

HEAT RECOVERY SYSTEMS

# Awenta *PRO*



FOUR SEASONS VENTILATION

---

EDITION 2022 / 2

# Awenta PRO



## Dear Customers,

in order to meet your expectations related to taking care of health and the high quality of the air at your homes, as well as paying attention to the environment, we hereby present the product catalogue for the AWENTA PRO brand.

30 years of experience in the ventilation industry constituted the basis for AWENTA to start a new business chapter. A comprehensive recuperation system for buildings, called AWENTA PRO, has been developed in our Research and Development Centre (RDC), which is based on our proprietary design solutions to improve air quality and living comfort in your homes.

The basis of the system consists of the Aquila, Auros and Zephyr heat recovery units with a capacity from 175 m<sup>3</sup>/h to 600 m<sup>3</sup>/h. The units have been manufactured using components from renowned manufacturers such as: Knauf Industries, Recair, Ziehl-Abegg and which in combination with a thought-out proprietary design,

a range of technical solutions and attention to detail, have resulted in reliable and high-quality products.

Quiet operation, long service life and of operation are the characteristics of the AWENTA PRO air handling units, which significantly affect the of unit installation and their daily operation. AWENTA plans to systematically expand its range with new units for different types of residential buildings.

The product range of AWENTA PRO includes ventilation system components such as ducts, connectors, distribution and plenum boxes and other accessories, which together form a complete ventilation solution with heat recovery.

The AWENTA PRO products are manufactured at the AWENTA production plant in Stojadła near Warsaw, which ensures their constant availability. By applying advanced quality control procedures and using its equipment resources, AWENTA provides modern and durable products as well as comprehensive solutions for investors based on its complete commercial offer.





With the establishment of the Research and Development Centre, AWENTA has gained a tool for in-depth analysis and verification of the quality of materials and raw materials used in the production process. The company can also perform measurements of key parameters of both fans, ventilation units and the air handling units themselves.

At the heart of the RDC is its main component – the anechoic chamber. It allows for the testing of the products in terms of the noise generated. The chamber meets the stringent requirements of European directives and has been equipped with measuring equipment from renowned manufacturers, enabling measurements from 5 dB.

Manufacturing of high-quality products would not be possible without constant investment, both in the equipment resources as well as in human capital. AWENTA is steadily increasing its production capacity thanks to continuous investment.

The recent investment in steel sheet processing equipment and a state-of-the-art automatic powder coating line enabled AWENTA to gain new production capacity. This has translated into the development of new product ranges or allowed the production of components for new units. In this case, an example may constitute the AWENTA PRO units designed for recuperation purposes.

The entire manufacturing process of metal products is performed exclusively by the production plant in Stojadła.



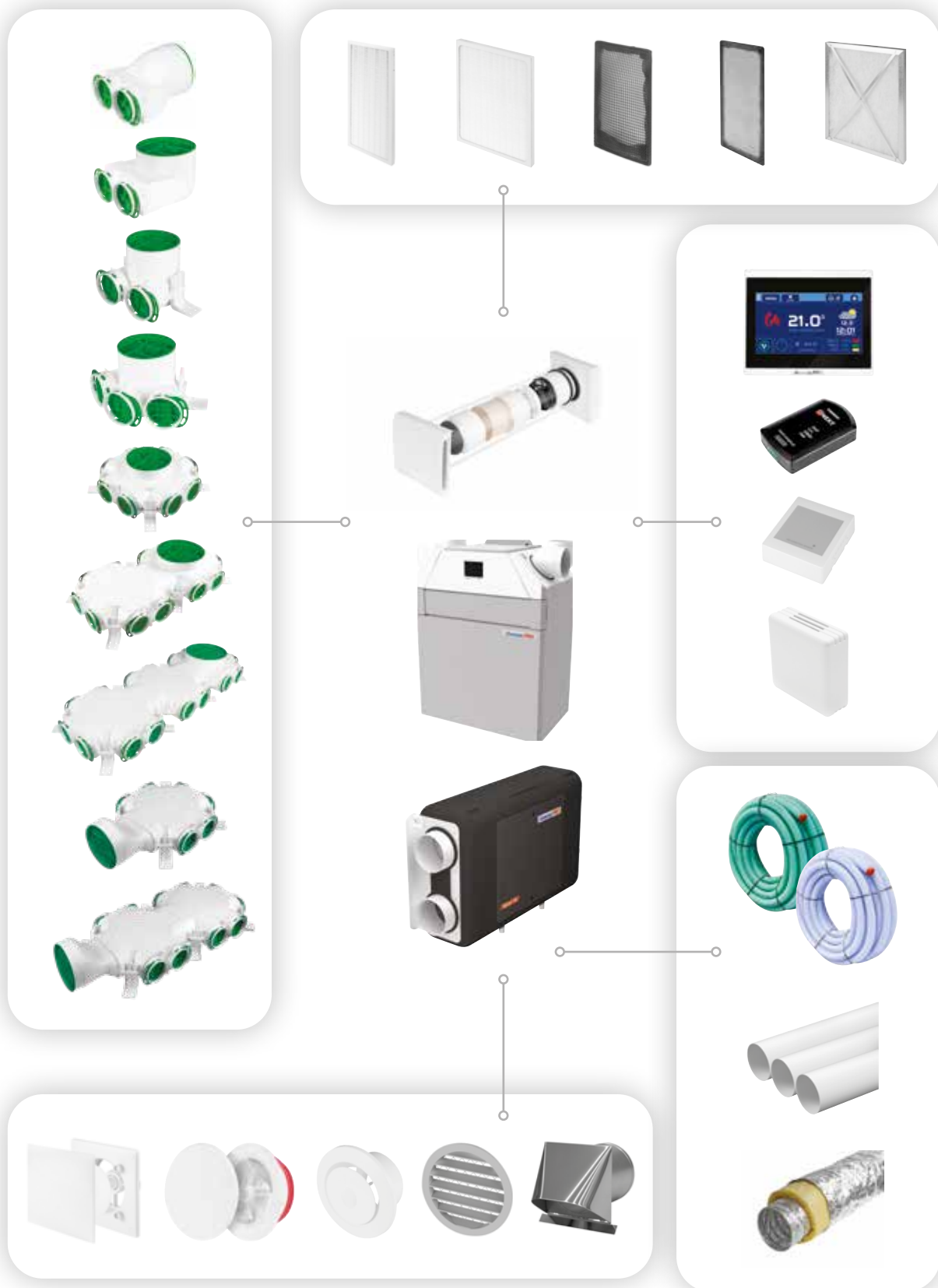
# Table of contents

PRODUCT CATALOGUE 2022

Diagram of the Awenta Pro heat recovery system	1
Auros series	2
Aquila series	4
EPP distributioN box intended to the Aquila Series	6
Enthalpy exchanger	7
Filters	8
Pre-filters	9
Internet module	10
Air quality sensor	11
CO <sub>2</sub> concentration and humidity sensor	12
Humidity sensor	13
VCB160-8, VCB200-8 distribution box	14
VCB160-12, VCB200-12 distribution box	15
VCB200-16 distribution box	16
VCB160-6 distribution box with side connection	17
VCB160-10 distribution box with side connection	18
VCB160/200-8 straight-through distribution box	19
VCB160/200-12 straight-through distribution box	20
VCB160/200-16 straight-through distribution box	21
VPB125-2 plenum box	22
VPB125-3 plenum box	23
VPC125-2 ceiling plenum box - horizontal	24
VPE125-2 ceiling plenum box - vertical	25
Supply air valves	26
Exhaust air valves	27
VAK125 directional diffuser	28
VAP125 panel diffuser	29
Exhaust vents	30
Intake vents	31
VFG75 / VFB75 ventilation duct	32
Circular duct Ø125 for the plenum box	33
Circular duct Ø160 for the plenum box	33
Flexible duct with thermal insulation	34
VH75-2 Ø75 duct holder	34
VM75 coupling	35
VZ75-5 end caps	35
VU75-5 gaskets	35
VNK75R and VNK75G Ø75 ducts cutters	35
VTM mounting tape, perforated	36
VTA aluminium sealing tape	36
VTZ reinforced sealing tape	36
Tape for the VZO band clamp + clamps for the VZT tape	36
Decentralized ventilation and ventilation devices	38
AHR160	40
HRV	46
CVU	48



# Diagram of the Awenta Pro heat recovery system



# Auros Series

VER415, VER605

## RECUPERATOR FEATURES

- Mounting position – wall (wall batten included) and floor standing (VKNER legs sold separately)
- 360° rotating connection joints
- Counterflow heat exchanger with the efficiency of up to 95%
- Energy-efficient fans with the Ziehl-Abegg EC motors
- Automatic bypass, 100% bypass, isolated
- Modulating preheat coil with variable operating parameters
- Excellent insulation thanks to the use of the EPP (expanded polypropylene) housing
- Leak tight structure preventing the penetration of odours and pollutants from the exhaust air into the supply air
- Mobile application for smartphones –Android, iOS
- Possible remote control (iNext module required)
- Automatic flow control system (constant flow) –in CF versions.
- Equipped with two filters M5/ISO ePM10 as a standard
- Possibility of using fine filters F7/ISO ePM1 with higher filtration class
- Possibility of using reusable pre-filter.
- Possible interoperation with the VACS-1 air quality sensor
- Possible interoperation with carbon dioxide and humidity sensor VSHC.
- Option of cleaning heat exchanger
- Long service life



## TECHNICAL INFORMATION

	400 SERIES	600 SERIES
INDEX	VER415	VER605
Supply voltage	230 V AC / 50 Hz	230 V AC / 50 Hz
Max. power consumption (without preheat coil)	280 W	340 W
Preheat coil power	2000 W	2000 W
IP protection class	IP33	IP33
Capacity (at 100 Pa)	430 m <sup>3</sup> /h	605 m <sup>3</sup> /h
Noise level	44,3 dB(A)	45 dB(A)
Type of heat exchanger	RECAIR cross-counter-flow heat exchanger	RECAIR cross-counter-flow heat exchanger
Max. heat recovery efficiency	up to 95%	up to 95%
Heat exchanger material	Polystyrene	Polystyrene
Housing material	EPP + powder coated steel	EPP + powder coated steel
Filters – intake vent	M5 (optional F7)	M5 (optional F7)
Filters – exhaust	M5	M5
Pre-filter intake/exhaust	VFWER415 (optional)	VFWER605 (optional)
Diameter of air connector	160 mm / torsional	200 mm / torsional
Diameter of condensate drain connector	25/32 mm	25/32 mm
Weight	46 kg	52 kg
Controller type	AERO 4 + NANO COLOR	AERO 4 + NANO COLOR
Bypass	Automatic 100%	Automatic 100%
Fans	2x radial fan with EC motor	2x radial fan with EC motor
Internet module	VLAN iNEXT (optional)	VLAN iNEXT (optional)
Air quality sensor	VACS-1 (optional)	VACS-1 (optional)
CO <sub>2</sub> concentration and humidity sensor	VSHC (optional)	VSHC (optional)
Humidity sensor	VSHW (optional)	VSHW (optional)
Constant Flow system	Yes, depend on version	Yes, depend on version

### Supplementary products

#### LEGS VKNER



#### FILTERS str. 10-11





ENERGY EFFICIENCY



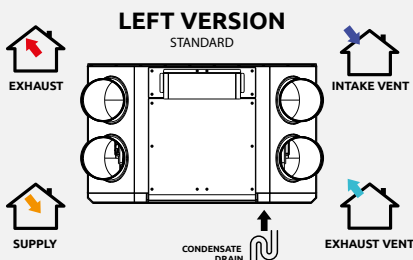
MATERIAL



WARRANTY

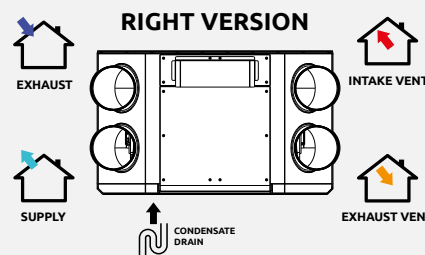
# Seria Auros

VER415, VER605



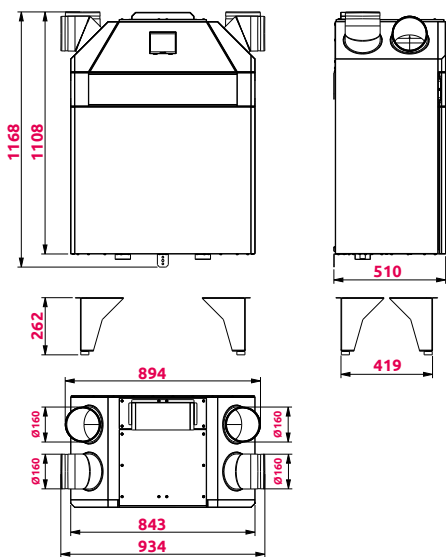
- VER415L** Recuperator AUROS 415 left version (standard)
- VER605L** Recuperator AUROS 605 left version (standard)
- VER415LCF** VER415LCF Recuperator AUROS 415 left version (standard) + module CF
- VER605LCF** VER605LCF Recuperator AUROS 605 left version (standard) + module CF

- VER415P** VER415P Recuperator AUROS 415 right version (standard)
- VER605P** VER415P Recuperator AUROS 605 right version (standard)
- VER415PCF** VER415PCF Recuperator AUROS 415 right version (standard) + module CF
- VER605PCF** VER605PCF Recuperator AUROS 605 right version (standard) + module CF

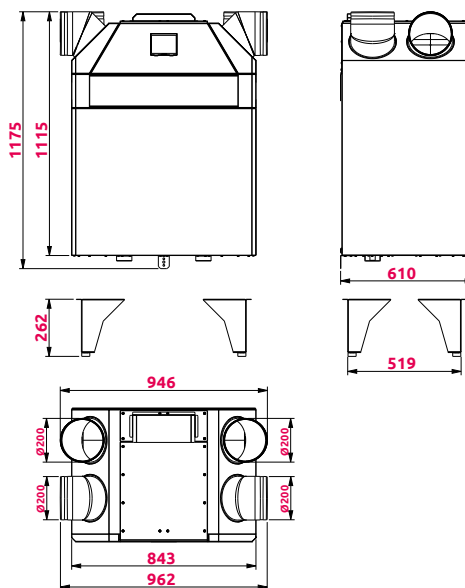


## DIMENSIONS

VER415

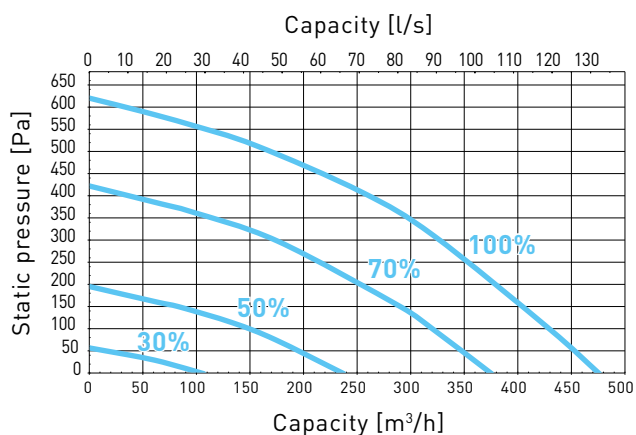


VER605

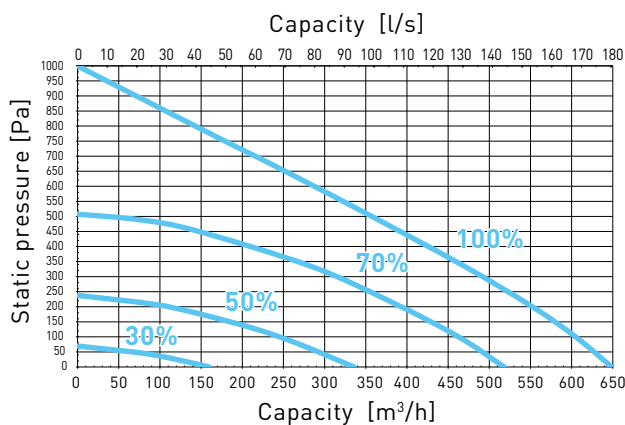


## CAPACITY

VER415



VER605



# Aquila Series

VARE175, VAR305

NOVELTY

## RECUPERATOR FEATURES

- Installation positions – wall mounted, ceiling mounted (suspended) in a horizontal or vertical position, and floor standing (VKNAR feet required)
- Counter-flow heat exchanger with the efficiency of up to 95%
- Low weight compact design
- Energy-saving fans with Ziehl-Abegg motors
- Automatic bypass, 100% bypass, insulated
- Excellent insulation thanks to an outer housing made of EPP (expanded polypropylene)
- Tight structure preventing odours and contaminants from the exhaust air from entering the supply air
- Wireless control available (iNext module required)
- Equipped with two filters M5/ISO ePM10 as standard
- Option of using fine filters F7/ISO ePM1 with a higher filtration class
- Possible use of reusable pre-filter
- Possible interoperation with air quality sensor VACS-1 (for AQUILA 305 version)
- Possible interoperation with carbon dioxide concentration and humidity sensor VSHC (for AQUILA 305 version)
- Cleanable heat exchanger
- Long service life
- Anti-freeze system\*



\* The role of the heater is fulfilled by an anti-freeze system, which temporarily turns off the supply fan when it detects that the heat exchanger has cooled down. Stopping the supply of cold air from outside while continuously supplying warm air from inside the room results in rapid heating of the heat exchanger and prevents freezing. The activation of the anti-freeze system is automatic and depends on the conditions outside the building.

\*\* – The units are available with and without a heater. The value quoted applies to units equipped with a preheat coil.

