

Series  
**VENTS VUT 160 PB EC**  
**VENTS VUT 350 PB EC**



Air handling unit in heat- and sound-insulated casing.  
 Air capacity up to **410 m<sup>3</sup>/h**.  
 Heat recovery efficiency up to 94 %.

**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 heat contained in the extract air is recuperated in the high-efficient plate, counter flow heat exchanger to warm up supply air. The units are designed for energy efficient ventilation of cottages and flats and are compatible with round air ducts.

**Casing**

Made of high-quality aluzink steel, internally filled with 40 mm mineral wool heat- and soundinsulating layer.

**Filter**

Supply and exhaust airflows are purified through panel filters with filtering class G4. A replaceable filter with filtering class F7 is optionally available.

**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 exchangers**

Counter-flow aluminum heat exchangers with high heat recovery efficiency. The drain pan under the heat exchanger block ensures condensate removal in both horizontal and vertical positions. In case of freezing danger determined by the temperature sensor, the supply fan is turned off for the period required for the heat exchanger defrosting. The heat exchanger is easily removed for cleaning.

**Bypass**

Units are equipped with a 100 % bypass, which can be opened if there is a need to cool down the ventilated area with cool intake air.

**Control and automation**

The unit includes integrated automation. The heat exchanger freezing protection operates as follows: In case of freezing danger determined by the temperature sensor the supply fan is turned off to let extract air warm up the heat exchanger. After freezing danger is no longer imminent, the unit reverts to the standard operation mode. Delivery set includes a multifunctional control panel indication and a 10 m long signaling cable.

**Sensor control panel (A14)**

**VUT 160 PB EC A14** and **VUT 350 PB EC A14** units are equipped with A14 sensor control panel with LED indication and following functions:



- ▶ Speed selection: Off, Low, Medium or High;
- ▶ Manual opening and closing of the bypass damper;
- ▶ Filter clogging control by motor hours;
- ▶ Fault indication;
- ▶ Control according to the optional duct humidity sensor HV2 feedback or according to an optional external sensor with NO contacts;
- ▶ Ventilation system shutdown at signal from the fire alarm system;

▶ **VUT 160 PB EC A14** and **VUT 350 PB EC A14** units can be connected to a PC by means of a USB cable. Special software gives following

possibilities:

- ▶ Software update of the unit;
- ▶ Adjusting of the Off, Low, Medium or High speed modes from 0 to 100 % for supply and exhaust fans separately;
- ▶ Adjustment of the humidity level and the speed activated by optional humidity sensor HV2;
- ▶ Adjustment of the speed activated by the optional external relay;
- ▶ Adjustment of the temperature of activation of freezing protection;
- ▶ Adjustment of filter maintenance timer;
- ▶ Monitoring of the maintenance timer, humidity level, external relay, and bypass;
- ▶ Error code indication.

**PU SENS 01 control panel (A11)**

**VUT 160 PB EC A11** and **VUT 350 PB EC A11** units are equipped with touch-screen LCD control panel PU SENS 01 with following functions:



- ▶ Turning unit on/off;
- ▶ Low-medium-high speed selection and adjustment from 0 up to 100% for supply and exhaust fans separately;
- ▶ Manual or automatic opening/closing of the bypass for summer ventilation;
- ▶ Timer;
- ▶ Week scheduled;
- ▶ Actuating external air dampers;
- ▶ Indication, adjustment and maintaining set room or supply air temperature;
- ▶ Control according to the optional duct humidity sensor HV1 feedback or according to the humidity sensor built-in the control panel;
- ▶ Filter clogging control by motor hours;
- ▶ Ventilation system shutdown at signal from the fire alarm system;
- ▶ Cooler connection possibility.

**Mounting**

Units can be mounted in two different ways:

- ▶ Suspended to the ceiling;
- ▶ Hung in the wall with vertical position of flanges.

Access for the unit servicing and filter maintenance on the bottom panel side.

