SINGLE-ROOM VENTILATION

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CATALOGUE 2018

Single-room air handling units

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FRESHBOX 60

SINGLE-ROOM AIR HANDLING UNITS

Features

- Heat recovery single-room air handling unit for supply and exhaust ventilation.
- Efficient energy-saving single-room ventilation of flats, houses, cottages, social and commercial premises.
- Ideal solution for simple and efficient ventilation of new or refurbished premises.
- Heat recovery minimises ventilation heat losses.
- Controllable air exchange creates individually set microclimate.

Air flow:
up to 60 m³/h
17 l/s

Heat recovery efficiency:
up to 79 %

Power:
from 4.2 W

Noise level:
from 22 dBA

EC motor · ErP 2016 · ErP 2018

Design

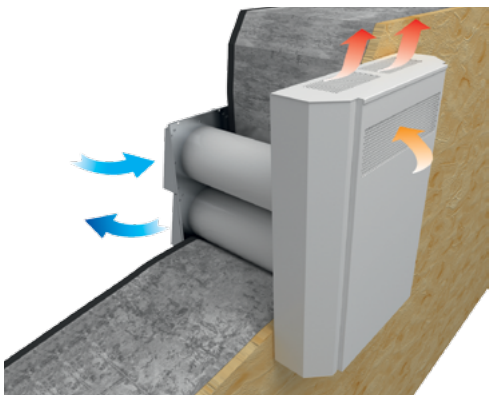
- The casing is made of polymer coated steel plates, internally filled with 15 mm thermal and sound insulation layer of PE foam.
- The hinged front panel of the casing ensures easy access to the internals for maintenance.
- The unit is powered via an integrated power pulser with a wide range supply voltage range from 100 to 240 V and frequency from 50 to 60 Hz.
- The unit is supplied with a power cord and a plug for connection to power supply.
- Compatible with round Ø125 mm air ducts.

Fans

- Axial fans with EC motors provide air supply and air extract.
- EC motor technologies meet the latest engineering demands for saving energy and for high-efficient ventilation.
- Low energy demand due to implemented EC technologies.
- The fan motors are equipped with a built-in thermal overheating protection and ball bearings for a long service life.

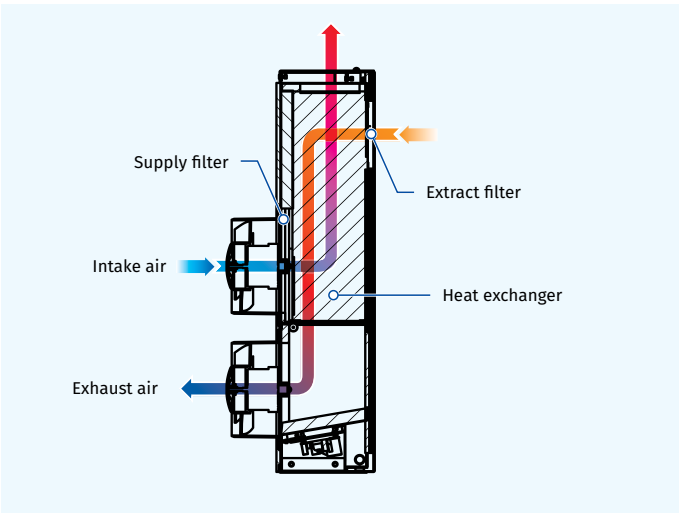
Mounting

- Install one **FRESHBOX 60** unit in each room requiring ventilation.
- One unit is able to provide efficient ventilation in a premise with area up to 25 m².
- Surface wall mounting on an outside wall from inside the premise.
- Suitable for wall thickness from 100 up to 500 mm.
- The hole spacing for Ø125 mm air ducts with a master plate included into the delivery set.
- Install the **AH FRESHBOX 60** outer hood (separate order, ref. accessories) on the outer wall.



Heat recovery

- The unit is equipped with a plate counter-flow plastic heat exchanger with a large surface area and high heat recovery efficiency.
- Heat recovery efficiency reaches 79 %.
- The air flows are fully separated within the heat exchanger. Odours and contaminants contained in the extract air are not transferred to the supply air flow.
- Heat recovery is based on extract air heat recovery for warming up of suply air. Extract air transfers most of its heat to the intake air flow. Heat recovery reduces heat losses in cold seasons. In summer the heat exchanger performs reverse and transfers a part of the accumulated coolness from the cooled extract air for cooling down of the intake air. This contributes to better performance of the air conditioner in ventilated premises.
- The integrated freezing protection system switches the supply fan off in the cold season in case of a freezing danger communicated by the temperature sensor to enable warming of the heat exchanger with the warm extract air flow. When a freezing danger is over the supply fan turns on and the unit reverts to the standard operation mode.



Air filtration

- Supply and extract air cleaning with two G2 filters.
- The filters ensure fresh air supply, free of dust, insects and prevent contamination of the unit components.

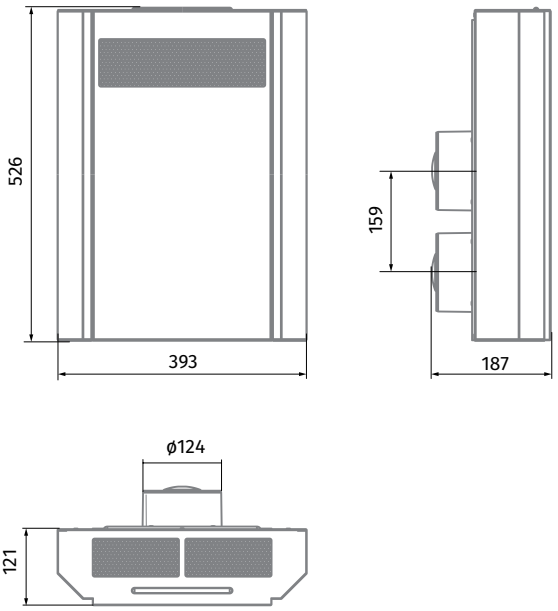
Control

- The unit is operated with an external sensor speed switch that enables switching the unit on/off as well as setting low, medium or high speed mode.

FRESHBOX 60

SINGLE-ROOM AIR HANDLING UNITS

Overall dimensions [mm]



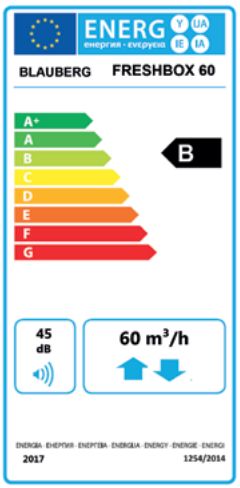
Technical data

Parameters	FRESHBOX 60		
Speed	1	2	3
Voltage [V / 50 (60) Hz]		100-240	
Power [W]	4.2	9.6	15.4
Current [A]	0.02	0.04	0.07
Maximum air flow [m³/h (l/s)]	30 (8)	45 (13)	60 (17)
RPM [min⁻¹]	1165	1720	2685
Noise level [dBA]	22	25	29
Transported air temperature [°C]		-20...+50	
Filter: extract/supply		G2	
Heat recovery efficiency [%]	79	74	70
Heat exchanger type		counter-flow	
Heat exchanger material		polystyrene	
SEC Class		B	
Weight [kg]		10.3	

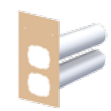
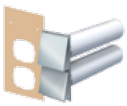
IP22

Designation key

Model	Nominal air flow [m³/h]
Freshbox	60



Accessories

Name		Description
MS1 FRESHBOX 60		cardboard master plate (2 items) plastic Ø125 mm, 500 mm long air duct (2 items)
MS2 FRESHBOX 60		cardboard master plate (1 item) plastic Ø125 mm, 500 mm long air duct (2 items) stainless steel outer hood
AH FRESHBOX 60		Stainless steel outer hood

FRESHBOX 100

SINGLE-ROOM AIR HANDLING UNITS

Features

- Efficient solution for supply and exhaust ventilation of enclosed spaces.
- Electric preheating or post-heating is available for cold climate conditions.
- Units with enthalpy heat exchangers are available for use in hot and wet climates.
- Low-energy EC fans.
- Silent operation.
- Supply air purification ensured by two built-in G4 and F8 filters (optionally H13).
- Upgradeable with an exhaust duct to provide air extraction from the bathroom.
- Easy installation.
- Compact size.

Air flow:
up to 100 m³/h
28 l/s

Heat recovery efficiency:
up to 96 %

Power:
from 12 W

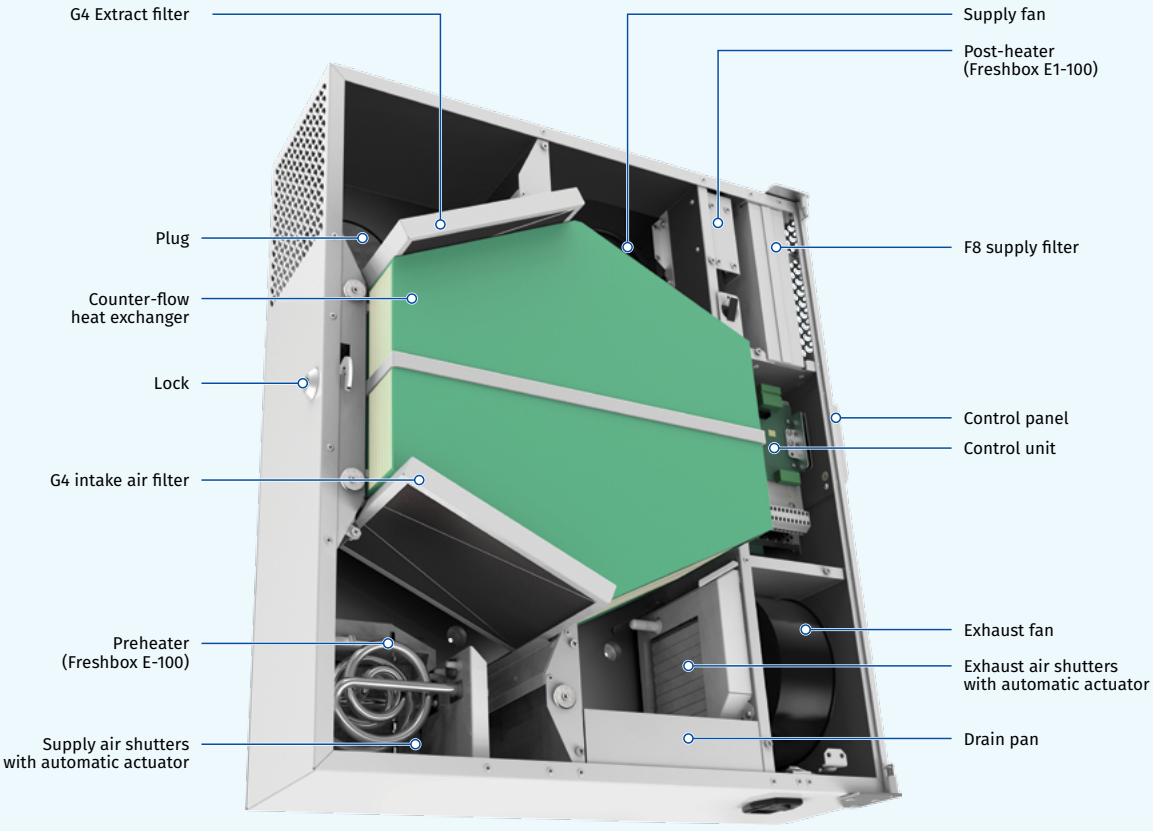
Noise level:
from 13 dBA

Design

- Polymer coated metal casing decorated with an acrylic front panel. Heat and noise insulation is ensured by a layer of 10 mm cellular synthetic rubber.
- The front panel provides convenient access for filter maintenance and has a lock for extra security.
- The unit has two Ø100 mm pipes for fresh air intake and stale air extraction outside. The third Ø100 mm pipe (included in the scope of delivery) can be additionally fitted to the unit to connect the exhaust air duct from the bathroom.

Fans

- The units feature efficient electronically commutated (EC) motors with an external rotor and impellers with forward curved blades. These state-of-the-art motors are the most advanced solution in energy efficiency today.
- EC motors are characterised with high performance and optimum control across the entire speed range. In addition to that the efficiency of electronically commutated motors reaches very impressive levels of up to 90 %.



Designation key

Model	Heater		Nominal air flow [m³/h]	Heat exchanger type	Colour
Freshbox	_: no heater E: preheater E1: post-heater	–	100	_: standard type ERV: enthalpy type	_: white casing Black: black casing

FRESHBOX 100

Air dampers

- The unit is equipped with supply and exhaust air dampers which activate automatically to prevent drafts while the unit is off.

Air filtration

- Supply air cleaning is provided by the G4 and F8 panel filters (PM2.5 > 75 %). To meet more stringent air purity requirements the F8 filter can be replaced with an H13 (PM2.5 > 95 %) (purchased separately). Exhaust air is cleaned by the panel filter G4.

Heaters

PREHEATING

- **Freshbox E-100** units are equipped with an electric preheater which protects the heat exchanger from freezing.

POST-HEATING

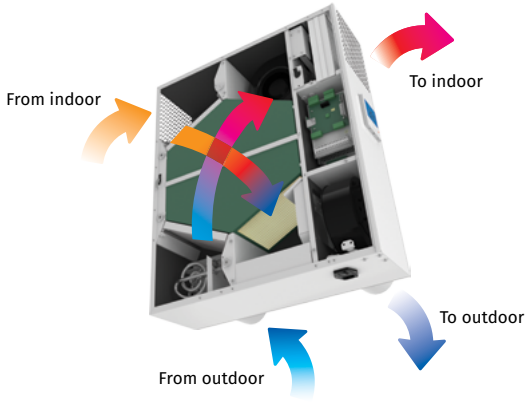
- **Freshbox E1-100** units feature an electric post-heater to raise the supply air temperature as necessary.

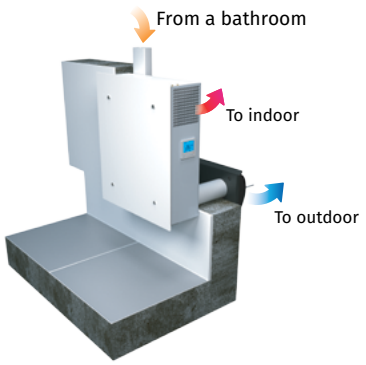
HEATER FOR CONDENSATE FREEZE PROTECTION

- Operation in a cold climate may result in condensate freezing in the exhaust air duct and the external hood. Therefore, it is recommended to install the **EH Freshbox 100** (optional) heater (purchased separately) to prevent icing.

Operating principle

- The cold outdoor air passes through the filters and the heat exchanger and then is delivered to the serviced space by the supply centrifugal fan.
- Warm stale air from indoors passes through the filter and the heat exchanger and is discharged outdoors by the centrifugal fan.
- The supply and exhaust air flows are fully separated which helps eliminate the possibility of odour or microbial transfer between the streams.





Operating principle with extra spigot for bathroom exhaust ventilation

Heat exchanger

- The **Freshbox 100** units are equipped with a counter-flow heat exchanger with a polystyrene core.
  - In the cold season the exhaust air heat is captured and transferred to the supply air stream which reduces the ventilation-generated heat losses.
  - Some condensate may form during heat recovery. The condensate is collected in the drain pan and is removed from the exhaust air duct.
  - In the warm season the intake air heat is transferred to the extract air stream. This allows for a considerable reduction of the supply air temperature which, in turn, reduces the air conditioning load.

- The **Freshbox 100 ERV** units are equipped with a counter-flow heat exchanger with an enthalpy membrane at the core.
  - In the cold season the exhaust air heat and moisture are transferred to the supply air stream through the enthalpy membrane reducing the heat losses through ventilation.
  - Consequently, it is the intake air heat and moisture transferred to the extract air stream through the enthalpy membrane in the warm season. This allows for a considerable reduction of the supply air temperature and humidity which, in turn, reduces the air conditioning load.

Control

- The unit is equipped with a control panel.
- The remote control is supplied as standard.

FUNCTIONS

	Freshbox 100 Freshbox E-100	Freshbox E1-100
Speed changeover	•	•
Filter replacement indication	•	•
Alarm indication	•	•
Speed setting	•	•
Timer	•	•
Weekly schedule	•	•
Post-heating enabled/disabled		•
Supply air temperature setup		•

FREEZE PROTECTION

- There are two types of freeze protection available to protect the heat exchangers in the cold season.
- **Freshbox 100** features an exhaust air temperature sensor downstream of the heat exchanger which disables the supply fan to let the warm extract air warm up the heat exchanger. After that the supply fan is turned on and the unit reverts to the normal operation mode.
- The **Freshbox E-100** units are equipped with an electric preheater which warms up the supply air upstream of the heat exchanger to prevent its freezing.
- These features ensure a continuous balanced air exchange regardless of ambient air temperature variations.

FRESHBOX 100

SINGLE-ROOM AIR HANDLING UNITS

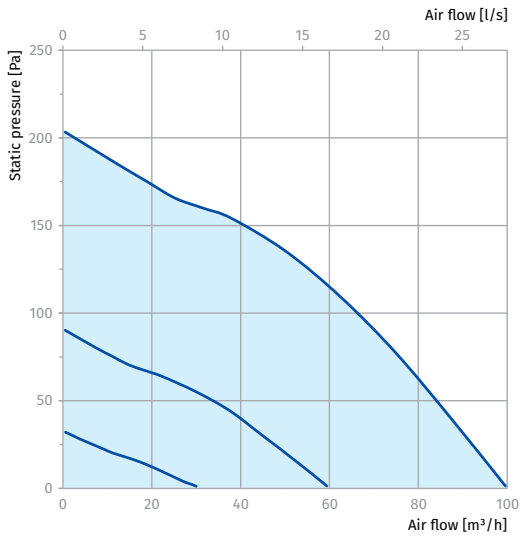
Technical data

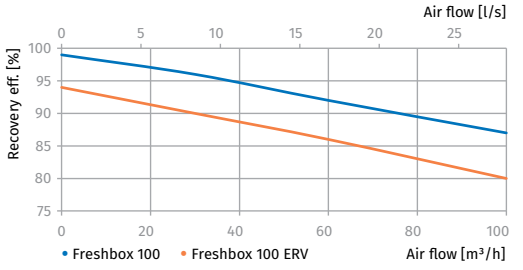
Parameters	Freshbox 100			Freshbox 100 ERV			Freshbox E-100			Freshbox E-100 ERV			Freshbox E1-100			Freshbox E1-100 ERV		
Speed	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Voltage [V / 50 (60) Hz]	1~230																	
Max. power without heater [W]	20	29	53	20	29	53	20	29	53	20	29	53	20	29	53	20	29	53
Preheater power consumption [W]	–			–			600			600			–			–		
Reheater power consumption [W]	–			–			–			–			350			350		
Max. current consumption without heater(s) [A]	0.4			0.4			0.4			0.4			0.4			0.4		
Max. current consumption with heater(s) [A]	–			–			3.08			3.08			1.94			1.94		
Maximum air flow [m³/h (l/s)]	30 (8)	60 (17)	100 (28)	30 (8)	60 (17)	100 (28)	30 (8)	60 (17)	100 (28)	30 (8)	60 (17)	100 (28)	30 (8)	60 (17)	100 (28)	30 (8)	60 (17)	100 (28)
RPM [min⁻¹]	max 2200																	
Sound pressure level at 3 m [dBA]	13	27	39	13	27	39	13	27	39	13	27	39	13	27	39	13	27	39
Transported air temperature [°C]	-25...+50																	
Casing material	polymer coated steel																	
Insulation thikness [mm]	10																	
Extract filter	G4																	
Supply filter	G4 + F8 (Option: F8 Carbon; H13)																	
Connected air duct diameter [mm]	100																	
Weight [kg]	31																	
Heat recovery efficiency [%]*	96	92	87	90	86	80	96	92	87	90	86	80	96	92	87	90	86	80
Heat exchanger type	counter-flow																	
Heat exchanger material	polystyrene			enthalpic membrane			polystyrene			enthalpic membrane			polystyrene			enthalpic membrane		
SEC class	A																	

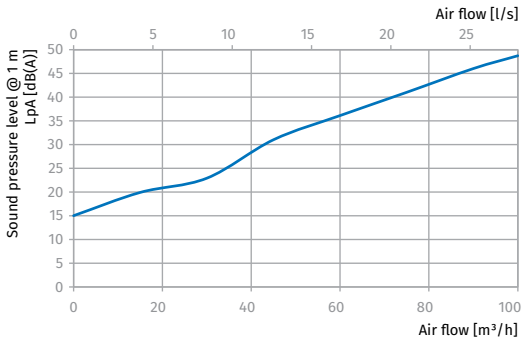
*Heat recovery efficiency is specified in compliance with EN 13141-8.

Sound power level, A-filter applied.

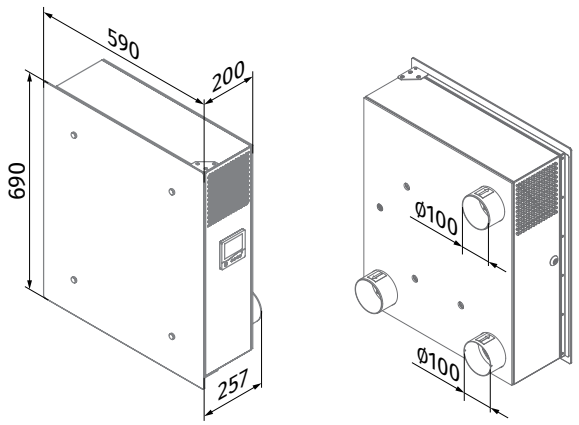
Sound-power level, A - weighted	General	Octave frequency band [Hz] 63	125	250	500	1000	2000	4000	8000	Sound pressure level at 3 m., A-filter applied	Sound pressure level at 1 m., A-filter applied
L_{WA} to environment [dBA]	**4000**	45	40	44	38	33	29	27	22	**28**	**38**







Overall dimensions [mm]



FRESHBOX 100

Accessories

Name		Description
MS Freshbox 100 chrome		Mounting kit: Two Ø 100 mm air ducts, 500 mm long Ventilation outer hood made of polished steel Cardboard template
MS Freshbox 100 white		Mounting kit: Two Ø 100 mm air ducts, 500 mm long Ventilation outer hood, painted white Cardboard template
AH Freshbox 100 chrome		Ventilation outer hood made of polished steel.
AH Freshbox 100 white		Ventilation outer hood, painted white
EH Freshbox 100		Heater to prevent condensate freezing in the drain pipe and outer ventilation hood
FP 193x158x18 G4 PPI		G4 Filter
FP 193x158x47 F8		F8 Filter
FP 193x158x47 F8 C		F8 Carbon Filter
FP 193x158x47 H13		H13 Hepa Filter
HR-S		Humidity sensor
CD-1		CO_2 Sensor with LED lights for indication of CO_2 concentration and a touch button for operation mode switching
CD-2		CO_2 Sensor

FRESHBOX E120

SINGLE-ROOM AIR HANDLING UNITS

Features

- Heat recovery single-room air handling unit for supply and exhaust ventilation.
- Single-room vent for efficient energy saving supply and exhaust ventilation in flats, houses, cottages and other small premises.
- Ideal solution for simple and efficient ventilation of new or refurbished premises.
- Heat recovery minimises ventilation heat losses.
- Controllable air exchange creates individually set microclimate.

Air flow:
up to 120 m³/h
33 l/s

Heat recovery efficiency:
up to 92 %

Power:
from 9 W

Noise level:
from 30 dBA

Design

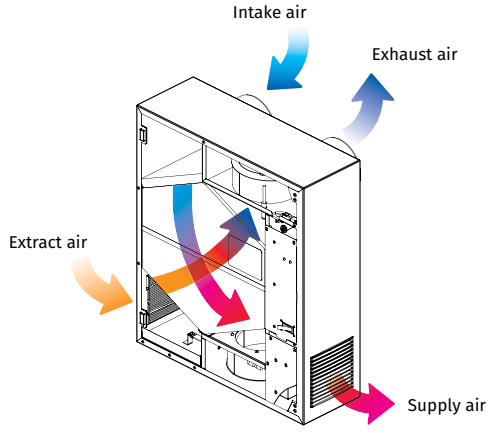
- The casing is made of polymer coated steel plates, internally filled with 10 mm thermal and sound insulation layer of cellular rubber.
- The front service panel of the casing ensures easy access to the unit internals for maintenance operations including filter replacement and cleaning.
- The spigots for connection to the air ducts are located at the side of the unit.
- The unit is supplied with a power cord and a plug for connection to power supply.
- Compatible with round Ø125 mm air ducts.

Fans

- The unit is equipped with high-efficient external rotor EC motors and centrifugal impellers with forward curved blades for air supply and exhaust.
- EC motor technologies meet the latest engineering demands for saving energy and for high-efficient ventilation.
- Low energy demand due to implemented EC technologies.
- The fan motors are equipped with a built-in thermal overheating protection and ball bearings for a long service life.

Heat recovery

- The unit is equipped with a high-efficient counter-flow polystyrene heat exchanger with a large surface area and high heat recovery efficiency.
- The air flows are fully separated within the heat exchanger. Odours and contaminants contained in the extract air are not transferred to the supply air flow.
- Heat recovery is based on extract air heat recovery for warming up of suply air. Extract air transfers most of its heat to the intake air flow. Heat recovery reduces heat losses in cold seasons. In summer the heat exchanger performs reverse and transfers a part of the accumulated coolness from the cooled extract air for cooling down of the intake air. This contributes to better performance of the air conditioner in ventilated premises.



- The integrated freezing protection system switches the supply fan off in the cold season in case of a freezing danger communicated by the temperature sensor to enable warming of the heat exchanger with the warm extract air flow. When a freezing danger is over the supply fan turns on and the unit reverts to the standard operation mode.
- The drain pan under the heat exchanger block is used for condensate collection and drainage.

Air heater

- The unit is equipped with a 350 W electric posistor heater used for operation of the unit at low outside air temperatures.
- The electric heater has an integrated overheating protection.

Air filtration

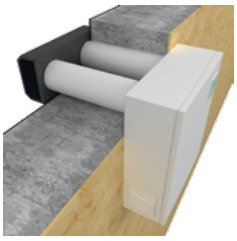
- Supply and extract air cleaning with two panel filters.
- The filters ensure fresh air supply, free of dust, insects and prevent contamination of the unit components.

Control

- The unit incorporates an integrated control system and a multifunctional external control panel with an LCD display and a remote control.
- Available functions:
  - Extra heating of supply air.
  - Maximum speed setting timer for 20-60 minutes.
  - Fan speed setting.
  - Week-scheduled operation mode setting.
  - Filter replacement/alarm indicator.

Mounting

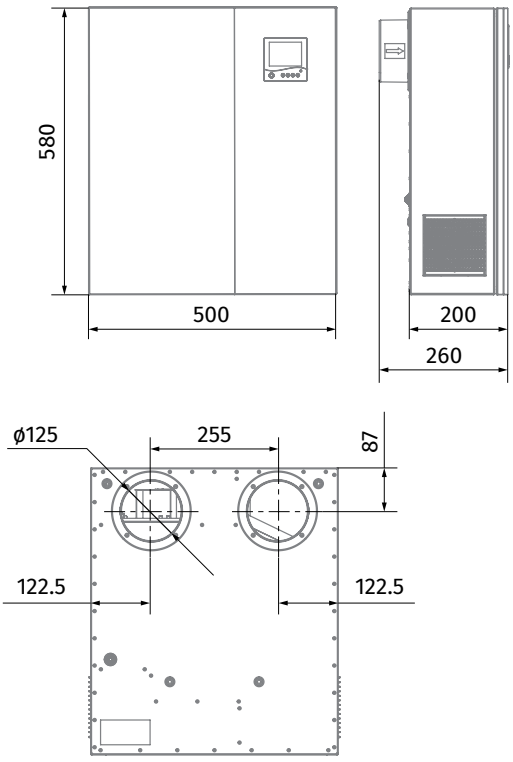
- Install one **FRESHBOX E120** unit in each room requiring ventilation.
- Surface wall mounting on an outside wall from inside the premise.
- The hole spacing for Ø125 mm air ducts with a master plate included in the delivery set.
- Install the **AH FRESHBOX E120** outer hood (separate order, ref. accessories) on outer wall.



FRESHBOX E120

SINGLE-ROOM AIR HANDLING UNITS

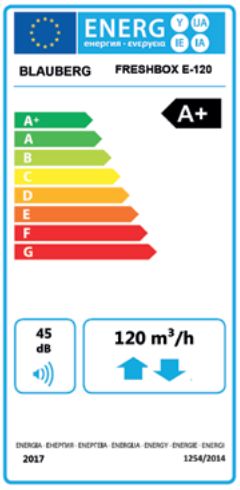
Overall dimensions [mm]



Technical data

Parameters	FRESHBOX E120		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		230	
Power [W]	9	16	40
Electric heater power [kW]		0.35	
Total unit power [kW]		0.39	
Total unit current [A]		1.7	
Maximum air flow [m³/h (l/s)]	40 (11)	80 (22)	120 (33)
RPM min⁻¹	450	780	2000
Noise level [dBA]	30	35	38
Transported air temperature [°C]		-20...+50	
Filter: extract/supply		G2/G4	
Heat recovery efficiency [%]		82...92	
Heat exchanger type		Counter-flow	
Heat exchanger material		Polystyrene	
SEC Class		A+	
Weight [kg]		20	

IP22



Designation key

Model	Heater	Nominal air flow [m³/h]
Freshbox	**E:** Preheater	**120**

Accessories

Name		Description
MS2 FRESHBOX E120		Mounting kit. Includes: • cardboard master plate (1 item) • plastic Ø 125 mm, 500 mm long air duct (2 items) • polymer coated outer hood. Fully-featured solution for a complete single-stage unit mounting.
AH FRESHBOX E120		Polymer coated outer hood. For air intake / exhaust and prevention of water and foreign objects ingress into the unit.

CIVIC EC LB

SINGLE-ROOM AIR HANDLING UNITS

Features

- The **CIVIC EC LB** units are designed for single-room ventilation of schools, offices and other public and commercial premises. Offer the ideal simple and efficient ventilation solutions for existing and renovated buildings and require no layout of air ducts.
- Efficient supply and extract ventilation for separate premises.
- EC fans with low energy consumption.
- Low-noise operation.
- Simple mounting.

Air flow:
up to 580 m³/h
161 l/s

Heat recovery efficiency:
up to 97 %

Design

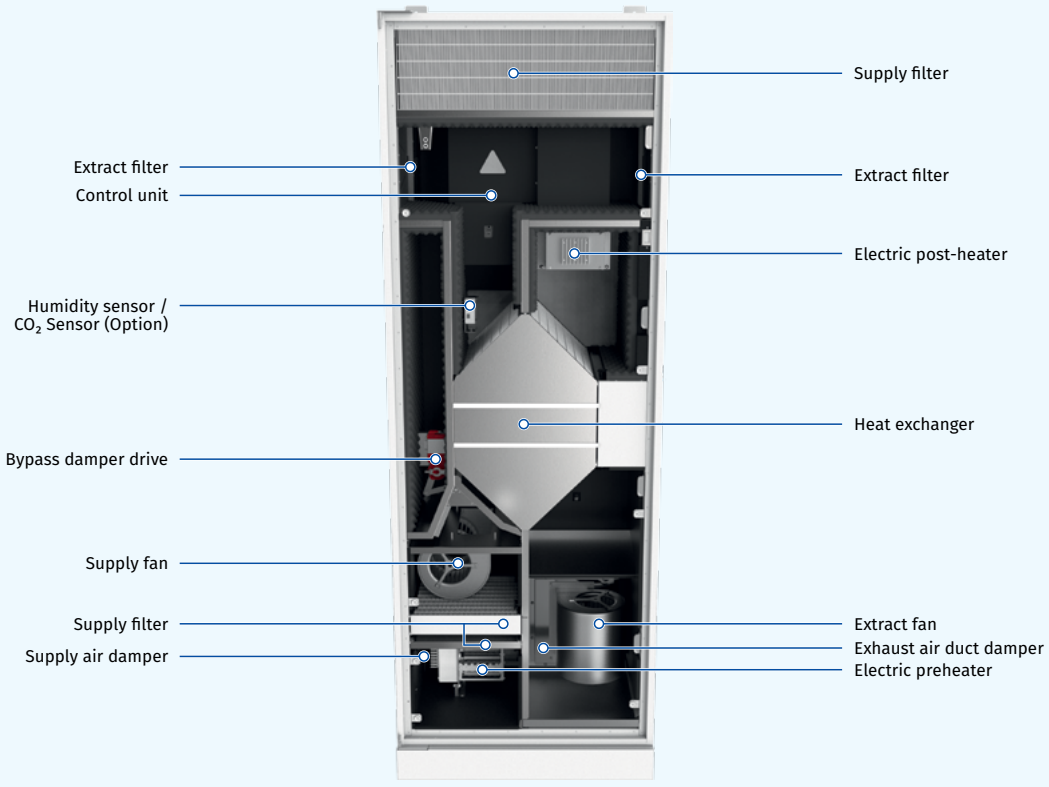
- Made of high-quality polymer coated steel, internally lined with heat- and sound insulation of mineral wool or other materials.
- Available modifications with an integrated preheater and reheater for cold climate applications.

Fans

- High efficient electronically commutated motors with external motor and impeller with forward curved blades. Such motors are the most state-of-the-art energy saving solution.
- EC motors are featured with high performance and total speed controllable range. High efficiency reaching 90 % is the premium advantage of the electronically commutated motors.

Air filtration

- Supply air is cleaned with G4 and F8 (PM2.5 > 75%) supply cassette air filters. For premises requiring high air quality it is recommended to install carbon F8 filters and H11 (PM2.5 > 95%) filters. Available as specially ordered accessories.
- Cassette G4 filter is used for extract air filtration.



Designation key

Model	Motor type	Mounting	Bypass	Heater	Nominal air flow [m³/h]	Heat exchanger type	Control
CIVIC	**EC:** synchronous electronically commutated motor	**L:** floor mounting	**B:** integrated bypass	**E:** preheating **E2:** preheating + post-heating	300; 500	**_:** heat recovery **-E:** energy recovery	**S14:** sensor control panel **S17:** th-Tune control panel **S18:** pGD control panel

CIVIC EC LB

Bypass

- The units are equipped with a bypass. The bypass damper opens for free cooling ventilation mode in summer.

Air dampers

- The automatic supply and extract air dampers are used to prevent uncontrollable air draughts during the unit standstill.

Heaters

PREHEATING

- **CIVIC EC LBE** and **CIVIC EC LBE2** units are equipped with an electric preheater which protects the heat exchanger from freezing.

POST-HEATING

- **CIVIC EC LBE2** units feature an electric post-heater to raise the supply air temperature.

