

Series  
**VENTS**  
**VUT/VUE 270 V5(B) EC**



Heat recovery air handling units in sound- and heat-insulated casings.  
Air flow up to 300 m<sup>3</sup>/h.  
Heat recovery efficiency up to 98 %

**Description**

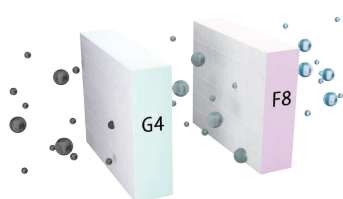
The air handling units are the fully featured ventilation units with heat recovery for air filtration, fresh air supply and stale air extract. The extract air heat is used for warming up of the supply air stream in the high-efficient plate heat exchanger. The units offer energy-efficient ventilation 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**

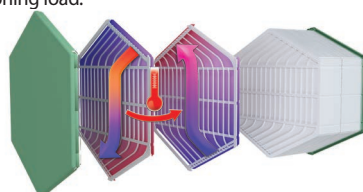
High-efficient electronically commutated motors with external motor and impeller with backward curved blades. Such motors are the most state-of-the-art energy saving solution. EC motors are featured with high performance and total speed controllable range. High efficiency reaching 90 % is the premium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

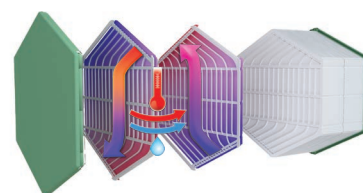
This allows for a considerable reduction of the supply air temperature which, in its turn, reduces the air conditioning load.



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

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).

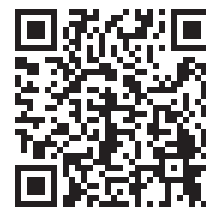
**Automation**

The VUT/VUE 270 V5B EC A21 units are equipped with integrated control system. 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 <sup>3</sup> /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

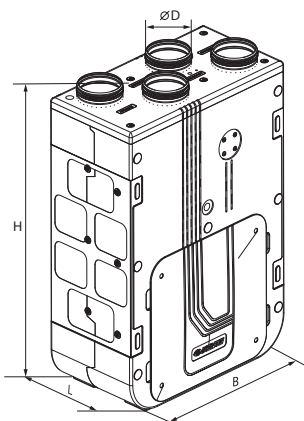
Functions	A21	A14	A2
External wired control panel	Option (A22) 	A14 	Speed controller R-1/010 
External wireless control panel	Option (A22 Wi-Fi) 	-	-
Wi-Fi control via mobile application	+	-	-
Freeze protection	+	+	+
Bypass	Auto + manual	Manual	-
Week scheduled operation	+	-	-
Filter replacement indication	By motor hours	By motor hours	-
Alarm indication	+	+	-
Speed selection	+	+	+
Timer	+	-	-
RH% sensor	Option	Option	-
CO <sub>2</sub> sensor	Option	Option	-
VOC sensor	Option	Option	-
PM2.5 sensor	Option	Option	-
Boost mode	+	-	-
Kamin mode	+	-	-
Preheater connection	Option	-	-
Reheater connection	Option	-	-
Cooler connection	Option	-	-
Fire detector	Option	Option	-
Control of minimum supply air temperature	+	-	-

### Installation

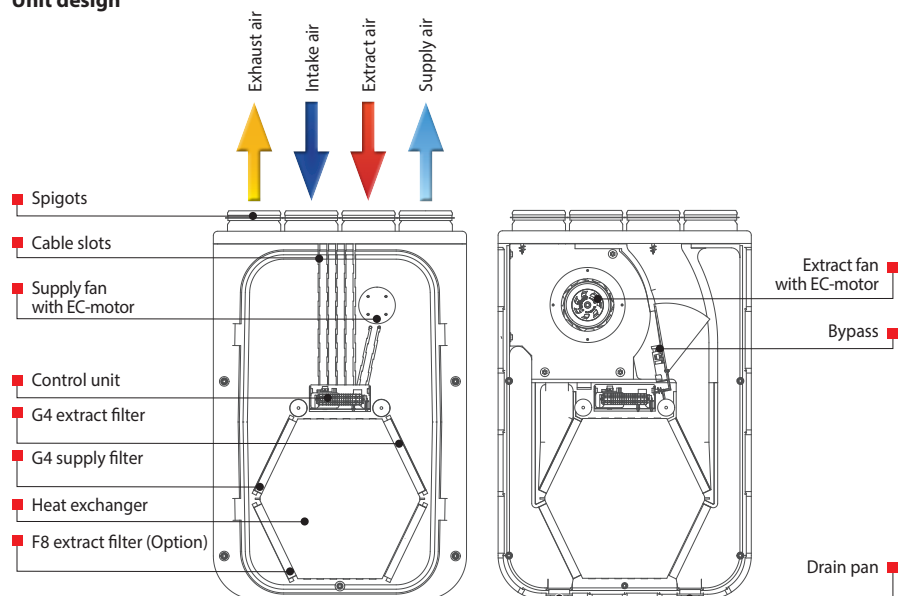
The units are designed for wall and floor mounting. The access for unit and filter maintenance is available on the right and left side.