**Designation key:**

Series	Rated air capacity [m <sup>3</sup> /h]	Mounting type		Motor type	Control
<b>VENTS VUT</b>	160; 350	<b>P</b> – ceiling suspended	<b>B</b> – bypass	<b>EC</b> – synchronous electronically commutated motor	<b>A11</b> – touch-screen LCD control panel PU SENS 01; <b>A14</b> – sensor control panel with LED indication

**Accessories**



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Duct humidity sensor HV1

Duct humidity sensor HV2

Siphon kit SH-32

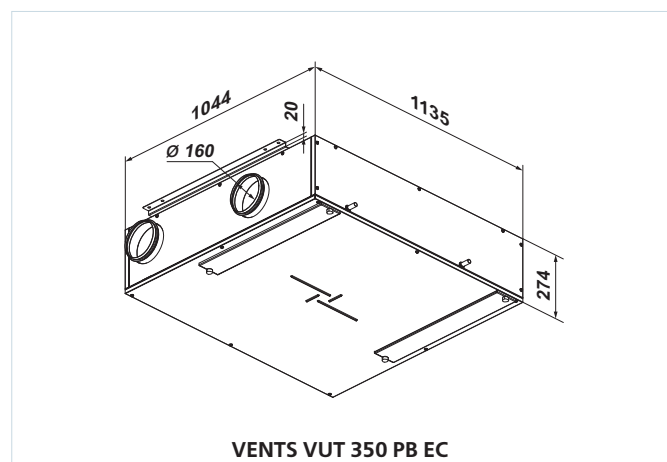
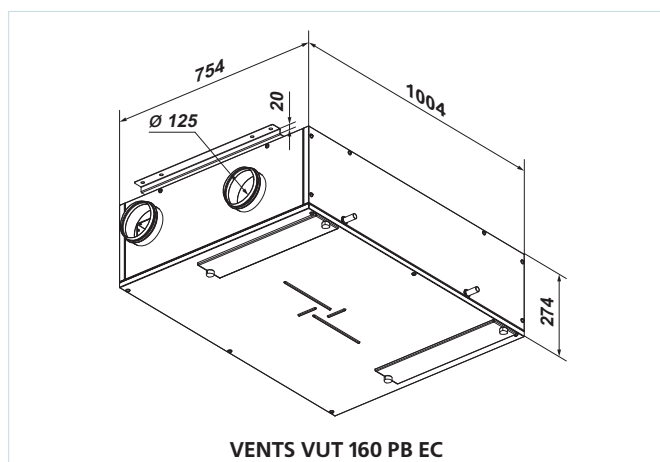
**Technical data:**

	VUT 160 PB EC	VUT 350 PB EC
Voltage [V / Hz]	1~ 230	
Total unit power [W]	50	170
Total unit current [A]	0.4	1.3
Max. air capacity [m <sup>3</sup> /h]	190	410
RPM [min <sup>-1</sup> ]	3770	3200
Sound pressure level at 3 m [dBA]	48	58
Transported air temperature [°C]	from -25 °C up to +60	
Casing material	aluzinc	
Insulation	40 mm mineral wool	
Filter: extract / supply	G4 / G4 (F7*)	
Connected air duct diameter [mm]	Ø 125	Ø 160
Weight [kg]	52	74
Heat recovery efficiency	82 up to 94 %	80 up to 91 %
Heat exchanger type	counter-flow	
SEC Class	A+	A
Heat exchanger material	aluminum	

\*modification

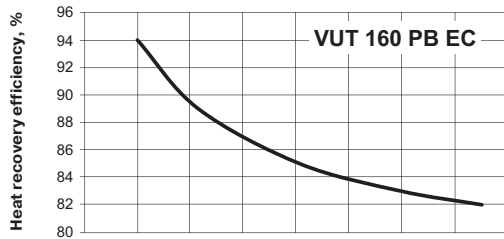
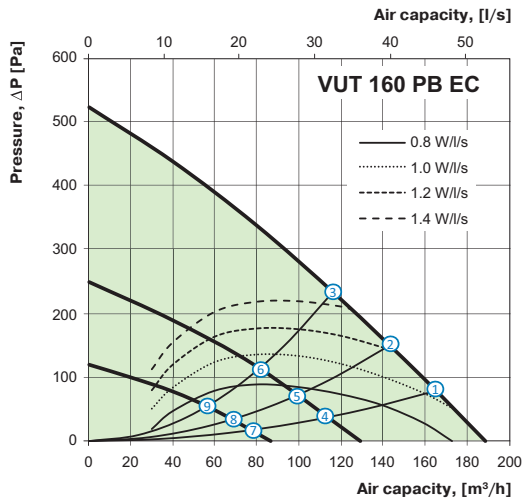
**Air handling unit accessories:**

