

Series
VENTS VUT/VUE VB EC



Air handling units in heat- and sound-insulated casing.

Air flow
up to **690 m³/h.**

Heat recovery efficiency
up to **93 %**

■ Description

The air-handling units are the fully featured ventilation units with heat recovery for air filtration, fresh air supply and stale air extract. During operation the extract air heat is transferred to the supply air stream by the highly efficient plate heat exchanger.

The units are designed for energy efficient ventilation of cottages and flats and are compatible with round air ducts (Ø 125, 160 and 200 mm).

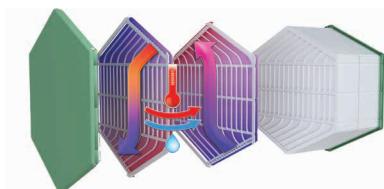
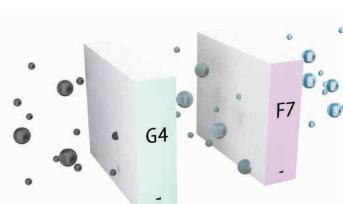
■ Casing

Made of high-quality polymer coated steel, internally filled with 20, 25, 30 or 40 mm (depending on the unit model) mineral wool layer for heat and sound insulation.

■ Filter

Supply and exhaust air is purified in panel filters with filtering class G4 and F7, respectively. Filters with G3 filtering class are used for supply and exhaust air purification in the **VUT/VUE 200 VB EC** units.

Supply air in the **VUT/VUE 250 VB EC** units is purified by the G4 and F7 filters. Exhaust air is purified by the G4 filters.



■ Fans

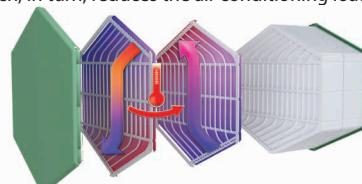
The units are equipped with high-efficient EC motors with an external rotor and a centrifugal impeller with backward curved blades. These state-of-the-art motors are the most advanced solution in energy efficiency today.

EC motors are characterised with high performance and optimum control across the entire speed range. In addition to that, the efficiency of the electronically commutated motor reaches very impressive levels of up to 90 %.

■ Heat exchanger

The **VUT V(B) EC** units are equipped with a counter-flow polystyrene heat exchanger. In the cold season the extract air heat is captured and transferred to the supply air stream which reduces the 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 ambient air heat is transferred to the exhaust air stream. This allows for a considerable reduction of the supply air temperature which, in turn, reduces the air conditioning load.



The **VUE V(B) EC** units are equipped with a counterflow enthalpy heat exchanger. In the cold season the extract air heat and moisture are transferred to the supply air stream through the enthalpy heat exchanger reducing the heat losses from ventilation. The ambient air heat and moisture are transferred to the exhaust air stream through the enthalpy heat exchanger in the warm season.

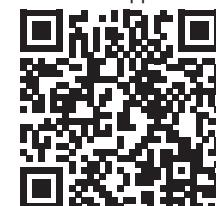
This allows for a considerable reduction of the supply air temperature and humidity which, in turn, reduces the air conditioning load.

■ Bypass

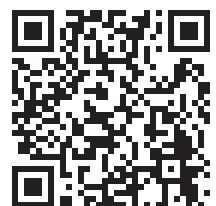
The **VUT/VUE VB EC** units are equipped with a bypass for summer ventilation (air cooling by the cool air from outside).

■ Automation

The **VUT/VUE V(B) EC A21** are equipped with a built-in automation system. The remote control panel is not included in the delivery set (available separately). To control the unit via Wi-Fi, download the VENTS AHU mobile app.



Google play



Download on the App Store

The **VUT/VUE V(B) EC A14** units have an integrated control system with a wall-mounted control panel A14 with a LED indication.

The **VUT 200 V(B) EC**, **VUT 250 V EC** units are available only with the A14 automation system.

■ Freeze protection

Freeze protection is provided by the shutdown of the supply fan. In the **VUT/VUE VB EC A21** units it is possible to connect a preheater to protect the unit from freezing.

Designation key

Series	Rated air flow [m ³ /h]	Installation features	Casing design	Bypass	Motor type	Control
VUT: ventilation with heat recovery VUE: ventilation with energy recovery	160, 200, 250, 300, 350, 550	V: vertical	– by default 1: casing modification	_ : without bypass B: with bypass	EC: synchronous electronically commutated motor	A14 A21

