Series
VENTS
VUT/VUE 270 V5B EC

ErP 2015 **ErP 2016** **ErP 2018** **BMS** BUILDING MANAGEMENT SYSTEMS **EC motor**

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.

■ Casing
The casing is made of 15-26 mm thick expanded polypropylene (EPP), 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.
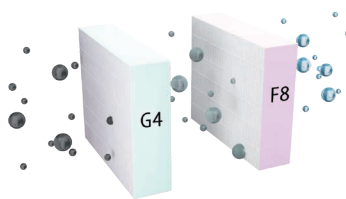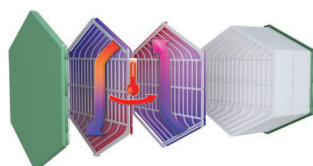

■ Fans
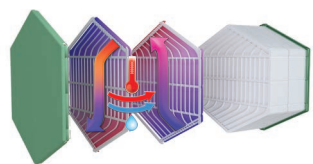High-efficient electronically commutated motors with external motor and impeller with backward curved blades.

■ Heat exchanger
The VUT 270 V5B EC units are equipped with a counter-flow polystyrene heat exchanger.

The VUE 270 V5B EC units are equipped with an enthalpy counter-flow heat exchanger.

■ 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).
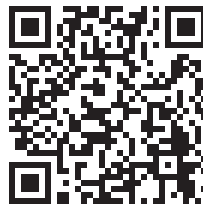
■ Automation
The **VUT/VUE 270 V5B EC A21** units are equipped with control system. The A21 controller allows integrating the unit into the Smart Home system or BMS (Building Management Systems).
The unit is controlled via Wi-Fi by means of the VENTS Home mobile application that must be downloaded.

Google play   App Store

Modbus

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

■ Freeze protection
For **VUT/VUE 270 V5B EC A14** 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 (available as an accessory) on.

■ 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.

■ Control and automation

Functions	A21	A14
External wired control panel	option (A22)	A14
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 shut-down of supply fan	cyclic shut-down of supply fan
	preheating (option)	-
Reheater connection	option	-
Cooler connection	option	-
Control of minimum supply air temperature	+	-
Humidity control	option	option
CO₂ 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.

Designation key

Series	Rated air flow [m³/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)	**B**: integrated bypass	**EC**: synchronous electronically commutated motor	**A14** **A21**

Overall dimensions

Model	Dimensions [mm]			
	Ø D	B	H	L
VUT/VUE 270 V5B EC	125	590	893	316

	Dimensions [mm]					
	L1	L2	L3	H1	H2	H3
External automation unit (only units with A21 automation)	324	313	93	180	330	196
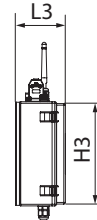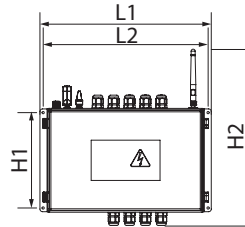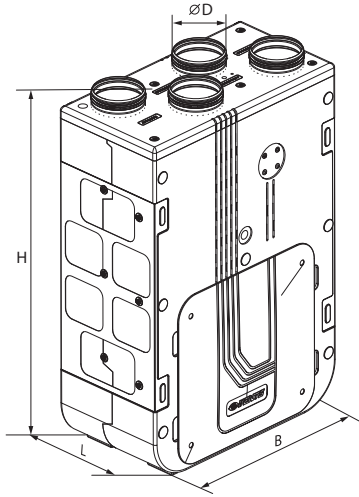
Unit design

