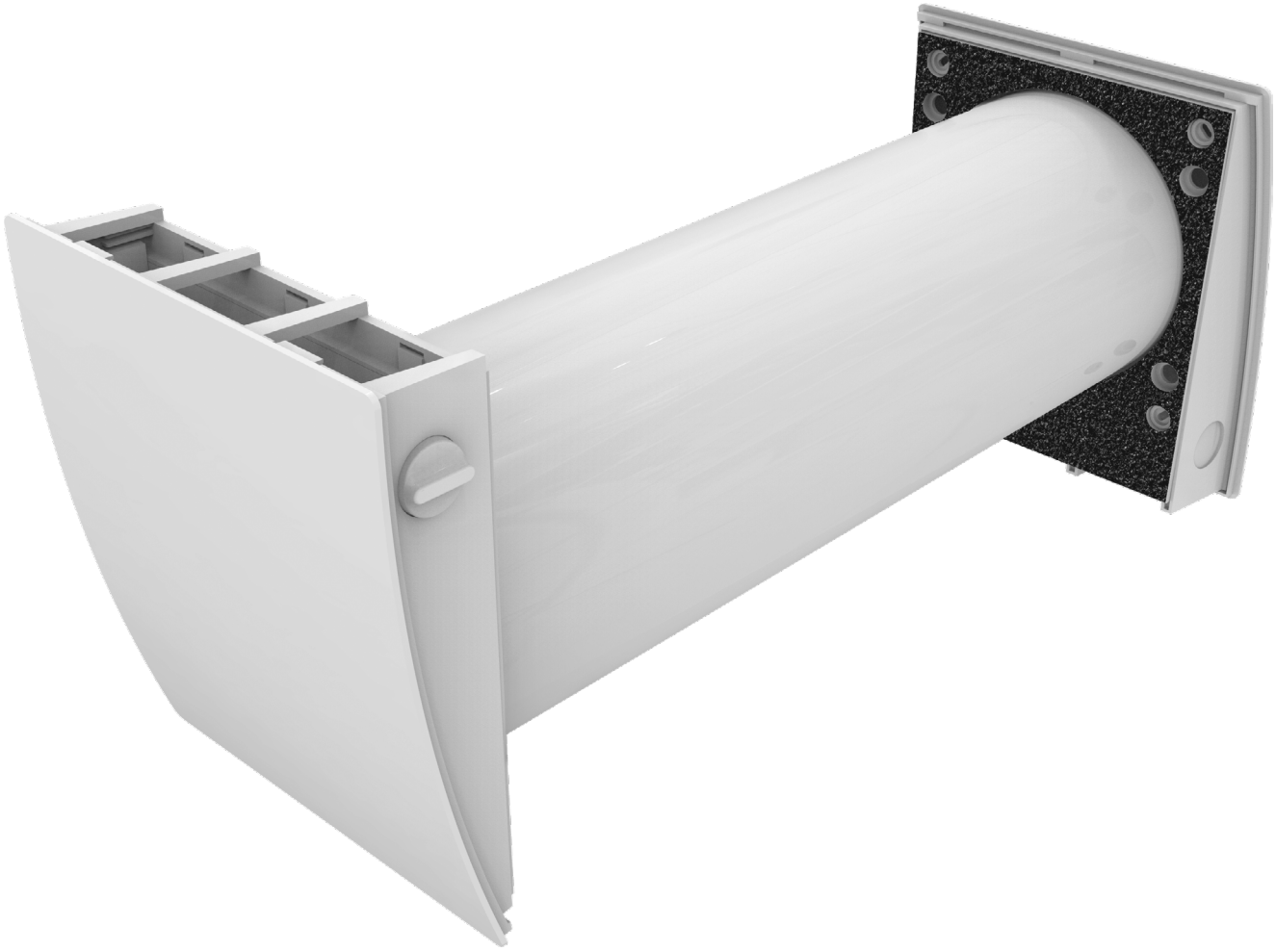


SINGLE-ROOM REVERSIBLE ENERGY RECOVERY VENTILATOR

VENTO Eco Standard
VENTO Eco Comfort
VENTO Eco Standard Pro
VENTO Eco Comfort Pro
VENTO Eco2 Comfort Pro
VENTO Eco2 Standard Pro

EN *USER'S MANUAL*

BLAUBERG

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This user's manual is a main operating document intended for technical, maintenance, and operating staff.
The manual contains information about purpose, technical details, operating principle, design, and installation of the VENTO Eco(2) Standard/Comfort (Pro) unit and all its modifications.
Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

SAFETY REQUIREMENTS

All operations described in this manual must be performed by qualified personnel only, properly trained and qualified to install, make electrical connections and maintain ventilation units.
Do not attempt to install the product, connect it to the mains, or perform maintenance yourself. This is unsafe and impossible without special knowledge.
Disconnect the power supply prior to any operations with the unit.
All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical norms and standards must be observed when installing and operating the unit.
Disconnect the unit from the power supply prior to any connection, servicing, maintenance, and repair operations.
Connection of the unit to power mains is allowed by a qualified electrician with a work permit for the electric units up to 1000 V after careful reading of the present user's manual.
Check the unit for any visible damage of the impeller, the casing, and the grille before starting installation. The casing internals must be free of any foreign objects that can damage the impeller blades.
While mounting the unit, avoid compression of the casing! Deformation of the casing may result in motor jam and excessive noise.
Misuse of the unit and any unauthorised modifications are not allowed.
Transported air must not contain any dust or other solid impurities, sticky substances, or fibrous materials.
Do not use the unit in a hazardous or explosive environment containing spirits, gasoline, insecticides, etc.

