

KOMFORT Roto EC S(E)

Air handling units with rotary heat exchanger

Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- Heat recovery is provided by the rotary heat exchanger and minimizes ventilation heat losses.
- Controllable air exchange for creating the best suitable indoor microclimate.
- Compatible with round Ø 125, 160 and 200 mm air ducts.
- Additional spigot for kitchen hood air duct connection.



Air flow:
up to 670 m³/h
186 l/s



Heat recovery efficiency:
up to 92 %



Design

- The fan casing is made of polymer coated steel and is heat- and sound-insulated with mineral wool.
- The spigots are located at the top of the unit and are rubber sealed for airtight connection to the air ducts.
- The insulation of **KOMFORT Roto EC S2(E) 200** is 20 mm, for **KOMFORT Roto EC S(E)280, 400** and **600** is 40 mm.
- **KOMFORT Roto EC S(2):** model without electric heater.
- **KOMFORT Roto EC S(2)E:** model with electric heater.

Fans

- High-efficient external rotor EC motors and centrifugal impellers 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.

Kitchen hood

- All units are equipped with a 5th spigot for connection to the kitchen hood air duct.
- The distinctive feature of **KOMFORT Roto EC S2(E)200** is the possibility to connect the kitchen hood DAH 251-13 (ordered separately) directly to the unit.

