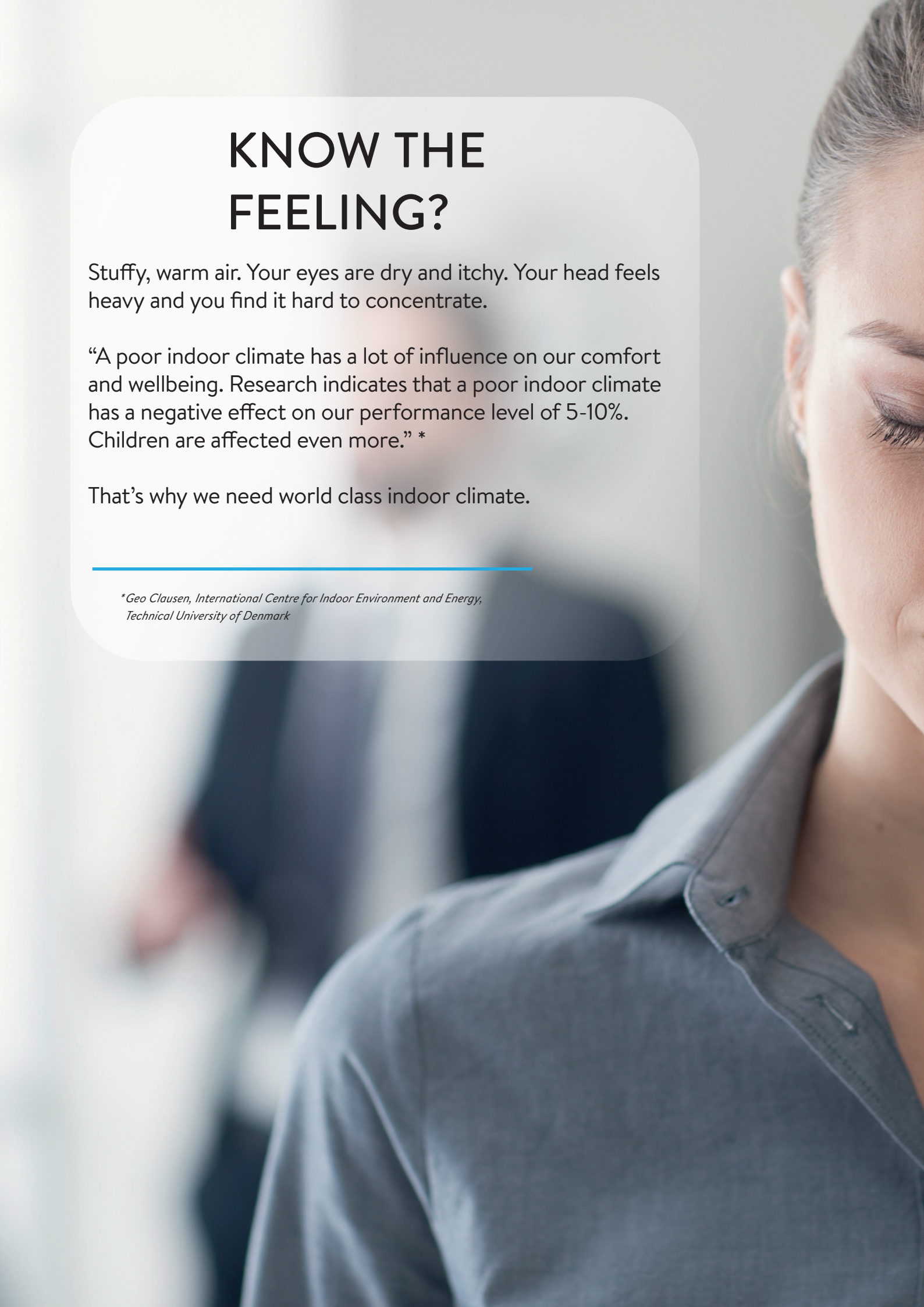
PRODUCT CATALOGUE

2022-2023 - Version 5.6

AIRMASTER®

ventilation in balance



KNOW THE FEELING?

Stuffy, warm air. Your eyes are dry and itchy. Your head feels heavy and you find it hard to concentrate.

“A poor indoor climate has a lot of influence on our comfort and wellbeing. Research indicates that a poor indoor climate has a negative effect on our performance level of 5-10%. Children are affected even more.” *

That’s why we need world class indoor climate.

*Geo Clausen, International Centre for Indoor Environment and Energy, Technical University of Denmark

CONTENT

GOOD AIR QUALITY - ALL DAY LONG

In indoor settings, the CO_2 concentration has long been used as an indicator of air quality. In many places, there are legislation governing maximum CO_2 values, partly because it is a reliable indicator of activity level and thus the need for air replacement, and partly because the CO_2 concentration can be measured with a high level of accuracy. It is therefore both appropriate and technically possible to use CO_2 levels to control ventilation.

Research shows, however, that the CO_2 concentration is not the only thing to cause difficulty in concentrating and the like. So-called VOCs, which occur in very small concentrations indoors, are a significant factor in how people experience the air quality and their well-being. VOCs are easily evaporable organic substances that may be given off by hand sanitiser, cleaning agents, building materials, furniture, paint, rugs and carpets, and work processes.

To achieve the very best air quality throughout the day – with the least possible energy consumption – it is therefore important to be able to base the air replacement on the concentration of CO_2 and VOCs.

You can do this with an Airmaster.

An Airmaster can be demand controlled by different sensors – e.g. CO_2 and TVOC sensors that control the amount of air in relation to the demand in the room concerned.

DO YOU KNOW YOUR CURRENT CO_2 AND TVOC LEVELS?

If not, we offer free, no-obligation test measurements of your indoor climate using a small monitoring station that can measure CO_2 and TVOC concentrations as well as temperature.

DIFFERENT CO_2-LEVELS:

400-1000	400-1000 ppm is considered the normal CO_2 level for rooms with a good supply of fresh air.
1000-2000	At a level of 1000-2000 ppm, you will typically begin to feel tired and have difficulty concentrating.
2000-5000	At a level of 2000-5000 ppm, you will typically suffer headaches, feel sleepy and generally unwell.
5000-	At a level of 5000 ppm or above, there is a risk of fainting due to CO_2 poisoning.

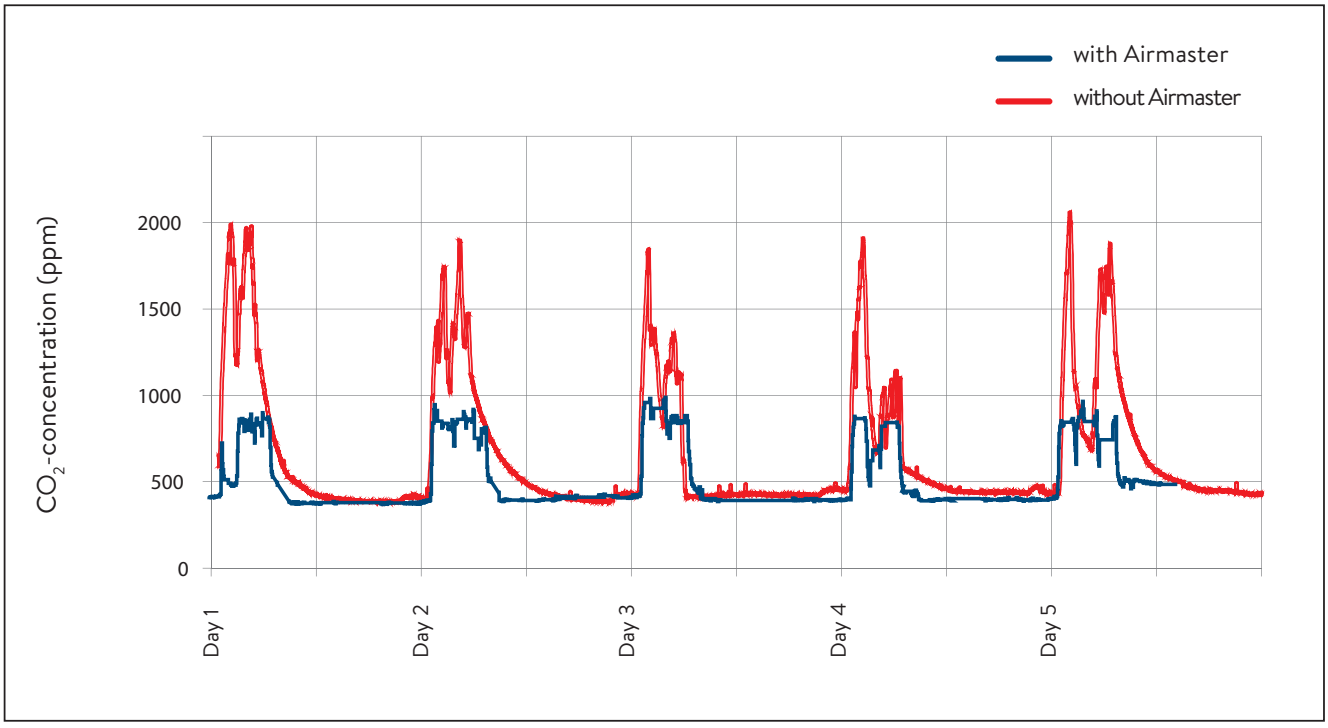
A COMMON EXAMPLE

CO_2 measurements performed in a traditional classroom at Gl. Hasseris School, clearly show how important good ventilation is for air quality.

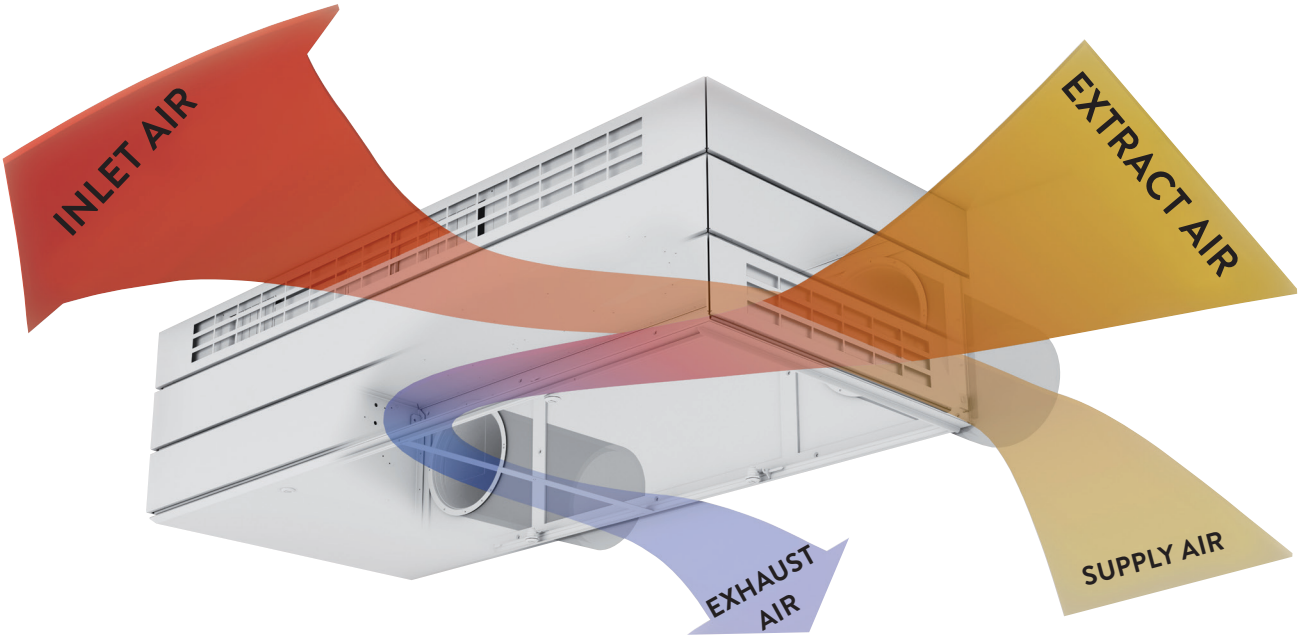
The blue line shows the CO_2 level with an Airmaster unit in operation. The red line shows readings taken in the same room without ventilation.

The figure shows readings taken over five weekdays.

The results are clear to see. Without ventilation, the CO_2 level reaches 2000 ppm within a single hour of lessons. Given the number of hours spent in daycare, schools and at work, this is a thought-provoking and disturbing result.



VENTILATION IN BALANCE



Fresh air is a human right. And that's why Airmaster has developed the most energy-efficient and quiet, decentralised ventilation solutions on the market with heat recovery - solutions which can be used in all types of rooms and buildings.

Airmaster's decentralised ventilation solutions keep energy consumption for ventilation and heating in a building to a minimum. Only those rooms where and when ventilation is needed are serviced.
No wasted energy on unnecessary ventilation.

INTELLIGENT VENTILATION

LOW ENERGY CONSUMPTION

The decentralised air handling unit with counter-flow heat exchanger is placed in the room close to an outer wall. The very short distance extracted air has to move combined with the counter-flow heat exchanger located alongside means very low energy consumption. No need for long ventilation ducts, meaning minimum pressure loss (transmission loss). Decentralised ventilation supplies an individual room without being difficult or expensive to install.

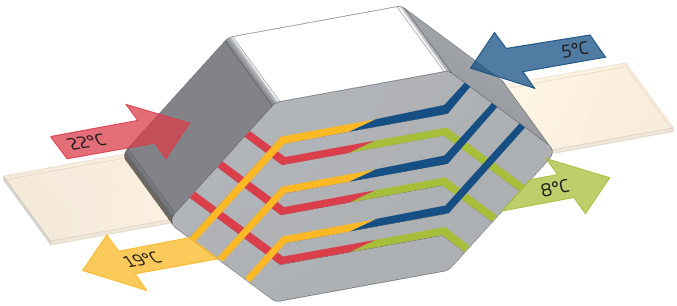
EFFICIENT EC MOTOR TECHNOLOGY

Airmaster uses energy-efficient EC motors, which give low energy consumption, flexible adjustment and silent operation.

HIGH HEAT RECOVERY

We use highly-efficient counter-flow heat exchangers, and document temperature efficiency in accordance with European standard EN 308:1997 [1].

Airmasters counter-flow heat exchangers perform up to 85% measured as a dry temperature ratio, in accordance with EN 308:1997, and up to 95% if condensation is included.



NO DRAUGHTS OR COLD AIR DISCOMFORT

Airmaster's decentralised air handling units are all fitted with motor-controlled air dampers for the supply and extract air. When the unit is inactive, the motor-controlled damper is closed against direct air access. Cold outdoor air cannot pass through the unit into the room. Similarly, warm air cannot pass through to the outdoors.

CONTROL WITH AIRMASTER'S CLOUD SOLUTION

Airmaster's "Airlinq® Online" cloud solution allows you to monitor Airmaster ventilation units centrally and gain a quick overview of the operating status, CO_2 level, etc. It is also possible to integrate control of the ventilation units into your BMS using the Airlinq® Online API

SIGNIFICANT ADVANTAGES OF AIRMASTER SOLUTIONS

An Airmaster decentralised ventilation solution often has many advantages over a centralised solution. This is seen in the cost of purchasing the unit, the overall economy and resource consumption. Decentralised ventilation also uses less energy because it is demand-controlled on a room-by-room basis, with the supply and exhaust led directly through the outer wall or roof. There are therefore no ducts for the air to be pressed through, resulting in pressure loss and thus uses energy.

In short:

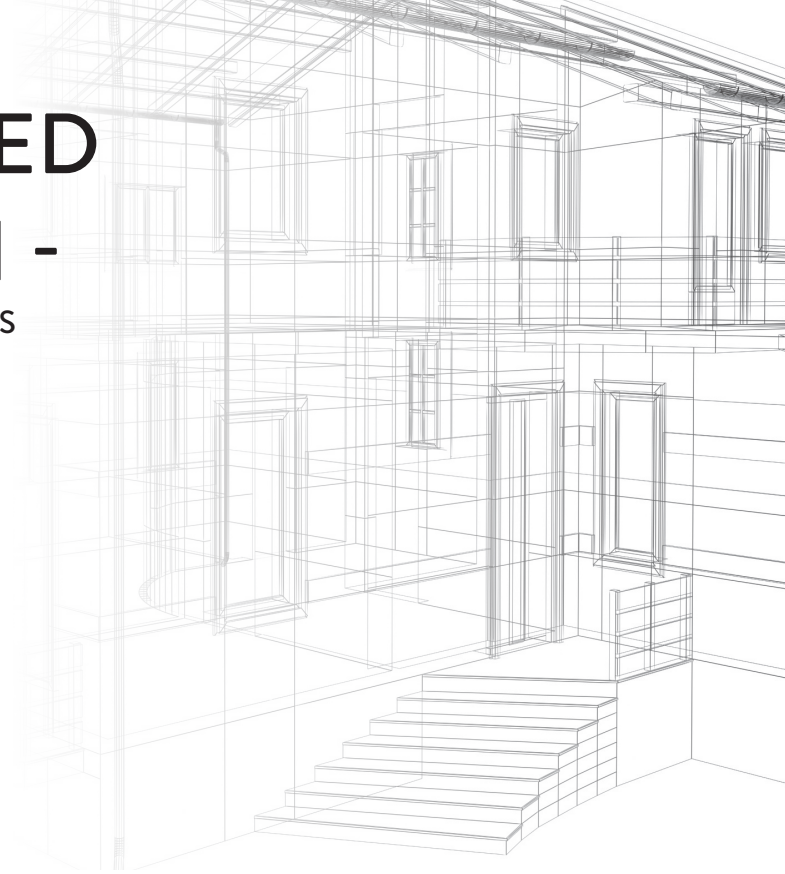
- Cost- and energy efficient ventilation
- Advantages when it comes to resource consumption and recycling
- Low noise – Airmaster is the market leader in the sound performance of decentralised ventilation solutions
- Advantages when it comes to fire regulations
- Short installation time – one room at a time
- Simple servicing. Recommended once a year, depending on the usage pattern and setting
- Complete control and monitoring with Airmaster's IoT platform, "Airlinq® online"

1 **Test conditions:**

Ambient temperature	5°C - relative humidity; 50% RH
Extract temperature	25°C - relative humidity; 28% RH
Airflow, test range	50-150% of the nominal airflow - relative humidity; 50% RH
Internal/external air emission	<3% of the nominal airflow inlet and extract are the same.

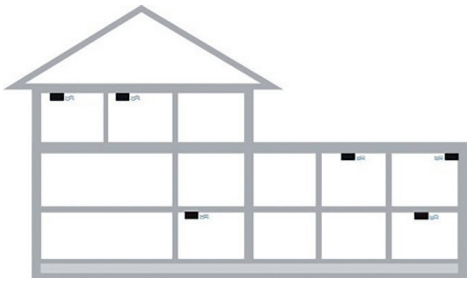
DECENTRALISED VENTILATION -

A WIDE RANGE OF APPLICATIONS

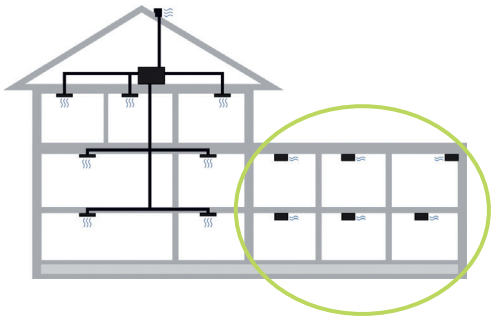


Decentralised ventilation allows you to install ventilation in small stages, in buildings with special challenges or throughout buildings.

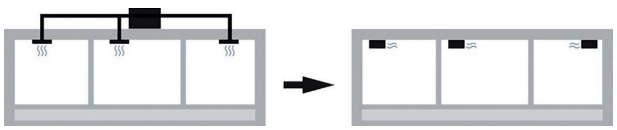
1 In a large building, where ventilation only has to be installed in a few rooms that are spread apart.



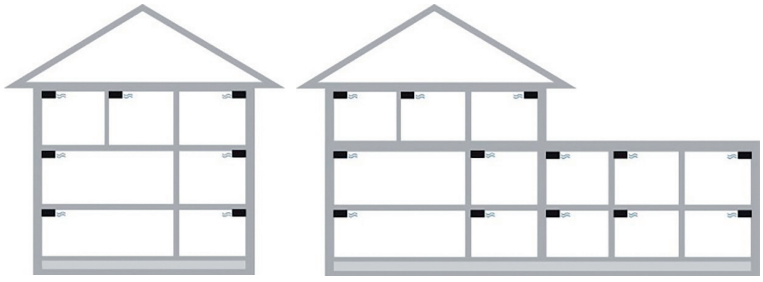
2 In a building extension, where the existing ventilation system cannot be extended.



3 In a building with a flat roof.



4 When total ventilation is required in a new building or in a renovation.




TOILET
CHARDONNAY

FLEXIBLE SOLUTIONS FOR INSTALLATION

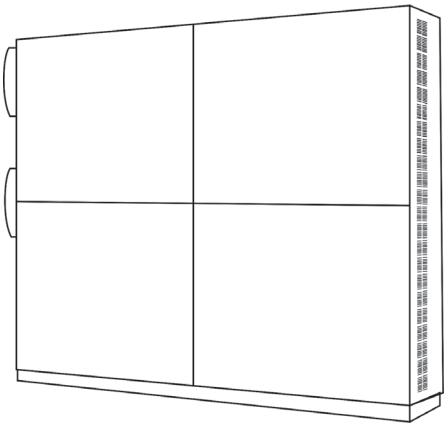
Some of the ceiling-/wall-mounted models are also available as a side model, where inlet and extract are on the side of the unit. In addition, a number of variants can be supplied, where the location of the inlet and extract are combined.
See product information for the individual ventilation unit for a description of the options for that specific unit.

EXHAUST / SUPPLY

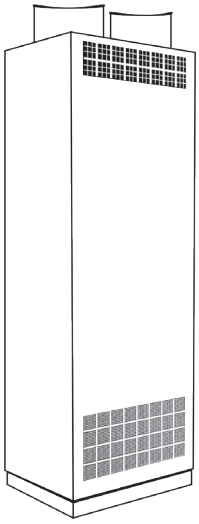
- On the back (H: **H**orisontalt)
- On the top (V: **V**ertikalt)
- On the side (S: **S**ide)
- Combinations

FLOOR-STANDING UNITS

Floor-standing units can be placed along a wall, away from a wall or freestanding, e.g. as a room divider.



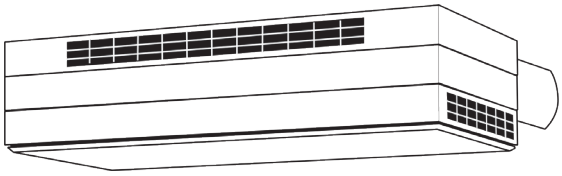
Horizontal model
Supply and exhaust pass horizontally through an outer wall.



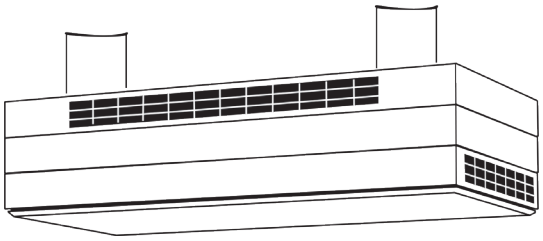
Vertical model
Supply and exhaust pass vertically up through the roof.

WALL/CEILING-MOUNTED VENTILATION UNITS

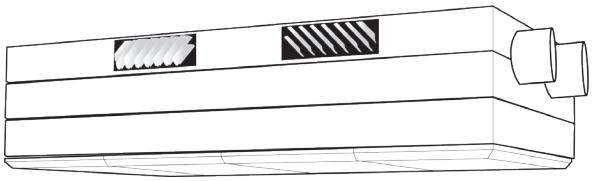
Our wall-mounted decentralised ventilation units comprise a range of models from AM 150, which is the smallest, to AM 1000, which has the capacity to supply a whole classroom with fresh air. So, there are ventilation solutions that can help create a good indoor climate in rooms such as offices, meeting rooms, classrooms, gyms, restaurants, etc.



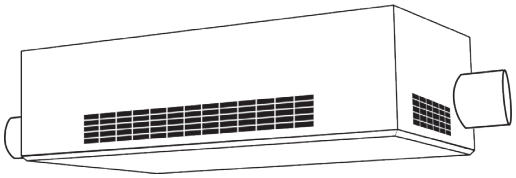
Horizontal model
Supply and exhaust pass horizontally out of the unit and through an outer wall. A louvred grille is mounted on the facade side.



Vertical model
Supply and exhaust pass vertically up through the roof. Roof Caps and covers are used at the end of the duct.



Side model
Supply and exhaust pass sideways out of the unit. Only possible on the AM 1000 unit.



Side model
Supply and exhaust pass sideways out of the unit on the left and right side respectively. Only available for the AM 300 unit.

EXHAUST / SUPPLY

The different options for exhaust and supply provide great flexibility in relation to installation.

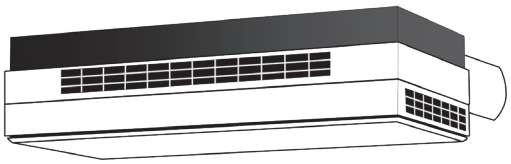
On the outside it allows for a uniform expression, and on the inside it opens up the possibility of navigating around, for example, windows and beams and thus taking the design and layout of the room into account

CHOOSING THE RIGHT VENTILATION UNIT

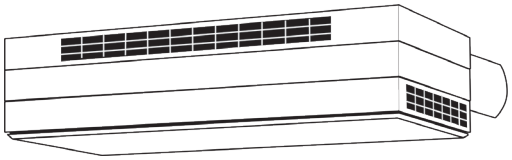
Different possibilities of installation are provided with the individual ventilation unit. Common for the wall mounted units, is the possibility for integration into the ceiling. Furthermore, there are several options for placing the inlet and extract. Below are some examples, please see further details under the description of each ventilation unit.

INLET / EXTRACT

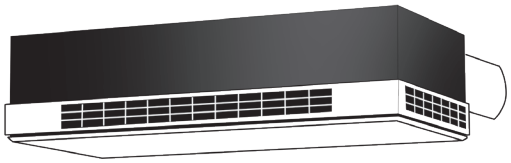
- Standard inlet
- Standard extract
- Ducted inlet
- Ducted extract
- Combinations



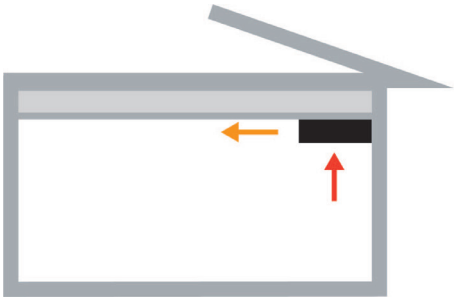
Horizontal model with 1/3rd of the unit integrated into a ceiling.



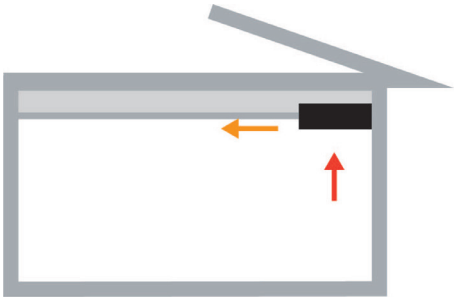
Standard inlet / extract. Panels on all three visible sides. White panel can be added on the back, if required.



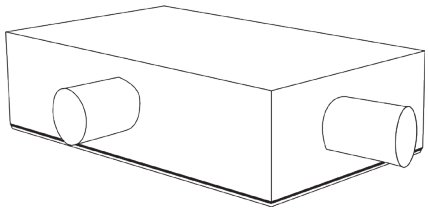
Horizontal model with 2/3rd of the unit integrated into a ceiling.



Installation with the ventilation unit under the ceiling.

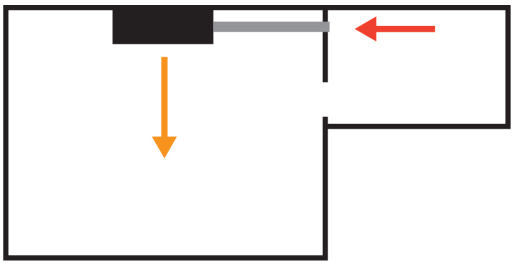


Installation with the ventilation unit partially integrated in the ceiling.

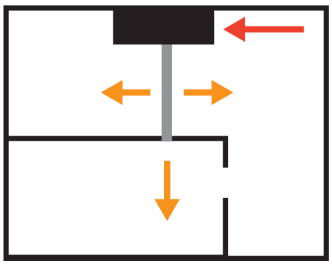


Airmaster wall mounted ventilation units can furthermore be delivered with ducted inlet and/or extract. This provides the possibility of giving fresh air in adjacent rooms, where no ventilation unit is needed. For example a toilet.

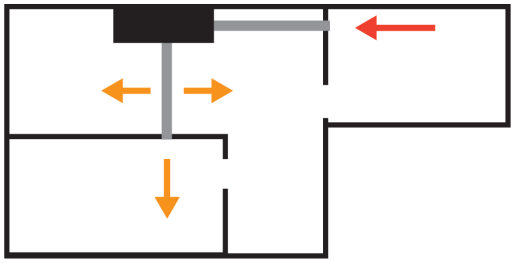
EXAMPLES OF INSTALLATION WITH DUCTED INLET/EXTRACT



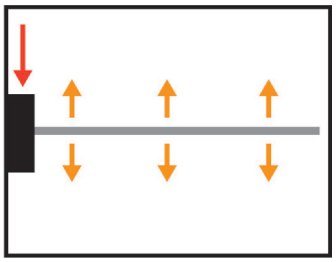
Where extract from an adjoining room is desired.



Where supply to an adjoining room is desired.



Where both extract and supply in adjoining rooms are desired.



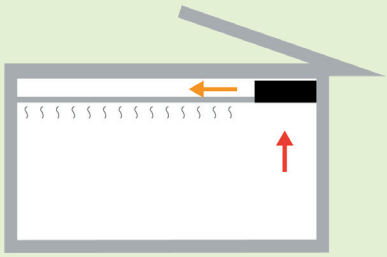
In a long room.

VENTILATION CEILING

An Airmaster air handling unit can also be integrated above a ventilation ceiling, with only its service hatch visible. All wall-mounted models can be integrated above a ventilation ceiling, where the inlet air is blown across the ceiling and the air flows down into the room through the ventilation ceiling.

Additional airflow does not need to be calculated with this solution. It will be the same with or without the ventilation ceiling.

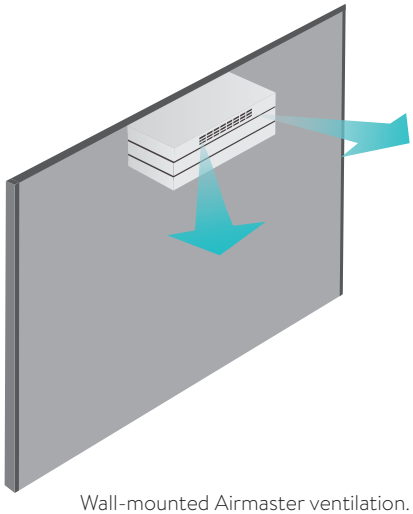
The extract air is extracted via an extraction unit in the ceiling.



AIRMASTERS
INLET STREAM PRINCIPLES

COANDA EFFECT
The fresh supply air "sticks" to the ceiling, before slowly descending - known as the Coanda effect. The Coanda effect mixes fresh air with ambient air and then slowly descends into the room.

MIXING PRINCIPLE
The Coanda effect causes the inlet stream to stick to the ceiling. The fresh air is blown in at a relatively high velocity. The air in the room is pushed along to ensure effective mixing of fresh and ambient air. The entrainment of the ambient air ensures uniform air quality in the room, whilst reducing the velocity of the supply inlet stream. Consequently, draughts are avoided in the room.

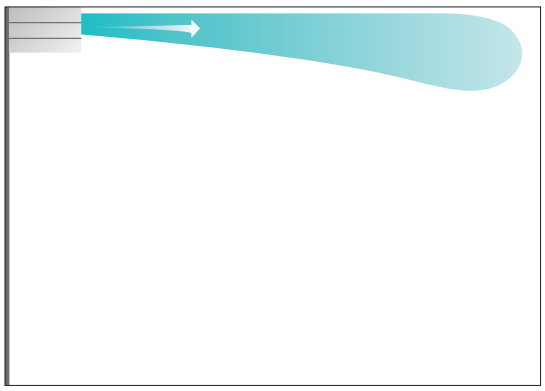


Wall-mounted Airmaster ventilation. The inlet air pattern can be adjusted according to the room.

INLET STREAM FOR WALL-MOUNTED UNITS
All wall-mounted models ventilate according to the mixing principle, in which fresh air is fed into the room at ceiling level, exploiting the Coanda effect.

ADJUSTABLE INLET OPENING
The wall-mounted units are equipped with an adjustable inlet openings. Throw and inlet pattern can be adjusted by adjusting the inlet slats.

The AM 1000 is available with adaptive inlet which automatically adjusts the throw in relation to the airflow relative to the lenght of the room.



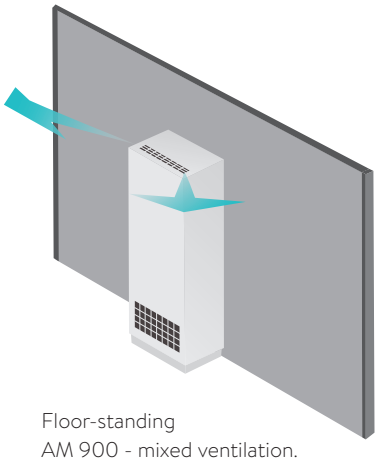
Wall-mounted Airmaster ventilation with inlet stream seen from the side.

INLET STREAM FOR FLOOR-STANDING UNITS

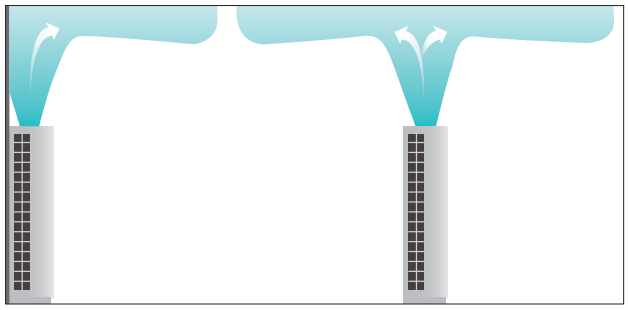
The mixing principle is also used for Airmaster's floor-standing models (AM 900, and AM 1200), with fresh air fed upwards into the room to exploit the Coanda effect.

ADJUSTABLE INLET OPENING

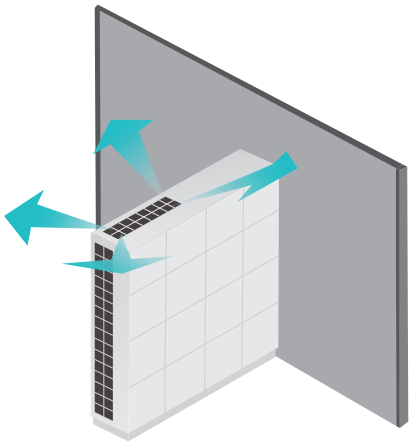
Floor-standing models AM 900 and AM 1200 are fitted with adjustable inlet openings. The opening can be adjusted according to requirement, ensuring the right throw according to the size of the room.
The throw and the supply pattern can be adjusted by adjusting the slats.



Floor-standing
AM 900 - mixed ventilation.



The illustration shows two floor-standing AM 1200, one standing alongside a wall and the other freestanding. Inlet viewed from the side.

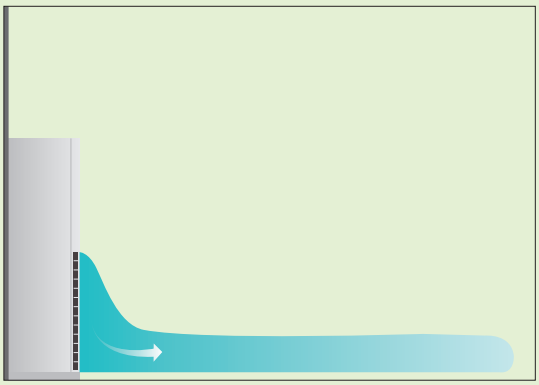


Floor-standing AM 1200 placed perpendicular to a wall as a room divider. Airflow and direction are adjusted using the louvred grille.

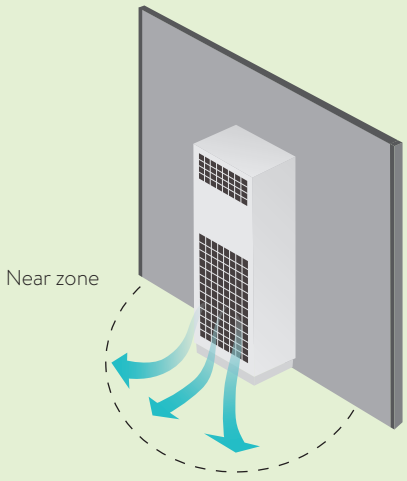
THE DISPLACEMENT PRINCIPLE

Airmaster's floor-standing model AM 900 is also available as a displacement model. The displacement ventilation principle feeds fresh air into the room at low velocity at floor level. The fresh air is blown in at a temperature a couple of degrees lower than the room temperature.

The air is distributed over the entire floor due to the difference in density between cold and warm air. The low inlet velocity avoids draughts in the room.



Floor-standing AM 900 - displacement ventilation with inlet stream seen from the side.

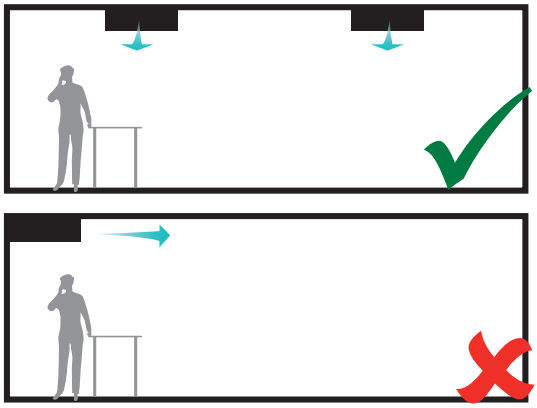


Floor-standing AM 900 - displacement ventilation.

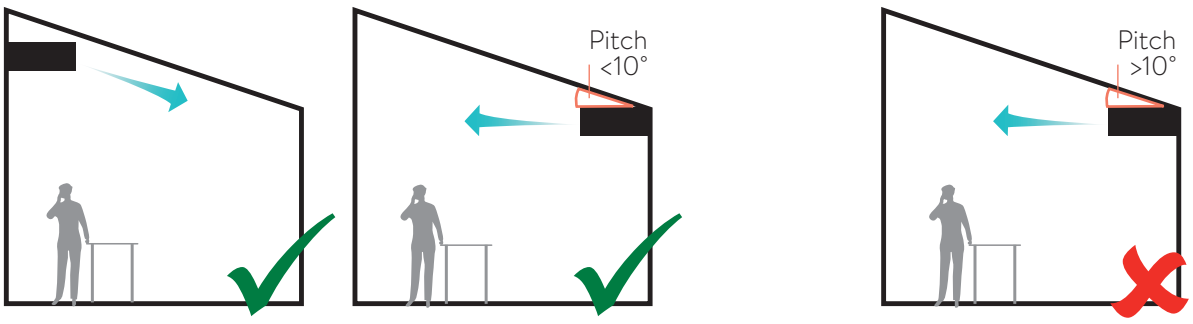
CORRECT POSITIONING

To gain the full benefit of Airmaster units, they must be correctly positioned in relation to the physical geometry of the room.

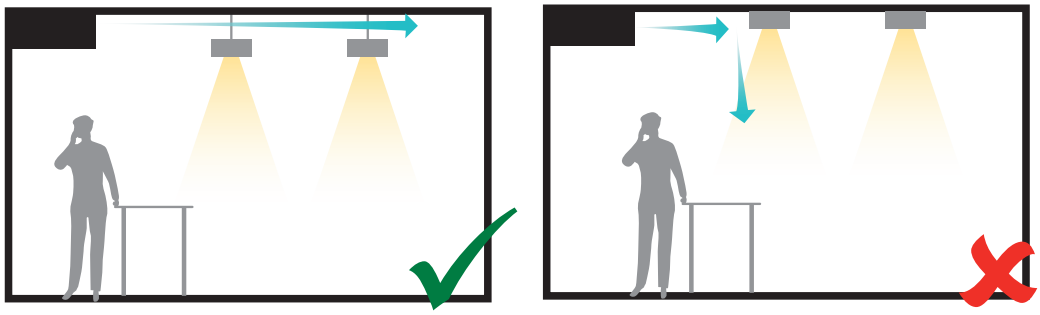
1 Two smaller units can be appropriate for a long, narrow room, where the throw is too short longitudinally, yet too long laterally.



2 If the room has a high or sloping ceiling, the units should be mounted as high as possible.

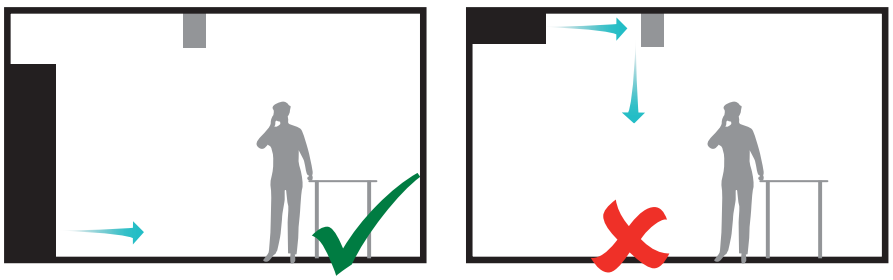


3 To achieve the most effective inlet, objects that could obstruct the path of the air should be avoided, such as light fittings mounted directly on the ceiling. Light fittings should be lowered to allow the air to circulate freely around the room.



4 In rooms where the occupants are physically close to a unit, it is important to use wall-mounted or floor-standing models according to the mixing principle to avoid draughts.

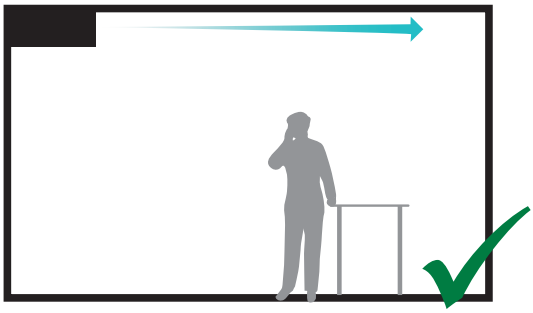
5 If there are ceiling beams in the room that can obstruct the air current, choose a floor-standing unit that ventilates according to the displacement principle (AM 900 D), or a wall-mounted unit that ventilates along the length of the room.



CORRECT POSITIONING

WITH REGARD TO ACOUSTIC PRESSURE

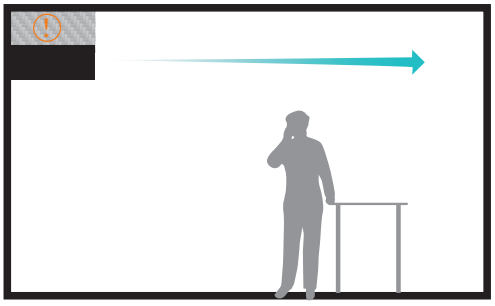
SECTIONAL VIEW



System mounted against the ceiling and wall.

To gain maximum yield from your Airmaster unit you should be aware of the following details. These diagrams can be used as a guideline and a tool for effective acoustic installation.

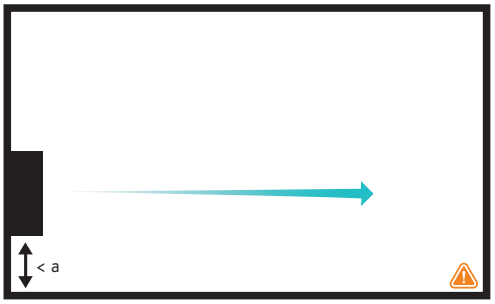
SECTIONAL VIEW



System mounted against the wall but away from the ceiling.

(!) The top plate is sound insulated, and visible pipes are insulated against condensation. The space between the unit and the ceiling can possibly be boxed in.

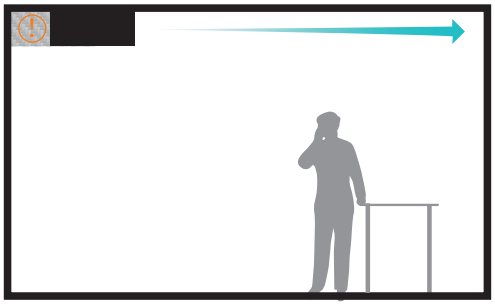
TOP VIEW



System mounted with a short distance from extract to the side wall.

a: min. 0,5 m for AM 150-800
min. 1,5 for AM 1000

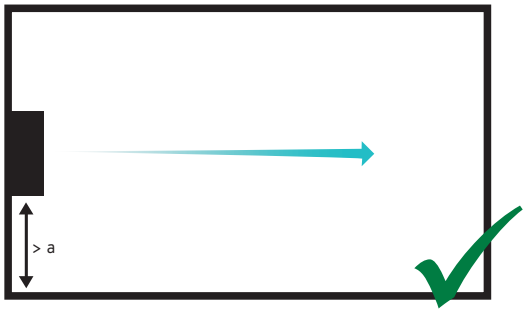
SECTIONAL VIEW



System mounted against the ceiling at a short distance from the wall.

(!) The back plate is sound insulated, and visible pipes are insulated against condensation. The space between the unit and the wall can possibly be boxed in.

TOP VIEW



System mounted with a further distance from extract to the side wall.

a: min. 0,5 m for AM 150-800
min. 1,5 for AM 1000

⚠ Additional calculations and measures may be expected. Contact Airmaster.

AM 150 is Airmaster's smallest unit. It is therefore developed specifically for the smallest rooms – such as offices for 1-2 people or small group and meeting rooms.

The ventilation unit can be installed fully visible, but it is also possible to partially integrate it so that only the lower part of the unit is visible.

AM 150

AM 150 is a horizontal model and supply and exhaust pass horizontally out of the unit and through an outer wall. AM 150 is particularly suited for one to two-person offices and small meeting rooms at companies, schools and institutions. Essentially, small rooms where there is a need for a pleasant indoor climate for comfort and well-being.

With options such as motion sensors and CO_2 sensors, ventilation can be controlled based on the number of people in a room at a given time. Furthermore, the fully automatic control can be combined with Airmaster Airlinq® Online.

TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)	BOOST
Maximum capacity[1]	ePM_{10} 50%	115 m³/h	147 m³/h	216 m³/h
	ePM_1 55%	90 m³/h	126 m³/h	197 m³/h
	ePM_1 80%	85 m³/h	115 m³/h	180 m³/h
Throw length (0.2 m/s)[2]	ePM_{10} 50%	2.6 m v. 115 m³/h	3.4 m v. 147 m³/h	4.6 m v. 216 m³/h
	ePM_1 55%	2.1 m v. 90 m³/h	2.8 m v. 126 m³/h	4.2 m v. 197 m³/h
	ePM_1 80%	1.9 m v. 85 m³/h	2.6 m v. 115 m³/h	3.8 m v. 180 m³/h
Maximum ; nominal power consumption at 30 dB(A) / 35 dB(A) / Boost[1]		185 W ; 21 W/ 38 W / 96 W		
Maximum ; nominal current at 30 dB(A) / 35 dB(A) / Boost[1]		1.35 A ; 0.2 A / 0.3 A / 0.8 A		
Electrical connection		1 x 230 V + N + PE / 50 Hz		
Duct connections		Ø125 mm		
Condensate pump (capacity/lifting height at 5 l/h)		10 l/h / 6 m		
Condensate drain, int./ext.		Ø4/6 mm		
Weight		53 kg		
Counterflow heat exchanger		PET		
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%		
Extract air filter		ePM_{10} 50%		
Colour, casing		RAL 9010 (white)		
Power factor		0.59		
Power cable		3 x 0,75 mm²		
Recommended fuse		10 A		
Maximum fuse		13 A		
Recommended residual current circuit breaker (RCCB)		Type A		
Leakage current AC / DC		≤ 0.52 mA / ≤ 0.0007 mA		
IP code		10		
Energy class, cf. EU regulation no. 1254/2014		A		
Air leakage classification:		Class L1 jf. EN 1886:2007 Class A1 jf. EN 13141-7:2010		
Air leakage classification, main damper		Class 3 jf. EN1751:2014		
Dimensions (WxHxD)		1170 x 261 x 572 mm		

[1] All measurements were performed in normal operating mode in a standard installation for the filter class, supply/extract air: ePM_{10} 50% / ePM_{10} 50%, using the facade grilles recommended by Airmaster, in a test room dimensioned 8.0 m x 10.0 m x 2.5 m with room attenuation of 7.5 dB. For small spaces, e.g. 4.0 m x 4.0 m x 2.5 m, 2 dB sound pressure must be added.

[2] The throw is measured with a 2 °C subcooled supply air at the standard setting of the inlet diffuser. The setting is adaptable.