Do not close or block the intake or extract vents in order to ensure the efficient air flow.
Do not sit on the unit and do not put objects on it.
The information in this user's manual was correct at the time of the document's preparation.
The Company reserves the right to modify the technical characteristics, design, or configuration of its products at any time in order to incorporate the latest technological developments.
Never touch the unit with wet or damp hands.
Never touch the unit when barefoot.
Do not install or use the product until all construction and finishing work has been completed in the room where it is to be installed.
BEFORE INSTALLING ADDITIONAL EXTERNAL DEVICES, READ THE RELEVANT USER MANUALS.
This unit is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the unit by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the unit.
This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
Cleaning and user maintenance shall not be done by children without supervision.
Children shall not play with the appliance.

Connection to the mains must be made through a disconnecting device, which is integrated into the fixed wiring system in accordance with the wiring rules for design of electrical units, and has a contact separation in all poles that allows for full disconnection under overvoltage category III conditions.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a safety hazard.

Ensure that the unit is switched off from the supply mains before removing the guard.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.

The appliance may adversely affect the safe operation of appliances burning gas or other fuels (including those in other rooms) due to back flow of combustion gases. These gases can potentially result in carbon monoxide poisoning. After installation of the unit the operation of flued gas appliances should be tested by a competent person to ensure that back flow of combustion gases does not occur.



THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.

DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC WASTE.

PURPOSE

The ventilator is designed to ensure continuous mechanical air exchange in flats, cottages, hotels, cafés and other domestic and public premises. The ventilator is equipped with a heat exchanger that enables supply of fresh filtered air heated by recovering heat from extract air.
The ventilator is designed for installation on outdoor walls.
The ventilator is rated for continuous operation.

DELIVERY SET

	VENTO Eco Standard	VENTO Eco Comfort	VENTO Eco Standard Pro	VENTO Eco Comfort Pro	VENTO Eco2 Standard Pro	VENTO Eco2 Comfort Pro
Air duct	1	1	1	1	2	2
Sound-absorbing material	1	1	1	1	2	2
Assembled cartridge	1	–		–	2	–
Assembled fan unit	–	1	–	1	–	2
Assembled heat exchanger unit	–	1	–	1	–	2
Indoor unit	1	1	1	1	2	2
Outer hood	1	1	1	1	2	2
Control panel	–	–	1	1	1	1
Fastening set	1 pack	1 pack	1 pack	1 pack	2 packs	2 packs
Junction box	–	–	1	1	1	1
User's manual	1	1	1	1	1	1
Packing box	1	1	1	1	1	1

DESIGNATION KEY

VENTO Eco2 Comfort Pro L07 S10

Outdoor hood model
_ – plastic outer ventilation hood AH-11
S2 – metal hood for thin walls AH-S
S10 – plastic outer ventilation hood AH-10
S17 – plastic hood for thin walls AH-17

Air duct length
_ – 500 mm
L035 – 350 mm
L07 – 700 mm

Control panel
_ – No control panel
Pro – SE3 control panel

Cartridge modification
Standard – solid cartridge
Comfort – split cartridge

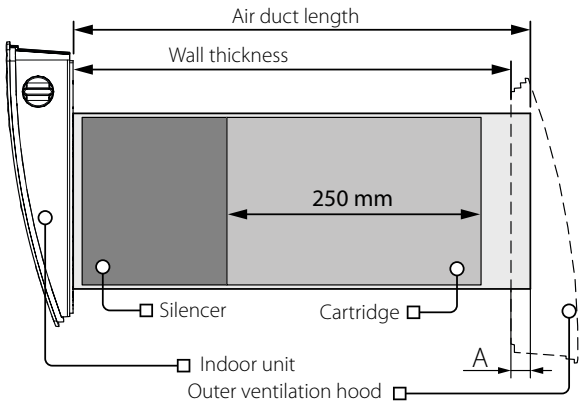
Ventilator series
VENTO Eco : series with one ventilator and one control panel
VENTO Eco2: series with two ventilators and one control panel

TECHNICAL DATA

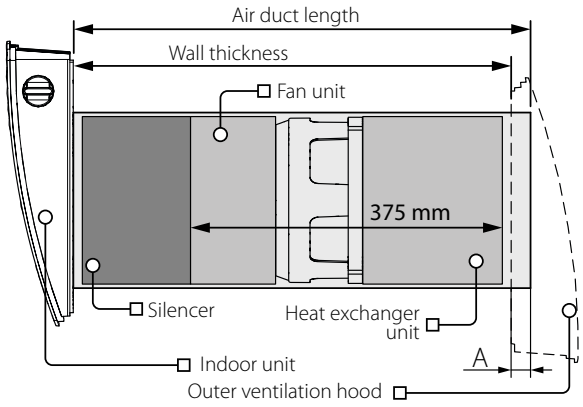
The temperature in the room where the indoor unit of the ventilator is installed must be in the range from +1 ˚C to +40 ˚C with relative air humidity up to 65 % (no condensation buildup).
If the conditions of use of the ventilator are outside the specified limits, turn off the ventilator.
Provide fresh air supply through the windows.
The temperature of the transported air should be in the range from -15 ˚C to +40 ˚C.
The unit is rated as a class II electric appliance.
Ingress protection rating against access to hazardous parts and water ingress is IP24.
The unit design is constantly being improved, thus some models may be slightly different from those described in this manual.

The air duct length and the model of the hood depends on the ventilator model (see the "Designation key" section on page 4).
The overall dimensions of the outer ventilation hood and the distance A are stated in its user's manual.
A diagram of the location of the ventilator's nodes inside the wall is presented below.

