HEAT RECOVERY SYSTEMS

# Awenta PRO

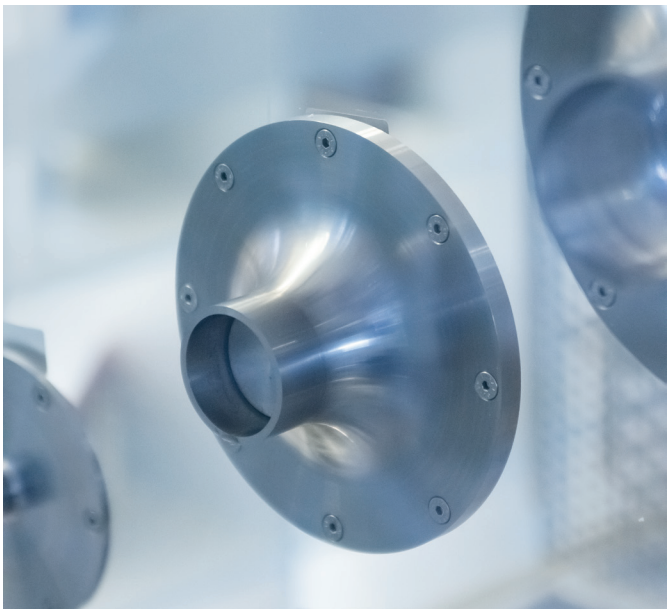
FOUR SEASONS VENTILATION

EDITION 2023 / 1

Awenta PRO

*Welcome home*

# 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 Auros, Avira and Aquilla heat recovery units with a capacity from 313 m³/h to 655 m³/h. The units have been manufactured using components from renowned manufacturers such as: Knauf Industries, Recair, Ziehl-Abegg and EBM Papst 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.

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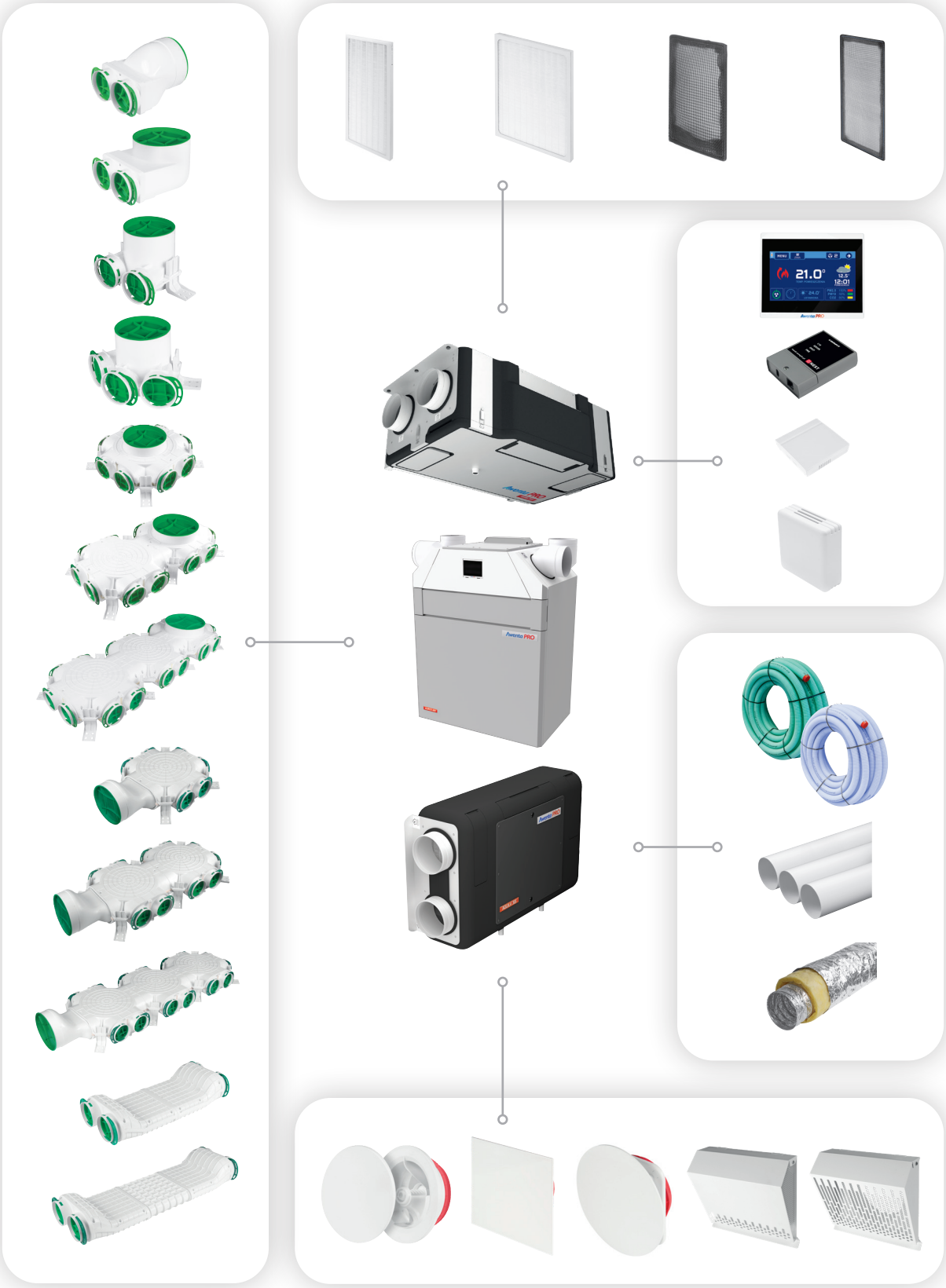
# Diagram of the Awenta Pro heat recovery system



PRODUCT DATA SHEET

# Auros Series

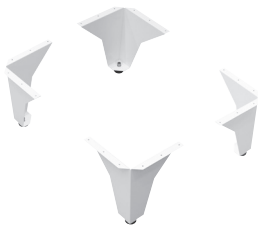
**VER305, VER405, VER605**

## 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 and possible remote control by using webpage (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 air quality, carbon dioxide and humidity sensor (VSPM, VSHC, VSHW)
- Option of cleaning heat exchanger
- Long service life
- Scratch resistance of painted parts at a value of 5 H
- Antimicrobial properties of painted parts according to ASTM E2149-13a


*Supplementary products*

**LEGS**
VKNER



**FILTERS**
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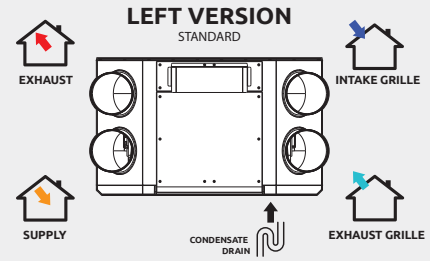
# Auros Series

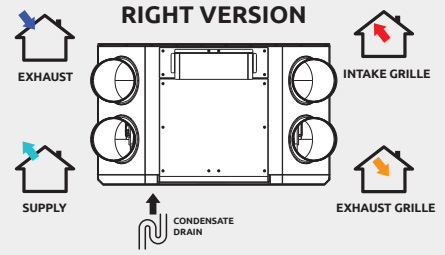
**VER305, VER405, VER605**

ENERGY EFFICIENCY | MATERIAL | WARRANTY






| | |
|---|---|
| **VER305L** | Recuperator AUROS 305 left version (standard) |
| **VER405L** | Recuperator AUROS 405 left version (standard) |
| **VER605L** | Recuperator AUROS 605 left version (standard) |
| **VER305LCF** | Recuperator AUROS 305 left version (standard) + module CF |
| **VER405LCF** | Recuperator AUROS 405 left version (standard) + module CF |
| **VER605LCF** | Recuperator AUROS 605 left version (standard) + module CF |




| | |
|---|---|
| **VER305P** | Recuperator AUROS 305 right version (standard) |
| **VER405P** | Recuperator AUROS 405 right version (standard) |
| **VER605P** | Recuperator AUROS 605 right version (standard) |
| **VER305PCF** | Recuperator AUROS 305 right version (standard) + module CF |
| **VER405PCF** | Recuperator AUROS 405 right version (standard) + module CF |
| **VER605PCF** | Recuperator AUROS 605 right version (standard) + module CF |

## TECHNICAL INFORMATION

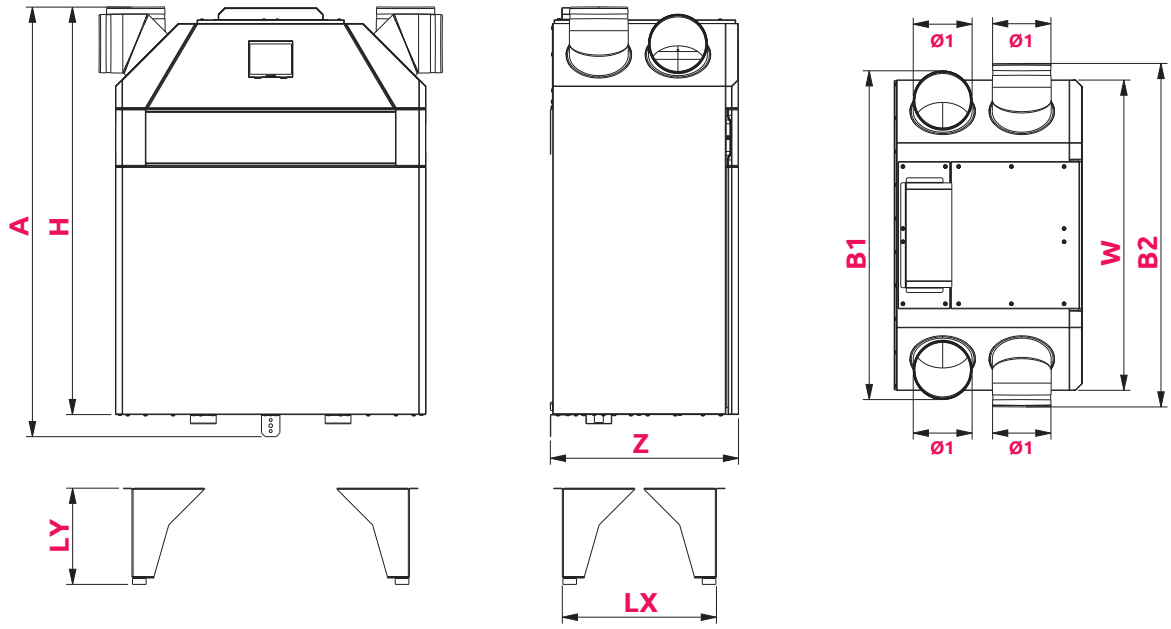
| | 300 SERIES | 400 SERIES | 600 SERIES |
|---|---|---|---|
| **INDEX** | **VER305** | **VER405** | **VER605** |
| **Supply voltage** | 230 V AC / 50 Hz | | |
| **IP protection class** | IP33 | | |
| **Preheat coil power** | 2000 W | | |
| **Max. power consumption (without preheat cooil)** | 195 W | 280 W | 340 W |
| **Capacity (at 100Pa)** | 313 $m^3$ / h | 430 $m^3$ / h | 605 $m^3$ / h |
| **Noise level** | 44,0 dB(A) | 44,3 dB(A) | 45 dB(A) |
| **Type of heat exchanger** | RECAIR cross - counter - flow heat exchanger (optional enthalpy) | | |
| **Max. heat recovery efficiency** | up to 95% | | |
| **Heat exchanger material** | Polystyrene | | |
| **Housing material** | EPP + powder coated steel | | |
| **Filter - intake vent** | M5 ISO ePM10 (optional F7 ISO ePM1) | | |
| **Filter - exhaust** | M5 ISO ePM10 | | |
| **Pre-filter intake / exhaust** | VFWER305 (optional) | VFWER405 (optional) | VFWER605 (optional) |
| **Diameter of air connector** | 160 mm / torsional | 160 mm / torsional | 200 mm / torsional |
| **Diameter of condensate drain connector** | 32 mm | | |
| **Controller type** | AERO 4 + NANO COLOR (colored) | | |
| **Bypass** | Automatic 100% | | |
| **Fans** | 2x radial fan with EC motor | | |
| **Internet module** | VLAN iNEXT (optional) | | |
| **Air quality sensor** | VSPM (optional) | | |
| **$CO_2$ concentration and humidity sensor** | VSHC (optional) | | |
| **Humidity sensor** | VSHW (optional) | | |
| **Constant Flow system** | YES, depend on version | | |
| **Modbus RTU communication** | YES | | |
| **Weight** | 43 kg | 46 kg | 52 kg |

PRODUCT DATA SHEET

# Auros Series

VER305, VER405, VER605

## DIMENSION




| | connector parameters | | | | units dimensions | | | leg spacing | |
|---|---|---|---|---|---|---|---|---|---|
| | Ø1 | A | B1 | B2 | H | Z | W | LX | LY |
| **VER305** | 160 | 1 168 | 804 | 764 | 1 108 | 510 | 713 | 419 | 262 |
| **VER405** | 160 | 1 168 | 894 | 934 | 1 108 | 510 | 843 | 419 | 262 |
| **VER605** | 200 | 1 175 | 946 | 962 | 1 115 | 610 | 843 | 519 | 262 |

AUROS with horizontal mounting on VKNER legs (sold separately)


AUROS with wall-mounting on strip (included in the scope of supply)

# Auros Series

VER305, VER405, VER605

ENERGY EFFICIENCY | MATERIAL | WARRANTY

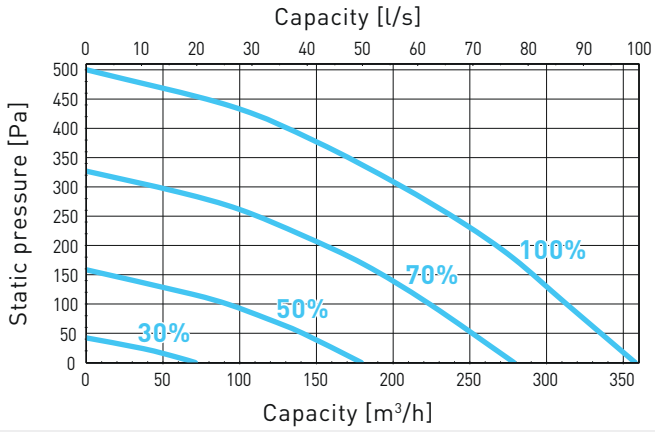


## CAPACITY


### AUROS 305

NOVELTY

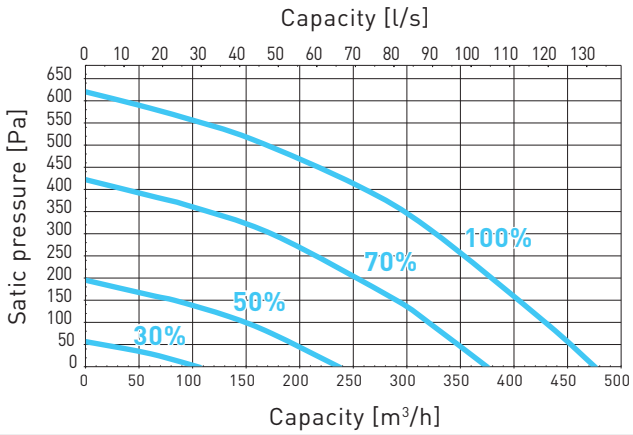
VER305





### AUROS 405

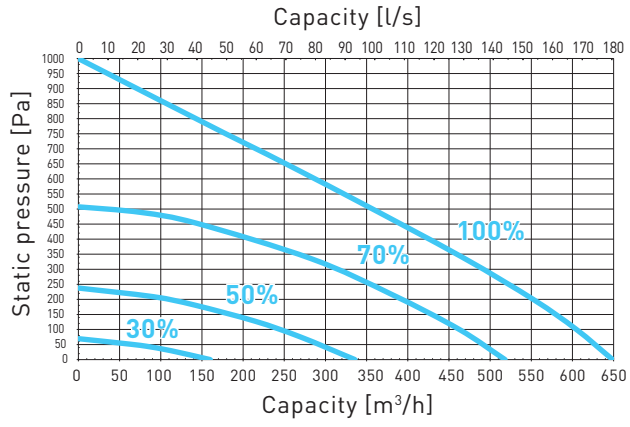
VER405





### AUROS 605

VER605



# PRODUCT DATA SHEET

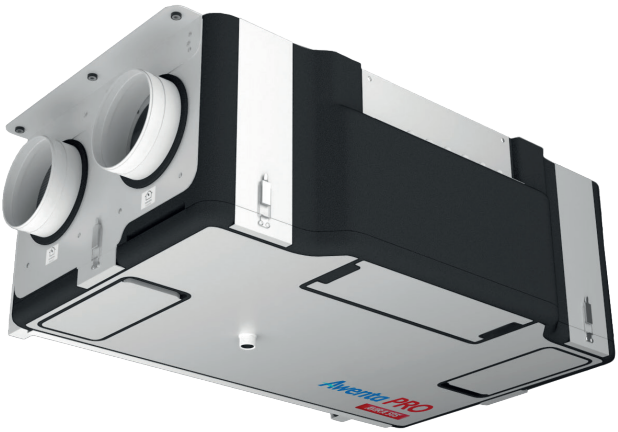
# Avira series

NOVELTY

**VAVP505, VAVP605**

## RECUPERATOR FEATURES

- Installation position - ceiling (suspended)
- Counterflow heat exchanger with the efficiency of up to 95%
- Energy-efficient fans with the EC Ziehl-Abegg and EBM papst motors
- Automatic bypass, 100% bypass, isolated
- Modulatic 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 and possible remote control by using webpage (iNext module required)
- Automatic flow control system (constant flow) - in CF versions
- Equipped with two filters (M5/ISO ePM10)
- Possibility of using fine filters (F7/ISO ePM1) with higher filtration class
- Possibility of using reusable pre-filter
- Possible interoperation with the air quality, carbon dioxide and humidity sensor (VSPM, VSHC, VSHW)
- Option of cleaning heat exchanger
- Long service life
- Scratch resistance of painted parts at a value of 5 H
- Animicrobial properties of painted parts accordind to ASTM E2149-13a
- Possible remote control via MODBUS RTU protocol



## TECHNICAL INFORMATION

| | 500 SERIES | 600 SERIES |
|---|---|---|
| **INDEX** | **VAVP505** | **VAVP605** |
| **Supply voltage** | 230 V AC / 50 Hz | 230 V AC / 50 Hz |
| **Max. power consumption (without preheat cooil)** | 340 W | 400 W |
| **Preheat coil power** | 2000 W | |
| **IP protection class** | IP33 | |
| **Capacity (at 100Pa)** | 546 m³/h | 655 m³/h |
| **Noise level** | 48,0 dB(A) | 42,0 dB(A) |
| **Type of heat exchanger** | RECAIR cross - counter - flow heat exchanger (optional enthalpy) | |
| **Max. heat recovery efficiency** | up to 95% | |
| **Heat exchanger material** | Polystyrene | |
| **Housing material** | EPP + powder coated steel | |
| **Filter – intake vent** | M5 ISO ePM10 (optional F7 ISO ePM1) | |
| **Filter – exhaust** | M5 ISO ePM10 | |
| **Pre-filter intake / exhaust** | VFWAV605 (optional) | |
| **Air spigots diameter** | 200 mm | |
| **Diameter of condensate drain connector** | 32 mm | |
| **Installation position** | Ceiling | |
| **Weight** | 43 kg | |
| **Controller type** | AERO 4 + NANO COLOR 2 | |
| **Bypass** | Automatic100% | |
| **Fans** | 2x radial fan with EC motor | |
| **Internet module +application Androis, iOS** | VLAN iNEXT (optional) | |
| **Air quality sensor** | VSPM (optional) | |
| **$CO_2$ concentration and humidity sensor** | VSHC (optional) | |
| **Humidity sensor** | VSHW (optional) | |
| **Constant Flow system** | YES, depend on version | |
| **Modbus RTU communication** | YES | |

*Supplementary products*

**FILTERS**
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# Avira series

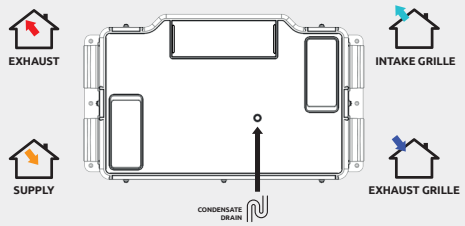
VAVP505, VAVP605

ENERGY EFFICIENCY | MATERIAL | WARRANTY



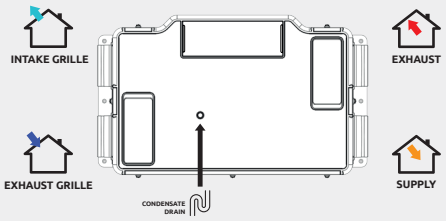
## LEFT VERSION

STANDARD




| | |
|---|---|
| **VAVP505L** | Recuperator Avira 505 left version (standard) |
| **VAVP605L** | Recuperator Avira 605 left version (standard) |
| **VAVP505LCF** | Recuperator Avira 505 left version (standard) + module CF |
| **VAVP605LCF** | Recuperator Avira 605 left version (standard) + module CF |

