

## BVR

### Smoke Ventilation Window

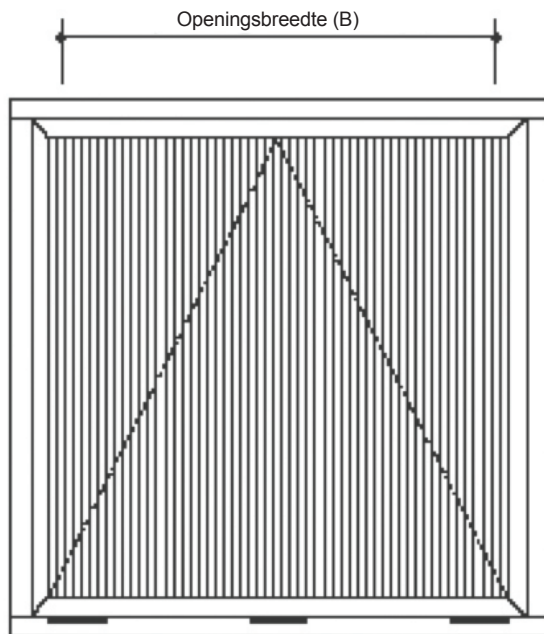
According EN 12101-2



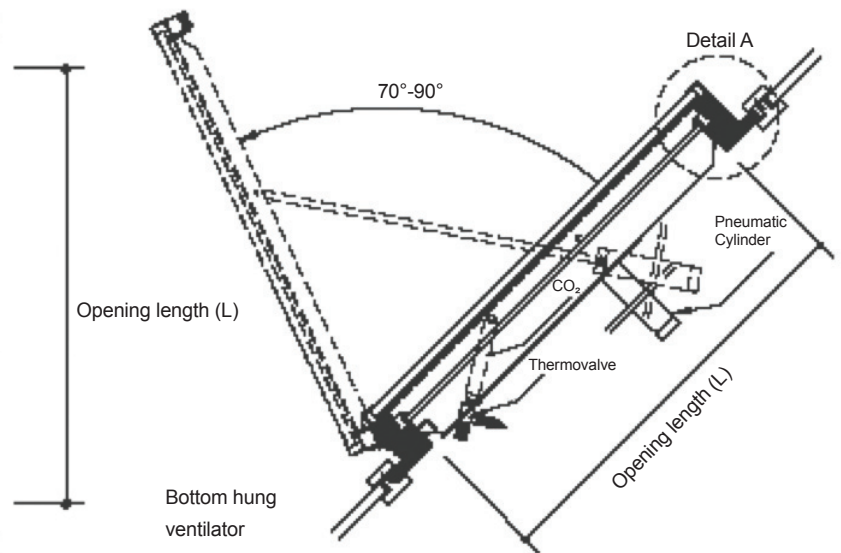
- Natural ventilation.
- Daily ventilation.
- Smoke ventilation (Smoke and heat exhaust).
- Daylightning.



## Intersection

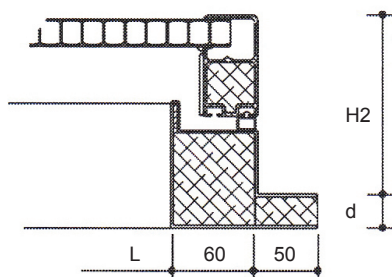


Plan



Side elevation

## Detail A



### Opening flap:

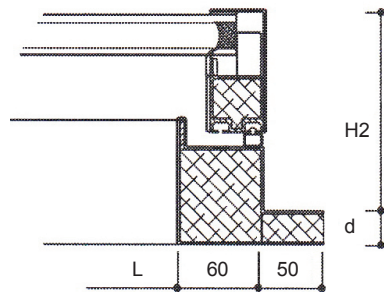
Translucent polycarbonate insulated aluminium

### Sealing:

Single/double EPDM

### Installation flange:

Double skin aluminium insulated and thermally broken high base



### Opening flap:

Glass or polycarbonate, insulated and thermally broken aluminium

### Sealing:

Single/double EPDM

### Installation flange:

Double skin aluminium insulated and thermally broken high base

## Technical information

### Geometric Area (m<sup>2</sup>)

Type	600	800	1000	1200	1400	1600	1800	2000	2200	B(mm)
600	0,36	0,48	0,60	0,72	0,84	0,96	1,08	1,20	1,32	
800	0,48	0,64	0,80	0,96	1,12	1,28	1,44	1,60	1,76	
1000	0,60	0,80	1,00	1,20	1,40	1,60	1,80	2,00	2,20	
1200	0,72	0,96	1,20	1,44	1,68	1,92	2,16	2,40	2,64	
1400	0,84	1,12	1,40	1,68	1,96	2,24	2,52	-	-	
1600	0,96	1,28	1,60	1,92	2,24	2,56	-	-	-	
1800	1,08	1,44	1,80	2,16	2,56	-	-	-	-	
2000	1,20	1,60	2,00	2,52	-	-	-	-	-	
2200	1,32	1,76	2,20	2,64	-	-	-	-	-	
L (mm)										

