

HYBRID



**Air handling unit
with heat recovery**

2

HYBRID

CENTRALISED VENTILATION UNIT FOR SMALL APARTMENTS



160 m³/h



95 %



33 dB(A)



FEATURES

Efficient centralised ventilation unit for small apartments.

Can be installed vertically on the wall, or suspended under the ceiling.

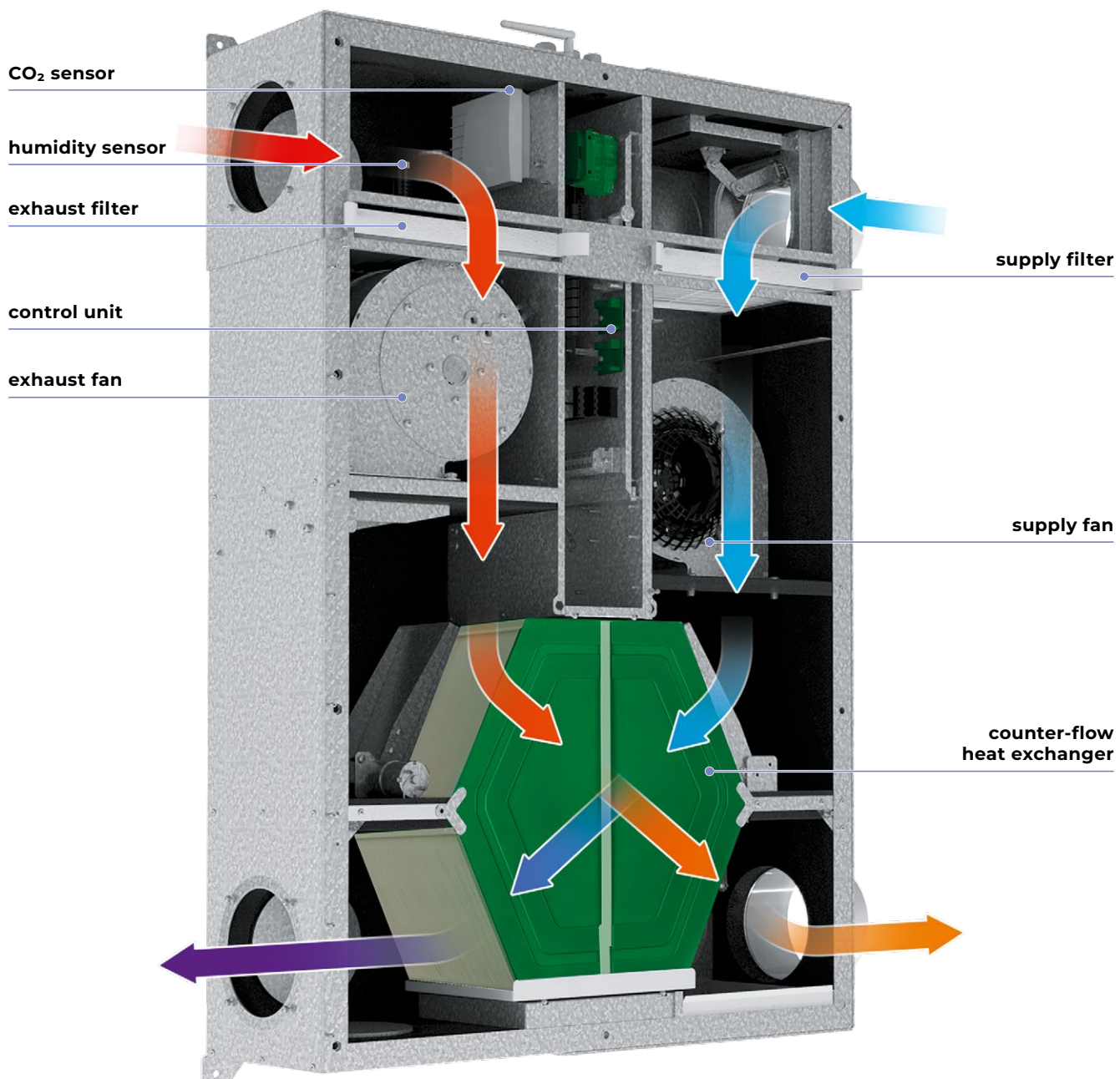
Concealed installation is possible due to optional revision door.

