HEAT RECOVERY SYSTEM

Awenta PRO

TECHNICAL CATALOGUE

Zephyr and Euros recuperators

Awenta PRO system accessories

Awenta PRO

Dear Customers,

In order to meet the needs related to health and a high quality of air at your homes, and care for the natural environment, we present the catalogue of AWENTA PRO series products.

On the basis of its 30 years of experience in the ventilation industry, AWENTA has started a new chapter of its activity.
In our Research and Development Centre, we have developed a complex AWENTA PRO heat recovery system for buildings, based on our design solutions.

The system includes the Zephyr and Euros series air handling units with capacities of over 400 m^3/h and 600 m^3/h - manufactured using the components from global manufacturers, such as: Knauf Industries, Recair, Ziehl-Abegg and EBM Papst.
The recuperator range is constantly being developed, and AWENTA plans to systematically introduce new models to the market.
These units are complemented by proprietary solutions for air distribution elements such as plenum and distribution boxes and air valves.

AWENTA PRO recuperators are characterised by high quality and reliability, quiet operation, long service life, low weight, and easy installation and operation. These are important features that make it much easier at the investment stage and during the subsequent operation of the air handling unit.

Air distribution elements such as distribution boxes, plenum boxes, circular ducts and air valves are made in AWENTA's production plant in Stojadła near Warsaw, which allows the company to ensure their constant availability. Applying advanced quality control procedures and using its equipment resources, Awenta provides modern and durable products and comprehensive solutions for investors based on a full sales proposal.

AWENTA PRO solutions make it possible to increase air quality and living comfort in homes and generate significant savings in heating costs in an environmentally friendly manner.

We invite you to familiarise yourself with the Awenta PRO product catalogue.

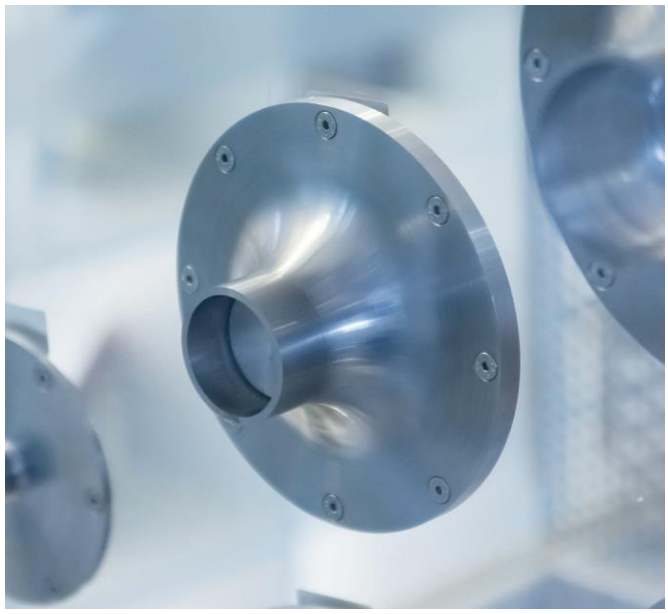

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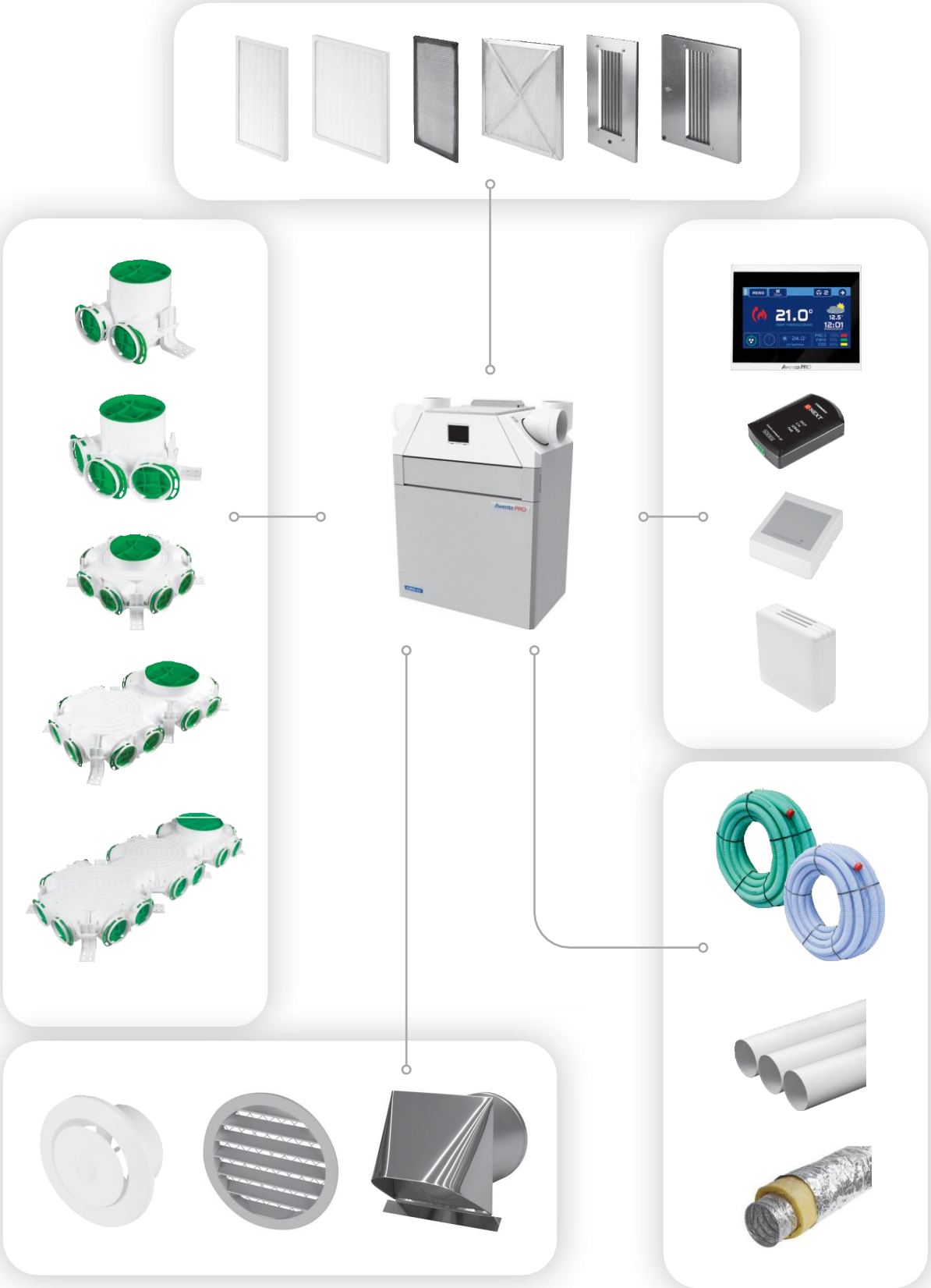
Diagram of the Awenta Pro heat recovery system



ENERGY EFFICIENCY

EXPANDED POLYPROPYLENE

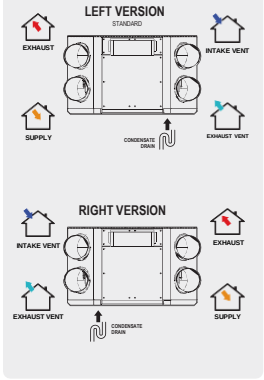
WARRANTY

Euros 415 air handling unit – VER415

VER415L	EUROS 415 air handling unit, left version (standard)	VER415LCF	EUROS 415 air handling unit, left version (standard) + CF module
VER415P	EUROS 415 air handling unit, right version	VER415PCF	EUROS 415 air handling unit, right version + CF module

RECUPERATOR FEATURES

- Mounting position - wall and floor standing
- 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 (optional)
- 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.
- Option of cleaning heat exchanger
- Long service life



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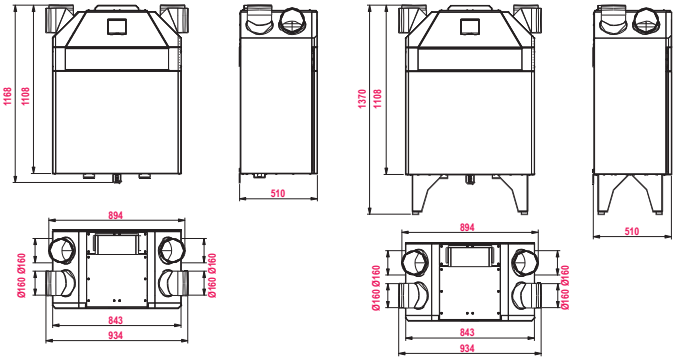
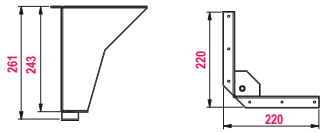
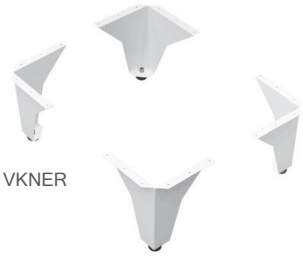