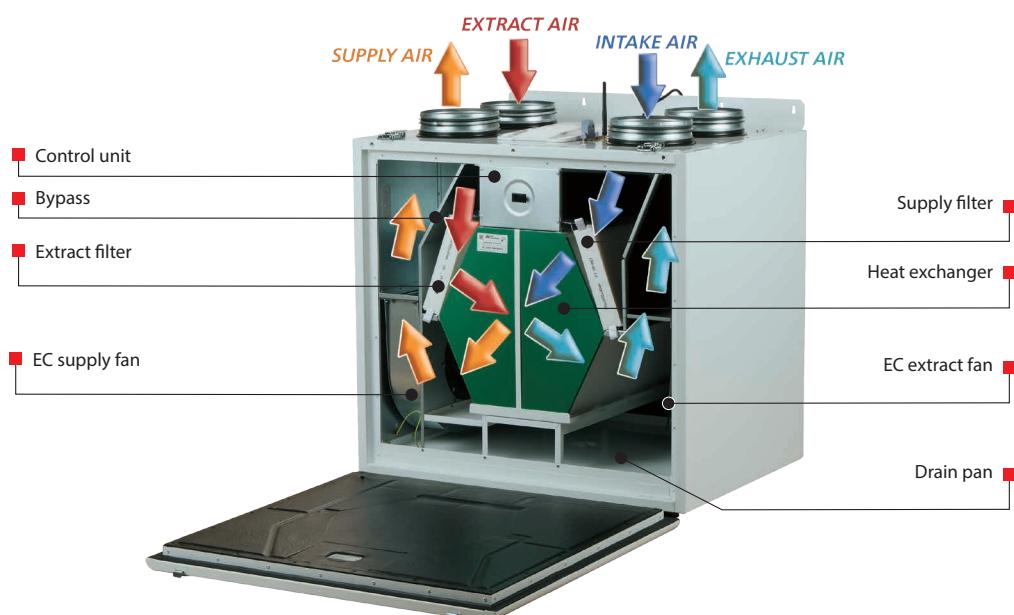
Control and automation

Functions	A21	A14
Wired remote control panel	Option (A22) 	A14 
Wired remote LCD control panel	Option (A25) 	-
Wireless remote control panel	Option (A22 Wi-Fi) 	-
Control by a mobile application via Wi-Fi	+	-
Freeze protection	+	+
Bypass	Auto + manual	Manual
Week-scheduled operation	+	-
Filter replacement indication	According to filter timer According to pressure switch of filter clogging (only for VUT/VUE 550 VB EC A21)	According to filter timer
Alarm indication	+	+
Speed selection	+	+
Timers	+	-
RH% sensor	Option	Option
CO ₂ sensor	Option	Option
VOC sensor	Option	Option
PM2.5 sensor	Option	Option
Boost mode	+	-
Fireplace mode	+	-
Preheater connection	Option	-
Reheater connection	Option	-
Cooler connection	Option	-
Fire alarm sensor	Option	Option
Minimum supply air temperature control	+	-

■ Installation

The units are designed for wall or floor mounting. Access for maintenance of units and filters is possible from the right and left side.