Clean air due to the use of an ePM1 70% / F7 filter for supply air filtration.

Low noise operation from 13 dB(A) at 3 m.

Simple installation due to variable location of the spigots.

Design

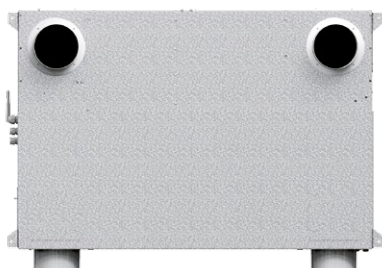
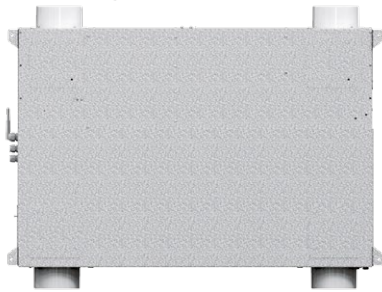


Casing

The casing is made of galvanized sheet metal. The unit is heat- and sound-insulated with a 20 mm layer of foam. The service panel is easy to open for filter maintenance. The unit is equipped with four $\varnothing 125$ mm spigots. The position of the spigots can be changed to simplify duct installation.

USP

Flanges can be installed in three different directions providing wide range of installation options.



Fans

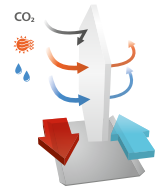
The units feature high-performance, electronically commutated (EC), external rotor motors with forward curved blades. These state-of-the-art units offer excellent energy efficiency. In addition to that, EC motors combine high performance and optimum control over the entire speed range. EC motors have an excellent power efficiency (up to 90 %).

Heat recovery

The **Hybrid** unit is equipped with a plate counter-flow polystyrene heat exchanger for heat recovery. The unit condensate is collected and drained to the drain pan under the heat exchanger.



The **Hybrid E** unit is equipped with an enthalpy plate counter-flow heat exchanger for energy (heat and humidity) recovery.



The air flows are completely separated in the heat exchanger. Thus smells and contaminants are not transferred from the extract air to the supply air.

Heat recovery is based on heat and/or humidity transfer through the heat exchanger plates. In the cold season supply air is heated in the heat exchanger by transferring the heat energy of warm and humid extract air to the cold fresh air. Heat recovery minimizes ventilation heat losses and heating costs respectively.

In the warm season the heat exchanger performs reverse and intake air is cooled in the heat exchanger by the cool extract air. That reduces operation load on air conditioners and saves electricity.

Control and automation

The **Hybrid S21** units are equipped with an integrated automation system. The remote control panel is not included in the delivery set (sold separately).

The S21 controller allows integrating the unit into the Smart Home system or **BMS (Building Management System)**.

Unit control via Wi-Fi using the mobile application Blauberg AHU.