### Overall dimensions

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



### Unit design



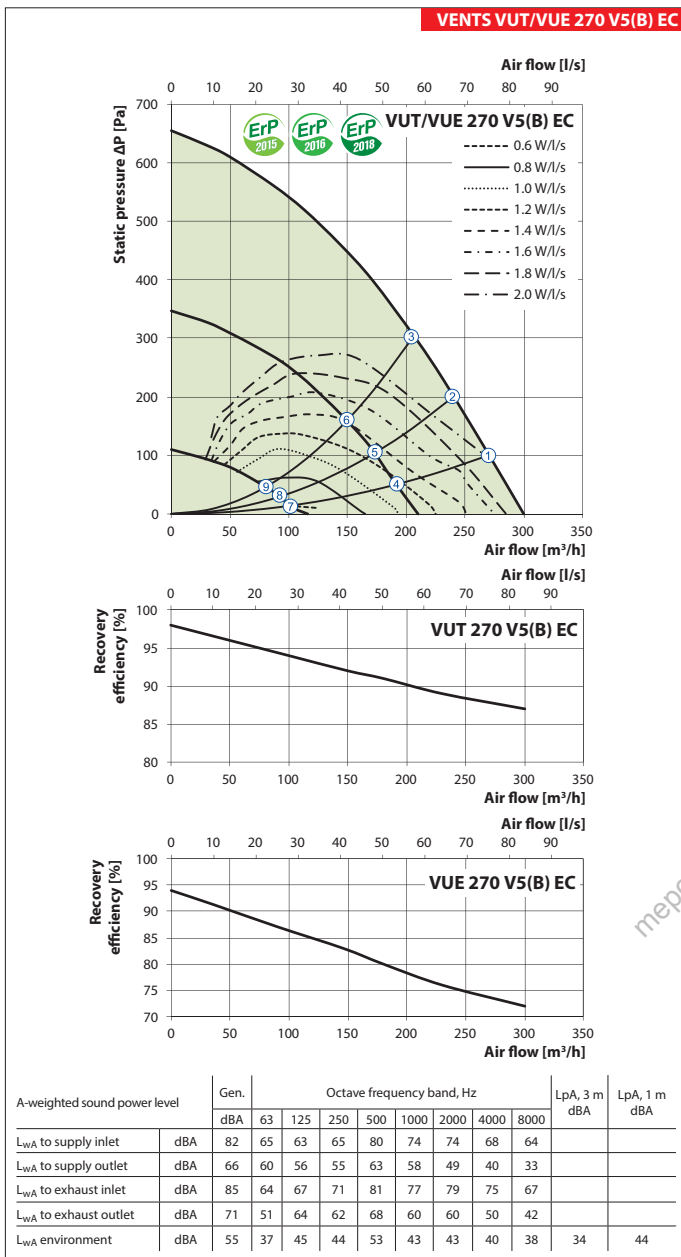
## AIR HANDLING UNITS WITH HEAT RECOVERY

### Accessories for air handling units

Model	G4 panel filter	F8 panel filter	Control panel	Wi-Fi controllable control panel	Internal humidity sensor	CO <sub>2</sub> sensor with indication	CO <sub>2</sub> sensor	Humidity sensor	VOC sensor (0-10 V)	CO <sub>2</sub> sensor (0-10 V)	Humidity sensor (0-10 V)	Reheater	Preheater	Syphon kit	Air damper	Electric actuator
VUT 270 V5(B) EC A21			A22	A22 Wi-Fi					DPWQ 30600	DPWQ 40200	DPWC 11200	NKD 125	NKP 125	SH-32		
VUE 270 V5(B) EC A21					HV2	CO <sub>2</sub> -1	CO <sub>2</sub> -2	HR-S							KRV 125	LF230
VUT 270 V5(B) EC A14	SF 264x182x18	SF 264x182x18	-	-					-	-	-	-	-	SH-32		
VUE 270 V5(B) EC A14	G4	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 <sup>3</sup> /h]		300
RPM [min <sup>-1</sup> ]		3200
Sound pressure level at 3 m distance [dBA]		34
Transported air temperature [°C]		-25...+50
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 membrane
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<sub>outd</sub> is outdoor air temperature [°C]

t<sub>extr</sub> is extract air temperature [°C]

