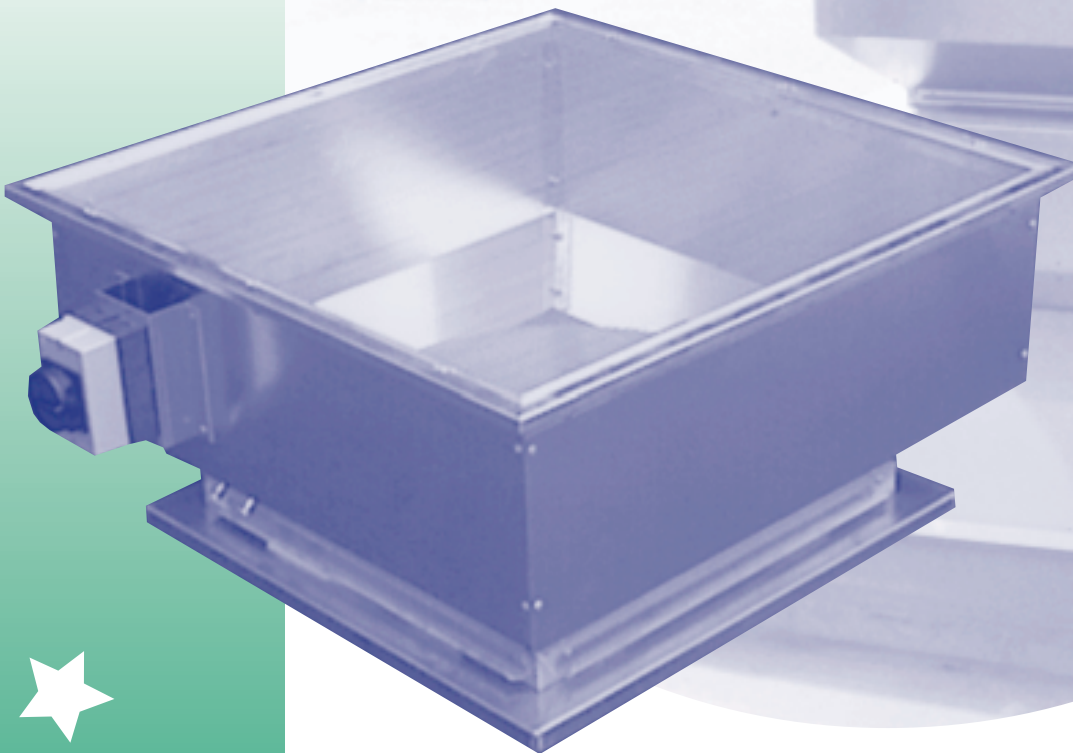


# ADV - B

## MECHANICAL SMOKE EXTRACT VENTILATOR

- Mechanical smoke and heat extract ventilator  
300 °C / 30 min
- Mechanical extract for daily ventilation
- Vertical air discharge
- Automatic weather shutter

