Helios AIR1®

Big solutions. **From Helios.***

* **Helios AIR1: The new force in energy-efficient compact ventilation units.**

Helios

A complete system
full of great solutions for
your applications.

Applications.

Configuration.

Product series.

System.

Even
larger.*

Even
more.*

Even
simpler.*

Work

More flexibility in working life: Whether inside or outside – Helios AIR1 ventilation units are suitable for almost all installation sites. They can also be perfectly integrated in central building control systems thanks to modern interfaces.

- **Public buildings**
- **Office, commercial and retail premises**
- **Industrial buildings**

Live

The new central building ventilation system with heat recovery. Together with the KWL MultiZoneBox, Helios AIR1 is the energy-efficient and convenient top solution for apartment building construction.

- **Hotels**
- **Residential buildings**
- **Social facilities**

Leisure

Flow rates up to 15,000 m³/h ensure the best indoor climate, even in the cinema. Also fully automated using sensors.

- **Event rooms**
- **Sports facilities**
- **Leisure centres**

Learn

The best conditions for reaching the top in school: The new, compact Helios AIR1 Series XC ceiling units. With an innovative maintenance concept and outstanding acoustics.

- **Kindergartens**
- **Libraries**
- **Educational facilities**

Helios AIR1®

As a pioneer in energy-efficient ventilation with decades of experience in development and production, Helios regularly sets milestones in ventilation technology. The time has come again with the new series Helios AIR1: The **largest ventilation units** with heat recovery ever built by Helios. For **more areas of application**. And an **ingeniously simple configuration.** Experience the new dimension of energy-efficient compact ventilation units with us.

Work

- **Public buildings**
- **Office, commercial and retail premises**
- **Industrial buildings**

The “work” application area often brings various challenges for ventilation technology. The connection to common central building control system standards provides the necessary overview. With BACnet and ModBus, Helios AIR1 offers two widely used interfaces for integrating the ventilation systems into the building automation.

- **Hotels**
- **Residential buildings**
- **Social facilities**

Besides high indoor air quality, individuality is particularly in demand in residential complexes and apartment buildings. Helios AIR1 offers a perfectly coordinated system solution as a central ventilation unit: Individual air volume control per residential unit is ensured in combination with the KWL MultiZoneBox.

Live

Learn

- **Kindergartens**
- **Libraries**
- **Educational facilities**

Whether it is pollen, fine dust or street noise – the reduction of harmful environmental factors is essential for a healthy indoor climate. Helios AIR1 units create ideal indoor conditions thanks to the numerous room air quality sensors, multi-stage filter concept and low-noise operation.

- **Meeting rooms**
- **Sports facilities**
- **Leisure centres**

A wellness experience with all senses: This also includes fresh and appropriately conditioned room air. Helios AIR1 always offers the right solution with wide-ranging accessory components for heating and cooling the room air. Even moisture recovery is possible thanks to rotary heat exchangers

Leisure

3

series

22

types

>100

configurations

If you have big plans, you will find exactly the right solution for energy-efficient ventilation with heat recovery at Helios. The new Helios AIR1 product range offers various technical variants in **3 series**: for ceiling or floor-mounted installation, with highly efficient cross-counterflow or rotary heat exchangers for use inside or outside.

In this respect, no less than **22 models** in a flow rate range from 500 to 15,000 m^3/h guarantee a suitable selection for virtually all areas of application and performance classes in the areas of living, leisure, working and learning.

The wide range of accessories with various heating and cooling options, multiple air quality sensors and a multi-level filter concept includes more than **100 configuration options.**

AIR1Select, the intuitive online software, provides the necessary overview for the simple and quick selection of your individual ventilation solution.

Helios AIR1 offers the following:

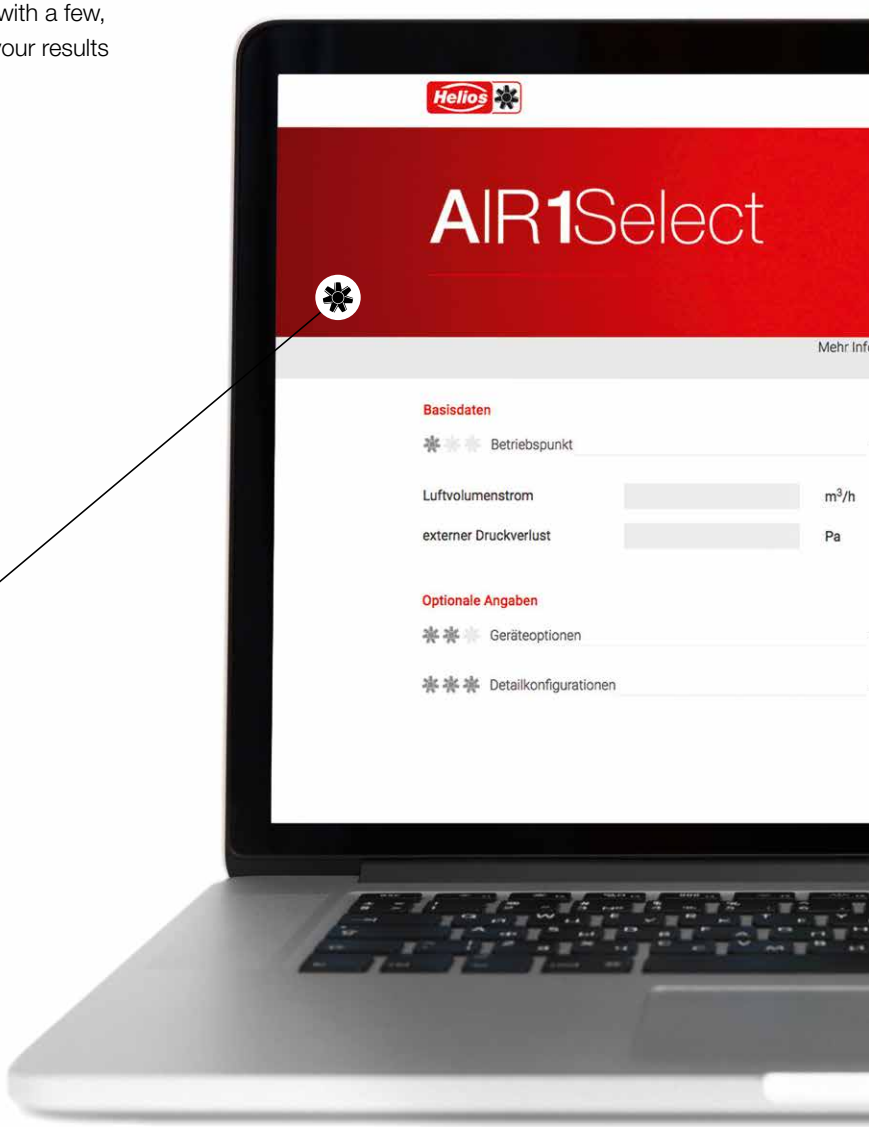
- Fast delivery of all types
- Flexible and simple installation
- Immediately ready for use due to integrated controls
- Eurovent-certified components

Online configuration **as simple as surfing the Internet.**

With Helios AIR1, you can choose the perfect solution for your application from more than 100 configuration options. In order to assist you with the selection, we have developed AIR1Select - an online configuration tool specifically for Helios AIR1 ventilation units.

AIR1Select allows the configuration of your ventilation unit with a few, self-explanatory inputs. You can save, export and retrieve your results at any time.

Simply run AIR1Select in your internet browser at:
www.AIR1Select.com



Simply precise!
Professional software has never been this uncomplicated:

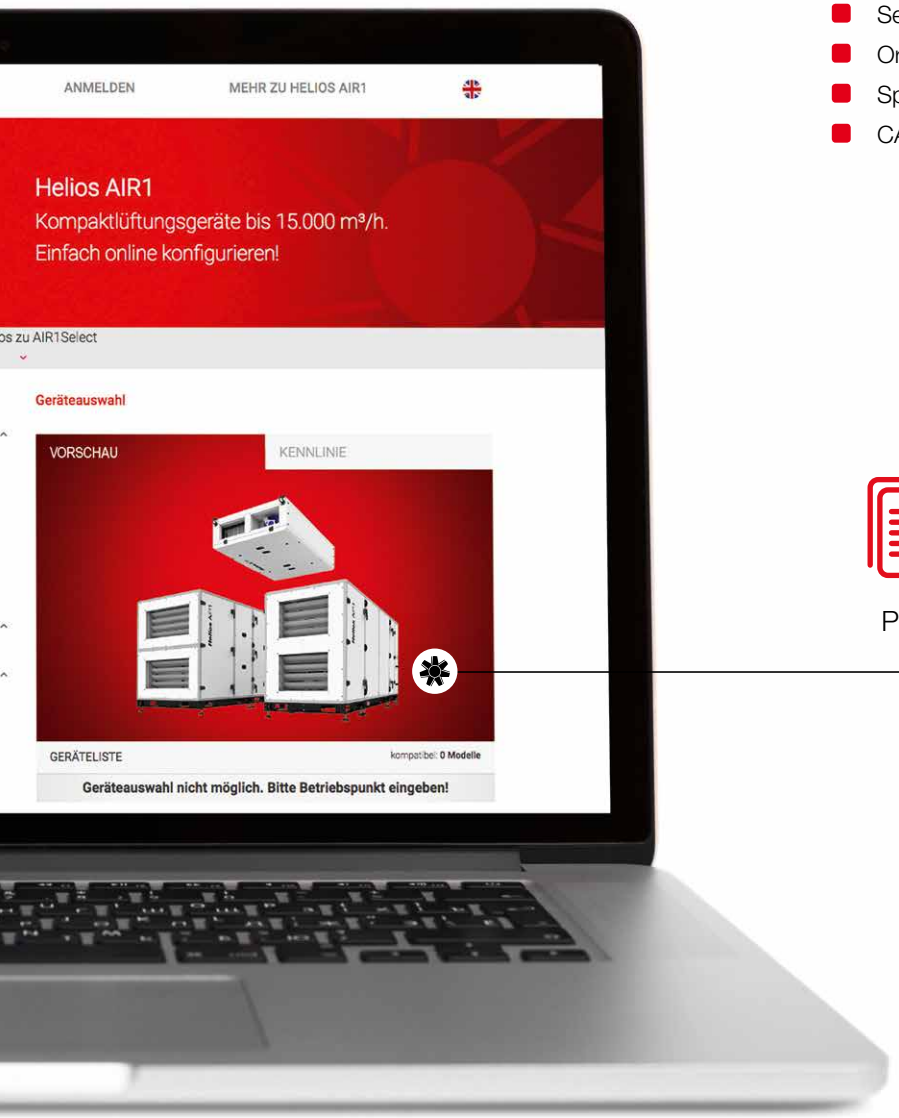
- Intuitive and modern user interface.
- From the Cloud: Always up to date and available everywhere.
- Runs in browser: Optimised for PC, laptop and tablet.
- Advanced user management including team functions.

Make it count!

Just a few inputs and your calculation results will appear clearly arranged on the screen. All project-specific results can be saved, printed and exported in various data formats. AIR1Select also assists you with the quick and secure selection of optional accessory components.

AIR1Select offers the following:

- Detailed calculation results and diagrams
- Selection of accessory components.
- Orderable material lists.
- Specification texts in Word format.
- CAD/BIM data for direct import into your system.



PDF BIM LV

The fastest way to a customised ventilation unit.

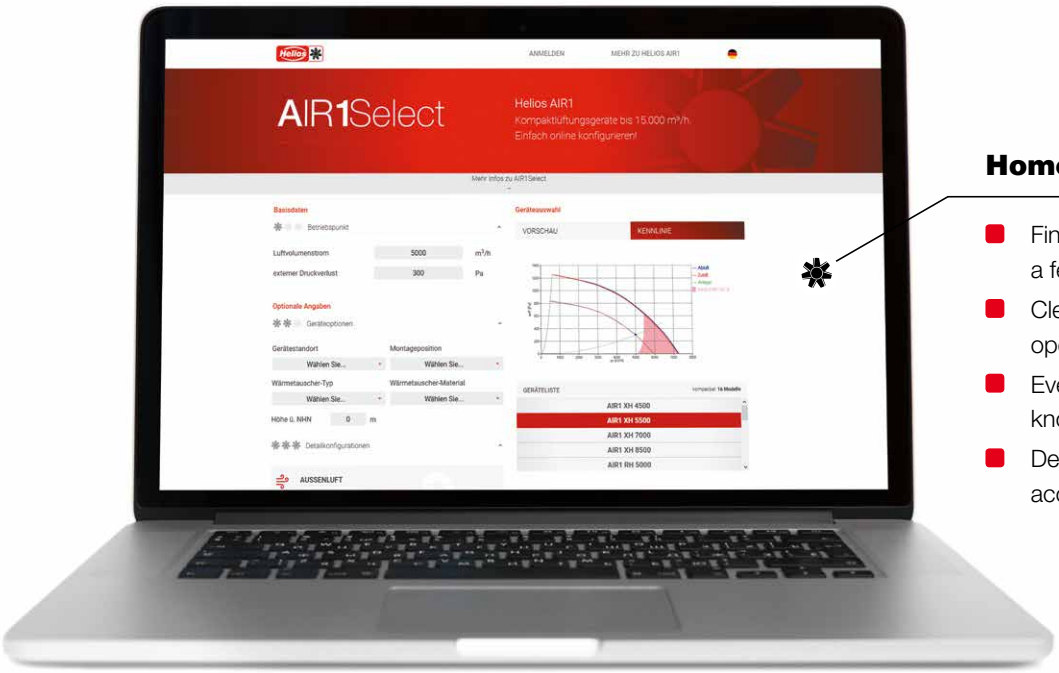
Very little basic data is required to configure your Helios AIR1 ventilation unit.
AIR1Select subsequently provides results including detailed calculation results at a glance – simple, secure and in record-setting speed.

Intuitive and high-performance

- Cloud-based online software – always up-to-date and available everywhere.
- Modern operating concept for perfect results in the shortest possible time.
- Comprehensive range of matching accessory components.

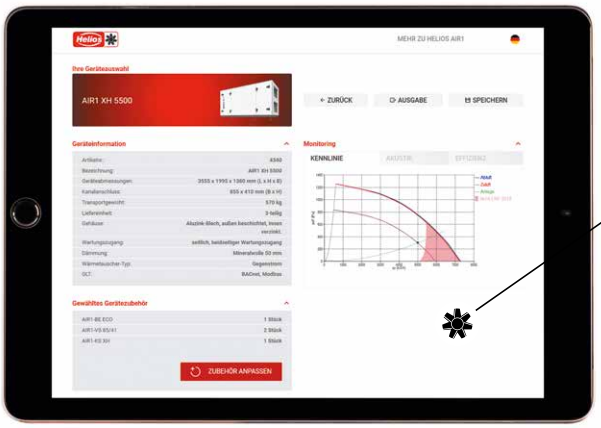
Everything from a single source

- Detailed calculation results and diagrams.
- Project-specific material lists, also with price information upon registration.
- Specification texts for your Helios AIR1 unit and the selected accessories.



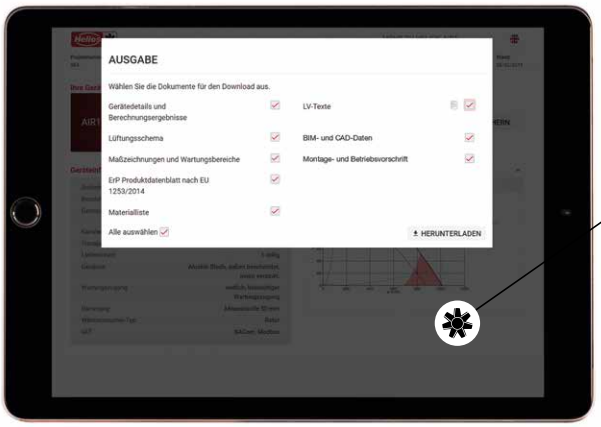
Homepage

- Find the right unit with just a few details.
- Clear design and intuitive operation.
- Everything you need to know is directly accessible.
- Detailed information can be accessed at any time.



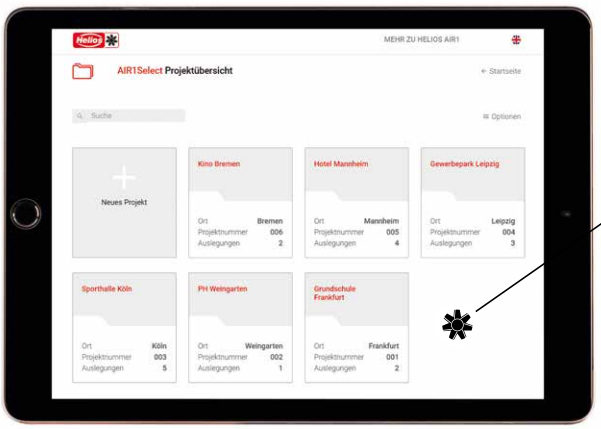
Results

- All data at a glance in compact form.
- Detailed calculation results for unit and accessories.
- Clear ventilation diagrams.
- Large amount of additional information, such as dimensional drawings, maintenance areas and ERP product data sheet.
- Individual material list.



Data output

- Free compilation of selected information.
- Dynamic generation of content for units and accessories.
- Incl. ERP data sheet, material lists, and specification texts.
- CAD/BIM data available to download.



Project management

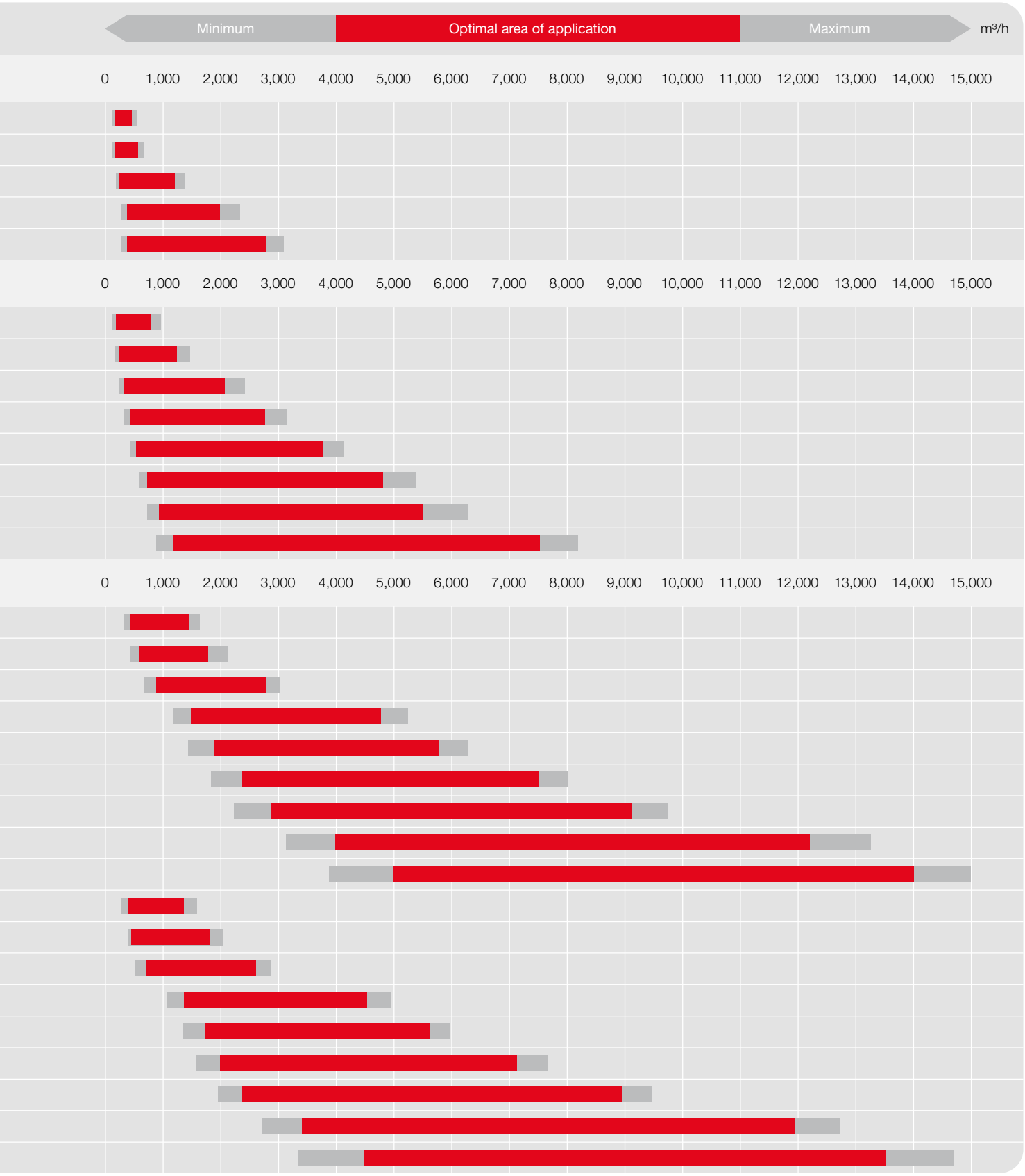
- Overview of all projects.
- Keyword search for quick orientation.
- Collection of a wealth of project information.
- Store multiple designs per project.
- Team function, allows multiple editors.

The **ideal solution** for every

Type	Ref. no.	Page	Unit location	Installation position	Heat exchanger	Unit dimensions (L x H x W) mm	Max. flow rate m³/h / stat. pressure Pa (1)	
XC series		18						
AIR1 XC 500	04330	22	Inside	Ceiling	Cross-counter-flow	1578 x 383 x 1050	570 / 200	
AIR1 XC 700	04331	24				1628 x 385 x 1225	680 / 200	
AIR1 XC 1400	04332	26				1753 x 425 x 1525	1,450 / 250	
AIR1 XC 2200	04333	28				1978 x 508 x 1895	2,350 / 250	
AIR1 XC 3200	04334	30				2128 x 594 x 2145	3,100 / 250	
XH series		40						
AIR1 XH 1000	04335	44	Inside or outside	Floor-standing	Cross-counter-flow	2005 x 1185 x 685	950 / 250	
AIR1 XH 1500	04336	46				2090 x 1380 x 695	1,490 / 250	
AIR1 XH 2500	04337	48				2345 x 1460 x 915	2,430 / 250	
AIR1 XH 3500	04338	50				2970 x 1599 x 1017	3,150 / 250	
AIR1 XH 4500	04339	52				3515 x 2020 x 1070	4,150 / 250	
AIR1 XH 5500	04340	54				3555 x 2020 x 1280	5,400 / 400	
AIR1 XH 7000	04341	56				3605 x 2020 x 1580	6,300 / 400	
AIR1 XH 8500	04342	58				3655 x 2020 x 1930	8,300 / 400	
RH series		76						
AIR1 RH 1500	04343	80	Inside or outside	Floor-standing	Condensation rotor	1700 x 1320 x 810	1,600 / 250	
AIR1 RH 2000	04344	82				1700 x 1420 x 910	2,100 / 250	
AIR1 RH 3000	04345	84				1700 x 1530 x 1020	3,000 / 250	
AIR1 RH 5000	04346	86				1845 x 1800 x 1290	5,150 / 400	
AIR1 RH 6000	04347	88				2015 x 1920 x 1410	6,200 / 400	
AIR1 RH 8000	04348	90				2185 x 2170 x 1660	8,000 / 400	
AIR1 RH 9500	04349	92				2315 x 2270 x 1760	9,700 / 400	
AIR1 RH 12000	04350	94				2450 x 2420 x 1910	13,300 / 400	
AIR1 RH 15000	04351	96				2535 x 2670 x 2160	15,000 / 400	
AIR1 RH 1500/SO	04352	80	Inside or outside	Floor-standing	Adsorption rotor	1700 x 1320 x 810	1,520 / 250	
AIR1 RH 2000/SO	04353	82				1700 x 1420 x 910	2,020 / 250	
AIR1 RH 3000/SO	04354	84				1700 x 1530 x 1020	2,770 / 250	
AIR1 RH 5000/SO	04355	86				1845 x 1800 x 1290	4,950 / 400	
AIR1 RH 6000/SO	04356	88				2015 x 1920 x 1410	5,950 / 400	
AIR1 RH 8000/SO	04357	90				2185 x 2170 x 1660	7,650 / 400	
AIR1 RH 9500/SO	04358	92				2315 x 2270 x 1760	9,400 / 400	
AIR1 RH 12000/SO	04359	94				2450 x 2420 x 1910	12,800 / 400	
AIR1 RH 15000/SO	04360	96				2535 x 2670 x 2160	14,700 / 400	

(1) The information contains guideline values. Detailled information can be found at www.AIR1Select.com

area of application.



The Helios AIR1® XC series: 500 to 3,200 m³/h.

5 unit types:

- **AIR1 XC 500**
- **AIR1 XC 700**
- **AIR1 XC 1400**
- **AIR1 XC 2200**
- **AIR1 XC 3200**

During the development of the Helios AIR1 XC series, the focus was already on the installation situation in suspended system ceilings. The result is a **new generation of ceiling ventilation units** with an intelligent maintenance solution and extremely compact unit dimensions.

Even if space is limited, an electric or warm water auxiliary heater battery can be easily integrated into the unit. The external cooling module can be directly mounted to the supply air inlets of the unit and thus also guarantees installation in confined spaces.

Helios AIR1®

series XC

Pre-heater as standard equipment for optimal year-round operation

Compact and flat construction fits everywhere

Flexible filter maintenance on the side and below

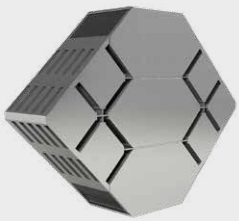
Integrable auxiliary heater register can be retrofitted at any time

Condensate tray on exhaust air and supply air side, also with condensate pump upon request

The XC series in detail.

1

2



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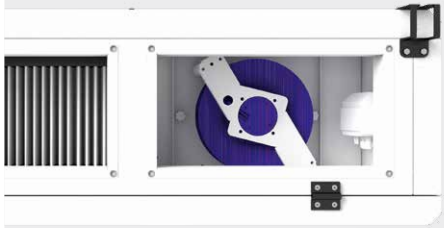


4

1 Housing

Compact housing in panel construction made of Aluzinc sheet steel, insulated on all sides with 50 mm mineral wool for optimal thermal and acoustic insulation. External corrosion-resistant coating on all sides of housing, RAL 7047, corrosion class C4, Aluzinc sheet steel inside. The smooth inner surface meets the hygiene requirements for optimal cleaning in consideration of the hygiene standard VDI 6022. Inspection openings on the on the underside of the unit for simple access to all unit components and optimal cleaning and maintenance. Additional inspection openings on the side for filter replacement. Stainless steel condensate tray on the exhaust air and supply air side. A corresponding condensate pump is optionally available for each unit size. The XC units are designed so that an electric or hot water auxiliary heater can be easily installed in the ventilation unit, even for retrofitting.

2 Heat exchanger

Eurovent-certified cross-counterflow plate heat exchanger made of aluminium with high thermal efficiency of up to 90 % in accordance with EN 308. The heat exchanger has high internal leak tightness and it is thus particularly suitable for applications with a risk of odour transmission. The heat exchanger module has an automatic bypass damper mechanism for summer night cooling as standard. An electrical pre-heater (standard equipment) heats the outside air at very low outside temperatures. Thus, it prevents the freezing of the heat exchanger and guarantees its safe functioning as well as optimal heat recovery for the entire heating period.

3 Fans

The vibration dampened fans are located in the unit and they consist of freewheeling, backward curved centrifugal impellers with direct drive via a variable EC motor with low energy consumption and very low noise level. The high performance plastic impeller is dynamically balanced in two levels. Variably controllable via 0 – 10 V signal. Plug-in connections to all electrical components for the simplification of maintenance work. Eurovent-certified EC-motors in class IE4 with very low SFP values and high energy efficiency.

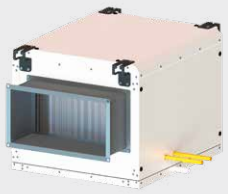
Pipe routing

Installation-friendly connection of outside, exhaust, extract and supply air to a duct or pipe system. Adapters are optionally available as unit accessories for adaption to a round duct system.

4 Control system

The ventilation unit is delivered ready for operation with a modern, all-round control system. The control system is attached to the side of the unit in a connection box for easy maintenance , factory-wired and function-tested. Two controllers are available for selection (required accessory).

5



6

7

Eurovent certification for the AIR1 XC series has been applied for. The AIR1 XC series is designed in accordance with the requirements of Directive **VDI 6022** (hygiene requirements for building ventilation systems).

Overview of control functions:

- ▢ Choice between ventilation modes Constant volume CAV, Constant pressure CAP (accessory required) or Constant speed CRPM in %.
- ▢ Multiple possible operating modes and levels.
- ▢ Automatic control via humidity or room air quality sensors (can connect up to three sensor types and maximum 18 sensors).
- ▢ Automatic operation via integrated weekly programme.
- ▢ Operating modes Free cooling (also night cooling/bypass function) and active cooling (using cooling register) possible.
- ▢ Commissioning assistant for simple, quick and faultless commissioning of the unit and matching accessories.
- ▢ Connection to the central building control system via BACnet or Modbus.
- ▢ Digital output for collective fault signal.

Further information on the Helios AIR1 control system can be found on p. 118.

5 Accessories

There are a number of accessory components available for the Helios AIR1 units. A detailed overview and the matching accessories for your Helios AIR1 unit can be found on the following product pages.

6 Air filters

Cassette filters with long service lives due to dynamic pressure monitoring. Simple filter replacement at the side or below through insert frame and quick clamp device.

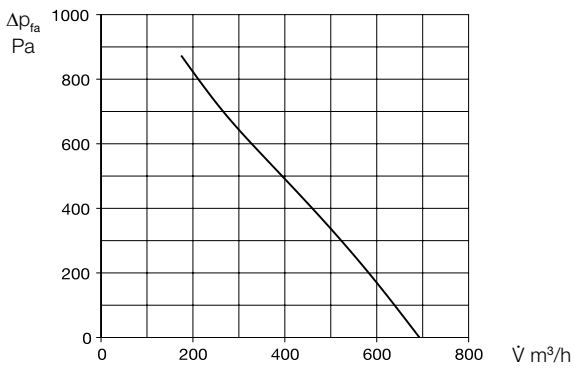
Further information on the air filters and filter classes can be found on p. 39.

▢ **Overview of air filters Standard scope of delivery**

	Type	Filter class
Extract air filter	ELF-AIR1 XC 500/ePM10 50%/96	ePM10 50% (M5)
	ELF-AIR1 XC 700/ePM10 50%/96	ePM10 50% (M5)
	ELF-AIR1 XC 1400/ePM10 50%/96	ePM10 50% (M5)
	ELF-AIR1 XC 2200/ePM10 50%/96	ePM10 50% (M5)
	ELF-AIR1 XC 3200/ePM10 50%/96	ePM10 50% (M5)
Outside air filter	ELF-AIR1 XC 500/ePM1 55%/96	ePM1 55% (F7)
	ELF-AIR1 XC 700/ePM1 55%/96	ePM1 55% (F7)
	ELF-AIR1 XC 1400/ePM1 55%/96	ePM1 55% (F7)
	ELF-AIR1 XC 2200/ePM1 55%/96	ePM1 55% (F7)
	ELF-AIR1 XC 3200/ePM1 55%/96	ePM1 55% (F7)

AIR1 XC 500

Performance curve



Unit type

	AIR1 XC 500
Ref. no.	04330
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside
Installation position	Ceiling
Maintenance access	Side and underside
Min. air volume	95 m³/h
Max. air volume	570 m³/h (1)
Weight, unit operational	130 kg
Housing class (DIN 1886)	T3 / TB3 / D2
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	230 V 1N ~, 50 Hz
Max. output Fans	2 x 170 W
Max. output Elec. pre-heater	1600 W
Nominal current	
– Ventilation unit	10.3 A (3)
– Electrical auxiliary heater	7 A (4)
– max. total	17.3 A
Connection (wiring diagram no.)	SS-1312

(1) = at 200 Pa external pressure loss ERP-compliant
(2) = Other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessory

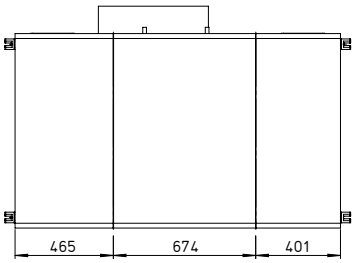
Sound data

Sound power level LwA dB(A) at 200 Pa external pressure			
	200 m³/h	400 m³/h	570 m³/h
Supply air (LwA)	67	71	76
Extract air (LwA)	61	64	68
Outside air (LwA)	58	60	64
Exhaust air (LwA)	67	71	76
Sound pressure level LpA db(A) of sound radiated from housing			
	200 m³/h	400 m³/h	570 m³/h
Housing rad. 1 m	39	41	45
Housing rad. 3 m	30	31	36
Housing rad. 5 m	25	27	31

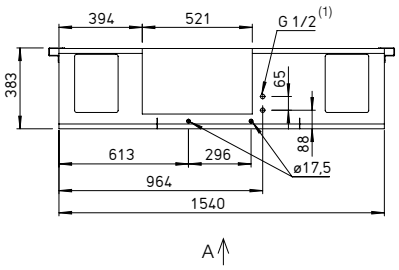
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

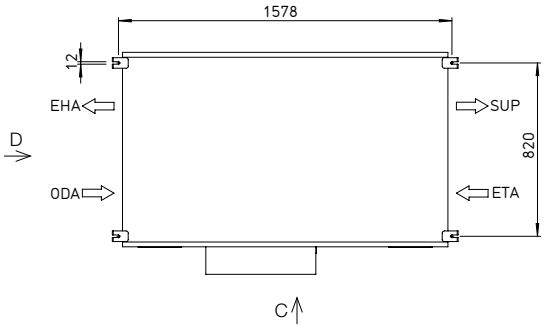
View A (from below)



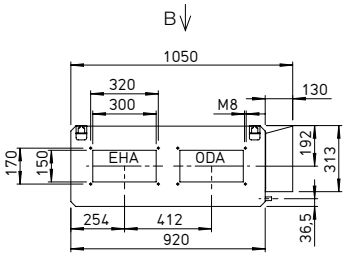
View C



View B (from above)



View D



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XC 500 Electrical, internal	Ref. no. 03558	Page 32
AIR1-NH WW XC 500 Hot water, internal	Ref. no. 02490	Page 32
Hydraulic unit for hot water heating register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 32
Cooling register		
AIR1-KR KW XC 500 Cold water, external	Ref. no. 04185	Page 33
AIR1-KR DX XC 500 Direct evaporator DX, external	Ref. no. 04867	Page 34

Air routing

Multi-leaf dampers		
AIR1-JVK XC 500	Ref. no. 05421	Page 35
Flexible connector		
AIR1-VS 30/15	Ref. no. 07400	Page 36
Adapter square-round		
AIR1-ÜS XC 500	Ref. no. 04361	Page 36

Condensate drainage

Condensate pump		
AIR1-KP XC 500-1400	Ref. no. 06867	Page 37
Ball siphon		
AIR1-KS XC for unit and cooling register	Ref. no. 07170	Page 37

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 37
AIR1-BE TOUCH	Ref. no. 06187	Page 38
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 37
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 37
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 38
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 38
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 38
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 38
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 39
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 38

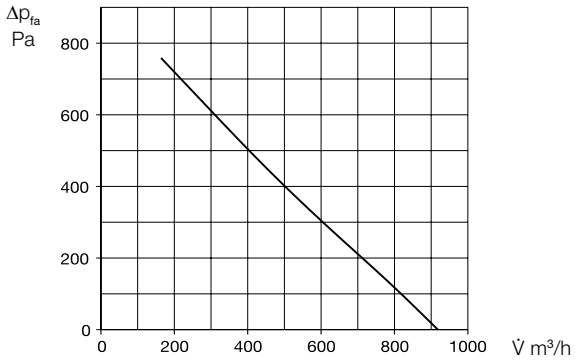
Air filters

Spare air filter and other filter classes		
ELF-AIR1 XC 500/ePM10 50%/96 (M5)	Ref. no. 02171	Page 39
ELF-AIR1 XC 500/ePM1 55%/96 (F7)	Ref. no. 02221	Page 39
ELF-AIR1 XC 500/ePM1 80%/96 (F9)	Ref. no. 02272	Page 39

