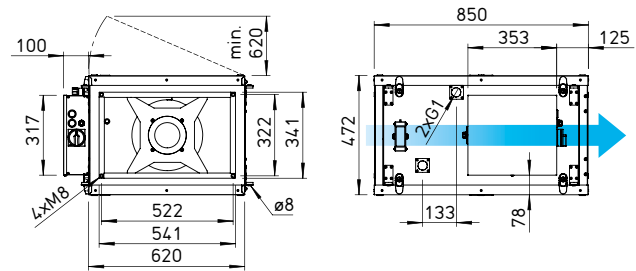


ALB EC 50/30 WW



Dimensions ALB EC 50/30 WW



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 rectangular duct systems. Suitable for a wide range of commercial applications.

**Description/Scope of delivery**

The air filter, fan and warm water heater are integrated in a compact flat casing which is thermally and acoustically insulated. The unit is delivered ready for connection and includes 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. In order to prevent frost damage to the unit, a shutter (see Accessories) is essential.

**Casing**

Robust construction made of coated steel sheet, double-walled with 30 mm thick mineral wool lining. The cover is easy to open with screw caps and hinge for cleaning purposes. Rectangular duct connectors on inlet side and outlet side, adapted to standard rectangular duct dimensions. 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 Coarse 90% (G4). Alternatively, filters with higher classifications ISO ePM<sub>10</sub> 70% (M5) or ISO ePM<sub>1</sub> 50% (F7) (see accessories) can be used. The volume output reduction must be taken into account. Periodic filter inspection /cleaning is required. A filter monitoring system is integrated. The filters comply with VDI 6022.

**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 the highest level of efficiency. Maintenance-free, with lifetime lubricated ball bearings.

**Heating element**

Air heater with AL blades and staggered copper pipes heat the intake air to the specified setpoint temperature. Control through connection of a hydraulic unit (accessories) via the integrated control board. The setpoint and the temperature measured by the room sensor (accessories) are constantly compared.

A frost protection circuit is integrated as standard. Max. operating pressure 1.6 MPa. Water connection pipes with external thread.

**Electrical connection**

Spacious terminal box in IP20 on outside of casing.

**Motor protection**

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

**Noise**

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).
- Frost protection.
- Control of hydraulic unit (accessories) to control the WW heating element. Specification of min./max. temperature.
- Control of an EC extract air fan.

- Display of ambient temperature, fan control and filter contamination.

**Other inputs and outputs:**

- Emergency switch contact.
- Boost switch contact.
- External switch.
- Input for air quality or humidity sensor.
- Input for room temperature sensor.
- Output for shutter control.

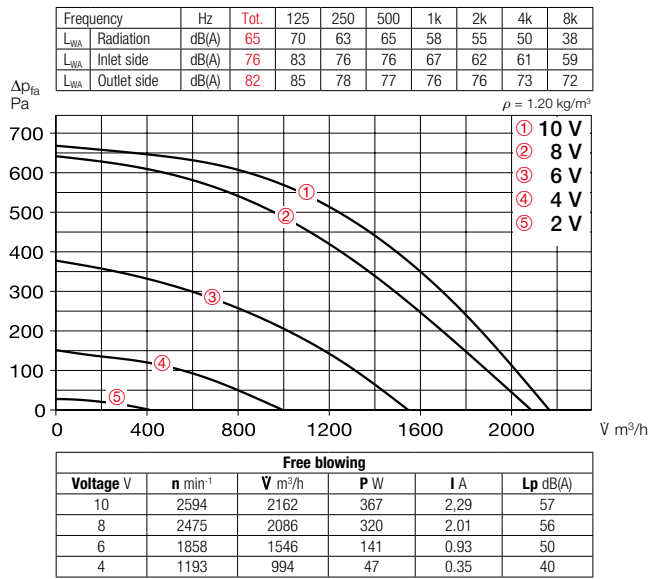


Control element with connection cable (10 m) included in delivery. Dimensions mm (W x H x D) 115 x 80 x 25