	AQUILA EASY 175	AQUILA 305**
Index	VARE175	VAR305
Supply voltage	230 V AC / 50Hz	230 V AC / 50Hz
Power consumption	118 W	210 W
Preheat coil maximum power	none*	750 W *, **
Electrical protection class	I	I
IP protection class	IP22	IP22
Capacity (at 100 Pa)	175 m3/h	313 m3/h
Noise level	39 dB(A)	49 dB(A)
Max. heat recovery efficiency	up to 95%	up to 95%
Heat exchanger material	Polystyrene	Polystyrene
Housing material	EPP + powder coated steel	EPP + powder coated steel
Filter – air inlet	M5 (optional F7)	M5 (optional F7)
Filter – extracted air	M5 ISO ePM10	M5 ISO ePM10
Pre-filter – air inlet/extracted air	VFWAR (optional)	VFWAR (optional)
Air spigots diameter	160 mm	160 mm
Installation position	Vertical (wall mounted) or horizontal (ceiling mounted)	Vertical (wall mounted) or horizontal (ceiling mounted)
Weight	16kg (VARE175) + 5kg (VARR75-160)	16kg (VAR305) + 5kg (VARR75-160)
Controller type	AERO 5 + NANO COLOR	AERO 4 + NANO COLOR
Bypass	Automatyczny (100%)	Automatyczny (100%)
Fans	2x radial fan with AC motor	2x radial fan with EC motor
Internet module	VLAN iNEXT (optional)	VLAN iNEXT (optional)
Air quality sensor	none	VACS-1 (optional)
CO2 concentration and humidity sensor	none	VSHC (optional)
Humidity sensor	none	VSHW (optional)

### Supplementary products

#### FEET VKNAR



#### FILTERS page 8-9





ENERGY EFFICIENCY



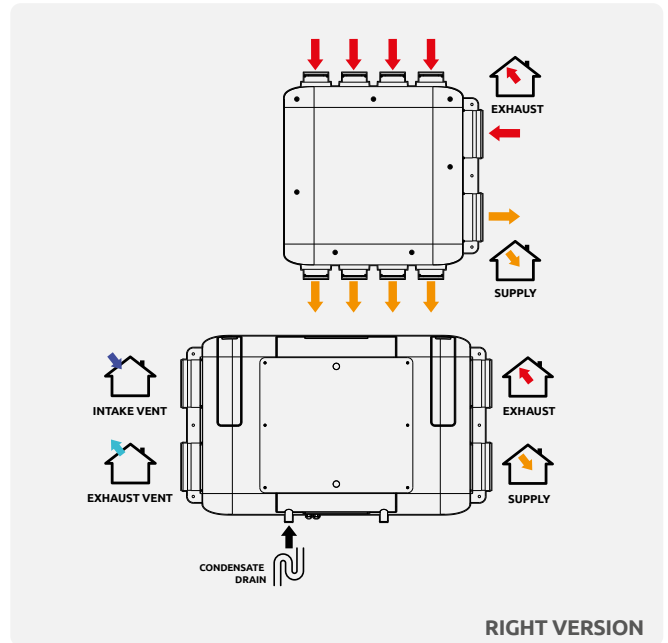
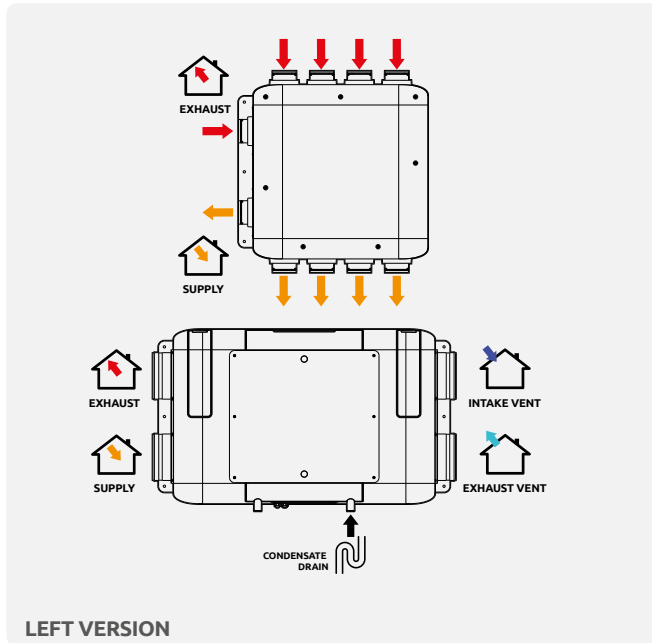
MATERIAL



WARRANTY

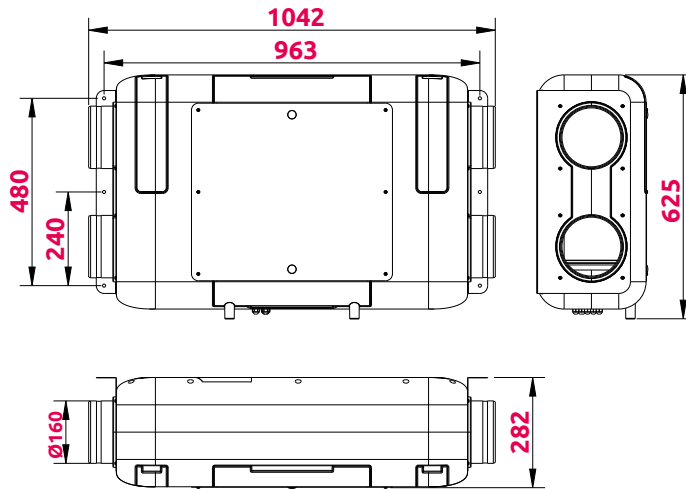
# Aquila Series

VARE175, VAR305



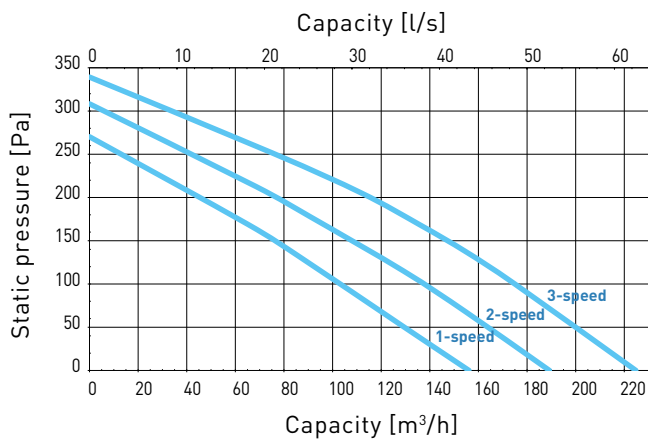
## DIMENSIONS

VARE175 / VAR305

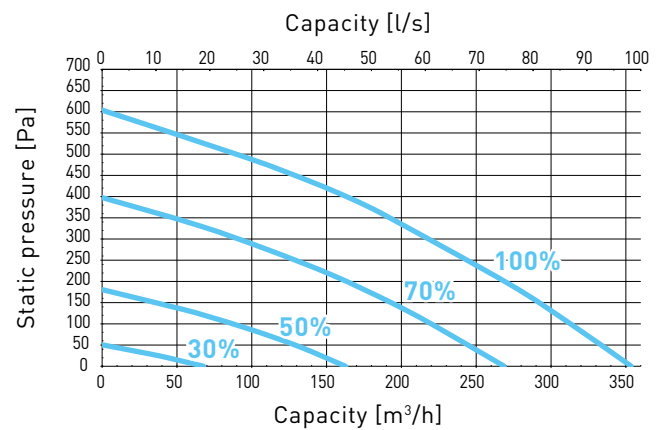


## CAPACITY

VARE175



VAR305



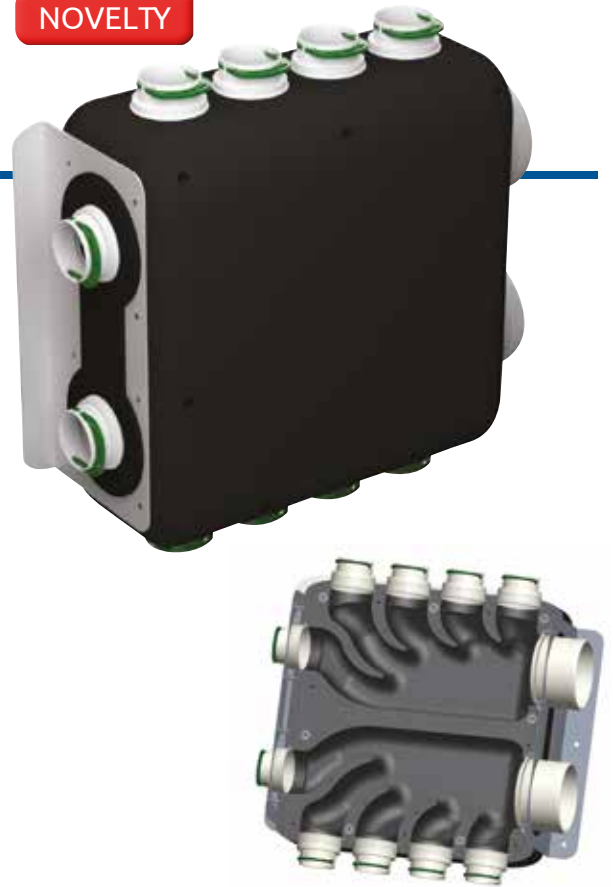


## PRODUCT DATA SHEET

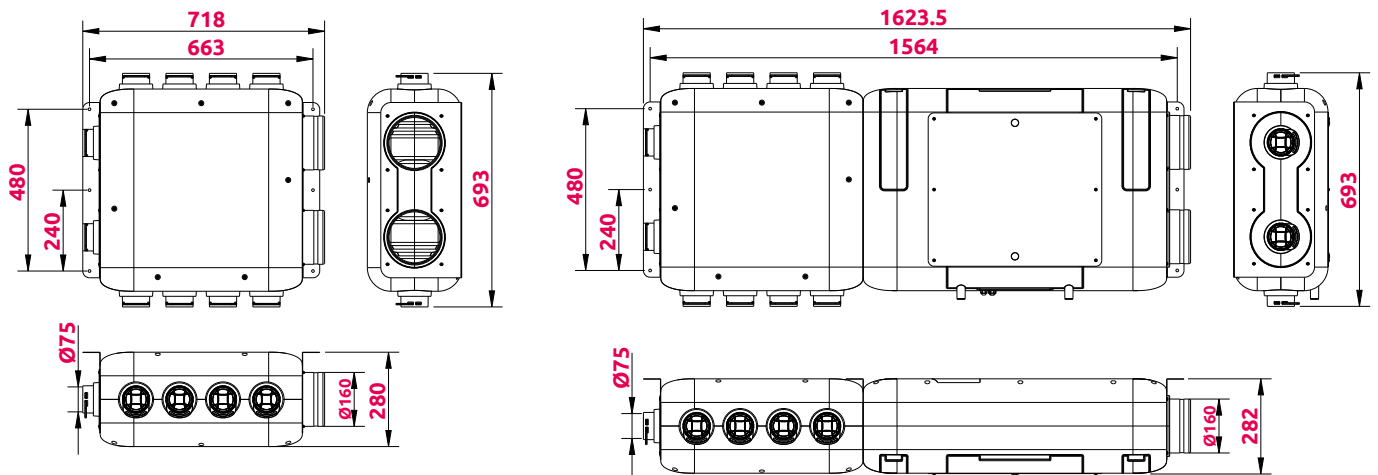
## Distribution unit for Aquila heat recovery unit

VARR75-160, VARR75-160K

NOVELTY

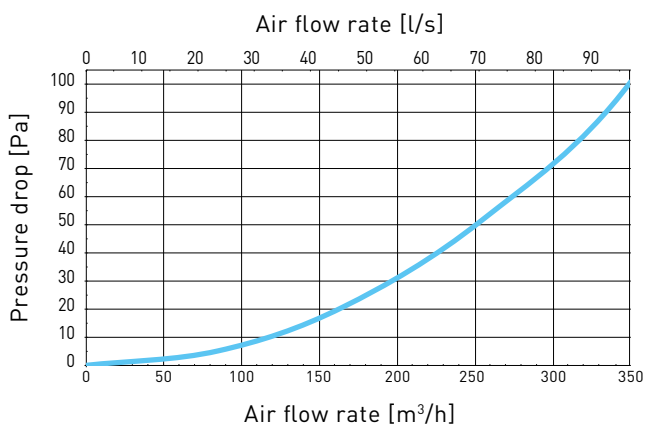


- Dedicated distribution unit for the Aquila series heat recovery units, connection of up to 10 ducts
- $\varnothing 75$  mm (5 supply ducts + 5 exhaust ducts). It is used to distribute the supply air and collect used air from rooms connected to the recuperation system.
- The distribution unit can be combined with the air handling unit or moved to any suitable location and connected by means of ventilation ducts fi160 (version VARR75-160K).
- The distribution unit housing is made of EPP (expanded polypropylene), which has a significant effect on the volume level by absorbing vibrations.
- The product is of the highest tightness class (D), insulating heat perfectly while being stable over a wide temperature range (from  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ). What is more important, expanded polypropylene is not conducive to mould and mildew.
- The distribution unit is compatible with the left and right versions of the heat recovery unit. The spigot diameter of the unit is  $\varnothing 160$  mm.
- The distribution unit replaces the traditional distribution box.

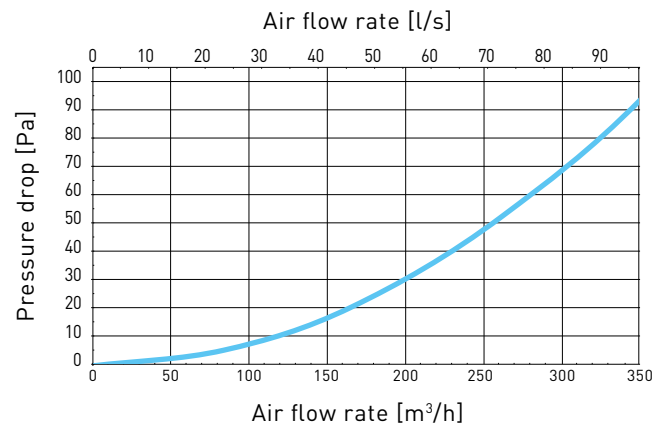


## CAPACITY

## SUPPLY



## EXHAUST



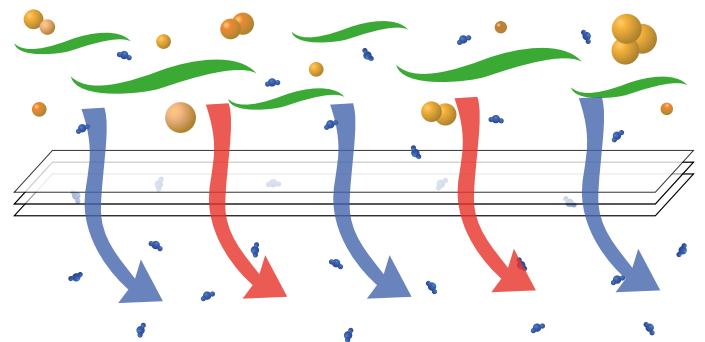
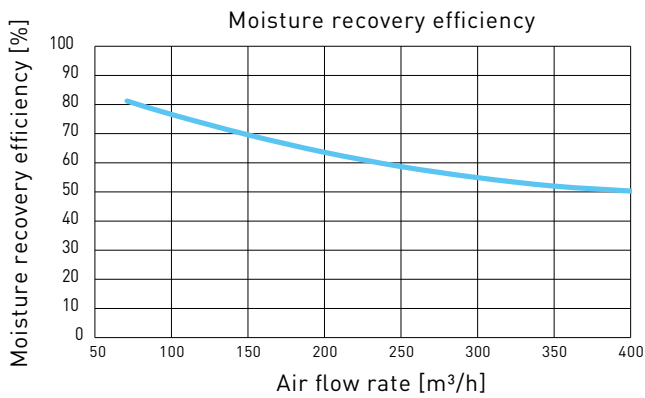
# Enthalpy heat exchanger

Enthalpy heat exchangers allow the simultaneous recovery of heat and moisture from the exhaust air. The main difference between an enthalpy heat exchanger and a standard heat exchanger is the use of polymeric membrane technology. This innovative membrane enables the transfer of energy and at the same time prevents cross-contamination with viruses, gases and volatile organic compounds. Exhaust and supply air pass through the enthalpy heat exchanger channels in opposite directions. The application of osmosis principles served to efficiently transfer moisture through the pore structures present in the polymer membrane in an efficient and hygienic manner.



## COMPATIBILITY

HRU type	Option of using entalpy heat exchanger
AQUILA VARE175	
AQUILA VAR305	•
AUROS VER415	•
AUROS VER605	•
ZEPHYR VZH405	•
ZEPHYR VZH605	•



- steam
- heat
- odour
- gases, pollutants

## PRODUCT DATA SHEET

# Filters

The AWENTA PRO air handling units are equipped as standard with high-quality M5 class air filters (ISO 16890 standard) capable of removing particles with sizes from 2.5 to 10 µm (microns), e.g.: particulates and fine dust (the thickness of human hair is from 40 to 120 µm).

For air drawn in from the outside, an F7 class filter, which removes the smallest particles from 0.3 to 1 µm, e.g.: viruses, cigarette smoke, bacteria, fungi and their spores, can be installed. Dirty filters reduce air flow, increase resistance in the system and electricity consumption. In practice, this means that the efficiency of the system will be lower, as the amount of air exchanged will be lower than desired, with a consequent negative impact on well-being. Therefore, it is important to replace them regularly.



## COMPATIBILITY

Index	Filter class	Intended use
VM5ER415	M5	AUROS VER415
VF7ER415	F7	AUROS VER415
VM5ER605	M5	AUROS VER605
VF7ER605	F7	AUROS VER605
VM5ZH	M5	ZEPHYR VZH405 / VZH605
VF7ZH	F7	ZEPHYR VZH405 / VZH605
VM5AR	M5	AQUILA VARE175 / VAR305
VF7AR	F7	AQUILA VARE175 / VAR305

## TECHNICAL DATA

	<b>F7</b>	<b>M5</b>
Filter class	tested according to ISO 16890 Filtr F7 (ePM1 0,3-1,0 µm)	tested according to ISO 16890 Filtr M5 (ePM10 2,5-10 µm)
Fire protection	DIN 53438-3 (F1)	DIN 53438-3 (F1)
Maximum relative humidity	100%	100%
Temperature resistance	max. 80°C	max. 80°C
Filter materials	Glass-fibre paper	Glass-fibre paper
Frame	Cardboard	Cardboard

## Pre-filters

To extend the life of the M5 or F7 class main filters used in air handling units, it is possible to install an additional pre-filter. The task of the pre-filter is to stop dust and particles of large size. This ensures that only small particles reach the main filter and do not cause it to wear out quickly. The pre-filters have a cassette design, making them easy to remove for cleaning or replacement.

Pre-filter is made of G2 class nonwoven fabric. The filter element is mounted to the steel frame by means of a clamping element. The nonwoven fabric is a replaceable element.

In case of pre-filter with nylon mesh as filter material, there is no need to replace it. The material used allows to be cleaned multiple times.



AUROS / AQUILLA



ZEPHYR

### COMPATIBILITY

Index	Filter class	Intended use
VFWER415	unclassified	AUROS VER415
VFWER605	unclassified	AUROS VER605
VFWZH	G2	ZEPHYR VZH405 / VZH605
VFWAR	unclassified	AQUILA VARE175 / VAR305

### TECHNICAL DATA

Filter class	G2 (wg. EN 779:2002)	unclassified
Element filtracyjny	nonwoven fabric	nylon mesh

## PRODUCT DATA SHEET

# Internet Module

### VLAN

VLAN is an integrated network communication system that uses the C14 communication protocol and a special Internet module. The module allows monitoring and remote control of the air handling unit's settings.

