Fresh air box ALB EC EH with electric heating element and air filter Ø 250 mm

ALB EC 250 EH

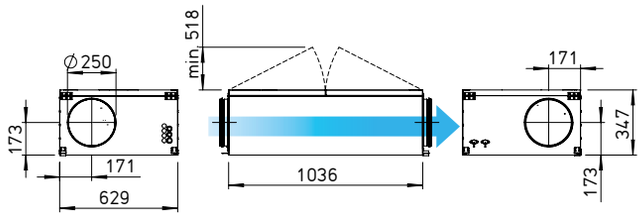


Efficiency class

B ALB EC 250 EH

EC

Dimensions ALB EC 250 EH



Dim. in mm

Application /Function
Pleasant indoor climate through the addition of external fresh air which is filtered and automatically heated to the specified temperature.

Operational unit for connection to round duct systems. Suitable for a wide range of applications.

Description / Scope of delivery
The air filter, fan, heater with controller and electrical terminal box are integrated in a compact flat casing which is thermally and acoustically insulated. Equipped as standard with a continuously variable, electronic heating controller and an external control unit for controlling the unit, as well as a connection cable (10 metres). Air quality, humidity and temperature sensors (see Accessories) can be connected to the electronics in the terminal box to control the specified setpoints.

Casing
Robust construction made of galvanised steel sheet, 50 mm thick mineral wool lining on all sides, which is also covered with dirt-repellent glass fabric. The cover is easy to open with screw caps and hinge for cleaning purposes. Round duct connectors on inlet side and outlet side with sealing lips, adapted to standard duct Ø. No thermal bridges, smooth surface for easy cleaning.

Filter
The large filter for long cleaning intervals is freely accessible by opening the casing cover. Standard version ISO $ePM_{2.5}$ 60% (M5). Alternatively, filters with higher classifications ISO ePM_1 50% (F7) (see accessories) can be used. The volume output reduction must be taken into account. Periodic filter inspection / cleaning is required. Equipment with automatic monitoring DDS (see Accessories) is recommended.

Fan
The volume flow rate switching is continuously variable with the control unit. Low-noise and high performance centrifugal fan made of galvanised steel sheet. Motor/impeller unit freely accessible for servicing. Drive through energy-saving, speed-controllable EC motor with a high level of efficiency. Maintenance-free, with lifetime lubricated ball bearings.

Heating element
Enclosed sheathed heating elements made of stainless steel with low surface temperature heat the intake air to the specified setpoint temperature.
The electronic pulser continuously variably controls the heat output in constant comparison between the setpoint and the temperature measured by the room or duct sensor.

Turn-off delay
The unit has a fixed turn-off delay time of approx. 2 minutes if the heating element has been activated.

Electrical connection
Spacious terminal box inside the casing. Cable entry from the front of the unit through three cable glands and another four holes are provided.

Motor protection
Deactivation when overheating is imminent. Automatic reactivation after cool down.

Noise
The total level and range for the case-radiated sound power and outlet side sound power in dB(A) are specified above the performance diagram. In addition, the type table shows the radiated noise and outlet side air noise as sound pressure at 1 m (free field conditions). If necessary, a cross talk silencer (see Accessories) must be integrated in the duct system on site. The radiated noise as sound pressure level at 1 m (free field conditions) is additionally stated in the type table as well as in the table below the performance curve.

Control
The control element is included in the delivery and offers the following functions:
- ☐ Operation with different volume flows.
- ☐ Weekly and seasonal timer.
- ☐ Temperature control (using room sensor, accessories).
- ☐ Control of electronic heating controller. Specification of min./ max. temperature.
- ☐ Control of an EC extract air fan.
- ☐ Display of ambient temperature, outdoor temperature, supply air temperature, fan control and filter contamination (using differential pressure switch, accessories).

Other inputs and outputs:
- ☐ Emergency switch contact.
- ☐ Boost switch contact.
- ☐ Input for air quality or humidity sensor.
- ☐ Input for room temperature sensor.



