

AIR1 RH 12000

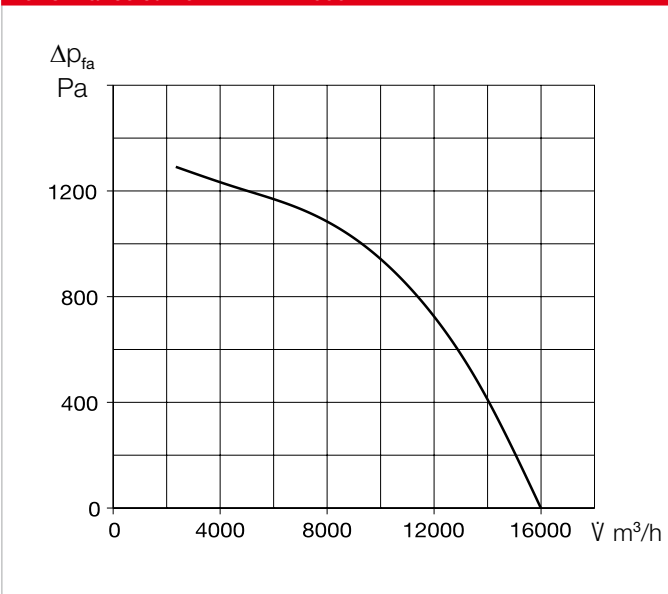


Separable casing design



Fig. shows accessories

Performance curve AIR1 RH 12000



Unit types

| | AIR1 RH 12000 | AIR1 RH 12000/SO |
|----------------|----------------------|---------------------------------|
| Ref. no. | 04350 | 04359 |
| Heat exchanger | Condensation rotor | Adsorption rotor ⁽³⁾ |

Technical data

| Mechanical data | |
|---------------------------------|--|
| Area of application | Inside/outside |
| Installation position | Standing |
| Maintenance access | Side, both sides |
| Min. air volume | 1,690 m ³ /h |
| Max. air volume ERP | 13,300 m ³ /h ⁽¹⁾ (12,800 m ³ /h ⁽⁴⁾) |
| Max. air volume (free blowing) | 16,000 m ³ /h |
| Weight, unit operational | 1,160 kg (1184 kg ⁽⁴⁾) |
| Delivery unit | 2-part |
| Unit segments | 2 |
| Housing class (DIN 1886) | T2 / TB2 / D2 |
| Filter Outside air | ISO ePM ₁ , 55% (F7) ⁽²⁾ |
| Filter Extract air | ISO ePM ₁₀ 50% (M5) ⁽²⁾ |
| Media temperature (air) | -20 to +40 °C |
| Ambient temperature (operation) | -20 to +50 °C |
| Protection class | IP31 |
| Electrical data | |
| Central building control system | BACnet, Modbus TCP/IP |
| Voltage / Frequency | 400 V 3N -, 50 Hz |
| Max. output Fans | 2 x 5,000 W |
| Nominal current | 15.2 / 15.2 / 17.2 A (15.2 / 15.2 / 18.4 A ⁽⁴⁾) |
| Connection (wiring diagram no.) | 1324 |

(1) = at 400 Pa external pressure loss ERP-compliant
 (2) = other filter classes see optional accessories
 (3) = with increased humidity recovery
 (4) = AIR RH 12000/SO

Sound data AIR1 RH 12000

| Sound power level L_{WA} dB(A) at 400 Pa external pressure | | | |
|---|-------------------------|-------------------------|--------------------------|
| | 4,000 m ³ /h | 9,500 m ³ /h | 13,300 m ³ /h |
| Supply air (L _{WA}) | 78 | 83 | 90 |
| Extract air (L _{WA}) | 65 | 70 | 75 |
| Outside air (L _{WA}) | 69 | 72 | 72 |
| Exhaust air (L _{WA}) | 77 | 82 | 89 |
| Sound pressure level L_{pA} dB(A) of sound radiated from housing | | | |
| | 4,000 m ³ /h | 9,500 m ³ /h | 13,300 m ³ /h |
| Housing rad. 1 m | 49 | 53 | 58 |
| Housing rad. 3 m | 39 | 43 | 49 |
| Housing rad. 5 m | 35 | 39 | 44 |

