

Series
VENTS
VUT/VUE 270 V5(B) EC



Heat recovery air handling units in sound- and heat-insulated casings.
Air flow up to 300 m³/h.
Heat recovery efficiency up to 98 %

Description

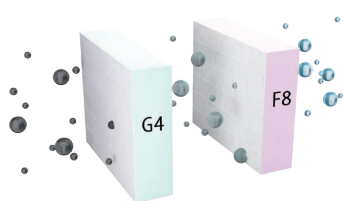
The air handling units are the fully featured ventilation units with heat recovery for air filtration, fresh air supply and stale air extract. The extract air heat is used for warming up of the supply air stream in the high-efficient plate heat exchanger. The units offer energy-efficient ventilation for cottages and flats and are compatible with round Ø 125 mm air ducts.

Casing

The casing is made of 15-26 mm thick expanded polypropylene (EPP) sheets, possessing high heat- and sound-insulating properties.

Filter

Supply and extract air flows are purified through G4 panel filters. For extra supply air filtration a F8 filter is available as a specially ordered accessory.



Fans

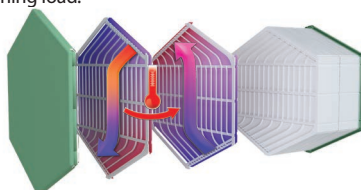
High-efficient electronically commutated motors with external motor and impeller with backward curved blades. Such motors are the most state-of-the-art energy saving solution. EC motors are featured with high performance and total speed controllable range. High efficiency reaching 90 % is the premium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

Heat exchanger

The VUT 270 V5(B) EC units are equipped with a counter-flow polystyrene heat exchanger. In the cold season the extract air heat is transferred to the intake air stream which reduces ventilation-generated heat losses.

This can lead to formation of condensate that is collected in a special drain pan and discharged into the sewage system. In the warm season the outside air heat is transferred to the exhaust air stream.

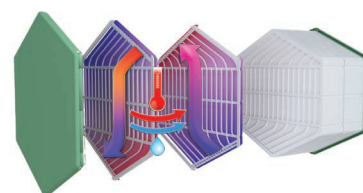
This allows for a considerable reduction of the supply air temperature which, in its turn, reduces the air conditioning load.



The VUE 270 V5(B) EC units are equipped with a counter-flow heat exchanger with an enthalpy at the core. In the cold season the extract air heat and moisture are transferred to the supply air stream through the enthalpy. Heat recovery minimises heat losses from ventilation.

In the warm season the outdoor air heat and moisture are transferred to the exhaust air stream through the enthalpy.

This enables considerable reduction of the supply air temperature and humidity which, in its turn, reduces the air conditioning load.



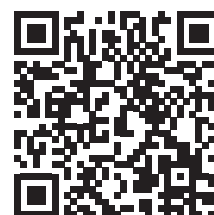
Bypass

The VUT/VUE 270 V5B EC units are equipped with a bypass for summer ventilation (cooling of the premise with a cool outside air).

Automation

The VUT/VUE 270 V5B EC A21 units are equipped with integrated control system. The A21 controller allows integrating the unit into the Smart Home system or BMS (Building Management Systems). Remote control panel is not included in the delivery set and is available as specially ordered accessory.

The unit is controlled via Wi-Fi by means of the VENTS AHU mobile application that must be downloaded.



Google play



Download on the App Store



The VUT/VUE 270 V5B EC A14 units are equipped with integrated control system and wall-mounted sensor control panel A14 with LED indication.

The VUT/VUE 270 V5B EC A2 units are equipped with R-1/010 speed controller.

Freeze protection

For VUT/VUE 270 V5B EC A14, VUT/VUE 270 V5 EC A2 the freeze protection is realized by means of shutdown the supply fan.

For VUT/VUE 270 V5B EC A21 the freeze protection is realized by means of turning the preheater on.

Designation key

Series	Rated air flow [m ³ /h]	Installation type	Casing design	Bypass	Motor type	Control
VUT: ventilation with heat recovery VUE: ventilation with energy recovery	270	V: vertical	5: expanded polypropylene (EPP)	_: no bypass B: integrated bypass	EC: synchronous electronically commutated motor	A2 A14 A21

