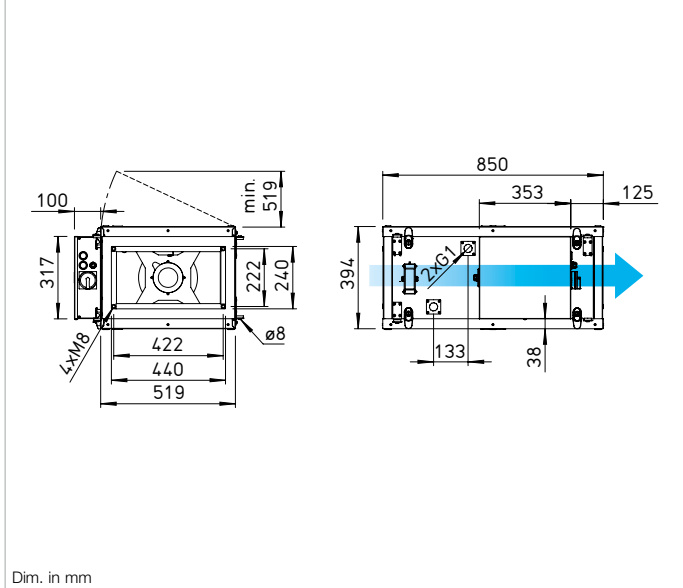


ALB EC 40/20 WW



Dimensions ALB EC 40/20 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 ePM₁₀ 70% (M5) or ISO ePM₁ 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:

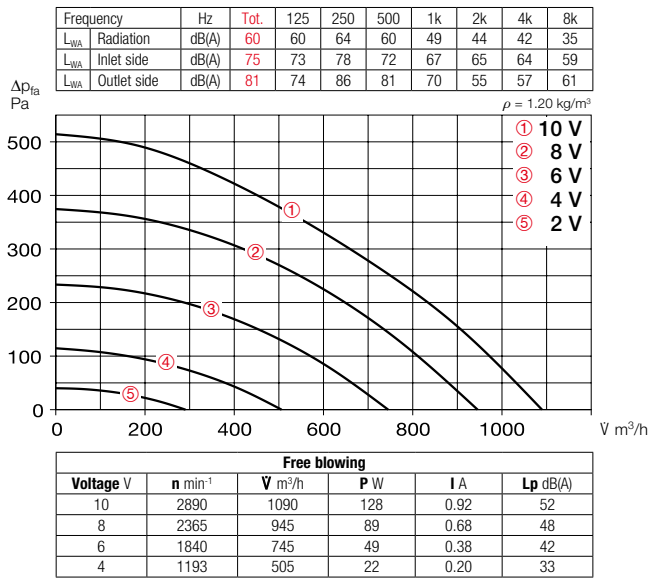
- Emergency switch contact.
- Boost switch contact.
- External switch.
- Input for air quality or humidity sensor.
- Input for room temperature sensor.
- Output for shutter control.



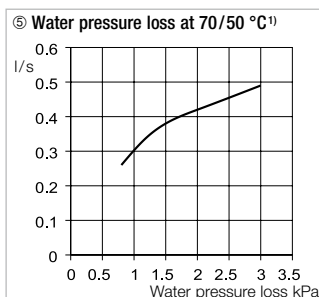
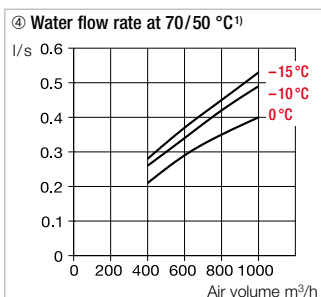
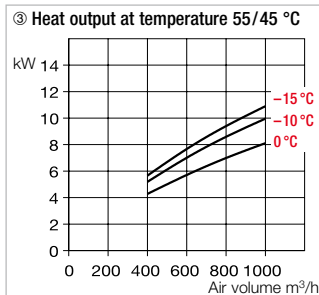
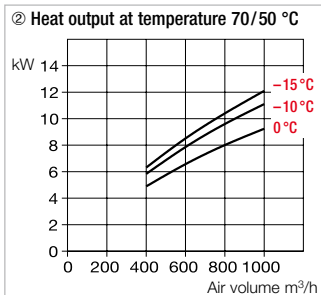
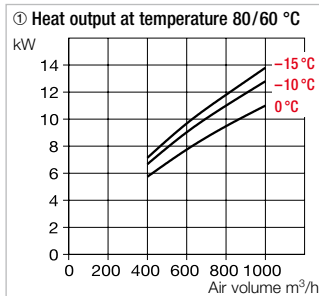
Type	Ref. no.	Flow rate* free blowing V m ³ /h (max.)	Max. speed min-1	Sound pressure level		Voltage 50/60 Hz Volt	Power consump.		Current consump. max. tot. A	Wiring diagram No.	Maximum intake temp. +°C	Weight net aprx. kg
				Case-radiation dB(A) at 1m	Air noise outlet side dB(A) at 1m		Motor kW	Heating kW				
ALB EC 40/20 WW	06533	1100	2900	52	73	230, 1~	0.15	-	1.09	1371	40	37

* Volume reduction by approx. 5% when using the filter ISO ePM₁₀ 50% (M5), by approx. 15% when using the filter ISO ePM₁ 50% (F7).

Performance curves ALB EC 40/20 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.



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

Reference

The integration of air filters ELF-ALB 40/20 F7 (ISO ePM₁ 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, temperature display, pump, actuator, mixer valve, gravity brake, thermal cladding and flexible connection hoses.



Replacement and pollen filter

- ISO Coarse 90% (G4)

ELF-ALB 40/20 G4 No. 07619

- Filter class ISO ePM₁₀ 70% (M5)

ELF-ALB 40/20 M5 No. 06766

- Filter class ISO ePM₁ 50% (F7)

ELF-ALB 40/20 F7 No. 06767

Large cassette filter for long cleaning intervals.

Unit = 3 pcs.



Room sensor - Air quality

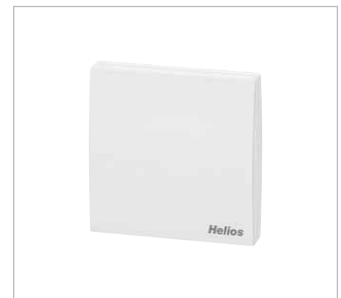
AIR1/KWL-CO2 0-10V No. 20251

AIR1/KWL-FTF 0-10V No. 20252

For measuring the CO₂ concentration or 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

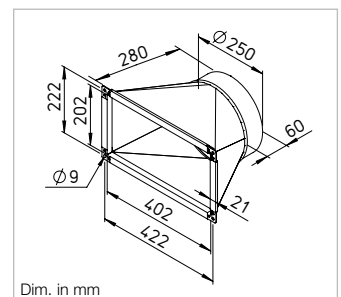
ALB EC-SK 40 Ref. no. 06817

Attach between ALB and control element as well as between ALB and TFR-ALB/KWL.

Transition piece - Symmetrical

ALB-ÜS 40/20 Ref. no. 07617

From unit flange to round duct systems.



Flexible connecting sleeve

FM 250 Ref. no. 01672

For acoustic decoupling, incl. 2 pcs. hose clamps.

Angle flange ring

FR 250 Ref. no. 01203

Made of galvanised steel sheet, for duct connection.

Duct shutter, motorised

RVM 250 Ref. no. 02576

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.

