KOMFORT S5 230

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 ∅ 125 mm air ducts.

Air flow:
up to 230 m³/h
64 l/s

Heat recovery efficiency:
up to 98 %

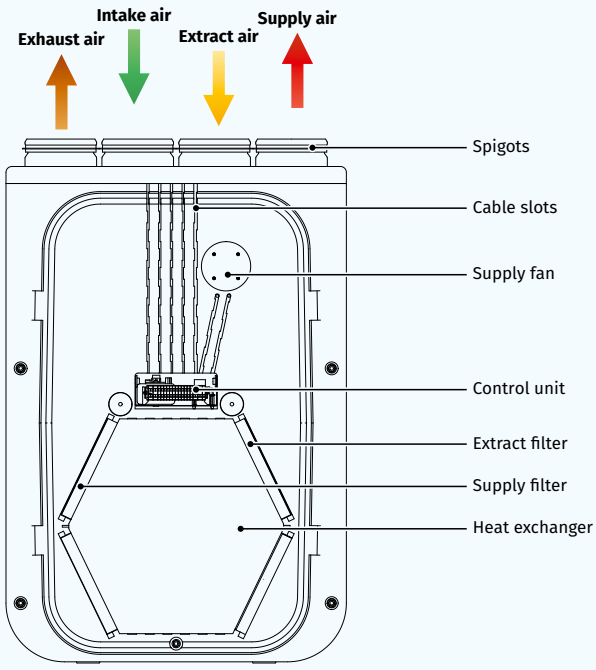
ErP 2016

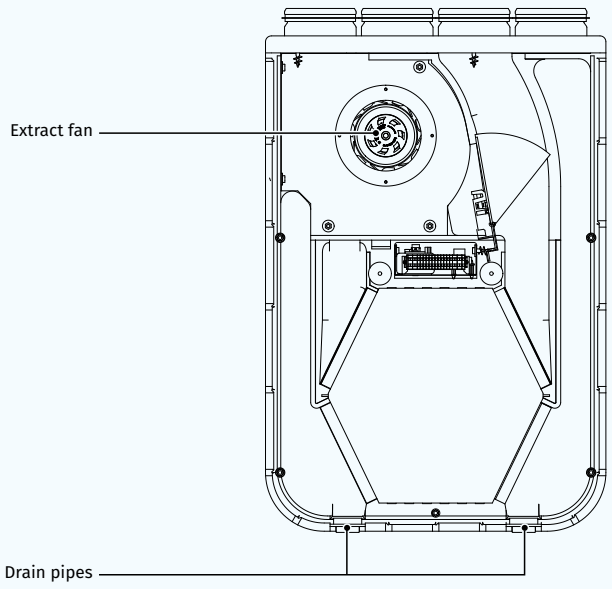
Design

- The casing is made of expanded polypropylene (EPP) plates, 15–30 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

- Single-phase three-speed external rotor motors with centrifugal impellers and forward curved blades.
- Integrated motor overheating protection with automatic restart.





Heat recovery

- The **KOMFORT S5 230** 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 **KOMFORT S5 230-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.

- 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.

FREEZE PROTECTION

- The freeze protection of the heat exchanger is activated by shutdown on the supply fan as follows: in case of freezing danger communicated by the temperature sensor the supply fan turns off for the time required for defrosting of the heat exchanger with the warm extract air flow. After freezing danger is no longer imminent, the unit reverts to the standard operation mode.

Air filtration

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

Control and automation

- The units have integrated control system based on the mechanical three-speed speed switch CDP-3/5 **(KOMFORT S5 230 S3)** or sensor three-speed speed switch SGR-3/1 **(KOMFORT S5 230 S4)** and power cable with mains plug.
- The control unit is integrated in the unit casing.
- The power and ground cables are connected to the control unit via the cable glands on the side of the unit.

Mounting

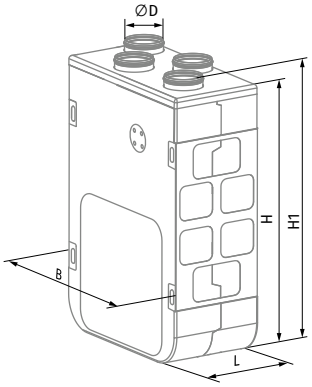
- The units are designed for wall and floor mounting.
- The universal casing design provides left- and right-sided mounting.

Designation key

Series	Spigot modification	Casing modification	Rated air flow [m³/h]	Heat exchanger type	Control
KOMFORT	**S:** vertically directed spigots	**5:** expanded polypropylene	**230**	**_:** heat recovery **–E:** energy recovery	**S3:** mechanical speed switch CDP-3/5 **S4:** sensor speed switch SGR-3/1

Overall dimensions [mm]

Model	D	B	H	H1	L
KOMFORT S5 230(-E) S3/S4	125	590	852	893	316

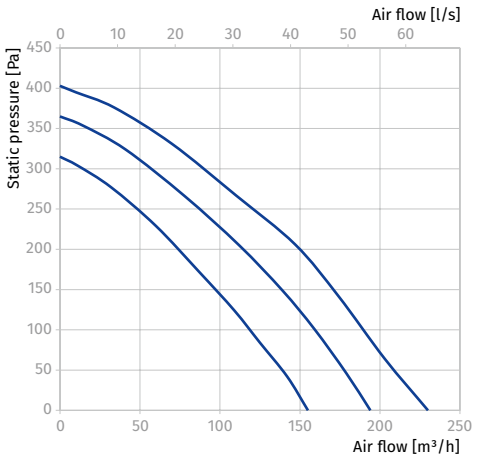


Technical data

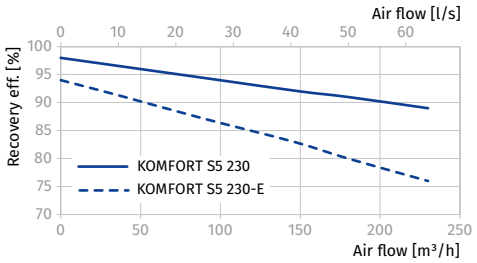
Parameters	KOMFORT S5 230 S3 KOMFORT S5 230 S4	KOMFORT S5 230-E S3 KOMFORT S5 230-E S4
Supply voltage [V / 50 (60) Hz]	1 ~ 230	1 ~ 230
Power [W]	163	163
Current [A]	0.7	0.7
Maximum air flow [m³/h (l/s)]	230 (64)	230 (64)
RPM [min⁻¹]	2720	2720
Sound pressure level at a distance of 3 m [dBA]	35	35
Transported 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	B	C
ErP	2016	2016

Sound power level, A-weighted	Total	Octave frequency band [Hz]								LpA 3 m	LpA 1 m
		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



KOMFORT S5 230



Calculation of air temperature downstream of the heat exchanger:

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

where

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

Accessories

		KOMFORT S5 230 S3 KOMFORT S5 230 S4	KOMFORT S5 230-E S3 KOMFORT S5 230-E S4
G4 panel filter		FP 264x182x18 G4	FP 264x182x18 G4
F8 panel filter		FP 264x182x18 F8	FP 264x182x18 F8
Syphon kit		SFK 20x32	–