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

AIR1 XC 700

Performance curve



Unit type

	AIR1 XC 700
Ref. no.	04331
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside
Installation position	Ceiling
Maintenance access	Side and underside
Min. air volume	180 m³/h
Max. air volume	680 m³/h (1)
Weight, unit operational	155 kg
Housing class (DIN 1886)	T3 / TB3 / D2
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 170 W
Max. output Elec. pre-heater	2300 W
Nominal current	
– Ventilation unit	6.4 / 3.4 / 3.7 A (3)
– Electrical auxiliary heater	3.3 / 3.3 / 3.3 A (4)
– max. total	9.7 / 6.7 / 7 A
Connection (wiring diagram no.)	SS-1313

(1) = at 200 Pa external pressure loss ERP-compliant
(2) = Other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessory

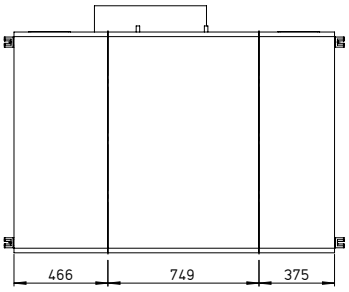
Sound data

Sound power level LwA dB(A) at 200 Pa external pressure			
	200 m³/h	500 m³/h	680 m³/h
Supply air (LwA)	66	68	70
Extract air (LwA)	61	61	63
Outside air (LwA)	57	57	60
Exhaust air (LwA)	66	67	70
Sound pressure level LpA db(A) of sound radiated from housing			
	200 m³/h	500 m³/h	680 m³/h
Housing rad. 1 m	39	39	41
Housing rad. 3 m	29	29	31
Housing rad. 5 m	25	25	27

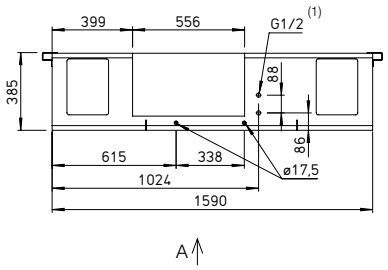
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

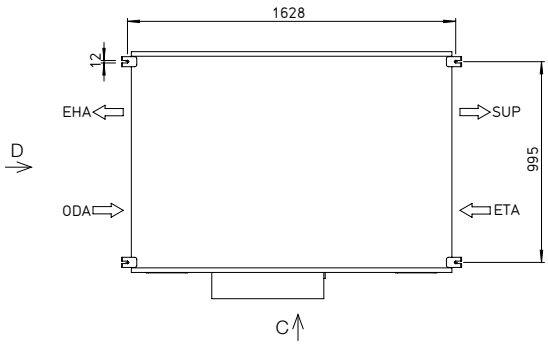
View A (from below)



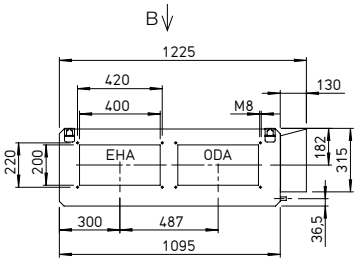
View C



View B (from above)



View D



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XC 700 Electrical, internal	Ref. no. 03559	Page 32
AIR1-NH WW XC 700 Hot water, internal	Ref. no. 03659	Page 32
Hydraulic unit for hot water heating register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 32
Cooling register		
AIR1-KR KW XC 700 Cold water, external	Ref. no. 04186	Page 33
AIR1-KR DX XC 700 Direct evaporator DX, external	Ref. no. 04868	Page 34

Air routing

Multi-leaf dampers		
AIR1-JVK XC 700	Ref. no. 05841	Page 35
Flexible connector		
AIR1-VS 40/20	Ref. no. 07403	Page 36
Adapter square-round		
AIR1-ÜS XC 700	Ref. no. 04362	Page 36

Condensate drainage

Condensate pump		
AIR1-KP XC 500-1400	Ref. no. 06867	Page 37
Ball siphon		
AIR1-KS XC for unit and cooling register	Ref. no. 07170	Page 37

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 37
AIR1-BE TOUCH	Ref. no. 06187	Page 38
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 37
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 37
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 38
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 38
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 38
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 38
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 39
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 38

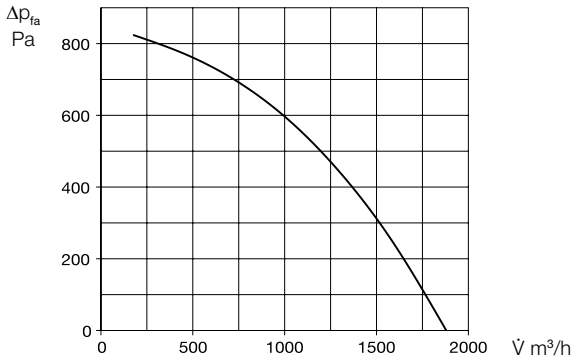
Air filters

Spare air filter and other filter classes		
ELF-AIR1 XC 700/ePM10 50%/96 (M5)	Ref. no. 02172	Page 39
ELF-AIR1 XC 700/ePM1 55%/96 (F7)	Ref. no. 02223	Page 39
ELF-AIR1 XC 700/ePM1 80%/96 (F9)	Ref. no. 02273	Page 39

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

AIR1 XC 1400

Performance curve



Unit type

	AIR1 XC 1400
Ref. no.	04332
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside
Installation position	Ceiling
Maintenance access	Side and underside
Min. air volume	190 m³/h
Max. air volume	1450 m³/h (1)
Weight, unit operational	200 kg
Housing class (DIN 1886)	T3 / TB3 / D2
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 500 W
Max. output Elec. pre-heater	4500 W
Nominal current	
– Ventilation unit	8.7 / 8.7 / 6.8 A (3)
– Electrical auxiliary heater	6.5 / 6.5 / 6.5 A (4)
– max. total	15.2 / 15.2 / 13.3 A
Connection (wiring diagram no.)	SS-1314

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = Other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessory

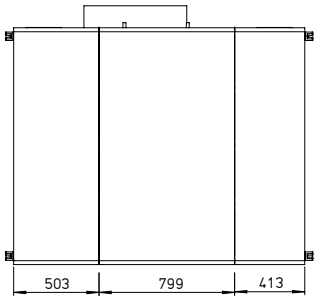
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	250 m³/h	900 m³/h	1,450 m³/h
Supply air (LwA)	68	71	78
Extract air (LwA)	60	63	69
Outside air (LwA)	56	60	66
Exhaust air (LwA)	68	71	77
Sound pressure level LpA db(A) of sound radiated from housing			
	250 m³/h	900 m³/h	1,450 m³/h
Housing rad. 1 m	40	44	50
Housing rad. 3 m	31	35	40
Housing rad. 5 m	26	30	36

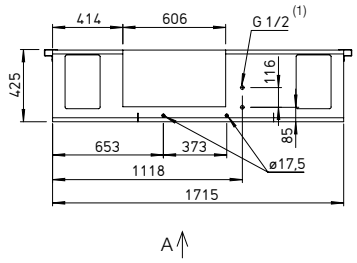
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

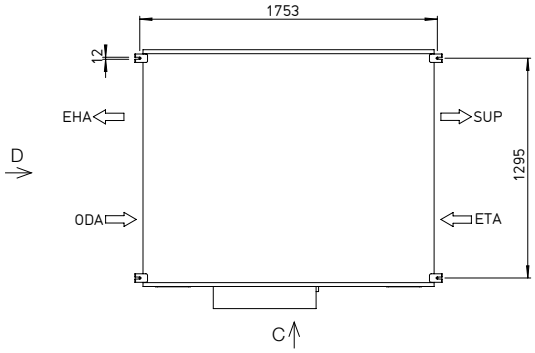
View A (from below)



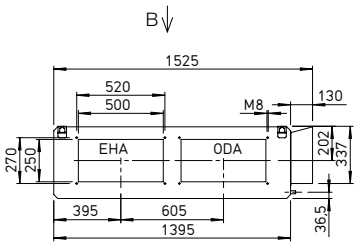
View C



View B (from above)



View D



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XC 1400 Electrical, internal	Ref. no. 03574	Page 32
AIR1-NH WW XC 1400 Hot water, internal	Ref. no. 03661	Page 32
Hydraulic unit for hot water heating register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 32
Cooling register		
AIR1-KR KW XC 1400 Cold water, external	Ref. no. 04187	Page 33
AIR1-KR DX XC 1400 Direct evaporator DX, external	Ref. no. 04869	Page 34

Air routing

Multi-leaf dampers		
AIR1-JVK XC 1400	Ref. no. 05856	Page 35
Flexible connector		
AIR1-VS 50/25	Ref. no. 07404	Page 36
Adapter square-round		
AIR1-ÜS XC 1400	Ref. no. 04363	Page 36

Condensate drainage

Condensate pump		
AIR1-KP XC 500-1400	Ref. no. 06867	Page 37
Ball siphon		
AIR1-KS XC for unit and cooling register	Ref. no. 07170	Page 37

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 37
AIR1-BE TOUCH	Ref. no. 06187	Page 38
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 37
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 37
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 38
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 38
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 38
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 38
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 39
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 38

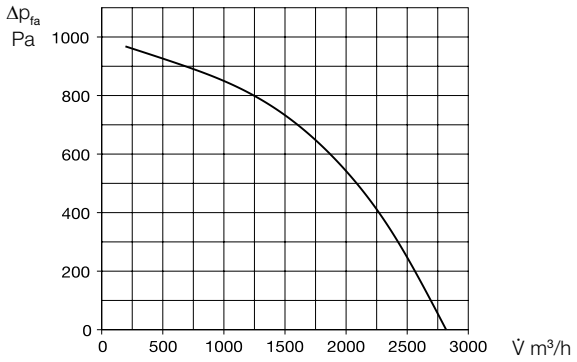
Air filters

Spare air filter and other filter classes		
ELF-AIR1 XC 1400/ePM10 50%/96 (M5)	Ref. no. 02173	Page 39
ELF-AIR1 XC 1400/ePM1 55%/96 (F7)	Ref. no. 02224	Page 39
ELF-AIR1 XC 1400/ePM1 80%/96 (F9)	Ref. no. 02274	Page 39

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

AIR1 XC 2200

Performance curve



Unit type

	AIR1 XC 2200
Ref. no.	04333
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside
Installation position	Ceiling
Maintenance access	Side and underside
Min. air volume	200 m³/h
Max. air volume	2350 m³/h (1)
Weight, unit operational	285 kg
Housing class (DIN 1886)	T3 / TB3 / D2
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +40 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 780 W
Max. output Elec. pre-heater	7050 W
Nominal current	
– Ventilation unit	13.6 / 13.6 / 10.5 A (3)
– Electrical auxiliary heater	10.2 / 10.2 / 10.2 A (4)
– max. total	23.8 / 23.8 / 20.7 A
Connection (wiring diagram no.)	SS-1315

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = Other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessory

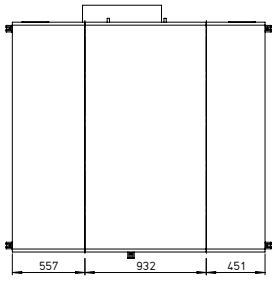
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	700 m³/h	1,500 m³/h	2,350 m³/h
Supply air (LwA)	69	73	81
Extract air (LwA)	61	65	72
Outside air (LwA)	57	61	68
Exhaust air (LwA)	69	73	81
Sound pressure level LpA db(A) of sound radiated from housing			
	700 m³/h	1,500 m³/h	2,350 m³/h
Housing rad. 1 m	42	45	53
Housing rad. 3 m	32	36	43
Housing rad. 5 m	28	31	39

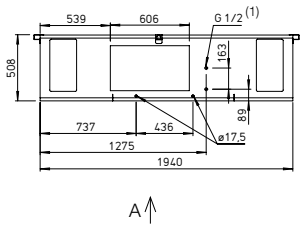
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

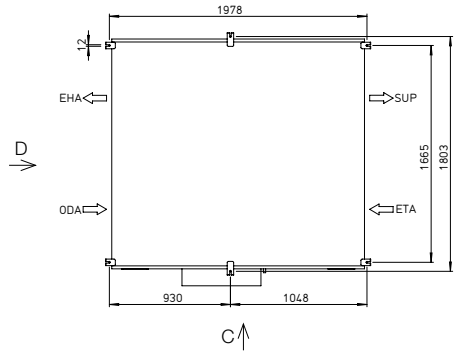
View A (from below)



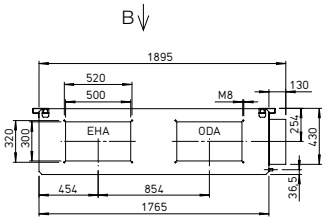
View C



View B (from above)



View D



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XC 2200 Electrical, internal	Ref. no. 03575	Page 32
AIR1-NH WW XC 2200 Hot water, internal	Ref. no. 03662	Page 32
Hydraulic unit for hot water heating register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 32
Cooling register		
AIR1-KR KW XC 2200 Cold water, external	Ref. no. 04188	Page 33
AIR1-KR DX XC 2200 Direct evaporator DX, external	Ref. no. 04870	Page 34

Air routing

Multi-leaf dampers		
AIR1-JVK XC 2200	Ref. no. 06000	Page 35
Flexible connector		
AIR1-VS 50/30	Ref. no. 07407	Page 36
Adapter square-round		
AIR1-ÜS XC 2200	Ref. no. 04364	Page 36

Condensate drainage

Condensate pump		
AIR1-KP XC 2200-3200	Ref. no. 06868	Page 37
Ball siphon		
AIR1-KS XC for unit and cooling register	Ref. no. 07170	Page 37

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 37
AIR1-BE TOUCH	Ref. no. 06187	Page 38
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 37
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 37
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 38
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 38
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 38
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 38
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 39
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 38

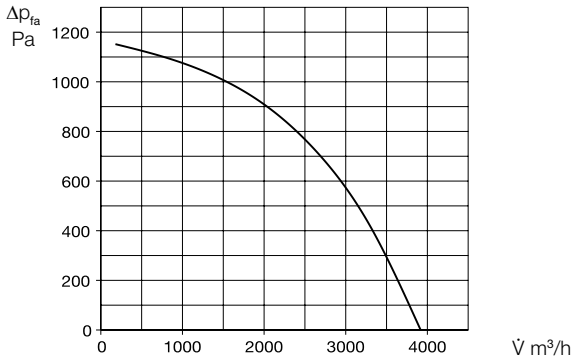
Air filters

Spare air filter and other filter classes		
ELF-AIR1 XC 2200/ePM10 50%/96 (M5)	Ref. no. 02174	Page 39
ELF-AIR1 XC 2200/ePM1 55%/96 (F7)	Ref. no. 02225	Page 39
ELF-AIR1 XC 2200/ePM1 80%/96 (F9)	Ref. no. 02285	Page 39

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

AIR1 XC 3200

Performance curve



Unit type

	AIR1 XC 3200
Ref. no.	04334
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside
Installation position	Ceiling
Maintenance access	Side and underside
Min. air volume	240 m³/h
Max. air volume	3100 m³/h (1)
Weight, unit operational	370 kg
Housing class (DIN 1886)	T3 / TB3 / D2
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +45 °C
Ambient temperature (operation)	0 to +45 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 1300 W
Max. output Elec. pre-heater	10500 W
Nominal current	
– Ventilation unit	20.9 / 20.9 / 15.5 A (3)
– Electrical auxiliary heater	15.2 / 15.1 / 15.1 A (4)
– max. total	36.1 / 36 / 30.6 A
Connection (wiring diagram no.)	SS-1316

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = Other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessory

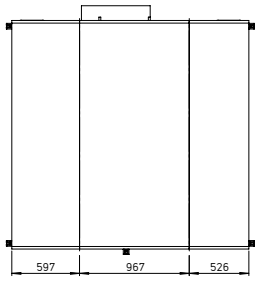
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	1,000 m³/h	2,200 m³/h	3,100 m³/h
Supply air (LwA)	70	77	85
Extract air (LwA)	61	69	76
Outside air (LwA)	57	65	72
Exhaust air (LwA)	70	77	85
Sound pressure level LpA db(A) of sound radiated from housing			
	1,000 m³/h	2,200 m³/h	3,100 m³/h
Housing rad. 1 m	42	50	57
Housing rad. 3 m	33	41	48
Housing rad. 5 m	28	36	43

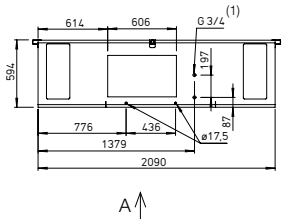
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

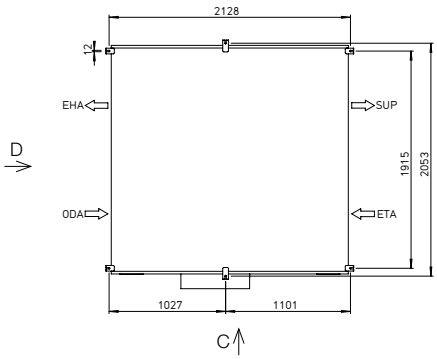
View A (from below)



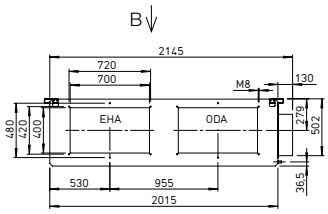
View C



View B (from above)



View D



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XC 3200 Electrical, internal	Ref. no. 02489	Page 32
AIR1-NH WW XC 3200 Hot water, internal	Ref. no. 03663	Page 32
Hydraulic unit for hot water heating register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 32
Cooling register		
AIR1-KR KW XC 3200 Cold water external	Ref. no. 04190	Page 33
AIR1-KR DX XC 3200 Direct evaporator DX, external	Ref. no. 04871	Page 34

Air routing

Multi-leaf dampers		
AIR1-JVK XC 3200	Ref. no. 06003	Page 35
Flexible connector		
AIR1-VS 70/40	Ref. no. 07408	Page 36
Adapter square-round		
AIR1-ÜS XC 3200	Ref. no. 04365	Page 36

Condensate drainage

Condensate pump		
AIR1-KP XC 2200-3200	Ref. no. 06868	Page 37
Ball siphon		
AIR1-KS XC for unit and cooling register	Ref. no. 07170	Page 37

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 37
AIR1-BE TOUCH	Ref. no. 06187	Page 38
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 37
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 37
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 38
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 38
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 38
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 38
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 39
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 38

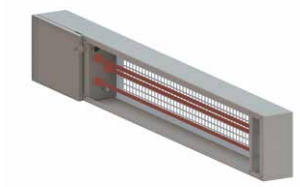
Air filters

Spare air filter and other filter classes		
ELF-AIR1 XC 3200/ePM10 50%/96 (M5)	Ref. no. 02175	Page 39
ELF-AIR1 XC 3200/ePM1 55%/96 (F7)	Ref. no. 02226	Page 39
ELF-AIR1 XC 3200/ePM1 80%/96 (F9)	Ref. no. 02286	Page 39

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

Accessories for the XC series.

Electrical auxiliary heater internal



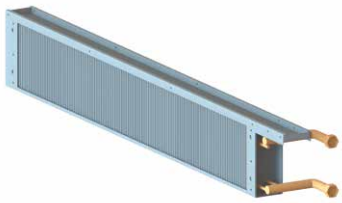
Electrical auxiliary heater
For installation in the ventilation unit. Provides demand-oriented temperature control of supply air. Mains power supply and connection to the ventilation unit control system through pre-wired plug contacts. Variable controls.

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Output	Current consumption	Weight approx.
AIR1-ENH XC 500	03558	1.6 kW	7.0 A	1.1 kg
AIR1-ENH XC 700	03559	2.3 kW	3.3 A	1.9 kg
AIR1-ENH XC 1400	03574	4.5 kW	6.5 A	3.0 kg
AIR1-ENH XC 2200	03575	7.1 kW	10.2 A	3.6 kg
AIR1-ENH XC 3200	02489	10.5 kW	15.2 A	6.7 kg

Hot water auxiliary heater internal



Hot water auxiliary heater
For installation in the ventilation unit. Provides demand-oriented temperature control of supply air. The heating elements consist of copper piping with formed aluminium fins, and copper pipe water connections for flow and return. Further accessories are required for supply air temperature control (see below; Hydraulic unit WHSH HE 24V).

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Water content	Weight (without liquid)	Hydraulic unit	Ref. no.
AIR1-NH WW XC 500	02490	3.3 l	3.0 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XC 700	03659	4.5 l	3.9 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XC 1400	03661	8.6 l	5.3 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XC 2200	03662	14.5 l	7.5 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XC 3200	03663	19.3 l	9.5 kg	WHSH HE 24 V (0 – 10 V)	08318

Hydraulic unit

Hydraulic unit
Hydraulic unit for supply air temperature control by controlling the water flow rate in the heater battery. Delivered as a complete unit consisting of the hydraulic unit with 3-way valve with actuator and circulating pump, Flow / return temperature display and flexible connection hoses.
Control voltage: 24 V (0 – 10 V)
K_{VS} value: 5.1
Flow rate: up to 3.3 m³/h
Connection diameter: G1 AG flat sealing (DN25, 1")

Type	Ref. no.
WHSH HE 24 V (0 – 10 V)	08318

Cold water cooling register external

Cold water cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit including fixing material is possible. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Stainless steel condensate tray with condensate drain outlets.

Recommended accessory: Ball siphon AIR1-KS XC (Ref. no. 07170)

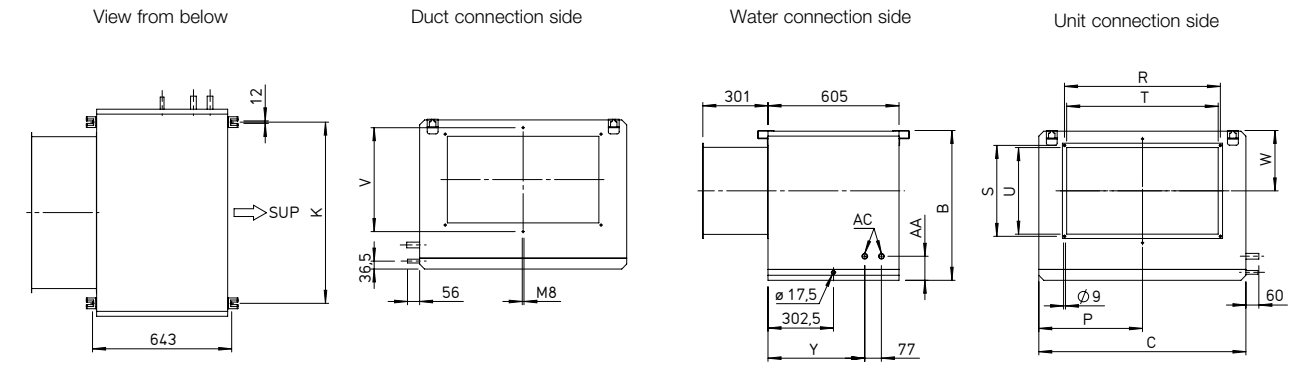
Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Water content	Connection flow / return (1)	Weight (without liquid)	Condensate connection
AIR1-KR KW XC 500	04185	1.2 l	G 1/2	24.0 kg	17.5 mm
AIR1-KR KW XC 700	04186	1.3 l	G 1/2	37.0 kg	17.5 mm
AIR1-KR KW XC 1400	04187	2.0 l	G 1/2	43.0 kg	17.5 mm
AIR1-KR KW XC 2200	04188	3.2 l	G 3/4	63.0 kg	17.5 mm
AIR1-KR KW XC 3200	04190	4.4 l	G 3/4	80.0 kg	17.5 mm

(1) External thread

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	B	C	K	P	R	S	T	U	V	W	Y	AA	AC (1)
AIR1-KR KW XC 500	04185	437	437	317	234	320	170	300	150	-	192	467	96	G 1/2
AIR1-KR KW XC 700	04186	490	537	417	284	420	220	400	200	-	218	467	96	G 1/2
AIR1-KR KW XC 1400	04187	542	677	557	374	520	270	500	250	-	243	467	96	G 1/2
AIR1-KR KW XC 2200	04188	592	878	757	453	520	320	500	300	-	254	447	111	G 3/4
AIR1-KR KW XC 3200	04190	692	957	837	479	720	420	700	400	480	279	447	111	G 3/4

(1) External thread

Accessories for the XC series.

Direct evaporator cooling register external

Direct evaporator cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit is possible. Suitable for use with common refrigerants (selection list see www.AIR1Select.com).Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Stainless steel condensate tray with condensate drain outlets. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Condensate connection 17.5 mm.
Recommended accessory: Ball siphon AIR1-KS XC (Ref. no. 07170)

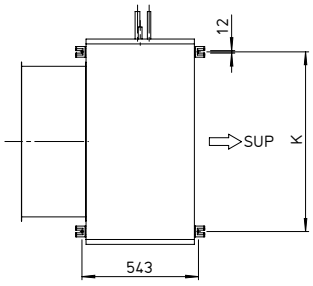
Detailed calculations / technical information: www.AIR1Select.com.

Technical data

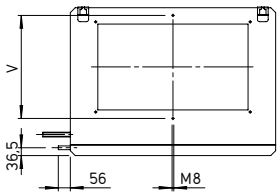
Type	Ref. no.	Filling capacity	Ø connection outlet	Ø connection inlet	Weight (without liquid)
AIR1-KR DX XC 500	04867	0.90 l	12 mm	9.5 mm	23.0 kg
AIR1-KR DX XC 700	04868	1.07 l	12 mm	9.5 mm	36.0 kg
AIR1-KR DX XC 1400	04869	1.71 l	19 mm	9.5 mm	44.0 kg
AIR1-KR DX XC 2200	04870	2.64 l	19 mm	12 mm	62.0 kg
AIR1-KR DX XC 3200	04871	3.64 l	22 mm	16 mm	79.0 kg

Dimensional drawing

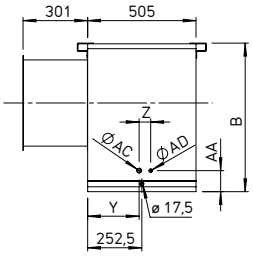
View from below



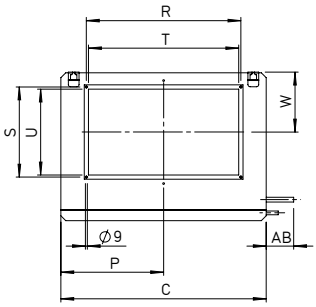
Duct connection side



Water connection side



Unit connection side



Dim. in mm

Dimensions

Type	Ref. no.	B	C	K	P	R	S	T	U	V	W	Y	Z	AA	AB	AC	AD
AIR1-KR DX XC 500	04867	437	437	317	234	320	170	300	150	–	192	230	60	85	106	12	9.5
AIR1-KR DX XC 700	04868	490	537	417	284	420	220	400	200	–	218	240	49	89	141	12	9.5
AIR1-KR DX XC 1400	04869	542	677	557	374	520	270	500	250	–	243	240	49	90	141	19	9.5
AIR1-KR DX XC 2200	04870	592	878	757	453	520	320	500	300	–	254	240	54	98	128	19	12
AIR1-KR DX XC 3200	04871	692	957	837	479	720	420	700	400	480	279	240	54	98	128	22	16

Multi-leaf damper external

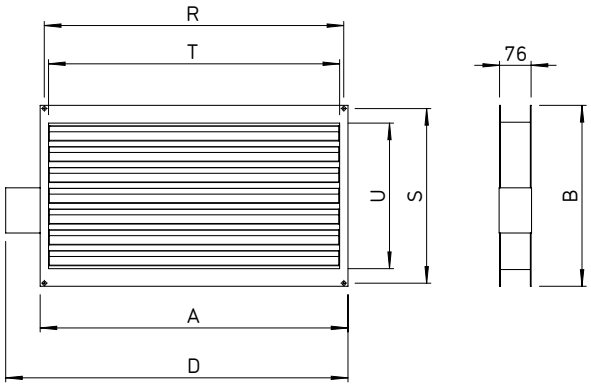
Multi-leaf damper

Multi-leaf damper for preventing cold draughts when the fan is stationary. Framework casing with connection flange on both sides. Counter-rotating blades, with retracted sealing lip. Sealing class 2. Installation on outside of unit.

Technical data

Type	Ref. no.	Runtime (open / closed)	Weight	Ambient temperature	Protection class	Actuator type
AIR1-JVK XC 500	05421	75 s	1.6 kg	-30 to +50 °C	IP 42	24 V DC. spring return
AIR1-JVK XC 700	05841	75 s	2.6 kg	-30 to +50 °C	IP 42	24 V DC. spring return
AIR1-JVK XC 1400	05856	75 s	3.9 kg	-30 to +50 °C	IP 42	24 V DC. spring return
AIR1-JVK XC 2200	06000	75 s	4.5 kg	-30 to +50 °C	IP 42	24 V DC. spring return
AIR1-JVK XC 3200	06003	75 s	7.9 kg	-30 to +50 °C	IP 42	24 V DC. spring return

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	D	R	S	T	U
AIR1-JVK XC 500	05421	340	185	430	320	170	300	100
AIR1-JVK XC 700	05841	440	235	523	420	220	400	150
AIR1-JVK XC 1400	05856	540	285	623	520	270	500	200
AIR1-JVK XC 2200	06000	540	335	623	520	320	500	250
AIR1-JVK XC 3200	06003	740	435	823	720	420	700	350

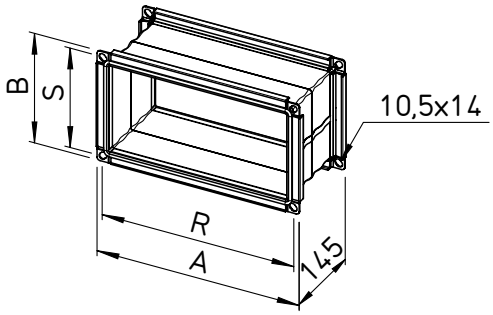
Accessories for the XC series.

Flexible connector

Flexible connector

Flexible connector (uninsulated), with flange connections on both sides, for mounting between the ventilation unit and duct system. Prevents structure-borne sound transmission and bridges mounting tolerances. Elastic fabric sleeve, operating temperature range from -10 °C to +80 °C.

Dimensional drawing



Dim. in mm

Dimensions

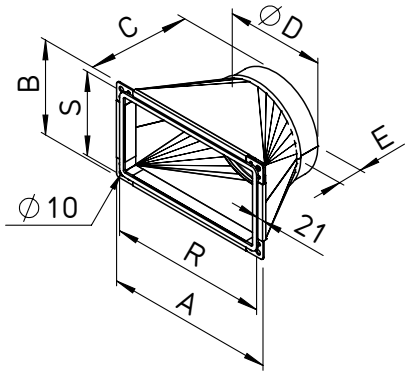
XC units	Type	Ref. no.	A	B	R	S
AIR1-XC 500	AIR1-VS 30/15	07400	343	193	320	170
AIR1-XC 700	AIR1-VS 40/20	07403	443	243	420	220
AIR1-XC 1400	AIR1-VS 50/25	07404	543	293	520	270
AIR1-XC 2200	AIR1-VS 50/30	07407	543	343	520	320
AIR1-XC 3200	AIR1-VS 70/40	07408	743	443	720	420

Square-round adapter

Square-round adapter

Symmetrical adapter for connecting the ventilation unit to round air ducts/duct systems. Made of galvanised steel sheet. The pressure loss of the adapter at maximum air volume is < 10 Pa on both the intake and discharge side.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	Ø D	E	R	S
AIR1-ÜS XC 500	04361	342	192	200	200	40	320	170
AIR1-ÜS XC 700	04362	442	242	200	250	60	420	220
AIR1-ÜS XC 1400	04363	542	292	250	315	60	520	270
AIR1-ÜS XC 2200	04364	542	342	250	400	80	520	320
AIR1-ÜS XC 3200	04365	742	442	300	450	80	720	420

Condensate pump

Condensate pump

Condensate pump for mounting directly to unit, includes fixing material. Self-priming. Thermal fuse with auto-restart. Protection class IP 20.

Technical data

Type	Ref. no.	Max. flow rate	Max. recommended discharge head	Max. suction head	Voltage / frequency / output	Max. water temperature	Drain pipe ID
AIR1-KP XC 500-1400	06867	13 l/h	10 m	1.5 m	220-240 V 50 / 60 Hz 19 W	35 °C	6 mm
AIR1-KP XC 2200-3200	06868	40 l/h	10 m	2 m	220-240 V 50 / 60 Hz 16 W	35 °C	6 mm

Ball siphon

Ball siphon

Siphon for the drainage of condensate with over or underpressure in comparison to the environment. Self-filling and self-closing, with float ball as non-return valve. Screw cap for inspection purposes.
Suitable for a max. under/overpressure of ± 600 Pa.
For use with the units and the cooling register.
Connection diameter 40 mm.

Type	Ref. no.
AIR1-KS XC	07170

Controller Eco

Controller Eco

Backlit display with 4 lines a 20 characters. The display menu system is operated via seven buttons. There are two LEDs on the front side: One alarm LED and one LED for the input mode. The controller is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. The controller is designed for wall mounting. Alternatively, it can also be attached to the unit casing using magnetic strips. Protection class IP 40.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE ECO	06186	24 V DC	0.24 W	115 x 95 x 25 mm	Max. 90 % RH (non-condensing)	+5 °C to +40 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Accessories for the XC series.

Controller Touch

Controller Touch

Graphic user interface with intuitive menu structure and simple operation. The display has a capacitive touch function and a size of 7”, incl. multi-colour colour technology. Includes stainless steel casing for simple surface-mounting to the wall. It is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. Protection class IP 20.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE TOUCH	06187	24 V DC	6 W	185 x 131 x 50 mm	Max. 90 % RH (1)	-10 °C to +60 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Room sensors

Room sensors

For measuring the CO_2, mixed gas (VOC) concentration or relative humidity and temperature. Control according to highest measured value. Includes control cable KWL-SL 4/3 (3 m long), other lengths available upon request. Dimensions (W x H x D) 95 x 97 x 30 mm.

Technical data

Type	Ref. no.	Measurement range
KWL-CO2	04272	400 ... 2000 ppm
KWL-FTF	04273	0 ... 99 % RH (1) and 0 ... 40 °C
KWL-VOC	04274	450 ... 2000 ppm

Carbon dioxide sensor for duct installation

Carbon dioxide sensor for duct installation

Sensor for measuring the carbon dioxide concentration in the air. For installation in the ventilation duct. Installation depth 40 – 180 mm.

Technical data

Type	Ref. no.	Measurement range
AIR1-CO2 K	07124	0 ... 2000 ppm

Extension kit for CAP mode

Extension kit for CAP mode

Differential pressure transmitter for constant pressure operation of the ventilation unit. Vertical or horizontal installation possible. Protection class IP 54.
Scope of delivery: Pressure transmitter, pressure hose and sensor.

Technical data

Type	Ref. no.	Voltage	Ambient humidity	Ambient temperature
AIR1-CAP	06756	24 V AC / DC ±15 %	Max. 95 % RH (1)	-25 °C to +50 °C

(1) Non-condensing

Signal converter for sensors

Signal converter for sensors

Signal converter for the connection of up to six AIR1 room sensors of the same sensor type. The AIR1-SK compares the connected inputs and forwards the highest input signal to the max. output. Supplied pre-installed in the appropriate terminal box incl. transformer 230 V / 24 V AC and terminal strip.
Dimensions terminal box (L x H x W): 218 x 149 x 97 mm

Technical data

Type	Ref. no.	Voltage	Power consumption	Ambient humidity	Ambient temperature	Protection class
AIR1-SK	06019	230 V, 50 Hz	max. 15 VA	Max. 90 % RH (non-condensing)	-40 °C to +50 °C	IP 20 / IP 66 in terminal box

Spare air filter

Extract air filter ePM10 50% (M5)

Outside or extract air filter ePM1 55% (F7)
Outside air filter ePM1 80% (F9)

Spare air filter

Helios AIR1 units are supplied with the filter classes ePM1 55%/F7 (outside air) and ePM10 50%/M5 (extract air) as standard. Depending on the unit size, the air filter consists of multiple (separate) air filter inserts. This is taken into account when ordering the spare air filter.
In case of increased air quality requirements, other filter classes are available for the outside air and extract air (see table below). All air filters are pressure-loss-optimised cassette filters with large filter surfaces.