Functioning

- Cold outside air flows through the filters and heat exchanger and is moved to the room with a supply centrifugal fan.
- Warm polluted air from the premise flows through the filter and the heat exchanger and is exhausted outside with an extract centrifugal fan.

Heat exchanger

- The **CIVIC EC LB** unit has a counter-flow heat exchanger made of polystyrene and aluminium.
  - In cold season the heat energy of the extract air flow is absorbed by intake air flow, thus decreasing the heat losses caused by ventilation. Condensate generated during heat recovery is collected in a drain pan and removed to the sewage system.
  - In warm season the heat of the outdoor air is absorbed by extract air flow. This way the supply air temperature decreases and heat recovery reduces operation loads for the air conditioner.

- The **CIVIC EC LB E** unit is equipped with a counter-flow heat exchanger made of enthalpy membrane.
  - In cold season the heat and moisture of the extract air are absorbed by supply air through the enthalpy membrane, thus decreasing the heat losses caused by ventilation.
  - In warm season the heat and moisture of the outdoor air is absorbed by extract air flow through the enthalpy membrane. This way the supply air temperature and humidity decreases and heat recovery reduces operation loads for the air conditioner.

Control

- The ventilation units may be operated with an integrated or an external control panel.

THREE AVAILABLE MODIFICATIONS OF THE CONTROL PANEL:

	S14 	S17 	S18 
Built-in control panel	•	•	•
External control panel	•	•	•
Preheater		•	•
Reheater		•	•
Humidity sensor	o	o	o
CO_2 sensor	o	o	o
Functions			
MODbus		o	o
Speed control from 0 to 100 %	•	•	•
Bypass control	Manual	Auto	Auto
Filter maintenance indicator	•	•	•
Alarm indicator	•	•	•
Timer scheduled operation		•	•
Week scheduled operation		•	•
Supply air temperature setup		•	•

• - available; o - option.

FREEZE PROTECTION

- The freeze protection function may be realized by two ways.
  - For the units without preheater: the supply fan shuts down on a signal from the exhaust air temperature sensor to let warm extract air flow warm up the heat exchanger. Then the supply fan turns on and the unit operates normally.
  - For the units with a preheater: the supply air is warmed up before contacting the heat exchanger, thus preventing its freezing. In this case balanced air exchange is not interrupted.

CIVIC EC LB

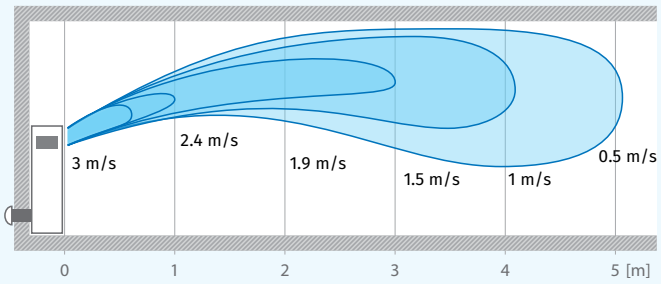
SINGLE-ROOM AIR HANDLING UNITS

Technical data

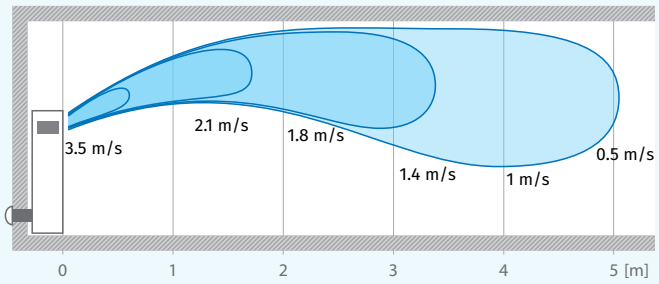
Parameters	CIVIC EC LB 300	CIVIC EC LBE 300	CIVIC EC LBE2 300	CIVIC EC LB 300-E	CIVIC EC LBE 300-E	CIVIC EC LBE2 300-E	CIVIC EC LB 500	CIVIC EC LBE 500	CIVIC EC LBE2 500
Voltage [V / 50 (60) Hz]	1~220-240								
Power consumption without heater(s) [W]	123	123	123	123	123	123	232	232	232
Preheater power consumption [W]	-	1400	1400	-	1400	1400	–	1400	1400
Reheater power consumption [W]	-	-	1400	-	-	1400	–	–	2800
Max. current consumption without heater(s) [A]	0,9	0,9	0,9	0,9	0,9	0,9	1,7	1,7	1,7
Max. current consumption with heater(s) [A]	0,9	7	13,1	0,9	7	13,1	1,7	7,8	20
Maximum air flow [m³/h (l/s)]	320 (89)	320 (89)	320 (89)	320 (89)	320 (89)	320 (89)	580 (161)	580 (161)	580 (161)
RPM [min⁻¹]	2150	2150	2150	2150	2150	2150	1280	1280	1280
Sound pressure level at 3 m [dBA]	35	35	35	35	35	35	35	35	35
Transported air temperature [°C]	-25...+50								
Casing material	painted steel								
Insulation	40 mm mineral wool								
Extract filter	G4								
Supply filter	G4 and F8 (Option: F8 Carbon; H11)								
Connected air duct diameter [mm]	200	200	200	200	200	200	250	250	250
Weight [kg]	138±3%	139±3%	140±3%	136±3%	137±3%	138±3%	191±3%	193±3%	194±3%
Heat exchanger type	counter-flow								
Heat exchanger material	polystyrene			enthalpy membrane			aluminium		
Heat recovery efficiency* [%]	82...97			76...90			79...93		
SEC class	A	A	A	A	A	A	A	A	A

*Heat recovery efficiency is specified in compliance with EN 13141-8.

Fresh air flow distance for CIVIC EC LB300



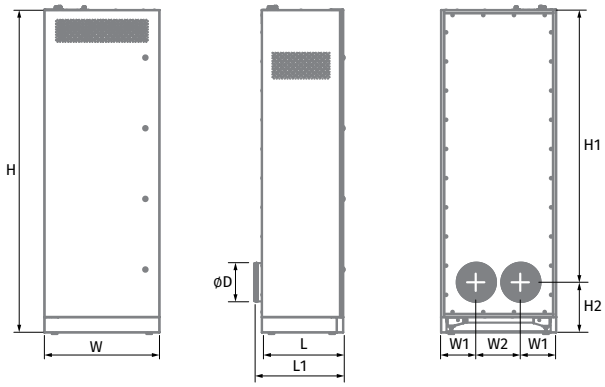
Fresh air flow distance for CIVIC EC LB500



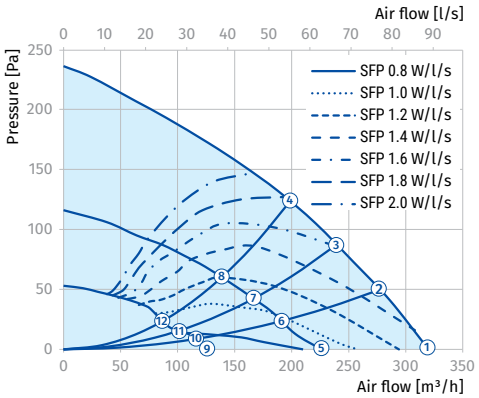
Overall dimensions [mm]

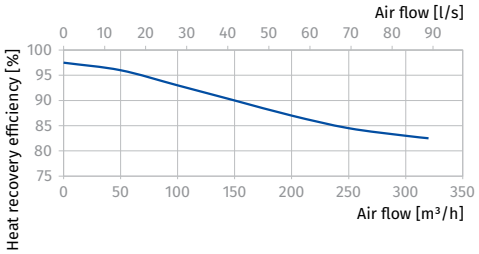
Model	D	H	H1	H2	L	L1	W	W1	W2
CIVIC EC LB300 (E)	200	1770	1476	294	470	520	620	230	195
CIVIC EC LB500	250	2170	1833	337	535	585	750	290	230

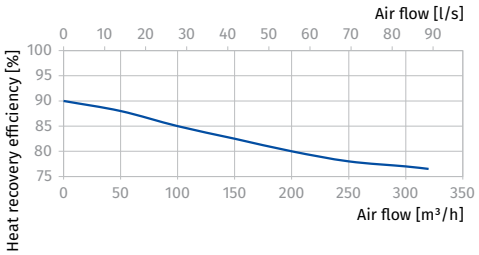
The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80 %.



CIVIC EC LB/LBE/LBE2 300



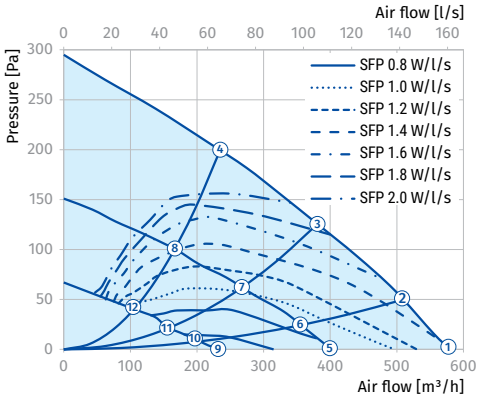


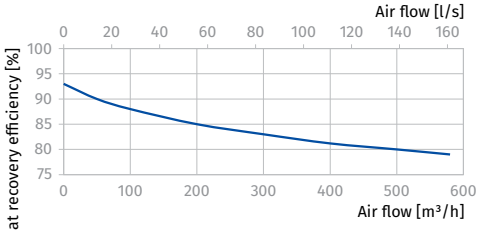


Unit power with no heater [W]

Point	CIVIC EC LB300(-E) CIVIC EC LBE300(-E) CIVIC EC LBE2 300(-E)
1	123
2	113
3	108
4	100
5	55
6	52
7	50
8	45
9	24
10	23
11	23
12	23

CIVIC EC LB/LBE/LBE2 500(-E)





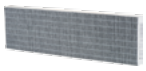
Unit power with no heater [W]

Point	CIVIC EC LB500 CIVIC EC LBE500 CIVIC EC LBE2 500
1	232
2	215
3	170
4	168
5	98
6	92
7	85
8	75
9	33
10	31
11	30
12	29

CIVIC EC LB

SINGLE-ROOM AIR HANDLING UNITS

Accessories

		Civic EC LB... 300 S17/S18	Civic EC LB... 300 S14	Civic EC LB... 500 S17/S18	Civic EC LB... 500 S14
G4 filter		FP 308x238x22 G4 PPI	FP 308x238x22 G4 PPI	FP 450x257x27 G4 PPI	FP 450x257x27 G4 PPI
G4 filter		FP 265x213x48 G4	FP 265x213x48 G4	FP 318x290x22 G4	FP 318x290x22 G4
F8 filter		FP 384x273x60 F8	FP 384x273x60 F8	FP 318x290x60 F8	FP 318x290x60 F8
F8 carbon filter		FP 533x135x48 F8 C	FP 533x135x48 F8 C	FP 666x196x48 F8 C	FP 666x196x48 F8 C
H11 filter		FP 533x135x60 H11	FP 533x135x60 H11	FP 666x196x60 H11	FP 666x196x60 H11
Outer ventilation hood made of brushed stainless steel		AH Civic 300 LB chrome	AH Civic 300 LB chrome	AH Civic 500 LB chrome	AH Civic 500 LB chrome
Outer ventilation hood made of white coated steel		AH Civic 300 LB white	AH Civic 300 LB white	AH Civic 500 LB white	AH Civic 500 LB white
Humidity sensor		FS2	FS2	FS2	FS2
External VOC sensor (0-10V)		DPWQ30600	–	DPWQ30600	–
External CO_2 sensor (0-10V)		DPWQ40200	–	DPWQ40200	–
External humidity sensor (0-10V)		DPWC11200	–	DPWC11200	–
Humidity sensor (NO)		HR-S	HR-S	HR-S	HR-S
Assembled U-trap		SFK 20x32	SFK 20x32	SFK 20x32	SFK 20x32
Assembled drain pump		CP-2	CP-2	CP-2	CP-2

CIVIC EC DB

SINGLE-ROOM AIR HANDLING UNITS

Features

- The **CIVIC EC DB** units are designed for single-room ventilation of schools, offices and other public and commercial premises. Offer the ideal simple and efficient ventilation solutions for existing and renovated buildings and require no layout of air ducts.
- Efficient supply and extract ventilation for separate premises.
- EC fans with low energy consumption.
- Low-noise operation.
- Simple mounting.

Air flow:
up to 510 m³/h
142 l/s

Heat recovery efficiency:
up to 94 %

Design

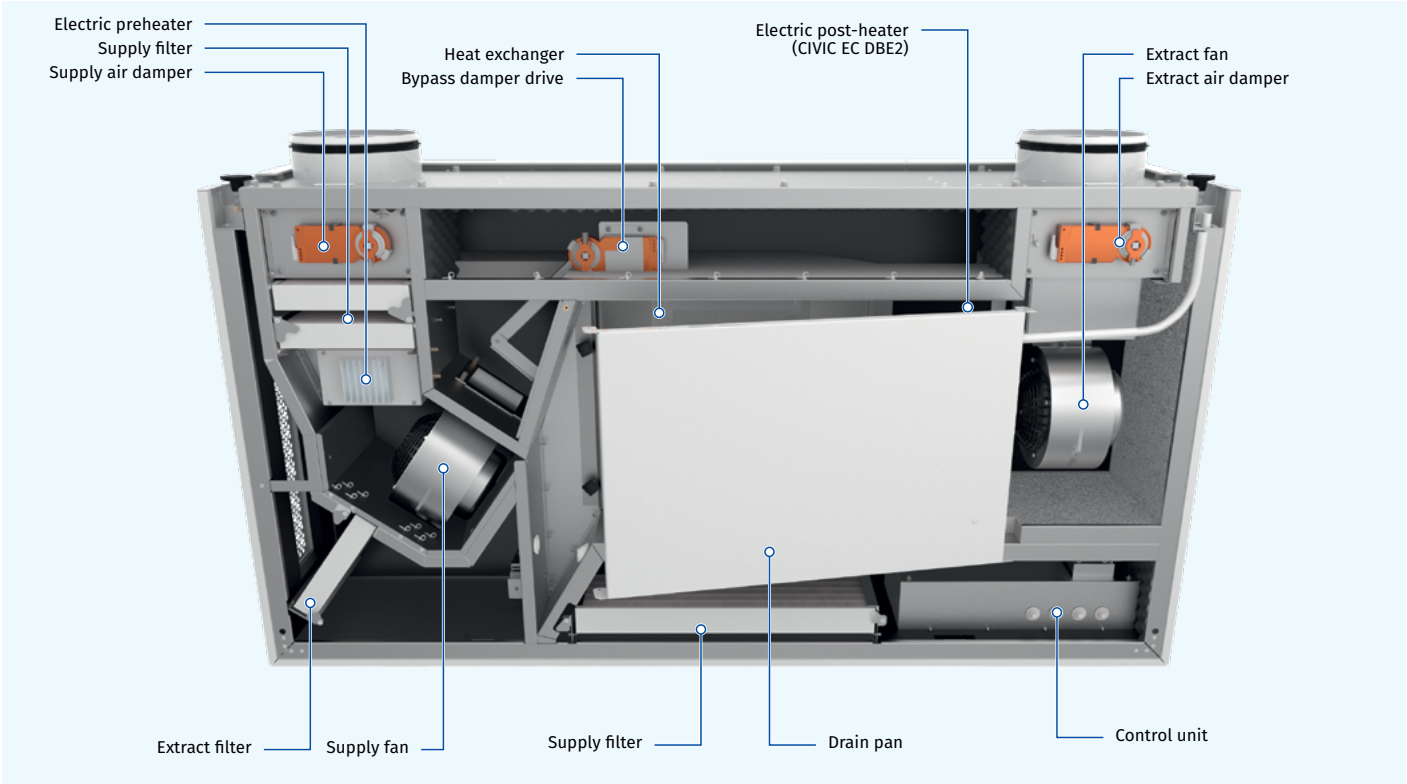
- Made of high-quality polymer coated steel, internally lined with heat- and sound insulation of mineral wool or other materials.
- Available modifications with an integrated preheater and reheater for cold climate applications.

Fans

- High efficient electronically commutated motors with external motor and impeller with forward curved blades. Such motors are the most state-of-the-art energy saving solution.
- EC motors are featured with high performance and total speed controllable range. High efficiency reaching 90 % is the premium advantage of the electronically commutated motors.

Air filtration

- Supply air is cleaned with G4 and F8 (PM2.5 > 75 %) supply cassette air filters. For premises requiring high air quality it is recommended to install carbon F8 filters and H11 (PM2.5 > 95 %) filters. Available as specially ordered accessories.
- Cassette G4 filter is used for extract air filtration



Designation key

Model	Motor type	Mounting	Bypass	Heater	Nominal air flow [m³/h]	Control
CIVIC	**EC:** synchronous electronically commutated motor	**D:** ceiling mounting	**B:** integrated bypass	**E:** preheating **E2:** preheating + post-heating	300; 500	**S17:** th-Tune control panel **S18:** pGD control panel

CIVIC EC DB

Bypass

- The units are equipped with a bypass. The bypass damper opens for free cooling ventilation mode in summer.

Air dampers

- The automatic supply and extract air dampers are used to prevent uncontrollable air draughts during the unit standstill.

Heater

PREHEATING

- **CIVIC EC DBE** and **CIVIC EC DBE2** units are equipped with an electric preheater which protects the heat exchanger from freezing.

POST-HEATING

- **CIVIC EC DBE2** units feature an electric post-heater to raise the supply air temperature.

Functioning

- Cold outside air flows through the filters and heat exchanger and is moved to the room with a supply centrifugal fan.
- Warm polluted air from the premise flows through the filter and the heat exchanger and is exhausted outside with an extract centrifugal fan.

Heat exchanger

- The **CIVIC EC DB** unit has a counter-flow heat exchanger made of aluminium.
- In cold season the heat energy of the extract air flow is absorbed by intake air flow, thus decreasing the heat losses caused by ventilation. Condensate generated during heat recovery is collected in a drain pan and removed to the sewage system.
- In warm season the heat of the outdoor air is absorbed by extract air flow. This way the supply air temperature decreases and heat recovery reduces operation loads for the air conditioner.

Control

- The ventilation units may be operated with an integrated or an external control panel.

THREE AVAILABLE MODIFICATIONS OF THE CONTROL PANEL:

	S17 	S18 
Built-in control panel	•	•
External control panel	•	•
Preheater	•	•
Reheater	•	•
Humidity sensor	o	o
CO_2 sensor	o	o
Functions		
MODbus	o	o
Speed control from 0 to 100 %	•	•
Bypass control	Auto	Auto
Filter maintenance indicator	•	•
Alarm indicator	•	•
Timer scheduled operation	•	•
Week scheduled operation	•	•
Supply air temperature setup	•	•

• - available; o - option.

FREEZE PROTECTION

- The freeze protection function may be realized by two ways.
  - For the units without preheater: the supply fan shuts down on a signal from the exhaust air temperature sensor to let warm extract air flow warm up the heat exchanger. Then the supply fan turns on and the unit operates normally.
  - For the units with a preheater: the supply air is warmed up before contacting the heat exchanger, thus preventing its freezing. In this case balanced air exchange is not interrupted.

CIVIC EC DB

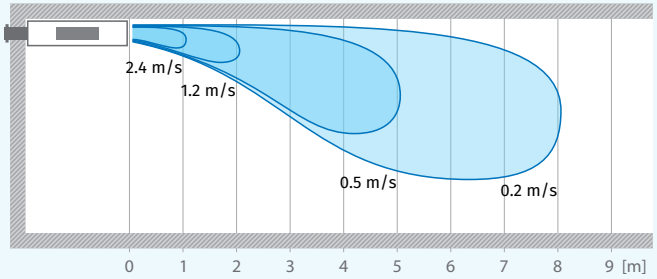
SINGLE-ROOM AIR HANDLING UNITS

Technical data

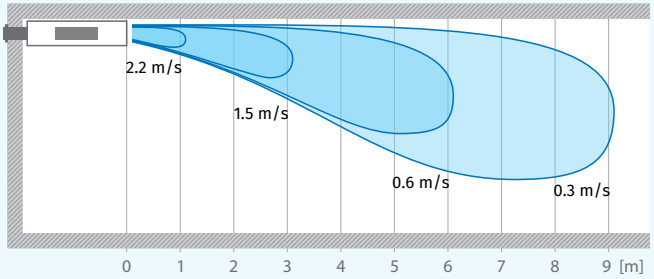
Parameters	CIVIC EC DB300	CIVIC EC DBE300	CIVIC EC DBE2 300	CIVIC EC DB500	CIVIC EC DBE500	CIVIC EC DBE2 500
Voltage [V / 50 (60) Hz]	1~230					
Power consumption without heater(s) [W]	175	175	175	230	230	230
Preheater power consumption [W]	–	1050	1050	–	1050	1050
Reheater power consumption [W]	–	–	1400	–	–	1400
Max. current consumption without heater(s) [A]	1.3	1.3	1.3	1.7	1.7	1.7
Max. current consumption with heater(s) [A]	–	7.3	13.6	–	7.2	13.5
Air flow [m³/h (l/s)]	300 (83)	300 (83)	300 (83)	510 (142)	510 (142)	510 (142)
RPM [min⁻¹]	2150	2150	2150	1700	1700	1700
Noise level @ 3 m [dBA]	22	22	22	24	24	24
Max. transported air temperature [°C]	-25...+50					
Casing material	polymer coated steel					
Insulation	40 mm, mineral wool					
Extract filter	G4					
Supply filter	G4 and F8 (Option: F8 Carbon; H11)					
Connected air duct diameter [mm]	200	200	200	250	250	250
Weight [kg]	78	79	80	103	104	105
Heat exchanger type	counter-flow					
Heat exchanger material	aluminum					
Heat recovery efficiency* [%]	79...91			79...94		
SEC class	A	A	A	A	A	A

*Heat recovery efficiency is specified in compliance with EN 13141-8.

Fresh air flow distance for CIVIC EC DB300



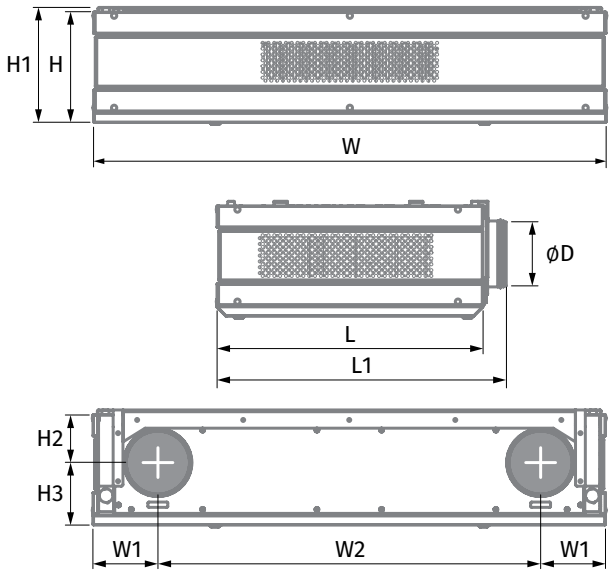
Fresh air flow distance for CIVIC EC DB500



Overall dimensions [mm]

Model	D	H	H1	H2	H3	L	L1	W	W1	W2
CIVIC EC DB300	199	333	347	145	188	806	873	1547	196	1155
CIVIC EC DB500	249	386	400	169	217	1006	1083	1806	244	1316

The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80 %

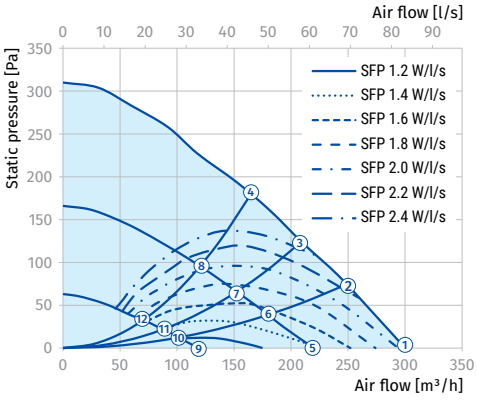


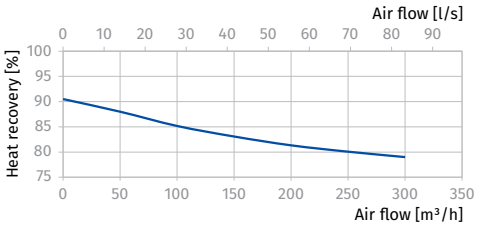
CIVIC EC DB

CIVIC EC DB/DBE/DBE2 300

Sound power level, A-filter applied.

Sound-power level, A - weighted		General	Octave frequency band [Hz] 63	125	250	500	1000	2000	4000	8000	LpA, 3m	LpA, 1m
L_{WA} to environment @ point 1	dBA	**42**	27	30	32	36	37	35	27	25	**22**	**32**
L_{WA} to environment @ point 5	dBA	**35**	22	22	32	24	29	25	20	17	**15**	**25**
L_{WA} to environment @ point 9	dBA	**27**	12	16	19	19	15	21	17	17	**6**	**16**





Total power of the unit [W]

Point	CIVIC EC DB300 CIVIC EC DBE300 CIVIC EC DBE2 300
1	175
2	155
3	145
4	130
5	83
6	78
7	73
8	68
9	36
10	34
11	32
12	32

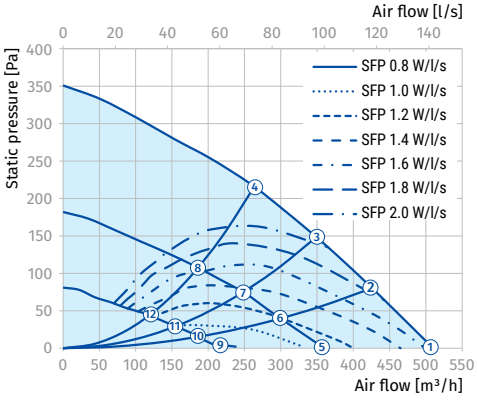
Total sound pressure level at 3 m (1 m) [dBA]

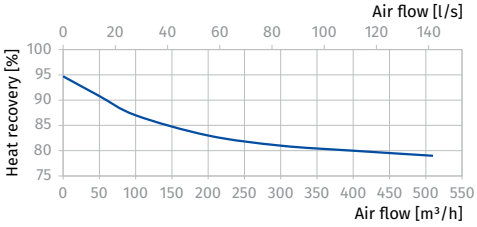
Point	CIVIC EC DB300 CIVIC EC DBE 300 CIVIC EC DBE2 300
1	22 (32)
2	21 (31)
3	21 (31)
4	20 (30)
5	15 (25)
6	15 (25)
7	15 (25)
8	15 (25)
9	6 (16)
10	6 (16)
11	6 (16)
12	6 (16)

CIVIC EC DB/DBE/DBE2 500

Sound power level, A-filter applied.

Sound-power level, A - weighted		General	Octave frequency band [Hz] 63	125	250	500	1000	2000	4000	8000	LpA, 3m	LpA, 1m
L_{WA} to environment @ point 1	dBA	**44**	22	28	38	41	37	33	25	16	**24**	**34**
L_{WA} to environment @ point 5	dBA	**40**	18	24	32	32	36	28	29	17	**19**	**29**
L_{WA} to environment @ point 9	dBA	**34**	10	17	22	21	33	18	18	17	**13**	**23**





Total power of the unit [W]

Point	CIVIC EC DB500 CIVIC EC DBE500 CIVIC EC DBE2 500
1	230
2	220
3	200
4	178
5	106
6	100
7	92
8	87
9	46
10	45
11	43
12	41

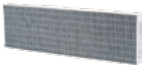
Total sound pressure level at 3 m (1 m) [dBA]

Point	CIVIC EC DB300 CIVIC EC DBE 300 CIVIC EC DBE2 300
1	24 (34)
2	23 (33)
3	23 (33)
4	22 (32)
5	19 (29)
6	19 (29)
7	19 (29)
8	18 (28)
9	13 (23)
10	13 (23)
11	13 (23)
12	13 (23)

CIVIC EC DB

SINGLE-ROOM AIR HANDLING UNITS

Accessories

		CIVIC EC DB300 / CIVIC EC DBE300 CIVIC EC DBE2 300	CIVIC EC DB500 / CIVIC EC DBE500 CIVIC EC DBE2 500
G4 filter		FP 270x216x48 G4	FP 325x388x48 G4
F8 filter		FP 270x218x48 F8	FP 325x314x48 F8
F8 carbon filter		FP 518x270x48 F8 C	FP 714x320x48 F8 C
H11 filter		FP 518x270x48 H11	FP 714x320x48 H11
Outer grill		VDA 200 CFn Al	VDA 250 CFn Al
Humidity sensor		FS2	FS2
External VOC sensor (0-10V)		DPWQ30600	DPWQ30600
External CO_2 sensor (0-10V)		DPWQ40200	DPWQ40200
External humidity sensor (0-10V)		DPWC11200	DPWC11200
Humidity sensor (NO)		HR-S	HR-S
Assembled U-trap		SFK 20x32	SFK 20x32
Assembled drain pump		CP-2	CP-2

CIVIC EC DB

VENTO V50-1 (Pro)

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate. mises ventilation heat losses.
- Coordinated network based on several integrated single-room ventilation units with central control.

Air flow:
up to 53 m³/h
15 l/s

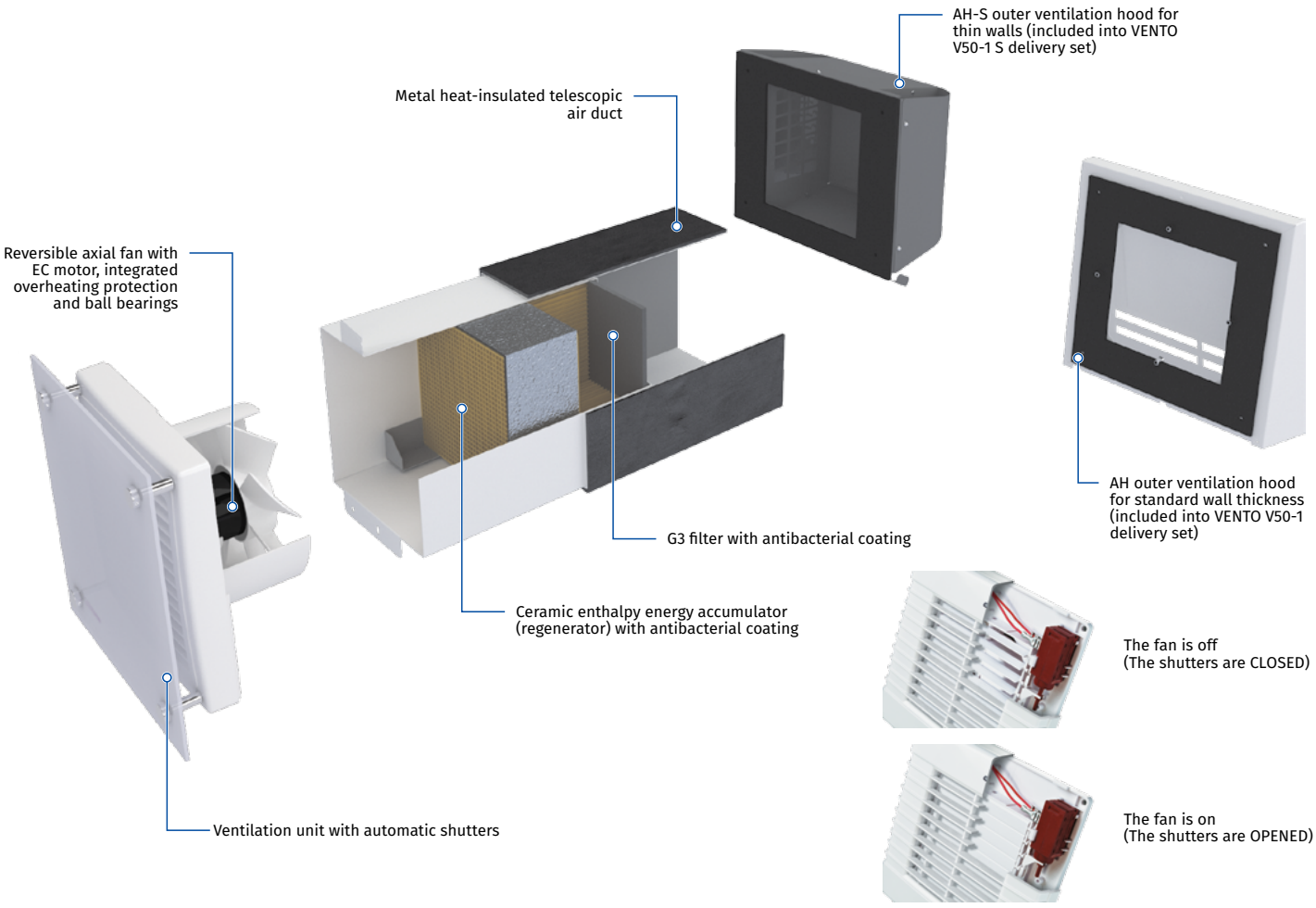
Heat recovery efficiency:
up to 90 %

Power:
from 3.7 W

Noise level:
from 14 dBA

EC motor · ErP 2016 · ErP 2018

Design



Designation key

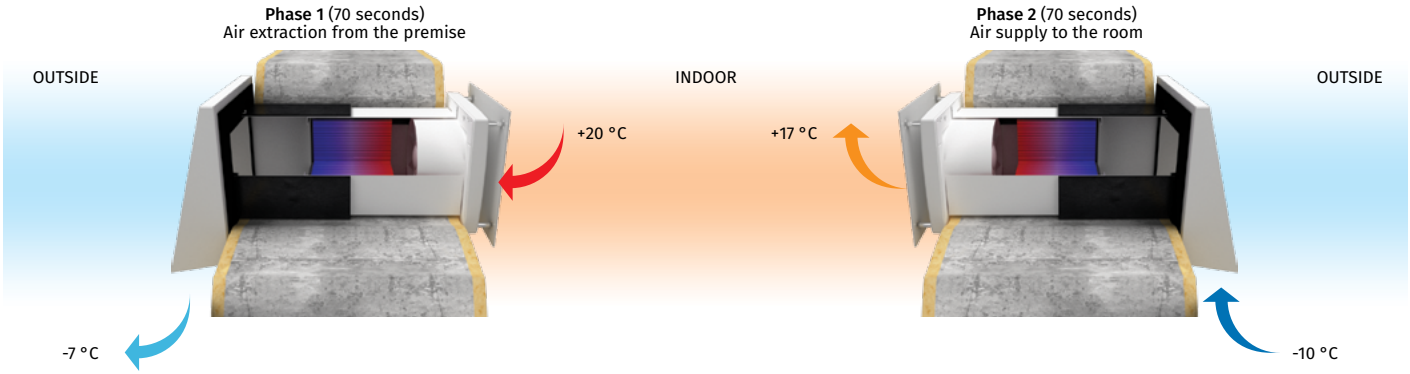
Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO	**V:** square air duct	**50**	**-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**Pro:** control panel SEA-T12

VENTO V50-1 (Pro)

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 90 %.
- Due to its cellular structure it has a larger contact area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

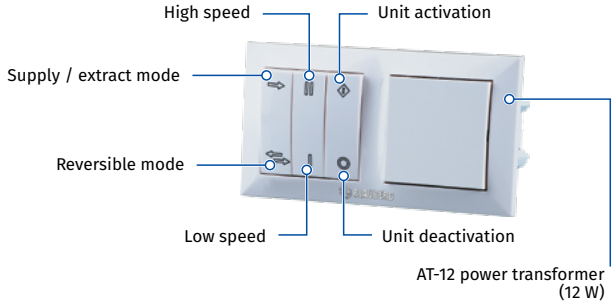
UNIT OPERATING LOGIC IN WINTER PERIOD



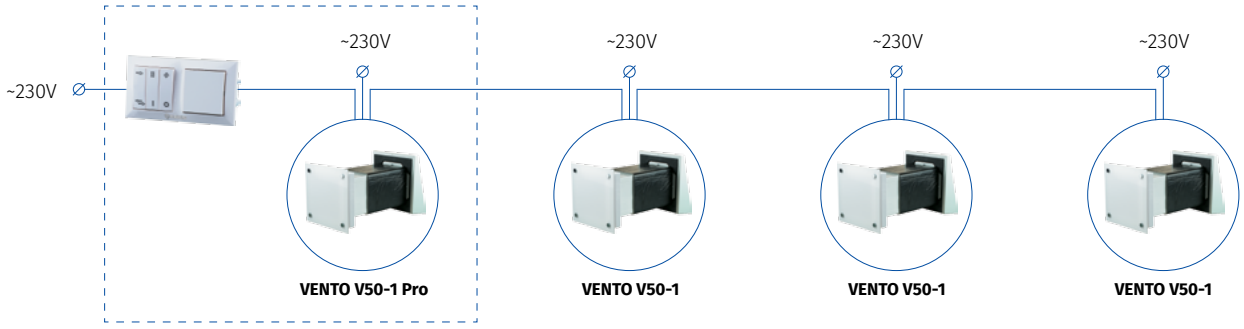
- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit is switched to the extract air mode.