- Spigots
- Cable slots
- Extract fan with EC-motor
- Control unit
- G4 extract filter
- G4 supply filter
- Heat exchanger
- F8 supply filter (Option)
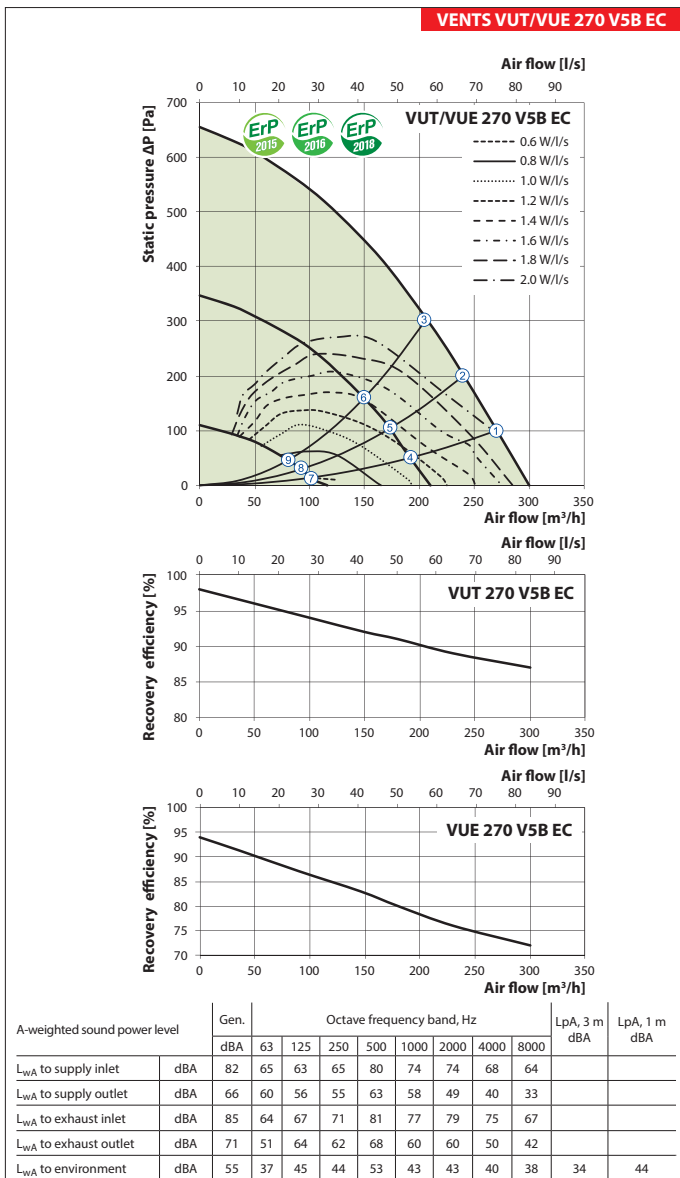- Supply fan with EC-motor
- Drain pan
- Bypass

Exhaust air · Intake air · Extract air · Supply air

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	CO₂ sensor with indication	CO₂ 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 V5B EC A21	SF 264x182x18 G4	SF 264x182x18 F8	A25	A22	A22 Wi-Fi	HV2	CO2-1	CO2-2	HR-S	DPWQ 30600	DPWQ 40200	DPWC 11200	NKD 125	NKP 125	SH-32	KRV 125	LF230
VUE 270 V5B EC A21			A25	A22	A22 Wi-Fi	HV2	CO2-1	CO2-2	HR-S	DPWQ 30600	DPWQ 40200	DPWC 11200	NKD 125	NKP 125	-	KRV 125	LF230
VUT 270 V5B EC A14			-	-	-	HV2	CO2-1	CO2-2	HR-S	-	-	-	-	-	SH-32	KRV 125	LF230
VUE 270 V5B EC A14			-	-	-	HV2	CO2-1	CO2-2	HR-S	-	-	-	-	-	-	KRV 125	LF230

Technical data

	VUT 270 V5B EC	VUE 270 V5B EC
Voltage 50 (60) Hz [V]	1~230	
Maximum power [W]	162	
Maximum current [A]	1.2	
Maximum air flow [m³/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

VENTS VUT/VUE 270 V5B EC

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------ 0.6 W/l/s
——— 0.8 W/l/s
·········· 1.0 W/l/s
------ 1.2 W/l/s
– – – 1.4 W/l/s
–·–·– 1.6 W/l/s
——— 1.8 W/l/s
–··–··– 2.0 W/l/s

VUT 270 V5B EC

VUE 270 V5B EC

Point	Power, W	Sound pressure level at 3 m (1 m) distance [dBA]
	VUT/VUE 270 V5B EC	VUT/VUE 270 V5B 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]
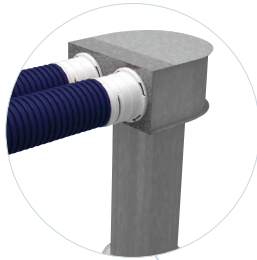k_{hr} is heat exchanger efficiency (according to the diagram) [%]

| A-weighted sound power level		Gen.	Octave frequency band, Hz								LpA, 3 m dBA	LpA, 1 m dBA
		dBA	63	125	250	500	1000	2000	4000	8000		
L_WA to supply inlet	dBA	82	65	63	65	80	74	74	68	64		
L_WA to supply outlet	dBA	66	60	56	55	63	58	49	40	33		
L_WA to exhaust inlet	dBA	85	64	67	71	81	77	79	75	67		
L_WA to exhaust outlet	dBA	71	51	64	62	68	60	60	50	42		
L_WA to environment	dBA	55	37	45	44	53	43	43	40	38	34	44