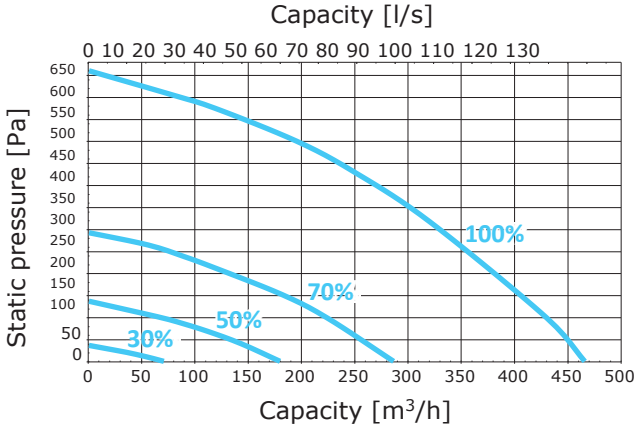




TECHNICAL INFORMATION

Supply voltage	230 V AC / 50 Hz
Max. power consumption (without preheat coil)	280 W
Preheat coil power (option)	2000 W
IP protection class	IP23
Capacity (at 100 Pa)	430 m^3/h
Noise level	44.3 dB(A)
Type of heat exchanger	Recair cross-counter-flow heat exchanger
Max. heat recovery efficiency	up to 95%
Heat exchanger material	Polystyrene
Housing material	EPP + powder coated steel
Filters – intake vent	M5 (optional - F7)
Filters – exhaust	M5
Diameter of air connector	160 mm / torsional
Diameter of condensate drain connector	25/32 mm
Weight	46 kg
Controller type	AERO 4 + NANO COLOR
Bypass	Automatic 100%
Fans	2x radial fan with EC motor
Internet module (option)	iNEXT

CAPACITY



PRODUCT DATA SHEET

Zephyr 405 air handling unit – VZH405

A ENERGY EFFICIENCY

EPP EXPANDED POLYPROPYLENE

2 YEAR WARRANTY

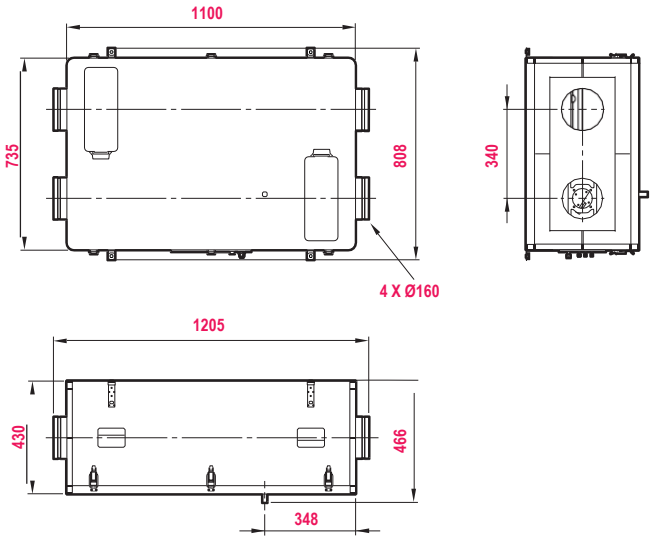
RECUPERATOR FEATURES

- Mounting position - ceiling (suspended)
- Counterflow heat exchanger with the efficiency of up to 95%
- Energy-efficient fans with the Ziehl-Abegg EC motors
- Automatic bypass, 100% bypass
- Modulating preheat coil with variable operating parameters (optional)
- 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
- Possible remote control (iNext module required)
- 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 pre-filter.
- Possible interoperation with the VACS-1 air quality sensor
- Possible interoperation with carbon dioxide and humidity sensor.
- Option of cleaning heat exchanger
- Long service life

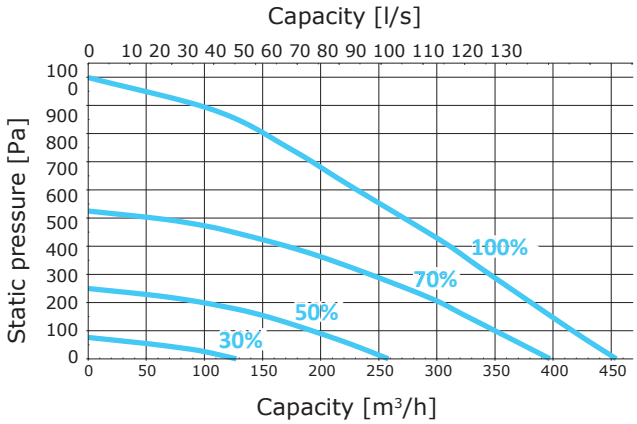
TECHNICAL INFORMATION

Supply voltage	230 V AC / 50 Hz
Max. power consumption (without preheat coil)	330 W
Preheat coil power (option)	2000 W
IP protection class	IP24
Capacity (at 100 Pa)	417 m³/h
Noise level	51.8 dB(A)
Type of heat exchanger	Recair cross-counter-flow heat exchanger
Max. heat recovery efficiency	up to 95%
Heat exchanger material	Polystyrene
Housing material	EPP + powder coated steel
Filter – intake vent	M5 (optional - F7)
Filter – exhaust	M5
Diameter of air connector	160 mm
Weight	35 kg
Controller type	AERO 3 + NANO COLOR
Bypass	Automatic 100%
Fans	2x radial fan with EC motor
Internet module (option)	iNEXT

DIMENSIONS



CAPACITY



ENERGY EFFICIENCY

EXPANDED POLYPROPYLENE

WARRANTY

Zephyr 605 air handling unit – VZH605

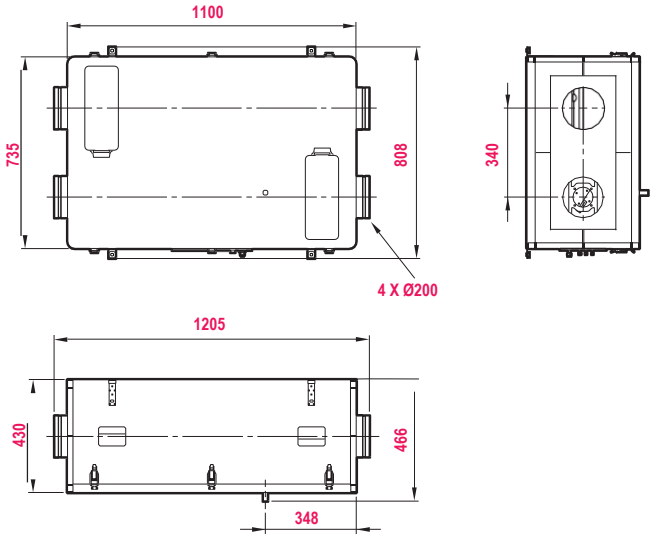
RECUPERATOR FEATURES

- Mounting position - ceiling (suspended)
- Counterflow heat exchanger with the efficiency of up to 95%
- Energy-efficient fans with the EBM-Papst EC motors
- Automatic bypass, 100% bypass
- Modulating preheat coil with variable operating parameters (optional)
- 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
- Possible remote control (iNext module required)
- 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 pre-filter.
- Possible interoperation with the VACS-1 air quality sensor
- Possible interoperation with carbon dioxide and humidity sensor.
- Option of cleaning heat exchanger
- Long service life

TECHNICAL INFORMATION

Supply voltage	230 V AC / 50 Hz
Max. power consumption (without preheat coil)	405 W
Preheat coil power (option)	2000 W
IP protection class	IP24
Capacity (at 100 Pa)	616 m³/h
Noise level	40.1 dB(A)
Type of heat exchanger	Recair cross-counter-flow heat exchanger
Max. heat recovery efficiency	up to 95%
Heat exchanger material	Polystyrene
Housing material	EPP + powder coated steel
Filter – intake vent	M5 (optional - F7)
Filter – exhaust	M5
Diameter of air connector	198 mm
Diameter of condensate drain connector	16 mm
Weight	35 kg
Controller type	AERO 3 + NANO COLOR
Bypass	Automatic 100%
Fans	2x radial fan with EC motor
Internet module (option)	iNEXT

DIMENSIONS



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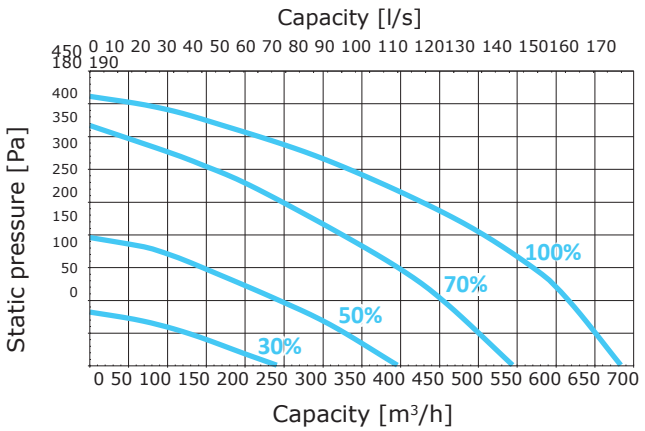


VM5ZH, VF7ZH, VM5ER415, VF7ER415 air filter

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.