Technical data

	Type	Ref. no.	Filter class
Extract air filter	ELF-AIR1 XC 500/ePM10 50%/96	02171	ePM10 50% (M5)
	ELF-AIR1 XC 700/ePM10 50%/96	02172	ePM10 50% (M5)
	ELF-AIR1 XC 1400/ePM10 50%/96	02173	ePM10 50% (M5)
	ELF-AIR1 XC 2200/ePM10 50%/96	02174	ePM10 50% (M5)
	ELF-AIR1 XC 3200/ePM10 50%/96	02175	ePM10 50% (M5)
Outside or extract air filter	ELF-AIR1 XC 500/ePM1 55%/96	02221	ePM1 55% (F7)
	ELF-AIR1 XC 700/ePM1 55%/96	02223	ePM1 55% (F7)
	ELF-AIR1 XC 1400/ePM1 55%/96	02224	ePM1 55% (F7)
	ELF-AIR1 XC 2200/ePM1 55%/96	02225	ePM1 55% (F7)
	ELF-AIR1 XC 3200/ePM1 55%/96	02226	ePM1 55% (F7)
Outside air filter	ELF-AIR1 XC 500/ePM1 80%/96	02272	ePM1 80% (F9)
	ELF-AIR1 XC 700/ePM1 80%/96	02273	ePM1 80% (F9)
	ELF-AIR1 XC 1400/ePM1 80%/96	02274	ePM1 80% (F9)
	ELF-AIR1 XC 2200/ePM1 80%/96	02285	ePM1 80% (F9)
	ELF-AIR1 XC 3200/ePM1 80%/96	02286	ePM1 80% (F9)

The Helios AIR1® XH series: 1,000 to 8,500 m³/h.

8 unit types:

- **AIR1 XH 1000**
- **AIR1 XH 1500**
- **AIR1 XH 2500**
- **AIR1 XH 3500**
- **AIR1 XH 4500**
- **AIR1 XH 5500**
- **AIR1 XH 7000**
- **AIR1 XH 8500**

The Helios AIR1 XH series stands for **reliable and high-performance compact ventilation units and various area of application.** The high-quality housing construction allows installation inside and outside and is modularly expandable.

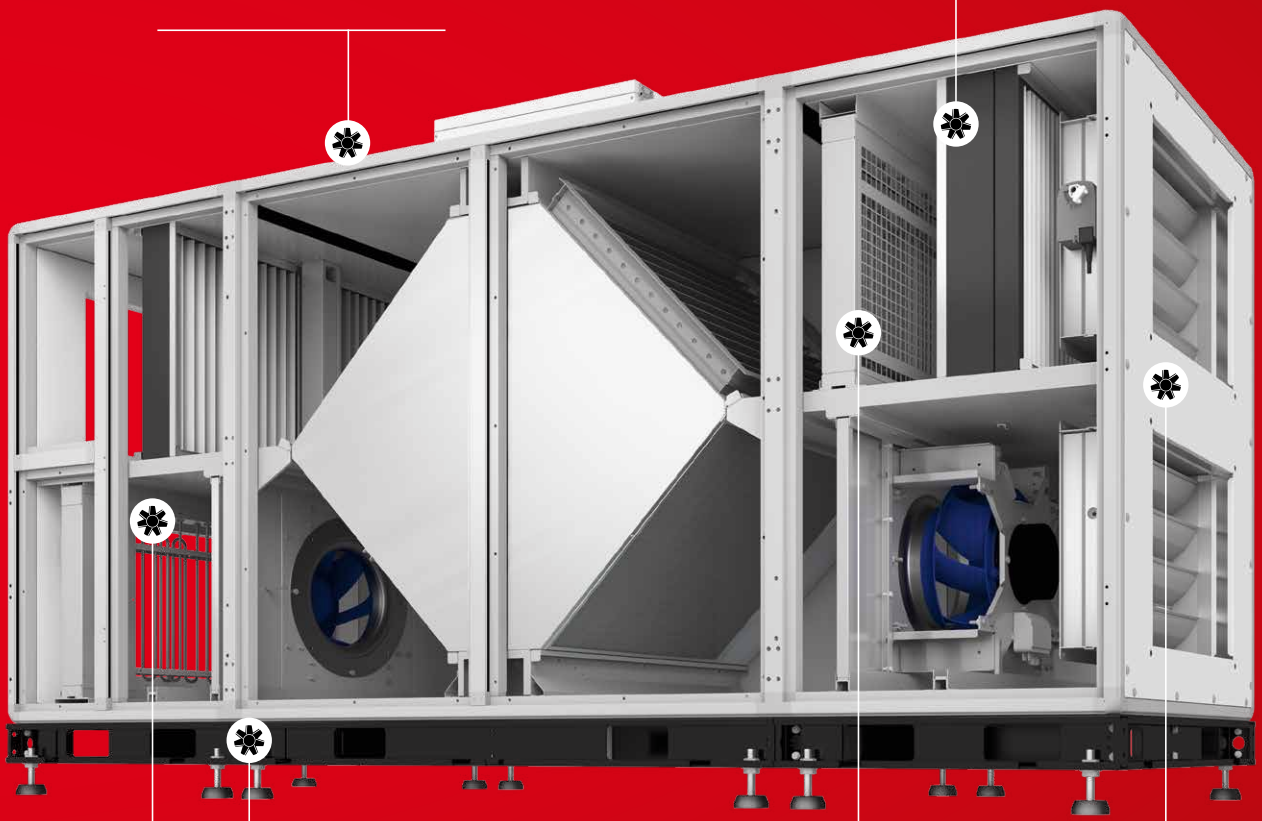
The two-sided maintenance access to all unit components and the universal right or left configuration guarantee high flexibility at the construction site. The multi-level filter concept, which enables the optimal adaptation to individual circumstances and requirements, provides the perfect indoor climate.

Helios AIR1®

series XH

Multi-level filter concept

Also suitable for outdoor installation



Separable casing design from 3,500 m³/h

Pre-heater as standard equipment for optimal year-round operation

Maintenance access on both sides for simple service work

Universal right / left configuration

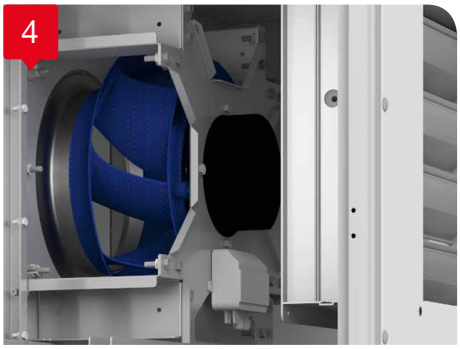
The XH series in detail.

1

2

3

4



1 Housing

Housing consisting of robust and stable aluminium frame profiles, thermally optimised to minimise thermal bridges. Double-walled panels made of Aluzinc sheet steel. Insulated on all sides with 50 mm mineral wool for optimal thermal and acoustic insulation. External corrosion-resistant coating on all sides of housing, RAL 7047, corrosion class C4 and thus suitable for external installation. Galvanised inside. The smooth inner surface meets the hygiene requirements for optimal cleaning in consideration of the hygiene standard VDI 6022. Large inspection openings on both sides of the unit for simple access to all unit components and optimal maintenance. The service doors are equipped with maintenance-free hinges and lockable lever locks. The XH units are designed so that accessories, such as electric or hot water auxiliary heaters, can be easily installed in the ventilation unit, even for retrofitting.

▢ Housing and tightness classes according to DIN EN 1886	
Thermal insulation	T2
Thermal bridging factor	TB2
Mechanical stability	D1
Housing leakage in case of overpressure	L1
Housing leakage in case of underpressure	L1
Filter bypass leakage	F9

Outdoor installation of unit

All units are suitable for internal and external installation. Additional accessories are mandatory for the external installation (e.g. weather protection cover, intake/discharge hoods etc.). In this respect, please see the accessory list or configure your unit with our online configuration software www.AIR1Select.com.

2 Heat exchanger

Eurovent-certified cross-counterflow plate heat exchanger made of aluminium with high thermal efficiency of up to 90 % in accordance with EN 308. The heat exchanger has high internal leak tightness and it is thus particularly suitable for applications with a risk of odour transmission. The heat exchanger module has an automatic bypass damper mechanism with a fully covered heat exchanger for summer night cooling. An electrical pre-heater (standard equipment) heats the outside air at very low outside temperatures. Thus, it prevents the freezing of the heat exchanger and guarantees its safe functioning as well as optimal heat recovery for the entire heating period.

3 Separating the unit housing

The units can be separated to simplify transportation and for easier installation at the installation site for units above size XH 3500. Note: The units are delivered in individual modules, i.e. in multiple delivery units.

5

6

7

8

Eurovent certification for the AIR1 XH series has been applied for.
The AIR1 XH series is designed in accordance with the requirements of Directive **VDI 6022** (hygiene requirements for building ventilation systems).

4 Fans

The vibration dampened fans are located in the unit and they consist of freewheeling, backward curved centrifugal impellers with direct drive via a variable EC motor with low energy consumption and very low noise level. The high performance plastic impeller is dynamically balanced in two levels. Variably controllable via 0 – 10 V signal. Plug-in connections to all electrical components for the simplification of maintenance work. Eurovent-certified EC-motors in class IE4 with very low SFP values and high energy efficiency.

Pipe routing

Installation-friendly connection of outside, exhaust, extract and supply air to a duct or pipe system. The floor-standing unit can be turned 180° for the installation of the air duct system, so that the outside air/exhaust air and extract air/supply air connections can be on the left or right side. Adapters are optionally available as unit accessories for adaption to a round duct system up to unit size XH 5500.

5 Control system

The ventilation unit is delivered ready for operation with a modern, all-round control system. The control system is attached on top of the unit in a connection box for easy maintenance , factory-wired and function-tested. Two controllers are available for selection (required accessory).

Overview of control functions:

- ☐ Choice between ventilation modes Constant volume CAV, Constant pressure CAP (accessory required) or Constant speed CRPM in %.
- ☐ Multiple possible operating modes and levels.
- ☐ Automatic control via humidity or room air quality sensors (can connect up to three sensor types and maximum 18 sensors).
- ☐ Automatic operation via integrated weekly programme.
- ☐ Operating modes Free cooling (also night cooling/bypass function) and active cooling (using cooling register) possible.
- ☐ Commissioning assistant for simple, quick and faultless commissioning of the unit and matching accessories.
- ☐ Connection to the central building control system via BACnet or Modbus.
- ☐ Digital output for collective fault signal.

Further information on the Helios AIR1 control system can be found on page 118.

6 Accessories

There are a number of accessory components available for the Helios AIR1 units. A detailed overview and the matching accessories for your Helios AIR1 unit can be found on the following product pages.

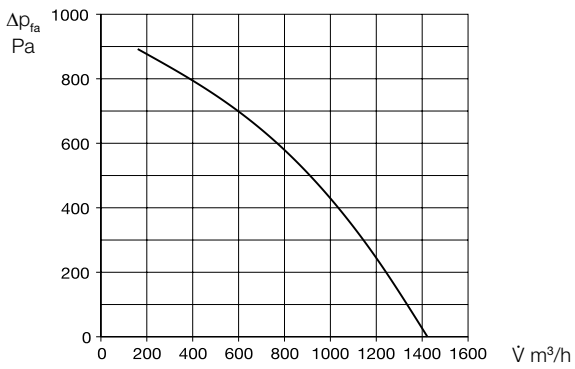
7 Air filters

Cassette filters with long service lives due to dynamic pressure monitoring. Simple filter replacement at the side or below through insert frame and quick clamp device. A multi-level filter concept inside the unit is optional.
Further information on the air filters can be found on page 75.

AIR1 XH 1000

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 1000
Ref. no.	04335
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	160 m³/h
Max. air volume	950 m³/h (1)
Weight, unit operational	276 kg
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 320 W
Max. output elec. pre-heater	2600 W
Nominal current	
– Ventilation unit	5.2 / 5.2 / 4.6 A (3)
– Electrical auxiliary heater	3.8 / 3.8 / 3.8 A (4)
– max. total	8.9 / 8.9 / 8.3 A
Connection (wiring diagram no.)	SS-1326

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

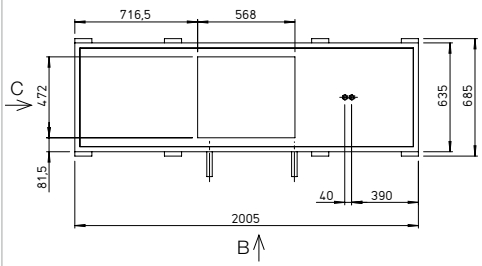
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	200 m³/h	700 m³/h	950 m³/h
Supply air (LwA)	69	73	77
Extract air (LwA)	65	68	71
Outside air (LwA)	62	64	67
Exhaust air (LwA)	69	63	76
Sound pressure level LpA db(A) of sound radiated from housing			
	200 m³/h	700 m³/h	950 m³/h
Housing rad. 1 m	43	46	48
Housing rad. 3 m	33	36	39
Housing rad. 5 m	29	32	34

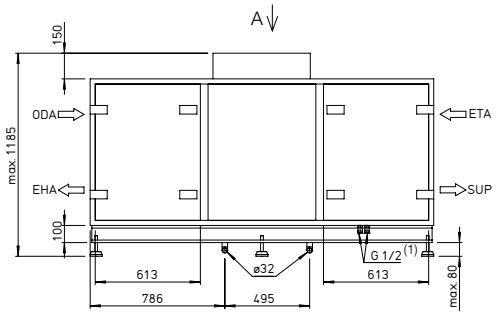
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

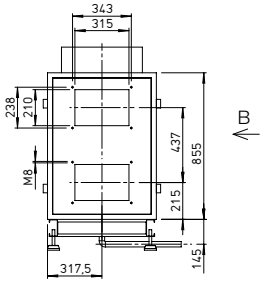
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 1000 Electrical, internal	Ref. no. 03587	Page 60
AIR1-NH WW XH 1000 Hot water, internal	Ref. no. 03664	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 61
Cooling register		
AIR1-KR KW XH 1000 L (1) Cold water, external	Ref. no. 03834	Page 75
AIR1-KR KW XH 1000 R (1) Cold water, external	Ref. no. 04254	Page 75
AIR1-KR DX XH 1000 L (1) Direct evaporator DX, external	Ref. no. 04403	Page 64
AIR1-KR DX XH 1000 R (1) Direct evaporator DX, external	Ref. no. 04872	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 1000	Ref. no. 06005	Page 66
Recirculation kit		
AIR1-ULK XH 1000	Ref. no. 06022	Page 66
Flexible connector		
AIR1-VS 31/21	Ref. no. 04371	Page 67
Adapter square-round		
AIR1-ÜS XH 1000	Ref. no. 04366	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 74

(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

External installation

Cover for external installation		
AIR1-AAD XH 1000 Weather protection cover for the unit	Ref. no. 06305	Page 69
AIR1-AAD KR KW + DX XH 1000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06451	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 1000 Intake hood outside air	Ref. no. 06483	Page 71
AIR1-AAHF XH 1000 Discharge hood exhaust air	Ref. no. 06613	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

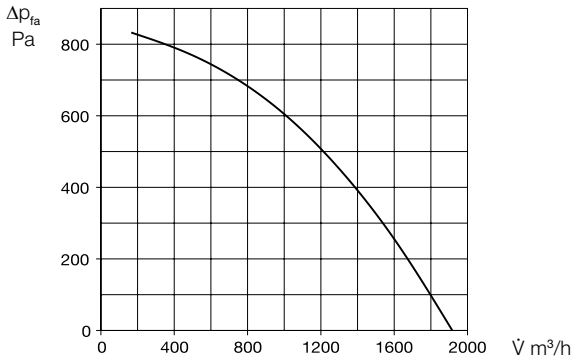
Spare air filter and other filter classes		
ELF-AIR1 XH 1000/ePM10 50%/48 (M5)	Ref. no. 02176	Page 75
ELF-AIR1 XH 1000/ePM10 50%/96 (M5)	Ref. no. 02203	Page 75
ELF-AIR1 XH 1000/ePM1 55%/96 (F7)	Ref. no. 02227	Page 75
ELF-AIR1 XH 1000/ePM1 80%/96 (F9)	Ref. no. 02288	Page 75

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

AIR1 XH 1500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 1500
Ref. no.	04336
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	170 m³/h
Max. air volume	1490 m³/h (1)
Weight, unit operational	335 kg
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 500 W
Max. output elec. pre-heater	3900 W
Nominal current	
– Ventilation unit	7.9 / 7.9 / 6.5 A (3)
– Electrical auxiliary heater	5.6 / 5.6 / 5.6 A (4)
– max. total	13.5 / 13.5 / 12.1 A
Connection (wiring diagram no.)	SS-1327

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

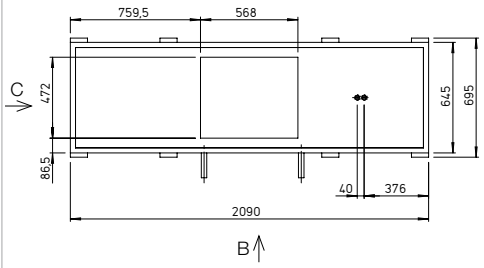
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	250 m³/h	900 m³/h	1,490 m³/h
Supply air (LwA)	67	72	76
Extract air (LwA)	60	65	68
Outside air (LwA)	56	62	64
Exhaust air (LwA)	67	71	76
Sound pressure level LpA db(A) of sound radiated from housing			
	250 m³/h	900 m³/h	1,490 m³/h
Housing rad. 1 m	40	48	48
Housing rad. 3 m	30	38	39
Housing rad. 5 m	26	34	34

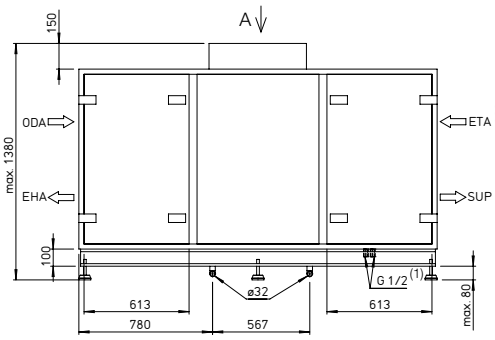
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

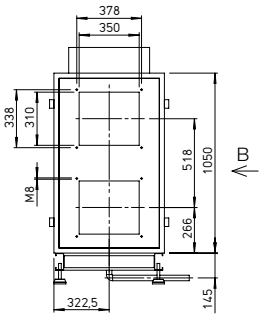
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 1500 Electrical, internal	Ref. no. 03588	Page 60
AIR1-NH WW XH 1500 Hot water, internal	Ref. no. 03665	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 61
Cooling register		
AIR1-KR KW XH 1500 L (1) Cold water, external	Ref. no. 03842	Page 75
AIR1-KR KW XH 1500 R (1) Cold water, external	Ref. no. 04255	Page 75
AIR1-KR DX XH 1500 L (1) Direct evaporator DX, external	Ref. no. 04406	Page 64
AIR1-KR DX XH 1500 R (1) Direct evaporator DX, external	Ref. no. 04873	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 1500/RH 1500	Ref. no. 06006	Page 66
Recirculation kit		
AIR1-ULK XH 1500	Ref. no. 06023	Page 66
Flexible connector		
AIR1-VS 35/31	Ref. no. 04372	Page 67
Adapter square-round		
AIR1-ÜS XH 1500/RH 1500	Ref. no. 04367	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 73

(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

External installation

Cover for external installation		
AIR1-AAD XH 1500 Weather protection cover for the unit	Ref. no. 06306	Page 69
AIR1-AAD KR KW + DX XH 1500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06455	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 1500/RH 1500 Intake hood outside air	Ref. no. 06484	Page 71
AIR1-AAHF XH 1500/RH 1500 Discharge hood exhaust air	Ref. no. 06643	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

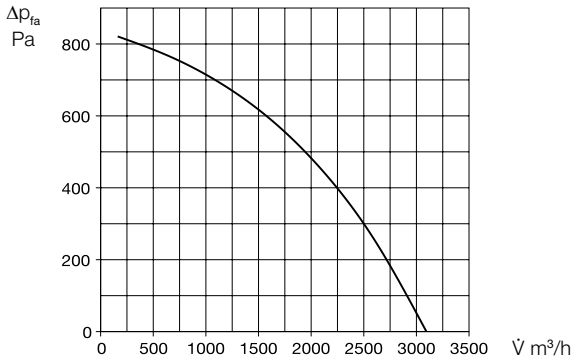
Spare air filter and other filter classes		
ELF-AIR1 XH 1500/ePM10 50%/48 (M5)	Ref. no. 02178	Page 75
ELF-AIR1 XH 1500/ePM10 50%/96 (M5)	Ref. no. 02204	Page 75
ELF-AIR1 XH 1500/ePM1 55%/96 (F7)	Ref. no. 02228	Page 75
ELF-AIR1 XH 1500/ePM1 80%/96 (F9)	Ref. no. 02289	Page 75

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

AIR1 XH 2500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 2500
Ref. no.	04337
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	240 m³/h
Max. air volume	2430 m³/h (1)
Weight, unit operational	508 kg
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 780 W
Max. output elec. pre-heater	6600 W
Nominal current	
– Ventilation unit	13 / 13 / 10.4 A (3)
– Electrical auxiliary heater	9.5 / 9.5 / 9.5 A (4)
– max. total	22.5 / 22.5 / 19.9 A
Connection (wiring diagram no.)	SS-1328

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

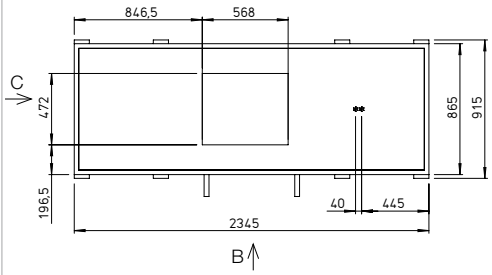
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	800 m³/h	1,700 m³/h	2,430 m³/h
Supply air (LwA)	71	74	78
Extract air (LwA)	62	65	69
Outside air (LwA)	58	61	66
Exhaust air (LwA)	71	73	78
Sound pressure level LpA db(A) of sound radiated from housing			
	800 m³/h	1,700 m³/h	2,430 m³/h
Housing rad. 1 m	43	46	51
Housing rad. 3 m	34	37	41
Housing rad. 5 m	29	32	37

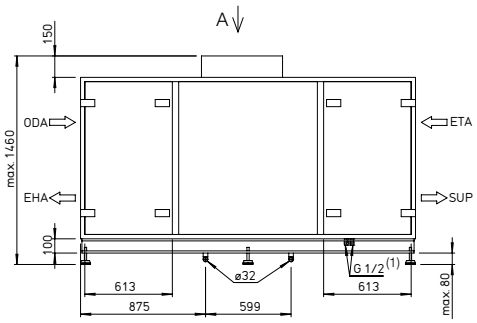
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

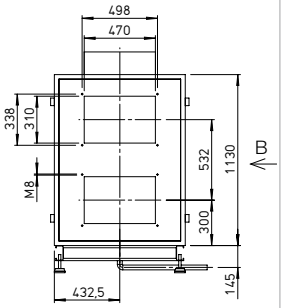
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 2500 Electrical, internal	Ref. no. 03590	Page 60
AIR1-NH WW XH 2500 Hot water, internal	Ref. no. 03679	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 61
Cooling register		
AIR1-KR KW XH 2500 L (1) Cold water, external	Ref. no. 03844	Page 75
AIR1-KR KW XH 2500 R (1) Cold water, external	Ref. no. 04264	Page 75
AIR1-KR DX XH 2500 L (1) Direct evaporator DX, external	Ref. no. 04407	Page 64
AIR1-KR DX XH 2500 R (1) Direct evaporator DX, external	Ref. no. 04877	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 2500/RH 2000	Ref. no. 06007	Page 66
Recirculation kit		
AIR1-ULK XH 2500	Ref. no. 06024	Page 66
Flexible connector		
AIR1-VS 47/31	Ref. no. 04373	Page 67
Adapter square-round		
AIR1-ÜS XH 2500/RH 2000	Ref. no. 04368	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 73

(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

External installation

Cover for external installation		
AIR1-AAD XH 2500 Weather protection cover for the unit	Ref. no. 06315	Page 69
AIR1-AAD KR KW + DX XH 2500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06461	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 2500/RH 2000 Intake hood outside air	Ref. no. 06539	Page 71
AIR1-AAHF XH 2500/RH 2000 Discharge hood exhaust air	Ref. no. 06646	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

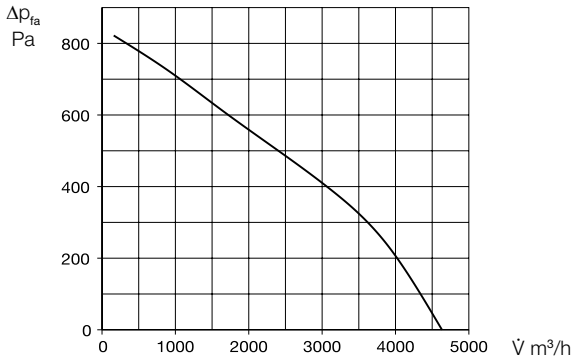
Spare air filter and other filter classes		
ELF-AIR1 XH 2500/ePM10 50%/48 (M5)	Ref. no. 02179	Page 75
ELF-AIR1 XH 2500/ePM10 50%/96 (M5)	Ref. no. 02205	Page 75
ELF-AIR1 XH 2500/ePM1 55%/96 (F7)	Ref. no. 02229	Page 75
ELF-AIR1 XH 2500/ePM1 80%/96 (F9)	Ref. no. 02290	Page 75

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

AIR1 XH 3500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 3500
Ref. no.	04338
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	375 m³/h
Max. air volume	3150 m³/h (1)
Weight, unit operational	687 kg
Delivery unit	3-part
Unit segments	3
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 1500 W
Max. output elec. pre-heater	9600 W
Nominal current	
– Ventilation unit	18.5 / 18.5 / 19.2 A (3)
– Electrical auxiliary heater	13.9 / 13.9 / 13.9 A (4)
– max. total	32.4 / 32.4 / 33.1 A
Connection (wiring diagram no.)	SS-1329

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

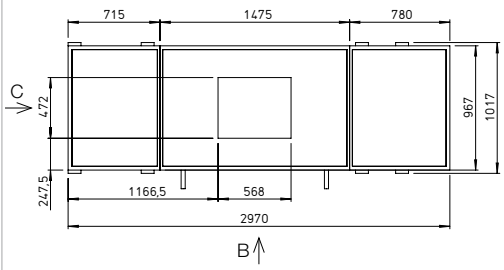
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	1,000 m³/h	2,200 m³/h	3,150 m³/h
Supply air (LwA)	79	81	83
Extract air (LwA)	71	73	75
Outside air (LwA)	67	69	71
Exhaust air (LwA)	79	81	83
Sound pressure level LpA db(A) of sound radiated from housing			
	1,000 m³/h	2,200 m³/h	3,150 m³/h
Housing rad. 1 m	51	52	54
Housing rad. 3 m	42	43	45
Housing rad. 5 m	37	38	40

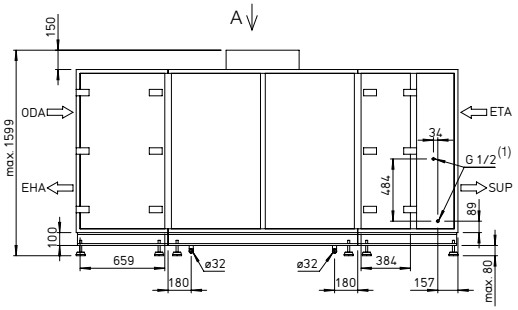
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

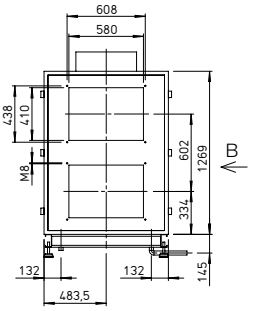
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 3500 Electrical, internal	Ref. no. 03592	Page 60
AIR1-NH WW XH 3500 Hot water, internal	Ref. no. 03683	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 61
Cooling register		
AIR1-KR KW XH 3500 L (1) Cold water, external	Ref. no. 03910	Page 75
AIR1-KR KW XH 3500 R (1) Cold water, external	Ref. no. 04268	Page 75
AIR1-KR DX XH 3500 L (1) Direct evaporator DX, external	Ref. no. 04408	Page 64
AIR1-KR DX XH 3500 R (1) Direct evaporator DX, external	Ref. no. 04878	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 3500-4500/RH 3000	Ref. no. 06009	Page 66
Recirculation kit		
AIR1-ULK XH 3500	Ref. no. 06025	Page 66
Flexible connector		
AIR1-VS 58/41	Ref. no. 04374	Page 67
Adapter square-round		
AIR1-ÜS XH 3500-4500/RH 3000	Ref. no. 04369	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 74

(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

External installation

Cover for external installation		
AIR1-AAD XH 3500 Weather protection cover for the unit	Ref. no. 06316	Page 69
AIR1-AAD KR KW + DX XH 3500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06462	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 3500-4500/RH 3000 Intake hood outside air	Ref. no. 06487	Page 71
AIR1-AAHF XH 3500-4500/RH 3000 Discharge hood exhaust air	Ref. no. 06647	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

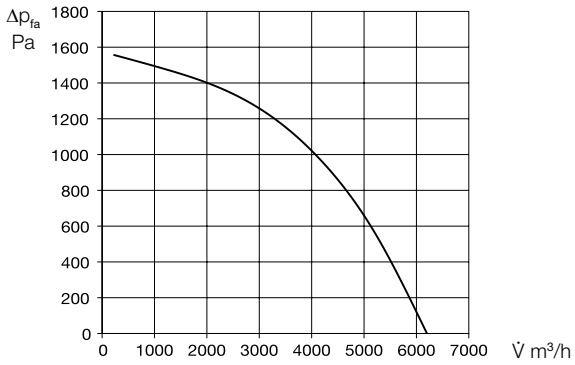
Spare air filter and other filter classes		
ELF-AIR1 XH 3500/ePM10 50%/48 (M5)	Ref. no. 02180	Page 75
ELF-AIR1 XH 3500/ePM10 50%/96 (M5)	Ref. no. 02206	Page 75
ELF-AIR1 XH 3500/ePM1 55%/96 (F7)	Ref. no. 02230	Page 75
ELF-AIR1 XH 3500/ePM1 80%/96 (F9)	Ref. no. 02291	Page 75

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

AIR1 XH 4500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 4500
Ref. no.	04339
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	380 m³/h
Max. air volume	4150 m³/h (1)
Weight, unit operational	750 kg
Delivery unit	3-part
Unit segments	3
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 2500 W
Max. output elec. pre-heater	12900 W
Nominal current	
– Ventilation unit	26.3 / 26.3 / 27 A (3)
– Electrical auxiliary heater	18.6 / 18.6 / 18.6 A (4)
– max. total	44.9 / 44.9 / 45.6 A
Connection (wiring diagram no.)	SS-1330

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

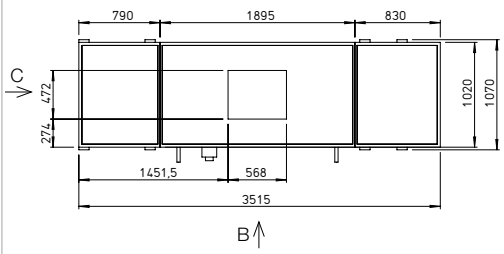
Sound data

Sound power level LwA dB(A) at 250 Pa external pressure			
	1,300 m³/h	2,900 m³/h	4,150 m³/h
Supply air (LwA)	71	75	81
Extract air (LwA)	62	65	72
Outside air (LwA)	58	61	67
Exhaust air (LwA)	70	75	81
Sound pressure level LpA db(A) of sound radiated from housing			
	1,300 m³/h	2,900 m³/h	4,150 m³/h
Housing rad. 1 m	43	47	53
Housing rad. 3 m	34	38	43
Housing rad. 5 m	29	33	39

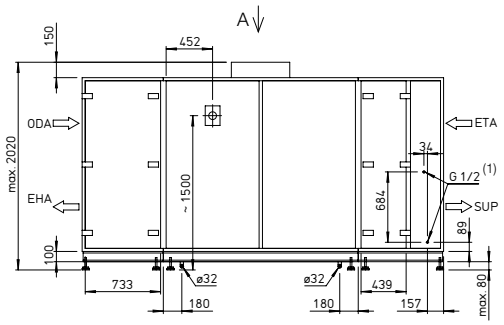
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

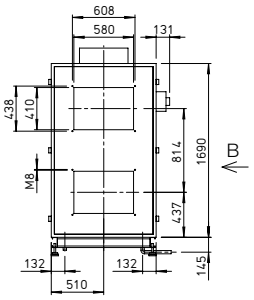
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 4500 Electrical, internal	Ref. no. 03593	Page 60
AIR1-NH WW XH 4500 Hot water, internal	Ref. no. 03684	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 61
Cooling register		
AIR1-KR KW XH 4500 L (1) Cold water, external	Ref. no. 03919	Page 75
AIR1-KR KW XH 4500 R (1) Cold water, external	Ref. no. 04278	Page 75
AIR1-KR DX XH 4500 L (1) Direct evaporator DX, external	Ref. no. 04409	Page 64
AIR1-KR DX XH 4500 R (1) Direct evaporator DX, external	Ref. no. 04879	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 3500-4500/RH 3000	Ref. no. 06009	Page 66
Recirculation kit		
AIR1-ULK XH 4500	Ref. no. 06026	Page 66
Flexible connector		
AIR1-VS 58/41	Ref. no. 04374	Page 67
Adapter square-round		
AIR1-ÜS XH 3500-4500/RH 3000	Ref. no. 04369	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 73

(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

External installation

Cover for external installation		
AIR1-AAD XH 4500 Weather protection cover for the unit	Ref. no. 06347	Page 69
AIR1-AAD KR KW + DX XH 4500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06463	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 3500-4500/RH 3000 Intake hood outside air	Ref. no. 06487	Page 71
AIR1-AAHF XH 3500-4500/RH 3000 Discharge hood exhaust air	Ref. no. 06647	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

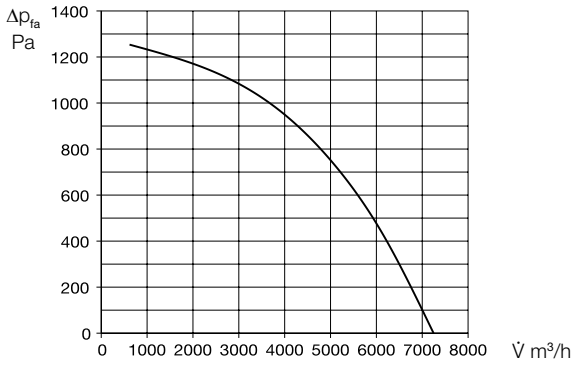
Spare air filter and other filter classes		
ELF-AIR1 XH 4500/ePM10 50%/48 (M5)	Ref. no. 02182	Page 75
ELF-AIR1 XH 4500/ePM10 50%/96 (M5)	Ref. no. 02207	Page 75
ELF-AIR1 XH 4500/ePM1 55%/96 (F7)	Ref. no. 02231	Page 75
ELF-AIR1 XH 4500/ePM1 80%/96 (F9)	Ref. no. 02292	Page 75

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

AIR1 XH 5500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 5500
Ref. no.	04340
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	400 m³/h
Max. air volume	5400 m³/h (1)
Weight, unit operational	873 kg
Delivery unit	3-part
Unit segments	3
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 2400 W
Max. output elec. pre-heater	17700 W
Nominal current	
– Ventilation unit	32.9 / 32.9 / 33.7 A (3)
– Electrical auxiliary heater	25.5 / 25.5 / 25.5 A (4)
– max. total	58.4 / 58.4 / 59.2 A
Connection (wiring diagram no.)	SS-1331

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

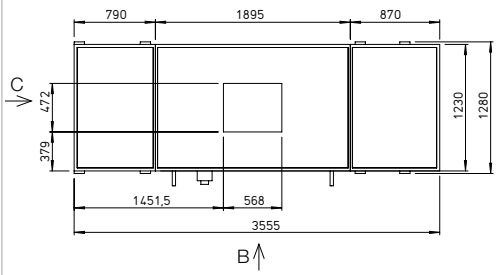
Sound data

Sound power level LwA dB(A) at 400 Pa external pressure			
	1,800 m³/h	3,800 m³/h	5,400 m³/h
Supply air (LwA)	76	78	83
Extract air (LwA)	67	68	74
Outside air (LwA)	63	64	70
Exhaust air (LwA)	76	78	83
Sound pressure level LpA db(A) of sound radiated from housing			
	1,800 m³/h	3,800 m³/h	5,400 m³/h
Housing rad. 1 m	49	50	55
Housing rad. 3 m	39	41	46
Housing rad. 5 m	35	36	41