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Home app
for Android







Download
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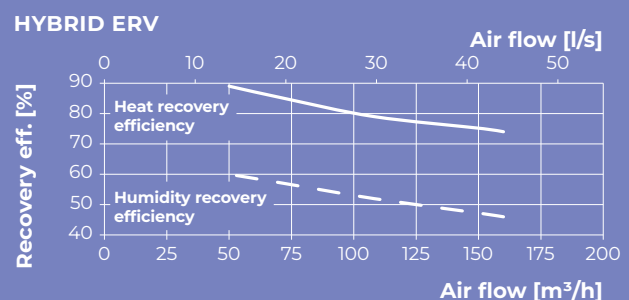
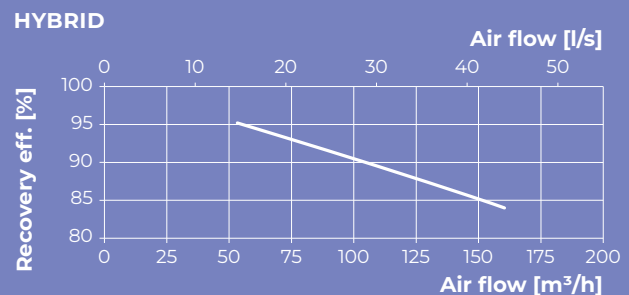
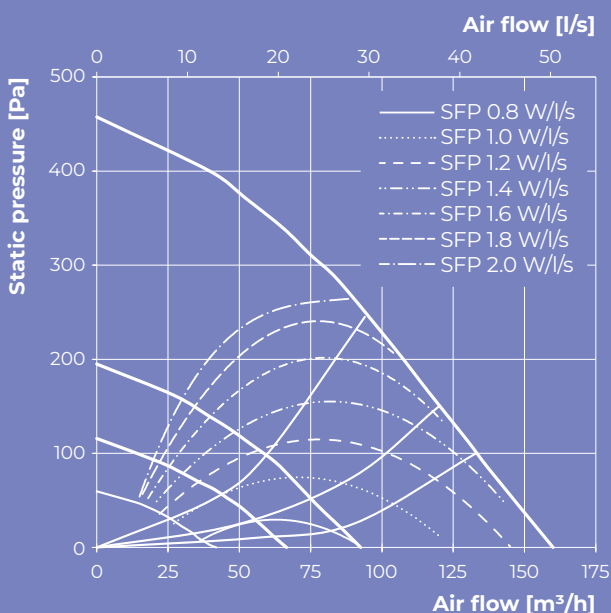
The **Hybrid S14** units are equipped with an integrated automation system and the S14 wall mounted sensor control panel with LED-indication.

Automation functions

Functions	Hybrid S21	Hybrid S14
Unit control via Wi-Fi using a mobile application	+	-
Unit control via a wired remote control panel	 S22 control panel (option)	 S14 control panel
Unit control via a wireless remote control panel	 S22 Wi-Fi control panel (option)	-
Unit control via a remote wired LCD control panel	 S25 control panel (option)	-
BMS (Building Management System)	RS-485	-
	Wi-Fi	-
	Ethernet	-
	MODBUS (RTU, TCP)	-
Speed selection	+	+
Filter replacement indication	by filter timer	by filter timer
Alarm indication	full alarm description in the mobile application	-
Week-scheduled operation	+	-
Bypass	automatic	manual
	manual	-
Timer	+	-
Boost mode	+	-
Fireplace mode	+	-
Freeze protection	through cyclic stops of the supply fan	through cyclic stops of the supply fan
	through preheating (option)	-
Reheater connection	option	-
Cooler connection	option	-
Minimum supply air temperature control	option	-
Humidity control	option	option
CO₂ control	option	option
VOC control	option	option
PM2.5 control	option	option
Fire alarm sensor connection	option	-

Technical data

Model	Hybrid			Hybrid ERV		
Voltage [V / 50/60 Hz]	1~ 230			1~ 230		
Max. unit power without electric heater [W]	58			58		
Max. unit current without electric heater [A]	0.5			0.5		
Max air flow [m ³ /h]	160			160		
RPM [min ⁻¹]	2800			2800		
Speed [m ³ /h]	60	90	160	60	90	160
Sound pressure level LpA to environment at 1 m [dBA]	23	34	42	23	34	42
Sound pressure level LpA to environment at 3 m [dBA]	13	26	33	13	26	33
Operating temperature [°C]	-25...+40			-25...+40		
Case material	Aluzinc			Aluzinc		
Insulation [mm]	20			20		
Extract filter	Coarse 90% / G4			Coarse 90% / G4		
Supply filter	ePM1 70% / F7 (G4 option)			ePM1 70% / F7 (G4 option)		
Connected air duct diameter [mm]	125			125		
Weight [kg]	31			31		
Heat recovery efficiency [%]	84-95			74-89		
Humidity recovery efficiency [%]	-			47-60		
Heat exchanger type	Counter-flow			Counter-flow		
Heat exchanger material	Polystyrene			Enthalpic membrane		
SEC class	A+			A		



