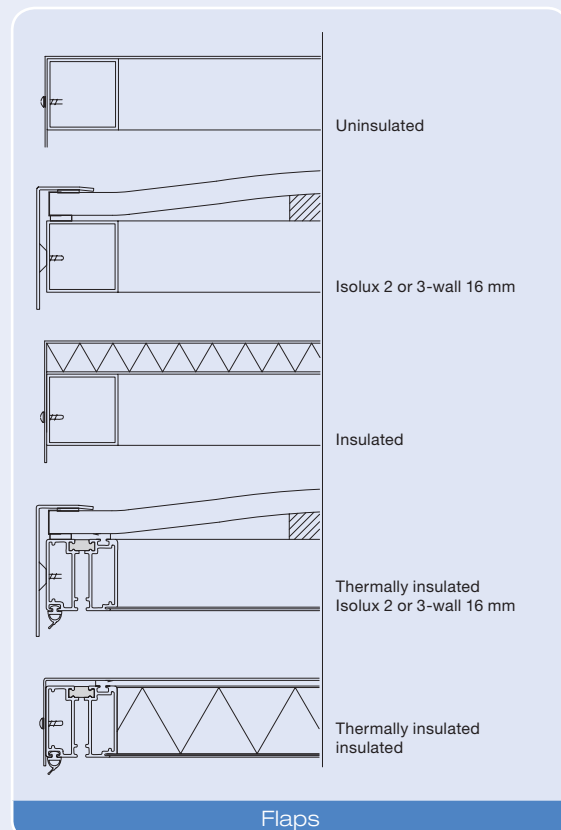
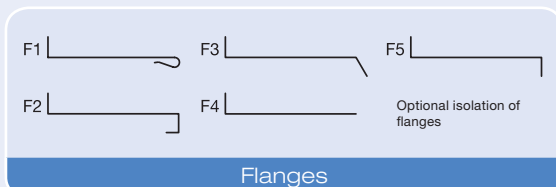
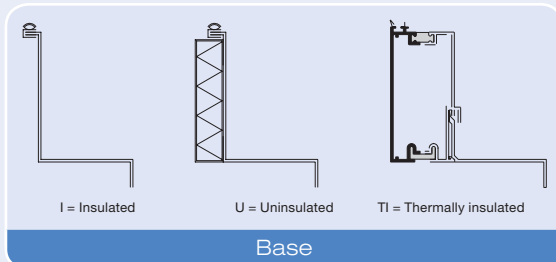
**M** motor operation

Extras: **B** including fire function

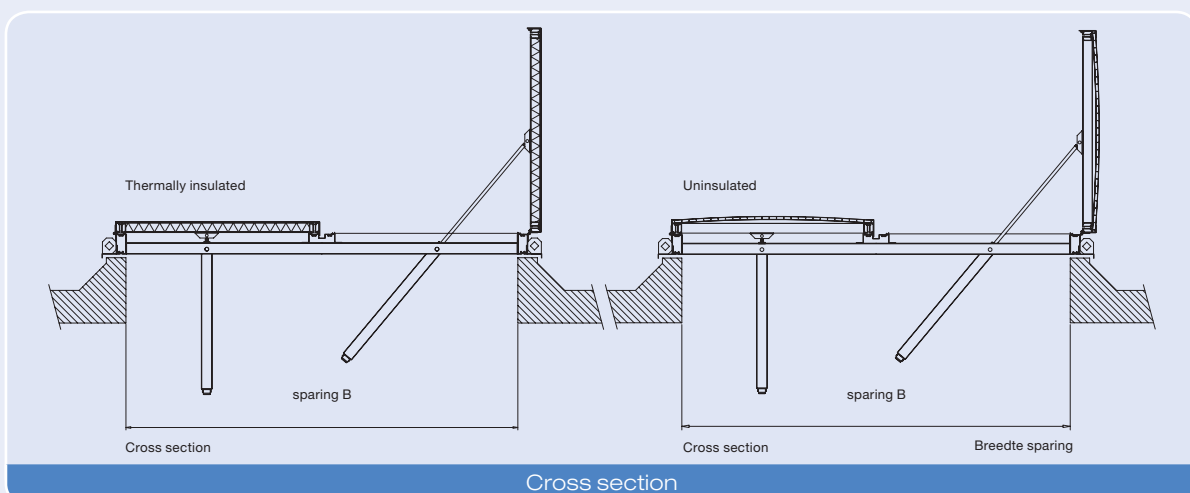
**FS** failsafe

## Regulations

The system is tested and certified in accordance with EN 12101-2.

