

Series VENTS VUT/VUE 230 V5



Heat recovery air handling units
in sound- and heat-insulated casings.
Air flow up to **230 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 in the high-efficient plate heat exchanger is used for warming up of the supply air stream.

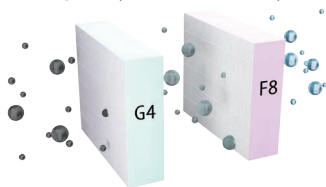
The units offer energy-efficient ventilation and heating solutions for cottages and flats and are compatible with round Ø 125 mm air ducts.

■ 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.

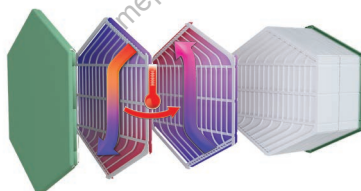


■ Fans

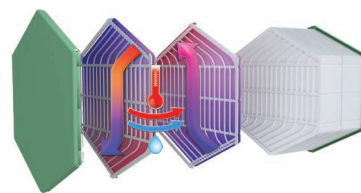
Single-phase three-speed external rotor motors with centrifugal impellers and forward curved blades. The motors have overheating protection with automatic restart.

■ Heat exchanger

The **VUT 230 V5** units are equipped with a counter-flow polystyrene heat exchanger. In the cold season the extract air heat is transferred to the supply 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 230 V5** 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.



■ Control and automation

The unit is equipped with integrated control system. It can be supplied either with the mechanical three-speed speed controller P3-1-300 or the sensor three-speed speed controller SP3-1, power cable with mains plug. The service side of the unit has a removable inspection door with hand screws to enable heat exchanger and filter cleaning and replacement. The control unit is located inside of the unit casing. The power cable and the ground cable are connected to the control unit via the cable glands on the side on the unit.



P3-1-300



SP3-1

■ Freeze protection

The freeze protection is realized by means of shutdown the supply fan as follows: in case of freezing danger communicated by the temperature sensor the supply fan is turned off to let the heat exchanger defrosting with the extract air heat.

After freezing danger is no longer imminent, the unit reverts to the standard operation mode.

■ Installation

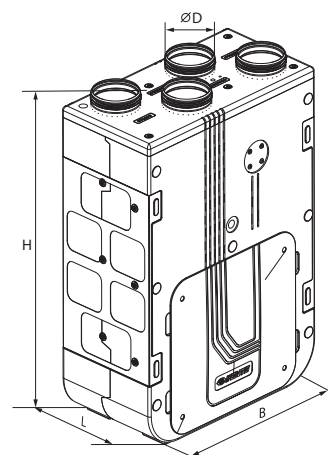
The units are designed for wall or floor mounting. The access for unit and filter maintenance is available on the right and left side.

Designation key

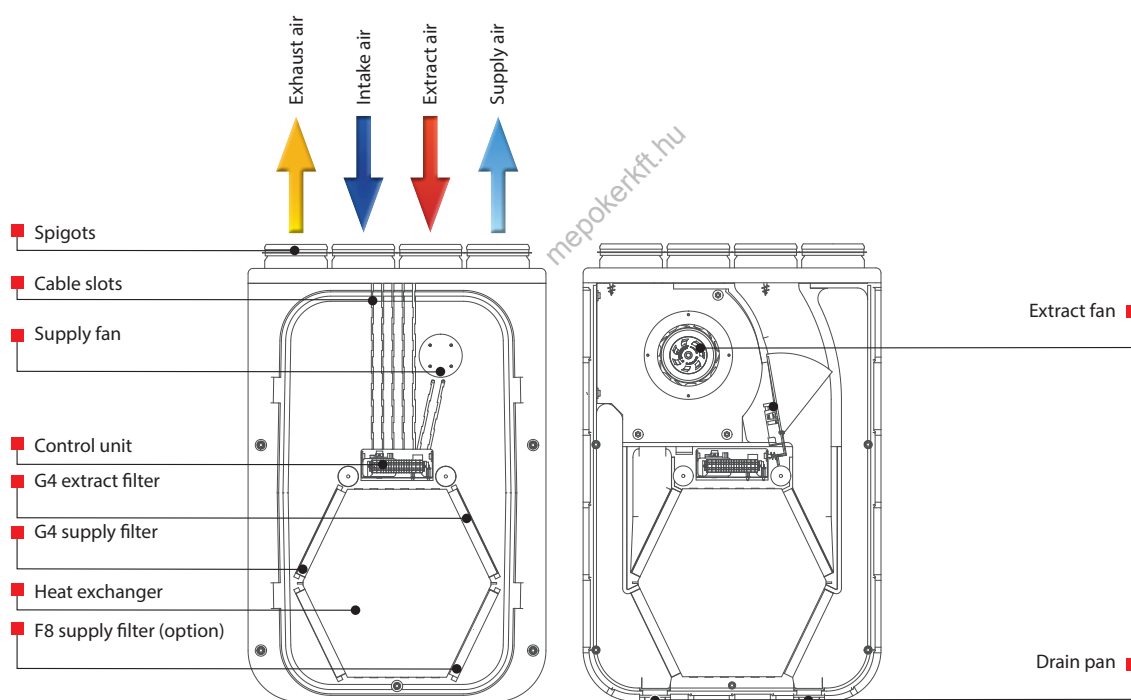
Series	Rated air flow [m³/h]	Mounting features	Casing design	Control
VUT: ventilation with heat recovery VUE: ventilation with energy recovery	230	V: vertical	5: expanded polypropylene	A3: P3-1-300 speed controller A4: SP3-1 sensor speed controller

