

KOMFORT ERV D S3/S4

Suspended energy recovery air handling units

Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- Reduction of load for air conditioning systems in hot climate and heat losses in cold climate conditions due to heat and humidity recovery.
- Quality air exchange control for arrangement of comfortable indoor climate.
- Compatible with round Ø 100 or 150 mm air ducts.



Air flow:
up to 500 m³/h
139 l/s



Heat recovery efficiency:
up to 87 %

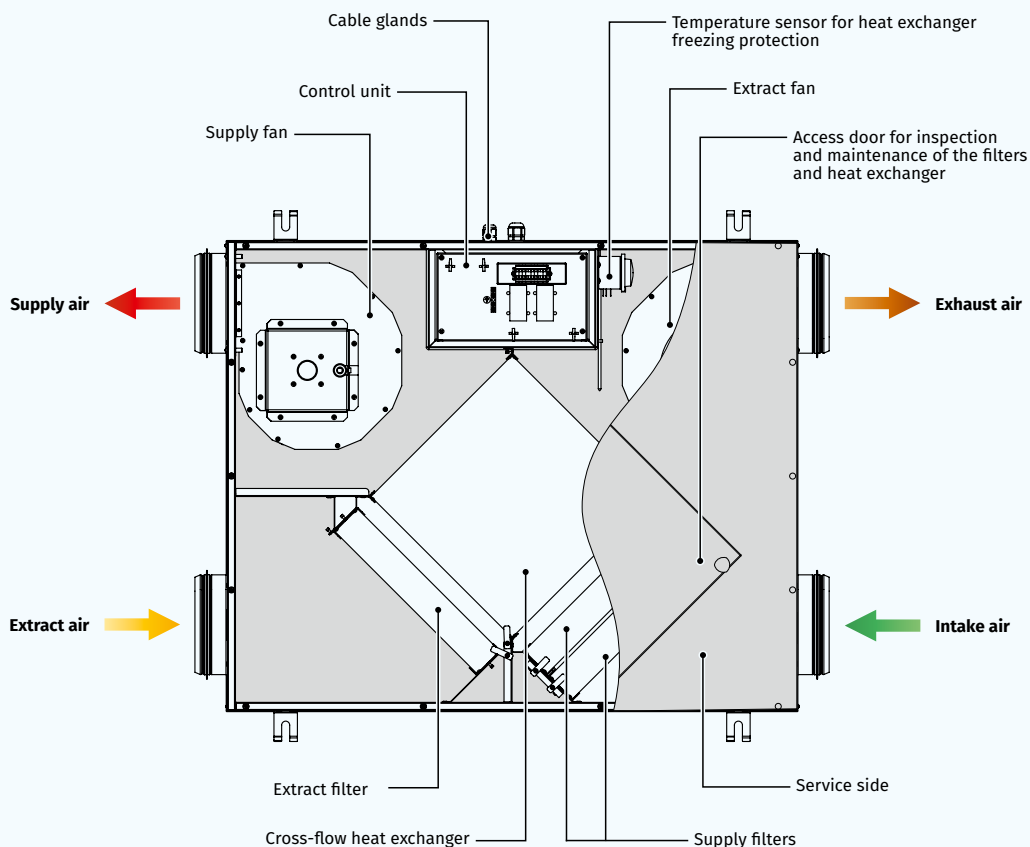


Design

- The casing is made of polymer-coated steel panels, internally filled with 5–10 mm thick expanded polyurethane layer.
- The bottom service panel is used to access the filters and the heat exchanger for maintenance operations.
- The spigots are located at the sides of the unit and are equipped with rubber seals for airtight connection to the air ducts.
- The casing is equipped with fixing brackets to suspend the unit to the ceiling.

Fans

- Asynchronous external rotor motors are used for air supply and exhaust.
- The units are equipped with single-phase three-speed external rotor motors with centrifugal impellers and forward curved blades.
- Integrated motor overheating protection with automatic restart.
- Ball bearings ensure long service life.
- The impellers are dynamically balanced.
- Featured with reliable and low-noise operation.



Air filtration

- Two built-in G4 and F8 filters provide efficient supply air filtration.
- The G4 filter is used for extract air filtration.

Heat recovery

- The unit is equipped with an enthalpy plate cross-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.
- When the indoor and outdoor temperature difference is insignificant, heat recovery is not reasonable. In this case the heat exchanger can be temporary replaced with a summer block for the warm season (available as a specially ordered accessory).



Control and automation

- The units have integrated control system based on the mechanical three-speed speed switch CDP-3/5 (**KOMFORT ERV D... S3**) or sensor three-speed speed switch SGR-3/1 (**KOMFORT ERV D... 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

- Due to a low casing height the air handling units are a perfect solution for space-restricted installations above suspended ceilings.
- The unit mounting position must provide access for service maintenance.