ELECTRICAL HEATING SURFACES	
Heat output	500 W
Nominal current	2.17A
Thermal circut breaker, manual reset	75°C

STANDARD AND OPTIONS	AM 150 H
Counterflow heat exchanger (PET)	x
Enthalpy counterflow heat exchanger (polymer membrane)	o
Combination counterflow heat exchanger (polymer membrane)	o
Motor driven bypass	x
Motor driven exhaust air damper	x
Motor driven supply air damper	x
Electric heating surface/VPH	●
Condensate pump	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
PIR/motion sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●
Hygrostat (wall-mounted)	o
Energy meter	●
Comfort cooling module	●

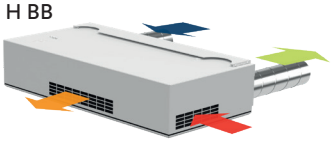
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	o
Extract air filter ePM_{10} 50%	●
LED (operating mode indicator)	x
Wall/ceiling frame	●
Ceiling frame	●
Operating button	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	o
KNX® Module	o

x : Standard ● : Optional o : Special item

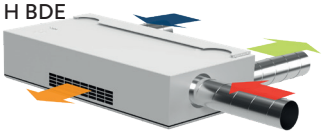
AM 150 VERSIONS

AM 150 ventilation unit

H BB

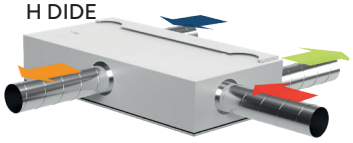


H BDE



H DIB

H DIDE



HL BDE-CF

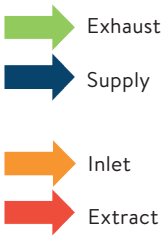
H BB: Horizontal exhaust / supply
Standard inlet / extract

H BDE: Horizontal exhaust / supply
Standard inlet / ducted extract

H DIB: Horizontal exhaust / supply
Ducted inlet / standard extract

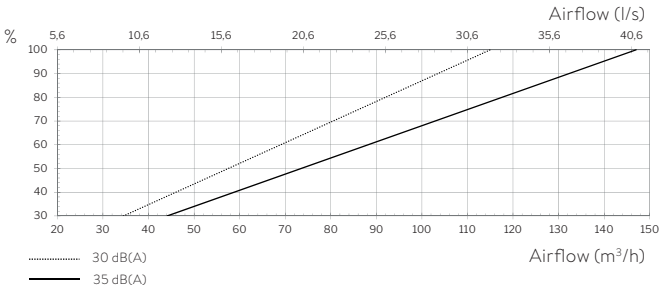
H DIDE: Horizontal exhaust / supply
Ducted inlet / ducted extract

HL BDE - CF: Horizontal exhaust / supply
Standard inlet / ducted extract in left side
A cooling module cannot be connected to this model

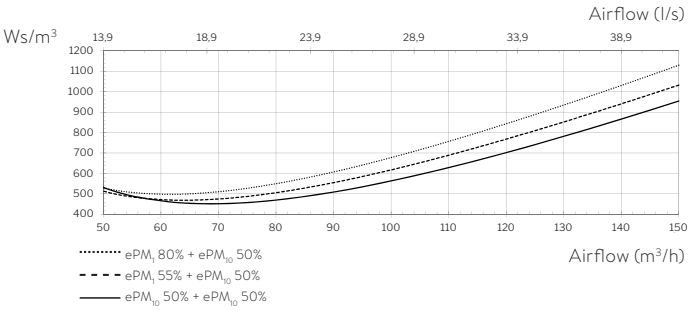


AM 150

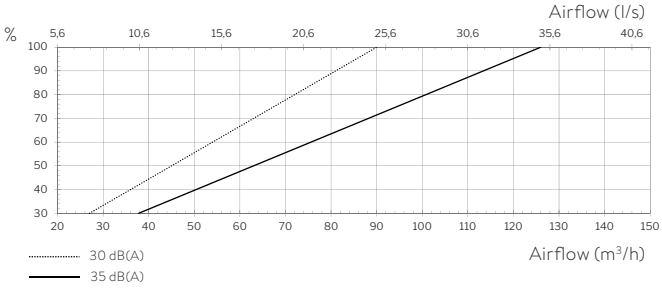
CAPACITY with ePM_{10} 50% + ePM_{10} 50% filter[1]



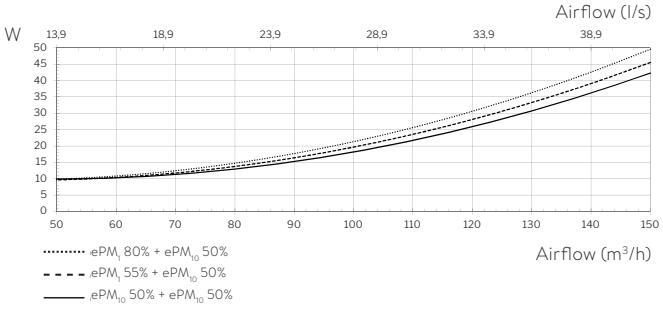
SFP[1]



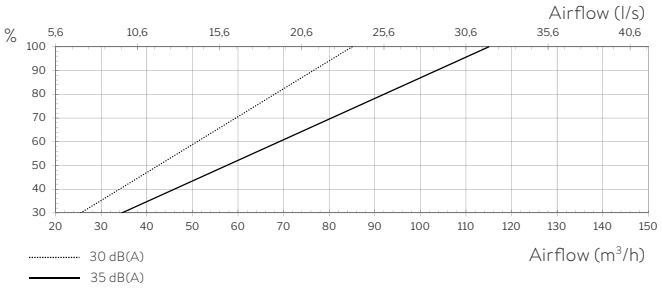
CAPACITY with ePM_1 55% + ePM_{10} 50% filter[1]



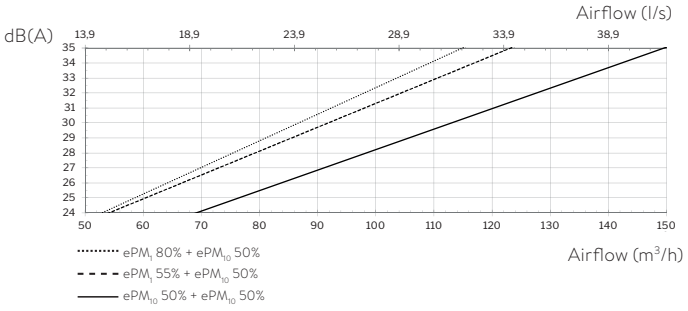
POWER CONSUMPTION[1]



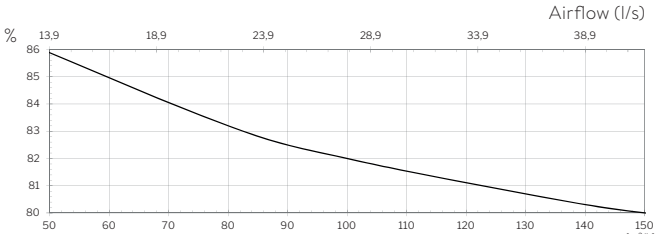
CAPACITY with ePM_1 80% + ePM_{10} 50% filter[1]



SOUND PRESSURE[2]



TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997



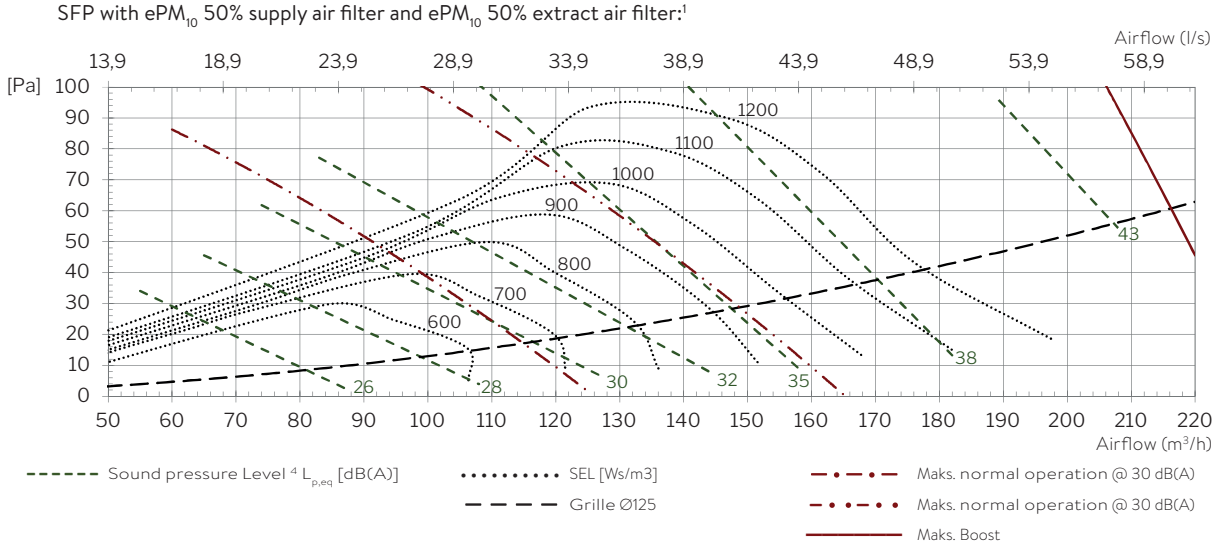
Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

[1] Measurements are taken at normal operation in a standard installation situation with Airmaster's recommended Ø125 mm wall grille.

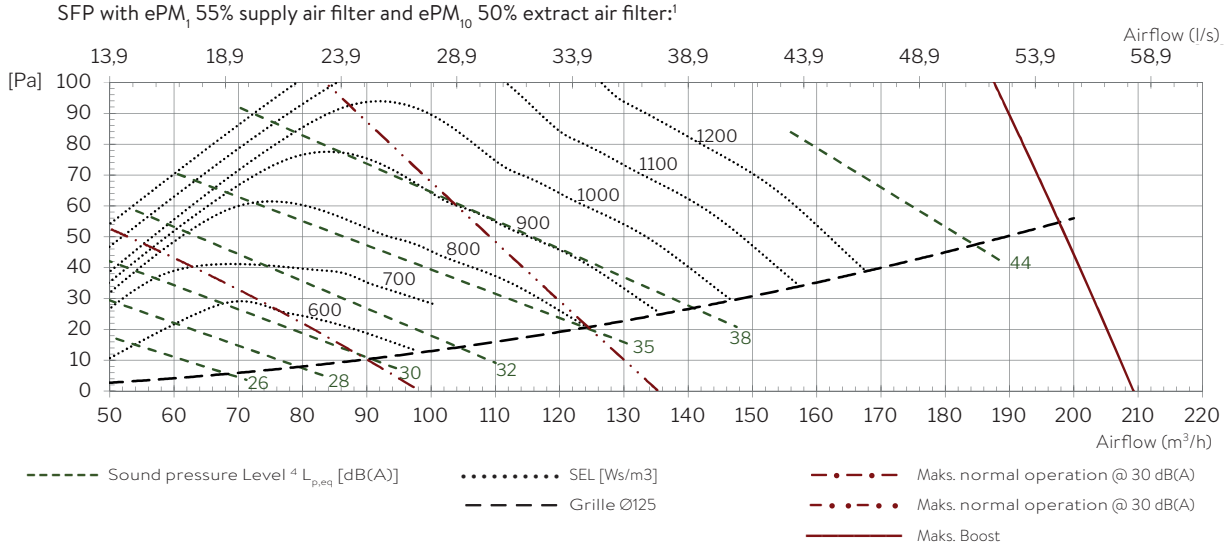
[2] Sound pressure level $L_{p,eq}$ is measured at 1.2 m height with 1 m horizontal distance from the air handling unit in a 200 m³ room with a reverberation time of T = 0.6 s or equivalent to a room sound attenuation of 7.5 dB. In smaller rooms, e.g. 40 m³, 2 dB of sound pressure must be added.

AM 150

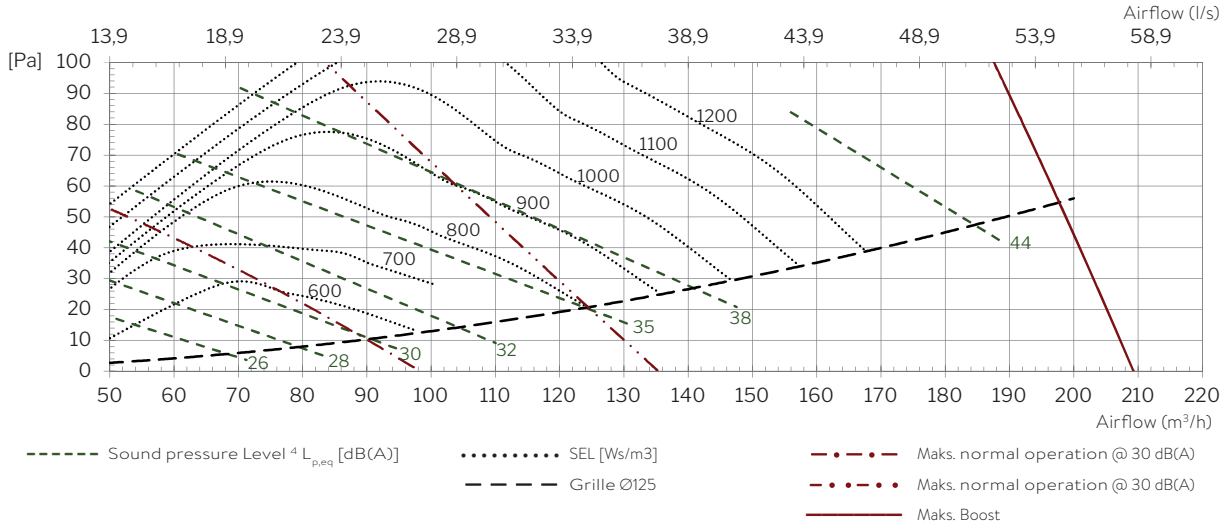
SFP with ePM_{10} 50% supply air filter and ePM_{10} 50% extract air filter:[1]



SFP with ePM_1 55% supply air filter and ePM_{10} 50% extract air filter:[1]



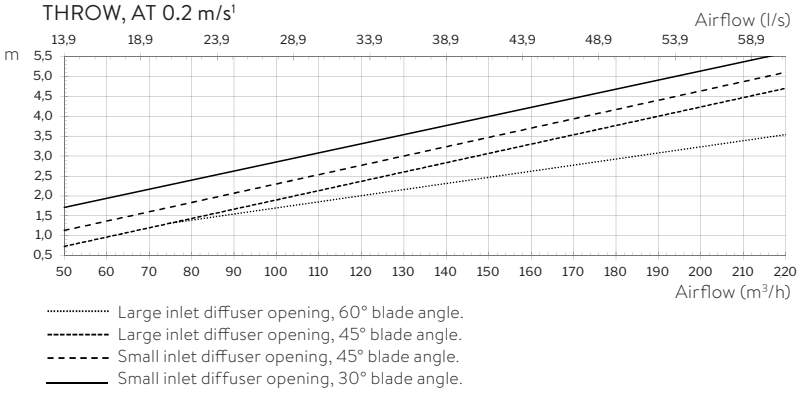
SFP with ePM_1 80% supply air filter and ePM_{10} 50% extract air filter:[1]



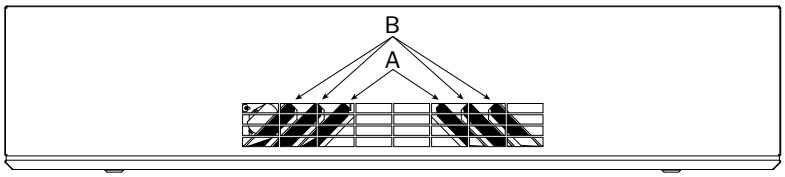
[1] Measurements are carried out in a 200 m³ room with 7.5 dB room sound attenuation in a standard installation situation.
[2] Sound pressure level $L_{p,eq}$ is measured at 1.2 m height with 1 m horizontal distance from the air handling unit in a 200 m³ room with a reverberation time of T = 0.6 s or equivalent to a room sound attenuation of 7.5 dB. In smaller rooms, e.g. 40 m³, 2 dB of sound pressure must be added.

AM 150

THROW, AT 0.2 m/s[1]



Small and large inlet difusor areal:

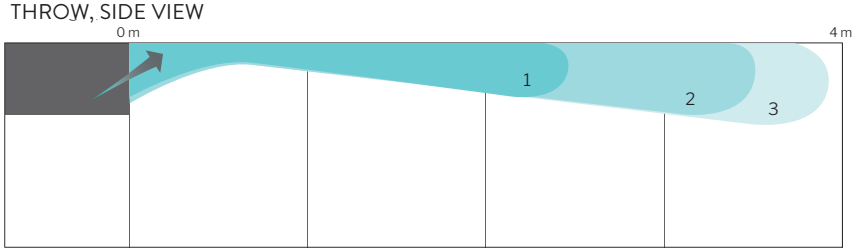


Small inlet difusor areal:
A is closed, B is open with X° blade angle.

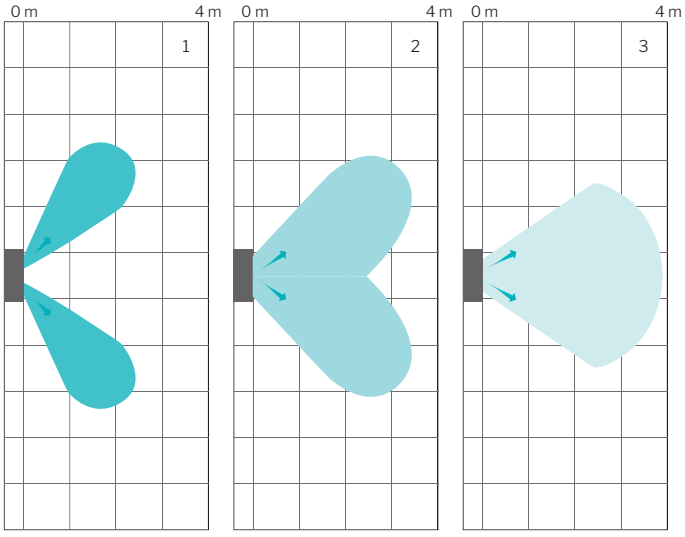
Large inlet difusor areal:
A and B are open with X° blade angle.

Default delivery state:
Small inlet difusor areal, 45° blade angle.

THROW, SIDE VIEW



THROW, TOP VIEW



The ventilation unit diffuses the supply air to varying degrees depending on the slat settings.

This is shown in the illustrations, which indicate the diffusion pattern and throw at the different slat settings.

The airflow also influences the throw.

Throw length at 0.2 m/s. The supply pattern is shown in different settings at 147 m³/h.

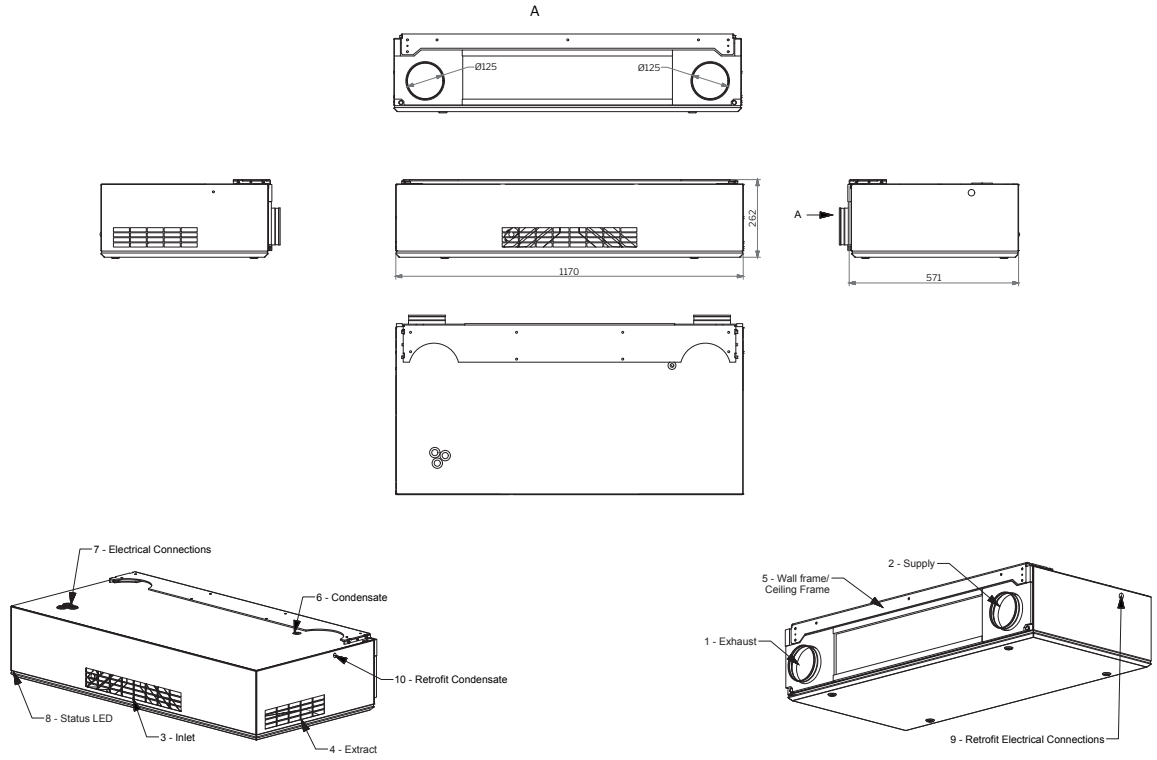
1. Throw with 60° blade angle.
2. Throw with 45° blade angle.
   (Small inlet diffusor)
3. Throw with 30° blade angle.

Regarding adjustment of blade angle, see operator's manual.-

[1] The throw is measured with 2°C subcooled inlet.

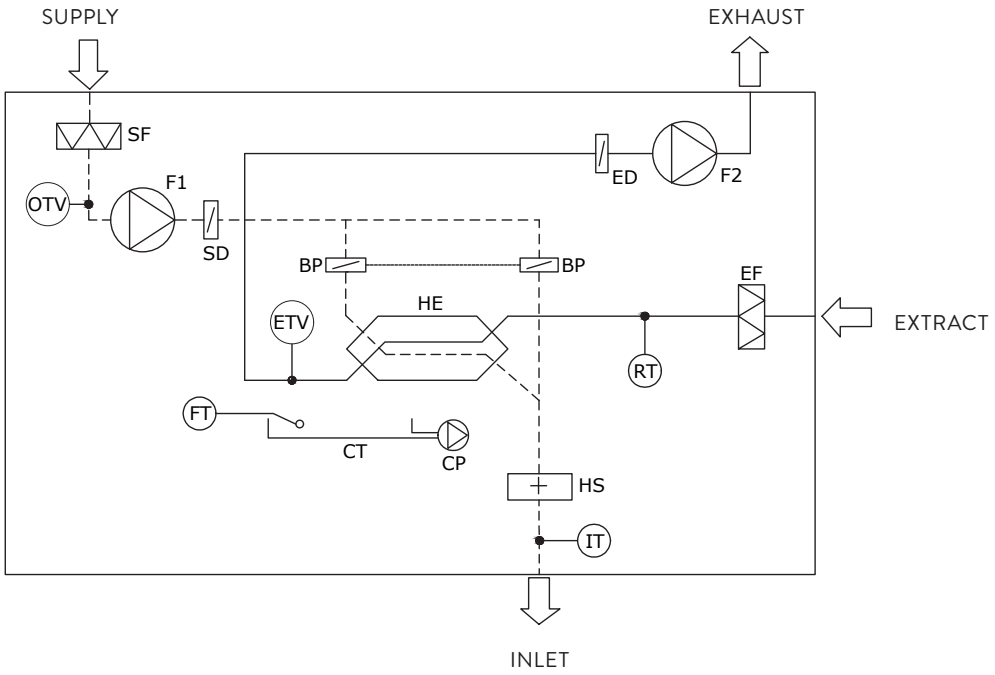
AM 150

AM 150 H



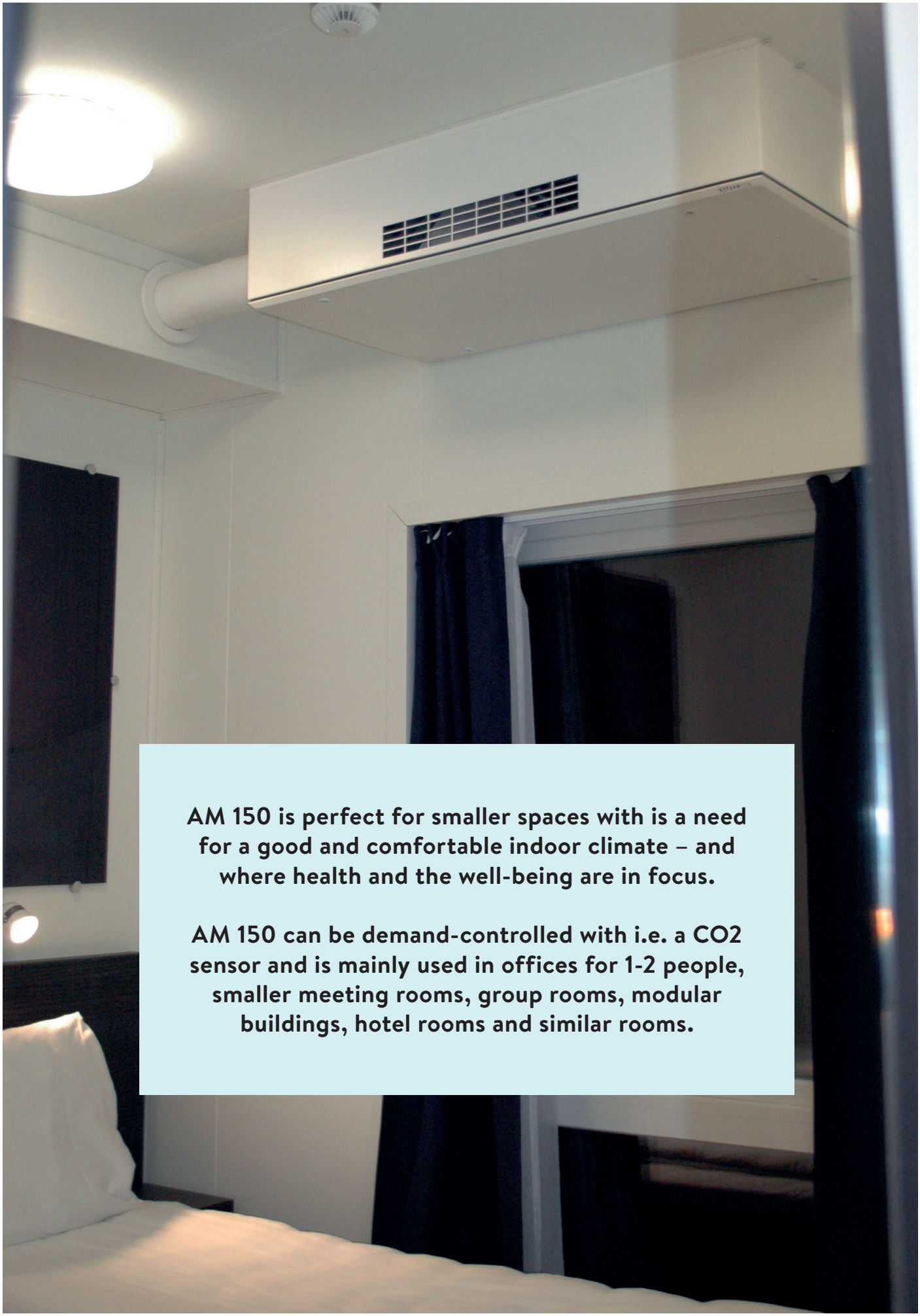
Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass damper (motor-driven)
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor-driven)
EF	Extract air filter
ETV	Exhaust temperature sensor, ventilation
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
HS	Electric heating surface
IT	Temperature sensor, Inlet-air
OTV	Supply air temperature sensor, ventilation
RT	Temperature sensor, Room
SD	Supply air damper (motor-driven)
SF	Supply air filter



AM 150 is perfect for smaller spaces with is a need for a good and comfortable indoor climate – and where health and the well-being are in focus.

AM 150 can be demand-controlled with i.e. a CO2 sensor and is mainly used in offices for 1-2 people, smaller meeting rooms, group rooms, modular buildings, hotel rooms and similar rooms.

Is there a need to lower the temperature on a hot summer day?
The control system in our AM 150 already provides the opportunity for cooling. Partially by utilizing the outdoor temperature and partially with the help of the bypass function.
However, if there is a need fo additional cooling, it is possible to install a cooling module on the AM 150.
The cooling module, CC 150, can reduce the temperature of the outdoor air with up to 15°C – and is therefore perfect for the hot days in the office.

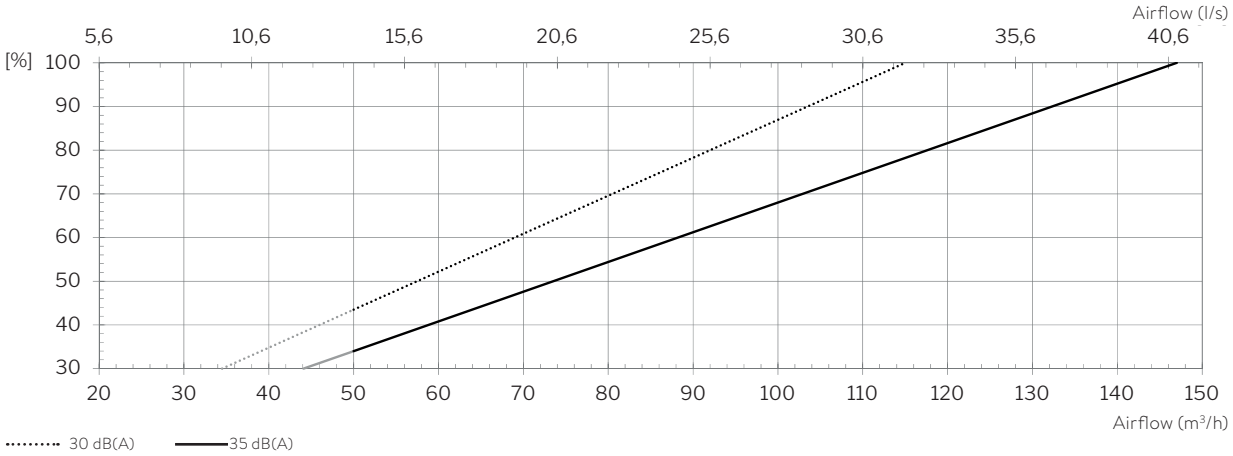
CC 150 COOLING MODULE

TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)	BOOST
Maximum capacity [1]	ePM_{10} 50%	115 m³/h	147 m³/h	216 m³/h
	ePM_1 55%	90 m³/h	1 26 m³/h	197 m³/h
	ePM_1 80%	85 m³/h	115 m³/h	180 m³/h
Throw (0.2 m/s) [2]	ePM_{10} 50%	2.6 m	3.4 m	4.6 m
	ePM_1 80%	2.1 m	2.8 m	4.2 m
	ePM_1 55%	1.9 m	2.6 m	3.8 m
Supply air filter		ePM_{10} 50%, ePM_1 55% eller ePM1 80%		
Extract air filter		ePM_{10} 50%		
Dimensions (WxHxD)		1170 x 261 x 862 mm		
Weight, standard unit, complete (AM 150 + CC 150)		82 kg (53 kg + 29 kg)		
Weight, casing (AM 150 + CC 150)		60 kg (40 kg + 20 Kg)		
Weight, service cover (AM 150 + CC 150)		22 kg (13 kg + 9 kg)		
Colour, casing		RAL 9010 (hvid)		
Counterflow heat exchanger		PET (Polyethylene terephthalate))		
Energy class, cf. EU regulation no. 1254/2014		SEC-Class A		
Air leakage classification cf. EN1886:2007/EN13141-7:2010		Class L1 / Class A1		
Air leakage classification, main damper, cf. EN1751:2014		Class 3		
IP code 10		10		
Duct connection		Ø125 mm		
Condensate pump (capacity/lifting height at 5 l/h)		10 l/h / 6 m		
Condensate drain hose int./ext. diameter		Ø4 mm / Ø6 mm		
Supply voltage		230 V + N + PE / 50 Hz		
Maximum ; nominal power consumption at 30 dB(A) / 35 dB(A) / Boost [1]		185 W ; 28 W/ 48 W / 92 W		
Maximum ; nominal current at 30 dB(A) / 35 dB(A) / Boos [t1]		1.35 A ; 0,25 A / 0,38 A / 0,69 A		
Power factor		0.59		
Power cable		3G0,75 mm²		
Recommended fuse		10 A		
Maximum fuse		13 A		
Leakage current AC (AM; CC) / DC		≤ 0.52 mA ; ≤ 1.5 mA / ≤ 0.0007 mA		
Recommended residual current circuit breaker (RCCB)		Type A		
Electrical heating surfaces				
Heat output 3		500 W	1000 W [3]	
Nominal current		2.17 A	4.35 A	
Thermal circut breaker, manual reset		75 °C	75 °C	
Cooling module CC 150				
Energy class, cf. EU regulation no. 206/2012 SEC		SEC-Class A++		
Nominal ; min. cooling duty [4]		640W ; 146 W		
Nominal EER		4,0		
Max. ; nominal power consumption		249 W ; 162 W		
Max. ; nominal current		1.84 A ; 1.1 A		
Minimum airflow for activating the cooling module		50 m³/h		
Refrigerant ; filling ; GWP		R134a ; 150g ; 1430		

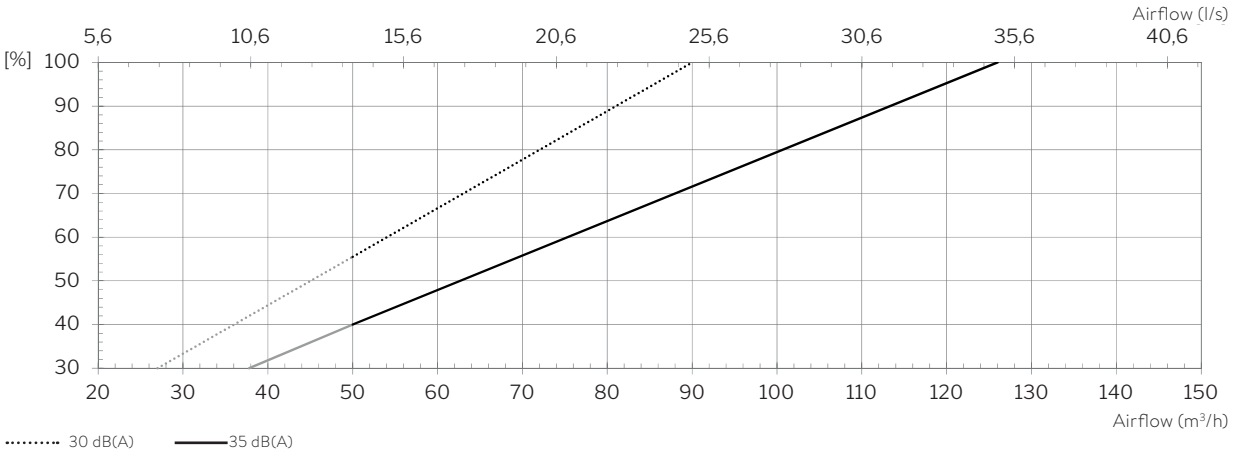
[1] All measurements were performed in normal operating mode in a standard installation for the filter class, supply/extract air: ePM10 50% / ePM10 50%, using the facade grills recommended by Airmaster, in a test room dimensioned 8.0 m x 10.0 m x 2.5 m with room attenuation of 7.5 dB. For small spaces, e.g. 4,0 m x 4,0 m x 2,5 m, 2 dB sound pressure must be added.
[2] The throw is measured with a 2 °C subcooled supply air at the standard setting of the inlet diffuser.
[3] Special item
[4] Cf. EN 308:1997 and EN 14825:2018 at 147 m3/h ; 50 m3/h..

CC 150

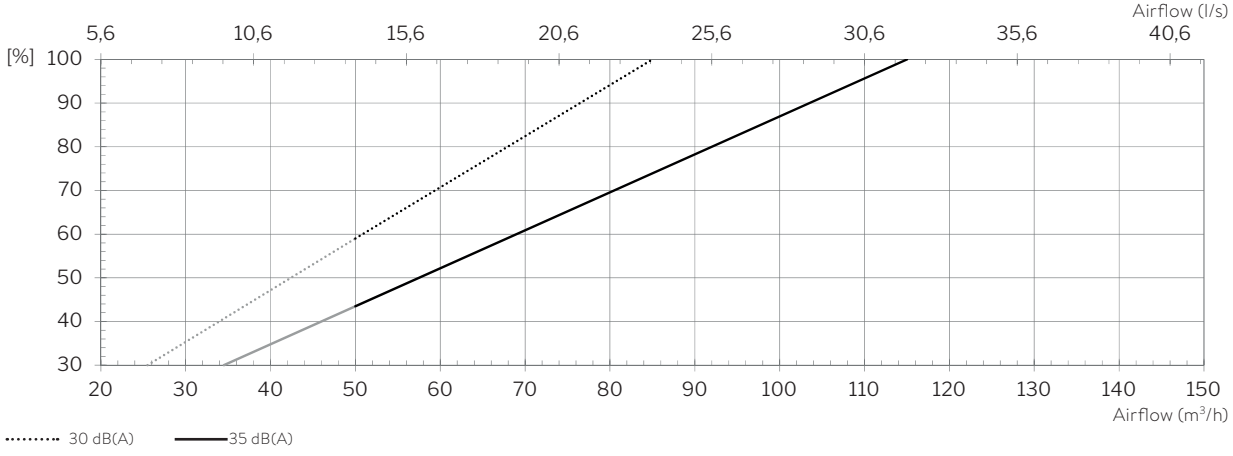
CAPACITY [1] med PM_{10} 50% / ePM_{10} 50% filters



CAPACITY [1] med PM_1 55% / ePM_{10} 50% filters



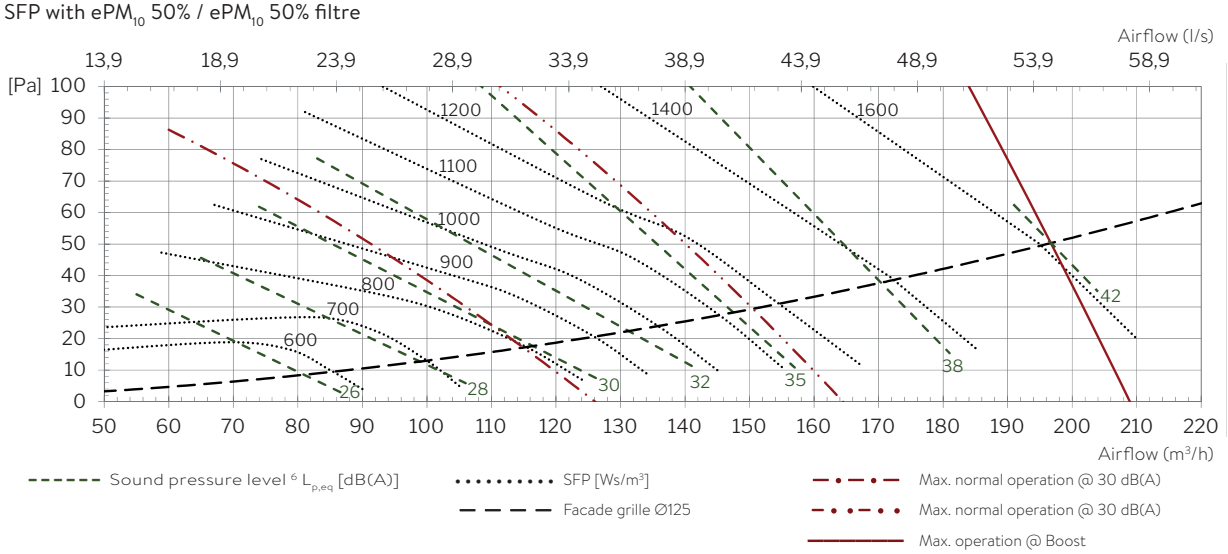
CAPACITY [1] med PM_1 80% / ePM_{10} 50% filters



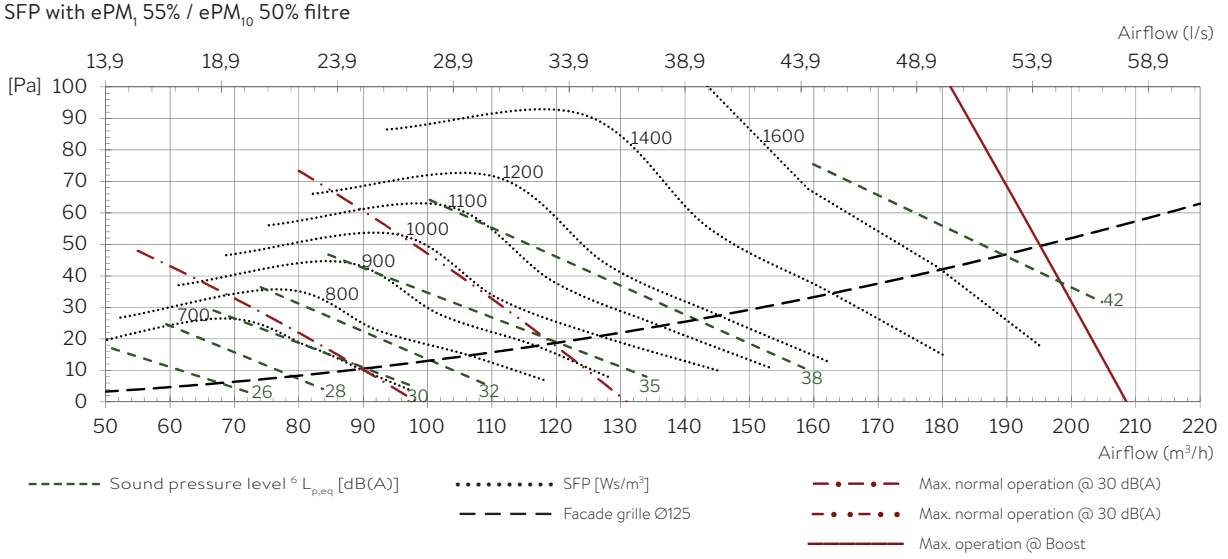
[1] Minimum airflow for activating the cooling module : 50 m^3/h

CC 150

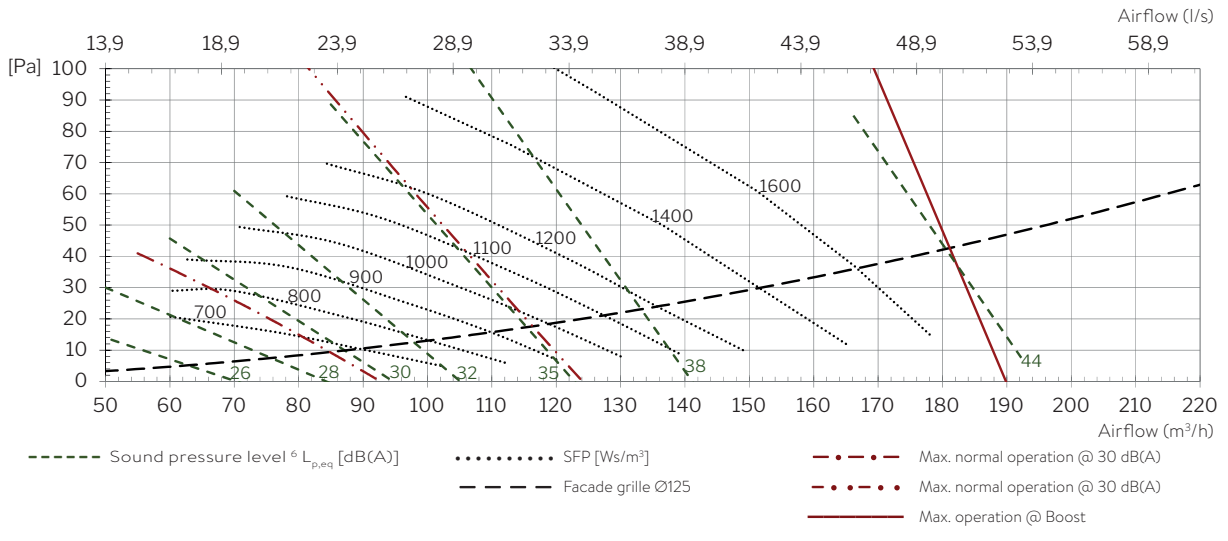
SFP with ePM_{10} 50% / ePM_{10} 50% filtre



SFP with ePM_1 55% / ePM_{10} 50% filtre



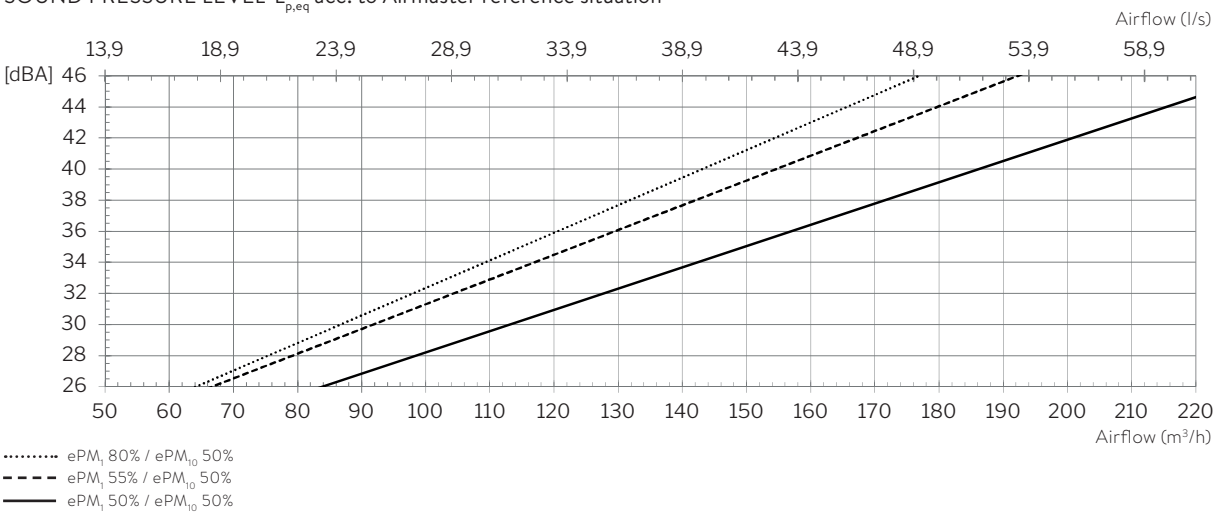
SFP with ePM_1 80% / ePM_{10} 50% filtre



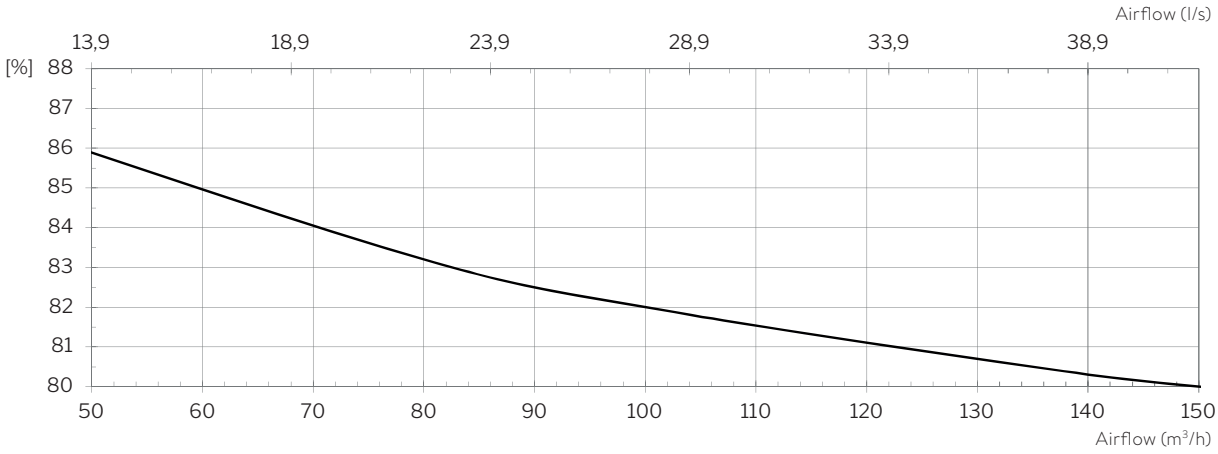
⁶ The sound pressure level Lp,eq is measured at a height of 1.2 m at a horizontal distance of 1 m from the air handling unit.

CC 150

SOUND PRESSURE LEVEL[1] $L_{p,eq}$ acc. to Airmaster reference situation



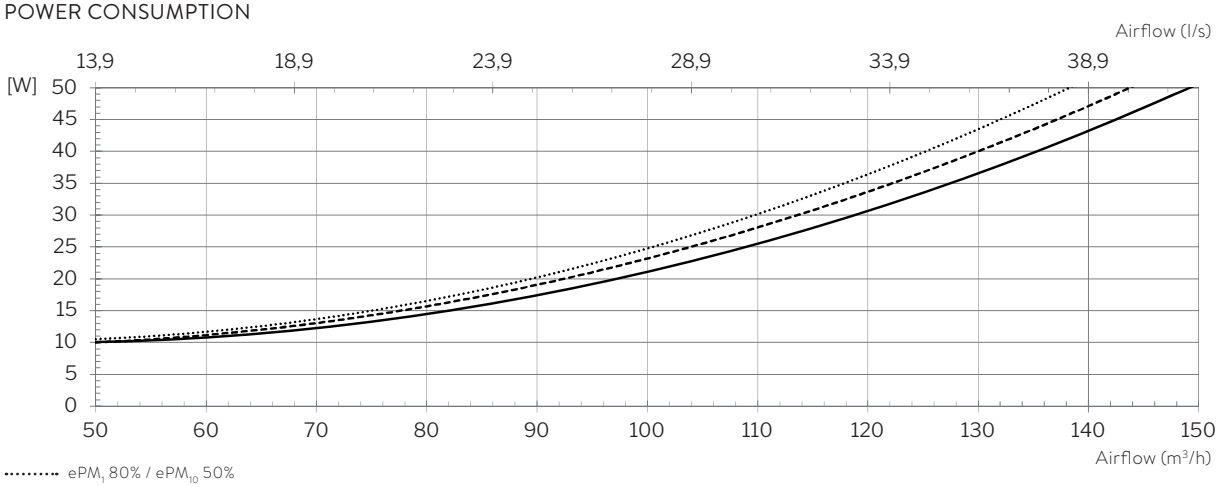
TEMPERATURE EFFICIENCY acc. to EN 308:1997



EN308:1997 conditions: Balanced operation; room air: 25 °C, 28 % RH; outdoor air: 5 °C.

ePM1 80% / ePM10 50%
ePM1 55% / ePM10 50%
ePM1 50% / ePM10 50%

POWER CONSUMPTION

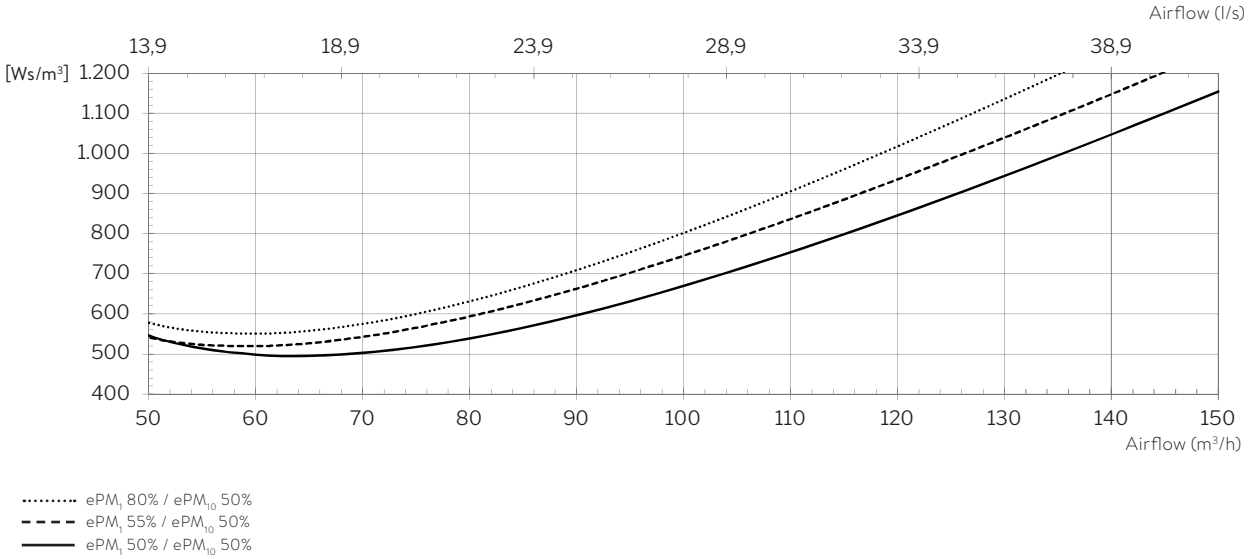


ePM1 80% / ePM10 50%
ePM1 55% / ePM10 50%
ePM1 50% / ePM10 50%

[1] The sound pressure level $L_{p,eq}$ ismeasurements are conducted 1.2 m at a horizontal distance of 1 m from the air handling unit.