VENTO Eco Standard

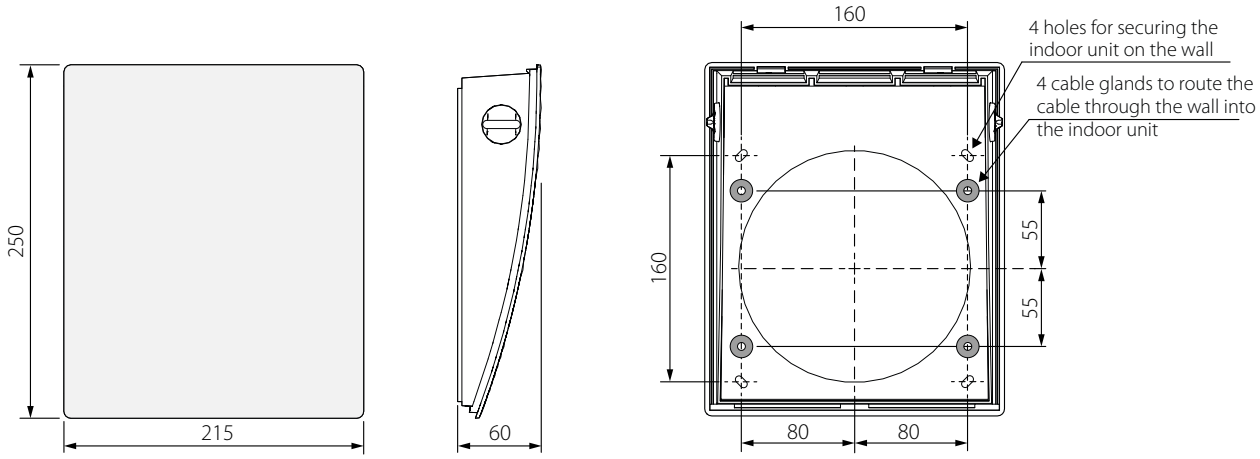


VENTO Eco Comfort



	Minimum wall thickness	
	With an AH-11/an AH-10 hood	With an AH-S/AH-17 hood
VENTO Eco Standard	250	150
VENTO Eco Comfort	285	185

OVERALL DIMENSIONS OF THE INDOOR UNIT [MM]



DESIGN AND OPERATING PRINCIPLE

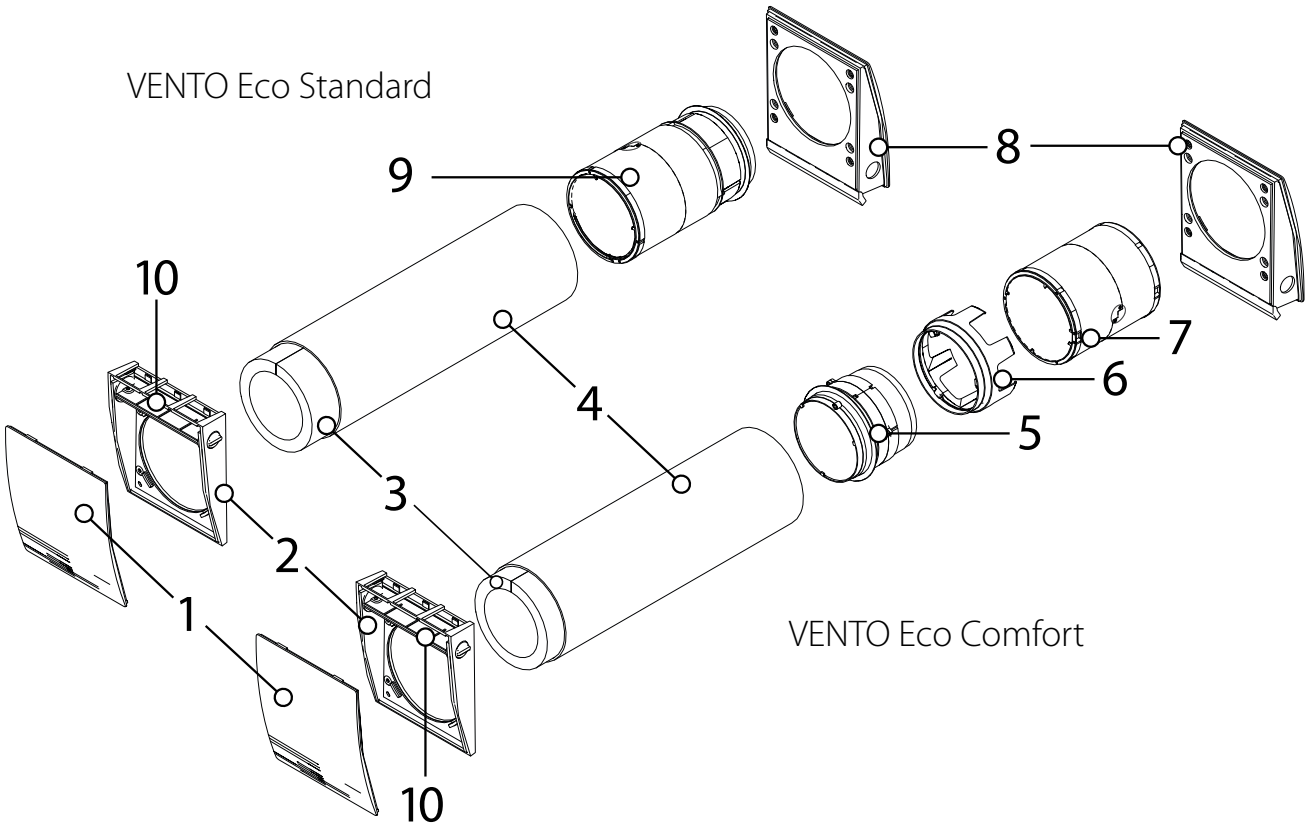
The ventilator consists of an indoor unit with a decorative front panel, a cartridge, an air duct with a sound absorbing layer and an outer ventilation hood.