Control

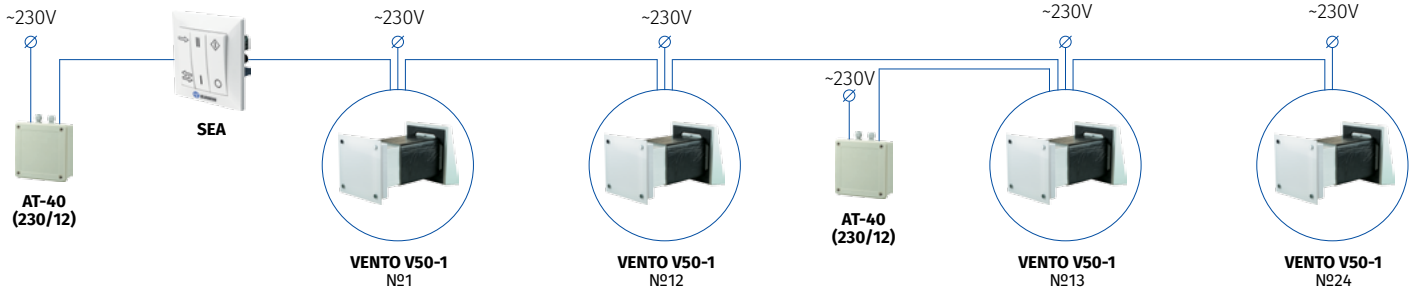
- The integrated automation system enables operation of the unit at the first low speed or the second high speed:
  - ventilation mode (air supply or air extract);
  - reversible heat regeneration mode.
- The unit operation mode control is performed by means of an external control block with a power transformer:
  - in VENTO V50-1 Pro / V50-1 S Pro delivery set included (model SEA-T12);
  - available upon separate order for VENTO V50-1 / V50-1 S (model SEA-T12 or SEA).



- To arrange a central controlled ventilation system based on 4 units connect three VENTO V50-1 / V50-1 S units to one VENTO V50-1 Pro / VENTO V50-1 S Pro unit with SEA-T12 control and power unit. No extra accessories are required.



- To arrange a central controlled ventilation system based on more than 4 units connect a required number of the units, one SEA three-position switch and several 12 W AT-12 transformers or 40 W AT-40 transformers, depending on the total unit power consumption to one VENTO V50-1 / VENTO V50-1 S unit.



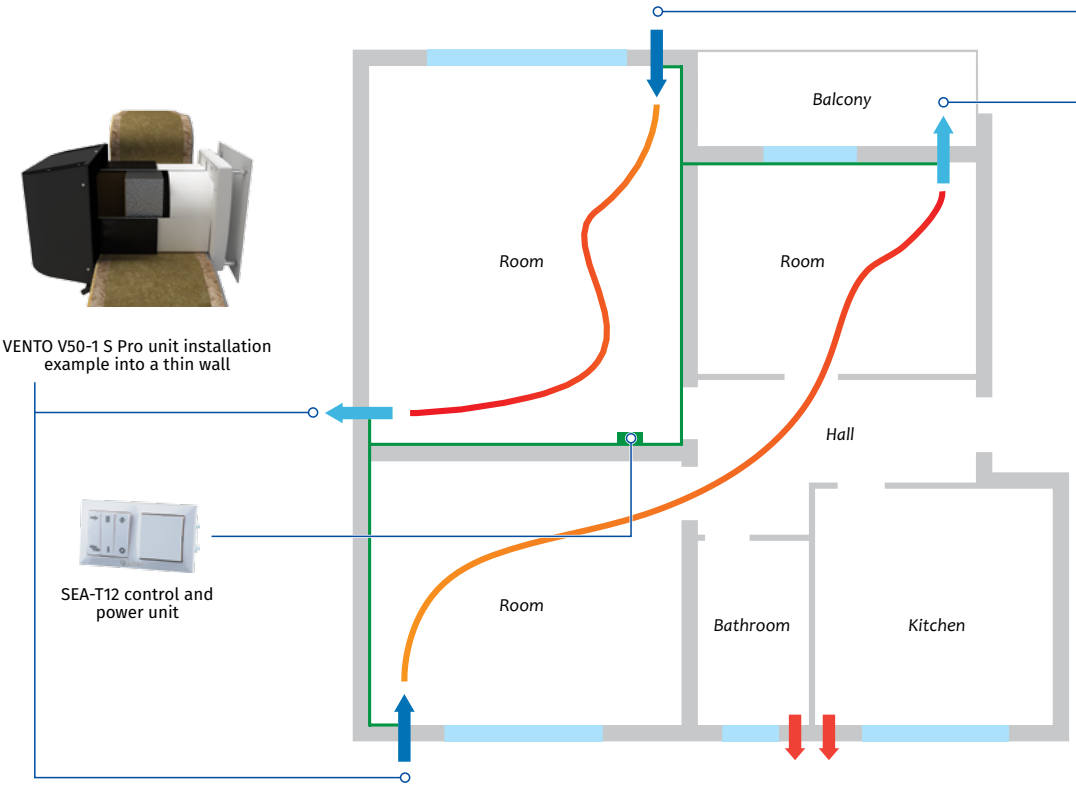
VENTO V50-1 (Pro)

HEAT RECOVERY SINGLE-ROOM UNITS

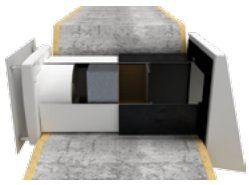
Mounting

- The unit is designed for external through-the-wall installation inside a prepared square hole in the outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation.
- In case of brand new construction the units are mounted in two stages:
  - **pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of the telescopic air ducts, outer ventilation hood and laying out of electric cables.
  - **final mounting** before commissioning of a house. It includes installation of the regenerator, the filter, connection of the ventilation unit and automation.

VENTO V50-1 S Pro unit installation example into a thin wall

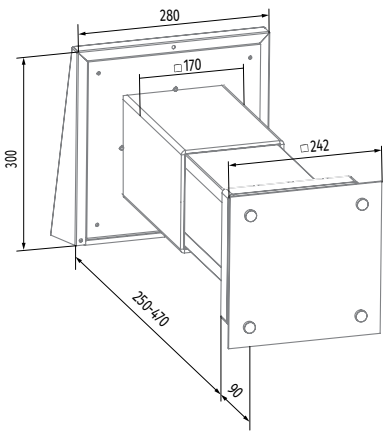


VENTO V50-1 Pro unit installation example into a wall with standard thickness

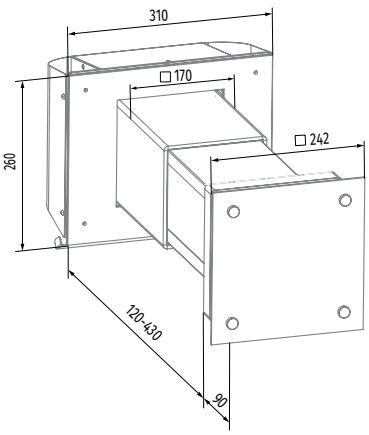


SEA-T12 control and power unit

Overall dimensions [mm]



VENTO V50-1

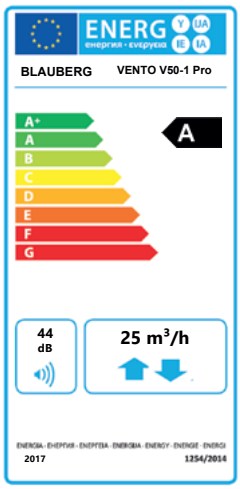


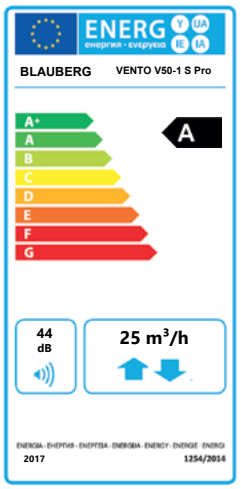
VENTO V50-1 S

VENTO V50-1 (Pro)

Technical data

Parameters	VENTO V50 / VENTO V50-1	
Speed	I	II
Voltage [V /50 Hz]	220-240	
Power [W]	3.7	4.8
Current [A]	0.02	0.03
RPM [min^{-1}]	599	1155
Maximum air flow [m^3/h (l/s)]	26 (7)	53 (15)
Sound pressure level at 1 m [dBA]	24	34
Sound pressure level at 3 m [dBA]	14	24
Outdoor sound pressure attenuation [dBA]	19	
Regeneration efficiency [%]	up to 90	
SEC Class	A	
Ingress protection rating	IP24	





Accessories

Name		Description
SEA-T12 (230/12)		External control unit with a 12 W power transformer. It is included into VENTO V50-1 Pro and VENTO V50-1 S Pro units standard delivery set.
SEA		External control unit for the unit operation mode control.
AT-40 (230/12)		12 W power transformer for synchronous connection of 4 units. Used jointly with SEA control unit it ensures a central controllable ventilation system.
AT-12 (230/12)		AT-40 is a 40 W power transformer for synchronous connection of 12 units. Used jointly with SEA control unit it ensures a central controllable ventilation system.
Pre-installation Kit VENTO V50-1		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Square telescopic air duct, section 164x164 mm, 250-470 mm long. • AH 164x164 outer ventilation hood. • Plastic foam plug.
Pre-installation Kit VENTO V50-1 S		Pre-installation kit for mounting into a thin wall. Includes: • Square telescopic air duct, section 164x164 mm, 120-430 mm long. • AH-S 164x164 outer ventilation hood. • Plastic foam plug.
Completion Kit VENTO V50-1		Final mounting kit. Includes: • Ceramic regenerator 164x164 mm. • VENTO V50-1 ventilation unit. • G3 filter.

VENTO A50(-1) (Pro)

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate.
- Coordinated network based on several integrated single-room ventilation units with central control.

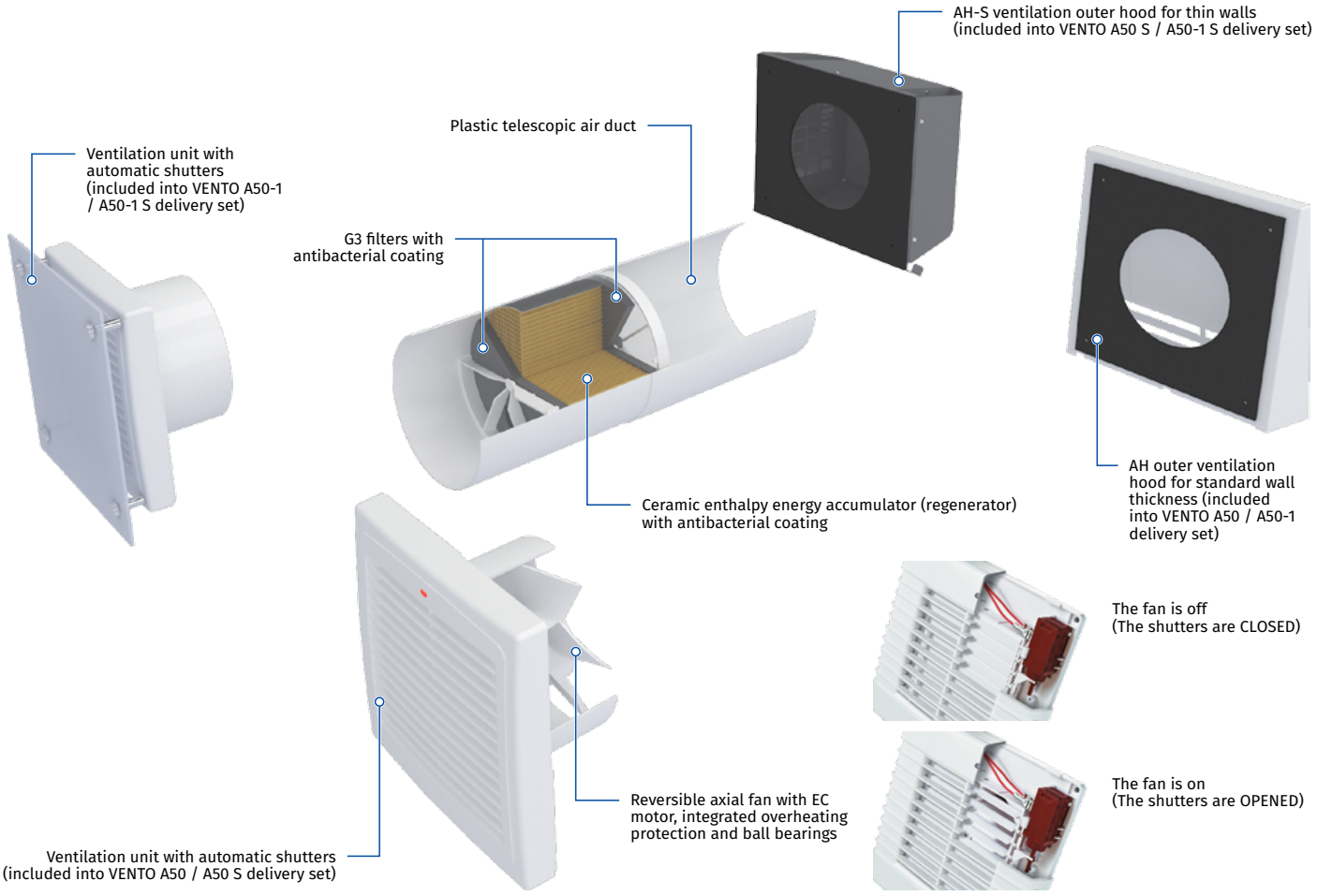
Air flow:
up to 53 m³/h
15 l/s

Heat recovery efficiency:
up to 90 %

Power:
from 3.7 W

Noise level:
from 14 dBA

Design



Designation key

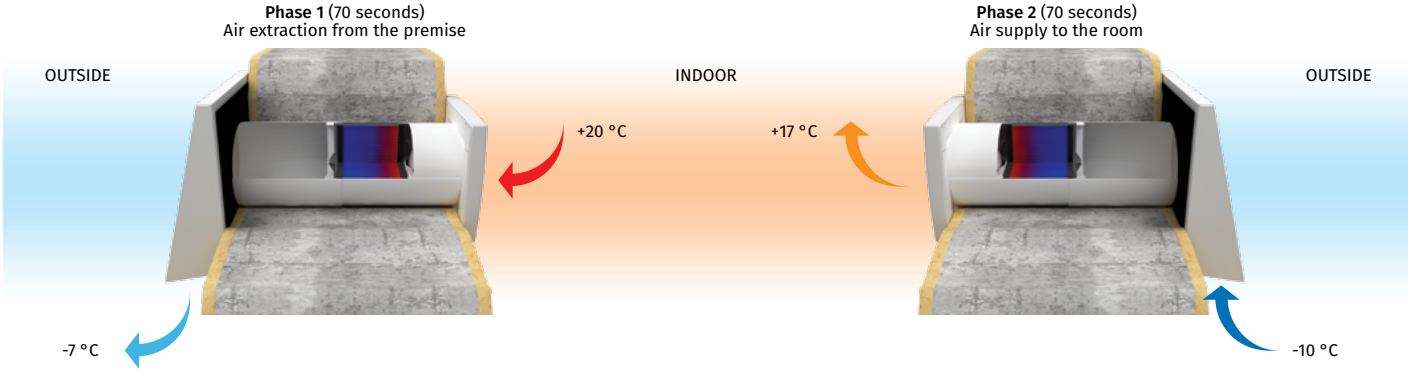
Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO	**A:** round air duct	**50**	**_:** no flat front panel **-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**_:** without control panel **Pro:** control panel SEA-T12

VENTO A50(-1) (Pro)

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 90 %.
- Due to its cellular structure it has a larger contact area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

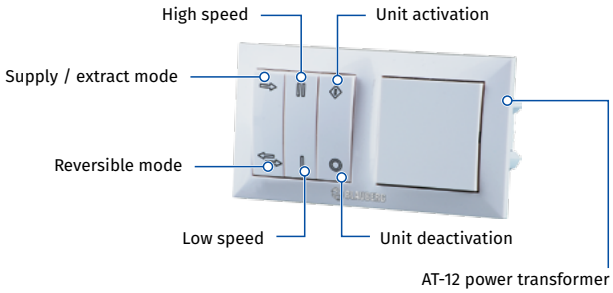
UNIT OPERATING LOGIC IN WINTER PERIOD



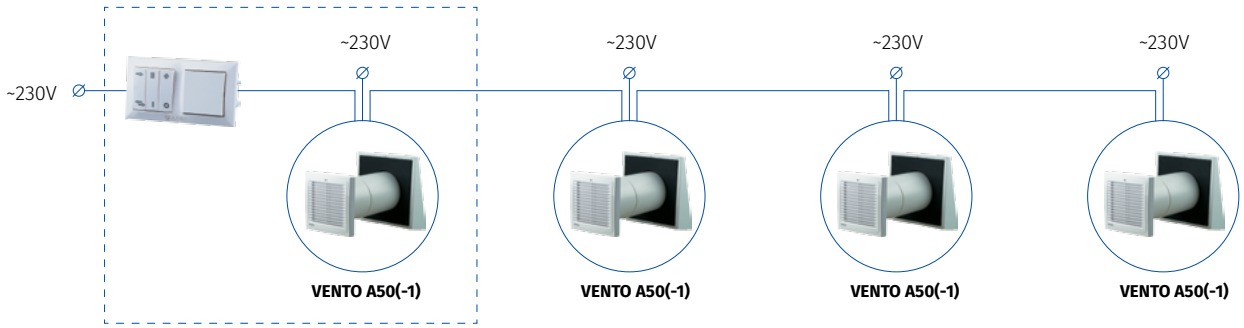
- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit is switched to the extract air mode.

Control

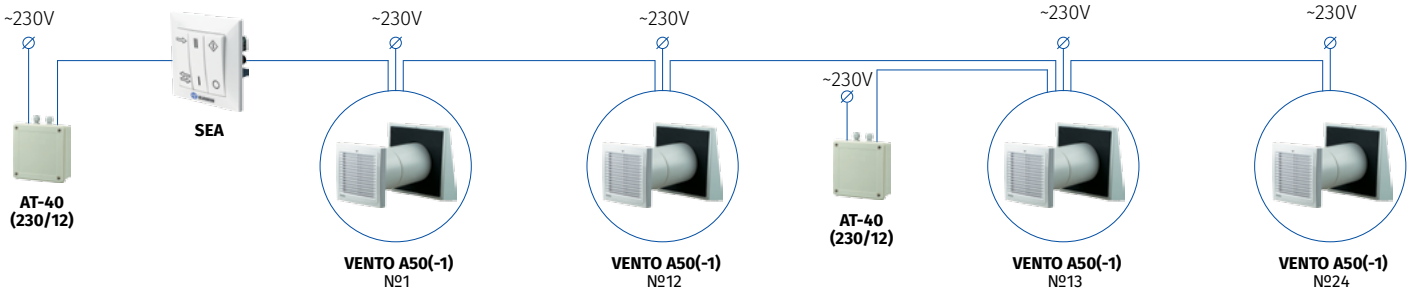
- The integrated automation system enables operation of the unit at the first low speed or the second high speed:
  - ventilation mode (air supply or air extract);
  - reversible heat regeneration mode.
- The unit operation mode control is performed by means of an external control block with a power transformer:
  - in VENTO A50 Pro / A50-1 Pro / A50 S Pro / A50-1 S Pro delivery set included (model SEA-T12)
  - available upon separate order for VENTO A50 / A50-1/ A50 S / A50-1 S (model SEA-T12 or SEA).



- To arrange a central controlled ventilation system based on 4 units connect three VENTO A50 / A50-1/ A50 S / A50-1 S units to one VENTO A50 Pro / A50-1 Pro / A50 S Pro / A50-1 S Pro unit with SEA-T12 control and power unit. No extra accessories are required.



- To arrange a central controlled ventilation system based on more than 4 units connect a required number of the units, one SEA three-position switch and several 12 W AT-12 transformers or 40 W AT-40 transformers, depending on the total unit power consumption to one VENTO A50 / A50-1/ A50 S / A50-1 S unit.



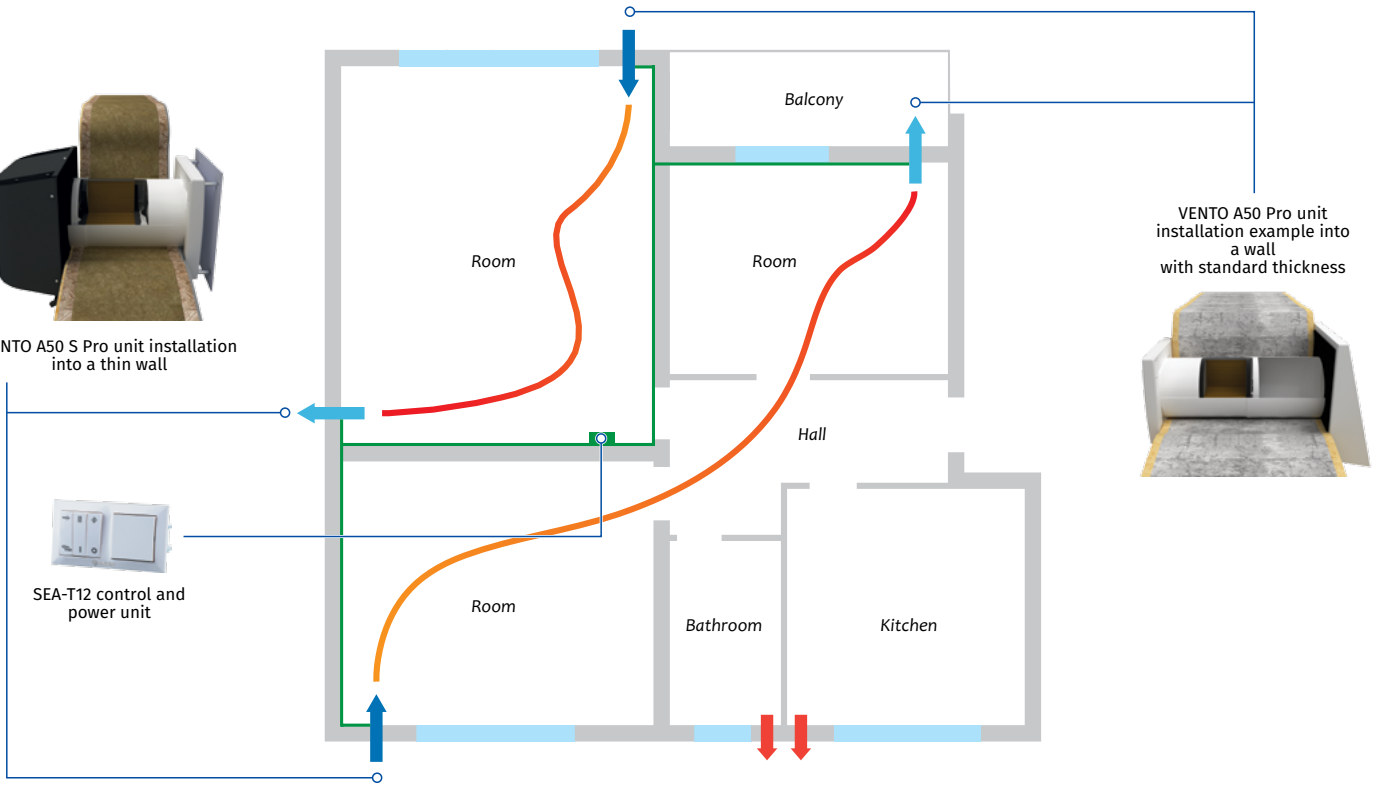
VENTO A50(-1) (Pro)

HEAT RECOVERY SINGLE-ROOM UNITS

Mounting

- The unit is designed for external through-the-wall installation inside a prepared round hole in the outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation.
- In case of brand new construction the units are mounted in two stages:
  - **pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of the telescopic air ducts, outer ventilation hood and laying out of electric cables.
  - **final mounting** before commissioning of a house. It includes installation of the regenerator, the filter, connection of the ventilation unit and automation.
- If mounting of the ventilation hood on the outer wall is undesirable it may be flush mounted and the external grille may be inserted into the outer window jamb using the KIT BlauPlast 204x60-1 pre-installation kit. Available upon separate order.

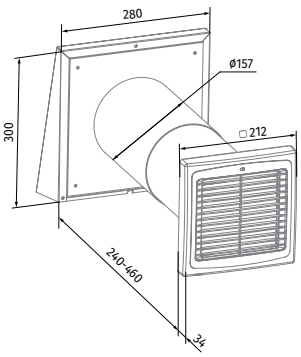
VENTO A50 S Pro unit installation into a thin wall



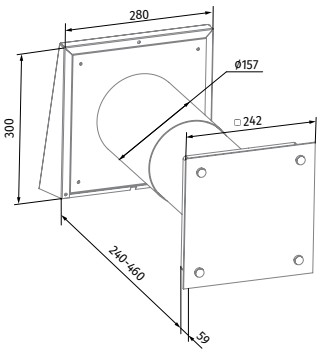
SEA-T12 control and power unit

VENTO A50 Pro unit installation example into a wall with standard thickness

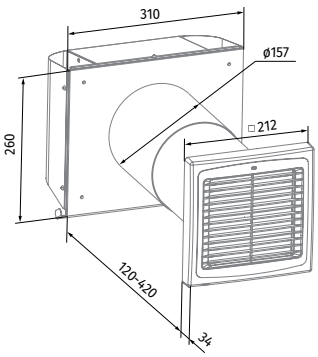
Overall dimensions [mm]



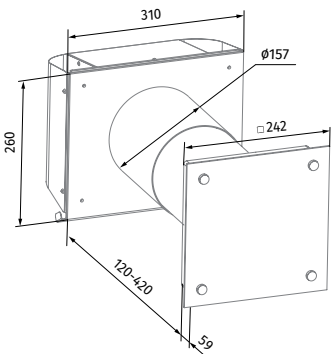
VENTO A50



VENTO A50-1



VENTO A50 S

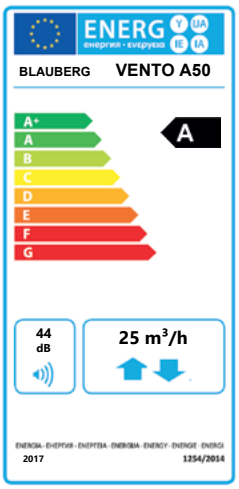


VENTO A50-1 S

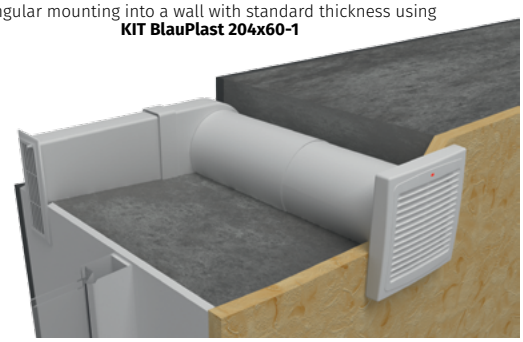
VENTO A50(-1) (Pro)

Technical data

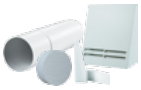
Parameters	VENTO A50 / VENTO A50-1 VENTO A50 S / VENTO A50-1 S	
Speed	I	II
Voltage [V /50 Hz]	220-240	
Power [W]	3.7	4.8
Current [A]	0.02	0.03
RPM [min⁻¹]	599	1155
Maximum air flow [m³/h (l/s)]	26 (7)	53 (15)
Sound pressure level at 1 m [dBA]	24	34
Sound pressure level at 3 m [dBA]	14	24
Outdoor sound pressure attenuation [dBA]	18	
Regeneration efficiency [%]	up to 90	
SEC Class	A	
Ingress protection rating	IP24	



Angular mounting into a wall with standard thickness using
KIT BlauPlast 204x60-1



Accessories

Name		Description
SEA-T12 (230/12)		External control unit with a 12 W power transformer. It is included into VENTO A50 / A50-1 Pro and VENTO A50 / A50-1 S Pro units standard delivery set.
SEA		External control unit for the unit operation mode control.
AT-40 (230/12)		40 W power transformer for synchronous connection of 12 units. Used jointly with SEA control unit it ensures a central controllable ventilation system.
AT-12 (230/12)		12 W power transformer for synchronous connection of 4 units. Used jointly with SEA control unit it ensures a central controllable ventilation system.
Pre-installation Kit VENTO A50		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Round Ø150 mm air duct, 240 up to 460 mm long. • AH 150 outer ventilation hood. • Plastic foam plug. • Plastic foam wedges.
Pre-installation Kit VENTO A50 S		Pre-installation kit for mounting into a thin wall. Includes: • Round Ø150 mm air duct, 120 up to 420 mm long. • AH-S 150 outer ventilation hood. • Plastic foam plug. • Plastic foam wedges.
Completion Kit VENTO A50		Final mounting kit. Includes: • Ceramic regenerator Ø150 mm. • VENTO A50 ventilation unit. • G3 filters.
Completion Kit VENTO A50-1		Final mounting kit. Includes: • Ceramic regenerator Ø150 mm. • VENTO A50-1 ventilation unit. • G3 filters.
KIT BlauPlast 204x60-1		Mounting kit for angular installation into a wall with standard thickness. Includes: • Plastic ventilation grille 230x86 mm. • Plastic air duct 204x60 mm. • Plastic connecting bend from Ø150 to 204x60 mm.

VENTO Ergo V50(-1) Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate.
- Coordinated network based on several integrated single-room ventilation units with central control.

