

Series  
**VENTS**  
**VUT/VUE 180 P5(B) EC**



Heat recovery air handling units in sound- and heat-insulated casings. Air flow up to **220 m³/h**. Heat recovery efficiency up to **98 %**

**Description**

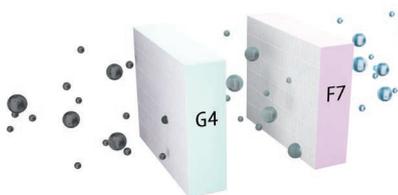
The air handling units are the fully featured ventilation units with heat recovery for air filtration, fresh air supply and stale air extract. The extract air heat is used for warming up of the supply air stream in the high-efficient plate heat exchanger. The units offer energy-efficient ventilation for cottages and flats and are compatible with round Ø 150 mm air ducts.

**Casing**

The casing is made of expanded polypropylene (EPP) possessing high heat- and sound-insulating properties.

**Filter**

Two built-in G4 and F7 filters provide efficient supply air filtration. The G4 filter is used for extract air filtration.



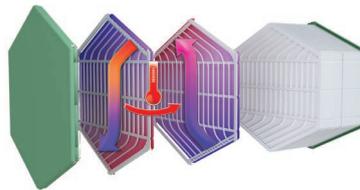
**Fans**

High-efficiency 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.

**Heat exchanger**

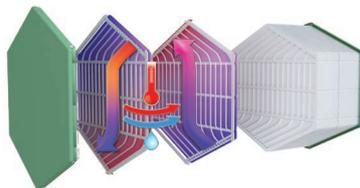
The **VUT 180 P5(B) EC** units are equipped with a counter-flow polystyrene heat exchanger. In the cold season the extract air heat is transferred to the intake air stream which reduces ventilation-generated heat losses.

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 180 P5(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 heat exchanger. This enables considerable reduction of the supply air temperature and humidity which, in its turn, reduces the load on air conditioners.



**Bypass**

The **VUT/VUE 180 P5B EC A14/A21** units are equipped with a bypass for summer ventilation (cooling of the premise with cool outside air).

**Automation**

The **VUT/VUE 180 P5B 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 180 P5B EC A14** units are equipped with integrated control system and the A14 wall-mounted control panel with LED indication.

The **VUT/VUE 180 P5B EC A2** units are equipped with the R-1/010 speed controller.

**Freeze protection**

For **VUT/VUE 180 P5B EC A14, VUT/VUE 180 P5 EC A2** the freeze protection is realized by means of shutdown the supply fan.

For **VUT/VUE 180 P5B EC A21** the freeze protection is realized by means of turning the preheater on.

**Designation key**

Series	Rated air flow [m³/h]	Mounting type	Casing design	Bypass	Motor type	Control
<b>VUT:</b> ventilation with heat recovery <b>VUE:</b> ventilation with energy recovery	180	<b>P:</b> suspended mounting	<b>5:</b> expanded polypropylene	<b>_:</b> no bypass <b>B:</b> integrated bypass	<b>EC:</b> synchronous electronically commutated motor	<b>A2</b> <b>A14</b> <b>A21</b>

**Control and automation**

Functions	A21	A14	A2
Wi-Fi control via mobile application	+	-	-
Control via external wired control panel	Option (A22) 	A14 	A2 
Wired remote LCD control panel	Option (A25) 	-	-
Control via external wireless control panel	Option (A22 Wi-Fi) 	-	-
BMS	RS-485 WI-FI Ethernet MODBUS (RTU, TCP)	-	-
Service Vents Cloud Server	+	-	-
Speed selection	+	+	+
Filter replacement indication	According to filter timer	According to filter timer	-
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	Cyclic shutdown of supply fan	Cyclic shutdown of supply fan
	Preheating (option)	-	-
Reheater connection	Option	-	-
Reheater connection	Option	-	-
Control of minimum supply air temperature	+	-	-
Humidity control	Option	Option	-
CO <sub>2</sub> 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.

