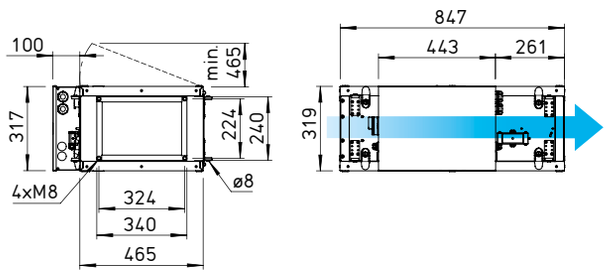
# Fresh air box ALB EC EH
# backward curved, for rectangular ducts 30 x 20 cm

## ALB EC 30/20 EH



## Dimensions ALB EC 30/20 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 rectangular duct systems. Suitable for a wide range of commercial applications.

**Description/ Scope of delivery**
The air filter, fan and electric heating element 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.

**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 $ePM_{10}$ 70% (M5) or 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.
A filter monitoring system is integrated.
The requirements of VDI 6022 are fulfilled through the integration of a ISO $ePM_1$ 50% (F7) filter.

**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**
The electric heating element made of stainless steel with low surface temperature heats the intake air to the specified setpoint temperature.
Control via the integrated control board.
The setpoint and the temperature measured by the room sensor (accessories) are constantly compared.
The electric heating element is equipped with an automatic safety temperature limiter (+50 °C) and a manually resettable safety temperature limiter (+115 °C).

**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).
- ☐ 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.



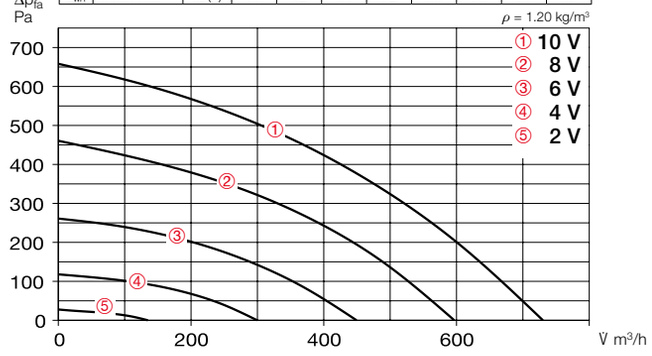

Control element with connection cable (10 m) included in delivery.
Dimensions mm (W x H x D) 115 x 80 x 25

| Type | Ref. no. | Flow rate* free blowing | Max. speed | Sound pressure level | | Voltage 50/60 Hz | Power consump. | | Current consump. max. tot. | Wiring diagram | Maximum intake temp. | Weight net aprx. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Case-radiation | Air noise outlet side | | Motor | Heating | | | | |
| | | $\dot{V}$ m³/h (max.) | min-1 | dB(A) at 1m | dB(A) at 1m | Volt | kW | kW | A | No. | +°C | kg |
| **ALB EC 30/20 EH** | 06538 | 720 | 3900 | 49 | 69 | 230, 1~ | 0.12 | 6.60 | 10.4 | 1371 | 40 | 36 |

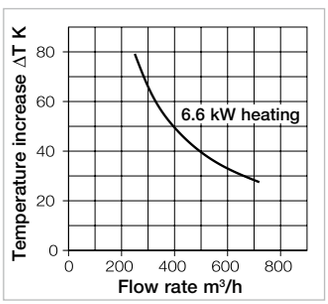
* Volume reduction by approx. 5 % when using the filter ISO $ePM_{10}$ 50 % (M5), by approx. 15 % when using the filter ISO $ePM_1$ 50 % (F7).

## Performance curves ALB EC 30/20 EH

| Frequency | | Hz | Tot. | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
|---|---|---|---|---|---|---|---|---|---|---|
| $L_{WA}$ | Radiation | dB(A) | 57 | 42 | 45 | 55 | 48 | 47 | 45 | 35 |
| $L_{WA}$ | Inlet side | dB(A) | 75 | 60 | 65 | 73 | 65 | 60 | 59 | 58 |
| $L_{WA}$ | Outlet side | dB(A) | 77 | 62 | 64 | 72 | 66 | 70 | 71 | 67 |




| Free blowing | | | | | |
|---|---|---|---|---|---|
| **Voltage** V | **n** min⁻¹ | **V̇** m³/h | **P** W | **I** A | **Lp** dB(A) |
| 10 | 3860 | 720 | 105 | 0.81 | 49 |
| 8 | 3200 | 590 | 60 | 0.45 | 45 |
| 6 | 2420 | 440 | 28 | 0.22 | 39 |
| 4 | 1640 | 300 | 11 | 0.10 | 31 |




### Reference

The integration of air filters ELF-ALB 30/20 F7 (ISO $ePM_1$ 50 % (F7)) in intake air systems 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**
– ISO Coarse 90 % (G4)
**ELF-ALB 30/20 G4** No. 07284
– Filter class ISO $ePM_{10}$ 70 % (M5)
**ELF-ALB 30/20 M5** No. 07285
– Filter class ISO $ePM_1$ 50 % (F7)
**ELF-ALB 30/20 F7** No. 07319
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 $CO_2$ 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.
Dim. mm (W x H x D) 80 x 80 x 25



**Connection cable**
**– 20 metres long**
**ALB EC-SK 20** Ref. no. 06816

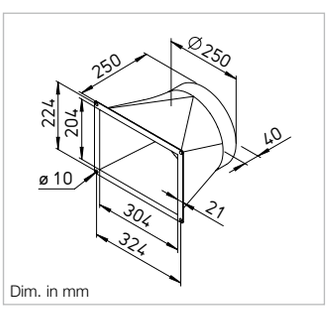
**– 40 metres long**
**ALB EC-SK 40** Ref. no. 06817
Attach between ALB and control element as well as between ALB and TFR-ALB/KWL.



**Transition piece – Symmetrical**
**KWL-ÜS 700 D** Ref. no. 04206
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.



Dim. in mm

**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.