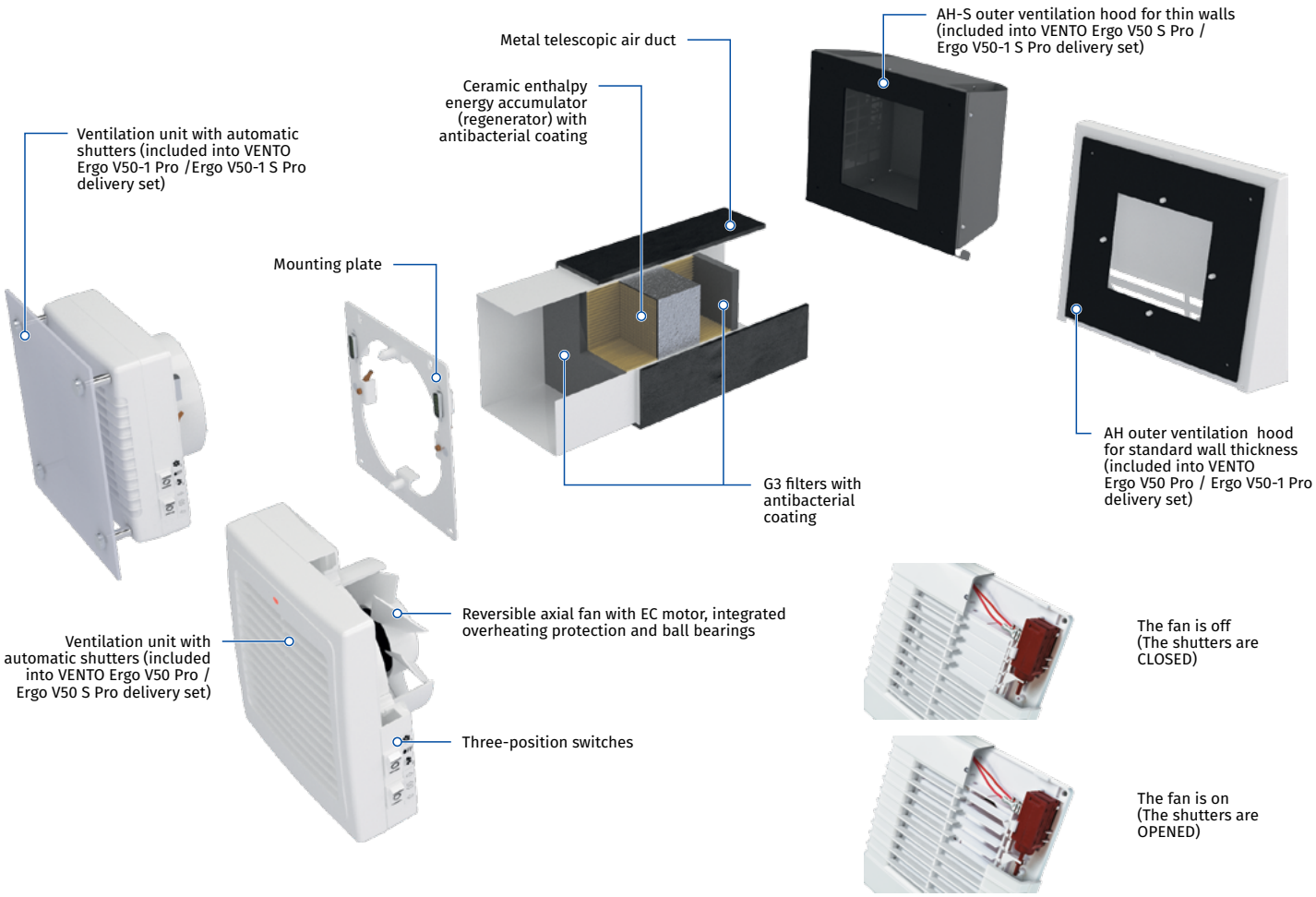
Air flow:
up to 35 m³/h
10 l/s

Heat recovery efficiency:
up to 88 %

Power:
from 4.3 W

Noise level:
from 19 dBA

Design



Designation key

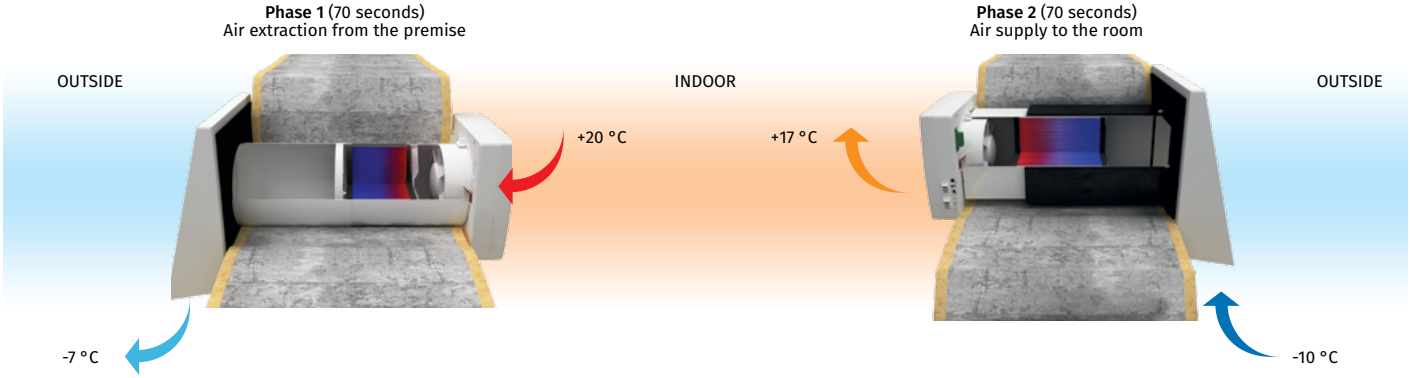
Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO Ergo	**V:** square air duct	**50**	**_:** no flat front panel **-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**_:** without control panel **Pro:** three-position switches and remote control

VENTO Ergo V50(-1) Pro

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 88 %.
- Due to its cellular structure it has a larger contact area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

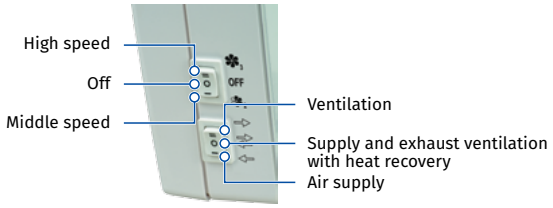
UNIT OPERATING LOGIC IN WINTER PERIOD

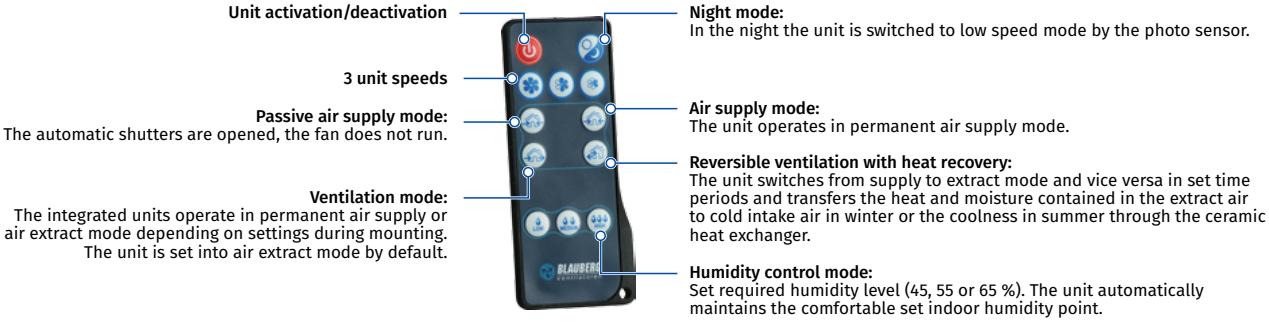


- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit is switched to the extract air mode.

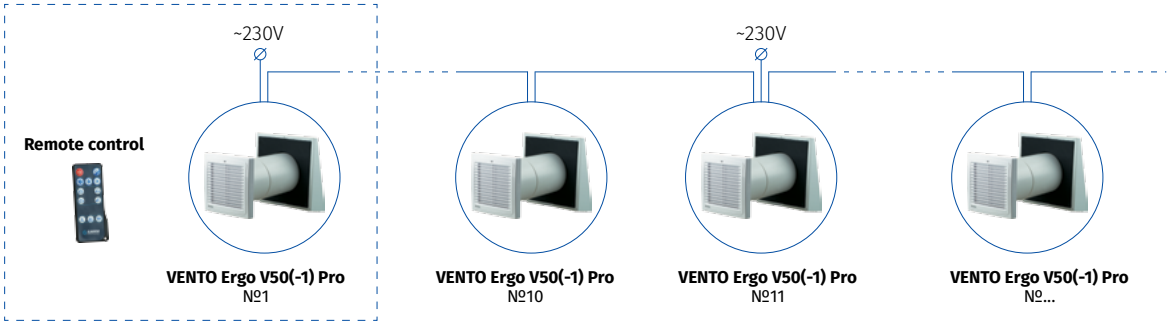
Control

- The unit operation mode control is performed by means of manual three-position switches located on the unit casing or using the remote controller.
- The unit is equipped with a humidity sensor for indoor humidity control and regulation.
- Connection of the units in series enables a central ventilation system.
- Remote control and operation mode selection:





- Connection of several units in series enables their synchronous control by the first unit. For connection of the units in series connect the contact socket on the mounting plate of the first unit to the contact socket of the second units. Connect the third unit with the second one in the same way, etc. The signal from the remote control is received by the first unit only. Power 220 V must be supplied to the 1st and every 11th unit in a chain.



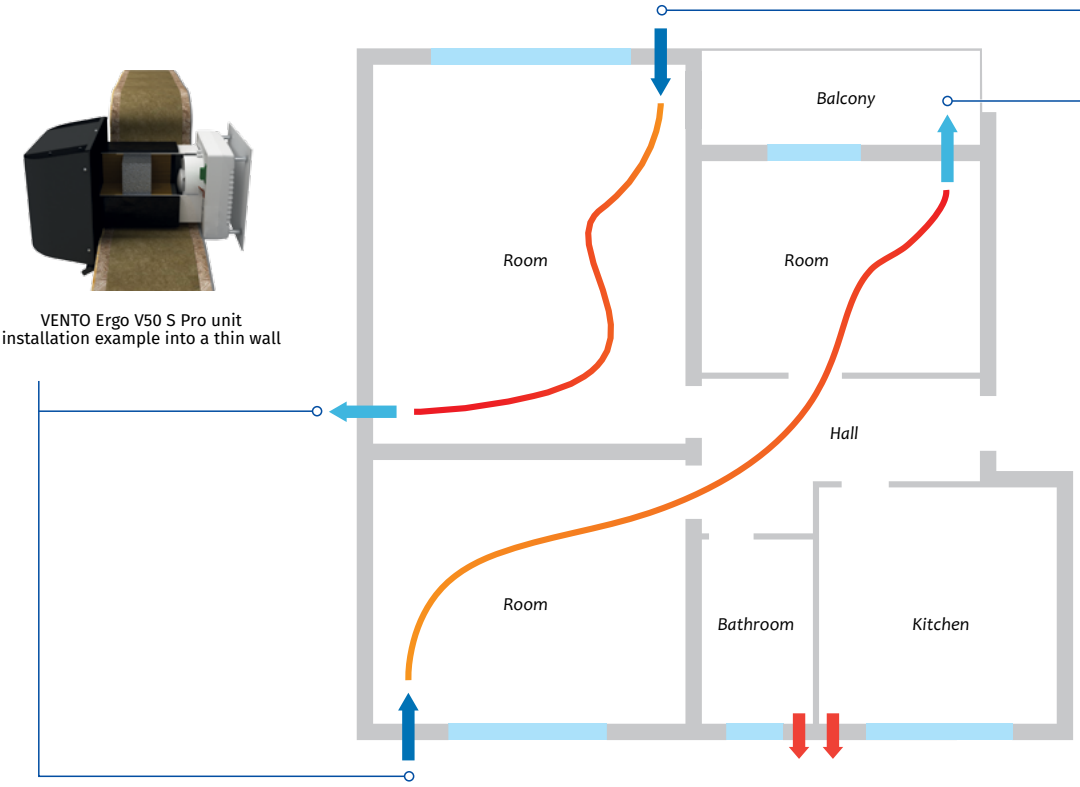
VENTO Ergo V50(-1) Pro

HEAT RECOVERY SINGLE-ROOM UNITS

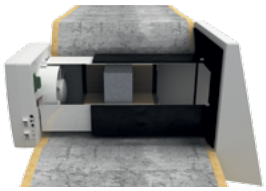
Mounting

- The unit is designed for external through-the-wall installation inside a prepared square hole in the outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation.
- In case of brand new construction the units are mounted in two stages:
  - **pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of the telescopic air ducts, outer ventilation hood and laying out of electric cables.
  - **final mounting** before commissioning of a house. It includes installation of the regenerator, the filters, connection of the ventilation unit.

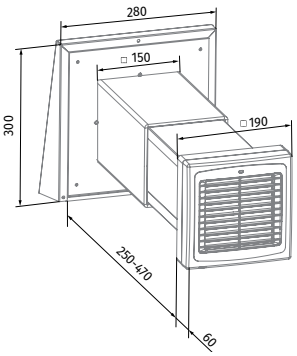
VENTO Ergo V50 S Pro unit installation example into a thin wall



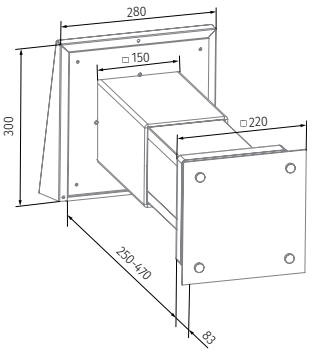
VENTO Ergo V50 Pro unit installation example into a wall with standard thickness



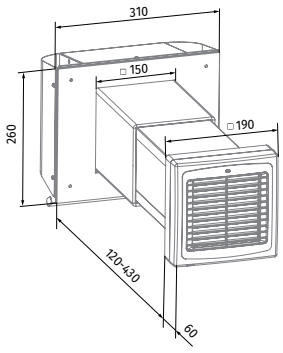
Overall dimensions [mm]



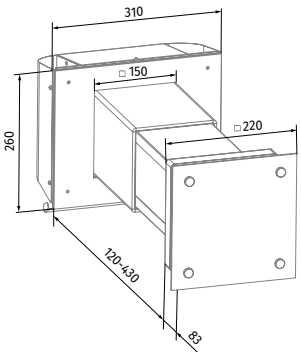
VENTO Ergo V50 Pro



VENTO Ergo V50-1 Pro



VENTO Ergo V50 S Pro



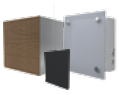
VENTO Ergo V50-1 S Pro

VENTO Ergo V50(-1) Pro

Technical data

Parameters	VENTO Ergo V50 Pro (S) / VENTO Ergo V50-1 Pro (S)		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	4.3	4.9	5.8
Current [A]	0.025	0.029	0.035
RPM [min^{-1}]	808	1264	1629
Maximum air flow [m^3/h (l/s)]	11 (3)	24 (7)	35 (10)
Sound pressure level at 1 m [dBA]	28	33	39
Sound pressure level at 3 m [dBA]	19	24	29
Outdoor sound pressure attenuation [dBA]		19	
Regeneration efficiency [%]		up to 88	
SEC Class		A	
Ingress protection rating		IP24	

Accessories

Name		Description
Pre-installation Kit VENTO Ergo V50		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Square telescopic air duct, section 150x150 mm, 250-470 mm long. • AH 150x150 outer ventilation hood. • Plastic foam plug. • Mounting plate.
Pre-installation Kit VENTO Ergo V50 S		Pre-installation kit for mounting into a thin wall. Includes: • Square telescopic air duct, section 150x150 mm, 120-430 mm long. • AH-S 150x150 outer ventilation hood. • Plastic foam plug. • Mounting plate.
Completion Kit VENTO Ergo V50		Final mounting kit. Includes: • Ceramic regenerator 150x150 mm. • VENTO Ergo V50 ventilation unit. • G3 filters.
Completion Kit VENTO Ergo V50-1		Final mounting kit. Includes: • Ceramic regenerator 150x150 mm. • VENTO Ergo V50-1 ventilation unit. • G3 filters.
FB-Vento Ergo		Remote control

VENTO Ergo A50(-1) Pro1

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate.
- Coordinated network based on several integrated single-room ventilation units with central control.

Air flow:
up to 50 m³/h
14 l/s

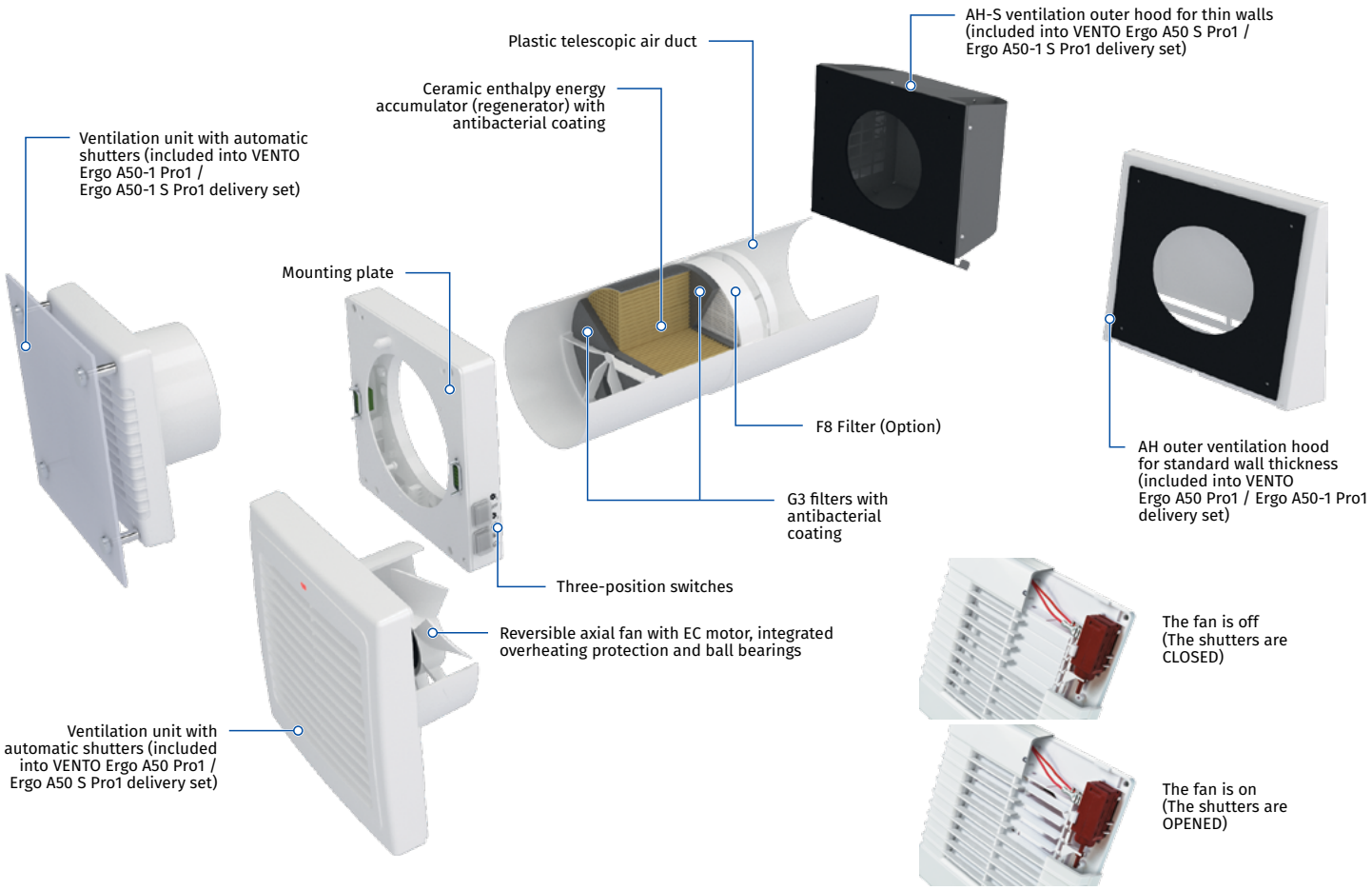
Heat recovery efficiency:
up to 88 %

Power:
from 4.5 W

Noise level:
from 13 dBA

EC motor · ErP 2016 · ErP 2018

Design



Designation key

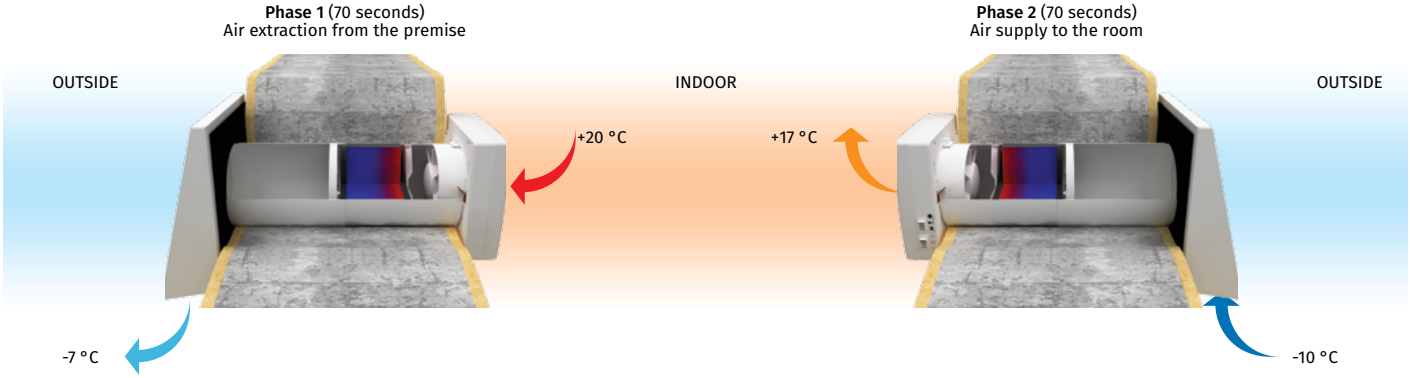
Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO Ergo	**A:** round air duct	**50**	**_:** no flat front panel **-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**Pro1:** three-position switches and remote control

VENTO Ergo A50(-1) Pro1

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 88 %.
- Due to its cellular structure it has a larger heat transfer area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

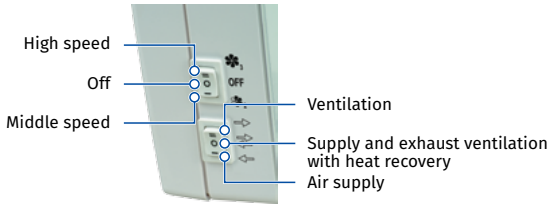
UNIT OPERATING LOGIC IN WINTER PERIOD



- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- In 70 seconds, after heating of the ceramic regenerator, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- In 70 seconds, after cooling of the ceramic regenerator, the unit is switched to the extract air mode.

Control

- The unit operation mode control is performed by means of manual three-position switches located on the unit casing or using the remote controller.
- The unit is equipped with a humidity sensor for indoor humidity control and regulation.
- Connection of the units into one ventilation system provide balanced ventilation and central control.
- Remote control and operation mode selection:



Unit activation/deactivation

3 unit speeds

Passive air supply mode:
The automatic shutters are opened, the fan does not run.

Ventilation mode:
The integrated units operate in permanent air supply or air extract mode depending on settings during mounting. The unit is set into air extract mode by default.

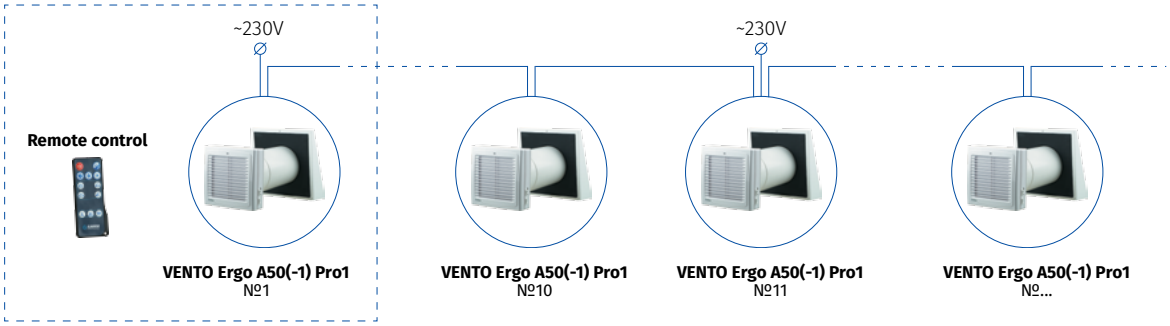
Night mode:
In the night the unit is switched to low speed mode by the photo sensor.

Air supply mode:
The unit operates in permanent air supply mode.

Reversible ventilation with heat recovery:
The unit switches from supply to extract mode and vice versa in set time periods and transfers the heat and moisture contained in the extract air to cold intake air in winter or the coolness in summer through the ceramic heat exchanger.

Humidity control mode:
Set required humidity level (45, 55 or 65 %). The unit automatically maintains the comfortable set indoor humidity point.

- Connection of several units in series enables their synchronous control by the first unit. The signal from the remote control is received by the first unit only. Power 220 V must be supplied to the 1st and every 11th unit in a chain.

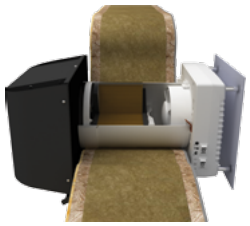


VENTO Ergo A50(-1) Pro1

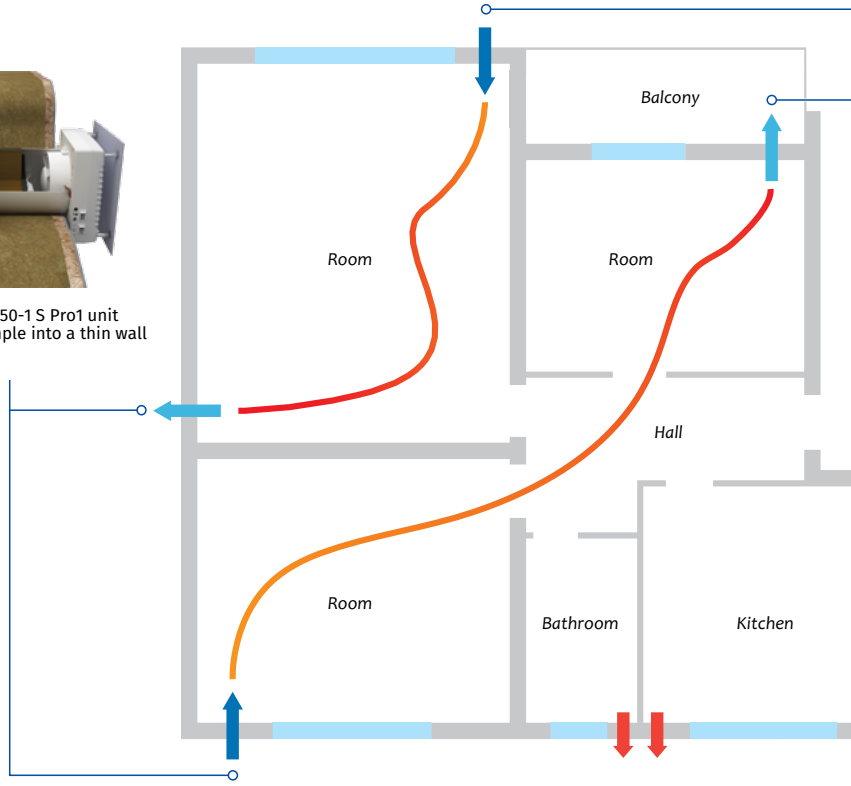
HEAT RECOVERY SINGLE-ROOM UNITS

Mounting

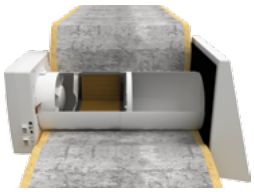
- The unit is designed for external through-the-wall installation inside a prepared round hole in the outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation.
- In case of brand new construction the units are mounted in two stages:
  - **pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of the telescopic air ducts, outer ventilation hood and laying out of electric cables.
  - **final mounting** before commissioning of a house. It includes installation of the regenerator, the filters, connection of the ventilation unit.
- If mounting of the ventilation hood on the outer wall is undesirable it may be flush mounted and the external grille may be inserted into the outer window jamb using the KIT BlauPlast 204x60-1 pre-installation kit. Available upon separate order.



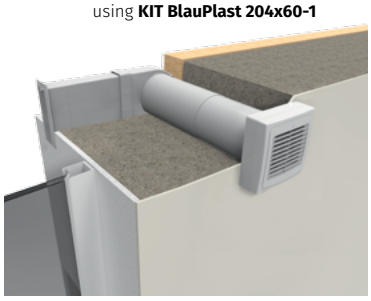
VENTO Ergo A50-1 S Pro1 unit installation example into a thin wall



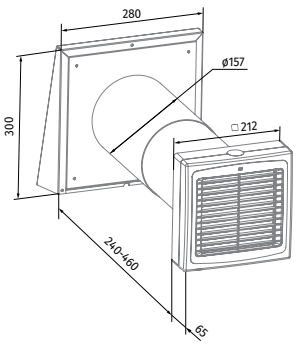
VENTO Ergo A50 Pro1 unit installation example into a wall with standard thickness



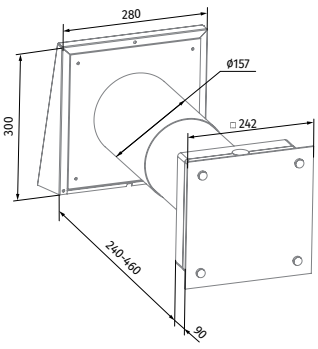
Angular mounting into a wall with standard thickness using **KIT BlauPlast 204x60-1**



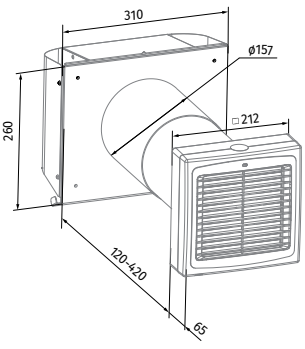
Overall dimensions [mm]



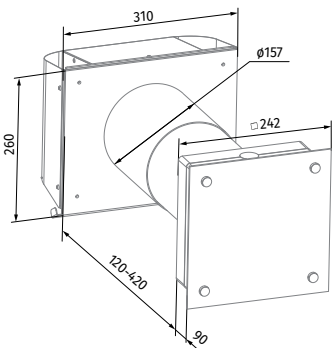
VENTO Ergo A50 Pro1



VENTO Ergo A50-1 Pro1



VENTO Ergo A50 S Pro1



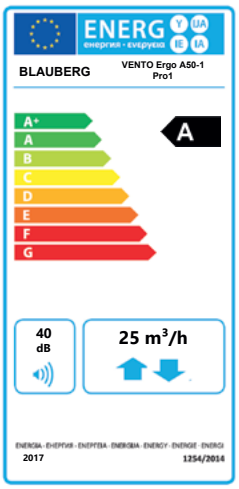
VENTO Ergo A50-1 S Pro1

VENTO Ergo A50(-1) Pro1

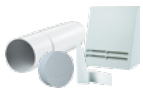
Technical data

Parameters	VENTO Ergo A50 Pro1 / VENTO Ergo A50-1 Pro1		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		1 ~ 100-230	
Power [W]	4.5	5	7
Current [A]	0.024	0.026	0.039
RPM [min⁻¹]	610	800	1450
Maximum air flow [m³/h (l/s)]	21 (6)	32 (9)	50 (14)
Sound pressure level at 1 m [dBA] *	22	29	32
Sound pressure level at 3 m [dBA] *	13	20	23
Outdoor sound pressure attenuation [dBA] in accordance with DIN EN 20140		40	
Regeneration efficiency [%] in accordance with DIBt LÜ-A 20		up to 88	
Transported air temperature [°C]		-20...+50	
SEC Class		A	
Ingress protection rating		IP24	

* In accordance with ISO 3741: 2004



Accessories

Name		Description
Pre-installation Kit VENTO Ergo A50 Pro1		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Round Ø150 mm air duct • AH 150 outer ventilation hood • Plastic foam plug. • Plastic foam wedges.
Completion Kit VENTO Ergo A50 Pro1		Includes: • Ceramic regenerator Ø150 mm • VENTO Ergo A50 ventilation unit • G3 filters • Mounting plate • Remote control
Completion Kit VENTO Ergo A50-1 Pro1		Includes: • Ceramic regenerator Ø150 mm • VENTO Ergo A50-1 ventilation unit • G3 filters • Mounting plate • Remote control
FB-VENTO Ergo		Remote control
KIT BlauPlast 204x60-1		Installation kit for angular mounting. Includes: • Plastic ventilation grille 230x86 mm • Plastic air duct 204x60 mm • Plastic connecting bend from Ø150 to 204x60 mm
FP VENTO Ergo A50 G3		G3 filter kit (2 pcs)
FP VENTO Ergo A50 F8		F8 filter (1 pc)
AH white 150		White painted aluminium hood
AH chrome 150		Brushed stainless steel hood
AH-S grey 150		Grey painted stainless steel hood for thin walls
AH-S chrome 150		Brushed stainless steel hood for thin walls

VENTO Ergo A25-1 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate.

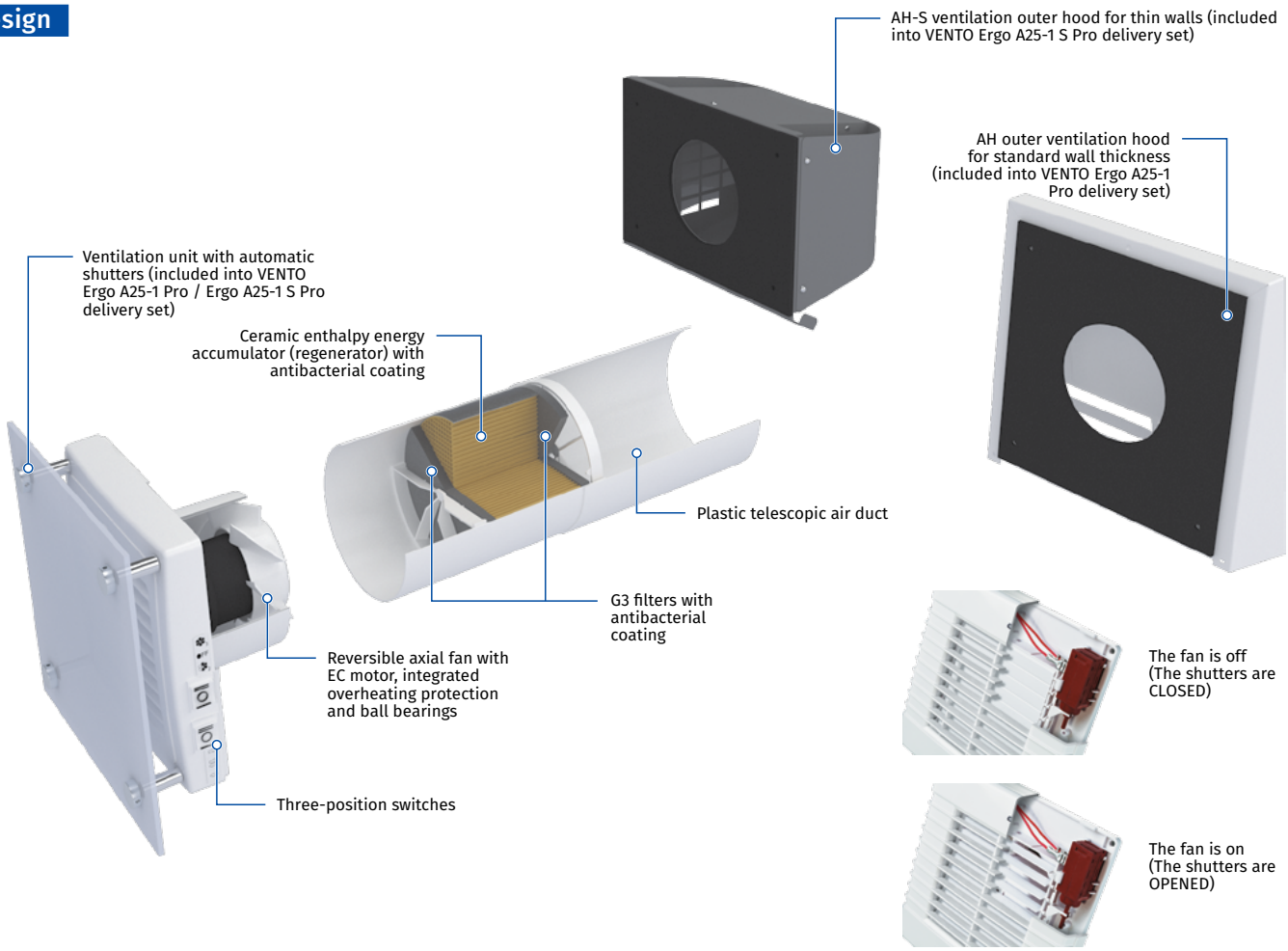
Air flow:
up to 25 m³/h
7 l/s

Heat recovery efficiency:
up to 85 %

Power:
from 3.68 W

Noise level:
from 22 dBA

Design



Designation key

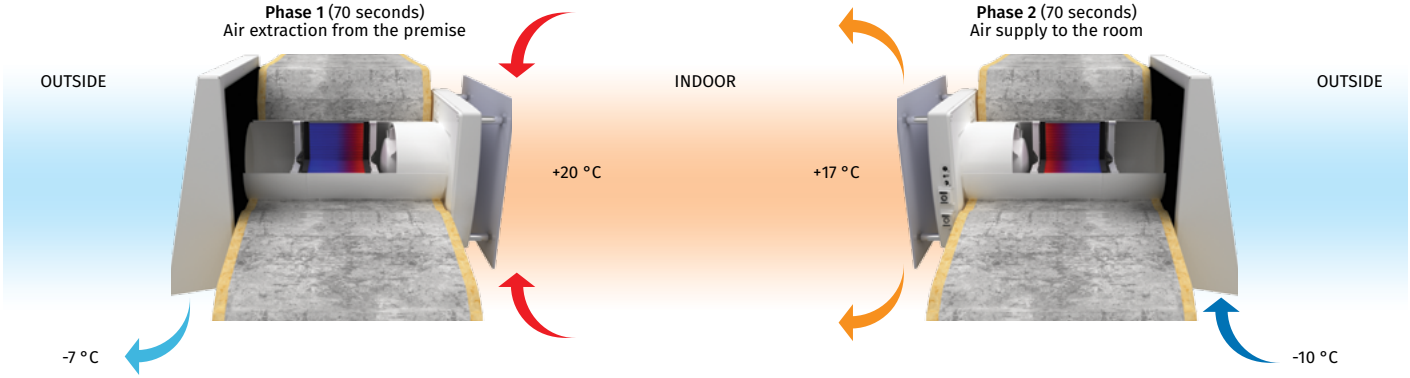
Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO Ergo	**A:** round air duct	**25**	**-1:** Flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**Pro:** remote control

VENTO ERGO A25-1 PRO

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 85 %.
- Due to its cellular structure it has a larger contact area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

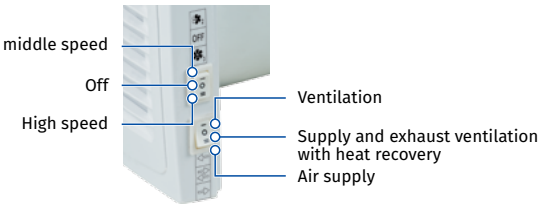
UNIT OPERATING LOGIC IN WINTER PERIOD



- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit is switched to the extract air mode.