VENTS  
 HEAT RECOVERY AIR  
 HANDLING UNITS  
 VUT/VUE 180  
 P5(B) EC

## AIR HANDLING UNITS WITH HEAT RECOVERY

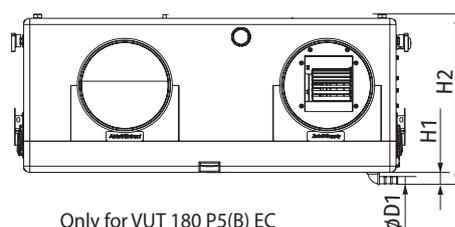
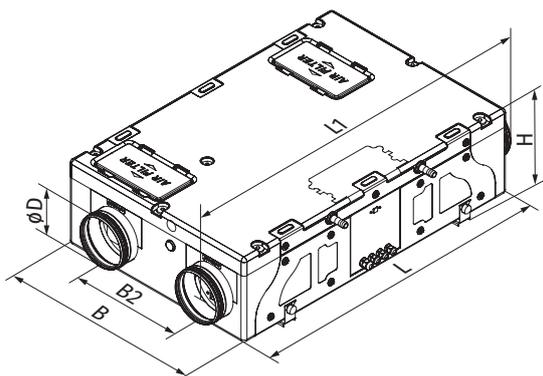
### ■ Mounting

The unit is designed for suspended ceiling, wall horizontal or vertical installation using the fixing brackets.

The mounting position of the unit must provide service access for maintenance and repair.

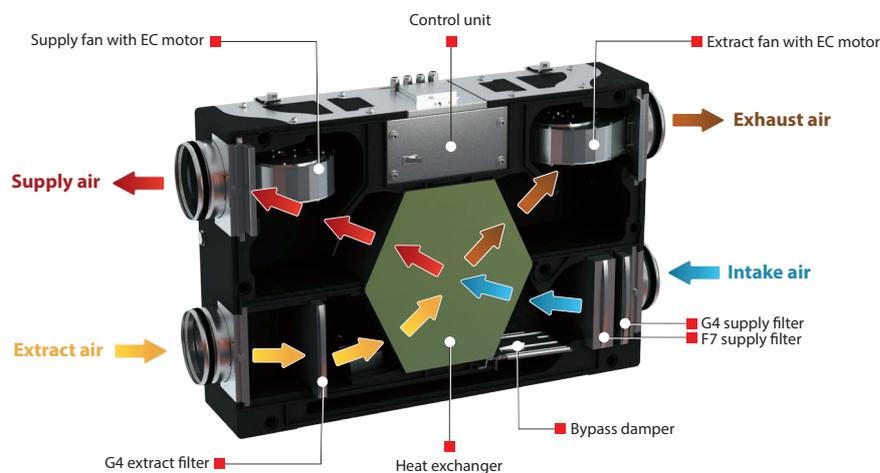
### Overall dimensions

Model	Dimensions [mm]							
	Ø D	Ø D1	B	B2	L	H	H1	H2
VUT 180 P5(B) EC	150	19	600	326	900	264	38	302
VUT 180 P5(B) EC	150	-	600	326	900	264	-	-



