

MVHR Specifications

Addressing Conditions 4 and 5, relating to noise and air quality respectively

- Blauberg Komfort Ultra EC S2 300 (see attached datasheet)
- Includes summer bypass function
- Sound pressure level 33 dBA at 3m. Units to be located in kitchen zones, away from bedrooms, separated by internal partitions.
- Compatible Blauberg filter: F7/Carbon - a combined high grade synthetic air filter down to PM2.5 (particulate matter), pollen, mould spores, fungi, bacteria and viruses with a light grade carbon NOx (nitrous oxide), car exhaust fumes and traffic pollution, nitrogen dioxide and other airborne gases and odours.

KOMFORT ULTRA EC S2 300

Compact heat recovery air handling units

Features

- Air handling units for efficient supply and exhaust ventilation in flats, houses, cottages and other buildings.
- The heat recovery technology is used to minimize ventilation heat losses.
- Control of air exchange for creating comfortable indoor microclimate.
- Compatible with round Ø125 mm air ducts.



Air flow:
up to 300 m³/h
83 l/s



Heat recovery efficiency:
up to 79 %



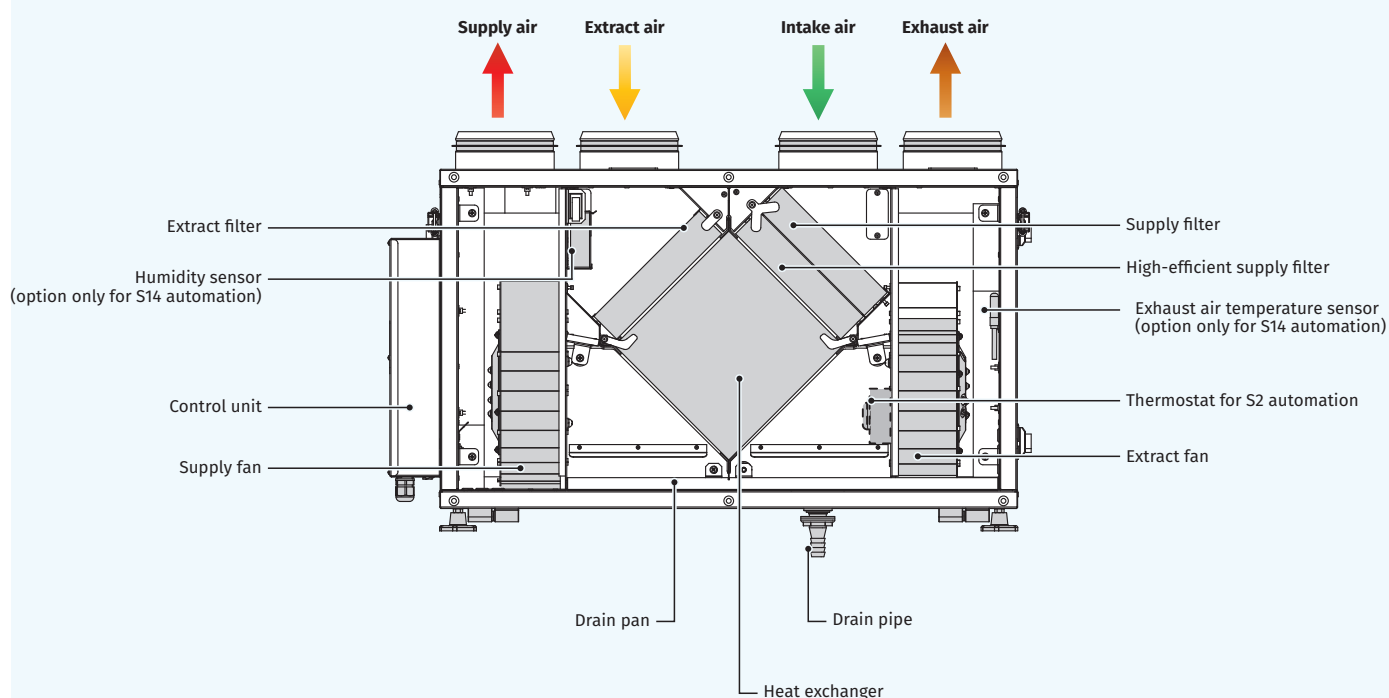
NEW

Design

- The casing of **KOMFORT Ultra EC S2 300** is made of double-skinned white painted metal panels, internally filled with 20 mm, mineral wool layer for heat- and sound-insulation.
- The spigots are located at the top of the unit and are rubber sealed for airtight connection to the air ducts.
- The hinged panel of the casing ensures easy access to the unit internals for service works including cleaning, filter replacement, etc.

Fans

- The unit is equipped with high-efficient external rotor EC motors and centrifugal impellers with forward curved blades.
- 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.
- The impellers are dynamically balanced.



Heat recovery

The **KOMFORT Ultra EC S2 300-H** unit is equipped with a plate cross-flow aluminium heat exchanger that recovers heat. The drain pan under the heat exchanger block of the **KOMFORT Ultra EC S2 300-H** is used for condensate collection and drainage.

The **KOMFORT Ultra EC S2 300-E** unit is equipped with a plate cross-flow heat exchanger made of polymerized cellulose that recovers heat and humidity. Due to humidity recovery the enthalpy heat exchanger produces no condensate.



