

AIR1 RH 12000

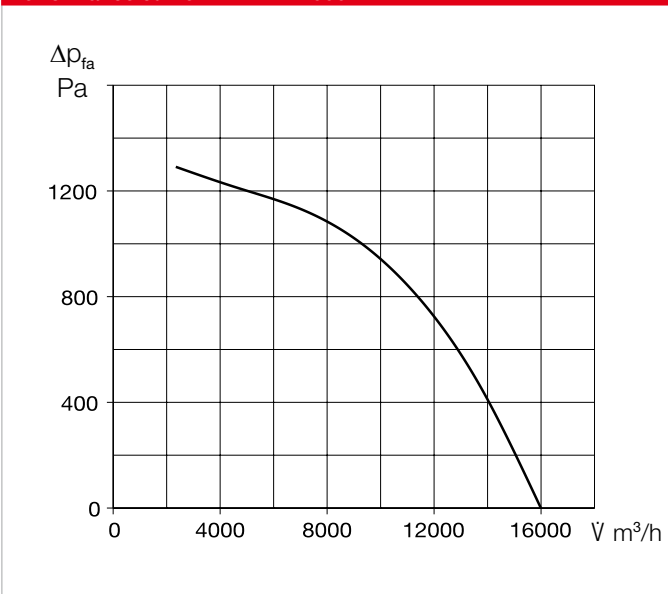


Separable casing design



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 (place of installation) | -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 |

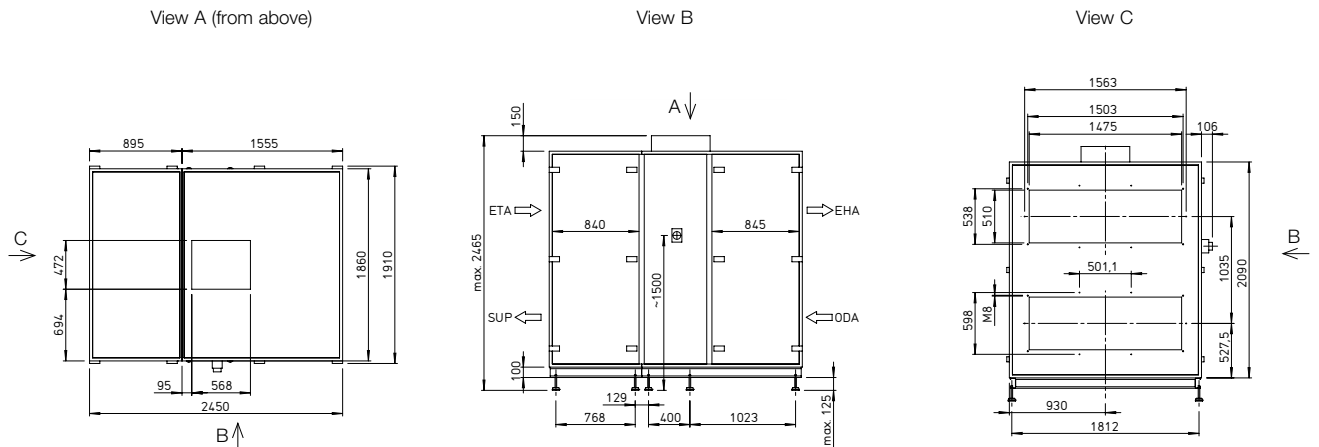
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1.3 and 5 m.

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 122 |
|--|----------------|----------|

Auxiliary heater

| | | |
|--|----------------|----------|
| AIR1-ENH RH 12000 Electrical, external | Ref. no. 03628 | Page 123 |
|--|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1-NH WW RH 12000 Hot water, external | Ref. no. 03831 | Page 124 |
|---|----------------|----------|

Hydraulic unit for hot water heater register

| | | |
|----------------------------------|----------------|----------|
| WHSH HE 24 V (0 – 10 V) L | Ref. no. 06311 | Page 125 |
|----------------------------------|----------------|----------|

Cooling register

| | | |
|---|----------------|----------|
| AIR1-KR KW RH 12000 L ⁽¹⁾ Cold water, external | Ref. no. 04183 | Page 126 |
|---|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1-KR KW RH 12000 R ⁽¹⁾ Cold water, external | Ref. no. 04389 | Page 126 |
|---|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-CO DX RH 12000 L ⁽¹⁾ Change-over, external | Ref. no. 40397 | Page 128 |
|--|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-CO DX RH 12000 R ⁽¹⁾ Change-over, external | Ref. no. 40406 | Page 128 |
|--|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-SM DX ⁽²⁾ Control module | Ref. no. 40408 | Page 130 |
|--|----------------|----------|