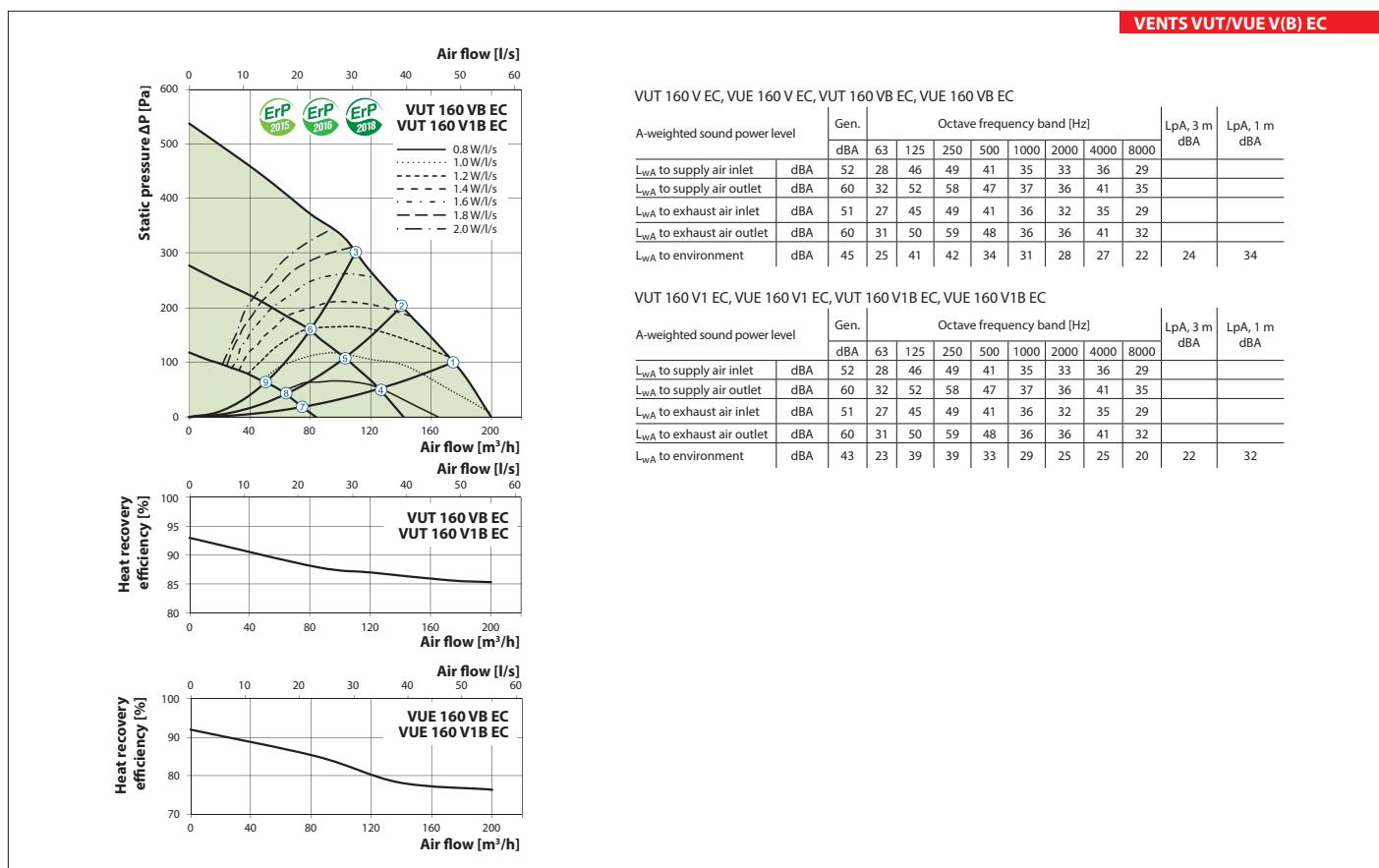
Unit design



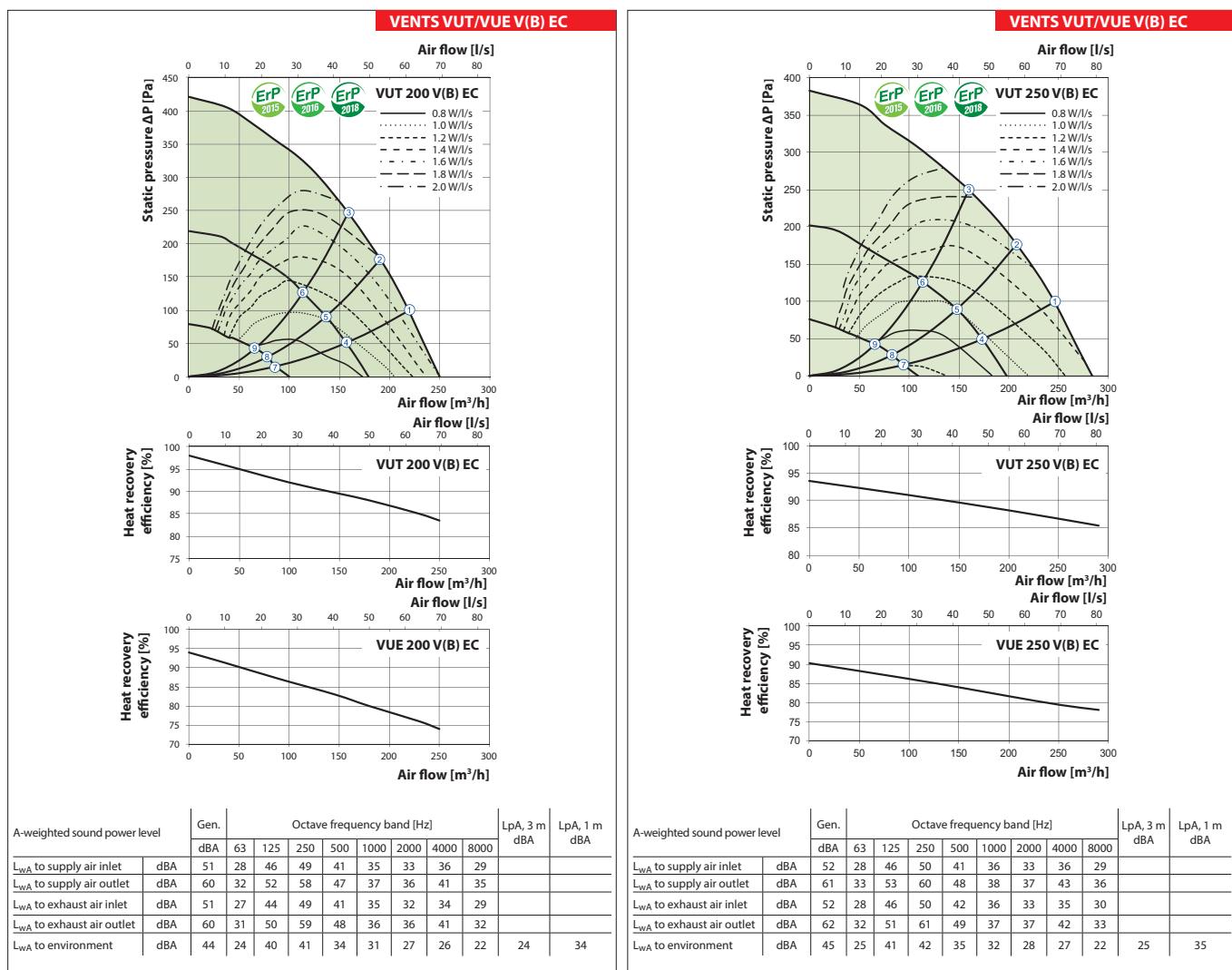
AIR HANDLING UNITS WITH HEAT RECOVERY

Technical data

	VUT 160 V EC	VUE 160 V EC	VUT 160 VB EC	VUE 160 VB EC	VUT 160 V1 EC	VUE 160 V1 EC	VUT 160 V1B EC	VUE 160 V1B EC				
Unit voltage [V/50 (60) Hz]	1~230											
Maximum power [W]	57											
Maximum current [A]	0.5											
Maximum air flow [m ³ /h]	200											
RPM [min ⁻¹]	3770											
Sound pressure level at 3 m distance [dBA]	24				22							
Transported air temperature [°C]	from -25 up to +40											
Casing material	painted steel											
Insulation	20 mineral wool				40 mineral wool							
Extract filter	G4											
Supply filter	F7 (optionally G4)											
Connected air duct diameter [mm]	Ø125											
