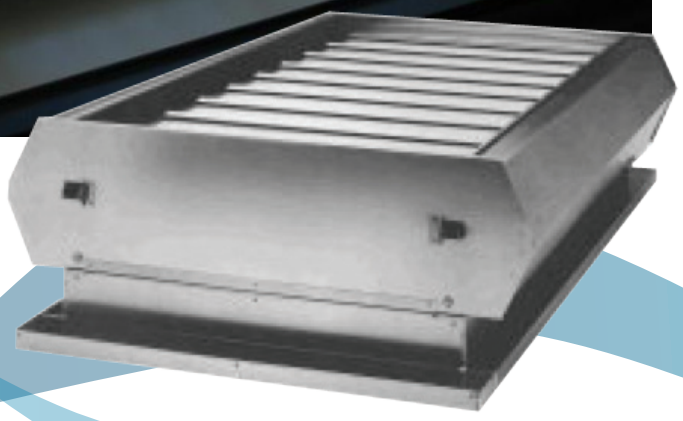
BOVEMA

TMS-DR

Standard Roof Louvre Ventilator

With weathered side ventilators. According EN 12101-2



- Natural ventilation.
- Smoke ventilation.
- Smoke and heat exhaust.
- Daylighting.

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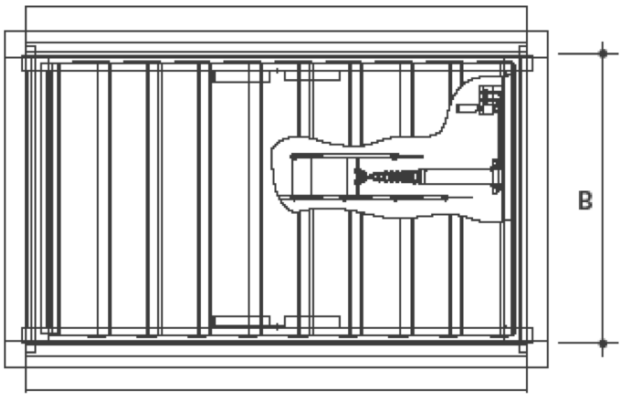
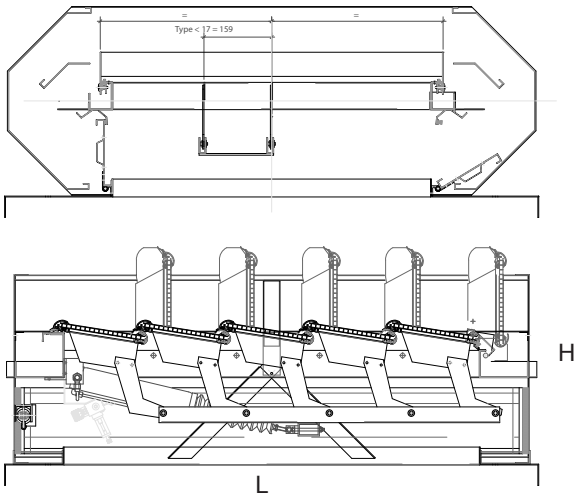
TMS-DR

Intersection

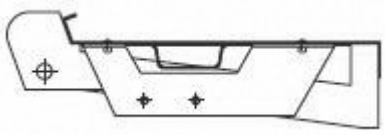


Plan

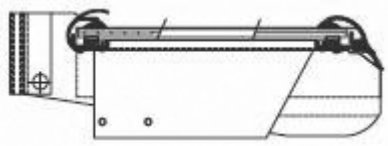


Side elevation

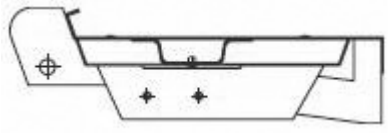
Top Louvres Blades



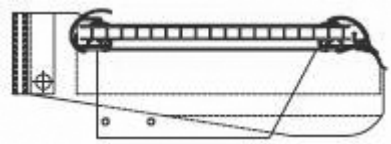
Aluminium 1,5 mm



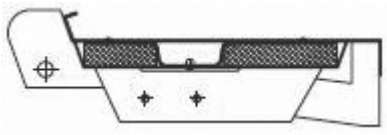
Georgian wired, toughened or laminated glass, ± 90% light transmission