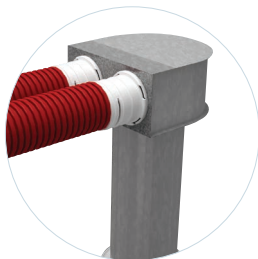
k<sub>hr</sub> is heat exchanger efficiency (according to the diagram) [%]

Application options

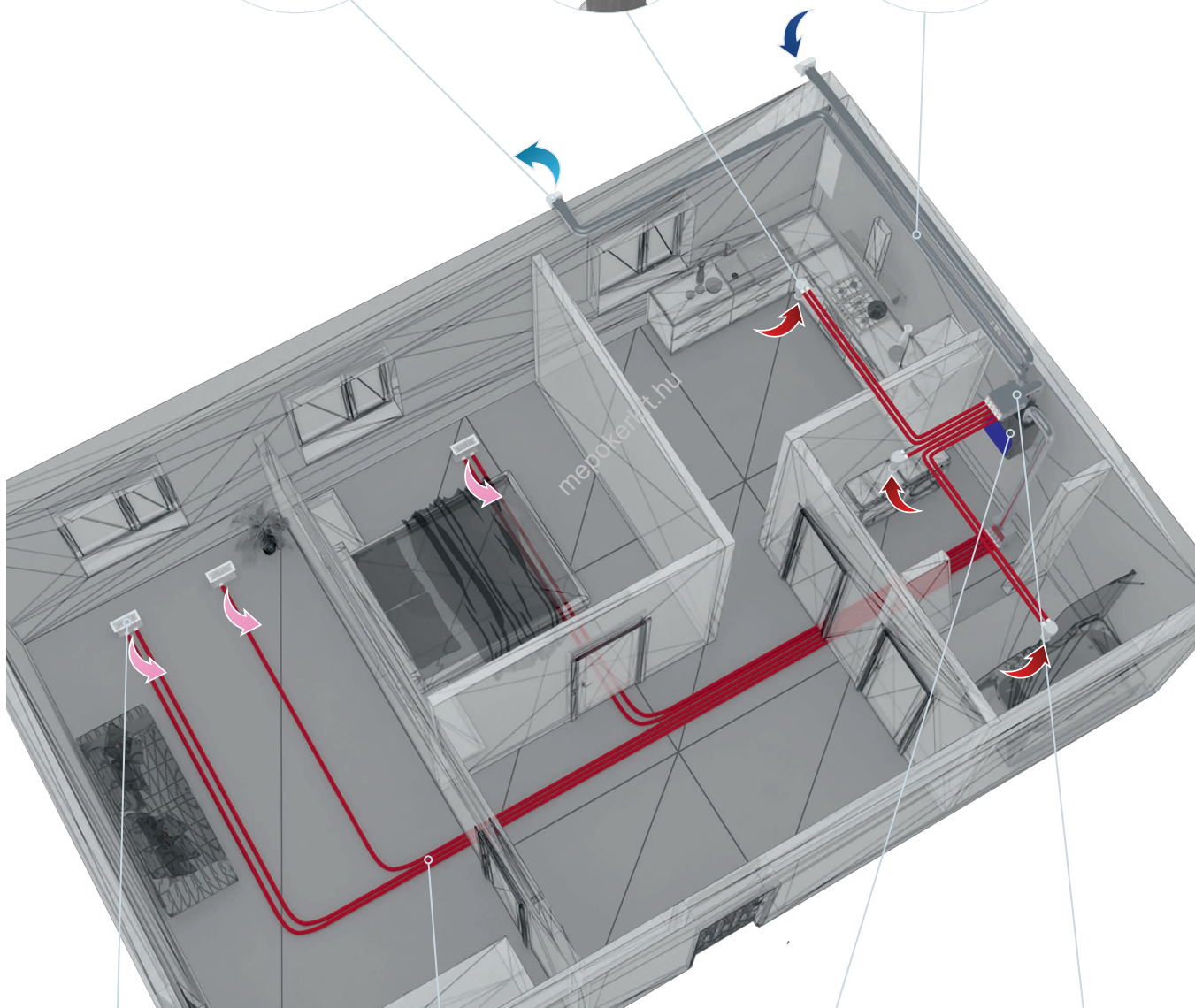
Ventilation hood



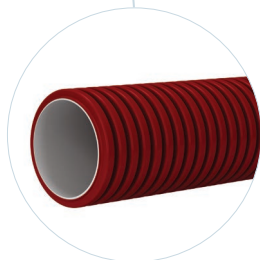
Ceiling plenum with an anemostat



Isovent 150 insulated air duct



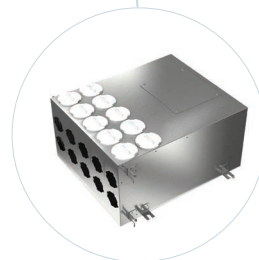
Floor plenum with a grille



FlexiVent air duct



Air handling unit



Collector