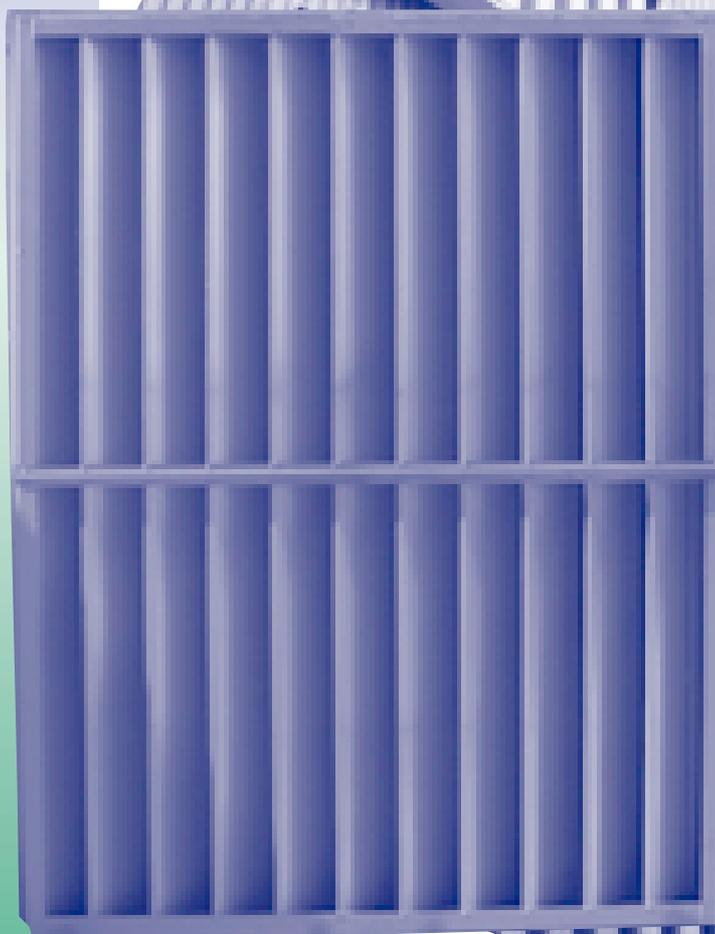


VERTICAL LOUVRES

UNILAB 1V

TSL-V

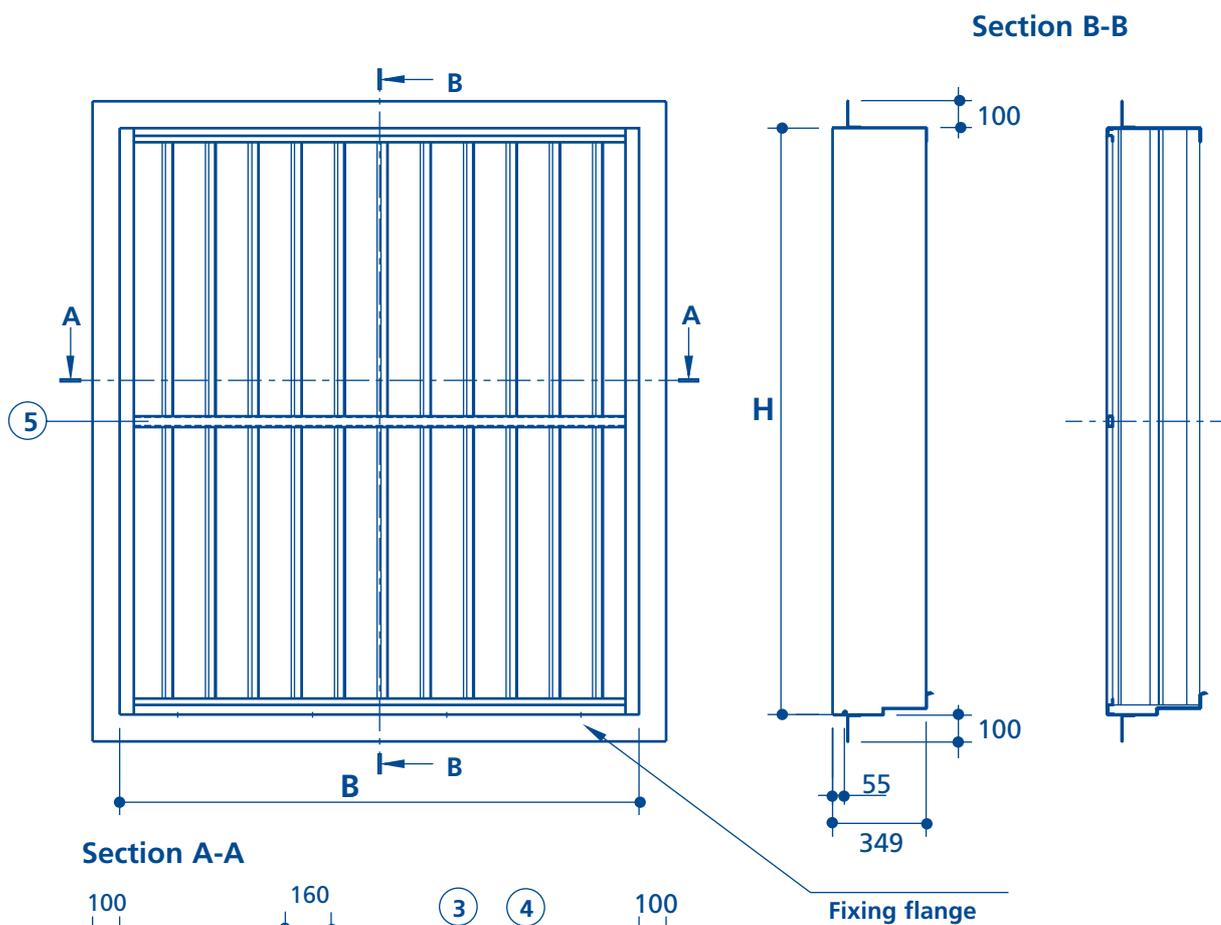
- Weathered natural ventilation
- Sound attenuated energy efficient air flow
- High capacity continuous ventilation
- Improved performance from vertical louvre blades.