Control and automation

Functions	A21	A14	A2
External wired control panel	option (A22) 	A14 	speed controller R-1/010
Wired remote LCD control panel	option (A25) 	-	-
External wireless control panel	option (A22 Wi-Fi) 	-	-
BMS	RS-485 WI-FI Ethernet MODBUS (RTU, TCP)	-	-
Service Vents Cloud Server	+	-	-
Wi-Fi control via mobile application	+	-	-
Speed selection	+	+	+
Filter replacement indication	according to filter timer	according to filter timer	-
	according to pressure switch of filter clogging	-	-
Alarm indication	full alarm description in the mobile application	alarm LED indication	-
Week scheduled operation	+	-	-
Bypass	auto	-	-
	manual	manual	-
Timer	+	-	-
Boost mode	+	-	-
Fireplace mode	+	-	-
Freeze protection	cyclic shutdown of supply fan preheating (option)	cyclic shutdown of supply fan	cyclic shutdown of supply fan
Reheater connection	option	-	-
Cooler connection	option	-	-
Control of minimum supply air temperature	+	-	-
Humidity control	option	option	-
CO ₂ control	option	option	-
VOC control	option	-	-
PM2.5 control	option	-	-
Fire detector	option	option	-

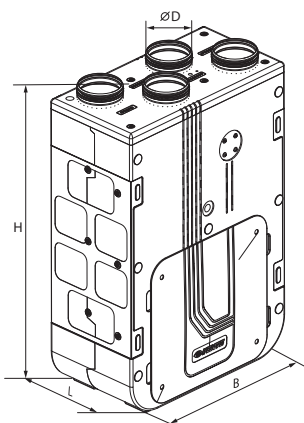
*Option. The function is available in case of mounting a respective accessory.

Installation

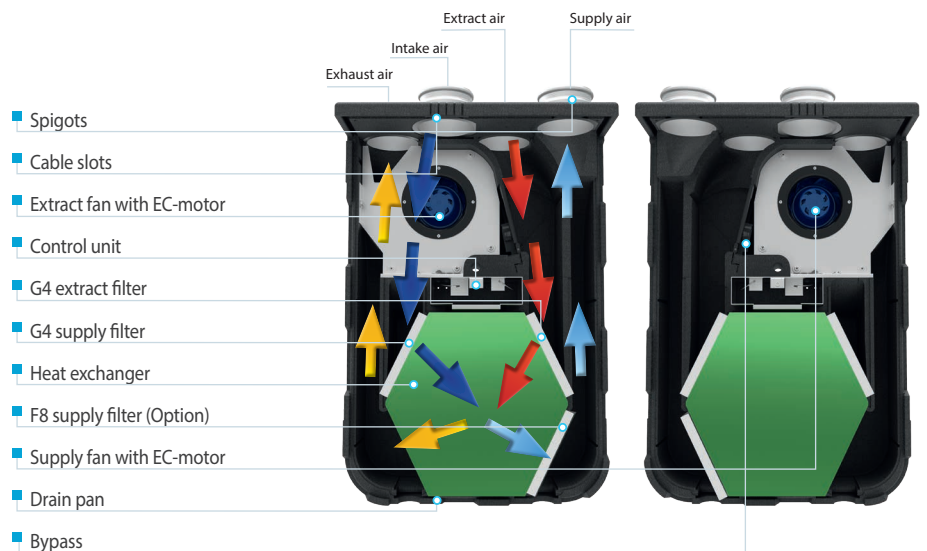
The units are designed for wall and floor mounting. The access for unit and filter maintenance is available on the right and left side.