FROST PROTECTION

- The integrated automatic freeze protection is used to prevent freezing of the heat exchanger in the cold season. The supply fan turns off according to the temperature sensor to get the heat exchanger warmed up with extract air. After that the supply fan turns on and the unit continues to run in the standard mode.

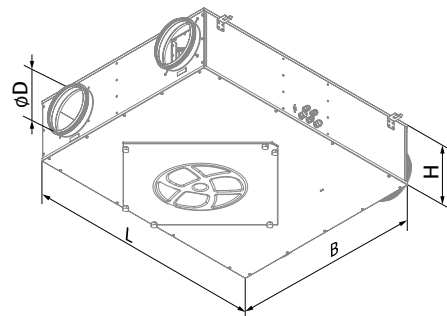
Designation key

Series	Unit type	Mounting type
KOMFORT	ERV: energy recovery unit	D: suspended mounting, horizontally directed spigots

Rated air flow [m³/h]	Service side	Control
100; 200; 300; 450	R: right L: left	S3: mechanical speed switch CDP-3/5 S4: sensor speed switch SGR-3/1

Overall dimensions [mm]

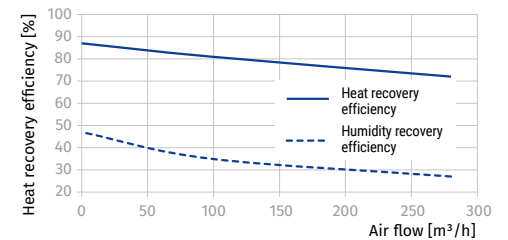
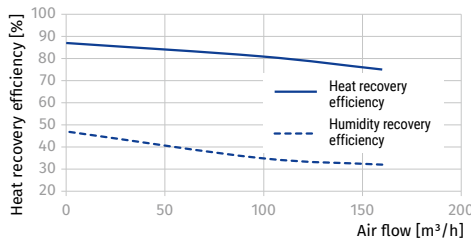
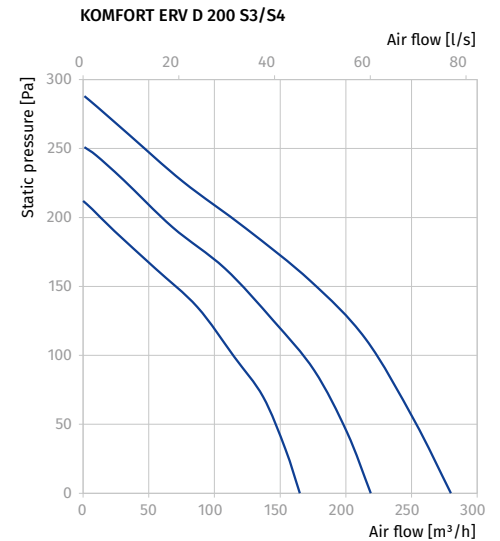
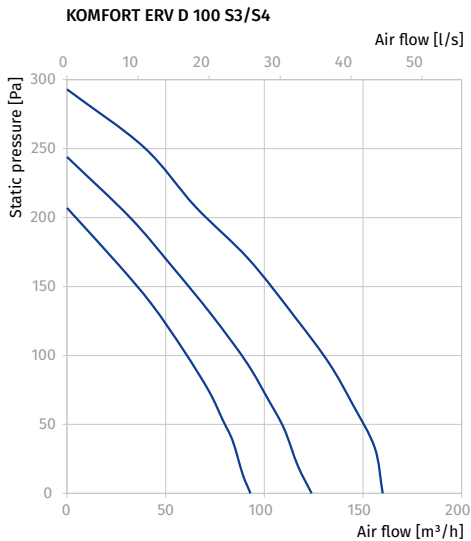
Model	∅ D	B	H	L
KOMFORT ERV D 100 S3/S4	100	481	203	600
KOMFORT ERV D 200 S3/S4	100	704	227	854
KOMFORT ERV D 300 S3/S4	150	704	227	854
KOMFORT ERV D 450 S3	150	704	227	1020