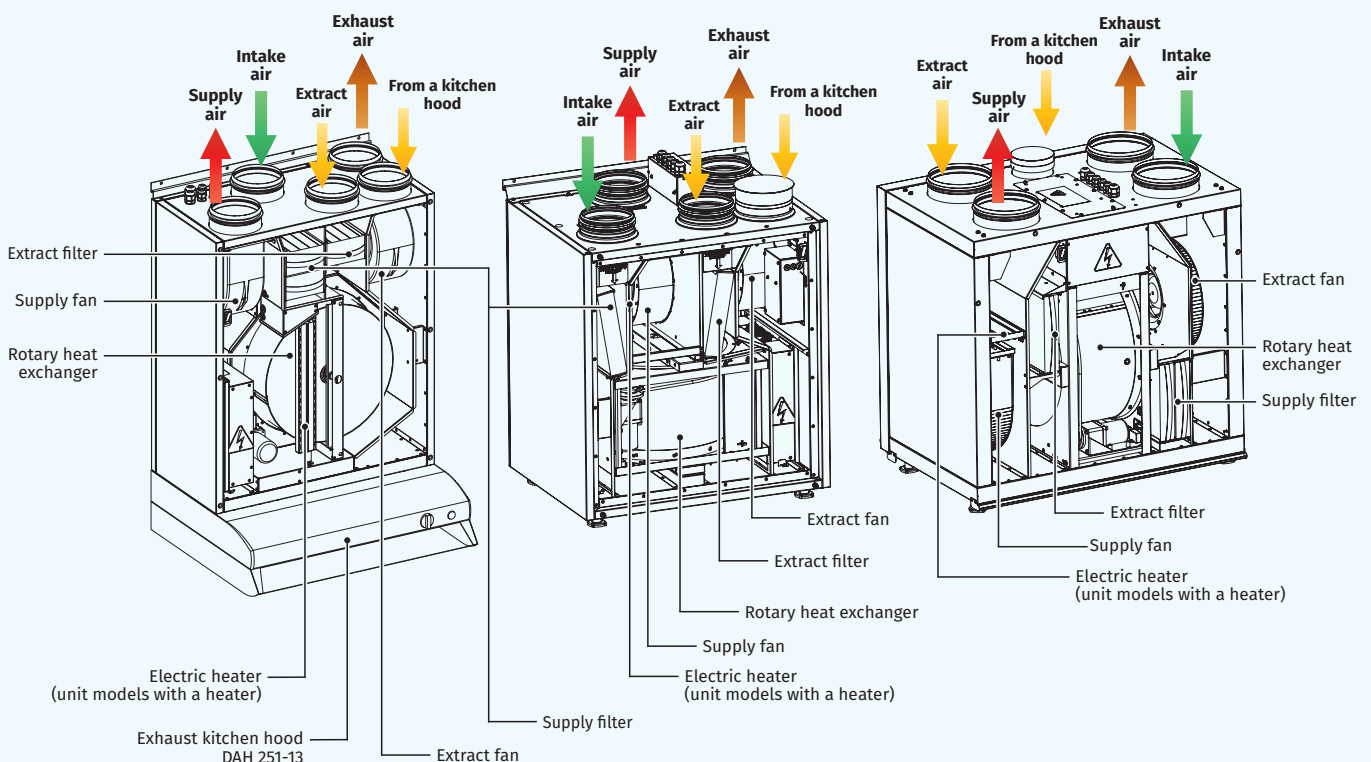


HEAT RECOVERY AIR HANDLING UNITS

KOMFORT ROTO EC S2(E)200

KOMFORT ROTO EC S2(E)280

KOMFORT ROTO EC S(E)400
KOMFORT ROTO EC S(E)600

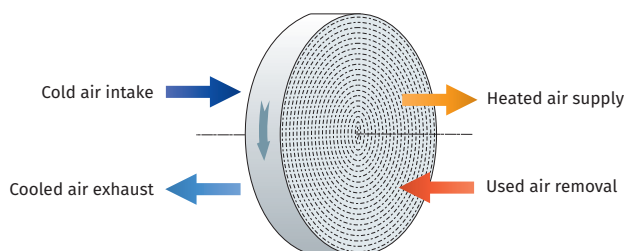


Air filtration

- Two built-in G4 and F7 filters provide efficient supply air filtration. The unit **KOMFORT ROTO EC S2(E)280** features F7 filter.
- The G4 filter is used for extract air filtration.

Heat recovery

- The unit has a high-efficient rotary aluminium heat exchanger.
- The rotary regenerator is a short, rotating cylinder, filled with corrugated aluminium sheet layers. The air streams flow through them.
- The band layers of the heat regenerator first come in contact with the supply and then with extract air flows.
- Therefore the band is alternatively warmed up and cooled down and the extract air heat and humidity are transferred to the cold intake air. This way heat recovery reduces heat losses in the cold season and reduces operation load for air conditioner in the warm season.
- The advantages of the rotary regenerator as compared to the plate heat exchangers include no condensate generation, maintaining comfort air humidity and high freeze resistance.








Rotor heat exchanger operating logic

Heater

- The **KOMFORT Roto EC S(2)E** units are equipped with the electric heater. If the necessary temperature level of the supply air cannot be achieved through heat recovery, the heater turns on automatically and heats the air supplied to the premise. The heaters incorporate protective measures securing the safe unit operation.

Automation functions

Functions	KOMFORT ROTO EC S(2)(E) S21	KOMFORT ROTO EC S(2)(E) S17	KOMFORT ROTO EC S(2)(E) S18
Control via Wi-Fi using a mobile application	+	-	-
Control via a wired remote control panel	S22 panel (option) 	S17 panel 	18 panel 
Control via a wireless remote control panel	S22 Wi-Fi panel (option) 	-	-
Control via a wired remote LCD control panel	S25 panel (option) 	-	-
Speed selection	+	+	+
Filter replacement indication	according to filter timer	according to filter timer	according to filter timer
Alarm indication	full alarm description in the mobile application	full alarm description in the mobile application	full alarm description in the mobile application
Week-scheduled operation	+	+	+
Timers	+	-	-
Boost mode	+	-	-
Kamin mode	+	-	-
Cooler connection	option	option	option
Kitchen hood connection	option	option	option
Minimum supply air temperature control	+	-	-
Humidity control	option	option	option
CO ₂ controller	option	option	option
VOC controller	option	option	option
Fire alarm sensor connection	option	option	option

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

Mounting

- The units can be fixed to the wall or mounted on the floor.
- During mounting stage the front and the back panels can be reversed providing either left-handed or right-handed unit mounting.

Control and automation

- KOMFORT Roto EC S... S21** units are equipped with a build-in automation system. The remote control panel is not included in the delivery set (purchased separately).
- The unit can be controlled via the Blauberg AHU mobile application via Wi-Fi.