Control

- The unit operation mode control is performed by means of manual three-position switches located on the unit casing or using the remote controller.
- The unit is equipped with a humidity sensor for indoor humidity control and regulation.
- Remote control and operation mode selection:



Unit activation/deactivation

3 unit speeds

Passive air supply mode:
The automatic shutters are opened, the fan does not run.

Ventilation mode:
The integrated units operate in permanent air supply or air extract mode depending on settings during mounting. The unit is set into air extract mode by default.

Night mode:
In the night the unit is switched to low speed mode by the photo sensor.

Air supply mode:
The unit operates in permanent air supply mode.

Reversible ventilation with heat recovery:
The unit switches from supply to extract mode and vice versa in set time periods and transfers the heat and moisture contained in the extract air to cold intake air in winter or the coolness in summer through the ceramic heat exchanger.

Humidity control mode:
Set required humidity level (45, 55 or 65 %). The unit automatically maintains the comfortable set indoor humidity point.

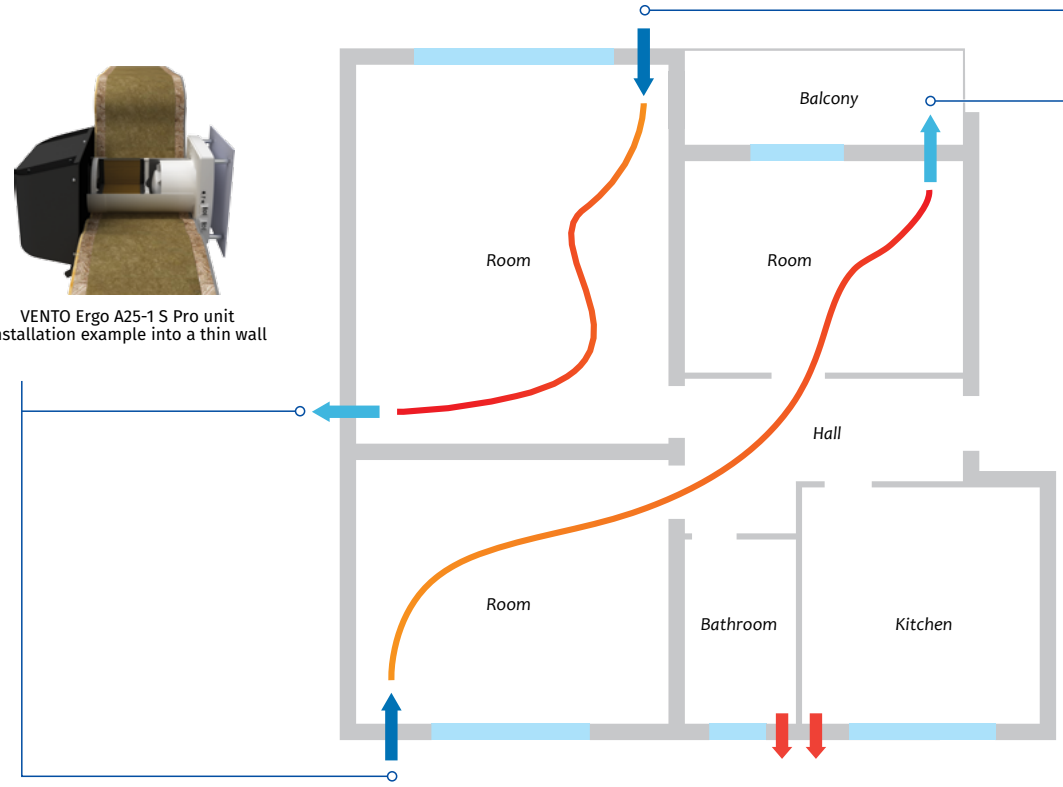
VENTO Ergo A25-1 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

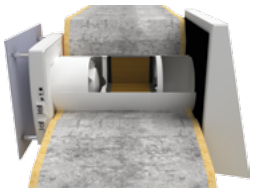
Mounting

- The unit is designed for external through-the-wall installation inside a prepared round hole in the outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation.
- In case of brand new construction the units are mounted in two stages:
  - **pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of the telescopic air ducts, outer ventilation hood and laying out of electric cables.
  - **final mounting** before commissioning of a house. It includes installation of the regenerator, the filters, connection of the ventilation unit
- If mounting of the ventilation hood on the outer wall is undesirable it may be flush mounted and the external grille may be inserted into the outer window jamb using the **KIT BlauPlast 204x60-1** pre-installation kit. Available upon separate order.

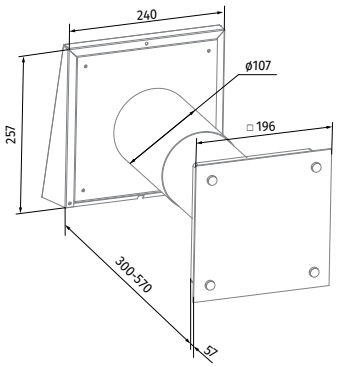
VENTO Ergo A25-1 S Pro unit installation example into a thin wall



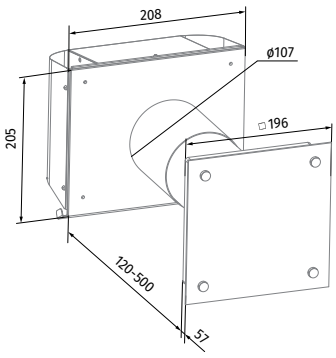
VENTO Ergo A25-1 Pro unit installation example into a wall with standard thickness



Overall dimensions [mm]

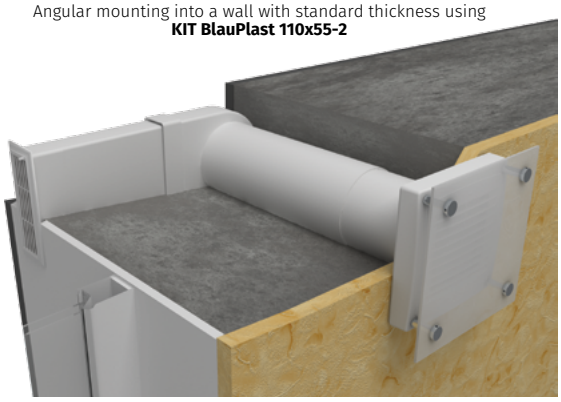


VENTO Ergo A25-1 Pro



VENTO Ergo A25-1 S Pro

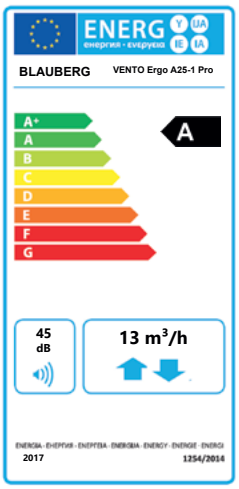
Angular mounting into a wall with standard thickness using **KIT BlauPlast 110x55-2**



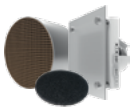
VENTO Ergo A25-1 Pro

Technical data

Parameters	VENTO Ergo A25-1 Pro		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	3.68	4.15	5.59
Current [A]	0.024	0.027	0.038
RPM [min^{-1}]	1250	1397	2541
Maximum air flow [m^3/h (l/s)]	7 (2)	16 (4)	25 (7)
Sound pressure level at 1 m [dBA]	31	35	43
Sound pressure level at 3 m [dBA]	22	25	33
Outdoor sound pressure attenuation [dBA]		19	
Regeneration efficiency [%]		up to 85	
SEC Class		A	
Ingress protection rating		IP24	



Accessories

Name		Description
Pre-installation Kit VENTO Ergo A25-1		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Round Ø100 mm air duct, 300-570 mm long. • AH 100 outer ventilation hood. • Plastic foam plug. • Plastic foam wedges.
Pre-installation Kit VENTO Ergo A25-1 S		Pre-installation kit for mounting into a thin wall. Includes: • Round Ø100 mm air duct, 120-500 mm long. • AH-S 100 outer ventilation hood. • Plastic foam plug. • Plastic foam wedges.
Completion Kit VENTO Ergo A25-1		Final mounting kit. Includes: • Ceramic regenerator Ø100 mm. • VENTO Ergo A25-1 ventilation unit. • G3 filters.
FB-VENTO Ergo		Remote control
KIT BlauPlast 110x55-2		Installation kit for angular mounting into a wall with standard thickness Includes: • Plastic ventilation grille 230x86 mm. • Plastic air duct 204x60 mm. • Plastic connecting bend from Ø150 to 204x60 mm.

VENTO Expert A50-1 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.
- Coordinated network based on several integrated single-room ventilation units with central control.

Air flow:
up to 50 m³/h
14 l/s

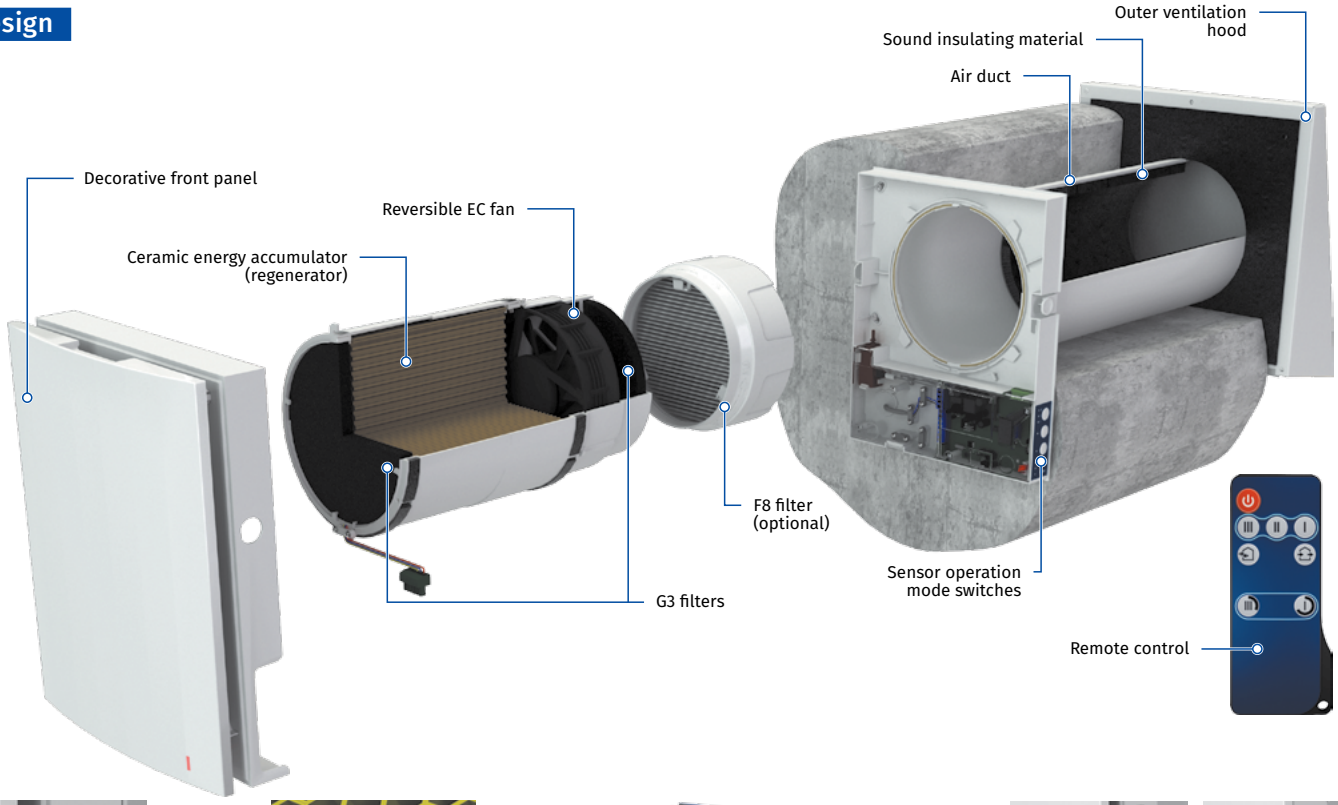
Heat recovery efficiency:
up to 93 %

Power:
from 3.61 W

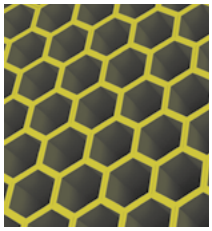
Noise level:
from 11 dBA

EC motor · ErP 2016 · ErP 2018

Design



Easy maintenance.
Indoor unit is opened by pressing the latches on both sides.



One of the best regeneration efficiency on the market due to innovative hexagonal structure of the heat exchanger cells.

Integrated automatic air shutters prevent air back drafting.

The specially designed front panel can be closed manually to ensure 100 % air tightness and protect against wind impact.

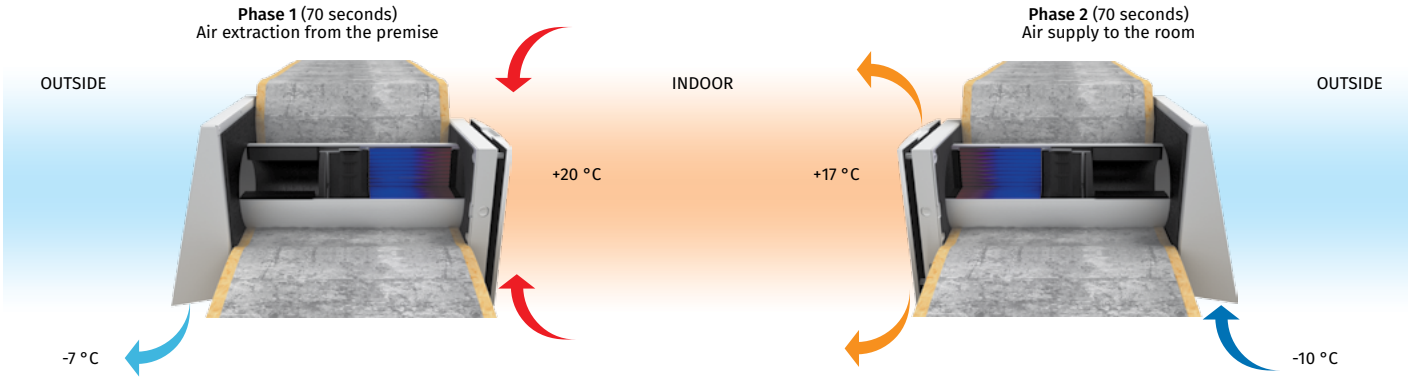
Designation key

Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO Expert	**A:** round air duct	**50**	**-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**Pro:** remote control

VENTO Expert A50-1 Pro

Heat and moisture regeneration

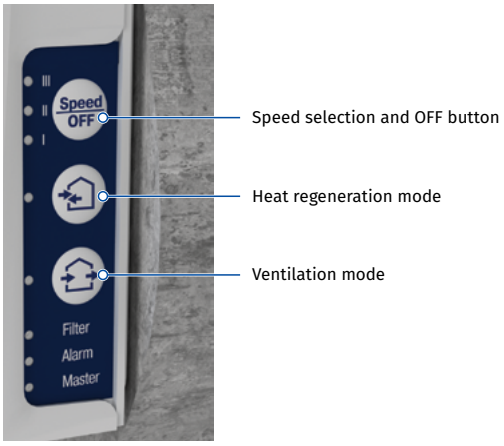
UNIT OPERATING LOGIC IN WINTER PERIOD

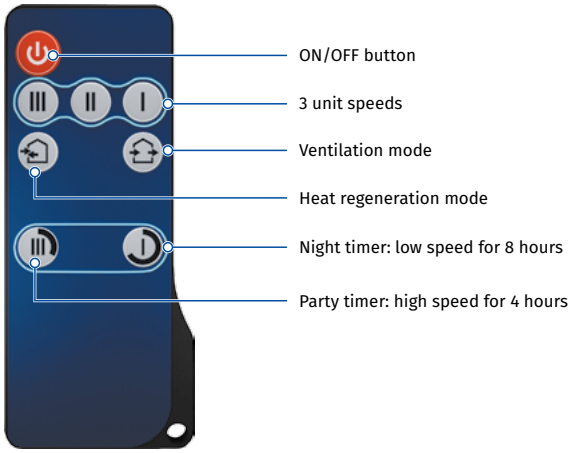


- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers its heat energy and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit switches to the extract air mode.

Control

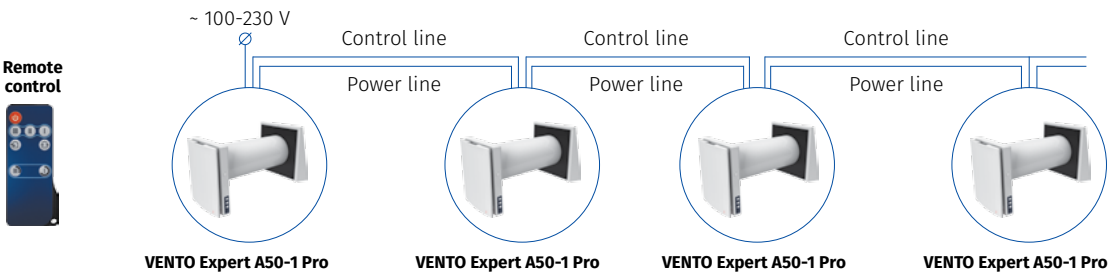
- Control of the unit operation mode is performed by means of sensor control panel located on the unit casing or a remote controller.





The unit is equipped with a humidity sensor for indoor humidity control. Connection of the units in series ensures balanced ventilation. First unit in the chain becomes the master one.

Ventilation mode of the entire system can be controlled by means of the control panel on the master unit.
A signal from the remote control is received by the master unit only.

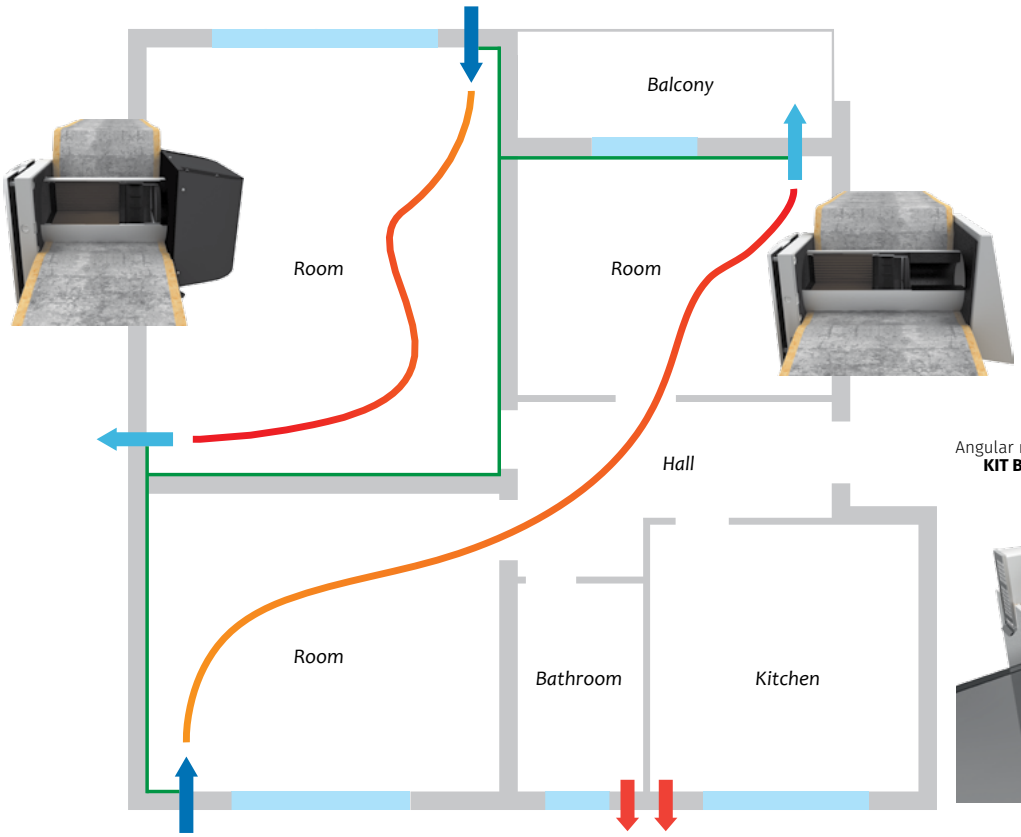


VENTO Expert A50-1 Pro

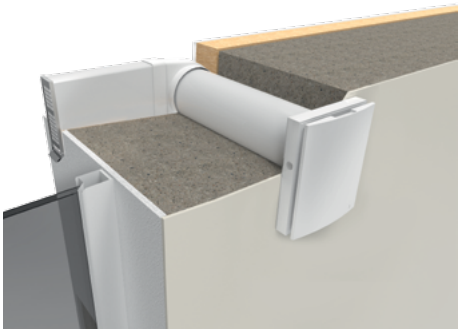
HEAT RECOVERY SINGLE-ROOM UNITS

Mounting

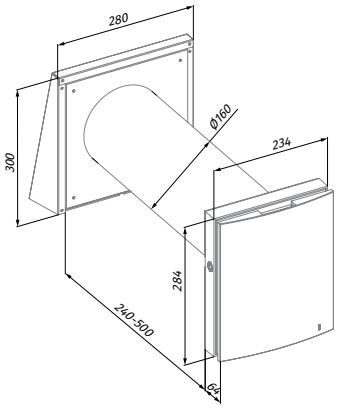
- The unit is designed for through-the-wall installation inside a prepared hole in an outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase connected units. Some units ensure supply of fresh air to the room and the other units extract air from the premise. This way the most efficient balanced ventilation is arranged.
- In case of brand new construction, units are mounted in two stages:
  - **Pre-installation** at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of an air duct, an outer ventilation hood and cable installation.
  - **Final mounting** before commissioning of a house. It includes installation of a regenerator with a fan and filters and mounting and wiring of an indoor unit with a controller and shutters.



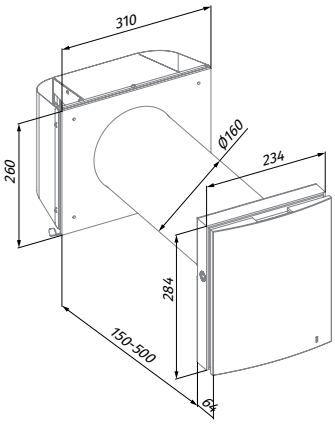
Angular mounting into a wall with standard thickness using **KIT BlauPlast white 160 / KIT BlauPlast chrome 160**



Overall dimensions [mm]



VENTO Expert A50-1 Pro



VENTO Expert A50-1 S Pro
(for thin walls)

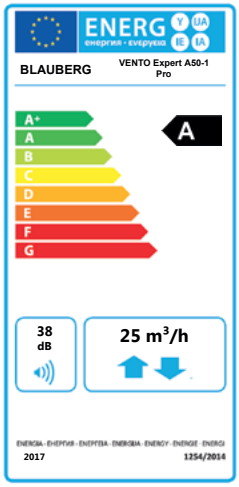
VENTO Expert A50-1 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

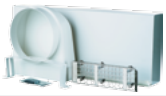
Technical data

Parameters	VENTO Expert A50-1 Pro		
Speed	I	II	III
Voltage [V / 50 (60) Hz]	100-230		
Power [W]	3.61	4.15	5.20
Current [A]	0.025	0.030	0.039
RPM [min⁻¹]	800	1300	1900
Air flow in ventilation mode [m³/h (l/s)]	15 (4)	30 (8)	50 (14)
Air flow in heat recovery mode [m³/h (l/s)]	8 (2)	15 (4)	25 (7)
Filter	G3 (Option: F8 PM2.5 > 99 %*)		
Transported air temperature [°C]	-20...+50		
Sound pressure level at 1 m [dBA]	20	27	30
Sound pressure level at 3 m [dBA]	11	18	21
Outdoor sound pressure attenuation [dBA] in accordance with DIN EN 20140	42		
Regeneration efficiency [%] in accordance with DIBt LÜ-A 20	up to 93		
SEC Class	A		
Ingress Protection Rating	IP24		

* maximum air flow 40 m³/h



Accessories

Name		Description
Pre-installation Kit VENTO Expert A50-1		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Air duct; • AH 160 outer ventilation hood; • Plastic foam plug. • Plastic foam wedges.
Pre-installation Kit VENTO Expert A50-1 S		Pre-installation kit for mounting into a thin wall. Includes: • Air duct; • AH-S 160 outer ventilation hood; • Plastic foam plug. • Plastic foam wedges.
Completion Kit VENTO Expert A50-1		Final mounting kit. Includes: • Cartridge with a heat regenerator, a fan and G3 filters; • Indoor unit with a controller and shutters; • Remote control.
FP VENTO Expert A50 G3		G3 filters (2 pcs.)
FP VENTO Expert A50 F8		Includes: • Plastic frame (1 pc.); • G2 pre-filter (1 pc.); • F8 filter (1 pc.). Filtration rate PM2.5 99 %. F8 filter reduces airflow of the unit down to 40 m³/h
FB-Vento Expert		Remote control
KIT BlauPlast white 160		Mounting kit for angular installation in walls with standard thickness
KIT BlauPlast chrome 160		Kit for angular mounting with stainless stees outer grille
PP 160		Plastic outer grille with pipe for mounting from indoor
CD-1		CO_2 sensor with LED indication and On/Off button
CD-2		CO_2 sensor

VENTO Expert A50-1 W

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving, supply and exhaust, single-room ventilation in flats, houses, cottages, social and commercial premises.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.
- Wi-Fi communication between several single-room ventilation units for coordinated operation.
- Controlled by Android or iOS smartphone or tablet.

Air flow:
up to 50 m³/h
14 l/s

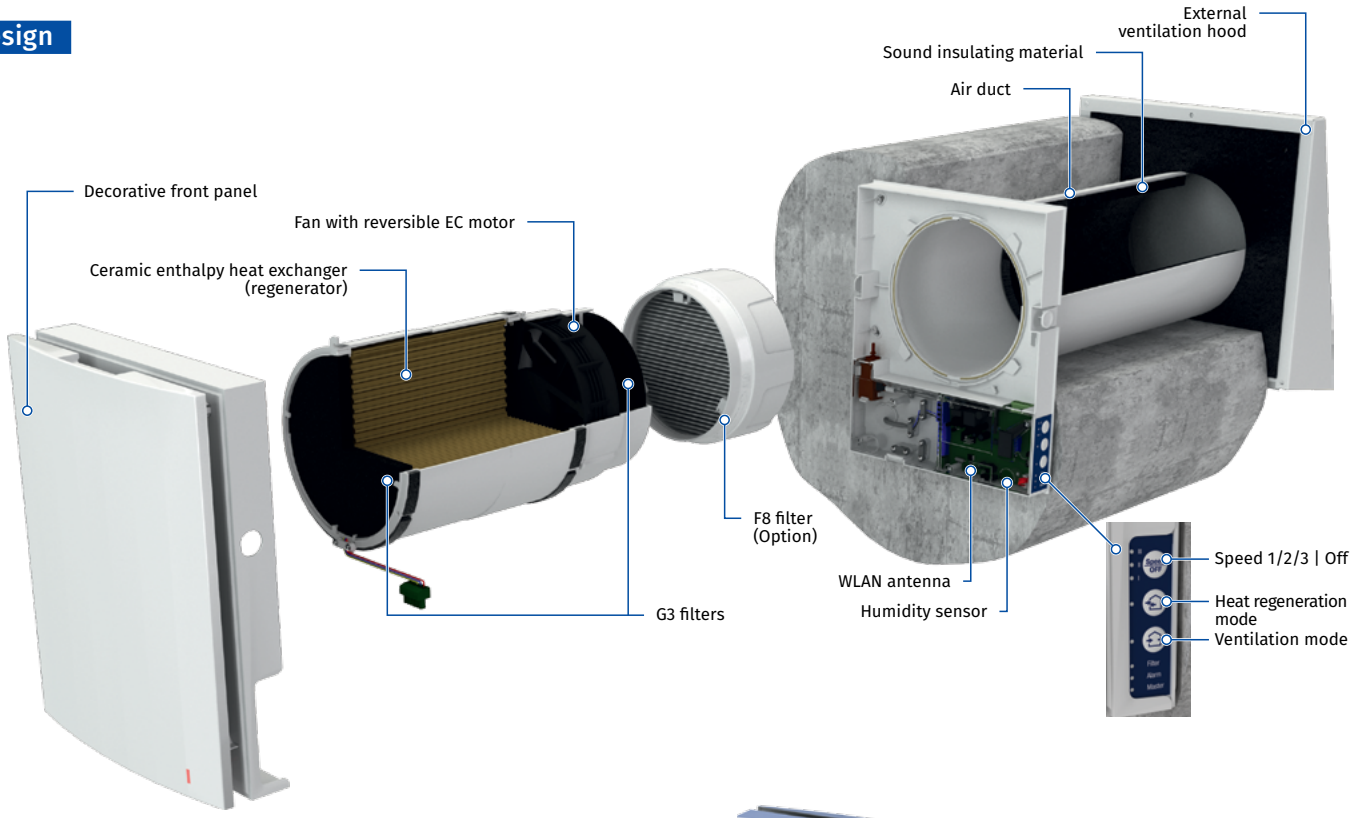
Heat recovery efficiency:
up to 93 %

Power:
from 4.45 W

Noise level:
from 11 dBA

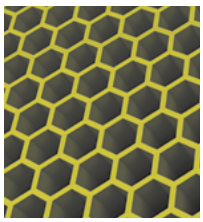
EC motor · ErP 2016 · ErP 2018

Design



Easy maintenance. Indoor unit is opened by pressing the latches on both sides.

The specially designed front panel can be closed manually to ensure 100% air tightness and protect against wind impact.



One of the best regeneration efficiency on the market due to innovative hexagonal structure of the heat exchanger cells.

Integrated automatic air shutters prevent air back drafting.

Wi Fi

Built-in Wi-Fi for wireless communication between units and Android or iOS device control.

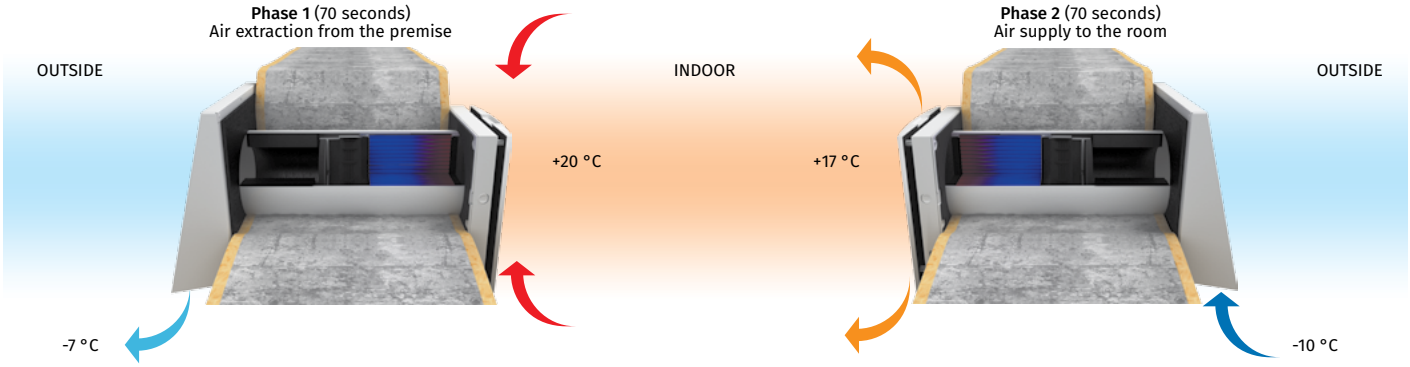
Designation key

Model	Air duct	Nominal air flow [m³/h]	Front panel	Hood type	Control
VENTO Expert	**A:** round air duct	**50**	**_:** no flat front panel **-1:** flat front panel	**_:** hood for standard walls (by default) **S:** metal hood for thin walls	**W:** wireless control

VENTO Expert A50-1 W

Heat and moisture regeneration

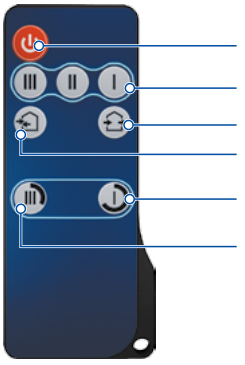
UNIT OPERATING LOGIC IN WINTER PERIOD



- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers its heat energy and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit switches to the extract air mode.

Control

- The units can be connected by Wi-Fi for synchronized operation.



ANDROID APP ON Google play

The units can be connected by Wi-Fi. Blauberg Vento app for Android or iOS devices is available at Google Play and App Store.