FILTER COMPATIBILITY

Filter model	Intended use
VM5ZH	ZEPHYR 405 / ZEPHYR 605
VF7ZH	ZEPHYR 405 / ZEPHYR 605
VM5ER415	EUROS 415
VF7ER415	

Filter F7 (ePM1 0.3-1.0 µm)

Filter class: F7, tested according to ISO 16890

Fire protection: DIN 53438-3 (F1)

Maximum relative humidity: 100%

Temperature resistance: max. 80°C

Filter materials: Glass-fibre paper

Frame: cardboard

Filter M5 (ePM10 2.5-10 µm)

Filter class: M5, tested according to ISO 16890

Fire protection: DIN 53438-3 (F1)

Maximum relative humidity: 100%

Temperature resistance: max. 80°C

Filter materials: Glass-fibre paper

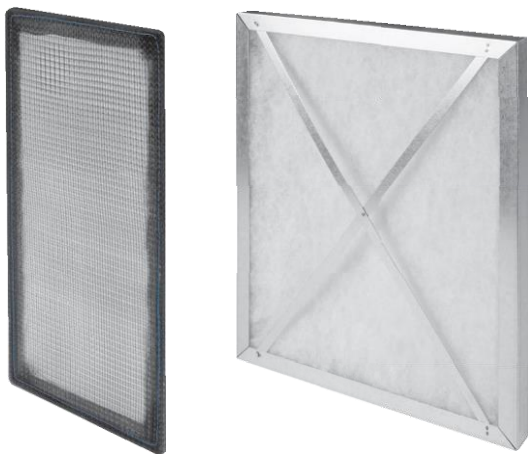
Frame: cardboard

VFWZH, VFWER415 pre-filter

To extend the life of the M5 or F7 class main filters used in the Zephyr and Euros 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.

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

In the case of the VFWER415 pre-filter, the filter material is nylon mesh. The material used allows for repeated cleaning, so there is no need to replace it.



TECHNICAL DATA

Filter model	VFWZH	VFWER415
External dimensions	188 x 398 x 5	309 x 369 x 23
Filter element dimensions	183 x 393	308 x 368
Filter element	Nonvowen fabric	Nylon mesh
Filtration class	G2 (acc. to EN 779:2002)	Unclassified

FILTER COMPATIBILITY

Filter model	Intended use
VFWZH	ZEPHYR 405
	ZEPHYR 605
VFWER415	EUROS 415

VGRZH, VGER415 preheat coil

The preheat coil with the control module is an additional element of the air handling unit. When the outside temperature drops below 0°C, the heat coil heats up the supplied air preventing the exchanger from freezing and malfunctioning. The heat coil is switched on by the controller at a safe moment based on readings from sensors inside the unit, while the control module determines the optimum operating time of the heat coil and thus reduces energy consumption. This solution allows for rapid heating and the ability to maintain a constant temperature even when the air flow is highly variable. A characteristic feature is the self-regulation function and extremely long service life of the heat coil.

TECHNICAL DATA

	VGRZH	VGER415
Operating voltage	230 V AC	230 V AC
Rated power	2,000 W	2,000 W
Maximum current	11.8 A	11.8 A
Electrical strength	1,800 VAC/10 mA/s	1,800 VAC/10 mA/s
Compliance with	EN 60335-1	EN 60335-1

HEAT COIL COMPATIBILITY

Heat coil model	Intended use
VGRZH	ZEPHYR 405
	ZEPHYR 605
VGER415	EUROS 415

VLAN Internet module

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, and in the case of the Euros unit also 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

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 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.

VACS-1 air quality sensor

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.

VSHC CO_2 concentration and humidity sensor

The sensor is designed to measure the concentration of carbon dioxide and humidity in rooms. It interoperates with NANO Color room panels (ZEPHYR and EUROS air handling units). 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_2. 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.

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_2 sensor is equipped with an automatic calibration algorithm.)

VSHW humidity sensor

The sensor is designed to measure the humidity in rooms. It interoperates with NANO Color room panels (ZEPHYR and EUROS air handling units). 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

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	

VCB160-8, VCB200-8 distribution box

D – TIGHTNESS CLASS
PP – POLYPROPYLENE
BACTERICIDAL
30-YEAR – WARRANTY

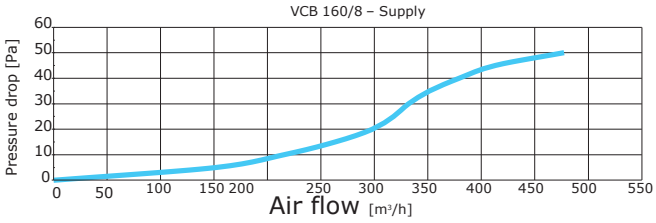
The AWENTA PRO VCB distribution box is used for the distribution of supplied air or collection of used air from rooms connected to the heat recovery system and it is directly connected to the air handling unit.

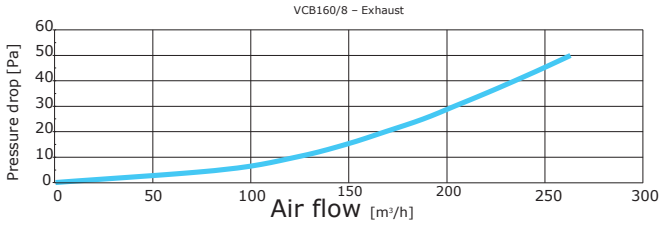
AWENTA PRO distribution boxes are made of modified polypropylene with the Nano-Silver bacteriostatic additive. The robust structure is equipped with a system of gaskets guaranteeing tightness and failure-free operation for many years. The use of a bacteriostatic additive made it possible to obtain bactericidal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

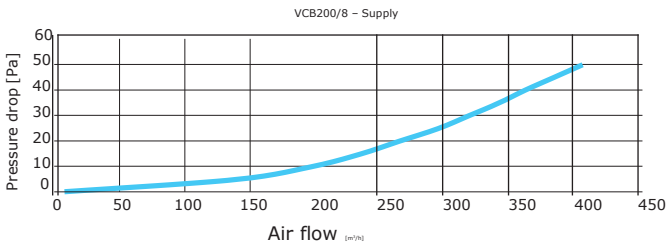
FLOW CHARACTERISTCS

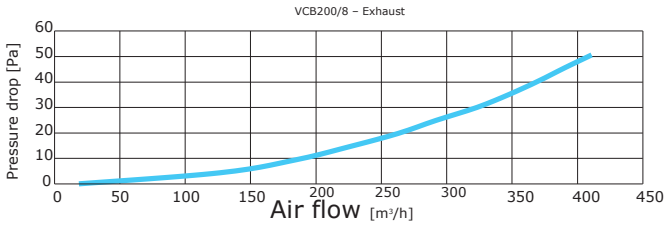
VCB 160/8





VCB 200/8





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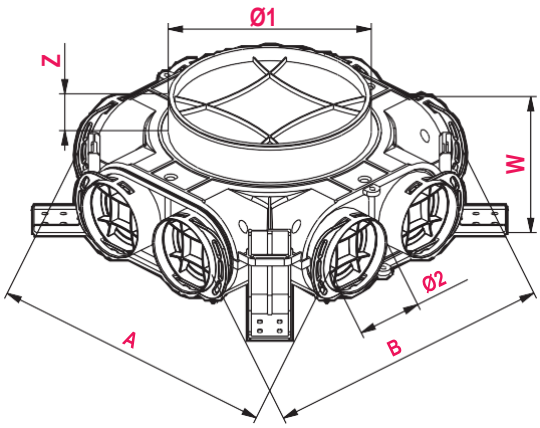


	Ø1	Ø2	A	B	W	Z
VCB160-8	160	75	347	349	104	38
VCB200-8	200	75	347	349	104	38

PRODUCT DATA SHEET | Heat recovery system components

VCB160-12, VCB200-12 distribution box

D – TIGHTNESS CLASS | PP – POLYPROPYLENE | BACTERICIDAL | 30-YEAR WARRANTY

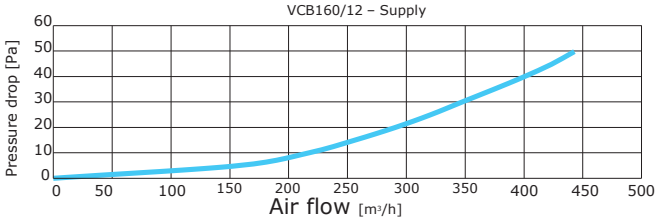
The Awenta PRO VCB160-12 and VCB200-12 distribution boxes enable the connection of up to 12 Ø75 mm ventilation ducts. Ducts not in use can be closed with the supplied end caps.
The box is available in two configurations of connection to the air handling unit: Ø160 mm and Ø200 mm.