Download the **Blauberg AHU** app for Android



Download the **Blauberg AHU** app for iOS

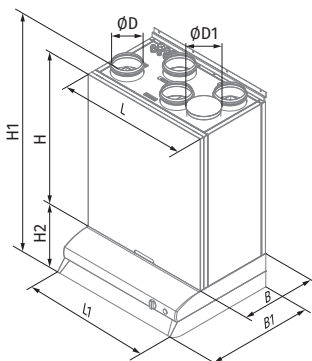
- The **KOMFORT Roto EC S2(E) S17** units are equipped with the thTune control panel with an LCD display.
- The **KOMFORT Roto EC S2(E) S18** units are equipped with the pGD1 control panel with an LCD display.

Designation key

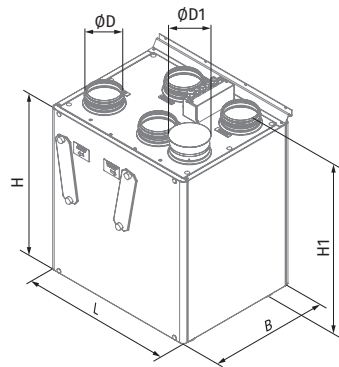
Serie	Unit type	Motor type	Spigot modification	Insulation	Heater type	Nominal air flow [m³/h]	Control
KOMFORT	Roto: rotary heat exchanger	EC: electronically commutated motor	S: vertical spigot orientation	_: 40 mm	_: no heater	200; 280; 400; 600	S17
				2: 20 mm	E: electric heater		S18
							S21

Overall dimensions [mm]

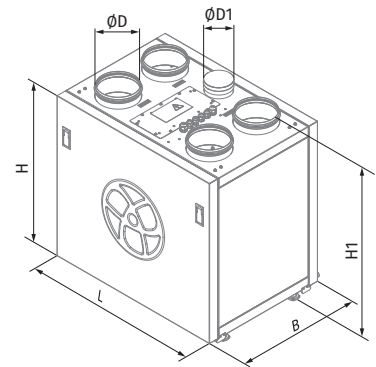
Model	D	D1	B	B1	H	H1	H2	L	L1
KOMFORT Roto EC S2(E)200 S17/S18/S21	125	125	347	510	700	901	135	598	600
KOMFORT Roto EC S2(E)280 S17/S18/S21	125	125	482	-	630	754	-	598	-
KOMFORT Roto EC S(E)400 S17/S18/S21	160	100	528	-	675	755	-	740	-
KOMFORT Roto EC S(E)600 S17/S18/S21	200	125	628	-	772	852	-	819	-



KOMFORT ROTO EC S2(E)200 + DAH 251-13



KOMFORT ROTO EC S2(E)280



KOMFORT ROTO EC S(E)400
KOMFORT ROTO EC S(E)600

Technical data

Parameters	KOMFORT Roto EC S2 200 S17 KOMFORT Roto EC S2 200 S18 KOMFORT Roto EC S2 200 S21	KOMFORT Roto EC S2E200 S17 KOMFORT Roto EC S2E200 S18 KOMFORT Roto EC S2E200 S21
Voltage [V / 50 (60) Hz]	1~230	1~230
Max. unit power without electric heater [W]	118	118
Max. power of electric heater [W]	-	700
Max. unit power [W]	118	818
Max. unit current without electric heater [A]	1.0	1.0
Max. unit current of electric heater [A]	-	3.0
Max. unit current [A]	1.0	4.0
Maximum air flow [m³/h (l/s)]	270 (75)	270 (75)
RPM [min⁻¹]	1800	1800
Sound pressure level at 3 m distance [dBA]	28	28
Operating temperature [°C]	-25...+40	-25...+40
Casing material	painted steel	painted steel
Insulation	20 mm mineral wool	20 mm mineral wool
Extract filter	G4	G4
Supply filter	G4+F7	G4+F7
Connected air duct diameter [mm]	125	125
Weight [kg]	47	48
Heat recovery efficiency [%] *	75-92	75-92
Heat exchanger type	rotary	rotary
Heat exchanger material	aluminum	aluminum
SEC class	A	A
ErP	2016, 2018	2016, 2018

* Heat recovery efficiency is specified in compliance with EN 13141-7.