Available on the App Store

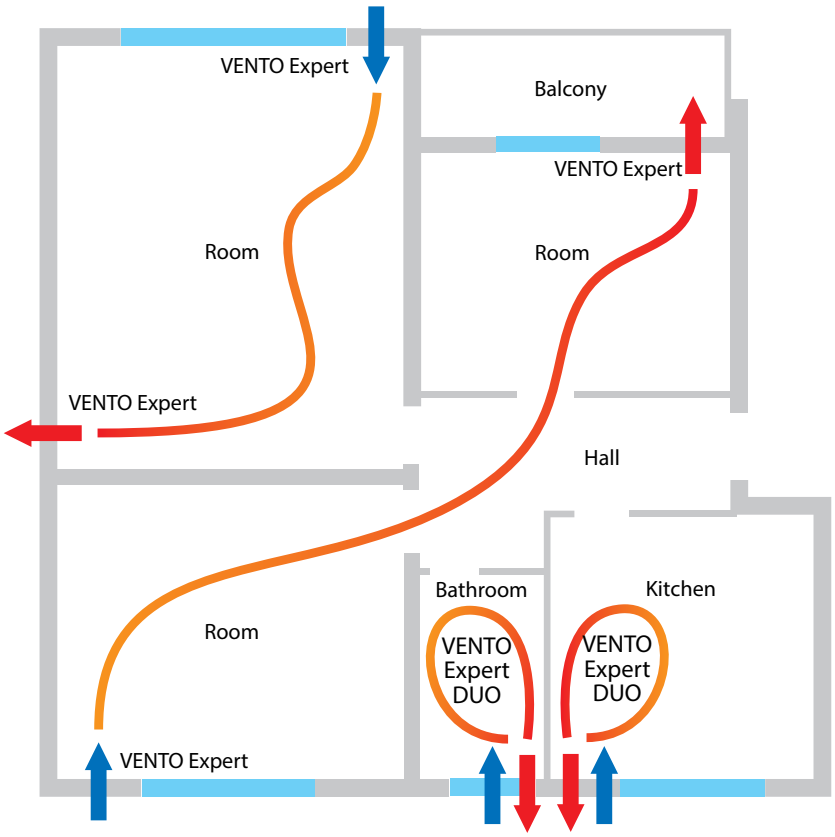
- The **VENTO Expert A50-1 W** unit can be connected to a laptop for advanced settings:
  - Master or slave
  - Supply or exhaust operation in ventilation mode
  - Connection through a Wi-Fi router or directly to a smartphone.

VENTO Expert A50-1 W

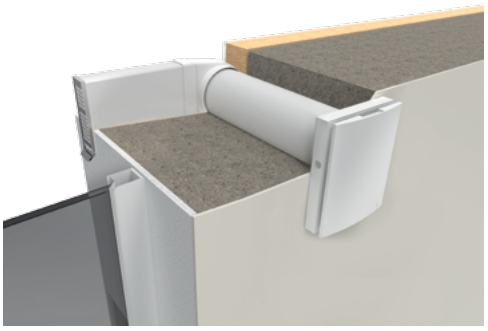
HEAT RECOVERY SINGLE-ROOM UNITS

Mounting

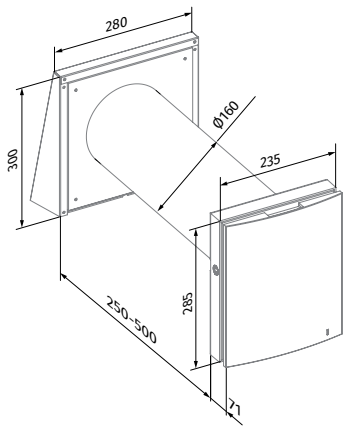
- The unit is designed for through-the-wall installation inside a prepared hole in an outer wall of the building.
- The best ventilation solution is pairwise installation of reverse phase synchronized units. Some units ensure supply of fresh air to the room and the other units extract air from the premise. This way the most efficient balanced ventilation is arranged.
- In case of brand new construction, units are mounted in two stages:
  - Pre-installation of an air duct and an outer ventilation hood at the stage of indoor finishing and outer decorative wall finishing.
  - Completion of the installation before commissioning of a house. It includes installation of the indoor unit with controller and shutters, the cartridge, the regenerator, the fan and the filters.



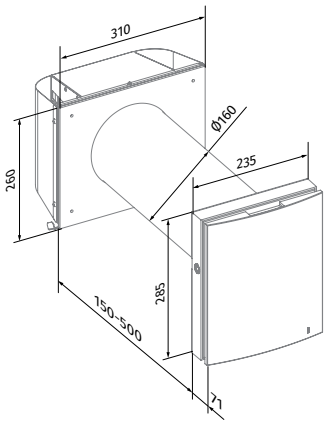
Angular mounting into a wall with standard thickness using
KIT BlauPlast white 160 / KIT BlauPlast chrome 160



Overall dimensions [mm]



VENTO Expert A50-1 W



VENTO Expert A50-1 S W
(for thin walls)

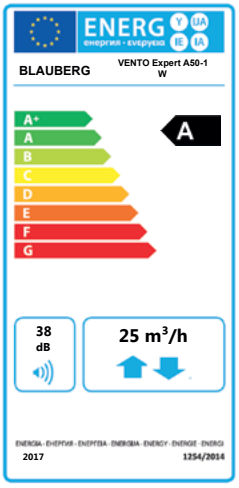
VENTO Expert A50-1 W

HEAT RECOVERY SINGLE-ROOM UNITS

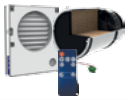
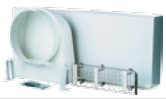
Technical data

Parameters	VENTO Expert A50-1 W		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	4.45	5.08	7.06
Current [A]	0.035	0.040	0.059
RPM [min⁻¹]	800	1300	1900
Air flow in ventilation mode [m³/h (l/s)]	15 (4)	30 (8)	50 (14)
Air flow in heat recovery mode [m³/h (l/s)]	8 (2)	15 (4)	25 (7)
Filter	G3 (Option: F8 PM2,5 > 99 %*)		
Transported air temperature [°C]	-20...+50		
Sound pressure level at 1 m [dBA]	20	27	30
Sound pressure level at 3 m [dBA]	11	18	21
Outdoor sound pressure attenuation [dBA] in accordance with DIN EN 20140	42		
Regeneration efficiency [%] in accordance with DIBt LÜ-A 20	up to 93		
SEC Class	A		
Ingress protection rating	IP24		

* maximum air flow 40 m³/h



Accessories

Name		Description
Pre-installation Kit VENTO Expert A50-1		Pre-installation kit for mounting into a wall with standard thickness. Includes: • Air duct; • AH 160 outer ventilation hood; • Plastic foam plug. • Plastic foam wedges.
Pre-installation Kit VENTO Expert A50-1 S		Pre-installation kit for mounting into a thin wall. Includes: • Air duct; • AH-S 160 outer ventilation hood; • Plastic foam plug. • Plastic foam wedges.
Completion Kit VENTO Expert A50-1		Final mounting kit. Includes: • Cartridge with a heat regenerator, a fan and G3 filters; • Indoor unit with a controller and shutters; • Remote control.
FP VENTO Expert A50 G3		G3 filters (2 pcs.)
FP VENTO Expert A50 F8		Includes: • Plastic frame (1 pc.); • G2 pre-filter (1 pc.); • F8 filter (1 pc.). Filtration rate PM2.5 99 %. F8 filter reduces airflow of the unit down to 40 m³/h
FB-Vento Expert		Remote control
KIT BlauPlast white 160		Mounting kit for angular installation in walls with standard thickness
KIT BlauPlast chrome 160		Kit for angular mounting with stainless stees outer grille
PP 160		Plastic outer grille with pipe for mounting from indoor
CD-1		CO_2 sensor with LED indication and On/Off button
CD-2		CO_2 sensor

VENTO Expert DUO A30-1 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.
- Coordinated network based on several integrated single-room ventilation units with central control.

Air flow:
up to 30 m³/h
8 l/s

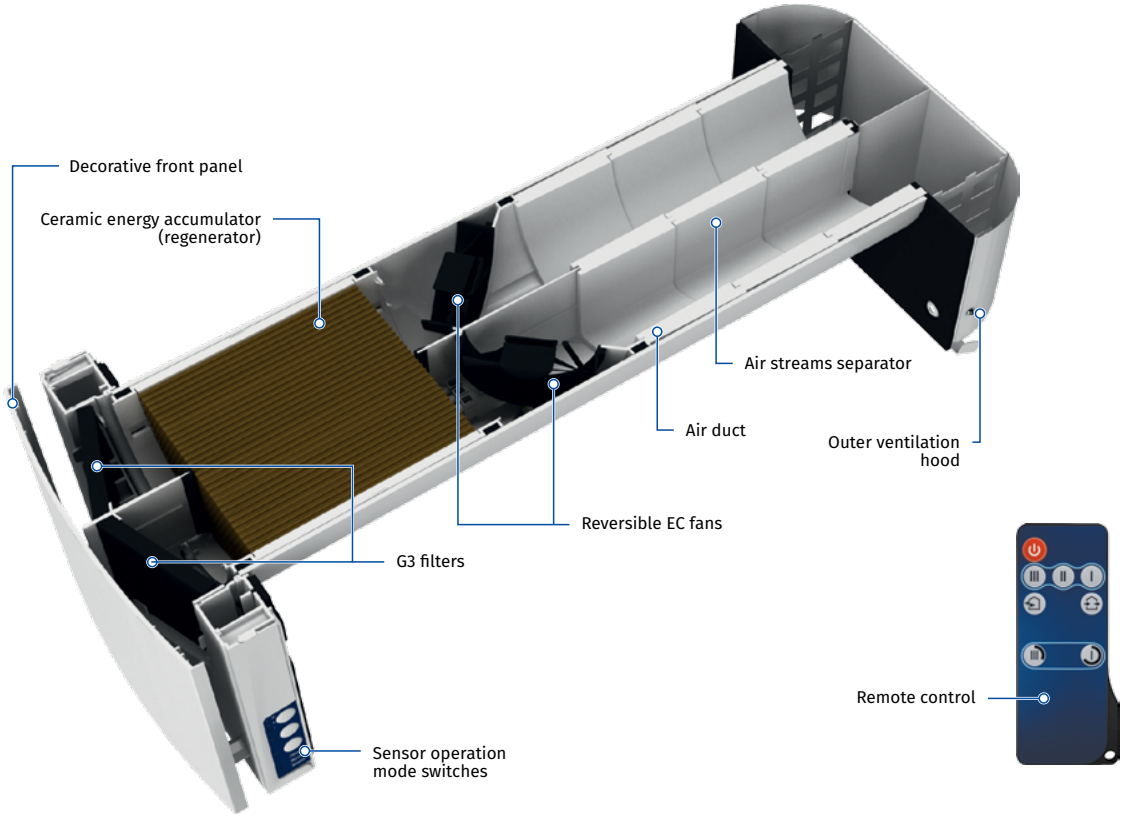
Heat recovery efficiency:
up to 85 %

Power:
from 2.00 W

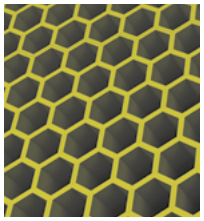
Noise level:
from 24 dBA

EC motor · ErP 2016 · ErP 2018

Design



Easy maintenance. Indoor unit is opened by pressing the latches on both sides.



One of the best regeneration efficiency on the market due to innovative hexagonal structure of the heat exchanger cells.

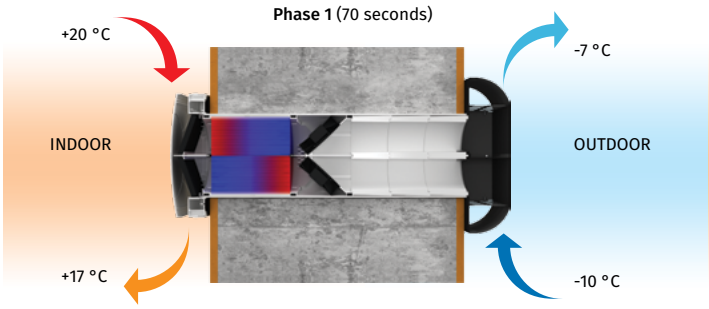
Designation key

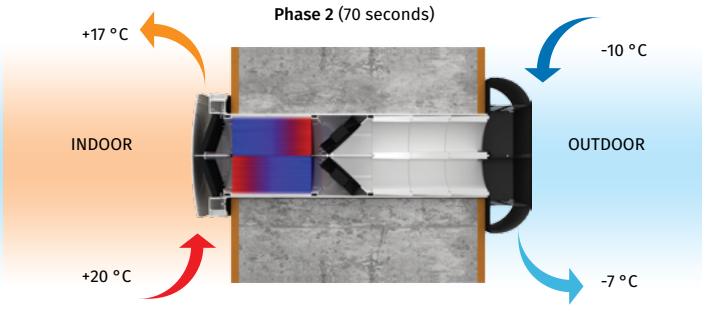
Model	Fans	Air duct	Nominal air flow [m³/h]	Unit modification	Control
VENTO Expert	**DUO:** two fans	**A:** round air duct	**30**	**1**	**Pro**

VENTO Expert DUO A30-1 Pro

Heat and moisture regeneration

UNIT OPERATING LOGIC IN WINTER PERIOD

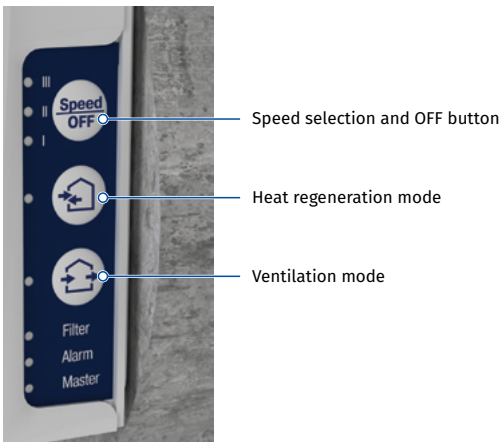


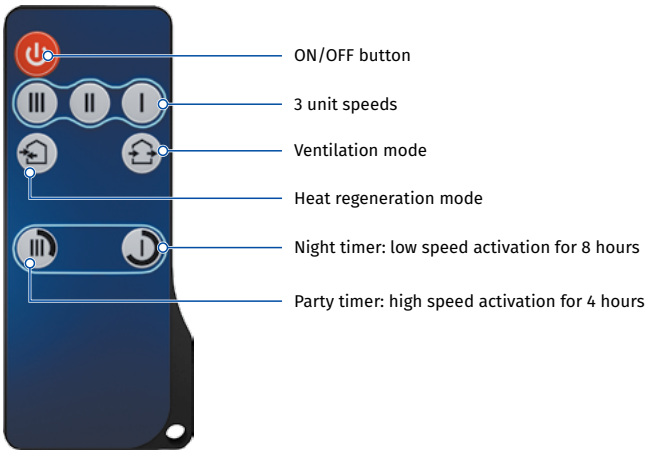


- One fan supplies fresh and cold air from outdoor, which flows through the correspondent part of the ceramic regenerator and absorbs accumulated heat and humidity.
- At the same time, another fan extracts slate and warm air from indoor, that flows through the other part of the ceramic regenerator and transfers heat energy and moisture to it.
- After 70 seconds operation the fans change the rotation direction and opposite processes start.

Control

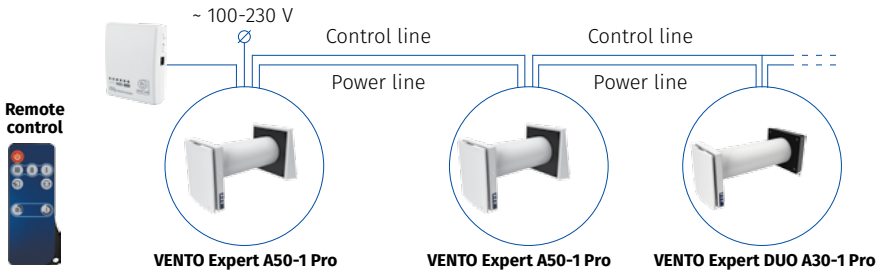
- Control of the unit operation mode is performed by means of the sensor control panel located on the unit casing or the remote controller.





VENTO Expert DUO either can operate as independent unit or can be wired with other units in a house and controlled with a master unit. In this case, only the master unit receives a signal from the remote control.

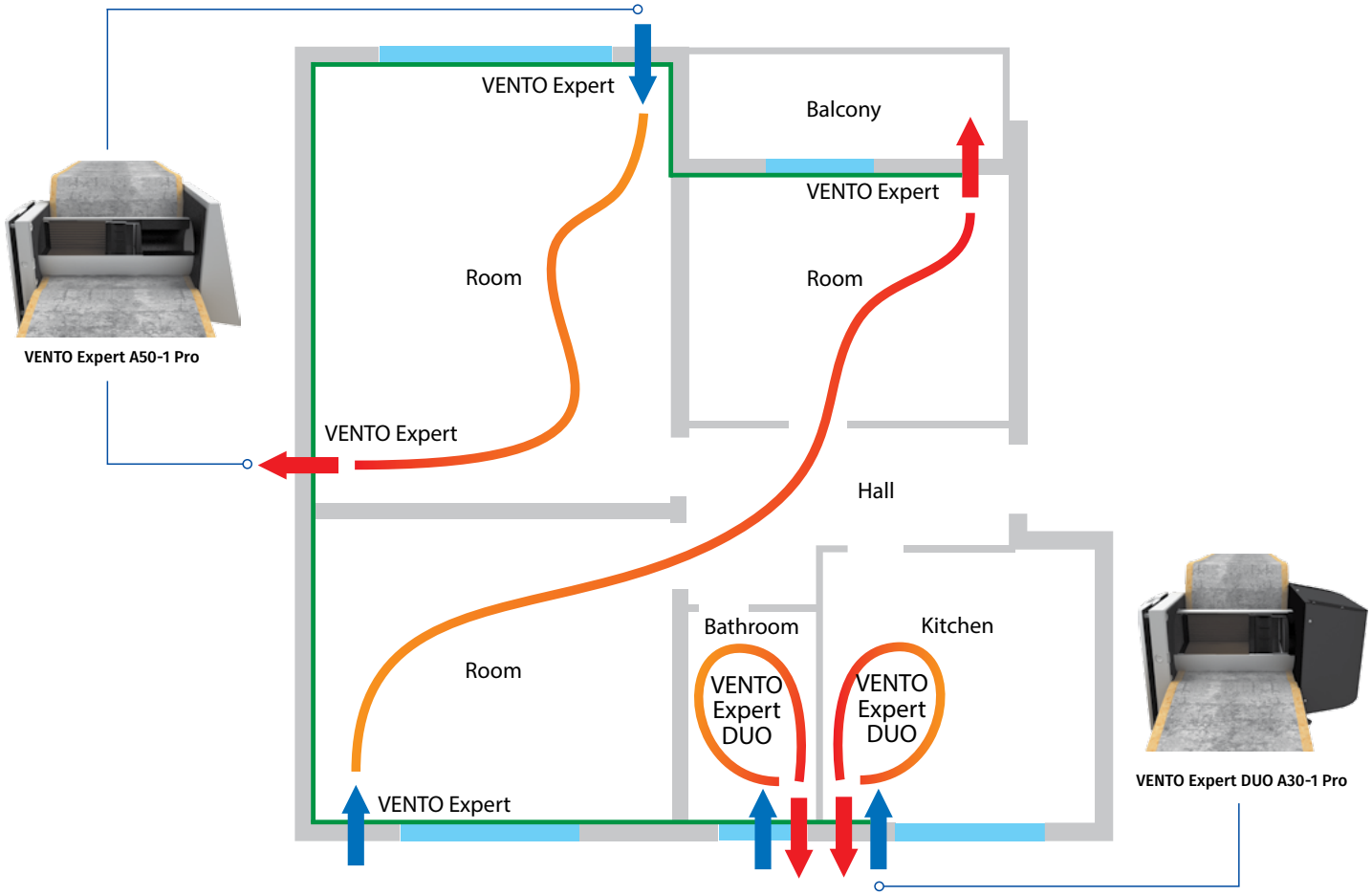
VENTO Expert DUO is equipped with a humidity sensor for indoor humidity control. If humidity increases above a set point, the unit boosts to the high speed independent of other units in the system.



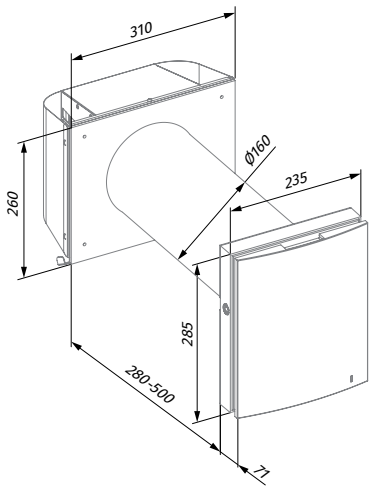
VENTO Expert DUO A30-1 Pro

Mounting

- The unit is designed for through-the-wall installation inside a prepared core hole in an outer wall of the building.
- **VENTO Expert DUO** must be installed in each room with high humidity like kitchen, bathroom to be ventilated while Vento Expert must be installed in each living room to be ventilated.



Overall dimensions [mm]

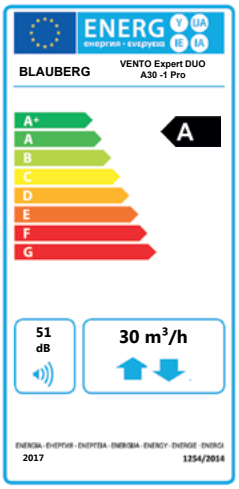


VENTO Expert DUO A30-1 Pro

VENTO Expert DUO A30-1 Pro

Technical data

Parameters	VENTO EXPERT DUO A30-1 Pro		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-240	
Power [W]	2.00	3.70	6.40
Current [A]	0.027	0.043	0.067
RPM [min⁻1]	1600	2200	2500
Air flow [m³/h (l/s)]	10 (3)	20 (6)	30 (8)
Air flow in heat recovery mode [m³/h (l/s)]		60 (16)	
Filter		G3	
Transported air temperature [°C]		15...+50	
Sound pressure level at 1 m [dBA]	33	40	43
Sound pressure level at 3 m [dBA]	24	31	34
Outdoor sound pressure attenuation [dBA] in accordance with DIN EN 20140		42	
Regeneration efficiency [%] in accordance with DIBt LÜ-A 20		up to 85	
SEC Class		A	
Ingress protection rating		IP24	



Accessories

Name		Description
FP Vento Expert DUO A50 G3		G3 filter kit (2 pcs.)
FB Vento Expert A50		Remote control
AH-5 white 160 DUO		Stainless steel ventilation hood, painted white
AH-5 chrome 160 DUO		Bushed stainless steel ventilation hood
AH chrome 160 DUO		Bushed stainless steel ventilation hood
AH white 160 DUO		Aluminum ventilation hood, painted white
PP 160/0.5		Outer ventilation hood for mounting from inside
CD-1		CO_2 sensor with LED indication and on/off button
CD-2		CO_2 sensor
LST Vento Expert DUO		Air stream separator

VENTO Expert DUO A30-1 W

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of balanced energy saving, supply and exhaust, single-room ventilation in kitchen, bathroom and utility room.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.
- Wi-Fi communication between several single-room ventilation units for coordinated operation.
- Controlled by Android or iOS smartphone or tablet.

Air flow:
up to 30 m³/h
8 l/s

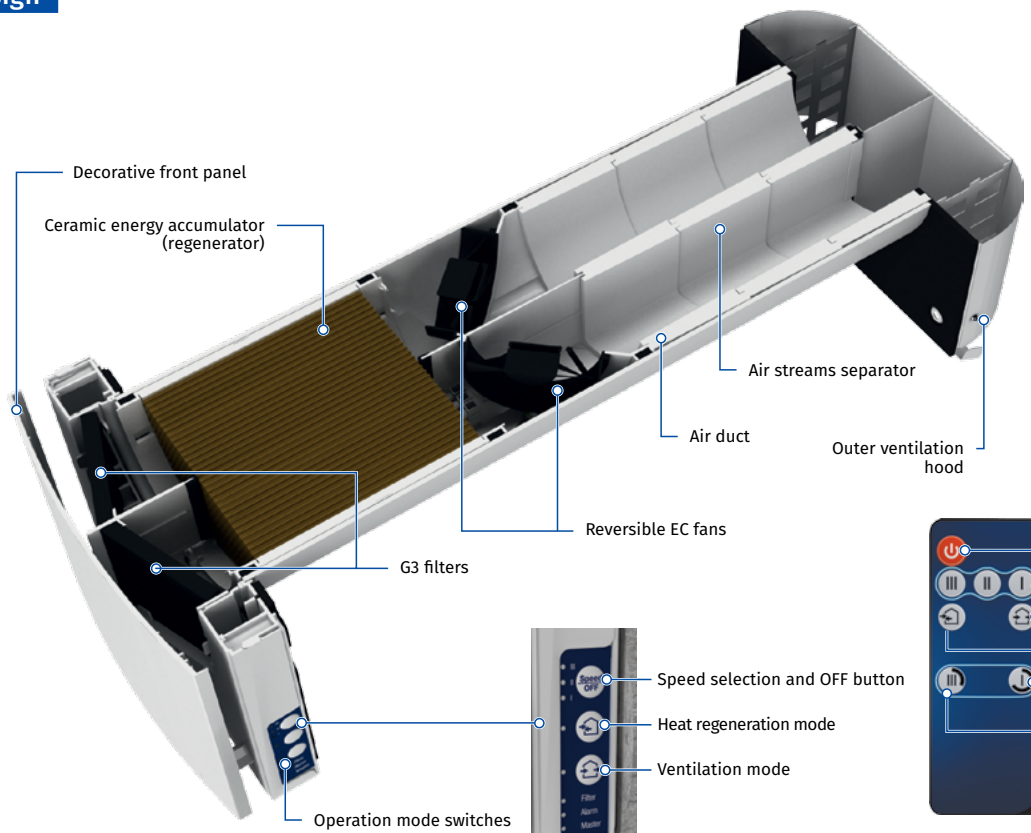
Heat recovery efficiency:
up to 85 %

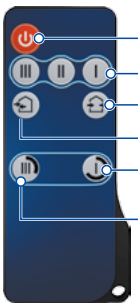
Power:
from 2.17 W

Noise level:
from 24 dBA

EC motor · ErP 2016 · ErP 2018

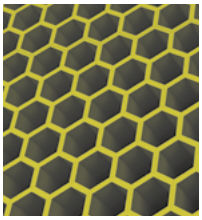
Design





Wi Fi

Built-in Wi-Fi for wireless communication between units and Android or iOS device control.



One of the best regeneration efficiency on the market due to innovative hexagonal structure of the heat exchanger cells.

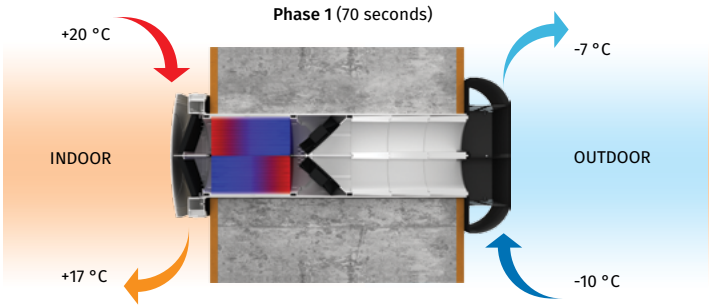
Designation key

Model	Fans	Air duct	Nominal air flow [m³/h]	Unit modification	Control
VENTO Expert	**DUO:** two fans	**A:** round air duct	**30**	**1**	**W:** wireless control

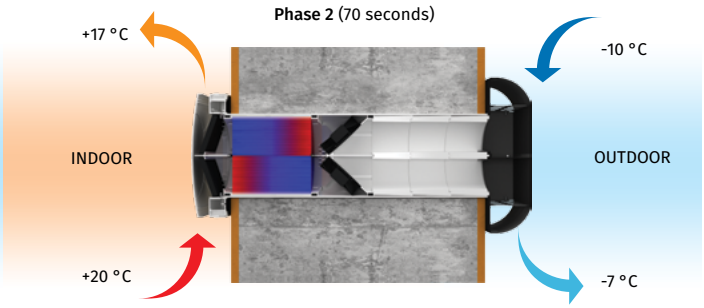
VENTO Expert DUO A30-1 W

Heat and moisture regeneration

UNIT OPERATING LOGIC IN WINTER PERIOD



- One fan supplies fresh and cold air from outdoor, which flows through the correspondent part of the ceramic regenerator and absorbs accumulated heat and humidity.
- At the same time, another fan extracts slate and warm air from indoor, that flows through the other part of the ceramic regenerator and transfers heat energy and moisture to it.



- After 70 second of operation, fans change their directions of rotations to the opposite ones, and everything happens vice versa.

Control

- Control of the unit operation mode is performed by means of smartphone, sensor control panel located on the unit casing or a remote controller.

ANDROID APP ON Google play

The units can be connected by Wi-Fi. Blauberg Vento app for Android or iOS devices is available at Google Play and App Store.

Available on the App Store

VENTO Expert DUO A30-1 W

VENTO Expert A50-1 W

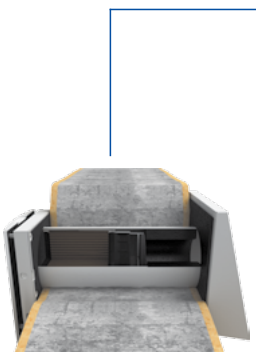
- **VENTO Expert DUO A30-1 W** either can operate as independent unit, or can be connected with other units in a house to be controlled with a master unit. In this case, only the master unit receives a signal from the remote control.
- **VENTO Expert DUO A30-1 W** is equipped with a humidity sensor for indoor humidity control. If humidity will rise higher than set point, than the unit will boost to high speed independently from other units in the system.
- The **VENTO Expert DUO A30-1 W** unit can be connected to a laptop for advanced settings:
  - Master or slave;
  - Connection through a Wi-Fi router or directly to a smartphone.

VENTO Expert DUO A30-1 W

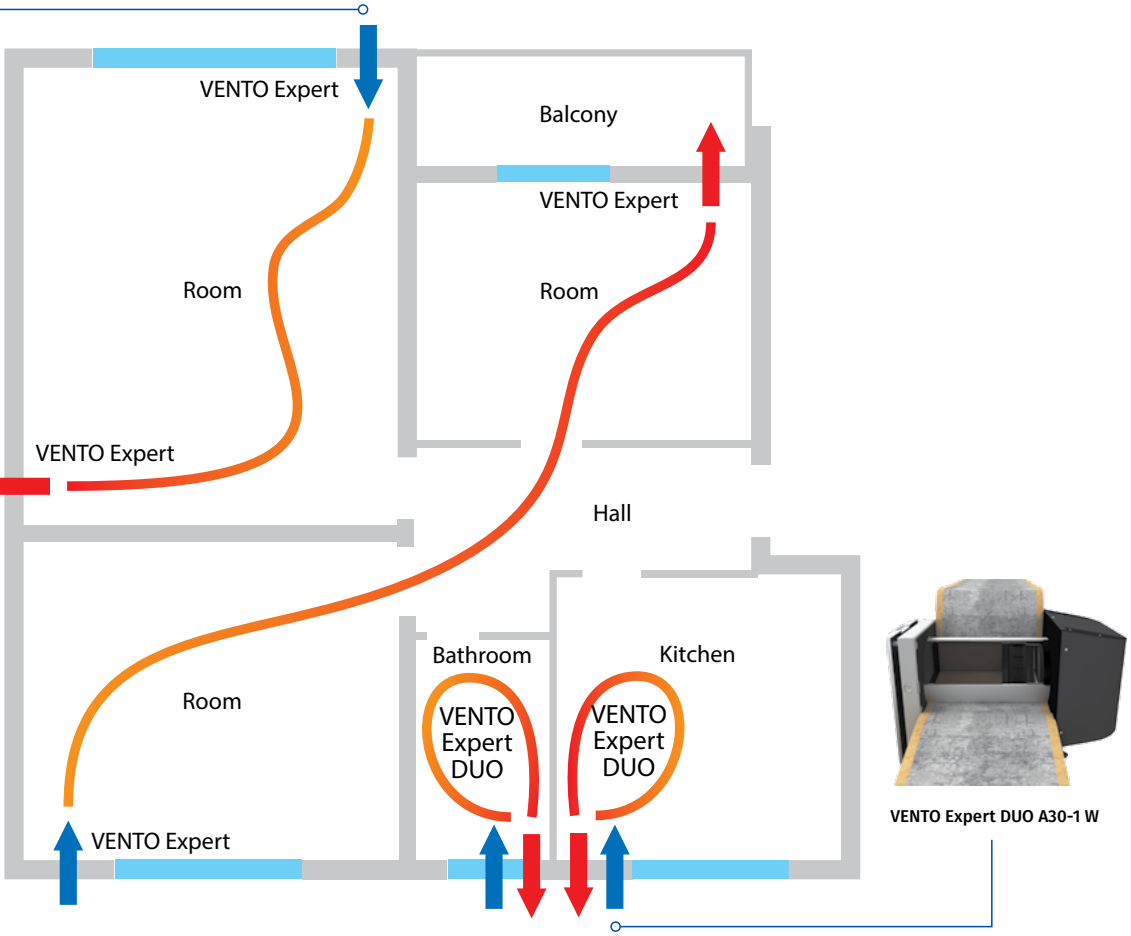
HEAT RECOVERY SINGLE-ROOM UNITS

Mounting

- **VENTO Expert A50-1 W** units should be installed in the living room and bedrooms while **VENTO Expert DUO A30-1 W** should be installed in kitchen, bathrooms and utility room.
- The unit is designed for through-the-wall installation inside a prepared hole in an outer wall of the building.