The fan and heat exchanger are the core functioning part of the ventilator. In **Standard** models, these elements are combined into a single non-separable unit, a "cartridge." In **Comfort** models, the fan unit and heat exchanger unit are split. To ensure the specified distance between them, a special spacer is installed. There are also two air filters that provide coarse air purification and prevent the ingress of dust and foreign objects into the regenerator and fan.

The indoor unit is equipped with a manually actuated air damper.

Warning! Closing the air damper does not turn off the ventilator; it only blocks the air flow. The outer protection grille or outer ventilation hood is used to prevent direct ingress of water and coarse foreign objects into the ventilator.

VENTILATOR DESIGN



1	**Front part of the indoor unit** Fulfills the decorative function. It is the part of indoor unit's design that directs the air flow upward.
2	**Back part of the indoor unit** Used to secure the indoor unit to the wall. Contains a rotary air damper to shut off the air duct in case of prolonged downtime of the ventilator.
3	**Silencer** A layer of sound-absorbing material for attenuation of noise generated during the ventilator operation.
4	**Air duct** Plastic air duct.
5	**Assembled fan unit** Generates air flow.
6	**Filter holder**
7	**Assembled heat exchanger unit** Provides heat recovery.
8	**Outer ventilation hood** Prevents ingress of water and foreign objects into the ventilator.
9	**Cartridge** A structure consisting of a fan, regenerator and filters. Generates air flow, provides heat recovery and air purification.
10	**Rotary air damper**

VENTILATOR OPERATION MODES

The ventilator has three operation modes:

Ventilation: the ventilator runs either in the air exhaust or air supply mode at a set speed.
In this mode, if two ventilators are available, one of them supplies air while the other one extracts it.

Regeneration – the ventilator runs in two cycles – heat and humidity recovery, 70 seconds each.

- Interval I. Warm stale air is extracted from the room and flows through the ceramic heat exchanger, which gradually absorbs heat and humidity. In 70 seconds, as the ceramic heat exchanger warms up, the ventilator is switched to supply mode.
- Interval II. Fresh intake air from outside flows through the ceramic heat exchanger, absorbs accumulated moisture and heat and warms up. In 70 seconds, as the heat exchanger cools down, the ventilator is switched back to air extraction mode and the cycle repeats. If two ventilators are installed, they operate with opposite rotation directions in this mode. While one ventilator supplies air, the other one extracts it.

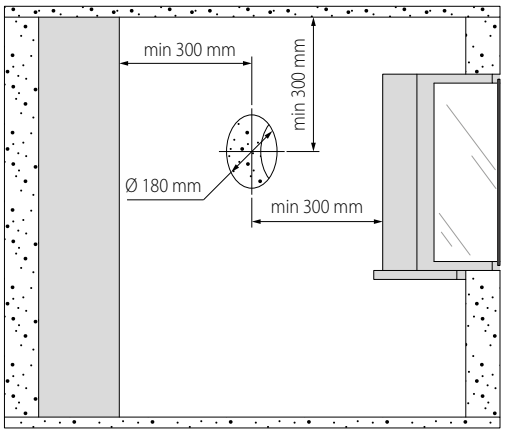
MOUNTING AND SET-UP

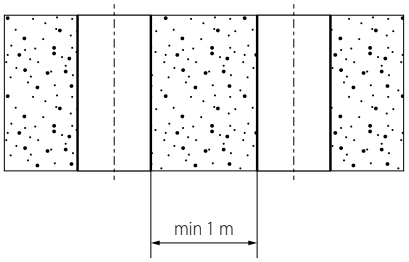
READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT.

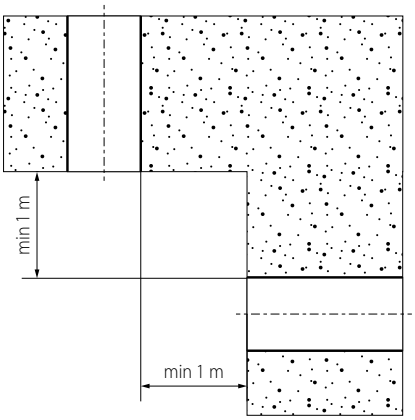
DO NOT BLOCK THE AIR DUCT OF THE INSTALLED VENTILATOR WITH DUST ACCUMULATING MATERIALS, SUCH AS CURTAINS, CLOTH SHUTTERS, ETC. AS IT PREVENTS AIR CIRCULATION IN THE ROOM.

MOUNTING THE VENTILATOR

1. Prepare mounting holes for the ventilators.
Prepare one or two holes through the external wall depending on the ventilator's delivery set.
It is recommended to mount the ventilators as far away from each other within the premise as possible for ventilation to be effective.
The size of the hole and minimum distances to obstacles like the walls, ceiling or windows, as well as the minimum distances between the ventilators are specified in the figure below.