VLAN module(iNEXT) enables:

- remote communication with the air handling unit via a web browser for Aquila Easy, Auros and Zephyr units also for Aquila and Auros via a mobile application (for smartphones)
- reading of current control panel parameters (e.g.: reading from temperature sensors)
- capacity control of the air handling unit (speed change, ventilation mode)
- programming weekly operating schedule
- remote access to all user settings
- remote access to service settings for the installer
- bypass flap control



VLAN

To ensure communication with the Internet, it is necessary to connect the module to an access device with an Ethernet connection –such as a router or 3G/4G/5G mobile network modem. Thanks to this connection the user can operate the air handling unit online from any place. To remotely operate the air handling unit via the VLAN module, a device with Internet access and web browser support (desktop computer, laptop, tablet, TV, smartphone) is required.

## COMPATIBILITY

Heat recovery unit	Access through the App	
	(Google Play, IOS)	Access through the web
AUROS VER415	•	•
AUROS VER605	•	•
ZEPHYR VZH405	•	•
ZEPHYR VZH605	•	•
AQUILA VARE175		•
AQUILA VAR305	•	•



# Air quality sensor

VACS-1

The VACS-1 air quality sensor is used to measure carbon dioxide content and the amount of PM2.5 and PM10 particles. Thanks to the application of a sensor, the air handling unit, on the basis of the readout data, regulates the flow of the exhaust and supply air stream to the rooms, maintaining the desired comfort in them.

PM2.5 particles are in the group of the most harmful particles to health. These are atmospheric aerosols which a diameter is less than 2.5 micrometres. Such fine dust can enter the alveoli, blood vessels and eventually the bloodstream. It is therefore harmful to both the respiratory and cardiovascular systems. People with lung and heart conditions, the elderly and children are considered more susceptible to the harmful effects of particulate matter. People who exercise regularly are also exposed to the consequences of these particulates.

PM10 is, in turn, a particulate matter that primarily affects the respiratory system. The particles it contains are less than 10 microns in diameter. They are responsible for coughing fits, wheezing, deterioration in the condition of people with asthma or acute, violent bronchitis. Studies indicate that PM10 particles indirectly increase the risk of heart attack and stroke.

The unit's compact design allows it to be mounted anywhere not obvious to the eye. The sensor is mounted in the room where the measurement is to take place. It can be used in rooms without excessive vapour condensation and in the permissible operating temperature range from 0°C to 55°C.



VACS-1

## COMPATIBILITY

Heat recovery unit	Intended use
AUROS VER415	•
AUROS VER605	•
ZEPHYR VZH405	•
ZEPHYR VZH605	•
AQUILA VAR305	•

**PRODUCT DATA SHEET**



CO<sub>2</sub>



HUMIDITY

# CO<sub>2</sub> concentration and humidity sensor

VSHC

The sensor is designed to measure the concentration of carbon dioxide and humidity in rooms. When the set value of carbon dioxide concentration and humidity is exceeded, the capacity of the air handling unit is automatically increased.

VSHC is equipped with automatic calibration algorithms. For the indications to be correct it is necessary to ventilate the room in which the sensor is located at least once a month to correct the reference point. After connecting the power supply, VSHC gives a value of 500 ppm of CO<sub>2</sub>.

The first measured value appears after approx.three minutes. Due to the automatic sensor calibration, the sensor gives correct measurements only after 30 minutes from the power supply connection. To ensure accurate measurements, VSHC should run continuously. The unit can operate at temperatures between 0°C-55°C in conditions where no vapour condensation occur.



VSHC

## COMPATIBILITY

Heat recovery unit	Intended use
AUROS VER415	•
AUROS VER605	•
ZEPHYR VZH405	•
ZEPHYR VZH605	•
AQUILA VAR305	•

## HUMIDITY MEASUREMENT

Humidity measurement range	0-100% (Note: Humidity measurement is only possible at temperatures between 0°C-55°C)
Humidity reading accuracy	±3%

## CARBON DIOXIDE MEASUREMENT

Carbon dioxide concentration measurement range	400-2000 ppm (Note: carbon dioxide concentration measurement is possible in the temperature range of 0°C-50°C)
Carbon dioxide reading accuracy	±3% + ±50 ppm (Note: the CO <sub>2</sub> sensor is equipped with an automatic calibration algorithm.)

# Humidity sensor

VSHW

The sensor is designed to measure the humidity in rooms. When the set humidity value is exceeded, the air handling unit's capacity is automatically increased. The device can operate in the temperature range of 0°C-55°C.



VSHW

## COMPATIBILITY

Heat recovery unit	Intended use
AUROS VER415	•
AUROS VER605	•
ZEPHYR VZH405	•
ZEPHYR VZH605	•
AQUILA VAR305	•

## HUMIDITY MEASUREMENT

Humidity measurement range	0-100% (Note: Humidity measurement is only possible at temperatures between 0°C-55°C)
----------------------------	------------------------------------------------------------------------------------------

Humidity reading accuracy	Digital	±3%
	Analogue (output AO)	±3% + ±0.1 V

## PRODUCT DATA SHEET

## Distribution box

VCB160-8, VCB200-8

TIGHTNESS  
CLASS

MATERIAL



BACTERICIDAL



WARRANTY

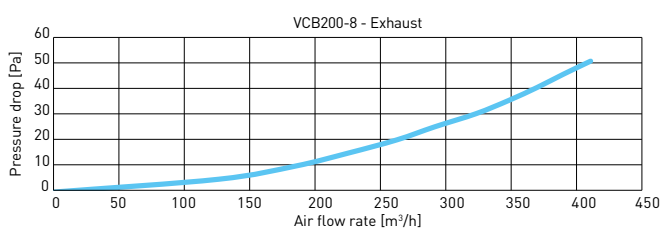
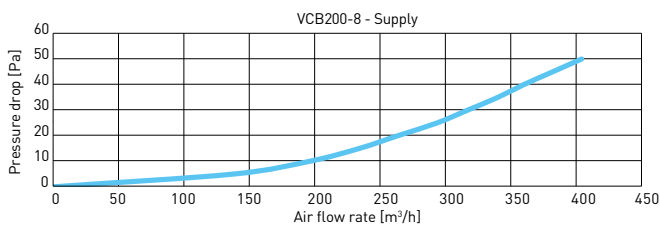
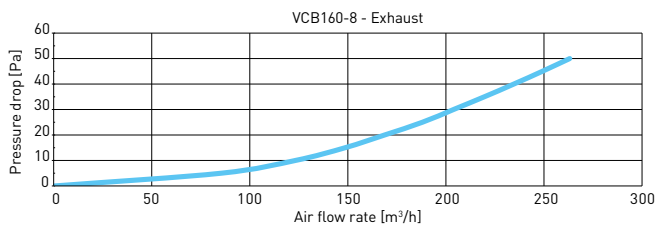
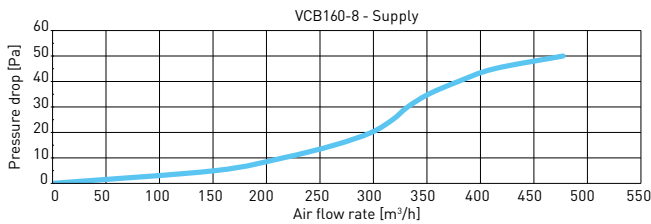
The AWENTA PRO VCB distribution box is used for the distribution of supplied air or collection of used air from rooms connected to the heat recovery system and it is directly connected to the air handling unit.

AWENTA PRO distribution boxes are made of modified polypropylene with the Nano-Silver bacteriostatic additive. The robust structure is equipped with a system of gaskets guaranteeing tightness and failure-free operation for many years. The use of a bacteriostatic additive made it possible to obtain bactericidal activity at a very high level.

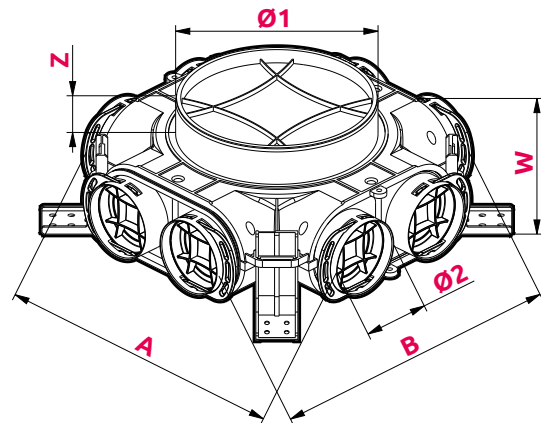
The VCB distribution boxes are available in different connection options allowing for the connection of up to 16 Ø75 mm ventilation ducts. All VCB boxes are supplied with mounting gaskets for a tight connection between the female connector and the ventilation duct. An integral part of each box is its mounting system, for which special adjustable mounting brackets are used.



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	Ø1	Ø2	A	B	W	Z
VCB160-8	160	75	347	349	104	38
VCB200-8	200	75	347	349	104	38

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



# PRODUCT DATA SHEET

## Distribution box

VCB160-12, VCB200-12



TIGHTNESS CLASS



MATERIAL



BACTERICIDAL



WARRANTY

The Awenta PRO VCB160-12 and VCB200-12 distribution boxes enable the connection of up to 12 Ø75 mm ventilation ducts. Ducts not in use can be closed with the supplied end caps.

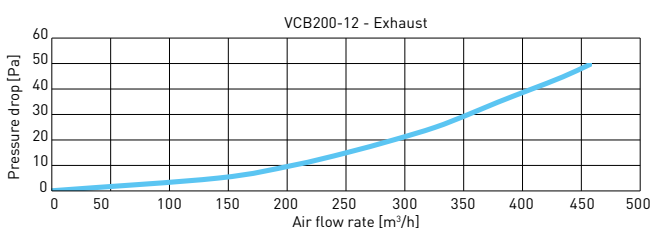
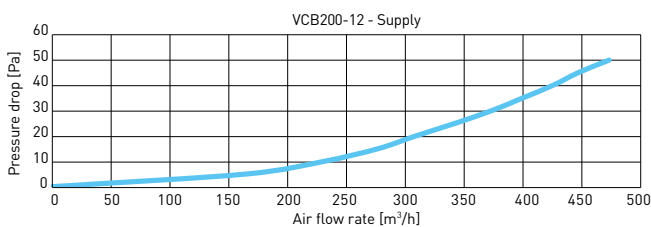
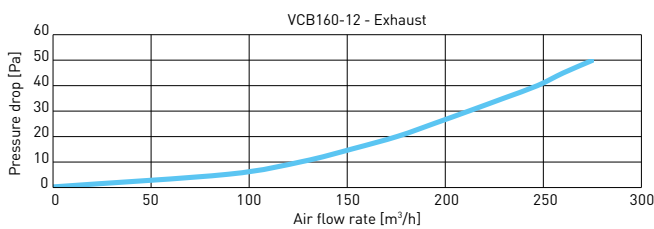
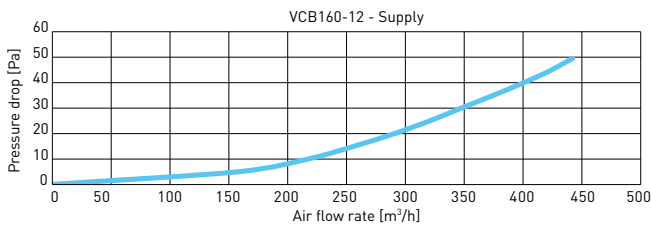
The box is available in two configurations of connection to the air handling unit: Ø160 mm and Ø200 mm.

The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling it to be tilted as well.

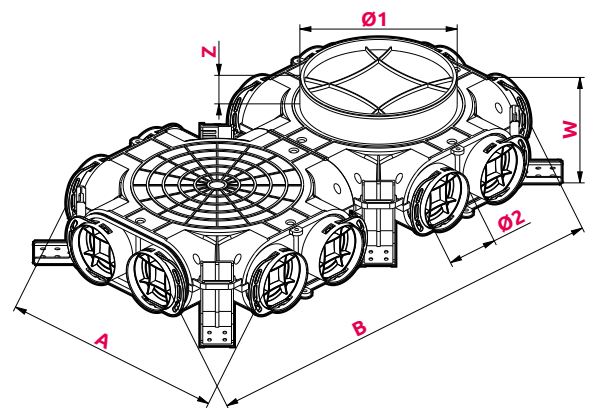
VCB series boxes are designed for installation in a heated area of the building; otherwise, they must be insulated with a layer of mineral wool (min. 15 cm). It can be permanently embedded into the screed or ceiling, or installed under plasterboards.



### AIR FLOW CHARACTERISTICS



### DIMENSIONS



	Ø1	Ø2	A	B	W	Z
VCB160-12	160	75	347	639	104	38
VCB200-12	200	75	347	639	104	38

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA





## PRODUCT DATA SHEET

## Distribution box

VCB200-16

TIGHTNESS  
CLASS

MATERIAL



BAKTERICIDAL



WARRANTY

The Awenta PRO VCB200-16 distribution box enables the connection of up to 16 Ø75 mm ventilation ducts.

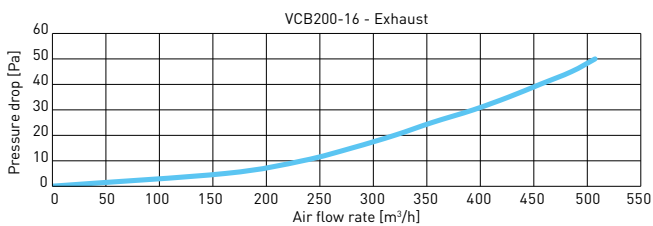
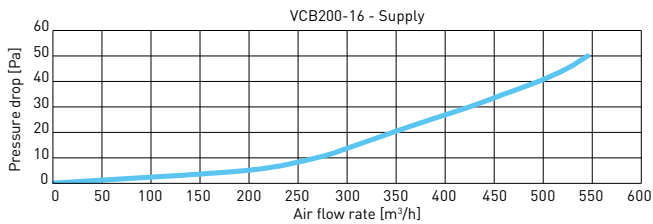
Ducts not in use can be closed with the supplied end caps. The box is available with a connector to the air handling unit with a diameter of Ø200 mm.

AWENTA PRO boxes are a well-thought-out design ensuring their use for many years. Thanks to their design and the use of high-quality plastics and bactericidal additives, they meet the expectations of the most demanding users. The range of available distribution boxes has been carefully planned to allow for their use in most typical mechanical ventilation systems.

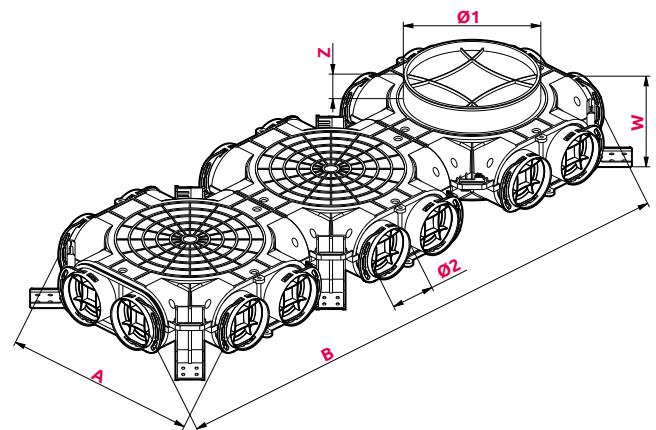
NOVELTY



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	Ø1	Ø2	A	B	W	Z
VCB200-16	200	75	347	927	104	38

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



## PRODUCT DATA SHEET

# Distribution box with side connection

VCB160-6



TIGHTNESS  
CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

The Awenta PRO VCB160-6 distribution box allows for the connection of up to 6 Ø75 ventilation ducts.

As with the other distribution boxes in the VCB series, unused spigots can be covered with plugs with gaskets. The box is characterised by a side connection with a diameter of Ø160 mm.

Distribution boxes with side connections are ideal for installation above suspended ceilings and wherever installation height is limited.

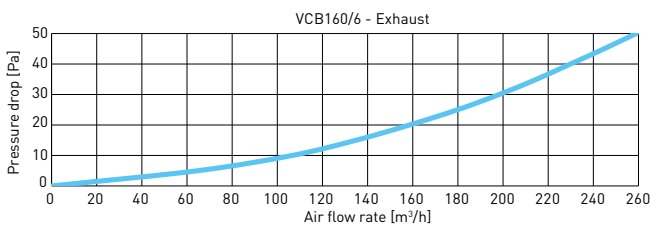
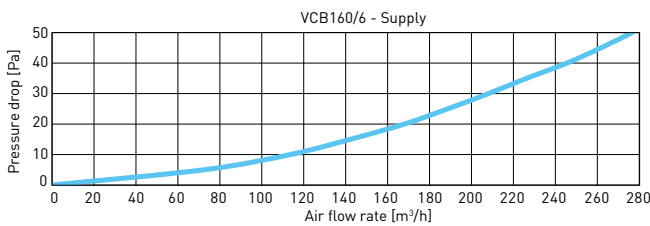
The suitably profiled shape of the Awenta PRO boxes allows for a quiet air flow, while ensuring low pressure loss.

AWENTA PRO boxes are a well-thought-out design for long-term use. Thanks to their structure and the use of high-quality plastics and bactericidal additives, they will meet the expectations of the most demanding users.

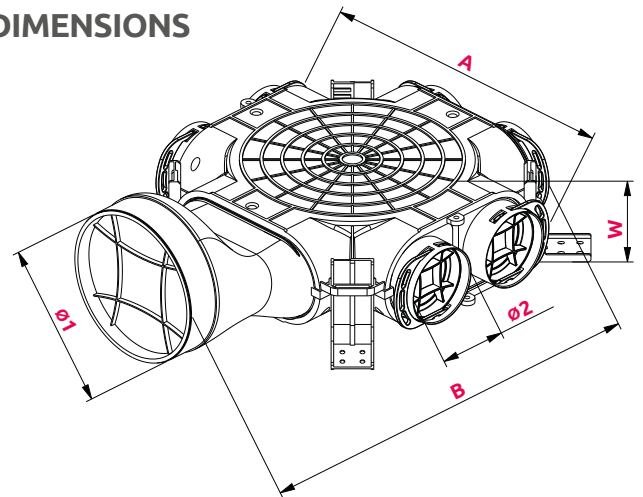
NOVELTY



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	Ø1	Ø2	A	B	W
VCB160-6	160	75	347	475	104

VCB160-6

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



## PRODUCT DATA SHEET

Distribution box  
with side connection

VCB160-10

TIGHTNESS  
CLASS

MATERIAL



BAKTERICIDAL



WARRANTY

The Awenta PRO VCB160-10 distribution box allows the connection of up to 10 Ø75 ventilation ducts.

As with the other distribution boxes in the VCB series, unused spigots can be covered with plugs with gaskets. The box is characterised by a side connection with a diameter of Ø160 mm.