CC 150

SFP [1]



[1] The calculation of SFP includes the power consumption for operating fans but not for controls, display panel, etc.

VERSION OVERVIEW

AM 150 with CC 150 Comfort Cooling Module (CC)

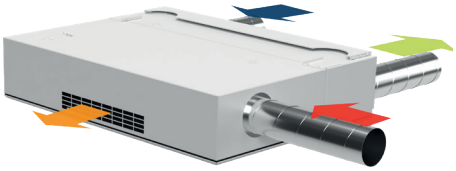
Exhaust/supply position
» Back (**H**orizontal)

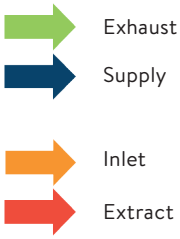
Placering indblæsning og udsugning
» Bottom (**B**)
» Ducted Inlet (**DI**)
» Ducted Extract (**DE**)

Mounting
» Wall/ceiling bracket

H BB - CC

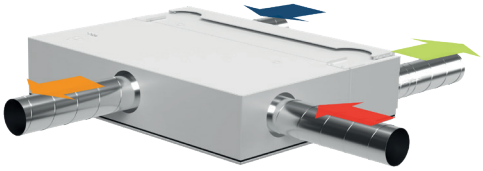
H BDE - CC





H DIB - CC[10]

H DIDE - CC[10]



H BB - CC: Horizontal exhaust / supply
Standard inlet / extract

H BDE - CC: Horizontal exhaust / supply
Standard inlet / ducted extract

H DIB - CC [1]: Horizontal exhaust / supply
Ducted inlet / extract

H DIDE - CC [1]: Horizontal exhaust / supply
Ducted inlet / standard extract

Standards and options	
Counterflow heat exchanger (PET)	x
Enthalpy counterflow heat exchanger (polymer membrane)	o
Combination counterflow heat exchanger (polymer membrane)	o
Motor-driven bypass	x
Motor-driven supply air damper	x
Motor-driven extract air damper	x
Electric heating surface/VPH [2]	●
Condensate pump	●
PIR/motion sensor (wall mounted)	●
PIR/motion sensor (integrated)	●
CO_2 sensor (wall mounted)	●
CO_2 sensor (integrated)	●
TVOC (integrated)	●
CO_2-/TVOC sensor (integrated)	●
Hygrostat	o
Energy meter	●
Supply air filter ePM10 50%	●

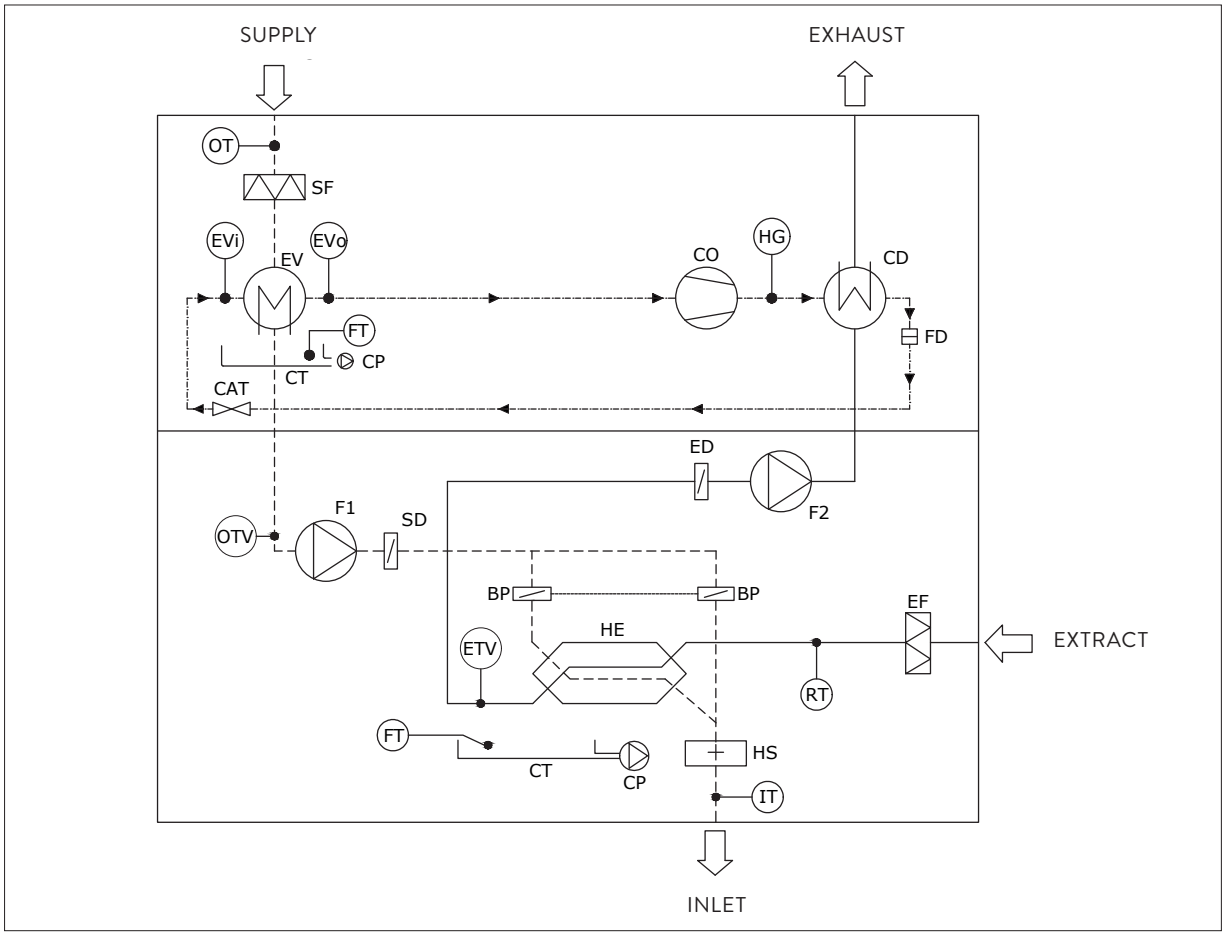
Supply air filter ePM[1] 55%	●
Supply air filter ePM[1] 80%	o
Extract air filterr ePM[10] 50%	x
LED (operating mode indicator)	x
Comfort cooling module	●
Wall/ceiling bracket	●
Ceiling frame	●
Operating button	●
Control panel, Viva	●
Control panel, Orbit	●
Airmaster Airlinq® Online	●
Airlinq® Online API	●
Airlinq® BMS	●
LON® modul	o
KNX® modul	o
MODBUS® RTU RS485 modul	●
BACnet™ MS/TP modul	●
BACnet™ /IP modul	●

X : Standard ● : Optional **O** : Special item

[1] Special item
[2] **V**irtual **P**re**H**eat)

CC 150

SCHEMATIC SKETCH



Component designation

BP	Bypass damper (motor-driven)	EV	Evaporator	HS	Electric heating surface
CAT	Capillary Tube	EVi	Temperature sensor, Evaporator in	IT	Temperature sensor, Inlet-air
CD	Condenser	EVo	Temperature sensor, Evaporator out	OT	Temperature sensor, Supply air
CO	Compressor, inverter Controlled	FD	Filter Dryer	OTV	Temperature sensor, Supply air ventilation
ED	Exhaust air damper (motor-driven)	F2	Extract air fan	S	Supply air filter
EF	Extract air filter	HE	Counterflow heat exchanger		
ETV	Temperature sensor, Exhaust, Ventilation	HG	Temperature sensor, Hot Gas		

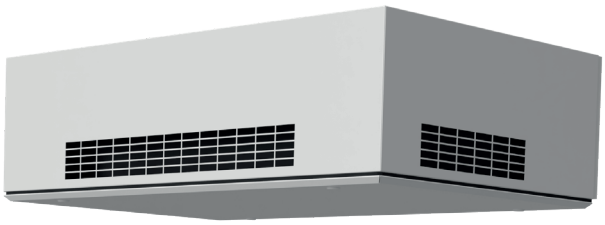
Airmaster's AM 300 unit exudes high quality, well-thought-out technical solutions and user-friendly details.

A flexible ventilation unit that i.a. can be used for offices, meeting rooms and restaurants, where the requirements for the indoor climate is high – together with the environmental considerations.

This is because, the AM 300 is made with a focus on low energy consumption and environmental sustainability.

AM 300

Our AM 300 is a medium-sized ventilation unit which can be used in medium-sized and small rooms. The AM 300 is therefore perfect for i.a. meeting rooms or offices – due to the unit's extreme flexibility, concerning usage and installation – and because it takes the design and layout of the room into consideration.



The unit is quiet and will therefore not be a disturbing element in the room. In addition to this, the AM 300 has a low energy consumption. This means that it is designed to take the environment into account, which is further supported by the unit being recyclable.

We can, without exaggeration, say that the product takes decentralized ventilation into the next phase of the term – decentralized ventilation for comfort use

TECHNICAL DATA	FILTERCLASS	30 dB(A)	35 dB(A)	BOOST
Maximum capacity [1]	ePM_{10} 50%	210 m³/h	275 m³/h	315 m³/h
	ePM_1 55%	205 m³/h	270 m³/h	315 m³/h
	ePM_1 80%	180 m³/h	240 m³/h	305 m³/h
Throw length (0.2 m/s) [2]	ePM_{10} 50%	4.25 m at 210 m³/h	6 m at 275 m³/h	7 m at 315 m³/h
	ePM_1 55%	4.25 m at 205 m³/h	6 m at 270 m³/h	7 m at 315 m³/h
	ePM_1 80%	3.5 m at 180 m³/h	5 m at 240 m³/h	6.75 m at 305 m³/h
Maximum ; nominal power consumption at 30dB(A) / 35 dB(A) / BOOST [1]		175 W / 55 W / 102 W / 123 W		
Maximum ; nominal current at 30dB(A) / 35 dB(A) / BOOST [1]		1.45 A / 0.45 A / 0.84 A / 1.01 A		
Supply voltage		1 x 230 V + N + PE / 50 Hz		
Duct connection		Ø160 mm		
Condensate pump (capacity/lifting height at 5 l/h)		10 l/h / 6 m		
Condensate drain, int./ext.		Ø4/6 mm		
Weight		85 kg		
Counterflow heat exchanger		Aluminium		
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%		
Extract air filter		ePM_{10} 50%		
Colour, casing		RAL 9010 (white)		
Power factor		0.53		
Power cable		3 x 1.5 mm²		
Recommended fuse		10 A		
Maximum fuse		13 A		
Recommended residual current circuit breaker (RCCB)		Type A		
Leakage current AC/DC		≤ 0.7 mA / ≤ 0.005 mA		
IP code		10		
Energy class, cf. EU regulation no. 1254/2014		A		
Air leakage classification		Class L2 cf. EN1886:2007 Class A1 cf. EN13141-7:2010		
Air leakage classification, main damper		Class 3 cf. EN1751:2014		
Dimensions (WxHxD)		1180 x 344 x 705 mm		

[1] All measurements were performed in normal operating mode in a standard installation for the filter class, supply/extract air: ePM_{10} 50% / ePM_{10} 50%, using the facade grills recommended by Airmaster: Airmaster Boomerain® Ø160, in a test room dimensioned 8.0 m x 10.0 m x 2.5 m with room attenuation of 7.5 dB.
[2] The throw is measured with a 2°C subcooled supply air at the standard setting of the inlet diffuser. The setting is adaptable.

ELECTRICAL HEATING SURFACES	PREHEATING SURFACE	COMFORT HEATING SURFACE
Heat output	1000 W	500 W
Nominal current	4.35 A	2.17 A
Termosikring, manuel reset	75°C	75°C

WATER HEATING SURFACE	
Maximum operating temperature	90°C
Maximum operating pressure	10 bar
Nominel heat output [3]	1593 W
Connection dimension	1/2" (DN 15)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

[3]Heat output for maximum capacity at 35 dB(A), delivery/return temperature 60/40°C and a liquid flow of 87 l/h.

STANDARD AND OPTIONS	AM 300
Counterflow heat exchanger (alu)	X
Enthalpy counterflow heat exchanger (polymer membrane)	O
Combination counterflow heat exchanger (polymer membrane)	O
Motor driven bypass	X
Motor driven exhaust air damper	X
Motor driven supply air damper	X
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
Service power switch	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
PIR/motion sensor (built-in)	●
Electronic humidity sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●
Hygrostat (wall-mounted)	O

Energy meter	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	O
Extract air filter ePM_{10} 50%	●
LED (operating mode indicator)	X
Wall/ceiling frame	●
Ceiling frame	●
Boomerain® façade ventilation grille Ø160	●
Operating button	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	O
KNX® Module	O

X : Standard ● : Optional O : Special item

AM 300 VERSIONS

Versions exhaust / supply

HH

VV

HS

SH

SS

Exhaust

Supply

H: **H**orizontal

V: **V**ertical

S: **S**ide

Versions inlet / extract

BB

DIB

BDE

DIDE

Inlet

Extract

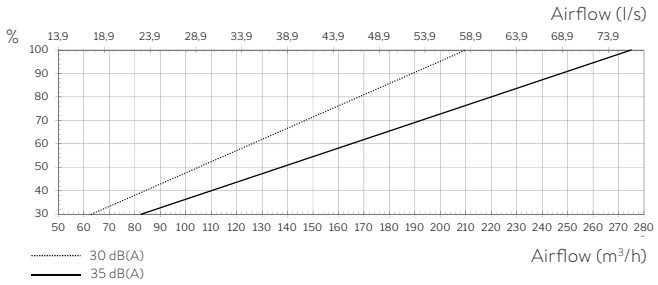
B: **B**ottom

DI: **D**ucted **I**nlet

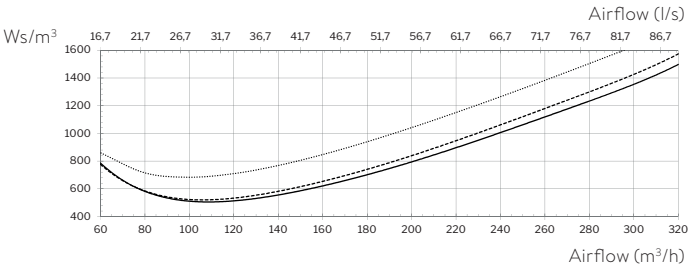
DE: **D**ucted **E**xtract

AM 300

CAPACITY with ePM_{10} 50% + ePM_{10} 50% filter [1]



SFP [2, 3]

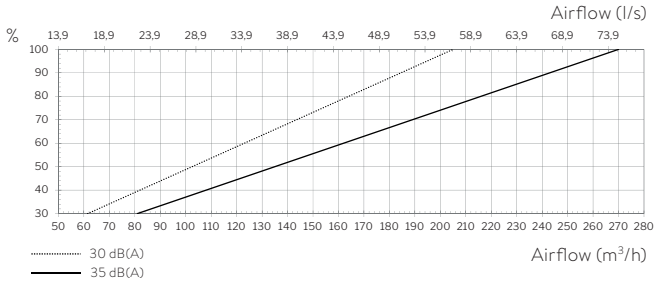


ePM_{10} 50% + ePM10 50% — For AM 300 VV variants, calculate $SFP_{VV,\ ePM1\ 80\%}$ = 1.07*SEL ; SFP in [Ws/m³].

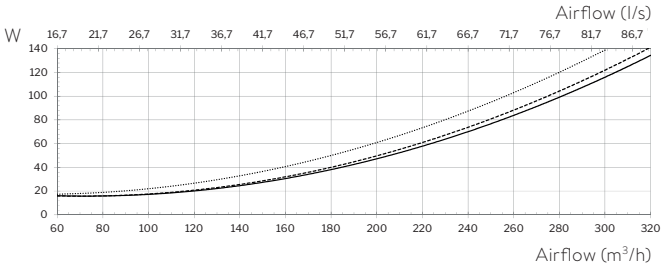
ePM^{55} 55% + ePM10 50% — For AM 300 VV variants, calculate $SEL_{VV,\ ePM1\ 55\%}$ = 1.09*SEL ; SFP in [Ws/m³].

ePM_{10} 80% + ePM10 50% — For AM 300 VV variants, calculate $SEL_{VV,\ ePM10\ 50\%}$ = 1.12*SEL ; SFP in [Ws/m³].

CAPACITY with ePM_1 55% + ePM_{10} 50% filter [1]



POWER CONSUMPTION [2]

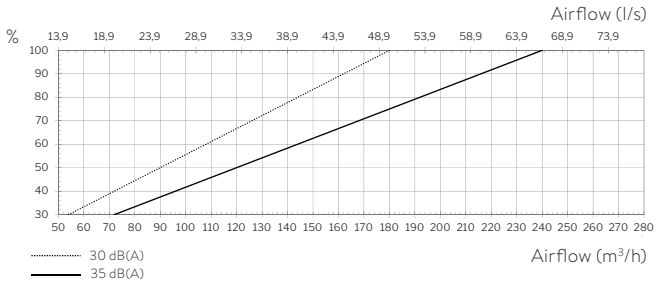


ePM_{10} 50% + ePM10 50% — For AM 300 VV variants, calculate $P_{VV,\ ePM1\ 80\%}$ = 1.07*P ; P = power consumption in [W].

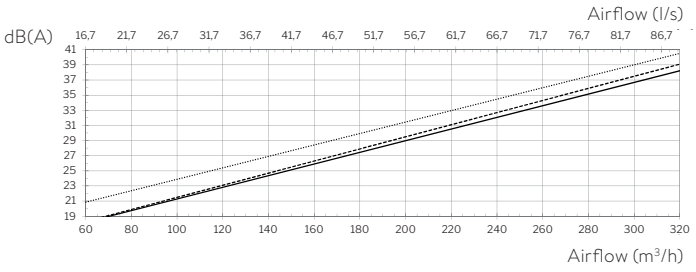
ePM_{10} 55% + ePM10 50% — For AM 300 VV variants, calculate $P_{VV,\ ePM1\ 55\%}$ = 1.09*P ; P = power consumption in [W].

ePM_{10} 80% + ePM10 50% — For AM 300 VV variants, calculate $P_{VV,\ ePM10\ 50\%}$ = 1.12*P ; P = power consumption in [W].

CAPACITY with ePM_1 80% + ePM_{10} 50% filter [1]



SOUND PRESSURE [2, 4]



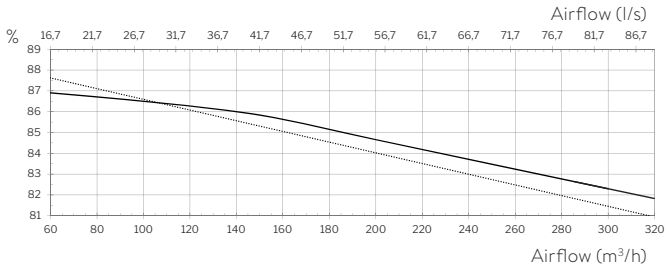
ePM_{10} 50% + ePM_{10} 50%

ePM_{10} 55% + ePM_{10} 50%

ePM_{10} 80% + ePM_{10} 50%

For AM 300 VV variants, add a sound pressure of ΔL_p = 0.00965*q_v - 0.4 to the sound pressure $L_{p,eq}$ fom the graph (q_v: airflow in [m³/h]).

TEMPERATURE EFFICIENCY, ACC. TO EN 380:1997 and EN 13141-7:2010



EN 308:1977 : Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

EN 13141-7:2010 : Balanced airflow; Extraction: 20°C, 38% RH Supply: 7°C

[1] AM 300 HH, SS and variants of this, including DI and DE variants.
Calculate airflow for AM 300 VV variants as follow: $q_{VV,\ @30DB(A)}$ = 0,928*q_v eller $q_{VV,\ @35DB(A)}$ = 0,928*q_v ; q_v = airflow from graph in [m³/h].

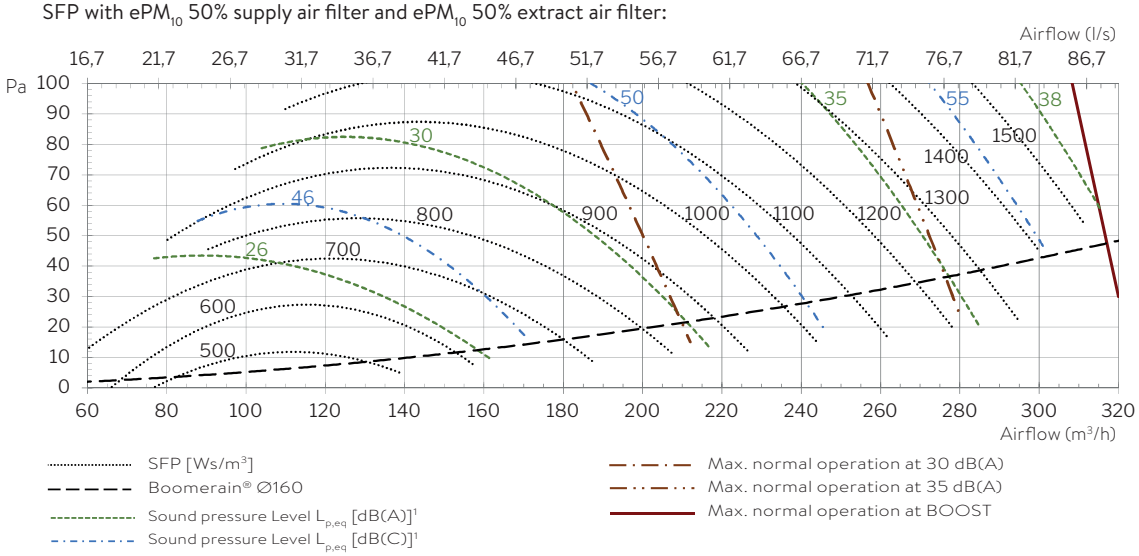
[2] AM 300 HH, SS and variants of this, including DI and DE variants.

[3] The calculation of SFP includes the power consumption for operating fans but not for controls, display panel, etc.

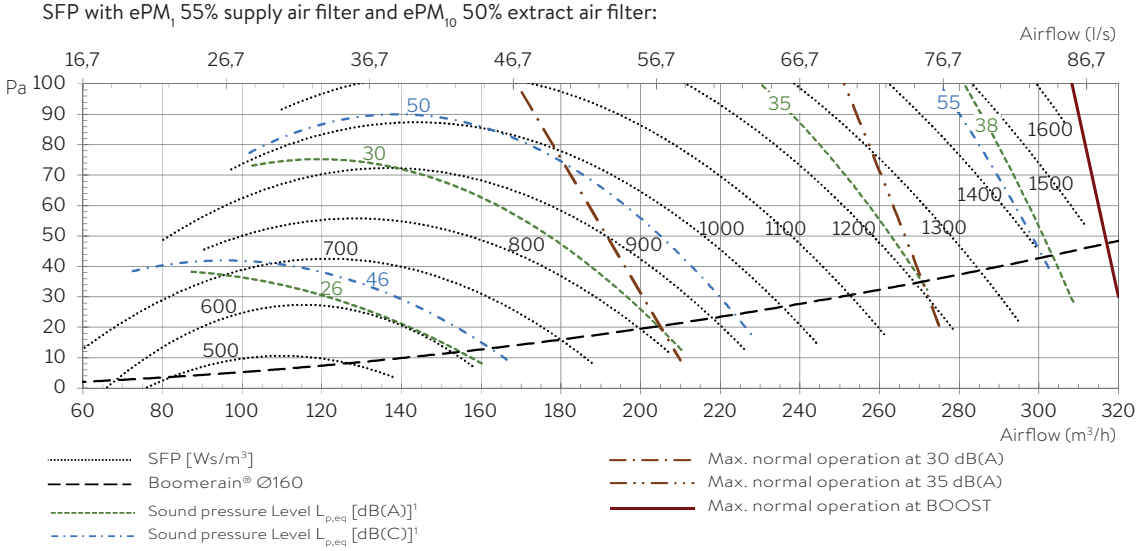
[4] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit.

AM 300

SFP with ePM_{10} 50% supply air filter and ePM_{10} 50% extract air filter:



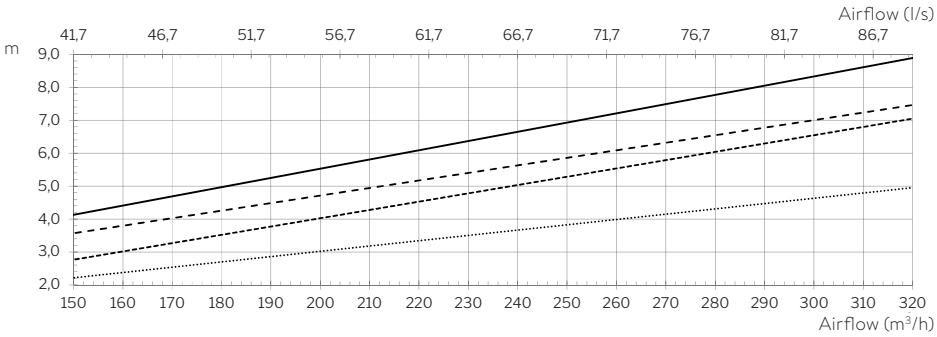
SFP with ePM_1 55% supply air filter and ePM_{10} 50% extract air filter:



[1] Sound pressure level $L_{p,eq}$ is measured iat 1.2 m height with 1 m horizontal distance from the air handling unit in a 200 m³ room with a reverberation time of T = 0.6 s or equivalent to a room sound attenuation of 7.5 dB. In smaller rooms, e.g. 40 m³, 2 dB of sound pressure must be added.

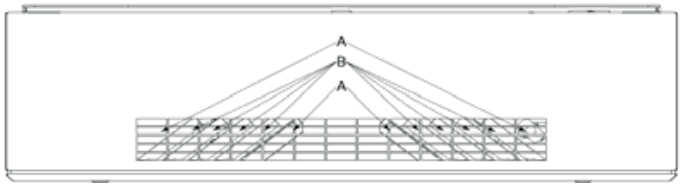
AM 300

THROW, AT 0.2 m/s[1]



Large inlet diffuser opening, 60° blade angle.
Large inlet diffuser opening, 45° blade angle.
Small inlet diffuser opening, 30° blade angle.
Small inlet diffuser opening, 5° blade angle.

Small and large inlet diffuser opening:

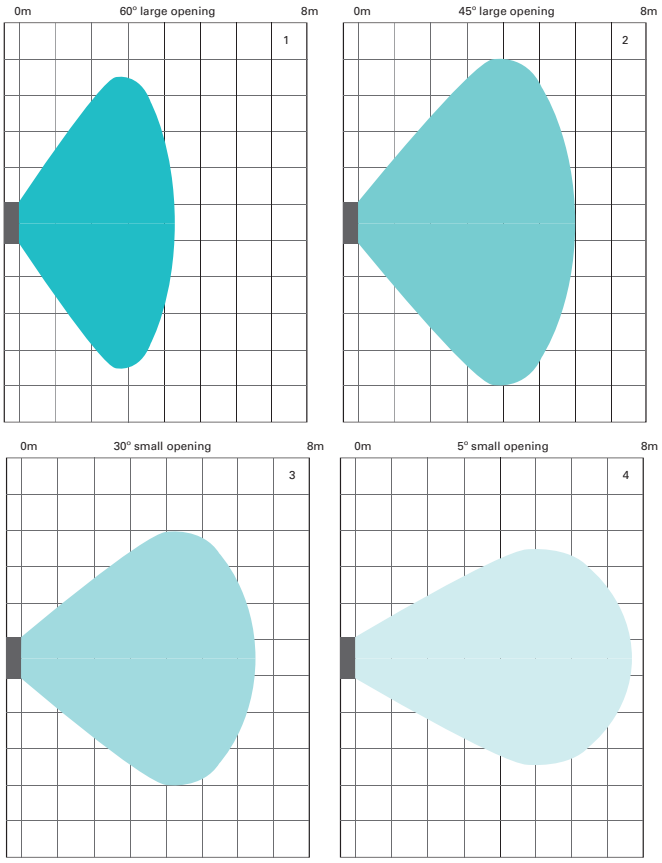


Large inlet diffuser opening:
A is closed, B is open at x°.

Large inlet diffuser opening:
A and B are open at x°.

Default delivery state:
Large inlet diffuser opening, 45° blade angle.

Throw length and dispersion, top view.



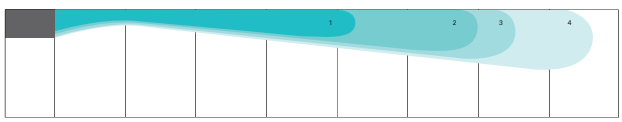
The air handling unit disperses inlet air depending on the blade angle settings.

The illustrations show the dispersion pattern and throw for the various blade angle settings at an air flow of 275 m³/h:

1. Large inlet diffuser opening, 60° blade angle.
2. Large inlet diffuser opening, 45° blade angle.
3. Small inlet diffuser opening, 30° blade angle.
4. Small inlet diffuser opening, 5° blade angle.

Changing the air flow also affects the throw.

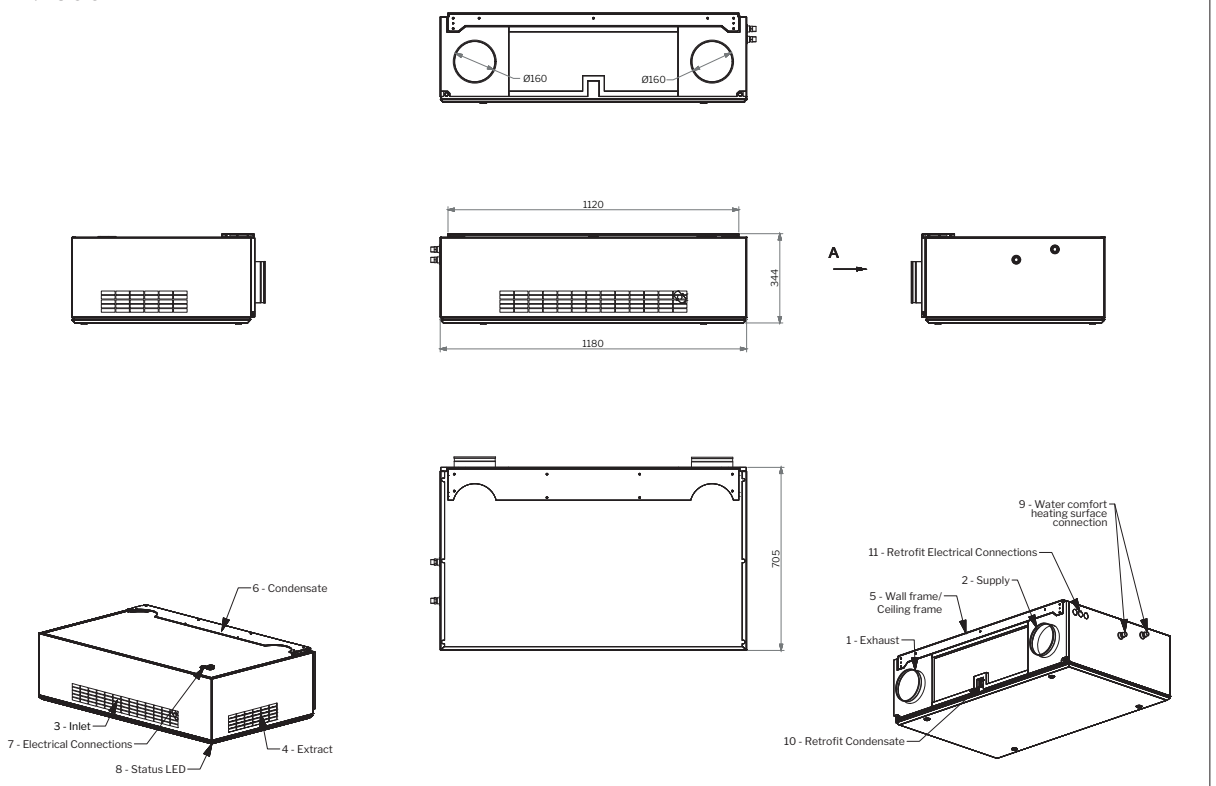
Throw, side view.



[1] The throw is measured with a 2 °C subcooled inlet air supply.

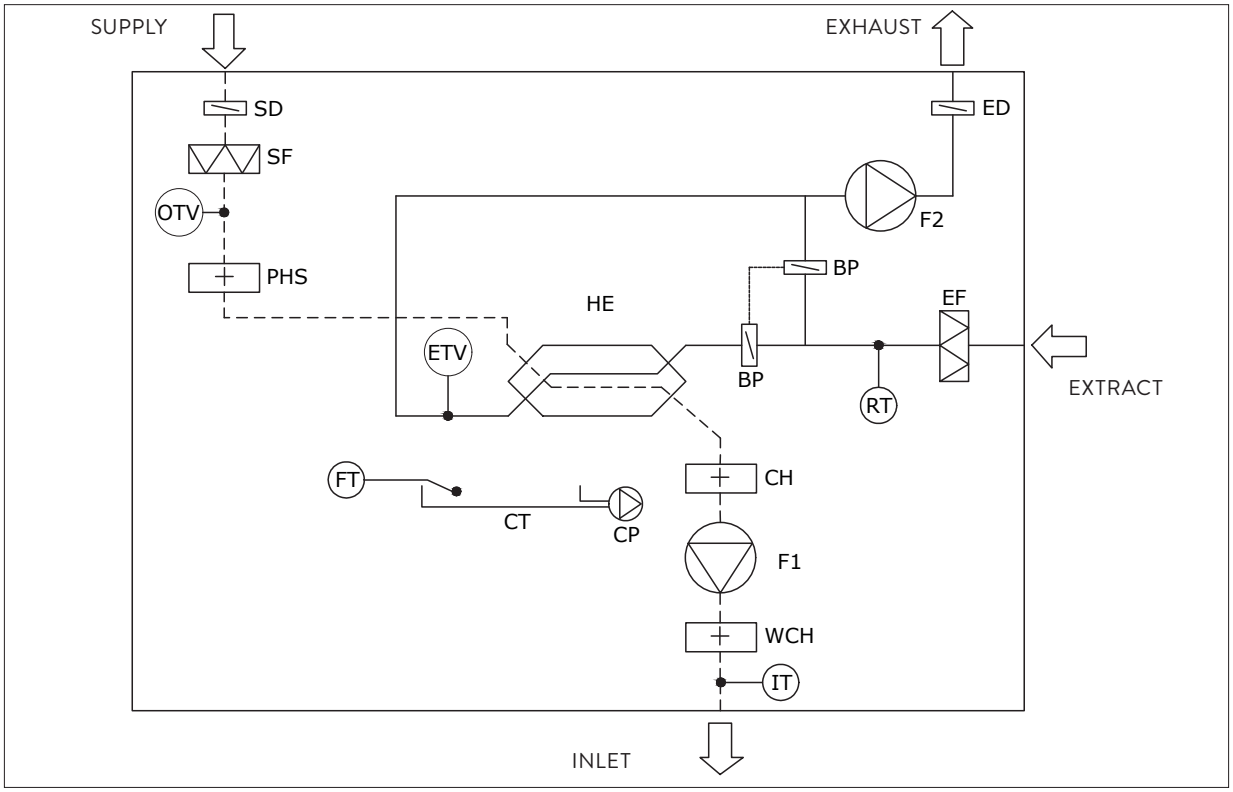
AM 300

AM 300 HHBB



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

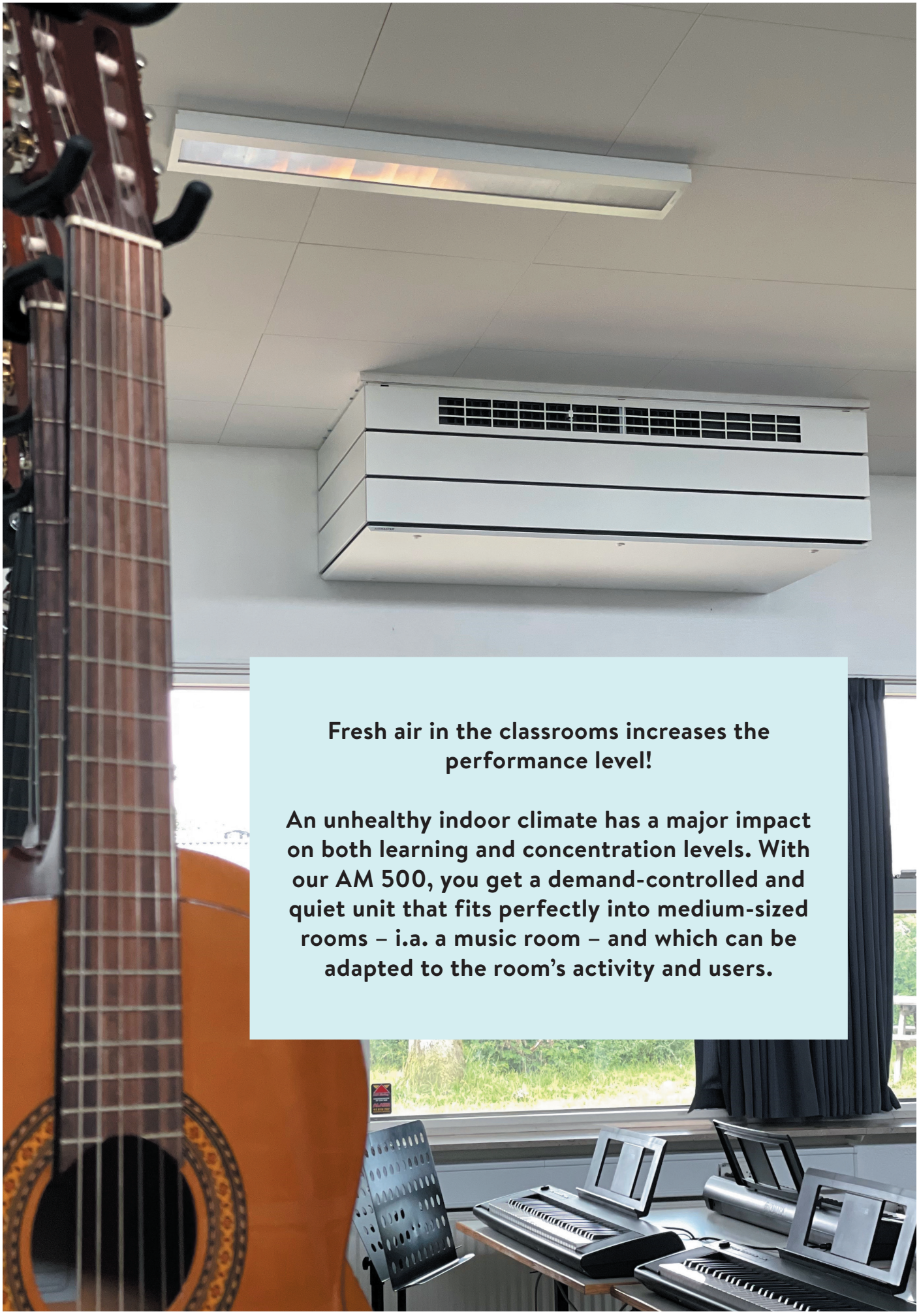
SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass damper (motor-driven)
CH	Electric comfort heating surface
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor-driven)
EF	Extract air filter
ETV	Exhaust temperature sensor, ventilation
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IT	Inlet-air temperature sensor
OTV	Supply air temperature sensor, ventilation
PHS	Electric preheating surface
RT	Room temperature sensor
SD	Supply air damper (motor-driven)
SF	Supply air filter
WCH	Water heating surface

AM 300 fits perfectly into small meeting rooms meant for multiple people, but where the space can feel cramped. Airmaster's AM 300 ensures that the room is supplied with fresh outdoor air, thereby ensuring a good and healthy indoor climate, which is of great importance for our well-being, concentration and performance abilities.



Fresh air in the classrooms increases the performance level!

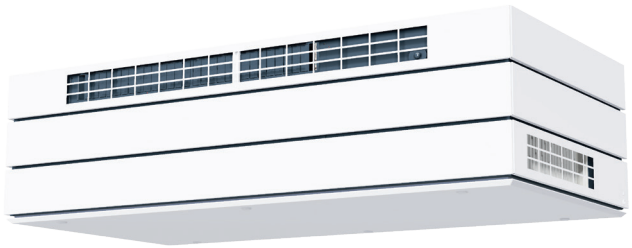
An unhealthy indoor climate has a major impact on both learning and concentration levels. With our AM 500, you get a demand-controlled and quiet unit that fits perfectly into medium-sized rooms – i.a. a music room – and which can be adapted to the room's activity and users.

AM 500

The AM 500 is designed for medium-sized rooms. A horizontal or vertical model can be installed, depending on the room and location of the unit. The air handling unit is available with a separate control panel and can also be connected to a network system.

A cooling module can be connected.

Ducts can be connected to extract, to inlet or to both.



TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)
Maximum capacity[1]	ePM_{10} 50%	430 m³/h	550 m³/h
	ePM_1 55%	387 m³/h	495 m³/h
	ePM_1 80%	344 m³/h	440 m³/h
Throw length (0.2 m/s)[1]	ePM_{10} 50%	5.9 m at 430 m³/h	7.5 m at 550 m³/h
	ePM_1 55%	5.4 m at 387 m³/h	6.7 m at 495 m³/h
	ePM_1 80%	4.8 m at 344 m³/h	6.0 m at 440 m³/h
Nominal current[2]		1.1 A	
Nominal power consumption[2]		132 W	
Electrical connection		1 x 230 V + N + PE / 50 Hz	
Duct connections		Ø250 mm	
Condensate drain, int./ext.		Ø6/9 mm	
Weight		108 kg	
Counterflow heat exchanger		Aluminium	
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	
Extract air filter		ePM_{10} 50%	
Colour, casing		RAL 9010 (white)	
Power factor		0.58	
Power cable		3 x 1.5 mm²	
Recommended fuse		10 A	
Maximum fuse		13 A	
Recommended residual current circuit breaker (RCCB)		Type A	
Leakage current		≤ 6 mA	
Air leakage classification		Class L2 cf. EN1886:2007 Class A2 cf. EN 13141-7:2010	
Dimensions (WxHxD)		1600 x 439 x 779 mm	

[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø250 grilles
[2] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%

ELECTRIC HEATING SURFACE	PRE-HEATER	COMFORT HEATER
Heat output	1000 W	630 W
Thermal circuit breaker, aut. reset	50°C	50°C
Thermal circuit breaker, man. reset	75°C	75°C

WATER HEATING SURFACE	COMFORT HEATER
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	858 W[3]
Connection dimension	3/8" (DN 10)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

[3] Capacity at: supply/return temperature 60/40°C, water volume 53 l/h

STANDARD AND OPTIONS	AM 500
Counterflow heat exchanger (aluminium)	X
Enthalpy counterflow heat exchanger (polymer membrane)	O
Combination counterflow heat exchanger (polymer membrane)	O
Motor driven bypass	X
Motor driven exhaust air damper	X
Motor driven supply air damper	X
Capacitive return for motorized exhaust and supply air dampers	●
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
PIR/motion sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●
Hygrostat (wall-mounted)	O

Energy meter	●
Cooling module (only for horizontal model)	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	O
Extract air filter ePM_{10} 50%	●
Wall frame	●
Ceiling frame	●
Boomerain® façade ventilation grill Ø250	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	O
KNX® Module	O
Mini B USB (on front of unit)	O

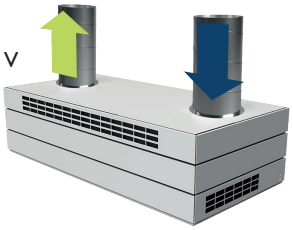
X : Standard ● : Optional O : Special item

AM 500 VERSIONS

Versions exhaust / supply

H

V



HRE

Exhaust

Supply

H: **H**orizontal

V: **V**ertical

HRE: **H**orisontal - **Rec**tangular

Versions inlet / extract

Inlet

Extract

T: **T**op

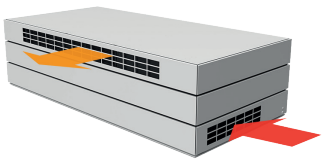
C: **C**enter

B: **B**ottom

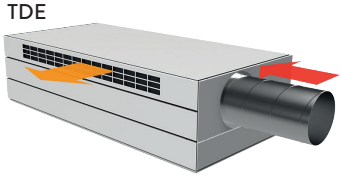
DI: **D**ucted **I**nlet

DE: **D**ucted **E**xtract

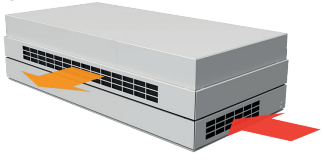
T



TDE



C



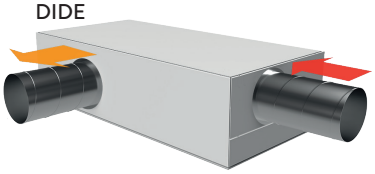
CDE

DIB

B

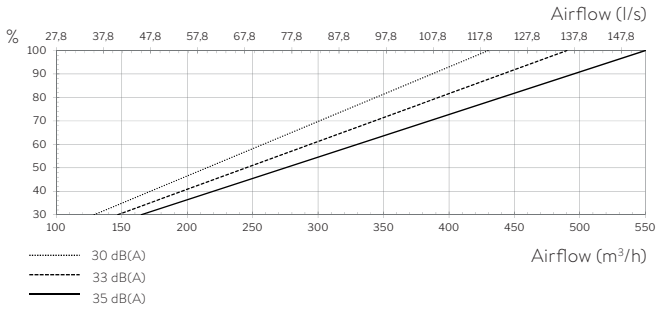
BDE

DIDE

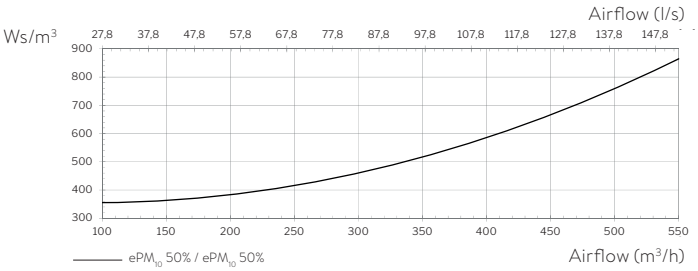


AM 500

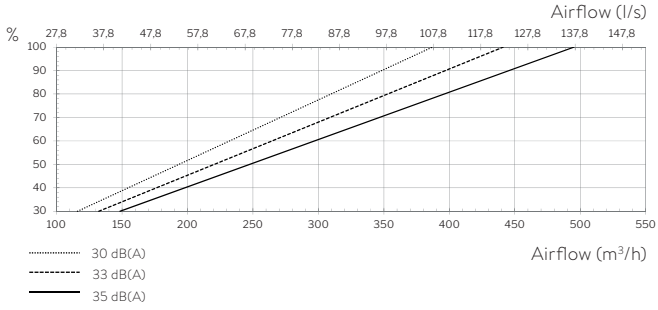
CAPACITY with ePM_{10} 50% + ePM_{10} 50% filter [1]



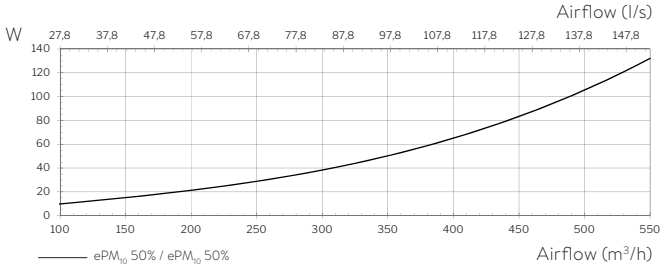
SFP [1]



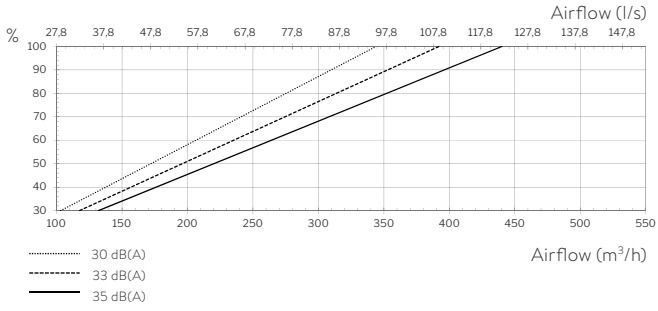
CAPACITY with ePM_1 55% + ePM_{10} 50% filter [1]



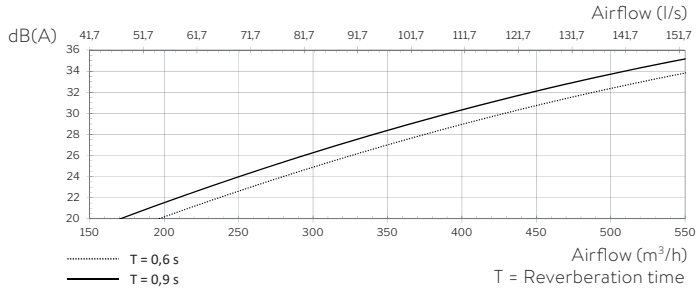
POWER CONSUMPTION [1]



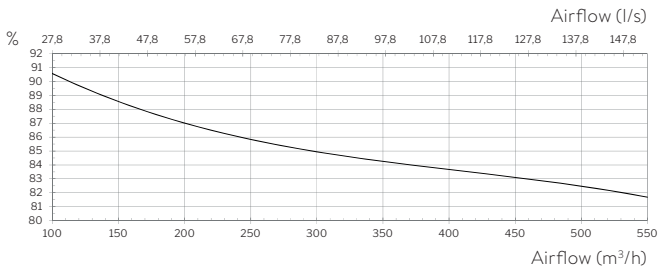
CAPACITY with ePM_1 80% + ePM_{10} 50% filter [1]



SOUND PRESSURE [1, 2]

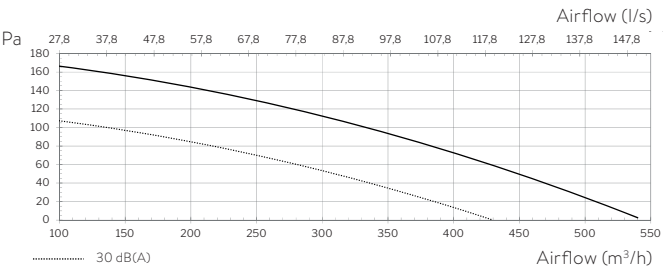


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997



Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

EXTERNAL PRESSURE LOSS



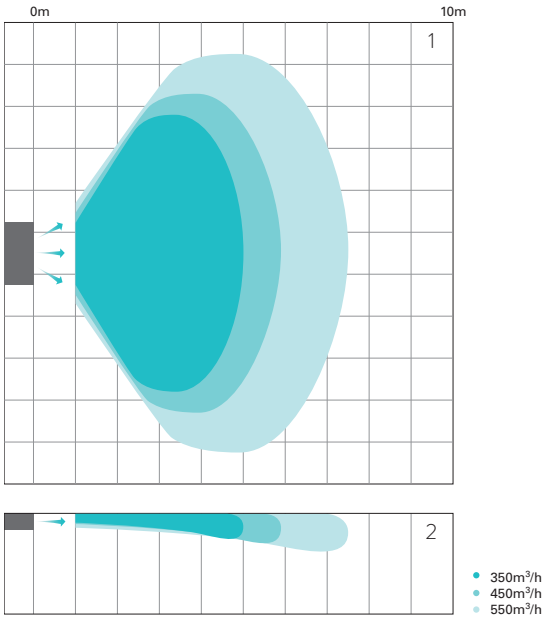
[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø250 grilles

[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m^3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7.5 dB.