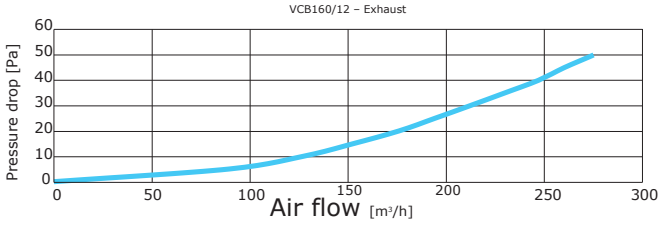
The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling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

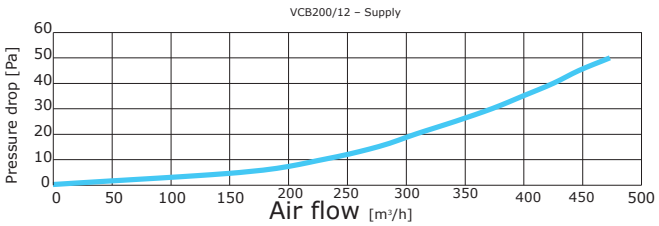
FLOW CHARACTERISTCS

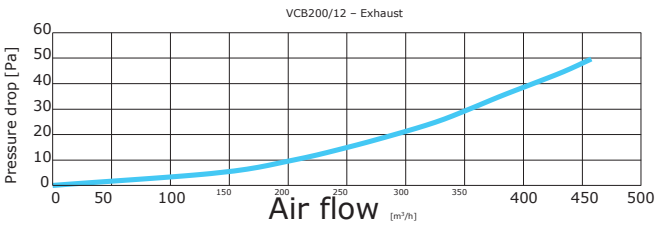
VCB 160/12





VCB 200/12





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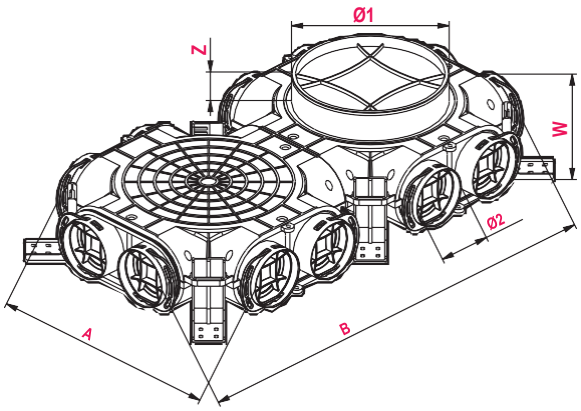


	Ø1	Ø2	A	B	W	Z
VCB160-12	160	75	347	639	104	38
VCB200-12	200	75	347	639	104	38

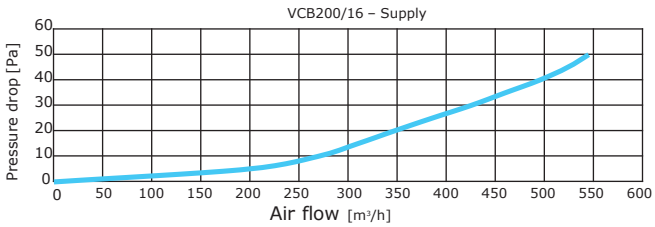
VCB200-16 distribution box

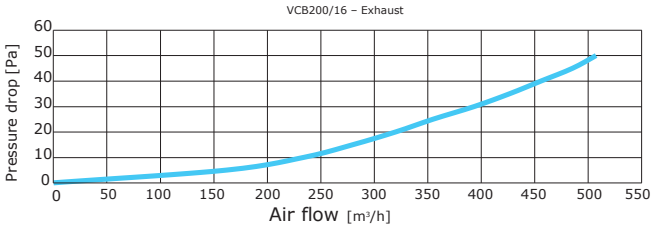
D TIGHTNESS CLASS | PP POLYPROPYLENE | BACTERICIDAL | 30-YEAR WARRANTY

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.

FLOW CHARACTERISTCS





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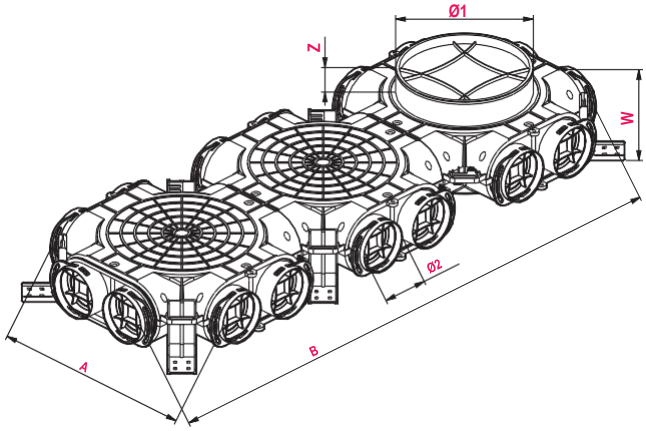


	Ø1	Ø2	A	B	W	Z
VCB200-16	200	75	347	927	104	38

VCB160/200-8 straight-through distribution box

D TIGHTNESS CLASS

PP POLYPROPYLENE

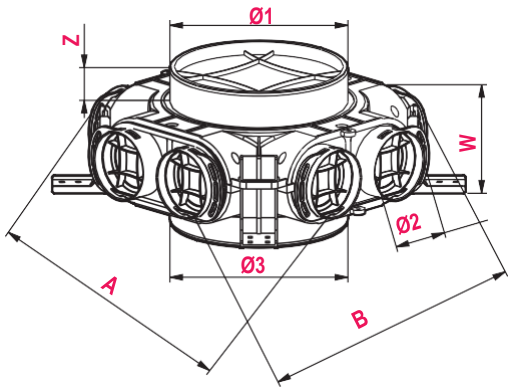
BACTERICIDAL

30-YEAR WARRANTY

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
VCB160/200-8	160	75	200	347	349	104	38

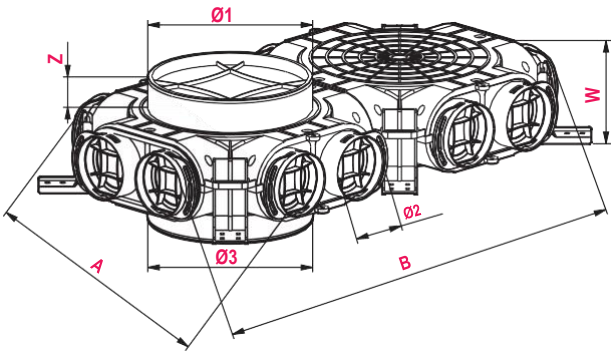
VCB160/200-12 straight-through distribution box

D TIGHTNESS CLASS | PP POLYPROPYLENE | BACTERICIDAL | 30-YEAR WARRANTY

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
VCB160/200-12	160	75	200	347	639	104	38

PRODUCT DATA SHEET Heat recovery system components

VCB160/200-16 straight-through distribution box

D TIGHTNESS CLASS

PP POLYPROPYLENE

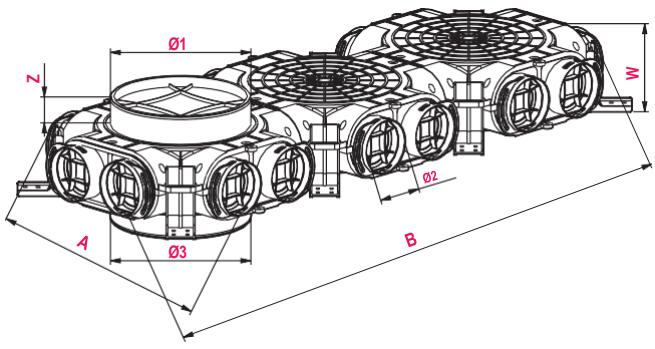
BACTERICIDAL

30-YEAR WARRANTY

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

VPB125-2 plenum box

D TIGHTNESS CLASS

PE POLYETHYLENE

BACTERICIDAL

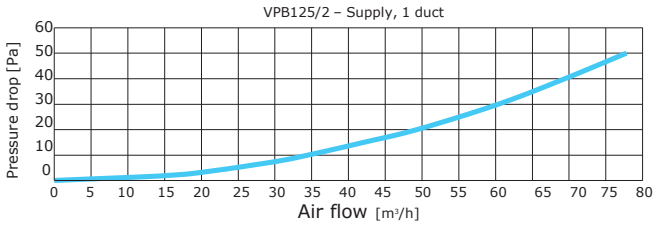
30-YEAR WARRANTY

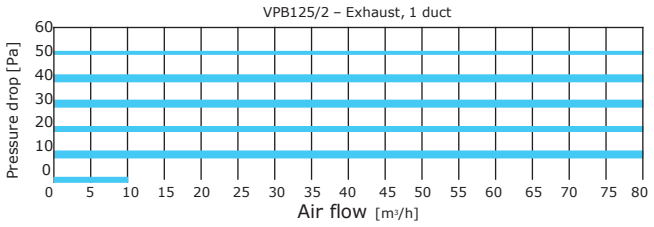
The AWENTA PRO VPB 125-2 plenum box is used to connect two flexible ducts to the distribution boxes. Thanks to the possibility of supplying two ducts, it is recommended for mounting air valves in rooms requiring balanced ventilation intended for daytime stays or bedrooms.