Sound power level

Sound power level, A-weighted	Total	Octave frequency bands [Hz]									LpA 3 m	LpA 1 m
		200	250	315	400	500	630	800	1000	1250		
LWA to environment at 160 m ³ /h (0 Pa)	53	38	36	40	45	50	42	43	41	38	33	42
LWA to environment at 90 m ³ /h (0 Pa)	45	26	32	38	37	37	35	34	34	31	26	34
LWA to environment at 60 m ³ /h (0 Pa)	34	22	22	22	25	25	23	22	21	18	13	23
LWA to supply air outlet at 160 m ³ /h (0 Pa)	48	32	32	38	36	40	30	43	39	30	27	37
LWA to supply air outlet at 90 m ³ /h (0 Pa)	41	26	28	34	29	29	23	35	32	22	20	30
LWA to supply air outlet at 60 m ³ /h (0 Pa)	32	20	19	21	18	18	13	24	21	14	12	21
LWA to exhaust air inlet at 160 m ³ /h (0 Pa)	50	27	24	40	42	46	30	26	29	33	29	39
LWA to exhaust air inlet at 90 m ³ /h (0 Pa)	47	37	23	44	34	37	27	23	27	29	26	36
LWA to exhaust air inlet at 60 m ³ /h (0 Pa)	34	23	14	24	24	26	19	15	16	17	14	23

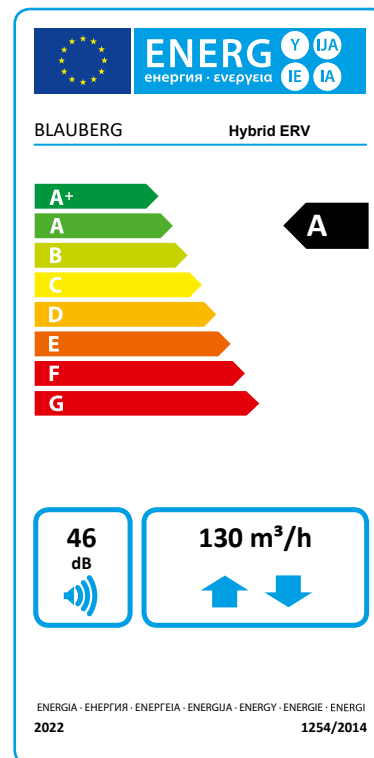
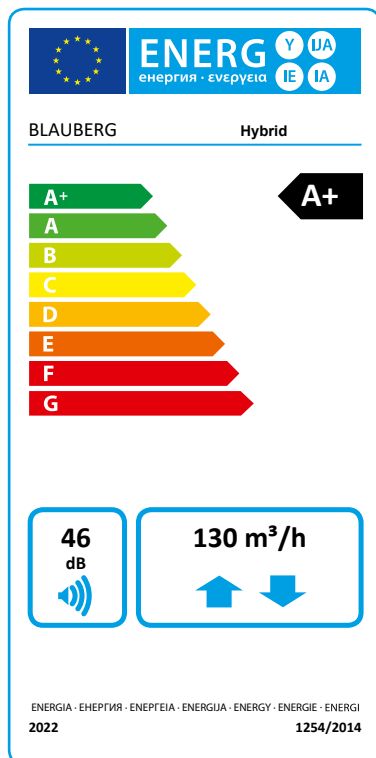
Sound power level, A-weighted	Total	Octave frequency bands [Hz]									LpA 3 m	LpA 1 m
		1600	2000	2500	3150	4000	5000	6300	8000	10000		
LWA to environment at 160 m ³ /h (0 Pa)	53	37	35	33	31	27	23	21	24	25	33	42
LWA to environment at 90 m ³ /h (0 Pa)	45	30	28	26	24	21	19	20	23	25	26	34
LWA to environment at 60 m ³ /h (0 Pa)	34	18	17	16	15	15	16	16	20	21	13	23
LWA to supply air outlet at 160 m ³ /h (0 Pa)	48	34	32	30	28	22	19	19	23	24	27	37
LWA to supply air outlet at 90 m ³ /h (0 Pa)	41	26	23	23	22	18	18	19	23	24	20	30
LWA to supply air outlet at 60 m ³ /h (0 Pa)	32	17	16	17	17	17	18	19	23	24	12	21
LWA to exhaust air inlet at 160 m ³ /h (0 Pa)	50	38	36	38	34	29	26	28	25	24	29	39
LWA to exhaust air inlet at 90 m ³ /h (0 Pa)	47	33	31	33	30	25	24	21	24	24	26	36
LWA to exhaust air inlet at 60 m ³ /h (0 Pa)	34	22	20	24	18	17	18	19	23	24	14	23