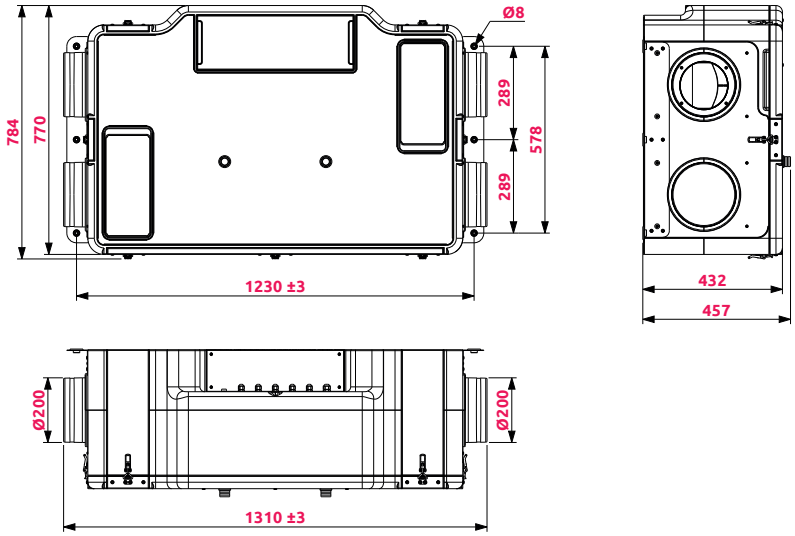
## RIGHT VERSION




| | |
|---|---|
| **VAVP505P** | Recuperator Avira 505 right version (standard) |
| **VAVP605P** | Recuperator Avira 605 right version (standard) |
| **VAVP505PCF** | Recuperator Avira 505 right version (standard) + module CF |
| **VAVP605PCF** | Recuperator Avira 605 right version (standard) + module CF |

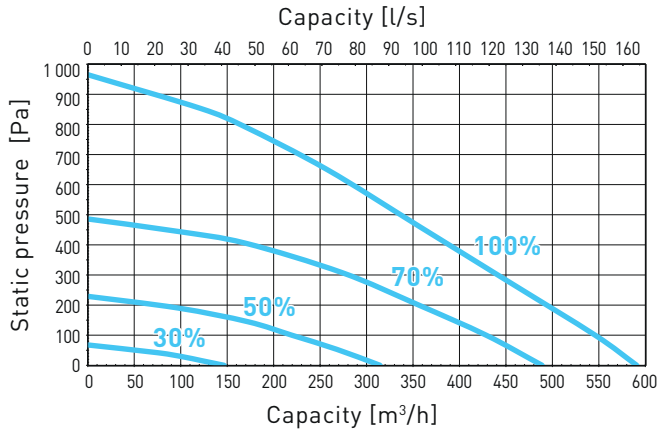
## DIMENSIONS

VAVP505, VAVP605

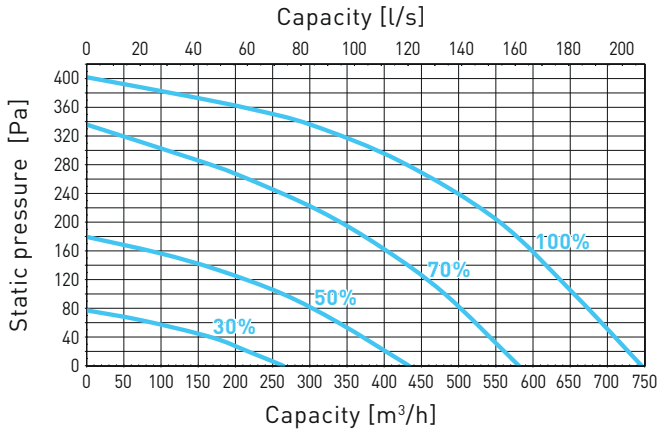



## CAPACITY

VAVP505




VAVP605



PRODUCT DATA SHEET

# Aquila Series - wall mounted version

NOVELTY

**VARS305**


## RECUPERATOR FEATURES

- Installation positions – wall mounted or floor standing (VKNAR feet required)
- Counter-flow heat exchanger with the efficiency of up to 95%
- 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 the air quality, carbon dioxide and humidity sensor (VSPM, VSHC, VSHW)
- Cleanable heat exchanger
- Long service life
- Anti-freeze system*
- Scratch resistance of painted parts at a value of 5 H
- Antimicrobial properties of painted elements according to ASTM E2149-13a

## TECHNICAL INFORMATION

| | AQUILA S 305** |
|---|---|
| **Index** | VARS305 |
| **Supply voltage** | 230 V AC / 50Hz |
| **Power consumption** | 210 W |
| **Preheat coil maximum power** | 750 W |
| **Electrical protection class** | I |
| **IP protection class** | IP22 |
| **Capacity (at 100Pa)** | 313 $m^3/h$ |
| **Maximum engine speed** | 4 000 RPM |
| **Noise level** | 49 dB(A) |
| **Type of heat exchanger** | RECAIR cross - counter - flow heat exchanger (optional enthalpy) |
| **Max. heat recovery effciency** | up to 95% |
| **Heat exchanger material** | Polystyrene |
| **Housing material** | EPP + powder coated steel |
| **Filter - air inlet** | M5 ISO ePM10 (optional F7 ISO ePM1) |
| **Filter - extracted air** | M5 ISO ePM10 |
| **Pre-filter - air inlet / extracted air** | VFWAR (optional) |
| **Air spigots diameter** | 160 mm |
| **Diameter of condensate drain connector** | 25/32 mm |
| **Weight** | 16kg (VAR305) + 5kg (VARR75-160) |
| **Controller type** | AERO 4 + NANO COLOR (colored) |
| **Bypass** | Automatic (100%) |
| **Fans** | 2x radial fan with EC motor |
| **Internet module** | VLAN iNEXT (optional) |
| **Modbus RTU communication** | yes |
| **Android, iOS application** | yes |
| **Air quality sensor** | VSPM (optional) |
| **$CO_2$ concentration and humidity sensor** | VSHC (optional) |
| **Humidity sensor** | VSHW (optional) |

*Supplementary products*

**LEGS**
VKNAR

**FILTERS**
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ENERGY EFFICIENCY: A

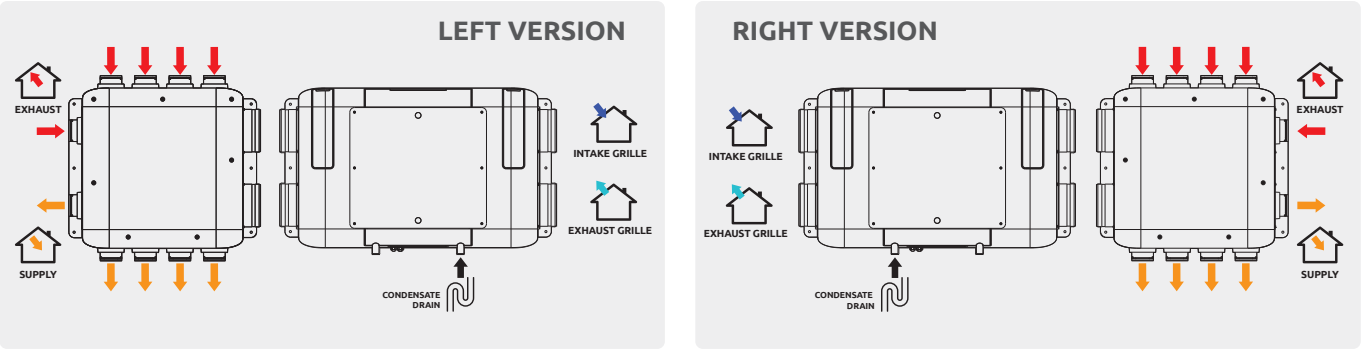
MATERIAL: EPP

WARRANTY: 2 YEAR

# Aquila Series - wall mounted version

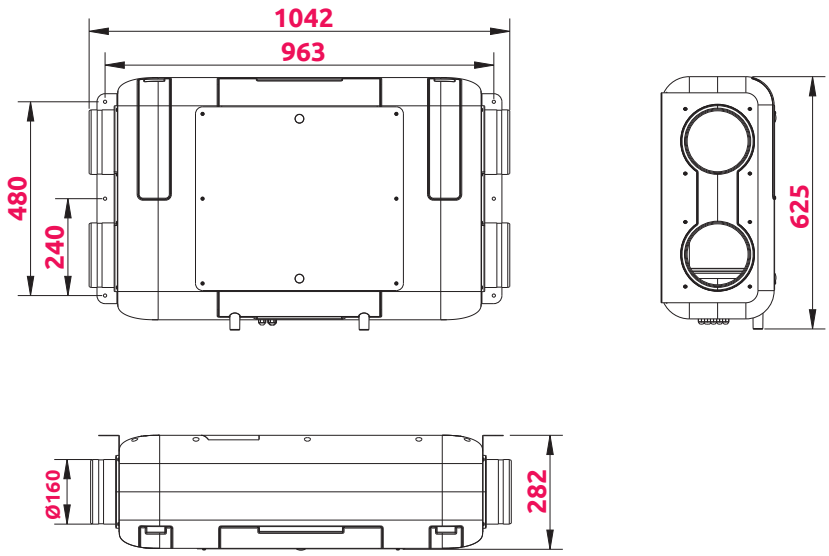
VARS305





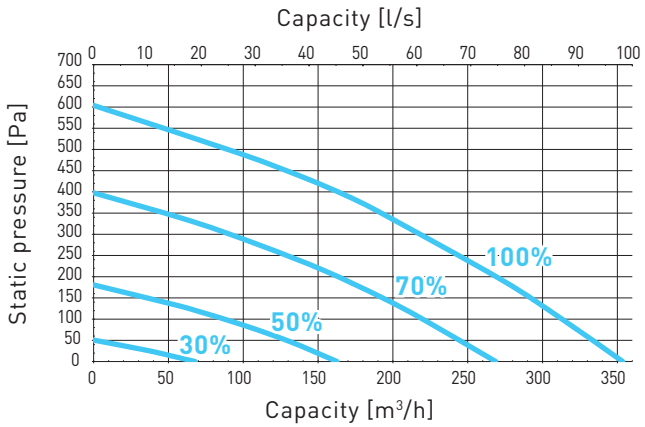

## DIMENSIONS

VARS305




## CAPACITY

VARS305



PRODUCT DATA SHEET

# Aquila Series - ceiling mounted version

NOVELTY

VARP305

## RECUPERATOR FEATURES

- Installation position – ceiling mounted (suspended)
- Counter-flow heat exchanger with the efficiency of up to 95%
- 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 the air quality, carbon dioxide and humidity sensor (VSPM, VSHC, VSHW)
- Cleanable heat exchanger
- Long service life
- Anti-freeze system*
- Scratch resistance of painted parts at a value of 5 H
- Antimicrobial properties of painted elements according to ASTM E2149-13a

| | AQUILA P 305 |
|---|---|
| **Index** | VARP305 |
| **Supply voltage** | 230 V AC / 50Hz |
| **Power consumption** | 210 W |
| **Preheat coil maximum power** | 750 W |
| **Electrical protection class** | I |
| **IP protection class** | IP22 |
| **Capacity (at 100Pa)** | 313 $m^3/h$ |
| **Maximum engine speed** | 4 000 RPM |
| **Noise level** | 49 dB(A) |
| **Type of heat exchanger** | RECAIR cross - counter - flow heat exchanger (optional enthalpy) |
| **Max. heat recovery effciency** | up to 95% |
| **Heat exchanger material** | Polystyrene |
| **Housing material** | EPP + powder coated steel |
| **Filter - air inlet** | M5 ISO ePM10 (optional F7 ISO ePM1) |
| **Filter - extracted air** | M5 ISO ePM10 |
| **Pre-filter - air inlet / extracted air** | VFWAR (optional) |
| **Air spigots diameter** | 160 mm |
| **Diameter of condensate drain connector** | 32 mm |
| **Weight** | 16kg (VAR305) + 5kg (VARR75-160) |
| **Controller type** | AERO 4 + NANO COLOR (colored) |
| **Bypass** | Automatic (100%) |
| **Fans** | 2x radial fan with EC motor |
| **Internet module** | VLAN iNEXT (optional) |
| **Modbus RTU communication** | yes |
| **Android, iOS application** | yes |
| **Air quality sensor** | VSPM (optional) |
| **$CO_2$ concentration and humidity sensor** | VSHC (optional) |
| **Humidity sensor** | VSHW (optional) |

*Supplementary products*

**FILTERS**

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ENERGY EFFICIENCY: A

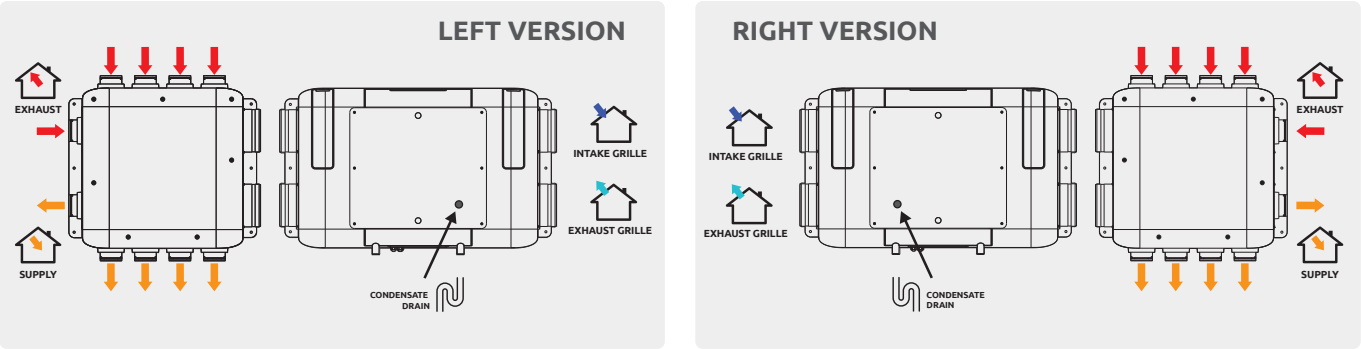
MATERIAL: EPP

WARRANTY: 2 YEAR

# Aquila Series - ceiling mounted version

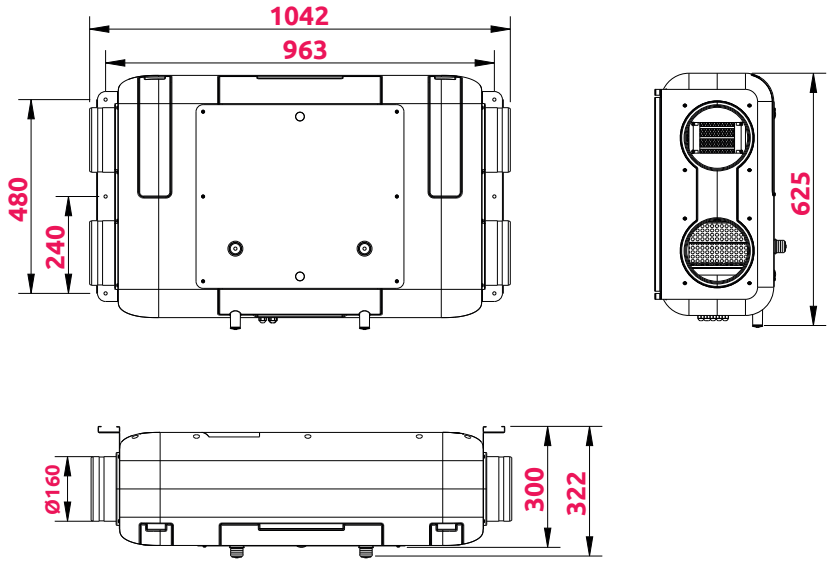
VARP305





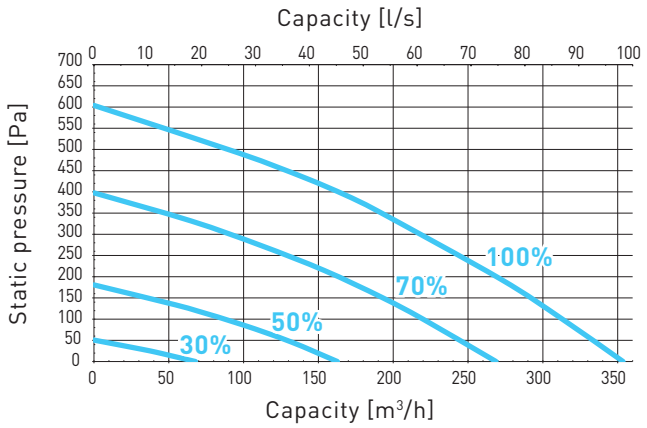

## DIMENSIONS

VARP305




## CAPACITY

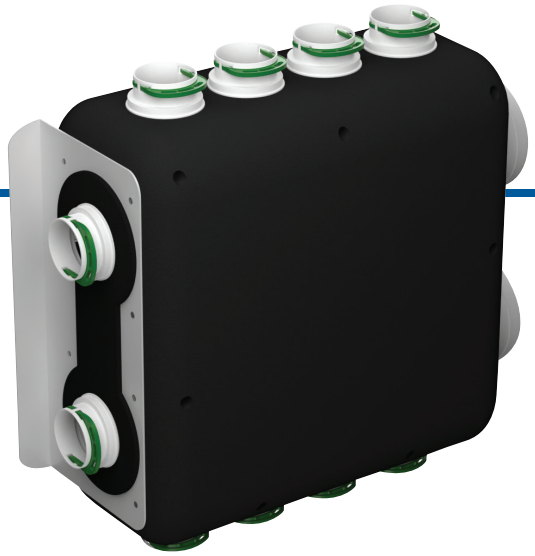
VARP305



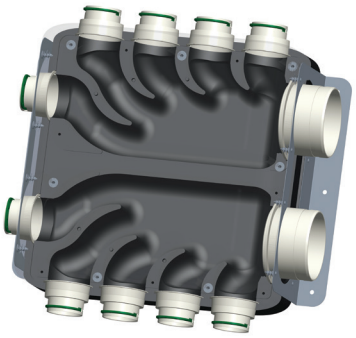
PRODUCT DATA SHEET

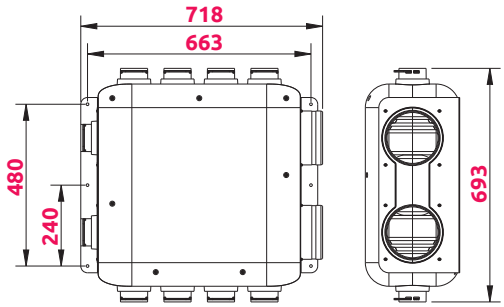
# Distribution unit for Aquila heat recovery unit

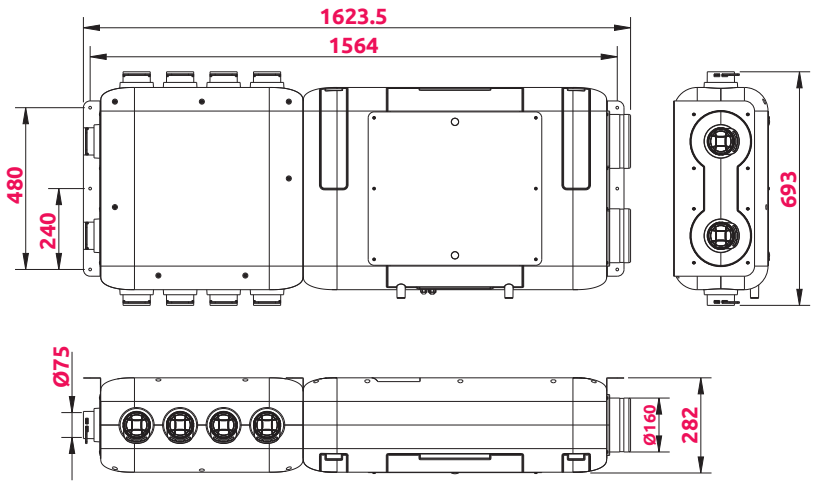
**VARR75-160, VARR75-160K**



- Dedicated distribution unit for the Aquila series heat recovery units, connection of up to 10 ducts
- Ø75 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°C to +60°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 Ø160 mm
- The distribution unit replaces the traditional distribution box