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 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. The box allows for connecting a maximum of two Ø75 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.

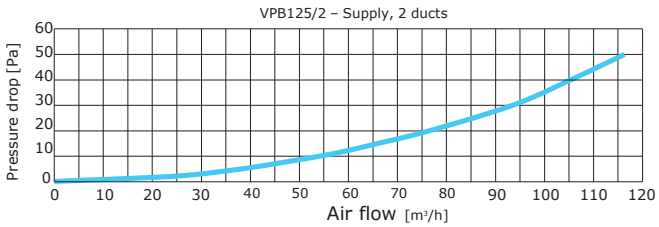
FLOW CHARACTERISTCS

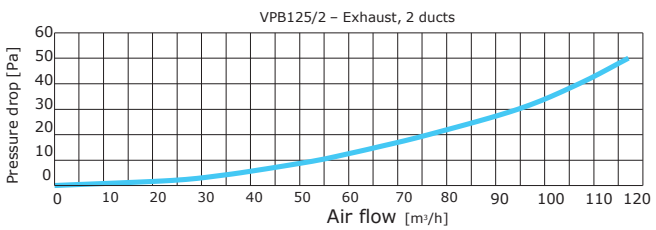
VCB 160/8





VCB 200/8





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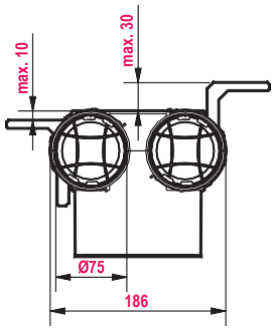
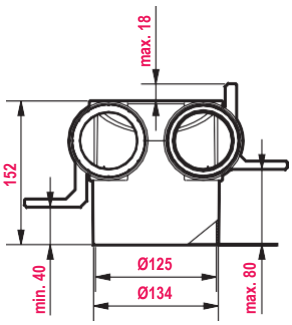
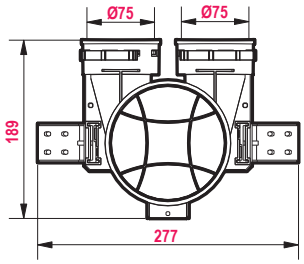






PRODUCT DATA SHEET Heat recovery system components

VPB125-3 plenum box

D TIGHTNESS CLASS | PE POLYETHYLENE | BACTERICIDAL | 30-YEAR WARRANTY

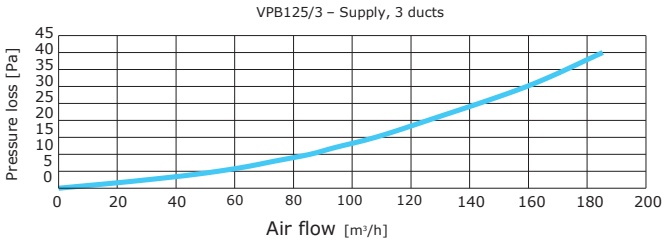
The AWENTA PRO VPB 125-3 plenum box is used to connect three flexible air ducts to the distribution boxes. Thanks to the possibility of supplying up to three ducts, it is recommended for mounting air valves in rooms requiring intensive ventilation, e.g. kitchen, bathroom or toilet. The high air flow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

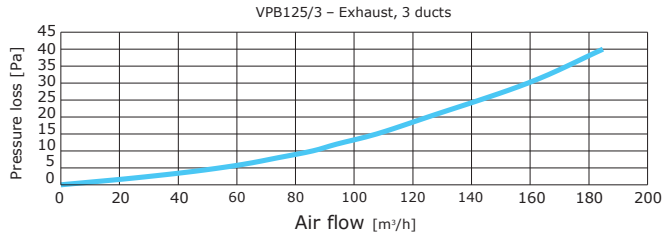
The AWENTA PRO plenum boxes are made of durable HDPE polyethylene with a bacteriostatic Nano-Silver additive. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bactericidal activity.

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.

FLOW CHARACTERISTCS





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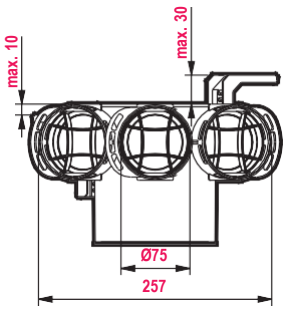
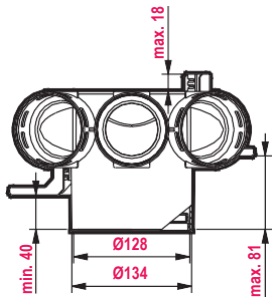
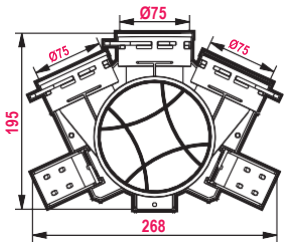






VPC125-2 ceiling plenum box – horizontal

D TIGHTNESS CLASS

ABS

BACTERICIDAL

30-YEAR WARRANTY

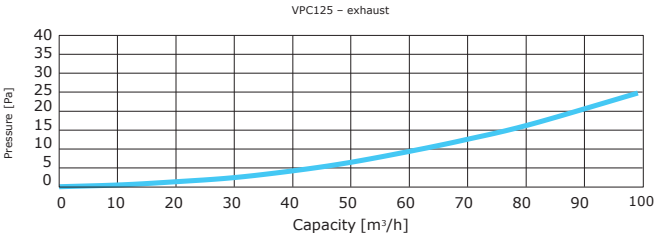
The AWENTA PRO VPC ceiling plenum box (horizontal) is an ultra-lightweight solution for use between a suspended ceiling, a ceiling or wall, and in other confined space locations. Mounting of the box to the surface can be additionally reinforced with a typical KP75-28 bracket (DIM. 75X150) from Awenta's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

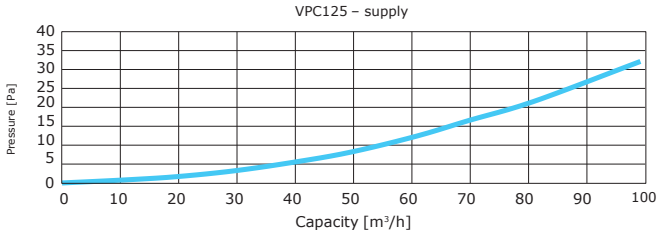
AWENTA PRO plenum boxes are made of durable ABS material. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bactericidal activity. The design of the plenum box allows it to be mounted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

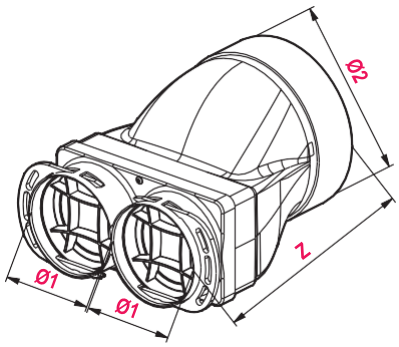
It is possible to install them on floor / wall / ceiling: made of concrete or plasterboard.

FLOW CHARACTERISTCS





DIMENSIONS



	Ø1	Ø2	Z
VPC125-2	75	128	194

PRODUCT DATA SHEET Heat recovery system components

VPE125-2 ceiling plenum box – vertical

D TIGHTNESS CLASS

ABS

BACTERICIDAL

30-YEAR WARRANTY

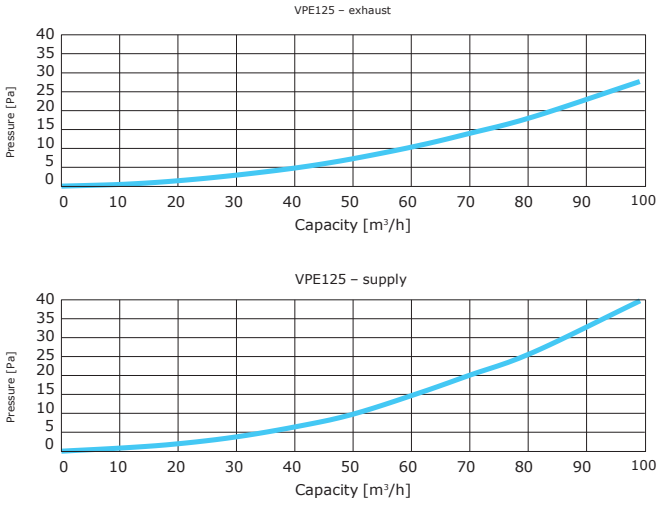
The AWENTA PRO VPE ceiling plenum box (vertical) is an ultra-lightweight solution for use between a suspended ceiling, a ceiling or wall, and in other confined space locations. Mounting of the box to the surface can be additionally reinforced with a typical KP75-28 bracket (DIM. 75X150) from Awenta's 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.