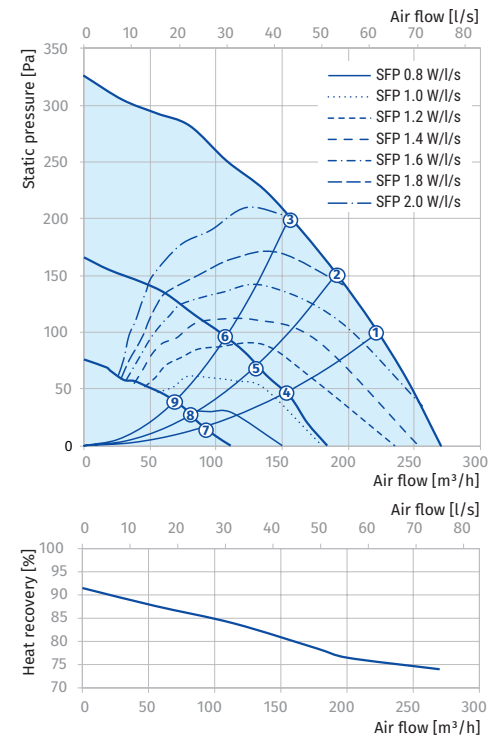
KOMFORT ROTO EC S2(E)200

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		
L _{WA} to supply inlet [dBA]	54	48	42	51	44	41	40	39	31		
L _{WA} to supply outlet [dBA]	69	34	45	54	61	64	64	59	54		
L _{WA} to exhaust inlet [dBA]	54	48	41	52	43	33	32	34	30		
L _{WA} to exhaust outlet [dBA]	61	32	40	51	57	53	55	53	47		
L _{WA} to environment [dBA]	49	25	41	43	43	39	38	35	24	28	38

Data provided for point 1 of the air flow diagram

Total power. Total sound pressure level.

Point	Total power of the unit [W]	Sound pressure level at 3 m (1 m) [dBA]
1	103	28 (38)
2	98	27 (37)
3	85	26 (36)
4	43	21 (31)
5	40	21 (31)
6	37	20 (30)
7	18	19 (29)
8	17	19 (29)
9	16	17 (27)



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) [%]

Parameters	KOMFORT Roto EC S280 S17 KOMFORT Roto EC S280 S18 KOMFORT Roto EC S280 S21	KOMFORT Roto EC SE280 S17 KOMFORT Roto EC SE280 S18 KOMFORT Roto EC SE280 S21
Voltage [V / 50 (60) Hz]	1~230	1~230
Max. unit power without electric heater [W]	195	195
Max. power of electric heater [W]	-	650
Max. unit power [W]	195	845
Max. unit current without electric heater [A]	1.9	1.9
Max. unit current of electric heater [A]	-	2.8
Max. unit current [A]	1.9	4.7
Maximum air flow [m³/h (l/s)]	300 (83)	300 (83)
RPM [min⁻¹]	2050	2050
Sound pressure level at 3 m distance [dBA]	26	26
Operating temperature [°C]	-25...+40	-25...+40
Casing material	painted steel	painted steel
Insulation	40 mm mineral wool	40 mm mineral wool
Extract filter	G4	G4
Supply filter	F7	F7
Connected air duct diameter [mm]	125	125
Weight [kg]	63	64
Heat recovery efficiency [%] *	81-90	81-90
Heat exchanger type	rotary	rotary
Heat exchanger material	aluminum	aluminum
SEC class	A	A
ErP	2016, 2018	2016, 2018

* Heat recovery efficiency is specified in compliance with EN 13141-7.