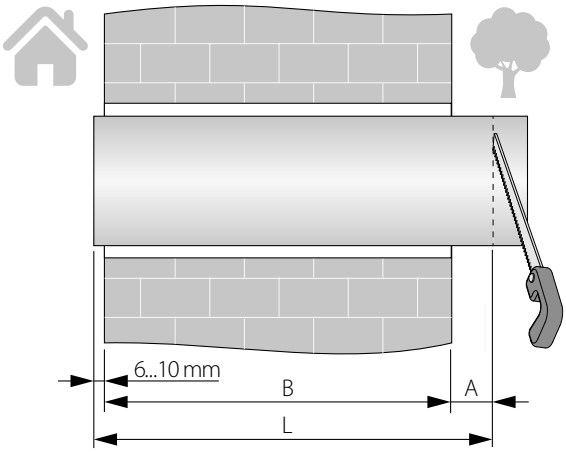




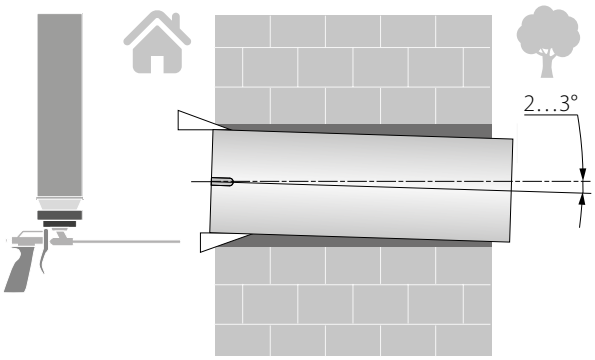


While preparing holes it is recommended to make preparations for layout of the cable to be connected.
Route the cables in from the wall facing one of the cable glands of the indoor unit's casing.

2. Prepare air ducts of the necessary length.
Measure the wall thickness B.
The length of the air duct should be L = B + A, where A is the protrusion length of the air duct from the outdoor side necessary for installing an outer grille or hood.
The distance A is stated in the mounting instruction for the outer ventilation hood.
Cut the air duct down to length L.



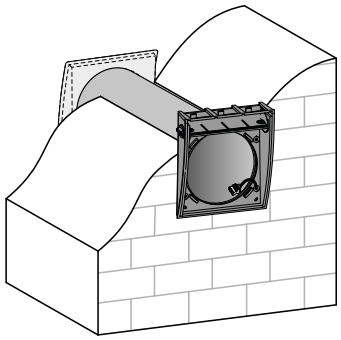
3. Insert the air duct into the wall at a slope downwards to the outside using the foam mounting wedges. Fill the gaps between the wall and the hole with a mounting foam.



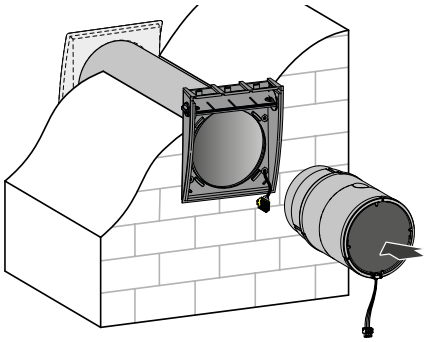
4. Install the outer ventilation hood.
The installation sequence of the outer ventilation hood is described in the respective installation instruction.

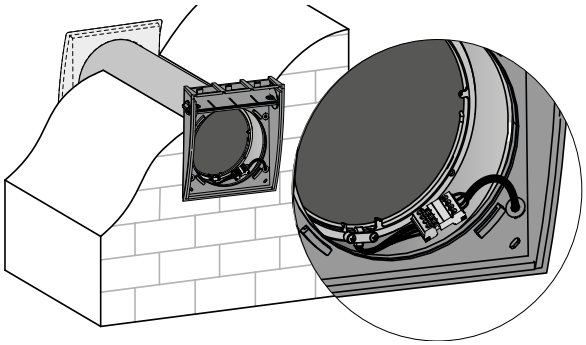
5. Secure the back part of the indoor unit by routing the cable through the cable gland.

6. Disconnect the terminal block from the cartridge cable and connect the cables from the control panel respectively, see the "Connection to power mains" section).

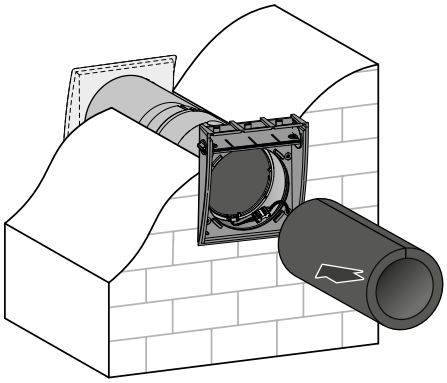


7. Insert the cartridge into the air duct. Connect the parts of the terminal block.

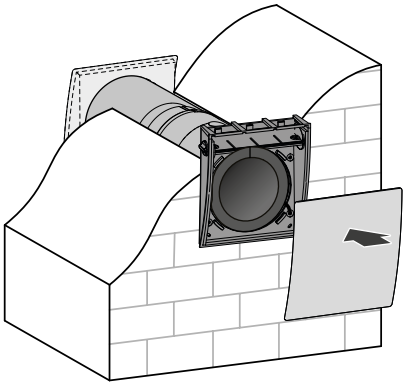




8. Lay the sound-absorbing material into the air duct.
Make sure the material's length matches the air duct.
Roll the layer of the sound absorbing material to match the air duct diameter. The protecting paper layer must be facing outward.
Insert the roll into the cartridge until it rests against it.
Remove the excess material.
Do not remove the protecting paper layer!



9. Install the front panel of the indoor unit.



CONNECTION TO POWER MAINS

POWER OFF THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.
THE UNIT MUST BE CONNECTED TO POWER SUPPLY BY A QUALIFIED ELECTRICIAN.
THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE MANUFACTURER'S LABEL.