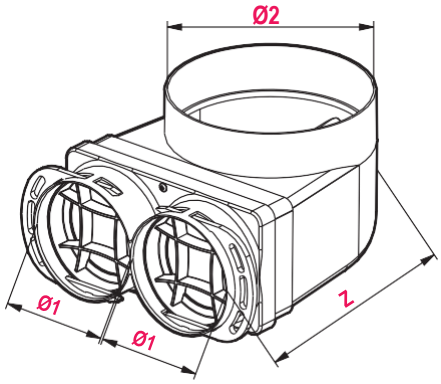
The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class.

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

FLOW CHARACTERISTCS



DIMENSIONS



	Ø1	Ø2	Z
VPE125-2	75	128	202

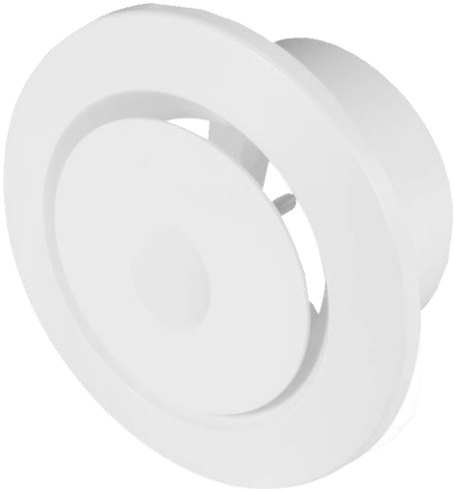
PS POLYSTYRENE | BACTERICIDAL | 30-YEAR WARRANTY

VAN supply air valves

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.

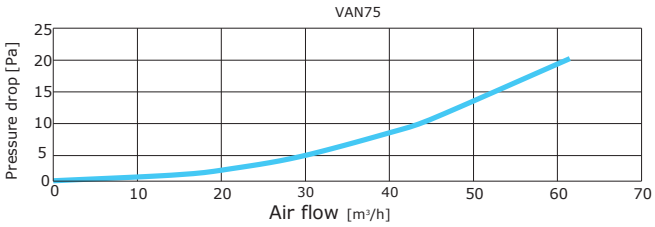
The AWENTA PRO air valves, with a modern design, are made of high-quality polystyrene plastic, which guarantees their long service life.

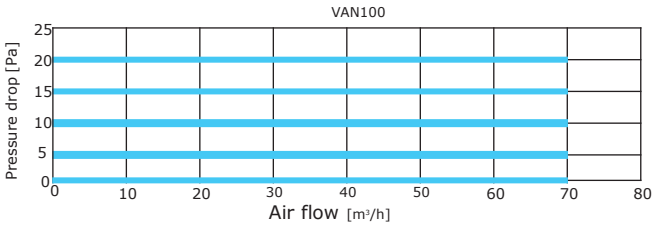
The VAN series air valves are designed for installation on the ceiling, wall or directly in the duct with a special mounting flange. Each air valve has smooth adjustment which makes it possible to precisely adjust the air flow. The specially designed shape of the air valve structure guarantees a low 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 ⌀75 mm duct.

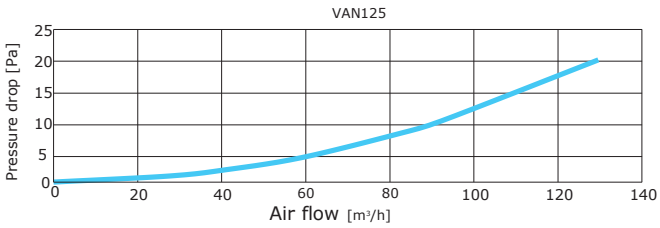


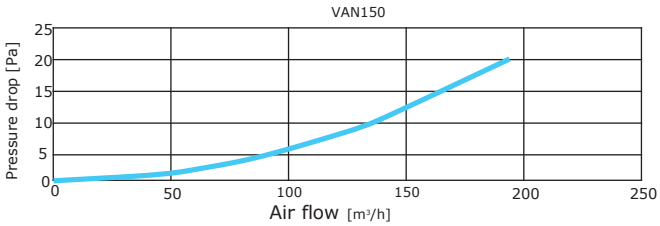
VAN75

FLOW CHARACTERISTCS

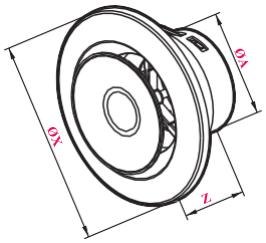




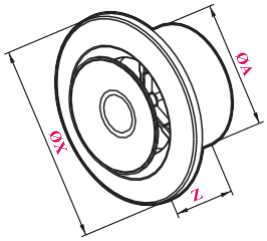




DIMENSIONS



VAN75



VAN100 / VAN125 / VAN150

	ØA	ØX	Z
VAN75	75	155	65
VAN100	100	155	60
VAN125	125	185	60
VAN150	150	214	73

POLYSTYRENE BACTERICIDAL WARRANTY

VAW exhaust air valves

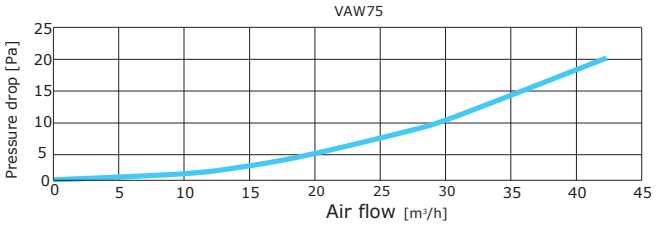
Exhaust air valves are components that constitute the finishing elements of ventilation ducts. Thanks to the mechanical ventilation system, the used air is collected and removed from the rooms where the exhaust air valve is installed. These are known as dirty rooms.

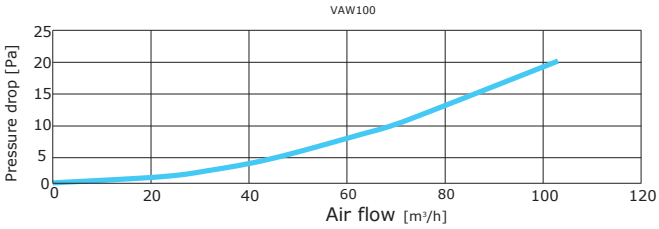
The AWENTA PRO air valves, with a modern design, are made of high-quality polystyrene plastic, which guarantees their long service life.

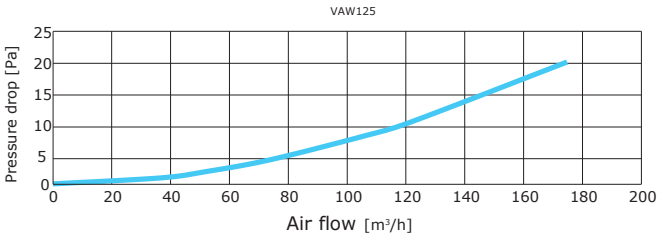
The standard place of installation of the VAW series air valves is a ceiling. The VAW75 model is additionally equipped with an adapter, which enables direct connection to the Ø75 mm duct to the diffuser without the necessity of using a plenum box. This is an ideal solution for areas where the need for air exchange is low. The VAW75 air valve flange allows for direct connection of ⌀75 mm duct.