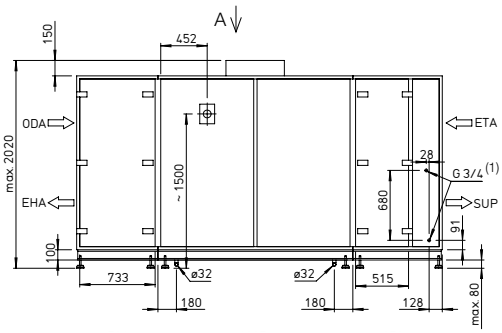
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

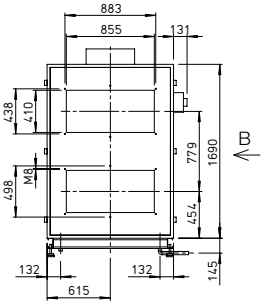
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 5500 Electrical, internal	Ref. no. 03595	Page 60
AIR1-NH WW XH 5500 Hot water, internal	Ref. no. 03687	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 86318	Page 61
Cooling register		
AIR1-KR KW XH 5500 L (1) Cold water, external	Ref. no. 03932	Page 75
AIR1-KR KW XH 5500 R (1) Cold water, external	Ref. no. 04279	Page 75
AIR1-KR DX XH 5500 L (1) Direct evaporator DX, external	Ref. no. 04410	Page 64
AIR1-KR DX XH 5500 R (1) Direct evaporator DX, external	Ref. no. 04883	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 5500/RH 5000-6000	Ref. no. 06010	Page 66
Recirculation kit		
AIR1-ULK XH 5500	Ref. no. 06027	Page 66
Flexible connector		
AIR1-VS 85/41	Ref. no. 04375	Page 67
Adapter square-round		
AIR1-ÜS XH 5500/RH 5000-6000	Ref. no. 04370	Page 73

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 73

(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

External installation

Cover for external installation		
AIR1-AAD XH 5500 Weather protection cover for the unit	Ref. no. 06349	Page 69
AIR1-AAD KR KW + DX XH 5500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06464	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 5500/RH 5000-6000 Intake hood outside air	Ref. no. 06496	Page 71
AIR1-AAHF XH 5500/RH 5000-6000 Discharge hood exhaust air	Ref. no. 06648	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

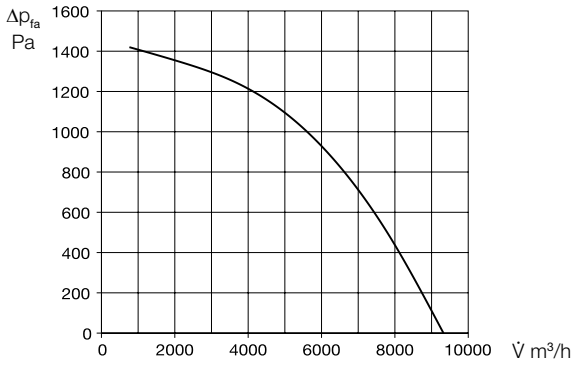
Spare air filter and other filter classes		
ELF-AIR1 XH 5500/ePM10 50%/48 (M5)	Ref. no. 02186	Page 75
ELF-AIR1 XH 5500/ePM10 50%/96 (M5)	Ref. no. 02208	Page 75
ELF-AIR1 XH 5500/ePM1 55%/96 (F7)	Ref. no. 02233	Page 75
ELF-AIR1 XH 5500/ePM1 80%/96 (F9)	Ref. no. 02293	Page 75

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

AIR1 XH 7000

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 7000
Ref. no.	04341
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	500 m³/h
Max. air volume	6300 m³/h (1)
Weight, unit operational	1080 kg
Delivery unit	3-part
Unit segments	3
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 3600 W
Max. output elec. pre-heater	21000 W
Nominal current	
– Ventilation unit	41.3 / 41.3 / 42.3 A (3)
– Electrical auxiliary heater	30.3 / 30.3 / 30.3 A (4)
– max. total	71.6 / 71.6 / 72.6 A
Connection (wiring diagram no.)	SS-1332

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

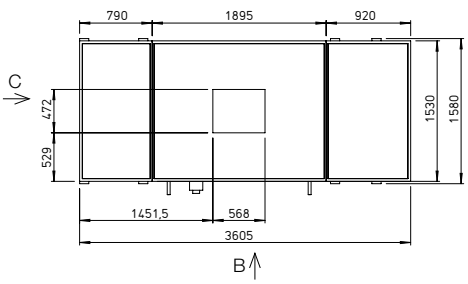
Sound data

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,200 m³/h	4,400 m³/h	6,300 m³/h
Supply air (LwA)	77	80	86
Extract air (LwA)	68	69	75
Outside air (LwA)	64	65	71
Exhaust air (LwA)	77	80	86
Sound pressure level LpA db(A) of sound radiated from housing			
	2,200 m³/h	4,400 m³/h	6,300 m³/h
Housing rad. 1 m	50	52	58
Housing rad. 3 m	40	43	48
Housing rad. 5 m	36	38	44

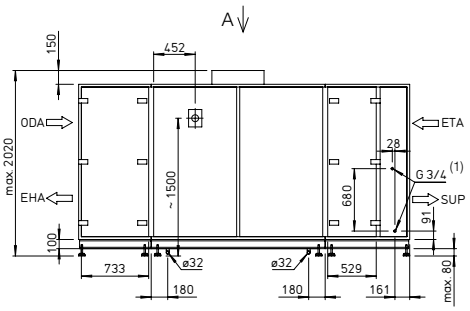
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

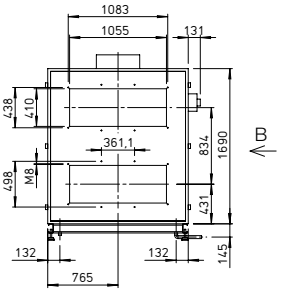
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 7000 Electrical, internal	Ref. no. 03603	Page 60
AIR1-NH WW XH 7000 Hot water, internal	Ref. no. 03689	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) M	Ref. no. 06310	Page 61
Cooling register		
AIR1-KR KW XH 7000 L (1) Cold water, external	Ref. no. 03945	Page 75
AIR1-KR KW XH 7000 R (1) Cold water, external	Ref. no. 04281	Page 75
AIR1-KR DX XH 7000 L (1) Direct evaporator DX, external	Ref. no. 04414	Page 64
AIR1-KR DX XH 7000 R (1) Direct evaporator DX, external	Ref. no. 03123	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 7000/RH 8000	Ref. no. 06012	Page 66
Recirculation kit		
AIR1-ULK XH 7000	Ref. no. 06028	Page 66
Flexible connector		
AIR1-VS 105/41	Ref. no. 04376	Page 67

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 74

(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

External installation

Cover for external installation		
AIR1-AAD XH 7000 Weather protection cover for the unit	Ref. no. 06350	Page 69
AIR1-AAD KR KW + DX XH 7000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06465	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 7000/RH 8000 Intake hood outside air	Ref. no. 06497	Page 71
AIR1-AAHF XH 7000/RH 8000 Discharge hood exhaust air	Ref. no. 06841	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

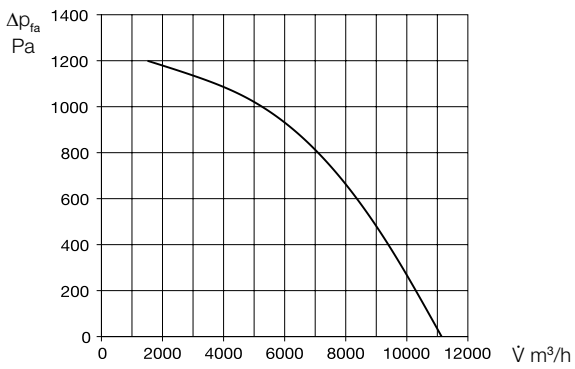
Spare air filter and other filter classes		
ELF-AIR1 XH 7000/ePM10 50%/48 (M5)	Ref. no. 02187	Page 75
ELF-AIR1 XH 7000/ePM10 50%/96 (M5)	Ref. no. 02209	Page 75
ELF-AIR1 XH 7000/ePM1 55%/96 (F7)	Ref. no. 02234	Page 75
ELF-AIR1 XH 7000/ePM1 80%/96 (F9)	Ref. no. 02435	Page 75

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

AIR1 XH 8500

Fig. shows accessories

Performance curve



Unit type

	AIR1 XH 8500
Ref. no.	04342
Heat exchanger	Cross-counterflow

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	630 m³/h
Max. air volume	8300 m³/h (1)
Weight, unit operational	1260 kg
Delivery unit	3-part
Unit segments	3
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 3600 W
Max. output elec. pre-heater	22000 W
Nominal current	
– Ventilation unit	42.4 / 42.4 / 43.4 A (3)
– Electrical auxiliary heater	31.8 / 31.8 / 31.8 A (4)
– max. total	74.2 / 74.2 / 75.2 A
Connection (wiring diagram no.)	SS-1333

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = includes electrical pre-heater
(4) = Optional accessories

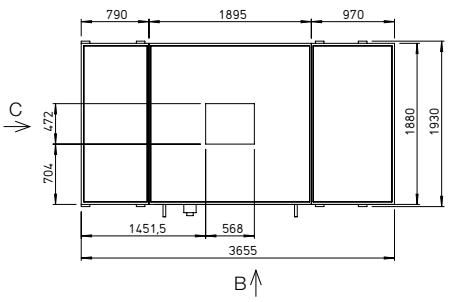
Sound data

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,800 m³/h	5,800 m³/h	8,300 m³/h
Supply air (LwA)	77	79	86
Extract air (LwA)	68	70	77
Outside air (LwA)	64	66	73
Exhaust air (LwA)	77	79	85
Sound pressure level LpA db(A) of sound radiated from housing			
	2,800 m³/h	5,800 m³/h	8,300 m³/h
Housing rad. 1 m	50	52	59
Housing rad. 3 m	40	42	50
Housing rad. 5 m	36	38	45

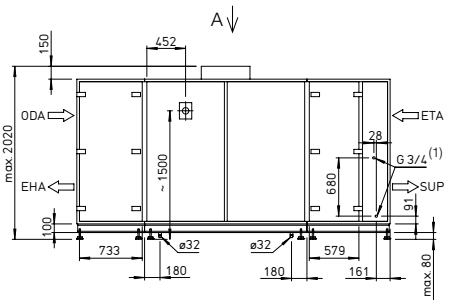
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

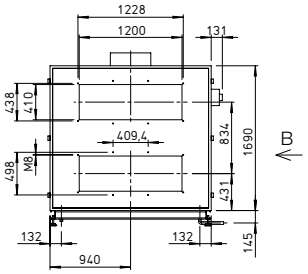
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Auxiliary heater		
AIR1-ENH XH 8500 Electrical, internal	Ref. no. 03604	Page 60
AIR1-NH WW XH 8500 Hot water, internal	Ref. no. 03793	Page 60
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) M	Ref. no. 06310	Page 61
Cooling register		
AIR1-KR KW XH 8500 L (1) Cold water, external	Ref. no. 03946	Page 75
AIR1-KR KW XH 8500 R (1) Cold water, external	Ref. no. 04282	Page 75
AIR1-KR DX XH 8500 L (1) Direct evaporator DX, external	Ref. no. 04415	Page 64
AIR1-KR DX XH 8500 R (1) Direct evaporator DX, external	Ref. no. 03052	Page 64

Air routing

Multi-leaf damper		
AIR1-JVK XH 8500/RH 9500	Ref. no. 06013	Page 66
Recirculation kit		
AIR1-ULK XH 8500	Ref. no. 06029	Page 66
Flexible connector		
AIR1-VS 120/41	Ref. no. 04377	Page 67

Condensate drainage

Ball siphon		
AIR1-KS XH for unit and cooling register	Ref. no. 07169	Page 74

(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

External installation

Cover for external installation		
AIR1-AAD XH 8500 Weather protection cover for the unit	Ref. no. 06378	Page 69
AIR1-AAD KR KW + DX XH 8500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06466	Page 70
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 71
Hoods		
AIR1-AAHA XH 8500/RH 9500 Intake hood outside air	Ref. no. 06499	Page 71
AIR1-AAHF XH 8500/RH 9500 Discharge hood exhaust air	Ref. no. 06864	Page 72

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 73
AIR1-BE TOUCH	Ref. no. 06187	Page 73
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 73
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 73
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 73
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 73
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 73
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 74
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 74
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 74

Air filters

Spare air filter and other filter classes		
ELF-AIR1 XH 8500/ePM10 50%/48 (M5)	Ref. no. 02189	Page 75
ELF-AIR1 XH 8500/ePM10 50%/96 (M5)	Ref. no. 02210	Page 75
ELF-AIR1 XH 8500/ePM1 55%/96 (F7)	Ref. no. 02235	Page 75
ELF-AIR1 XH 8500/ePM1 80%/96 (F9)	Ref. no. 02334	Page 75

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

Accessories for the XH series.

Electrical auxiliary heater internal

Electrical auxiliary heater
For installation in the ventilation unit. Provides demand-oriented temperature control of supply air. Mains power supply and connection to the ventilation unit control system through pre-wired plug contacts. Variable controls.

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Output	Current consumption	Weight
AIR1-ENH XH 1000	03587	2.6 kW	3.8 A	5.5 kg
AIR1-ENH XH 1500	03588	3.9 kW	5.6 A	7.0 kg
AIR1-ENH XH 2500	03590	6.6 kW	9.5 A	10.0 kg
AIR1-ENH XH 3500	03592	9.6 kW	13.9 A	12.5 kg
AIR1-ENH XH 4500	03593	12.9 kW	18.6 A	15.0 kg
AIR1-ENH XH 5500	03595	17.7 kW	25.5 A	17.0 kg
AIR1-ENH XH 7000	03603	21.0 kW	30.3 A	19.0 kg
AIR1-ENH XH 8500	03604	22.0 kW	31.8 A	20.0 kg

Hot water auxiliary heater internal

Hot water auxiliary heater
For installation in the ventilation unit. Provides demand-oriented temperature control of supply air. The heating elements consist of copper piping with formed aluminium fins, and copper pipe water connections for flow and return. Further accessories are required for supply air temperature control (see below; Hydraulic unit WHSH HE 24V on page 61).

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Water content	Connection flow / return (1)	Weight (without liquid)	Hydraulic unit	Ref. no.
AIR1-NH WW XH 1000	03664	4.6 l	G 1/2	3.6 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 1500	03665	7.9 l	G 1/2	4.4 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 2500	03679	12.2 l	G 1/2	6.3 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 3500	03683	18.0 l	G 1/2	7.7 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 4500	03684	23.1 l	G 1/2	10.2 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 5500	03687	28.7 l	G 3/4	12.5 kg	WHSH HE 24 V (0 – 10 V)	08318
AIR1-NH WW XH 7000	03689	35.2 l	G 3/4	15.6 kg	WHSH HE 24 V (0 – 10 V) M	06310
AIR1-NH WW XH 8500	03793	45.3 l	G 3/4	18.8 kg	WHSH HE 24 V (0 – 10 V) M	06310

(1) External thread

Hydraulic unit

Hydraulic unit

Hydraulic unit for supply air temperature control by controlling the water flow rate in the heater battery. Delivered as a complete unit consisting of the hydraulic unit with 3-way valve with actuator and circulating pump, Flow / return temperature display and flexible connection hoses.
Control voltage: 24 V (0 – 10 V)
K_{VS} value: 5.1
Flow rate: up to 3.3 m³/h
Connection diameter: G1 AG flat sealing (DN25, 1")

Types

XH units	Type	Ref. no.	Control voltage	K_{VS} value	Flow rate	Connection diameter
AIR1-XH 1000	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 1500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 2500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 3500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 4500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 5500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-XH 7000	WHSH HE 24 V (0 – 10 V) M	06310	24 V (0 – 10 V)	8.1	0.0 to 4.0 m³/h	G2 AG flat sealing (DN32, 1 1/4")
AIR1-XH 8500	WHSH HE 24 V (0 – 10 V) M	06310	24 V (0 – 10 V)	8.1	0.0 to 4.0 m³/h	G2 AG flat sealing (DN32, 1 1/4")

Accessories for the XH series.

Cold water cooling register external

Cold water cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit including fixing material is possible. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Stainless steel condensate tray with condensate drain outlets. Condensate connection 32 mm. Cooling register suitable for internal and external installation. Note: A weather protection cover is required for external installation.
Recommended accessory: Ball siphon AIR1-KS XH (Ref. no. 07169)

Detailed calculations / technical information: www.AIR1Select.com.

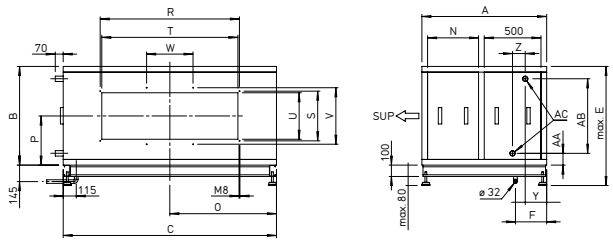
Technical data

Type	Ref. no.	Version	Water content	Connection flow / return (1)	Weight (without liquid)
AIR1-KR KW XH 1000 L	03834	left	1.3 l	G 1/2	57.0 kg
AIR1-KR KW XH 1000 R	04254	right	1.3 l	G 1/2	57.0 kg
AIR1-KR KW XH 1500 L	03842	left	1.9 l	G 3/4	64.0 kg
AIR1-KR KW XH 1500 R	04255	right	1.9 l	G 3/4	64.0 kg
AIR1-KR KW XH 2500 L	03844	left	3.0 l	G 3/4	86.0 kg
AIR1-KR KW XH 2500 R	04264	right	3.0 l	G 3/4	86.0 kg
AIR1-KR KW XH 3500 L	03910	left	3.9 l	G 1	112.0 kg
AIR1-KR KW XH 3500 R	04268	right	3.9 l	G 1	112.0 kg
AIR1-KR KW XH 4500 L	03919	left	6.3 l	G 1 1/4	148.0 kg
AIR1-KR KW XH 4500 R	04278	right	6.3 l	G 1 1/4	148.0 kg
AIR1-KR KW XH 5500 L	03932	left	9.3 l	G 1 1/4	173.0 kg
AIR1-KR KW XH 5500 R	04279	right	9.3 l	G 1 1/4	173.0 kg
AIR1-KR KW XH 7000 L	03945	left	12.4 l	G 1 1/2	213.0 kg
AIR1-KR KW XH 7000 R	04281	right	12.4 l	G 1 1/2	213.0 kg
AIR1-KR KW XH 8500 L	03946	left	15.1 l	G 1 1/2	250.0 kg
AIR1-KR KW XH 8500 R	04282	right	15.1 l	G 1 1/2	250.0 kg

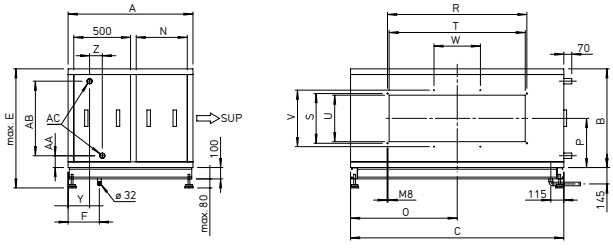
(1) External thread

Dimensional drawing

Version left (L)



Version right (R)



Dim. in mm

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.

Dimensions

Type	Ref. no.	A	B	C	E	F	N	O	P	R	S
AIR1-KR KW XH 1000 L	03834	1000	495	635	675	250	350	318	215	343	238
AIR1-KR KW XH 1000 R	04254	1000	495	635	675	250	350	318	215	343	238
AIR1-KR KW XH 1500 L	03842	1000	570	645	750	250	350	323	266	378	338
AIR1-KR KW XH 1500 R	04255	1000	570	645	750	250	350	323	266	378	338
AIR1-KR KW XH 2500 L	03844	1000	620	865	800	250	350	433	285	498	338
AIR1-KR KW XH 2500 R	04264	1000	620	865	800	250	350	433	285	498	338
AIR1-KR KW XH 3500 L	03910	1100	670	967	850	275	450	484	320	608	438
AIR1-KR KW XH 3500 R	04268	1100	670	967	850	275	450	484	320	608	438
AIR1-KR KW XH 4500 L	03919	1100	870	1020	1050	275	450	510	433	608	438
AIR1-KR KW XH 4500 R	04278	1100	870	1020	1050	275	450	510	433	608	438
AIR1-KR KW XH 5500 L	03932	1100	870	1230	1050	275	450	615	433	883	438
AIR1-KR KW XH 5500 R	04279	1100	870	1230	1050	275	450	615	433	883	438
AIR1-KR KW XH 7000 L	03945	1100	870	1530	1050	275	450	765	433	1083	438
AIR1-KR KW XH 7000 R	04281	1100	870	1530	1050	275	450	765	433	1083	438
AIR1-KR KW XH 8500 L	03946	1100	870	1880	1050	275	450	940	433	1228	438
AIR1-KR KW XH 8500 R	04282	1100	870	1880	1050	275	450	940	433	1228	438

Type	Ref. no.	T	U	V	W	Y	Z	AA	AB	AC [1]
AIR1-KR KW XH 1000 L	03834	315	210	–	–	176	104	91	308	G 1/2
AIR1-KR KW XH 1000 R	04254	315	210	–	–	176	104	91	308	G 1/2
AIR1-KR KW XH 1500 L	03842	350	310	–	–	178	98	93	379	G 3/4
AIR1-KR KW XH 1500 R	04255	350	310	–	–	178	98	93	379	G 3/4
AIR1-KR KW XH 2500 L	03844	470	310	–	–	178	98	93	429	G 3/4
AIR1-KR KW XH 2500 R	04264	470	310	–	–	178	98	93	429	G 3/4
AIR1-KR KW XH 3500 L	03910	580	410	–	–	182	92	97	471	G 1
AIR1-KR KW XH 3500 R	04268	580	410	–	–	182	92	97	471	G 1
AIR1-KR KW XH 4500 L	03919	580	410	–	–	186	83	101	663	G 1 1/4
AIR1-KR KW XH 4500 R	04278	580	410	–	–	186	83	101	663	G 1 1/4
AIR1-KR KW XH 5500 L	03932	855	410	498	–	186	118	101	663	G 1 1/2
AIR1-KR KW XH 5500 R	04279	855	410	498	–	186	118	101	663	G 1 1/2
AIR1-KR KW XH 7000 L	03945	1055	410	498	361	189	112	104	657	G 1 1/2
AIR1-KR KW XH 7000 R	04281	1055	410	498	361	189	112	104	657	G 1 1/2
AIR1-KR KW XH 8500 L	03946	1200	410	498	409	189	112	104	657	G 1 1/2
AIR1-KR KW XH 8500 R	04282	1200	410	498	409	189	112	104	657	G 1 1/2

(1) External thread

Accessories for the XH series.

Direct evaporator cooling register external

Direct evaporator cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit is possible. Suitable for use with common refrigerants (selection list see www.AIR1Select.com).Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Stainless steel condensate tray with condensate drain outlets. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Condensate connection 32 mm. Cooling register suitable for internal and external installation. Note: A weather protection cover is required for external installation.
Recommended accessory: Ball siphon AIR1-KS XH (Ref. no. 07169)

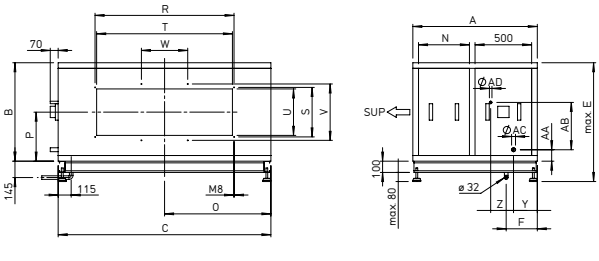
Detailed calculations / technical information: www.AIR1Select.com.

Technical data

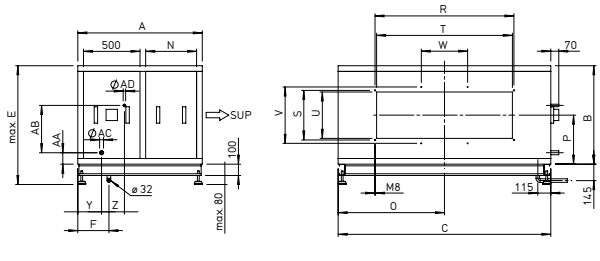
Type	Ref. no.	Version	Weight (without liquid)	Filling capacity	Ø connection outlet	Ø connection inlet
AIR1-KR DX XH 1000 L	04403	left	56.0 kg	1.11 l	16 mm	9.5 mm
AIR1-KR DX XH 1000 R	04872	right	56.0 kg	1.11 l	16 mm	9.5 mm
AIR1-KR DX XH 1500 L	04406	left	63.0 kg	1.49 l	16 mm	9.5 mm
AIR1-KR DX XH 1500 R	04873	right	63.0 kg	1.49 l	16 mm	9.5 mm
AIR1-KR DX XH 2500 L	04407	left	85.0 kg	2.47 l	19 mm	12 mm
AIR1-KR DX XH 2500 R	04877	right	85.0 kg	2.47 l	19 mm	12 mm
AIR1-KR DX XH 3500 L	04408	left	110.0 kg	3.23 l	22 mm	16 mm
AIR1-KR DX XH 3500 R	04878	right	110.0 kg	3.23 l	22 mm	16 mm
AIR1-KR DX XH 4500 L	04409	left	145.0 kg	4.88 l	28 mm	16 mm
AIR1-KR DX XH 4500 R	04879	right	145.0 kg	4.88 l	28 mm	16 mm
AIR1-KR DX XH 5500 L	04410	left	173.0 kg	7.85 l	28 mm	22 mm
AIR1-KR DX XH 5500 R	04883	right	173.0 kg	7.85 l	28 mm	22 mm
AIR1-KR DX XH 7000 L	04414	left	211.0 kg	10.28 l	28 mm	22 mm
AIR1-KR DX XH 7000 R	03123	right	211.0 kg	10.28 l	28 mm	22 mm
AIR1-KR DX XH 8500 L	04415	left	250.0 kg	12.90 l	35 mm	22 mm
AIR1-KR DX XH 8500 R	03052	right	250.0 kg	12.90 l	35 mm	22 mm

Dimensional drawing

Version left (L)



Version right (R)



Dim. in mm

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.

Dimensions

Type	Ref. no.	A	B	C	E	F	N	O	P	R	S
AIR1-KR DX XH 1000 L	04403	1000	495	635	675	250	350	318	248	343	238
AIR1-KR DX XH 1000 R	04872	1000	495	635	675	250	350	318	248	343	238
AIR1-KR DX XH 1500 L	04406	1000	570	645	750	250	350	323	285	378	338
AIR1-KR DX XH 1500 R	04873	1000	570	645	750	250	350	323	285	378	338
AIR1-KR DX XH 2500 L	04407	1000	620	865	800	250	350	433	310	498	338
AIR1-KR DX XH 2500 R	04877	1000	620	865	800	250	350	433	310	498	338
AIR1-KR DX XH 3500 L	04408	1100	670	967	850	275	450	484	320	608	438
AIR1-KR DX XH 3500 R	04878	1100	670	967	850	275	450	484	320	608	438
AIR1-KR DX XH 4500 L	04409	1100	870	1020	1050	275	450	510	433	608	438
AIR1-KR DX XH 4500 R	04879	1100	870	1020	1050	275	450	510	433	608	438
AIR1-KR DX XH 5500 L	04410	1100	870	1230	1050	275	450	615	433	883	438
AIR1-KR DX XH 5500 R	04883	1100	870	1230	1050	275	450	615	433	883	438
AIR1-KR DX XH 7000 L	04414	1100	870	1530	1050	275	450	765	433	1083	438
AIR1-KR DX XH 7000 R	03123	1100	870	1530	1050	275	450	765	433	1083	438
AIR1-KR DX XH 8500 L	04415	1100	870	1880	1050	275	450	940	433	1228	438
AIR1-KR DX XH 8500 R	03052	1100	870	1880	1050	275	450	940	433	1228	438

Type	Ref. no.	T	U	V	W	Y	Z	AA	AB	AC	AD
AIR1-KR DX XH 1000 L	04403	315	210	–	–	203	47	111	153	16	9.5
AIR1-KR DX XH 1000 R	04872	315	210	–	–	203	47	111	153	16	9.5
AIR1-KR DX XH 1500 L	04406	350	310	–	–	203	47	101	218	16	9.5
AIR1-KR DX XH 1500 R	04873	350	310	–	–	203	47	101	218	16	9.5
AIR1-KR DX XH 2500 L	04407	470	310	–	–	203	47	105	250	19	12
AIR1-KR DX XH 2500 R	04877	470	310	–	–	203	47	105	250	19	12
AIR1-KR DX XH 3500 L	04408	580	410	–	–	203	47	107	306	22	16
AIR1-KR DX XH 3500 R	04878	580	410	–	–	203	47	107	306	22	16
AIR1-KR DX XH 4500 L	04409	580	410	–	–	203	47	110	400	28	16
AIR1-KR DX XH 4500 R	04879	580	410	–	–	203	47	110	400	28	16
AIR1-KR DX XH 5500 L	04410	855	410	498	–	210	202	97	426	28	22
AIR1-KR DX XH 5500 R	04883	855	410	498	–	210	202	97	426	28	22
AIR1-KR DX XH 7000 L	04414	1055	410	498	361	210	202	97	426	28	22
AIR1-KR DX XH 7000 R	03123	1055	410	498	361	210	202	97	426	28	22
AIR1-KR DX XH 8500 L	04415	1200	410	498	409	210	202	101	418	35	22
AIR1-KR DX XH 8500 R	03052	1200	410	498	409	210	202	101	418	35	22

Accessories for the XH series.

Multi-leaf damper internal

Multi-leaf damper

Multi-leaf damper for preventing cold draughts when the fan is stationary. Framework casing with connection flange on both sides. Counter-rotating blades, with retracted sealing lip. Sealing class 2. Installation inside of unit.

Technical data

Type	Ref. no.	Runtime (open / closed)	Weight	Ambient temperature	Actuator type
AIR1-JVK XH 1000	06005	40 ... 75 s	2.5 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 1500/RH 1500	06006	40 ... 75 s	3.0 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 2500/RH 2000	06007	40 ... 75 s	4.0 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 3500-4500/RH 3000	06009	40 ... 75 s	5.0 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 5500/RH 5000-6000	06010	40 ... 75 s	6.6 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 7000/RH 8000	06012	40 ... 75 s	7.8 kg	-30 bis +50 °C	24 V DC. spring return
AIR1-JVK XH 8500/RH 9500	06013	40 ... 75 s	8.6 kg	-30 bis +50 °C	24 V DC. spring return

Recirculation kit

Recirculation kit

Recirculation kit for the 100% recirculation of the extract air into the building. Multi-leaf dampers are required for recirculation operation.
The kit consists of a recirculation damper including drive. For mounting to bypass duct of ventilation unit. Plug-in connection to the mains power supply and ventilation unit control system.

Type	Ref. no.
AIR1-ULK XH 1000	06022
AIR1-ULK XH 1500	06023
AIR1-ULK XH 2500	06024
AIR1-ULK XH 3500	06025
AIR1-ULK XH 4500	06026
AIR1-ULK XH 5500	06027
AIR1-ULK XH 7000	06028
AIR1-ULK XH 8500	06029

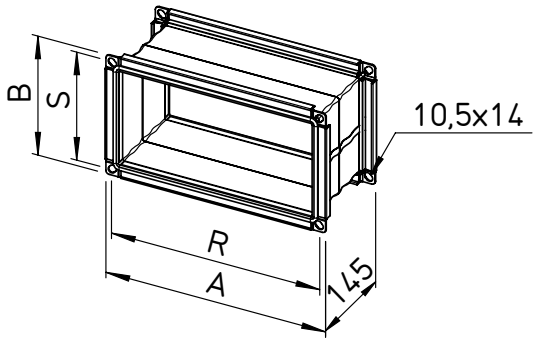
Flexible connector

Flexible connector

Flexible connector (uninsulated), with flange connections on both sides, for mounting between the ventilation unit and duct system. Prevents structure-borne sound transmission and bridges mounting tolerances. Elastic fabric sleeve, operating temperature range from -10 °C to +80 °C.

Only suitable for internal installation.

Dimensional drawing



Dim. in mm

Dimensions

XH units	Type	Ref. no.	A	B	R	S
AIR1-XH 1000	AIR1-VS 31/21	04371	363	258	343	238
AIR1-XH 1500	AIR1-VS 35/31	04372	398	358	378	338
AIR1-XH 2500	AIR1-VS 47/31	04373	518	358	498	338
AIR1-XH 3500	AIR1-VS 58/41	04374	628	458	608	438
AIR1-XH 4500	AIR1-VS 58/41	04374	628	458	608	438
AIR1-XH 5500	AIR1-VS 85/41	04375	903	458	883	438
AIR1-XH 7000	AIR1-VS 105/41	04376	1103	458	1083	438
AIR1-XH 8500	AIR1-VS 120/41	04377	1248	458	1228	438

Accessories for the XH series.

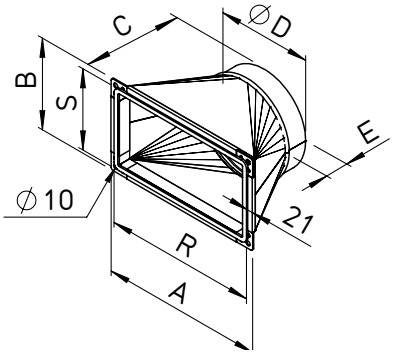
Square-round adapter

Square-round adapter

Symmetrical adapter for connecting the ventilation unit to round air ducts/duct systems. Made of galvanised steel sheet. The pressure loss of the adapter at maximum air volume is < 10 Pa on both the intake and discharge side.

Only suitable for internal installation.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	D	E	R	S
AIR1-ÜS XH 1000	04366	365	260	200	250	60	343	238
AIR1-ÜS XH 1500/RH 1500	04367	400	360	200	315	60	378	338
AIR1-ÜS XH 2500/RH 2000	04368	520	360	250	400	80	498	338
AIR1-ÜS XH 3500-4500/RH 3000	04369	630	460	300	500	80	608	438
AIR1-ÜS XH 5500/RH 5000-6000	04370	905	460	350	630	80	883	438

Ball siphon

Ball siphon

Siphon for the drainage of condensate with over or underpressure in comparison to the environment. Self-filling and self-closing, with float ball as non-return valve.
Screw cap for inspection purposes.
Suitable for a max. under/overpressure of ± 600 Pa.
For use with the units and the cooling register.
Connection diameter 40 mm.

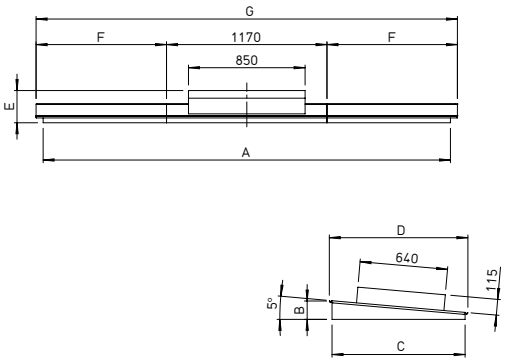
Type	Ref. no.
AIR1-KS XH	07169

Weather protection cover for the unit

Weather protection cover for the unit

Weather protection cover for the external installation of AIR1 ventilation units. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the unit to IP 54.

Dimensional drawing



Dim. in mm

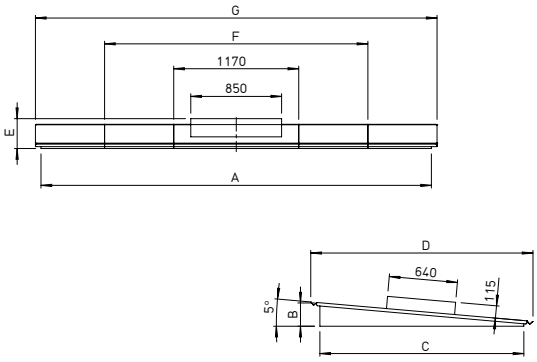
AIR1 XH 1000 – 3500

Dimensions

Type	Ref. no.	A	B	C	D
AIR1-AAD XH 1000	06305	2005	106	635	785
AIR1-AAD XH 1500	06306	2085	106	643	790
AIR1-AAD XH 2500	06315	2346	120	860	1000
AIR1-AAD XH 3500	06316	2970	134	970	1010

Type	Ref. no.	E	F	G
AIR1-AAD XH 1000	06305	205	469	2107
AIR1-AAD XH 1500	06306	205	509	2187
AIR1-AAD XH 2500	06315	230	639	2448
AIR1-AAD XH 3500	06316	235	951	3072

Dimensional drawing



Dim. in mm

AIR1 XH 4500 – 8500

Dimensions

Type	Ref. no.	A	B	C	D
AIR1-AAD XH 4500	06347	3515	142	1050	1090
AIR1-AAD XH 5500	06349	3555	160	1260	1435
AIR1-AAD XH 7000	06350	3605	185	1560	1730
AIR1-AAD XH 8500	06378	3655	218	1910	2080

Type	Ref. no.	E	F	G
AIR1-AAD XH 4500	06347	230	2395	3620
AIR1-AAD XH 5500	06349	250	2415	3660
AIR1-AAD XH 7000	06350	270	2440	3710
AIR1-AAD XH 8500	06378	280	2465	3760

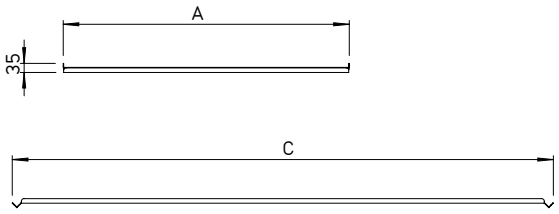
Accessories for the XH series.