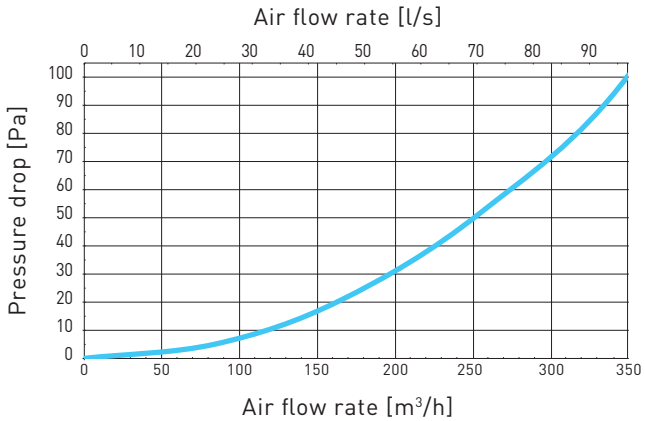




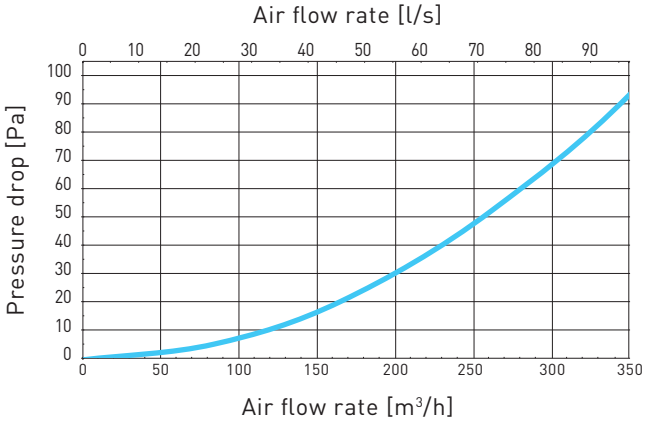




## CAPACITY

### SUPPLY




### EXHAUST

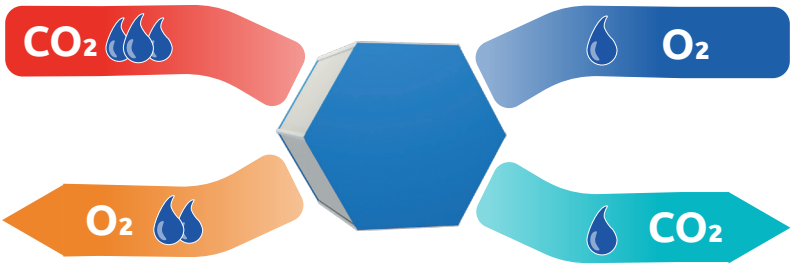


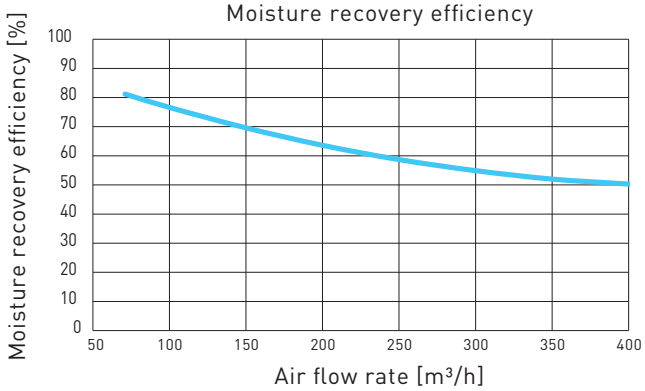
# Enthalpy heat exchanger

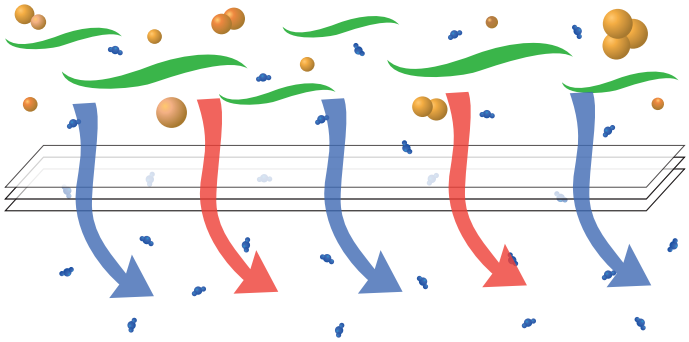
Enthalpy heat exchangers allow the simultaneous recovery of heat and moisture from the exhaust air. The main difference between an enthalpy heat exchanger and a standard heat exchanger is the use of polymeric membrane technology. This innovative membrane enables the transfer of energy and at the same 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 |
|---|---|
| AUROS VER305 | • |
| AUROS VER405 | • |
| AUROS VER605 | • |
| AVIRA VAVP505 | • |
| AVIRA VAVP605 | • |
| AQUILA VARS305 | • |
| AQUILA VARP305 | • |



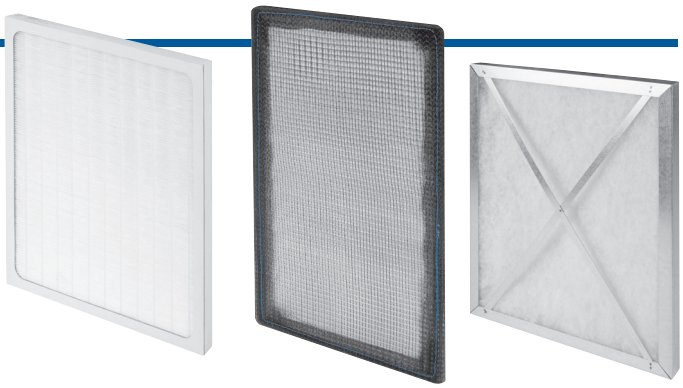



- steam
- heat
- odour
- gases, pollutants

PRODUCT DATA SHEET

# Filters and Pre-filters



AUROS / AVIRA / AQUILA ZEPHYR

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.

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.

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.

## COMPATIBILITY

### FILTERS

| Index | Filter class | Intended use |
|---|---|---|
| VM5ER405 | M5 | AUROS VER305 |
| | | AUROS VER405 |
| VF7ER405 | F7 | AUROS VER305 |
| | | AUROS VER405 |
| VM5ER605 | M5 | AUROS VER605 |
| VF7ER605 | F7 | AUROS VER605 |
| VM5AV605 | M5 | AVIRA VAVP505 |
| | | AVIRA VAVP605 |
| VF7AV605 | F7 | AVIRA VAVP505 |
| | | AVIRA VAVP605 |
| VM5A | M5 | AQUILA VARS305 |
| | | AQUILA VARP305 |
| VF7AR | F7 | AQUILA VARS305 |
| | | AQUILA VARP305 |
| VM5ZH | M5 | ZEPHYR VZH405 / VZH605 |
| VF7ZH | F7 | ZEPHYR VZH405 / VZH605 |

### PRE-FILTER

| Index | Filter class | Intended use |
|---|---|---|
| VFWER405 | unclassified | AUROS VER305 |
| | | AUROS VER405 |
| VFWER605 | unclassified | AUROS VER605 |
| VFWAV605 | unclassified | AVIRA VAVP505 |
| | | AVIRA VAVP605 |
| VFWAR | unclassified | AQUILA VARS305 |
| | | AQUILA VARP305 |
| VFWZH | G2 | ZEPHYR VZH405 / VZH605 |

## TECHNICAL DATA

| | F7 | M5 |
|---|---|---|
| Filter class | tested according to ISO 16890 Filter F7 (ePM1 0,3-1,0 µm) | tested according to ISO 16890 Filter 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 |

# 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 Auros 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

| HRU type | Access through the App (Google Play, IOS) | Access through the web |
|---|---|---|
| AUROS VER305 | • | • |
| AUROS VER405 | • | • |
| AUROS VER605 | • | • |
| AVIRA VAVP505 | • | • |
| AVIRA VAVP605 | • | • |
| AQUILA VARS305 | • | • |
| AQUILA VARP305 | • | • |

PRODUCT DATA SHEET

# $CO_2$ concentration and humidity sensor

**VSHC, VSHW**

$CO_2$ HUMIDITY

The VSHC 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 $CO_2$. 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.

The VSHW 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.

VSHC
VSHW

## COMPATIBILITY

| HRU type | Intended use |
|---|---|
| AUROS VER305 | • |
| AUROS VER405 | • |
| AUROS VER605 | • |
| AVIRA VAVP505 | • |
| AVIRA VAVP605 | • |
| AQUILA VARS305 | • |
| AQUILA VARP305 | • |

## VSHC

### HUMIDITY MEASUREMENT

| | |
|---|---|
| Humidity measurement range | 0-100%<br>(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<br>(Note: carbon dioxide concentration measurement is possible in the temperature range of 0°C-50°C) |
| Carbon dioxide reading accuracy | ±3% + ±50 ppm<br>(Note: the $CO_2$ sensor is equipped with an automatic calibration algorithm). |

## VSHW

### HUMIDITY MEASUREMENT

| | | |
|---|---|---|
| Humidity measurement range | 0-100%<br>(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 |

AIR QUALITY



# Air quality sensor

NOVELTY

**VSPM**

The VSPM air quality sensor is used to measure carbon dioxide content and the amount of PM1, PM2.5, PM4 and PM10 particles. Additionally, it measures relative humidity and room temperature. 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.

PM1 and PM2.5 particles are in the group of the most harmful particles to health. These are atmospheric aerosols which a diameter is less than 1 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.

PM4 and 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.

The sensor is equipped with a signaling LED that provides real-time information about the level of air pollution.

VSPM

## COMPATIBILITY

| HRU type | Intended use |
|---|---|
| AUROS VER305 | • |
| AUROS VER405 | • |
| AUROS VER605 | • |
| AVIRA VAVP505 | • |
| AVIRA VAVP605 | • |
| AQUILA VARS305 | • |
| AQUILA VARP305 | • |

PRODUCT DATA SHEET

# Plenum box

**VPB125-2**

D — TIGHTNESS CLASS

PE — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANTY

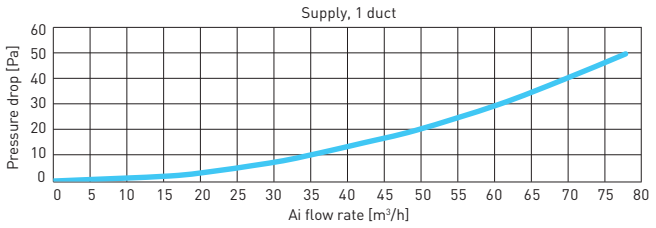
The AWENTA PRO VPB125-2 plenum box is used to connect two flexible ducts to the distribution boxes. Thanks to the possibility of supplying two ducts, it is recommended for mounting air valves in rooms requiring balanced ventilation intended for daytime stays or bedrooms.

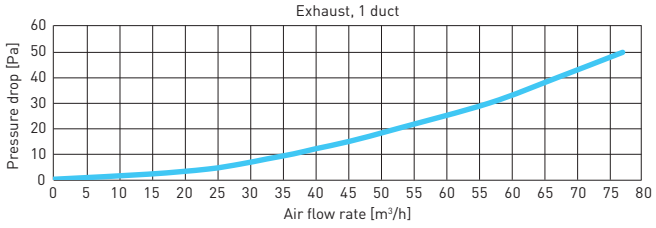
The AWENTA PRO plenum boxes are made of durable HDPE (High Density Polyethylene) with a bacteriostatic Nano-Silver additive. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bacteriostatic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

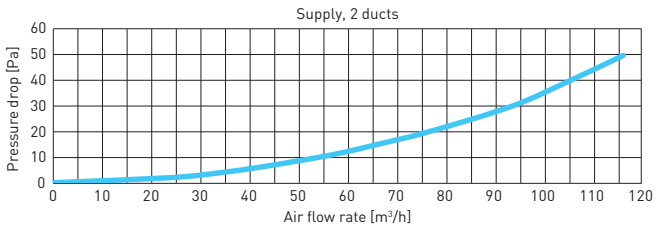
## AIR FLOW CHARACTERISTICS

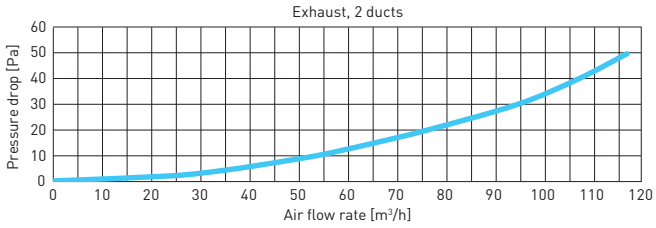
VPB125-2



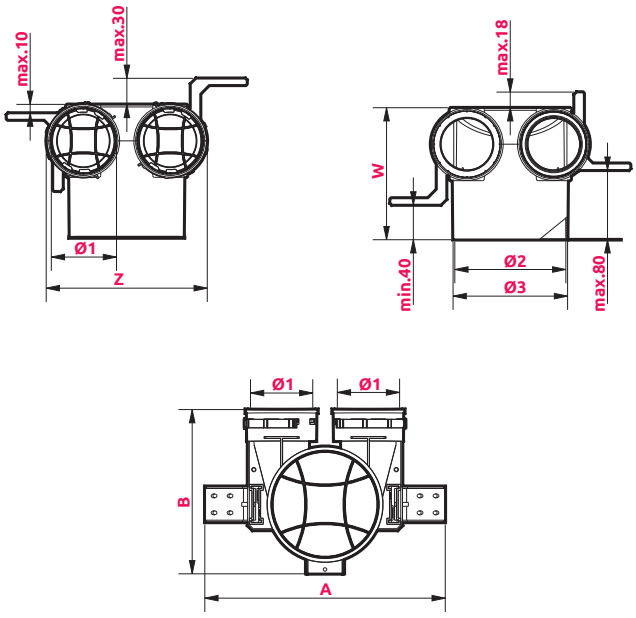




VPB125-2




## DIMENSION




| | Ø1 | Ø2 | Ø3 | A | B | Z | W |
|---|---|---|---|---|---|---|---|
| VPB125-2 | 75 | 128 | 134 | 277 | 189 | 186 | 152 |

# Plenum box

**VPB125-3**

D — TIGHTNESS CLASS

PE — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

The AWENTA PRO VPB125-3 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 VPB125-3 box makes it possible to achieve increased ventilation parameters without having to drill additional holes in the ceiling.

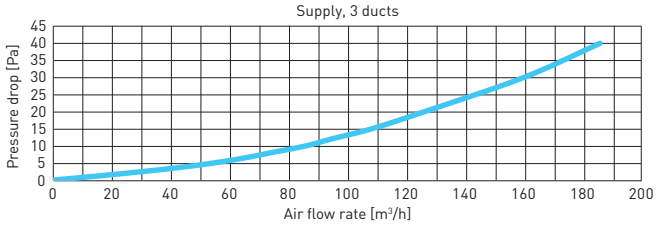
The AWENTA PRO plenum boxes are made of durable HDPE (High Density Polyethylene) with a bacteriostatic Nano-Silver additive. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bacteriostatic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

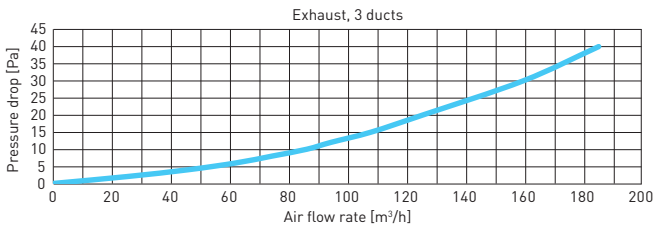
The design of the plenum box allows it to be mounted on different surfaces and in different planes. The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class. Mounting of the box is facilitated 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



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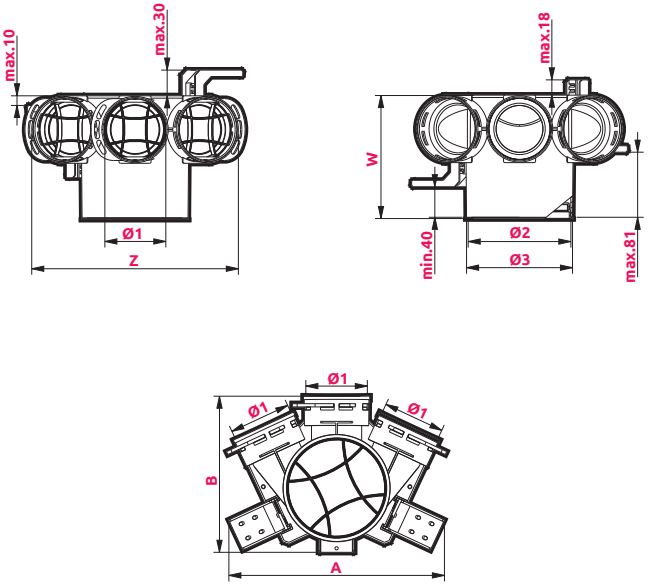



| | Ø1 | Ø2 | Ø3 | A | B | Z | W |
|---|---|---|---|---|---|---|---|
| **VPB125-3** | 75 | 128 | 134 | 268 | 195 | 257 | 152 |

PRODUCT DATA SHEET

# Ceiling plenum box – horizontal

**VPC125-2**

D — TIGHTNESS CLASS

ABS — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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'sproduct portfolio. The box allows for connecting a maximum of two Ø75 mm ventilation ducts to a supply or exhaust air valve.

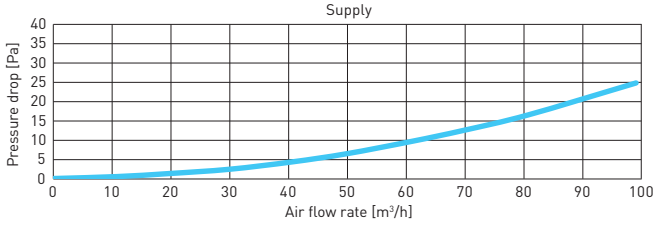
AWENTA PRO plenum boxes are made of durable ABS material. The robust structure guarantees failure-free operation for many years and thanks to the use of a bacteriostatic additive the product has obtained a very high level of bacteriostatic activity. The design of the plenum box allows it to be mounted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

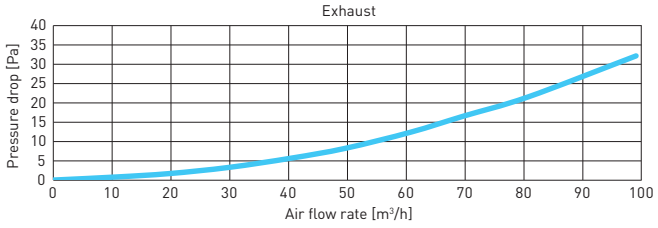
The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class.

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

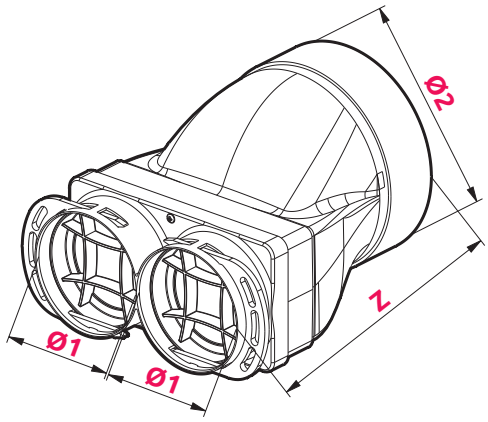
## AIR FLOW CHARACTERISTICS

VPC125-2




## DIMENSIONS




| | Ø1 | Ø2 | Z |
|---|---|---|---|
| VPC125-2 | 75 | 128 | 194 |

D
TIGHTNESS CLASS

ABS
MATERIAL

BACTERIOSTATIC

30 YEAR
WARRANCY

# Ceiling plenum box – vertical

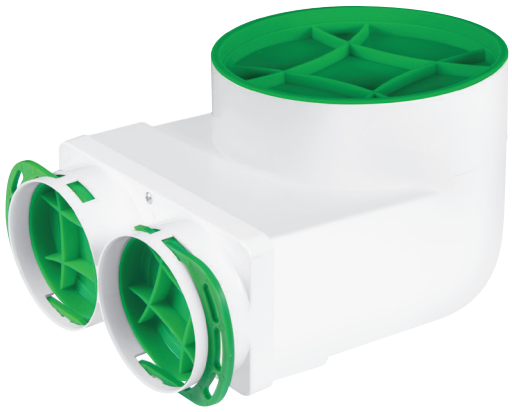
**VPE125-2**

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'sproduct portfolio. The box allows for connecting a maximum of two Ø75 mm ventilation ducts to a supply or exhaust air valve.