AM 500

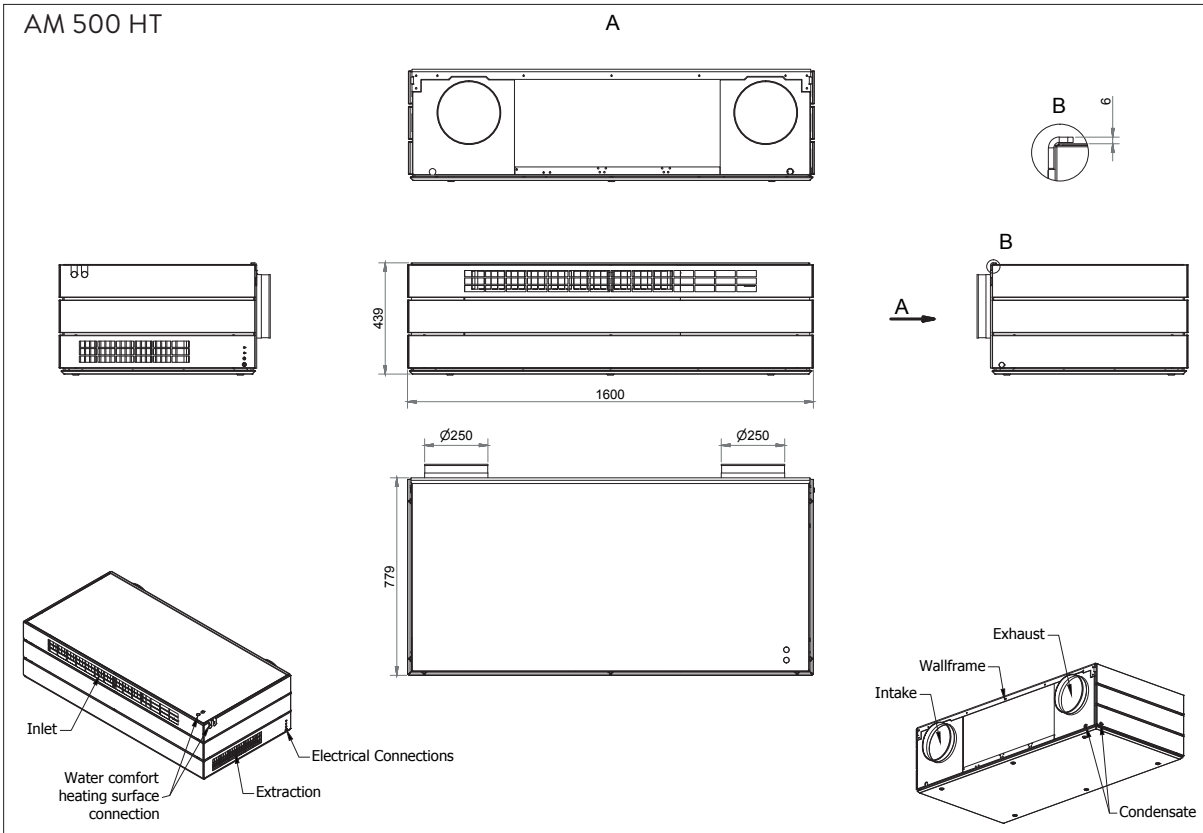
THROW

Airmaster air handling units spread an air stream in different directions, depending on the given airflow.
This can be seen in the illustration, in which the blue shading indicates airflows for the different throws.



[1] Throw seen from above
[2] Throw seen from the side

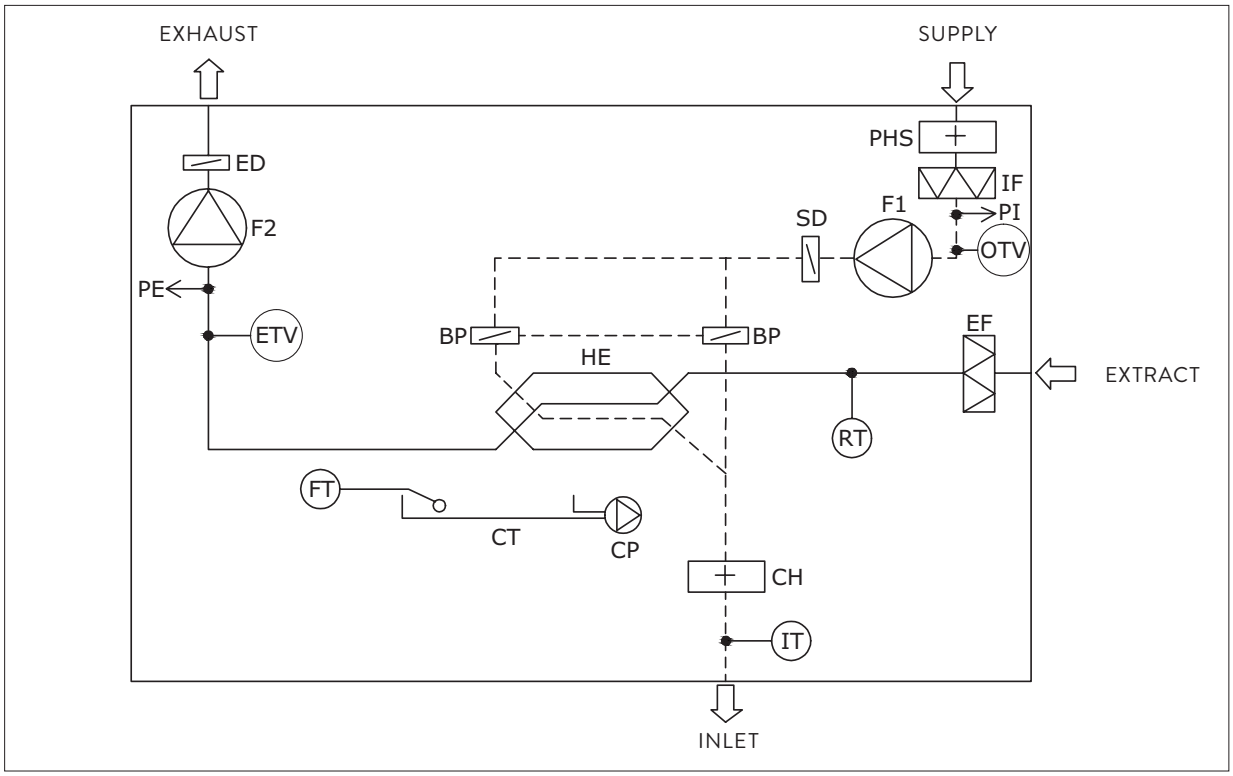
AM 500 HT



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

AM 500

SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass (motor driven)
CH	Comfort heating surface
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, extracted air
PHS	Preheating surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven)

CC 500 COOLING MODULE

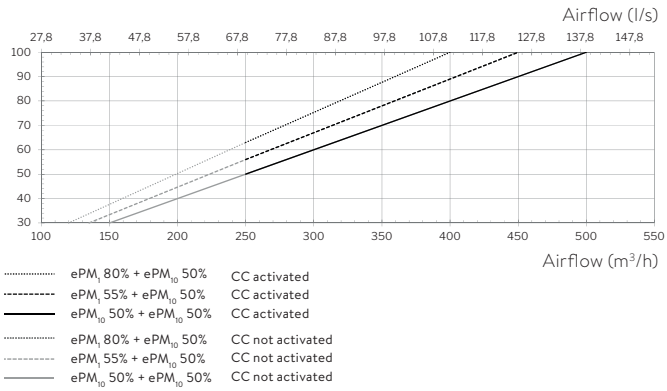
Read more about our inverter-controlled cooling modules on page 96.

TECHNICAL DATA

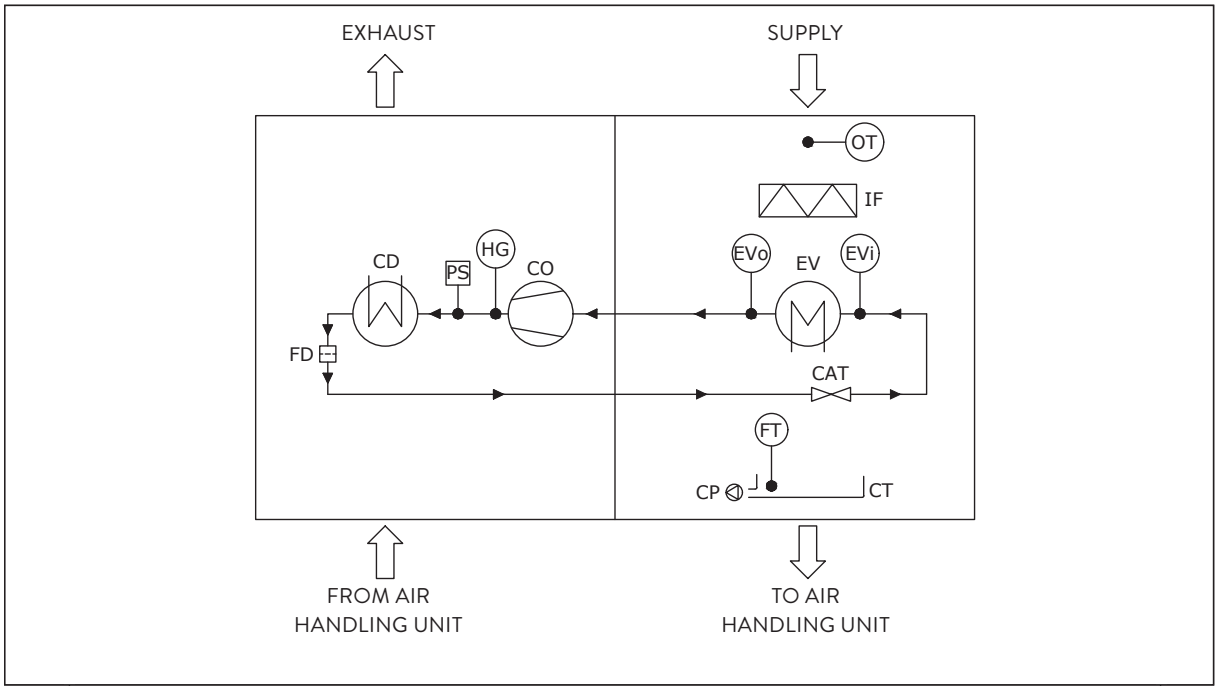
Nominal cooling capacity[1]	3280 W
Min. cooling capacity[1]	820 W
Nominal EER	3.16
Max. airflow	500 m^3/h
Min. airflow[2]	250 m^3/h
Electricity supply	1 x 230 V + N + PE / 50 Hz
Nominal electrical output	1040 W
Nominal current strength	6.4 A
Electrical output factor	0.71
Max. leakage current	1.5 mA
Coolant	R410a
Filling	480 g
Duct connection	Ø250 mm
Drain hose, internal/external diameter	Ø6/9 mm
Energy class	A^+
Weight	82,8 kg
Dimensions incl. unit (WxHxD)	1600 x 439 x 1185 mm

[1] Measured according to EN 308 and EN 14825 at max. airflow with ePM_{10} 50% filter.
[2] Cooling module activation.

CAPACITY AM 500 + CC 500



SCHEMATIC SKETCH CC



NAME OF COMPONENT

CAT	Capillary tube
CD	Condenser
CO	Compressor, inverter-controlled
CP	Condensate pump
CT	Condensate tray
EV	Evaporator
EVi	Evaporator, temperature inlet
EVo	Evaporator, temperature output
FD	Dry filter
FT	Float
HG	Hot gas temperature
OT	Outside temperature
PS	Pressure switch

AM 500 is not only good for medium-sized rooms in schools and institutions. The unit is also perfect for modular buildings, meeting rooms, and as seen in the picture, for medium-sized office areas. With our AM 500, you ensure a healthy indoor climate with fresh air for the brain – all day. This also applies for hot summer days! By adding a cooling module to the ventilation unit, the temperature of the outdoor air will be reduced with up to 15°C

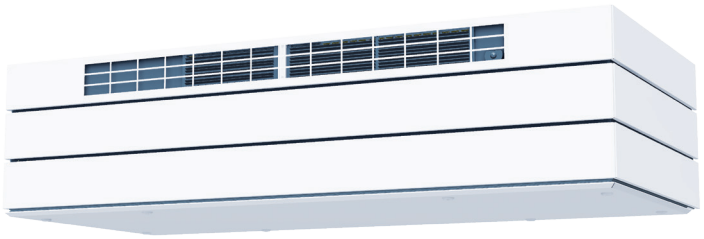
AM 800 is one of our medium-sized ventilation units, which i.a. fits perfectly in classrooms, institutions, offices and meeting rooms. The AM 800 is designed for larger rooms with moderate load and where there is a need for efficient air exchange. The AM 800 is, like our other units, quiet and is therefore not a disturbing element in the room. AM 800 can also be demand-controlled with e.g. CO_2 sensors. This way, the units only ventilates when there is a need for it – and with exactly the required amount of air.

AM 800

This air handling unit is designed for large rooms with moderate requirement and is thus perfect for classrooms. A horizontal or vertical model can be installed, depending on the room and location of the unit. The air handling unit is available with a separate control panel and can also be connected to a network system.

A cooling module can be connected.

Ducts can be connected to extract, to inlet or to both.



TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)
Maximum capacity[1]	ePM_{10} 50%	650 m³/h	725 m³/h
	ePM_1 55%	585 m³/h	653 m³/h
	ePM_1 80%	520 m³/h	580 m³/h
Throw length (0.2 m/s)[1]	ePM_{10} 50%	7.7 m at 650 m³/h	8.3 m at 725 m³/h
	ePM_1 55%	7.2 m at 585 m³/h	7.7 m at 653 m³/h
	ePM_1 80%	6.7 m at 520 m³/h	7.2 m at 580 m³/h
Nominal current[2]		1.1 A	
Nominal power consumption[2]		156 W	
Electrical connection		1 x 230 V + N + PE / 50 Hz	
Duct connections		Ø315 mm	
Condensate drain, int./ext.		Ø6/9 mm	
Weight		157 kg	
Counterflow heat exchanger		2 x Aluminium	
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	
Extract air filter		ePM_{10} 50%	
Colour, casing		RAL 9010 (white)	
Power factor		0.56	
Power cable		3 x 1.5 mm²	
Recommended fuse		13 A	
Maximum fuse		16 A	
Recommended residual current circuit breaker (RCCB)		Type A	
Leakage current		≤ 6 mA	
Air leakage classification		Class L2 cf. EN 1886:2007 Class A1 cf. EN 13141-7:2010	
Dimensions (WxHxD)		1910 x 474 x 916 mm	

[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 grilles
[2] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%

ELECTRIC HEATING SURFACE	PRE-HEATER	COMFORT HEATER
Heat output	1500 W	1000 W
Thermal circuit breaker, aut. reset	50°C	50°C
Thermal circuit breaker, man. reset	75°C	75°C

WATER HEATING SURFACE	COMFORT HEATER
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	1379 W[3]
Connection dimension	1/2" (DN 15)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

[3] Capacity at: supply/return temperature 60/40°C, water volume 60 l/h

STANDARD AND OPTIONS	AM 800
Counterflow heat exchanger (aluminium)	X
Enthalpy counterflow heat exchanger (polymer membrane)	O
Combination counterflow heat exchanger (polymer membrane)	O
Motor driven bypass	X
Motor driven exhaust air damper	X
Motor driven supply air damper	X
Capacitive return for motorized exhaust and supply air dampers	●
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
Service power switch	O
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
PIR/motion sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●
Hygrostat (wall-mounted)	O

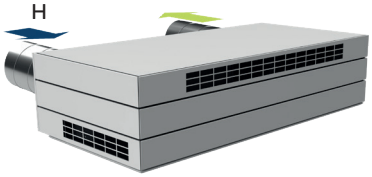
Energy meter	●
Cooling module (only for horizontal model)	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	O
Extract air filter ePM_{10} 50%	●
Wall frame	●
Ceiling frame	●
Boomerain® façade ventilation grille Ø315	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	O
KNX® Module	O
Mini B USB (on front of unit)	O

X : Standard ● : Optional O : Special item

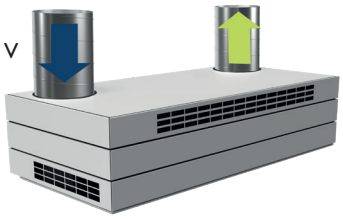
AM 800 VERSIONS

Versions exhaust / supply

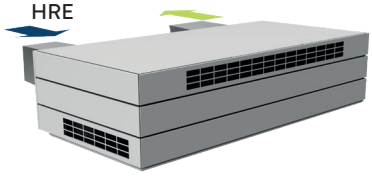
H



V



HRE



Exhaust

Supply

H: **H**orizontal

V: **V**ertical

HRE: **H**orisontal - **Rec**tangular

Versions inlet / extract

Inlet

Extract

T: **T**op

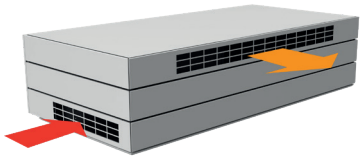
C: **C**enter

B: **B**ottom

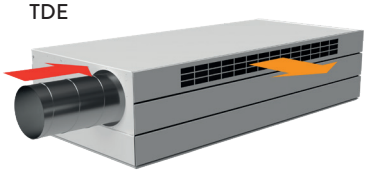
DI: **D**ucted **I**nlet

DE: **D**ucted **E**xtract

T



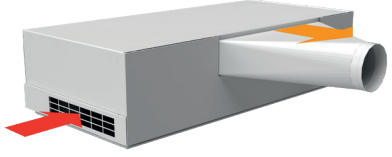
TDE



C

CDE

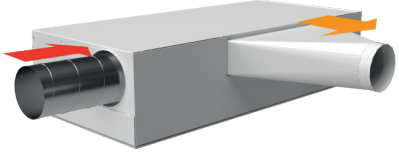
DIB



B

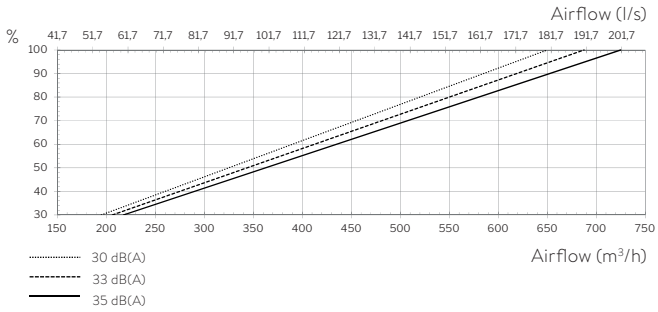
BDE

DIDE

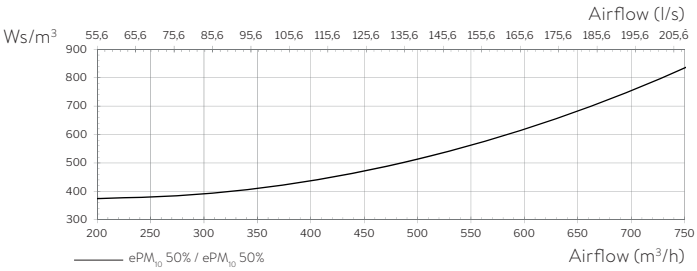


AM 800

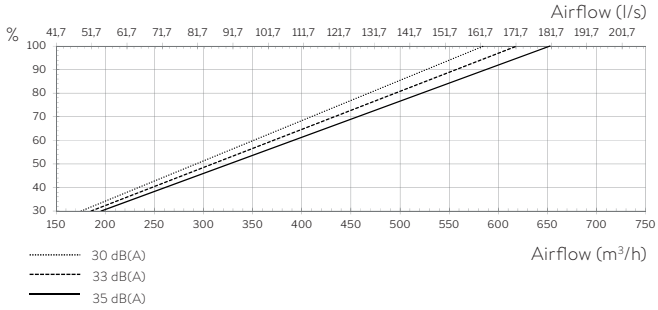
CAPACITY with ePM_{10} 50% + ePM_{10} 50% filter [1]



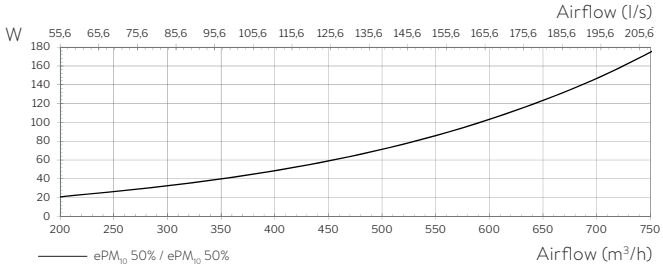
SFP [1]



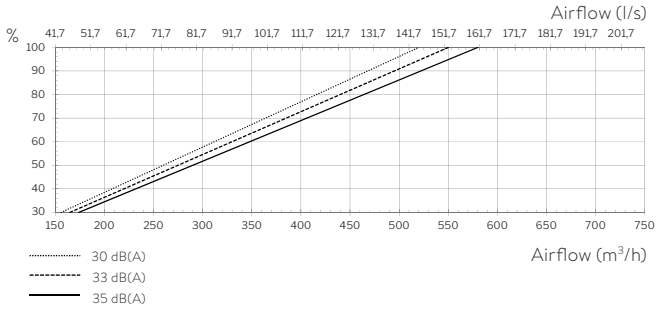
CAPACITY with ePM_1 55% + ePM_{10} 50% filter [1]



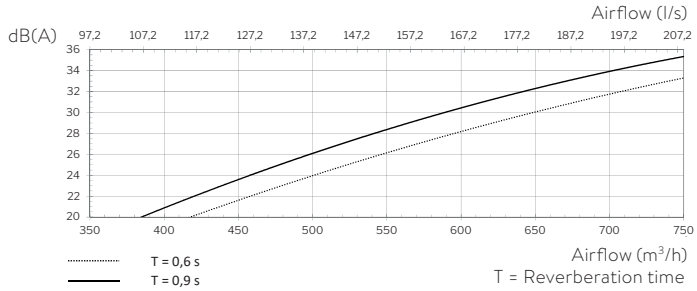
POWER CONSUMPTION [1]



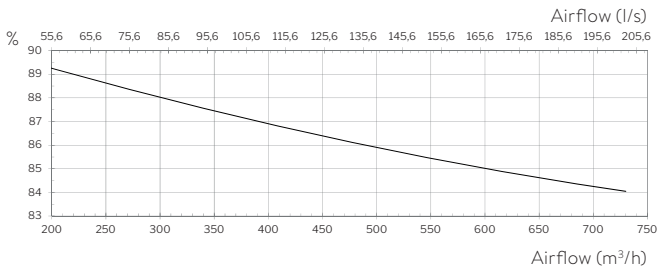
CAPACITY with ePM_1 85% + ePM_{10} 50% filter [1]



SOUND PRESSURE [1, 2]

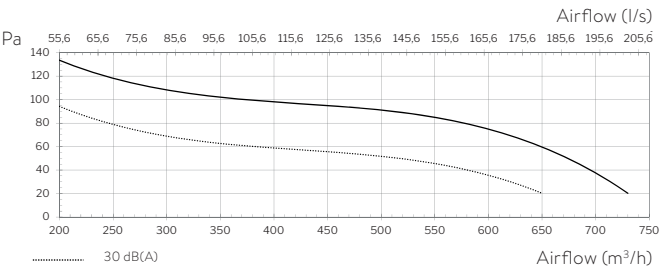


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997



Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

EXTERNAL PRESSURE LOSS



[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 grilles

[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m^3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7.5 dB.

AM 800

Sound pressure level, L_{WA} [dB(A)], acc. EN/ISO 3744

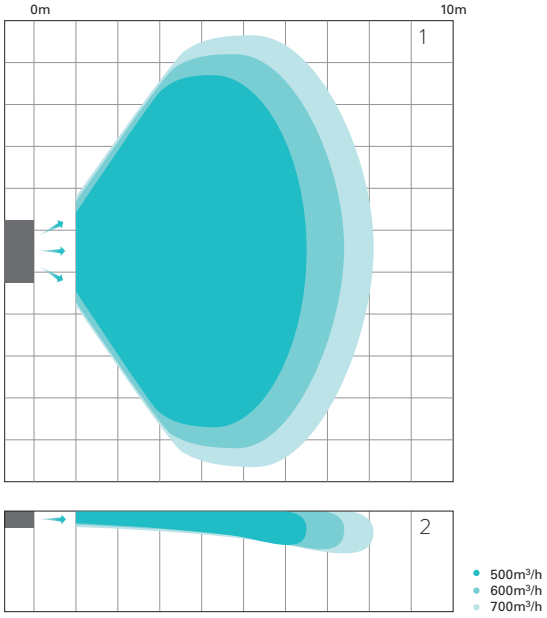
Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Ø L_{WA}	$L_{p,eq}$ [2,3]	q_v [m³/h]
filter:	28	33	28	30	25,1	20,2	19,9	18,3	36,8	30	650
ePM_{10} 50% +	31	35	31	32	28	23,7	21	18,8	39,2	33	688
ePM_{10} 50%	33	39	34	34	31,8	25,9	22,8	19,1	42,1	35	725
filter:	29	33	27	29	25,4	19,7	19,8	18,3	36,8	30	585
ePM_{10} 55% +	31	36	32	32	28,1	22,8	20,9	18,8	39,8	33	619
ePM_{10} 50%	34	39	33	35	32,3	25	22,5	19	42,6	35	653

$L_{p,eq}$, Sound pressure level [dB(A)] at 1 m distance.

THROW

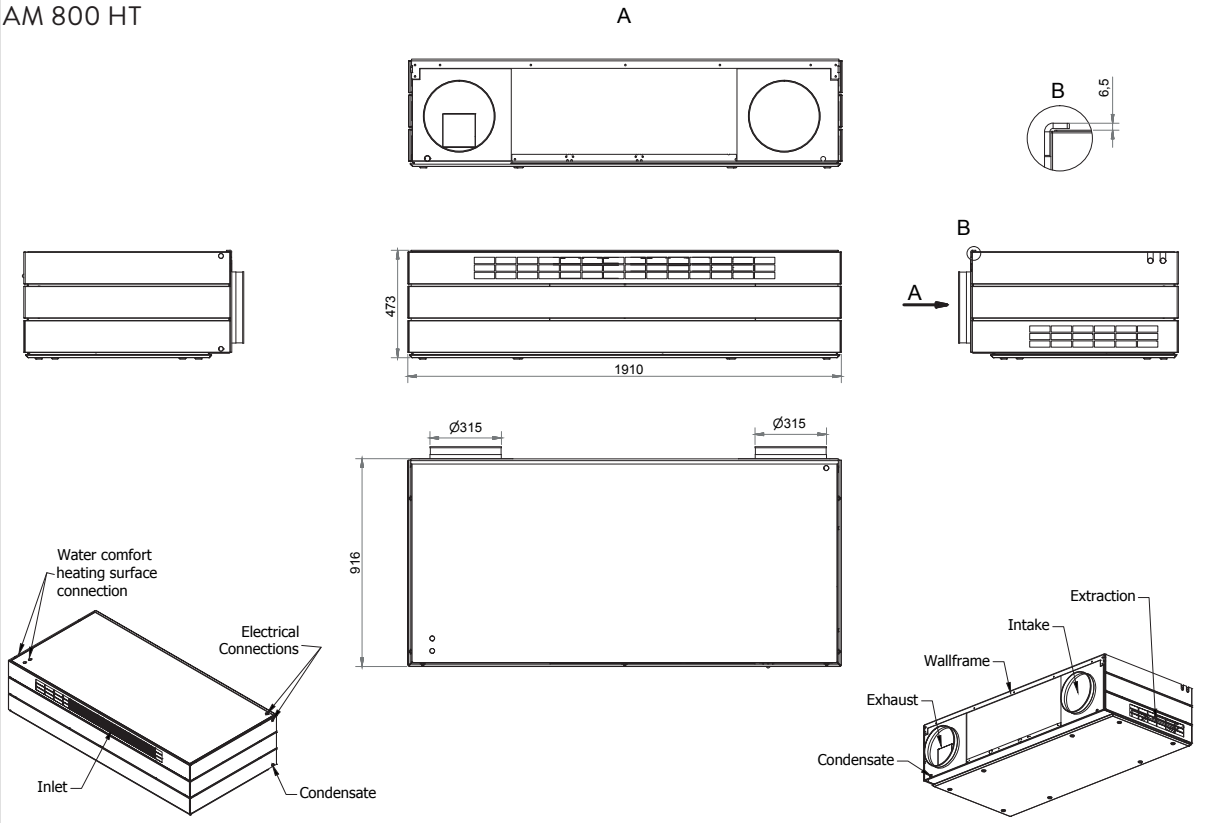
Airmaster air handling units spread an air stream in different directions, depending on the given airflow. This can be seen in the illustration, in which the blue shading indicates airflows for the different throws.

[1] Throw seen from above
[2] Throw seen from the side



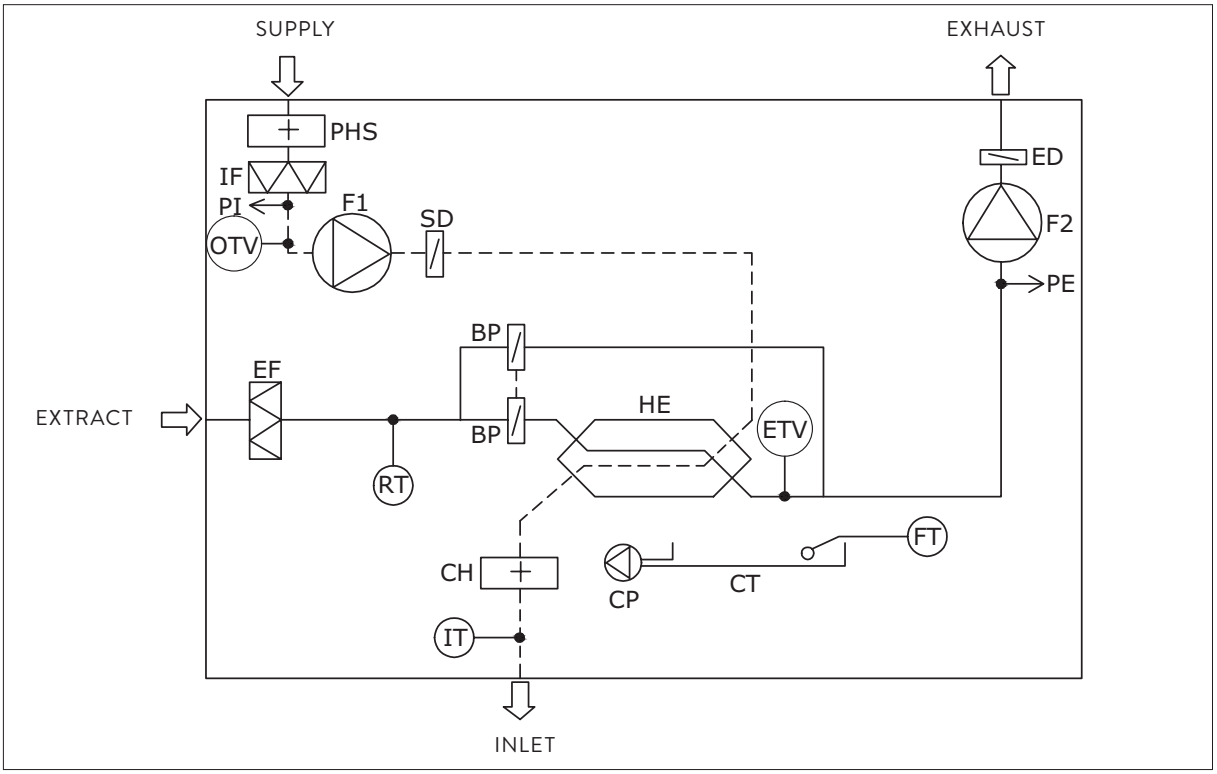
AM 800

AM 800 HT



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass (motor driven)
CH	Comfort heating surface
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, extracted air
PHS	Preheater surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven)

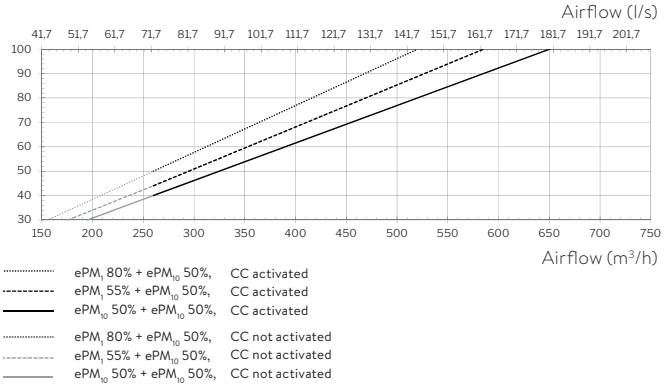
CC 800 COOLING MODULE

TECHNICAL DATA

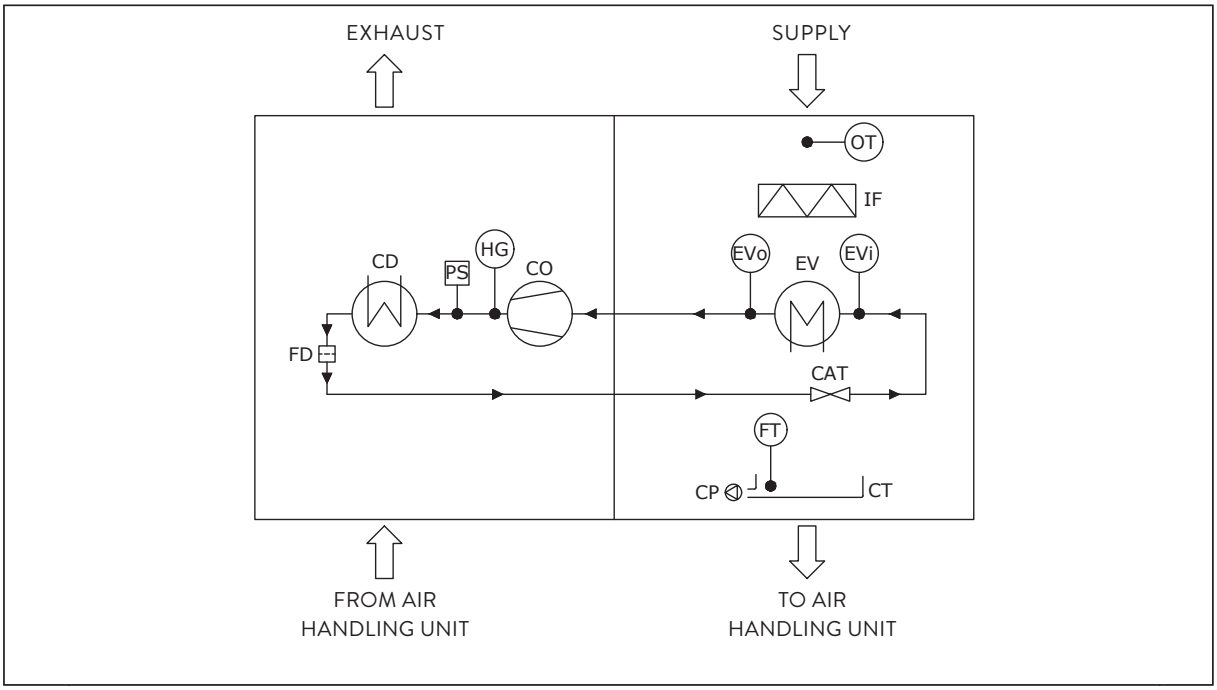
Nominal cooling capacity[1]	5240 W
Min. cooling capacity[1]	990 W
Nominal EER	4.72
Max. airflow	650 m^3/h
Min. airflow[2]	260 m^3/h
Electricity supply	1 x 230 V + N + PE / 50 Hz
Nominal electrical output	1110 W
Nominal current strength	6.8 A
Power factor	0.71
Max. leakage current	1,3 mA
Coolant	R410a
Filling	820 g
Duct connection	Ø315 mm
Drain hose, internal/external diameter	Ø6/9 mm
Energy class	A^{+++}
Weight	100,7 kg
Dimensions incl. unit (WxHxD)	1910 x 474 x 1321 mm

[1] Measured according to EN 308 and EN 14825 at max. airflow with ePM_{10} 50% filter.
[2] Cooling module activation.

CAPACITY AM 800 + CC 800

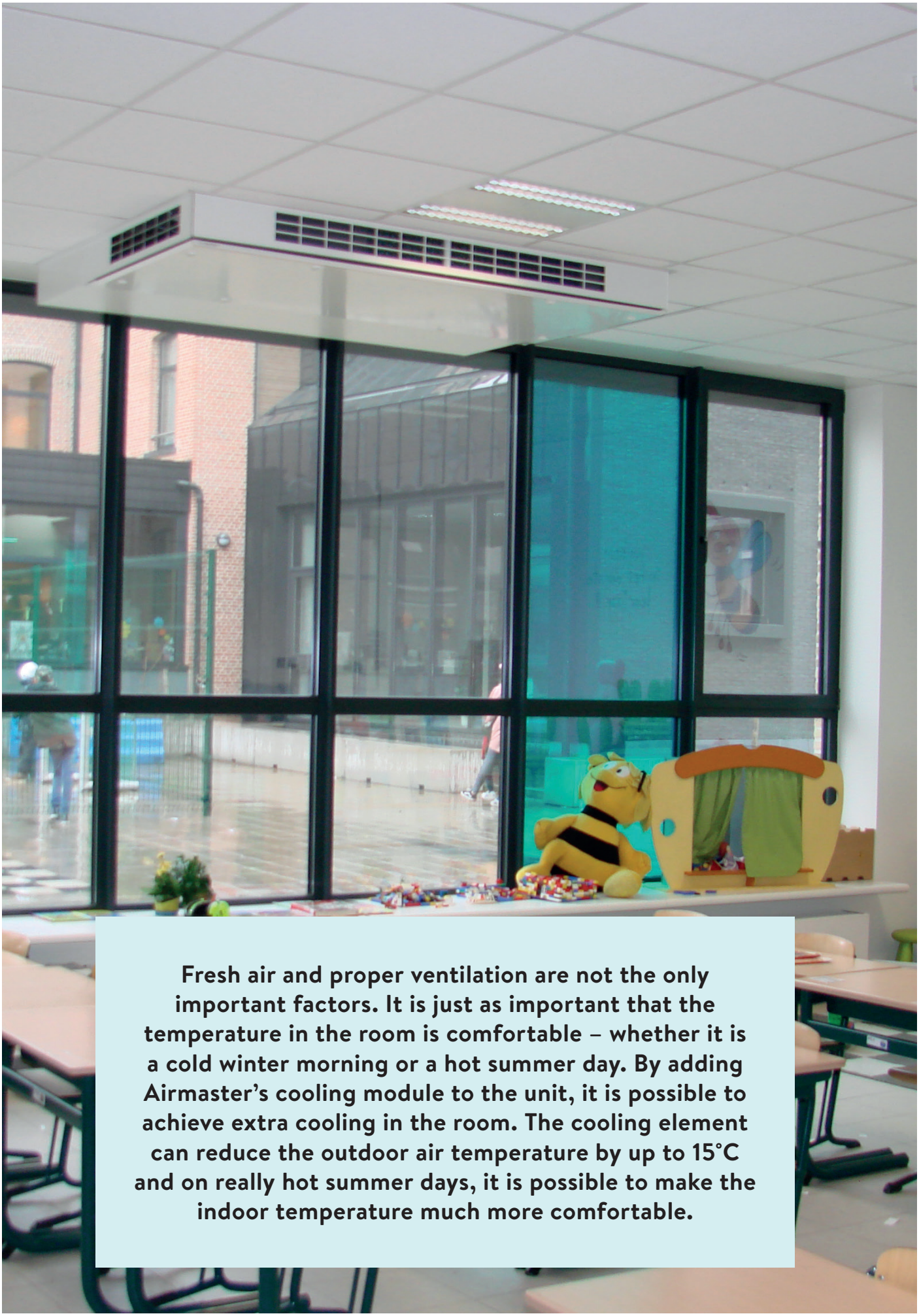


SCHEMATIC SKETCH CC

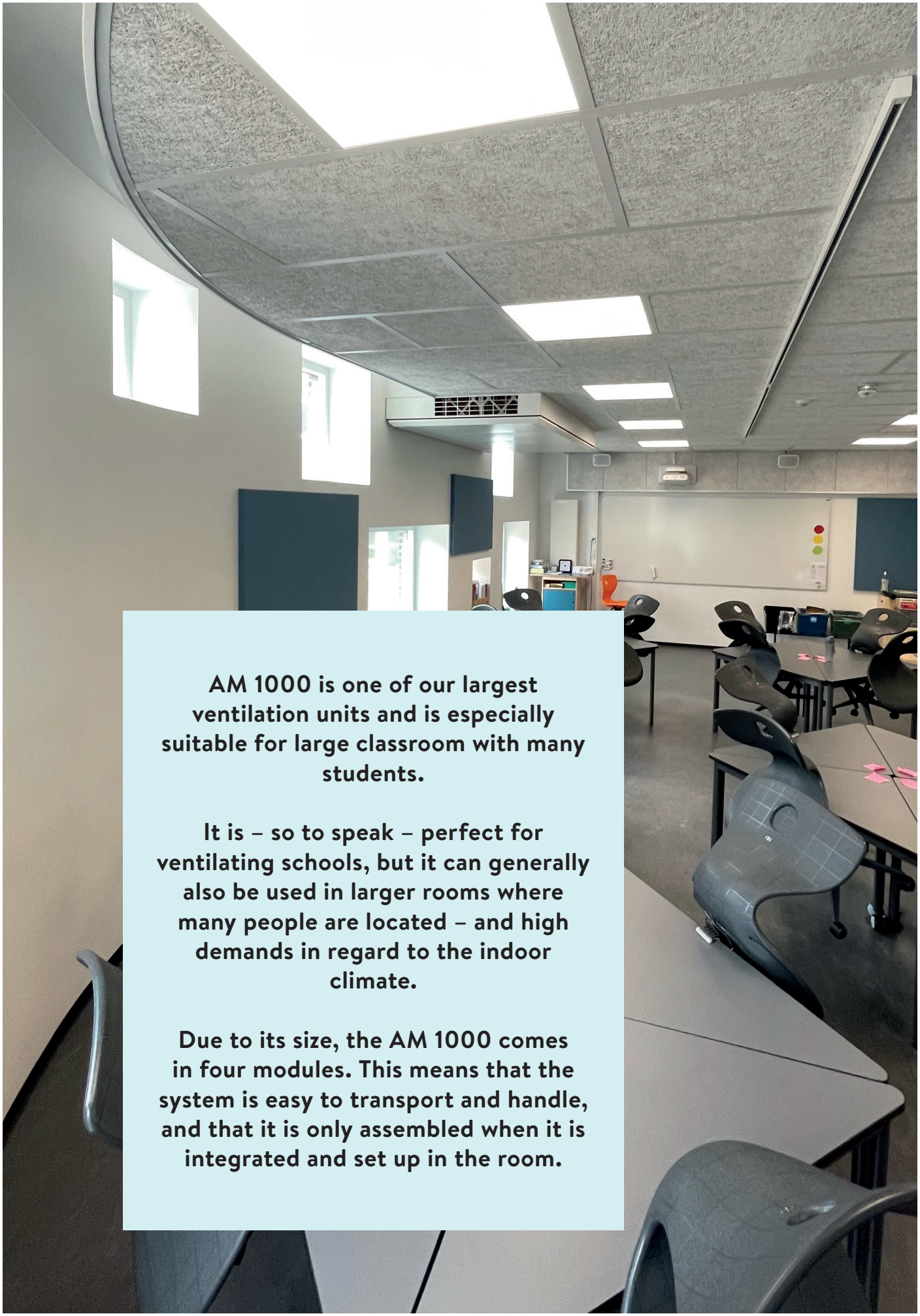


NAME OF COMPONENT

CAT	Capillary tube
CD	Condenser
CO	Compressor, inverter-controlled
CP	Condensate pump
CT	Condensate tray
EV	Evaporator
EVi	Evaporator, temperature inlet
EVo	Evaporator, temperature output
FD	Dry filter
FT	Float
HG	Hot gas temperature
OT	Outside temperature
PS	Pressure switch



Fresh air and proper ventilation are not the only important factors. It is just as important that the temperature in the room is comfortable – whether it is a cold winter morning or a hot summer day. By adding Airmaster's cooling module to the unit, it is possible to achieve extra cooling in the room. The cooling element can reduce the outdoor air temperature by up to 15°C and on really hot summer days, it is possible to make the indoor temperature much more comfortable.



AM 1000 is one of our largest ventilation units and is especially suitable for large classroom with many students.

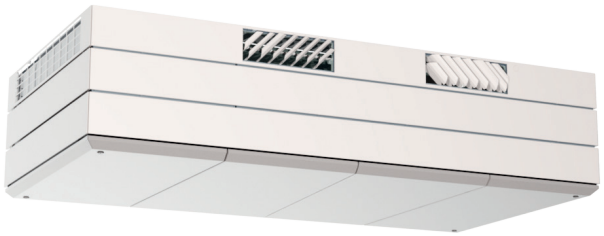
It is – so to speak – perfect for ventilating schools, but it can generally also be used in larger rooms where many people are located – and high demands in regard to the indoor climate.

Due to its size, the AM 1000 comes in four modules. This means that the system is easy to transport and handle, and that it is only assembled when it is integrated and set up in the room.

AM 1000

AM 1000 is a highly competitive solution developed for ventilation in classrooms, but can of course be used anywhere with high requirements for comfort and healthy indoor climate.

Active noise control
The active noice control technology is excellent at reducing low-frequency noise, which normally requires a large damper area.



TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)
Maximum capacity[1]	ePM_{10} 50%	950 m³/h	1050 m³/h
	ePM_1 55%	926 m³/h	1024 m³/h
	ePM_1 80%	903 m³/h	998 m³/h
Throw (0.2 m/s)		8.0 m	9.5 m
Nominal current[2]		2.2 A	
Nominal power consumption[2]		305 W	
Electrical connection		1x230V+N+PE / 3x230/400V+N+PE[4]	
Duct connections		Ø315 mm[3]	
Condensate drain, int./ext.		Ø6/9 mm	
Weight, standard unit complete		301.5 kg	
Counterflow heat exchanger		2 x Aluminium	
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	
Extract air filter		ePM_{10} 50%	
Colour, panel		RAL 9010 (white)	
Power factor		0.60	
Power cable		5 x 2.5 mm²	
Recommended fuse		3 x 13 A	
Maximum fuse		16 A	
Recommended residual current circuit breaker (RCCB)		Type A	
Leakage current		≤ 4 mA	
Air leakage classification		Class L2 cf. EN 1886:2007 Class A1 cf. EN 13141-7:2010	
Dimensions (WxHxD)		2325 x 561 x 1283 mm	

[1] Measurements taken with unit model AM 1000 HHTT built-in as standard using Airmaster's recommended wall grille 400 mm di[a.]
[2] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%
[3] Horizontal supply/exhaust using Airmaster Boomerain® Ø315 or Ø400 mm wall grille.
[4] The supply can be limited to a single-phase, connected to L1. Only for air handling units without electric heating surface or only with electric comfort heater.

