

KOMFORT EC S5(B)270(-E)

Heat and energy recovery air handling units

Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- Heat recovery minimizes ventilation heat losses during cold season and reduces air conditioner load during hot season.
- Controllable air exchange provides the best indoor microclimate.
- Compatible with round Ø 125 mm air ducts.



Air flow:
up to 300 m³/h
83 l/s



Heat recovery efficiency:
up to 98 %



Design

- The casing is made of expanded polypropylene (EPP) plates, 15–26 mm thick, possessing high heat- and sound-insulating properties.
- The unit is equipped with service panels for convenient maintenance of filters and heat exchanger.
- The spigots are located at the top of the unit and are rubber sealed for airtight connection to the air ducts.

Fans

- High-efficient external rotor EC motors and centrifugal impellers with backward curved blades are used for air supply and exhaust.
- EC motors have the best power consumption to air flow ratio and meet the latest demands concerning energy saving and high-efficient ventilation.
- EC motors are featured with high performance, low noise level and totally controllable speed range.
- Dynamically balanced impellers.

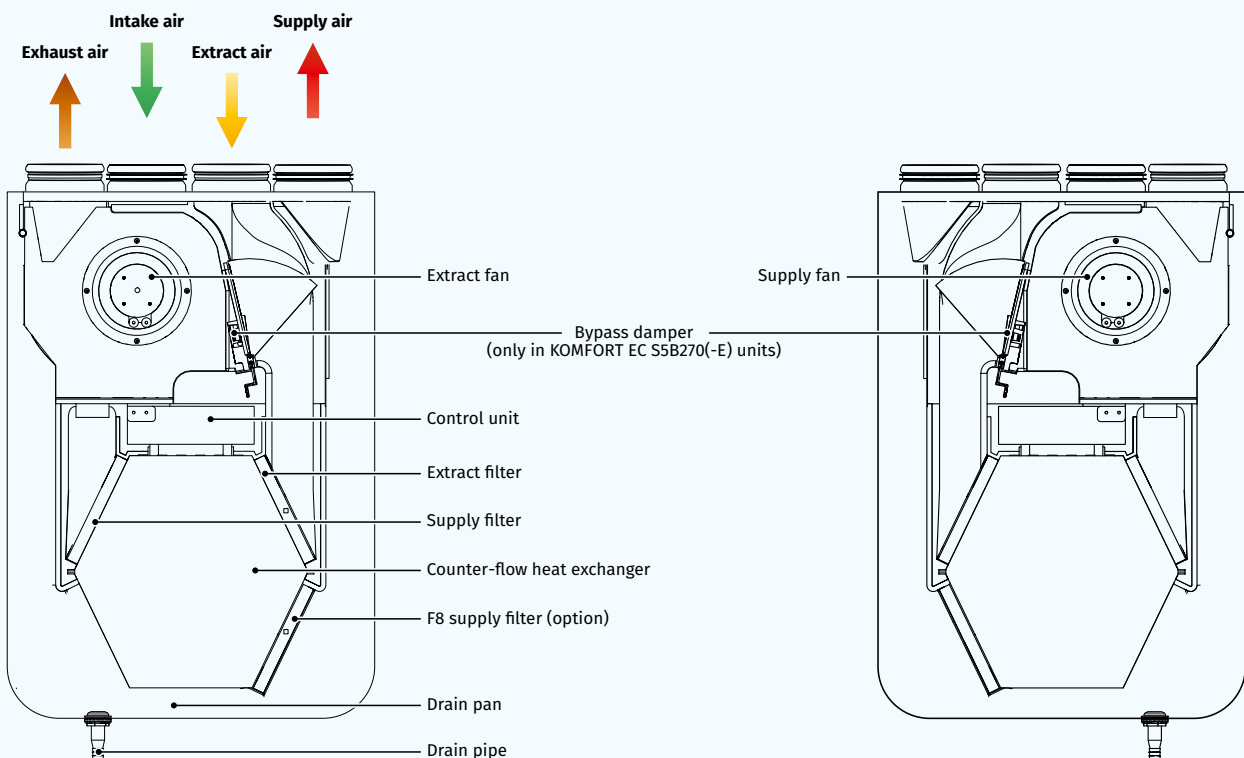
Air filtration

- The built-in G4 supply filter and G4 extract filter provide air filtration.
- The F8 supply filter (specially ordered accessory) may be used for efficient supply air filtration.

Bypass

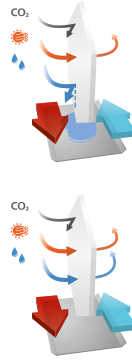
- The **KOMFORT EC S5B270(-E)** models are equipped with a bypass which can be opened to cool down the ventilated area with cool intake air, if required.