Weather protection cover cooling register

Weather protection cover for external cold water or direct evaporator cooling registers

Weather protection cover for the external installation of external cold water or direct evaporator cooling registers. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the cooling register to IP 54.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	C
AIR1-AAD KR KW + DX XH 1000	06451	1000	805
AIR1-AAD KR KW + DX XH 1500	06455	1000	812
AIR1-AAD KR KW + DX XH 2500	06461	1000	1037
AIR1-AAD KR KW + DX XH 3500	06462	1100	1138
AIR1-AAD KR KW + DX XH 4500	06463	1100	1220
AIR1-AAD KR KW + DX XH 5500	06464	1100	1430
AIR1-AAD KR KW + DX XH 7000	06465	1100	1730
AIR1-AAD KR KW + DX XH 8500	06466	1100	2080

Heating element for the terminal box

Heating element for the terminal box

Heating element for the electrical terminal box of the ventilation unit. Recommended for the external installation of AIR ventilation units in cold climate zones to prevent condensate formation and protect the control system against temperatures below 0 °C.
Heat output automatically controlled depending on the outside air temperature.
Max. heat output: 100 W
Supply voltage: 230 V

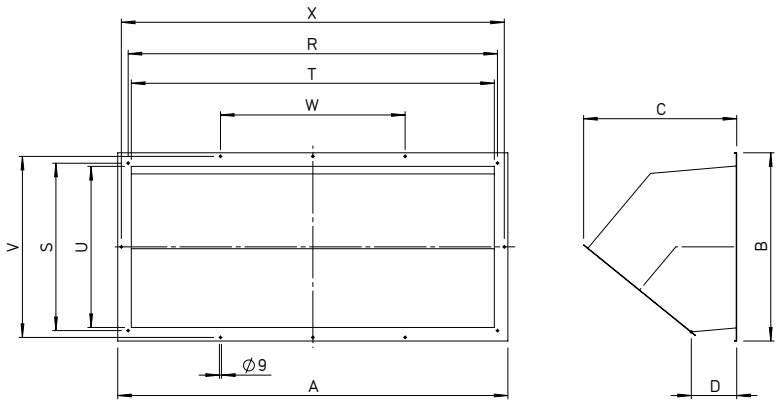
Type	Ref. no.
AIR1-AAHK	07064

Intake hood outside air

Intake hood outside air

Intake hood outside air for external installation. Includes drainage tray and droplet separator. Mounting via flange connection to the unit connector. Surface with weather-resistant coating.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	D	R	S	T	U	V	W
AIR1-AAHA XH 1000	06483	375	270	332	162	343	238	315	210	–	–
AIR1-AAHA XH 1500/RH 1500	06484	410	370	486	195	378	338	350	310	–	–
AIR1-AAHA XH 2500/RH 2000	06539	530	370	486	195	498	338	470	310	–	–
AIR1-AAHA XH 3500-4500/RH 3000	06487	640	470	525	200	608	438	580	410	–	–
AIR1-AAHA XH 5500/RH 5000-6000	06496	915	530	525	200	883	438	855	410	498	–
AIR1-AAHA XH 7000/RH 8000	06497	1115	530	525	200	1083	438	1055	410	498	361
AIR1-AAHA XH 8500/RH 9500	06499	1260	530	525	200	1228	438	1200	410	498	409

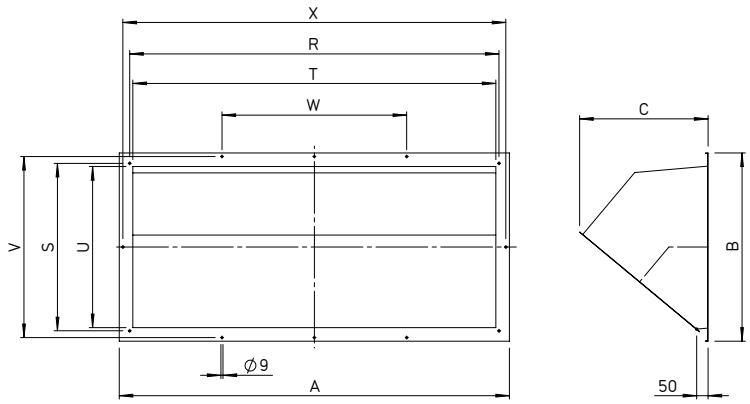
Accessories for the XH series.

Discharge hood exhaust air

Discharge hood exhaust air

Discharge hood exhaust air for external installation. Includes protection guard. Mounting via flange connection to the unit connector. Surface with weather-resistant coating.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	R	S	T	U	V	W
AIR1-AAHF XH 1000	06613	375	270	235	343	238	315	210	–	–
AIR1-AAHF XH 1500/RH 1500	06643	410	370	338	378	338	350	310	–	–
AIR1-AAHF XH 2500/RH 2000	06646	530	370	338	498	338	470	310	–	–
AIR1-AAHF XH 3500-4500/RH 3000	06647	640	470	375	608	438	580	410	–	–
AIR1-AAHF XH 5500/RH 5000-6000	06648	915	530	375	883	438	855	410	498	–
AIR1-AAHF XH 7000/RH 8000	06841	1115	530	375	1083	438	1055	410	498	361
AIR1-AAHF XH 8500/RH 9500	06864	1260	530	375	1228	438	1200	410	498	409

Controller Eco

Controller Eco

Backlit display with 4 lines a 20 characters. The display menu system is operated via seven buttons. There are two LEDs on the front side: One alarm LED and one LED for the input mode. The controller is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. The controller is designed for wall mounting. Alternatively, it can also be attached to the unit casing using magnetic strips. Protection class IP 40.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE ECO	06186	24 V DC	0.24 W	115 x 95 x 25 mm	Max. 90 % RH (1)	+5 °C to +40 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Controller Touch

Controller Touch

Graphic user interface with intuitive menu structure and simple operation. The display has a capacitive touch function and a size of 7", incl. multi-colour colour technology. Includes stainless steel casing for simple surface-mounting to the wall. It is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. Protection class IP 20.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE TOUCH	06187	24 V DC	6 W	185 x 131 x 50 mm	Max. 90 % RH (1)	-10 °C to +60 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Room sensors

Room sensors

For measuring the CO_2, mixed gas (VOC) concentration or relative humidity and temperature. Control according to highest measured value. Includes control cable KWL-SL 4/3 (3 m long), other lengths available upon request. Dimensions (W x H x D) 95 x 97 x 30 mm.

Technical data

Type	Ref. no.	Measurement range
KWL-CO2	04272	400 ... 2000 ppm
KWL-FTF	04273	0 ... 99 % RH (1) and 0 ... 40 °C
KWL-VOC	04274	450 ... 2000 ppm

(1) Non-condensing

Accessories for the XH series.

Carbon dioxide sensor for duct installation

Carbon dioxide sensor for duct installation
Sensor for measuring the carbon dioxide concentration in the air. For installation in the ventilation duct. Installation depth 40 – 180 mm.

Technical data

Type	Ref. no.	Measurement range
AIR1-CO2 K	07124	0 ... 2000 ppm

Signal converter

Signal converter for sensors
Signal converter for the connection of up to six AIR1 room sensors of the same sensor type. The AIR1-SK compares the connected inputs and forwards the highest input signal to the max. output. Supplied pre-installed in the appropriate terminal box incl. transformer 230 V / 24 V AC and terminal strip.
Dimensions terminal box (L x H x W): 218 x 149 x 97 mm

Technical data

Type	Ref. no.	Voltage	Power consumption	Ambient humidity	Ambient temperature	Protection class
AIR1-SK	06019	230 V, 50 Hz	max. 15 VA	Max. 90 % RH (1)	-40 °C to +50 °C	IP 20 / IP 66 in terminal box

Extension kit for CAP mode

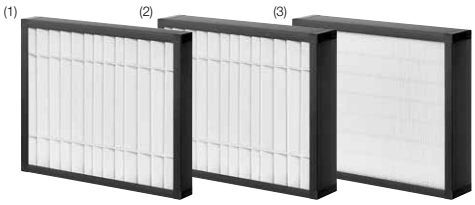
Extension kit for CAP mode
Differential pressure transmitter for constant pressure operation of the ventilation unit. Vertical or horizontal installation possible.
Scope of delivery: Pressure transmitter, pressure hose and sensor.

Technical data

Type	Ref. no.	Voltage	Ambient humidity	Ambient temperature	Protection class
AIR1-CAP	06756	24 V AC / DC ± 15 %	Max. 95 % RH (1)	-25 °C to +50 °C	IP 54

(1) Non-condensing

Spare air filter



(1) Pre-filter outs. air ePM10 50% (M5)
(2) Extract air filter ePM10 50% (M5)
(3) Outs. or extract air filter ePM1 55% (F7) Outside air filter ePM1 80% (F9)

Spare air filter

Helios AIR1 units are supplied with the filter classes ePM1 55%/F7 (outside air) and ePM10 50%/M5 (extract air) as standard. Depending on the unit size, the air filter consists of multiple (separate) air filter inserts. This is taken into account when ordering the spare air filter.
In case of increased air quality requirements, other filter classes are available for the outside air and extract air (see table below). All air filters are pressure-loss-optimised cassette filters with large filter surfaces.

Technical data

	Type	Ref. no.	Filter class
Pre-filter outside air	ELF-AIR1 XH 1000/ePM10 50%/48	02176	ePM10 50% (M5)
	ELF-AIR1 XH 1500/ePM10 50%/48	02178	ePM10 50% (M5)
	ELF-AIR1 XH 2500/ePM10 50%/48	02179	ePM10 50% (M5)
	ELF-AIR1 XH 3500/ePM10 50%/48	02180	ePM10 50% (M5)
	ELF-AIR1 XH 4500/ePM10 50%/48	02182	ePM10 50% (M5)
	ELF-AIR1 XH 5500/ePM10 50%/48	02186	ePM10 50% (M5)
	ELF-AIR1 XH 7000/ePM10 50%/48	02187	ePM10 50% (M5)
	ELF-AIR1 XH 8500/ePM10 50%/48	02189	ePM10 50% (M5)
Extract air filter	ELF-AIR1 XH 1000/ePM10 50%/96	02203	ePM10 50% (M5)
	ELF-AIR1 XH 1500/ePM10 50%/96	02204	ePM10 50% (M5)
	ELF-AIR1 XH 2500/ePM10 50%/96	02205	ePM10 50% (M5)
	ELF-AIR1 XH 3500/ePM10 50%/96	02206	ePM10 50% (M5)
	ELF-AIR1 XH 4500/ePM10 50%/96	02207	ePM10 50% (M5)
	ELF-AIR1 XH 5500/ePM10 50%/96	02208	ePM10 50% (M5)
	ELF-AIR1 XH 7000/ePM10 50%/96	02209	ePM10 50% (M5)
	ELF-AIR1 XH 8500/ePM10 50%/96	02210	ePM10 50% (M5)
Outside or extract air filter	ELF-AIR1 XH 1000/ePM1 55%/96	02227	ePM1 55% (F7)
	ELF-AIR1 XH 1500/ePM1 55%/96	02228	ePM1 55% (F7)
	ELF-AIR1 XH 2500/ePM1 55%/96	02229	ePM1 55% (F7)
	ELF-AIR1 XH 3500/ePM1 55%/96	02230	ePM1 55% (F7)
	ELF-AIR1 XH 4500/ePM1 55%/96	02231	ePM1 55% (F7)
	ELF-AIR1 XH 5500/ePM1 55%/96	02233	ePM1 55% (F7)
	ELF-AIR1 XH 7000/ePM1 55%/96	02234	ePM1 55% (F7)
	ELF-AIR1 XH 8500/ePM1 55%/96	02235	ePM1 55% (F7)
Outside air filter	ELF-AIR1 XH 1000/ePM1 80%/96	02288	ePM1 80% (F9)
	ELF-AIR1 XH 1500/ePM1 80%/96	02289	ePM1 80% (F9)
	ELF-AIR1 XH 2500/ePM1 80%/96	02290	ePM1 80% (F9)
	ELF-AIR1 XH 3500/ePM1 80%/96	02291	ePM1 80% (F9)
	ELF-AIR1 XH 4500/ePM1 80%/96	02292	ePM1 80% (F9)
	ELF-AIR1 XH 5500/ePM1 80%/96	02293	ePM1 80% (F9)
	ELF-AIR1 XH 7000/ePM1 80%/96	02435	ePM1 80% (F9)
	ELF-AIR1 XH 8500/ePM1 80%/96	02334	ePM1 80% (F9)

The Helios AIR1® RH series: 1,500 to 15,000 m³/h.

9 unit types:

- **AIR1 RH 1500**
- **AIR1 RH 2000**
- **AIR1 RH 3000**
- **AIR1 RH 5000**
- **AIR1 RH 6000**
- **AIR1 RH 8000**
- **AIR1 RH 9500**
- **AIR1 RH 12000**
- **AIR1 RH 15000**

The ventilation units in the Helios AIR1 RH series are equipped with highly efficient rotary heat exchangers including rinsing chambers as standard. The additional moisture recovery provides an **optimal indoor climate** and **improved energy balance.**

Alternatively, an adsorption heat exchanger for maximum humidity and heat transfer can be selected in case of special requirements. Furthermore, the rotary technology allows shorter housing dimensions and thus more freedom when selecting the installation site.

Helios AIR1®

series RH

Integrated rinsing chamber as standard

Optional adsorption heat exchanger for specific requirements

Compact design

Maintenance access on both sides for simple service work

Moisture recovery with rotary heat exchanger

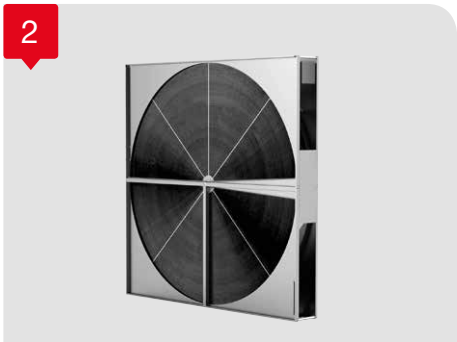
Separable housing construction from 5,000 m³/h

Universal right / left configuration

The RH series in detail.

1

2



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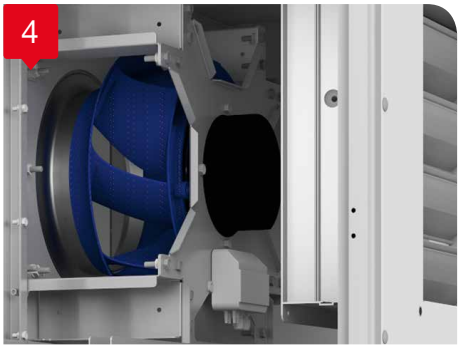

1 Housing

Housing made of robust and stable aluminium frame profiles, thermally optimised to minimise thermal bridges. Double-walled panels made of Alu-zinc sheet steel. Insulated on all sides with 50 mm mineral wool for optimal thermal and acoustic insulation. External corrosion-resistant coating on all sides of housing, RAL 7047, corrosion class C4 and thus suitable for external installation. Galvanised inside. The smooth inner surface meets the hygiene requirements for optimal cleaning in consideration of the hygiene standard VDI 6022. Large inspection openings on both sides of the unit for simple access to all unit components and optimal maintenance. The service doors are equipped with maintenance-free hinges and lockable lever locks. The XH units are designed so that accessories, such as electric or hot water auxiliary heaters, can be easily installed in the ventilation unit, even for retrofitting.

☐ Housing and tightness classes according to DIN EN 1886	
Thermal insulation	T2
Thermal bridging factor	TB2
Mechanical stability	D1
Housing leakage in case of overpressure	L1
Housing leakage in case of underpressure	L1
Filter bypass leakage	F9

Outdoor installation of unit

All units are suitable for internal and external installation. Additional accessories are mandatory for the external installation (e.g. weather protection cover, intake/discharge hoods etc.). In this respect, please see the accessory list or configure your unit with our online configuration software www.AIR1Select.com.

2 Heat exchanger

Eurovent-certified rotary heat exchanger made of aluminium (condensation wheel) produced according to the latest production standards and guarantees the highest quality and high thermal efficiency. The heat exchanger is suitable for heat and cold recovery for additional humidity transfer and it guarantees freezing protection to approx. -15 °C outside air temperature. Optimal hygiene is guaranteed by an ingenious sealing system, and a rinsing chamber included in the scope of delivery. The rotor is drive by an energy-efficient step motor for the continuous and precise controlling of the rotor rotation speeds. The innovative “power belt” drive belt guarantees high wear resistance, a long service life, and simple replacement. The unit types “SO” are equipped with an adsorption rotor for the increased transfer of humidity and heat/cold with humidity retention levels up to 90 %. This heat exchanger type also has freezing protection to an outside air temperature of approx. -20 °C.

3 Separating the unit housing

The units can be separated to simplify transportation and for easier installation at the installation site for units above size RH 5000. Note: The units are delivered in individual modules, i.e. in multiple delivery units.

5

6

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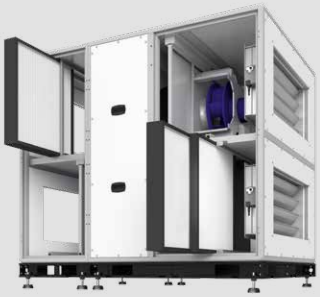


8

Eurovent certification for the AIR1 RH series has been applied for.
The AIR1 RH series is designed in accordance with the requirements of Directive **VDI 6022** (hygiene requirements for building ventilation systems).

4 Fans

The vibration dampened fans are located in the unit and they consist of freewheeling, backward curved centrifugal impellers with direct drive via a variable EC motor with low energy consumption and very low noise level. The high performance plastic impeller is dynamically balanced in two levels. Variably controllable via 0 – 10 V signal. Plug-in connections to all electrical components for the simplification of maintenance work. Eurovent-certified EC-motors in class IE4 with very low SFP values and high energy efficiency.

Pipe routing

Installation-friendly connection of outside, exhaust, extract and supply air to a duct or pipe system. The floor-standing unit can be turned 180° for the installation of the air duct system, so that the outside air/exhaust air and extract air/supply air connections can be on the left or right side. Adapters are optionally available as unit accessories for adaption to a round duct system up to unit size RH 6000.

5 Control system

The ventilation unit is delivered ready for operation with a modern, all-round control system. The control system is attached on top of the unit in a connection box for easy maintenance , factory-wired and function-tested. Two controllers are available for selection (required accessory).

Overview of control functions:

- Choice between ventilation modes Constant volume CAV, Constant pressure CAP (accessory required) or Constant speed CRPM in %.
- Multiple possible operating modes and levels.
- Automatic control via humidity or room air quality sensors (can connect up to three sensor types and maximum 18 sensors).
- Automatic operation via integrated weekly programme.
- Operating modes Free cooling (also night cooling/bypass function) and active cooling (using cooling register) possible.
- Commissioning assistant for simple, quick and faultless commissioning of the unit and matching accessories.
- Connection to the central building control system via BACnet or Modbus.
- Digital output for collective fault signal.

Further information on the Helios AIR1 control system can be found on page 118.

6 Accessories

There are a number of accessory components available for the Helios AIR1 units. A detailed overview and the matching accessories for your Helios AIR1 unit can be found on the following product pages.

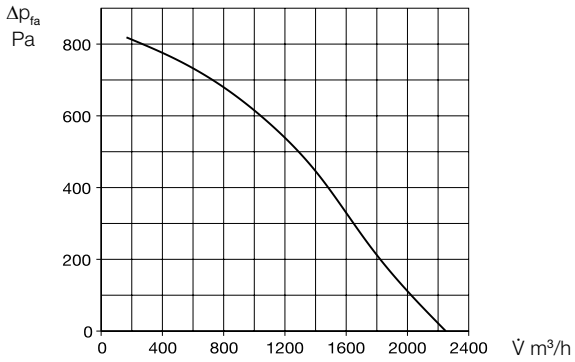
7 Air filters

Cassette filters with long service lives due to dynamic pressure monitoring. Simple filter replacement at the side or below through insert frame and quick clamp device. A multi-level filter concept inside the unit is optional.
Further information on the air filters can be found on page 115.

AIR1 RH 1500

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 1500	AIR1 RH 1500/SO
Ref. no.	04343	04352
Heat exchanger	Condensation rotor	Adsorption rotor (4)

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	150 m³/h
Max. air volume	1600 m³/h (1) (1520 m³/h (5))
Weight, unit operational	230 kg (236 kg (5))
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 500 W
Nominal current	
– Ventilation unit	2.2 / 2.2 / 1.3 A
– Electrical auxiliary heater	6.1 / 6.1 / 6.1 A (3)
– max. total	8.3 / 8.3 / 7.4 A
Connection (wiring diagram no.)	SS-1317

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = Optional accessories
(4) = with increased humidity recovery
(5) = AIR RH 1500/SO

Sound data AIR1 RH 1500

Sound power level LwA dB(A) at 250 Pa external pressure			
	450 m³/h	1,200 m³/h	1,600 m³/h
Supply air (LwA)	69	72	76
Extract air (LwA)	62	65	68
Outside air (LwA)	58	62	64
Exhaust air (LwA)	69	72	76
Sound pressure level LpA db(A) of sound radiated from housing			
	450 m³/h	1,200 m³/h	1,600 m³/h
Housing rad. 1 m	42	46	49
Housing rad. 3 m	33	36	39
Housing rad. 5 m	28	32	35

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.

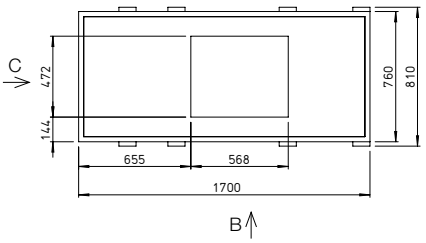
Sound data AIR1 RH 1500/SO

Sound power level LwA dB(A) at 250 Pa external pressure			
	450 m³/h	1,200 m³/h	1,520 m³/h
Supply air (LwA)	70	73	76
Extract air (LwA)	63	67	68
Outside air (LwA)	59	62	64
Exhaust air (LwA)	70	73	76
Sound pressure level LpA db(A) of sound radiated from housing			
	450 m³/h	1,200 m³/h	1,520 m³/h
Housing rad. 1 m	43	47	48
Housing rad. 3 m	33	38	39
Housing rad. 5 m	29	33	34

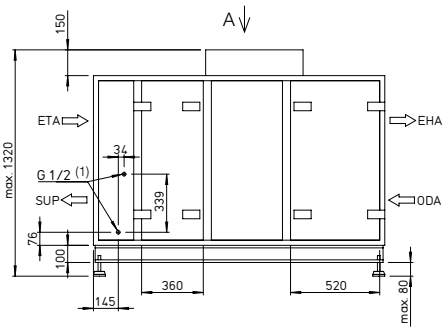
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

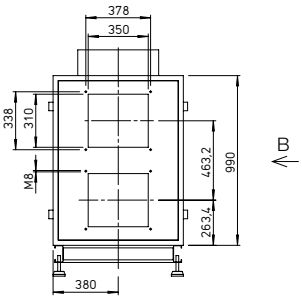
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 1500 Electrical, external	Ref. no. 01262	Page 98
Auxiliary heater		
AIR1-ENH RH 1500 Electrical, internal	Ref. no. 03605	Page 99
AIR1-NH WW RH 1500 Hot water, internal	Ref. no. 03805	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 101
Cooling register		
AIR1-KR KW RH 1500 L (1) Cold water, external	Ref. no. 03958	Page 102
AIR1-KR KW RH 1500 R (1) Cold water, external	Ref. no. 04283	Page 102
AIR1-KR DX RH 1500 L (1) Direct evaporator DX, external	Ref. no. 04416	Page 104
AIR1-KR DX RH 1500 R (1) Direct evaporator DX, external	Ref. no. 05001	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 1500/RH 1500	Ref. no. 06006	Page 106
Flexible connector		
AIR1-VS 35/31	Ref. no. 04372	Page 107
Adapter square-round		
AIR1-ÜS XH 1500/RH 1500	Ref. no. 04367	Page 107

(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

External installation

Cover for external installation		
AIR1-AAD RH 1500 Weather protection cover for the unit	Ref. no. 06382	Page 108
AIR1-AAD KR KW + DX RH 1500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06467	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 1500/RH 1500 Intake hood outside air	Ref. no. 06484	Page 111
AIR1-AAHF XH 1500/RH 1500 Discharge hood exhaust air	Ref. no. 06643	Page 112

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

Air filters

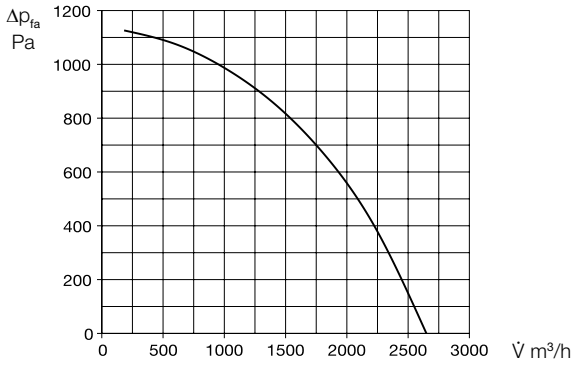
Spare air filter and other filter classes		
ELF-AIR1 RH 1500/ePM10 50%/48 (M5)	Ref. no. 02192	Page 115
ELF-AIR1 RH 1500/ePM10 50%/96 (M5)	Ref. no. 02211	Page 115
ELF-AIR1 RH 1500/ePM1 55%/96 (F7)	Ref. no. 02236	Page 115
ELF-AIR1 RH 1500/ePM1 80%/96 (F9)	Ref. no. 02374	Page 115

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

AIR1 RH 2000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 2000	AIR1 RH 2000/SO
Ref. no.	04344	04353
Heat exchanger	Condensation rotor	Adsorption rotor (4)

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	150 m³/h
Max. air volume	2100 m³/h (1) (2020 m³/h (5))
Weight, unit operational	361 kg (368 kg (5))
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 780 W
Nominal current	
– Ventilation unit	3.4 / 3.4 / 1.3 A
– Electrical auxiliary heater	8.4 / 8.4 / 8.4 A (3)
– max. total	11.8 / 11.8 / 9.7 A
Connection (wiring diagram no.)	SS-1318

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = Optional accessories
(4) = with increased humidity recovery
(5) = AIR RH 2000/SO

Sound data AIR1 RH 2000

Sound power level LwA dB(A) at 250 Pa external pressure			
	600 m³/h	1,500 m³/h	2,100 m³/h
Supply air (LwA)	68	74	80
Extract air (LwA)	60	65	71
Outside air (LwA)	57	61	67
Exhaust air (LwA)	68	74	80
Sound pressure level LpA db(A) of sound radiated from housing			
	600 m³/h	1,500 m³/h	2,100 m³/h
Housing rad. 1 m	43	45	52
Housing rad. 3 m	33	36	42
Housing rad. 5 m	29	31	38

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.

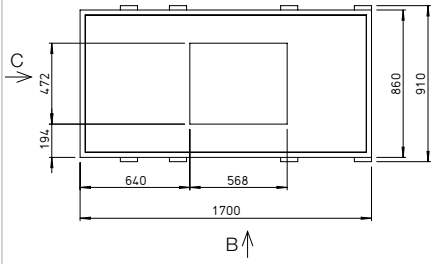
Sound data AIR1 RH 2000/SO

Sound power level LwA dB(A) at 250 Pa external pressure			
	600 m³/h	1,500 m³/h	2,020 m³/h
Supply air (LwA)	69	74	79
Extract air (LwA)	61	65	70
Outside air (LwA)	57	61	66
Exhaust air (LwA)	69	74	79
Sound pressure level LpA db(A) of sound radiated from housing			
	600 m³/h	1,500 m³/h	2,020 m³/h
Housing rad. 1 m	44	46	50
Housing rad. 3 m	34	37	40
Housing rad. 5 m	30	32	36

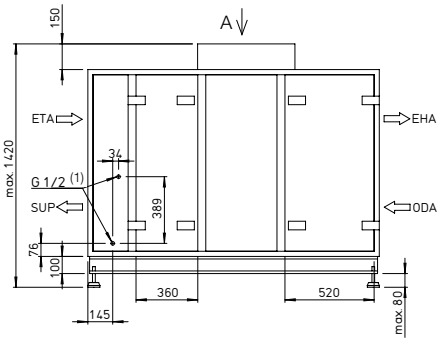
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

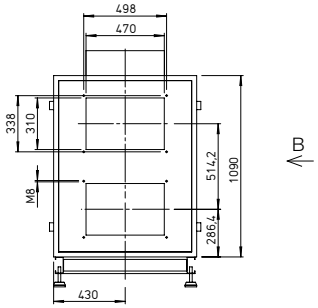
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 2000 Electrical, external	Ref. no. 01710	Page 98
Auxiliary heater		
AIR1-ENH RH 2000 Electrical, internal	Ref. no. 03616	Page 99
AIR1-NH WW RH 2000 Hot water, internal	Ref. no. 03806	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 101
Cooling register		
AIR1-KR KW RH 2000 L (1) Cold water, external	Ref. no. 03959	Page 102
AIR1-KR KW RH 2000 R (1) Cold water, external	Ref. no. 04285	Page 102
AIR1-KR DX RH 2000 L (1) Direct evaporator DX, external	Ref. no. 04417	Page 104
AIR1-KR DX RH 2000 R (1) Direct evaporator DX, external	Ref. no. 05025	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 2500/RH 2000	Ref. no. 06007	Page 106
Flexible connector		
AIR1-VS 47/31	Ref. no. 04373	Page 107
Adapter square-round		
AIR1-ÜS XH 2500/RH 2000	Ref. no. 04368	Page 107

(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

External installation

Cover for external installation		
AIR1-AAD RH 2000 Weather protection cover for the unit	Ref. no. 06431	Page 108
AIR1-AAD KR KW + DX RH 2000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06468	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 2500/RH 2000 Intake hood outside air	Ref. no. 06539	Page 111
AIR1-AAHF XH 2500/RH 2000 Discharge hood exhaust air	Ref. no. 06646	Page 112

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

Air filters

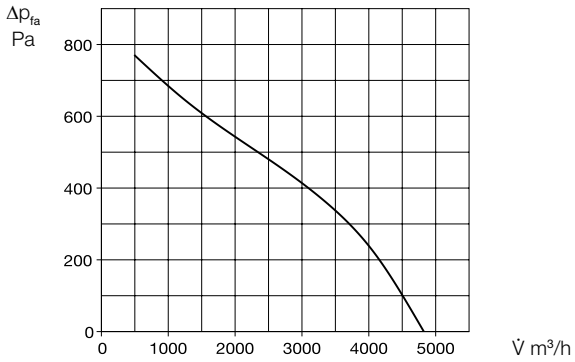
Spare air filter and other filter classes		
ELF-AIR1 RH 2000/ePM10 50%/48 (M5)	Ref. no. 02193	Page 115
ELF-AIR1 RH 2000/ePM10 50%/96 (M5)	Ref. no. 02212	Page 115
ELF-AIR1 RH 2000/ePM1 55%/96 (F7)	Ref. no. 02237	Page 115
ELF-AIR1 RH 2000/ePM1 80%/96 (F9)	Ref. no. 02384	Page 115

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

AIR1 RH 3000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 3000	AIR1 RH 3000/SO
Ref. no.	04345	04354
Heat exchanger	Condensation rotor	Adsorption rotor (4)

Technical data

Mechanical data	
Area of application	Inside/outside
Installation position	Standing
Maintenance access	Side, both sides
Min. air volume	150 m³/h
Max. air volume	3000 m³/h (1) (2770 m³/h (5))
Weight, unit operational	438 kg (450 kg (5))
Delivery unit	1-part
Unit segments	1
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 1500 W
Nominal current	
– Ventilation unit	4.6 / 4.6 / 5.8 A
– Electrical auxiliary heater	13.1 / 13.1 / 13.1 A (3)
– max. total	17.7 / 17.7 / 18.9 A
Connection (wiring diagram no.)	SS-1319

(1) = at 250 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = Optional accessories
(4) = with increased humidity recovery
(5) = AIR RH 3000/SO

Sound data AIR1 RH 3000

Sound power level LwA dB(A) at 250 Pa external pressure			
	900 m³/h	2,200 m³/h	3,000 m³/h
Supply air (LwA)	79	82	82
Extract air (LwA)	71	74	74
Outside air (LwA)	67	70	70
Exhaust air (LwA)	79	82	82
Sound pressure level LpA db(A) of sound radiated from housing			
	900 m³/h	2,200 m³/h	3,000 m³/h
Housing rad. 1 m	52	54	55
Housing rad. 3 m	42	44	45
Housing rad. 5 m	38	40	41

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.

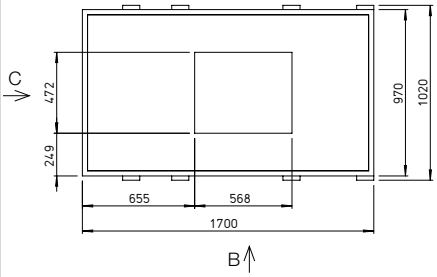
Sound data AIR1 RH 3000/SO

Sound power level LwA dB(A) at 250 Pa external pressure			
	900 m³/h	2,200 m³/h	2,770 m³/h
Supply air (LwA)	79	83	83
Extract air (LwA)	72	75	74
Outside air (LwA)	68	71	70
Exhaust air (LwA)	79	83	82
Sound pressure level LpA db(A) of sound radiated from housing			
	900 m³/h	2,200 m³/h	2,770 m³/h
Housing rad. 1 m	52	55	54
Housing rad. 3 m	43	46	45
Housing rad. 5 m	38	41	40

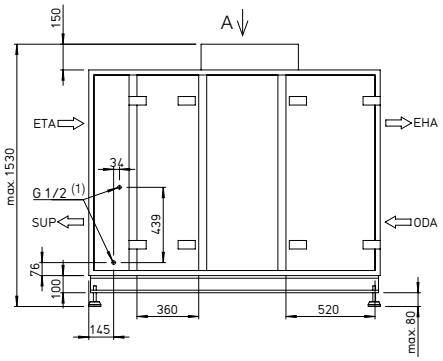
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

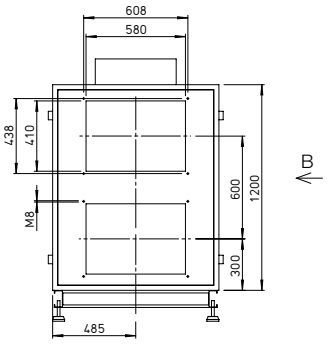
View A (from above)



View B



View C



Dim. in mm (1) External thread ODA: Outside air EHA: Exhaust air ETA: Extract air SUP: Supply air

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 3000 Electrical, external	Ref. no. 01711	Page 98
Auxiliary heater		
AIR1-ENH RH 3000 Electrical, internal	Ref. no. 03617	Page 99
AIR1-NH WW RH 3000 Hot water, internal	Ref. no. 03824	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V)	Ref. no. 08318	Page 101
Cooling register		
AIR1-KR KW RH 3000 L (1) Cold water, external	Ref. no. 03967	Page 102
AIR1-KR KW RH 3000 R (1) Cold water, external	Ref. no. 04286	Page 102
AIR1-KR DX RH 3000 L (1) Direct evaporator DX, external	Ref. no. 04422	Page 104
AIR1-KR DX RH 3000 R (1) Direct evaporator DX, external	Ref. no. 05028	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 3500-4500/RH 3000	Ref. no. 06009	Page 106
Flexible connector		
AIR1-VS 58/41	Ref. no. 04374	Page 107
Adapter square-round		
AIR1-ÜS XH 3500-4500/RH 3000	Ref. no. 04369	Page 107

(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

External installation

Cover for external installation		
AIR1-AAD RH 3000 Weather protection cover for the unit	Ref. no. 06432	Page 108
AIR1-AAD KR KW + DX RH 3000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06469	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 3500-4500/RH 3000 Intake hood outside air	Ref. no. 06487	Page 111
AIR1-AAHF XH 3500-4500/RH 3000 Discharge hood exhaust air	Ref. no. 06647	Page 112

Controls

Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

Air filters

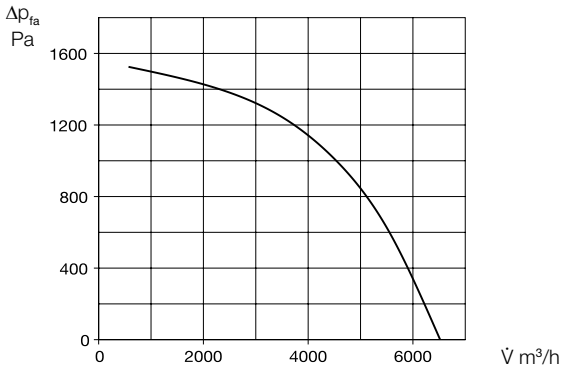
Spare air filter and other filter classes		
ELF-AIR1 RH 3000/ePM10 50%/48 (M5)	Ref. no. 02194	Page 115
ELF-AIR1 RH 3000/ePM10 50%/96 (M5)	Ref. no. 02213	Page 115
ELF-AIR1 RH 3000/ePM1 55%/96 (F7)	Ref. no. 02238	Page 115
ELF-AIR1 RH 3000/ePM1 80%/96 (F9)	Ref. no. 02425	Page 115

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

AIR1 RH 5000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 5000	AIR1 RH 5000/SO
Ref. no.	04346	04355
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	150 m³/h
Max. air volume	5150 m³/h (1) (4950 m³/h (4))
Weight, unit operational	629 kg (645 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 2500 W
Nominal current	7.6 / 7.6 / 8.9 A (7.6 / 7.6 / 9.5 A (4))
Connection (wiring diagram no.)	SS-1320

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = with increased humidity recovery
(4) = AIR RH 5000/SO

Sound data AIR1 RH 5000

Sound power level LwA dB(A) at 400 Pa external pressure			
	1,500 m³/h	3,700 m³/h	5,150 m³/h
Supply air (LwA)	75	80	86
Extract air (LwA)	66	70	76
Outside air (LwA)	62	66	72
Exhaust air (LwA)	75	80	86
Sound pressure level LpA db(A) of sound radiated from housing			
	1,500 m³/h	3,700 m³/h	5,150 m³/h
Housing rad. 1 m	48	52	57
Housing rad. 3 m	39	43	48
Housing rad. 5 m	34	38	43

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.