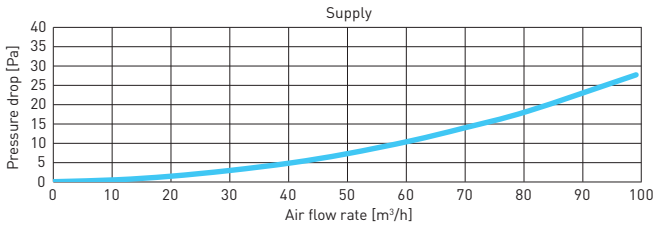
AWENTA PRO plenum boxes are made of durable ABS material. The robust structure guarantees failure-free operation for many years and thanks to the use of bacteriostatic additive the product has obtained 99.99% bacteriostatic activity. The design of the plenum box allows it to be mounted on different surfaces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

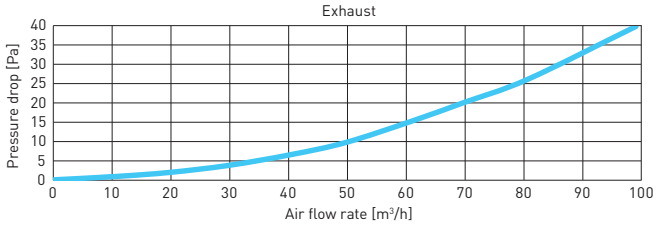
The Ø75 mm female connectors are equipped with a gasket and special protection of the connected ducts, which ensures the tightness of the entire system in the high D class.

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

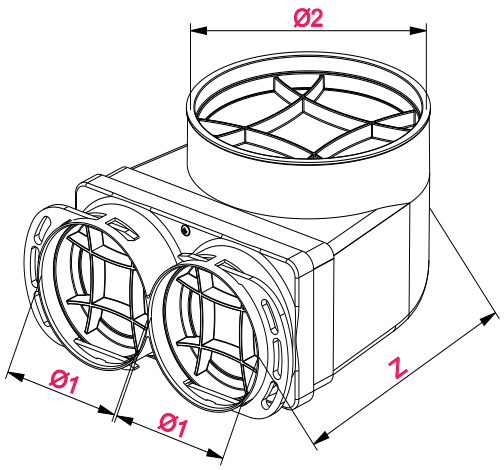


## AIR FLOW CHARACTERISTICS




## DIMENSIONS




| | Ø1 | Ø2 | Z |
|---|---|---|---|
| VPE125-2 | 75 | 128 | 202 |

# PRODUCT DATA SHEET

## Short duct crossover

NOVELTY

**VMK75-2-S**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

The VMK AWENTA PRO duct crossover is used for crossing ø75 ducts without altering the height of the installation.

It also allows ducts to be run over other sanitary or electrical piping and any elements in the path of the duct.

AWENTA PRO crossovers, made of modified polypropylene with the bacteriostatic additive Nano-Silver.

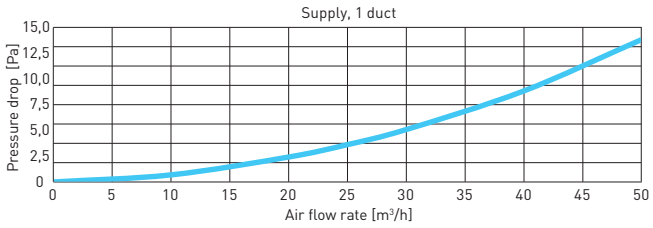
Thanks to its robust construction, the crossover can be permanently embedded in the screed or ceiling.

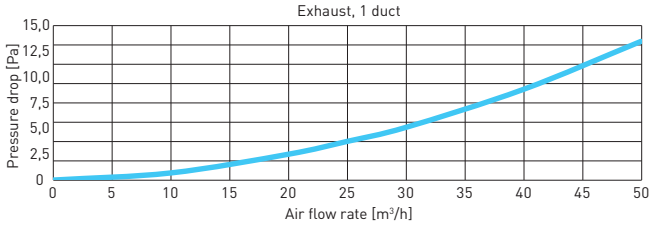
The crossover package includes a set of gaskets and plugs for a tight connection between the socket and the ventilation duct and closure of unused connections.

VMK crossovers are available in two lengths to enable passing from 2 to as many as 8 Ø75 ventilation ducts.

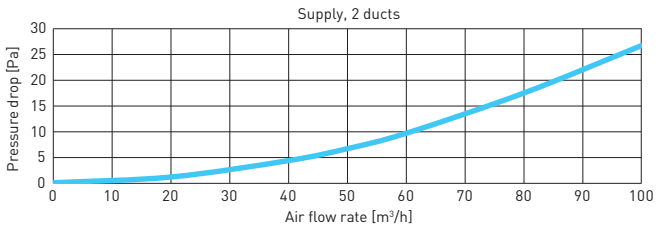
## AIR FLOW CHARACTERISTICS

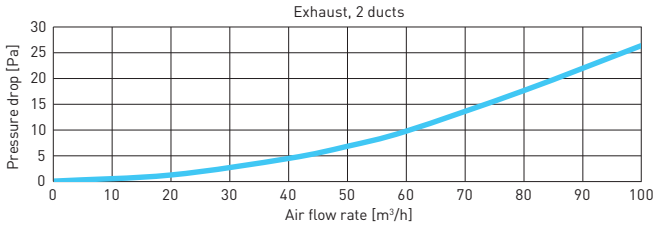
VKM75-2-S , 1 duct



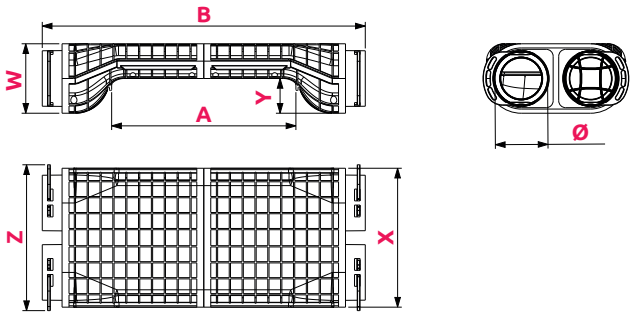




VKM75-2-S , 2 ducts

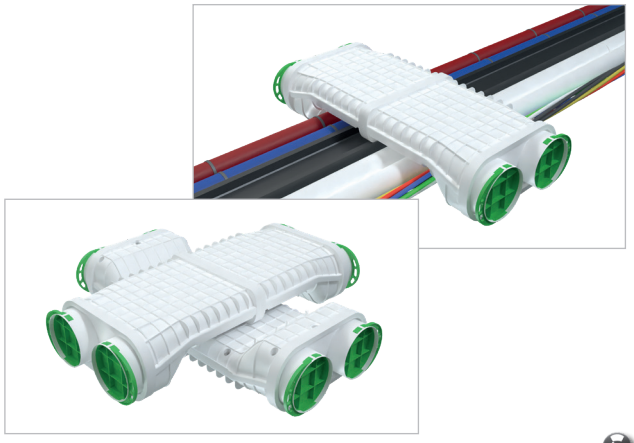



## DIMENSIONS




| | Ø | W | A | B | Y | Z | X |
|---|---|---|---|---|---|---|---|
| **VMK75-2-S** | 75 | 100 | 265 | 465 | 50 | 210 | 200 |



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

# PRODUCT DATA SHEET

## Long duct crossover

NOVELTY

**VMK75-2-L**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

The VMK AWENTA PRO duct crossover is used for crossing ø75 ducts without altering the height of the installation.

It also allows ducts to be run over other sanitary or electrical piping and any elements in the path of the duct.

AWENTA PRO crossovers, made of modified polypropylene with the bacteriostatic additive Nano-Silver.

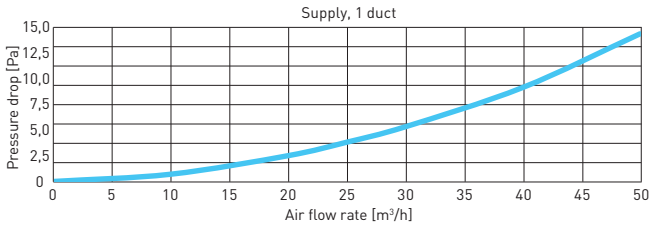
Thanks to its robust construction, the crossover can be permanently embedded in the screed or ceiling.

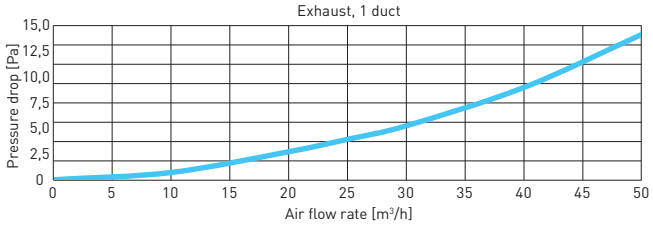
The crossover package includes a set of gaskets and plugs for a tight connection between the socket and the ventilation duct and closure of unused connections.

VMK crossovers are available in two lengths to enable passing from 2 to as many as 8 Ø75 ventilation ducts.

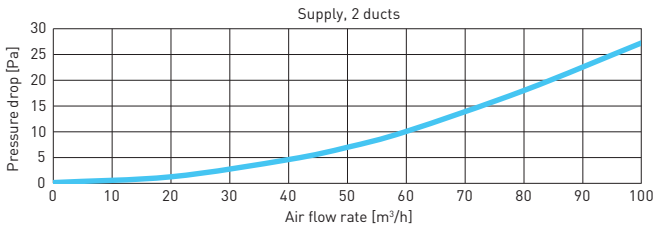
## AIR FLOW CHARACTERISTICS

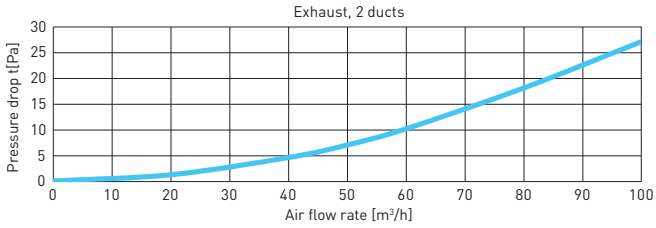
VKM75-2-L, 1 duct



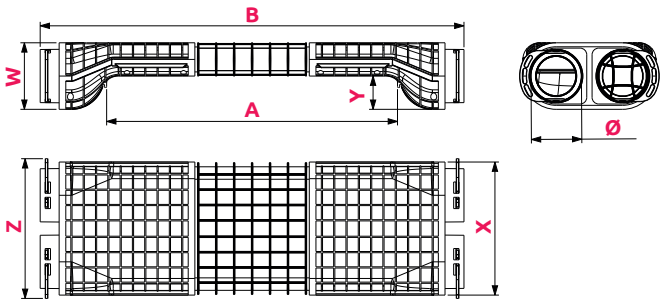




VKM75-2-L, 2 ducts

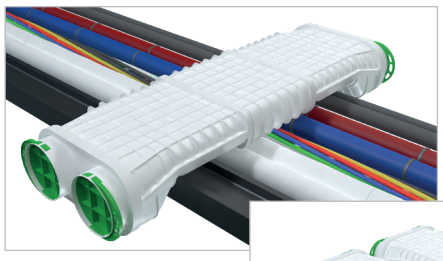



## DIMENSIONS




| | Ø | W | A | B | Y | Z | X |
|---|---|---|---|---|---|---|---|
| VMK75-2-L | 75 | 100 | 437 | 637 | 50 | 210 | 200 |



PRODUCT DATA SHEET

# Distribution box

**VCB160-8, VCB200-8**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

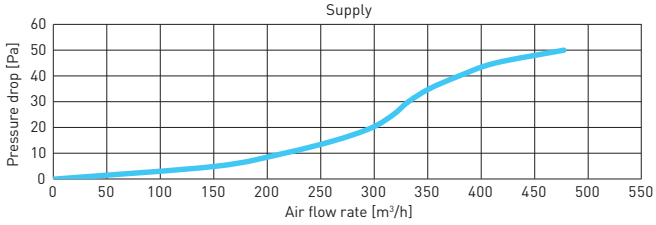
The AWENTA PRO VCB distribution box is used for the distribution of supplied air or collection of used air from rooms connected to the heat recovery system and it is directly connected to the air handling unit.

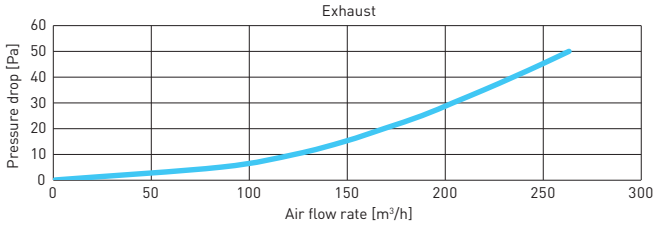
AWENTA PRO distribution boxes are made of modified polypropylene with the Nano-Silver bacteriostatic additive. The robust structure is equipped with a system of gaskets guaranteeing tightness and failure-free operation for many years. The use of a bacteriostatic additive made it possible to obtain bacteriostatic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

The VCB distribution boxes are available in different connection options allowing for the connection of up to 8 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.

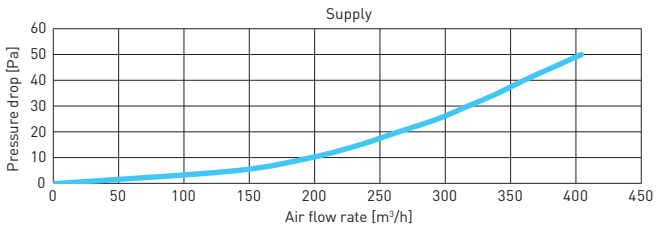
## AIR FLOW CHARACTERISTICS

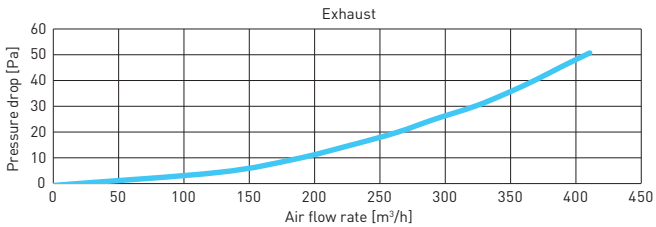
VCB160-8



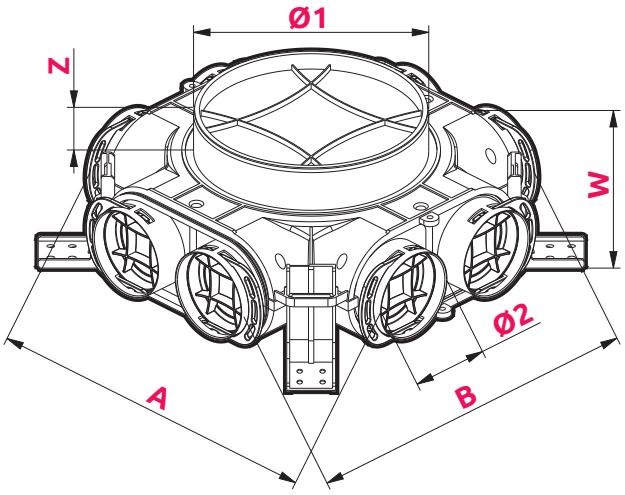




VCB200-8




## DIMENSIONS




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

# Distribution box

**VCB160-12, VCB200-12**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY



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.

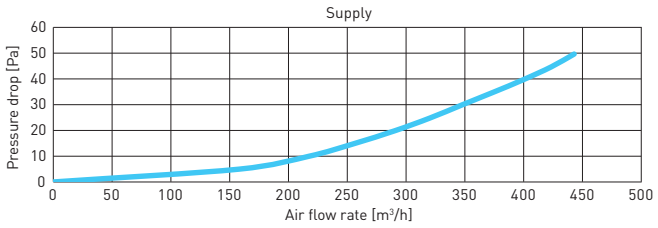
The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise adjustment of the distance between the box and the mounting planes and makes it easy to remove the box if necessary. Independently adjustable brackets allow the horizontal installation of the unit, enabling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

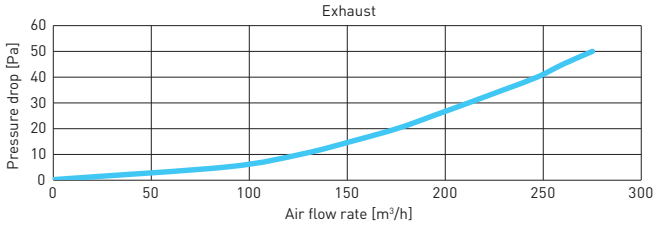
VCB series boxes are designed for installation in a heated area of the building; otherwise, they must be insulated with a layer of mineral wool (min. 15 cm).

It can be permanently embedded into the screed or ceiling, or installed under plasterboards.

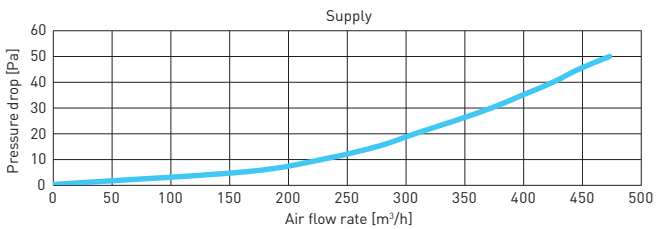
## AIR FLOW CHARACTERISTICS

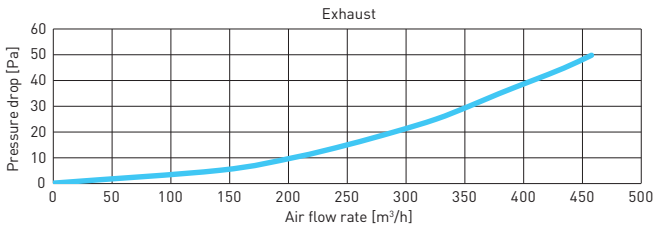
VCB160-12



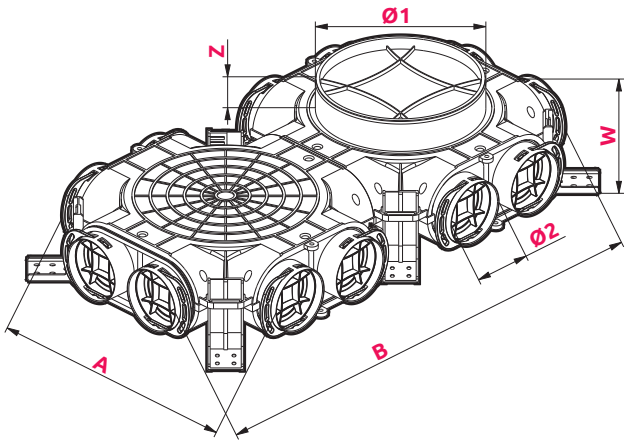




VCB200-12




## DIMENSIONS




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

PRODUCT DATA SHEET

# Distribution box

**VCB200-16**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANTY

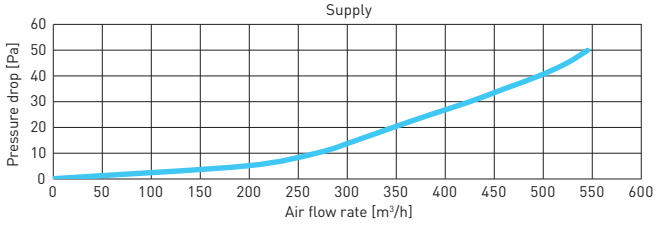
The Awenta PRO VCB200-16 distribution box enables the connection of up to 16 Ø75 mm ventilation ducts.

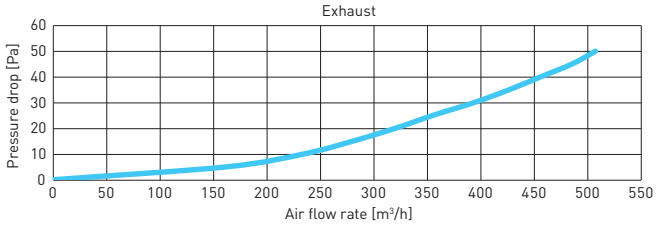
Ducts not in use can be closed with the supplied end caps. The box is available with a connector to the air handling unit with a diameter of Ø200 mm.

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.

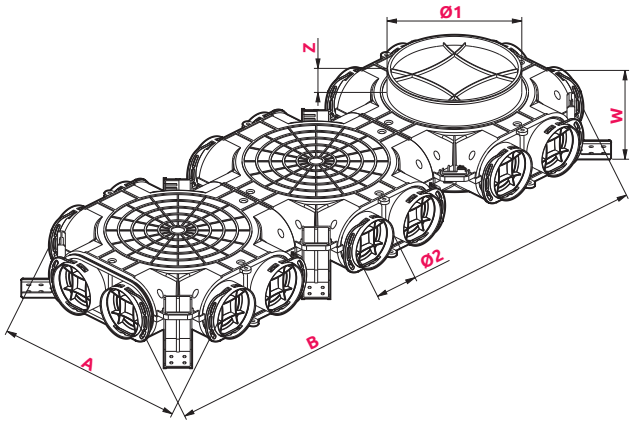
## AIR FLOW CHARACTERISTICS






## DIMENSIONS




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

PRODUCT DATA SHEET

# Distribution box
## with side connection

**VCB125-6, VCB160-6**

NOVELTY

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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

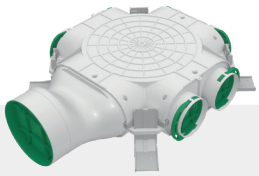
As with the other distribution boxes in the VCB series, unused spigots can be covered with plugs with gaskets included with the product. The box is characterised by a side connection available in two variants with a diameter of Ø160 mm and Ø125 mm.