ANY TAMPERING WITH THE INTERNAL CONNECTIONS IS PROHIBITED AND WILL VOID THE WARRANTY.

The ventilator is rated for connection to single-phase AC 100-240 V/50 (60) Hz power mains.
The routing of the cable is shown in the "Mounting and set-up" section.
The ventilator must be connected using durable, insulated and heat-resistant conductors (cables, wires) with a cross section of at least 0.5 - 0.75 mm^2 through an automatic circuit breaker and a magnetic trip integrated into the fixed wiring system.
The trip current of the automatic circuit breaker must be chosen based on the current consumed by the ventilator (see the table on page 5).
The actual conductor cross-section selection must be based on its type, maximum permissible heating, insulation, length and installation method.

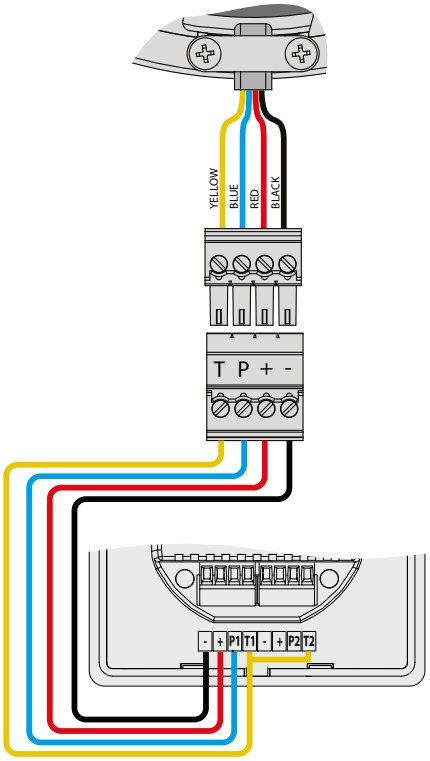
When selecting a signal cable, follow the guidelines below:
Use shielded wires at all times.
The cross sections of the wires must be chosen based on their length; refer to the table presented below.

Cable length [m]	Minimum wire cross section in the cable [mm^2]
< 5	0.25
< 10	0.5
< 15	0.75
< 30	1.5

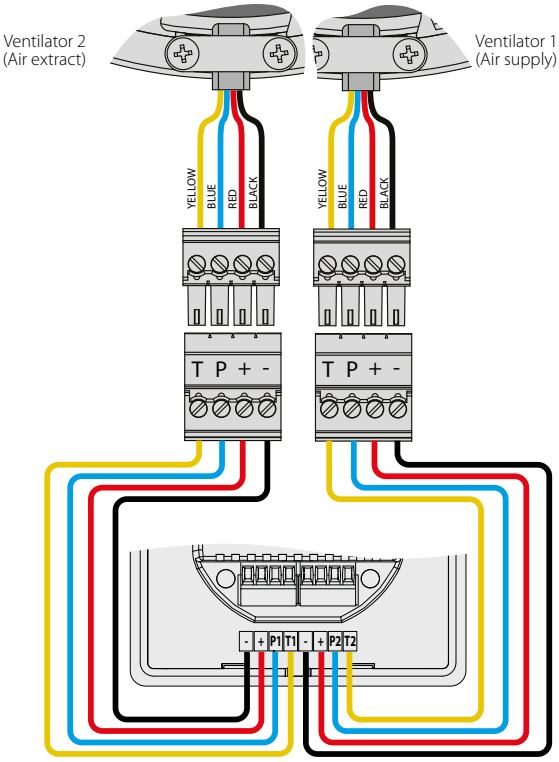
Signal cable must be laid in accordance with the requirements of the relevant regulatory documents.
Connect the shielding of the signal cable to the "–" terminals of the control panel and the fan.
Use copper wires for all the electric connections!
The ventilator is connected to power mains in compliance with the external wiring diagram.

Wiring diagram for connecting ventilators to the SE3 control panel

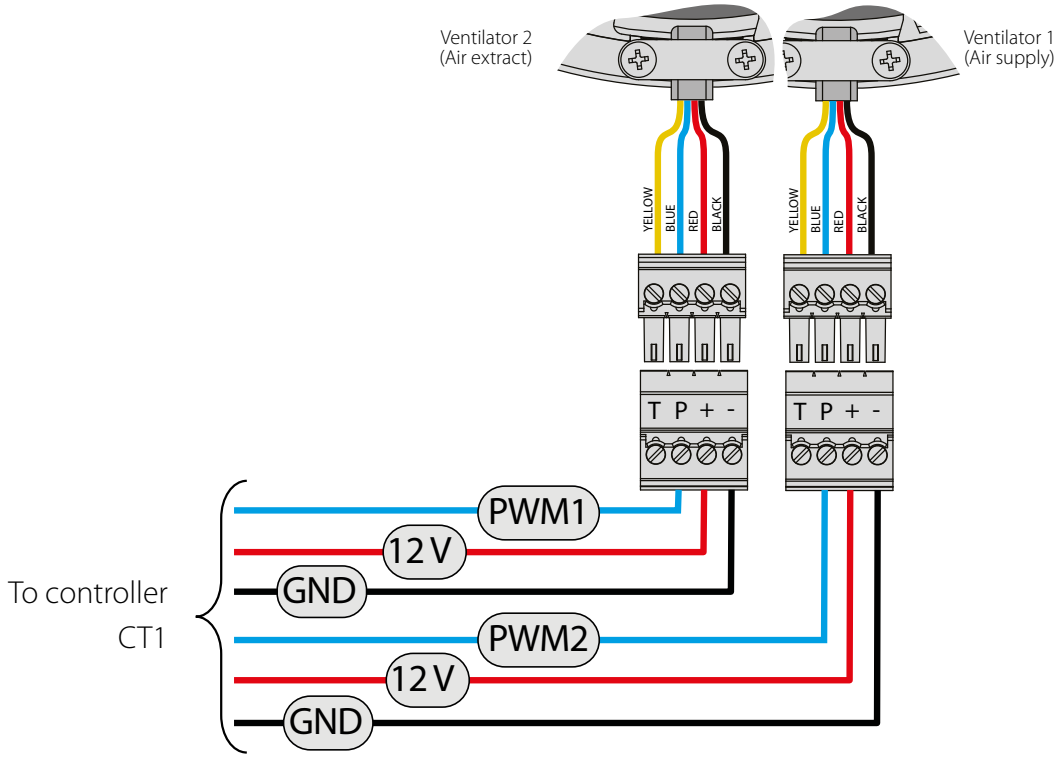
VENTO Eco Standard Pro,
VENTO Eco Comfort Pro