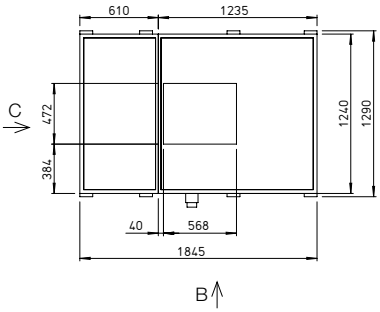
Sound data AIR1 RH 5000/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	1,500 m³/h	3,700 m³/h	4,950 m³/h
Supply air (LwA)	75	80	85
Extract air (LwA)	67	71	75
Outside air (LwA)	63	67	71
Exhaust air (LwA)	75	80	85
Sound pressure level LpA db(A) of sound radiated from housing			
	1,500 m³/h	3,700 m³/h	4,950 m³/h
Housing rad. 1 m	49	52	57
Housing rad. 3 m	39	43	47
Housing rad. 5 m	35	38	43

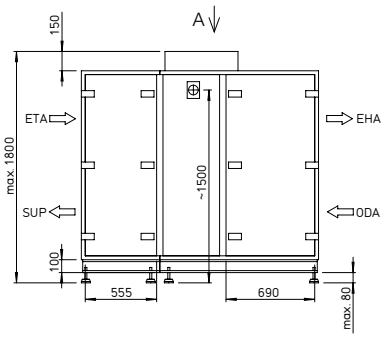
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

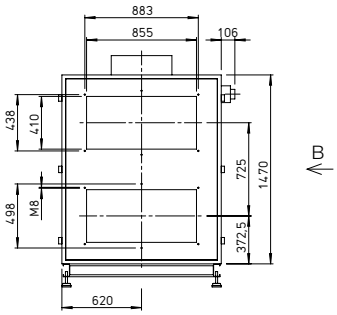
View A (from above)



View B



View C



Dim. in mm

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

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 5000 Electrical, external	Ref. no. 01791	Page 98
Auxiliary heater		
AIR1-ENH RH 5000 Electrical, external	Ref. no. 03618	Page 99
AIR1-NH WW RH 5000 Hot water, external	Ref. no. 03825	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) M	Ref. no. 06310	Page 101
Cooling register		
AIR1-KR KW RH 5000 L (1) Cold water, external	Ref. no. 03971	Page 102
AIR1-KR KW RH 5000 R (1) Cold water, external	Ref. no. 04287	Page 102
AIR1-KR DX RH 5000 L (1) Direct evaporator DX, external	Ref. no. 04424	Page 104
AIR1-KR DX RH 5000 R (1) Direct evaporator DX, external	Ref. no. 05046	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 5500/RH 5000-6000	Ref. no. 06010	Page 106
Recirculation module		
AIR1-ULM RH 5000	Ref. no. 06040	Page 106
Flexible connector		
AIR1-VS 85/41	Ref. no. 04375	Page 107
Adapter square-round		
AIR1-ÜS XH 5500/RH 5000-6000	Ref. no. 04370	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 5000/ePM10 50%/48 (M5)	Ref. no. 02196	Page 115
ELF-AIR1 RH 5000/ePM10 50%/96 (M5)	Ref. no. 02214	Page 115
ELF-AIR1 RH 5000/ePM1 55%/96 (F7)	Ref. no. 02239	Page 115
ELF-AIR1 RH 5000/ePM1 80%/96 (F9)	Ref. no. 02446	Page 115

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 5000 Weather protection cover for the unit	Ref. no. 06433	Page 108
AIR1-AAD RH 5000/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06439	Page 109
AIR1-AAD KR KW + DX RH 5000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06470	Page 110
AIR1-AAD NH EL + WW RH 5000 Weather protection cover for aux. heater	Ref. no. 06445	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 5500/RH 5000-6000 Intake hood outside air	Ref. no. 06496	Page 111
AIR1-AAHF XH 5500/RH 5000-6000 Discharge hood exhaust air	Ref. no. 06648	Page 112

Controls

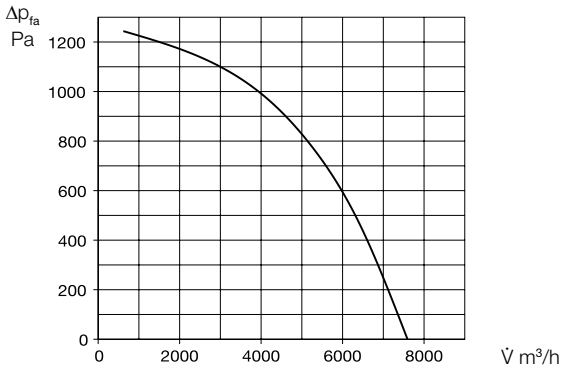
Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

AIR1 RH 6000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 6000	AIR1 RH 6000/SO
Ref. no.	04347	04356
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	150 m³/h
Max. air volume	6200 m³/h (1) (5950 m³/h (4))
Weight, unit operational	775 kg (787 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 2400 W
Nominal current	7.3 / 7.3 / 8.8 A (7.3 / 7.3 / 9.3 A (4))
Connection (wiring diagram no.)	SS-1321

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = with increased humidity recovery
(4) = AIR RH 6000/SO

Sound data AIR1 RH 6000

Sound power level LwA dB(A) at 400 Pa external pressure			
	1,900 m³/h	4,400 m³/h	6,200 m³/h
Supply air (LwA)	76	79	86
Extract air (LwA)	67	70	77
Outside air (LwA)	63	66	73
Exhaust air (LwA)	76	79	85
Sound pressure level LpA db(A) of sound radiated from housing			
	1,900 m³/h	4,400 m³/h	6,200 m³/h
Housing rad. 1 m	49	51	59
Housing rad. 3 m	39	42	49
Housing rad. 5 m	35	37	45

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.

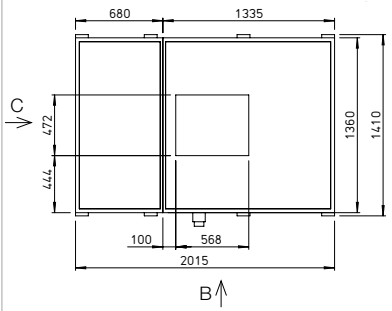
Sound data AIR1 RH 6000/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	1,900 m³/h	4,400 m³/h	5,950 m³/h
Supply air (LwA)	76	79	85
Extract air (LwA)	67	70	76
Outside air (LwA)	63	66	72
Exhaust air (LwA)	76	79	85
Sound pressure level LpA db(A) of sound radiated from housing			
	1,900 m³/h	4,400 m³/h	5,950 m³/h
Housing rad. 1 m	49	52	58
Housing rad. 3 m	40	42	48
Housing rad. 5 m	35	38	44

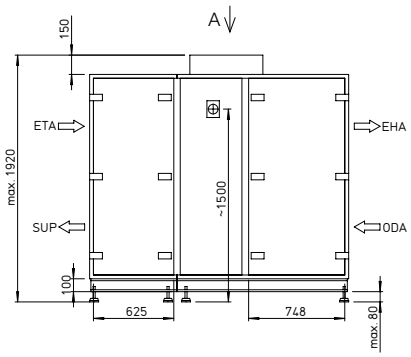
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

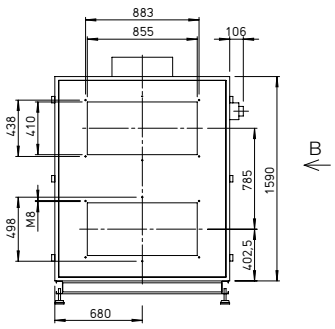
View A (from above)



View B



View C



Dim. in mm

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

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 6000 Electrical, external	Ref. no. 01792	Page 98
Auxiliary heater		
AIR1-ENH RH 6000 Electrical, external	Ref. no. 03625	Page 99
AIR1-NH WW RH 6000 Hot water, external	Ref. no. 03826	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) M	Ref. no. 06310	Page 101
Cooling register		
AIR1-KR KW RH 6000 L (1) Cold water, external	Ref. no. 03976	Page 102
AIR1-KR KW RH 6000 R (1) Cold water, external	Ref. no. 04288	Page 102
AIR1-KR DX RH 6000 L (1) Direct evaporator DX, external	Ref. no. 04425	Page 104
AIR1-KR DX RH 6000 R (1) Direct evaporator DX, external	Ref. no. 05239	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 5500/RH 5000-6000	Ref. no. 06010	Page 106
Recirculation module		
AIR1-ULM RH 6000	Ref. no. 06160	Page 106
Flexible connector		
AIR1-VS 85/41	Ref. no. 04375	Page 107
Adapter square-round		
AIR1-ÜS XH 5500/RH 5000-6000	Ref. no. 04370	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 6000/ePM10 50%/48 (M5)	Ref. no. 02220	Page 115
ELF-AIR1 RH 6000/ePM10 50%/96 (M5)	Ref. no. 02215	Page 115
ELF-AIR1 RH 6000/ePM1 55%/96 (F7)	Ref. no. 02240	Page 115
ELF-AIR1 RH 6000/ePM1 80%/96 (F9)	Ref. no. 02451	Page 115

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 6000 Weather protection cover for the unit	Ref. no. 06434	Page 108
AIR1-AAD RH 6000/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06440	Page 109
AIR1-AAD KR KW + DX RH 6000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06471	Page 110
AIR1-AAD NH EL + WW RH 6000 Weather protection cover for aux. heater	Ref. no. 06446	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 5500/RH 5000-6000 Intake hood outside air	Ref. no. 06496	Page 111
AIR1-AAHF XH 5500/RH 5000-6000 Discharge hood exhaust air	Ref. no. 06648	Page 112

Controls

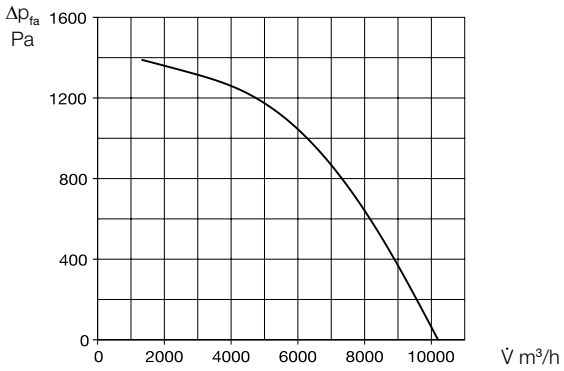
Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

AIR1 RH 8000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 8000	AIR1 RH 8000/SO
Ref. no.	04348	04357
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	150 m³/h
Max. air volume	8000 m³/h (1) (7650 m³/h (4))
Weight, unit operational	888 kg (905 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 3600 W
Nominal current	11 / 11 / 12.4 A (11 / 11 / 14.1 A (4))
Connection (wiring diagram no.)	SS-1322

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = with increased humidity recovery
(4) = AIR RH 8000/SO

Sound data AIR1 RH 8000

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,400 m³/h	5,800 m³/h	8,000 m³/h
Supply air (LwA)	77	83	90
Extract air (LwA)	67	72	79
Outside air (LwA)	63	69	75
Exhaust air (LwA)	77	83	90
Sound pressure level LpA db(A) of sound radiated from housing			
	2,400 m³/h	5,800 m³/h	8,000 m³/h
Housing rad. 1 m	49	55	61
Housing rad. 3 m	40	46	51
Housing rad. 5 m	35	41	47

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.

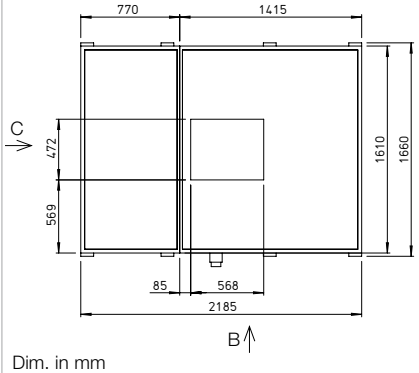
Sound data AIR1 RH 8000/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,400 m³/h	5,800 m³/h	7,650 m³/h
Supply air (LwA)	77	84	89
Extract air (LwA)	67	72	80
Outside air (LwA)	63	69	76
Exhaust air (LwA)	77	84	89
Sound pressure level LpA db(A) of sound radiated from housing			
	2,400 m³/h	5,800 m³/h	7,650 m³/h
Housing rad. 1 m	50	55	62
Housing rad. 3 m	40	46	52
Housing rad. 5 m	36	41	48

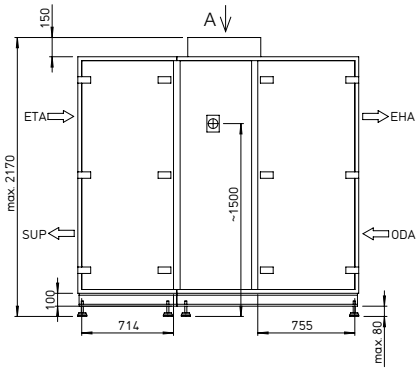
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

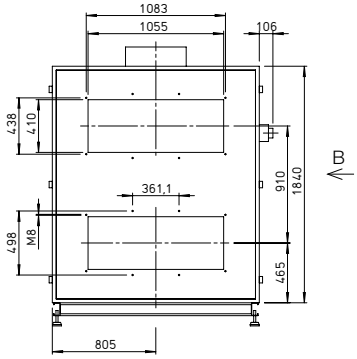
View A (from above)



View B



View C



Dim. in mm

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

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 8000 Electrical, external	Ref. no. 01819	Page 98
Auxiliary heater		
AIR1-ENH RH 8000 Electrical, external	Ref. no. 03626	Page 99
AIR1-NH WW RH 8000 Hot water, external	Ref. no. 03827	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) M	Ref. no. 06310	Page 101
Cooling register		
AIR1-KR KW RH 8000 L (1) Cold water, external	Ref. no. 03983	Page 102
AIR1-KR KW RH 8000 R (1) Cold water, external	Ref. no. 04382	Page 102
AIR1-KR DX RH 8000 L (1) Direct evaporator DX, external	Ref. no. 04426	Page 104
AIR1-KR DX RH 8000 R (1) Direct evaporator DX, external	Ref. no. 05240	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 7000/RH 8000	Ref. no. 06012	Page 106
Recirculation module		
AIR1-ULM RH 8000	Ref. no. 06184	Page 106
Flexible connector		
AIR1-VS 105/41	Ref. no. 04376	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 8000/ePM10 50%/48 (M5)	Ref. no. 02199	Page 115
ELF-AIR1 RH 8000/ePM10 50%/96 (M5)	Ref. no. 02216	Page 115
ELF-AIR1 RH 8000/ePM1 55%/96 (F7)	Ref. no. 02241	Page 115
ELF-AIR1 RH 8000/ePM1 80%/96 (F9)	Ref. no. 02460	Page 115

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 8000 Weather protection cover for the unit	Ref. no. 06435	Page 108
AIR1-AAD RH 8000/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06441	Page 109
AIR1-AAD KR KW + DX RH 8000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06472	Page 110
AIR1-AAD NH EL + WW RH 8000 Weather protection cover for aux. heater	Ref. no. 06447	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 7000/RH 8000 Intake hood outside air	Ref. no. 06497	Page 111
AIR1-AAHF XH 7000/RH 8000 Discharge hood exhaust air	Ref. no. 06841	Page 112

Controls

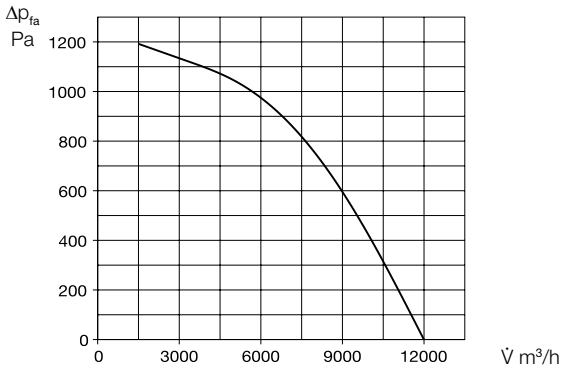
Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

AIR1 RH 9500

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 9500	AIR1 RH 9500/SO
Ref. no.	04349	04358
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	150 m³/h
Max. air volume	9700 m³/h (1) (9400 m³/h (4))
Weight, unit operational	1090 kg (1111 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +50 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 3500 W
Nominal current	10.7 / 10.7 / 12.7 A (10.7 / 10.7 / 13.8 A (4))
Connection (wiring diagram no.)	SS-1323

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = with increased humidity recovery
(4) = AIR RH 9500/SO

Sound data AIR1 RH 9500

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,900 m³/h	7,000 m³/h	9,700 m³/h
Supply air (LwA)	77	81	88
Extract air (LwA)	68	72	79
Outside air (LwA)	64	68	75
Exhaust air (LwA)	77	81	88
Sound pressure level LpA db(A) of sound radiated from housing			
	2,900 m³/h	7,000 m³/h	9,700 m³/h
Housing rad. 1 m	50	54	61
Housing rad. 3 m	40	45	52
Housing rad. 5 m	36	40	47

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.

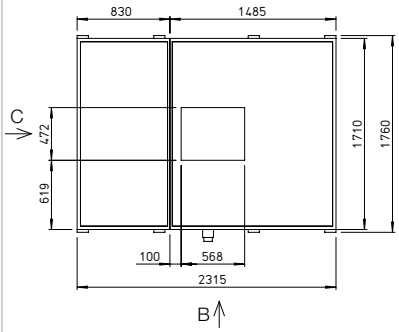
Sound data AIR1 RH 9500/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	2,900 m³/h	7,000 m³/h	9,400 m³/h
Supply air (LwA)	77	82	88
Extract air (LwA)	69	72	78
Outside air (LwA)	65	68	74
Exhaust air (LwA)	77	82	88
Sound pressure level LpA db(A) of sound radiated from housing			
	2,900 m³/h	7,000 m³/h	9,400 m³/h
Housing rad. 1 m	50	55	61
Housing rad. 3 m	41	45	51
Housing rad. 5 m	36	41	47

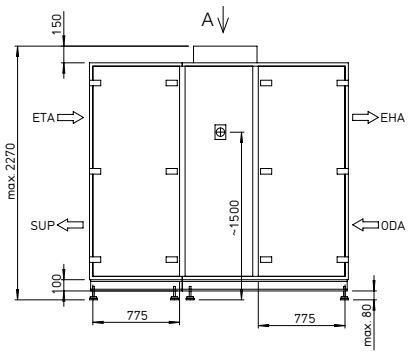
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

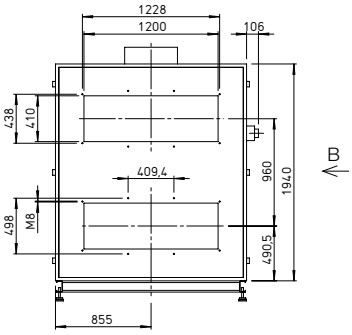
View A (from above)



View B



View C



Dim. in mm

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

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 9500 Electrical, external	Ref. no. 01830	Page 98
Auxiliary heater		
AIR1-ENH RH 9500 Electrical, external	Ref. no. 03627	Page 99
AIR1-NH WW RH 9500 Hot water, external	Ref. no. 03830	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) L	Ref. no. 06311	Page 101
Cooling register		
AIR1-KR KW RH 9500 L (1) Cold water, external	Ref. no. 03984	Page 102
AIR1-KR KW RH 9500 R (1) Cold water, external	Ref. no. 04383	Page 102
AIR1-KR DX RH 9500 L (1) Direct evaporator DX, external	Ref. no. 04864	Page 104
AIR1-KR DX RH 9500 R (1) Direct evaporator DX, external	Ref. no. 05280	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK XH 8500/RH 9500	Ref. no. 06013	Page 106
Recirculation module		
AIR1-ULM RH 9500	Ref. no. 06185	Page 106
Flexible connector		
AIR1-VS 120/41	Ref. no. 04377	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 9500/ePM10 50%/48 (M5)	Ref. no. 02200	Page 115
ELF-AIR1 RH 9500/ePM10 50%/96 (M5)	Ref. no. 02217	Page 115
ELF-AIR1 RH 9500/ePM1 55%/96 (F7)	Ref. no. 02261	Page 115
ELF-AIR1 RH 9500/ePM1 80%/96 (F9)	Ref. no. 02463	Page 115

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 9500 Weather protection cover for the unit	Ref. no. 06436	Page 108
AIR1-AAD RH 9500/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06442	Page 109
AIR1-AAD KR KW + DX RH 9500 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06473	Page 110
AIR1-AAD NH EL + WW RH 9500 Weather protection cover for aux. heater	Ref. no. 06448	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA XH 8500/RH 9500 Intake hood outside air	Ref. no. 06499	Page 111
AIR1-AAHF XH 8500/RH 9500 Discharge hood exhaust air	Ref. no. 06864	Page 112

Controls

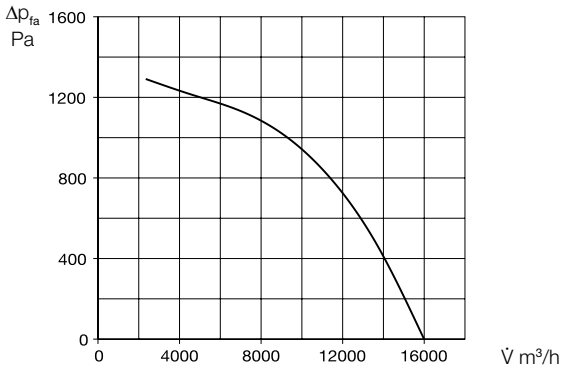
Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

AIR1 RH 12000

Fig. shows accessories

Performance curve



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	150 m³/h
Max. air volume	13300 m³/h (1) (12800 m³/h (4))
Weight, unit operational	1190 kg (1215 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 5000 W
Nominal current	15.2 / 15.2 / 17.2 A (15.2 / 15.2 / 18.4 A (4))
Connection (wiring diagram no.)	SS-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 LwA dB(A) at 400 Pa external pressure			
	4,000 m³/h	9,500 m³/h	13,300 m³/h
Supply air (LwA)	77	82	89
Extract air (LwA)	69	74	81
Outside air (LwA)	65	70	77
Exhaust air (LwA)	77	82	89
Sound pressure level LpA db(A) of sound radiated from housing			
	4,000 m³/h	9,500 m³/h	13,300 m³/h
Housing rad. 1 m	50	55	63
Housing rad. 3 m	40	45	53
Housing rad. 5 m	36	41	49

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.

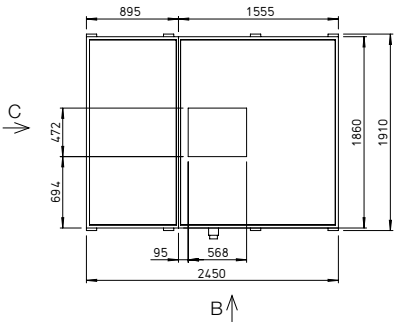
Sound data AIR1 RH 12000/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	4,000 m³/h	9,500 m³/h	12,800 m³/h
Supply air (LwA)	77	82	88
Extract air (LwA)	70	75	79
Outside air (LwA)	66	71	75
Exhaust air (LwA)	77	82	88
Sound pressure level LpA db(A) of sound radiated from housing			
	4,000 m³/h	9,500 m³/h	12,800 m³/h
Housing rad. 1 m	50	55	59
Housing rad. 3 m	41	46	50
Housing rad. 5 m	36	41	45

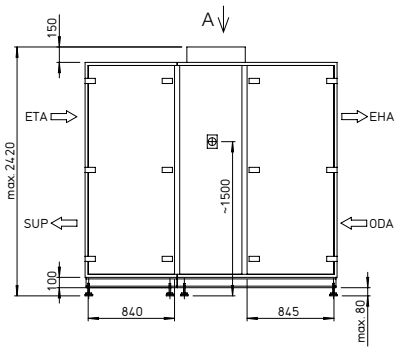
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

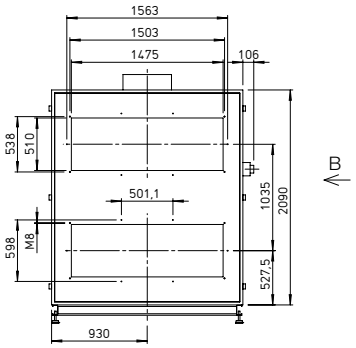
View A (from above)



View B



View C



Dim. 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 98
Auxiliary heater		
AIR1-ENH RH 12000 Electrical, external	Ref. no. 03628	Page 99
AIR1-NH WW RH 12000 Hot water, external	Ref. no. 03831	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) L	Ref. no. 06311	Page 101
Cooling register		
AIR1-KR KW RH 12000 L (1) Cold water, external	Ref. no. 04183	Page 102
AIR1-KR KW RH 12000 R (1) Cold water, external	Ref. no. 04389	Page 102
AIR1-KR DX RH 12000 L (1) Direct evaporator DX, external	Ref. no. 04865	Page 104
AIR1-KR DX RH 12000 R (1) Direct evaporator DX, external	Ref. no. 05281	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK RH 12000	Ref. no. 06020	Page 106
Recirculation module		
AIR1-ULM RH 12000	Ref. no. 06170	Page 106
Flexible connector		
AIR1-VS 147/51	Ref. no. 04378	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 12000/ePM10 50%/48 (M5)	Ref. no. 02201	Page 115
ELF-AIR1 RH 12000/ePM10 50%/96 (M5)	Ref. no. 02218	Page 115
ELF-AIR1 RH 12000/ePM1 55%/96 (F7)	Ref. no. 02264	Page 115
ELF-AIR1 RH 12000/ePM1 80%/96 (F9)	Ref. no. 02471	Page 115

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 108
AIR1-AAD RH 12000/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06443	Page 109
AIR1-AAD KR KW + DX RH 12000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06474	Page 110
AIR1-AAD NH EL + WW RH 12000 Weather protection cover for aux. heater	Ref. no. 06449	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA RH 12000 Intake hood outside air	Ref. no. 06611	Page 111
AIR1-AAHF RH 12000 Discharge hood exhaust air	Ref. no. 06865	Page 112

Controls

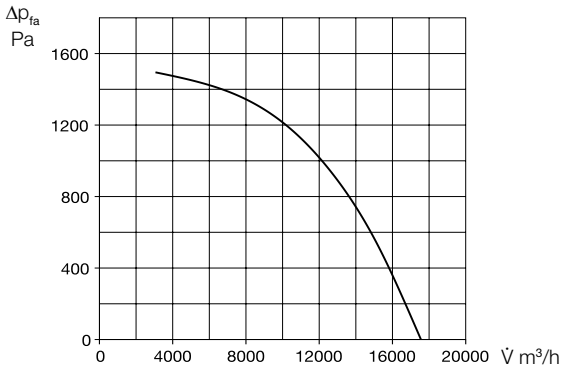
Controllers		
AIR1-BE ECO	Ref. no. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

AIR1 RH 15000

Fig. shows accessories

Performance curve



Unit types

	AIR1 RH 15000	AIR1 RH 15000/SO
Ref. no.	04351	04360
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	150 m³/h
Max. air volume	15000 m³/h (1) (14700 m³/h (4))
Weight, unit operational	1500 kg (1531 kg (4))
Delivery unit	2-part
Unit segments	2
Housing class (DIN 1886)	T2 / TB2 / D1
Filter Outside air	ePM1 55% (F7) (2)
Filter Extract air	ePM10 50% (M5) (2)
Media temperature (air)	-20 to +40 °C
Ambient temperature (operation)	0 to +50 °C
Protection class	IP 31
Electrical data	
Central building control system	BACnet, Modbus TCP/IP
Voltage / Frequency	400 V 3N ~, 50 Hz
Max. output Fans	2 x 6000 W
Nominal current	18.3 / 18.3 / 20.3 A (18.3 / 18.3 / 21.4 A (4))
Connection (wiring diagram no.)	SS-1325

(1) = at 400 Pa external pressure loss ERP-compliant
(2) = other filter classes see optional accessories
(3) = with increased humidity recovery
(4) = AIR RH 15000/SO

Sound data AIR1 RH 15000

Sound power level LwA dB(A) at 400 Pa external pressure			
	5,000 m³/h	10,500 m³/h	15,000 m³/h
Supply air (LwA)	77	84	92
Extract air (LwA)	69	76	83
Outside air (LwA)	65	73	80
Exhaust air (LwA)	77	84	92
Sound pressure level LpA db(A) of sound radiated from housing			
	5,000 m³/h	10,500 m³/h	15,000 m³/h
Housing rad. 1 m	50	57	66
Housing rad. 3 m	40	48	56
Housing rad. 5 m	36	43	52

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.

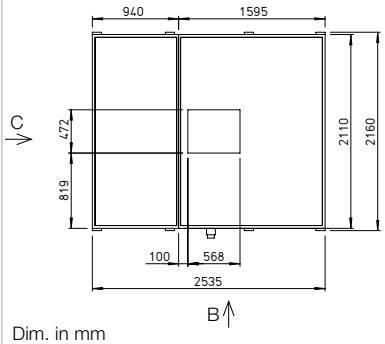
Sound data AIR1 RH 15000/SO

Sound power level LwA dB(A) at 400 Pa external pressure			
	5,000 m³/h	10,500 m³/h	14,700 m³/h
Supply air (LwA)	77	84	92
Extract air (LwA)	69	75	83
Outside air (LwA)	65	71	79
Exhaust air (LwA)	77	84	92
Sound pressure level LpA db(A) of sound radiated from housing			
	5,000 m³/h	10,500 m³/h	14,700 m³/h
Housing rad. 1 m	50	55	65
Housing rad. 3 m	40	45	56
Housing rad. 5 m	36	41	51

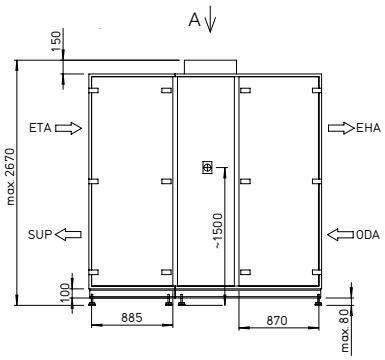
The sound power at the connectors is calculated for the simultaneous operation of both fans. The sound pressure level is determined for the simultaneous operation of both fans at distances of 1, 3 and 5 m.

Dimensional drawing

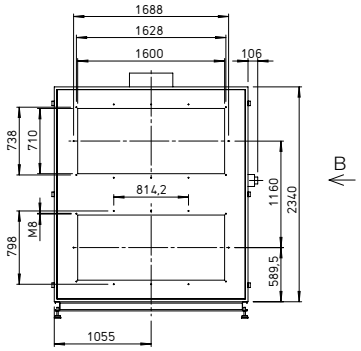
View A (from above)



View B



View C



Dim. in mm

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

Accessories

Heating and cooling registers

Pre-heater		
AIR1-EVH RH 15000 Electrical, external	Ref. no. 01883	Page 98
Auxiliary heater		
AIR1-ENH RH 15000 Electrical, external	Ref. no. 03642	Page 99
AIR1-NH WW RH 15000 Hot water, external	Ref. no. 03833	Page 100
Hydraulic unit for hot water heater register		
WHSH HE 24 V (0 – 10 V) L	Ref. no. 06311	Page 101
Cooling register		
AIR1-KR KW RH 15000 L (1) Cold water, external	Ref. no. 04184	Page 102
AIR1-KR KW RH 15000 R (1) Cold water, external	Ref. no. 04391	Page 102
AIR1-KR DX RH 15000 L (1) Direct evaporator DX, external	Ref. no. 04866	Page 104
AIR1-KR DX RH 15000 R (1) Direct evaporator DX, external	Ref. no. 05282	Page 104

Air routing

Multi-leaf damper		
AIR1-JVK RH 15000	Ref. no. 06021	Page 106
Recirculation module		
AIR1-ULM RH 15000	Ref. no. 06182	Page 106
Flexible connector		
AIR1-VS 160/71	Ref. no. 04379	Page 107

Air filters

Spare air filter and other filter classes		
ELF-AIR1 RH 15000/ePM10 50%/48 (M5)	Ref. no. 02202	Page 115
ELF-AIR1 RH 15000/ePM10 50%/96 (M5)	Ref. no. 02219	Page 115
ELF-AIR1 RH 15000/ePM1 55%/96 (F7)	Ref. no. 02271	Page 115
ELF-AIR1 RH 15000/ePM1 80%/96 (F9)	Ref. no. 02479	Page 115

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 15000 Weather protection cover for the unit	Ref. no. 06438	Page 108
AIR1-AAD RH 15000/ULM Weather protection cover for the unit incl. recirculation module	Ref. no. 06444	Page 109
AIR1-AAD KR KW + DX RH 15000 Weather protection cover for cooling register cold water or direct evaporator	Ref. no. 06482	Page 110
AIR1-AAD NH EL + WW RH 15000 Weather protection cover for aux. heater	Ref. no. 06450	Page 110
Terminal box heater		
AIR1-AAHK	Ref. no. 07064	Page 111
Hoods		
AIR1-AAHA RH 15000 Intake hood outside air	Ref. no. 06612	Page 111
AIR1-AAHF RH 15000 Discharge hood exhaust air	Ref. no. 06866	Page 112

Controls

Controllers		
AIR1-BE ECO	Best.-Nr. 06186	Page 113
AIR1-BE TOUCH	Ref. no. 06187	Page 113
Controller connection cable		
AIR1-SL 4/10 10 m	Ref. no. 07073	Page 113
AIR1-SL 4/20 20 m	Ref. no. 07121	Page 113
Sensors		
KWL-CO2 Carbon dioxide sensor	Ref. no. 04272	Page 113
KWL-FTF Humidity-temperature sensor	Ref. no. 04273	Page 113
KWL-VOC Mixed gas sensor	Ref. no. 04274	Page 113
AIR1-CO2 K Carbon dioxide sensor duct	Ref. no. 07124	Page 114
Signal converter for sensors		
AIR1-SK	Ref. no. 06019	Page 114
Extension kit for constant pressure control		
AIR1-CAP	Ref. no. 06756	Page 114

(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

Accessories for the RH series.