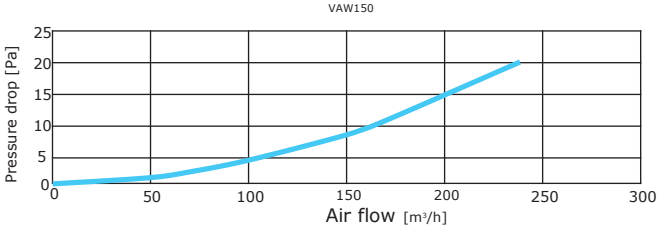
VAW75

FLOW CHARACTERISTCS









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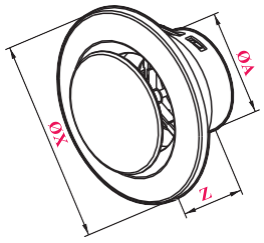
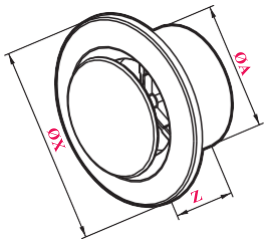


VAW75



VAW100 / VAW125 / VAW150

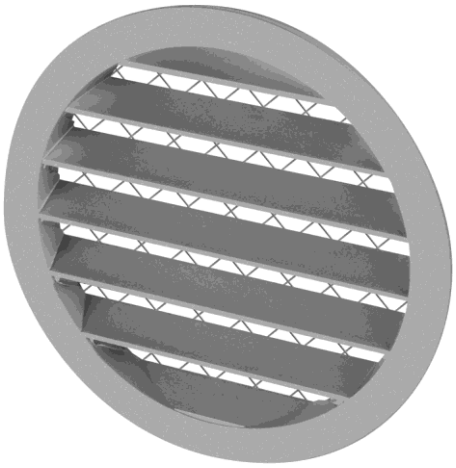
	ØA	ØX	Z
VAW75	75	155	65
VAW100	100	155	60
VAW125	125	185	60
VAW150	150	214	73

AL ALUMINIUM

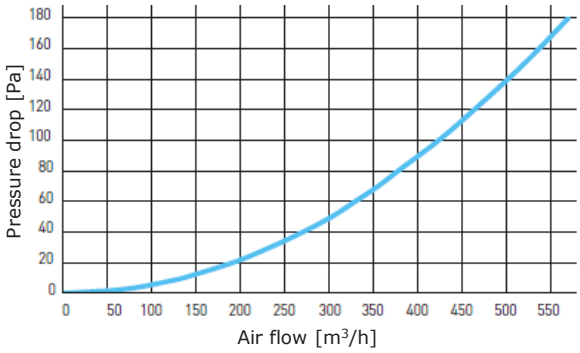
2 YEAR WARRANTY

VKR aluminium exhaust/intake vent

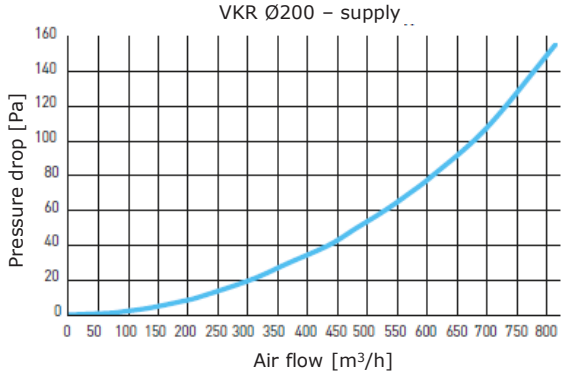
The grille is installed at the ends of the ventilation ducts.
It can be used as an intake or exhaust vent. The vent is made of aluminium and designed for indoor and outdoor installation. The stainless steel mesh used prevents small rodents from entering the room. With just two mounting holes, its installation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



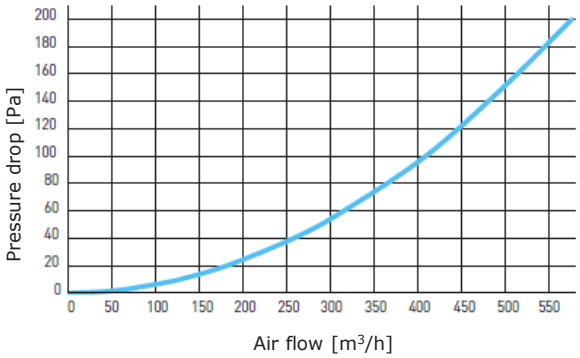
VKR Ø160 – supply



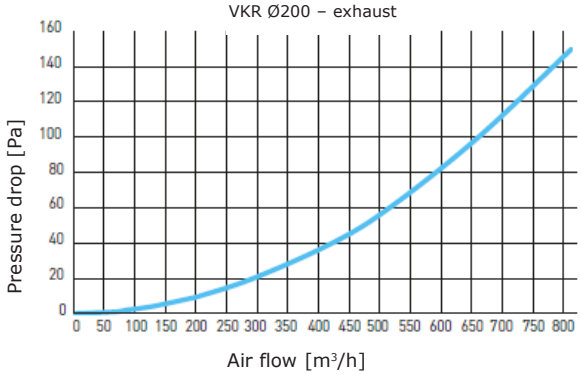
VKR Ø200 – supply



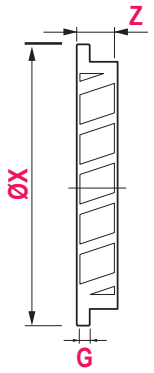
VKR Ø160 – exhaust



VKR Ø200 – exhaust



DIMENSIONS



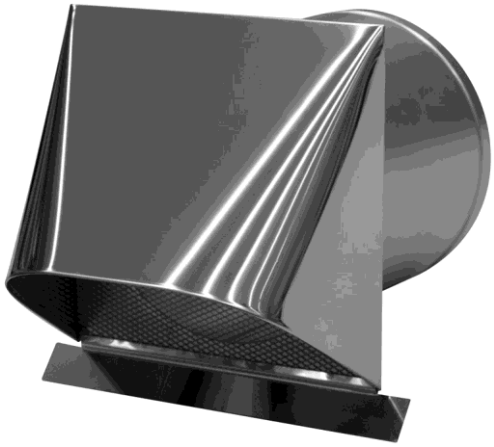
	ØX	Z	G
VKR160	185	18	3.2
VKR200	225	20	3.4

VOK stainless steel intake/exhaust vent

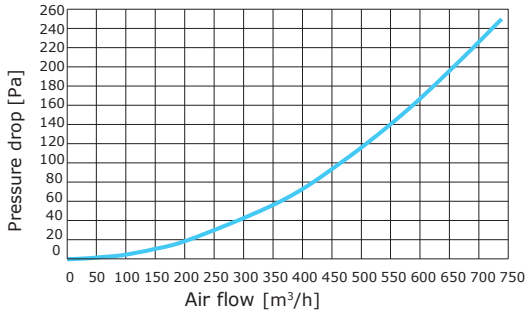
N
STAINLESS STEEL

2 YEAR
WARRANTY

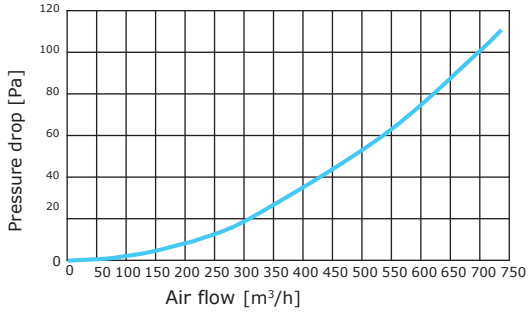
The stainless steel element can be used as an intake or exhaust vent. Stainless steel mesh prevents small rodents and larger insects from entering the system. The drip limits the penetration of precipitation into the ventilation system and, when the element is used as an exhaust vent, it limits the possible 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.



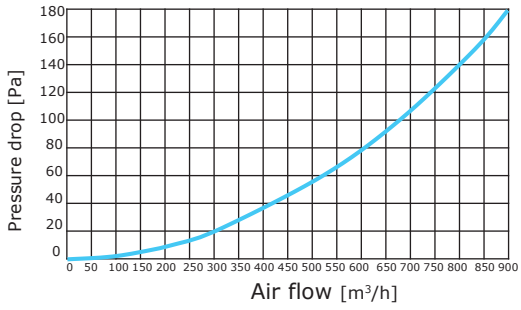
VOK Ø160 – supply



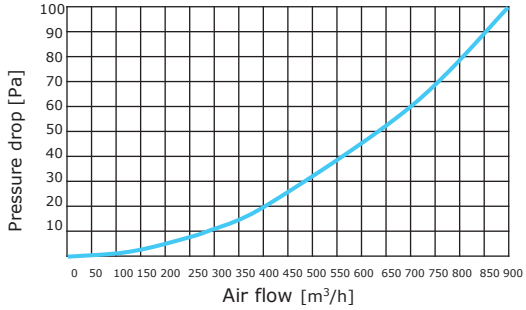
VOK Ø160 – exhaust



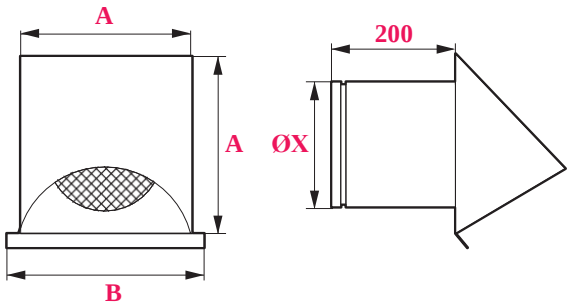
VOK Ø200 – supply



VOK Ø200 – exhaust



DIMENSIONS



	ØX	A	B
VOK160	160	190	235
VOK200	200	230	230

VFG75 / VFB75 ventilation duct

HDPE/ LDPE MODIFIED POLYETHYLENE

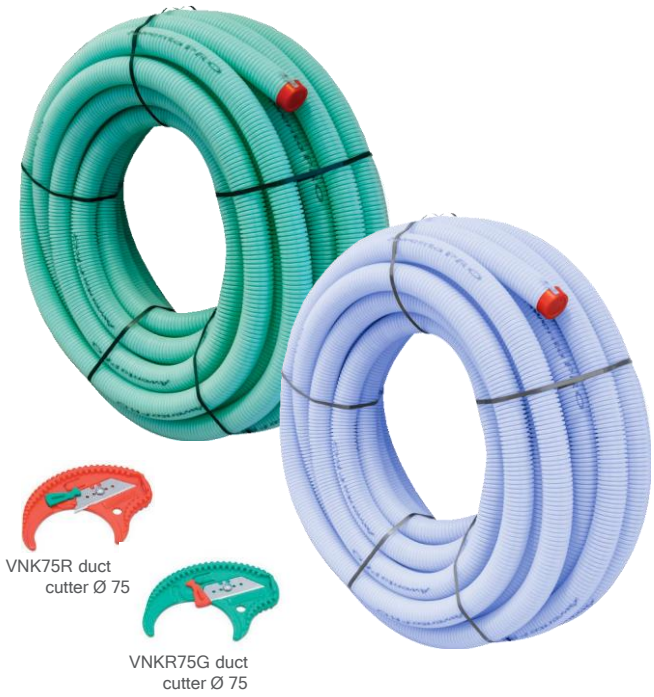
BACTERICIDAL

30-YEAR WARRANTY

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.