ELECTRIC HEATING SURFACE	PRE-HEATER	COMFORT HEATER
Heat output	2300 W	1500 W
Thermal circuit breaker, aut. reset	50°C	50°C
Thermal circuit breaker, man. reset	75°C	75°C

WATER HEATING SURFACE	
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	2540 W[5]
Connection dimension	1/2" (DN 15)
Materials pipes/fins	kobber/aluminium
Open/close time, motor valve	60 s

[5] Capacity at: supply/return temperature 60/40°C, water volume 112 l/h

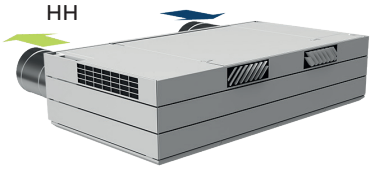
STANDARD AND OPTIONS	AM 1000
Counterflow heat exchanger (aluminium)	x
Enthalpy counterflow heat exchanger (polymer membrane)	o
Combination counterflow heat exchanger (polymer membrane)	o
Motor driven bypass	x
Motor driven exhaust air damper	x
Motor driven supply air damper	x
Capacitive return for motorized exhaust and supply air dampers	●
Adaptive Airflow™	●
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
PIR/motion sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●
Hygrostat (wall-mounted)	o
Energy meter single-phase or three-phase	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	o
Extract air filter ePM_{10} 50%	●
Wall / Ceiling frame	x
Boomerain® façade ventilation grille Ø315	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	o
KNX® Module	o

x : Standard ● : Optional o : Special item

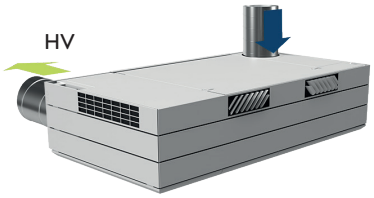
AM 1000 VERSIONS

Versions exhaust / supply

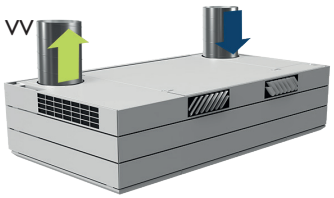
HH



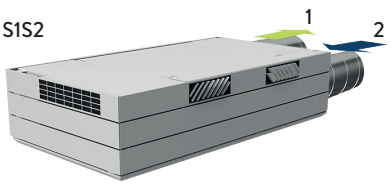
HV



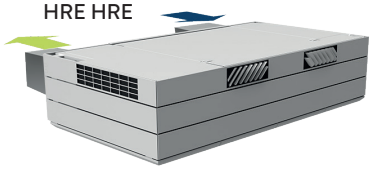
VV



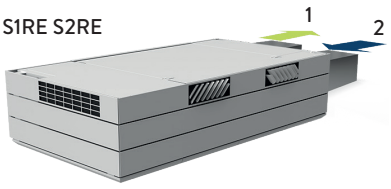
S1S2



HRE HRE



S1RE S2RE



Exhaust

Supply

H: **H**orizontal

V: **V**ertical

S1: **S**ide (towards the rear)

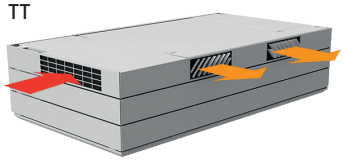
S2: **S**ide (towards the front)

HRE: **H**orizontal **Re**ctangular

SRE: **S**ide **Re**ctangular

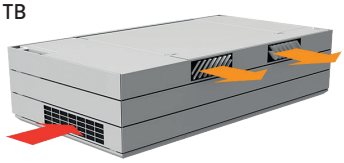
Versions inlet / extract

TT



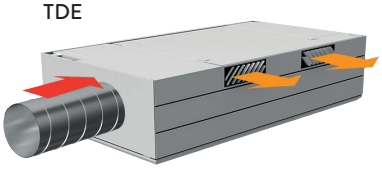
BB

TB

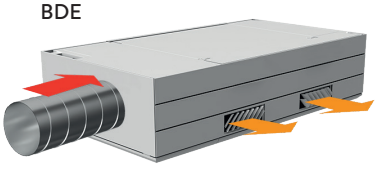


DIT

TDE



BDE



DIDE

Inlet

Extract

T: **T**op

B: **B**ottom

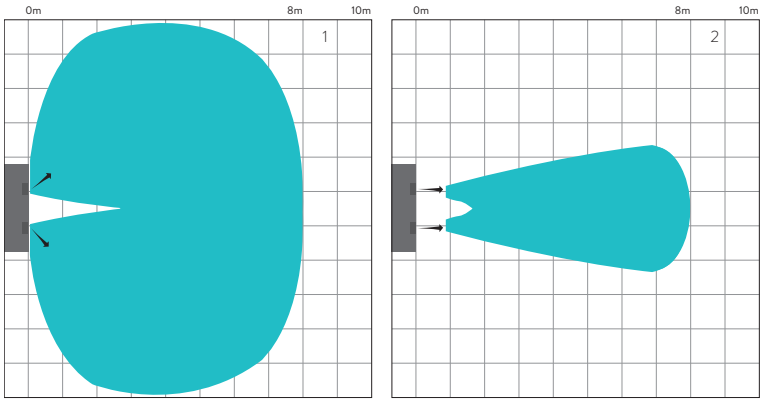
DI: **D**ucted **I**nlet

DE: **D**ucted **E**xtract

AM 1000 THROW

Variable inlet with AM 1000. The inlet is divided into two separate inlet grilles, each of which forms a stream. Both grilles have variable louvres. The streams achieve maximum spread at full airflow. This tends to cause a short throw. The streams are concentrated together when a small airflow is used, which tends to cause a long throw. Adjustment is gradual and automatic, based on the built-in flow measurement. This method ensures an almost constant throw adapted to the length of the room.

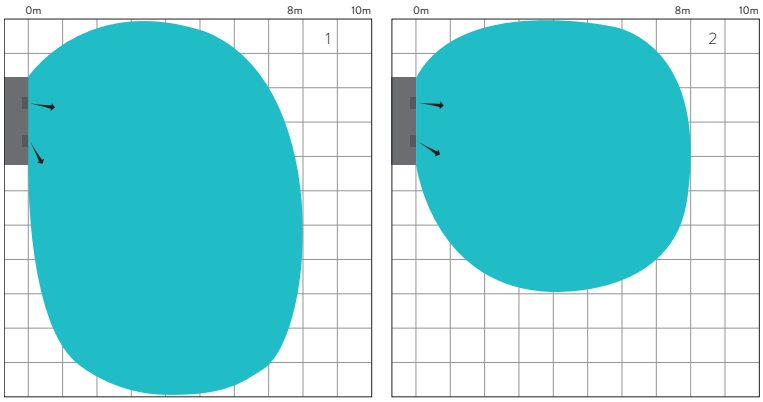
SYMMETRIC MOUNTING IN THE ROOM WITH ADAPTIVE AIRFLOW™



1. At maximum air volume with separate streams.
2. At minimum air volume with concentrated streams.

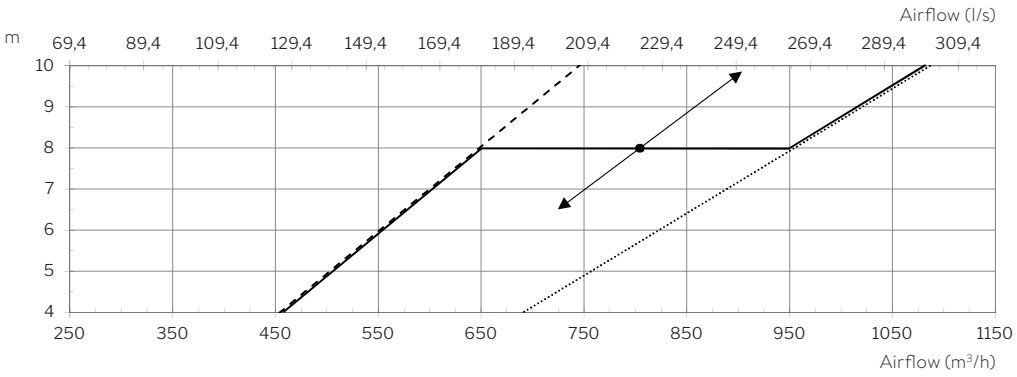
ASYMMETRIC MOUNTING IN THE ROOM WITH ADAPTIVE AIRFLOW™

If the type of room or building only makes asymmetric mounting possible, we recommend to order a directional inlet grille..



1. At maximum air volume with separate streams.
2. At minimum air volume with concentrated streams.

THROW LENGTH: [1]



Inlet diffuser assembled

Inlet diffuser spread

Setpoint throw

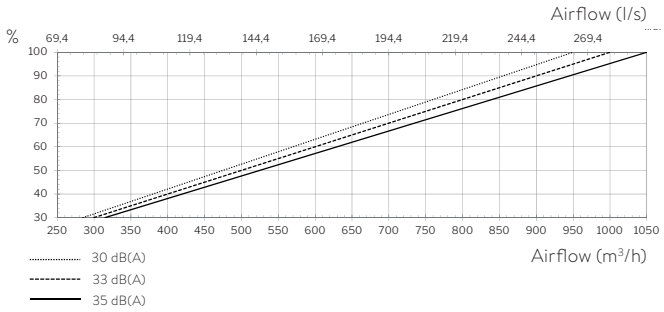
[1] The throw is measured with 2°C subcooled inlet.

Throw set as standard to 8 m.

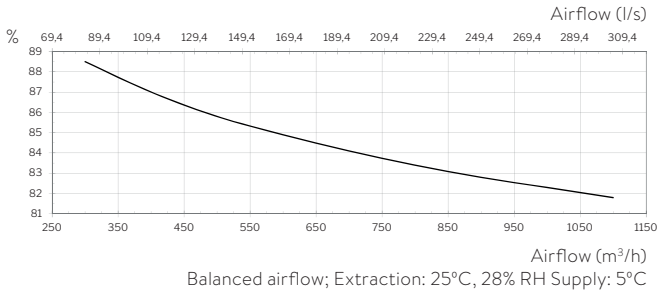
Set point for throw can be adjusted using a PC with Airlinq® Service Tool installed.

AM 1000

CAPACITY with ePM_{10} 50% + ePM_{10} 50% filter [1]

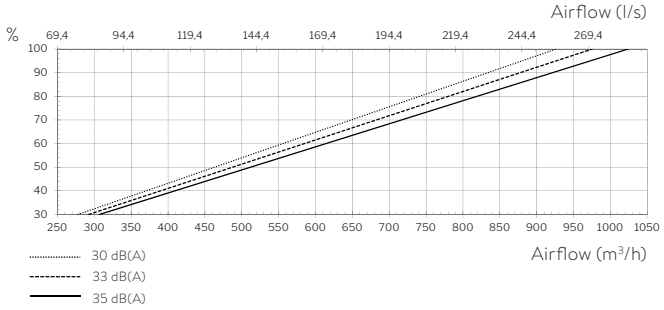


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997

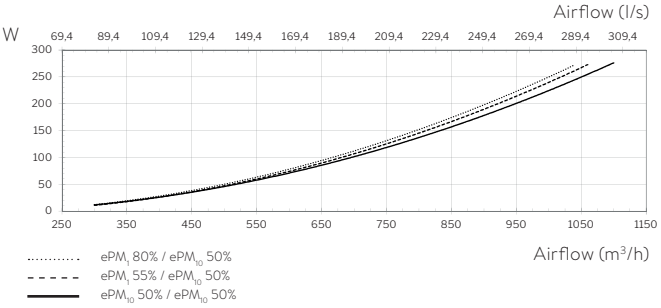


Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

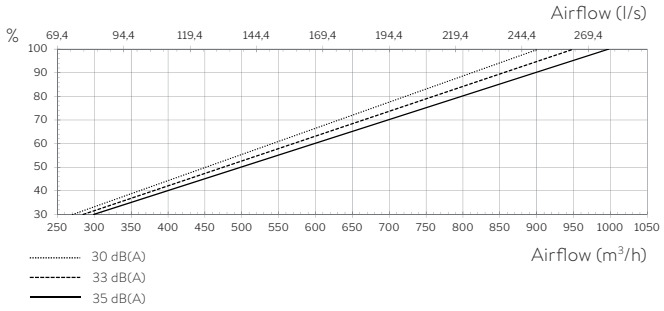
CAPACITY with ePM_1 55% + ePM_{10} 50% filter [1]



POWER CONSUMPTION[1]



CAPACITY with ePM_1 80% + ePM_{10} 50% filter [1]



Sound pressure level, L_{WA} [dB(A)], acc. ISO 9614-1

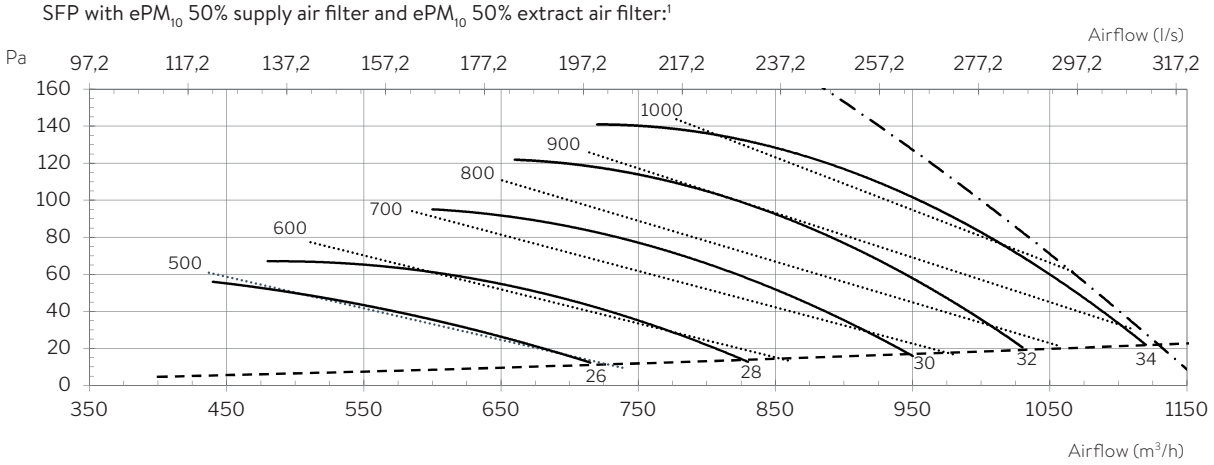
Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Combined
L_{WA} [dB(A)]	31,2	38,3	38,2	36,7	31,6	23,4	14,1	7,7	43,2

Data for the whole unit (including top) at 950 m³/h flow with ePM_{10} 50% / ePM_{10} 50% filters and standard grilles. A simplified calculation model which assumes a point source may for AM 1000 result in overestimation of sound pressure, especially if sound absorbing surfaces are located close to the unit.

[1] Measurements taken with unit model AM 1000 HHT built-in as standard using Airmaster's recommended wall grille 400 mm dia.

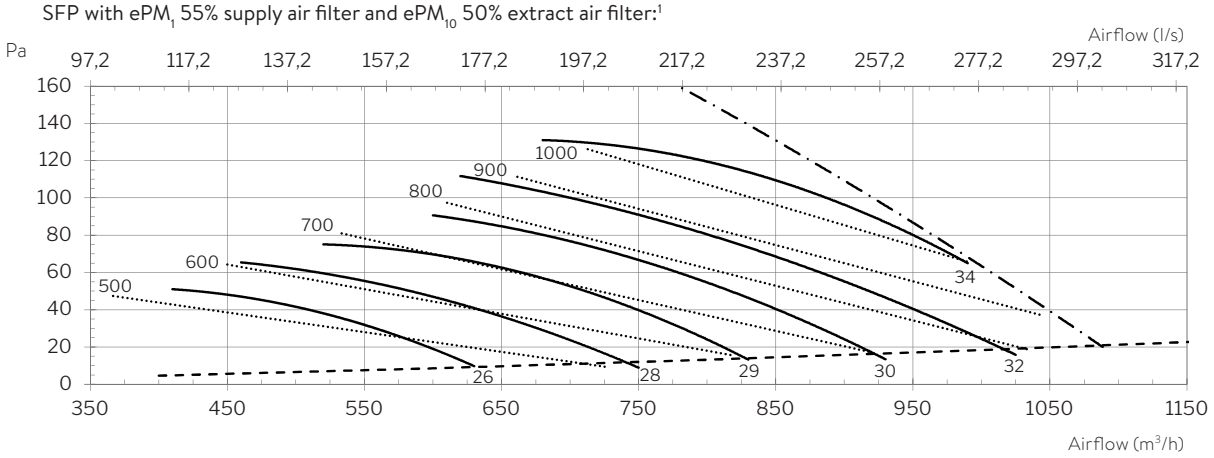
AM 1000

SFP with ePM_{10} 50% supply air filter and ePM_{10} 50% extract air filter:[1]



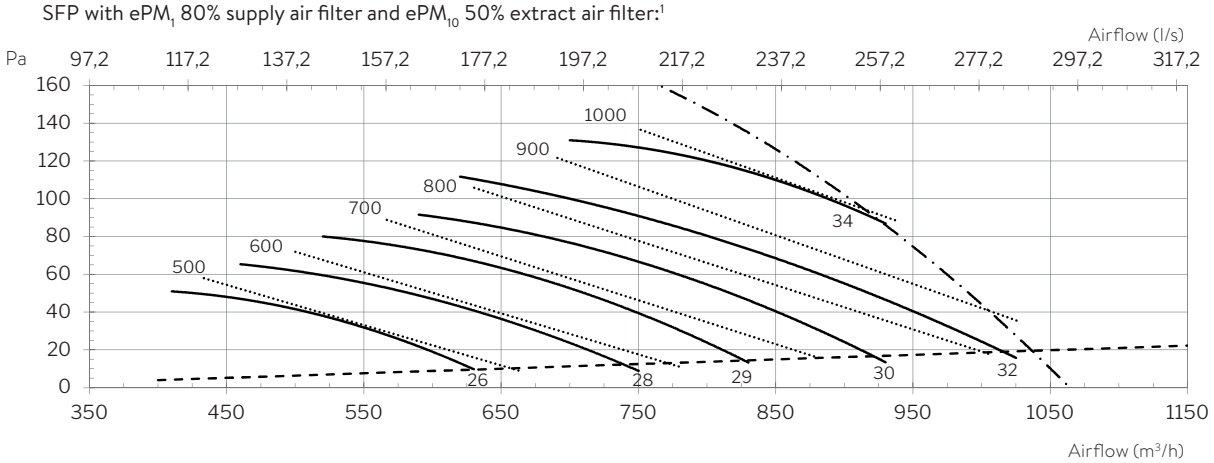
Sound Pressure Level[2] $L_{p,eq}$ [dB(A)]
SFP [Ws/m³]
Ø400 Grille
Maximum

SFP with ePM_1 55% supply air filter and ePM_{10} 50% extract air filter:[1]



Sound Pressure Level[2] $L_{p,eq}$ [dB(A)]
SFP [Ws/m³]
Ø400 Grille
Maximum

SFP with ePM_1 80% supply air filter and ePM_{10} 50% extract air filter:[1]

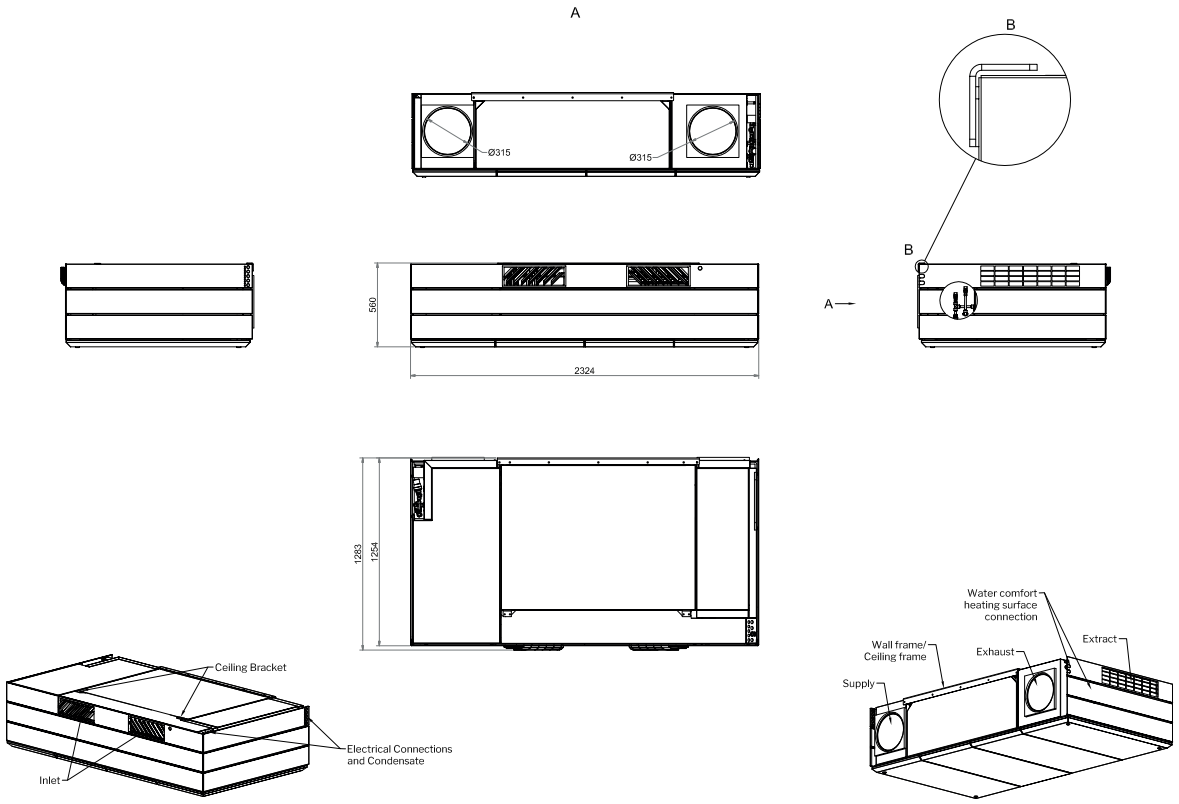


Sound Pressure Level[2] $L_{p,eq}$ [dB(A)]
SFP [Ws/m³]
Ø400 Grille
Maximum

[1] Measurements taken with unit model AM 1000 HHTT built-in as standard using Airmaster's recommended wall grille 400 mm dia.
[2] Sound pressure $L_{p,eq}$ is measured at a height of 1.2 m with 1 m horizontal distance from unit with room damping of 9 dB(A).

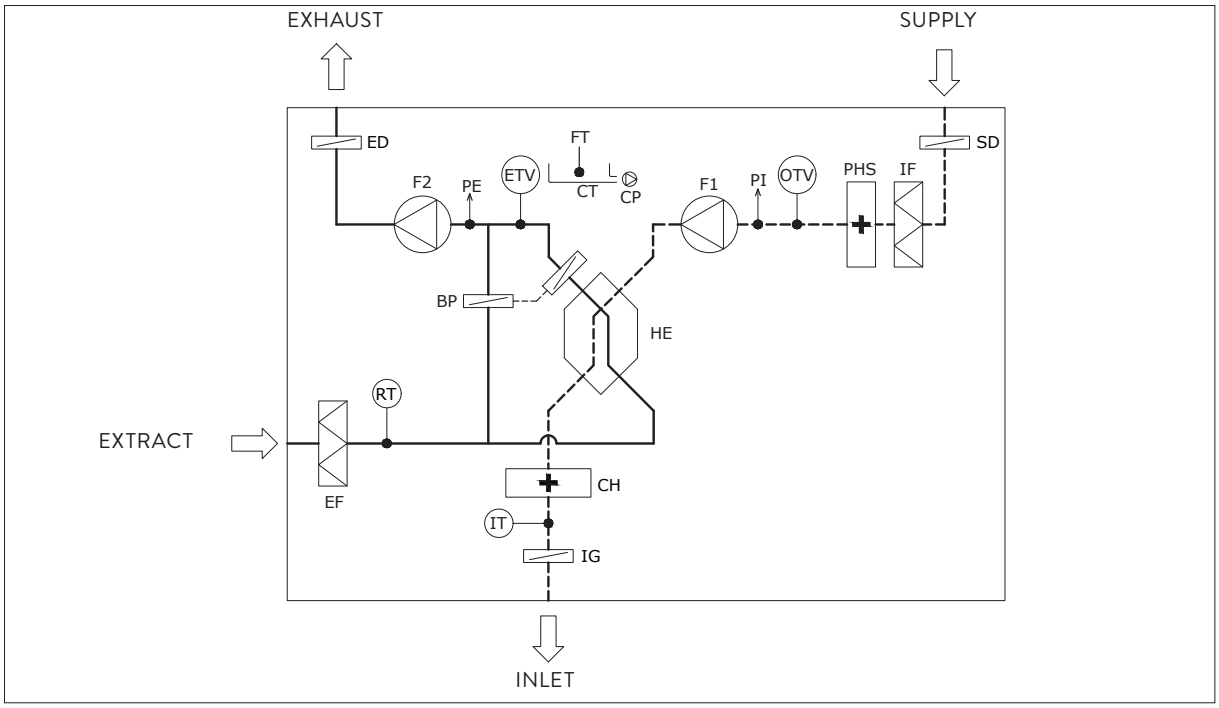
AM 1000

AM 1000 HHTT



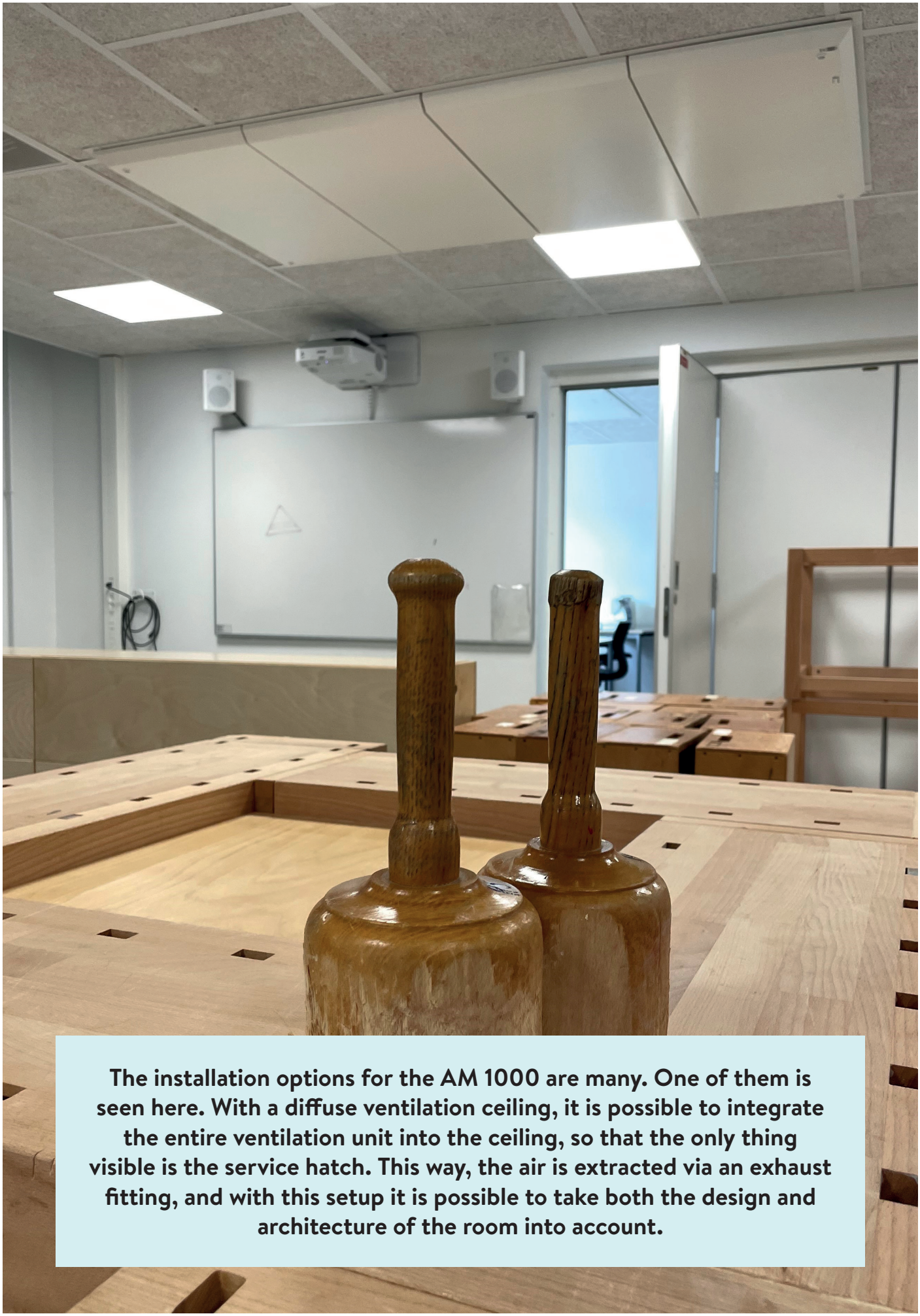
Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass (motor driven)
CH	Comfort heating surface
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IG	Inlet grille (motor driven)
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, extracted air
PHS	Preheating surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven)



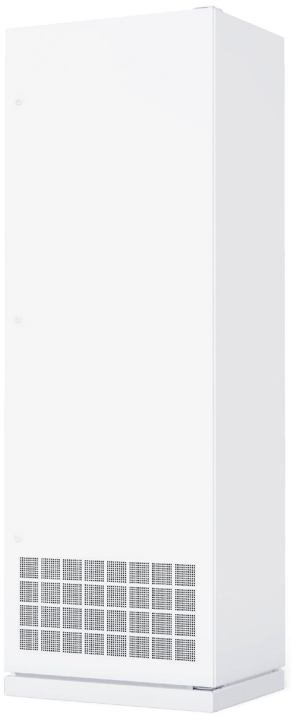
The installation options for the AM 1000 are many. One of them is seen here. With a diffuse ventilation ceiling, it is possible to integrate the entire ventilation unit into the ceiling, so that the only thing visible is the service hatch. This way, the air is extracted via an exhaust fitting, and with this setup it is possible to take both the design and architecture of the room into account.

With AM 900, you get a floor-standing decentralized ventilation unit that gives you fresh air and a healthy indoor climate. It fits perfectly into larger rooms, such as classrooms, meeting rooms or office landscapes, and can either be placed discreetly between i.e. cabinets or as an integral part of the décor.

AM 900

The AM 900 air handling unit is available in two model types: Mixing and displacement ventilation. The two different available ventilation principles provide great application of the unit and the model type is selected based on the layout and usage of the room. The unit can be placed on the floor or discreetly between cupboards, as an integrated part of the room.

The AM 900 is ideal for larger rooms, such as classrooms, meeting rooms and open plan offices.



TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)
Mixed			
Maximum capacity[1]	ePM_{10} 50%	690 m³/h	830 m³/h
	ePM_1 55%	669 m³/h	805 m³/h
	ePM_1 80%	649 m³/h	780 m³/h
Throw (0.2 m/s)[1]		6 m at 690 m³/h	7.2 m at 830 m³/h
Displacement ventilation			
Maximum capacity[1]	ePM_{10} 50%	650 m³/h	800 m³/h
	ePM_1 55%	631 m³/h	776 m³/h
	ePM_1 80%	611 m³/h	752 m³/h
Adjacent zone (0,2 m/s)[1]		Adjacent zone to outlet, approx. 1.2 m at 650 m³/h	Adjacent zone to outlet, approx. 1.5 m at 800 m³/h
Nominal current[2]		1.8 A	
Nominal power consumption[2]		240 W	
Electrical connection		1 x 230 V + N + PE / 50 Hz	
Duct connections		Ø315 mm	
Condensate drain		Ø4/6 mm	
Weight		180 kg	
Counterflow heat exchanger		3 x PET	
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	
Extract air filter		ePM_{10} 50%	
Colour, casing		Ral 9010 (white)	
Power factor		0.60	
Power cable		3 x 1.5 mm²	
Recommended fuse		13 A	
Maximum fuse		16 A	
Recommended residual current circuit breaker (RCCB)		Type A	
Leakage current		≤ 6 mA	
Dimensions (WxHxD)		Mixed: 800 x 2323 x 602 mm	
		Displ.: 800 x 2323 x 687 mm	
Minimum ceiling height		2490 mm	

[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 grilles
[2] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%

ELECTRIC HEATING SURFACE	PRE-HEATER	COMFORT HEATER
Heat output	1500 W	1050 W
Thermal circuit breaker, aut. reset	50°C	50°C
Thermal circuit breaker, man. reset	75°C	75°C

WATER HEATING SURFACE	COMFORT HEATER
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	2345 W[3]
Connection dimension	1/2" (DN 15)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

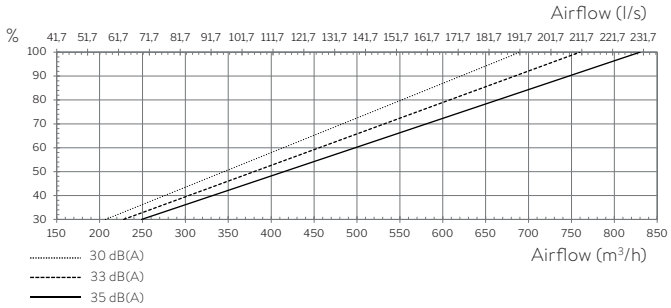
[3] Capacity at: supply/return temperature 60/40°C, water volume 111 l/h

STANDARD AND OPTIONS	AM 900
Counterflow heat exchanger (PET)	x
Enthalpy counterflow heat exchanger (polymer membrane)	o
Combination counterflow heat exchanger (polymer membrane)	o
Motor driven bypass	x
Motor driven exhaust air damper	x
Motor driven supply air damper	x
Capacitive return for motorized exhaust and supply air dampers	●
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●

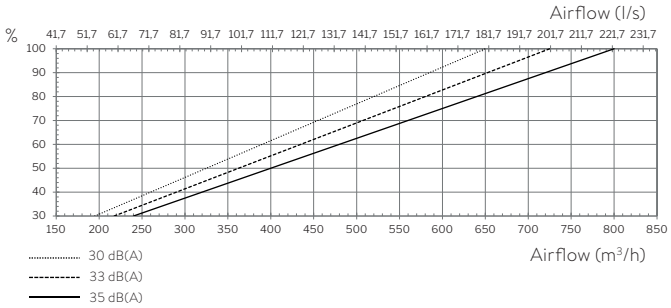
Hygrostat (wall-mounted)	o
Energy meter	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	o
Extract air filter ePM_{10} 50%	●
Boomerain® façade ventilation grill Ø315	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	o
KNX® Module	o

x : Standard ● : Optional o : Special item

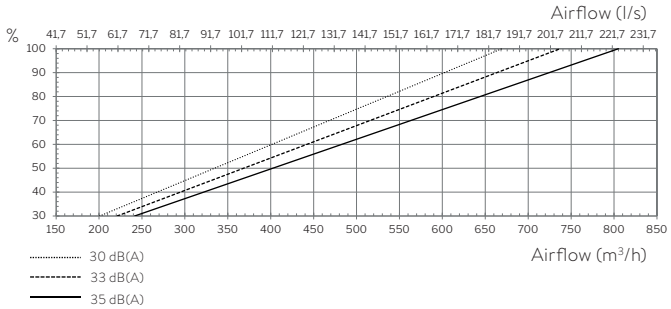
CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter - Mixed[1]



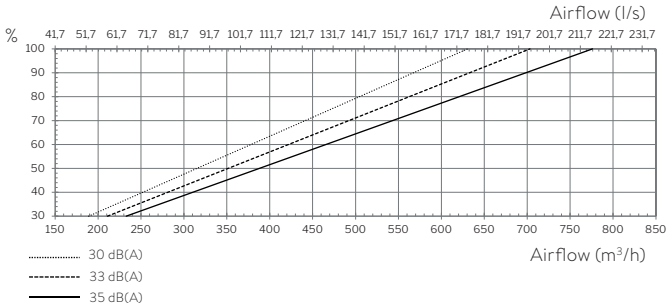
CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter - Displacement[1]



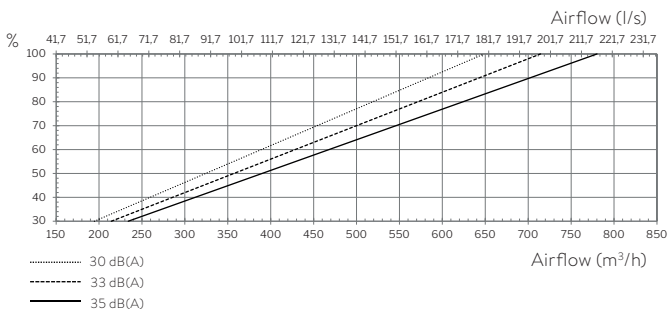
CAPACITY with ePM_1 55% / ePM_{10} 50% filter - Mixed[1]



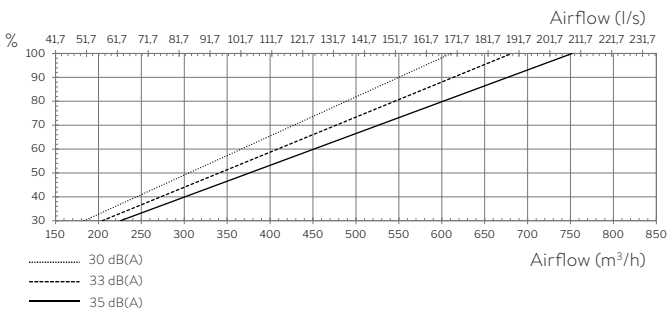
CAPACITY with ePM_1 55% / ePM_{10} 50% filter - Displacement[1]



CAPACITY with ePM_1 80% / ePM_{10} 50% filter - Mixed[1]



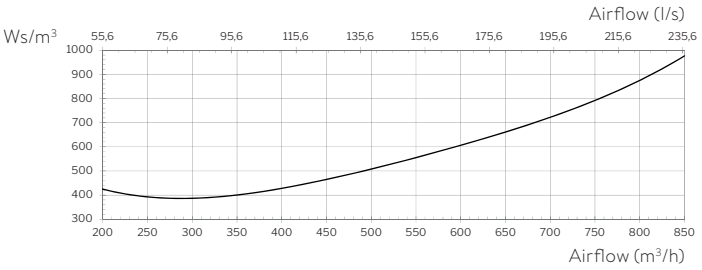
CAPACITY with ePM_1 80% / ePM_{10} 50% filter - Displacement[1]



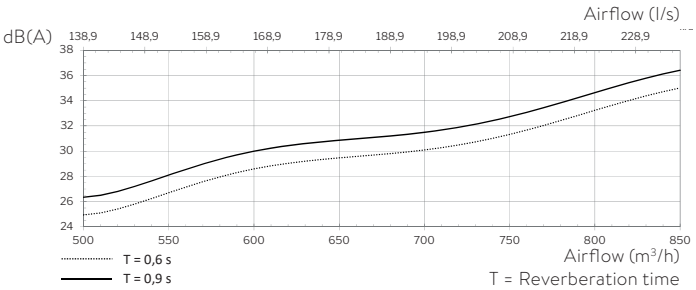
[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 grilles

AM 900

SFP

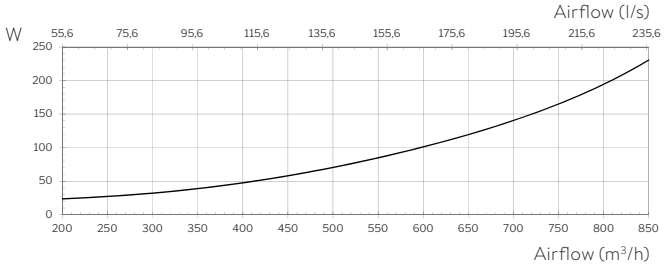


SOUND PRESSURE

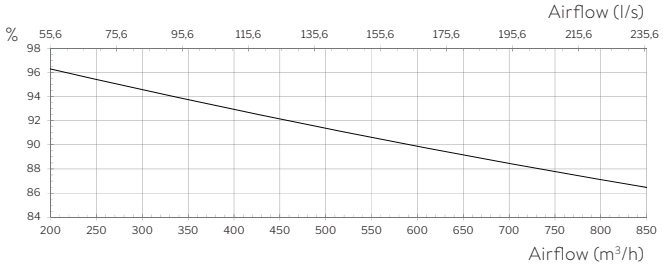


T = Reverberation time

POWER CONSUMPTION

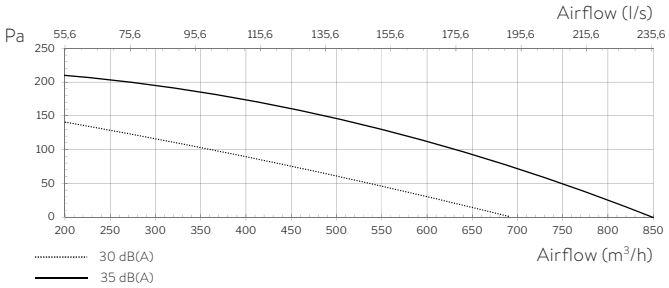


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997



Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

EXTERNAL PRESSURE LOSS

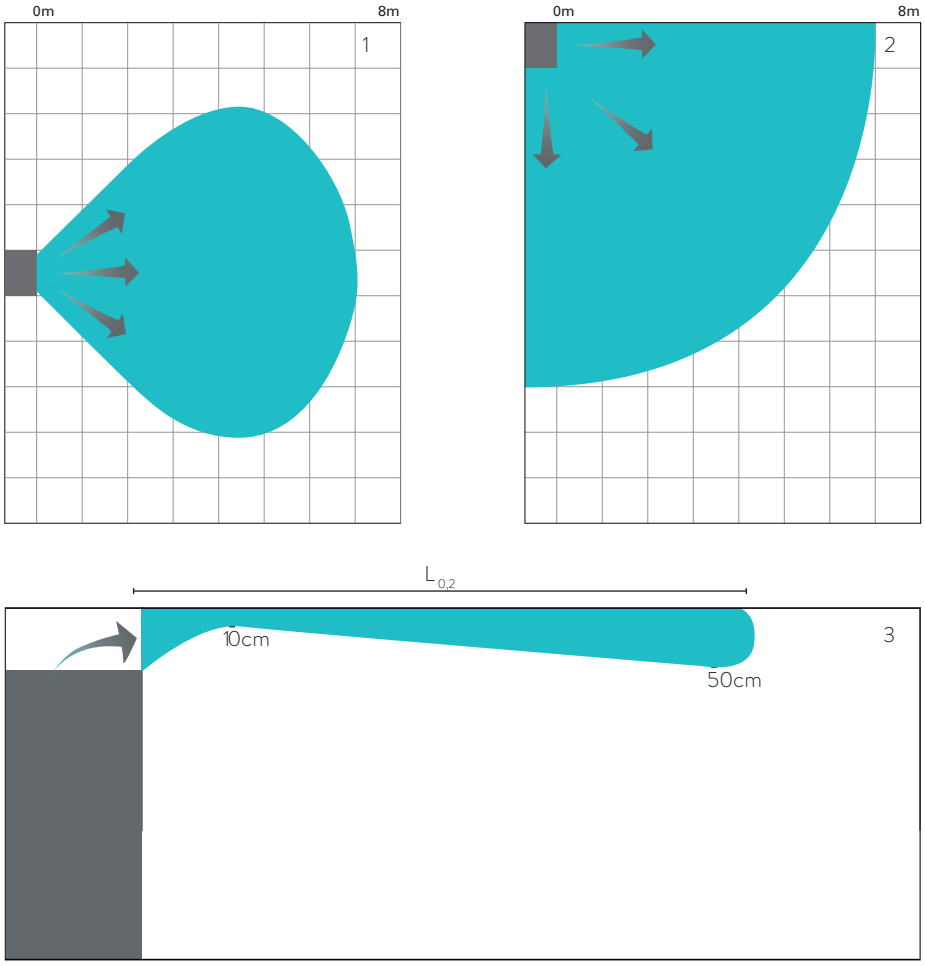


[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 grilles

[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m^3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7.5 dB.

AM 900

THROW - MIXED



Throw illustrated for airflow rate 830 m^3/h.
At other volume flow rates the throw can be extrapolated:
$L_2 = L_1 \times q_2 / q_1$.

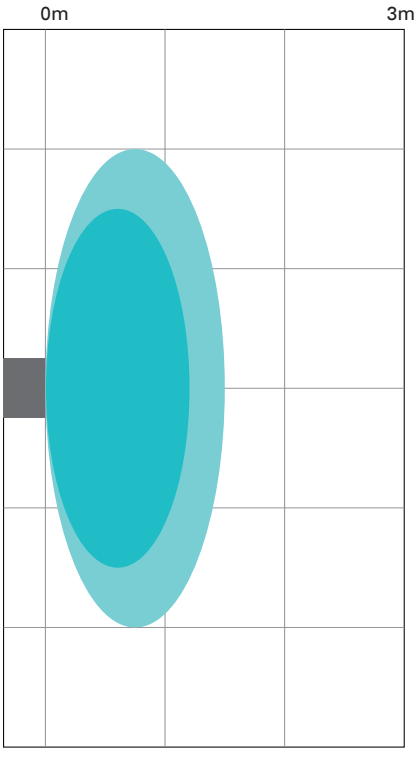
The AM 900 unit spreads an air stream below the ceiling depending on the given flow rate.

Blue shading in the illustration indicates spread pattern and throw.

1. Spread pattern seen from above, symmetric inlet (default).
2. Spread pattern seen from above, asymmetric inlet.
3. Spread pattern seen from the side.

Throw and spread of the supply air in the room can be adjusted to the geometry of the room by adjusting the inlet opening with a pair of plyers (see operator's manual).

ADJACENT ZONE - DISPLACEMENT



The result applies to an undertemperature of the inlet air of 3-5°C.

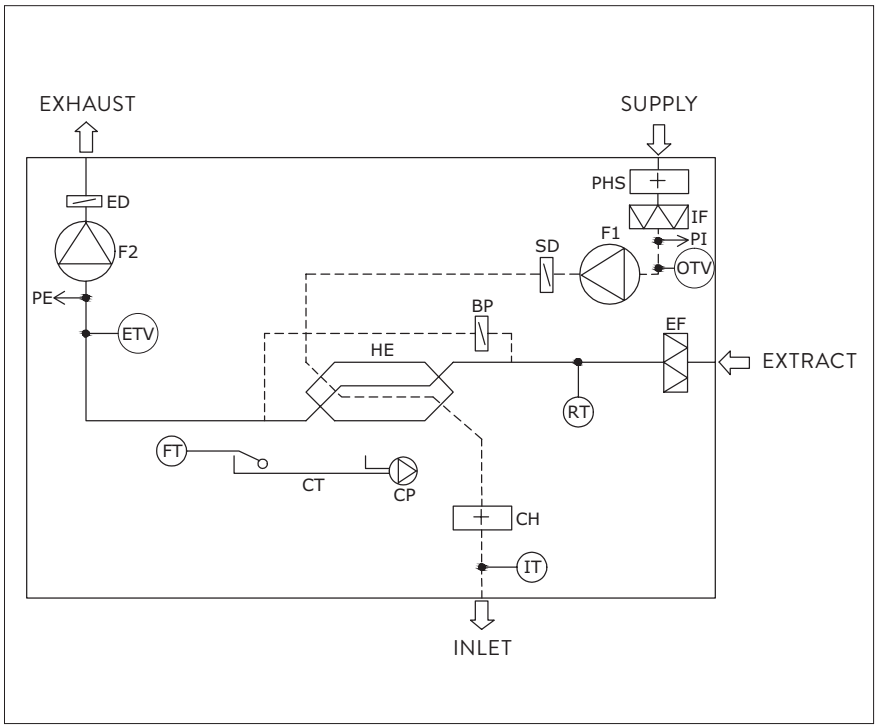
- 650m^3/h
- 800m^3/h

Notes regarding ceiling height
The AM 900 will fit into a room with minimum ceiling height of 2,49 m. The illustrated throw will manifest itself in these circumstances.

The AM 900 will also work with larger ceiling heights, up to 4,50 m has been tested. Height above 2.50 m should be subtracted from the length of the throw.