Electrical pre-heater external

Electrical pre-heater

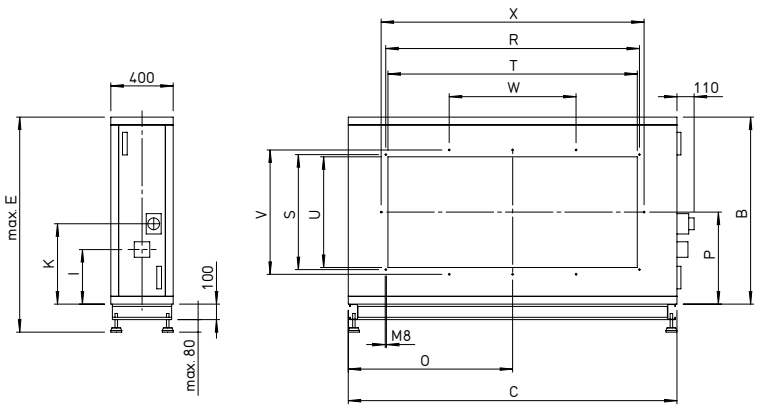
For heating the outside air at very low external temperatures. For mounting directly to the supply air duct of the ventilation unit including fixing material. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Suitable for internal installation.

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

Type	Ref. no.	Output max.	Power consumption max.	Weight
AIR1-EVH RH 1500	01262	4.2 kW	6.1 A	50.0 kg
AIR1-EVH RH 2000	01710	5.8 kW	8.4 A	61.0 kg
AIR1-EVH RH 3000	01711	9.1 kW	13.1 A	77.0 kg
AIR1-EVH RH 5000	01791	15.6 kW	22.5 A	110.0 kg
AIR1-EVH RH 6000	01792	18.1 kW	26.1 A	126.0 kg
AIR1-EVH RH 8000	01819	22.0 kW	31.8 A	135.0 kg
AIR1-EVH RH 9500	01830	22.0 kW	31.8 A	150.0 kg
AIR1-EVH RH 12000	01871	22.0 kW	31.8 A	174.0 kg
AIR1-EVH RH 15000	01883	22.0 kW	31.8 A	211.0 kg

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	B	C	E	I	K	O	P	R	S	T	U	V	W	X
AIR1-EVH RH 1500	01262	520	760	700	200	173	380	265	378	338	350	310	–	–	–
AIR1-EVH RH 2000	01710	580	860	760	250	173	430	295	498	338	470	310	–	–	–
AIR1-EVH RH 3000	01711	640	970	820	250	173	485	300	608	438	580	410	–	–	–
AIR1-EVH RH 5000	01791	780	1240	960	300	465	620	375	883	438	855	410	498	–	–
AIR1-EVH RH 6000	01792	830	1360	1010	300	465	680	400	883	438	855	410	498	–	–
AIR1-EVH RH 8000	01819	950	1610	1130	350	515	805	465	1083	438	1055	410	498	361	–
AIR1-EVH RH 9500	01830	1000	1710	1180	350	515	855	490	1228	438	1200	410	498	409	–
AIR1-EVH RH 12000	01871	1080	1860	1260	350	515	930	530	1503	538	1475	510	598	501	1563
AIR1-EVH RH 15000	01883	1200	2110	1380	350	515	1055	590	1628	738	1600	710	798	814	1688

Electrical auxiliary heater internal/external

internal

external

Electrical auxiliary heater

For the demand-oriented temperature control of supply air.

Internal up to RH 3000: Mains power supply and connection to the ventilation unit control system through pre-wired plug contacts. Auxiliary heater for installation in the ventilation unit.

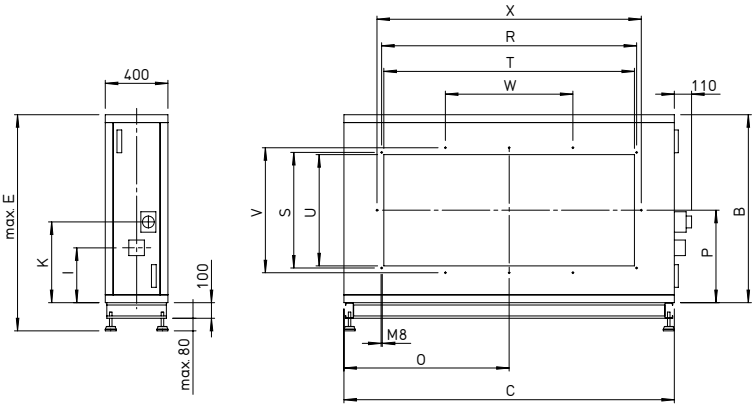
External from RH 5000: For mounting directly to the supply air duct of the ventilation unit including fixing material. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Suitable for internal and external installation. Note: A weather protection cover is required for external installation.

Detailed calculations / technical information: www.AIR1Select.com.

Technical data

	Type	Ref. no.	Output max.	Current consumption max.	Weight
internal	AIR1-ENH RH 1500	03605	4.2 kW	6.1 A	8.0 kg
	AIR1-ENH RH 2000	03616	5.8 kW	8.4 A	10.0 kg
	AIR1-ENH RH 3000	03617	9.1 kW	13.1 A	15.0 kg
external	AIR1-ENH RH 5000	03618	15.6 kW	22.5 A	110.0 kg
	AIR1-ENH RH 6000	03625	18.1 kW	26.1 A	126.0 kg
	AIR1-ENH RH 8000	03626	22.0 kW	31.8 A	135.0 kg
	AIR1-ENH RH 9500	03627	29.2 kW	42.2 A	150.0 kg
	AIR1-ENH RH 12000	03628	38.9 kW	56.2 A	174.0 kg
	AIR1-ENH RH 15000	03642	44.0 kW	63.5 A	211.0 kg

Dimensional drawing



Dim. in mm

Dimensions

	Type	Ref. no.	B	C	E	I	K	O	P	R	S	T	U	V	W	X
external	AIR1-ENH RH 5000	03618	780	1240	960	300	465	620	375	883	438	855	410	498	–	–
	AIR1-ENH RH 6000	03625	830	1360	1010	300	465	680	400	883	438	855	410	498	–	–
	AIR1-ENH RH 8000	03626	950	1610	1130	350	515	805	465	1083	438	1055	410	498	361	–
	AIR1-ENH RH 9500	03627	1000	1710	1180	350	515	855	490	1228	438	1200	410	498	409	–
	AIR1-ENH RH 12000	03628	1080	1860	1260	350	515	930	530	1503	538	1475	510	598	501	1563
	AIR1-ENH RH 15000	03642	1200	2110	1380	350	515	1055	590	1628	738	1600	710	798	814	1688

Accessories for the RH series.

Hot water auxiliary heater internal/external

Hot water auxiliary heater

For demand-oriented temperature control of supply air. Further accessories are required for supply air temperature control (Hydraulic unit WHSH HE 24 V).

Internal up to RH 3000: For installation in the ventilation unit. The heating elements consist of copper piping with formed aluminium fins, and copper pipe water connections for flow and return.

External from RH 5000: For mounting directly to the supply air duct of the ventilation unit including fixing material. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. For internal and external installation. Note: A weather protection cover is required for external installation.

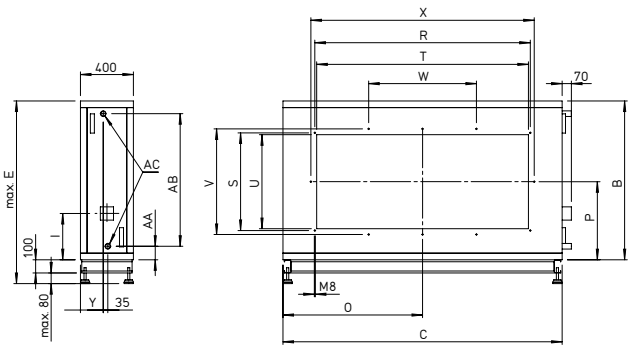
Detailed calculations / technical information: www.AIR1Select.com.

Technical data

	Type	Ref. no.	Water content	Connection flow / return (1)	Weight (without liquid)	Temperature control system	Ref. no.
internal	AIR1-NH WW RH 1500	03805	7.6 l	G 1/2	4.6 kg	WHSH HE 24 V (0 – 10 V)	08318
	AIR1-NH WW RH 2000	03806	11.6 l	G 1/2	5.8 kg	WHSH HE 24 V (0 – 10 V)	08318
	AIR1-NH WW RH 3000	03824	14.9 l	G 1/2	7.0 kg	WHSH HE 24 V (0 – 10 V)	08318
external	AIR1-NH WW RH 5000	03825	24.1 l	G 1/2	103.0 kg	WHSH HE 24 V (0 – 10 V) M	06310
	AIR1-NH WW RH 6000	03826	30.5 l	G 3/4	125.0 kg	WHSH HE 24 V (0 – 10 V) M	06310
	AIR1-NH WW RH 8000	03827	45.2 l	G 3/4	171.0 kg	WHSH HE 24 V (0 – 10 V) M	06310
	AIR1-NH WW RH 9500	03830	53.7 l	G 1	195.0 kg	WHSH HE 24 V (0 – 10 V) L	06311
	AIR1-NH WW RH 12000	03831	67.1 l	G 1	228.0 kg	WHSH HE 24 V (0 – 10 V) L	06311
	AIR1-NH WW RH 15000	03833	80.5 l	G 1 1/4	274.0 kg	WHSH HE 24 V (0 – 10 V) L	06311

(1) External thread

Dimensional drawing



Dim. in mm

Dimensions

	Type	Ref. no.	B	C	E	I	O	P	R	S	T
external	AIR1-NH WW RH 5000	03825	780	1240	960	300	620	375	883	438	855
	AIR1-NH WW RH 6000	03826	830	1360	1010	300	680	400	883	438	855
	AIR1-NH WW RH 8000	03827	950	1610	1130	350	805	465	1083	438	1055
	AIR1-NH WW RH 9500	03830	1000	1710	1180	350	855	490	1228	438	1200
	AIR1-NH WW RH 12000	03831	1080	1860	1260	350	930	530	1503	538	1475
	AIR1-NH WW RH 15000	03833	1200	2110	1380	350	1055	590	1628	738	1600

	Type	Ref. no.	U	V	W	X	Y	AA	AB	AC (1)
external	AIR1-NH WW RH 5000	03825	410	498	–	–	178	85	599	G 1/2
	AIR1-NH WW RH 6000	03826	410	498	–	–	180	93	641	G 3/4
	AIR1-NH WW RH 8000	03827	410	498	361	–	180	93	761	G 3/4
	AIR1-NH WW RH 9500	03830	410	498	409	–	175	96	808	G 1
	AIR1-NH WW RH 12000	03831	510	598	501	1563	175	96	888	G 1
	AIR1-NH WW RH 15000	03833	710	798	814	1688	172	102	1002	G 1 1/4

(1) External thread

Hydraulic unit

Hydraulic unit

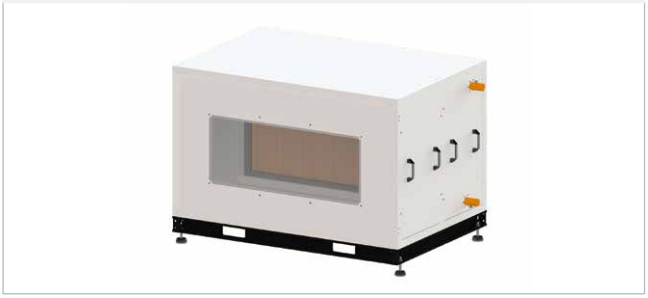
Hydraulic unit for supply air temperature control by controlling the water flow rate in the heater battery. Delivered as a complete unit consisting of the hydraulic unit with 3-way valve with actuator and circulating pump, Flow / return temperature display and flexible connection hoses.
Control voltage: 24 V (0 – 10 V)
K_{VS} value: 5.1
Flow rate: up to 3.3 m³/h
Connection diameter: G1 AG flat sealing (DN25, 1")

Types

XH units	Type	Ref. no.	Control voltage	K_{VS} value	Flow rate	Connection diameter
AIR1-RH 1500	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-RH 2000	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-RH 3000	WHSH HE 24 V (0 – 10 V)	08318	24 V (0 – 10 V)	5.1	0.2 to 3.3 m³/h	G1 AG flat sealing (DN25, 1")
AIR1-RH 5000	WHSH HE 24 V (0 – 10 V) M	06310	24 V (0 – 10 V)	8.1	0.0 to 4.0 m³/h	G2 AG flat sealing (DN32, 1 1/4")
AIR1-RH 6000	WHSH HE 24 V (0 – 10 V) M	06310	24 V (0 – 10 V)	8.1	0.0 to 4.0 m³/h	G2 AG flat sealing (DN32, 1 1/4")
AIR1-RH 8000	WHSH HE 24 V (0 – 10 V) M	06310	24 V (0 – 10 V)	8.1	0.0 to 4.0 m³/h	G2 AG flat sealing (DN32, 1 1/4")
AIR1-RH 9500	WHSH HE 24 V (0 – 10 V) L	06311	24 V (0 – 10 V)	15	0.0 to 8.0 m³/h	G2 flat sealing (DN32, 1 1/4")
AIR1-RH 12000	WHSH HE 24 V (0 – 10 V) L	06311	24 V (0 – 10 V)	15	0.0 to 8.0 m³/h	G2 flat sealing (DN32, 1 1/4")
AIR1-RH 15000	WHSH HE 24 V (0 – 10 V) L	06311	24 V (0 – 10 V)	15	0.0 to 8.0 m³/h	G2 flat sealing (DN32, 1 1/4")

Accessories for the RH series.

Cold water cooling register external



Cold water cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit including fixing material is possible. Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Stainless steel condensate tray with condensate drain outlets. Condensate connection 32 mm. Cooling register suitable for internal and external installation. Note: A weather protection cover is required for external installation.
Recommended accessory: Ball siphonAIR1-KS XH (Ref. no. 07169)

Detailed calculations / technical information: www.AIR1Select.com.

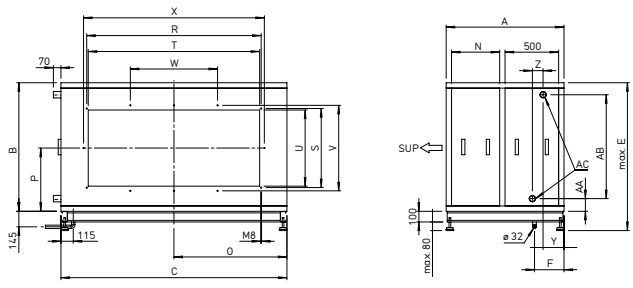
Technical data

Type	Ref. no.	Version	Water content	Connection flow /return (1)	Weight (without liquid)
AIR1-KR KW RH 1500 L	03958	left	1.9 l	G 1/2	66.0 kg
AIR1-KR KW RH 1500 R	04283	right	1.9 l	G 1/2	66.0 kg
AIR1-KR KW RH 2000 L	03959	left	2.6 l	G 3/4	80.0 kg
AIR1-KR KW RH 2000 R	04285	right	2.6 l	G 3/4	80.0 kg
AIR1-KR KW RH 3000 L	03967	left	3.4 l	G 1	101.0 kg
AIR1-KR KW RH 3000 R	04286	right	3.4 l	G 1	101.0 kg
AIR1-KR KW RH 5000 L	03971	left	6.5 l	G 1 1/4	158.0 kg
AIR1-KR KW RH 5000 R	04287	right	6.5 l	G 1 1/4	158.0 kg
AIR1-KR KW RH 6000 L	03976	left	7.0 l	G 1 1/4	180.0 kg
AIR1-KR KW RH 6000 R	04288	right	7.0 l	G 1 1/4	180.0 kg
AIR1-KR KW RH 8000 L	03983	left	13.7 l	G 1 1/2	242.0 kg
AIR1-KR KW RH 8000 R	04382	right	13.7 l	G 1 1/2	242.0 kg
AIR1-KR KW RH 9500 L	03984	left	16.9 l	G 2	270.0 kg
AIR1-KR KW RH 9500 R	04383	right	16.9 l	G 2	270.0 kg
AIR1-KR KW RH 12000 L	04183	left	20.5 l	G 2	313.0 kg
AIR1-KR KW RH 12000 R	04389	right	20.5 l	G 2	313.0 kg
AIR1-KR KW RH 15000 L	04184	left	20.2 l	G 2	380.0 kg
AIR1-KR KW RH 15000 R	04391	right	20.2 l	G 2	380.0 kg

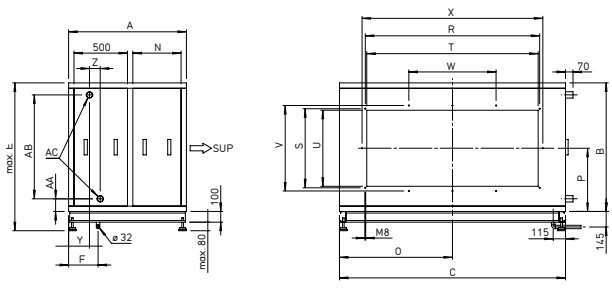
(1) External thread

Dimensional drawing

Version left (L)



Version right (R)



Dim. in mm

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.

Dimensions

Type	Ref. no.	A	B	C	E	F	N	O	P	R	S
AIR1-KR KW RH 1500 L	03958	1000	520	760	700	250	350	380	265	378	338
AIR1-KR KW RH 1500 R	04283	1000	520	760	700	250	350	380	265	378	338
AIR1-KR KW RH 2000 L	03959	1000	580	860	760	250	350	430	295	498	338
AIR1-KR KW RH 2000 R	04285	1000	580	860	760	250	350	430	295	498	338
AIR1-KR KW RH 3000 L	03967	1000	640	970	820	250	350	485	300	608	438
AIR1-KR KW RH 3000 R	04286	1000	640	970	820	250	350	485	300	608	438
AIR1-KR KW RH 5000 L	03971	1100	780	1240	960	275	450	620	375	883	438
AIR1-KR KW RH 5000 R	04287	1100	780	1240	960	275	450	620	375	883	438
AIR1-KR KW RH 6000 L	03976	1100	830	1360	1010	275	450	680	400	883	438
AIR1-KR KW RH 6000 R	04288	1100	830	1360	1010	275	450	680	400	883	438
AIR1-KR KW RH 8000 L	03983	1100	950	1610	1130	275	450	805	465	1083	438
AIR1-KR KW RH 8000 R	04382	1100	950	1610	1130	275	450	805	465	1083	438
AIR1-KR KW RH 9500 L	03984	1100	1000	1710	1180	275	450	855	490	1228	438
AIR1-KR KW RH 9500 R	04383	1100	1000	1710	1180	275	450	855	490	1228	438
AIR1-KR KW RH 12000 L	04183	1100	1080	1860	1260	275	450	930	530	1503	538
AIR1-KR KW RH 12000 R	04389	1100	1080	1860	1260	275	450	930	530	1503	538
AIR1-KR KW RH 15000 L	04184	1100	1200	2110	1380	275	450	1055	590	1628	738
AIR1-KR KW RH 15000 R	04391	1100	1200	2110	1380	275	450	1055	590	1628	738

Type	Ref. no.	T	U	V	W	X	Y	Z	AA	AB	AC (1)
AIR1-KR KW RH 1500 L	03958	350	310	–	–	–	175	70	98	340	G 1/2
AIR1-KR KW RH 1500 R	04283	350	310	–	–	–	175	70	98	340	G 1/2
AIR1-KR KW RH 2000 L	03959	470	310	–	–	–	179	62	102	382	G 3/4
AIR1-KR KW RH 2000 R	04285	470	310	–	–	–	179	62	102	382	G 3/4
AIR1-KR KW RH 3000 L	03967	580	410	–	–	–	182	56	105	426	G 1
AIR1-KR KW RH 3000 R	04286	580	410	–	–	–	182	56	105	426	G 1
AIR1-KR KW RH 5000 L	03971	855	410	498	–	–	186	83	109	568	G 1 1/4
AIR1-KR KW RH 5000 R	04287	855	410	498	–	–	186	83	109	568	G 1 1/4
AIR1-KR KW RH 6000 L	03976	855	410	498	–	–	186	83	109	588	G 1 1/4
AIR1-KR KW RH 6000 R	04288	855	410	498	–	–	186	83	109	588	G 1 1/4
AIR1-KR KW RH 8000 L	03983	1055	410	498	361	–	195	65	118	720	G 1 1/2
AIR1-KR KW RH 8000 R	04382	1055	410	498	361	–	195	65	118	720	G 1 1/2
AIR1-KR KW RH 9500 L	03984	1200	410	498	409	–	195	35	118	770	G 2
AIR1-KR KW RH 9500 R	04383	1200	410	498	409	–	195	35	118	770	G 2
AIR1-KR KW RH 12000 L	04183	1475	510	598	501	1563	195	35	118	850	G 2
AIR1-KR KW RH 12000 R	04389	1475	510	598	501	1563	195	35	118	850	G 2
AIR1-KR KW RH 15000 L	04184	1600	710	798	814	1688	195	100	118	970	G 2
AIR1-KR KW RH 15000 R	04391	1600	710	798	814	1688	195	100	118	970	G 2

(1) External thread

Accessories for the RH series.

Direct evaporator cooling register external

Direct evaporator cooling register

For demand-oriented temperature control (cooling) of supply air. Mounting directly to the supply air duct of the ventilation unit is possible. Suitable for use with common refrigerants (selection list see www.AIR1Select.com).Casing in robust panel construction, insulated on all sides with 50 mm mineral wool for the minimisation of heat losses. External corrosion-resistant coating of casing. Stainless steel condensate tray with condensate drain outlets. Large inspection openings on both sides of unit for easy access and optimised cleaning and maintenance. Condensate connection 32 mm. Cooling register suitable for internal and external installation. Note: A weather protection cover is required for external installation.
Recommended accessory: Ball siphon AIR1-KS XH (Ref. no. 07169)

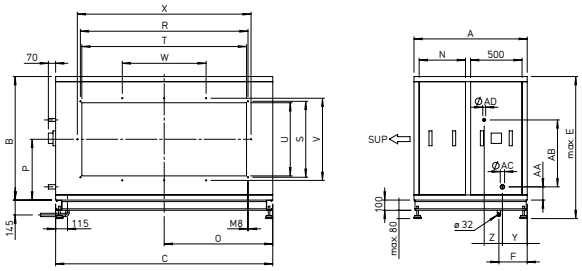
Detailed calculations / technical information: www.AIR1Select.com.

Technical data

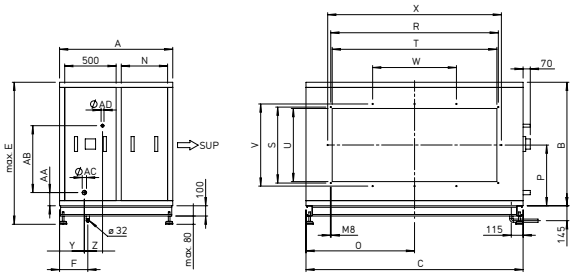
Type	Ref. no.	Version	Weight (without liquid)	Filling capacity	Ø connection outlet	Ø connection inlet
AIR1-KR DX RH 1500 L	04416	left	65.0 kg	1.57 l	16 mm	12 mm
AIR1-KR DX RH 1500 R	05001	right	65.0 kg	1.57 l	16 mm	12 mm
AIR1-KR DX RH 2000 L	04417	left	79.0 kg	2.14 l	19 mm	12 mm
AIR1-KR DX RH 2000 R	05025	right	79.0 kg	2.14 l	19 mm	12 mm
AIR1-KR DX RH 3000 L	04422	left	100.0 kg	2.80 l	22 mm	16 mm
AIR1-KR DX RH 3000 R	05028	right	100.0 kg	2.80 l	22 mm	16 mm
AIR1-KR DX RH 5000 L	04424	left	156.0 kg	5.17 l	28 mm	16 mm
AIR1-KR DX RH 5000 R	05046	right	156.0 kg	5.17 l	28 mm	16 mm
AIR1-KR DX RH 6000 L	04425	left	180.0 kg	6.22 l	28 mm	16 mm
AIR1-KR DX RH 6000 R	05239	right	180.0 kg	6.22 l	28 mm	16 mm
AIR1-KR DX RH 8000 L	04426	left	240.0 kg	11.33 l	35 mm	22 mm
AIR1-KR DX RH 8000 R	05240	right	240.0 kg	11.33 l	35 mm	22 mm
AIR1-KR DX RH 9500 L	04864	left	265.0 kg	13.03 l	35 mm	22 mm
AIR1-KR DX RH 9500 R	05280	right	265.0 kg	13.03 l	35 mm	22 mm
AIR1-KR DX RH 12000 L	04865	left	303.0 kg	12.73 l	42 mm	22 mm
AIR1-KR DX RH 12000 R	05281	right	303.0 kg	12.73 l	42 mm	22 mm
AIR1-KR DX RH 15000 L	04866	left	380.0 kg	15.97 l	42 mm	28 mm
AIR1-KR DX RH 15000 R	05282	right	380.0 kg	15.97 l	42 mm	28 mm

Dimensional drawing

Version left (L)



Version right (R)



Dim. in mm

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.

Dimensions

Type	Ref. no.	A	B	C	E	F	N	O	P	R	S
AIR1-KR DX RH 1500 L	04416	1000	520	760	700	250	350	380	265	378	338
AIR1-KR DX RH 1500 R	05001	1000	520	760	700	250	350	380	265	378	338
AIR1-KR DX RH 2000 L	04417	1000	580	860	760	250	350	430	295	498	338
AIR1-KR DX RH 2000 R	05025	1000	580	860	760	250	350	430	295	498	338
AIR1-KR DX RH 3000 L	04422	1000	675	970	855	250	350	485	320	608	438
AIR1-KR DX RH 3000 R	05028	1000	675	970	855	250	350	485	320	608	438
AIR1-KR DX RH 5000 L	04424	1100	780	1240	960	275	450	620	375	883	438
AIR1-KR DX RH 5000 R	05046	1100	780	1240	960	275	450	620	375	883	438
AIR1-KR DX RH 6000 L	04425	1100	830	1360	1010	275	450	680	400	883	438
AIR1-KR DX RH 6000 R	05239	1100	830	1360	1010	275	450	680	400	883	438
AIR1-KR DX RH 8000 L	04426	1100	950	1610	1130	275	450	805	465	1083	438
AIR1-KR DX RH 8000 R	05240	1100	950	1610	1130	275	450	805	465	1083	438
AIR1-KR DX RH 9500 L	04864	1100	1000	1710	1180	275	450	855	490	1228	438
AIR1-KR DX RH 9500 R	05280	1100	1000	1710	1180	275	450	855	490	1228	438
AIR1-KR DX RH 12000 L	04865	1100	1080	1860	1260	275	450	930	530	1503	538
AIR1-KR DX RH 12000 R	05281	1100	1080	1860	1260	275	450	930	530	1503	538
AIR1-KR DX RH 15000 L	04866	1100	1200	2110	1380	275	450	1055	590	1628	738
AIR1-KR DX RH 15000 R	05282	1100	1200	2110	1380	275	450	1055	590	1628	738

Type	Ref. no.	T	U	V	W	X	Y	Z	AA	AB	AC	AD
AIR1-KR DX RH 1500 L	04416	350	310	–	–	–	206	120	137	171	16	12
AIR1-KR DX RH 1500 R	05001	350	310	–	–	–	206	120	137	171	16	12
AIR1-KR DX RH 2000 L	04417	470	310	–	–	–	206	119	116	242	19	12
AIR1-KR DX RH 2000 R	05025	470	310	–	–	–	206	119	116	242	19	12
AIR1-KR DX RH 3000 L	04422	580	410	498	–	–	206	117	118	290	22	16
AIR1-KR DX RH 3000 R	05028	580	410	498	–	–	206	117	118	290	22	16
AIR1-KR DX RH 5000 L	04424	855	410	498	–	–	206	114	121	387	28	16
AIR1-KR DX RH 5000 R	05046	855	410	498	–	–	206	114	121	387	28	16
AIR1-KR DX RH 6000 L	04425	855	410	498	–	–	206	114	121	382	28	16
AIR1-KR DX RH 6000 R	05239	855	410	498	–	–	206	114	121	382	28	16
AIR1-KR DX RH 8000 L	04426	1055	410	498	361	–	213	167	122	491	35	22
AIR1-KR DX RH 8000 R	05240	1055	410	498	361	–	213	167	122	491	35	22
AIR1-KR DX RH 9500 L	04864	1200	410	498	409	–	230	203	122	526	35	22
AIR1-KR DX RH 9500 R	05280	1200	410	498	409	–	230	203	122	526	35	22
AIR1-KR DX RH 12000 L	04865	1475	510	598	501	1563	223	143	128	580	42	22
AIR1-KR DX RH 12000 R	05281	1475	510	598	501	1563	223	143	128	580	42	22
AIR1-KR DX RH 15000 L	04866	1600	710	798	814	1688	241	177	128	650	42	28
AIR1-KR DX RH 15000 R	05282	1600	710	798	814	1688	241	177	128	650	42	28

Accessories for the RH series.

Multi-leaf damper internal

Multi-leaf damper

Multi-leaf damper for preventing cold draughts when the fan is stationary. Framework casing with connection flange on both sides. Counter-rotating blades, with retracted sealing lip. Sealing class 2. Installation inside of unit.

Technical data

Type	Ref. no.	Runtime (open / closed)	Weight	Ambient temperature	Actuator type
AIR1-JVK XH 1500/RH 1500	06006	40 ... 75 s	3.0 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK XH 2500/RH 2000	06007	40 ... 75 s	4.0 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK XH 3500-4500/RH 3000	06009	40 ... 75 s	5.0 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK XH 5500/RH 5000-6000	06010	40 ... 75 s	6.6 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK XH 7000/RH 8000	06012	40 ... 75 s	7.8 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK XH 8500/RH 9500	06013	40 ... 75 s	8.6 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK RH 12000	06020	40 ... 75 s	10.0 kg	-30 to +50 °C	24 V DC. spring return
AIR1-JVK RH 15000	06021	40 ... 75 s	13.0 kg	-30 to +50 °C	24 V DC. spring return

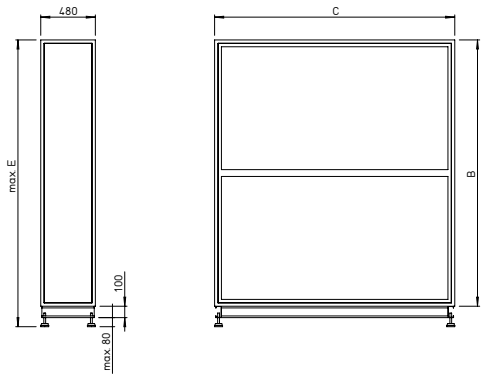
Recirculation module

Recirculation module

Recirculation module for the 100% recirculation of the extract air into the building. Multi-leaf dampers are required for recirculation operation. The module consists of a recirculation damper including drive. For mounting between the heat exchanger segment and supply air segment of the rotary heat exchanger unit.

Plug-in connection to the mains power supply and ventilation unit control system.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	B	C	E
AIR1-ULM RH 5000	06040	1470	1240	1650
AIR1-ULM RH 6000	06160	1590	1360	1770
AIR1-ULM RH 8000	06184	1840	1610	2020
AIR1-ULM RH 9500	06185	1940	1710	2120
AIR1-ULM RH 12000	06170	2090	1860	2270
AIR1-ULM RH 15000	06182	2340	2110	2520

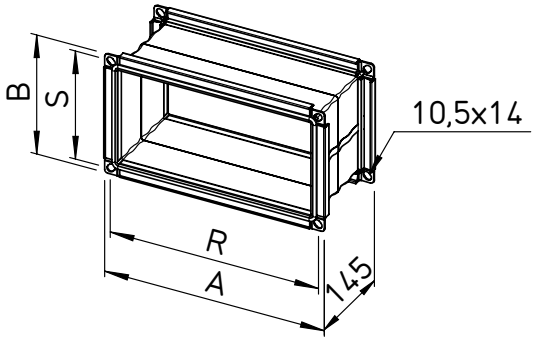
Flexible connector

Flexible connector

Flexible connector (uninsulated), with flange connections on both sides, for mounting between the ventilation unit and duct system. Prevents structure-borne sound transmission and bridges mounting tolerances. Elastic fabric sleeve, operating temperature range from -10 °C to +80 °C.

Only suitable for internal installation.

Dimensional drawing



Dim. in mm

Dimensions

RH units	Type	Ref. no.	A	B	R	S
AIR1-RH 1500	AIR1-VS 35/31	04372	398	358	378	338
AIR1-RH 2000	AIR1-VS 47/31	04373	518	358	498	338
AIR1-RH 3000	AIR1-VS 58/41	04374	628	458	608	438
AIR1-RH 5000	AIR1-VS 85/41	04375	903	458	883	438
AIR1-RH 6000	AIR1-VS 85/41	04375	903	458	883	438
AIR1-RH 8000	AIR1-VS 105/41	04376	1103	458	1083	438
AIR1-RH 9500	AIR1-VS 120/41	04377	1248	458	1228	438
AIR1-RH 12000	AIR1-VS 147/51	04378	1523	558	1503	538
AIR1-RH 15000	AIR1-VS 160/71	04379	1648	758	1628	738

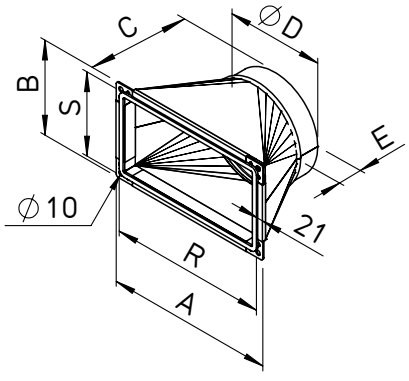
Square-round adapter

Square-round adapter

Symmetrical adapter for connecting the ventilation unit to round air ducts/duct systems. Made of galvanised steel sheet. The pressure loss of the adapter at maximum air volume is < 10 Pa on both the intake and discharge side.

Only suitable for internal installation.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	D
AIR1-ÜS XH 1500/RH 1500	04367	400	360	200	315
AIR1-ÜS XH 2500/RH 2000	04368	520	360	250	400
AIR1-ÜS XH 3500-4500/RH 3000	04369	630	460	300	500
AIR1-ÜS XH 5500/RH 5000-6000	04370	905	460	350	630

Type	Ref. no.	E	R	S
AIR1-ÜS XH 1500/RH 1500	04367	60	378	338
AIR1-ÜS XH 2500/RH 2000	04368	80	498	338
AIR1-ÜS XH 3500-4500/RH 3000	04369	80	608	438
AIR1-ÜS XH 5500/RH 5000-6000	04370	80	883	438

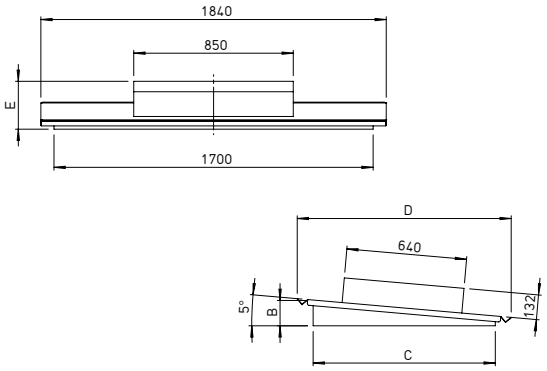
Accessories for the RH series.

Weather protection cover

Weather protection cover

Weather protection cover for the external installation of AIR1 ventilation units. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the unit to IP 54.