■ Air routing

Multi-leaf damper

| | | |
|--------------------------|----------------|----------|
| AIR1-JVK RH 12000 | Ref. no. 06020 | Page 130 |
|--------------------------|----------------|----------|

Recirculation module

| | | |
|--------------------------|----------------|----------|
| AIR1-ULM RH 12000 | Ref. no. 06170 | Page 130 |
|--------------------------|----------------|----------|

Flexible connector

| | | |
|-----------------------|----------------|----------|
| AIR1-VS 147/51 | Ref. no. 04378 | Page 131 |
|-----------------------|----------------|----------|

■ Air filters

Spare air filter and other filter classes

| | | |
|--|----------------|----------|
| ELF-AIR1 RH 12000/ePM10 50%/48 (M5) | Ref. no. 02201 | Page 139 |
|--|----------------|----------|

| | | |
|--|----------------|----------|
| ELF-AIR1 RH 12000/ePM10 50%/96 (M5) | Ref. no. 02218 | Page 139 |
|--|----------------|----------|

| | | |
|---|----------------|----------|
| ELF-AIR1 RH 12000/ePM1 55%/96 (F7) | Ref. no. 02264 | Page 139 |
|---|----------------|----------|

| | | |
|---|----------------|----------|
| ELF-AIR1 RH 12000/ePM1 80%/96 (F9) | Ref. no. 02471 | Page 139 |
|---|----------------|----------|

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 132 |
|---|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-AAD RH 12000/ULM Weather protection cover for the unit incl. recirculation module | Ref. no. 06443 | Page 133 |
|--|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-AAD KR KW + DX RH 12000 Weather protection cover for cooling register cold water or direct evaporator | Ref. no. 06474 | Page 134 |
|--|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1-AAD NH EL + WW RH 12000 Weather protection cover for aux. heater | Ref. no. 06449 | Page 134 |
|---|----------------|----------|

Terminal box heater

| | | |
|------------------|----------------|----------|
| AIR1-AAHK | Ref. no. 07064 | Page 135 |
|------------------|----------------|----------|

Hoods

| | | |
|--|----------------|----------|
| AIR1-AAHA RH 12000 Intake hood outside air | Ref. no. 06611 | Page 135 |
|--|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1-AAHF RH 12000 Discharge hood exhaust air | Ref. no. 06865 | Page 136 |
|---|----------------|----------|

■ Controls

Controllers

| | | |
|--------------------|----------------|----------|
| AIR1-BE ECO | Ref. no. 06186 | Page 137 |
|--------------------|----------------|----------|

| | | |
|----------------------|----------------|----------|
| AIR1-BE TOUCH | Ref. no. 06187 | Page 137 |
|----------------------|----------------|----------|

Controller connection cable

| | | |
|--------------------------|----------------|----------|
| AIR1-SL 4/10 10 m | Ref. no. 07073 | Page 137 |
|--------------------------|----------------|----------|

| | | |
|--------------------------|----------------|----------|
| AIR1-SL 4/20 20 m | Ref. no. 07121 | Page 137 |
|--------------------------|----------------|----------|

Sensors

| | | |
|--|----------------|----------|
| AIR1/KWL-VOC 0-10V Mixed gas sensor | Ref. no. 20250 | Page 137 |
|--|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1/KWL-CO2 0-10V Carbon dioxide sensor | Ref. no. 20251 | Page 137 |
|---|----------------|----------|

| | | |
|---|----------------|----------|
| AIR1/KWL-FTF 0-10V Humidity-temperature sensor | Ref. no. 20252 | Page 137 |
|---|----------------|----------|

| | | |
|--|----------------|----------|
| AIR1-CO2 K Carbon dioxide sensor duct | Ref. no. 07124 | Page 138 |
|--|----------------|----------|

Signal converter for sensors

| | | |
|----------------|----------------|----------|
| AIR1-SK | Ref. no. 06019 | Page 138 |
|----------------|----------------|----------|

Extension kit for constant pressure control

| | | |
|-----------------|----------------|----------|
| AIR1-CAP | Ref. no. 06756 | Page 138 |
|-----------------|----------------|----------|

(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.