VENTO Eco2 Standard Pro,
VENTO Eco2 Comfort Pro

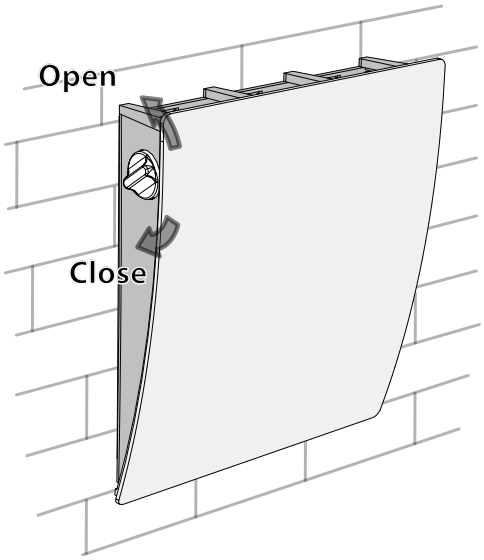


Wiring diagram for connecting VENTO Eco Standard and VENTO Eco Comfort ventilators to the Modular automation system CT1 Vento Eco



CONTROLLING THE VENTILATOR

The functionality of the control panels is described in detail in their respective user's manuals.



AIR FLOW SHUT-OFF

The indoor unit contains a rotary air damper.
Turn one of the handles on the side walls of the indoor unit it stops to open or close the air duct, as shown in the figure.
The vertical position of the handle corresponds to OPEN position, the horizontal one – to CLOSED position.

Warning! Opening or closing the air damper does not turn the ventilator on or off!

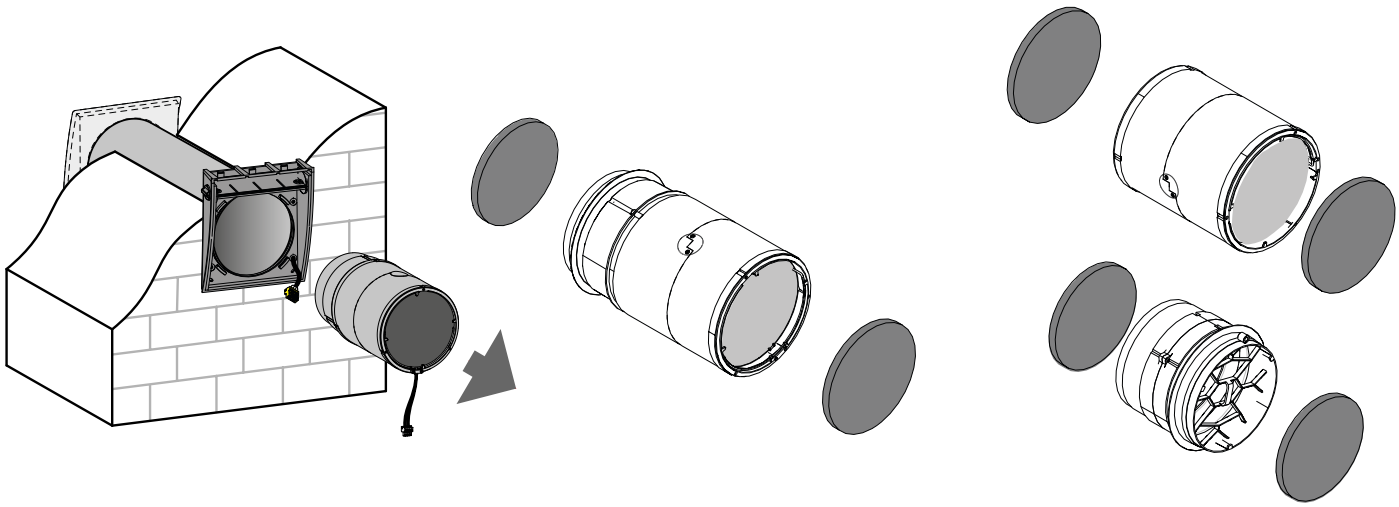
TECHNICAL MAINTENANCE

DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!

MAKE SURE THE UNIT IS DISCONNECTED FROM POWER MAINS BEFORE REMOVING THE PROTECTION.