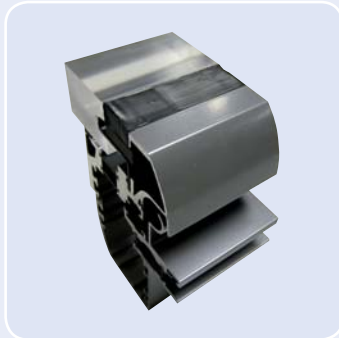


TYPE	Geom. surface m <sup>2</sup>	Aërod. surface m <sup>2</sup>	Thermally insulated weight with aluminium flaps kg	Thermally insulated weight with translucentplastic flaps kg	Uninsulated weight for aluminium flaps kg	Uninsulated weight with translucentplastic flaps kg	Height mm	Minimum clear width x length mm
1520	3,00	1,95	120	102	45	45	200	1500 x 2000
2020	4,00	2,60	140	116	60	60	200	2000 x 2000
2025	5,00	3,25	164	135	75	75	200	2000 x 2500
2525	6,25	4,06	188	150	90	90	200	2500 x 2500



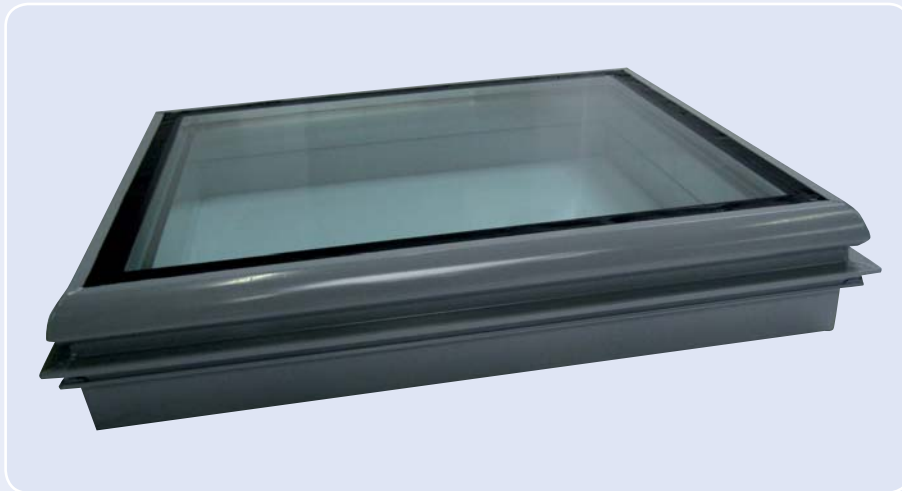
For more information please refer to our web site: [www.brakelaluminium.com](http://www.brakelaluminium.com)

## Lumera



### Architectonic (fire)ventlight

Just like the Luma, the Lumera is a high-grade architectonic (fire) ventlight. The Lumera is a combination of the Luma and the Ventria: it is a top-hung window with slim profiles and controls concealed in the frame. The Lumera has been specially developed for structural glass roofs with shallow pitch.



### Designs

The Lumera is a ventlight that can be mounted at an angle of 0-90°. The opening angle of the window in relation to the base is variable up to a maximum of 90°. As a result the Lumera is suitable for both day-to-day ventilation and fire ventilation. The Lumera consists of completely thermally insulated aluminium profiles ensuring that a high insulation value is attained. Although the Lumera is usually supplied with insulated glass, uninsulated glass (or some alternative panel) is also possible on demand. Delivery, installation and sealing of the (glazed) panel can be carried out by third-parties on site or by Brakel in the factory.

The Lumera is designed with an eye for detail and is therefore ideally suited for use in buildings with very stringent aesthetic requirements. Examples of this are the concealed controls and the glass fixing, which is not visible from the outside. If required, the Lumera can be anodised or powder-coated (in any RAL colour you require).

## Controls

For opening and closing the Lumera is fitted with one or two 24 Vdc chain motors. The controls can be designed to be fail-safe using batteries. A 230 Vac control is also possible. Gas springs can also be used to support the motors.

## Flanges

The standard flange thickness is 28 mm and can be increased as required. There are two standard flange widths, namely 30 mm or 50 mm. Various customer-specific requirements with regard to flanges can be implemented on demand.

## External appearance

Other than in its standard rectangular shape the Lumera is also available in triangular or trapezium shapes.

Dimensions and specifications:

- height: 300 to 2000 mm
- width: 600 to 3000 mm
- surface area: maximum 3.5m<sup>2</sup>
- glass thickness: maximum 37 mm
- glass: fitted with recessed frame
- glass weight: maximum 55 kg/m<sup>2</sup>
- seals: two double seals around using EPDM rubbers
- total profile height: 169 mm

## Regulations

The system has been tested in accordance with EN 12101-2.