Overall dimensions




Model	Dimensions [mm]			
	Ø D	B	H	L
VUT/VUE 230 V5	125	590	893	316



Unit design



Accessories for air handling units

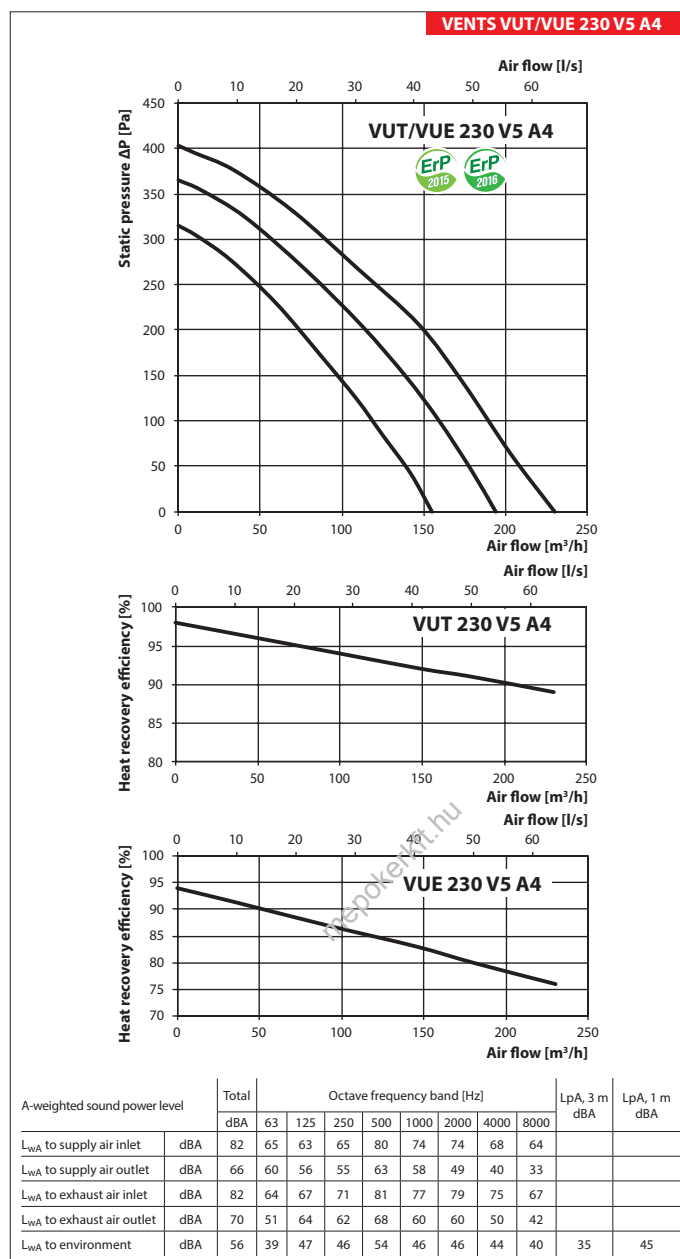
Model	G4 panel supply filter	F8 panel supply filter	Hydraulic U-trap
VUT 230 V5 A4			
VUE 230 V5 A4	SF 264x182x18 G4	SF 264x182x18 F8	SH-32