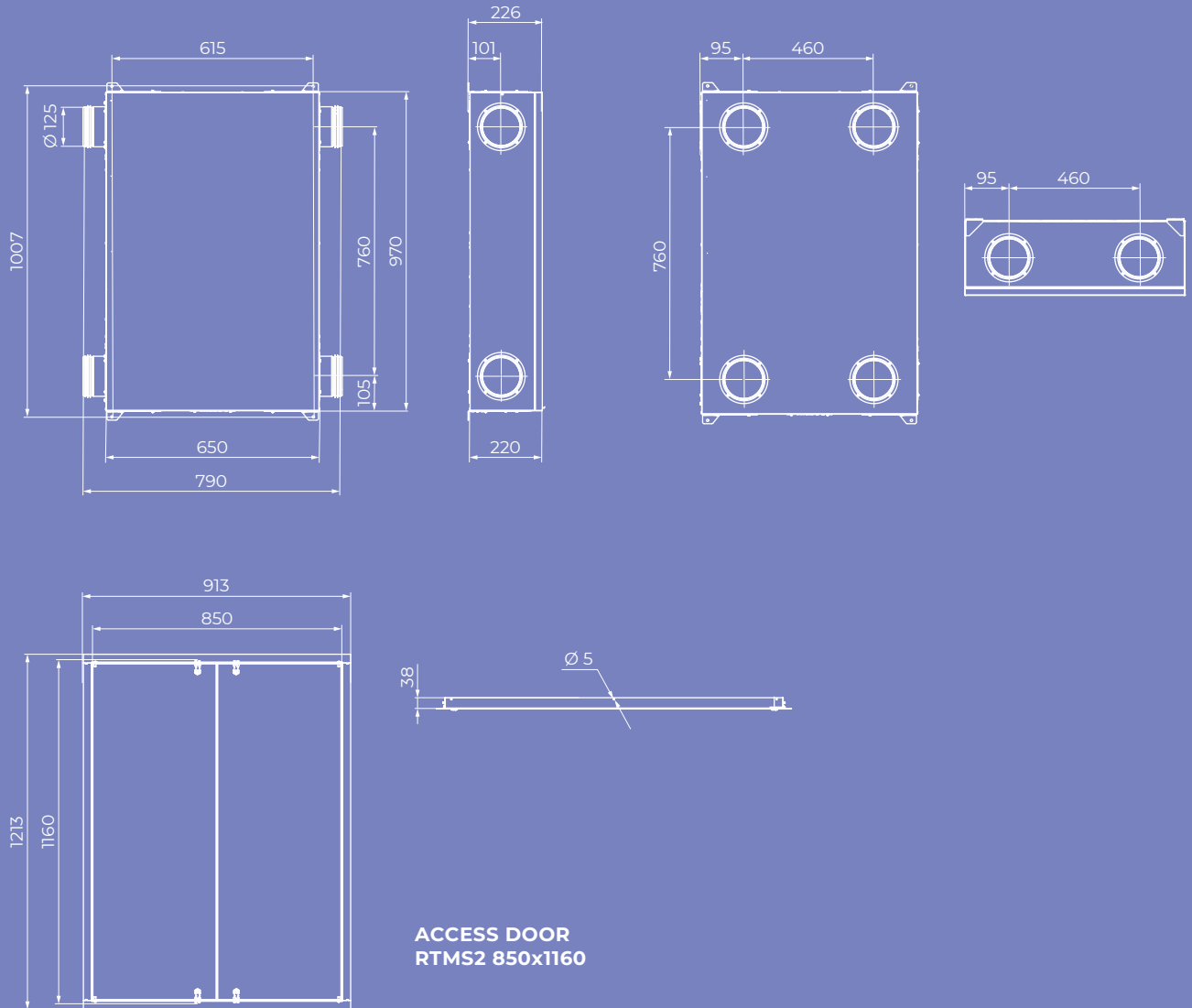
Energy labeling

Supplier model identifier and options installed	Hybrid	Hybrid ERV
Reference climate	Cold/Average/Warm	Cold/Average/Warm
SEC in [kWh/(m ² a)] for each type of climate	-82.6/-42.9/-17.5	-79.4/-41.3/-16.8
SEC Class	A+	A
Declared typology	BVU	
Type of drive installed	Variable speed	
Type of heat recovery	Recuperative	
Thermal efficiency*	91	91
Maximum flow rate in [m ³ /h]	130	130