Weight [kg]	34	36	42	44								
Heat recovery efficiency [%]	from 85 up to 93	from 76 up to 92	from 85 up to 93	from 76 up to 92	from 85 up to 93	from 76 up to 92	from 85 up to 93	from 76 up to 92				
Heat exchanger type	counter-flow											
Heat exchanger material	polystyrene	enthalpy	polystyrene	enthalpy	polystyrene	enthalpy	polystyrene	enthalpy				
Energy efficiency class for A14, A21	A+	A	A+	A	A+	A	A+	A				



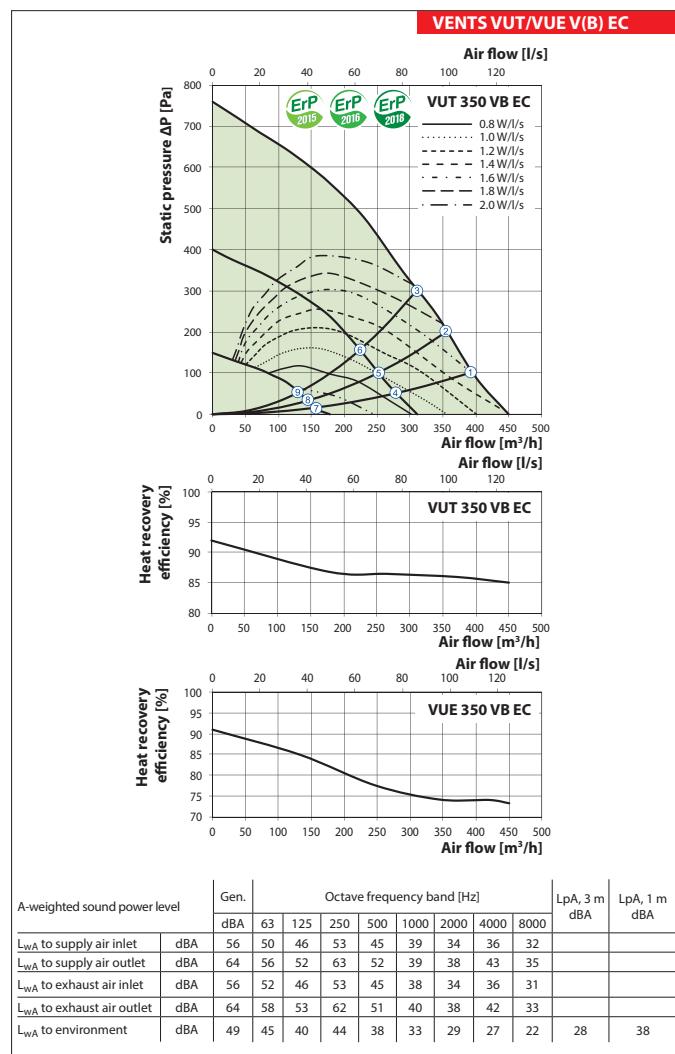
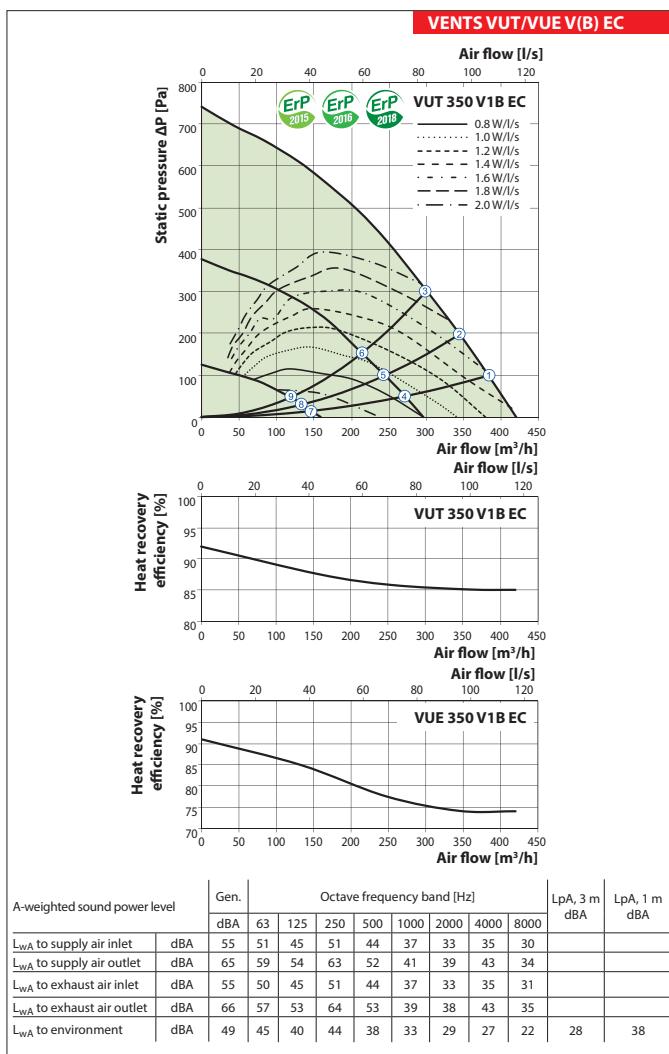
	VUT 200 V EC	VUE 200 V EC	VUT 200 VB EC	VUE 200 VB EC	VUT 250 V EC	VUE 250 V EC	VUT 250 VB EC	VUE 250 VB EC
Unit voltage [V/50 (60) Hz]	1~230						1~230	
Maximum power [W]	112						115	
Maximum current [A]	0.9						0.9	
Maximum air flow [m^3/h]	250						290	
RPM [min^{-1}]	2050						2050	
Sound pressure level at 3 m distance [dBA]	24						25	
Transported air temperature [°C]	from -25 up to +40						from -25 up to +40	
Casing material	painted steel						painted steel	
Insulation	25 mineral wool						30 mineral wool	
Extract filter	G3						G4	
Supply filter	G3						G4, F7	
Connected air duct diameter [mm]	$\varnothing 125$						$\varnothing 160$	
Weight [kg]	45						51	
Heat recovery efficiency [%]	from 83 up to 98	from 74 up to 94	from 83 up to 98	from 74 up to 94	from 85 up to 94	from 78 up to 90	from 85 up to 94	from 78 up to 90
Heat exchanger type	counter-flow							
Heat exchanger material	polystyrene	enthalpy	polystyrene	enthalpy	polystyrene	enthalpy	polystyrene	enthalpy
Energy efficiency class for A14, A21	A+	A	A+	A	A+	A+	A+	A+