Overall dimensions

Model	Dimensions [mm]			
	Ø D	B	H	L
VUT/VUE 270 V5(B) EC	125	590	893	316















Unit design



VENTS
 VUT/VUE 270
 V5(B) EC
 AIR HANDLING UNITS WITH
 HEAT RECOVERY

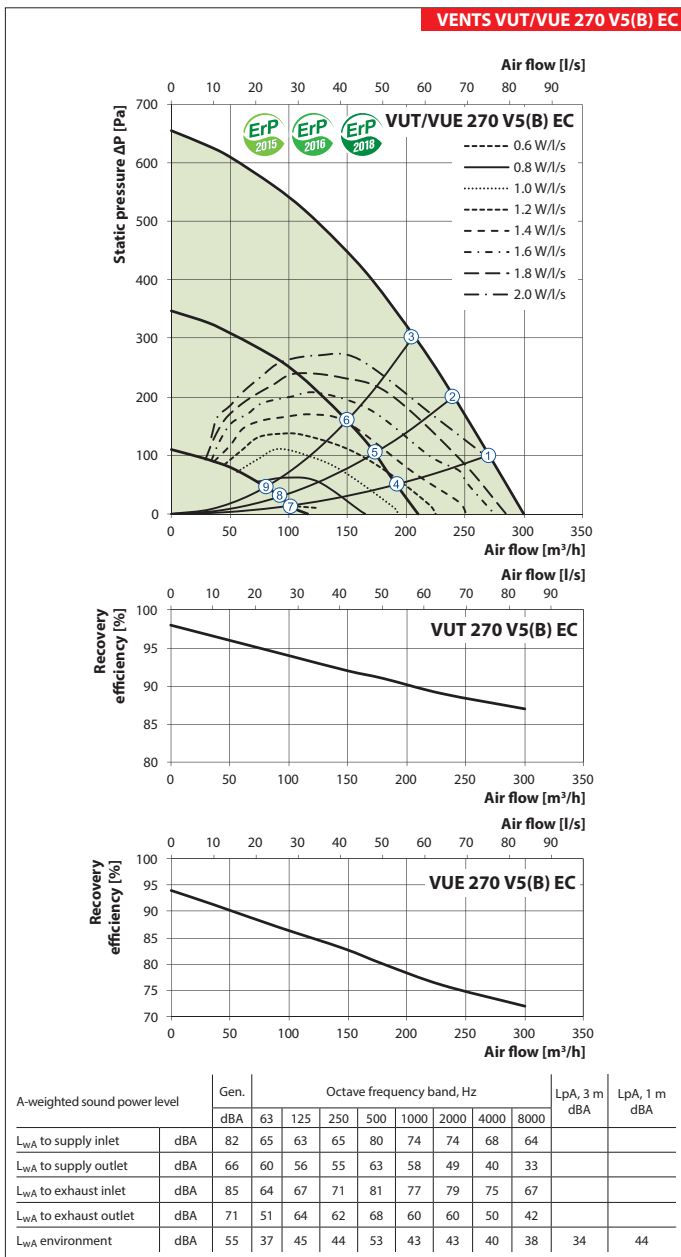
AIR HANDLING UNITS WITH HEAT RECOVERY

Accessories for air handling units

Model	G4 panel filter	F8 panel filter	LCD control panel	Control panel	Wi-Fi controllable control panel	Internal humidity sensor	CO ₂ sensor with indication	CO ₂ sensor	Humidity sensor	VOC sensor (0-10 V)	CO2 sensor (0-10 V)	Humidity sensor (0-10 V)	Reheater	Preheater	Syphon kit	Air damper	Electric actuator
																	
VUT 270 V5(B) EC A21			A25	A22	A22					DPWQ	DPWQ	DPWC	NKD	NKP	SH-32		
VUE 270 V5(B) EC A21					Wi-Fi	HV2	CO2-1	CO2-2	HR-S	30600	40200	11200	125	125	-	KRV	LF230
VUT 270 V5(B) EC A14	SF	SF	-	-	-					-	-	-	-	-	SH-32	125	
VUE 270 V5(B) EC A14	264x182x18 G4	264x182x18 F8	-	-	-					-	-	-	-	-	-	-	-
VUT 270 V5 EC A2			-	-	-	-	-	-	-	-	-	-	-	-	SH-32	-	-
VUE 270 V5 EC A2			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Technical data

	VUT 270 V5(B) EC	VUE 270 V5(B) EC
Voltage 50 (60) Hz [V]		1~230
Maximum power [W]		162
Maximum current [A]		1.2
Maximum air flow [m ³ /h]		300
RPM [min ⁻¹]		3200
Sound pressure level at 3 m distance [dBA]		34
Transported air temperature [°C]		-25...+40
Casing mater	expanded polypropylene (EPP)	
Insulation	EPP 15...26 mm	
Extract filter	G4	
Supply filter	G4 (optional F8)	
Connected air duct diameter [mm]	Ø125	
Weight [kg]	13	13.5
Recovery efficiency [%]	87 up to 98	72 up to 94
Heat exchanger type	counter-flow	
Heat exchanger material	polystyrene	enthalpy
SEC class for A14, A21	A+	A
SEC class for A2	B	B



Point	Power, W	Sound pressure level at 3 m (1 m) distance [dBA]
	VUT/VUE 270 V5(B) EC	VUT/VUE 270 V5(B) EC
1	153	34 (44)
2	150	34 (44)
3	142	33 (43)
4	62	30 (40)
5	60	29 (39)
6	59	28 (38)
7	17	27 (37)
8	17	23 (33)
9	16	23 (33)

Exhaust air spigot configuration	Air flow [l/s]	Specific fan power [W/l/s]	Recovery efficiency [%]
Kitchen + 1 additional wet room	21	0,73	85
Kitchen + 2 additional wet rooms	29	0,86	84
Kitchen + 3 additional wet rooms	37	1,08	82
Kitchen + 4 additional wet rooms	45	1.39	81

Calculation of air temperature at heat exchanger outlet:

$$t = t_{outd} + k_{hr} * (t_{extr} - t_{outd})/100,$$

where

t_{outd} is outdoor air temperature [°C]

t_{extr} is extract air temperature [°C]

k_{hr} is heat exchanger efficiency (according to the diagram) [%]

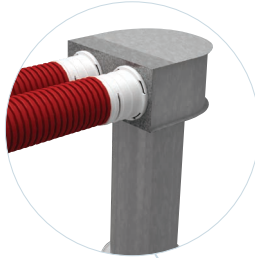
VENTS VUT/VUE 270 V5(B) EC AIR HANDLING UNITS WITH HEAT RECOVERY