Distribution boxes with side connections are ideal for installation above suspended ceilings and wherever installation height is limited.

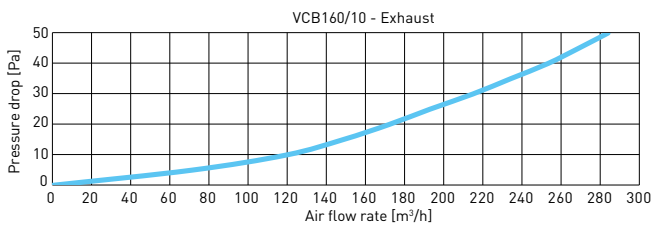
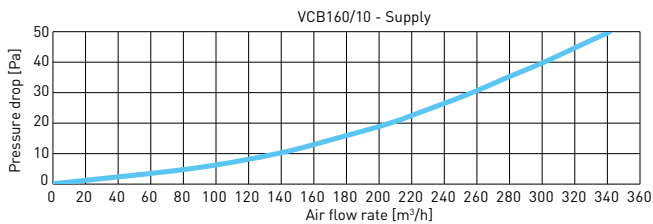
The suitably profiled shape of the Awenta PRO boxes allows for a quiet air flow, while ensuring low pressure loss.

The range of distribution boxes available has been carefully planned to allow their use in most typical mechanical ventilation systems.

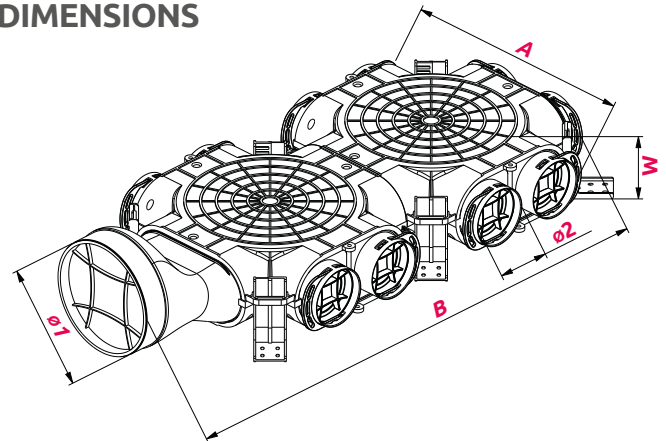
NOVELTY



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	Ø1	Ø2	A	B	W
VCB160-10	160	75	347	766	104

VCB160-10

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA





TIGHTNESS CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

# Straight-through distribution box

VCB160/200-8

The Awenta PRO VCB straight-through distribution box is designed to distribute the air stream between two floors. Straight-through ducts, Ø160 or Ø200 mm, are used for air flow to the next floor of the building, while Ø75 mm ducts enable connection of up to 8 ducts for ventilation of rooms on the lower floor. The air flow between floors is adjusted by means of air valves.

In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps.

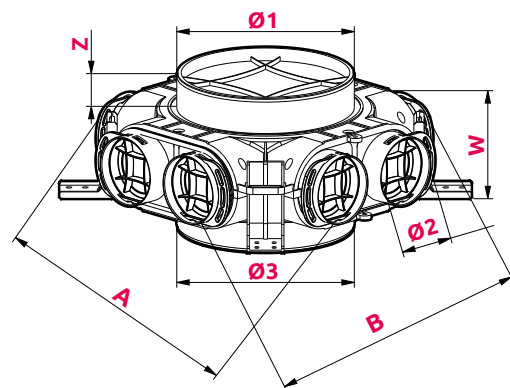
The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling it to be tilted as well.

VCB series boxes are designed for installation in a heated area of the building; otherwise, they must be insulated with a layer of mineral wool (min. 15 cm). It can be permanently embedded into the screed or ceiling, or installed under plasterboards.



## DIMENSIONS

	Ø1	Ø2	Ø3	A	B	W	Z
VCB160/200-8	160	75	200	347	349	104	38



WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



## PRODUCT DATA SHEET

## Straight-through distribution box

VCB160/200-12

TIGHTNESS  
CLASS

MATERIAL



BAKTERICIDAL



WARRANTY

The Awenta PRO VCB straight-through distribution box is designed to distribute the air stream between two floors. Straight-through ducts,  $\varnothing 160$  or  $\varnothing 200$  mm, are used for air flow to the next floor of the building, while  $\varnothing 75$  mm ducts enable connection of up to 12 ducts for ventilation of rooms on the lower floor. The air flow between floors is adjusted by means of air valves.

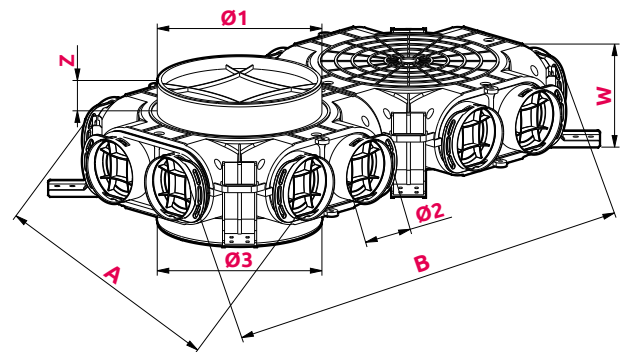
In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps.

The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling it to be tilted as well.

VCB series boxes are designed for installation in a heated area of the building; otherwise, they must be insulated with a layer of mineral wool (min. 15 cm). It can be permanently embedded into the screed or ceiling, or installed under plasterboards.



## DIMENSIONS



	Ø1	Ø2	Ø3	A	B	W	Z
VCB160/200-12	160	75	200	347	639	104	38

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA







TIGHTNESS CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

# Straight-through distribution box

VCB160/200-16

The Awenta PRO VCB straight-through distribution box is designed to distribute the air stream between two floors. Straight-through ducts, Ø160 or Ø200 mm, are used for air flow to the next floor of the building, while Ø75 mm ducts enable connection of up to 16 ducts for ventilation of rooms on the lower floor. The air flow between floors is adjusted by means of air valves.

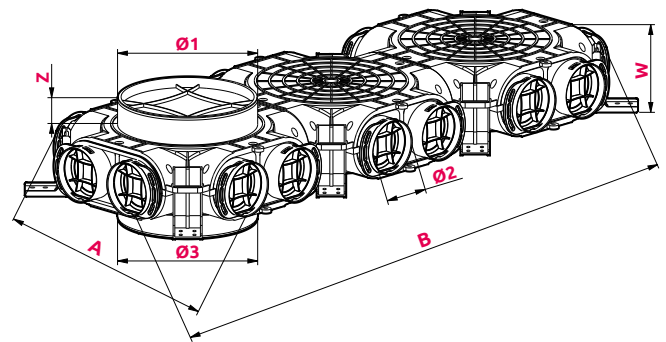
In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps.

The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling it to be tilted as well.

VCB series boxes are designed for installation in a heated area of the building; otherwise, they must be insulated with a layer of mineral wool (min. 15 cm). It can be permanently embedded into the screed or ceiling, or installed under plasterboards.



## DIMENSIONS



	Ø1	Ø2	Ø3	A	B	W	Z
VCB160/200-16	160	75	200	347	927	104	38

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



## PRODUCT DATA SHEET

## Plenum box

VPB125-2

TIGHTNESS  
CLASS

MATERIAL



BAKTERICIDAL



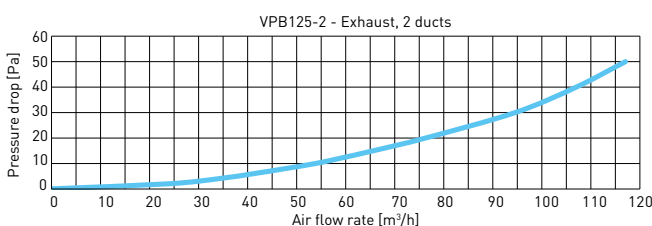
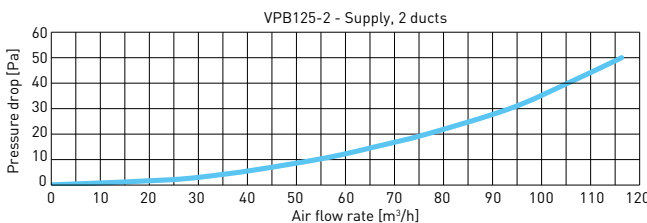
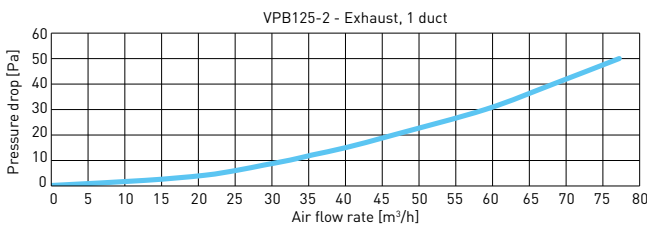
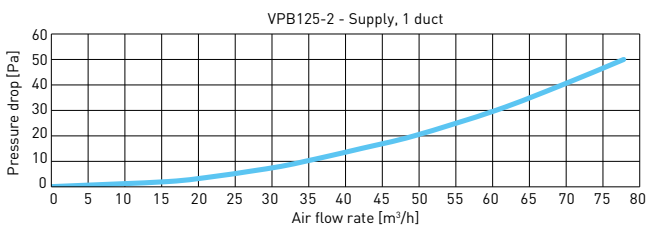
WARRANTY

The AWENTA PRO VPB 125-2 plenum box is used to connect two flexible ducts to the distribution boxes. Thanks to the possibility of supplying two ducts, it is recommended for mounting air valves in rooms requiring balanced ventilation intended for daytime stays or bedrooms.

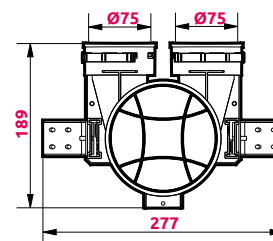
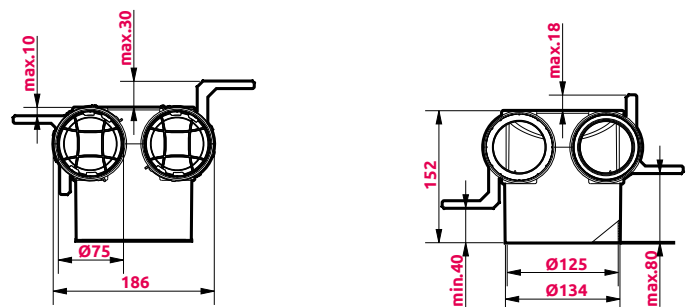
The AWENTA PRO plenum boxes are made of durable HDPE polyethylene with a bacteriostatic Nano-Silver additive. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bactericidal activity. The design of the plenum box allows it to be mounted on different surfaces and in different planes. The  $\varnothing 75$  mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class. Mounting of the box is facilitated by brackets allowing for the installation height adjustment that adapts to the place of installation. They guarantee the quick and easy installation of the plenum boxes in the system. The box allows for connecting a maximum of two  $\varnothing 75$  mm ventilation ducts to a supply or exhaust air valve. It is possible to install them on floor / wall / ceiling: made of concrete or plasterboard.



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



VPB125-2	Ø1	Ø2	Z
	75	125	277

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO 99% BACTERIA





TIGHTNESS CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

# Plenum box

VPB125-3

The AWENTA PRO VPB 125-3 plenum box is used to connect three flexible air ducts to the distribution boxes. Thanks to the possibility of supplying up to three ducts, it is recommended for mounting air valves in rooms requiring intensive ventilation, e.g. kitchen, bathroom or toilet. The high air flow efficiency of the VPB 125-3 box makes it possible to achieve increased ventilation parameters without having to drill additional holes in the ceiling.

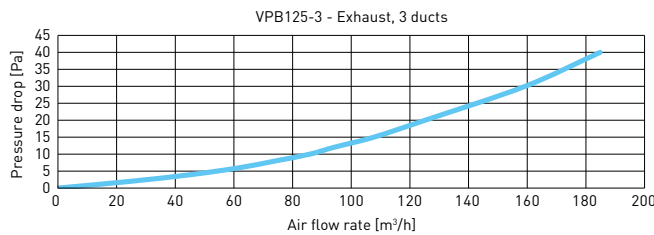
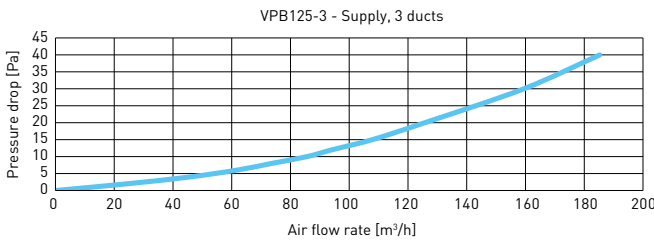
The AWENTA PRO plenum boxes are made of durable HDPE polyethylene with a bacteriostatic Nano-Silver additive. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bactericidal activity.

The design of the plenum box allows it to be mounted on different surfaces and in different planes. The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class. Mounting of the box is facilitated by brackets allowing for the installation height adjustment that adapts to the place of installation. They guarantee the quick and easy installation of the plenum boxes in the system.

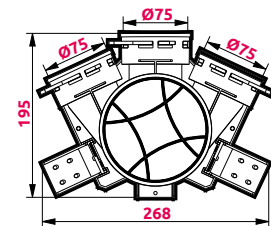
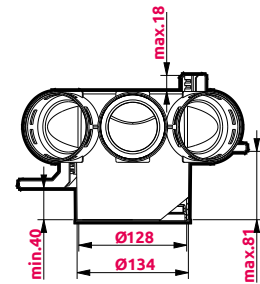
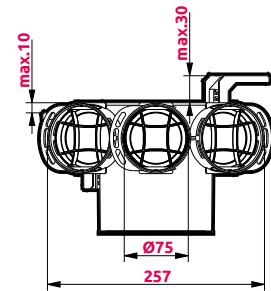
It is possible to install them on floor / wall / ceiling: made of concrete or plasterboard.



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



VPB125-3

	Ø1	Ø2	Z
VPB125-3	75	125	277

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO 99% BACTERIA

## PRODUCT DATA SHEET



TIGHTNESS  
CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

# Ceiling plenum box –horizontal

VPC125-2

The AWENTA PRO VPC ceiling plenum box (horizontal) is an ultra-lightweight solution for use between a suspended ceiling, a ceiling or wall, and in other confined space locations. Mounting of the box to the surface can be additionally reinforced with a typical KP75-28 bracket (DIM. 75X150) from Awenta's product portfolio. The box allows for connecting a maximum of two Ø75 mm ventilation ducts to a supply or exhaust air valve.

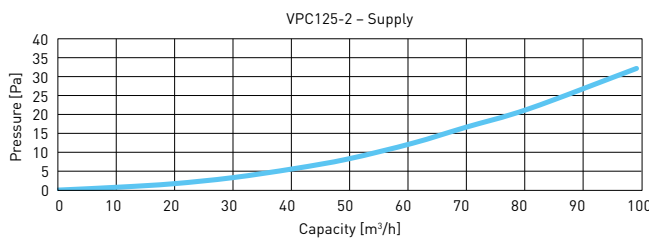
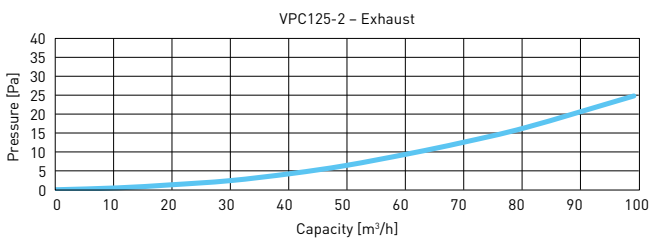
AWENTA PRO plenum boxes are made of durable ABS material. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bactericidal activity. The design of the plenum box allows it to be mounted on different surfaces and in different planes.

The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class.

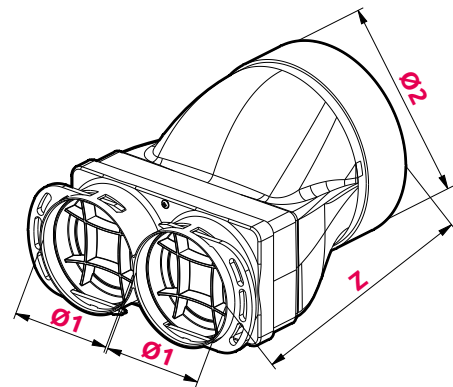
It is possible to install them on floor / wall / ceiling: made of concrete or plasterboard.



## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	Ø1	Ø2	Z
VPC125-2	75	128	194

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA



# PRODUCT DATA SHEET



TIGHTNESS CLASS



MATERIAL



BAKTERICIDAL



WARRANTY

## Ceiling plenum box –vertical

VPE125-2

The AWENTA PRO VPE ceiling plenum box (vertical) is an ultra-lightweight solution for use between a suspended ceiling, a ceiling or wall, and in other confined space locations. Mounting of the box to the surface can be additionally reinforced with a typical KP75-28 bracket (DIM. 75X150) from Awenta's product portfolio. The box allows for connecting a maximum of two Ø75 mm ventilation ducts to a supply or exhaust air valve.

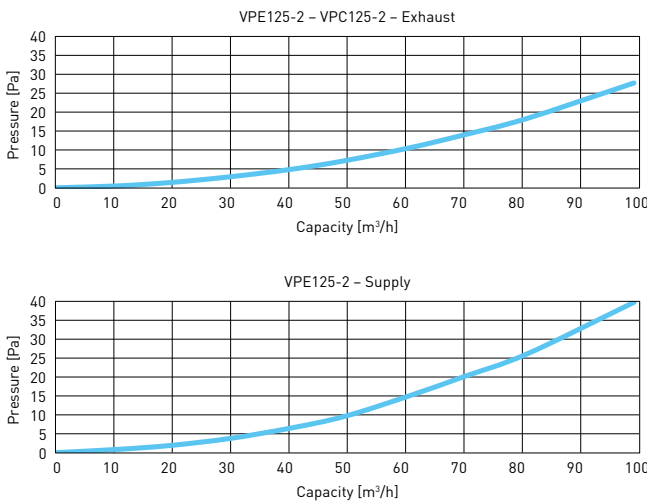
AWENTA PRO plenum boxes are made of durable ABS material. The robust structure guarantees failure-free operation for many years and thanks to the use of bacteriostatic additive the product has obtained 99.99% bactericidal activity. The design of the plenum box allows it to be mounted on different surfaces and in different planes.

The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class.

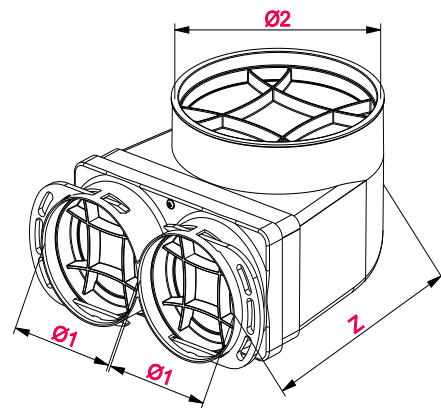
It is possible to install them on floor / wall / ceiling: made of concrete or plasterboard.