AM 900

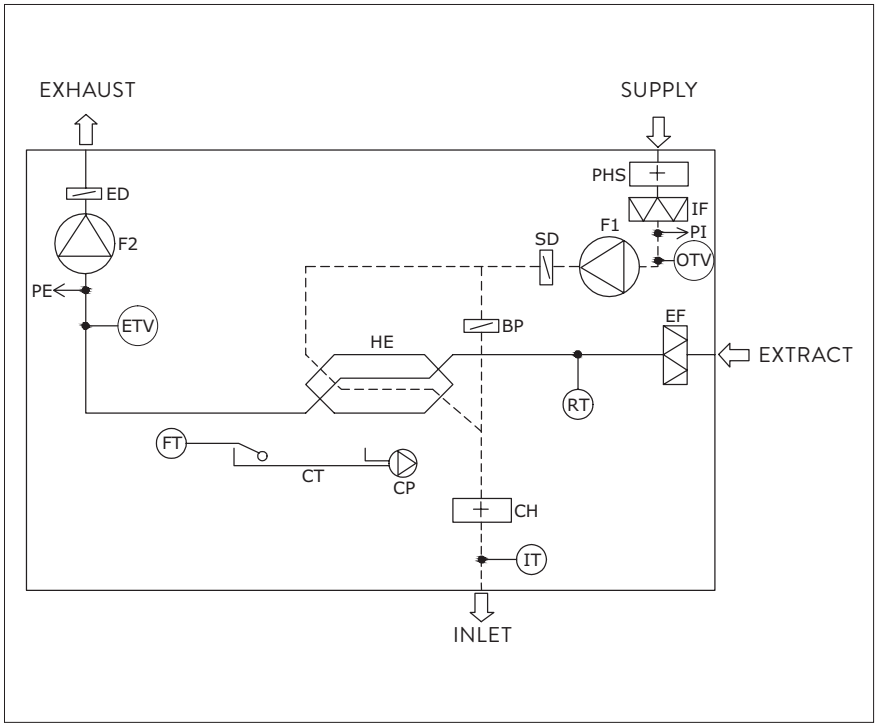
SCHEMATIC SKETCH - MIXED



NAME OF COMPONENT

BP	Bypass (motor driven)
CH	Comfort heater
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, return air
PHS	Preheating surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven)

SCHEMATIC SKETCH - DISPLACEMENT

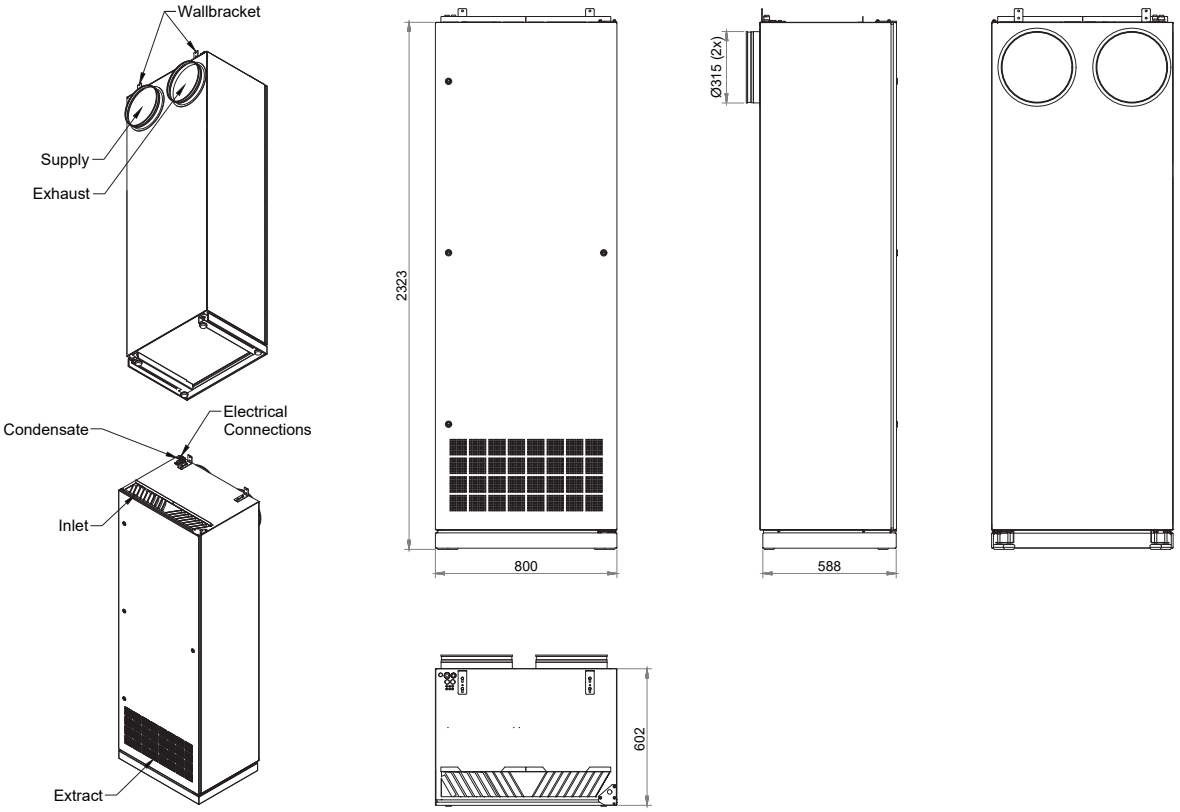


NAME OF COMPONENT

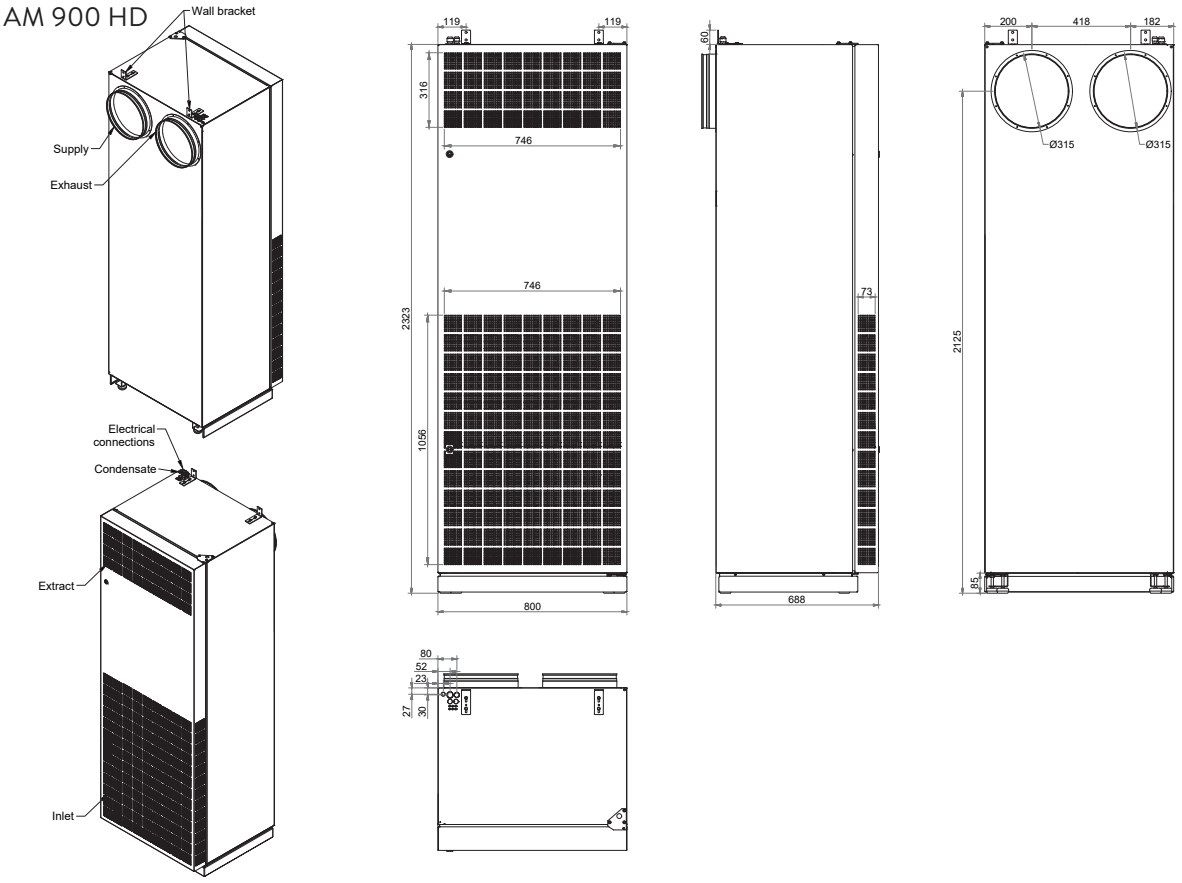
BP	Bypass (motor driven)
CH	Comfort heater
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, return air
PHS	Preheating surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven)

AM 900

AM 900 HM

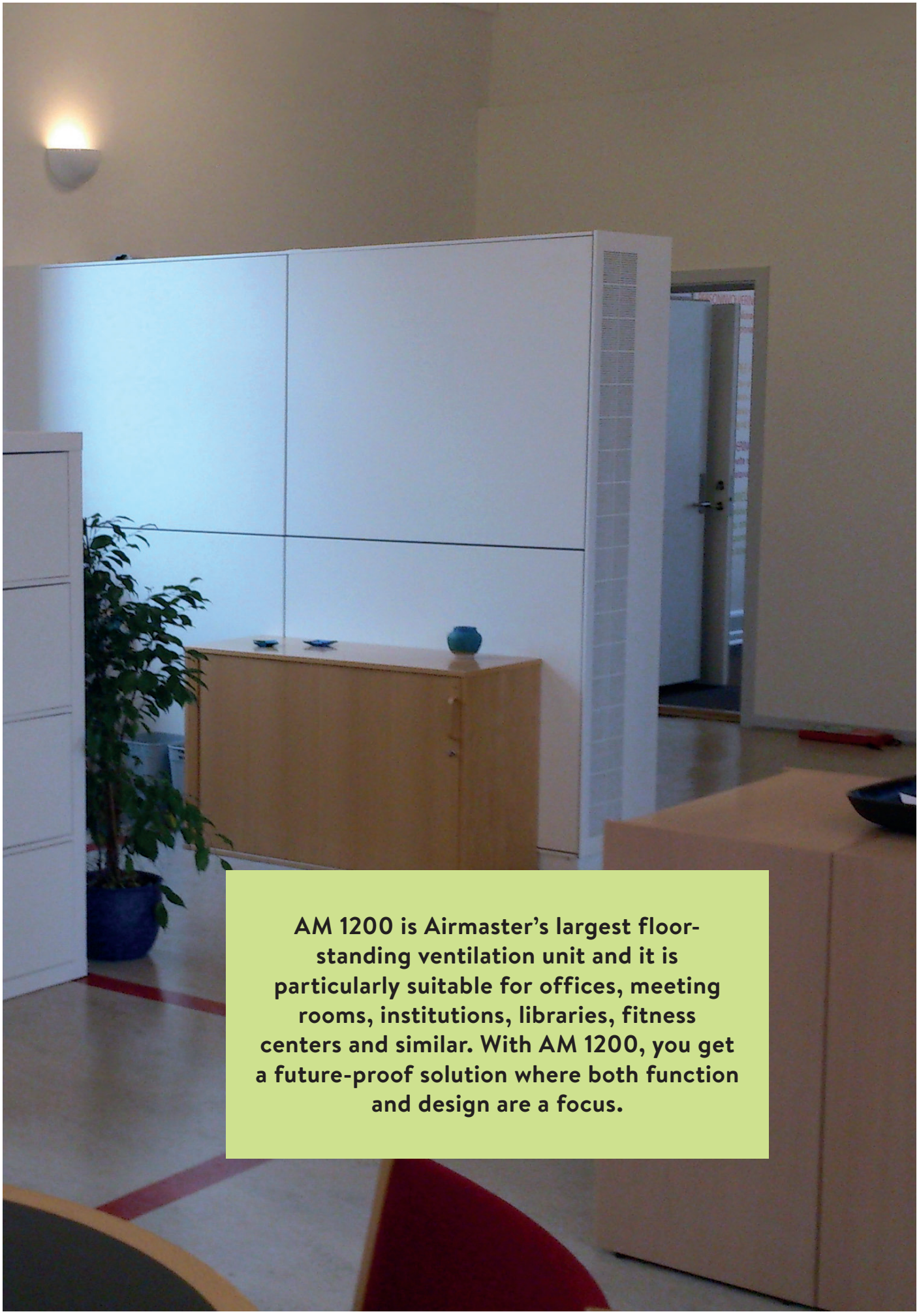


AM 900 HD



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

AM 900 is a floor-standing unit that fits perfectly in rooms where efficient air exchange is needed – without noise! AM 900 can be continuously adapted to the room's function and needs – i.a. with a CO2 sensor, motion senor (PIR), or a hygrostat.



AM 1200 is Airmaster's largest floor-standing ventilation unit and it is particularly suitable for offices, meeting rooms, institutions, libraries, fitness centers and similar. With AM 1200, you get a future-proof solution where both function and design are a focus.

AM 1200

Featuring function and design. Ventilation should not always just be a technical necessity. It can also play a part in the function of a room.

The AM 1200 is a concept within decentralised ventilation which combines fresh air with elegant design, which can be used for a lot more than you might believe.

The AM 1200 is a floor-standing unit, available in horizontal and vertical models. It can be mounted against a wall (right/left variant) or freestanding (central variant).

Different design panels mean the front can be used as a notice board, mirror or whiteboard for example.

TECHNICAL DATA	FILTER CLASS	30 dB(A)	35 dB(A)
Maximum capacity[1] **Horizontal** model, Ø400 mm right / left:	ePM_{10} 50% ePM_1 55% ePM_1 80%	930 m³/h 837 m³/h 744 m³/h	1180 m³/h 1062 m³/h 944 m³/h
Maximum capacity[1] **Horizontal** model, Ø400 mm center:	ePM_{10} 50% ePM_1 55% ePM_1 80%	1050 m³/h 945 m³/h 840 m³/h	1310 m³/h 1179 m³/h 1048 m³/h
Maximum capacity[1] **Vertical** model, Ø400 mm right / left:	ePM_{10} 50% ePM_1 55% ePM_1 80%	870 m³/h 783 m³/h 696 m³/h	1130 m³/h 1017 m³/h 904 m³/h
Maximum capacity[1] **Vertical** model, Ø400 mm center:	ePM_{10} 50% ePM_1 55% ePM_1 80%	980 m³/h 882 m³/h 784 m³/h	1260 m³/h 1134 m³/h 1008 m³/h
Maximum capacity[1] **Vertical** model, Ø315 mm right / left:[2]	ePM_{10} 50% ePM_1 55% ePM_1 80%	820 m³/h 738 m³/h 656 m³/h	1060 m³/h 954 m³/h 848 m³/h
Maximum capacity[1] **Vertical** model, Ø315 mm center:[2]	ePM_{10} 50% ePM_1 55% ePM_1 80%	920 m³/h 828 m³/h 736 m³/h	1170 m³/h 1053 m³/h 936 m³/h
Throw (0.2 m/s) - center[1]	ePM_{10} 50% ePM_1 55% ePM_1 80%	min. 3 m at 1000 m³/h max. 6.5 m at 1000 m³/h min. 4 m at 1300 m³/h max. 8 m at 1300 m³/h	
Throw (0.2 m/s) - right / left[1]	ePM_{10} 50% ePM_1 55% ePM_1 80%	min. 4 m at 1000 m³/h max. 9 m at 1000 m³/h min. 5.5 m at 1300 m³/h max. 11 m at 1300 m³/h	
Nominal current[3]		1.4 A	
Nominal power consumption[3]		254 W	
Electrical connection		3 x 400 V + N + PE / 50 Hz	
Duct connections		Ø400 mm	
Condensate drain		Ø4/6 mm	
The weight includes standard lacquered panels		Right/left variant: 545 kg Center variant: 630 kg	
Counterflow heat exchanger		4 x Aluminium	
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	
Extract air filter		ePM_{10} 50%	
Power factor		0.60	
Power cable		5 x 2.5 mm2	
Recommended fuse		3x13 A	
Maximum fuse		3x16 A	
Recommended residual current circuit breaker		Type A	
Leakage current		≤ 9 mA	
Dimensions (WxHxD)		Horizontal: 496 x 2098 x 2427 mm	
		Vertical: 496 x 2406 x 2427 mm	

[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø400 grilles
[2] With roof cap module
[3] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%

AM 1200

ELECTRIC HEATING SURFACE	PREHEATING FUNCTION	COMFORT HEATING FUNCTION
Heat output	2500 W	1670 W
Thermal circuit breaker, aut. reset	50°C	50°C
Thermal circuit breaker, man. reset	75°C	75°C

WATER HEATING SURFACE	COMFORT HEATING FUNCTION
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	2454 W[1]
Connection dimension	1/2" (DN 15)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

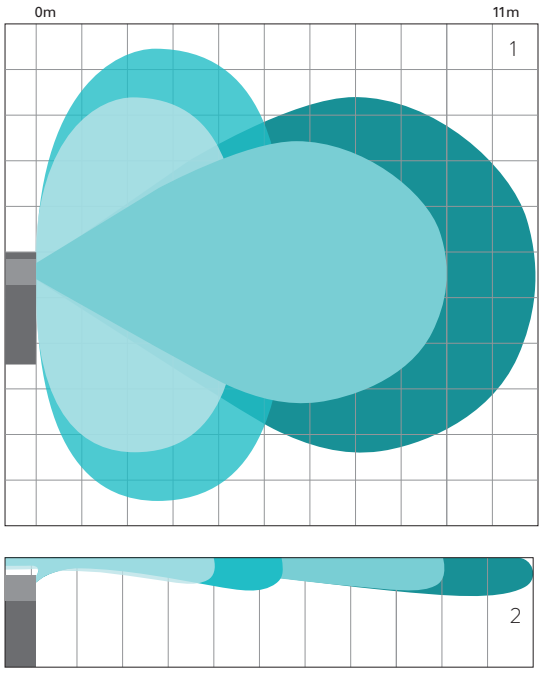
[1] Capacity at: supply/return temperature 60/40°C, water volume 107 l/h

STANDARD AND OPTIONS	AM 1200
Counterflow heat exchanger (PET)	x
Enthalpy counterflow heat exchanger (polymer membrane)	o
Combined counterflow heat exchanger (polymer membrane)	o
Motor driven bypass	x
Sprint-return motor driven exhaust air damper	x
Spring-return motor driven supply air damper	x
Electric preheating surface	●
Electric comfort heating surface	●
Water heating surface	●
Condensate pump	●
CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
CO_2-/TVOC-sensor (built-in)	●
CO_2-sensor (wall-mounted)	●
PIR/motion sensor (wall-mounted)	●

Hygrostat (wall-mounted)	o
Energy meter	●
Supply air filter ePM_{10} 50%	●
Supply air filter ePM_1 55%	●
Supply air filter ePM_1 80%	o
Extract air filter ePM_{10} 50%	●
Airlinq® Viva control panel	●
Airlinq® Orbit control panel	●
Airmaster Airlinq® Online	●
Airlinq® BMS	●
MODBUS® RTU RS485 Module	●
BACnet™ MS/TP Module	●
BACnet™ /IP Module	●
LON® Module	o
KNX® Module	o

x : Standard ● : Optional o : Special item

THROW LENGTH



1300 m³/h
● max throw
● min throw

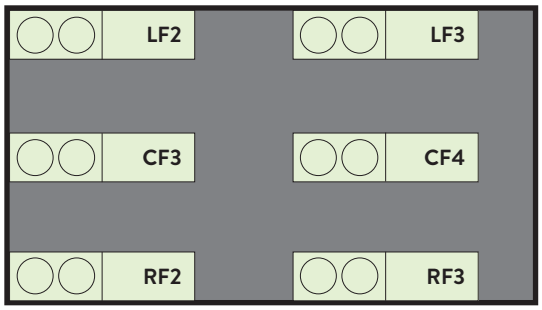
1000 m³/h
● max throw
● min throw

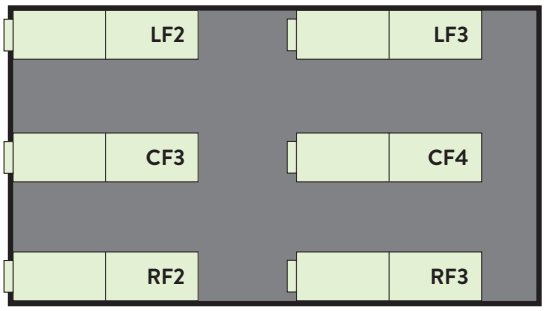
The AM 1200 unit spreads an air stream in different directions, depending on the given airflow. This can be seen in the illustration, in which the blue shading indicates throw the different airflows.

[1] Throw seen from above
[2] Throw seen from the side

AM 1200

VARIANTS





AM 1200 V**RF2** (right, with 2 open sides)
AM 1200 V**RF3** (right, with 3 open sides)
AM 1200 V**CF3** (centre, with 3 open sides)
AM 1200 V**CF4** (centre, with 4 open sides)
AM 1200 V**LF2** (left, with 2 open sides)
AM 1200 V**LF3** (left, with 3 open sides)

AM 1200 H**RF2** (right, with 2 open sides)
AM 1200 H**RF3** (right, with 3 open sides)
AM 1200 H**CF3** (centre, with 3 open sides)
AM 1200 H**CF4** (centre, with 4 open sides)
AM 1200 H**LF2** (left, with 2 open sides)
AM 1200 H**LF3** (left, with 3 open sides)

DESIGN PANELS	COLOUR	SIZE
MDF	Painted (standard colours)	1200 x 1000
MDF with whiteboard laminate[1]	White	1200 x 1000
MDF with blackboard surface	Black	1200 x 1000
Mirror glued on MDF	Mirror	1200 x 1000

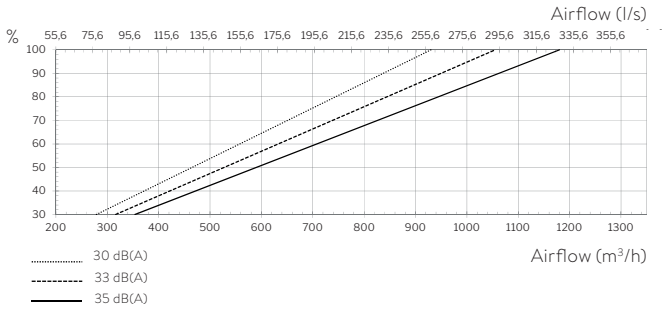
[1] We are offering the best quality of whiteboards with a surface of ceramic enamel. Ceramic enamel forms a completely closed surface and is therefore also extremely easy to clean.

Colour options
Painted MDF boards are supplied in the following 8 standard colours.
Other RAL colours are available at extra cost.

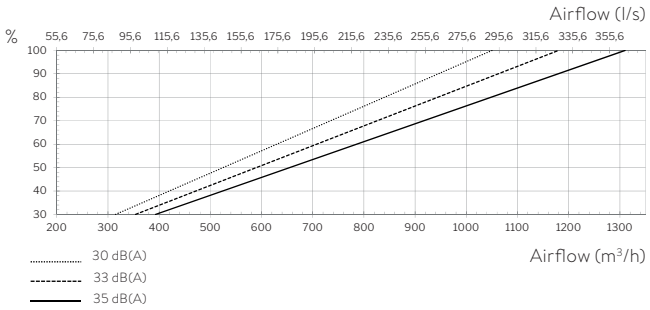
RAL 9010	RAL 9005	RAL 5017	RAL 6017
RAL 1016	RAL 3020	RAL 6027	RAL 6019

AM 1200 H

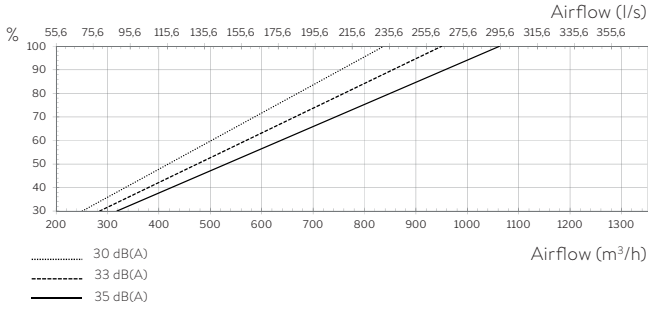
H - L/R CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter [1]



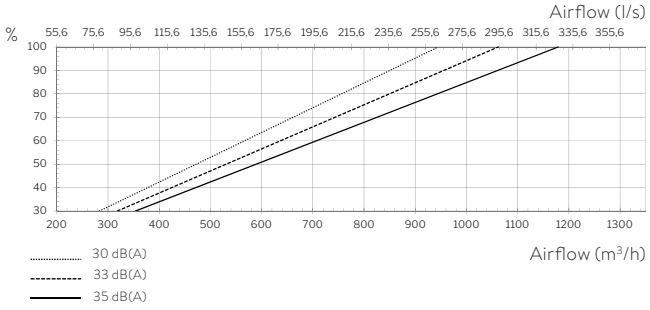
H - C CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter [1]



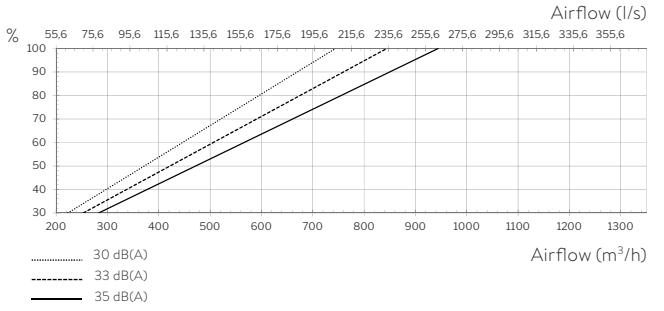
H - L/R CAPACITY with ePM_1 55% / ePM_{10} 50% filter [1]



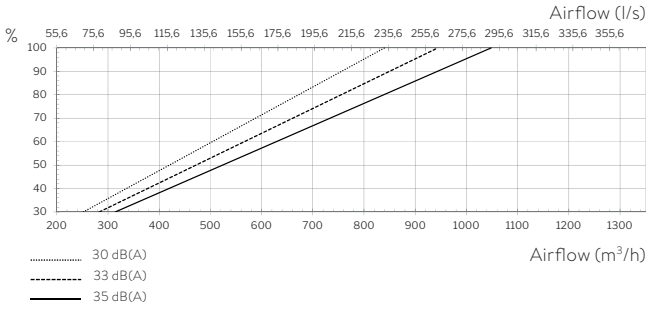
H - C CAPACITY with ePM_1 55% / ePM_{10} 50% filter [1]



H - L/R CAPACITY with ePM_1 80% / ePM_{10} 50% filter [1]



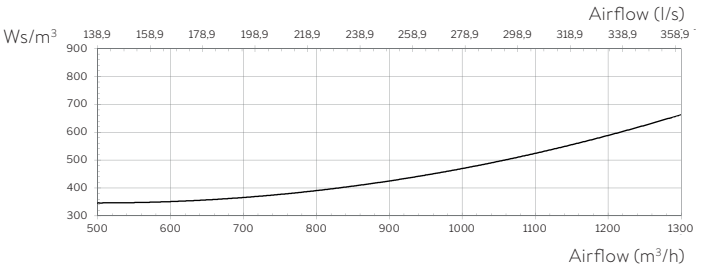
H - C CAPACITY with ePM_1 80% / ePM_{10} 50% filter [1]



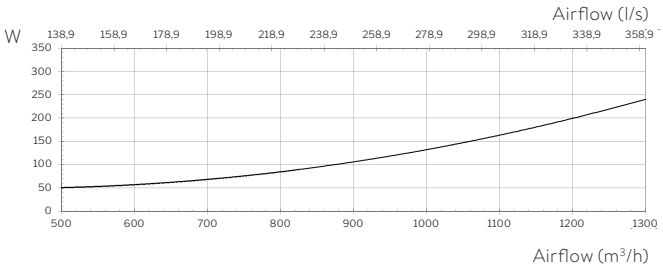
[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø400 grilles

AM 1200 H

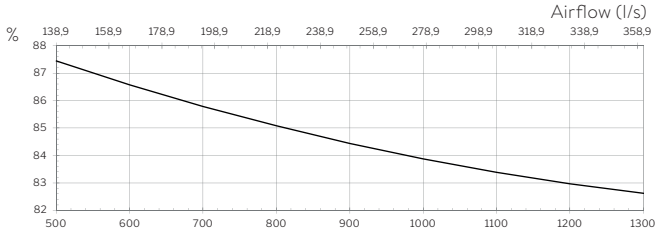
SFP[1]



POWER CONSUMPTION[1]

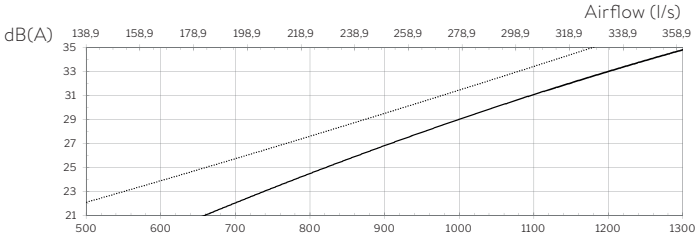


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997

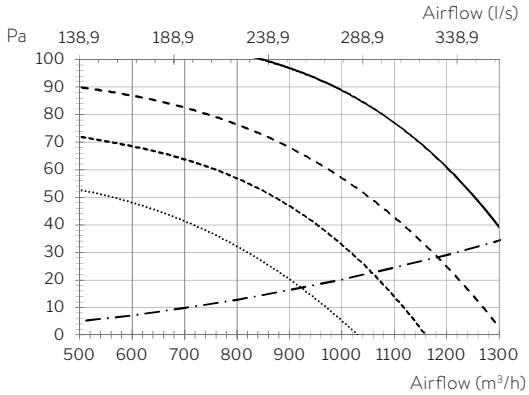


Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

SOUND PRESSURE[2]

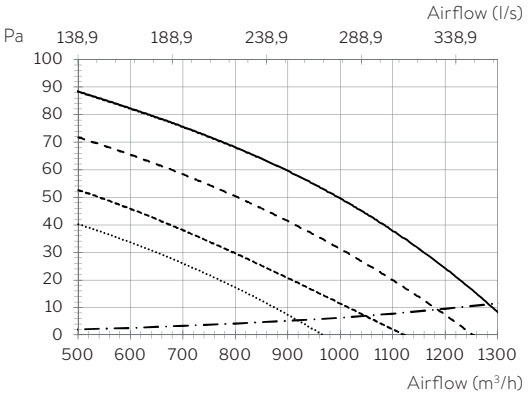


EXTERNAL PRESSURE LOSS - SUPPLY AIR



- Center, 35 dB(A), ePM$_{10}$ 50% filter
- Right/left, 35 dB(A), ePM$_{10}$ 50% filter
- Center, 30 dB(A), ePM$_{10}$ 50% filter
- Right/left, 30 dB(A), ePM$_{10}$ 50% filter
- Facade grille Ø400

EXTERNAL PRESSURE LOSS - EXTRACT AIR

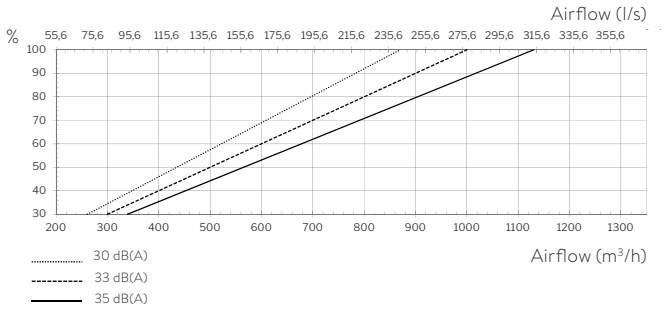


- Center, 35 dB(A), ePM$_{10}$ 50% filter
- Right/left, 35 dB(A), ePM$_{10}$ 50% filter
- Center, 30 dB(A), ePM$_{10}$ 50% filter
- Right/left, 30 dB(A), ePM$_{10}$ 50% filter
- Facade grille Ø400

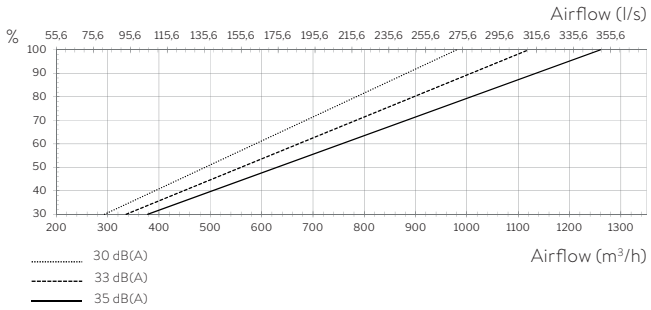
[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø400 grilles
[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7,5 dB(A).

AM 1200 V

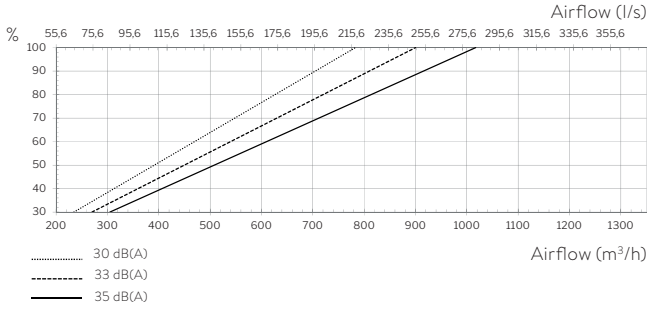
V - L/R CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter[1]



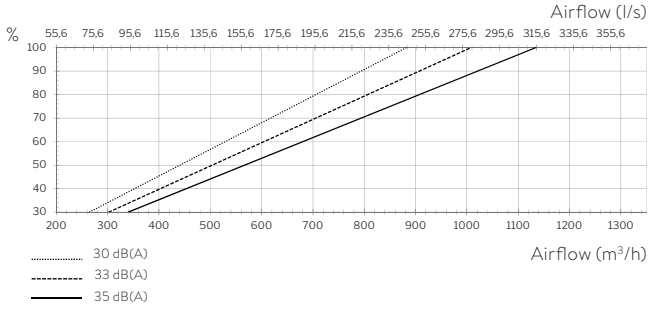
V - C CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter[1]



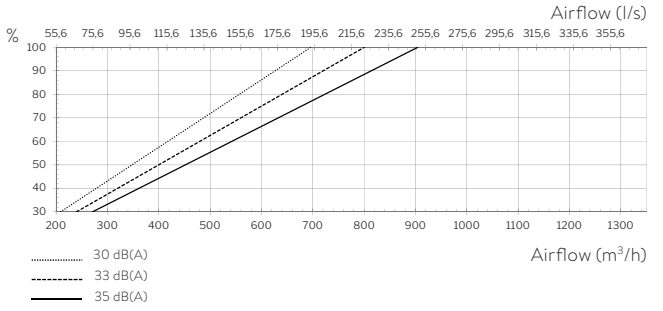
V - L/R CAPACITY with ePM_1 55% / ePM_{10} 50% filter[1]



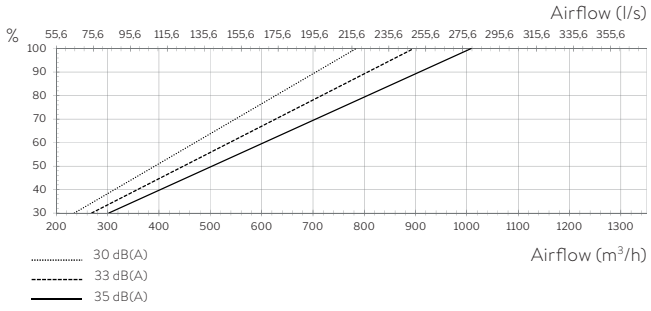
V - C CAPACITY with ePM_1 55% / ePM_{10} 50% filter[1]



V - L/R CAPACITY with ePM_1 80% / ePM_{10} 50% filter [1]



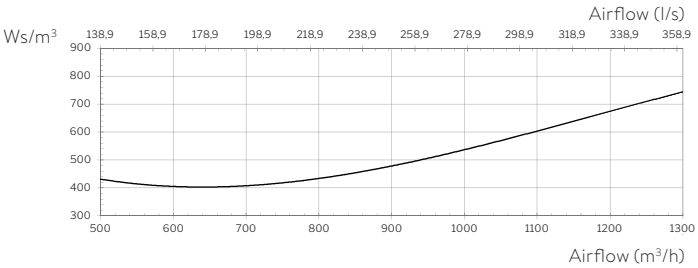
V - C CAPACITY with ePM_1 80% / ePM_{10} 50% filter[1]



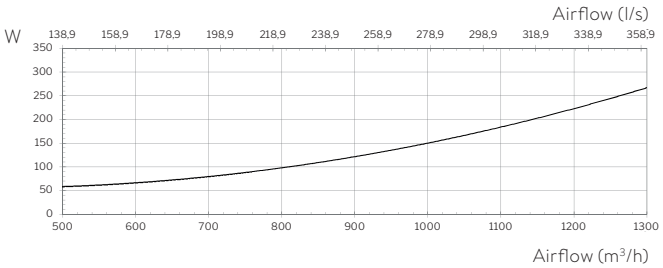
[1] The measurements have been made during normal operations in a standard installation situation with the roof cap Ø400 mm, which is recommended by Airmaster.

AM 1200 V

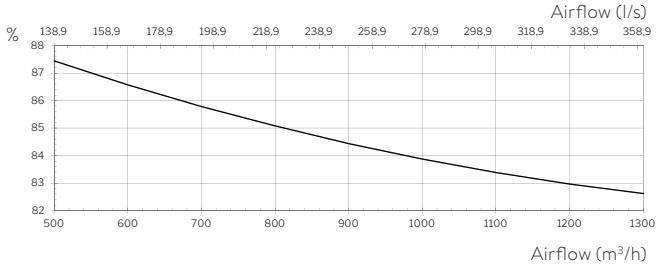
SFP[1]



POWER CONSUMPTION[1]

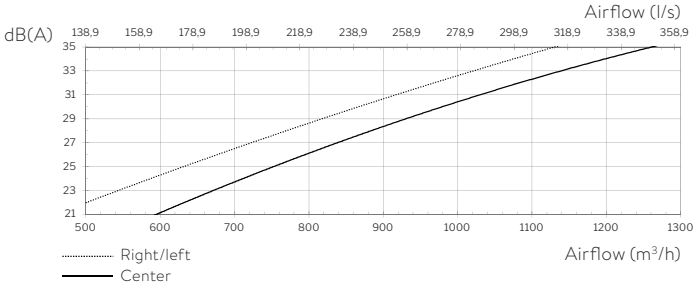


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997

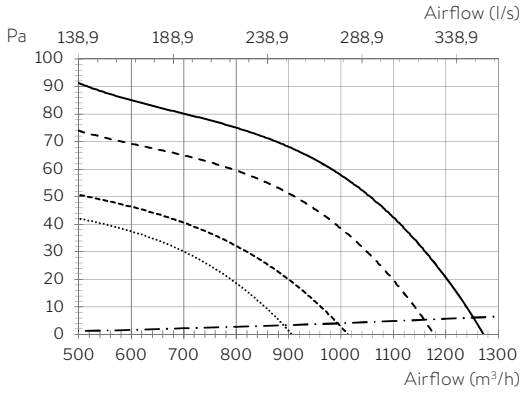


Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

SOUND PRESSURE[2]

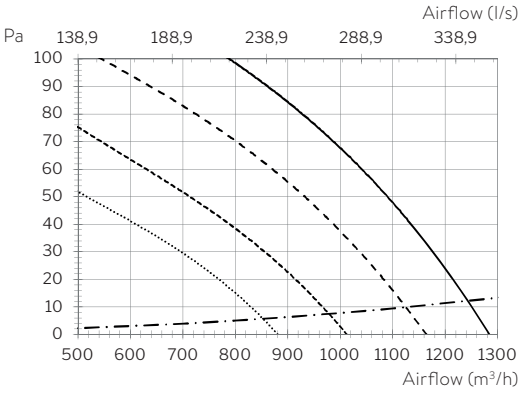


EXTERNAL PRESSURE LOSS - SUPPLY AIR



Center, 35 dB(A), ePM$_{10}$ 50% filter
Right/left, 35 dB(A), ePM$_{10}$ 50% filter
Center, 30 dB(A), ePM$_{10}$ 50% filter
Right/left, 30 dB(A), ePM$_{10}$ 50% filter
Roof cap module Ø400

EXTERNAL PRESSURE LOSS - EXTRACT AIR

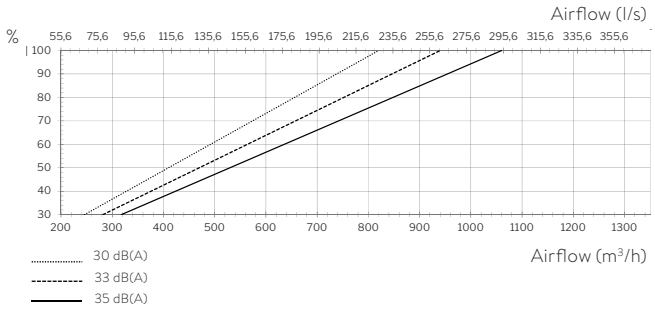


Center, 35 dB(A), ePM$_{10}$ 50% filter
Right/left, 35 dB(A), ePM$_{10}$ 50% filter
Center, 30 dB(A), ePM$_{10}$ 50% filter
Right/left, 30 dB(A), ePM$_{10}$ 50% filter
Roof cap module Ø400

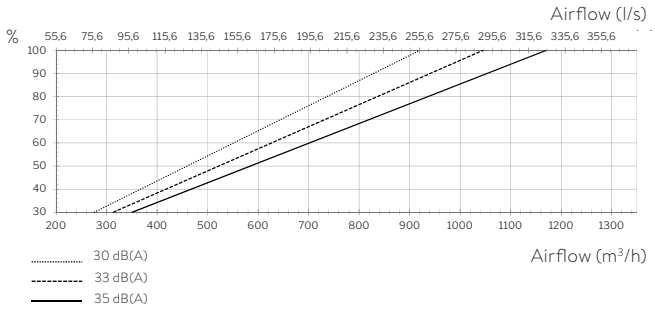
[1] The measurements have been made during normal operations in a standard installation situation with the roof cap Ø400 mm, which is recommended by Airmaster.
[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7,5 dB(A).

AM 1200 V Ø315

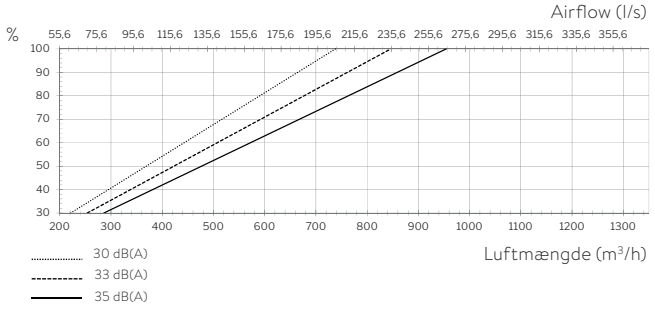
V - L/R Ø315 CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter[1]



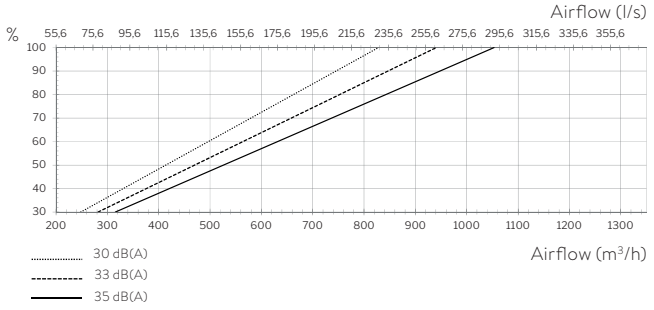
V - C Ø315 CAPACITY with ePM_{10} 50% / ePM_{10} 50% filter[1]



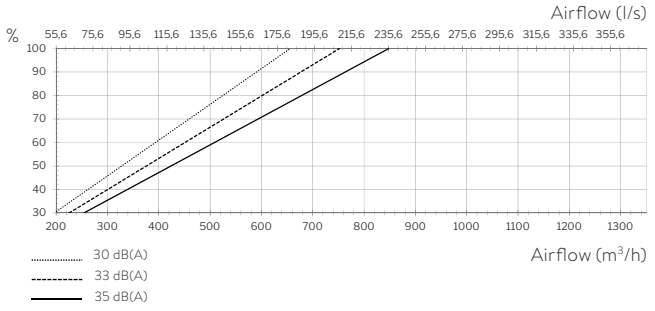
V - L/R Ø315 CAPACITY with ePM_1 55% / ePM_{10} 50% filter[1]



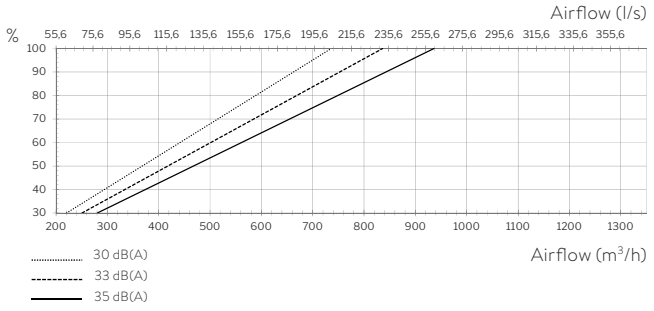
V - C Ø315 CAPACITY with ePM_1 55% / ePM_{10} 50% filter[1]



V - L/R Ø315 CAPACITY with ePM_1 80% / ePM_{10} 50% filter[1]



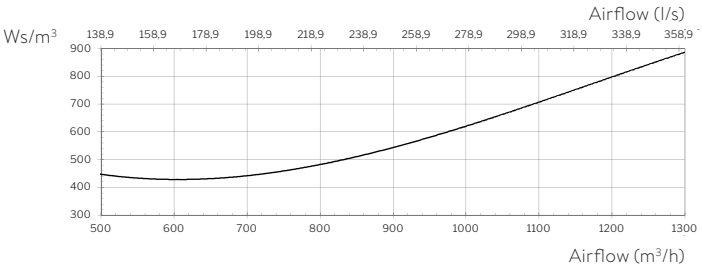
V - C Ø315 CAPACITY with ePM_1 80% / ePM_{10} 50% filter[1]



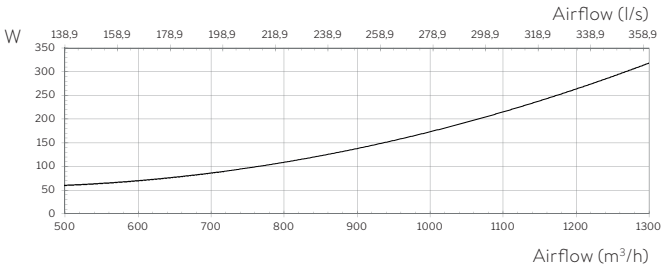
[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 roof caps module.

AM 1200 V Ø315

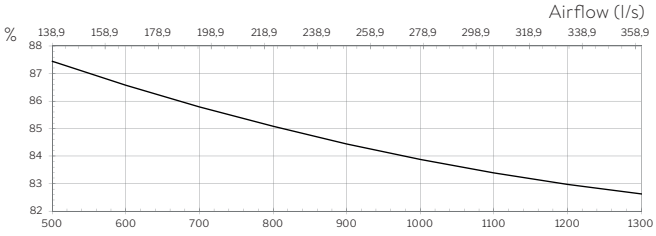
SFP[1]



POWER CONSUMPTION[1]

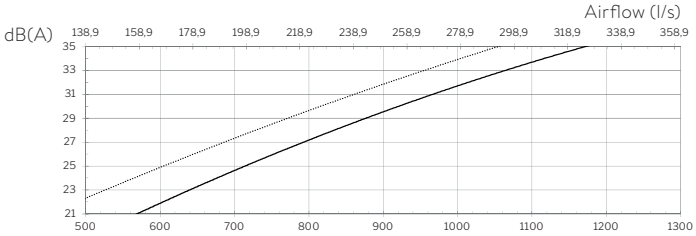


TEMPERATURE EFFICIENCY, ACC. TO EN 308:1997

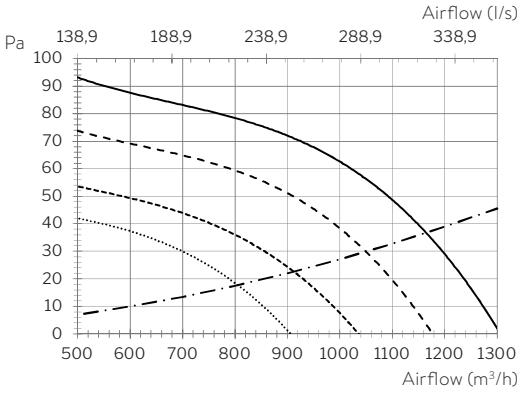


Balanced airflow; Extraction: 25°C, 28% RH Supply: 5°C

SOUND PRESSURE[2]

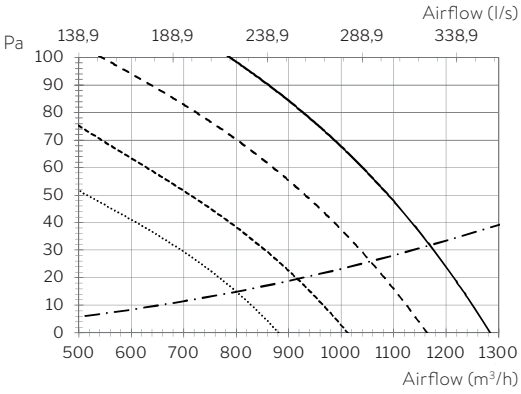


EXTERNAL PRESSURE LOSS - SUPPLY AIR



- Center, 35 dB(A), ePM$_{10}$ 50% filter
- Right/left, 35 dB(A), ePM$_{10}$ 50% filter
- Center, 30 dB(A), ePM$_{10}$ 50% filter
- Right/left, 30 dB(A), ePM$_{10}$ 50% filter
- Roof cap module Ø315

EXTERNAL PRESSURE LOSS - EXTRACT AIR

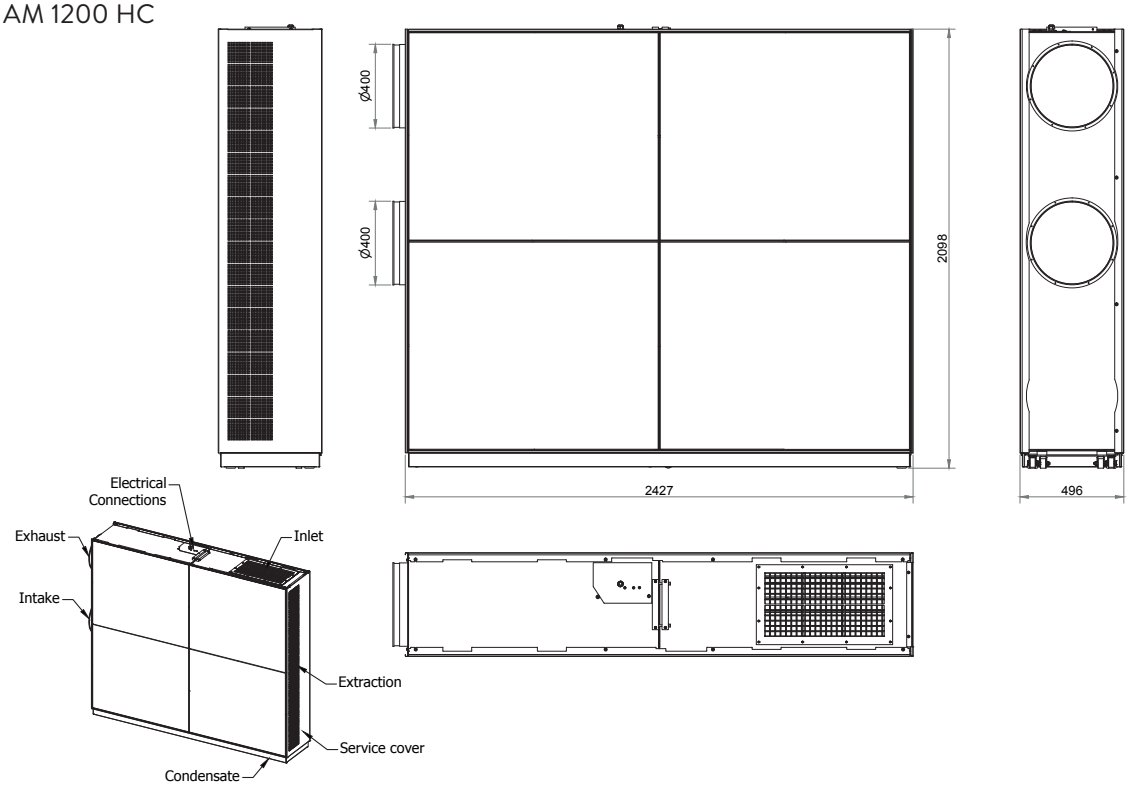


- Center, 35 dB(A), ePM$_{10}$ 50% filter
- Right/left, 35 dB(A), ePM$_{10}$ 50% filter
- Center, 30 dB(A), ePM$_{10}$ 50% filter
- Right/left, 30 dB(A), ePM$_{10}$ 50% filter
- Roof cap module Ø315

[1] Measurements are conducted at normal operation in a standard installation situation with Airmaster recommended Ø315 roof caps module.
[2] Sound pressure level Lp,eq is measured in a height of 1.2 m with at horizontal distance of 1 m from the air handling unit in a room with a size of 200 m3 and a reverberation time of T = 0.6 s, corresponding to a room attenuation of 7,5 dB(A).