Application options

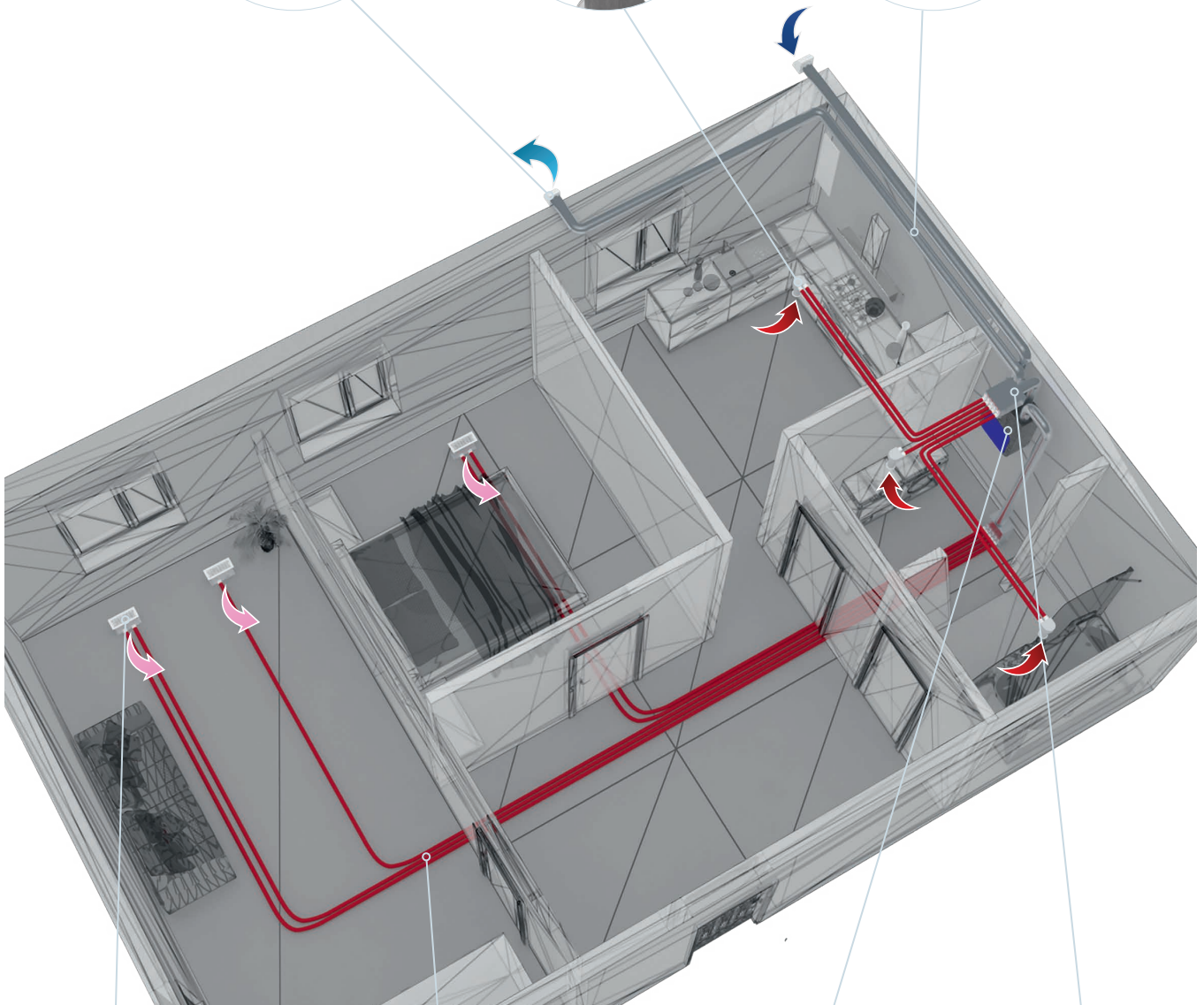
Ventilation hood



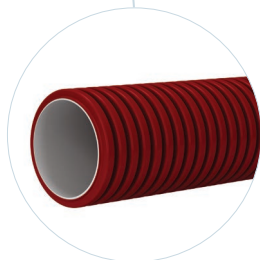
Ceiling connector with a disk valve



Isovent 150 insulated air duct



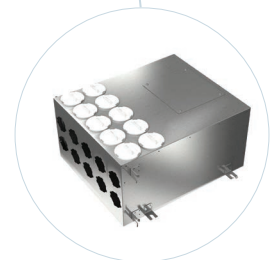
Floor connector with a grille



FlexiVent air duct



Air handling unit



Collector