### AIR FLOW CHARACTERISTICS



### DIMENSIONS



	Ø1	Ø2	Z
VPE125-2	75	128	202

VPE125-2

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA

**PRODUCT DATA SHEET**



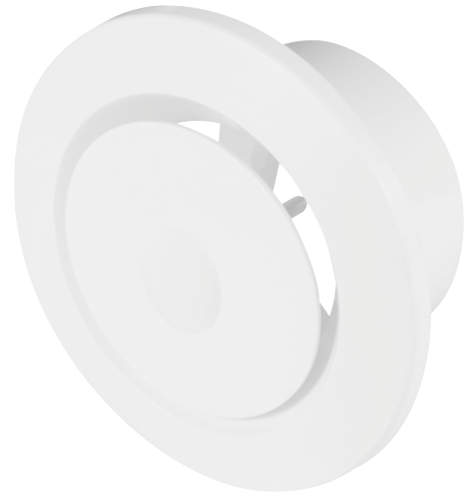
# Supply air valves

## VAN

Supply air valves are components that constitute the finishing elements of ventilation ducts. Thanks to these fresh air is supplied to the rooms by the mechanical ventilation system. The efficient functioning of the air valves is a guarantee of the efficiency of the entire mechanical ventilation system.

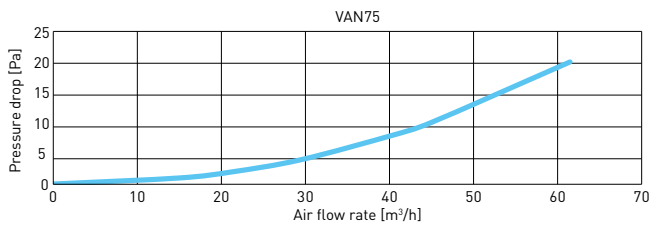
The AWENTA PRO air valves, with a modern design, are made of high-quality polystyrene plastic, which guarantees their long service life.

The VAN series air valves are designed for installation on the ceiling, wall or directly in the duct with a special mounting flange. Each air valve has smooth adjustment which makes it possible to precisely adjust the air flow. The specially designed shape of the air valve structure guarantees a low level of noise emitted during the air flow. A two-piece design makes the installation easy. The VAN75 air valve flange allows for direct connection of  $\varnothing 75$  mm duct.

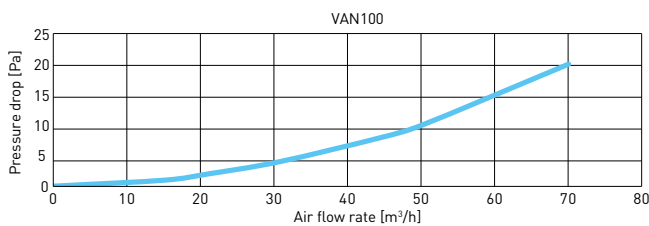


### AIR FLOW CHARACTERISTICS

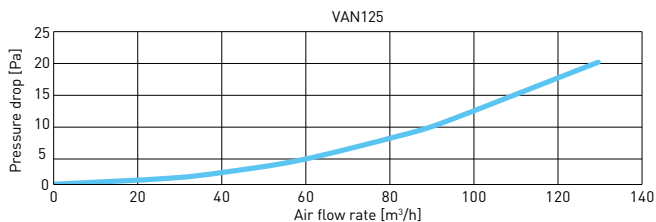
VAN 75



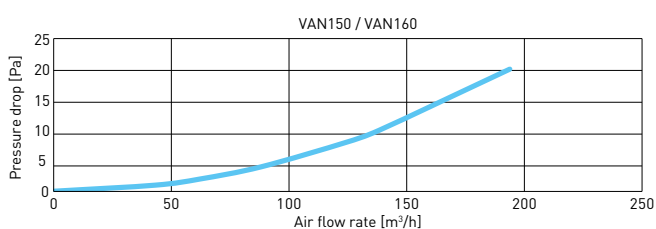
VAN 100



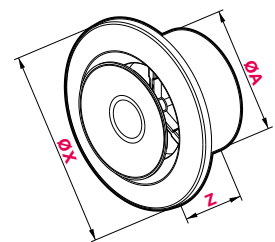
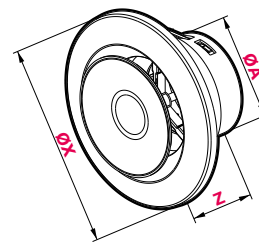
VAN 125



VAN 150/160



### DIMENSIONS



VAN75

VAN100 / VAN125 / VAN150 / VAN160

	ØA	ØX	Z
<b>VAN75</b>	75	155	65
<b>VAN100</b>	100	155	60
<b>VAN125</b>	125	185	60
<b>VAN150</b>	150	214	73
<b>VAN160</b>	160	214	73

**WITH NANOSILVER ADDITIVE**  
ELIMINATING UP TO 99% BACTERIA







MATERIAL



BAKTERICIDAL



WARRANTY

# Exhaust air valves

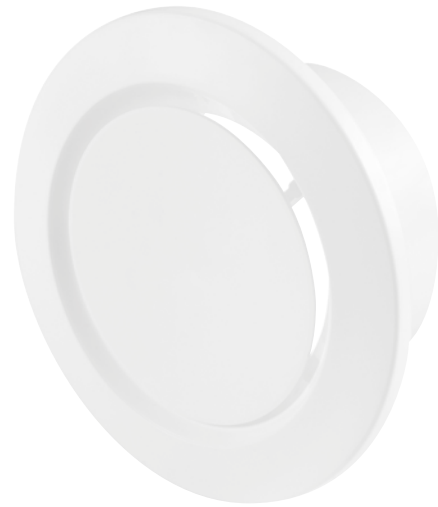
## VAW

Exhaust air valves are components that constitute the finishing elements of ventilation ducts. Thanks to the mechanical ventilation system, the used air is collected and removed from the rooms where the exhaust air valve is installed. There are known as dirty rooms.

The AWENTA PRO air valves, with a modern design, are made of high-quality polystyrene plastic, which guarantees their long service life.

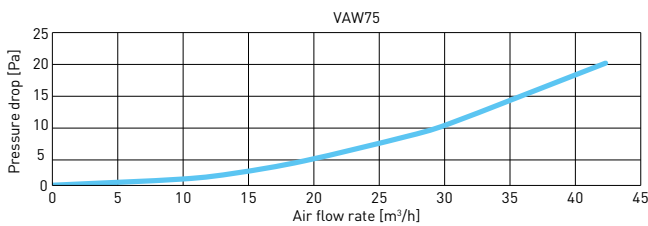
The standard place of installation of the VAW series air valves is a ceiling. The VAW75 model is additionally equipped with an adapter, which enables direct connection to the Ø75 mm duct to the diffuser without the necessity of using a plenum box.

This is an ideal solution for areas where the need for air exchange is low. The VAW75 air valve flange allows for direct connection of Ø75 mm duct.

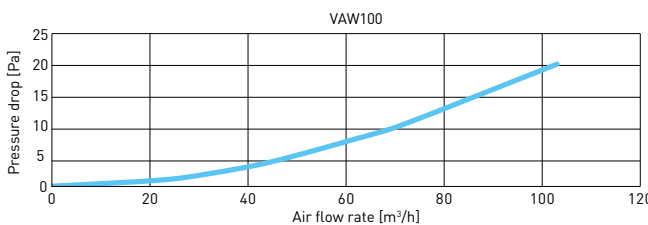


## AIR FLOW CHARACTERISTICS

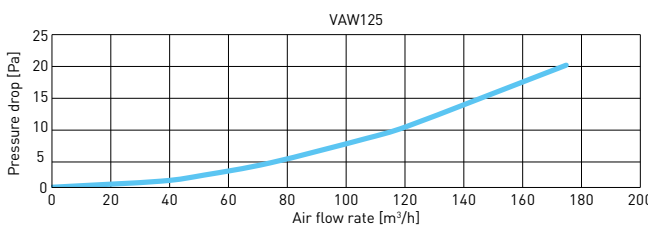
VAW 75



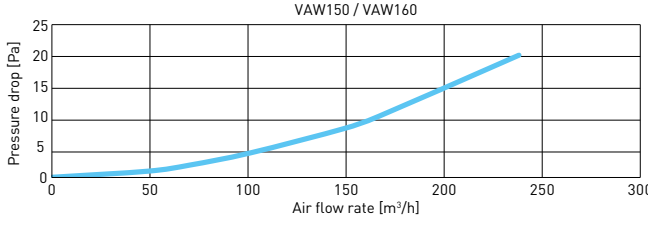
VAW 100



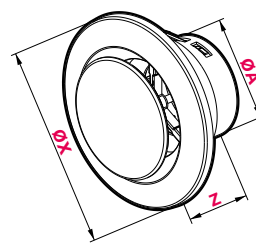
VAW 125



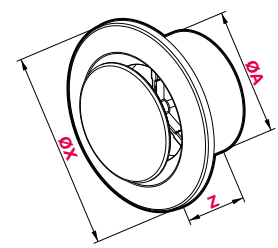
VAW 150/160



## DIMENSIONS



VAW75



VAW100 / VAW125 / VAW150 / VAW160

	ØA	ØX	Z
<b>VAW75</b>	75	155	65
<b>VAW100</b>	100	155	60
<b>VAW125</b>	125	185	60
<b>VAW150</b>	150	214	73
<b>VAW160</b>	160	214	73

WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA





**PRODUCT DATA SHEET**



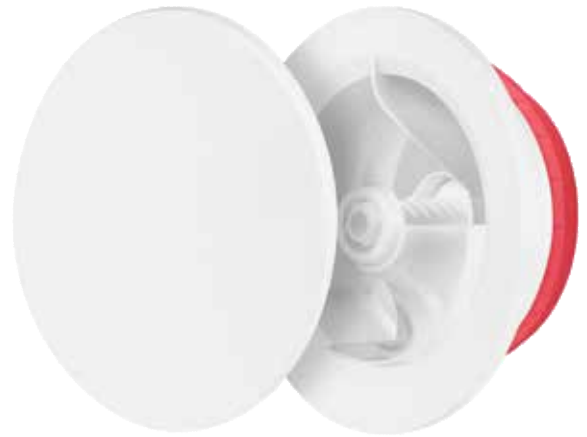
# THE DIRECTIONAL DIFFUSER

VAK125

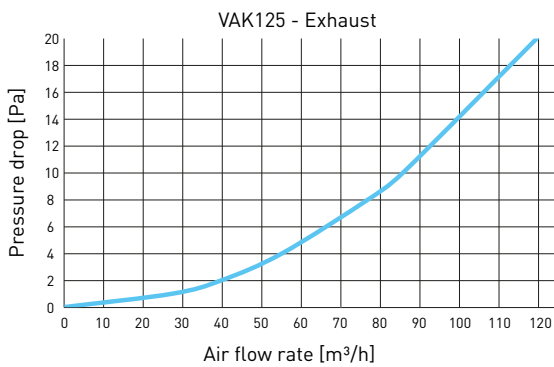
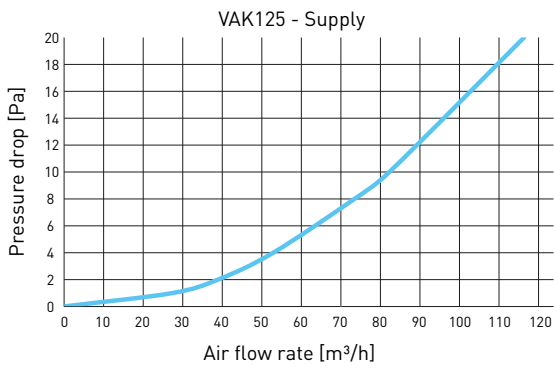
**NOVELTY**

The directional diffuser is the termination of the ventilation system. The product is equipped with a special damper that allows the setting of the direction of the air supply. This solution is used in situations where the diffuser is installed close to walls or fixtures that may be adversely affected by the air supply.

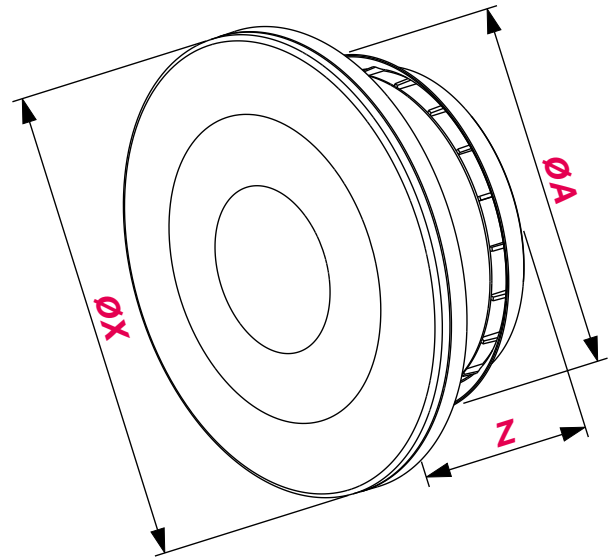
The intensity of the supply air flow is adjusted by means of a rotary disc.



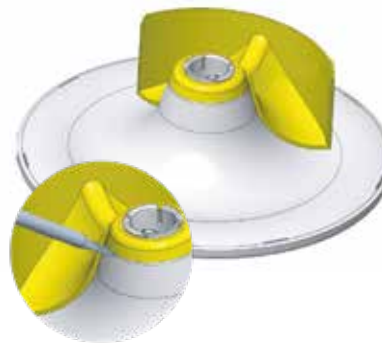
## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	ØX	ØA	Z
VAK125	173	125	54



The VAK125 diffuser has an air flow guide vane. It can be positioned in the desired direction or removed.

**WITH NANOSILVER ADDITIVE**  
ELIMINATING UP TO 99% BACTERIA

# THE PANEL DIFFUSER

VAP125

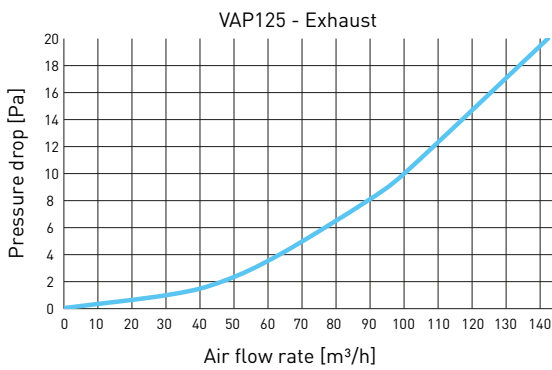
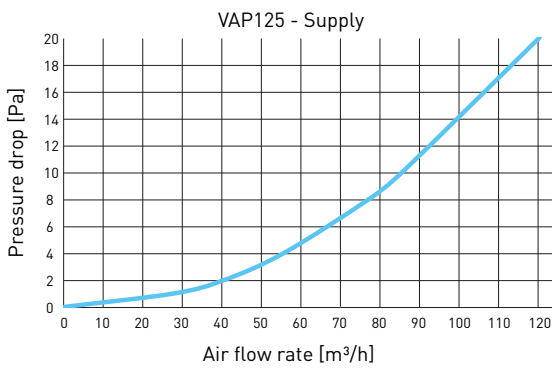
The VAP125 diffuser is fitted with a front panel that can be assembled and removed without tools. This solution makes it easier to keep the product clean.

It is a twin solution to the SYSTEM+ product range offered by AWENTA, which allows the use of plastic panels for Ø125 fans.

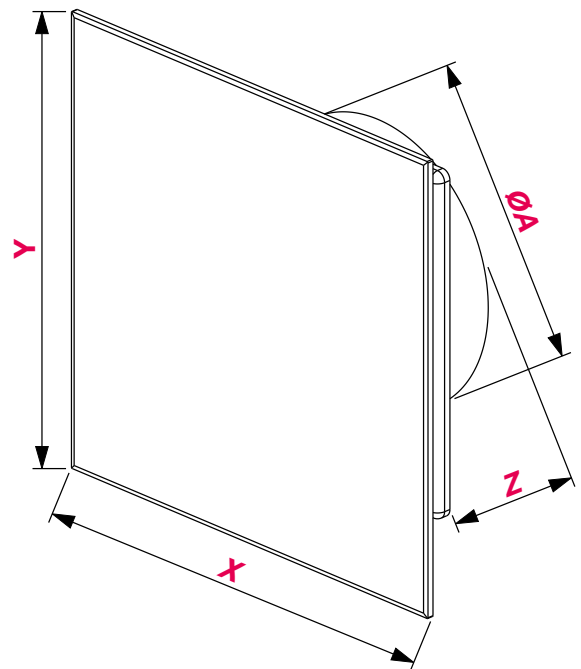
**NOVELTY**



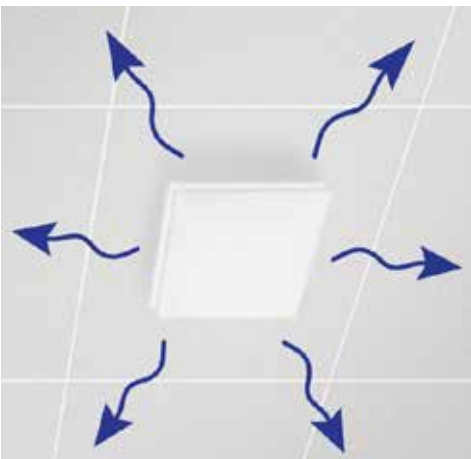
## AIR FLOW CHARACTERISTICS



## DIMENSIONS



	X	Y	Z	ØA
VAP125	200	200	36	125

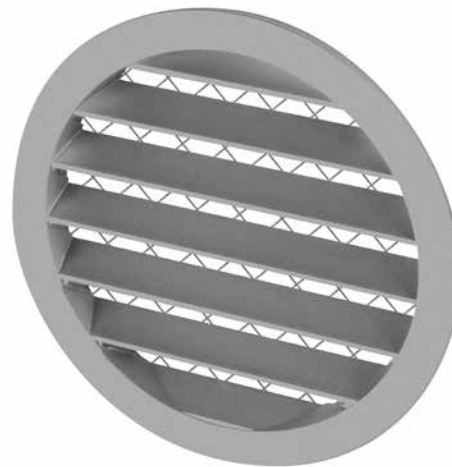


WITH **NANOSILVER** ADDITIVE  
ELIMINATING UP TO **99%** BACTERIA

# Aluminium exhaust/intake vent

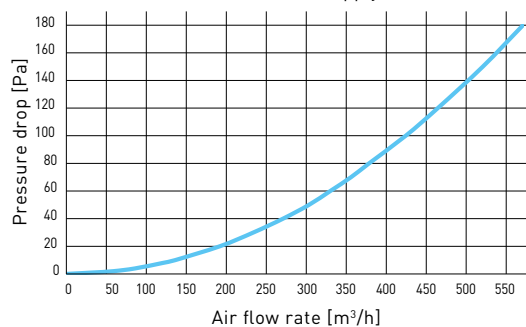
VKR

The grille is installed at the ends of the ventilation ducts. It can be used as an intake or exhaust vent. The vent is made of aluminium and designed for indoor and outdoor installation. The stainless steel mesh used prevents small rodents from entering the room. With just two mounting holes, its installation is quick and easy.