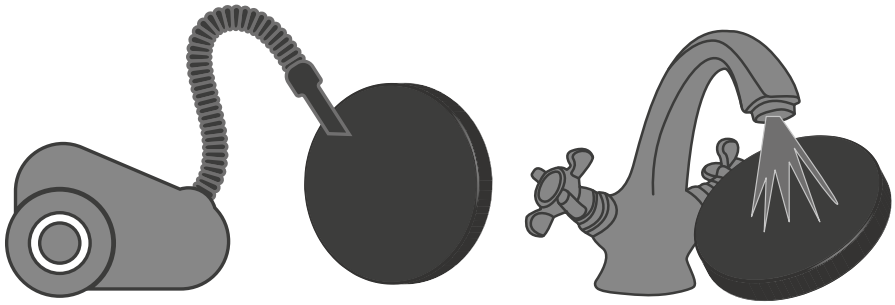
Maintenance of the ventilator means regular cleaning of the ventilator surfaces of dust and cleaning and replacement of the filters. To access the main assemblies for service, follow these steps:

Remove the front part of the indoor unit. Disconnect the connector and pull the cartridge out of the air duct by pulling on its cord. Pull the filters out of the cartridge.



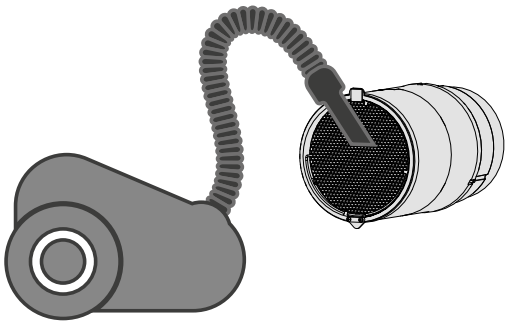
Clean the filters as often as required, but at least 3 times a year.

- After the preset filter time has elapsed (90 days), the filter replacement indicator appears on the control panel's screen.
- Wash the filters and leave them to dry. Then reinstall the dry filters back into the duct.
- Vacuum cleaning is allowed.
- Reassemble the ventilator's components in reverse order.
- The procedure of resetting the filter maintenance timer is described in the user's manuals of the control panels.
- The filter service life is 3 years.
- For new filters contact the Seller.



Some dust may accumulate on the regenerator and the fan even in case of regular maintenance of the filters.

- Subject the regenerator to regular cleaning to ensure high heat recovery efficiency.
- Vacuum clean the regenerator not less than once a year.



TROUBLESHOOTING

Possible faults and troubleshooting

Problem	Possible reasons	Troubleshooting
When switching on the ventilator the fan will not start; information is not displayed on the touchscreen of the control panel, and it does not respond to tapping.	No power supply.	Contact a qualified electrician to ensure proper power supply connection and troubleshoot the connection error if any.
The control panel's screen displays an alarm signal.	Jammed motor due to clogged impeller.	Turn the ventilator off. Clean the impeller to fix the motor jam. Restart the ventilator.
	No cable connection between the fan motor and the control panel.	Turn the ventilator off. Contact the Seller.
Circuit breaker tripping when the ventilator starts running.	Overcurrent as a result of short circuit in the electric circuit.	Turn the ventilator off. Contact the Seller.
Low air flow.	Low set fan speed.	Set higher speed.
	The filters, the fan or the regenerator are clogged.	Clean or replace the filter. Clean the fan and the heat exchanger.
Increased noise, vibration.	The impeller is clogged.	Clean the impeller.

STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from +5 ˚C (+41 ˚F) to +40 ˚C (+104 ˚F) and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapors and chemical mixtures provoking corrosion, insulation, and sealing deformation.
- Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.
- Follow the handling requirements applicable for the particular type of cargo.
- The unit can be carried in the original packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

MANUFACTURER'S WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Compatibility (EMC) Directive 2014/30/EU of the European Parliament and of the Council, Low Voltage Directive (LVD) 2014/35/EU of the European Parliament and of the Council and CE-marking Council Directive 93/68/EEC. This certificate is issued following test carried out on samples of the product referred to above.
The manufacturer hereby warrants normal operation of the unit for 24 months after the retail sale date provided the user's observance of the transportation, storage, installation, and operation regulations. Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation, the user is entitled to get all the faults eliminated by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation. The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

The warranty repair does not include:

- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair, the user must provide the unit, the user's manual with the purchase date stamp, and the payment paperwork certifying the purchase. The unit model must comply with the one stated in the user's manual. Contact the Seller for warranty service.

The manufacturer's warranty does not apply to the following cases:

- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismounted by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- Damage to the unit casing and internal components caused by the user.
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Unit misuse.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment paperwork certifying the unit purchase.



FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT



USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP

CERTIFICATE OF ACCEPTANCE

Unit Type	Single-room reversible energy recovery ventilator
Model	
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

SELLER INFORMATION

Seller	
Address	
Phone Number	
E-mail	
Purchase Date	
This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted.	
Customer's Signature	

Seller's Stamp

INSTALLATION CERTIFICATE

The _____ unit is installed pursuant to the requirements stated in the present user's manual.		
Company name		
Address		
Phone Number		
Installation Technician's Full Name		
Installation Date:	**Signature:**	
The unit has been installed in accordance with the provisions of all the applicable local and national construction, electrical and technical codes and standards. The unit operates normally as intended by the manufacturer.		
Signature:		

Installation Stamp

WARRANTY CARD

Unit Type	Single-room reversible energy recovery ventilator
Model	
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	

Seller's Stamp



BLAUBERG

Manufacturer: Ventilation Systems LLC,
Ukraine, Kyiv, 1 M. Kotsyubynskoho Street
Address of production facilities:
Ukraine, Kyiv Region, Fastiv District, Boyarka, 36 Sobornosti Street

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