Bovema 
Konstrukties B.V.

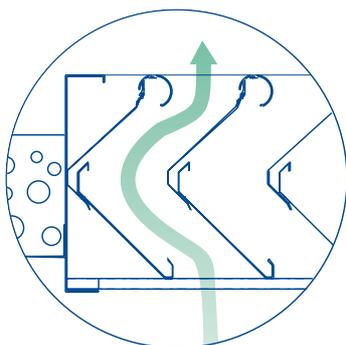
Bovema Konstrukties B.V. is a member of the international Bovema Beheer Group

TSL - 1V

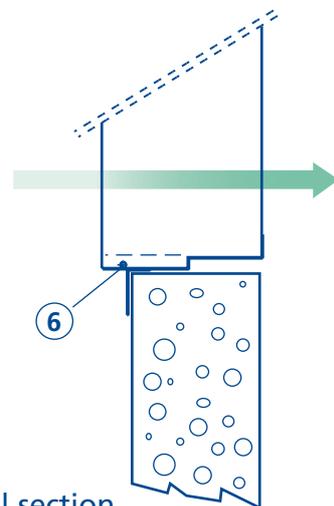


1. Fixing flange
2. Louvre box
3. Vertical rain channel
4. Vertical louvre blade
5. Louvre blade support bar
6. Drainage channel