 AIR HANDLING UNITS WITH
HEAT RECOVERY

AIR HANDLING UNITS WITH HEAT RECOVERY

Technical data

	VUT 350 V1B EC	VUE 350 V1B EC	VUT 350 VB EC	VUE 350 VB EC
Unit voltage [V/50 (60) Hz]	1~230		1~230	
Maximum power [W]	169		178	
Maximum current [A]	1.3		1.4	
Maximum air flow [m³/h]	420		450	
RPM [min⁻¹]	3200		3200	
Sound pressure level at 3 m distance [dBA]	28		28	
Transported air temperature [°C]	from -25 up to +40		from -25 up to +40	
Casing material	painted steel		painted steel	
Insulation	40 mineral wool		40 mineral wool	
Extract filter	G4		G4	
Supply filter	F7 (optionally G4)		F7 (optionally G4)	
Connected air duct diameter [mm]	Ø160		Ø160	
Weight [kg]	57		64	
Heat recovery efficiency [%]	from 85 up to 92	from 74 up to 91	from 85 up to 92	from 73 up to 91
Heat exchanger type	counter-flow		counter-flow	
Heat exchanger material	polystyrene	enthalpy	polystyrene	enthalpy
Energy efficiency class for A14, A21	A+	A	A+	A

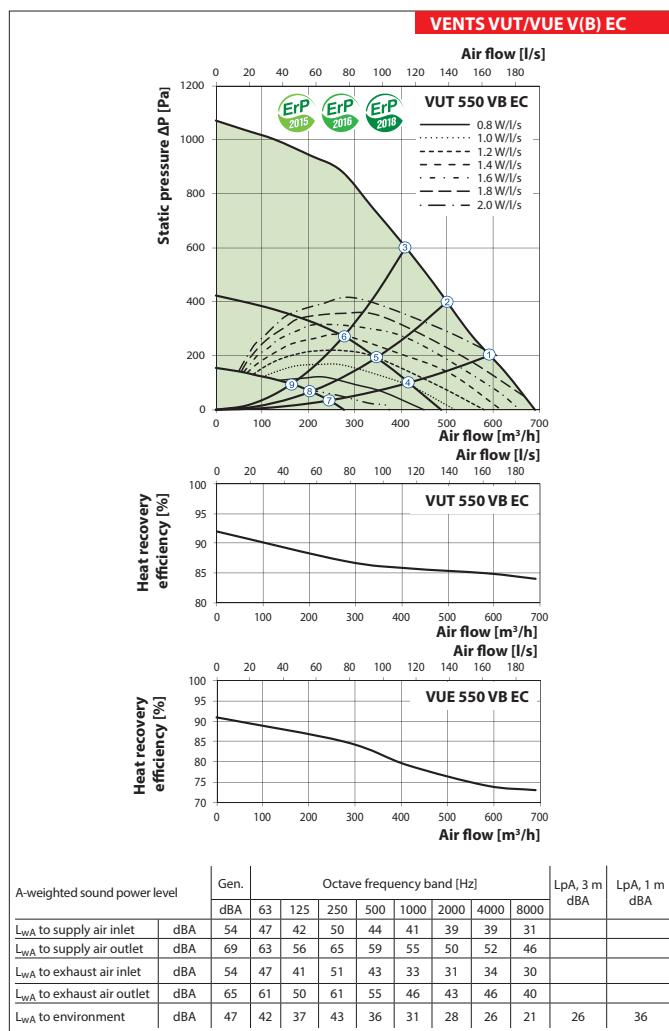


A-weighted sound power level	Gen.	Octave frequency band [Hz]								LpA, 3 m dBA	LpA, 1 m dBA	
	dBA	63	125	250	500	1000	2000	4000	8000			
L _{WA} to supply air inlet	dBA	55	51	45	51	44	37	33	35	30		
L _{WA} to supply air outlet	dBA	65	59	54	63	52	41	39	43	34		
L _{WA} to exhaust air inlet	dBA	55	50	45	51	44	37	33	35	31		
L _{WA} to exhaust air outlet	dBA	66	57	53	64	53	39	38	43	35		
L _{WA} to environment	dBA	49	45	40	44	38	33	29	27	22	28	38

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 air inlet	dBA	56	50	46	53	45	39	34	36	32		
L _{WA} to supply air outlet	dBA	64	56	52	63	52	39	38	43	35		
L _{WA} to exhaust air inlet	dBA	56	52	46	53	45	38	34	36	31		
L _{WA} to exhaust air outlet	dBA	64	58	53	62	51	40	38	42	33		
L _{WA} to environment	dBA	49	45	40	44	38	33	29	27	22	28	38

Technical data

	VUT 550 VB EC	VUE 550 VB EC
Unit voltage [V/50 (60) Hz]	1~230	
Maximum power [W]	337	
Maximum current [A]	2.4	
Maximum air flow [m^3/h]	690	
RPM [min^{-1}]	2860	
Sound pressure level at 3 m distance [dBA]	26	
Transported air temperature [°C]	from -25 up to +40	
Casing material	painted steel	
Insulation	40 mineral wool	
Extract filter	G4	
Supply filter	F7 (optionally G4)	
Connected air duct diameter [mm]	Ø200	
Weight [kg]	82	
Heat recovery efficiency [%]	from 84 up to 92	from 73 up to 91
Heat exchanger type	counter-flow	
Heat exchanger material	polystyrene	enthalpy
Energy efficiency class for A14, A21	A+	A



AIR HANDLING UNITS WITH HEAT RECOVERY

Technical data

VUT 200 V(B) EC				VUT 250 V(VB) EC			
Outlet spigot configuration	Air flow [l/s]	Specific power input [W/l/s]	Heat exchange efficiency [%]	Outlet spigot configuration	Air flow [l/s]	Specific power input [W/l/s]	Heat exchange efficiency [%]
Kitchen + 1 additional room with high level of humidity	21	0.67	87	Kitchen + 1 additional room with high level of humidity	21	0.65	92
Kitchen + 2 additional rooms with high levels of humidity	29	0.69	85	Kitchen + 2 additional rooms with high levels of humidity	29	0.68	91
Kitchen + 3 additional rooms with high levels of humidity	37	0.88	84	Kitchen + 3 additional rooms with high levels of humidity	37	0.77	90
Kitchen + 4 additional rooms with high levels of humidity	45	1.13	83	Kitchen + 4 additional rooms with high levels of humidity	45	0.94	89
Kitchen + 5 additional rooms with high levels of humidity	53	1.37	83	Kitchen + 5 additional rooms with high levels of humidity	53	1.12	88
				Kitchen + 6 additional rooms with high levels of humidity	61	1.35	87
				Kitchen + 7 additional rooms with high levels of humidity	69	1.70	86

VUT 350 VB EC				VUT 550 VB EC			
Outlet spigot configuration	Air flow [l/s]	Specific power input [W/l/s]	Heat exchange efficiency [%]	Outlet spigot configuration	Air flow [l/s]	Specific power input [W/l/s]	Heat exchange efficiency [%]
Kitchen + 1 additional room with high level of humidity	21	0.71	88	Kitchen + 1 additional room with high level of humidity	21	0.71	87
Kitchen + 2 additional rooms with high levels of humidity	29	0.64	88	Kitchen + 2 additional rooms with high levels of humidity	29	0.63	88
Kitchen + 3 additional rooms with high levels of humidity	37	0.68	87	Kitchen + 3 additional rooms with high levels of humidity	37	0.63	88
Kitchen + 4 additional rooms with high levels of humidity	45	0.76	86	Kitchen + 4 additional rooms with high levels of humidity	45	0.72	88
Kitchen + 5 additional rooms with high levels of humidity	53	0.86	86	Kitchen + 5 additional rooms with high levels of humidity	53	0.84	88
Kitchen + 6 additional rooms with high levels of humidity	61	1.07	85	Kitchen + 6 additional rooms with high levels of humidity	61	0.98	87
Kitchen + 7 additional rooms with high levels of humidity	69	1.26	85	Kitchen + 7 additional rooms with high levels of humidity	69	1.16	87