Dimensional drawing

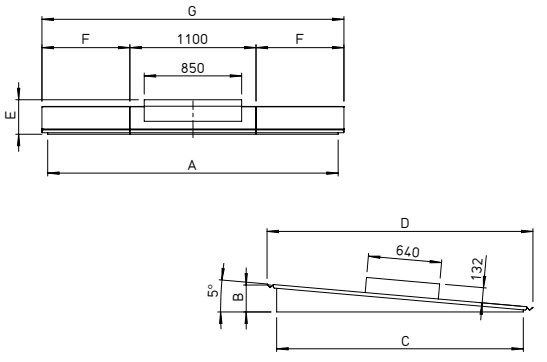


Dim. in mm AIR1 RH 1500 – 3000

Dimensions

Type	Ref. no.	B	C	D	E
AIR1-AAD RH 1500	06382	115	760	930	245
AIR1-AAD RH 2000	06431	125	860	1030	250
AIR1-AAD RH 3000	06432	135	970	1140	255

Dimensional drawing



Dim. in mm AIR1 RH 5000 – 15000

Dimensions

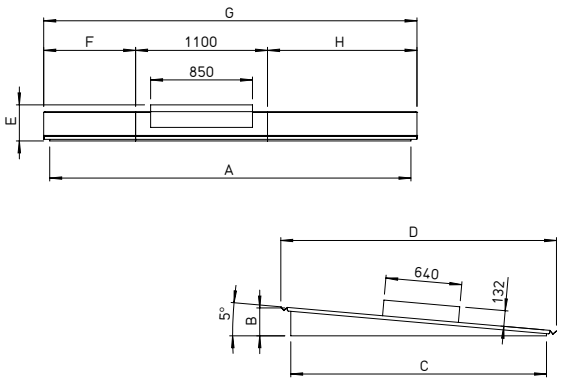
Type	Ref. no.	A	B	C	D	E	F	G
AIR1-AAD RH 5000	06433	1842	162	1280	1448	269	423	1946
AIR1-AAD RH 6000	06434	2012	172	1400	1568	275	508	2116
AIR1-AAD RH 8000	06435	2182	194	1650	1818	285	594	2288
AIR1-AAD RH 9500	06436	2312	199	1750	1918	290	656	2412
AIR1-AAD RH 12000	06437	2442	212	1900	2068	290	721	2542
AIR1-AAD RH 15000	06438	2532	234	2150	2318	300	766	2632

Weather protection cover for the unit including recirculation module

Weather protection cover for the unit incl. recirculation module

Weather protection cover for the external installation of AIR1 ventilation units with a recirculation module. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the unit to IP 54.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	D	E	F	G	H
AIR1-AAD RH 5000/ULM	06439	2322	162	1280	1448	269	423	2426	903
AIR1-AAD RH 6000/ULM	06440	2492	172	1400	1568	275	508	2596	988
AIR1-AAD RH 8000/ULM	06441	2662	194	1650	1818	285	594	2768	1074
AIR1-AAD RH 9500/ULM	06442	2792	199	1750	1918	290	656	2892	1136
AIR1-AAD RH 12000/ULM	06443	2922	212	1900	2068	290	721	3022	1201
AIR1-AAD RH 15000/ULM	06444	3012	234	2150	2318	300	766	3112	1246

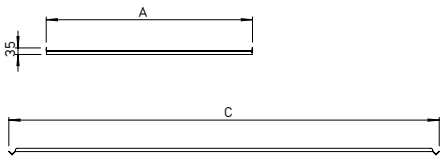
Accessories for the RH series.

Weather protection cover cooling register

Weather protection cover for external cold water or direct evaporator cooling registers

Weather protection cover for the external installation of external cold water or direct evaporator cooling registers. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the cooling register to IP 54.

Dimensional drawing



Dim. in mm

Dimensions

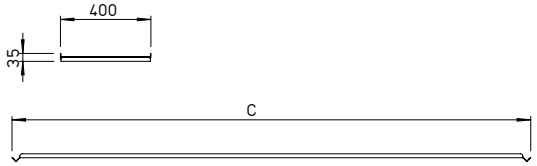
Type	Ref. no.	A	C
AIR1-AAD KR KW + DX RH 1500	06467	1000	932
AIR1-AAD KR KW + DX RH 2000	06468	1000	1032
AIR1-AAD KR KW + DX RH 3000	06469	1000	1102
AIR1-AAD KR KW + DX RH 5000	06470	1100	1424
AIR1-AAD KR KW + DX RH 6000	06471	1100	1544
AIR1-AAD KR KW + DX RH 8000	06472	1100	1794
AIR1-AAD KR KW + DX RH 9500	06473	1100	1894
AIR1-AAD KR KW + DX RH 12000	06474	1100	2044
AIR1-AAD KR KW + DX RH 15000	06482	1100	2294

Weather protection cover for auxiliary heater

Weather protection cover for auxiliary heater

Weather protection cover for the external installation of electrical or hot water auxiliary heater registers. Made of galvanised steel sheet, in weather-resistant design/coating. Increases the protection class of the cooling register to IP 54.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	C
AIR1-AAD NH EL + WW RH 5000	06445	1424
AIR1-AAD NH EL + WW RH 6000	06446	1544
AIR1-AAD NH EL + WW RH 8000	06447	1794
AIR1-AAD NH EL + WW RH 9500	06448	1894
AIR1-AAD NH EL + WW RH 12000	06449	2044
AIR1-AAD NH EL + WW RH 15000	06450	2294

Heating element for the terminal box

Heating element for the terminal box

Heating element for the electrical terminal box of the ventilation unit. Recommended for the external installation of AIR ventilation units in cold climate zones to prevent condensate formation and protect the control system against temperatures below 0 °C.
Heat output automatically controlled depending on the outside air temperature.
Max. heat output: 100 W
Supply voltage: 230 V

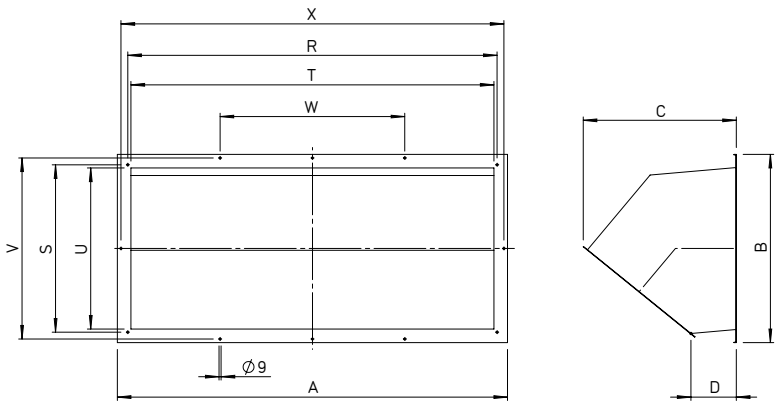
Type	Ref. no.
AIR1-AAHK	07064

Intake hood outside air

Intake hood outside air

Intake hood outside air for external installation. Includes drainage tray and droplet separator. Mounting via flange connection to the unit connector. Surface with weather-resistant coating.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	D	R	S	T	U	V	W	X
AIR1-AAHA XH 1500/RH 1500	06484	410	370	486	195	378	338	350	310	–	–	–
AIR1-AAHA XH 2500/RH 2000	06539	530	370	486	195	498	338	470	310	–	–	–
AIR1-AAHA XH 3500-4500/RH 3000	06487	640	470	525	200	608	438	580	410	–	–	–
AIR1-AAHA XH 5500/RH 5000-6000	06496	915	530	525	200	883	438	855	410	498	–	–
AIR1-AAHA XH 7000/RH 8000	06497	1115	530	525	200	1083	438	1055	410	498	361	–
AIR1-AAHA XH 8500/RH 9500	06499	1260	530	525	200	1228	438	1200	410	498	409	–
AIR1-AAHA RH 12000	06611	1595	630	575	200	1503	538	1475	510	598	501	1563
AIR1-AAHA RH 15000	06612	1720	830	675	200	1628	738	1600	710	798	814	1688

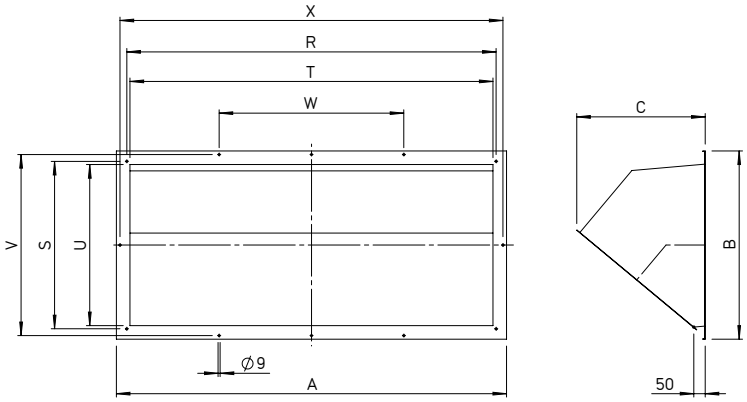
Accessories for the RH series.

Discharge hood exhaust air

Discharge hood exhaust air

Discharge hood exhaust air for external installation. Includes protection guard. Mounting via flange connection to the unit connector. Surface with weather-resistant coating.

Dimensional drawing



Dim. in mm

Dimensions

Type	Ref. no.	A	B	C	R	S	T	U	V	W	X
AIR1-AAHF XH 1500/RH 1500	06643	410	370	338	378	338	350	310	–	–	–
AIR1-AAHF XH 2500/RH 2000	06646	530	370	338	498	338	470	310	–	–	–
AIR1-AAHF XH 3500-4500/RH 3000	06647	640	470	375	608	438	580	410	–	–	–
AIR1-AAHF XH 5500/RH 5000-6000	06648	915	530	375	883	438	580	410	498	–	–
AIR1-AAHF XH 7000/RH 8000	06841	1115	530	375	1083	438	1055	410	498	361	–
AIR1-AAHF XH 8500/RH 9500	06864	1260	530	375	1228	438	1200	410	498	409	–
AIR1-AAHF RH 12000	06865	1595	630	415	1503	538	1475	510	598	501	1563
AIR1-AAHF RH 15000	06866	1720	830	566	1628	738	1600	710	798	814	1688

Controller Eco

Controller Eco

Backlit display with 4 lines a 20 characters. The display menu system is operated via seven buttons. There are two LEDs on the front side: One alarm LED and one LED for the input mode. The controller is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. The controller is designed for wall mounting. Alternatively, it can also be attached to the unit casing using magnetic strips. Protection class IP 40.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE ECO	06186	24 V DC	0.24 W	115 x 95 x 25 mm	Max. 90 % RH (1)	+5 °C to +40 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Controller Touch

Controller Touch

Graphic user interface with intuitive menu structure and simple operation. The display has a capacitive touch function and a size of 7", incl. multi-colour colour technology. Includes stainless steel casing for simple surface-mounting to the wall. It is delivered with a 5 m cable as standard. Cable lengths of 10 m and 20 m are optionally available. The maximum connection length is 100 m. Protection class IP 20.

Technical data

Type	Ref. no.	Voltage	Power consumption	Dimensions (WxHxD)	Ambient humidity	Ambient temperature	Connection cable 10 m	Connection cable 20 m
AIR1-BE TOUCH	06187	24 V DC	6 W	185 x 131 x 50 mm	Max. 90 % RH (1)	-10 °C to +60 °C	AIR1-SL 4/10 Ref. no.: 07073	AIR1-SL 4/20 Ref. no.: 07121

Room sensors

Room sensors

For measuring the CO_2, mixed gas (VOC) concentration or relative humidity and temperature. Control according to highest measured value. Includes control cable KWL-SL 4/3 (3 m long), other lengths available upon request. Dimensions (W x H x D) 95 x 97 x 30 mm.

Technical data

Type	Ref. no.	Measurement range
KWL-CO2	04272	400 ... 2000 ppm
KWL-FTF	04273	0 ... 99 % RH (1) and 0 ... 40 °C
KWL-VOC	04274	450 ... 2000 ppm

(1) Non-condensing

Accessories for the RH series.

Carbon dioxide sensor for duct installation

Carbon dioxide sensor for duct installation
Sensor for measuring the carbon dioxide concentration in the air. For installation in the ventilation duct. Installation depth 40 – 180 mm.

Technical data

Type	Ref. no.	Measurement range
AIR1-CO2 K	07124	0 ... 2000 ppm

Signal converter

Signal converter for sensors
Signal converter for the connection of up to six AIR1 room sensors of the same sensor type. The AIR1-SK compares the connected inputs and forwards the highest input signal to the max. output. Supplied pre-installed in the appropriate terminal box incl. transformer 230 V / 24 V AC and terminal strip.
Dimensions terminal box (L x H x W): 218 x 149 x 97 mm

Technical data

Type	Ref. no.	Voltage	Power consumption	Ambient humidity	Ambient temperature	Protection class
AIR1-SK	06019	230 V, 50 Hz	max. 15 VA	Max. 90 % RH (1)	-40 °C to +50 °C	IP 20 / IP 66 in terminal box

Extension kit for CAP mode

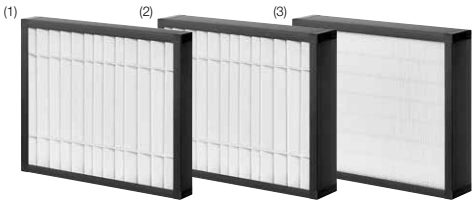
Extension kit for CAP mode
Differential pressure transmitter for constant pressure operation of the ventilation unit. Vertical or horizontal installation possible.
Scope of delivery: Pressure transmitter, pressure hose and sensor.

Technical data

Type	Ref. no.	Voltage	Ambient humidity	Ambient temperature	Protection class
AIR1-CAP	06756	24 V AC / DC ± 15 %	Max. 95 % RH (1)	-25 °C to +50 °C	IP 54

(1) Non-condensing

Spare air filter



(1) Pre-filter outs. air ePM10 50% (M5)
(2) Extract air filter ePM10 50% (M5)
(3) Outs. or extract air filter ePM1 55% (F7) Outside air filter ePM1 80% (F9)

Spare air filter

Helios AIR1 units are supplied with the filter classes ePM1 55%/F7 (outside air) and ePM10 50%/M5 (extract air) as standard. Depending on the unit size, the air filter consists of multiple (separate) air filter inserts. This is taken into account when ordering the spare air filter.
In case of increased air quality requirements, other filter classes are available for the outside air and extract air (see table below). All air filters are pressure-loss-optimised cassette filters with large filter surfaces.

Technical data

	Type	Ref. no.	Filter class
Pre-filter outside air	ELF-AIR1 RH 1500/ePM10 50%/48	02192	ePM10 50% (M5)
	ELF-AIR1 RH 2000/ePM10 50%/48	02193	ePM10 50% (M5)
	ELF-AIR1 RH 3000/ePM10 50%/48	02194	ePM10 50% (M5)
	ELF-AIR1 RH 5000/ePM10 50%/48	02196	ePM10 50% (M5)
	ELF-AIR1 RH 6000/ePM10 50%/48	02220	ePM10 50% (M5)
	ELF-AIR1 RH 8000/ePM10 50%/48	02199	ePM10 50% (M5)
	ELF-AIR1 RH 9500/ePM10 50%/48	02200	ePM10 50% (M5)
	ELF-AIR1 RH 12000/ePM10 50%/48	02201	ePM10 50% (M5)
	ELF-AIR1 RH 15000/ePM10 50%/48	02202	ePM10 50% (M5)
Extract air filter	ELF-AIR1 RH 1500/ePM10 50%/96	02211	ePM10 50% (M5)
	ELF-AIR1 RH 2000/ePM10 50%/96	02212	ePM10 50% (M5)
	ELF-AIR1 RH 3000/ePM10 50%/96	02213	ePM10 50% (M5)
	ELF-AIR1 RH 5000/ePM10 50%/96	02214	ePM10 50% (M5)
	ELF-AIR1 RH 6000/ePM10 50%/96	02215	ePM10 50% (M5)
	ELF-AIR1 RH 8000/ePM10 50%/96	02216	ePM10 50% (M5)
	ELF-AIR1 RH 9500/ePM10 50%/96	02217	ePM10 50% (M5)
	ELF-AIR1 RH 12000/ePM10 50%/96	02218	ePM10 50% (M5)
	ELF-AIR1 RH 15000/ePM10 50%/96	02219	ePM10 50% (M5)
Outside or extract air filter	ELF-AIR1 RH 1500/ePM1 55%/96	02236	ePM1 55% (F7)
	ELF-AIR1 RH 2000/ePM1 55%/96	02237	ePM1 55% (F7)
	ELF-AIR1 RH 3000/ePM1 55%/96	02238	ePM1 55% (F7)
	ELF-AIR1 RH 5000/ePM1 55%/96	02239	ePM1 55% (F7)
	ELF-AIR1 RH 6000/ePM1 55%/96	02240	ePM1 55% (F7)
	ELF-AIR1 RH 8000/ePM1 55%/96	02241	ePM1 55% (F7)
	ELF-AIR1 RH 9500/ePM1 55%/96	02261	ePM1 55% (F7)
	ELF-AIR1 RH 12000/ePM1 55%/96	02264	ePM1 55% (F7)
	ELF-AIR1 RH 15000/ePM1 55%/96	02271	ePM1 55% (F7)
Outside air filter	ELF-AIR1 RH 1500/ePM1 80%/96	02374	ePM1 80% (F9)
	ELF-AIR1 RH 2000/ePM1 80%/96	02384	ePM1 80% (F9)
	ELF-AIR1 RH 3000/ePM1 80%/96	02425	ePM1 80% (F9)
	ELF-AIR1 RH 5000/ePM1 80%/96	02446	ePM1 80% (F9)
	ELF-AIR1 RH 6000/ePM1 80%/96	02451	ePM1 80% (F9)
	ELF-AIR1 RH 8000/ePM1 80%/96	02460	ePM1 80% (F9)
	ELF-AIR1 RH 9500/ePM1 80%/96	02463	ePM1 80% (F9)
	ELF-AIR1 RH 12000/ePM1 80%/96	02471	ePM1 80% (F9)
	ELF-AIR1 RH 15000/ePM1 80%/96	02479	ePM1 80% (F9)

Helios AIR1®: more than a product.

The innovative configuration, excellent quality characteristics and clever system solutions – Helios AIR1 is more than the sum of its parts. This also includes a perfectly conceived control concept, ideally matched accessories and an A1 service offering. See for yourself.

Helios AIR1®

All **set?**

Quick and easy – this also applies to the Helios AIR1 control system, be it during the commissioning or operation. In this respect, there are various automatic control options using sensors and different control elements through to integration in modern central building control systems.
More information can be found on page 118.

A strong unit needs **a strong partner.**

Helios completes the Helios AIR1 system package with the MultiZoneBox. These two perfectly coordinated solutions combine maximum efficiency with maximum individuality in multi-storey construction.
More information can be found on page 120.

Control everything. Simply.

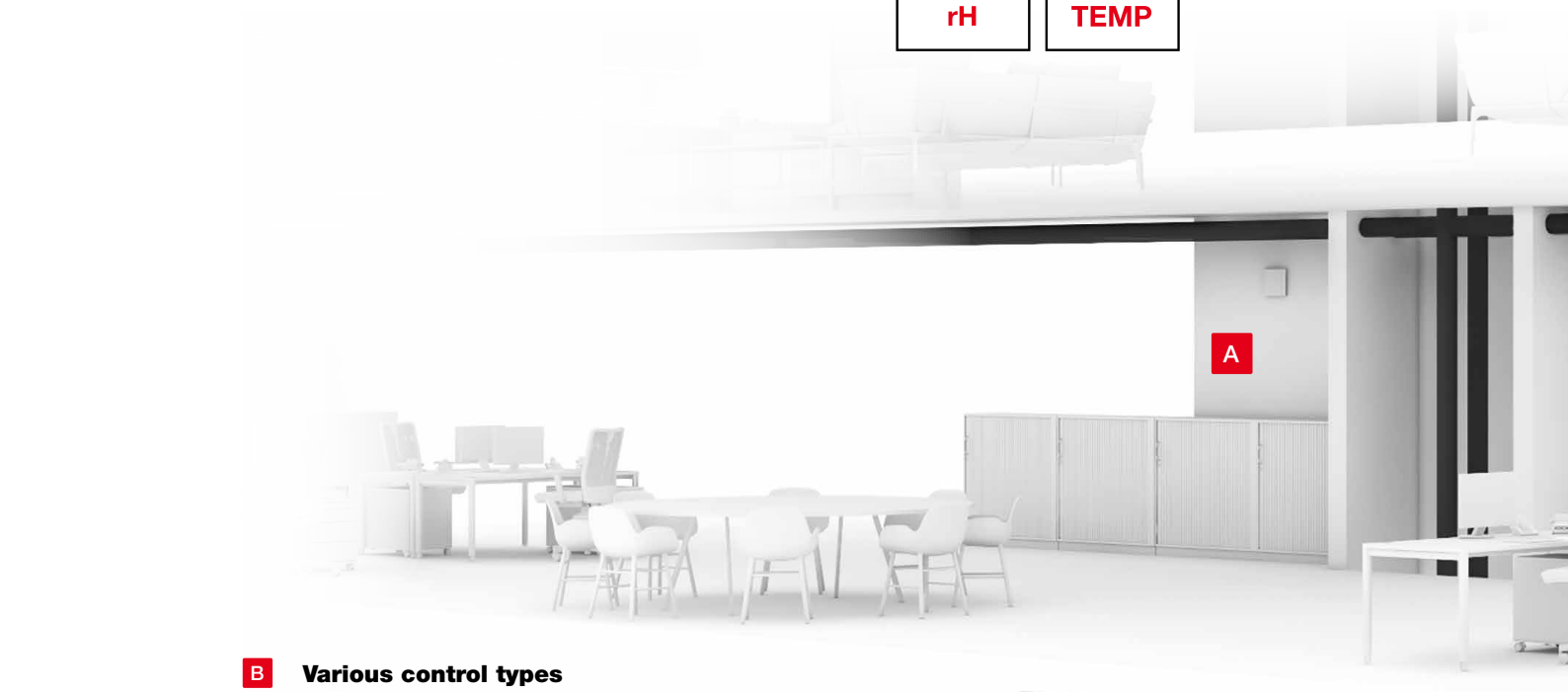
All Helios AIR1 compact ventilation units have an advanced control system, which leaves nothing to be desired. The commissioning and configuration is quick and easy due to the clever “step by step” assistant.

Modern standards, such as a high-quality touch control element and the connection to common building management systems, also guarantee extremely convenient operation. Completely automated operation using various air quality sensors is also possible. Overall, this results in a control concept that could not be more diverse, flexible and user-friendly.

A Optimal indoor climate

Whether it is a school, office or theatre hall, an optimal indoor climate is an important aspect for all ventilation applications. With the option of connecting various air quality sensors, there is the right unit for all requirements.

CO_2	VOC
rH	TEMP



B Various control types

The Helios AIR1 control system has various pre-programmed functions. All control types and parameters can be simply set or changed via the external control unit.

CAV Constant flow rate	**CAP** Constant pressure	**CRPM** Constant speed	**VOD** Demand-based
TM Time	**EX** External signal	**RE** Recirculation	**TP** Temperature

C Flexible communication

Various control elements are available for communication with the Helios AIR1 ventilation units. The connection to modern building management systems is also possible with the integrated protocols BACnet and Modbus.

Control element TOUCH

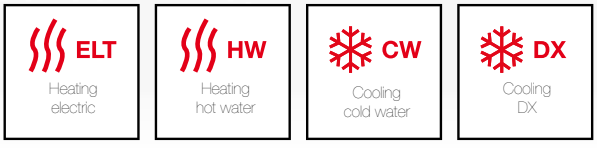
The large 7” colour display is extremely user-friendly and a perfect visualisation of all important system parameters. Includes Commissioning Assistant.

Control element ECO

The control element ECO is the economical and functional solution for controlling the Helios AIR1 ventilation units. Includes Commissioning Assistant.

D Extended control options

With the high-performance Helios AIR1 control system, all accessory components, such as heater and cooling batteries, can also be controlled without complication. Various control scenarios for a variety of applications are available for this purpose.



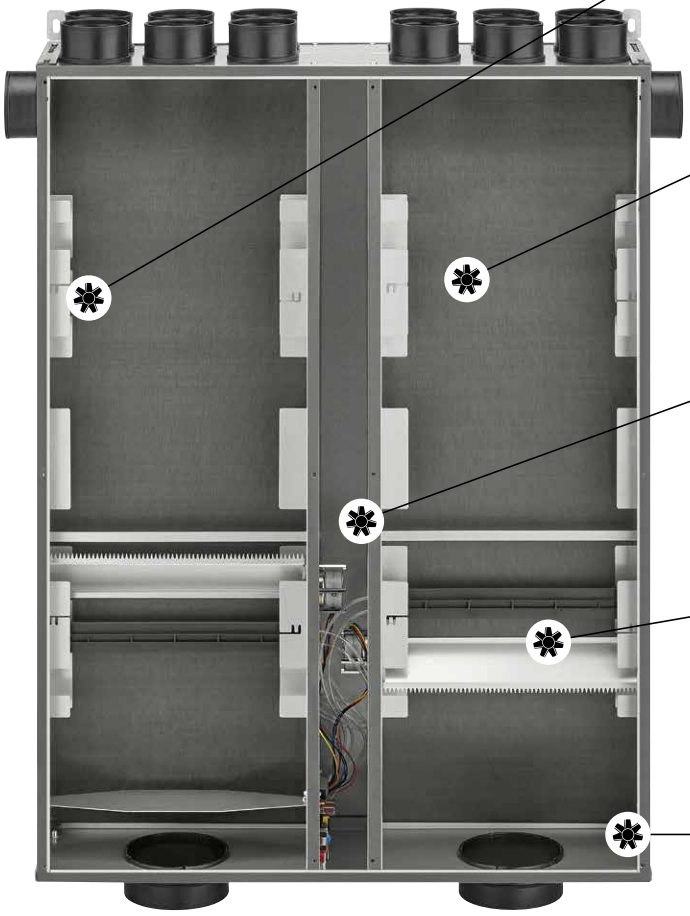
The KWL® MultiZoneBox.
The flexible partner for Helios AIR1®.

Central ventilation in multi-storey construction is now more individual than ever with the KWL MulitZoneBox

It has more potential
for multi-storey construction.

Flow rate control, sound insulation, air distribution and system control – you save on numerous individual components with the new KWL MultiZoneBox. The MultiZoneBox silently ensures the appropriate supply and extract ventilation of residential and commercial units in combination with a central building ventilation unit with heat recovery.

This process is even more efficient than ever in combination with Helios AIR1: Thanks to the integrated fan-optimiser technology, the exact amount of air required for each moment is provided. This reduces the energy consumption without reducing the level of comfort.



Maintenance-free

Consumable and wear parts were completely avoided during the construction of the KWL MultiZoneBox.

Super quiet

Large scale sound insulation elements ensure silent operation. Ideal for noise-sensitive environments.

All automatic

The optional room air sensor makes the MultiZoneBox a ventilation-on-demand unit.

Unique

Revolutionary technology safely ensures the pre-defined flow rate – independently and continuously.

Quick assembly

Just one single, compact box is installed, instead of numerous individual components.

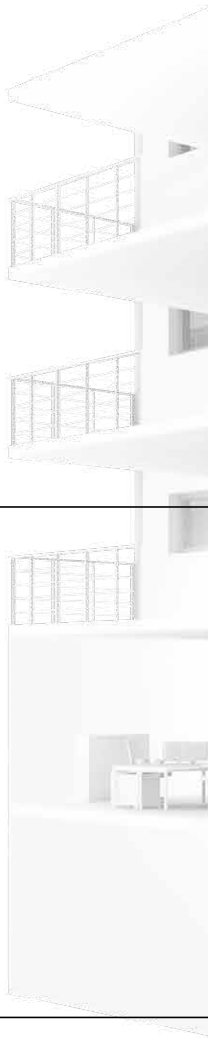
Both this and that.
More individuality for residential and commercial units.

Both classic and modern.

The MultiZoneBox is compatible with all ducts. Spiral ducts can be connected as easily as the flexible plastic ducting system FlexPipe*plus*. There are no limits to the possibilities.

Both for work and at home.

The MultiZoneBox guarantees reliable air distribution for almost all areas of application. Thus, it is the perfect solution for residential and commercial units – whether it is a single apartment or maisonette – an office complex or loading area, or all together.



Both now and tomorrow.

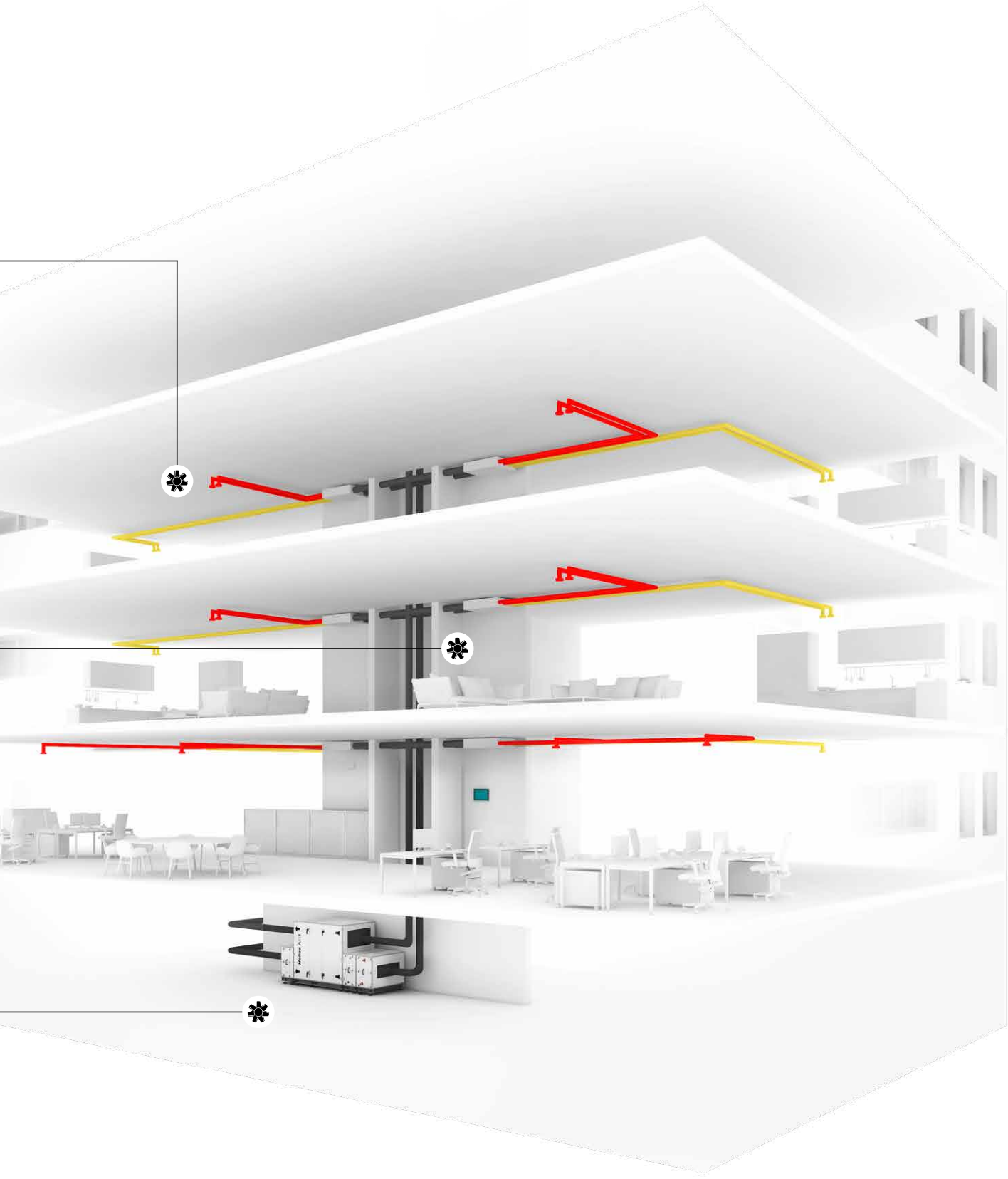
One box instead of multiple individual components reduces the planning cost in advance and saves valuable installation space. The maintenance-freedom, highest functional reliability and silent operation are convincing in practical use.

Both high-performance and demand-based.

If multiple MultiZoneBoxes are used to ventilate a large unit, such as e.g. a practice, different zones can be independently supplied with different volumes of air based on demand.

Both inside and outside, above and below.

Whether the ventilation system is installed in the basement or on the roof, inside or outside – the MultiZoneBox always ensures the ideal air distribution with each ventilation unit.

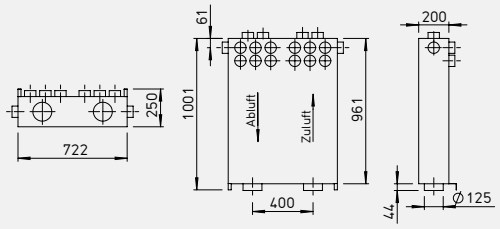


Supply air
Extract air

The **KWL® MultiZoneBox** range.

MultiZoneBox Right 90 degrees

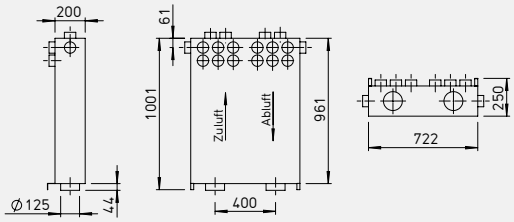
KWL-MZB 6+1-75/125 R90 Ref. no. 04050



Compact unit for the connection of supply and extract air DN 125 and 2 sets of 7 single nozzles DN 75 with the supply air on the right side.

MultiZoneBox Left 90 degrees

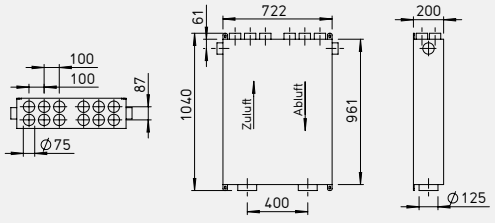
KWL-MZB 6+1-75/125 L90 Ref. no. 04051



Compact unit for the connection of supply and extract air DN 125 and 2 sets of 7 single nozzles DN 75 with the supply air on the left side.

MultiZoneBox Straight-through 75

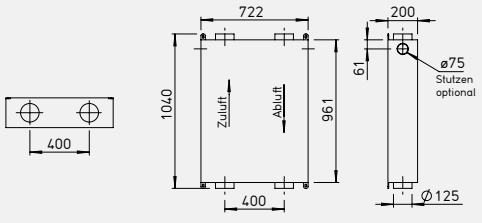
KWL-MZB 6+1-75/125* Ref. no. 04052



Compact unit for the connection of supply and extract air DN 125 and 2 sets of 7 single nozzles DN 75.

MultiZoneBox Straight-through 125

KWL-MZB 125/125* Ref. no. 04053



Box with one connection for both supply and extract air on each side DN 125.

* Supply and extract air direction optional.
All dimensions in mm.

Control element Eco

KWL-MZB-BE Ref. no. 04213

Manual 4 stage operation or automatic mode. For flush-mounting.
– Dim. (WxHxD) 80 x 80 x 10 mm
– 4-stage with LED, flush-mount. version

Control element Touch

KWL-MZB-BET Ref. no. 04214

Glass touch display for controlling and configuring the boxes.
– Dim. (WxHxD) 110 x 93 x 19 mm
– 3.9 inch display, including temperature sensor, flush-mounted version

Central controller

KWL-MZB-ZR Ref. no. 04215

Central control, configuration and management of all connected boxes.
– Networking of up to 256 boxes
– Fan-optimiser function

Connection plate

KWL-MZB-AP Ref. no. 04217

For installation in concrete ceilings.
– Dim. (WxHxD) 776 x 50 x 255 mm
– 2 x 6 single nozzles DN75
– for direct connection of box to the ducting system in the ceiling

Duct support set

KWL-MZB-RH7 Ref. no. 04236

Duct support sets for bilateral connection of FlexPipe® *plus*
– Set consists of 2 connection plates per 7 holders

Duct support set

MZB-RH13 Ref. no. 04249

Duct support sets for one-sided connection of FlexPipe® *plus*.
– consisting of 1 connection plate with 13 holders

Connection set

KWL-MZB-VSAP Ref. no. 04219

For ceiling installation with connection plate. Set with 12 single nozzles and mounting bracket.
– including 12 single nozzles for connection plate

Combi sensor

KWL-MZB-VOC-F Ref. no. 04216

Combi sensor (air humidity and VOC) for installation in the MZB.
– VOC-humidity sensor
– Installation in MultiZoneBox

Humidity sensor

KWL-MZB-F Ref. no. 04250

Air humidity sensor for installation in the MultiZoneBox.

Plastic fittings DN75

KWL-MZB KSS Ref. no. 04253

Set consisting of 2 pcs, for optional, side-connection of a ventilation duct DN75 to KWL-MZB 125/125 (Ref. no.: 04053), included in scope of delivery for boxes 04050, 04051, 04052!

Technical data

Area of application	40-220 m³/h
Measurement accuracy	+/-10 m³/h
Voltage/frequency	230 V 1~, 50 Hz
Max. power consumption	6 Watt
Protection class	IP 40
Weight	25 kg

All details for the individual types:
www.HeliosSelect.de

Notes

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