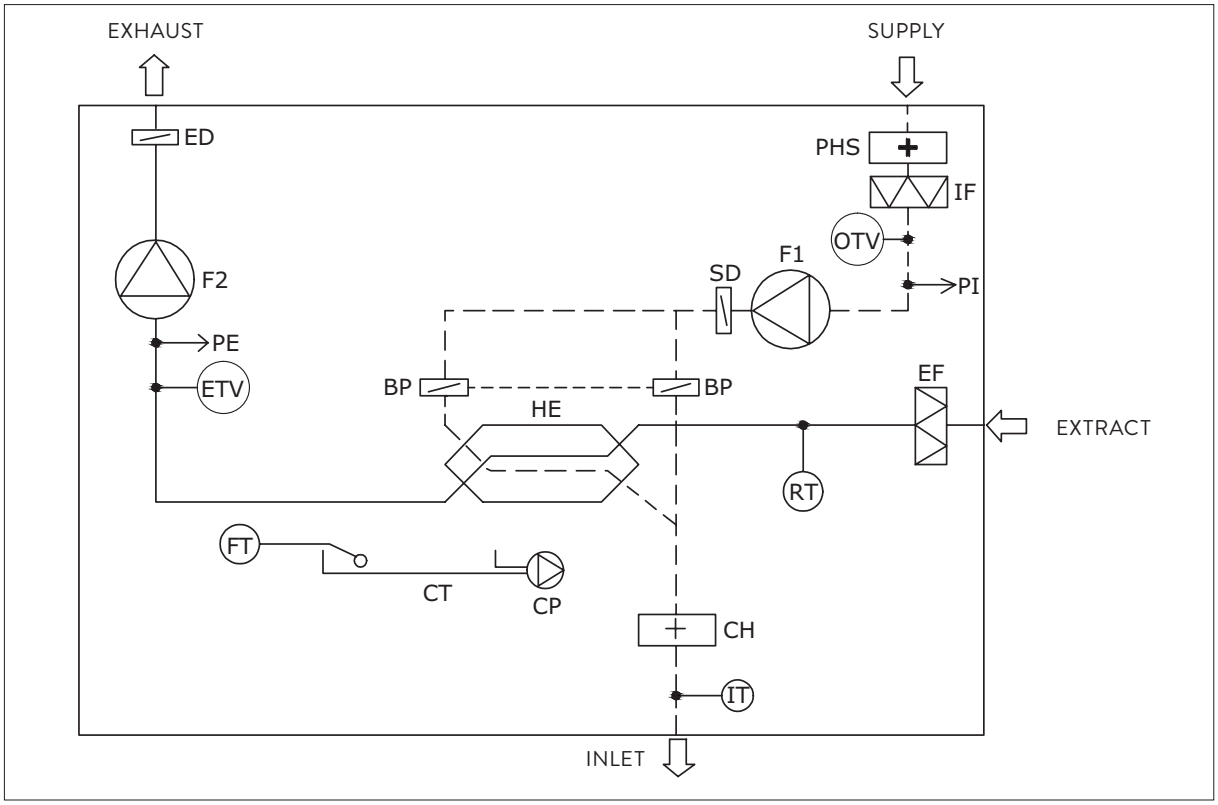
AM 1200

AM 1200 HC



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

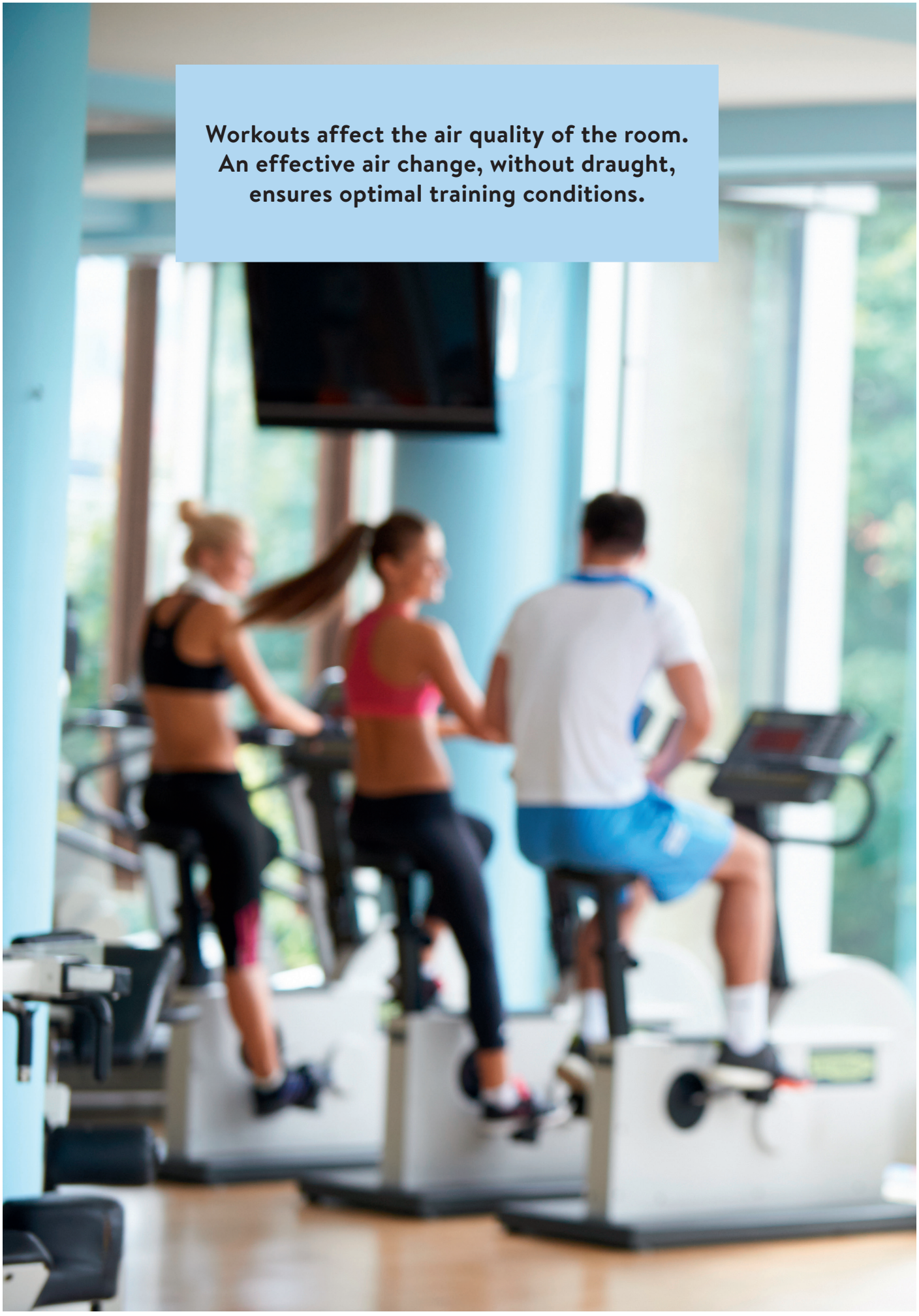
SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass (motor driven)
CH	Comfort heating surface
CP	Condensate pump
CT	Condensate tray
ED	Exhaust air damper (motor driven, spring return)
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature eensor
PE	Flow meter, return air
PHS	Preheating surface
PI	Flow meter, supply air
RT	Room temperature sensor
SD	Supply air damper (motor driven, spring return)

With AM 1200, we combine the fresh air in the room with a ventilation unit that has far more functions than you might think. The unit is available with different types of design boards and can therefore be used as both a whiteboard or notice board – yes, in fact, it is only the imagination that sets the limits for the possibilities of use.

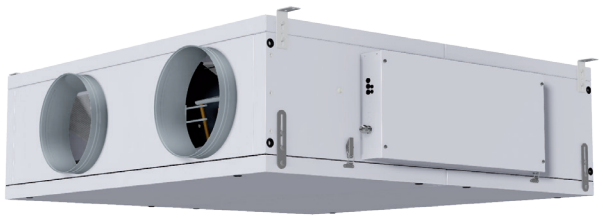


Workouts affect the air quality of the room. An effective air change, without draught, ensures optimal training conditions.

DV 1000

The DV 1000 is a compact, high pressure unit with low SFP value.

It is available in two variants - hinged (**H**) or sliding service covers (**S**). The option makes it possible for either vertical or horizontal opening, depending on the type of ceiling and space available.



TECHNICAL DATA	FILTERCLASS	
Nominal capacity	ePM_{10} 50% ePM_1 55% ePM_1 80%	1000 m³/h 950 m³/h 900 m³/h
Nominal current[1]		2.6 A
Nominal power consumption[1]		333 W
Electrical connection with electric heating surface		3 x 400 V + N + PE / 50 Hz
Duct connections		Ø315 mm
Condensate drain, int. / ext.		4/6 mm
Weight		210 kg
Counterflow heat exchanger		2 x Aluminium
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%
Extract air filter		ePM_{10} 50%
Colour, casing		RAL 9010 (white)
Power factor		0.60
Power cable		5 x 2.5 mm²
Recommended fuse		3x13 A
Leakage current		≤ 7 mA
Maximum fuse		3x16A
Recommended residual current circuit breaker		Type A
Dimensions (WxHxD)		**H**: 1498 x 424 x 1384 mm **S**: 1512 x 501 x 1385 mm

[1] At filter class, supply air/extract air: ePM_{10} 50% / ePM_{10} 50%

ELECTRIC HEATING SURFACE	
Heat output	2500 W
Thermal circuit breaker, aut. reset	50°C
Thermal circuit breaker, man. reset	75°C

WATER HEATING SURFACE[2]	
Max. operating temperature	90°C
Max. operating pressure	10 bar
Heat output	4099 W[3]
Connection dimension	1/2" (DN 15)
Materials pipes/fins	copper/aluminium
Open/close time, motor valve	60 s

[2] Duct heating surface

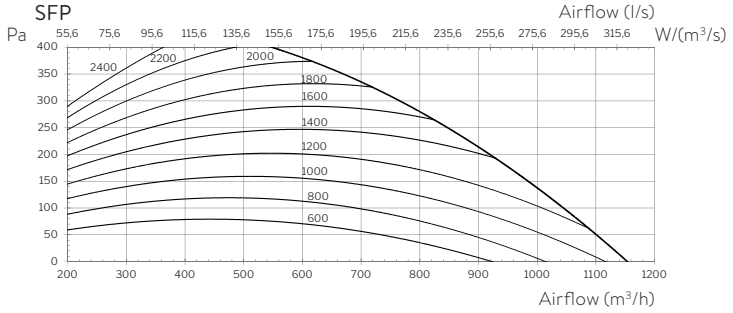
[3] Capacity at: supply/return temperature 60/40°C, water volume 180 l/h

STANDARD AND OPTIONS	DV 1000
Bypass	x
Electric heating surface/VPH	●
Water heating surface/VPH	●
CO_2 sensor (built-in)	●
Hygrostat	O
TVOC/CO_2-sensor (built-in)	●
TVOC-sensor (built-in)	●
PIR (wall-mounted)	●
Boomerain® façade ventilation grille Ø315	●
Condensate pump	x
Cooling module	●
Motor driven exhaust air damper	●
Spring-return actuator on exhaust air damper	●
Motor driven supply air damper	●
Spring-return actuator on supply air damper	●
Counterflow heat exchanger (aluminium)	x
Energy meter	●

x : standard ● : option O : Special item

DV 1000

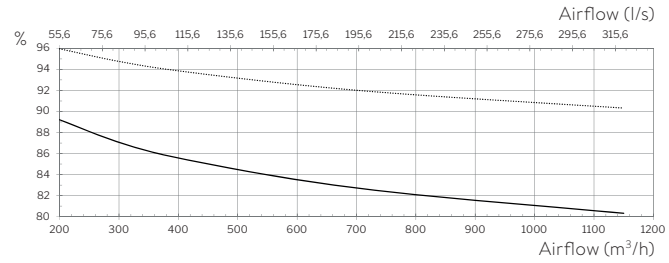
SFP



Additional pressure loss for ePM$_1$ 55% Supply air filter.
$\Delta P = 0{,}0222 \cdot q_v$ [Pa]; (q_v = flow in m³/h)
Pressure loss (p) incl. ePM$_1$ 55% filter: $p = p_S + \Delta p$ [Pa]

Power consumption (P):
$P = SFP \cdot q_v/3600$ [W];
(SFP from diagram and q_v = airflow in (m³/h)

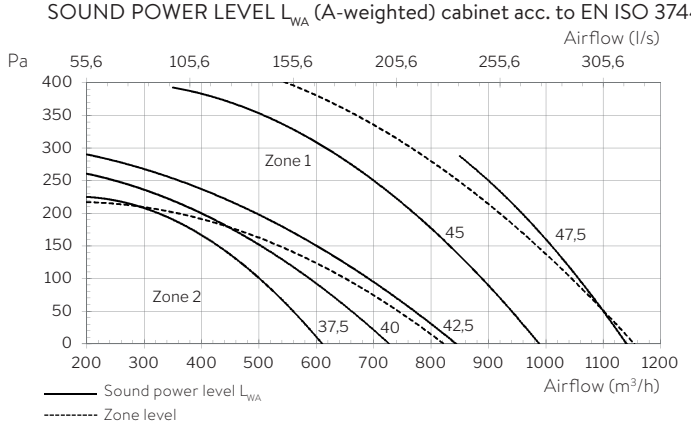
TEMPERATURE EFFICIENCY



1: According to: EN 308:1997 (without condensation)
Conditions: Indoor air: 25°C 28% RH
Outdoor air: 5°C

2: With condensation
Conditions: Indoor air: 25°C 55% RH
Outdoor air: -10°C

SOUND POWER LEVEL L_{WA} (A-weighted) cabinet acc. to EN ISO 3744

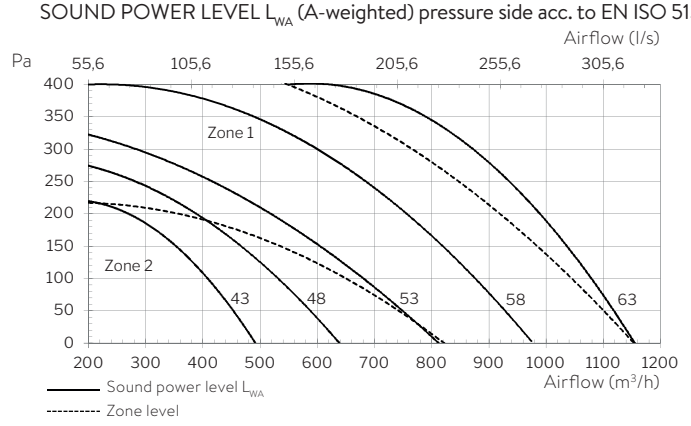


SOUND POWER LEVEL - CABINET

HZ	ZONE 1 K_W	ZONE 2 K_W
63	13	13
125	8	11
250	6	6
500	-7	-9
1000	-12	-16
2000	-14	-16
4000	-20	-18
8000	-20	-17

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

SOUND POWER LEVEL L_{WA} (A-weighted) pressure side acc. to EN ISO 5136

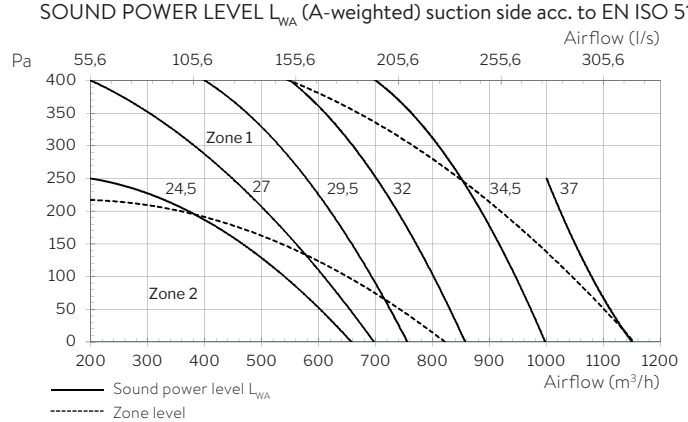


SOUND POWER LEVEL - PRESSURE SIDE

HZ	ZONE 1 K_W	ZONE 2 K_W
63	-4	-5
125	-9	-4
250	-5	-7
500	-12	-13
1000	-15	-16
2000	-13	-15
4000	-20	-22
8000	-20	-29

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

SOUND POWER LEVEL L_{WA} (A-weighted) suction side acc. to EN ISO 5136



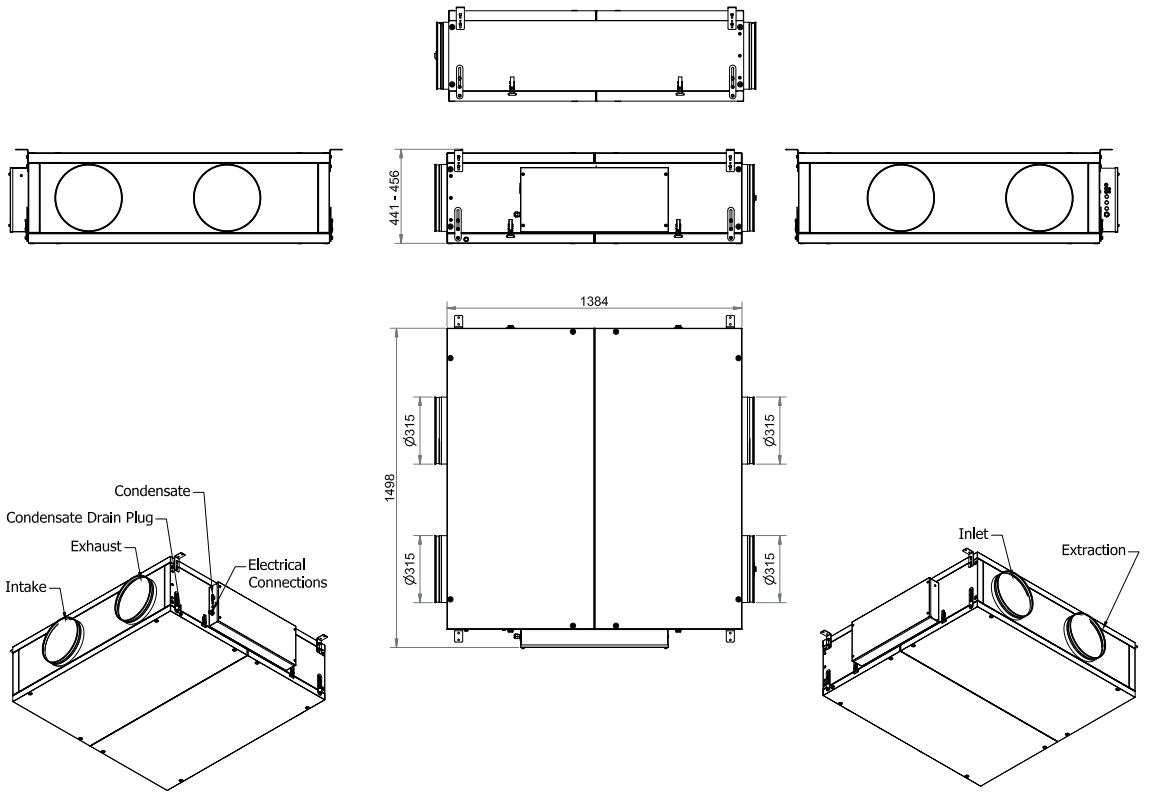
SOUND POWER LEVEL - SUCTION SIDE

HZ	ZONE 1 K_W	ZONE 2 K_W
63	-2	-2
125	-9	-7
250	-8	-9
500	-18	-19
1000	-21	-22
2000	-25	-28
4000	-36	-38
8000	-42	-49

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

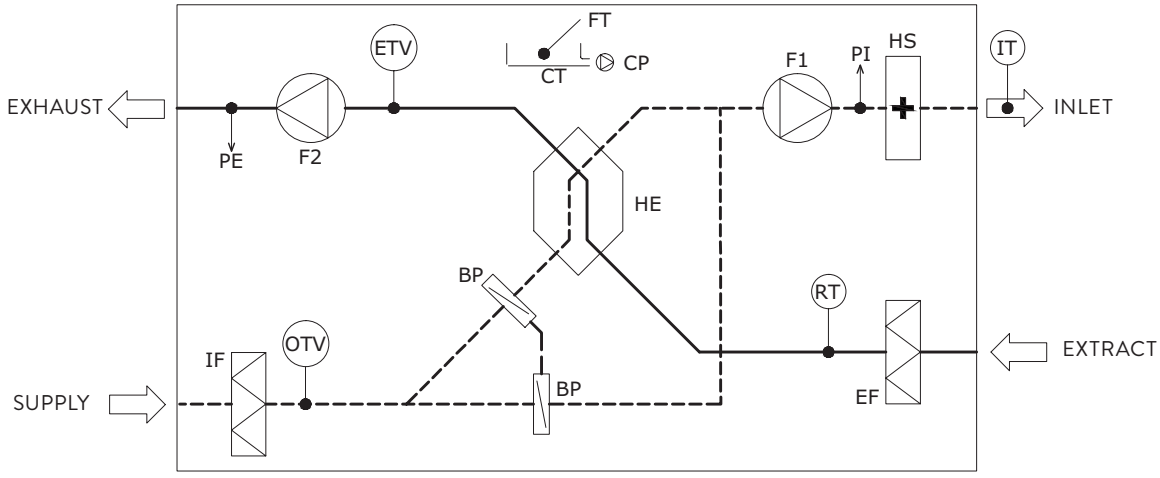
DV 1000

DV 1000 H



Example of dimension drawing. To see the latest dimension drawings and download 3D BIM objects in Autodesk Revit format please go to our website: www.airmaster-as.com

SCHEMATIC SKETCH



NAME OF COMPONENT

BP	Bypass (motor driven)
CP	Condensate tump
CT	Condensate tray
EF	Extract air filter
ETV	Exhaust temperature sensor
FT	Float
F1	Supply air fan
F2	Extract air fan
HE	Counterflow heat exchanger
HS	Electric heating surface
IF	Supply air filter
IT	Inlet air temperature sensor
OTV	Outside temperature sensor
PE	Flow meter, extracted air
PI	Flow meter, supply air
RT	Room temperature sensor

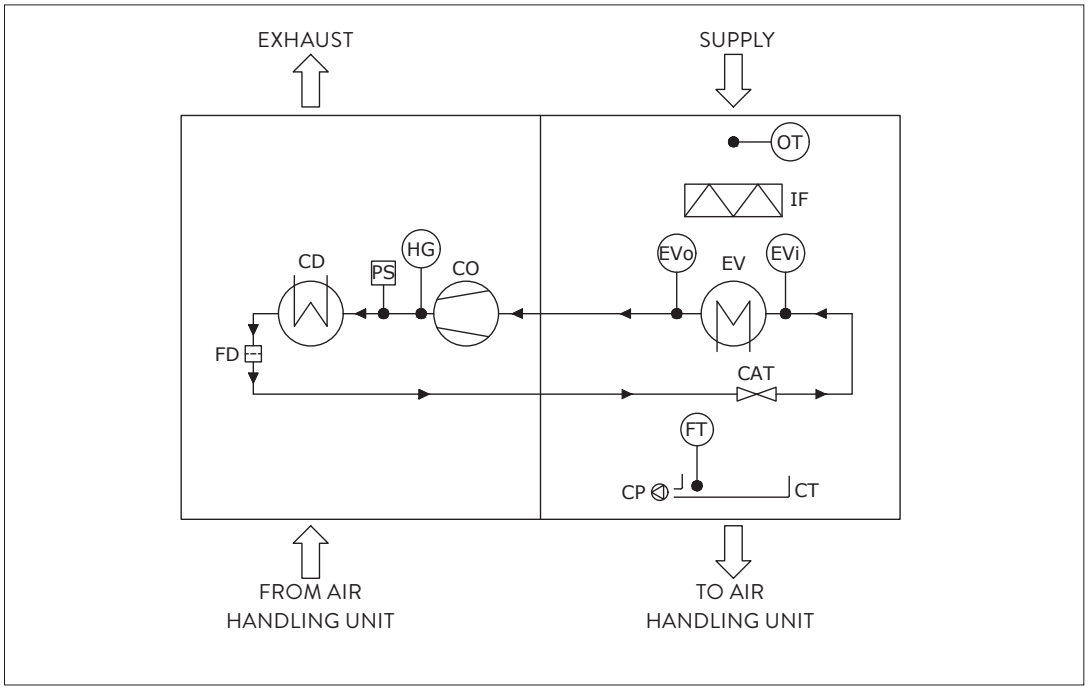
CC 1000 COOLING MODULE

TECHNICAL DATA

Nominal cooling capacity[1]	6450 W
Min. cooling capacity[1]	1120 W
Nominal EER	4.45
Max. airflow	900 m^3/h
Min. airflow[2]	360 m^3/h
Electricity supply	1 x 230 V + N + PE / 50 Hz
Nominal electrical output	1449 W
Nominal current strength	8.9 A
Electrical output factor	0,71
Max. leakage current	2.0 mA
Coolant	R410a
Filling	770 g
Duct connection	Ø315 mm
Drain hose, internal/external diameter	Ø6/9 mm
Energy class	A^{+++}
Weight	85 kg
Dimensions incl. unti (WxHxD)	1498 x 424 x 1898 mm

[1] Measured according to EN 308 and EN 14825 at max. airflow with ePM_{10} 50% filter.
[2] Cooling module activation.

SCHEMATIC SKETCH CC

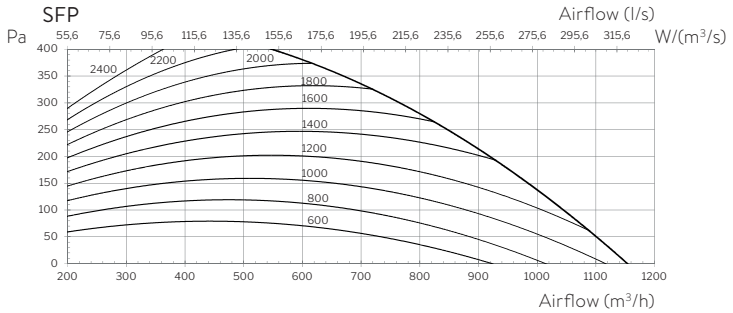


NAME OF COMPONENT

CAT	Capillary Tube	EV	Evaporator	OT	Outside Temperature
CD	Condenser	EVi	Evaporator, temperature inlet	PS	Pressure Switch
CO	Compressor, inverter-controlled	EVo	Evaporator, temperature output		
CP	Condensate Pump	FD	Dry Filter		
CT	Condensate Tray	FT	Float		
		HG	Hot Gas Temperature		

CC 1000 COOLING MODULE

SFP



Additional pressure loss for ePM$_1$ 55% Supply air filter.
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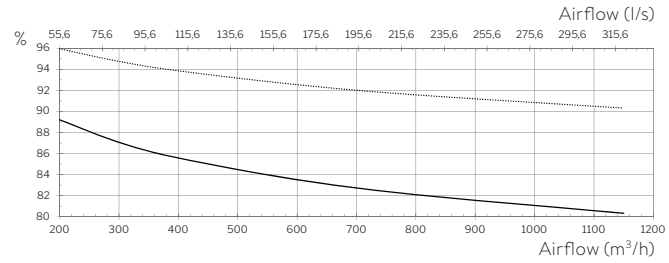
Pressure loss (p) incl. ePM$_1$ 55% filter: $p = p_s + \Delta p$ [Pa]

Power consumption (P):
$P = SFP \cdot q_v/3600$ [W];
(SFP from diagram and q_v = airflow in (m³/h)

TEMPERATURE EFFICIENCY



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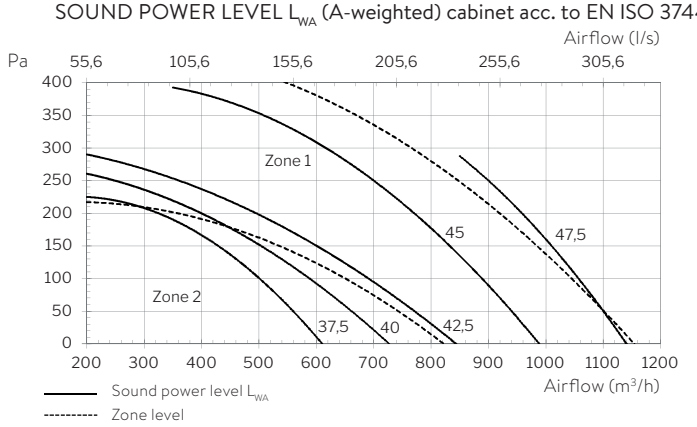
Conditions: Indoor air: 25°C 55% RH
Outdoor air: -10°C

SOUND POWER LEVEL L_{WA} (A-weighted) cabinet acc. to EN ISO 3744

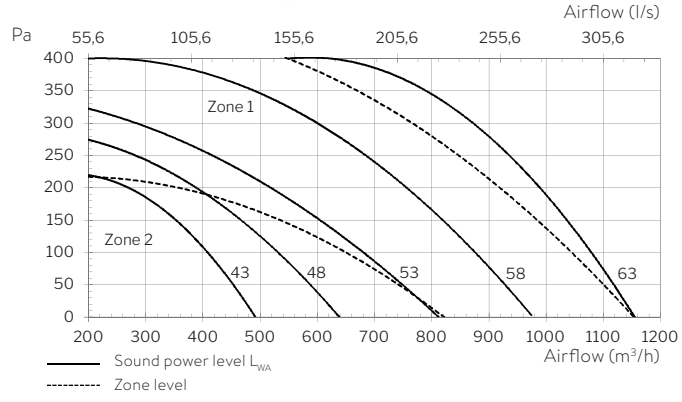


SOUND POWER LEVEL - CABINET

HZ	ZONE 1 K_W	ZONE 2 K_W
63	13	13
125	8	11
250	6	6
500	-7	-9
1000	-12	-16
2000	-14	-16
4000	-20	-18
8000	-20	-17

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

SOUND POWER LEVEL L_{WA} (A-weighted) pressure side acc. to EN ISO 5136

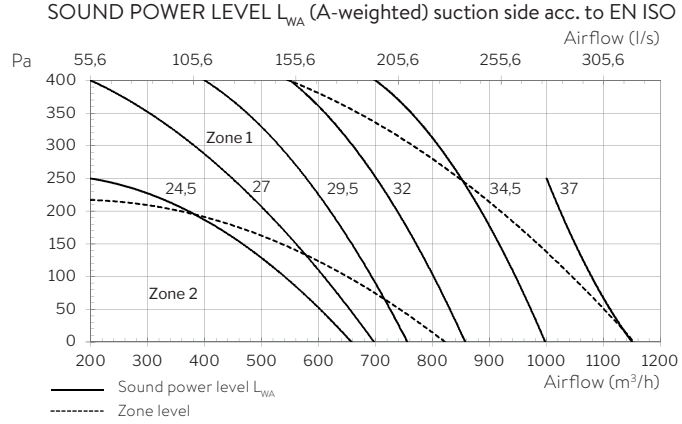


SOUND POWER LEVEL - PRESSURE SIDE

HZ	ZONE 1 K_W	ZONE 2 K_W
63	-4	-5
125	-9	-4
250	-5	-7
500	-12	-13
1000	-15	-16
2000	-13	-15
4000	-20	-22
8000	-20	-29

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

SOUND POWER LEVEL L_{WA} (A-weighted) suction side acc. to EN ISO 5136



SOUND POWER LEVEL - SUCTION SIDE

HZ	ZONE 1 K_W	ZONE 2 K_W
63	-2	-2
125	-9	-7
250	-8	-9
500	-18	-19
1000	-21	-22
2000	-25	-28
4000	-36	-38
8000	-42	-49

$L_W = L_{WA} + K_W$
Sound power level L_{PA} must be calculated.

CONTROL PROCESSES

On the following pages the different advanced control processes are described.

DEALING WITH CONDENSATE

With the high level of heat recovery of up to 95%, extract air in the counterflow heat exchanger undergoes intense cooling.
This may, under certain conditions, cause moisture in the extract air to condense in the exchanger. If this occurs, the condensation will then be collected in a condensation tray, where a float sensor automatically records how much water there is. The unit is fitted with an automatic condensation management process, which means that in rooms with normal humidity, such as offices, meeting rooms and classrooms, it is not typically necessary to connect a condensation drain.

When ventilating rooms with high humidity, the condensation can be directed away from the unit to a drain to prevent outages, for example by fitting the unit with a fully automatic condensation pump.

FLOAT SENSOR
Built-in float sensor detects unwanted build-up of condensate.

FROST PROTECTION

When the outside temperature approaches freezing point, the exhaust temperature behind the counter-flow heat exchanger drops. This can result in condensate freezing in the heat exchanger. The Airlinq® control system prevents the formation of ice by increasing extract air and reducing inlet air, causing the extract air temperature to rise again.

If this process is insufficient to prevent ice forming in the heat exchanger, Airlinq® will protect the unit by shutting down operation.

”PREHEAT” WITH ELECTRIC PREHEATING SURFACE

If the air handling unit is fitted with an electric preheating surface, it will heat the fresh air before it meets the counter-flow heat exchanger, preventing the formation of ice. To maintain balanced ventilation, the Airlinq® control system controls the temperature in the unit. This is achieved by the preheating surfaces only cutting in if the requirement exists. Energy consumption can thus be kept at a minimum.

”VIRTUAL PREHEAT” WITH ELECTRIC HEATING SURFACE

On AM 150 and DV 1000, the unit can alternatively be protected against ice formation by using an electric heating element and the “virtual pre-heating” function. A bypass damper diverts some of the fresh air past the counterflow heat exchanger. The heating surface heats the fresh air up to the inlet temperature is reached. The extract air is cooled down less in the heat exchanger, preventing ice formation.

ELECTRIC PREHEATING SURFACE
Optional preheating surface for very cold areas.

CONTROLLED INLET TEMPERATURE

To achieve the highest level of heat recovery, Airmaster air handling units are fitted with highly-efficient counter-flow heat exchangers. A comfort heating surface is therefore used only to equalise the minimal heat loss during ventilation, ensuring that full operation can be maintained, even in cold geographical regions.

Balanced ventilation is maintained as long as the inlet temperature remains within acceptable limits as standard.

If the inlet temperature cannot be maintained at low fresh temperatures, Airlinq® will reduce inlet air and increase extract air to compensate for the low temperature.

The function is also active if comfort heating surface capacity is utilised 100%.

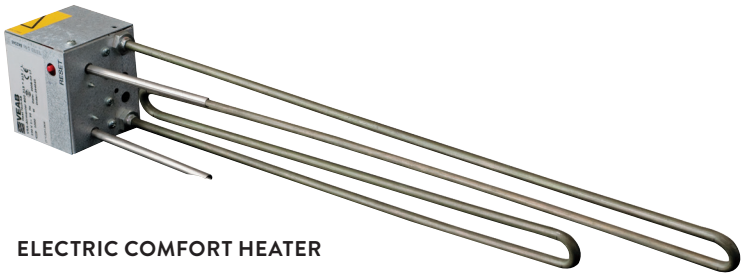
This function means that in certain climates the comfort heating surface is not required.

ELECTRIC COMFORT HEATING SURFACE WITH ADAPTIVE CONTROL

The electrical comfort heating surface is controlled automatically by the Airlinq® controls system, which checks the temperature conditions in the air handling unit and switches the comfort heating surface on and off as required.

Adaptive control means that the electrical comfort heating surface warms the inlet air after the counter-flow heat exchanger with only the energy required to maintain the desired inlet air temperature. In other words, adaptive control ensures that the supply air has an even temperature.

The balance between the supply air and extract air can be maintained via an electrical comfort heating surface, even at very low outside air temperatures.



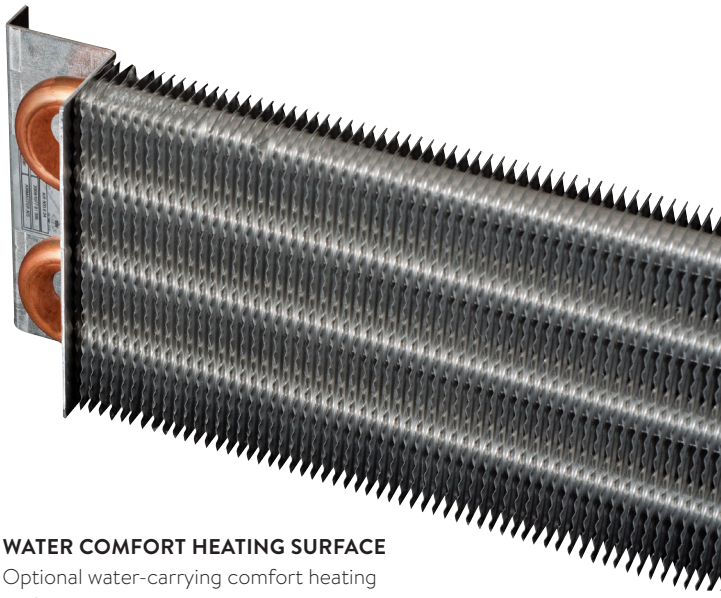
ELECTRIC COMFORT HEATER

CONTROL PROCESSES

WATER COMFORT HEATING SURFACE

Most air handling units can have a water comfort heating surface fitted as an alternative to an electric comfort heating surface. A wwater comfort heating surface also ensures the required inlet temperature. The large surface area of the heating surface ensures efficient transfer of heat energy to the inlet air.

The Airlinq® control system activates and deactivates the heating surface using a motor-driven valve. The heating surface is supplied built-in to the air handling unit, or as part of the duct system. Connection to the local heating system is therefore quick and simple.



WATER COMFORT HEATING SURFACE
Optional water-carrying comfort heating surface.

FROST PROTECTION OF ATER COMFORT HEATING SURFACE

The water comfort heating surface is fitted with a separate, self-controlling heat retention valve, which ensures a minimum temperature even when the air handling unit is switched off. All nominal values for the water heating surface are preprogrammed into the Airlinq® control system. The heating surface is therefore protected against frost and is directly functional.

FLOW CONTROL

Most air handling units can control the airflow using flow control. Flow control means that the airflow is stated in m^3/h and ensures balanced operation, even in case of varying pressure losses on the supply and extract air. To convert airflow to m^3/h, a measuring nozzle is fitted inside the air handling unit between the fan and the main control box, which measures the differential pressure. The differential pressure is measured for the supply air and extract air respectively, and then converted to an airflow in m^3/h.

CONTROL PROCESSES FOR COOLING

Although not a heating or air conditioning unit as such, an Airmaster ventilation unit can still help regulate the room temperature to a certain degree. The fully automatic control will utilise the outside temperature for cooling when it is lower than the room temperature, both by bypassing the heat exchanger and through night cooling. If additional cooling is needed, most Airmaster ventilation units can have a cooling module added, which can further reduce the temperature of the inlet air. The specially developed cooling modules are designed to lower the temperature of the outside air by up to 15°C and ensure the most comfortable supply temperature. The cooling modules are demand controlled and only cool the air to the extent necessary and when needed.

AUTOMATIC BYPASS

The Airlinq® control system can open the bypass gradually if the inlet temperature exceeds the required level. Cooler fresh air will be allowed to bypass the counter-flow heat exchanger, ensuring the inlet temperature setpoint is. Airlinq® will adjust the inlet air temperature to achieve a higher cooling output.
If the room temperature exceeds the desired level, e.g. as a result of strong ssunlight, the bypass will open automatically.

If a cooling module is fitted to the air handling unit, Airlinq® will activate it automatically if cooling using fresh air is insufficient.

NIGHT TIME COOLING

If the room temperature exceeds the desired maximum level set during the day, all Airmaster air handling units can automatically cool down the room using colder night air. It will be registered by the Airlinq® control system, and started automatically.
If necessary, the function will use the bypass damper and cooling module to achieve the cooling output required. The building and its contents will be cooled, and a reduction of the room temperature will be achieved for the next day.

CONTROL PROCESSES FOR COOLING

ENERGY-EFFICIENT AND ON-DEMAND COOLING
Airmaster inverter-controlled cooling modules provide efficient and on-demand controlled ventilation and cooling solutions with extremely low-energy consumption in rooms where air-replacement and cooling needs vary.
The inverter-controlled cooling modules are integrated with Airmaster decentralised air handling units.

COOLING USING INVERTER-CONTROLLED COMFORT COOLING MODULES (CC)
At high outside air temperatures, the bypass function and night cooling ensures that the inlet air temperature is kept at the desired level. If the cooling level is insufficient, the temperature can be reduced efficiently using the cooling module.

The Airlinq® control system automatically activates the cooling module, which can reduce the outside air temperature by up to 15°C.

The cooled air is fed into the air handling unit and the inlet air temperature is thus kept to the desired level.

All cooling modules are dimensioned in accordance with European conditions (outside air temperature 35°C, 40% relative humidity) and standard EN 14511-2.

The cooling module is not subject to the PED – Pressure Equipment Directive in accordance with article 1 (3.6).

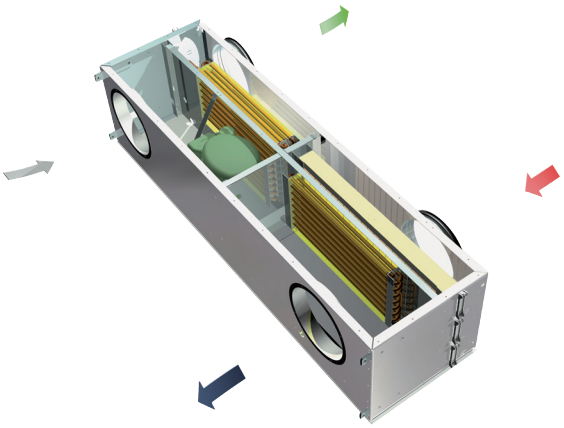
All cooling modules are equipped with a built-in condensation pump as standard.

Airmaster specially developed inverter-controlled cooling modules are fully automatically controlled by the Airlinq® control system.

Together with five different network modules (Airlinq® Online, LON®, MODBUS® RTU RS485, BACnet™ MS/TP,
BACnet™/IP, KNX®) and the intuitive control panels, Airlinq® supports an efficient, economical and future-proof ventilation solution.

COMFORT COOLING MODULE
is available for the following air handling units:

AM 150 H
AM 500 H
AM 800 H
DV 1000

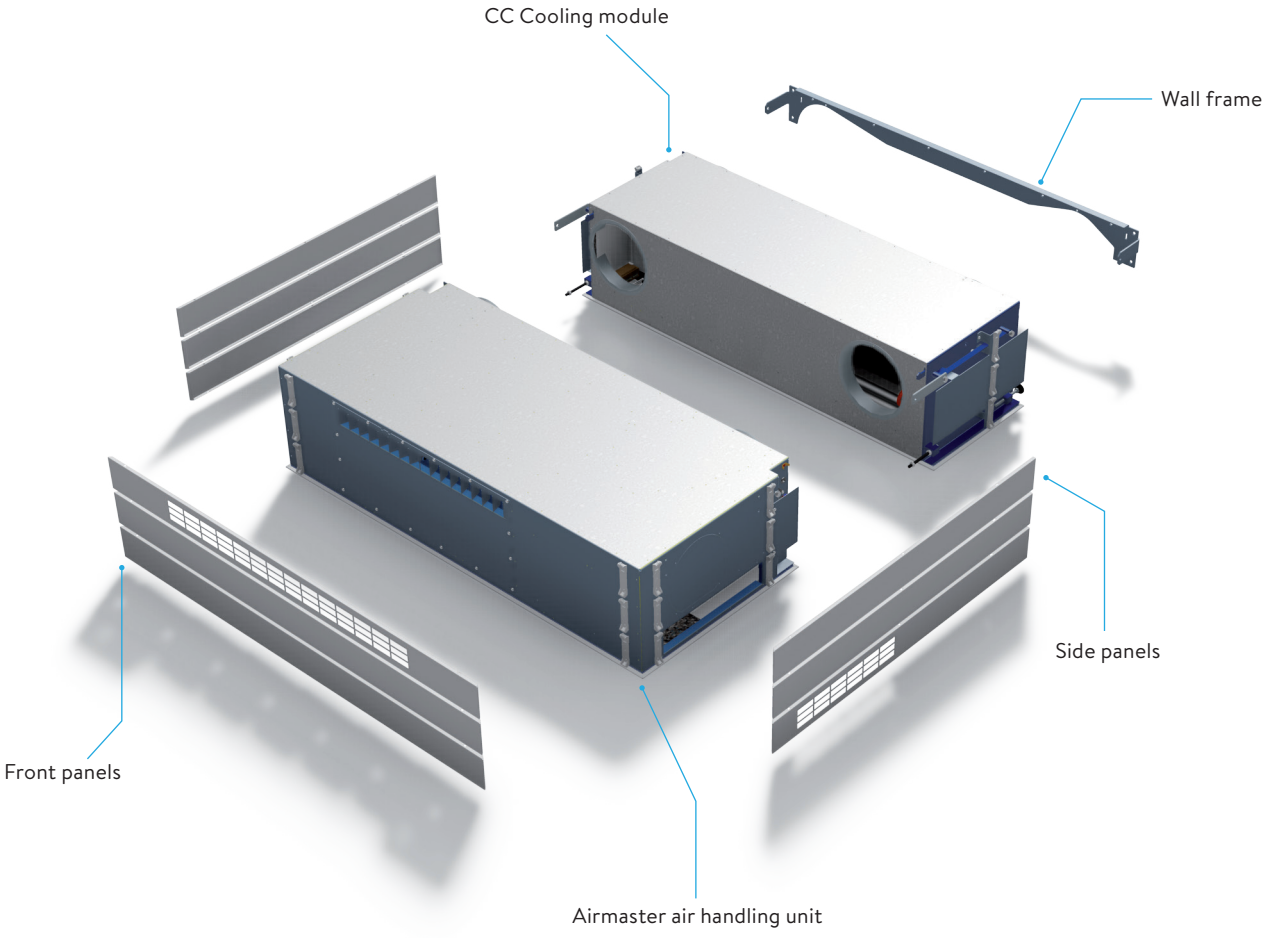


Airmaster's comfort-creating cooling module for horizontal models completes the most flexible ventilation system on the market.

BENEFITS IN TERMS OF RUNNING COSTS AND CLIMATE IMPACT ARE GAINED BY THE DEPLOYMENT OF PIONEERING TECHNOLOGY.

An inverter-controlled cooling solution gives infinitely adjustable capacity regulation of the compressor, to ensure that it adjusts constantly to actual cooling requirement. That means significant benefits in terms of running costs and climate impact:

- Optimised for energy-efficient operation in our climate zone.
- Improved annual mean EER value due to inverter-controlled compressor.
- Lower running costs thanks to on-demand control - annual savings for electricity typically 60-80%.
- Intelligent inverter-control ensures continuous operation, even under extreme climatic conditions, indoors and outside.
- Very quiet in operation.
- Outside air is typically cooled by up to 15°C before entering the room via the Airmaster unit.
- Easy monitoring of operation and climate via Airlinq® data log - stores up to one year's operating data.



CONTROL PROCESSES WITH SENSORS

Demand controlled ventilation can be obtained by means of various sensors. Controlling ventilation according to needs provide both a high level of indoor air quality and reduces energy consumption.

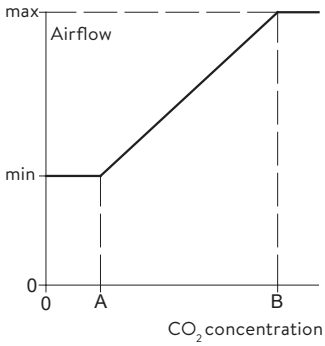
CO_2 SENSOR - WALL-MOUNTED OR BUILT-IN
Automatically aligns the ventilation level to the CO_2 level in individual rooms.

CONTROL VIA CO_2 SENSOR
In rooms where humans are the primary source of pollution, comfort ventilation is often controlled according to the CO_2 concentration in the room as it is a good indicator of pollution caused by people and thus the need for a supply of fresh outside air. A CO_2 sensor measures the CO_2 level in the room, and sends the reading to the control system. The control system then adjusts the rate of air replacement in the room according to the CO_2 level. The unit's energy consumption is reduced to a minimum.

AIRFLOW CONTROL (FIGURE 1)
The unit can be set to run with a reduced standard airflow (min.) for basic ventilation. If the CO_2 level in the room exceeds the programmed lower limit (A), the CO_2 sensor will cut in and increase airflow.

If CO_2 levels continue to rise, the airflow will be increased up to the maximum volume (max.) at the upper CO_2 limit (B) and above.

FIGURE 1
AIRFLOW CONTROL



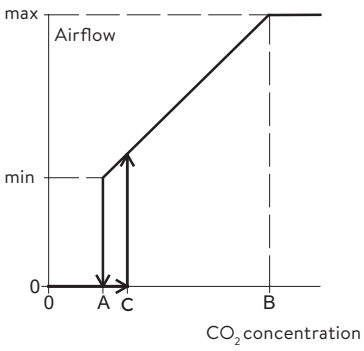
START, STOP AND AIRFLOW CONTROL (FIGURE 2)
If the unit is fully controlled by the CO_2-sensor, it will start with the corresponding air volume when the CO_2-level exceeds the programmed lower control limit, plus 10%, or a fixed programmed value (C).

If the CO_2 level continues to increase in the room, the airflow is increased linearly, up to the maximum airflow at the CO_2 level's upper limit (B) and above.

If the CO_2 level falls below the programmed lower limit (A), the air handling unit stops again.

If the air handling unit is started by a timer and the CO_2 limit continues to exceed the lower limit (A), the air handling unit will continue even after the programmed stop, until the CO_2 level has fallen below the lower limit, to ensure a good indoor climate.

FIGURE 2
START, STOP AND AIRFLOW CONTROL



MODULATING TVOC-SENSOR

Research shows that the CO_2 concentration is not the only thing to cause impaired concentration and the like, but that other gases such as formaldehyde, acetone, methanol, acetic acid and acetaldehyde – called VOCs (Volatile Organic Compounds) – have a decisive influence.

VOCs are easily evaporable organic compounds released by cleaning agents, building materials, work processes, cosmetics and human bodily processes, etc.

Despite them occurring in very small concentrations in the indoor climate, research has shown that these substances probably play a major role in people's perception of the air quality, and they have an impact on our mental well-being.

As VOC and CO_2 concentrations do not necessarily occur together, it makes sense to have a separate measurement of VOCs that demand controls the ventilation based on the VOC concentration, or better still, based on the VOC concentration and the CO_2 concentration at the same time.
The benefit for occupants of the rooms will be that the air exchange is controlled on the basis of several relevant parameters.

The TVOC (Total VOC) sensor is available either as a stand-alone sensor or incorporated with Airmaster's existing CO_2
sensor. If incorporated, both sensors will operate in parallel, with the most critical signal determining the air exchange.

The demand control emits a modulating operating signal which ensures that only the required amount of air is supplied to the room, thus reducing the energy consumption for ventilation.