Calculation of air temperature downstream of the heat exchanger:

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

where

t_{outd} – outdoor air temperature [$^{\circ}\text{C}$]

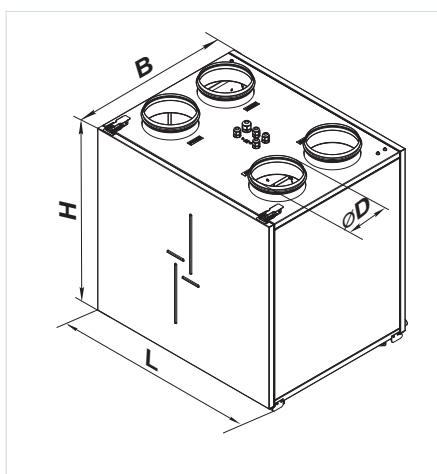
t_{extr} – extract air temperature [$^{\circ}\text{C}$]

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

Point	Power [W]						
	VUT 160 V EC VUT 160 VB EC VUT 160 V1 EC VUT 160 V1B EC VUE 160 V EC VUE 160 VB EC VUE 160 V1 EC VUE 160 V1B EC	VUT 200 V EC VUE 200 V EC VUT 200 VB EC VUE 200 VB EC	VUT 250 V EC VUE 250 V EC VUT 250 VB EC VUE 250 VB EC	VUT 350 V1B EC VUE 350 V1B EC	VUT 350 VB EC VUE 350 VB EC	VUT 550 VB EC VUE 550 VB EC	
1	57	103	106	168	177	337	
2	56	95	95	166	175	337	
3	54	88	82	162	170	337	
4	28	42	44	65	71	118	
5	27	38	40	64	71	113	
6	26	36	36	62	69	107	
7	14	16	16	18	21	34	
8	13	15	15	17	21	66	
9	13	15	15	17	21	32	
Point	Sound pressure level at 3 m distance [dBA]						
	VUT 160 V EC VUT 160 VB EC VUT 160 V1 EC VUT 160 V1B EC VUE 160 V EC VUE 160 VB EC VUE 160 V1 EC VUE 160 V1B EC	VUT 200 V EC VUE 200 V EC VUT 200 VB EC VUE 200 VB EC	VUT 250 V EC VUE 250 V EC VUT 250 VB EC VUE 250 VB EC	VUT 350 V1B EC VUE 350 V1B EC	VUT 350 VB EC VUE 350 VB EC	VUT 550 VB EC VUE 550 VB EC	
1	24 (34)	24 (34)	25 (35)	28 (38)	28 (38)	26 (36)	
2	23 (33)	23 (33)	24 (34)	27 (37)	27 (37)	26 (36)	
3	23 (33)	23 (33)	24 (34)	27 (37)	27 (37)	25 (35)	
4	20 (30)	19 (29)	20 (30)	23 (33)	23 (33)	24 (34)	
5	20 (30)	18 (28)	19 (29)	22 (32)	22 (32)	24 (34)	
6	20 (30)	18 (28)	19 (29)	22 (32)	22 (32)	22 (32)	
7	13 (23)	12 (22)	13 (23)	15 (25)	15 (25)	15 (25)	
8	13 (23)	12 (22)	12 (22)	14 (24)	14 (24)	14 (24)	
9	13 (23)	11 (21)	12 (22)	14 (24)	14 (24)	13 (23)	

Overall dimensions

Model	Dimensions [mm]			
	Ø D	B	H	L
VUT/VUE 160 V EC	125	330	550	600
VUT/VUE 160 V1 EC	125	370	590	640
VUT/VUE 160 VB EC	125	330	580	600
VUT/VUE 160 V1B EC	125	370	620	640
VUT/VUE 200 V EC	125	326	858	564
VUT/VUE 200 VB EC	125	326	858	564
VUT/VUE 250 V EC	160	489	881	567
VUT/VUE 250 VB EC	160	489	881	567
VUT/VUE 350 VB EC	160	583	675	730
VUT/VUE 350 V1B EC	160	470	675	730
VUT/VUE 550 VB EC	200	720	675	823