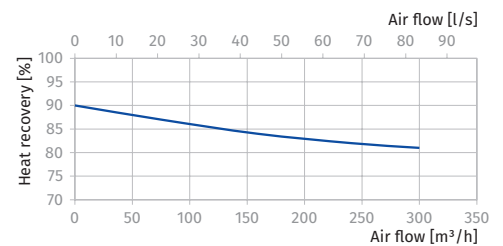
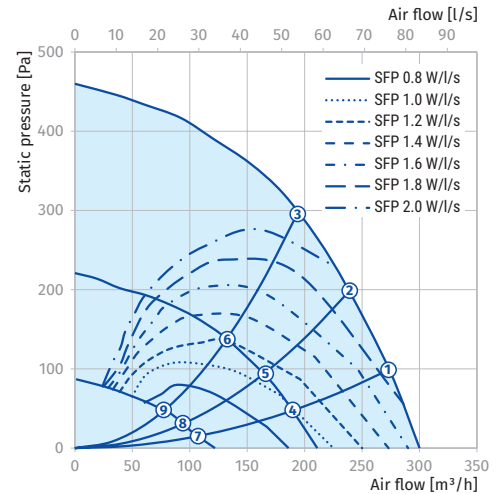
KOMFORT ROTO EC S(E)280

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]	54	47	42	50	44	41	39	39	31		
LWA to supply outlet [dBA]	69	63	56	65	59	55	50	52	46		
LWA to exhaust inlet [dBA]	54	47	41	51	43	33	31	34	30		
LWA to exhaust outlet [dBA]	65	61	50	61	55	46	43	46	40		
LWA to environment [dBA]	47	42	37	43	36	31	28	26	21	26	36

Data provided for point 1 of the air flow diagram

Total power. Total sound pressure level.

Point	Total power of the unit [W]	Sound pressure level at 3 m (1 m) [dBA]
1	154	26 (36)
2	132	26 (36)
3	110	25 (35)
4	55	24 (34)
5	47	24 (34)
6	38	22 (32)
7	19	15 (25)
8	18	14 (24)
9	17	13 (23)



Parameters	KOMFORT Roto EC S400 S17 KOMFORT Roto EC S400 S18 KOMFORT Roto EC S400 S21	KOMFORT Roto EC SE400 S17 KOMFORT Roto EC SE400 S18 KOMFORT Roto EC SE400 S21
Voltage [V / 50 (60) Hz]	1~230	1~230
Max. unit power without electric heater [W]	200	200
Max. power of electric heater [W]	-	1400
Max. unit power [W]	200	1600
Max. unit current without electric heater [A]	1.4	1.4
Max. unit current of electric heater [A]	-	6.1
Max. unit current [A]	1.4	7.5
Maximum air flow [m ³ /h (l/s)]	440 (122)	440 (122)
RPM [min ⁻¹]	3280	3280
Sound pressure level at 3 m distance [dBA]	33	33
Operating temperature [°C]	-25...+40	-25...+40
Casing material	polymer coated steel	polymer coated steel
Insulation	40 mm mineral wool	40 mm mineral wool
Extract filter	G4	G4
Supply filter	G4+F7	G4+F7
Connected air duct diameter [mm]	160	160
Weight [kg]	81	82
Heat recovery efficiency [%] *	76-85	76-85
Heat exchanger type	rotary	rotary
Heat exchanger material	aluminum	aluminum
SEC class	A	A
ErP	2016, 2018	2016, 2018

* Heat recovery efficiency is specified in compliance with EN 13141-7.

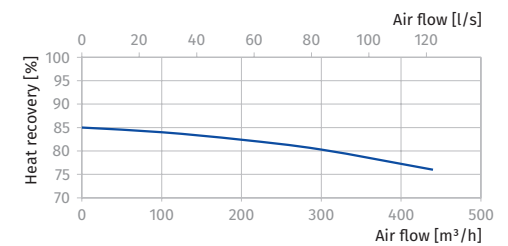
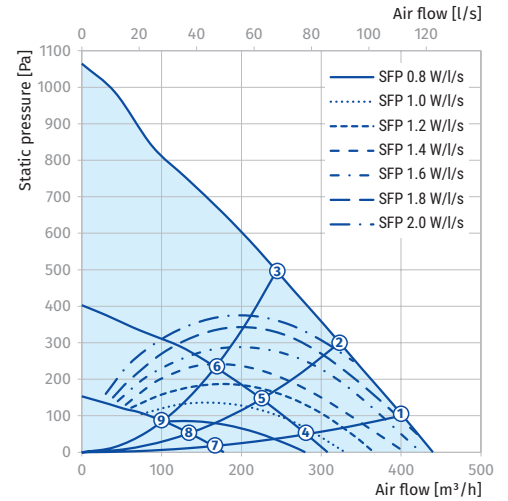
KOMFORT ROTO EC S(E)400