EPP HEAT AND ENERGY RECOVERY AIR HANDLING UNITS



Heat recovery

- The **KOMFORT EC S5(B)270** unit is equipped with a plate counter-flow polystyrene heat exchanger for heat recovery. In the unit condensate is collected and drained to the drain pan under the heat exchanger.
- The **KOMFORT EC S5(B)270-E** unit is equipped with an enthalpy plate counter-flow heat exchanger for energy (heat and humidity) recovery. Due to humidity recovery condensate is not generated in the enthalpy heat exchanger.



Mounting

- The ventilation units are designed for wall and floor mounting.
- Due to universal casing design both left and right mounting is possible.

Control and automation

- The **KOMFORT EC S5B270(-E) S21** units are equipped with a built-in 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 Systems)**.
- Unit control via Wi-Fi using the mobile application **Blauberg AHU**.



Download the **Blauberg AHU** app for Android








Download the **Blauberg AHU** app for iOS



- The **KOMFORT EC S5B270 (-E) S14** units are equipped with an integrated automation system and the S14 wall mounted sensor control panel with LED-indication.
- The **KOMFORT EC S5 270 (-E) S2** units are equipped with the CDT E/0-10 speed controller.

Automation functions

Functions	KOMFORT EC S5B270(-E) S21	KOMFORT EC S5B270(-E) S14	KOMFORT EC S5 270(-E) S2
Unit control via Wi-Fi using the mobile application	+	-	-
Unit control via remote control panel	S22 control panel (option) 	S14 control panel 	CDT E/0-10 speed controller 
Unit control via remote wireless control panel	S22 WiFi control panel (option) 	-	-
Unit control via a wired remote LCD control panel	S25 control panel (option) 	-	-
BMS (Building Management Systems)	RS-485	-	-
	Wi-Fi	-	-
	Ethernet	-	-
	MODBUS (RTU, TCP)	-	-
Blauberg Cloud Server service	+	-	-
Speed switch	+	+	+
Filter replacement indication	according to filter timer	according to filter timer	-
Alarm indication	full description of the alarm in the mobile application	LED indication about alarms	-
Week scheduled operation	+	-	-
Bypass	automatic	-	-
	manual	manual	-
Timer	+	-	-
Boost mode	+	-	-
Fireplace mode	+	-	-
Freeze protection	using cyclical stops of the supply fan	using cyclical stops of the supply fan	using cyclical stops of the supply fan
	using preheating (option)	-	-
Reheater connection	option	-	-
Cooler connection	option	-	-
Minimum supply air temperature control	+	-	-
Humidity control	option	option	-
CO ₂ control	option	option	-
VOC control	option	-	-
PM2.5 control	option	-	-
Fire alarm sensor connection	option	option	-

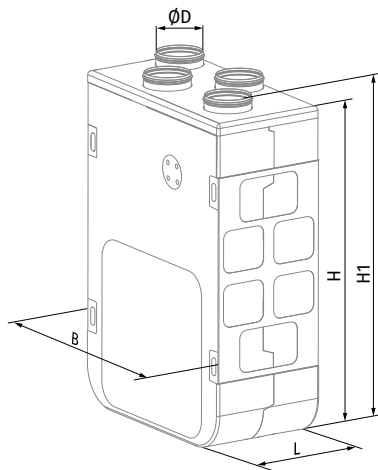
option: the functionality is available when purchasing the appropriate accessory (see the "Accessories" section)

Designation key

Series	Motor type	Spigot orientation	Casing modification	Bypass	Nominal air flow [m³/h]	Heat exchanger type	Control
KOMFORT	EC: electronically commutated motor	S: vertical spigot orientation	5: EPP	_ : without a bypass B: integrated bypass	270	_ : heat recovery -E: energy recovery	S21 S14 S2

Overall dimensions [mm]