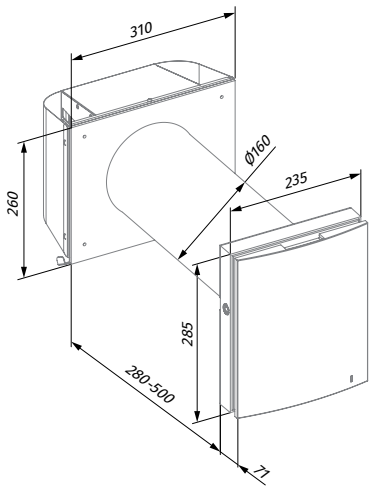


VENTO Expert A50-1 W



VENTO Expert DUO A30-1 W

Overall dimensions [mm]

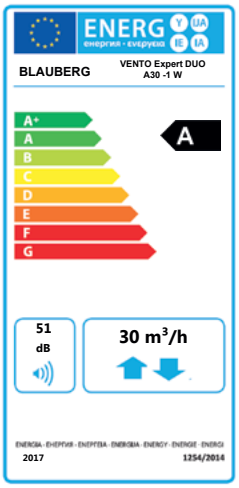


VENTO Expert DUO A30-1 W

VENTO Expert DUO A30-1 W

Technical data

Parameters	VENTO Expert DUO A30-1 W		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	2.17	3.66	6.62
Current [A]	0.026	0.039	0.066
RPM [min^{-1}]	1600	2200	2500
Air flow [m^3/h (l/s)]	10 (3)	20 (6)	30 (8)
Air flow in heat recovery mode [m^3/h (l/s)]		60 (16)	
Filter		G3	
Transported air temperature [°C]		15...+50	
Sound pressure level at 1 m [dBA]	33	40	43
Sound pressure level at 3 m [dBA]	24	31	34
Outdoor sound pressure attenuation [dBA] in accordance with DIN EN 20140		42	
Regeneration efficiency [%] in accordance with DIBt LÜ-A 20		up to 85	
SEC Class		A	
Ingress protection rating		IP24	



Accessories

Name		Description
FP Vento Expert DUO A30 G3		G3 filter kit (2 pcs.)
FB Vento Expert A50		Remote control
AH-5 white 160 DUO		Stainless steel ventilation hood, painted white
AH-5 chrome 160 DUO		Brushed stainless steel ventilation hood
AH chrome 160 DUO		Brushed stainless steel ventilation hood
AH white 160 DUO		Aluminum ventilation hood, painted white
PP 160/0.5		Outer ventilation hood for mounting from inside
CD-1		CO_2 sensor with LED indication and on/off button
CD-2		CO_2 sensor
LST Vento Expert DUO		Air stream separator

VENTO ECO A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Air purification with optional F8 filter PM2.5 99 %.
- Protection from outdoor noise.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.

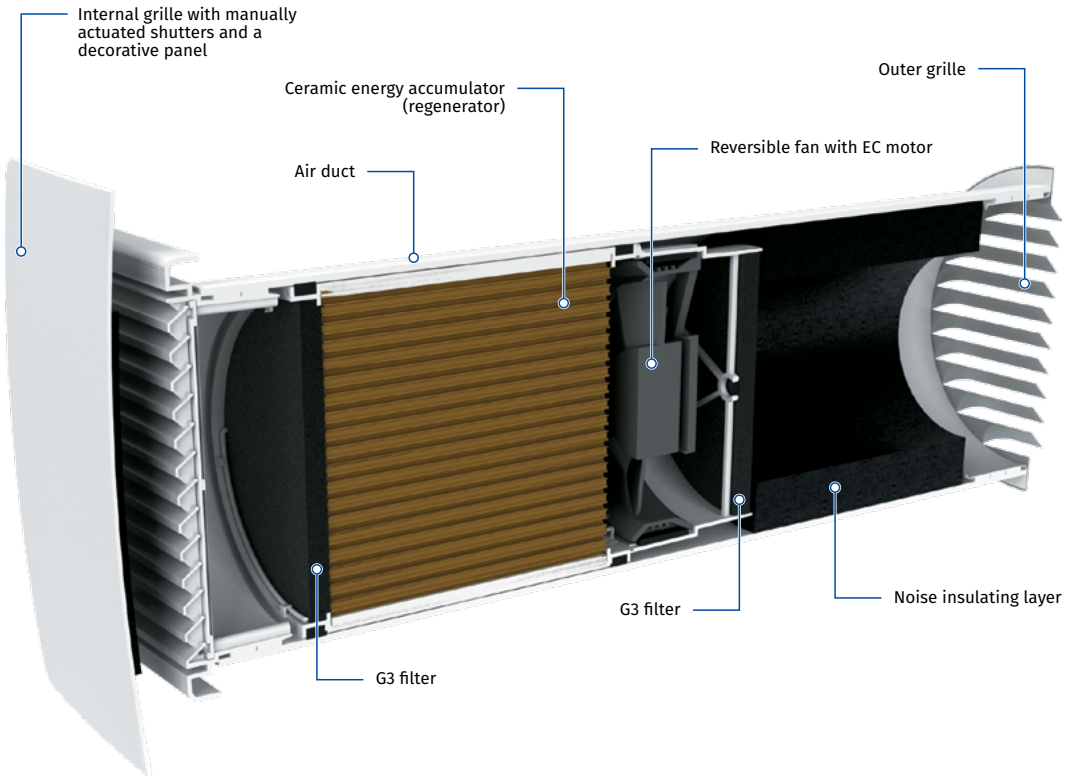
Air flow:
up to 50 m³/h
14 l/s

Heat recovery efficiency:
up to 92 %

Power:
from 0.89 W

Noise level:
from 13 dBA

Design



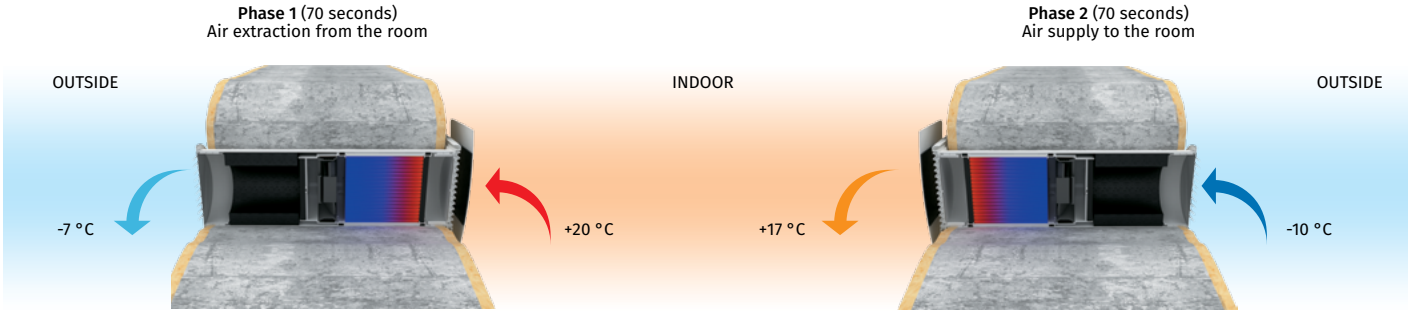
Designation key

Model	Air duct	Nominal air flow [m³/h]	Hood type	Control
VENTO Eco	**A:** round air duct	**50**	**S1:** round metal grille **S9:** round plastic grille **S:** metal hood for thin walls	**Pro:** sensor control panel

VENTO ECO A50 Pro

Heat and moisture regeneration

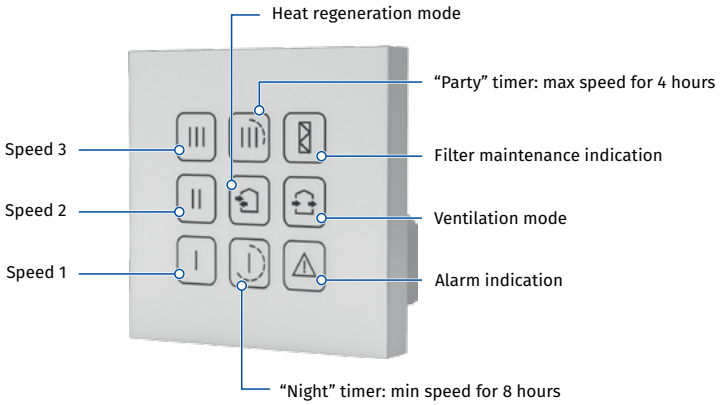
UNIT OPERATING LOGIC IN WINTER PERIOD

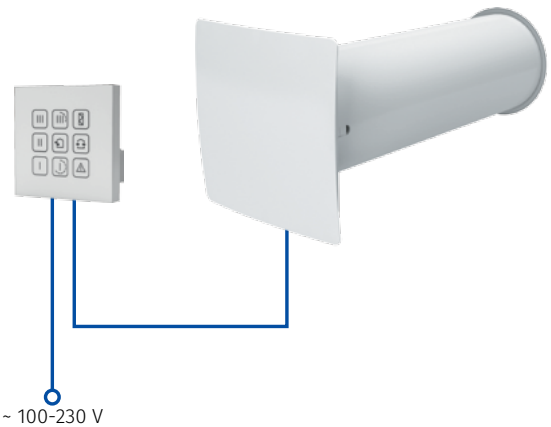


- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers its heat energy and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit switches to the extract air mode.

Control

- Control of the unit operation mode is performed by means of the sensor control panel.





- One control panel with sensor buttons can control up to two units.
- Low voltage (12 V) power supply between control panel and VENTO Eco units.

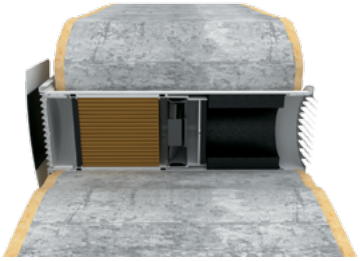
VENTO ECO A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

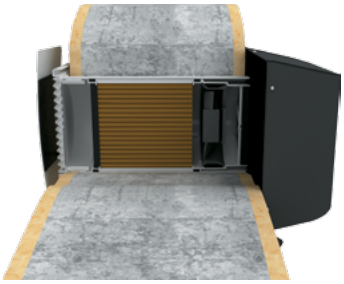
Mounting

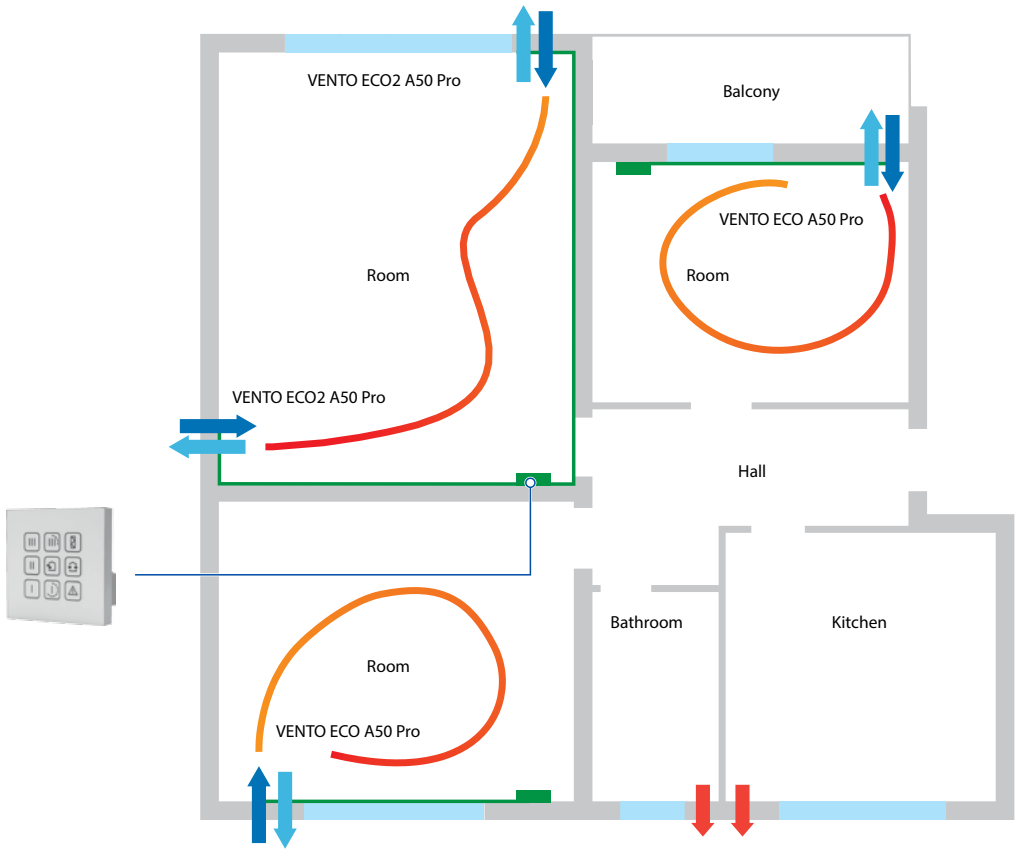
- The unit is designed for through-the-wall installation inside a prepared hole in an outer wall of the building.
- One unit is able to ventilate a room up to 25 m². For bigger rooms two or more units must be installed.

VENTO ECO A50 S1(S9) PRO

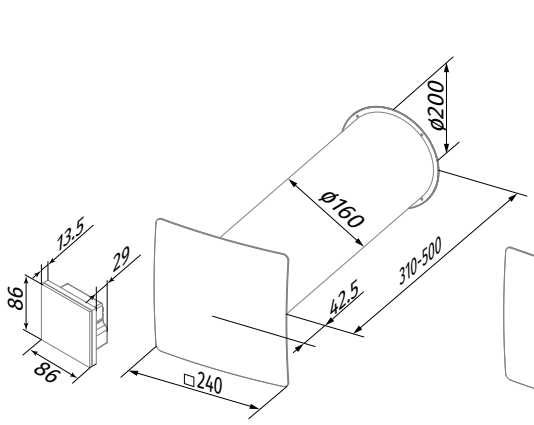


VENTO ECO A50 S Pro

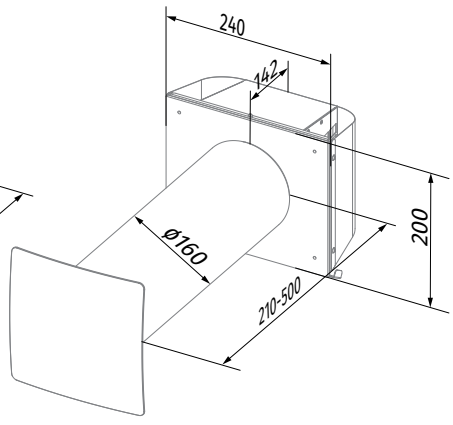




Overall dimensions [mm]



VENTO ECO A50 S1(S9) Pro



VENTO ECO A50 S Pro

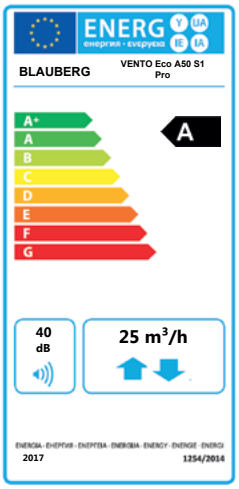
VENTO ECO A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

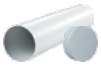
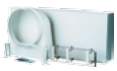
Technical data

Parameters	VENTO ECO A50 Pro		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	0.89	2.32	5.39
Current [A]	0.018	0.032	0.060
RPM [min⁻¹]	1030	1760	2690
Air flow in ventilation mode [m³/h (l/s)]	15 (4)	30 (8)	50 (14)
Air flow in heat recovery mode [m³/h (l/s)]	8 (2)	15 (4)	25 (7)
Filter	G3 (Option: F8 PM2,5 > 99 %*)		
Transported air temperature [°C]	-20...+50		
Sound pressure level at 1 m [dBA] In accordance with ISO 3741: 2004	22	29	32
Sound pressure level at 3 m [dBA] In accordance with ISO 3741: 2004	13	20	23
Outdoor sound pressure attenuation [dBA] according to DIN EN 20140		41	
Regeneration efficiency [%] In accordance with DIBt LÜ-A 20		up to 92	
SEC Class		A	
Ingress protection rating		IP24	

* maximum air flow 40 m³/h



Accessories

Name		Description
Completion Kit VENTO Eco A50		Cartridge with heat regenerator, fan and G3 filters. Square and round indoor grille with manually actuated shutters
SE VENTO Eco A50 Pro		Sensor control panel (white)
SE VENTO Eco A50 Pro black		Sensor control panel (black)
R 160-500		500 mm air duct and plastic foam plug
R 160-700		700 mm air duct and plastic foam plug
AH chrome 160		Outer hood made of brushed stainless steel
AH-S chrome 160		Outer hood for thin wall made of brushed stainless steel
Decor 150Fs An white		Outer grille
KIT BlauPlast white 160		Kit for angular mounting with white outer grille
KIT BlauPlast chrome 160		Kit for angular mounting with stainless stees outer grille
FP VENTO Eco A50 G3		G3 filters (2 pcs.)
FP VENTO Eco A50 F8		G2 + F8 filters (1 pc.). Filtration rate PM2.5 99 %. Combination of G2 + F8 filters reduces air flow down to 410 m³/h
L VENTO Eco A50		Fan
PP 160		Plastic outer grille with pipe for mounting from indoor

VENTO ECO2 A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises.
- Air purification with optional F8 filter PM2.5 99 %.
- Protection from outdoor noise.
- Reducing heat losses caused by ventilation due to heat recovery.
- Humidity balance and regulated air exchange create individually controlled microclimate.

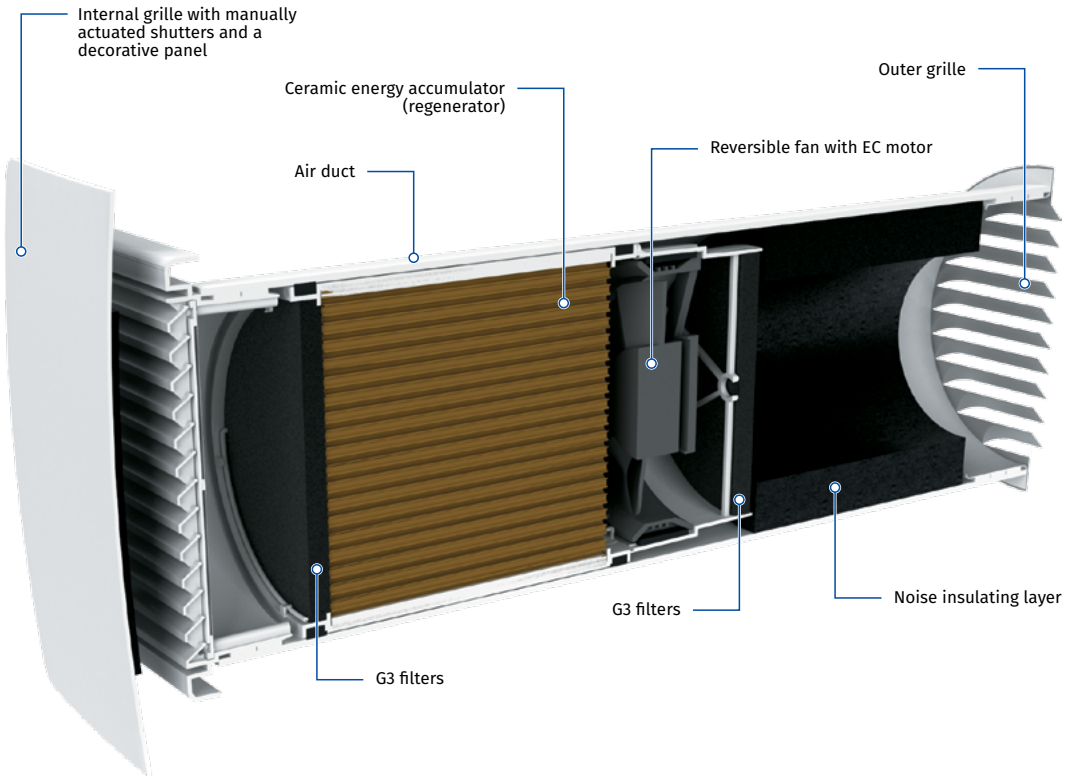
Air flow:
up to 50 m³/h
14 l/s

Heat recovery efficiency:
up to 92 %

Power:
from 2.07 W

Noise level:
from 13 dBA

Design



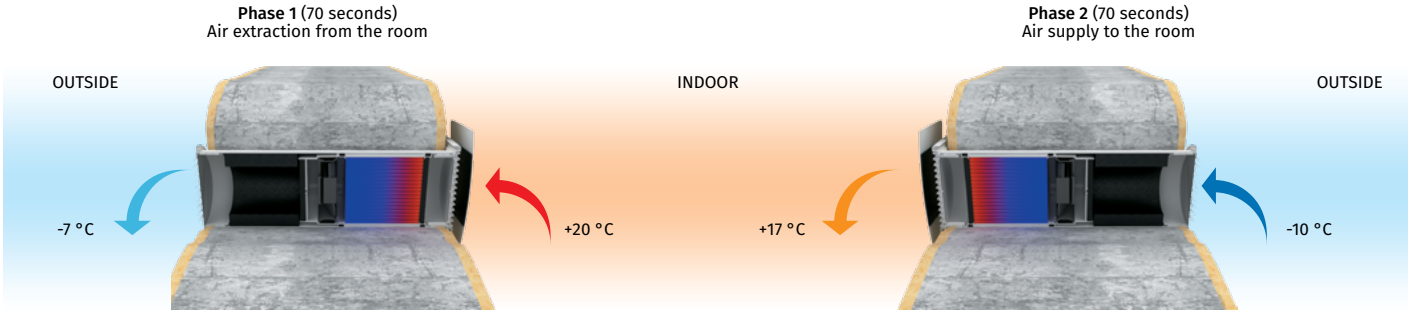
Designation key

Model	Number of units, items	Air duct	Nominal air flow [m³/h]	Hood type	Control
VENTO Eco	2	**A:** round air duct	50	**S1:** round metal grille **S9:** round plastic grille **S:** metal hood for thin walls	**Pro:** sensor control panel

VENTO ECO2 A50 PRO

Heat and moisture regeneration

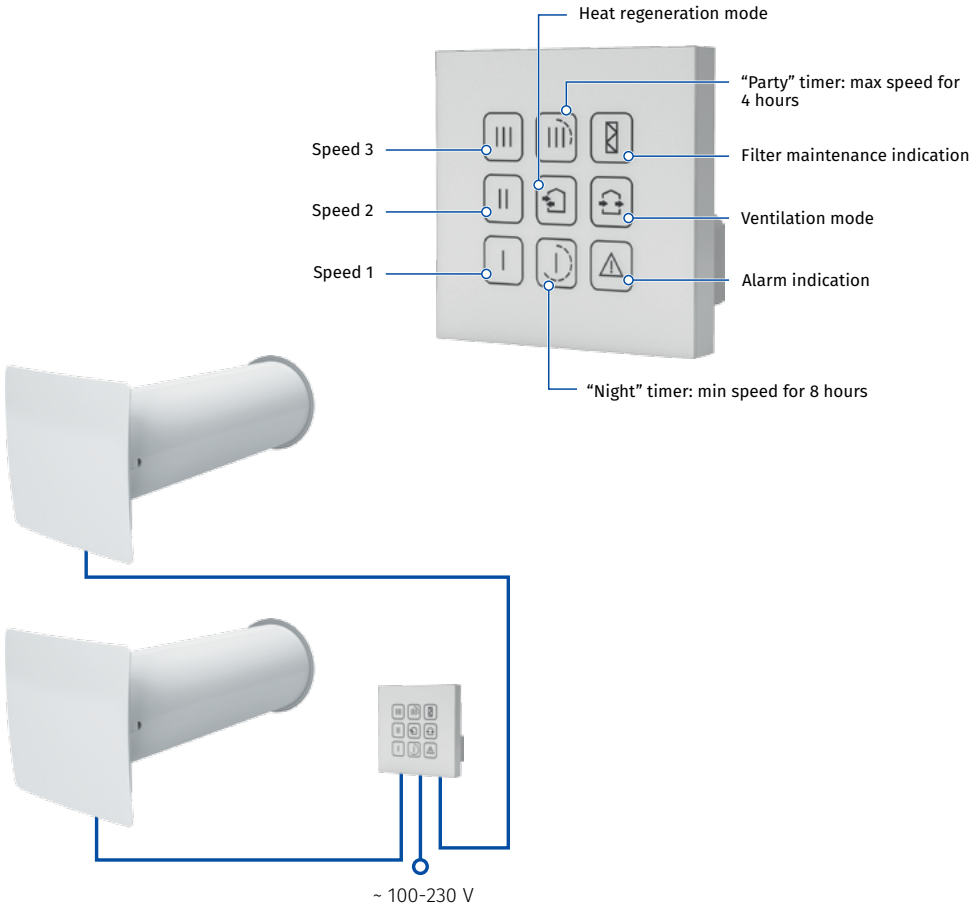
UNIT OPERATING LOGIC IN WINTER PERIOD



- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers its heat energy and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit switches to the extract air mode.

Control

- Control of the unit operation mode is performed by means of sensor control panel located on the unit casing or a remote controller.



- Low voltage (12 V) power supply between control panel and VENTO Eco2 units.

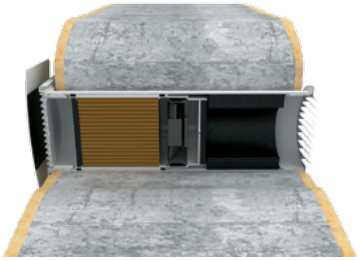
VENTO ECO2 A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

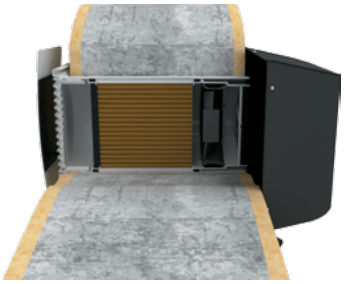
Mounting

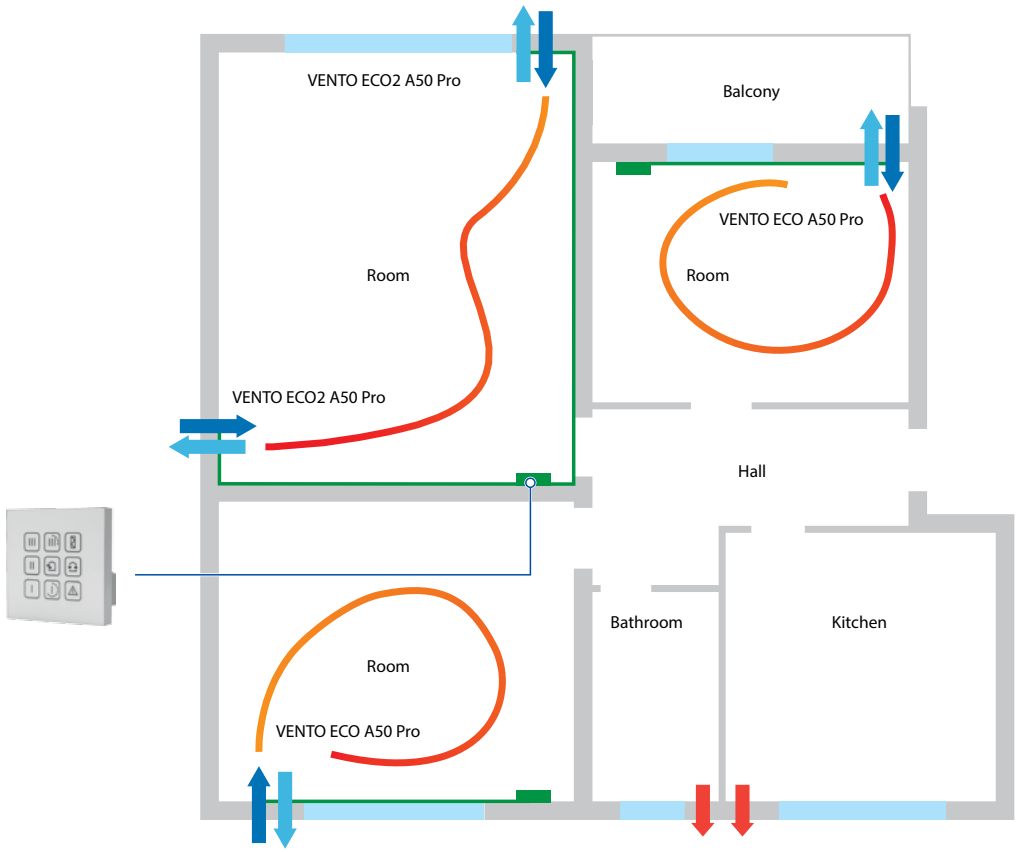
- The unit is designed for through-the-wall installation inside a prepared hole in an outer wall of the building.
- VENTO Eco2 A50 S1 allows arranging the most efficient balanced ventilation. Two units, connected to single control panel, operate in reverse phases. One unit ensures supply of fresh air to the room and the other unit provides air extract from the premise. In regeneration mode units change direction of air flow to opposite one every 70 seconds.
- One unit is able to ventilate a room up to 25 m². For bigger rooms two or more units must be installed.

VENTO ECO2 A50 S1(S9) PRO

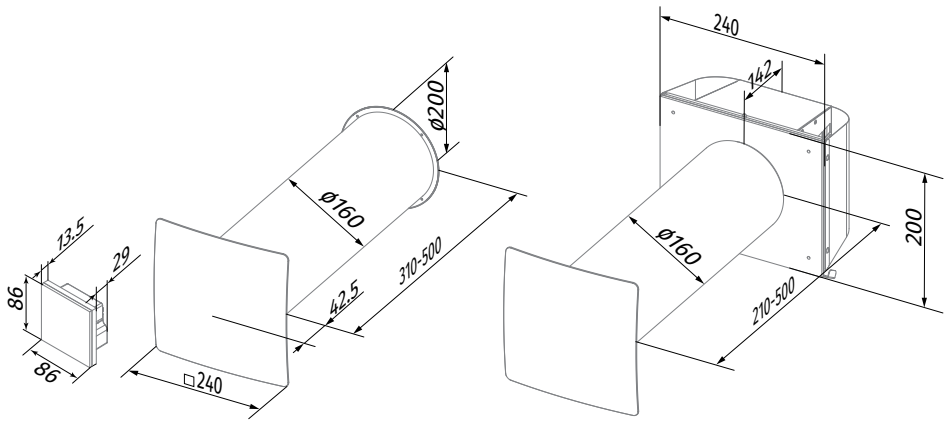


VENTO ECO2 A50 S Pro





Overall dimensions [mm]



VENTO ECO2 A50 S1(S9) Pro

VENTO ECO2 A50 S Pro

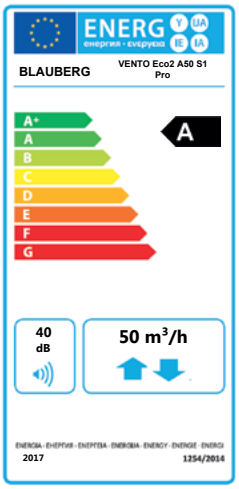
VENTO ECO2 A50 Pro

HEAT RECOVERY SINGLE-ROOM UNITS

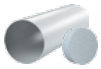
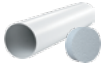
Technical data

Parameters	VENTO ECO2 A50 Pro		
Speed	I	II	III
Voltage [V / 50 (60) Hz]		100-230	
Power [W]	2.07	4.15	10.10
Current [A]	0.030	0.049	0.098
RPM [min⁻¹]	1030	1760	2690
Air flow in ventilation mode [m³/h]	15 (4)	30 (8)	50 (14)
Air flow in heat recovery mode [m³/h]	15 (4)	30 (8)	50 (14)
Filter		G3 (option: F8 PM2,5 > 99 %*)	
Transported air temperature [°C]		-20...+50	
Sound pressure level at 1 m [dBA] In accordance with ISO 3741: 2004	22	29	32
Sound pressure level at 3 m [dBA] In accordance with ISO 3741: 2004	13	20	23
Outdoor sound pressure attenuation [dBA] according to DIN EN 20140		41	
Regeneration efficiency [%] In accordance with DIBt LÜ-A 20		up to 92	
SEC Class		A	
Ingress protection rating		IP24	

* maximum air flow 40 m³/h



Accessories

Name		Description
Completion Kit VENTO Eco A50		Cartridge with heat regenerator, fan and G3 filters. Square and round indoor grille with manually actuated shutters
SE VENTO Eco A50 Pro		Sensor control panel (white)
SE VENTO Eco A50 Pro black		Sensor control panel (black)
R 160-500		500 mm air duct and plastic foam plug
R 160-700		700 mm air duct and plastic foam plug
AH chrome 160		Outer hood made of brushed stainless steel
AH-S chrome 160		Outer hood for thin wall made of brushed stainless steel
Decor 150Fs An white		Outer grille
KIT BlauPlast white 160		Kit for angular mounting with white outer grille
KIT BlauPlast chrome 160		Kit for angular mounting with stainless stees outer grille
FP VENTO Eco A50 G3		G3 filters (2 pcs.)
FP VENTO Eco A50 F8		G2 + F8 filters (1 pc.). Filtration rate PM2.5 99 %. Combination of G2 + F8 filters reduces air flow down to 40 m³/h
L VENTO Eco A50		Fan
PP 160		Plastic outer grille with pipe for mounting from indoor

VENTO Solar V60 Pro(2)

WALL VENTS WITH SOLAR PANELS

Features

- Arrangement of efficient energy-saving supply and exhaust single-room ventilation in flats, houses, cottages, social and commercial premises
- Heat recovery minimises ventilation heat losses.
- Humidity balance and controllable air exchange create individually set microclimate. mises ventilation heat losses.
- Coordinated network based on several integrated controlled single-room ventilation units.