Type	G4 replaceable panel filter	F7 replaceable panel filter	Duct humidity sensor	Siphon kit
VUT 160 PB EC A14	SF VUT 160 PB EC G4	SF VUT 160 PB EC F7	HV2	SH-32
VUT 350 PB EC A14	SF VUT 350 PB EC G4	SF VUT 350 PB EC F7		
VUT 160 PB EC A11	SF VUT 160 PB EC G4	SF VUT 160 PB EC F7	HV1	
VUT 350 PB EC A11	SF VUT 350 PB EC G4	SF VUT 350 PB EC F7		

**Overall dimensions:**

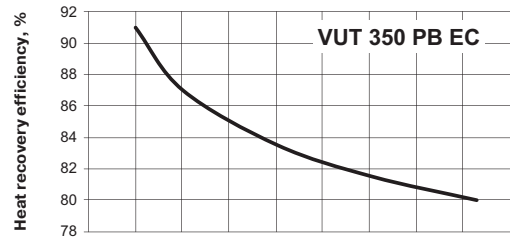
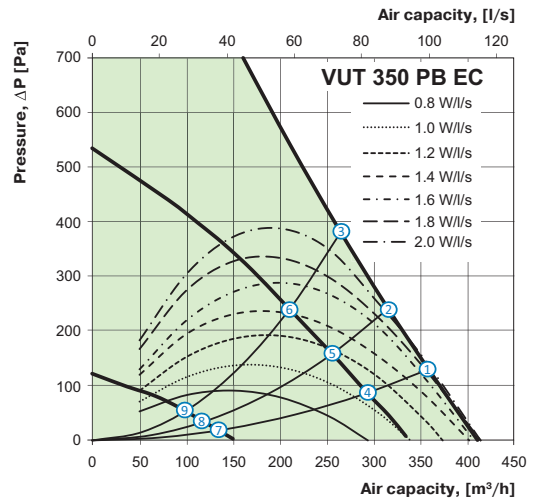
# HEAT RECOVERY AIR HANDLING UNITS

## VENTS VUT 160 PB EC



Sound pressure level, A-weighted	Hz	Octave-frequency band [Hz]								LpA, 3m dBA	LpA, 1m dBA	
		Gen	63	125	250	500	1000	2000	4000			8000
L <sub>WA</sub> to supply inlet	dBA	53	32	45	50	45	38	34	36	29	32	42
L <sub>WA</sub> to supply outlet	dBA	61	36	51	60	52	38	39	41	33	40	50
L <sub>WA</sub> to exhaust inlet	dBA	53	33	45	50	45	38	34	35	31	32	42
L <sub>WA</sub> to exhaust outlet	dBA	61	37	51	59	54	41	40	41	33	40	50
L <sub>WA</sub> to environmet	dBA	47	29	41	44	37	34	28	27	23	26	36