Only for VUT 180 P5(B) EC

### VUT 180 P5(B) EC unit design



### Accessories for air handling units

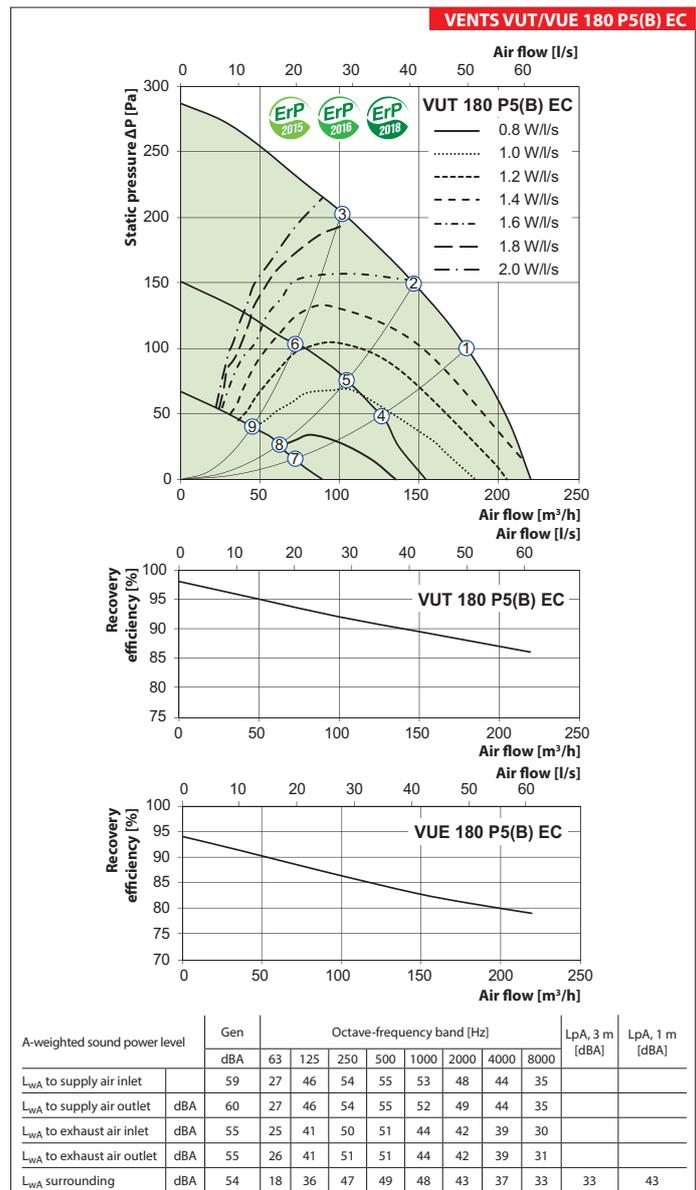
Model	G4 panel filter	F7 panel filter	LCD control panel	Control panel	Wi-Fi controllable control panel	Internal humidity sensor	CO <sub>2</sub> sensor with indication	CO <sub>2</sub> sensor	Humidity sensor	VOC sensor (0-10 V)	CO <sub>2</sub> sensor (0-10 V)	Humidity sensor (0-10 V)	Reheater	Preheater	Syphon kit	Air damper	Electric actuator
VUT 180 P5B EC A21			A25	A22	A22 Wi-Fi					DPWQ	DPWQ	DPWC	NKD	NKP	SG-32		
VUE 180 P5B EC A21						HV2	CO2-1	CO2-2	HR-S	30600	40200	11200	150	150	-	KRV	LF230
VUT 180 P5B EC A14	SF	SF	-	-	-					-	-	-	-	-	SG-32	150	
VUE 180 P5B EC A14	214x186x18 G4	214x186x48 F7	-	-	-					-	-	-	-	-	-	-	-
VUT 180 P5 EC A2			-	-	-					-	-	-	-	-	SG-32	-	-
VUE 180 P5 EC A2			-	-	-					-	-	-	-	-	-	-	-

### Technical data

	VUT 180 P5(B) EC	VUE 180 P5(B) EC
Voltage 50 (60) Hz [V]	1~230	
Maximum power [W]	87	
Maximum current [A]	0.71	
Maximum air flow [m <sup>3</sup> /h]	220	
RPM [min <sup>-1</sup> ]	2200	
Sound pressure level at 3 m distance [dBA]	33	
Transported air temperature [°C]	-25...+40	
Casing mater	Expanded polypropylene (EPP)	
Insulation	EPP 30-15 mm	
Extract filter	G4	
Supply filter	G4, G7	
Connected air duct diameter [mm]	Ø150	
Weight [kg]	14	14
Recovery efficiency [%]	86 up to 98	79 up to 94
Heat exchanger type	Counter-flow	
Heat exchanger material	Polystyrene	Enthalpy
SEC class for A14, A21	A+	A+
SEC class for A2	A	A

Point	Power, W	Sound pressure level at 3 m (1 m) distance [dBA]
	VUT/VUE 180 P5(B) EC	VUT/VUE 180 P5(B) EC
1	77	33 (43)
2	64	33 (43)
3	53	32 (42)
4	31	29 (39)
5	30	28 (38)
6	26	27 (37)
7	14	23 (33)
8	13	21 (31)
9	12	19 (29)

Exhaust air spigot configuration	Air flow [l/s]	Specific fan power [W/l/s]	Recovery efficiency [%]
Kitchen + 1 additional wet room	21	0.90	0.88
Kitchen + 2 additional wet rooms	29	1.00	0.86
Kitchen + 3 additional wet rooms	37	1.20	0.85