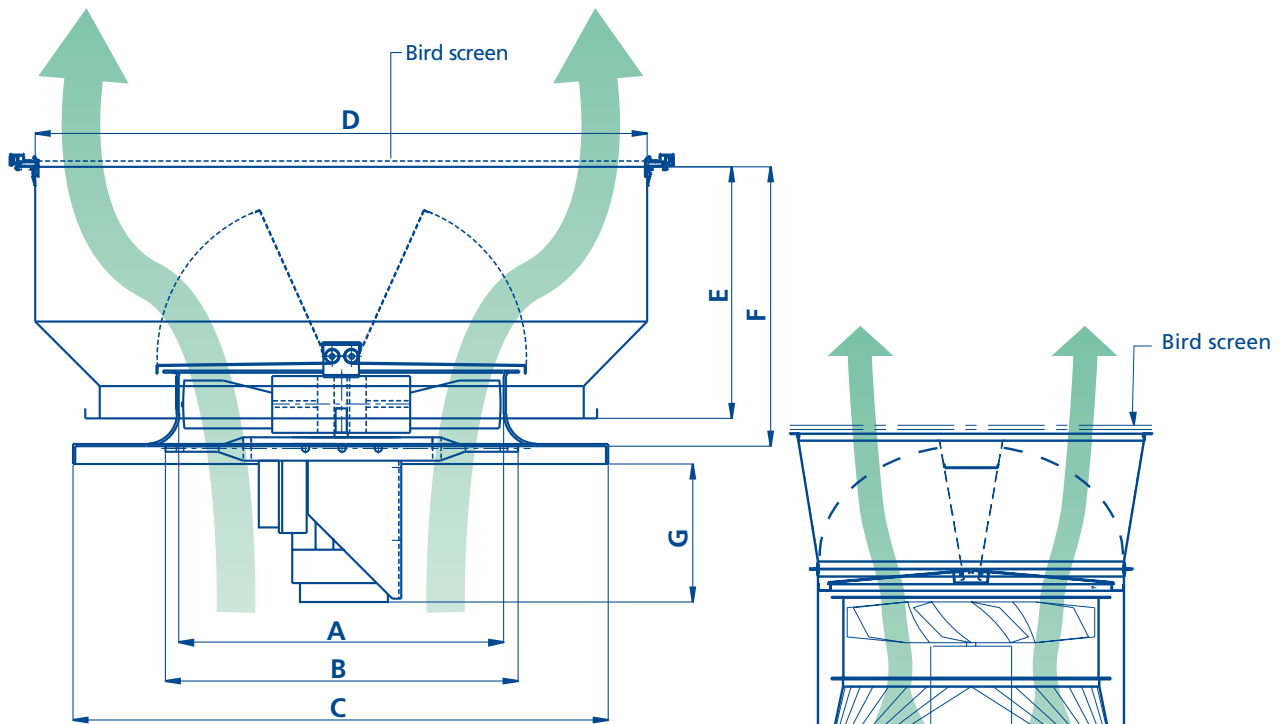


**Bovema**   
Konstrukties B.V.

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

# TECHNICAL SPECIFICATIONS

## Standard Unit Design



## Special Unit Design vertical/ horizontaal

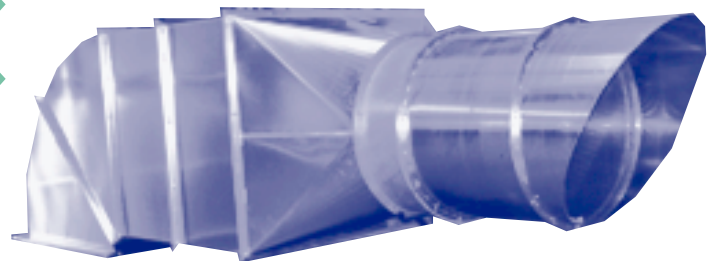
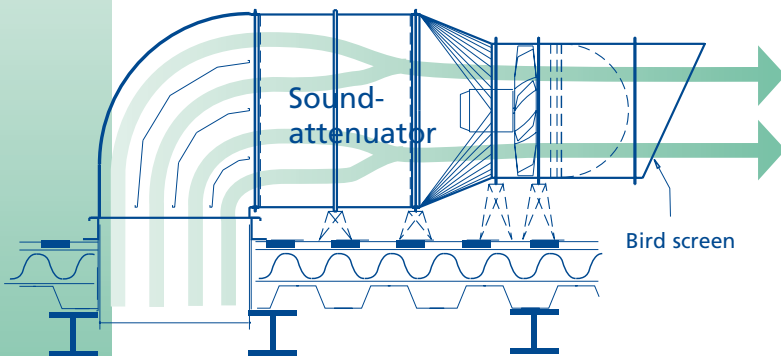
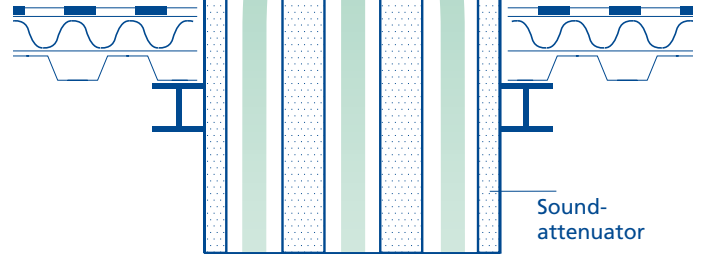
Capacity: 25.000 to 100.000 m<sup>3</sup>/h