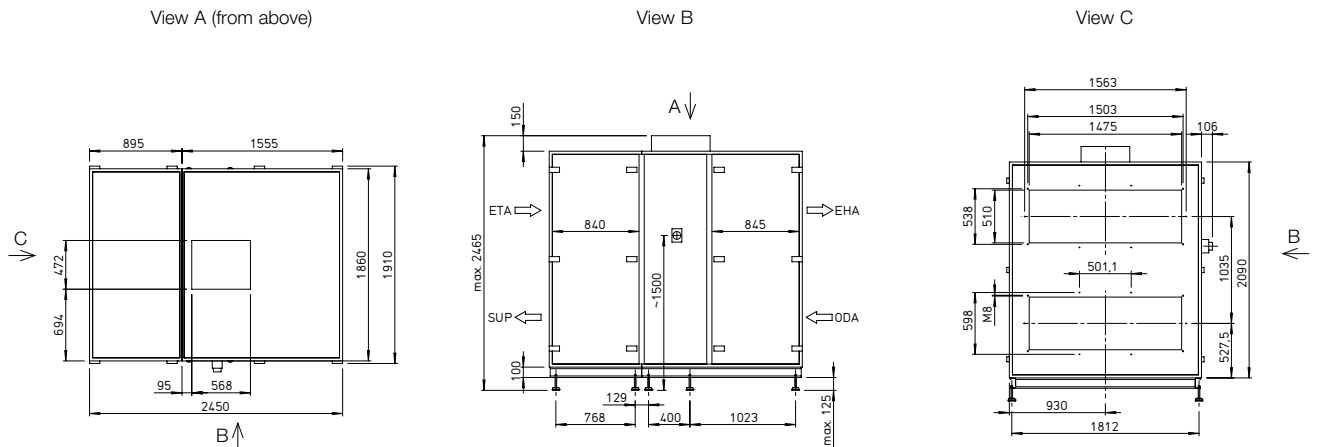
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1.3 and 5 m.

Sound data AIR1 RH 12000/SO

| Sound power level L_{WA} dB(A) at 400 Pa external pressure | | | |
|---|-------------------------|-------------------------|--------------------------|
| | 4,000 m ³ /h | 9,500 m ³ /h | 12,800 m ³ /h |
| Supply air (L _{WA}) | 79 | 84 | 89 |
| Extract air (L _{WA}) | 66 | 70 | 72 |
| Outside air (L _{WA}) | 69 | 73 | 71 |
| Exhaust air (L _{WA}) | 77 | 82 | 88 |
| Sound pressure level L_{pA} dB(A) of sound radiated from housing | | | |
| | 4,000 m ³ /h | 9,500 m ³ /h | 12,800 m ³ /h |
| Housing rad. 1 m | 49 | 53 | 56 |
| Housing rad. 3 m | 39 | 44 | 46 |
| Housing rad. 5 m | 35 | 39 | 42 |

The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1.3 and 5 m.

Dimensions AIR1 RH 12000



Dimensions in mm

ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

■ Accessories

■ Heating and cooling registers

| Pre-heater | | |
|--|----------------|----------|
| AIR1-EVH RH 12000 Electrical, external | Ref. no. 01871 | Page 126 |
| Auxiliary heater | | |
| AIR1-ENH RH 12000 Electrical, external | Ref. no. 03628 | Page 127 |
| AIR1-NH WW RH 12000 Hot water, external | Ref. no. 03831 | Page 128 |
| Hydraulic unit for hot water heater register | | |
| WHSH HE 24 V (0 – 10 V) L | Ref. no. 06311 | Page 129 |
| Cooling register | | |
| AIR1-KR KW RH 12000 L ⁽¹⁾ Cold water, external | Ref. no. 04183 | Page 130 |
| AIR1-KR KW RH 12000 R ⁽¹⁾ Cold water, external | Ref. no. 04389 | Page 130 |
| AIR1-CO DX RH 12000 L ⁽¹⁾ Change-over, external | Ref. no. 40397 | Page 132 |
| AIR1-CO DX RH 12000 R ⁽¹⁾ Change-over, external | Ref. no. 40406 | Page 132 |
| AIR1-SM DX ⁽²⁾ Control module | Ref. no. 40408 | Page 134 |