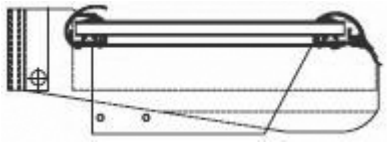
Double skin aluminium, 20 mm



Translucent polycarbonate, clear or opal with 10 mm insulation,
± 79% - 50% light transmission

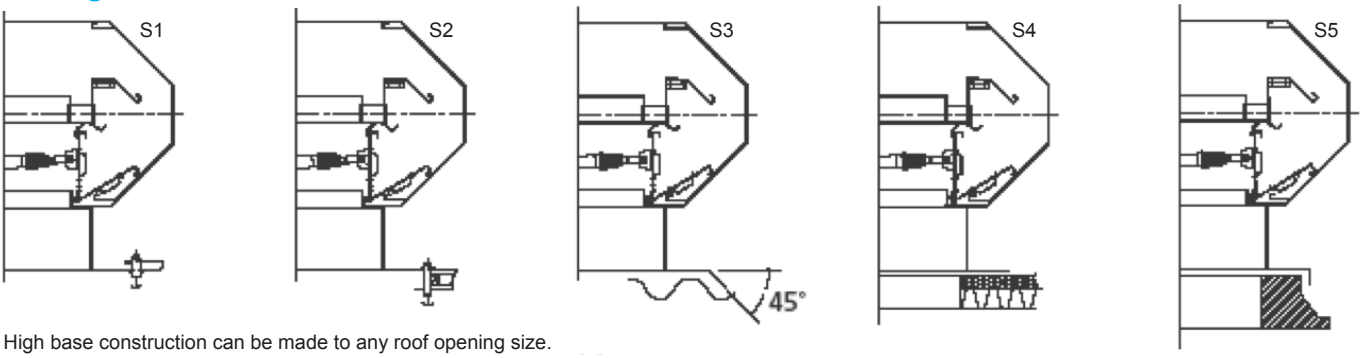


Double skin aluminium 20 mm (with extra insulation)



Aluminium sandwich, 10 mm thermal insulation

Flange details



High base construction can be made to any roof opening size.

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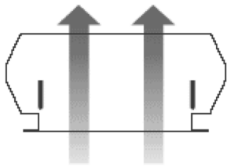
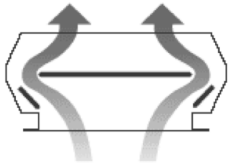
Ventilation principle

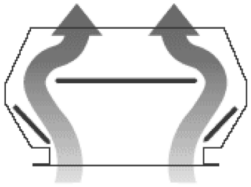
The top louvre may be replaced with a solid translucent fixed panel and the side ventilator dampers may be omitted.



Daily ventilation
Smoke/fire ventilation



Weathered ventilation
with type 150 side sections



Weathered ventilation
with type 300 side sections

Dimensions

Minimum roof opening	low base single skin aluminium	low base + fixing flange with insulation	high base single skin aluminium	high base, base with insulation	high base, base and fixing flange with insulation
Length	L	L	L	L-50	L-50
Width	W	W	W	W-50	B-50

Specification side shields

Geometric area (side dampers), Ag (m²)

Type	3	4	5	6	7	8	9	10	11	12	13	14	15	16
150	0,20	0,25	0,30	0,35	0,40	0,45	0,50	0,55	0,60	0,65	0,70	0,75	0,80	0,85
300	0,44	0,56	0,67	0,78	0,90	1,01	1,12	1,24	1,35	1,46	1,57	1,69	1,80	1,91

Hight H	High base	Low base
Side type 150	600	450
Side type 300	920	770

Technical information

TMS-DR (high base) single skin aluminium, geometric area (top louvre) Ag (m²)