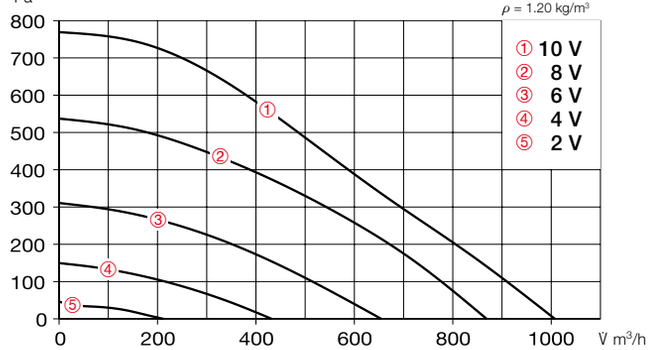
Control element with connection cable (10 m) included in delivery. For flush-mounted installation. Dimensions mm (W x H) 82 x 82

Type	Ref. no.	Flow rate* free blowing	Max. speed	Freq.	Sound pressure level		Prot. category	Voltage	Power consumption	Current consump. max. tot.	Wiring diagram	Max. intake temp.	Weight net aprx.
					Case-radiation	Air noise outlet side							
		V̇ m³/h (max.)	min-1	Hz	dB(A) at 1m	dB(A) at 1m		Volt	kW	A	No.	+°C	kg
ALB EC 250 EH	06818	1010	2810	50/60	41	63	IP44	400, 3N~	5.15	13.73	SS-1309	40	36

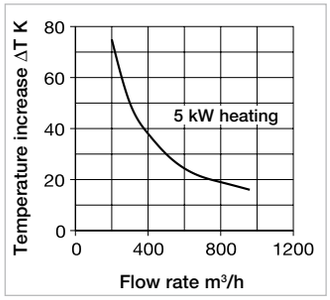
* Volume reduction by approx. 15% when using the filter ISO ePM_1 50% (F7).

Performance curves ALB EC 250 EH

Frequency		Hz	Tot.	125	250	500	1k	2k	4k	8k
L_{WA}	Radiation	dB(A)	49	34	46	41	35	33	31	29
L_{WA}	Inlet side	dB(A)	59	46	53	42	43	45	41	33
L_{WA}	Outlet side	dB(A)	71	53	68	61	62	62	58	49



	Voltage V	n min⁻¹	V̇ m³/h	P W	I A	Lp dB(A)	SFP kW/m³/s
Free blowing	10	2900	1010	147	1.18	41	0.52
	8	2530	870	99	0.82	39	0.41
	6	1900	650	45	0.40	36	0.25
	4	1300	430	17	0.17	27	0.14
	2	650	210	5	0.07	25	0.09



Reference

The integration of air filters ELF-ALB 125 F7 (ISO ePM$_1$ 50 %) and differential pressure switches DDS (accessories) in outdoor installation fulfils the requirements of VDI 6022.

Reference	Page
Planning information	14 ff.

Other accessories	Page
Silencers	496 ff.
Flexible ventilation ducts, ventilation grilles, fittings, shutters,	
Supply air disc valves	586 f.

Accessories

Replacement and pollen filter
Large cassette filter for long cleaning intervals.
Unit = 3 pcs.
– Filter class ISO ePM$_{2,5}$ 60 % (M5)
ELF-ALB 250 M5 No. 07294
– Filter class ISO ePM$_1$ 50 % (F7)
ELF-ALB 250 F7 No. 07305





Differential pressure switch
DDS Ref. no. 00445
Adjustable normally closed / normally open contact for monitoring drops in pressure.

Room sensor – Temperature
TFR-ALB Ref. no. 40000
Room temperature sensor for surface installation.

Temperature range	0 – 30 °C
Protection category	IP20
Dim. mm	W 87 x H 87 x D 30
Weight approx.	0.05 kg





Flexible cross talk silencer
FSD 250 Ref. no. 00680
For structure-borne noise-free connection of fan and piping and for suspension (1 set = 2 pcs).

Pipe clamp connectors
BM 250 Ref. no. 05079
For structure-borne noise-free connection of fan and piping and for suspension (1 set = 2 pcs).

Surface-mounted casing incl. frame
ALB-APG Ref. no. 00134
Casing for surface-mounting of control element.

Protection category	IP20
Dim. mm	W 85 x H 85 x D 48





Duct shutter
RSK 250 Ref. no. 05673
Automatic, casing made from galvanized steel.

External wall cover grille
G 250 Ref. no. 00256
Made of plastic, white. For covering and insertion in round ventilation openings.





Automatic duct shutter
RVS 250 Ref. no. 02592
With spring return, can be installed horizontally in any direction, vertically with throughflow from bottom to top. Shutter opening in flow direction; automatic function through fan operation.