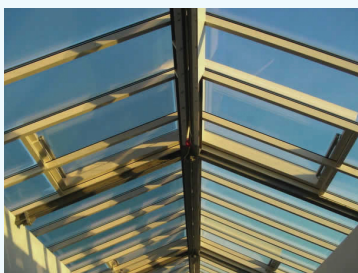
L (mm) = Opening length, B (mm) = Opening width

### Thickness of blade material in mm.

	1,5	6,0	10	16	16k	20	24	25k	30
Thermal insulation									
K-value in W/m <sup>2</sup> . K (U value)									
Single skin aluminium	5,6								
Georgian wired, toughened or laminated glass	5,1								
Translucent polycarbonate	3,1 2,3 2,0								
Insulated glass standard shape	3,0 2,9 2,8								
Insulated glass type HR	2,0 1,8 1,6								
Double skin aluminium panel with thermal insulation	1,9 1,8								
Sound reduction									
Rw-value in dB per ISO 717									

Single skin aluminium	6,0								
Georgian wired, toughened or laminated glass									
Translucent polycarbonate	17 21 21								
Insulated glass standard shape	32 35 37								
Insulated glass type HR	32 35 37								
Double skin aluminium panel with thermal insulation	22 28								
H1 in mm	60	65	80	80	80	80	85	86	95
H2 in mm	120	125	140	140	140	140	145	146	155

Montageflens dikte (d) 10 - 30 mm



## Service

BOVEMA offers a comprehensive service covering the specification and installation of our products.

## BOVEMA

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Subject to technical changes and misprints.

## Description

The casement type ventilation window BVR is suitable for daily/smoke extract ventilation respectively. The slim profiled shape makes the BVR ventilator particularly suitable for installation into the roof glazing systems used on many industrial and commercial buildings. The ventilator is available with various specifications for the opening panels. They may be fitted with translucent single or double-glazed units, to provide various levels of thermal or acoustic insulation performance and light transmission, to match the project requirements. Weatherproof EPDM seals provide a very high level of air tightness and prevent water penetration, when closed, even under extreme weather conditions.

## Operating principles

Warm air is lighter than cold air and rises by convection. This thermal principle can extract large quantities of warm air from a building without any additional electrical power consumption. The BVR ventilator is bottom hung so the panel stands up and protects the roof opening from side wind action, in accordance with the requirements for smoke extract ventilators. The ventilators provide openings that offer very little resistance to air flow. Manual or automatic controls using pneumatic or electric actuators can be combined with control panels having inputs from thermostats, rain sensors, wind sensors or fire alarm inputs to provide Building ventilation systems to meet any required control specification. In case of smoke alarm inputs the smoke ventilation windows would be controlled on a priority basis to a full locked opened position.

## Applications

Commercial and industrial buildings such as Atria and glazed areas in shopping malls, hotels and restaurants. Also apartment blocks and public buildings.

## Specifications

### Opening light Panel:

- Single skin or thermally insulated aluminium units or thermally broken and insulated units.

### Panel Inserts:

- 6 mm single glazed Georgian wired glass.
- Single or double glazed units in toughened or laminated glass (18- 30 mm).
- Translucent polycarbonate 10-16 mm, clear or opal.
- Special panels in stainless steel, copper, plastic or other materials to suit Architectural requirements.

### Base frame:

- Single skin aluminium or thermally insulated and/or thermally broken aluminium

## Controls

- Pneumatic (locked) - Power 24V DC / 230V AC
- Thermally driven (with fuse / detection) or remotely operated.
- Fuse Temperature: 68 - 93 °C.
- "Fail safe" pneumatic building controls with independent emergency - sprinkler shields open / closed position indication.

## Materials

Opening panel:	Extruded aluminium profiles AlMgSi 0,5 alloy
Installation frame:	Aluminium sheet material AlMg3 alloy
Seals:	EPDM rubber
Hinges:	Aluminium/stainless steel

## General

The ventilation windows type VR and BVR are supplied fully assembled and each is tested before delivery. As standard the unit is manufactured in natural mill finished aluminium but can be polyester powder paint finished, to any RAL colour, selected from the standard colour range. The installation flanges are manufactured to suit the specific project requirements and are fully welded to give complete weather resistance. The light weight and flexibility of construction of the VR and BVR ventilator frames allows for installation into almost any roof or rooflight construction.