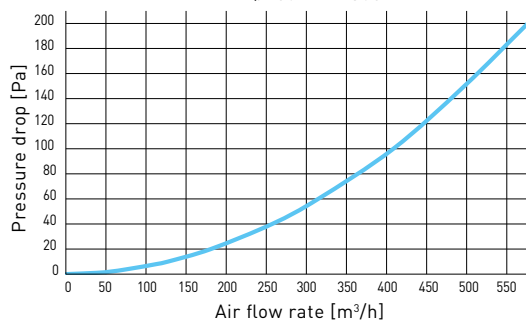


## AIR FLOW CHARACTERISTICS

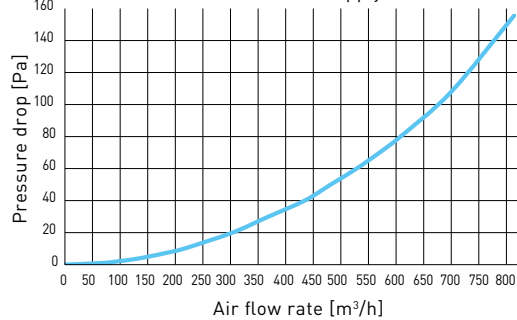
VKR Ø160 - Supply



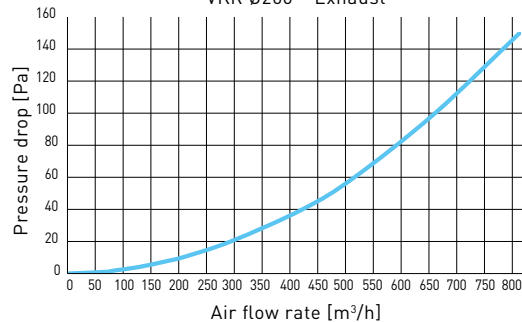
VKR Ø160 - Exhaust



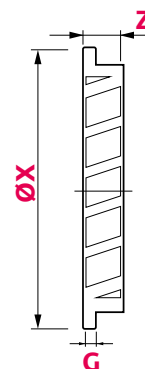
VKR Ø200 - Supply



VKR Ø200 - Exhaust



## DIMENSIONS



	ØX	Z	G
VKR160	185	18	3,2
VKR200	225	20	3,4

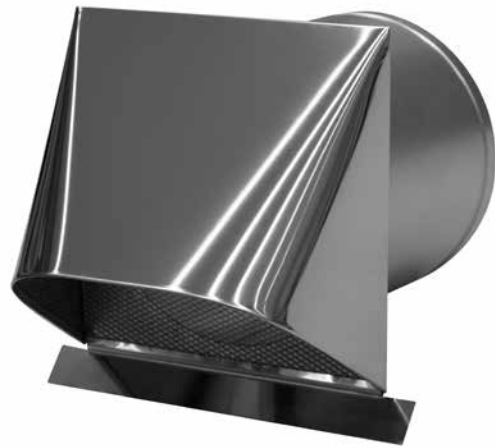
VKR160

VKR200

# Stainless steel intake/exhaust vent

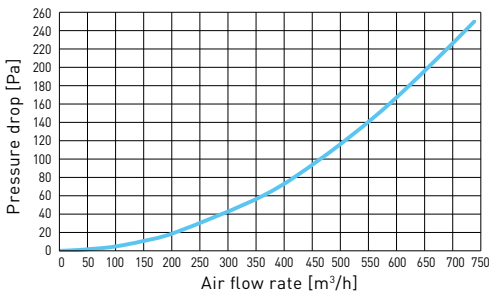
VOK

The stainless steel element can be used as an intake or exhaust vent. Stainless steel mesh prevents small rodents and larger insects from entering the system. The drip limits the penetration of precipitation into the ventilation system and, when the element is used as an exhaust vent, it limits the possible outflow of condensate along the façade. The extended connector facilitates its installation in the masonry, while the wide flange enhances the aesthetic of the appearance on the façade. Its installation is easy and quick.

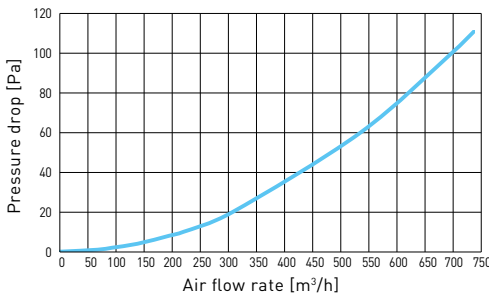


## AIR FLOW CHARACTERISTICS

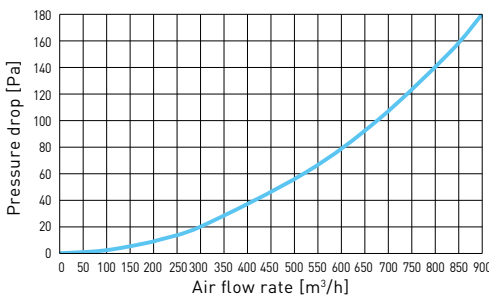
VOK Ø160 - Supply



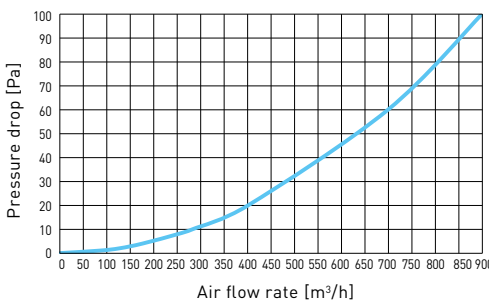
VOK Ø160 - Exhaust



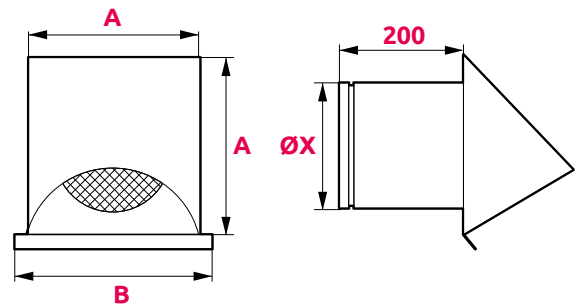
VOK Ø200 - Supply



VOK Ø200 - Exhaust



## DIMENSIONS



	ØX	A	B
VOK160	160	190	235
VOK200	200	230	230

VOK 160

VOK 200

## PRODUCT DATA SHEET



MATERIAL



BAKTERICIDAL



WARRANTY

## Ventilation duct

VFG75 / VFB75

The VFG75/VFB75 ducts are used to transport air in mechanical ventilation systems. They are characterised by very high flexibility, which allows for free shaping of their course, bending and adjustment to the installation conditions, without the need of using additional connectors and fittings. The duct design provides a mechanical compressive strength of more than 450 N, which allows them to be poured over with structural concrete. The double-walled duct design with partially closed air voids suppresses the noise caused by air flowing inside the duct and provides thermal insulation. The VFG75 ducts have an antibacterial internal coating containing silver in the amount of 150 ppm in the polymer matrix so it does not migrate, ionise or elute. The use of silver ensures a long-lasting bactericidal effect regardless of the air temperature and humidity and prevents bacteria from developing defence mechanisms.

The inner layer also has an antistatic effect, which reduces the settling and accumulation of dust in the ducts. A smooth inner surface allows for high air flows with low-pressure losses contributing to the low energy intensity of the entire system. It also makes it easier to clean the ducts if needed.

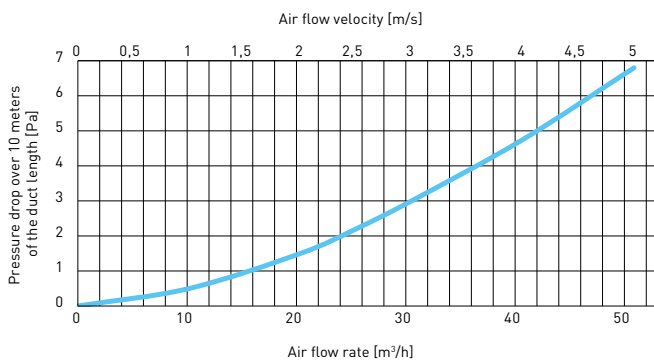
The ergonomically shaped VNK 75 cutter with a replaceable blade is used for cutting ducts.



WITH NANOSILVER ADDITIVE  
ELIMINATING UP TO 99% BACTERIA

duct characteristics	VFG75	VFB75
compression strength	(PN-EN 61386-241):450 N	
impact resistance	(PN-EN 61386-241): Normal (N)	
bending strength	flexible	
flammability	yes	
antibacterial effect after 24h	61-92%	none
outer layer –material	polietylen modyfikowany (HDPE-mod)	
outer layer –colour	green	blue
inner layer –material	modified polyethylene (mod-LDPE), antistatic, antibacterial layer –silver 150 ppm	modified polyethylene (mod-LDPE), antistatic,
inner layer -colour	transparent	
unit packaging unit packaging	50 lm	

## AIR FLOW CHARACTERISTICS



Air flow velocity	2 [m/s]	2,5 [m/s]	3 [m/s]
Air flow rate [m³/h] – 1 duct	20,4	25,5	30,5
Air flow rate [m³/h] – 2 ducts	40,7	50,9	61,1
Air flow rate [m³/h] – 3 ducts	61,1	76,4	91,6

Duct length	Pressure drop [Pa]		
1 mb	1,5	2,2	3,0
2 mb	3,0	3,5	6,0
4 mb	6,0	8,8	12,0
6 mb	9,0	13,2	18,0
8 mb	12,0	17,6	24,0
10 mb	15,0	22,0	30,0
12 mb	18,0	26,4	36,0
14 mb	21,0	30,8	42,0
16 mb	24,0	35,2	48,0
18 mb	27,0	39,6	54,0
20 mb	30,0	44,0	60,0

Nominal dimension DN (mm)	Inner diameter (mm)	Outer diameter (mm)	Minimum bending radius (above 10°C) (m)	Lengths of sections (m)
75	61	76,2	0,17	50

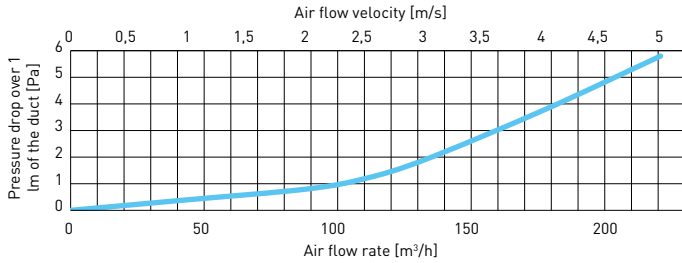
# Circular duct Ø125 for plenum box

KO125-05, KO125-10, KO125-15

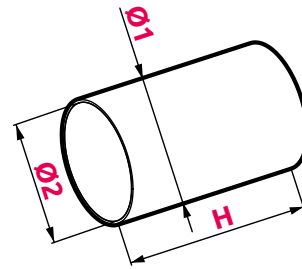
The circular duct allows for extending the connector in the plenum boxes to the required length and install the air valve (supply or exhaust) in the subsidence of the suspended ceiling or the under ceiling.

Available in 50 cm, 100 cm and 150 cm sections, made of PVC.

KO125



Air flow velocity	2 [m/s]	2,5 [m/s]	3 [m/s]
Duct length	Pressure drop [Pa]		
1 mb	0,8	1,2	2,0
2 mb	1,6	3,5	4,0
4 mb	3,2	4,8	8,0
6 mb	4,8	7,2	12,0
8 mb	6,4	9,6	16,0
10 mb	8,0	12,0	20,0
12 mb	9,6	14,4	24,0
14 mb	11,2	16,8	28,0
16 mb	12,8	19,2	32,0
18 mb	14,4	21,6	36,0
20 mb	16,0	24,0	40,0



INDEX	Ø	Ø1	Ø2	H
KO125-05	Ø125	128	125	500
KO125-10	Ø125	128	125	1000
KO125-15	Ø125	128	125	1500

# Circular duct Ø160 for distribution box

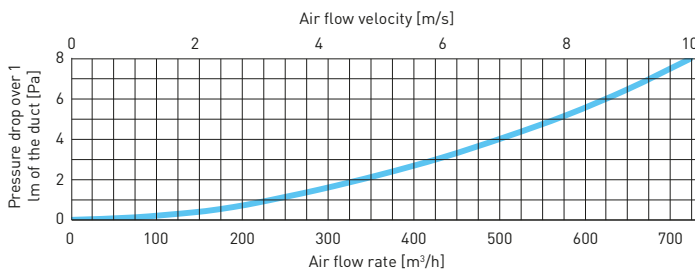
NOVELTY

KO160-05, KO160-10, KO160-15

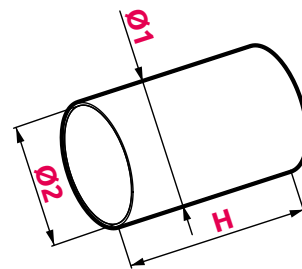
Ventilation ducts Ø160 mm are made of PVC in three lengths: 50 cm, 100 cm and 150 cm.

They are designed for the installation of distribution boxes.

KO160



Air flow velocity	2 [m/s]	2,5 [m/s]	3 [m/s]
Duct length	Pressure drop [Pa]		
1 mb	0,4	0,6	0,9
2 mb	0,8	1,2	1,7
4 mb	1,5	2,3	3,4
6 mb	2,3	3,5	5,1
8 mb	3,0	4,6	6,8
10 mb	3,8	5,8	8,5
12 mb	4,6	7,0	10,2
14 mb	5,3	8,1	11,9
16 mb	6,1	9,3	13,6
18 mb	6,8	10,4	15,3
20 mb	7,6	11,6	17,0



INDEX	Ø	Ø1	Ø2	H
KO160-05	Ø160	163	160	500
KO160-10	Ø160	163	160	1000
KO160-15	Ø160	163	160	1500

## PRODUCT DATA SHEET

# Flexible duct with thermal insulation

KEI160, KEI200

Insulated ventilation ducts with temperature resistance up to 140°C. They are designed for ventilation, air conditioning and heat recovery systems. Adequate stiffness and maintenance of the cross-section are ensured by an internal duct frame made of spiral wound steel wire with increased strength. They are excellent at dampening noise, eliminating vibration, and reduce the need for fittings.

**Material:** Aluminium

**Operating temperature range:** -30°C / +140°C

**Air velocity:** max. 30m/sek.

**Operating pressure:** max. 5000Pa

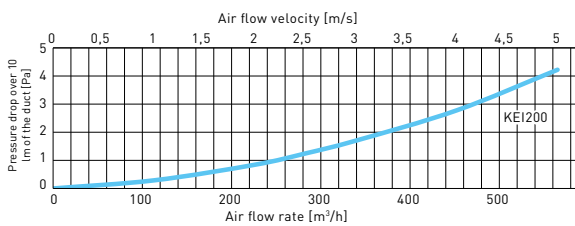
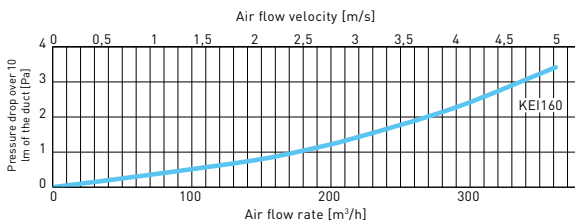
**Flammability class:** fire-retardant

**Insulation:** wool with a thickness of 25 mm and density of 12 kg/m<sup>3</sup>

**Outer cladding:** Aluminium



## AIR FLOW CHARACTERISTICS

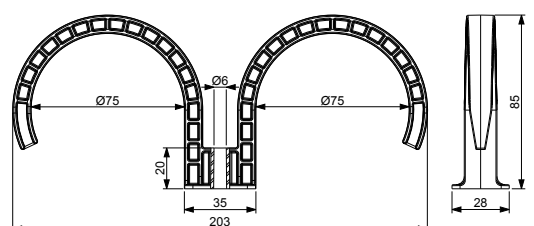
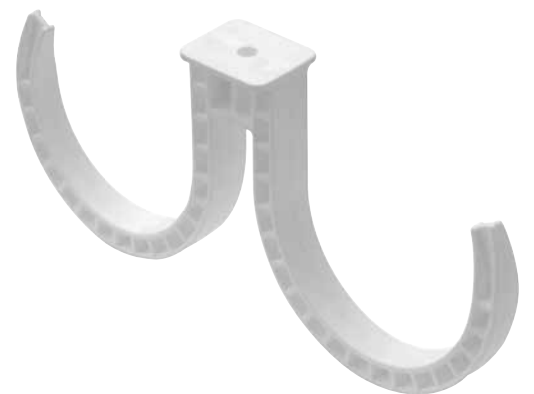


### KEI160

Air flow velocity	KEI160			KEI200		
	2 [m/s]	2,5 [m/s]	3 [m/s]	2 [m/s]	2,5 [m/s]	3 [m/s]
<b>Duct length</b>	<b>Pressure drop [Pa]</b>			<b>Pressure drop [Pa]</b>		
1 mb	0,8	1,2	1,6	0,8	1,2	1,8
2 mb	1,5	3,5	3,2	1,7	3,5	3,6
4 mb	3,1	4,9	6,5	3,4	5,0	7,1
6 mb	4,6	7,3	9,7	5,0	7,4	10,7
8 mb	6,2	9,8	13,0	6,7	9,9	14,2
10 mb	7,7	12,2	16,2	8,4	12,4	17,8
12 mb	9,2	14,6	19,4	10,1	14,9	21,4
14 mb	10,8	17,1	22,7	11,8	17,4	24,9
16 mb	12,3	19,5	25,9	13,4	19,8	28,5
18 mb	13,9	22,0	29,2	15,1	22,3	32,0
20 mb	15,4	24,4	32,4	16,8	24,8	35,6

## Duct holder Ø 75 VH75-2

Duct holder with a diameter of 75 mm. The holder allows you to instal the ducts both on the floor and the ceiling.





## Coupling VM75

Couplings made of HDPE material in black are available for joining VFG75 / VFB75 ducts. The couplings provide fast, durable and break-resistant duct connections. The duct connection is tight thanks to the possibility of using the VU75 gaskets.