(6.9 to 27.7 m<sup>3</sup>/s)

### Elektric motor

Power: 7.5 up to 25 kW

Supply: 400 V- A/C- 3 Ph - 50 Hz



	Sound Attenuation dB								
Frequency >	63	125	250	500	1000	2000	4000	8000	Rw
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

Length



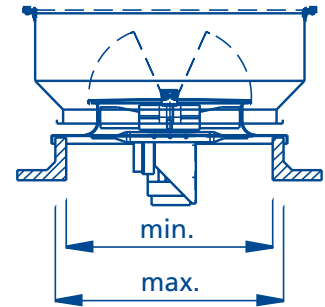
Lloyds Quality Assurance audits the production and management process twice each year

# ADV - B

## MECHANICAL SMOKE AND HEAT EXHAUST ROOF VENTILATOR

Motor data 400 V- A/C- 3 Ph Standard Design

Type	kW	Amp	RPM	dB(A)	kg
450-4	0.55	1.45	1420	63	28
450-6	0.18	0.75	920	53	28
500-4	0.75	1.90	1420	65	35
500-6	0.25	0.92	920	56	35
560-4	1.10	2.59	1410	70	48
560-6	0.37	1.25	920	60	45
630-4	2.20	4.80	1430	75	55
630-6	0.55	1.78	930	66	50
710-4	3.00	6.48	1430	77	70
710-4s	3.00	6.48	1430	82	73
710-6	1.10	3.25	930	70	68



dB(A) at 4 m. free field measurement

2 Speed motor 400V- A/C- 3 Ph

Type	kW	Amp	RPM	winding
450-4/6	0.45/0.15	1.30/0.73	1400/960	seperated
450-4/8	0.55/0.11	1.60/0.54	1380/700	Dahlander
500-4/6	0.65/0.22	1.70/0.94	1400/960	seperated
500-4/8	0.75/0.16	2.00/0.70	1390/700	Dahlander
560-4/6	1.00/0.30	2.50/1.20	1400/940	seperated
560-4/8	1.10/0.26	2.80/1.20	1410/700	Dahlander
630-4/6	2.20/0.60	4.50/2.00	1430/960	seperated
630-4/8	2.20/0.48	5.10/1.80	1430/720	Dahlander
710-4/6	2.50/0.80	5.50/2.50	1430/960	seperated
710-4/8	2.80/0.60	6.40/2.20	1430/720	Dahlander

Upstand in  $\varnothing$  (mm)

Type	min.	max.
450	480	600
500	550	700
560	580	700
630	680	800
710	750	1100

Figures for 4 pole motor

Air Capacity m<sup>3</sup>/h, system resistance in Pa

Type	0	40	60	80	100	120	140	160
450-4	7200	6800	6500	6100	5700	-	-	-
450-6	3900	-	-	-	-	-	-	-
500-4	9500	9200	8900	8400	7900	7300	6700	-
500-6	5400	4500	-	-	-	-	-	-
560-4	12300	11900	11500	11100	10600	10000	9500	8700
560-6	7700	7000	5800	-	-	-	-	-
630-4	18500	18000	17900	17000	16500	15900	15600	14500
630-6	11000	10000	9000	-	-	-	-	-
710-4	25300	25100	24400	23800	23100	22500	21600	20500
710-4s	27000	26100	25500	25000	24300	23600	23000	22300
710-6	17000	16000	15000	13400	10800	-	-	-