H = max 3600 mm
 B = n x 160 mm + 200 mm



Plan section

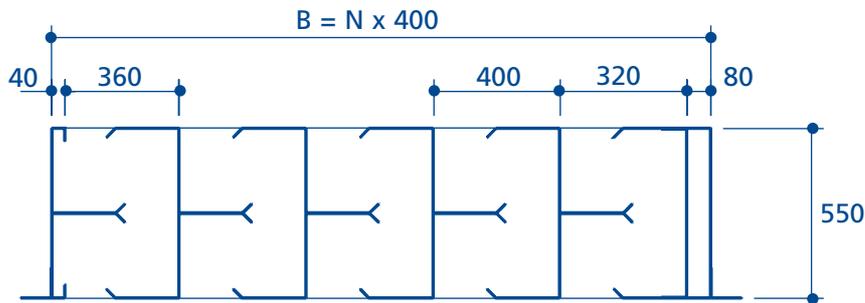


Vertical section

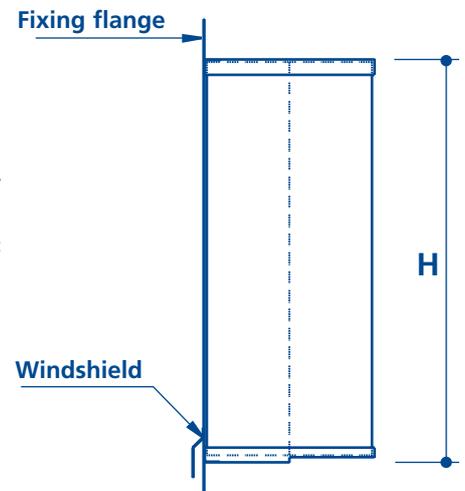
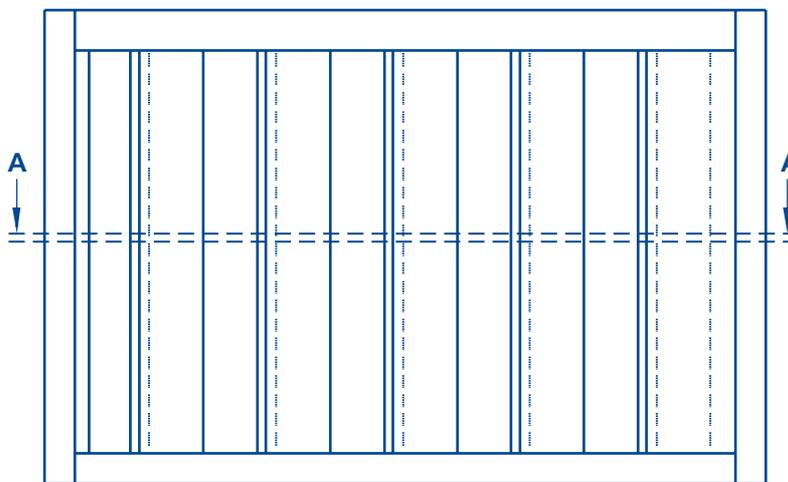


UNILAB - 1V

Section A-A



Front elevation



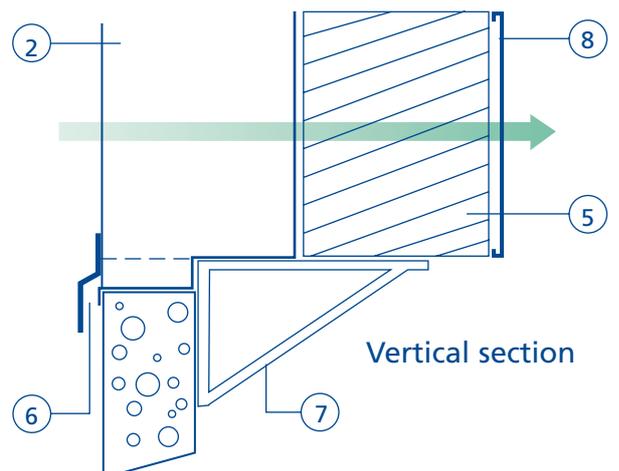
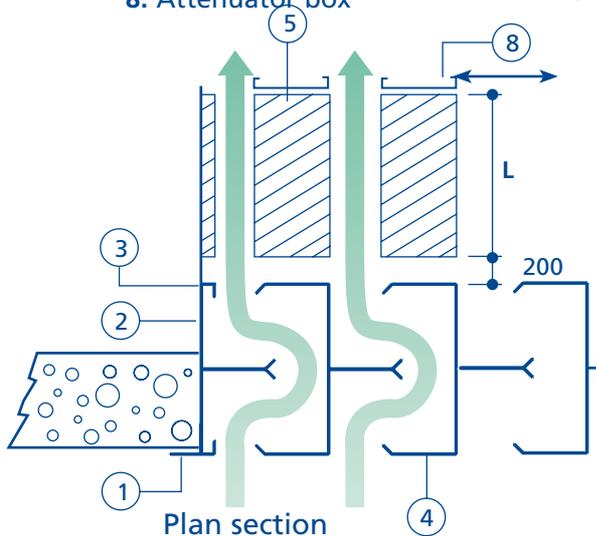
H = max 3600 mm
B = n x 400 mm