AIR HANDLING UNITS WITH HEAT RECOVERY

Technical data

	VUT 230 V5 A3/A4	VUE 230 V5 A3/A4
Voltage 50 (60) Hz [V]	1~230	
Maximum power [W]	163	
Maximum current [A]	0.7	
Maximum air flow [m³/h]	230	
RPM [min⁻¹]	2720	
Sound pressure level at 3 m distance [dBA]	35	
Transported air temperature [°C]	-25...+50	
Casing material	Expanded polypropylene (EPP)	
Insulation	EPP 15...26 mm	
Extract filter	G4	
Supply filter	G4 (optionally 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	B	C

mepokerkt.hu



Calculation of air temperature downstream of the heat exchanger:

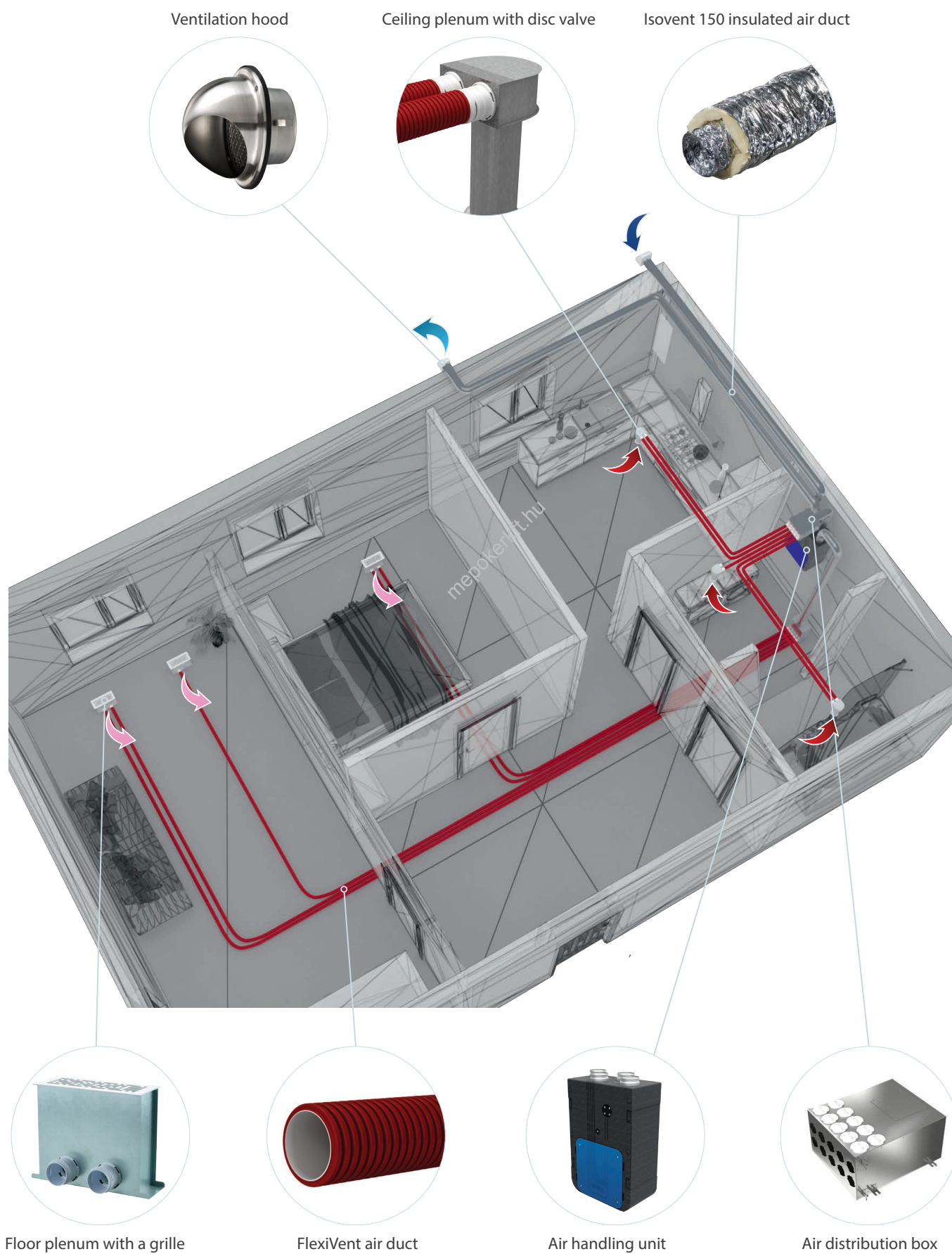
$$t_{\text{outd}} = t_{\text{ext}} + k_{\text{hr}} \cdot (t_{\text{extr}} - t_{\text{outd}}) / 100,$$

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

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

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

Application options



Floor plenum with a grille

FlexiVent air duct

Air handling unit

Air distribution box