Type	A	B	C	D	E	F	G
450-4	450	480	650	750	370	380	235
450-6	450	480	650	750	370	380	210
500-4	500	550	750	800	385	395	235
500-6	500	550	750	800	385	395	210
560-4	560	580	750	925	430	440	235
560-6	560	580	750	925	430	440	210
630-4	630	680	850	1000	455	465	280
630-6	630	680	850	1000	455	465	235
710-4	710	750	1000	1100	515	525	300
710-4s	710	750	1000	1100	515	525	300
710-6	710	750	1000	1100	515	525	280

Dimensions in mm



Test facility

## General information

### DESCRIPTION

The **Bovema** ADV-B roof ventilator is an aluminium roof extract unit, with an axial flow fan, designed to remove large volumes of air, with low energy consumption. It is particularly suitable for the exhaust of free air from large buildings for daily ventilation, and has low system resistance. The ADV-B roof ventilator is manufactured to NEN-EN-ISO 9002 quality control standards and is designed and tested to comply with the various national standards for smoke ventilators, for example BS: 7346: Pt 2: 1990 in the UK. The ventilator is rated to operate at 300 Deg C for a minimum period of 30 min. The ADV-B discharges the air/smoke vertically, where it is diluted by outside air, clear of the roof construction. The ADV-B ventilator is suitable for continuous operation as a daily ventilator and as a once-only emergency smoke extract ventilator. The aerodynamic roof cowl is fitted with an external stainless steel birdguard and gravity based non-return shutter. The non-return shutter ensures the building remains watertight when the fan is not in operation. The lightweight aluminium construction is suitable for installation on steel, wood or concrete upstands, and can also be built in to various glazing systems.

### OPERATING PRINCIPLES

The specially designed high temperature electric motor is directly connected to the fan shaft for minimal transmission loss and the fan motor is air cooled by the extract air, which passes through the unit, to be discharged vertically from the weather cowl. The gravity shutter is lifted by the fan pressure to allow the air or smoke to be expelled. When the fan stops the shutter closes, to cover the opening, and prevents both water penetration and air loss. The shutter may be fitted with a magnetic latch mechanism, to hold it closed when ventilation is not required. It is automatically released when the power is turned on, to start the fan.

### DESIGN

- Standard:
- Fully welded aluminium base unit, for upstand or glazing system installation
  - Aluminium cased electric motor, rated at 300 deg C for 30 min
  - Aluminium axial flow fan, with adjustable blade angles (For capacities over 27000 m<sup>3</sup>/hr steel fans and fan housings are used)
  - Aluminium cowl, removable for maintenance
  - Motor with Frequency control
  - Non-return shutter
  - Stainless steel bird guard
- Options:
- Electro-magnetic shutter lock.
  - Motor protection for 100% Relative Humidity (Moisture proof)
  - Motor for non-standard voltages
  - Sound attenuator
  - Single skin aluminium upstand
  - Double skin insulated aluminium upstand

### CAPACITY

- Standard: - 3,900 m<sup>3</sup>/hr to 27,000 m<sup>3</sup>/hr (1.08 m<sup>3</sup>/s to 7.5 m<sup>3</sup>/s)  
Special design: - 25,000 m<sup>3</sup>/hr up to 100,000 m<sup>3</sup>/hr (7.5 m<sup>3</sup>/s to 27.8 m<sup>3</sup>/s)

### MATERIALS

- Installation flange: - Aluminium Al99.5 / 1S HH alloy  
Roof cowl: - Aluminium AlMg3 alloy  
Electric motor: - Cast aluminium  
Fan housing standard / special: - Aluminium Al99.5 / 1S HH / Galvanised steel  
Fan standard / special design: - Cast aluminium / Galvanised steel (fully balanced)  
Non-return shutter: - Aluminium AlMg3 alloy  
Motor connection brackets: - Stainless steel / Galvanised Steel  
Birdscreen: - Stainless steel

### GENERAL

The ADV-B mechanical exhaust fan units are supplied fully assembled and are tested before despatch. Standard units are manufactured in natural mill finished aluminium but can be polyester powder paint finished to any RAL colour, selected from the Bovema standard colour range.

### SERVICE

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