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		
L _{WA} to supply inlet [dBA]	59	27	46	54	55	53	48	44	35		
L _{WA} to supply outlet [dBA]	60	27	46	54	55	53	49	44	35		
L _{WA} to exhaust inlet [dBA]	55	25	41	50	51	44	42	39	30		
L _{WA} to exhaust outlet [dBA]	55	26	41	51	51	44	42	39	31		
L _{WA} to environment [dBA]	54	18	36	47	49	48	43	37	33	33	43

Data provided for point 1 of the air flow diagram

Total power. Total sound pressure level.

Point	Total power of the unit [W]	Sound pressure level at 3 m (1 m) [dBA]
1	170	33 (43)
2	170	33 (43)
3	170	32 (42)
4	68	31 (41)
5	65	28 (38)
6	59	27 (37)
7	26	23 (33)
8	25	21 (31)
9	25	19 (29)



Parameters	KOMFORT Roto EC S600 S17 KOMFORT Roto EC S600 S18 KOMFORT Roto EC S600 S21	KOMFORT Roto EC SE600 S17 KOMFORT Roto EC SE600 S18 KOMFORT Roto EC SE600 S21
Voltage [V / 50 (60) Hz]	1~230	1~230
Max. unit power without electric heater [W]	405	405
Max. power of electric heater [W]	-	2800
Max. unit power [W]	405	3205
Max. unit current without electric heater [A]	2.6	2.6
Max. unit current of electric heater [A]	-	12.2
Max. unit current [A]	2.6	14.8
Maximum air flow [m³/h (l/s)]	670 (186)	670 (186)
RPM [min⁻¹]	3230	3230
Sound pressure level at 3 m distance [dBA]	35	35
Operating temperature [°C]	-25...+40	-25...+40
Casing material	polymer coated steel	polymer coated steel
Insulation	40 mm mineral wool	40 mm mineral wool
Extract filter	G4	G4
Supply filter	G4+F7	G4+F7
Connected air duct diameter [mm]	200	200
Weight [kg]	90	92
Heat recovery efficiency [%] *	81-89	81-89
Heat exchanger type	rotary	rotary
Heat exchanger material	aluminum	aluminum
SEC class	A	A
ErP	2016, 2018	2016, 2018

* Heat recovery efficiency is specified in compliance with EN 13141-7.

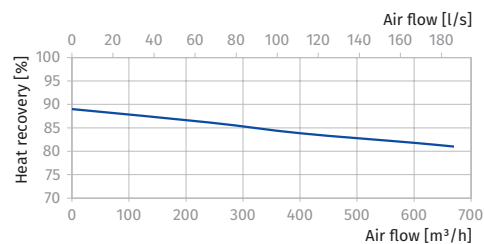
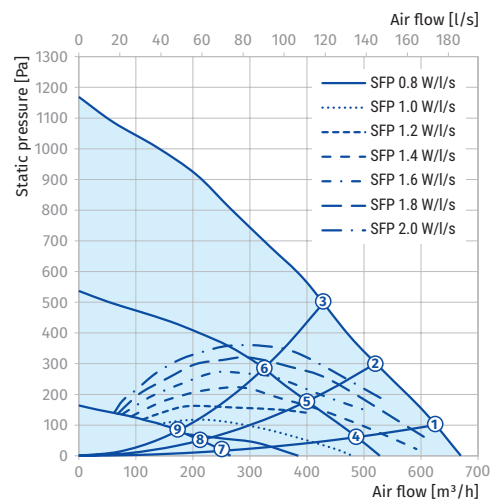
KOMFORT ROTO EC S(E)600

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		
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]	82	64	67	71	81	77	79	75	67		
L _{WA} to exhaust outlet [dBA]	70	51	64	62	68	60	60	50	42		
L _{WA} to environment [dBA]	56	39	47	46	54	46	46	44	40	35	45







Data provided for point 1 of the air flow diagram

Total power. Total sound pressure level.