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 bacteriostatic additives, they will meet the expectations of the most demanding users.

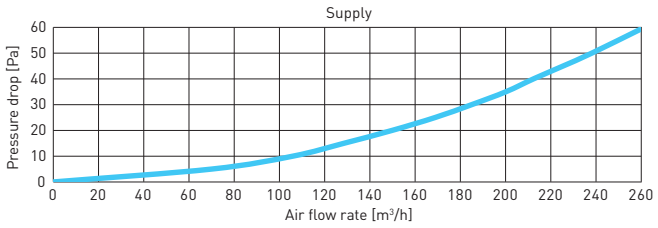
VCB125-6

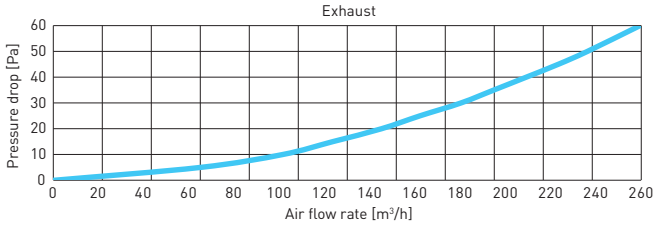


VCB160-6

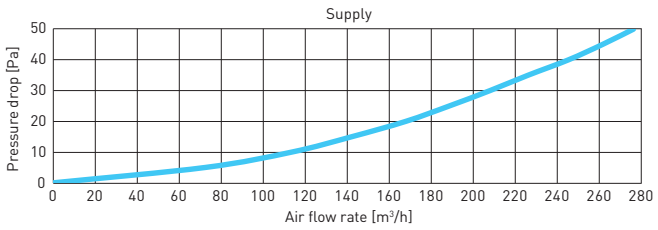
## AIR FLOW CHARACTERISTICS

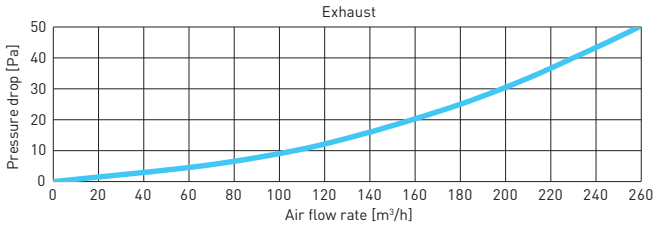
VCB125-6



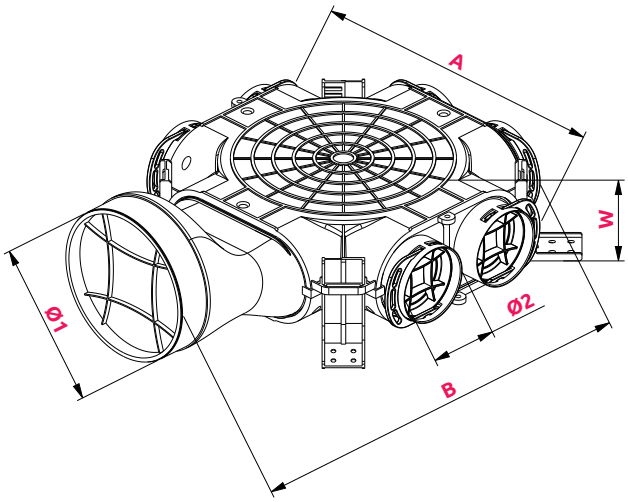




VCB160-6




## DIMENSIONS




| | Ø1 | Ø2 | A | B | W |
|---|---|---|---|---|---|
| VCB125-6 | 125 | 75 | 347 | 445 | 104 |
| VCB160-6 | 160 | 75 | 347 | 475 | 104 |

PRODUCT DATA SHEET

# Distribution box
## with side connection

**VCB160-10**

NOVELTY

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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

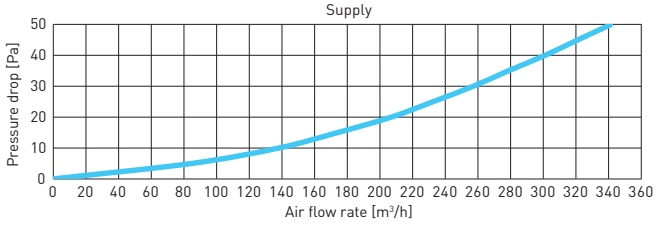
As with the other distribution boxes in the VCB series, unused spigots can be covered with plugs with gaskets included with the product. The box is characterised by a side connection with a diameter of Ø160 mm.

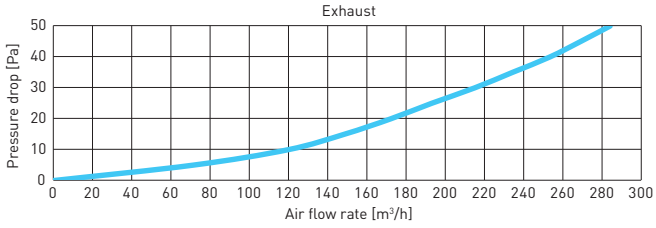
Distribution boxes with side connections are ideal for installation above suspended ceilings and wherever installation height is limited.

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

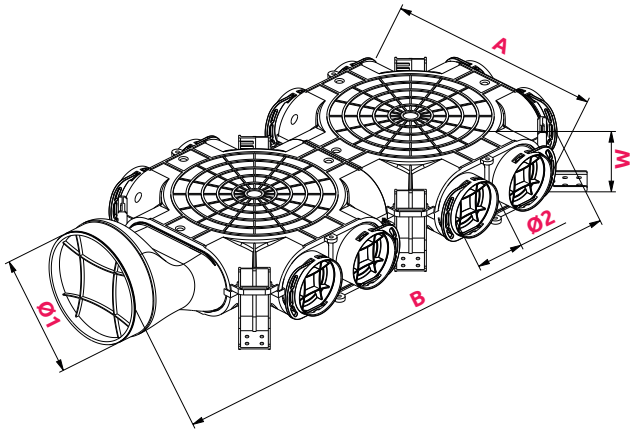
The range of distribution boxes available has been carefully planned to allow their use in most typical mechanical ventilation systems.

## AIR FLOW CHARACTERISTICS




## DIMENSIONS




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

PRODUCT DATA SHEET

# Distribution box
## with side connection

**VCB160-14**

NOVELTY

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

The Awenta PRO VCB160-14 distribution box allows the connection of up to 14 Ø75 ventilation ducts.

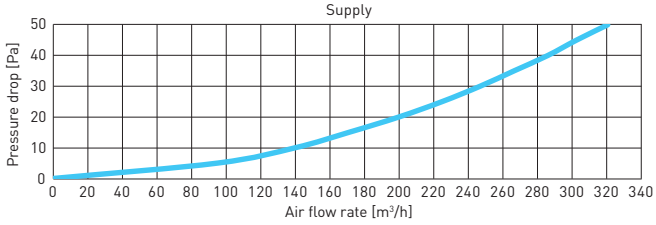
As with the other distribution boxes in the VCB series, unused spigots can be covered with plugs with gaskets included with the product. The box is characterised by a side connection with a diameter of Ø160 mm.

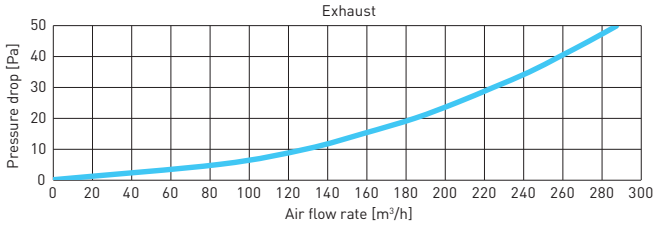
Distribution boxes with side connections are ideal for installation above suspended ceilings and wherever installation height is limited.

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

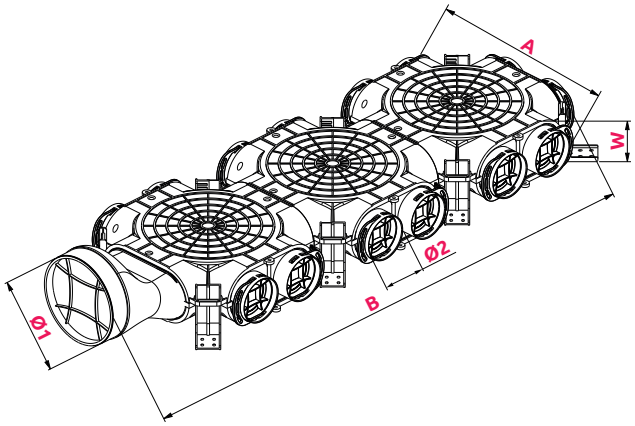
AWENTA PRO boxes are a well-thought-out design for long-term use. Thanks to their structure and the use of high-quality plastics and bacteriostatic additives, they will meet the expectations of the most demanding users.

## AIR FLOW CHARACTERISTICS




## DIMENSIONS




| | Ø1 | Ø2 | A | B | W |
|---|---|---|---|---|---|
| **VCB160-14** | 160 | 75 | 347 | 1057 | 104 |

PRODUCT DATA SHEET

# Straight-through distribution box

**VCB160/200-8**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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.

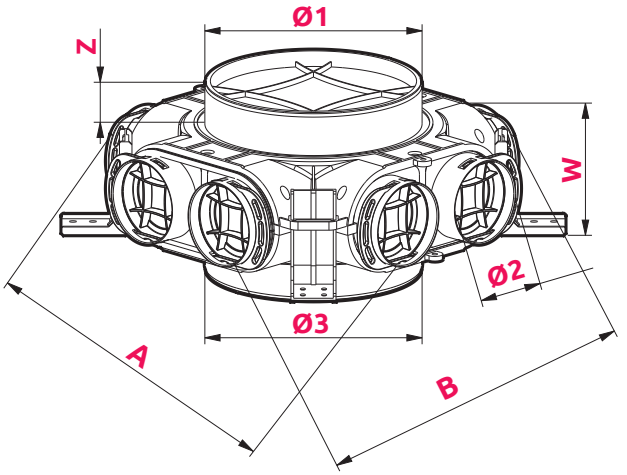
In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps with gaskets.

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 |




# Straight-through distribution box

**VCB160/200-12**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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 12 ducts for ventilation of rooms on the lower floor. The air flow between floors is adjusted by means of air valves.

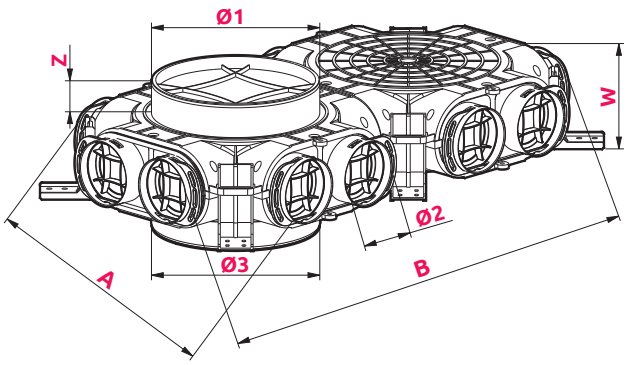
In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps with gaskets.

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

# Straight-through distribution box

**VCB160/200-16**

D — TIGHTNESS CLASS

PP — MATERIAL

BACTERIOSTATIC

30 YEAR — WARRANCY

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.

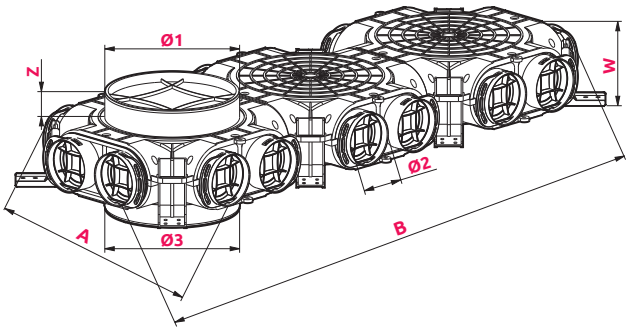
In addition, the user can install a damper upstream of the inlet to the distribution box on the upper floor. Ducts not in use can be closed with the supplied end caps with gaskets.

The AWENTA PRO distribution boxes are equipped with a patented fixing system that enables precise djustment 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 | 349 | 104 | 38 |




# The directional diffuser

NOVELTY

VAK125

ABS MATERIAL

BACTERIOSTATIC

2 YEAR WARRANCY

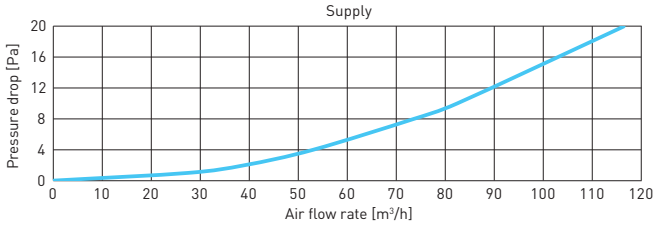


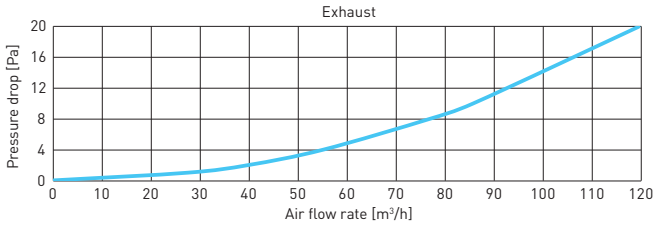
The directional diffuser is the termination of the ventilation system. The product is equipped with a special damper that allows the setting of the direction of the air supply. This solution is used in situations where the diffuser is installed close to walls or fixtures that may be adversely affected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

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

## AIR FLOW CHARACTERISTICS

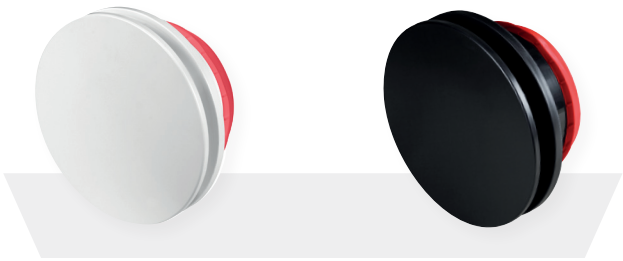




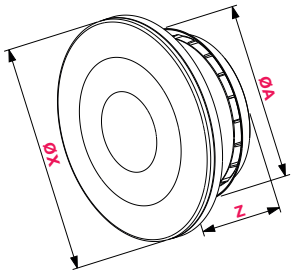




VAK125/WHITE

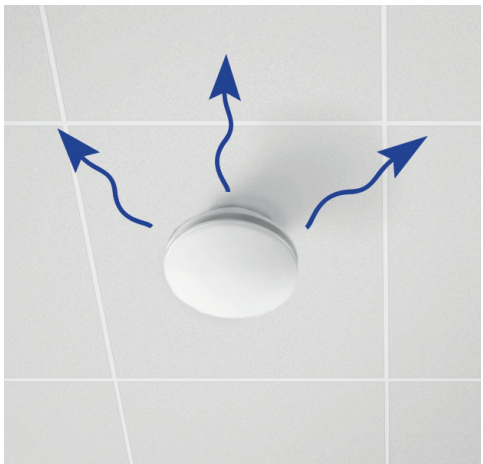
VAK125CZ/BLACK

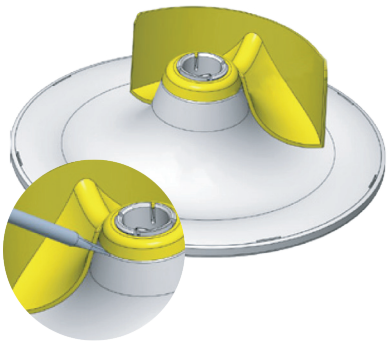


## DIMENSIONS




| | ØX | ØA | Z |
|---|---|---|---|
| VAK125 | 173 | 125 | 54 |





The VAK125 diffuser has a air flow guide. It can be set in the desired direction or can be removed.

PRODUCT DATA SHEET

# The panel diffuser

NOVELTY

VAP125

ABS MATERIAL

BACTERIOSTATIC

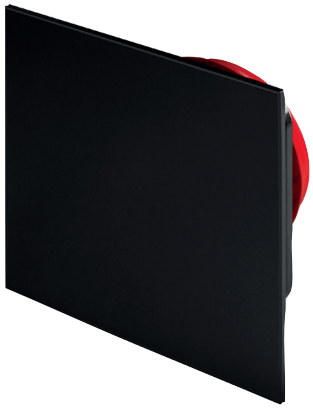
2 YEAR WARRANCY

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.

Beneath the aesthetic front panel, there is a damper that, similar to other air diffusers, allows for smooth airflow regulation.

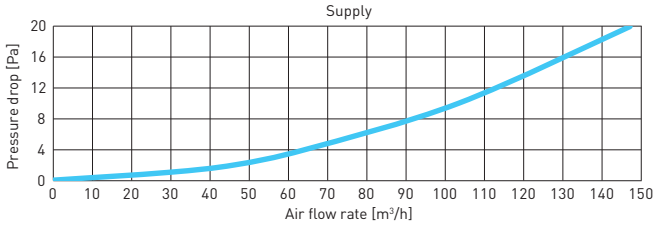
VAP125/WHITE

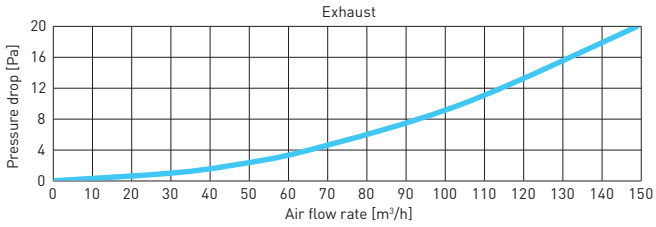


VAP125CZ/BLACK

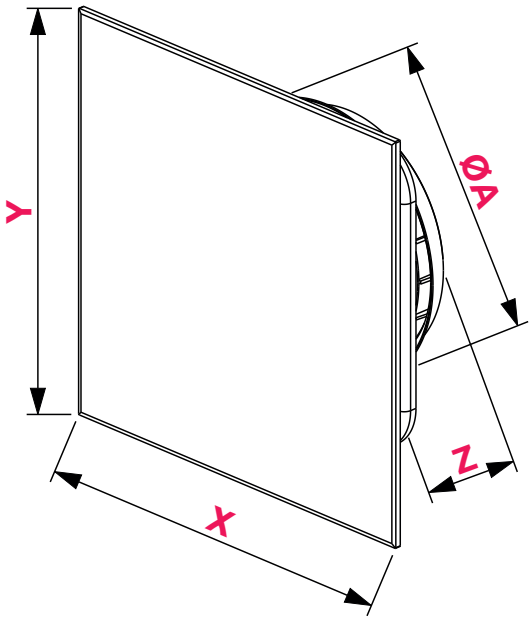
## AIR FLOW CHARACTERISTICS



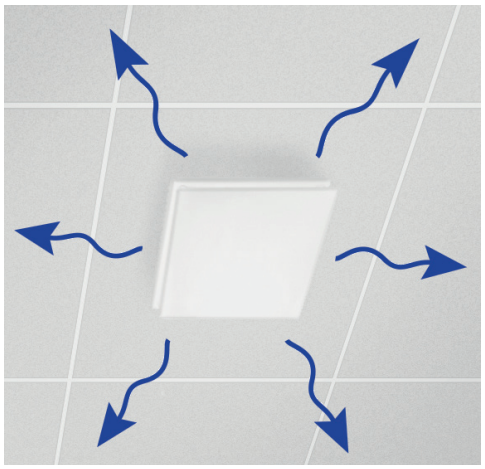



## DIMENSIONS




| | X | Y | Z | ØA |
|---|---|---|---|---|
| VAP125 | 200 | 200 | 36 | 125 |



WITH NANOSILVER ADDITIVE ELIMINATING UP TO 99% BACTERIA

# The panel diffuser

NOVELTY

VAPO125

ABS MATERIAL

BACTERIOSTATIC

2 YEAR WARRANCY



The VAPO125 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.

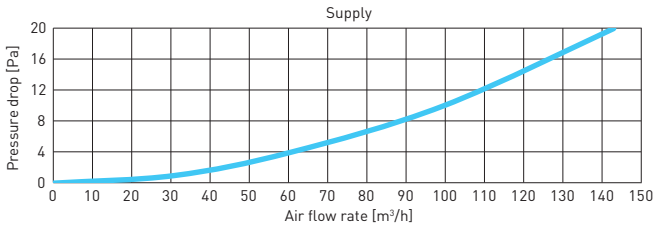
Beneath the aesthetic front panel, there is a damper that, similar to other air diffusers, allows for smooth airflow regulation.