Scales and interpretation:

CO_2		TVOC (Total VOC)			
Limits, ppm (parts per million)		**Limits, ppb (parts per billion)**		**Colours**	**Interpretation**
From	To	From	To		
400	900	0	65	Dark green	"really good"
900	1200	65	220	Light green	"good"
1200	2000	220	660	Yellow	"fair"
2000	5000	660	2200	Orange	"poor"
5000		2200		Red	"warning"

CONTROL VIA MOTION SENSOR (PIR)

The air handling unit is set to start/stop via a signal from a motion sensor. The motion sensor detects motion within its detection field and sends a signal to the unit to start. The unit will start in normal operation using the programmed airflow and inlet temperature.

When the signal ceases, the unit will stop after the preprogrammed afterrun time. A motion sensor is often used to switch the unit from basic ventilation to normal operation when anyone enters the detection field.

A MOTION SENSOR wall-mounted or built in. Ensures as little energy consumption as possible, as ventilation does not start until movement is detected in the room.

HUMIDITY

HUMIDITY CONTROL
ADAPTIVE ON-DEMAND CONTROL

Airmaster's AM 300 ventilation unit can be fitted with two built-in humidity sensors and extended programming.

Integrated humidity and temperature sensors on supply and extract make exact calculation of absolute air humidity possible.

AUTOMATIC ADAPTATION TO WEATHER CONDITIONS

The adaptive humidity control automatically reduces the drying out of the air during the winter and reduces humidity in the summer. This effective, energy-saving form of operation creates a healthy environment and a healthy energy bill.

CONTROL BY A WALL-MOUNTED HYGROSTAT

A hygrostat registers relative air humidity, and sends either a start or stop signal to the air handling unit. Humidity in the air affects the length of hygroscopic man-made fibres. Depending on the humidity level, the fibres will activate a contact that triggers the signal.

When the relative air humidity goes above or below the setpoint, the hygrostat sends a start/stop signal to the air handling unit. Hygrostats are often used to switch a unit from basic ventilation to full operation when the relative humidity set is exceeded.

HYGROSTAT ensures that humidity is automatically kept down. Can be installed in the room.

INTELLIGENT CONTROL WITH AIRLINQ®

Airmaster focuses not only on the air handling unit, but also on the control system and operation.

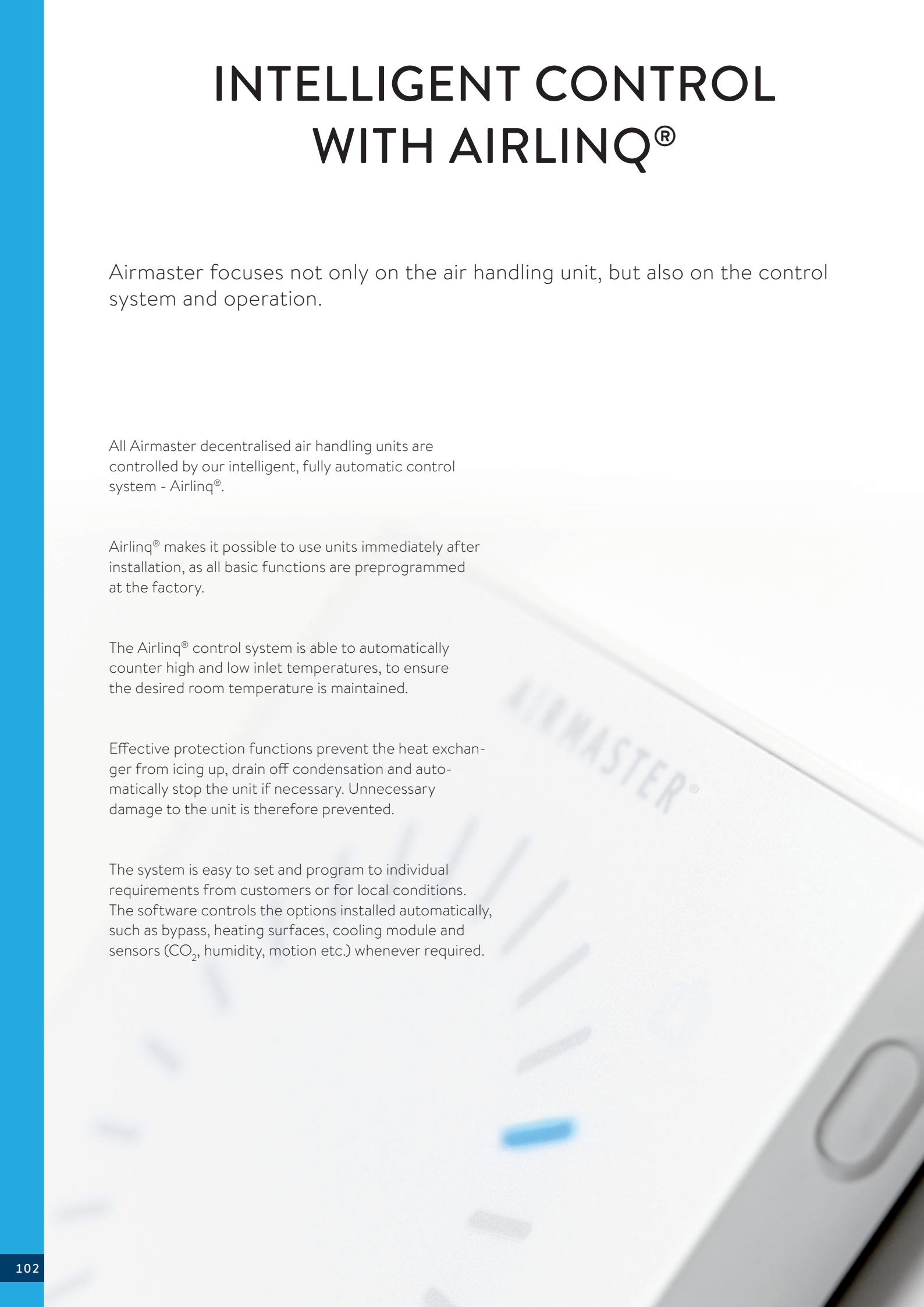
All Airmaster decentralised air handling units are controlled by our intelligent, fully automatic control system - Airlinq®.

Airlinq® makes it possible to use units immediately after installation, as all basic functions are preprogrammed at the factory.

The Airlinq® control system is able to automatically counter high and low inlet temperatures, to ensure the desired room temperature is maintained.

Effective protection functions prevent the heat exchanger from icing up, drain off condensation and automatically stop the unit if necessary. Unnecessary damage to the unit is therefore prevented.

The system is easy to set and program to individual requirements from customers or for local conditions. The software controls the options installed automatically, such as bypass, heating surfaces, cooling module and sensors (CO_2, humidity, motion etc.) whenever required.



CONTROL FUNCTIONS WITH AIRLINQ®:

DATA LOG
Unique log function for all key operating and room data such as:
- Inlet temperature
- Room temperature
- Outside temperature
- CO_2 level
- Air humidity
- Airflow
- Damper position

AIRLINQ® PC TOOLS
User-friendly monitoring and setting of air handling units via PC with Airlinq® User Tool.

Service engineers can use the more advanced Airlinq® Service Tool.

DOWNLOAD TO PC
The unit's operating data can be downloaded to a PC to provide rapid overview of operation, and to generate operating documentation. This allows full optimisation of the unit.

ALL-IN-ONE
All intelligence is concentrated in the unit, which means that it can run fully automatically without having to be connected to a control panel.

MONITORING, WARNING AND ALARM SYSTEM
The advanced warning and alarm system helps minimise operating and service costs. Errors are quickly detected, making the unit more reliable.

FLEXIBILITY WITH DIGITAL BMS
Airlinq® can be fitted with a network module (optional PCB) to provide flexible connection to one of the following network systems:

- KNX®
- BACnet™/IP
- BACnet™ MS/TP
- LON®
- MODBUS® RTU RS485
- Airlinq® Online

AIRLINQ® BMS
Up to 20 different and individually equipped air handling units can be controlled using a single control panel in an Airlinq® BMS.
Can be combined with Airlinq® Online.

AIRMASTER SENSOR FOR BMS
Airmaster's motion sensor (PIR), CO_2 sensors and TVOC sensors can be used on network systems. The result is a very simple and inexpensive connection to a BMS system.

AIRLINQ® ORBIT CONTROL PANEL

Operation using Airlinq® Orbit is perfect when more comprehensive and easier access is required to control normal ventilation operation.

WIDE RANGE OF OPTIONS
Operating functions provide a wide range of options for controlling ventilation. The Airlinq® Orbit control panel with touch function is user-friendly for navigation and setting operating parameters. The menu layout makes operation easy and simple, and reduces the risk of error.

OPERATION
Settings can be made directly on the control panel touch screen.

Data cable

USB cable

OPERATION VIA PC
A PC can be connected via the USB port on the control panel, and Airlinq® Service Tool used to set all operating parameters. (Airlinq® Service Tool is for the use of service engineers).

AIRLINQ® SERVICE TOOL
The control panel can be easily connected to a PC, providing access to operating data using the Airlinq® User Tool.

- Adjusting and programming control system
- Download a data log and graphic record of operation
- Download or upload a control system setup
- Monitor energy consumption using a built-in energy meter
- Update control system software
- Automatic synchronisation of the built-in timer via PC date and time

Airlinq® User Tool and Airlinq® Service Tool can be downloaded from **www.airlinq.eu**

CONTROL FUNCTIONS WITH AIRLINQ® ORBIT

Manual start, stop and standby. Manual start and stop of an individual group or entire system for Airlinq® BMS.

Setting of all major operating parameters using an automatic startup guide. The start-up guide can be restarted at any time.

Display and setting air flow via touch function on the front.

Displays warnings and alarms with text description (for all Airlinq® BMS units).

Holiday mode - a function to ensures basic ventilation with reduced airflow.

Shows the CO2 and TVOQ level when a CO2 and/or TVOQ sensor is connected (shows separately for all sensors in Airlinq® BMS).

Easy, simple control of Airlinq® BMS.

Automatic operating lock.

Screen lock with security code.

SET OPERATING PARAMETERS:

- Display operating status for up to 40 operating parameters (for all units with Airlinq® BMS)
- Overview and adjustment for all timed programs, including night time cooling
- Inlet temperature and standard airflow
- Set date and time
- Reset service
- Modify data log

AIRLINQ® VIVA CONTROL PANEL

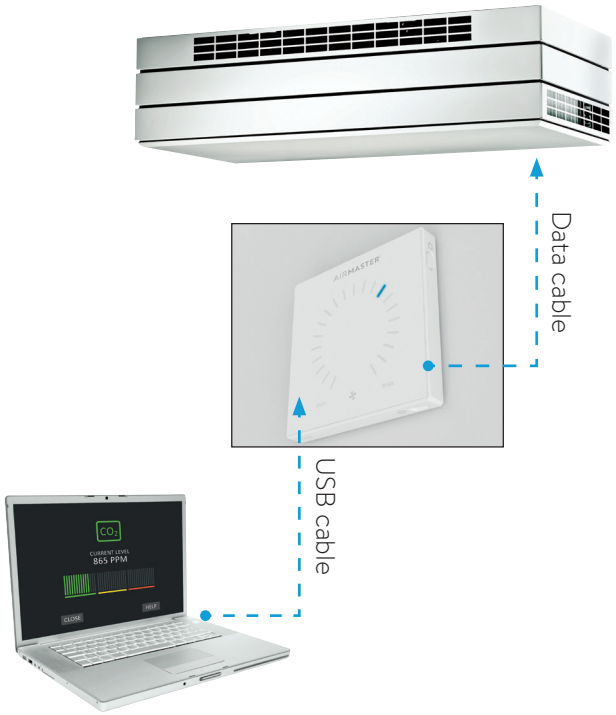
The Airlinq® Viva is designed to be perfect for any requirement for optimal ventilation with minimal manual control.

THE EASIEST CONTROL INTERFACE ON THE MARKET

Control functions are simple and user-friendly. Operation is automatic to minimise the risk of incorrect use.

OPERATION VIA PC

The control panel can be connected to a PC via a USB port to set additional operating parameters. Airlinq® User Tool and Airlinq® Service Tool (programs used by service engineers) provide complete details of the unit's performance. See the following description of options for the two programs.



AIRLINQ® USER TOOL

The control panel can be easily connected to a PC, providing access to operating data using the Airlinq® User Tool.

- Options include setting airflow, inlet-temperature and maximum room temperature
- Filter status display
- Setting CO_2 range
- Setting, activating and deactivating timer programs

AIRLINQ® SERVICE TOOL

The control panel can be easily connected to a PC, providing access to operating data using the Airlinq® User Tool.

- Adjusting and programming control system
- Download a data log and graphic record of operation
- Download or upload a control system setup
- Monitor energy consumption using a built-in energy meter
- Update control system software
- Automatic synchronisation of the built-in timer via PC date and time

Airlinq® User Tool and Airlinq® Service Tool can be downloaded from **www.airlinq.eu**

CONTROL FUNCTIONS WITH AIRLINQ® VIVA

Manual start, stop and standby.

Setting airflow via touch function on the front.

Display of warnings and alarms by red or yellow symbols.

Holiday mode - a function to ensure basic ventilation with reduced airflow.

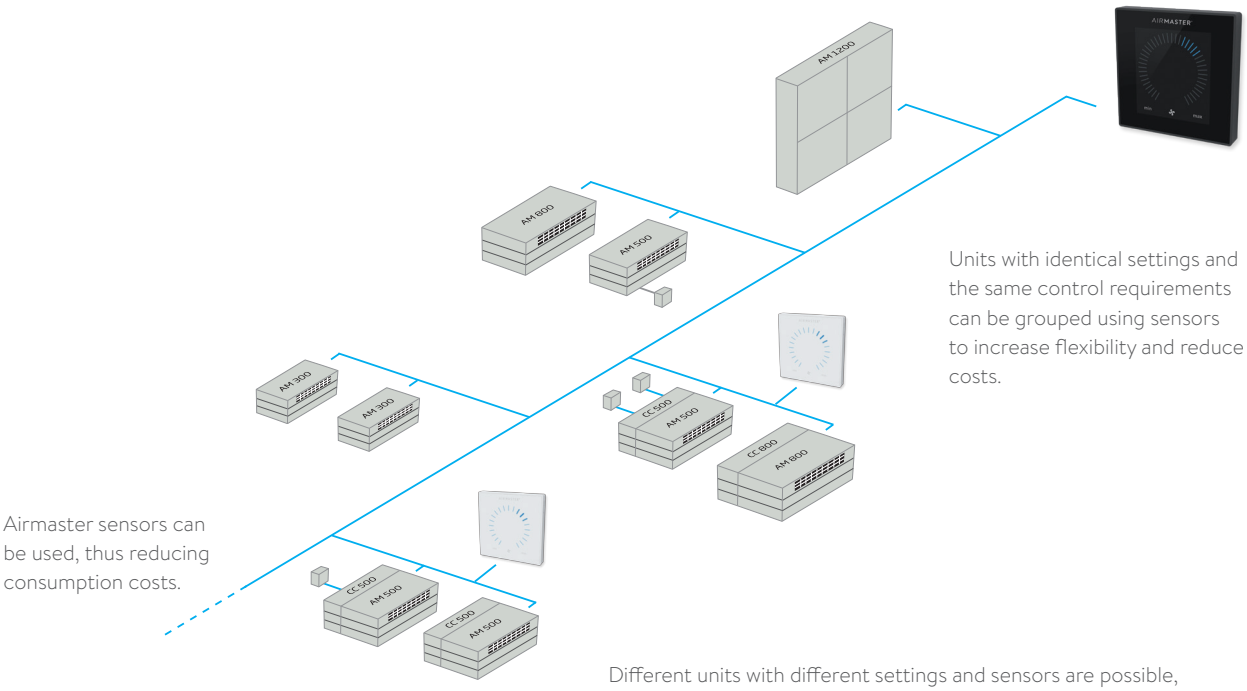
Automatic operation lock.

Child lock.

The control panel allows the user to adjust airflow easily.

NETWORK WITH AIRMASTER

Network control can be performed using Airlinq® BMS, with which up to 20 units can be controlled from a single Airlinq® Orbit control panel.



Units with identical settings and the same control requirements can be grouped using sensors to increase flexibility and reduce costs.

Airmaster sensors can be used, thus reducing consumption costs.

Different units with different settings and sensors are possible, giving maximum flexibility and optimising according to local conditions and room use. Local control is possible using the Airlinq® Viva control panel.

AIRLINQ® BMS

Flexibility is the order of the day for the Airlinq® BMS system. BMS stands for ”Building Management System”.

Up to 20 different air handling units can be controlled by the system from a single control panel. The units can be different types and fitted with different options.
Cooling modules can also be attached to individual units as and when required.

Such a degree of flexibility means that units with different levels of performance and options can be connected to a single system, whilst meeting the requirements of any individual room.

Dividing the system into groups of one or more units with a common control system optimises use of their size and sensors.

Control using a single sensor (e.g. CO_2 sensor) or a combination (e.g. a motion sensor and a CO_2 sensor) is also possible. Using sensors overrides the basic operating parameters for individual units, whole groups or all units.

Individual operation, monitoring and programming - plus programming of common parameters - are performed from a single control panel. Connection to an analogue building network (BMS system) is of course also possible.

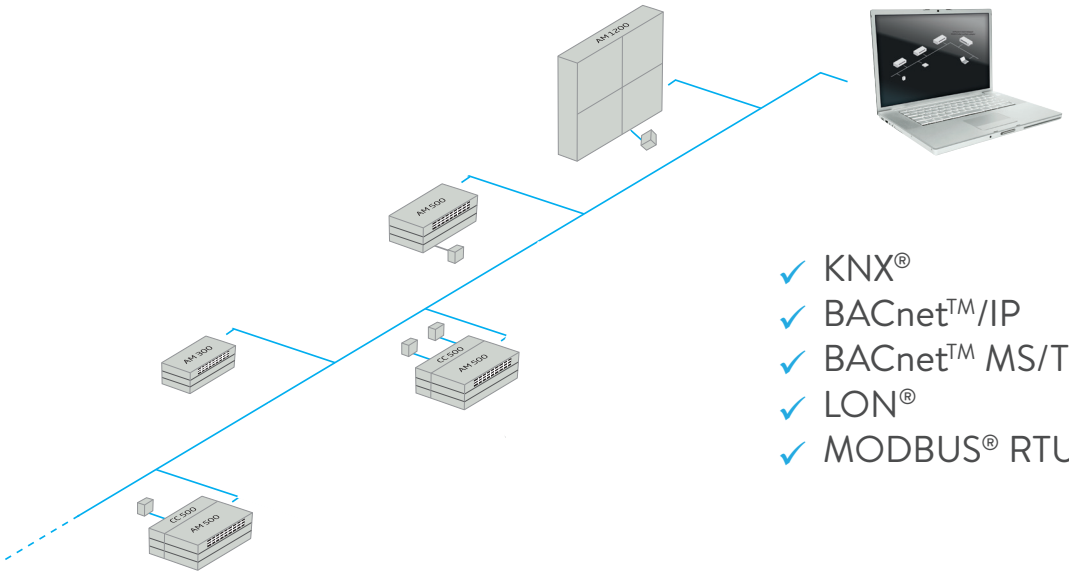
DIGITAL BMS

A BMS (Building Management System) network makes it possible to keep all the benefits of decentralised ventilation, whilst utilising the administrative benefits of central control.

Airmaster air handling units are easy to integrate with other building automation.

Creating a full overview of operations and programmable air handling units in relation to local use is easy with a Building Management System (BMS).

The units can also run fully automatically, but can be monitored using a BMS network. Airmaster motion sensor and CO_2 sensors can be connected, and data from the units and sensors can be transferred to the BMS network. This reduces installation, operation and maintenance costs.



- ✓ KNX®
- ✓ BACnet™/IP
- ✓ BACnet™ MS/TP
- ✓ LON®
- ✓ MODBUS® RTU RS485

When the control system is connected to BMS, all individual air handling units can be controlled and/or monitored by BMS.

AIRMASTER
AIRLINQ® ONLINE

Airmaster Airlinq® Online is a cloud based WEB portal, where the user is able to control, monitor, and manage all of the installed Airmaster air handling units (AHU) of a project. The WEB portal is accesable from both PC, smarthphone and tablet.

The Airlinq® Online WEB portal gives the user an overview and access to operation and monitoring of installed Airmaster AHU of a project.

Airmaster Airlinq® Online is much more than just a web service. It is a total package, which includes that Airmaster in cooperation with the customer makes the setup of the project and ensures correct connection and setup for each AHU on the WEB portal. Furthermore, Airmaster provides fundamental instructions and training in using the system. Hereby ensuring maximum user satisfaction.

Airmaster Airlinq® Online includes 3 years, free of charge, software update of the firmware for the air handling unit.

The setup of each AHU includes, besides setup of operating parameters, also the fundamental setup of user groups and registration of authorised users with associated permissions and rights.

The setup of each AHU ensures that the customer gets the overview and availability of the project customized to his/her needs. Furthermore, the operation of each AHU is individually adjusted to the project.

This way the energy consumption can be kept at a minimum by ensuring an efficient operation setup.

OVERVIEW & PEACE OF MIND AS A MATTER OF COURSE

Airmaster Airlinq® Online meets your needs for centralised administration while retaining the benefits of decentralised ventilation. As a municipality, housing association, property manager, caretaker and end user, you get a quick and easy overview of all your ventilation units.

- Online control
- Online operation
- Online operational monitoring

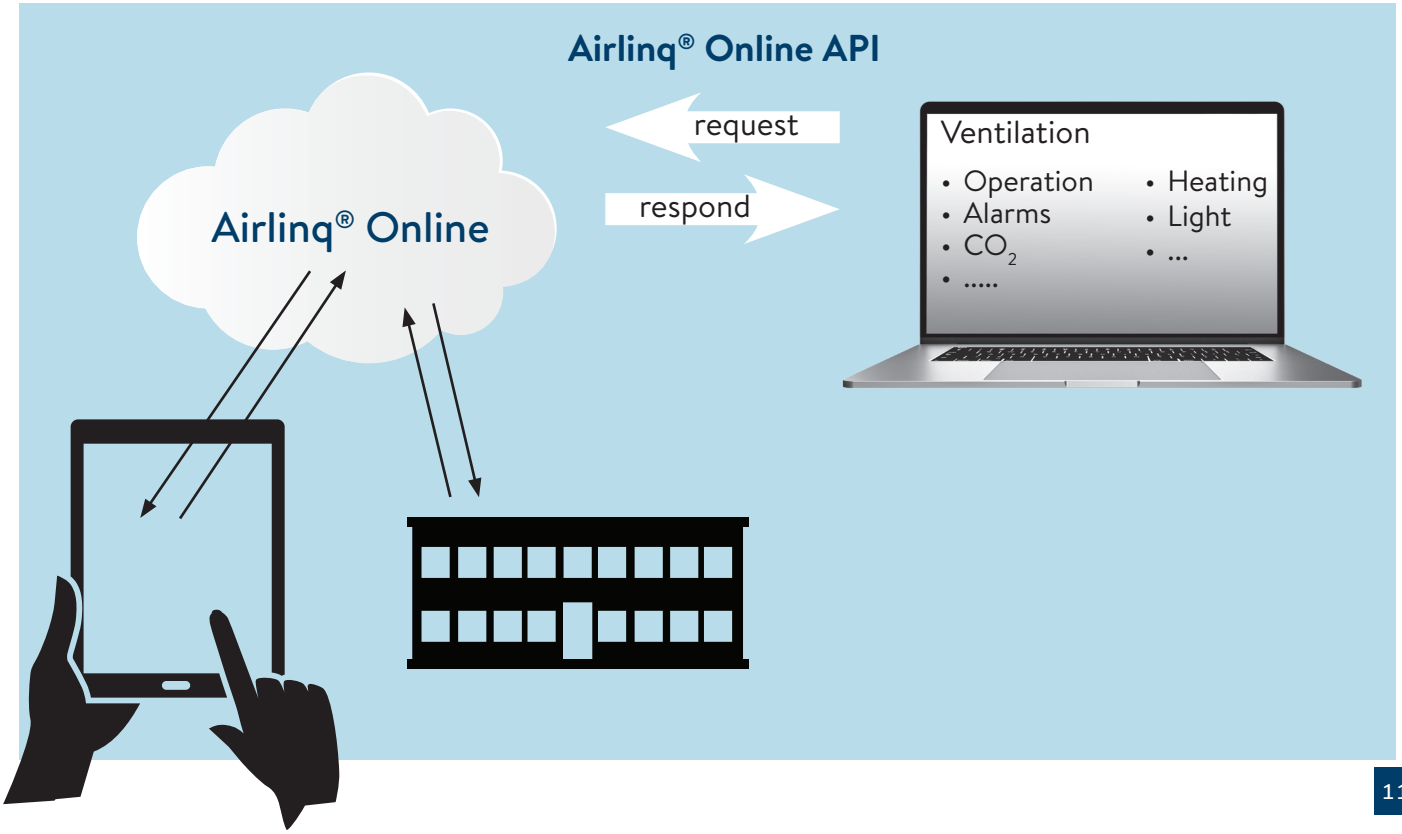
Security
As much as we favour openness, security is also paramount at Airmaster. All communication is therefore securely encrypted, whether between user and server or between ventilation unit and server.

Connection to Airmaster Airlinq® Online
Airmaster ventilation units can be connected to Airmaster Airlinq® Online in two ways:
Connection to Airmaster Airlinq® Online is possible using a standard Ethernet cable (min. Cat 5e) for each individual Airmaster ventilation unit. Requires a network socket for all ventilation units or alternatively a network switch.

Connection to Airmaster Airlinq® Online is also possible using a standard Ethernet cable (min. Cat 5e) for one Airmaster ventilation unit which is part of an Airlinq® BMS system.
The units can communicate with Airmaster Airlinq® Online via the RS-485 bus connection established to the Airlinq® BMS system. This solution requires a single network socket for one of the ventilation units in an Airlinq® BMS system. One Airlinq® BMS system can handle up to 20 ventilation units.

Connection to BMS systems
If you wish to integrate the control and operation of Airmaster ventilation units with other building automation, this is also a possibility. On page 109, we have described Networks with Airmaster using BACnet™ and MODBUS®, for example, but there is another option. If you have Airmaster Airlinq® Online, you can connect to BMS systems from here using the Airlinq® Online API. Whether you want the entire control system to be integrated or just certain sub-functions such as operational monitoring, the API can facilitate integration.

For further information regarding Airlinq® Online and Airlinq® Online API, please visit:
www.airmaster-as.com/en/products/control-and-operation/airlinq-online



VENTILATION GRILLE

Airmaster Boomerain® Ø160 mm, Ø250 mm and Ø315 mm
Façade ventilation grille in a new, aerodynamic design, developed for Airmaster ventilation units. The shape of the slats has been designed in such a way that only very limited turbulence occurs on the reverse of the façade ventilation grille. Pressure loss is thus reduced, and energy consumption is reduced considerably. The unique geometry is furthermore designed to capture water droplets and channel them away, preventing penetration into the duct.
Airmaster Boomerain® is made of seawater resistant aluminium, and can, as an option, be supplied powder coated in all RAL colours.
There are three variants in each size:

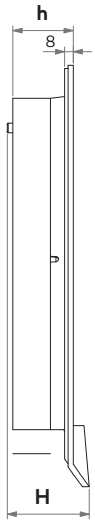
Airmaster Boomerain® 1
is a façade ventilation grille with a single layer of slats, which is ideal for an ordinary inland climate under protective conditions in a relatively passive environment.

Airmaster Boomerain® 2
is a façade ventilation grille with a double layer of slats, providing greater protection from rainwater. We recommend it in more exposed places, which are occasionally lashed by westerly winds, for example.

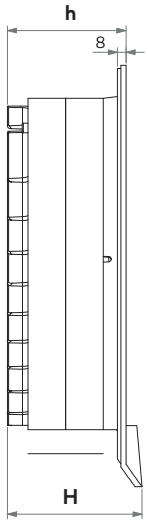
Airmaster Boomerain® 3
is a façade ventilation grille with three layers of slats, which are extra effective at keeping the rain out. It is designed for harsh weather conditions, such as in coastal areas where extra protection may be needed.

	Ø160-1	Ø160-2	Ø160-3	Ø250-1	Ø250-2	Ø250-3	Ø315-1	Ø315-2	Ø315-3
Ød	157 mm	157 mm	157 mm	247 mm	247 mm	247 mm	312 mm	312 mm	312 mm
ØD	215 mm	215 mm	215 mm	305 mm	305 mm	305 mm	370 mm	370 mm	370 mm
h	53 mm	104 mm	155 mm	53 mm	126 mm	177 mm	53 mm	104 mm	155 mm
H	72 mm	118 mm	174 mm	72 mm	140 mm	196 mm	72 mm	118 mm	174 mm
Free area	0,015 m^2	0,015 m^2	0,015 m^2	0,038 m^2	0,038 m^2	0,038 m^2	0,0624 m^2	0,0624 m^2	0,0624 m^2
Weight	≈ 0,99 kg	≈ 1,47 kg	≈ 1,98 kg	1,72 kg	2,66 kg	3,62 kg	2,12 kg	3,64 kg	5 kg

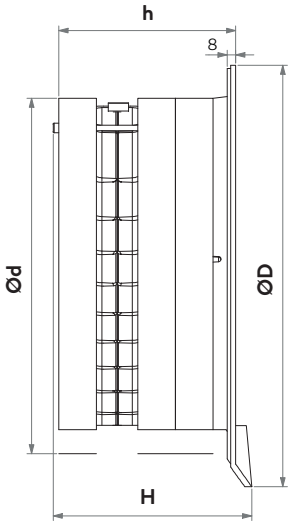
Boomerain® 1



Boomerain® 2

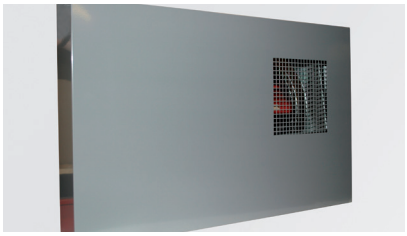


Boomerain® 3

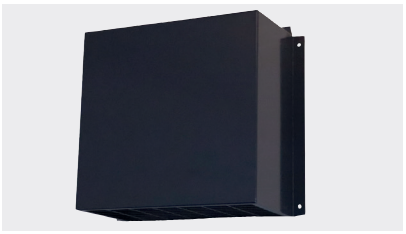


INSTALLATION AND FITTINGS

FACADE GRILLE
supplied with built-in bird net, and protects against driving rain.
Size:
Ø125, Ø160, Ø200, Ø250, Ø315 & Ø400

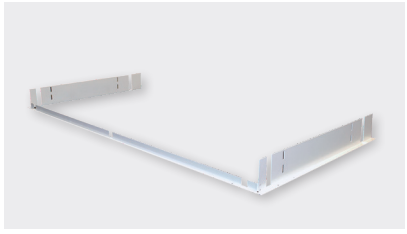


WALL COVER
for the AM 900 - used when supply and exhaust have to be close together and prevents external short circuit.



STORM CAP
can be used when the supply and exhaust are particularly exposed to wind.
Size:
Ø100/Ø125, Ø160/Ø200, Ø250 & Ø315

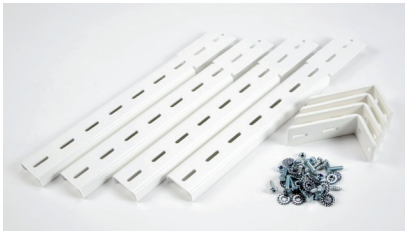
WALL FRAME
for AM 150, AM 300, AM 500, AM 800, AM 1000 and is also used for all cooling modules.



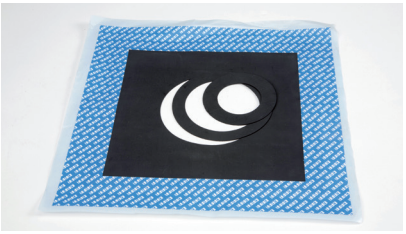
CEILING FRAME
for AM 150, AM 300, AM 500 and AM 800.

CEILING BRACKET
for DV 1000.

CEILING BRACKETS
for mounting direct on ceiling as support if a wall provides an unsatisfactory mounting point.



ADJUSTABLE CEILING BRACKETS
height adjustable.



VAPOUR BARRIER MEMBRANE
used around pipes penetrating walls or roofs. Ensures tight vapour membrane after ducting.

ROOF PENETRATION SET

A complete roof penetration set
consists of
2 insulated penetration ductings,
2 roof covers,
1 exhaust cap,
1 louvred cap,
2 bushings and
3 metres spiral pipe.

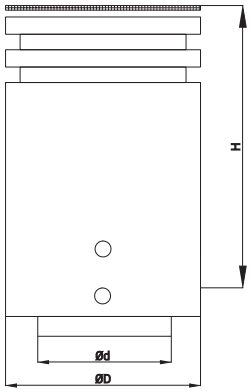
ROOF CAP MODULE

AM 900 / AM 1200	Ød	ØD	H	H x B x D
Exhaust cap	315	450	540	-
Louvred cap	315	450	540	-
Box housing AM 900	-	-	-	1000 x 950 x 500
Box housing AM 1200	-	-	-	1004 x 884 x 434

Ød = internal diameter - ØD = external diameter · H = height

A roof cap module is used on roofing felt roofs with a pitch of 0-30° for AM 900 V and AM 1200 V. Exhaust and louvred caps are integrated into a box housing.
Please remember to state roof pitch when ordering.

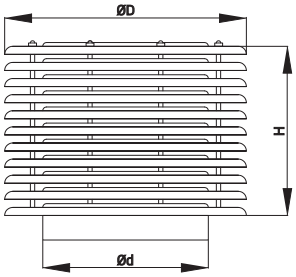
EXHAUST CAP



	Ød	ØD	H
AM 150	125	250	230
AM 300	160	280	310
AM 500	250	355	437
AM 800 AM 900 DV 1000 AM 1000	315	450	540
AM 1200	400	500	700

Ød = internal diameter - ØD = external diameter · H = height
NB: the height measurements stated are to the upper edge of the lowest hole.
The exhaust cap has the same external dimensions as Airmaster's insulated pipes to ensure a good fit.
Also available in black at extra charge.

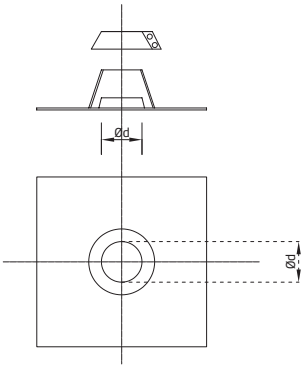
LOUVRED CAP



	Ød	ØD	H
AM 150	125	250	130
AM 300	160	280	180
AM 500	250	355	191
AM 800 AM 900 DV 1000 AM 1000	315	450	222
AM 1200	400	500	284

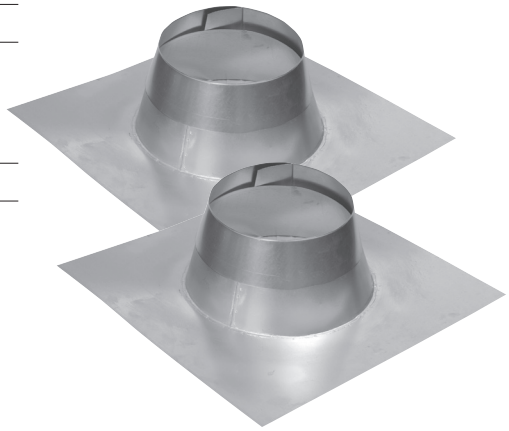
Ød = internal diameter - ØD = external diameter · H = height
The louvred cap has the same external dimensions as Airmaster's insulated pipes to ensure a good fit.
Also available in black at extra charge.

ROOF COVERS



	Ød
AM 150	250
AM 300	280
AM 500	400
AM 800 AM 900 / AM 1200 DV 1000 AM 1000	450
AM 1200	500

Ød = internal diameter.
Roof covers are available in galvanised or grey preformed sheet metal, both with a galvanised sheet metal pipe collar.
Also available in black at extra charge.

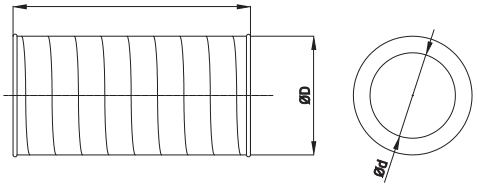


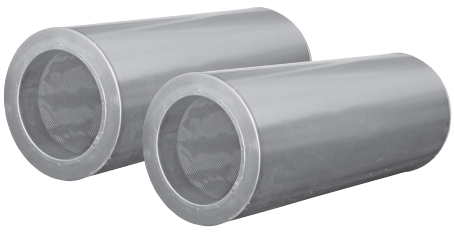
INSULATED PENETRATION DUCTING

	Ød	ØD
AM 150	125	250
AM 300	160	280
AM 500	250	400
AM 800 AM 900 DV 1000 AM 1000	315	450
AM 1200	400	500

Ød = internal diameter - ØD = external diameter.
Insulated penetration ducting with minimum 50 mm insulation.
Length depends on roof pitch:
Pitch 0° - 30° = length 900 mm · Pitch 31° - 45° = length 1200 mm
Also available in black at extra charge.

Ød = internal diameter - ØD = external diameter.





TECHNICAL DATA

FILTERCLASS		AM 150	AM 300	AM 500	AM 800
Maximum capacity at 30 dB(A)	ePM_{10} 50% m³/h	115	210	430	650
	ePM_1 55%	90	205	387	585
	ePM_1 80%	85	180	344	520
Maximum capacity at 35 dB(A)	ePM_{10} 50% m³/h	147	275	550	725
	ePM_1 55%	126	270	495	653
	ePM_1 80%	115	240	440	580
Throw length (0.2 m/s) at 30 dB(A)	ePM_{10} 50% m	2.6 m at 115	4.25 m at 210	5.9 m at 430	7.7 m at 650
	ePM_1 55%	2.1 m at 90	4.25 m at 205	5.4 m at 387	7.2 m at 585
	ePM_1 80%	1.9 m at 85	3.5 m at 180	4.8 m at 344	6.7 m at 520
Throw length (0.2 m/s) at 35 dB(A)	ePM_{10} 50% m	3.4 m at 147	6 m at 275	7.5 m at 550	8v3 m at 725
	ePM_1 55%	2.8 m at 126	6 m at 270	6.7 m at 495	7.7 m at 653
	ePM_1 80%	2.6 m at 115	5 m at 240	6,0 m at 440	7.2 m at 580
Nominal current*	A	0.3	1.45	1.1	1.1
Nominal power consumption*	W	38	175	132	156
Electrical connection	V/Hz	1 x 230 V + N + PE / 50 Hz	1 x 230 V + N + PE / 50 Hz	1 x 230 V + N + PE / 50 Hz	1 x 230 V + N + PE / 50 Hz
Duct connections	mm	Ø125	Ø160	Ø250	Ø315
Condensate drain	mm	Ø4/6	Ø4/6	Ø6/9	Ø6/9
Weight, air handling unit (excl. options)	kg	47	85	108	157
Counterflow heat exchanger		PET	Aluminium	Aluminium	2 x Aluminium
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%
Extract air filter		ePM_{10} 50%	ePM_{10} 50%	ePM_{10} 50%	ePM_{10} 50%
Colour, panel	RAL			9010	9010
Colour, casing	RAL	9010	9010	7024	7024
Power factor		0.55	0.53	0.58	0.56
Power cable	mm²	3 x 0.75	3 x 1.5	3 x 1.5	3 x 1.5
Recommended fuse	A	10	10	10	13
Fuse (max.)	A	13	13	13	16
Leakage current (max.)	mA	≤0.5	≤ 0.7	≤6	≤6
Energy class (SEC class)		A	A		
Air leakage classification		Class L1 cf. EN 1886 Class A1 cf. EN 13141-7	Class L2 cf. EN 1886 Class A1 cf. EN 13141-7	Class L2 cf. EN 1886 Class A2 cf. EN 13141-7	Class L2 cf. EN 1886 Class A1 cf. EN 13141-7
Dimensions (WxHxD)	mm	1170 x 261 x 572	1180 x 344 x 705	1600 x 439 x 779	1910 x 474 x 916

ELECTRIC HEATING SURFACE

Thermal circuit breaker, aut. reset	°C			50	50
Thermal circuit breaker, man. reset	°C	75	75	75	75
Electric comfort heater output	W		500	630	1000
Current	A		2.17	2.6	4.4
Electric preheater output	W		1000	1000	1500
Current	A		4.35	4.4	6.5
Heating surface (VPH)[1]	W	500			
Nominal current	A	2.17			

WATER HEATING SURFACE

Output at 60/40°C supply/return	W		1973	858	1379
Max. operating temperature	°C		90	90	90
Max. operating pressure	bar		10	10	10
Connection dimension			1/2" (DN15)	3/8"(DN10)	1/2" (DN 15)
Materials			cobber /aluminium	copper/aluminium	copper/aluminium
Open/close time, motor valve	s		60	60	60

CONDENSATE PUMP

Maximum capacity	l/h	10	10	10	10
Maximum lift height	m	6	6	6	6

[1] VPH: Virtual Preheat

TECHNICAL DATA

FILTERCLASS		AM 900 (mixed)	AM 900 (displacement)	AM 1000	AM 1200
Maximum capacity at 30 dB(A)	ePM_{10} 50%	m³/h 690	650	950	820-1050
	ePM_1 55%	669	631	926	738-945
	ePM_1 80%	649	611	903	656-840
Maximum capacity at 35 dB(A)	ePM_{10} 50%	m³/h 830	800	1050	1060-1310
	ePM_1 55%	805	776	1024	954-1179
	ePM_1 80%	780	752	998	848-1049
Throw (0.2 m/s) at 30 dB(A)	ePM_{10} 50%	m 6 m at 690 m³/h	Adjacent zone to outlet, approx. 1.2 m at 650 m³/h	8.0 m at 950	min. 3 m at 1000[1] max. 6.5 m at 1000[1] min. 4 m at 1300[2] max. 8 m at 1300[2]
	ePM_1 55%				
	ePM_1 80%				
Throw (0.2 m/s) at 35 dB(A)		m 7.2 m at 830 m³/h	Adjacent zone to outlet, approx. 1.5 m at 800 m³/h	9.5 m at 1050	min. 4 m at 1000[1] max. 9 m at 1000[1] min. 5.5 m at 1300[2] max. 11 m at 1300[2]
Nominal current		A 1.8	1.8	2.2	1.4
Nominal power consumption		W 240	240	305	254
Electrical connection		V/Hz 1 x 230 V + N + PE / 50 Hz	1 x 230 V +N + PE / 50 Hz	1 x 230 V + N + PE / 3 x 400 V + N + PE	3 x 400 V + N + PE / 50 Hz
Duct connections		mm Ø315	Ø315	Ø315	Ø315/Ø400
Condensate drain		mm Ø4/6	Ø4/6	Ø6/9	Ø4/6
Weight, air handling unit (excl. options)		kg 180	180	301,5	545/630
Counterflow heat exchanger		3 x PET	3 x PET	2 x Aluminium	4 x Aluminium
Supply air filter		ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%	ePM_{10} 50%, ePM_1 55% or ePM_1 80%
Extract air filter		ePM_{10} 50%	ePM_{10} 50%	ePM_{10} 50%	ePM_{10} 50%
Design panel dimensions		mm			1200 x 1000
Colour, panel		RAL 9010	9010	9010	9010
Colour, casing		RAL 7024	7024	7024	7024
Min. ceiling height for horizontal supply/exhaust		mm 2490	2490		2400
Min. ceiling height for vertical supply/exhaust		mm 2490	2490		2500
Power factor		0.60	0.60	0.60	0.60
Power cable		mm² 3 x 1.5	3 x 1.5	5 x 2.5	5 x 2.5
Recommended fuse		A 13	13	3x13	3x13
Fuse (max.)		A 16	16	3x16	3x16
Leakage current (max.)		mA ≤6	≤6	≤4	≤9
Air leakage classification				Class L2 cf. EN 1886 Class A1 cf. EN 13141-7	
Dimensions (WxHxD)		mm 800 x 2323 x 602	800 x 2323 x 687	2325 x 561 x 1283	496 x 2098 x 2427
ELECTRIC HEATING SURFACE					
Thermal circuit breaker, aut. reset		°C 50	50	50	50
Thermal circuit breaker, man. reset		°C 75	75	75	75
Electric comfort heater output		W 1050	1050	1500	1670
Current		A 4.4	4.4	6.5	7.3
Electric preheater output		W 1500	1500	2300	2500
Current		A 6,5	6,5	10	10,9
WATER HEATING SURFACE					
Output at 60/40°C supply/return		W 2345		2540	2454
Max. operating temperature		°C 90		90	90
Max. operating pressure		bar 10		10	10
Connection dimension		1/2" (DN 15)		1/2" (DN 15)	1/2"(DN 15)
Materials		copper/aluminium		copper/aluminium	copper/aluminium
Open/close time, motor valve		s 60		60	60
CONDENSATE PUMP					
Capacity		l/h 10	10	10	10
Lift height		m 6	6	6	6

[1] Throw (0.2 m/s) - Center
[2] Throw (0.2 m/s) - Right / left

TECHNICAL DATA

FILTERCLASS		DV 1000
Nominal capacity ePM$_{10}$ 50% ePM$_1$ 55% ePM$_1$ 80%	m³/h	1000 950 900
Nominal current*	A	2,6
Nominal power consumption*	W	333
Electrical connection	V/Hz	3 x 400 V + N + PE / 50 Hz
Duct connections	mm	Ø315
Condensate drain	mm	Ø4/6
Weight, air handling unit (excl. options)	kg	210
Counterflow heat exchanger		2 x Aluminium
Supply air filter		ePM$_{10}$ 50%, ePM$_1$ 55% or ePM$_1$ 80%
Extract air filter		ePM$_{10}$ 50%
Colour, casing	RAL	9010
Power factor		0.6
Power cable mm²		5 x 2,5
Recommended fuse	A	3x13
Fuse (max.)	A	3x16
Leakage current (max.)	mA	≤7
Dimensions (WxHxD)	mm	**H**: 1498 x 424 x 1384 **S**: 1512 x 501 x 1385
ELECTRIC HEATING SURFACE		
Thermal circuit breaker, aut. reset	°C	50
Thermal circuit breaker, man. reset	°C	75
Electric comfort heater output	W	2500
Current	A	10,9
WATER HEATING SURFACE		
Max. operating temperature	°C	90
Max. operating pressure	bar	10
Heat output	W	4099
Connection dimension		1/2" (DN 15)
Materials pipes/fins		copper/aluminium
Open/close time, motor valve	s	60
CONDENSATE PUMP		
Maximum capacity	l/h	10
Maximum lift height	m	6

TECHNICAL DATA

		CC 150	CC 500	CC 800	CC 1000
Nominal cooling capacity	W	640	3280	5240	6450
Min. cooling capacity	W	146	820	990	1120
Nominal EER		4,00	3,16	4,72	4,45
Max. airflow	m^3/h	249	500	650	900
Min. airflow[1]	m^3/h	50	250	260	360
Supply voltage for all cooling:		1 x 230 V + N + PE / 50 Hz			
Nominal electrical output	W	500	1040	1110	1449
Nominal current strength	A	2,17	6,4	6,8	8,9
Electrical output factor		0,59	0,71	0,71	0,71
Max. leakage current	mA	3,0	1,5	2,0	2,0
Coolant		R134a	R410a	R410a	R410a
Filling	g	300	480	820	770
Duct connection dia.	mm	Ø125	Ø250	Ø315	Ø315
Drain hose, internal/external diameter	mm	Ø8/12	Ø6/9	Ø6/9	Ø6/9
Energy class		SEC-Class A^{+++}	A^{+}	A^{+++}	A^{+++}
Weight	kg	29	82,8	100,7	85
Dimensions incl. unit (WxHxD)	mm	1274 x 333 x 972	1600 x 439 x 1185	1910 x 474 x 1321	1498 x 424 x 1898

[1] Cooling module activation.

PERFORMANCE TESTING OF VENTILATION UNITS

You are already operating a ventilation unit or have just had one installed, but is it operating as it should?

It is possible for you to performance test Airmaster ventilation units yourself, allowing you to check that that the unit is performing as it should at start-up, and that it continues to deliver the same quality.

You can choose to perform the test before the ventilation unit is started to remedy any installation errors. The test can also be performed as part of the annual service or when you change the filter. This will ensure optimal operation and energy consumption.

What does the performance test show?

- Airflow (nominal air flow)
- Specific Fan Power (SFP)

HOW TO CARRY OUT THE PERFORMANCE TEST

On all Airmaster ventilation units, you can get access to "Airlinq® Service Tool". Under the "Performance Test" (from Airlinq® Service Tool rev. 3.0.0.5) tab, you can perform the test on all newer Airmaster units yourself.[1] You will be guided through the process step-by-step, in a simple and clear way, and a report will be generated at the end.

Airlinq® Service Tool:
http://www.airlinq.eu/servicetool

WHY PERFORMANCE TEST?

Airmaster has developed this function in the "Airlinq® Service Tool" based on Danish legal requirements, but it does not make the functionality less relevant in other countries. The reason for the requirement is a history of construction projects that have all too often been handed over with faulty technical installations. This has often resulted in higher energy consumption and poorer indoor climate than expected. Similar issues are also experienced in markets outside Denmark. Performance testing your Airmaster ventilation unit ensures optimal performance.

Airmaster recommends testing the units after installation, before using them. This can help prevent faults, a poorer indoor climate and unforeseen energy consumption as a result of this. We also recommend continuously utilising the functionality provided in our standard software to ensure optimal operation and energy consumption.

[1] Additional tools are required

FILTER STANDARD - ISO 16890

All Airmaster air handling units are delivered with filters in compliance with the standard ISO 16890.

The EN ISO 16890 test method focus on the performance of filtering in proportion to specific particle sizes.

The old test method only focused on the efficiency of filtration, without taking into consideration which specific particle size it could filtrate. This standard makes it more manageable to compare with particulate pollution in other contexts.

Table 1 shows the old classifications for EN 779:2012 compared to the new classification for EN ISO 16890.

It is not possible to translate the new classifications directly, but the table shows how Airmaster translate the classification in proportion to each other.

EN ISO 16890 use new descriptions which classify the efficiency of the filtration in proportion to the particle size. PM_{1}, $PM_{2,5}$ and PM_{10} indicates the particulate matter size in µm. 10 µm is the largest particle and 1 µm is the smallest particle. In front of the PM an e is given (ePM) which indicate the efficiency of the filtration in proportion to the specific particle size and is given in %.

For example, a filter which is classified as ePM_{1} (>55%) capture more than 55% of particle size 1 µm.

Classification cf. EN 779:2012	**Classification cf. EN ISO 16890**
M5	ISO ePM_{10} (>50%)
F7	ISO ePM_{1} (>55%)
F9	ISO ePM_{1} (>80%)

Tabel 1 - Filter classifications

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