Application options
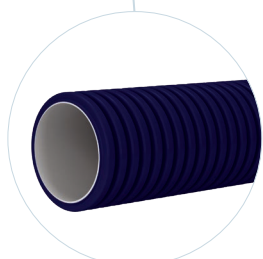
Ventilation hood

Ceiling connector with a disk valve
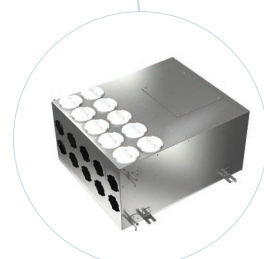
Isovent 150 insulated air duct
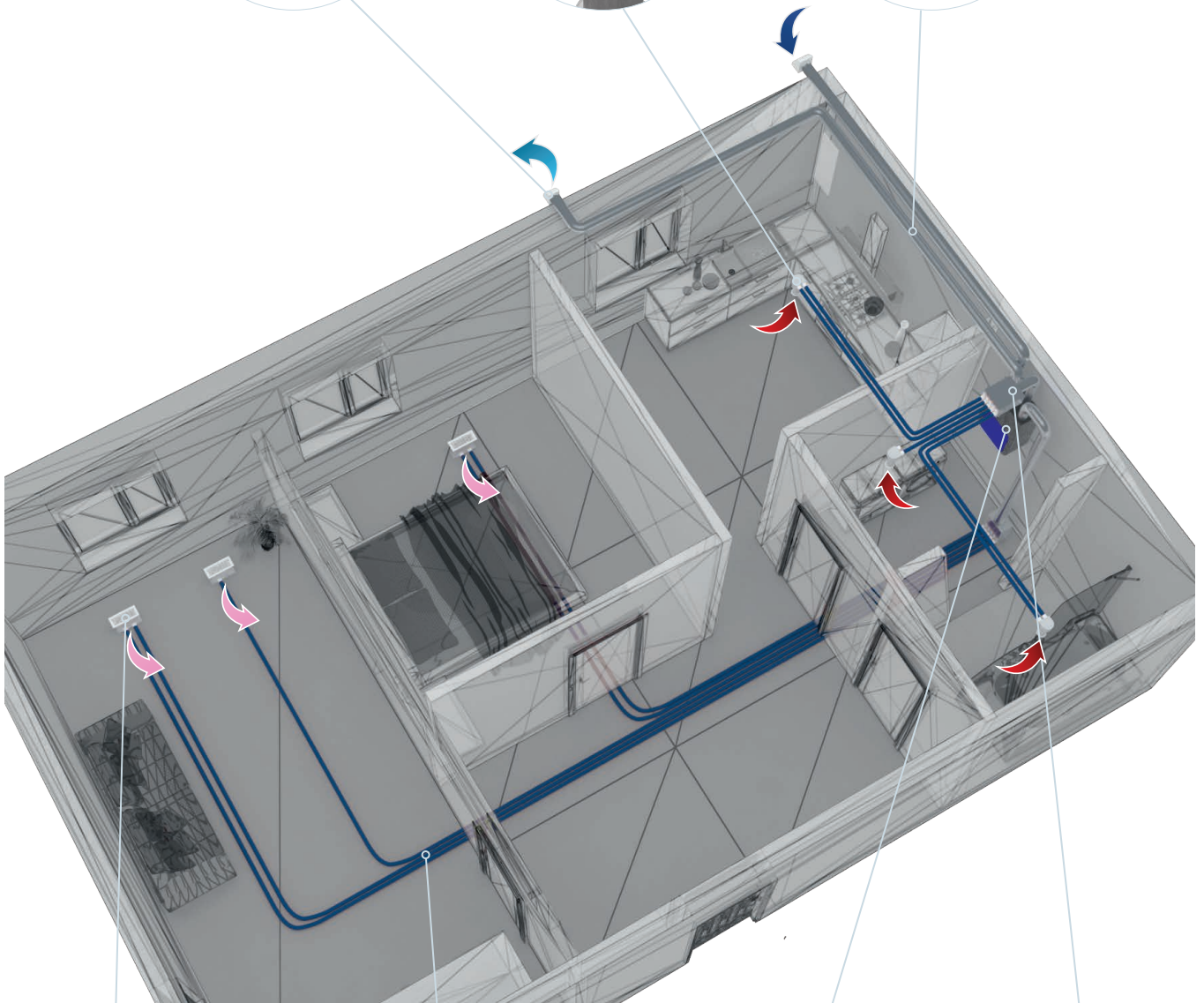
Floor connector with a grille

FlexiVent air duct

Air handling unit

Manifold