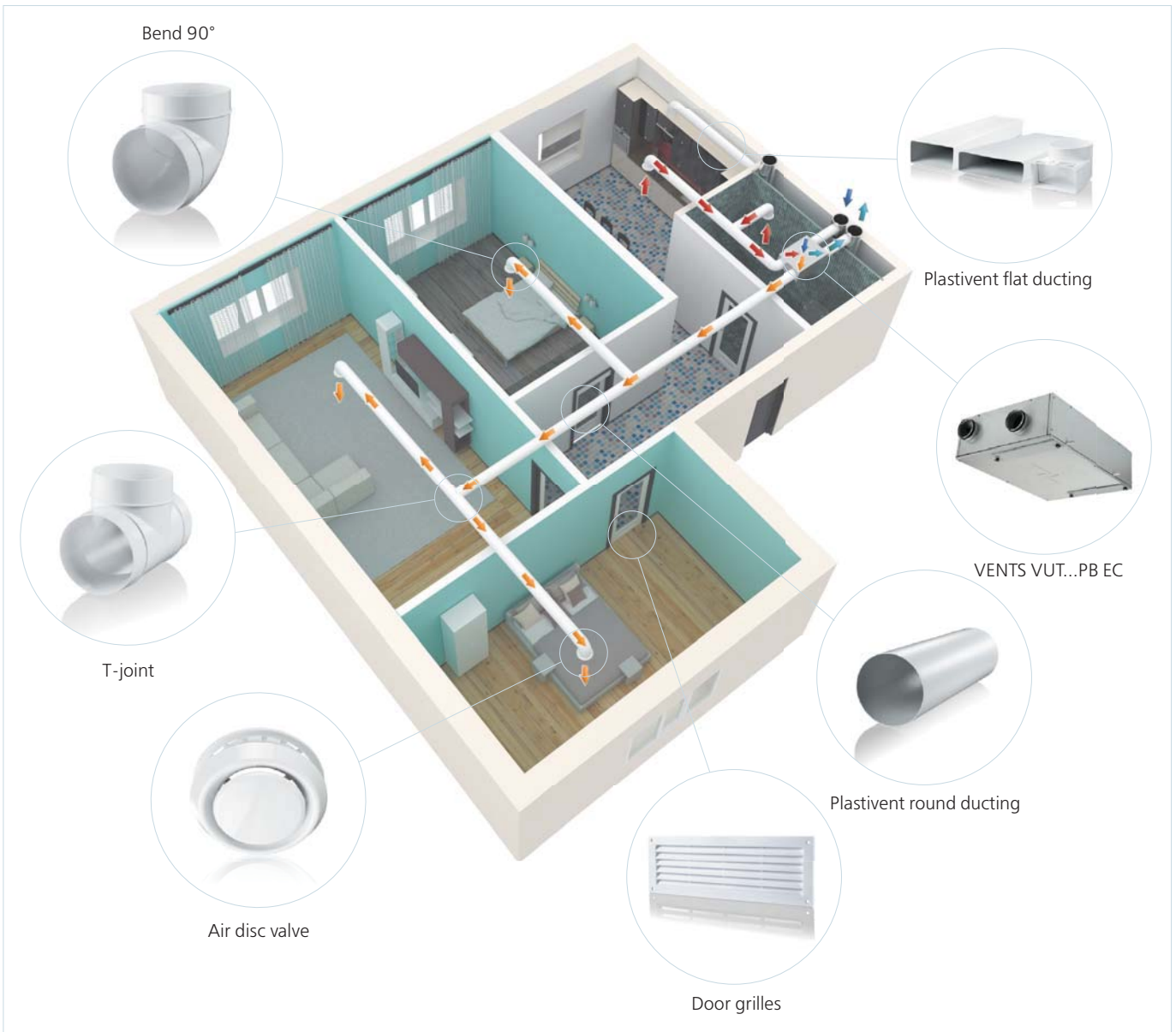
## VENTS VUT 350 PB EC



Sound pressure level, A-weighted	Hz	Octave-frequency band [Hz]								LpA, 3m dBA	LpA, 1m dBA	
		Gen	63	125	250	500	1000	2000	4000			8000
L <sub>WA</sub> to supply inlet	dBA	60	46	54	58	50	46	40	40	31	40	50
L <sub>WA</sub> to supply outlet	dBA	63	52	58	60	54	46	40	41	35	43	53
L <sub>WA</sub> to exhaust inlet	dBA	61	47	54	58	50	47	41	41	32	40	50
L <sub>WA</sub> to exhaust outlet	dBA	63	51	58	59	56	46	40	41	35	43	53
L <sub>WA</sub> to environmet	dBA	55	44	51	51	43	38	32	28	24	34	44

Point	Total power of the unit, W		Total sound pressure level at 3 m (1 m), dBA	
	VUT 160 PB EC	VUT 350 PB EC	VUT 160 PB EC	VUT 350 PB EC
1	49	169	26 (36)	34 (44)
2	49	169	26 (36)	34 (44)
3	48	169	25 (35)	33 (43)
4	21	87	22 (32)	28 (38)
5	21	86	22 (32)	28 (38)
6	20	84	21 (31)	27 (37)
7	8	20	19 (29)	22 (32)
8	8	19	18 (28)	22 (32)
9	8	19	18 (28)	21 (31)

Application examples:



VENTS VUT  
160 PB EC /  
350 PB EC  
HEAT RECOVERY AIR  
HANDLING UNITS