Maximum electric power in [W]	55	55
Sound power level (LWA) in [dB(A)]	46	46
Reference flow rate [m ³ /s]	0.025	0.025
Reference pressure difference in [Pa]	50	50
SPI in [W/m ³ /h]	0.286	0.286
Control factor and typology	Local demand control	
Internet address	http://www.ventilation-system.com/	

*Efficiency according EN13141-7:2010 at reference flow rate

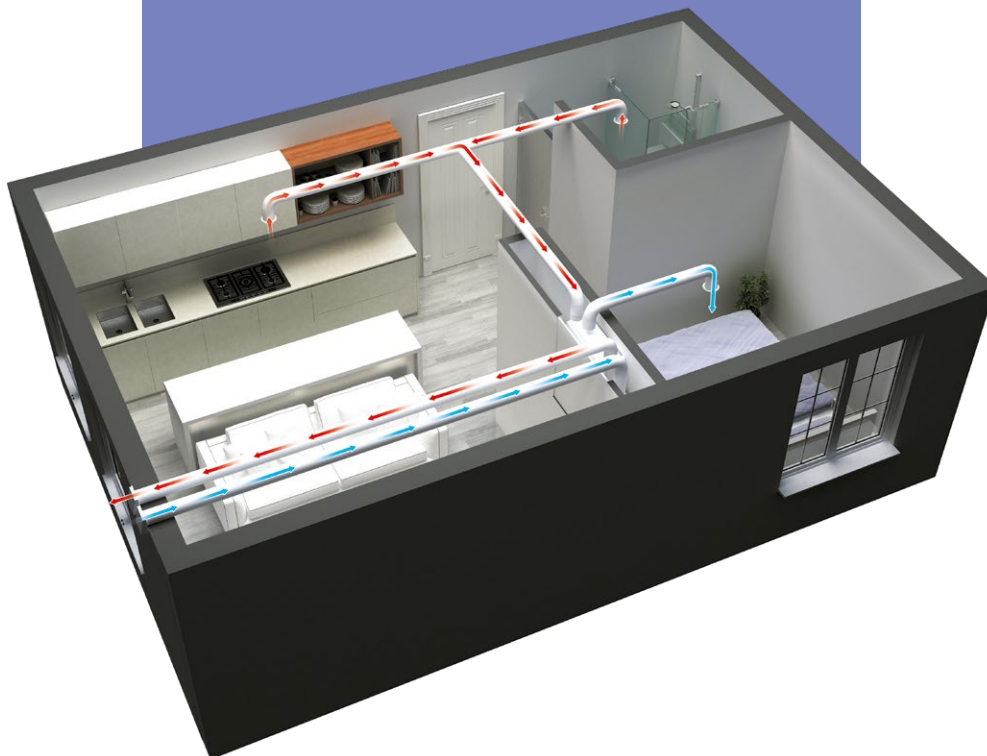


Overall dimensions [mm]