Model	Ø D	B	H	H1	L
KOMFORT EC S5(B)270(-E) S21/S14/S2	125	590	852	893	316



Technical data

Parameters	KOMFORT EC S5B270 S21 KOMFORT EC S5B270 S14 KOMFORT EC S5 270 S2	KOMFORT EC S5B270-E S14 KOMFORT EC S5B270-E S21 KOMFORT EC S5 270-E S2
Voltage [V / 50 (60) Hz]	1 ~ 230	1 ~ 230
Power [W]	162	162
Current [A]	1.2	1.2
Maximum air flow [m³/h (l/s)]	300 (83)	300 (83)
RPM [min⁻¹]	3200	3200
Sound pressure level at 3 m [dBA]	34	34
Transported air temperature [°C]	-25...+40	-25...+40
Casing material	EPP	EPP
Insulation	15–26 mm EPP	15–26 mm EPP
Extract filter	G4	G4
Supply filter	G4 (Option: F8)	G4 (Option: F8)
Connected air duct diameter [mm]	125	125
Weight [kg]	13	13.5
Heat recovery efficiency [%]	87–98	72–94
Heat exchanger type	counter-flow	counter-flow
Heat exchanger material	polystyrene	enthalpy
SEC class for S21 and S14 automation	A+	A
SEC class for S2 automation	B	B
ErP	2016, 2018	2016, 2018

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

Data provided for point 1 of the air flow diagram

Point	Unit power [W]	Sound pressure level at 3 m (1 m) [dBA]
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)

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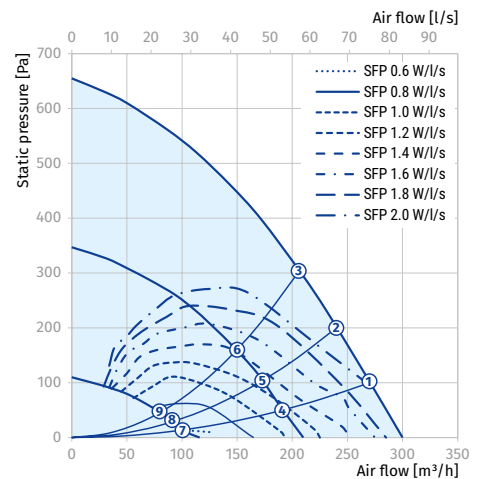
Exhaust spigot configuration	Air flow rate [l/s]	Specific fan power [W/l/s]	Heat exchange efficiency [%]
Kitchen + 1 additional wet room	21	0.73	85
Kitchen + 2 additional wet rooms	29	0.86	84
Kitchen + 3 additional wet rooms	37	1.08	82
Kitchen + 4 additional wet rooms	45	1.39	81

Calculation of air temperature downstream of the heat exchanger:

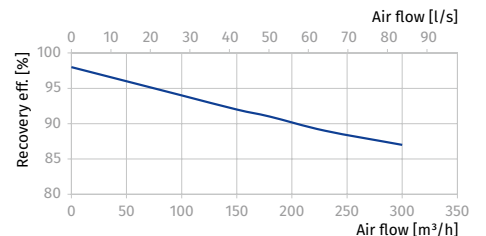
$$t = t_{\text{outd}} + k_{\text{hr}} \times (t_{\text{extr}} - t_{\text{outd}}) / 100,$$

where

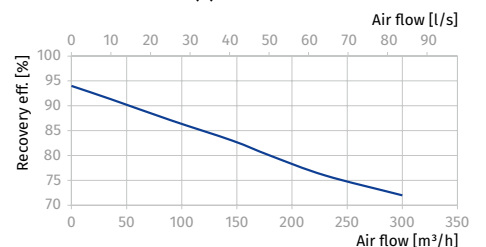
- t_{outd} – outdoor air temperature [°C]
- t_{extr} – extract air temperature [°C]
- k_{hr} – heat exchanger efficiency (according to the diagram) [%]




















KOMFORT EC S5(B)270






KOMFORT EC S5(B)270-E



Accessories

		KOMFORT EC S5B270(-E) S21	KOMFORT EC S5B270(-E) S14
G4 panel filter		FP 264x182x18 G4	FP 264x182x18 G4
F8 panel filter		FP 264x182x18 F8	FP 264x182x18 F8
Control panel		S22	-
Wi-Fi control panel		S22 Wi-Fi	-
LCD control panel		S25	-
Internal humidity sensor		FS2	FS2
Humidity sensor		HR-S	HR-S
CO ₂ sensor		CD-2	CD-2
CO ₂ sensor with indication		CD-1	CD-1
VOC sensor		DPWQ30600	-
CO ₂ sensor		DPWQ40200	-
Humidity sensor		DPWC11200	-
Electric preheater		EVH 125	-
Electric reheater		ENH 125	-
Syphon kit (for the units without an enthalpy heat exchanger)		SFK 20x32	SFK 20x32
Air damper		VKA 125	VKA 125
Electric actuator		LF230	LF230

KOMFORT EC S5 270(-E) S2		
G4 panel filter		FP 264x182x18 G4
F8 panel filter		FP 264x182x18 F8
Syphon kit (for the units without an enthalpy heat exchanger)		SFK 20x32