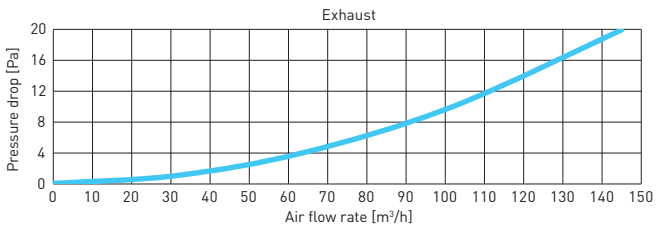
VAPO125/WHITE

VAPO125CZ/BLACK

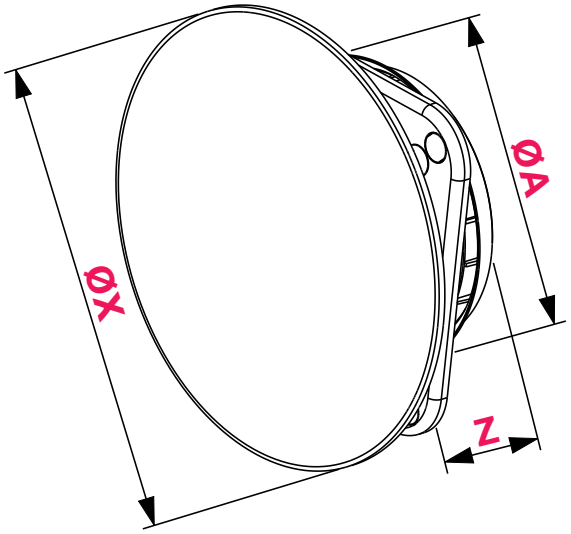
## AIR FLOW CHARACTERISTICS



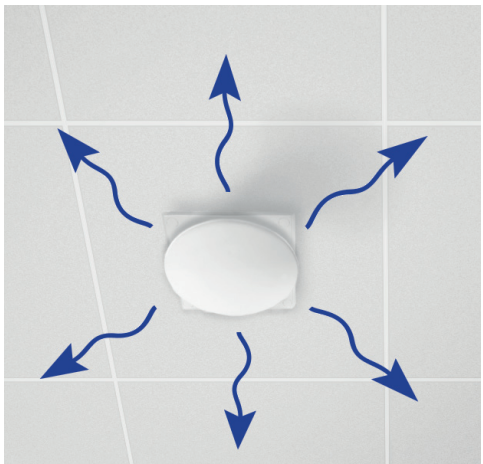



## DIMENSIONS




| | ØX | ØA | Z |
|---|---|---|---|
| VAPO125 | 200 | 125 | 36 |



PRODUCT DATA SHEET

# Supply air valves

**VAN**

PS MATERIAL

BACTERIOSTATIC

2 YEAR WARRANTY

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.

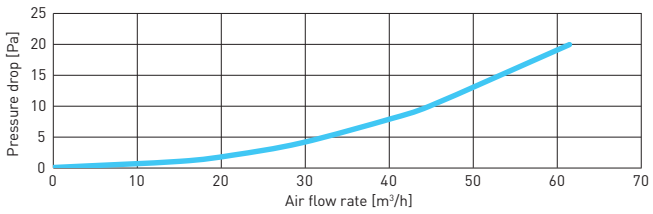
The AWENTA PRO air valves, with a modern design, are made of high-quality polystyrene plastic, which guarantees their long service life.

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 Ø75 mm duct.

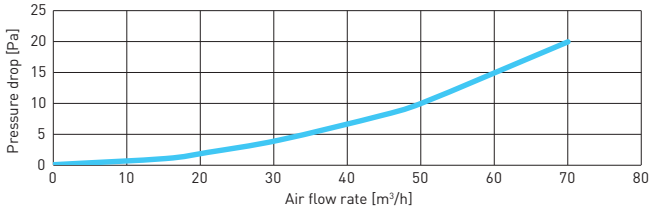
VAN75

## AIR FLOW CHARACTERISTICS

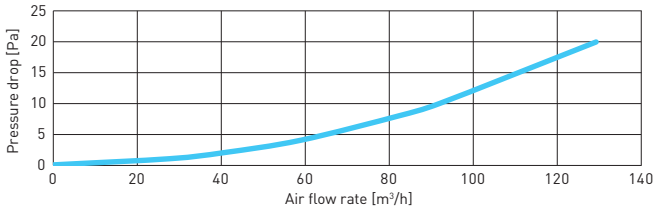
VAN 75



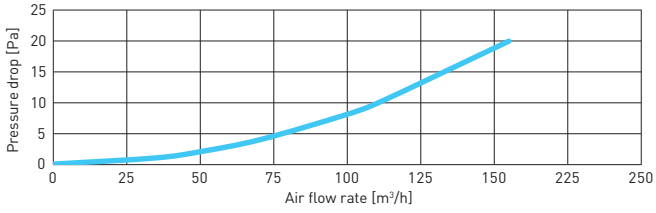

VAN 100



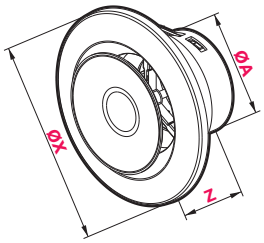

VAN 125



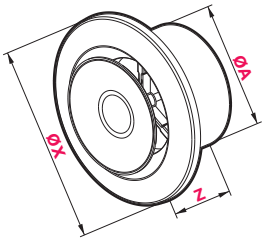

VAN 150/160




## DIMENSIONS




VAN75




VAN100 / VAN125 / VAN150 / VAN160

| | ØA | ØX | Z |
|---|---|---|---|
| **VAN75** | 75 | 155 | 65 |
| **VAN100** | 100 | 155 | 60 |
| **VAN125** | 125 | 185 | 60 |
| **VAN150** | 150 | 214 | 73 |
| **VAN160** | 160 | 214 | 73 |

PRODUCT DATA SHEET

# Exhaust air valves

VAW

PS MATERIAL

BACTERIOSTATIC

2 YEAR WARRANCY

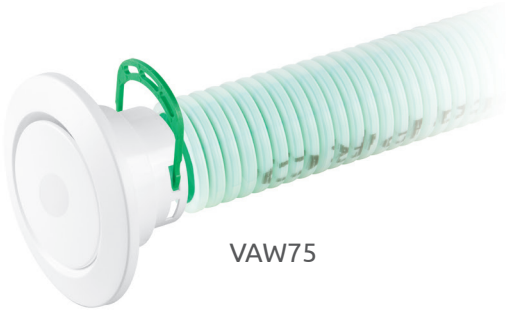
Exhaust air valves are components that constitute the finishing elements of ventilation ducts. Thanks to the mechanical ventilation system, the used air is collected and removed from the rooms where the exhaust air valve is installed. There are know as dirty rooms.

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.

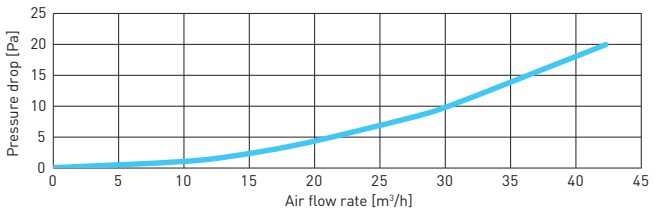




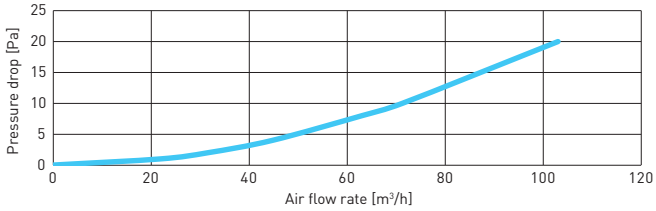
VAW75

## AIR FLOW CHARACTERISTICS

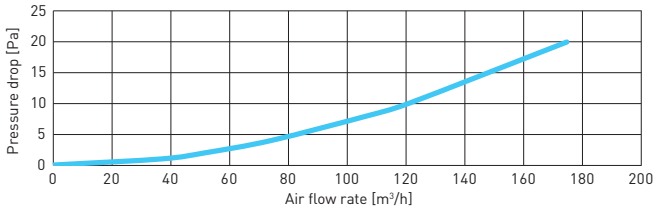
VAW 75



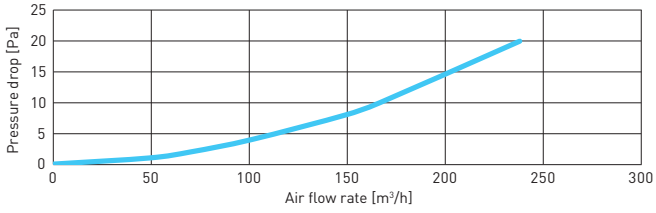

VAW 100



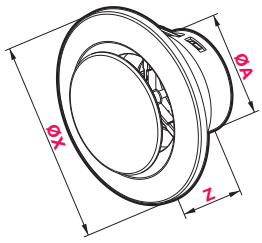

VAW 125



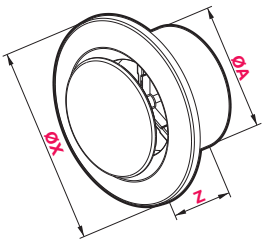

VAW 150/160




## DIMENSIONS




VAW75




VAW100 / VAW125 / VAW150 / VAW160

| | ØA | ØX | Z |
|---|---|---|---|
| **VAW75** | 75 | 155 | 65 |
| **VAW100** | 100 | 155 | 60 |
| **VAW125** | 125 | 185 | 60 |
| **VAW150** | 150 | 214 | 73 |
| **VAW160** | 160 | 214 | 73 |

PRODUCT DATA SHEET

# Intake grilles

NOVELTY

VCSM

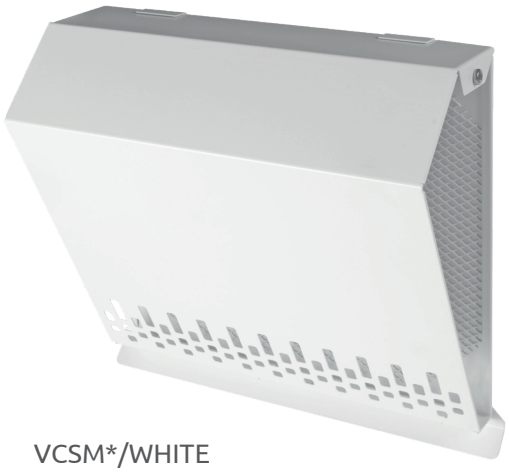
OC/N
MATERIAL

2 YEAR
WARRANCY

The initial component of ventilation systems with heat recovery unit. Designed for external use in residential and public buildings. Equipped with a drip deflector to protect the wall from water droplets and a protective mesh to cover the inlet opening.

The designed geometry ensures minimal air resistance/pressure drop while providing protection against rainwater.

A rubber gasket facilitates installation and prevents water leakage from the ventilation duct. Mounting holes at the corners allow for attachment to the wall. The side placement of detachable intake front screws makes installation and disassembly for maintenance easier.



VCSM*/WHITE

VCSM*GR/GRAPHITE

VCSM*I/INOX

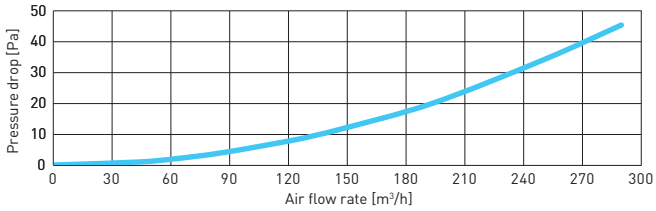
* Connector diameter

## CHARACTERISTICS OF COLOR VARIANTS

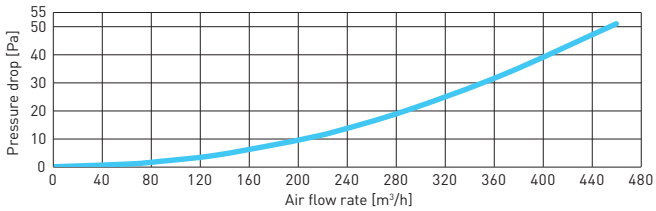
| White, Graphite(GR) | Inox(I) |
|---|---|
| All materials used are suitable for external applications | |
| • Galvanized steel sheet with a thickness of 0.7 mm, powder-coated using passivation technology for additional corrosion protection | • High-quality stainless steel sheet - acid-resistant, chrome-nickel (grade: 316L/1.4404) with a thickness of 0.6 mm |
| • An attractive color used in contemporary construction | • Aesthetically polished surface |
| Protective mesh for the inlet opening | |
| Mounting gasket with double-lipped seal | |
| Fast and easy installation (4 mounting holes in the corners) | |

## AIR FLOW CHARACTERISTICS

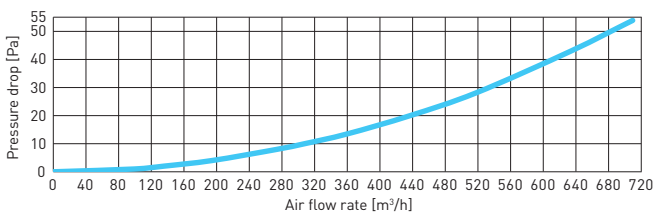
VCSM 160



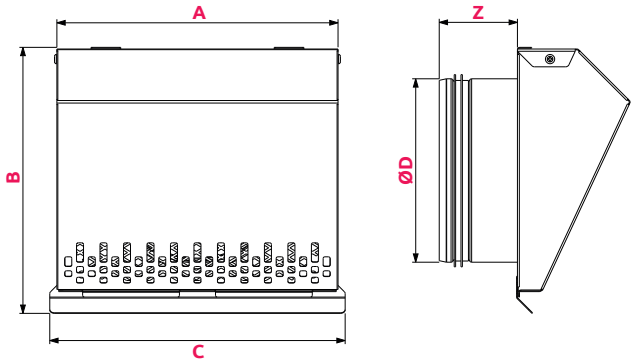

VCSM 200




VCSM 250

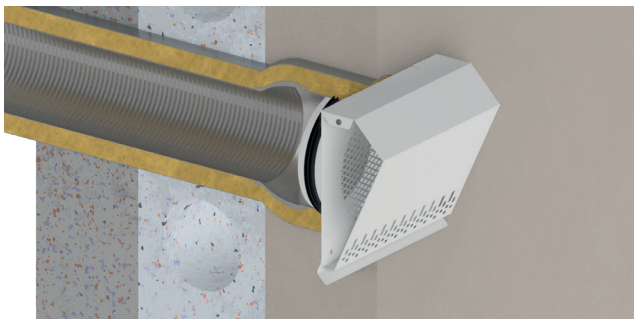



## DIMENSIONS




| | ØD | A | B | C | Z |
|---|---|---|---|---|---|
| VCSM160 | 160 | 237 | 224 | 249 | 66 |
| VCSM200 | 200 | 277 | 264 | 289 | 66 |
| VCSM250 | 250 | 327 | 314 | 339 | 66 |

## MOUNTING POSITION



# Exhaust grilles

NOVELTY

**VWSM**

OC/N
MATERIAL

2 YEAR
WARRANCY

Endings of ducts in mechanical ventilation systems with heat recovery unit. Designed for external use in residential and public buildings. Equipped with a drip deflector to protect the wall from water droplets and a protective mesh to cover the outlet opening.

The perpendicular geometry of the air discharge with side closure prevents the wall from getting dirty due to exhausted air.
The designed geometry ensures minimal resistance/pressure drop of the expelled air.

A rubber gasket facilitates installation and prevents water from flowing out of the ventilation duct. Mounting holes in the corners allow for attachment to the wall. The side positioning of the detachable outlet front screws facilitates installation and disassembly for maintenance easier.

VWSM*/WHITE

VWSM*GR/GRAPHITE

VWSM*I/INOX

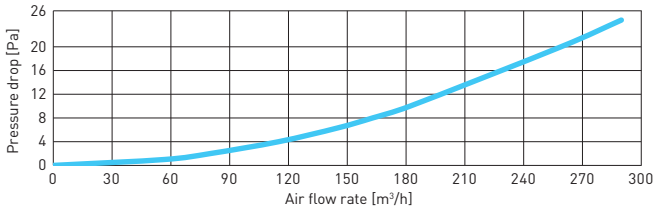
* Connector diameter

## CHARACTERISTICS OF COLOR VARIANTS

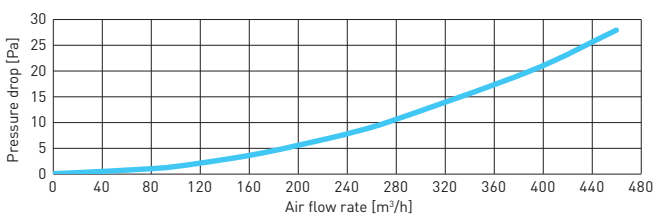
| White, Graphite(GR) | Inox(I) |
|---|---|
| All materials used are suitable for external applications | |
| • Galvanized steel sheet with a thickness of 0.7 mm, powder-coated using passivation technology for additional corrosion protection | • High-quality stainless steel sheet - acid-resistant, chrome-nickel (grade: 316L/1.4404) with a thickness of 0.5 - 0.6 mm |
| • An attractive color used in contemporary construction | • Aesthetically polished surface powierzchnia polerowana |
| Protective mesh for the outlet opening | |
| Mounting gasket with double-lipped seal | |
| Fast and easy installation (4 mounting holes in the corners) | |

## AIR FLOW CHARACTERISTICS

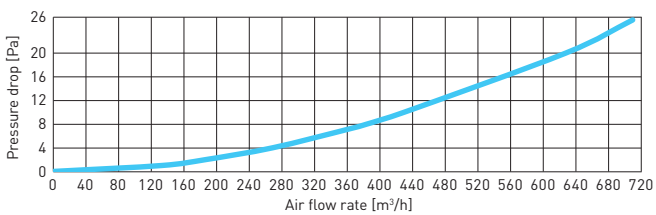
VWSM 160



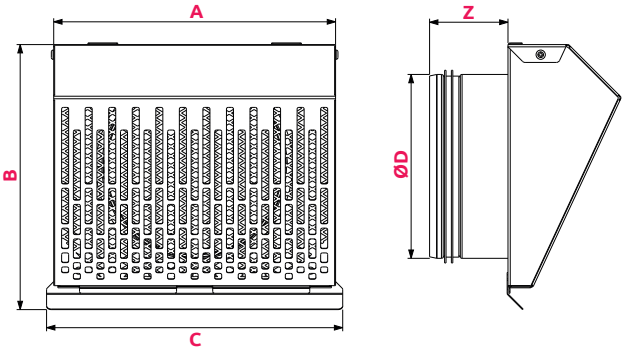

VWSM 200




VWSM 250

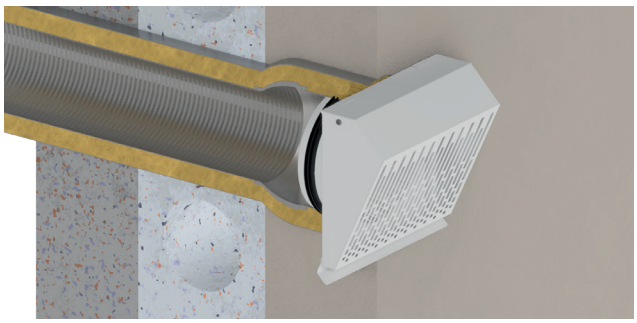



## DIMENSIONS




| | ØD | A | B | C | Z |
|---|---|---|---|---|---|
| VWSM160 | 160 | 237 | 224 | 249 | 66 |
| VWSM200 | 200 | 277 | 264 | 289 | 66 |
| VWSM250 | 250 | 327 | 314 | 339 | 66 |

## MOUNTING POSITION



PRODUCT DATA SHEET

# Ventilation duct

**VFG75 / VFB75**

HDPE/LDPE MATERIAL

BACTERIOSTATIC

30 YEAR WARRANCY

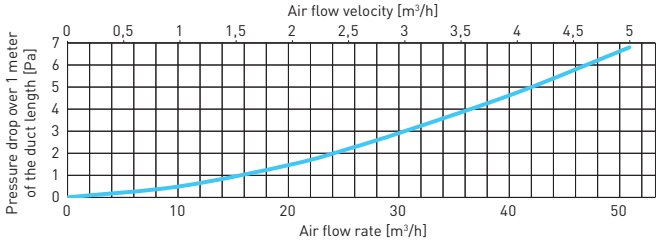
The VFG75/VFB75 ducts are used to transport air in mechanical ventilation systems. They are characterised by very high flexibility, which allows for free shaping of their course, bending and adjustment to the installation conditions, without the need of using additional connectors and fittings. The duct 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.


| 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 | modified polyethylene (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 | 50 lm | |