1. Fixing flange
2. Louvre box
3. Vertical rain channel
4. Vertical louvre blade
5. Sound attenuation

6. Drainage channel
7. Supporting brackets
8. Attenuator box

Attenuator depth L	Sound reduction in dB per octave band								
	Frequency >	63	125	250	500	1000	2000	4000	8000
500 mm	3.9	5.0	10.8	13.0	14.1	13.4	10.9	11.3	14
750 mm	4.4	5.5	13.5	17.0	18.7	17.2	13.0	13.2	18
1000 mm	4.8	6.0	16.2	20.9	23.3	21.0	15.0	15.1	21
1250 mm	4.6	7.2	18.9	24.1	27.6	24.2	16.6	15.8	25
1500 mm	4.3	8.3	21.5	27.3	31.9	27.3	18.2	16.5	27

Attenuator panel width = 200mm
Air passage width = 200mm



Vertical section

General information

DESCRIPTION

Bovema vertical louvre systems, UNILAB-1V and TSL-V provide energy efficient air inlet or extract units as required for industrial buildings, plant rooms or other applications where high air volumes and high levels of weather protection are required together. The vertical blade louvre systems offer much better protection against the ingress of wind driven rain or snow when compared to standard louvres with horizontal blades. The UNILAB-1V and TSL-V louvres are designed for minimum maintenance and are manufactured in accordance with quality control standards NEN-EN-ISO 9002, from corrosion resistant aluminium, to provide a long and trouble free operational lifespan. The robust and attractive system with its lightweight vertical panels is quite shallow and can be built flush into most wall constructions. This together with an extensive range of sizes means the vertical louvre system is suitable for most installations. The aerodynamic labyrinth design of the type TSL-V includes an internal vertical drainage channel to ensure maximum airflow plus a high level of weather protection. The UNILAB-1V has an overlapping internal baffle to maximise protection against wind driven rain or snow. The UNILAB -1V unit can also be used as a sand or dust filter to minimise the penetration of wind driven particles into the building. In many instances the machinery within the building produces high internal noise levels and sound attenuation to limit or prevent this noise break-out is a requirement of the ventilation system for environmental purposes. Both vertical ventilation units provide a limited level of noise protection and the UNILAB-1V ventilator with its vertical box section construction is ideally suited for the attachment of sound attenuator units. Units can have purpose designed internal sound attenuation boxes added, to meet any practically achievable design requirement for noise reduction. Stainless-steel bird and insect meshes can also be fitted to the external or internal louvre faces. Both types of vertical wall louvres are designed to provide permanent ventilation and shut off dampers or moving blades are not provided. Separate internal damper units can be added to the system where volume control or shut off is required.

OPERATING PRINCIPLES

Outside air enters the front of the louvre box. The air is then directed through a labyrinth system which changes its direction several times before allowing it to emerge from the rear of the louvre. The water or snow or dust has greater inertia than the air and its reluctance to change direction causes it to be deposited on the sides of the vertical drainage channels. It then runs vertically to the base of the louvre where it is expelled to the outside via a bottom drainage channel.

APPLICATIONS

Power stations - Waste or compost process plants - Industrial process plants - Enclosed car parks - Buildings in hot dusty environments - Electricity generation stations - Plant room inlets to air conditioning or mechanical ventilation systems.

SPECIFICATIONS

Panels: - UNILAB-1V, Blade pitch 400 mm
- Material, 1.5 mm aluminium
- TSL-V, Blade pitch 160 mm
- Material, 1.5mm and 2 mm aluminium
Housing: - Material, 2.0 mm aluminium with fully welded construction.
Assembly flanges: - Material, 5.0 mm aluminium as standard, other thicknesses available

CONTROLS

The Bovema range of vertical louvres are intended for permanent ventilation. No operating systems are available for these products. The vertical louvres can be used in conjunction with internal operable damper or louvre systems where control or shut off of the airflow is required.

MATERIALS

Corrosion resistant aluminium, AlMg3 sheet. Extruded aluminium sections, AlMg Si 0.5
Fixings in stainless steel, Plastic bearings.

GENERAL

The UNILAB-1V and TSL-V louvres are supplied as standard in fully assembled units, ready for direct installation into prepared openings. The louvres may also be supplied in broken down form for site assembly. This allows the construction of long continuous units where required. The standard product is supplied in mill finished aluminium but coating in polyester powder paint to any RAL colour selected from the standard Bovema range is available. Additional items such as bird guards, insect meshes, and burglar guards may be provided, and sound attenuation units are available for the UNILAB-1V unit only. The self-supporting construction makes the louvres suitable for installation onto any type of wall construction. The base flanges are manufactured to match individual project requirements and are fully welded to ensure they are completely waterproof.

SERVICE

The Bovema group offers a comprehensive service covering the specification and installation of our products.