## End caps VZ75-5

End caps protect ducts from any contamination during transport, storage and the system from possible contamination during installation. They are made of polyethylene PE.



## Gaskets VU75-5

Specially designed gaskets ensure a tight connection between ducts as well as between duct and manifolds and plenum boxes. The gasket is placed on the ducts between the "humps". They are made of polyurethane PUR.



## Duct cutter Ø 75 VNK75R, VNK75G

A cutter for ducts with a diameter of 75mm allows for precise trimming to get your duct a desired length.

Precise cut will ensure a tight connection with other system components. Replaceable cutter blade extends its life span

VNK75R duct cutter Ø 75



VNKR75G duct cutter Ø 75

## Aluminium sealing tape VTA

Aluminium sealing tape is used to protect connections from possible leaks. The tape is flexible so it adheres perfectly to the surface and sets very well even on uneven planes.

The tape is resistant to weather conditions including high temperatures, UV radiation and water.



## Reinforced sealing tape VTZ

Aluminium tape additionally reinforced with fibres for increased strength. It has the same properties as the VTA tape. It is used to protect connections from possible leaks. The tape is resistant to weather conditions including high temperatures, UV radiation and water.



## Mounting tape, perforated VTM

Perforated tape is used to suspend ventilation ducts of circular, oval and rectangular cross-section. It is ideal for installations requiring smooth height adjustment or when there is no possibility to use clamps. Mounting openings of  $\varnothing$  4 mm and 8 mm allow for mounting with threaded rods, screws, rivets or bolts.



## Tape for the VZO band clamp + clamps for the VZT tape

The metal tape allows you to create band clamps of any diameter. Special packaging makes it easy to measure the desired lengths of tape. It has properly shaped edges to prevent damage to ducts during installation. It can be toned for all types of ventilation ducts. The band clamp is installed using the VZT clamp. The special design of the lock allows it to be closed or opened quickly

### VZO – Tape for band clamps

**Length:** 30 lm.

**Width:** 9 mm

**Thickness:** 0.6 mm

**Material:** Stainless steel

**Unit packaging:** 30 lm.

**Collective packaging:** 10 pcs.

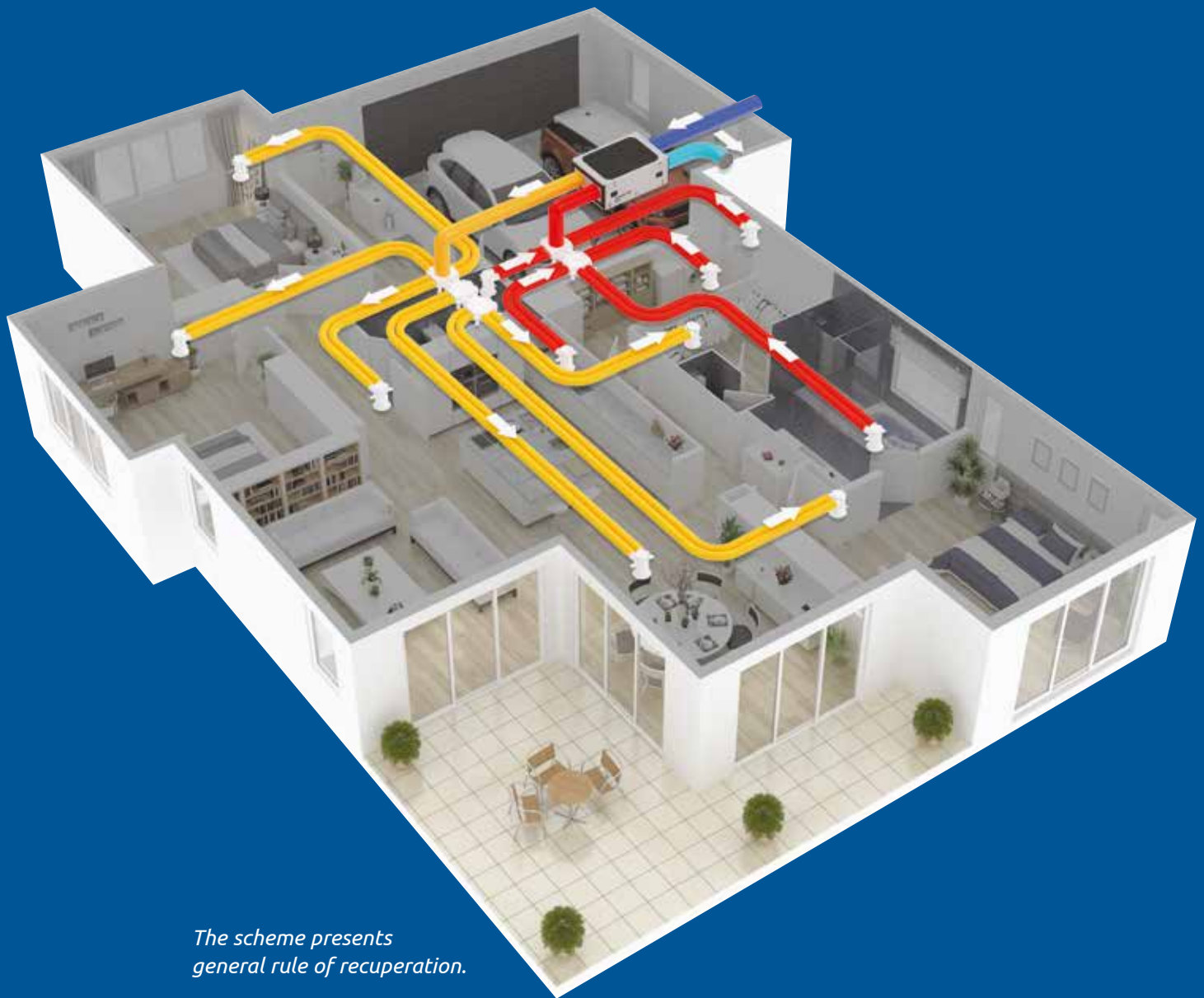
### VZT – Clamps for tape

**Material:** Stainless steel (lock), galvanised steel (screw).

**Unit packaging:** 50 sets

**Collective packaging:** 10 pcs.





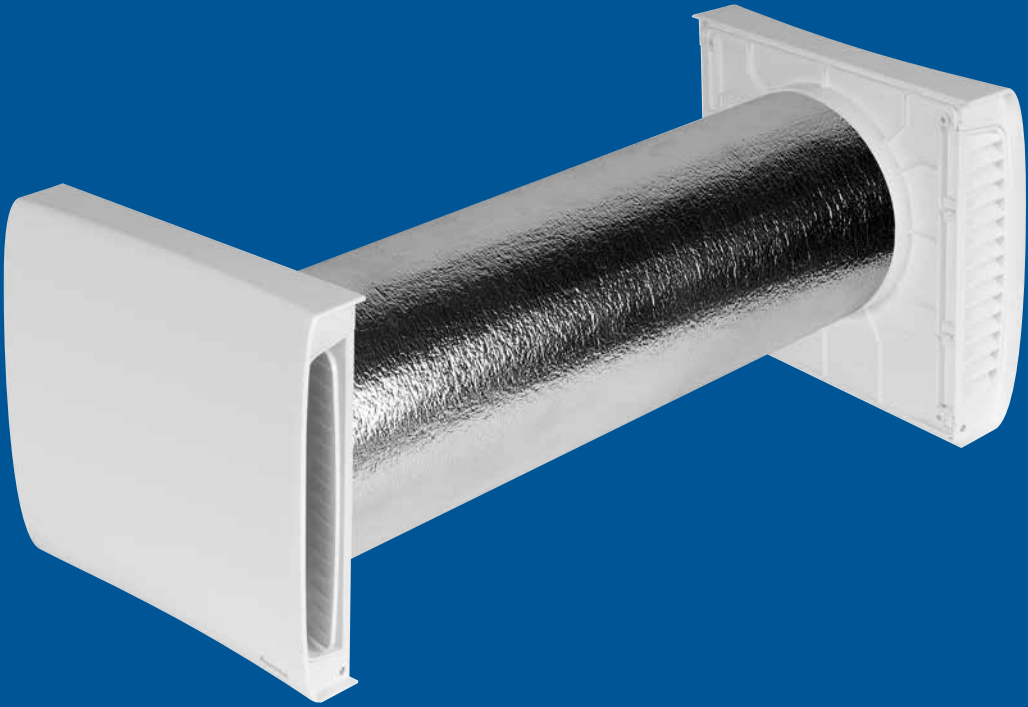
*The scheme presents  
general rule of recuperation.*

# DECENTRALIZED VENTILATION AND OTHER VENT EQUIPMENT

Decentralized ventilation provides comfort by supplying the optimal amount of fresh air with no necessity to open the windows. Opened windows may cause a significant cooling down the room during the winter and the insects' influx in the summer. The ventilation system consists of several smaller units located in various rooms of the house.

Thanks to use of the energy-saving fans and high-efficiency heat exchangers, the installation of the AHR and HRV devices brings economic benefits. Heat recovery always occurs by the two-way operation of the device. In the air exhaust cycle, the used air flows through the heat exchanger heating it up, while during the air supply cycle the heat accumulated by the exchanger is received back and transferred to the room.

An additional aspect of the decentralized ventilation is minor interference in the building construction in comparison to the traditional heat recovery ventilation system. The reason is the devices are located in the outside wall of the building and there is no need to build in the ventilation ducts and carry out a major renovation of the house. All these mentioned benefits allow to significantly reduce costs installations, especially in old-time buildings.



# AHR160

AHR is a new generation of decentralized ventilation devices facilitating ventilation while reducing heat loss.

Thanks to the use of an accumulation heat exchanger, the AHR retains and stores heat energy to transfer it to the cooler, supplied air. The difference between the AHR and HRV series lies in the solutions used to automate its operation.

The applied electronics control the operation of the device and adjusts its parameters depending on the conditions in the room where the AHR is installed. In addition, the AHR series has possibility to pair multiple devices thanks to automatic wireless communication.



Ø160

I	24 dB (A)	23 m <sup>3</sup> /h	4 W
II	34 dB (A)	36 m <sup>3</sup> /h	5 W
III	39 dB (A)	52 m <sup>3</sup> /h	7 W

1

The ceramic exchanger

9

LED Display



6

Remote Control

7

Automatic shutters



30 000 H



IP22  
TIGHTNESS  
CLASS



2  
YEAR  
WARRANTY





# AHR160

1

The ceramic exchanger is the heart of the device and one of its most important elements. In AHR, a hexagonal exchanger was used, thanks to which one of the highest heat recovery rates in decentralized ventilation devices available on the market was obtained.



2

Duct was made of PVC with addition of silver ions to prevent proliferating of bacteria inside of it. Additional insulation was used to reduce condensation and heat loss.



3

Main components are made of ABS plastic with addition of UV stabilizer increasing resistance to sunlight.



4

Energy - saving brushless motor 24V DC



5

The AHR is equipped with two air purifying filters.



6

The AHR160 is equipped with an infrared remote control, enabling the device to be operated in the full range of changing operating modes, operating speed as well as switching on and off.



7

Automatic shutters that cut off the air flow when the device is turned off and a soundproofed internal panel increase the comfort of use.



8

The wireless temperature and humidity sensor enables automatic operation of the device, which, based on the measurements, adjusts the operating speed.





30 000 H



TIGHTNESS CLASS



WARRANTY

9



**Display mode 1**

The display is dimmed (a blinking dot indicates active ventilation, continuous light indicates off mode)

**Display mode 2**

Display is showing the air flow direction, set gear and current room humidity level

**Display mode 3**

Display is showing the air flow direction, set gear and current room temperature

**Display mode 4**

The current time is displayed

**Display mode 5**

Sequential change of display modes (2, 3, 4) every 5 seconds.



The speed is changed by pressing individual buttons

**RECUPERATION mode**

**TIMER mode**

**HUMIDITY mode**

**SET.** It allows you to set the clock time, night mode operation time and resetting the filter contamination counter.

**EXHAUST mode.**

Continuous operation in the exhaust direction.

**INWARD AIRFLOW mode.**

Continuous operation in the inward airflow direction.

**NIGHT (silent) mode**

**DISPLAY.**

Changes the information currently displayed on the display.

**SYNCHRONIZATION.**  
In the case of the „Master” device, it starts working in synchronization of all paired „Slave” devices.



**RECUPERATION mode**

The flow direction is changed automatically based on the measurement temperature



**RECUPERATION mode**

The flow direction is changed automatically based on the measurement temperature



**HUMIDITY mode**

The speed depends on the settings and currently measured humidity.



**TIMER mode**

Enables automatic shutdown of the device after 5-180 minutes.



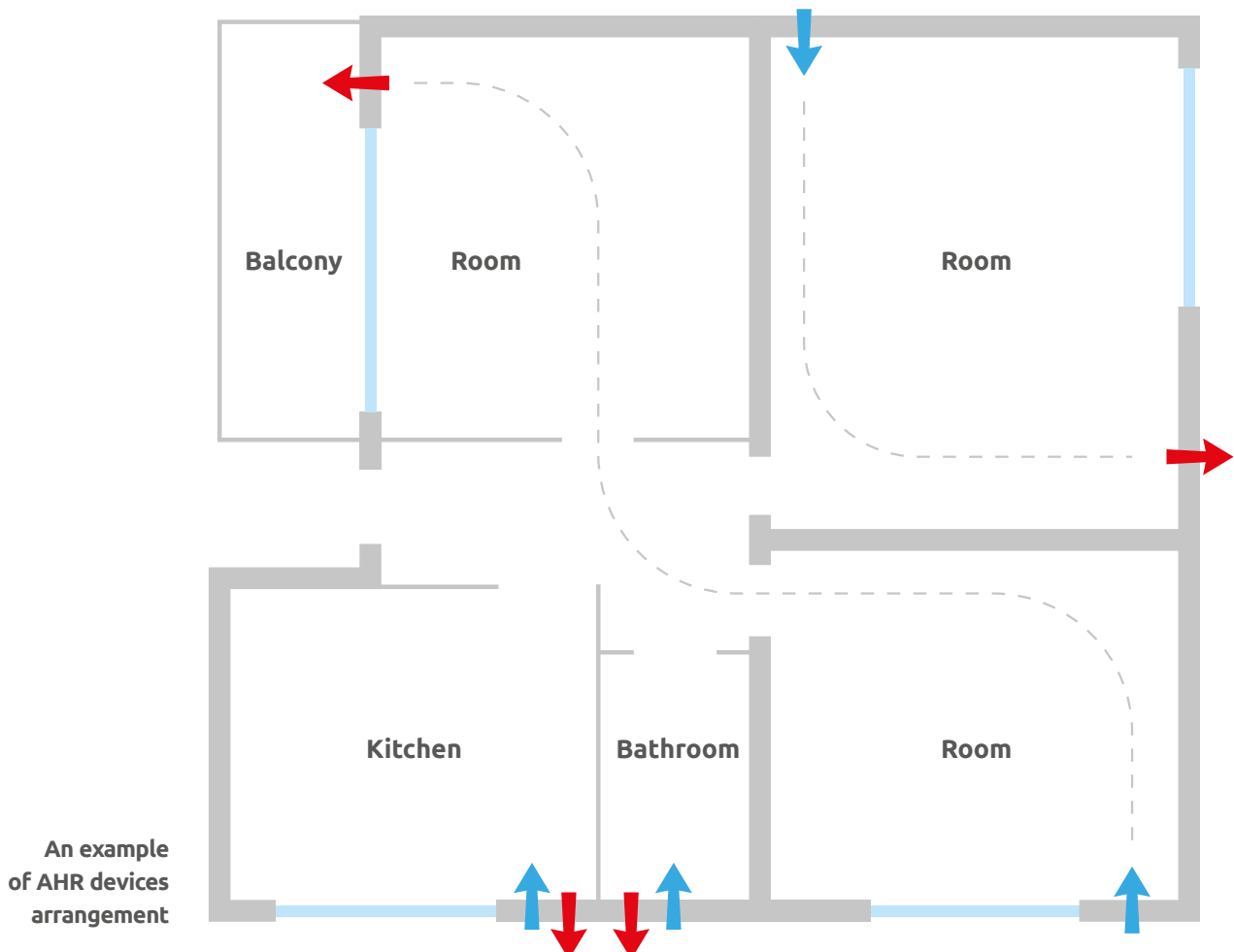
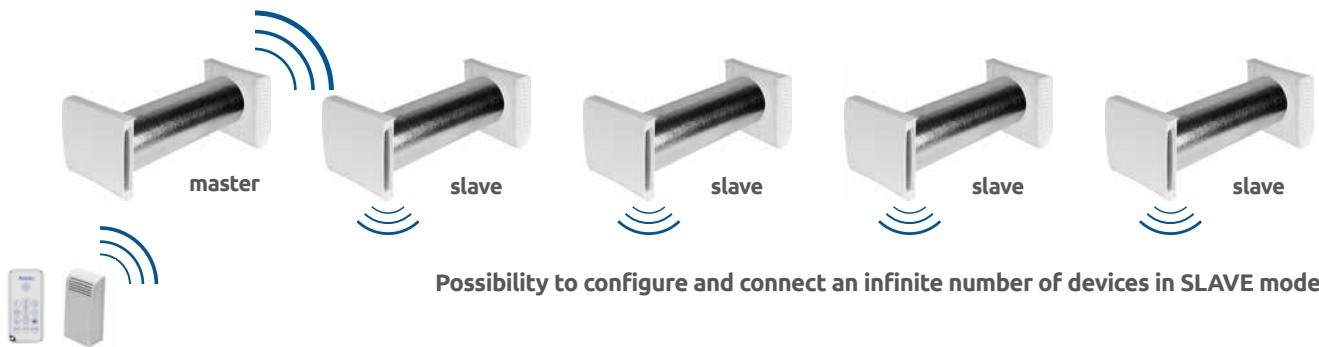
**NIGHT (silent) mode**

The night mode is activated at the user-set clock time, reducing the efficiency of the device.

# AHR160

The AHR series has the ability to connect several devices installed in one or more rooms with the possibility of pairing them via wireless communication. No hassle of connecting devices with a power cord. Connection

possible in various modes, e.g. both units only supply or only exhaust and alternate operation, one unit blows in and the other blows out.