Point	Total power of the unit [W]	Sound pressure level at 3 m (1 m) [dBA]
1	375	35 (45)
2	375	35 (45)
3	375	34 (44)
4	163	30 (40)
5	155	29 (39)
6	151	28 (38)
7	43	27 (37)
8	42	23 (33)
9	39	23 (33)



Accessories

		KOMFORT Roto EC S2(E)200 S17 KOMFORT Roto EC S2(E)200 S18	KOMFORT Roto EC S2(E)200 S21	KOMFORT Roto EC S2(E)280 S17 KOMFORT Roto EC S2(E)280 S18	KOMFORT Roto EC S2(E)280 S21
G4 panel filter		FP 284x103x60 G4	FP 284x103x60 G4	FP 400x196x40 G4	FP 400x196x40 G4
F7 panel filter		FP 284x103x60 F7	FP 284x103x60 F7	FP 400x196x40 F7	FP 400x196x40 F7
Control panel		-	S22	-	S22
Wi-Fi control panel		-	S22 Wi-Fi	-	S22 Wi-Fi
LCD Control panel		-	S25	-	S25
VOC sensor		DPWQ30600	DPWQ30600	DPWQ30600	DPWQ30600
External CO ₂ sensor		DPWQ40200	DPWQ40200	DPWQ40200	DPWQ40200
Humidity sensor		DPWC11200	DPWC11200	DPWC11200	DPWC11200
Humidity sensor		HR-S	HR-S	HR-S	HR-S
Internal humidity sensor		FS2	FS2	FS2	FS2
Kitchen hood		DAH 251-13	DAH 251-13	DAH 251-13	DAH 251-13
Silencer		SD 125	SD 125	SD 125	SD 125
Silencer		SDF 125	SDF 125	SDF 125	SDF 125
Backdraft air damper		VRV 125	VRV 125	VRV 125	VRV 125
Air damper		VKA 125	VKA 125	VKA 125	VKA 125
Electric actuator		LF230	LF230	LF230	LF230
Electric actuator		TF230	TF230	TF230	TF230

		KOMFORT Roto EC S(E)400 S17 KOMFORT Roto EC S(E)400 S18	KOMFORT Roto EC S(E)400 S21	KOMFORT Roto EC S(E)600 S17 KOMFORT Roto EC S(E)600 S18	KOMFORT Roto EC S(E)600 S21
G4 panel filter		FP 436x196x40 G4	FP 436x196x40 G4	FP 536x220x40 G4	FP 536x220x40 G4
F7 panel filter		FP 436x196x40 F7	FP 436x196x40 F7	FP 536x220x40 F7	FP 536x220x40 F7
Control panel		-	S22	-	S22
Wi-Fi control panel		-	S22 Wi-Fi	-	S22 Wi-Fi
LCD Control panel		-	S25	-	S25
VOC sensor		DPWQ30600	DPWQ30600	DPWQ30600	DPWQ30600
External CO ₂ sensor		DPWQ40200	DPWQ40200	DPWQ40200	DPWQ40200
Humidity sensor		DPWC11200	DPWC11200	DPWC11200	DPWC11200
Humidity sensor		HR-S	HR-S	HR-S	HR-S
Internal humidity sensor		FS2	FS2	FS2	FS2
Kitchen hood		DAH 251-13	DAH 251-13	DAH 251-13	DAH 251-13
Silencer		SD 160	SD 160	SD 200	SD 200
Silencer		SDF 160	SDF 160	SDF 200	SDF 200
Backdraft air damper		VRV 160	VRV 160	VRV 200	VRV 200
Air damper		VKA 160	VKA 160	VKA 200	VKA 200
Electric actuator		LF230	LF230	LF230	LF230
Electric actuator		TF230	TF230	TF230	TF230