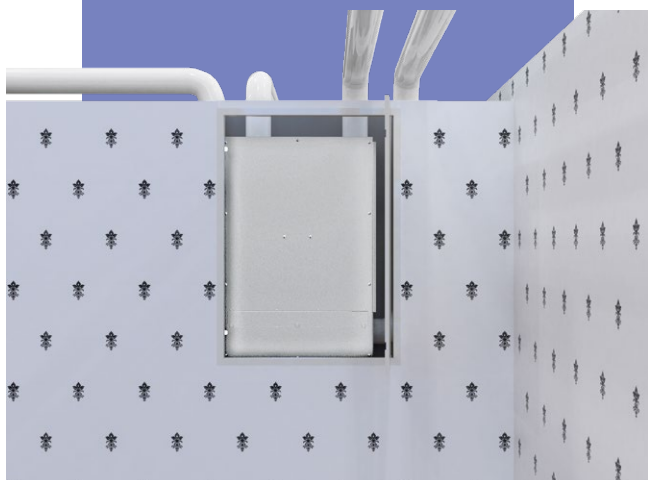


Mounting

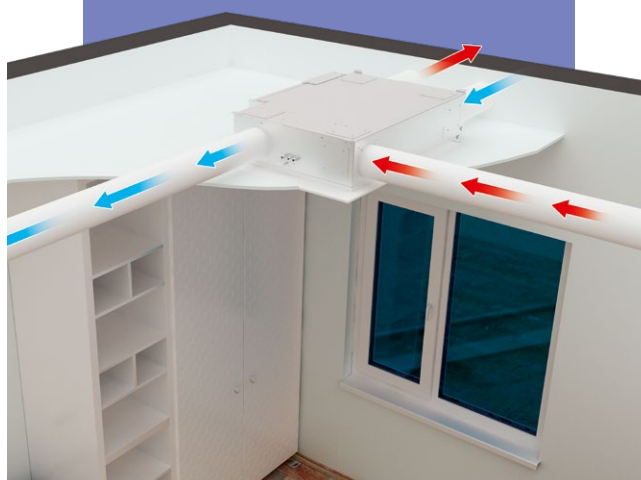
For concealed mounting



Wall flush mounting



Ceiling flush mounting



Accessories

		Hybrid R S14 Hybrid L S14	Hybrid R ERV S14 Hybrid L ERV S14	Hybrid R S21 Hybrid L S21	Hybrid R ERV S21 Hybrid L ERV S21
G4 panel filter		FP 233x175x22 G4	FP 233x175x22 G4	FP 233x175x22 G4	FP 233x175x22 G4
F7 panel filter		FP 233x175x22 F7	FP 233x175x22 F7	FP 233x175x22 F7	FP 233x175x22 F7
Control panel		-	-	S22	S22
Wireless control panel		-	-	S22 Wi-Fi	S22 Wi-Fi
LCD control panel		-	-	S25	S25
Humidity sensor		FS2	FS2	FS2	FS2
Humidity sensor		HR-S	HR-S	HR-S	HR-S
Humidity sensor		-	-	DPWC11200	DPWC11200
CO₂ sensor with indication		CD-1	CD-1	CD-1	CD-1
CO₂ sensor		CD-2	CD-2	CD-2	CD-2
CO₂ sensor		CD-3	CD-3	CD-3	CD-3
CO₂ sensor		-	-	DPWQ40200	DPWQ40200
VOC sensor		-	-	DPWQ30600	DPWQ30600
Electric reheater		ENH S21 V.2	ENH S21 V.2	ENH S21 V.2	ENH S21 V.2
Outer grille		VDA 125 CFn AI	VDA 125 CFn AI	VDA 125 CFn AI	VDA 125 CFn AI
Access doors		RTMS2 850x1160	RTMS2 850x1160	RTMS2 850x1160	RTMS2 850x1160



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2|2023