## AIR FLOW CHARACTERISTICS




| 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 |

| 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 |

PVC
MATERIAL

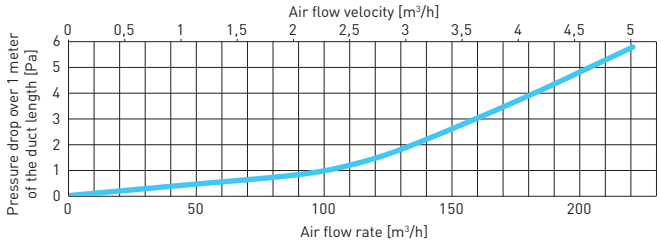
2 YEAR
WARRANCY

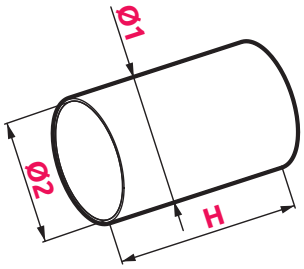
# Circular duct Ø125 for the plenum box

**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.




| 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 |

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

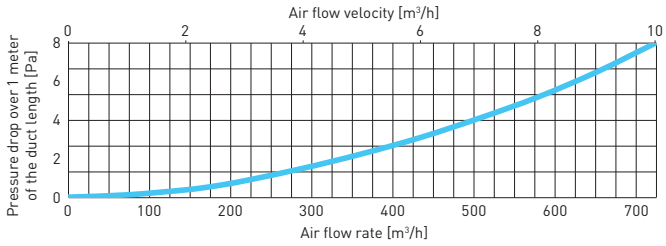
# Circular duct Ø160 for the distribution box

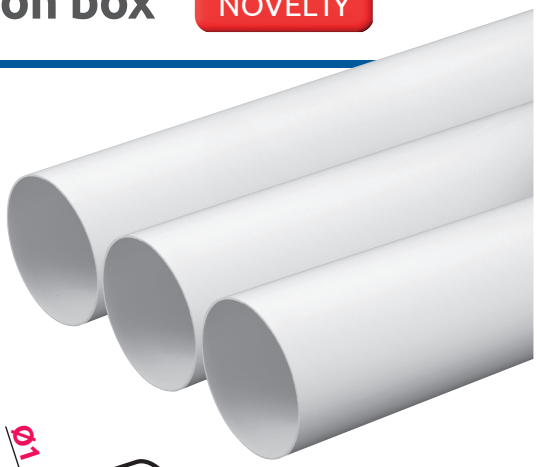
NOVELTY

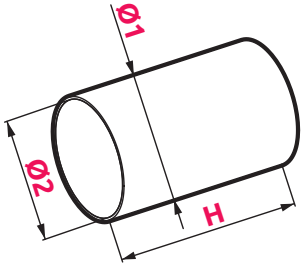
**KO160-05, KO160-10, KO160-15**

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.






| 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 |

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

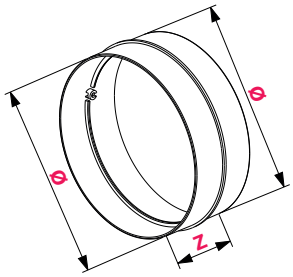
ABS MATERIAL

2 YEAR WARRANTY

## Circural duct connector Ø 160 KO160-21

NOVELTY

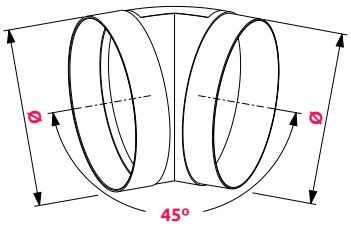
| | Ø | Z |
|---|---|---|
| KO160-21 | 160 | 62 |

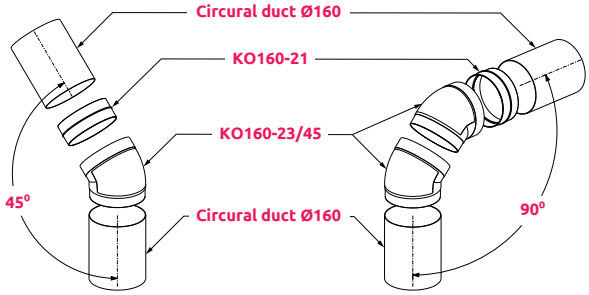



## 45' bend circural duct Ø 160 KO160-23/45

| | Ø |
|---|---|
| KO160-23/45 | 160 |

For the correct installation of KO160-23/45, it is necessary to use the connector KO160-21 and place it between the elbow and the duct section according to the following diagram.

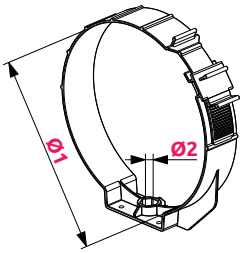



45 - degree bend circular ducts can be joined together and rotated in any direction up to 360 degrees.

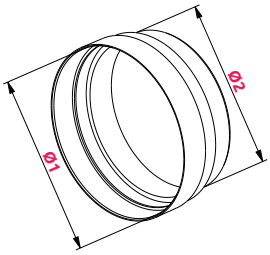
## Circural duct clamp Ø 160 KO160-28

| | Ø1 | Ø2 |
|---|---|---|
| KO160-28 | 150-170 | 8 |




## Circural duct reductor Ø 160/150 KO160-29

| | Ø1 | Ø2 |
|---|---|---|
| KO160-29 | 160 | 150 |



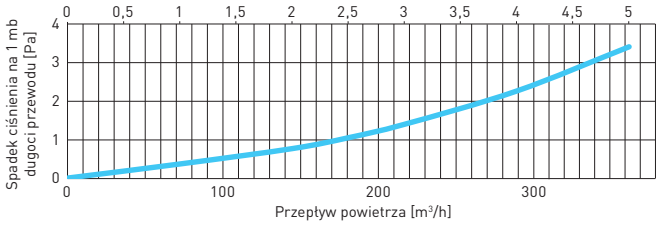

# Flexible duct with thermal insulation

**KEI160, KEI200**

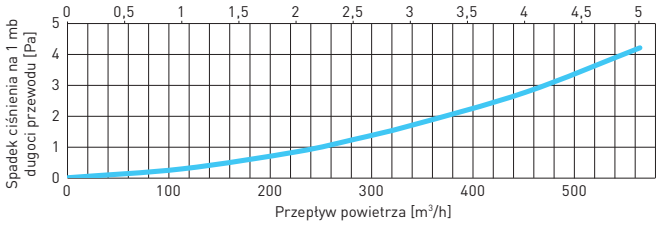
Insulated ventilation ducts with temperature resistance up to 140°C. They are designed for ventilation, air conditioning and heat recovery systems. Adequate stiffness and maintenance of the cross-section are ensured by an internal duct frame made of spiral wound steel wire with increased strength. They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

**Materiał:** 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/m³
**Outter cladding:** Aluminium

KEI 160




KEI 200




**KEI160**

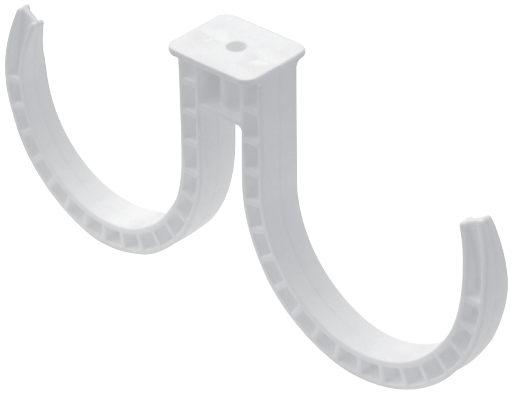
| Air flow velocity | 2 [m/s] | 2,5 [m/s] | 3 [m/s] |
|---|---|---|---|
| Duct length | Pressure drop [Pa] | | |
| 1 mb | 0,8 | 1,2 | 1,6 |
| 2 mb | 1,5 | 3,5 | 3,2 |
| 4 mb | 3,1 | 4,9 | 6,5 |
| 6 mb | 4,6 | 7,3 | 9,7 |
| 8 mb | 6,2 | 9,8 | 13,0 |
| 10 mb | 7,7 | 12,2 | 16,2 |
| 12 mb | 9,2 | 14,6 | 19,4 |
| 14 mb | 10,8 | 17,1 | 22,7 |
| 16 mb | 12,3 | 19,5 | 25,9 |
| 18 mb | 13,9 | 22,0 | 29,2 |
| 20 mb | 15,4 | 24,4 | 32,4 |

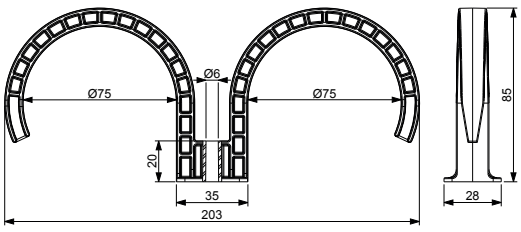
**KEI200**

| 2 [m/s] | 2,5 [m/s] | 3 [m/s] |
|---|---|---|
| Pressure drop [Pa] | | |
| 0,8 | 1,2 | 1,8 |
| 1,7 | 3,5 | 3,6 |
| 3,4 | 5,0 | 7,1 |
| 5,0 | 7,4 | 10,7 |
| 6,7 | 9,9 | 14,2 |
| 8,4 | 12,4 | 17,8 |
| 10,1 | 14,9 | 21,4 |
| 11,8 | 17,4 | 24,9 |
| 13,4 | 19,8 | 28,5 |
| 15,1 | 22,3 | 32,0 |
| 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

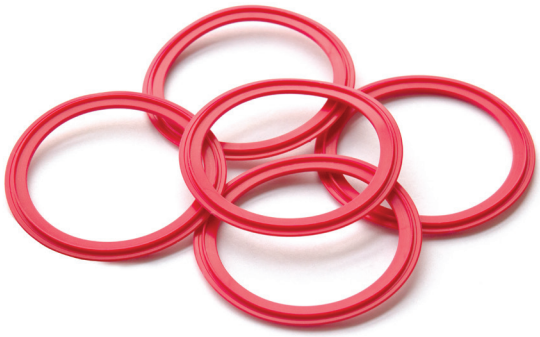
Couplings made of HDPE material in black are available for joining VFG75 / VFB75 ducts. The couplings provide fast, durable and break-resistant duct connections. The duct connection is tight thanks to the possibility of using the VU75 gaskets.

## 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

VNK75G 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

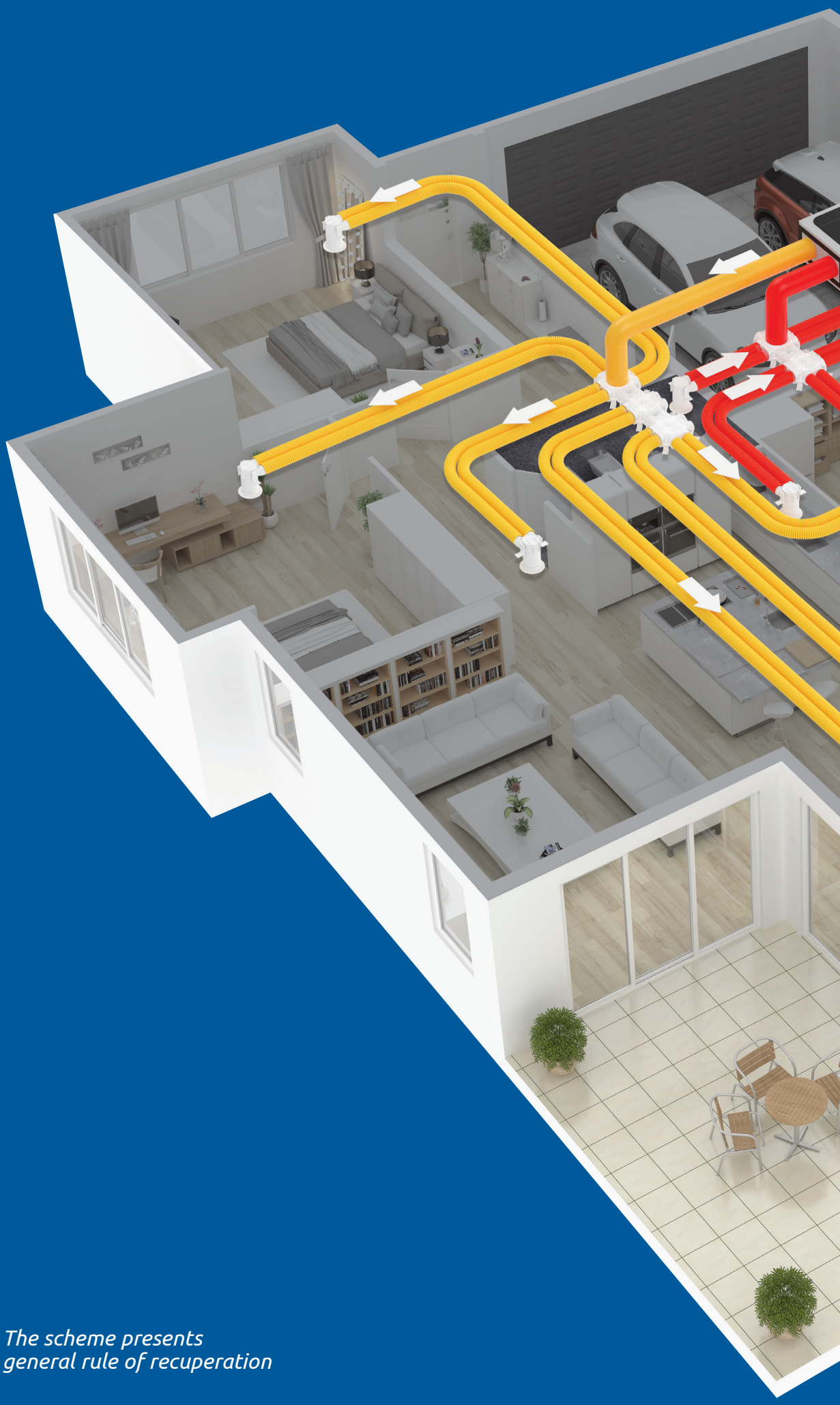
Perforated tape is used to suspend ventilation ducts of circular, oval and rectangular cross-section. It is ideal for installations requiring smooth height adjustment or when there is no possibility to use clamps. Mounting openings of Ø 4 mm and 8 mm allow for mounting with threaded rods, screws, rivets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



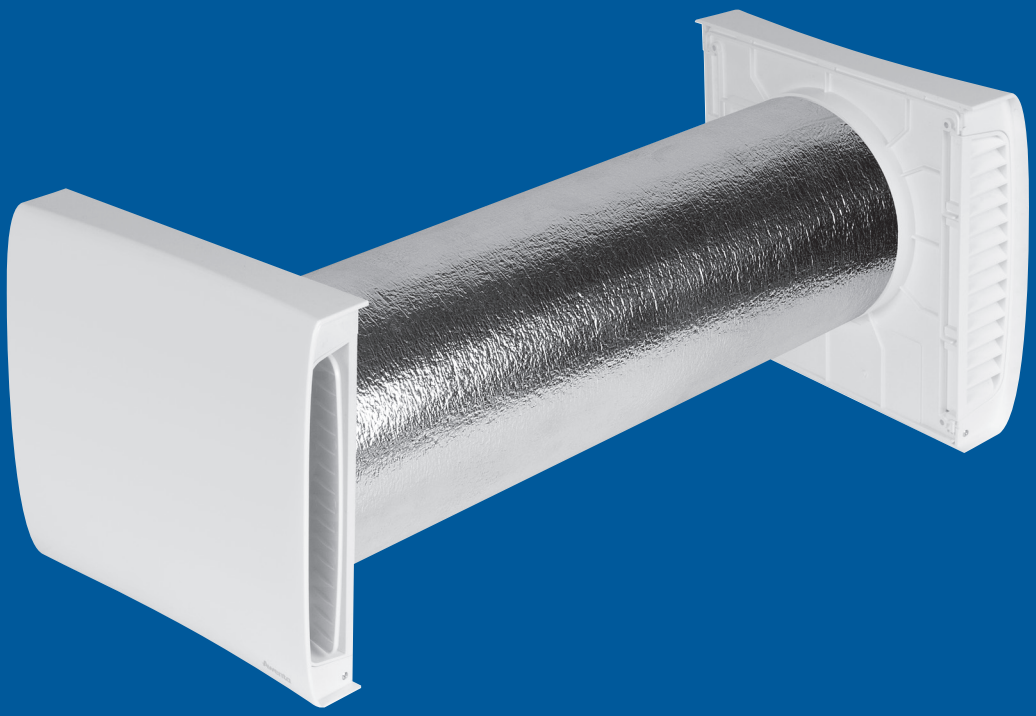
*The scheme presents*
*general rule of recuperation*

# DECENTRALIZED VENTILATION AND OTHER VENT EQUIPMENT

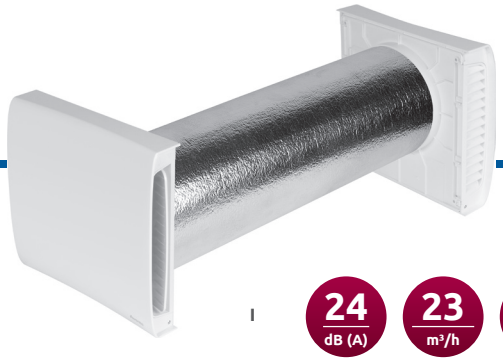
Decentralized ventilation provides comfort by supplying the optimal amount of fresh air with no necessity to open the windows. Opened windows may cause a significant cooling down the room during the winter and the insects' influx in the summer. The ventilation system consists of several smaller units 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 m³/h | 4 W |
| | II | 34 dB (A) | 36 m³/h | 5 W |
| | III | 39 dB (A) | 52 m³/h | 7 W |

1 The ceramic exchanger

9 LED Display


6 Remote Control

7 Automatic shutters

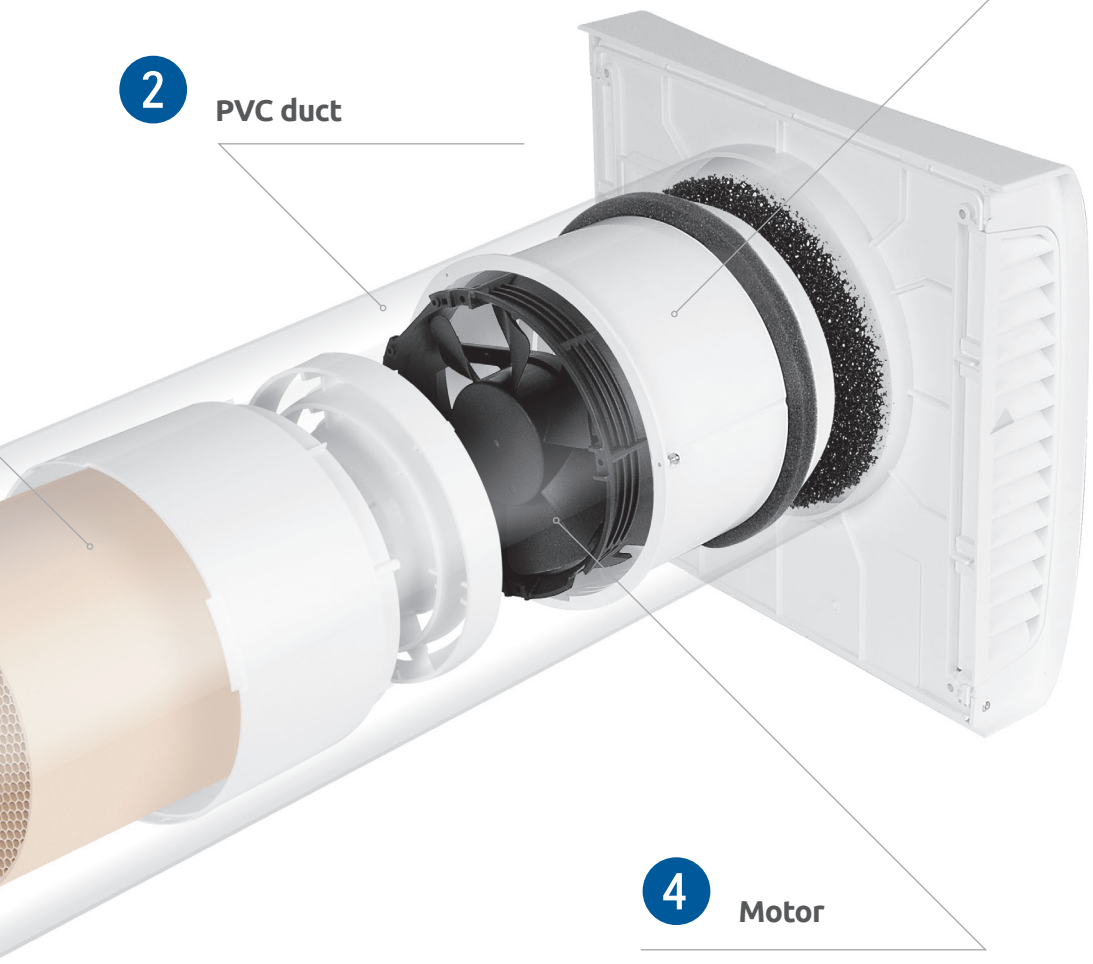
30 000 H

IP22
TIGHTNESS CLASS

2 YEAR
WARRANTY

3 Housing made of ABS

2 PVC duct

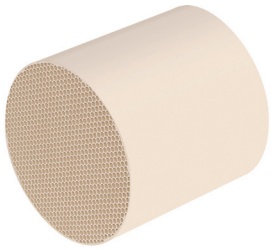


4 Motor

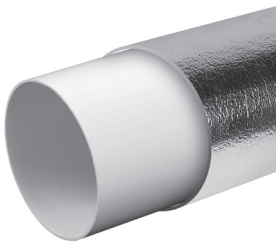
5 Filters

8 Temperature and humidity sensor

# 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.


**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
Automatic change of air flow direction

**TIMER** mode

**HUMIDITY** mode

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

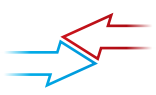

**SYNCHRONIZATION**
In the case of the „Master" device, it starts working in synchronization of all paired „Slave" devices.