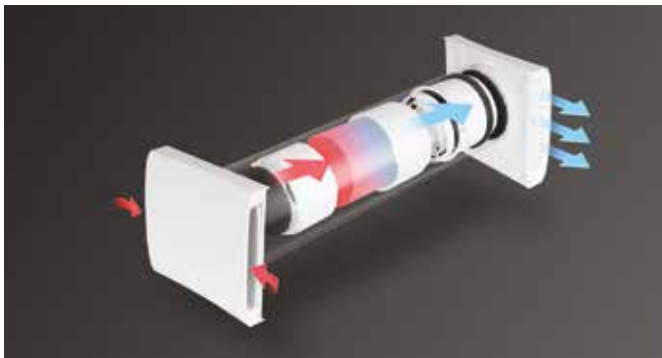
30 000 H



TIGHTNESS CLASS

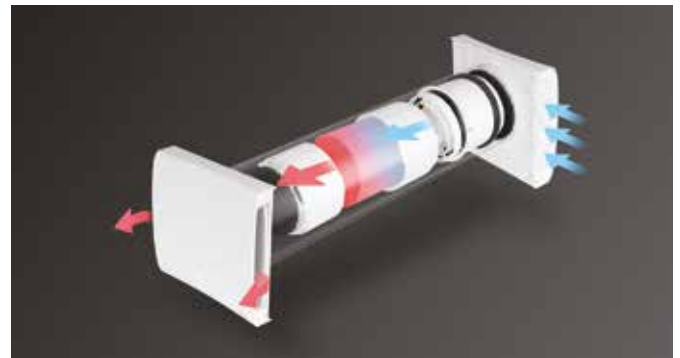


WARRANTY



### EXHAUST

During exhaust operation, the heat is stored in a ceramic heat exchanger. After the exchanger is completely warmed up, it automatically changes the direction of operation.

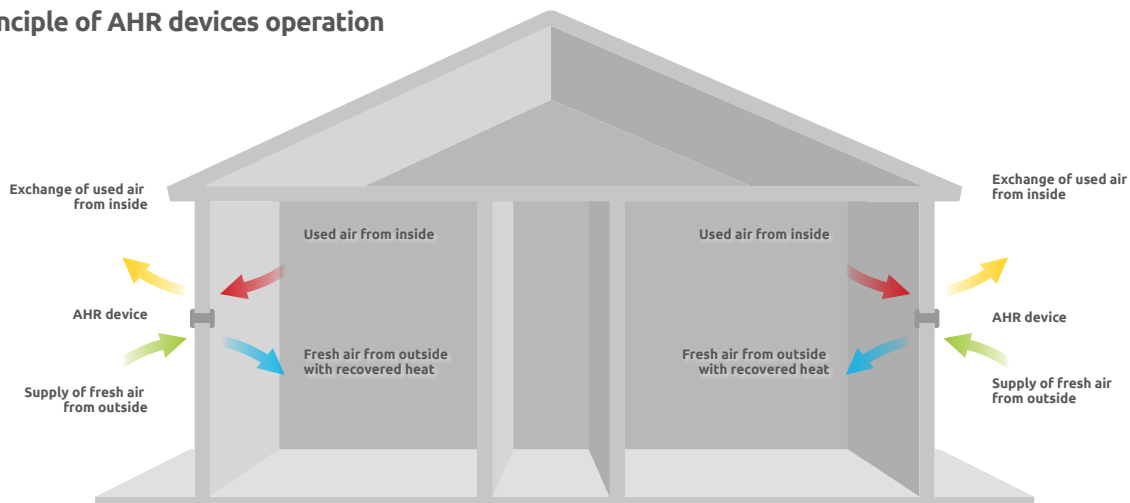


### AIRFLOW

The heat accumulated in the exchanger is collected by the supply air stream and then transferred to the room. After the exchanger cools down, it automatically changes the direction of operation.

The optimal one-way operation time is determined by the temperature readings from sensors located upstream and downstream of the heat exchanger.

### The principle of AHR devices operation



### EQUIPMENT



Terminal block



3 speed



Remote control



Timer



Humidity sensor

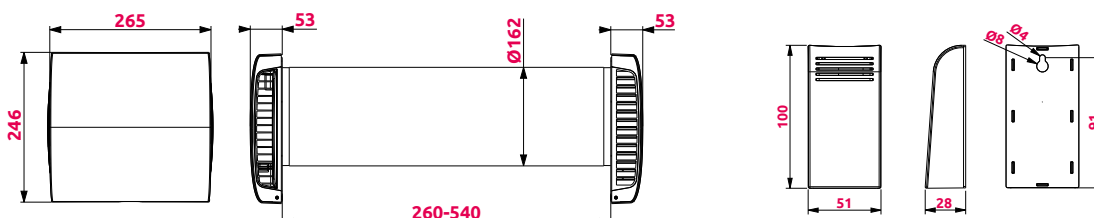


Ball bearings



4 rawplugs and screws

### DIMENSIONS



# HRV

The HRV-series unit is equipped with an accumulating heat exchanger which retains and stores heat energy to transfer it to the air supplied from the outside. Thanks to this solution, the exchange of fresh air with a temperature close to the temperature prevailing in the room is possible.

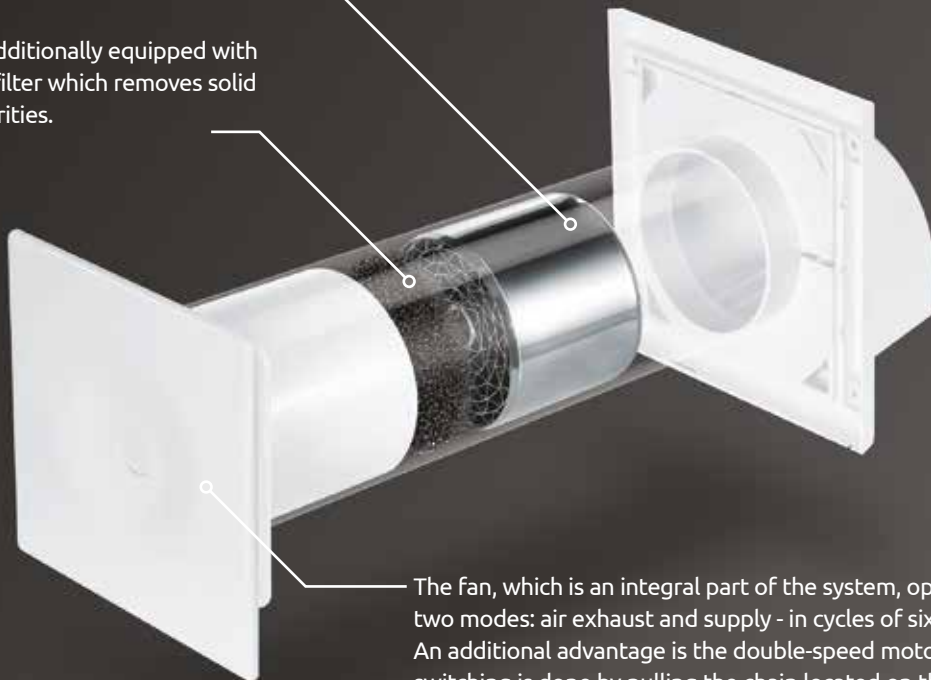
Heat recovery gives the possibility to limit heat losses caused by room ventilation. The task of the recuperator is therefore to recover heat from the exhaust air from the room in which it is installed.



The heat exchanger is made of aluminium. This alloy is characterised by one of the best heat-conduction coefficients among metals. Its additional advantage is the lack of water absorption thanks to which fungi do not grow on the surface of the exchanger.

HRV-series recuperators are designed for continuous operation, because the device's energy-consumption level oscillates around 1.5 W – 4.5 W (depending on its size and operation mode). The unit is easy to install - without connecting ventilation ducts.

The system is additionally equipped with an air-cleaning filter which removes solid and liquid impurities.



The fan, which is an integral part of the system, operates in two modes: air exhaust and supply - in cycles of sixty seconds. An additional advantage is the double-speed motor, and gears switching is done by pulling the chain located on the fan body (HRV100 / HRV125) or using the buttons on the remote control in versions with that function (HRV100P / HRV125P).



Versions with remote control (HRV100P, HRV125P) allow you to completely switch off the device without disconnecting it from the network.



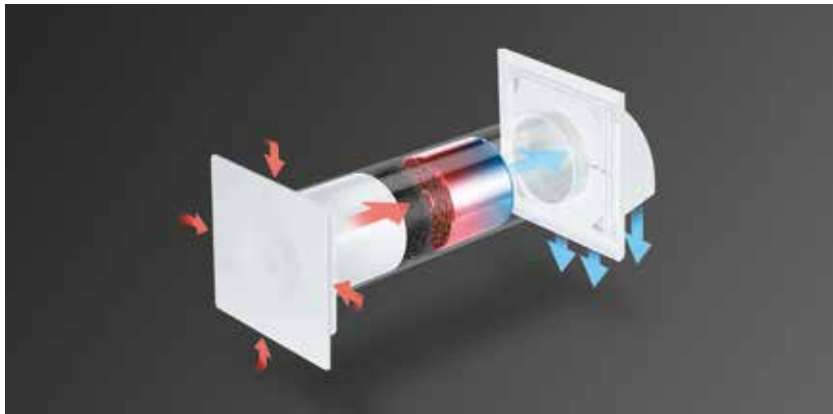
30 000 H



TIGHTNESS CLASS

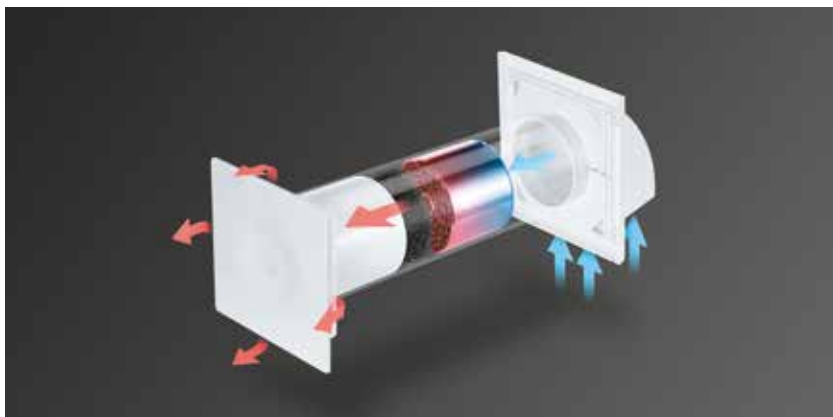


WARRANTY



### Air extraction mode

The HRV recuperator is always switched on in exhaust mode. The air removed from the room after it is switched on transfers heat energy to the aluminium exchanger. After sixty seconds, the fan automatically switches to supply mode.



### Air supply mode

The air supplied from outside is heated by the accumulated heat of the exchanger before it enters the room. Due to such action, the loss of heat is unnoticeable.

## EQUIPMENT



Terminal block



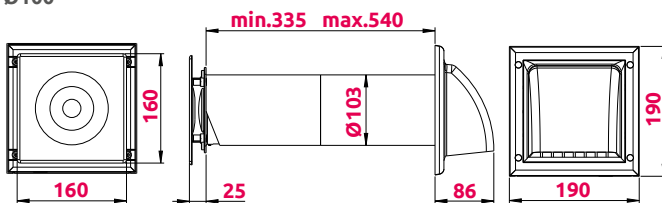
2 speed



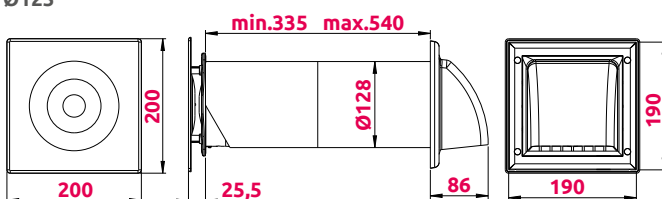
Remote control

## DIMENSION

Ø100



Ø125



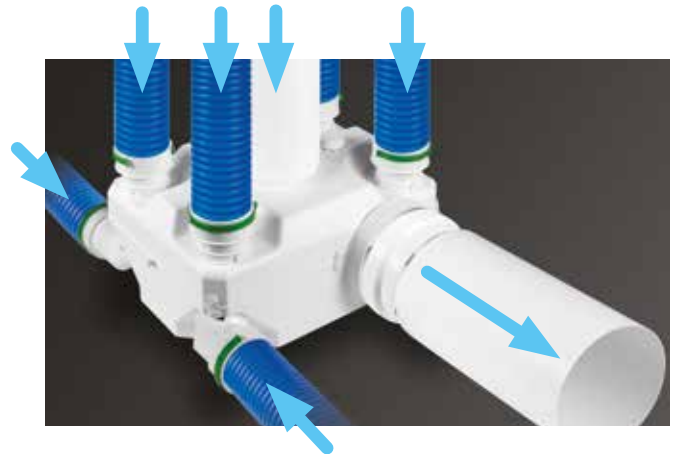
INDEX				
Ø100	HRV100	●		●
	HRV100P	●	●	●
Ø125	HRV125	●		●
	HRV125P	●	●	●



Ball bearings



8 rawplugs and screws



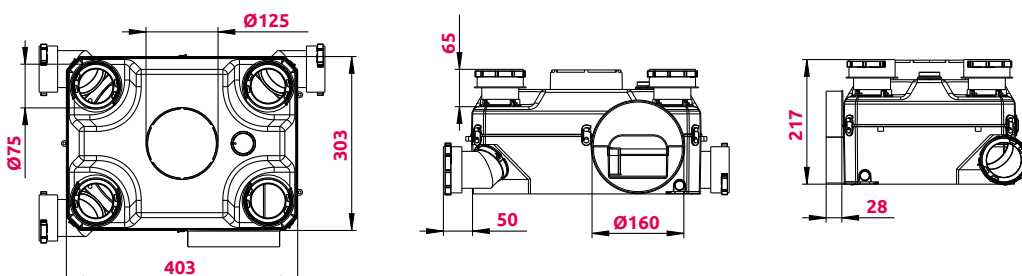
The CVU400 central fan is designed for the continuous and quiet ventilation of many rooms at the same time. It can be used in single-family houses and flats in multi-family buildings, as well as in conference rooms, offices and public buildings. The unit is equipped with an energy-saving motor, which enables operation at three performance levels. Its construction allows the connecting of up to seven inlet ducts with a diameter of  $\text{\O}75$  mm, and one  $\text{\O}125$  mm duct intended for connecting an extractor hood.

The CVU400 is also available with a hygrostat, which automatically adjusts the efficiency of the fan to the prevailing humidity. The simple device design allows

for its quick installation and maintenance (cleaning) without using complicated tools.

The central fan is an innovative element because of its universal adjustment of the connection direction of the ventilation ducts. Such a solution allows any configuration of connection directions at the assembly stage, adapted to the individual needs of the user. The design of the CVU central fan allows it to be mounted on the wall or ceiling in both horizontal and vertical positions.

	Index	m <sup>3</sup> /h	Pa	W	dB(A)	IP
CVU	CVU400	265/360/415	435/495/535	54/55/60	44/49/56	IPX2
	CVU400HT					





## EQUIPMENT



Ball bearings



Terminal block



Rawlplug



Cord



Pokreřto



Junction box



Switch



Humidity sensor



Timer

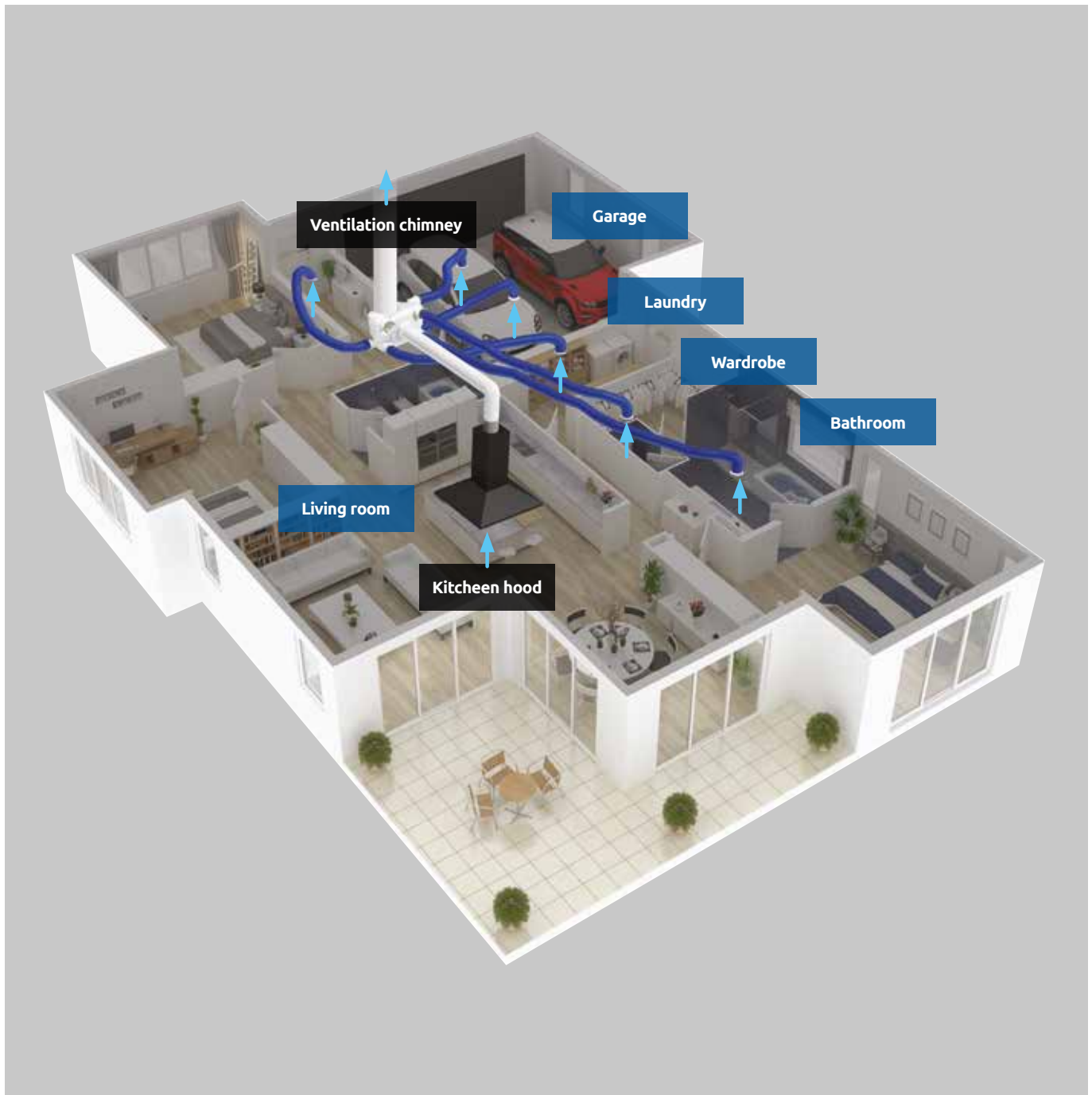


### INDEX

CVU400



CVU400HT



Awenta Spółka Jawna  
05-300 Mińsk Mazowiecki  
Stojadła, ul. Warszawska 99  
Poland

tel: +48 25 758-52-52  
+48 25 758-93-92

e-mail: [info@awentapro.pl](mailto:info@awentapro.pl)

[awentapro.pl](http://awentapro.pl)