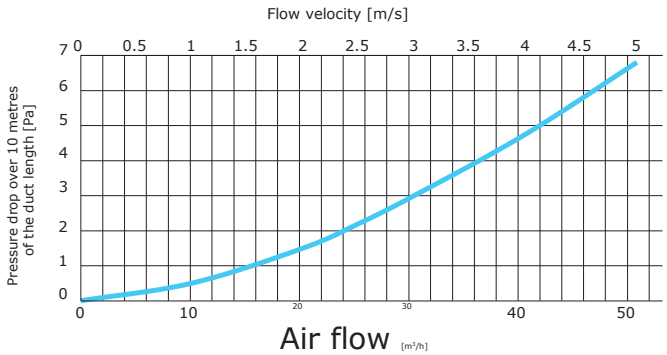


VNK75R duct cutter Ø 75

VNKR75G duct cutter Ø 75

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%	45-76%
outer layer - material	material modified polyethylene (mod-HDPE)	
outer layer - colour	green	blue
inner layer - material	modified polyethylene (mod-LDPE), antistatic, antibacterial layer - silver 150 ppm	modified polyethylene (mod-LDPE), antistatic, antibacterial layer - silver 30-50 ppm
inner layer - colour	transparent	
unit packaging	50 lm	

FLOW CHARACTERISTCS



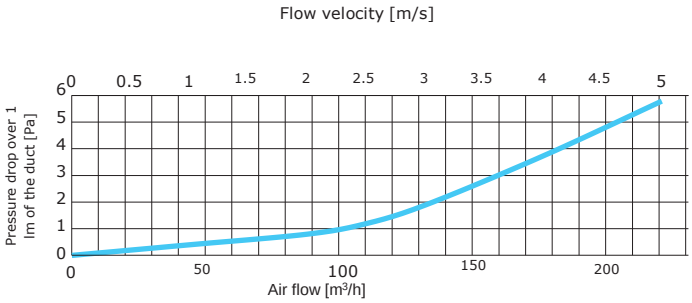
Nominal dimension DN (mm)	Inner diameter (mm)	Outer diameter (mm)	Minimum bending radius (above 10°C) (m)	Lengths of sections (m)
75	61	76.2	0.17	50

Flow velocity	2 [m/s]	2.5 [m/s]	3 [m/s]
Air flow [m³/h] - 1 duct	20.4	25.5	30.5
Air flow [m³/h] - 2 ducts	40.7	50.9	61.1
Air flow [m³/h] - 3 ducts	61.1	76.4	91.6

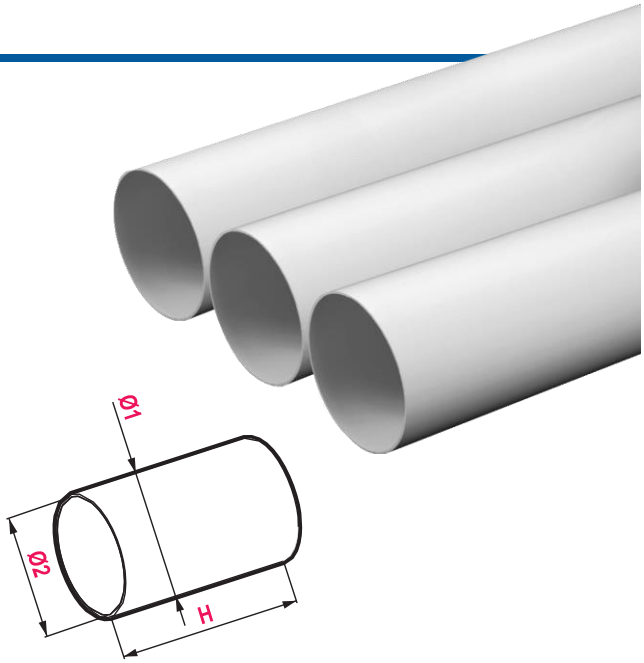
Duct length	Pressure drop [Pa]		
1 lm	1.5	2.2	3.0
2 lm	3.0	3.5	6.0
4 lm	6.0	8.8	12.0
6 lm	9.0	13.2	18.0
8 lm	12.0	17.6	24.0
10 lm	15.0	22.0	30.0
12 lm	18.0	26.4	36.0
14 lm	21.0	30.8	42.0
16 lm	24.0	35.2	48.0
18 lm	27.0	39.6	54.0
20 lm	30.0	44.0	60.0

Circular duct Ø125 for plenum box

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.



Flow velocity	2 [m/s]	2.5 [m/s]	3 [m/s]
Duct length	Pressure drop [Pa]		
1 lm	0.8	1.2	2.0
2 lm	1.6	3.5	4.0
4 lm	3.2	4.8	8.0
6 lm	4.8	7.2	12.0
8 lm	6.4	9.6	16.0
10 lm	8.0	12.0	20.0
12 lm	9.6	14.4	24.0
14 lm	11.2	16.8	28.0
16 lm	12.8	19.2	32.0
18 lm	14.4	21.6	36.0
20 lm	16.0	24.0	40.0

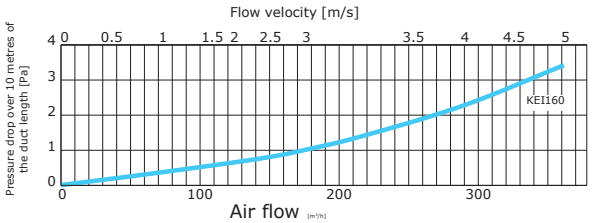


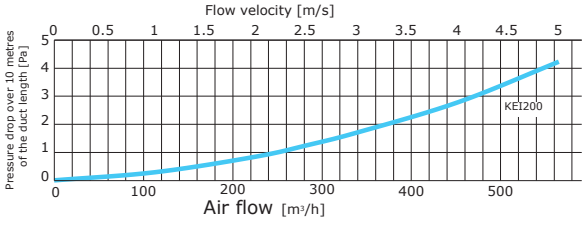
PART INDEX	Ø	Ø1	Ø2	H
KO125-05	Ø125	128	125	500
KO125-10	Ø125	128	125	1000
KO125-15	Ø125	128	125	1500

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. 30 m/s
Operating pressure: max. 5000 Pa
Flammability class: fire-retardant
Insulation: wool with a thickness of 25 mm and density of 12 kg/m³
Outer cladding: Aluminium





KEI160				KEI200		
Flow velocity	2 [m/s]	2.5 [m/s]	3 [m/s]	2 [m/s]	2.5 [m/s]	3 [m/s]
Duct length	Pressure drop [Pa]			Pressure drop [Pa]		
1 lm	0.8	1.2	1.6	0.8	1.2	1.8
2 lm	1.5	3.5	3.2	1.7	3.5	3.6
4 lm	3.1	4.9	6.5	3.4	5.0	7.1
6 lm	4.6	7.3	9.7	5.0	7.4	10.7
8 lm	6.2	9.8	13.0	6.7	9.9	14.2
10 lm	7.7	12.2	16.2	8.4	12.4	17.8
12 lm	9.2	14.6	19.4	10.1	14.9	21.4
14 lm	10.8	17.1	22.7	11.8	17.4	24.9
16 lm	12.3	19.5	25.9	13.4	19.8	28.5
18 lm	13.9	22.0	29.2	15.1	22.3	32.0
20 lm	15.4	24.4	32.4	16.8	24.8	35.6

VM75 coupling

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.

VZ75-5 end caps

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

VTM mounting tape, perforated

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 Ø 4 mm and 8 mm allow for mounting with threaded rods, screws, rivets or bolts.

VU75-5 gaskets

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.

VTA aluminium sealing tape

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.

VTZ reinforced sealing tape

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.

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.

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