Type	3	4	5	6	7	8	9	10	11	12	13	14	15	16	B(mm)
6-	0,44	0,55	0,67	0,79	0,90	1,02	1,14	1,25	1,37	1,49	1,61	1,72	1,84	1,96	**600**
8-	0,62	0,78	0,95	1,11	1,28	1,45	1,61	1,78	1,94	2,11	2,27	2,44	2,61	2,77	**850**
11-	0,80	1,01	1,23	1,44	1,66	1,87	2,08	2,30	2,51	2,73	2,94	3,16	3,37	3,59	**1100**
14-	1,02	1,29	1,56	1,83	2,11	2,38	2,65	2,93	3,20	3,47	3,75	4,02	4,29	4,56	**1400**
17-	1,23	1,56	1,90	2,23	2,56	2,89	3,22	3,55	3,88	4,22	4,55	4,88	5,21	5,54	**1700**
20-	1,45	1,84	2,23	2,62	3,01	3,40	3,79	4,18	4,57	4,96	5,35	5,74	6,13	6,52	**2000**
L (mm)	**725**	**920**	**1115**	**1310**	**1505**	**1700**	**1895**	**2090**	**2285**	**2480**	**2675**	**2870**	**3065**	**3260**	

L (mm) = Length of throat opening, B (mm) = Width of throat opening, Ag (m²) = L (m) x B (m)
Shallow Box LI = L - 140 mm, BI = B - 100 mm

TMS-DR

Service

Bovema biedt een uitgebreide service met betrekking tot de specificatie en installatie van onze producten.

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Description

The TMS-DR louvred ventilator, with weathered side sections, is designed to provide an economic, non-powered method for the removal of large quantities of warm air and/or smoke. The ventilator is particularly suitable for use in industrial buildings where low cost natural ventilation is required with a reduced weathered ventilation facility during inclement weather. Each slim line, multi purpose, ventilator is manufactured to NEN-EN-ISO 9001 quality standard control, and is designed and tested to EN-12101-2.

Operating principles

Warm air in a building rises due thermal convection and large quantities of warm air and/or smoke can be evacuated using this natural ventilation principle. The ventilation effect can be increased due to external wind action. The TMS-DR ventilator has operable top louvres, which provide substantial daily ventilation or smoke/heat evacuation. Operable and weathered side ventilators provide a lower level of weather-protected ventilation. The side dampers operate outside of the top louvre air-stream so the aerodynamic performance of the top louvres is not compromised. The top louvre and side dampers can be operated independently, to allow maximum variation of the level of ventilation. When used as a smoke extract ventilator, the louvre blades are opened on a priority control basis. Operating systems can include rain or other environmental systems to protect the building interior. The louvre section has specially designed interlocking blades, to ensure weather protection. These are angled to allow translucent louvres to be self-cleaning. The louvre blade pivots are outside the airstream to ensure maintenance free operation and specially designed seals, on each side of the blades, reduce unnecessary energy losses. The bottom hung side dampers offer minimum resistance to airflow and when closed they do not obstruct the louvre drainage facility.

Applications

Industrial buildings, particularly those with heat producing processes which require a large volume of ventilation in the summer, with reduced weathered ventilation at other times. Also smoke ventilation in the event of a fire.

Specifications

Top Louvres:	1.5 mm single skin aluminium
	10 mm thermally insulation, double skin aluminium
	20 mm thermally insulation, double skin aluminium
	6 mm single, laminated, toughened or wired glass
	10 mm translucent or opal, twin wall polycarbonate
Side dampers:	Single kin aluminium
	Insulated, double skin aluminium
Frame/Base:	Single skin aluminium
	Insulated, double skin aluminium

Controls

- Pneumatic cilinder. 1 or 2 pipe system (locked).
- Electrical motor 24V DC / 230V AC,
- “Fail safe” control, pneumatic with CO_2 bottle and fuse.
- Manual control.

Materials

Corrosion resistant aluminium, with sheet materials AlMg3 alloy. Extruded aluminium profiles from AlMgSi 0.5 alloy. All fixing are in stainless steel.

General

The TMS-DR louvre is supplied fully assembled and each is test operated before despatch.
wwThe standard unit is manufactured in natural mill finished aluminium, but a Polyester Powder Paint finish may be applied, to any standard RAL colour selected from the standard range. Other optional items such as bird screens, insect mesh, sound attenuators, sprinkler shields and open/close location devices are also available.