**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.



**RECUPERATION mode**
The air flow direction is changed automatically based on the measurement temperature.

**RECUPERATION mode**
The flow direction is changed automatically based on the measurement temperature.

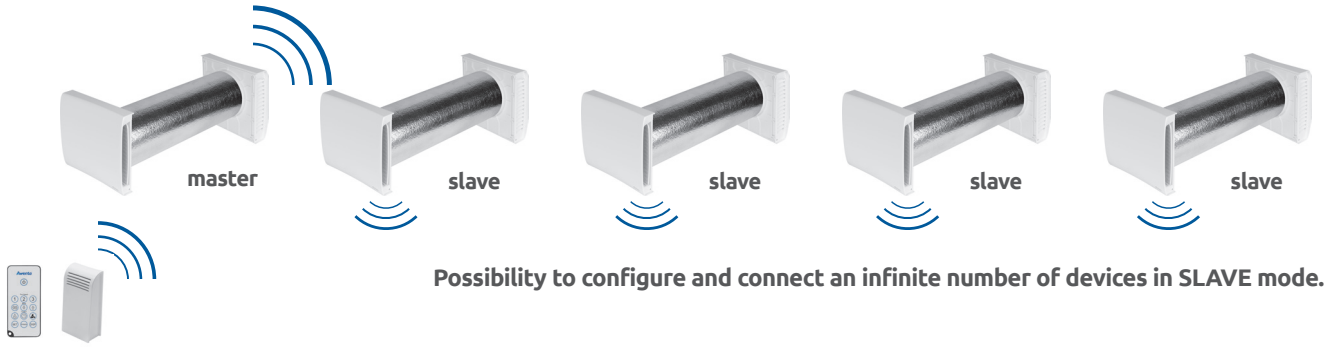
**HUMIDITY mode**
The speed depends on the settings and currently measured humidity.

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

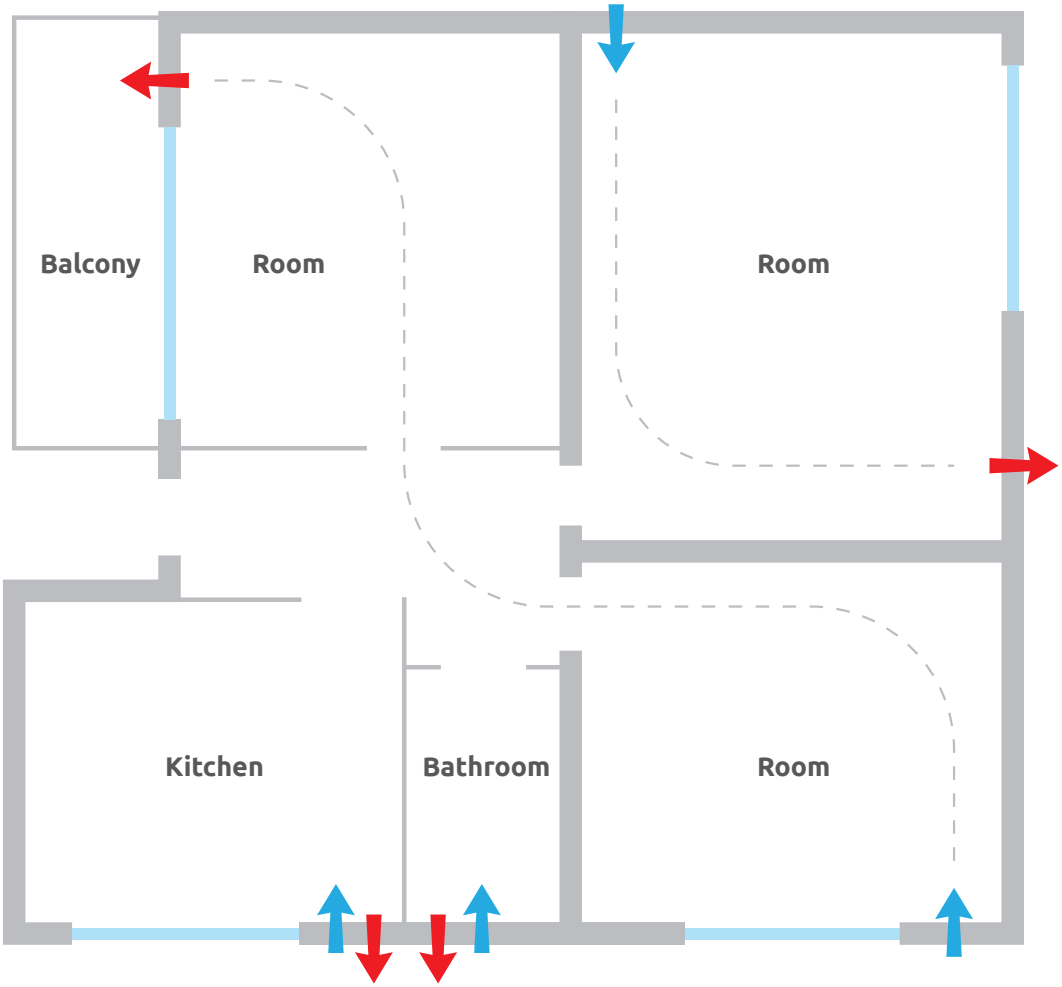
**NIGHT (silent) mode**
The night mode is activated at the user-set clock time, reducing the efficiency of the device.

# 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.




**Possibility to configure and connect an infinite number of devices in SLAVE mode.**

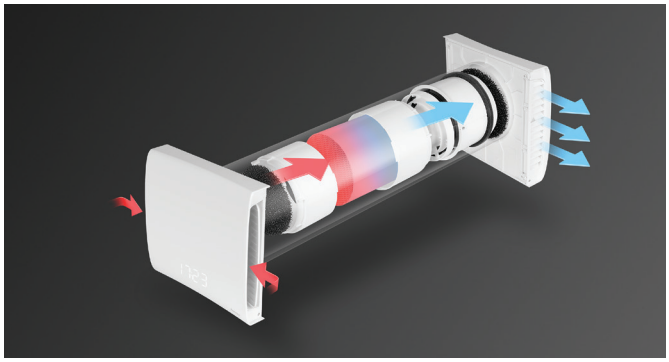


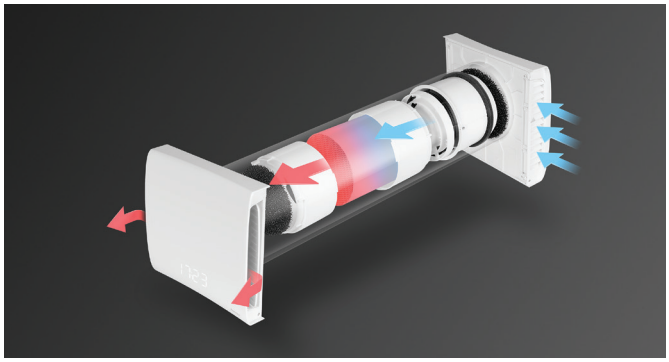

**An example of AHR devices arrangement**

30 000 H

IP22 TIGHTNESS CLASS

2 YEAR WARRANTY





**EXHAUST**

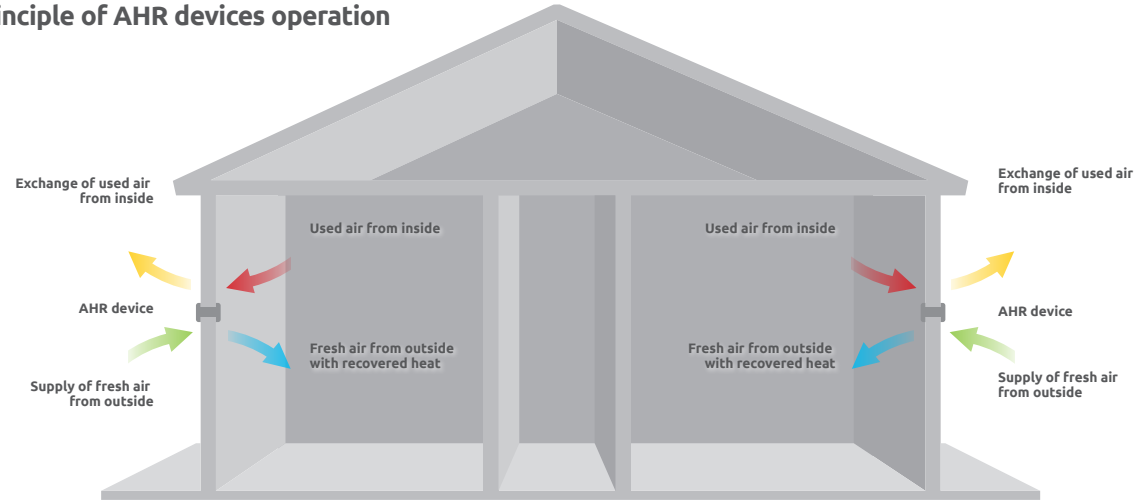
During exhaust operation, the heat is stored in a ceramic heat exchanger. After the exchanger is completely warmed up, it automatically changes the direction of operation.

**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

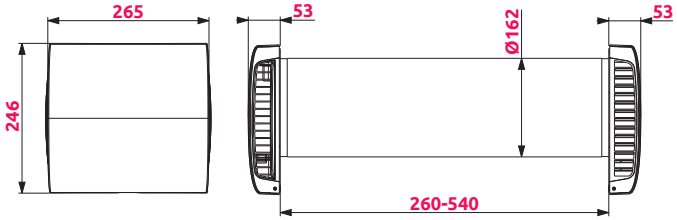

Timer

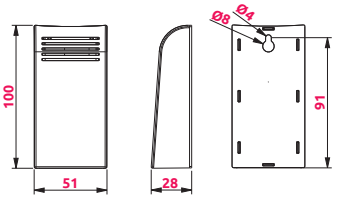

Humidity sensor


Ball bearings


4 rawlplugs 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.

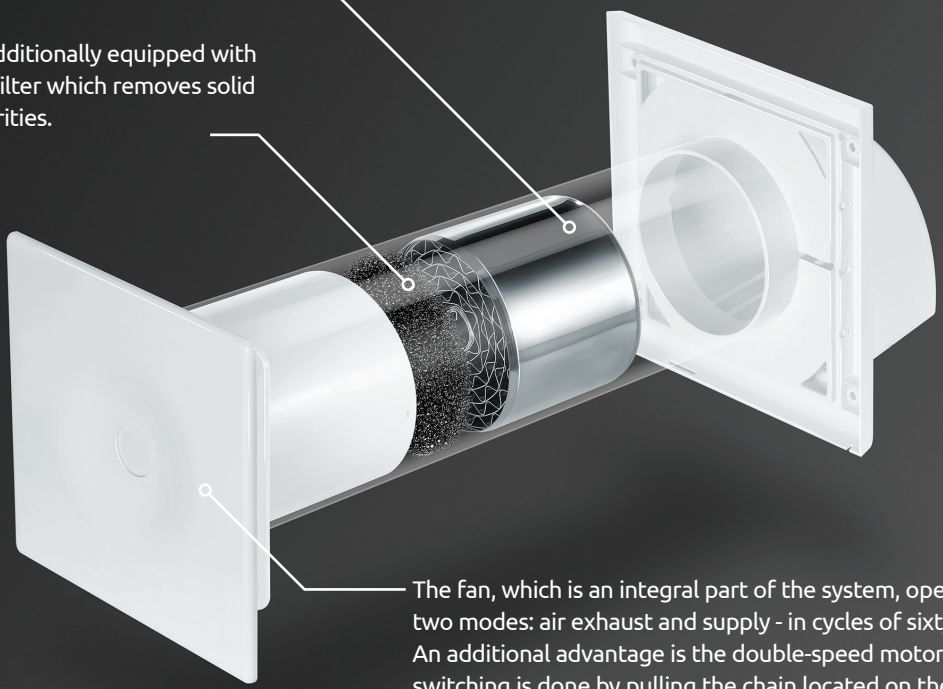
Heat recovery gives the posibility to limit heat losses caused by room ventilation. The task of the recuperator is therefore to recover heat from the exhaust air from the room in which it is installed.

| | | | | |
|---|---|---|---|---|
| Ø100 | I (min.) | 32 dB (A) | 30 m³/h | 1,5 W |
| | II (max) | 36 dB (A) | 45 m³/h | 2 W |
| Ø125 | I (min.) | 39 dB (A) | 50 m³/h | 3 W |
| | II (max) | 42 dB (A) | 70 m³/h | 4,5 W |

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.



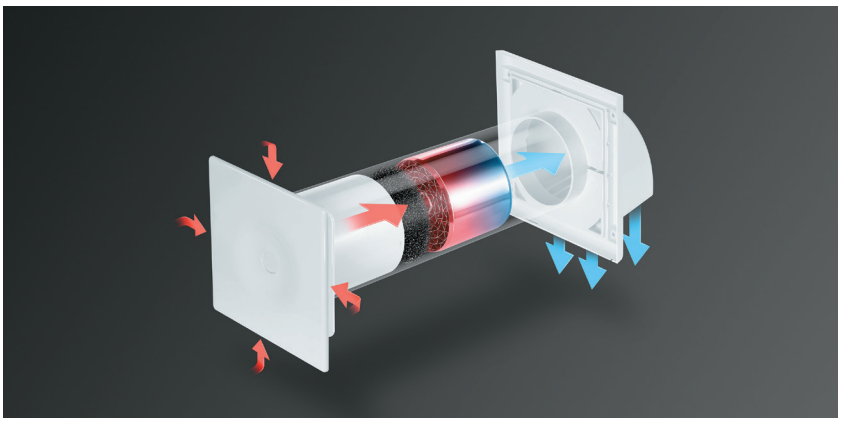
The fan, which is an integral part of the system, operates in two modes: air exhaust and supply - in cycles of sixty seconds. An additional advantage is the double-speed motor, and gears switching is done by pulling the chain located on the fan body (HRV100 / HRV125) or using the buttons on the remote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

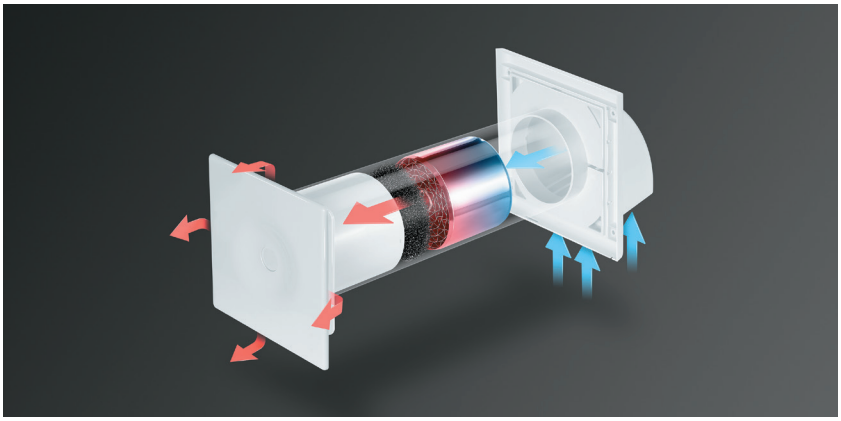
IPX4 TIGHTNESS CLASS

2 YEAR 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

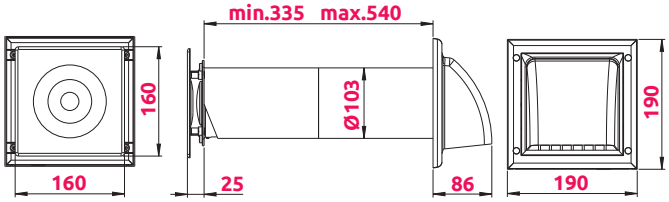
Terminal block

2 speed

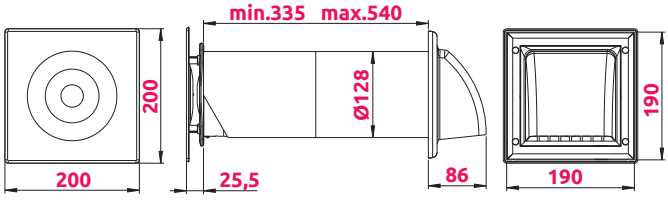
Remote control

## DIMENSIONS

Ø100




Ø125




| | INDEX | | | |
|---|---|---|---|---|
| ø100 | HRV100 | ● | | ● |
| | HRV100P | ● | ● | ● |
| ø125 | HRV125 | ● | | ● |
| | HRV125P | ● | ● | ● |

Ball bearings

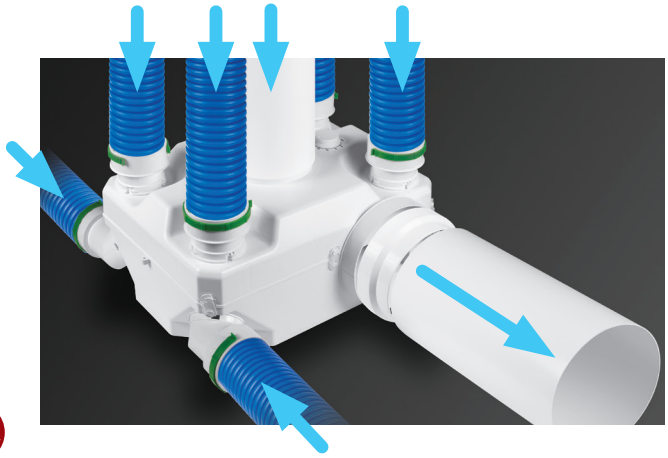
8 rawlplugs and screws

# CVU

THREE SPEED VARIANTS

IPX2 TIGHTNESS CLASS

2 YEAR WARRANCY

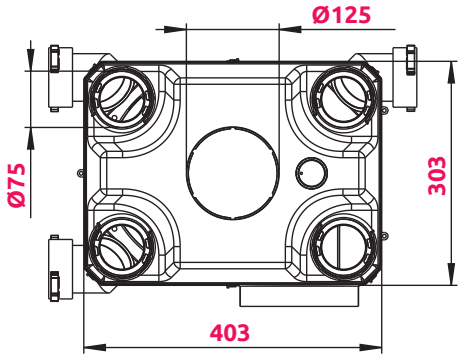


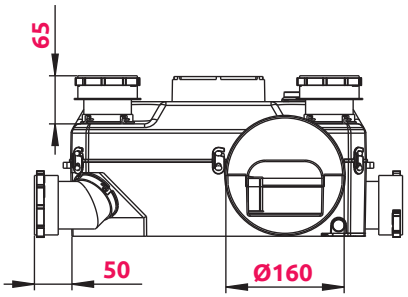
| | | | |
|---|---|---|---|
| 1 | 44 dB (A) | 435 m³/h | 54 W |
| 2 | 49 dB (A) | 495 m³/h | 55 W |
| 3 | 56 dB (A) | 535 m³/h | 60 W |

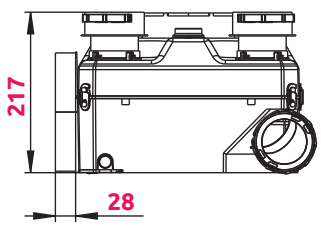
The CVU400 central fan is designed for the continuous and quiet ventilation of many rooms at the same time. It can be used in single-family houses and flats in multi-family buildings, as well as in conference rooms, offices and public buildings. The unit is equipped with an energy-saving motor, which enables operation at three performance levels. Its construction allows the connecting of up to seven inlet ducts with a diameter of Ø75 mm, and one Ø125 mm duct intended for connecting a 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.



## EQUIPMENT


Ball bearings


Terminal block


Rawlplug


Cord


Knob


Junction box


Switch


Humidity sensor


Timer

| INDEX |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
| CVU400 | ● | ● | ● | | | | | |
| CVU400HT | ● | ● | ● | ● | ● | ● | ● | ● |

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