**Calculation of air temperature downstream of the heat exchanger:**

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

where

t<sub>outd</sub> is outdoor air temperature [°C]

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

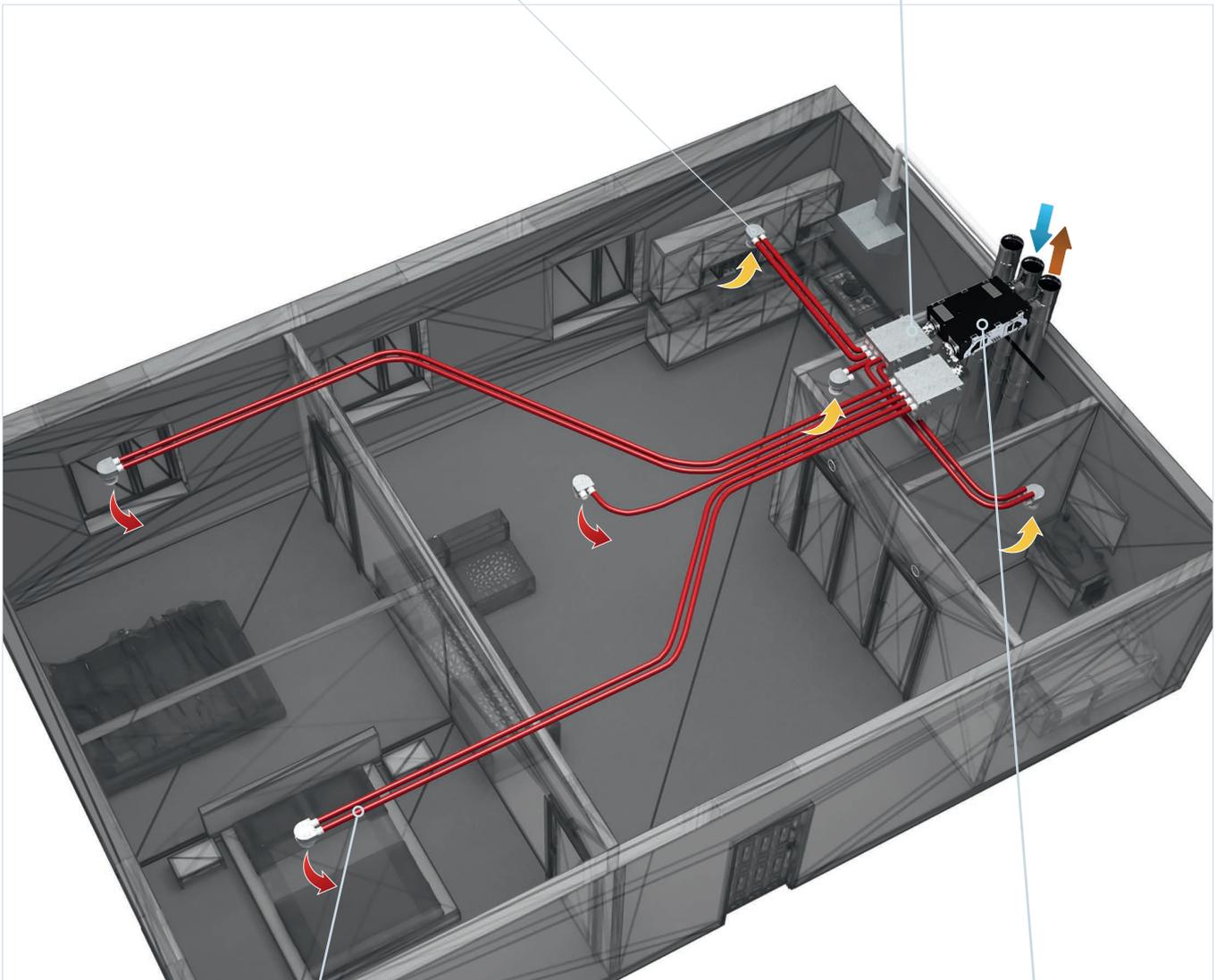
k<sub>hr</sub> is heat exchanger efficiency (according to the diagram) [%]

### Application options

Ceiling connector with disc valve



Air distribution box



FlexiVent air duct



Air handling unit

VENTS  
HEAT RECOVERY AIR  
HANDLING UNITS  
VUT/UE 180  
P5(B)EC