AIR HANDLING UNITS WITH HEAT RECOVERY

Accessories for air handling units

Model	Panel filter G3	Panel filter G4	Panel filter F7	Control panel LCD	Control panel	Control panel with Wi-Fi	Indoor humidity sensor	CO ₂ sensor with indication	CO ₂ sensor	Humidity sensor
VUT 160 V EC A21										
VUT 160 V EC A14				-	-	-				
VUE 160 V EC A21				A25	A22	A22 Wi-Fi				
VUE 160 V EC A14				-	-	-				
VUT 160 VB EC A21				A25	A22	A22 Wi-Fi				
VUT 160 VB EC A14				-	-	-				
VUE 160 VB EC A21				A25	A22	A22 Wi-Fi				
VUE 160 VB EC A14	-	SF 285x195x10 G4	SF 285x195x10 F7	-	-	-				
VUT 160 V1 EC A21				A25	A22	A22 Wi-Fi				
VUT 160 V1 EC A14				-	-	-				
VUE 160 V1 EC A21				A25	A22	A22 Wi-Fi				
VUE 160 V1 EC A14				-	-	-				
VUT 160 V1B EC A21				A25	A22	A22 Wi-Fi				
VUT 160 V1B EC A14				-	-	-				
VUE 160 V1B EC A21				A25	A22	A22 Wi-Fi				
VUE 160 V1B EC A14				-	-	-				
VUT 200 V EC A14	SF 264x195x18 G3	-	-	-	-	-	HV2	CO2-1	CO2-2	HR-S
VUT 200 VB EC A14										
VUE 200 V EC A14										
VUE 200 VB EC A14										
VUT 250 V EC A14				-	-	-				
VUT 250 VB EC A21		SF 417x200x18 G4	SF 417x184x18 F7	A25	A22	A22 Wi-Fi				
VUT 250 VB EC A14				-	-	-				
VUE 250 V EC A14				-	-	-				
VUE 250 VB EC A21				A25	A22	A22 Wi-Fi				
VUT 350 V1B EC A21		SF 384x196x40 G4	SF 384x196x40 F7	A25	A22	A22 Wi-Fi				
VUT 350 V1B EC A14				-	-	-				
VUE 350 V1B EC A21				A25	A22	A22 Wi-Fi				
VUE 350 V1B EC A14				-	-	-				
VUT 350 VB EC A21				A25	A22	A22 Wi-Fi				
VUT 350 VB EC A14		SF 500x196x40 G4	SF 500x196x40 F7	-	-	-				
VUE 350 VB EC A21				A25	A22	A22 Wi-Fi				
VUE 350 VB EC A14				-	-	-				
VUT 550 VB EC A21		SF 630x198x40 G4	SF 630x198x40 F7	A25	A22	A22 Wi-Fi				
VUT 550 VB EC A14				-	-	-				
VUE 550 VB EC A21				A25	A22	A22 Wi-Fi				
VUE 550 VB EC A14				-	-	-				

Model	VOC sensor (0-10V)	CO ₂ sensor (0-10V)	Humidity sensor (0-10 V)	Kitchen hood	Electric heater for preheating	Electric reheat	Hydraulic U-trap	Air damper	Electric actuator	Summer block
										
VUT 160 V EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	SH-32			
VUT 160 V EC A14	-	-	-		-	-				
VUE 160 V EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	-			VL C6 366/285
VUE 160 V EC A14	-	-	-		-	-				
VUT 160 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	SH-32			
VUT 160 VB EC A14	-	-	-		-	-				
VUE 160 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	-			
VUE 160 VB EC A14	-	-	-		-	-				
VUT 160 V1 EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	SH-32			KRV 125
VUT 160 V1 EC A14	-	-	-		-	-				
VUE 160 V1 EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	-			VL C6 366/285
VUE 160 V1 EC A14	-	-	-		-	-				
VUT 160 V1B EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	SH-32			
VUT 160 V1B EC A14	-	-	-		-	-				
VUE 160 V1B EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-125	NKD-125	-			
VUE 160 V1B EC A14	-	-	-		-	-				
VUT 200 V EC A14							SH-32			VL C6 366/240
VUT 200 VB EC A14										-
VUE 200 V EC A14										VL C6 366/240
VUE 200 VB EC A14										-
VUT 250 V EC A14	-	-	-				SH-32			VL C6 366/384
VUT 250 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKP-160	SH-32			
VUT 250 VB EC A14	-	-	-		-	-				
VUE 250 V EC A14	-	-	-		-	-				VL C6 366/384
VUE 250 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKP-160	-			
VUT 350 V1B EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKD-160	SH-32			
VUT 350 V1B EC A14	-	-	-		-	-				
VUE 350 V1B EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKD-160	-			KRV 160
VUE 350 V1B EC A14	-	-	-		-	-				
VUT 350 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKD-160	SH-32			
VUT 350 VB EC A14	-	-	-		-	-				
VUE 350 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-160	NKD-160	-			
VUE 350 VB EC A14	-	-	-		-	-				
VUT 550 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-200	NKD-200	SH-32			
VUT 550 VB EC A14	-	-	-		-	-				
VUE 550 VB EC A21	DPWQ30600	DPWQ40200	DPWC11200		NKP-200	NKD-200	-			KRV 200
VUE 550 VB EC A14	-	-	-		-	-				

VENTS
VUT/VUE
VB ECAIR HANDLING UNITS WITH
HEAT RECOVERY

AIR HANDLING UNITS WITH HEAT RECOVERY

Application options