■ Air routing

| Multi-leaf damper | | |
|--------------------------|----------------|----------|
| AIR1-JVK RH 12000 | Ref. no. 06020 | Page 134 |
| Recirculation module | | |
| AIR1-ULM RH 12000 | Ref. no. 06170 | Page 134 |
| Flexible connector | | |
| AIR1-VS 147/51 | Ref. no. 04378 | Page 135 |

■ Air filters

| Spare air filter and other filter classes | | |
|--|----------------|----------|
| ELF-AIR1 RH 12000/ePM10 50%/48 (M5) | Ref. no. 02201 | Page 143 |
| ELF-AIR1 RH 12000/ePM10 50%/96 (M5) | Ref. no. 02218 | Page 143 |
| ELF-AIR1 RH 12000/ePM1 55%/96 (F7) | Ref. no. 02264 | Page 143 |
| ELF-AIR1 RH 12000/ePM1 80%/96 (F9) | Ref. no. 02471 | Page 143 |

The use of original spare air filters is mandatory to guarantee the specified technical data and air volumes.

■ External installation

| Cover for external installation | | |
|--|----------------|----------|
| AIR1-AAD RH 12000 Weather protection cover for the unit | Ref. no. 06437 | Page 136 |
| AIR1-AAD RH 12000/ULM Weather protection cover for the unit incl. recirculation module | Ref. no. 06443 | Page 137 |
| AIR1-AAD KR KW + DX RH 12000 Weather protection cover for cooling register cold water or direct evaporator | Ref. no. 06474 | Page 138 |
| AIR1-AAD NH EL + WW RH 12000 Weather protection cover for aux. heater | Ref. no. 06449 | Page 138 |
| Terminal box heater | | |
| AIR1-AAHK | Ref. no. 07064 | Page 139 |
| Hoods | | |
| AIR1-AAHA RH 12000 Intake hood outside air | Ref. no. 06611 | Page 139 |
| AIR1-AAHF RH 12000 Discharge hood exhaust air | Ref. no. 06865 | Page 140 |

■ Controls

| Controllers | | |
|---|----------------|----------|
| AIR1-BE ECO | Ref. no. 06186 | Page 141 |
| AIR1-BE TOUCH | Ref. no. 06187 | Page 141 |
| Controller connection cable | | |
| AIR1-SL 4/10 10 m | Ref. no. 07073 | Page 141 |
| AIR1-SL 4/20 20 m | Ref. no. 07121 | Page 141 |
| Sensors | | |
| AIR1/KWL-VOC 0-10V Mixed gas sensor | Ref. no. 20250 | Page 141 |
| AIR1/KWL-CO2 0-10V Carbon dioxide sensor | Ref. no. 20251 | Page 141 |
| AIR1/KWL-FTF 0-10V Humidity-temperature sensor | Ref. no. 20252 | Page 141 |
| AIR1-CO2 K Carbon dioxide sensor duct | Ref. no. 07124 | Page 142 |
| Signal converter for sensors | | |
| AIR1-SK | Ref. no. 06019 | Page 142 |
| Extension kit for constant pressure control | | |
| AIR1-CAP | Ref. no. 06756 | Page 142 |

(1) = When looking at the cooling register from the air flow direction, the service side is on the right for the R version and on the left for the L version.

(2) = Necessary accessory in connection with an AIR1-CO DX change-over register for connecting an AIR1 ventilation unit of the XC, XH and RH series to the control of an on-site cooling system.