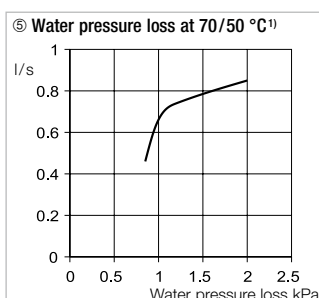
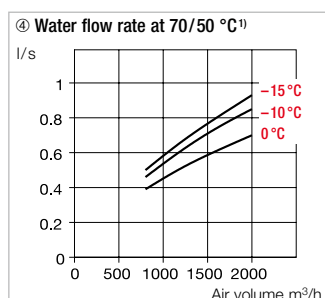
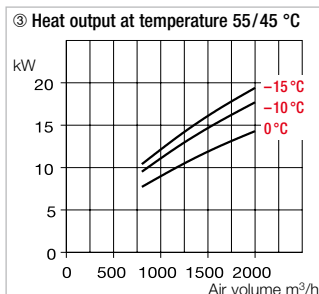
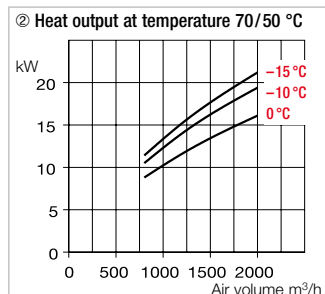
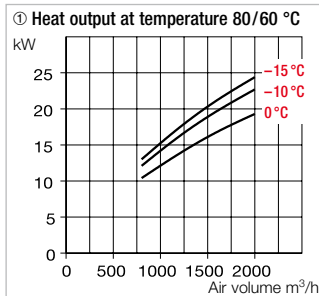
Type	Ref. no.	Flow rate* free blowing V m³/h (max.)	Max. speed min-1	Sound pressure level		Voltage 50/60 Hz Volt	Power consump.		Current consump. max. tot. A	Wiring diagram No.	Maximum intake temp. +°C	Weight net aprx. kg
				Case-radiation dB(A) at 1m	Air noise outlet side dB(A) at 1m		Motor kW	Heating kW				
ALB EC 40/20 WW	06534	2100	2600	57	74	230, 1~	0.47	-	2.90	1371	40	55

\* Volume reduction by approx. 5% when using the filter ISO ePM<sub>10</sub> 50% (M5), by approx. 15% when using the filter ISO ePM<sub>1</sub> 50% (F7).

Performance curves ALB EC 50/30 WW



- Heat output WW element ①-③  
These diagrams show the heat output depending on the flow/return/outside temp. over the air volume.
- Water volume WW element ④  
shows the water flow rate depending on the flow/return/outside temp. over the air volume.
- Pressure loss WW element ⑤  
shows the water throughflow over water pressure loss kPa.



<sup>1)</sup> Correction factor for 80/50 °C: 1.16; for 55/45 °C: 1.81.

Reference

The integration of air filters ELF-ALB 50/30 F7 (ISO ePM<sub>1</sub> 50% (F7)) in intake air systems fulfils the requirements of VDI 6022.

Reference	Page
Planning information	14 ff.

Other accessories Page

Silencers	494 ff.
Hydraulic unit details	492 ff.
Flexible ventilation ducts, ventilation grilles, fittings, shutters	561 ff.
Supply air disc valves	584 f.

Accessories

Hydraulic unit

**WHSH HE 24 V (0-10V)** No. 08318  
For controlling the heat output of the warm water heating element in combination with room/duct sensors. Includes flow/return temperature display, pump, actuator, mixer valve, gravity brake, thermal cladding and flexible connection hoses.



Replacement and pollen filter

- ISO Coarse 90% (G4)  
**ELF-ALB 220/4/50/30 G4** No. 03646  
- Filter class ISO ePM<sub>10</sub> 70% (M5)  
**ELF-ALB 220/4/50/30 M5** No. 03647  
- Filter class ISO ePM<sub>1</sub> 50% (F7)  
**ELF-ALB 220/4/50/30 F7** No. 03648  
Large cassette filter for long cleaning intervals.  
Unit = 3 pcs.



Room sensor - Air quality

**AIR1/KWL-FTF 0-10V** No. 20252  
For measuring the relative room humidity. Maximum total of one sensor can be connected.  
Dim. mm (W x H x D) 85 x 85 x 27



Room sensor - Temperature

**TFR-ALB/KWL** Ref. no. 07277  
For measuring the room temperature and controlling the ventilation unit according to the setpoint.  
Incl. 20 m control line.  
Dim. mm (W x H x D) 80 x 80 x 25

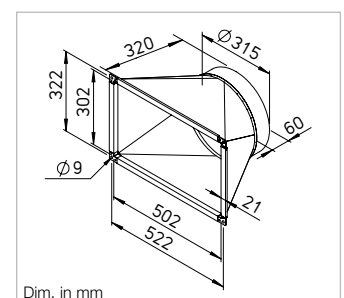


Connection cable

- 20 metres long  
**ALB EC-SK 20** Ref. no. 06816  
- 40 metres long  
**ALB EC-SK 40** Ref. no. 06817  
Attach between ALB and control element as well as between ALB and TFR-ALB/KWL.

Transition piece - Symmetrical

**ALB-ÜS 220/4/50/30** No. 07515  
From unit flange to round duct systems.



Flexible connecting sleeve

**FM 315** Ref. no. 01674  
For acoustic decoupling, incl. 2 pcs. hose clamps.

Angle flange ring

**FR 315** Ref. no. 01204  
Made of galvanised steel sheet, for duct connection.

Duct shutter, motorised

**RVM 315** Ref. no. 02578  
Prevents cold draughts when the unit is at a standstill. Automatic function through fan operation, with mounted spring return motor. Installation in any position, closing force adjustable corresponding to fan power and installation position.