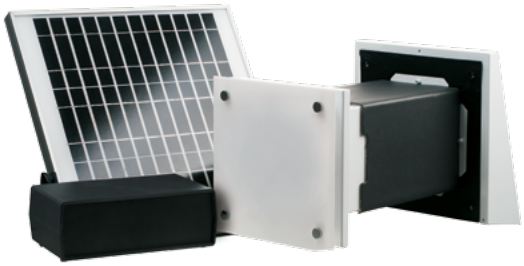
Air flow:
up to 58 m³/h
16 l/s

Heat recovery efficiency:
up to 88 %

Power:
from 2.8 W

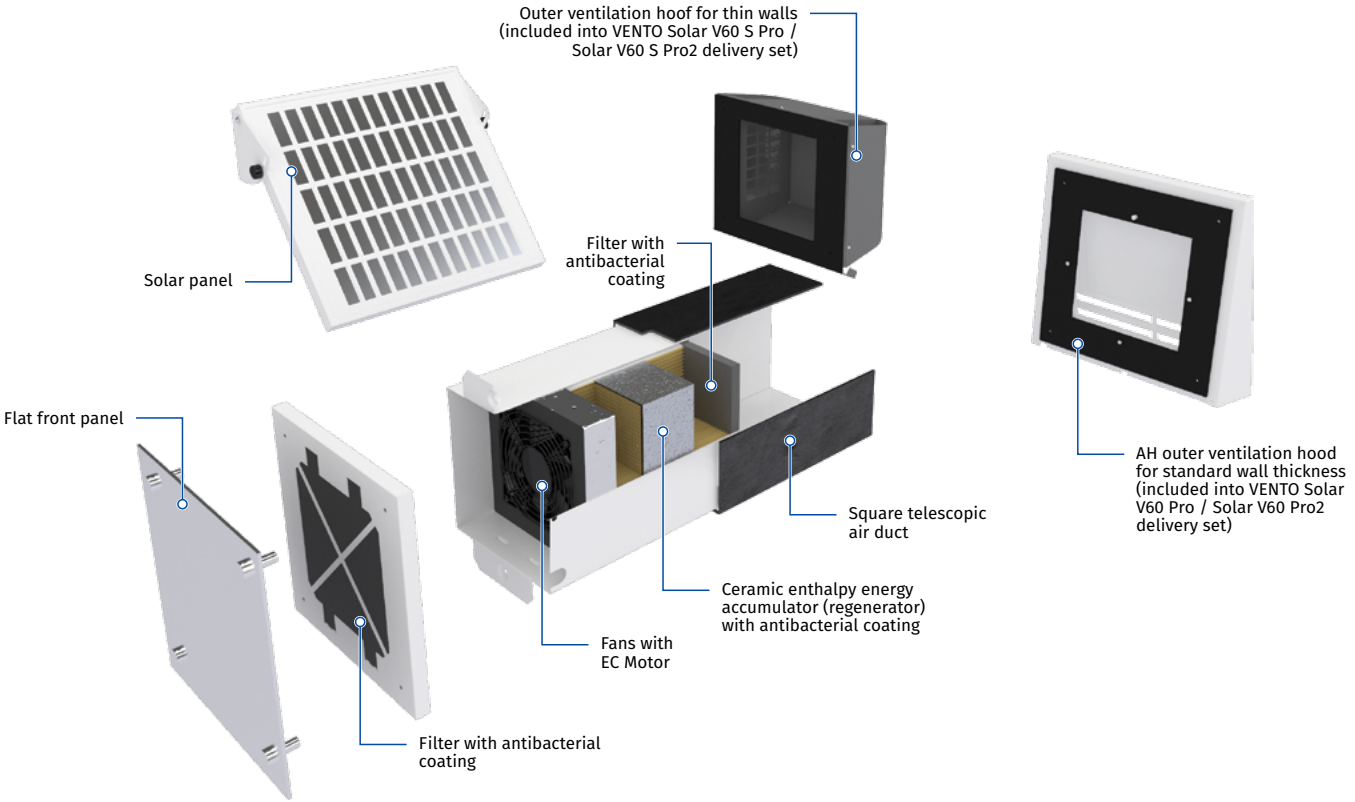
Noise level:
from 19 dBA

EC motor · ErP 2016 · ErP 2018



Features

- The unit is operated by solar energy generated by the solar panel. Vento Solar is suitable for power-independent operation without connection to 230 V power supply. If the unit is connected to power mains it switches to 230 V power supply source in case of no solar light conditions or a full discharge of a storage battery.
- The VENTO Solar V60 Pro2 delivery set includes a storage battery with a charger. In the day time the solar panel is used for power supply to the unit and charging of a storage battery. In the night time the unit is powered by the storage battery. The integrated charger prevent overcharging and discharging of the storage battery.



Designation key

Model	Air duct	Nominal air flow [m³/h]	Hood type	Control
VENTO Solar	**V:** square air duct	**60**	**_:** hood for standard walls (by default) **S1:** metal hood for thin walls	**Pro:** control panel SEV-T12 **Pro2:** control panel SEV-T12 + Storage battery

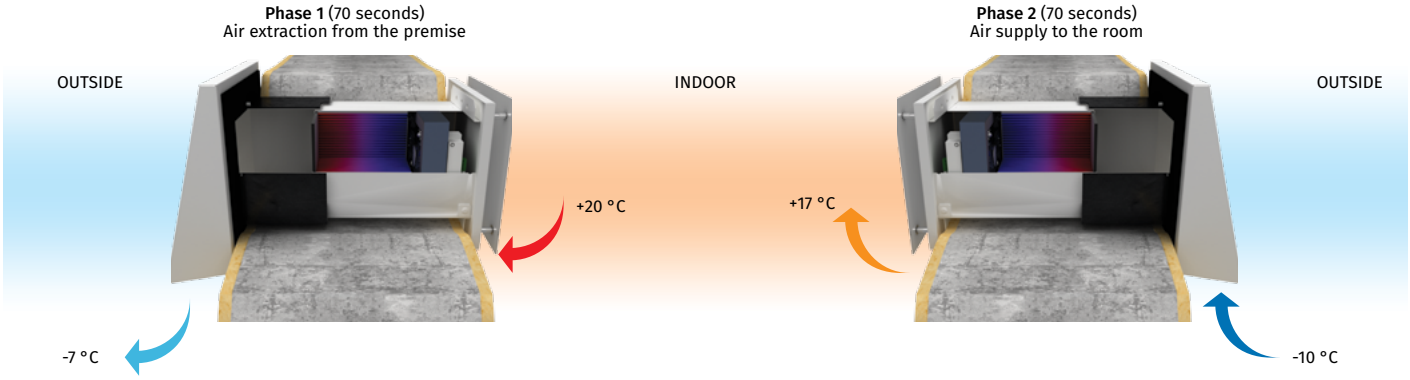
VENTO Solar V60 Pro(2)

WALL VENTS WITH SOLAR PANELS

Heat and moisture regeneration

- High-tech ceramic energy accumulator with heat recovery up to 88 %.
- Due to its cellular structure it has a larger contact area surface and high efficiency. The energy accumulator is featured with excellent heat-conducting properties and thermal energy storage capacity.

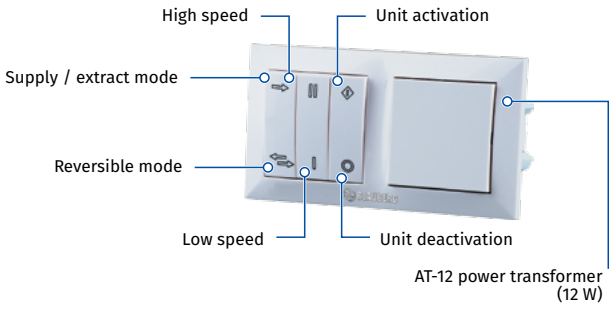
UNIT OPERATING LOGIC IN WINTER PERIOD

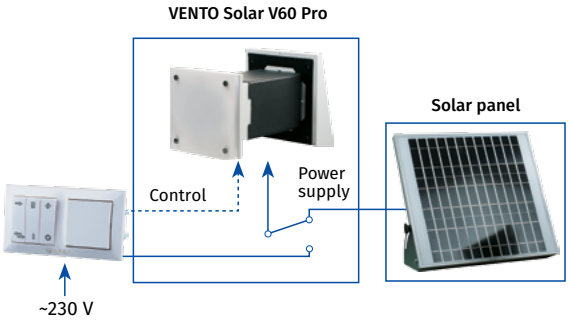


- Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers a part of the accumulated heat and moisture to it.
- As the ceramic regenerator gets warmed up, the unit switches to the supply mode.
- Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity.
- When the ceramic regenerator is cooled down, the unit is switched to the extract air mode.

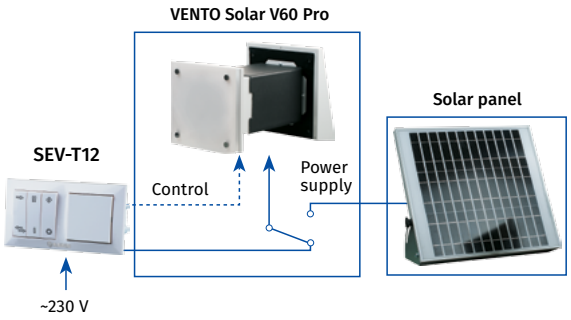
Control

- The control and power unit SEV-T12 consists of SEV control panel and AT-12 power transformer.
  - The control and power unit SEV-T12 is able to operate unlimited number of ventilation units and has the following functions:
    - Activation/Deactivation of the unit.
    - Low and high speed changeover.
    - Heat recovery or ventilation mode selection.
  - The power transformer AT-12 is able to supply power to up to four ventilation units from 230 V power mains.
- The control system includes a switching unit installed on the ventilation unit. It is used for selection of a power supply source, either a solar panel, a storage battery or 230 V power supply.
- VENTO Solar V60 Pro / VENTO Solar V60 S Pro connection
  - In the day time the unit is powered by the solar panel.

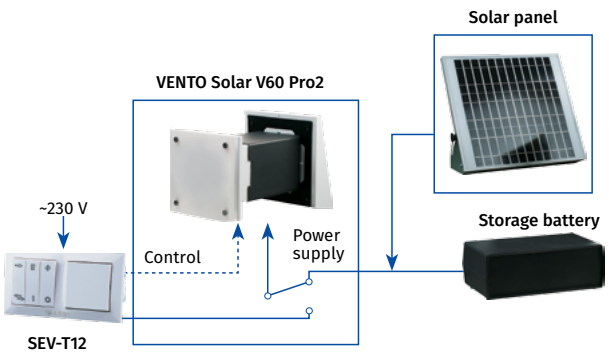




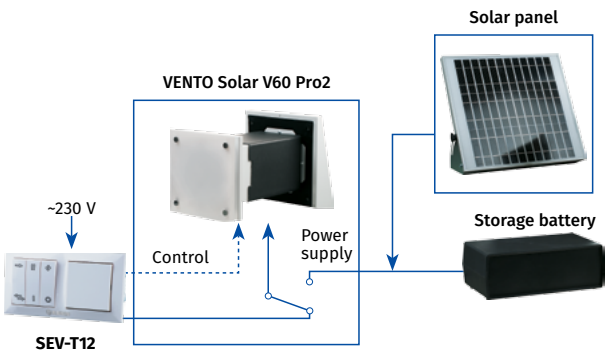
- In the night time or in low light conditions the unit is powered by power mains.



- VENTO Solar V60 Pro2 / VENTO Solar V60 S Pro2 connection
  - In the day time or when the storage battery is charged the unit is powered by the accumulated in the storage battery solar energy.



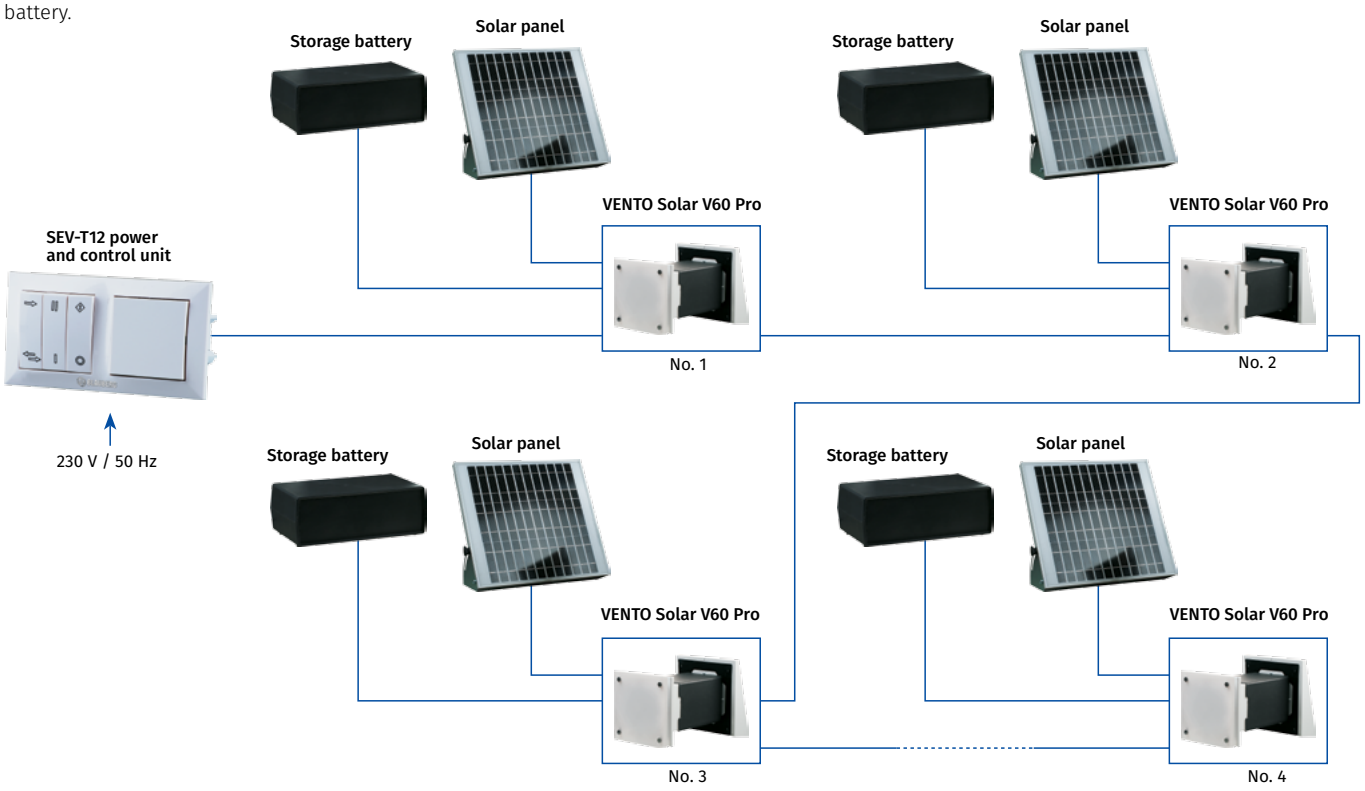
- In the night time, in low light conditions or when the storage battery is discharged the unit is powered by power mains.



VENTO Solar V60 Pro(2)

WALL VENTS WITH SOLAR PANELS

- If several VENTO Solar Pro2 units integrated into a single system, each ventilation unit must be connected to its own solar panel and a storage battery.

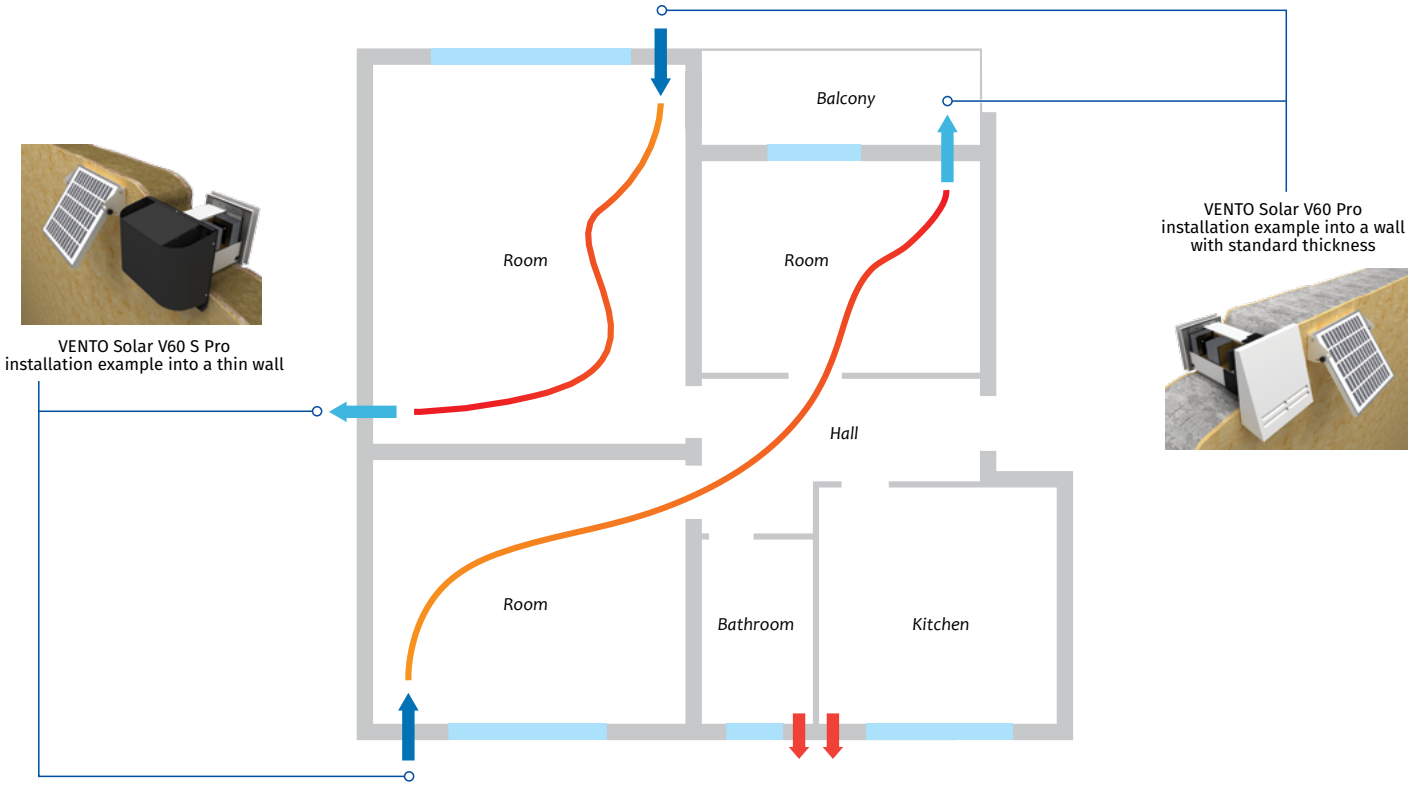


Mounting

- The unit is designed for external through-the-wall installation inside a prepared square hole in the outer wall of the building.

- The best ventilation solution is pairwise installation of reverse phase connected units. Some units supply fresh air to the room and the other units extract stale air from the room. This allows to arrange the most efficient balanced ventilation. The best ventilation solution is a pairwise installation of reverse phase connected units.

VENTO Solar V60 S Pro installation example into a thin wall



VENTO Solar V60 Pro installation example into a wall with standard thickness

VENTO Solar V60 Pro(2)

WALL VENTS WITH SOLAR PANELS

Technical data

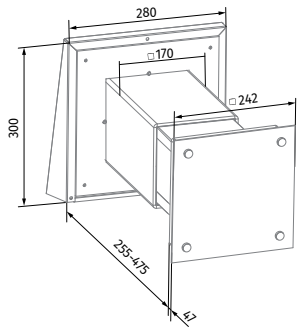
Parameters	Vento Solar V60 Pro / Vento Solar V60 Pro2 VENTO Solar V60 S Pro / Vento Solar V60 S Pro2	
Speed	I	II
Voltage [V]	12	
Power [W]	2.8	4.8
Current [A]	0.018	0.028
RPM [min⁻¹]	1150	2100
Maximum air flow [m³/h (l/s)]	35 (10)	58 (16)
Sound pressure level at 1 m [dBA]	34	41
Sound pressure level at 3 m [dBA]	24	29
Outdoor sound pressure attenuation [dBA]	19	
Regeneration efficiency [%]	up to 88	
SEC class	A+	
Ingress protection rating	IP 24	

Parameters	Solar panel
Voltage [V]	18
Power [W]	20
Current [A]	1.12

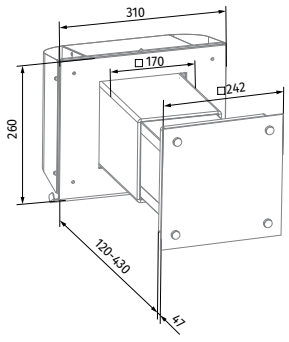
Parameters	Battery (for Pro2 models)
Voltage [V]	12
Capacity [A/h]	20
Current [A]	1.12

Parameters	Charger (for Pro2 models)
Voltage [V]	12
Current [A]	3

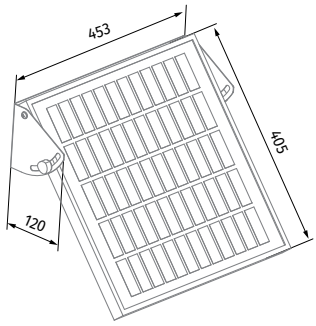
Overall dimensions [mm]



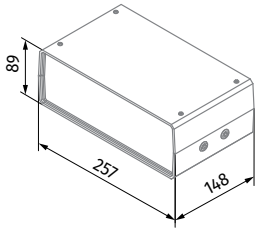
VENTO Solar V60 Pro / Pro2



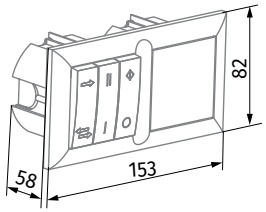
VENTO Solar V60 S Pro / Pro2



Solar panel



Storage battery



Power and control unit

Accessories

Name		Description
SEV		External control unit for operation of the unit.
AT-40 (230/12)		40 W power transformer suitable for connection for max. 12 ventilation units. Used jointly with SEV control unit it ensures a central controllable ventilation system.
AT-12 (230/12)		12 W power transformer suitable for connection for max. 4 ventilation units. Used jointly with SEV control unit it ensures a central controllable ventilation system.

PP 160

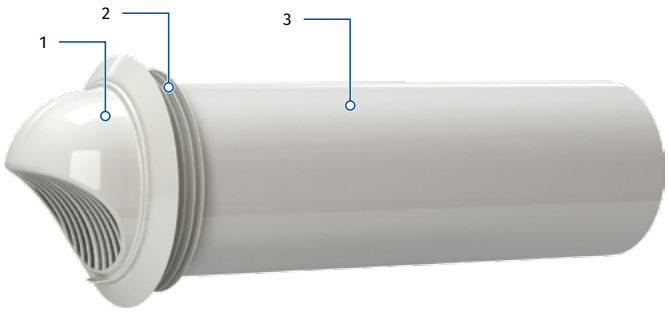
OUTER VENTILATION HOOD MOUNTING FROM INSIDE

Features

- The outer hood is designed to prevent the ingress of water and large objects into the ventilation equipment from outside.
- Pre-installed with a hood the air duct is mounted in a hole drilled in the wall. The installation is done from the inside.
- Special design allows installation of the hood by the operator on a wall of high-rise buildings and enables airtight sealing of the air duct in the core hole.

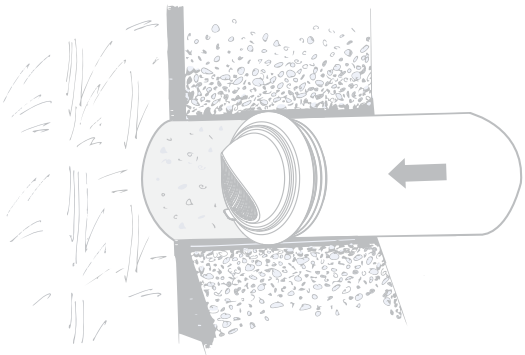
Design

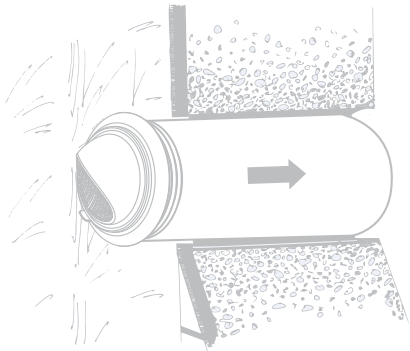
- Made of high-quality incombustible ultraviolet resistant plastic.
- Fixation at the end of the air duct with latches.
- The ventilation hood [1] is equipped with a silicone sealing ring [2] that provides high sealing integrity of the air duct [3] in the wall.
- The air duct with diameter of 160 mm is made of high-quality PVC plastic.

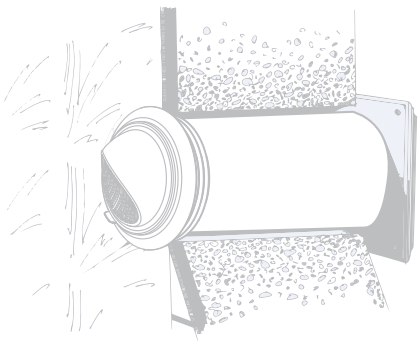


Heat and moisture regeneration

- Drill a hole with a diameter of 180 mm in the wall.
- Insert the hood into the wall core hole and push it until the sealing ring appears on the outer side.
- Pull the hood in the opposite direction so the silicone sealing ring provides tight seal between the hood and the wall.
- The air duct must be fixed in the wall core hole using mounting foam.

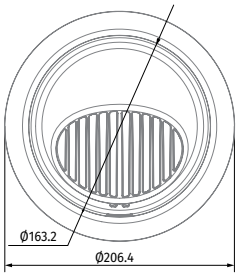


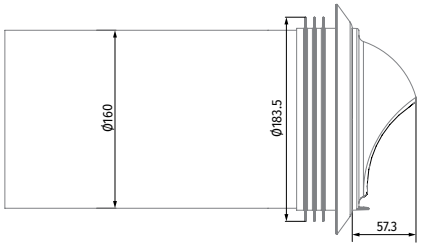




Overall dimensions [mm]

Model	Air duct length [mm]
PP 160/0.3	300
PP 160/0.5	500
PP 160/0.7	700
PP 160/0.8	800





CD-1/CD-2

CO₂ SENSORS

Features

- Indoor carbon dioxide concentration measurement.
- Air capacity control depending on CO_2 concentration.
- Efficient energy saving device.

Design

- The sensor has two separate outputs, a normally opened dry relay contact and an analogue output 0–10 V that is adjustable fo 2–10 V/ 0–20 mA/4–20 mA. The relay output is used to turn the fan on/off depending on indoor CO_2 concentration and the analogue output is used for smooth fan speed control for a fan with EC motor or a fan with extra speed controller with 0–10 V input. In case of smooth fan speed control the fan speed varies proportionally to carbon dioxide emissions. Due to the relay and analogue outputs the sensor is compatible with any ventilation system. The self-calibration system ensures reliable sensor operation during the sensor service life.

Modifications

- **CD-1:** integrated LED lights for indication of CO_2 concentration and a touch button for operation mode switching (mode 1: on, mode 2: off, mode 3: operation according to CO_2 concentration). The button is used to turn the fan on or turn it off when CO_2-based ventilation is not required.
- **CD-2:** no integrated LED-lights and no touch button. This model is recommended for premises requiring permanent ventilation as school classes and other public premises.

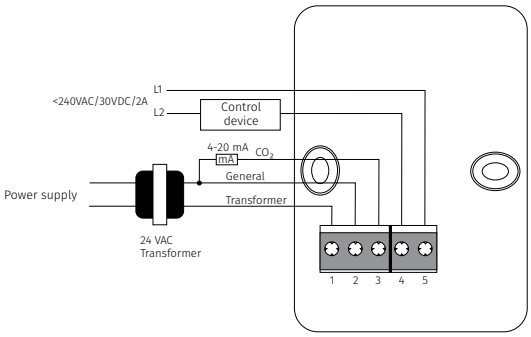
Mounting and power supply

- Wall surface mounting.
- 24 VAC low current power supply.
- The sensor has a socket for AT power unit offered as an accessory (AT-220/25 or AT-120/25 models).

Technical data

Parameters	Value
Power supply / Consumption	24 VAC (50/60 Hz ± 10 %), 24 VDC/1.6 W Max
Gas sensing element	Non-dispersive infrared detector (NDIR) with self-calibration system
CO_2-measuring range	0–2,000 ppm (parts per million)
Accuracy at 25 °C, 2,000 ppm	±30 ppm + 3 % of reading
Response time	max. 2 min
Warm up time for each turning-on	2 hours (first time), 2 minutes (operation)
Analogue output	0–10 VDC (default), 4–20 mA selectable by jumpers
On/Off output	1X2A switch load Four set points selectable by jumpers
6 LED lights for CO_2 concentration indication (for CD-1 model)	1st green indicator lights when CO_2 concentration is below 600 ppm 1st and 2nd green indicators light when CO_2 concentration is 600–800 ppm 1st yellow indicator lights when CO_2 concentration is 800–1200 ppm 1st and 2nd yellow indicators light when CO_2 concentration is 1200–1400 ppm 1st red indicator lights when CO_2 concentration is 1400–1600 ppm 1st and 2nd red indicators light when CO_2 concentration is above 1600 ppm
Operating conditions / Storage regulations	0–50 °C; 0–95 % RH non condensing/0–50 °C
Weight/Dimensions	0.120 kg/100 mm x 80 mm x 30 mm

Sensor wiring diagram



DRWQ40200

CO_2 SENSORS

Features

- Self-calibrating sensor with microprocessor control for measuring carbon dioxide content in the air within the range from 0 to 2,000 million^{-1} (parts per million).

Design

- **DRWQ40200** CO_2 sensor has 2 analogue outputs: 0-10 V and 4-20 mA. An analogue output provides for stepless fan speed control (requires an EC motor fan or a frequency drive).
- With stepless control the fan speed is changed in proportion to carbon dioxide concentration changes. The CO_2 content in the air is measured by means of a non-dispersive infrared analyser (NDIR).

Mounting

- The sensor is mounted onto a wall or a mounting box inside the serviced space. The unit is powered from a 24 V AC/DC low-current electric mains.

Technical data

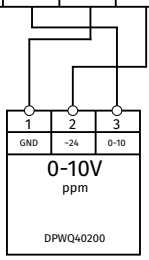
Parameters	Values
Power source	24 V AC/DC
Gas analyser	optical (NDIR)
CO_2 measurement range	0-2,000 million^{-1} (parts per million) of CO_2
CO_2 output signal	0-10 V
CO_2 measurement precision	± 30 million^{-1} (parts per million), ± 5% of maximum value
Operating conditions	0-50 °C; 10-90 % relative humidity without condensate
Protection class	IP55
Dimensions	95x97x30 mm

DRWQ40200

Connection diagram

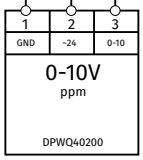
KOMFORT Roto EC D/S

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
gnd	R+	R-	GND~	~24V	0-10V	GND	~24V	NO	NO	NO	NO	2	1	2	1	TS1	TS1	PE	N	L	N	L1



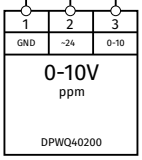
Civic EC L

1	2	3	4	5		6	7		8		9
PE	N	L	NC	L	L	L	~24V	~24V	GND	GND	B5



Civic EC D

1	2	3	4	5	6	7		8		9	10		11		12	13
GND	0-10V	TACH	0-10V	TACH	NO	GND	GND	~24V	~24V	NO	L	L	L	L	L	0-10V



DPWQ30600

VOC SENSOR

Features

- Sensor is intended for temperature, humidification and/or dehumidification control in ventilation, air conditioning and heating systems.

Design

- **DPWQ30600** VOC sensor has 2 analogue outputs: 0-10 V and 4-20 mA. An analogue output provides for stepless fan speed control (requires an EC motor fan or a frequency drive).
- With stepless control the fan speed is changed in proportion to air quality changes.

Mounting

- The sensor is mounted onto a wall or a mounting box inside the serviced space. The unit is powered from a 24 V AC/DC low-current electric mains.

Technical data

Parameters	Values
Power source	24 V AC/DC
Gas analyser	VOC sensor
Measurement range	0-100 % air quality
Output signal	0-10 V
Measurement precision	±20%
Operating conditions	0-50 °C; 10-90 % relative humidity without condensate
Protection class	IP30
Dimensions	79x81x26 mm

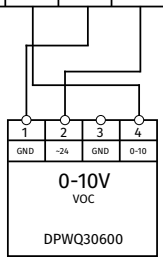
DPWQ30600

VOC SENSOR

Connection diagram

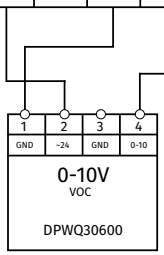
KOMFORT Roto EC D/S

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
GND	R+	R-	GND~	~24V	0-10V	GND	~24V	NO	NO	NO	NO	2	1	2	1	TS1	TS1	PE	N	L	N	L1



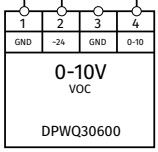
Civic EC L

1	2	3	4	5		6	7		8		9
PE	N	L	NC	L	L	L	~24V	~24V	GND	GND	B5



Civic EC D

1	2	3	4	5	6	7		8		9	10		11		12	13
GND	0-10V	TACH	0-10V	TACH	NO	GND	GND	~24V	~24V	NO	L	L	L	L	L	0-10V



DPWC11200

HUMIDITY AND TEMPERATURE SENSOR

Features

- The DPWC sensor is intended for temperature, humidification and/or dehumidification control in ventilation, air conditioning and heating systems.

Design

- The **DPWC11200** humidity and temperature sensor has 2 analogue outputs: 0-10 V and 4-20 mA. An analogue output provides for stepless fan speed control (requires an EC motor fan).
- With stepless control the fan speed is changed in proportion to the humidity and temperature level. Being equipped with both relay and analogue outputs the sensor is compatible with most every existing ventilation systems.

Mounting

- The sensor is mounted onto a wall in the serviced space. The unit is powered from a 24 V AC/DC low-current electric mains.

Technical data

Parameters	Values
Power source	8-30 V DC / 12-24 V AC
Analogue outputs	0-10 V and 4-20 mA
Temperature measurement precision	±1,2 °C
Humidity measurement precision	±3 % RH
Operating conditions	-10-60 °C; 10-90 % humidity without condensate
Protection class	IP30
Dimensions	127x80x30 mm

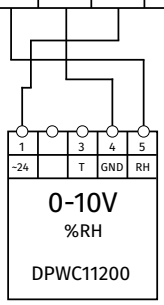
DPWC11200

HUMIDITY AND TEMPERATURE SENSOR

Connection diagram

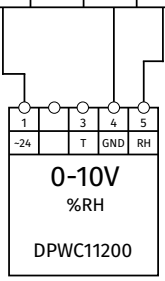
KOMFORT Roto EC D/S

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
GND	R+	R-	GND~	~24V	0-10V	GND	~24V	NO	NO	NO	NO	2	1	2	1	TS1	TS1	PE	N	L	N	L1



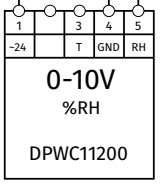
Civic EC L

1	2	3	4	5		6	7		8		9
PE	N	L	NC	L	L	L	~24V	~24V	GND	GND	B5



Civic EC D

1	2	3	4	5	6	7		8		9	10		11		12	13
GND	0-10V	TACH	GND~	0-10V	NO	GND	GND	~24V	~24V	NO	L	L	L	L	L	0-10V



HR-S

ELECTRO-MECHANICAL HUMIDISTATS

Features

- The humidistat is designed for controlling humidification and/or dehumidification in ventilation, air conditioning and heating systems. Can also be used to alarm when the humidity exceeds or falls below a pre-set level.

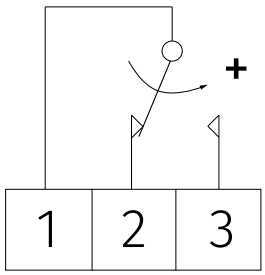
Design

- The single-stage humidistat HR-S uses a synthetic element as sensor medium. The synthetic element stretches as the humidity increases and shrinks as the humidity decreases.

Mounting

- The humidistat is designed for indoor mounting on the wall surface.

Humidistat wiring diagram



Humidification	Closing contact between terminals 1 and 2
Dehumidification	Closing contact between terminals 1 and 3

Technical data

Parameters	HR-S
Switch contact	250 V AC, 5 A.
Moisture	20-90 %
Casing material	Polycarbonate
Temperature range [°C]	0-40
Mounting	Wall surface mounting
Ingress protection	IP30
Dimensions	86x86x30 mm