Technical data

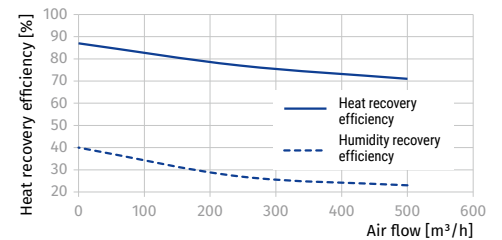
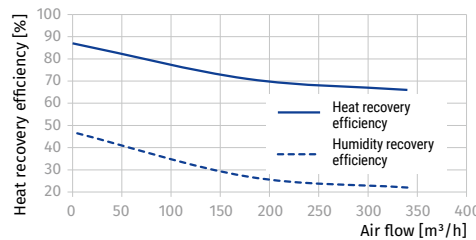
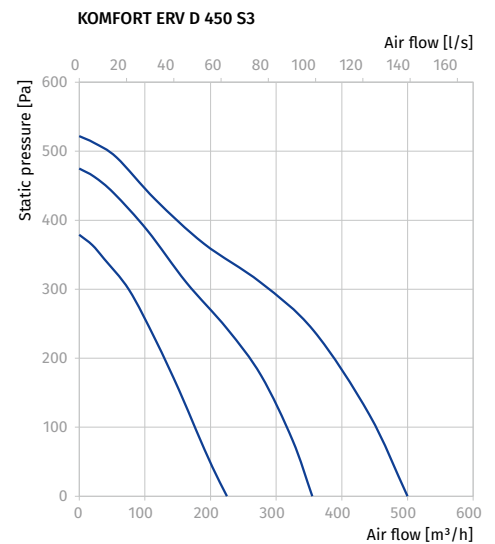
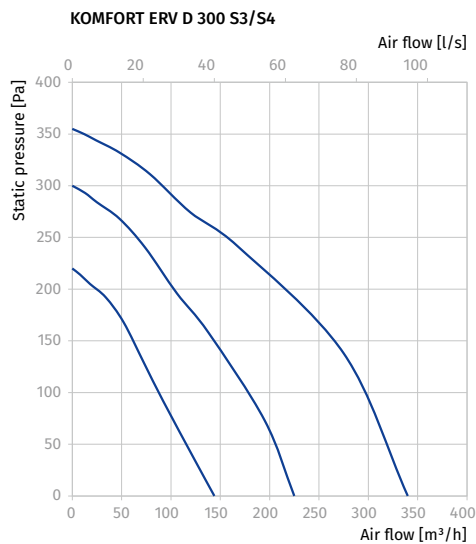
Parameters	KOMFORT ERV D 100 S3 KOMFORT ERV D 100 S4	KOMFORT ERV D 200 S3 KOMFORT ERV D 200 S4
Voltage [V / 50 Hz]	1~230	1~230
Power [W]	76	141
Current [A]	0.33	0.63
Maximum air flow [m³/h (l/s)]	160 (44)	280 (78)
RPM [min ⁻¹]	2750	2840
Sound pressure level at 3 m [dBA]	47	49
Transported air temperature [°C]	-5...+40	-5...+40
Insulation	5–10 mm expanded polyurethane	5–10 mm expanded polyurethane
Extract filter	G4	G4
Supply filter	G4 and F8 (PM2.5 > 93 %)	G4 and F8 (PM2.5 > 93 %)
Connected air duct diameter [mm]	100	100
Weight [kg]	17	24
Heat recovery efficiency [%]*	75–87	72–87
Humidity recovery efficiency [%]	32–47	27–47
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	enthalpy	enthalpy
SEC class	D	D
ErP	2016	2016

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



Parameters	KOMFORT ERV D 300 S3 KOMFORT ERV D 300 S4	KOMFORT ERV D 450 S3
Voltage [V / 50 Hz]	1~230	1~230
Power [W]	193	354
Current [A]	0.84	1.54
Maximum air flow [m³/h (l/s)]	340 (94)	500 (139)
RPM [min⁻¹]	2720	2870
Sound pressure level at 3 m [dBA]	52	57
Transported air temperature [°C]	-5...+40	-5...+40
Insulation	5–10 mm expanded polyurethane	5–10 mm expanded polyurethane
Extract filter	G4	G4
Supply filter	G4 and F8 (PM2.5 > 93 %)	G4 and F8 (PM2.5 > 93 %)
Connected air duct diameter [mm]	150	150
Weight [kg]	27	39
Heat recovery efficiency [%]*	66–87	71–87
Humidity recovery efficiency [%]	22–47	23–40
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	enthalpy	enthalpy
SEC class	E	E
ErP	2016	

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



HEAT RECOVERY AIR HANDLING UNITS

Accessories

		KOMFORT ERV D 100 S3 KOMFORT ERV D 100 S4	KOMFORT ERV D 200 S3 KOMFORT ERV D 200 S4	KOMFORT ERV D 300 S3 KOMFORT ERV D 300 S4	KOMFORT ERV D 450 S3
G4 panel filter		FP 200x191x20 G4	FP 300x220x48 G4	FP 300x220x48 G4	FP 300x270x48 G4
F8 panel filter		FP 200x191x20 F8	FP 300x220x48 F8	FP 300x220x48 F8	FP 300x270x48 F8
Summer block		SB C4 300/220	SB C4 300/220	SB C4 300/270	SB C4 300/270