- The air flows are fully separated within the heat exchangers. Odours and contaminants contained in the extract air are not transferred to the supply air flow.
- Heat recovery is based on heat and/or humidity transfer through the plates of the heat exchanger. In 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 heat losses, which reduces the cost of space heating. In summer heat recovery acts reverse and intake air is cooled in the heat exchanger by the cooled extract air. This reduces load on air conditioners and saves electricity.
- The electronic frost protection system is used to prevent the heat exchanger freezing in cold seasons. In case of freezing danger communicated by the temperature sensor the supply fan is stopped to let warm extract air warm up the heat exchanger. After that the supply fan is turned on and the unit reverts to the normal operation mode.
- In summer, when the indoor and outdoor temperature difference is low heat recovery is not reasonable. In this case the heat exchanger can be temporary replaced with a summer block for warm seasons. Available upon separate order.

Air filtration

- Two built-in G4 and F7 filters provide efficient supply air filtration. The G4 filter is used for extract air filtration.

Control and automation

- The **KOMFORT Ultra EC S2 300 S2** unit is equipped with the CDT E/0-10 speed controller that is included in the delivery.
- The **KOMFORT Ultra EC S2 300 S14** units have an integrated control system with a wall-mounted control panel S14 with a LED indication.

The KOMFORT Ultra EC S2 300 S14 control panel functions:

- Unit On/Off.
- Speed selection: Low, Medium or High.
- Activation of the summer ventilation mode: The supply fan stops and the extract fan continues its operation with no heat recovery.
- Alarm indication.
- Filter maintenance indication.

The KOMFORT Ultra EC S2 300 S14 unit is equipped with a USB connector (Type B) and can be connected to a PC for configuring the advanced settings in a special software:

- Fan speed adjustment from 0 to 100 %. Each speed is individually adjusted for the supply and the extract fans.
- Operation control on feedback from the FS2 duct humidity sensor (to be ordered separately).
- Unit operation setting according to the external relay (to be ordered separately).
- Temperature setting for freeze protection system activation.
- Control and operation adjustment of the filter maintenance timer.
- Error code indication.
- External control unit and humidity level control.
- Software version upgrading.



Mounting

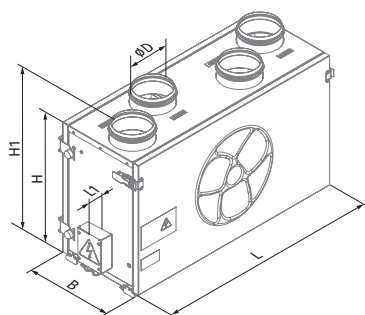
- The units can be fixed to the wall or mounted on the floor using the mounting brackets. The **KOMFORT Ultra EC S2 300-E** unit is also suitable for ceiling mounting.
- While mounting provide free access to the service panel for filter replacement and servicing.
- The **KOMFORT Ultra EC S2 300-H** unit mounting position must provide condensate collection and drainage.
- Due to universal casing design both left and right mounting is possible. It requires swapping the service and the back panel.

Designation key

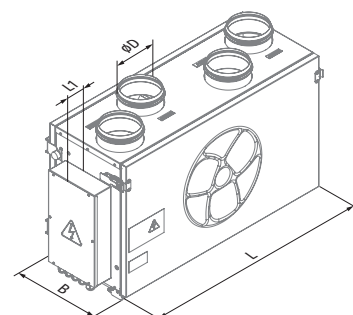
Serie	Unit type	Motor type	Spigot modification	Casing	Nominal air flow [m³/h]	Heat exchanger type	Control
KOMFORT	Ultra: compact unit	EC: electronically commutated motor	S: vertical spigot orientation	2: Insulation 20 mm	300	— H: heat recovery E: energy recovery	S2: CDT E/0-10 speed controller S14: sensor control panel with LED indi- cation

Overall dimensions [mm]

Model	D	B	H	H1	L	L1
KOMFORT Ultra EC S2 300-H(E) S2	125	300	443	490	713	43
KOMFORT Ultra EC S2 300-H(E) S14	125	300	443	490	713	63



KOMFORT Ultra EC S2 300-H(E) S2



KOMFORT Ultra EC S2 300-H(E) S14

Technical data

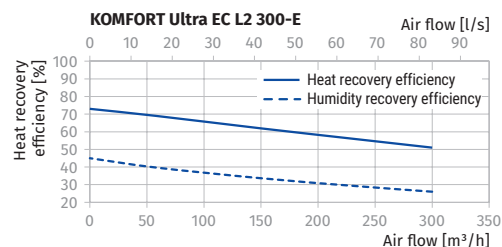
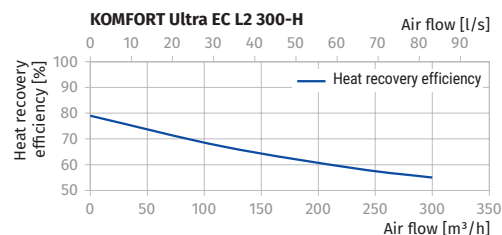
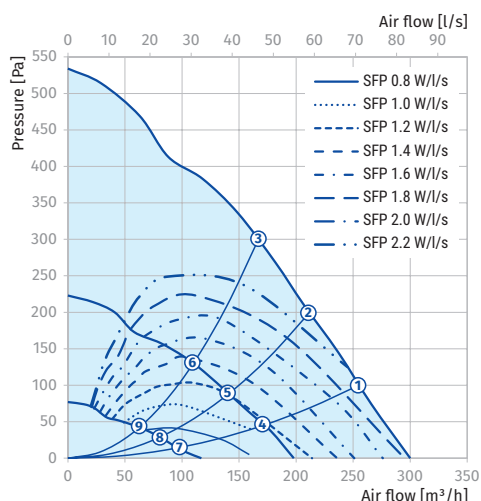
Parameters	KOMFORT Ultra EC S2 300-H	KOMFORT Ultra EC S2 300-E
Voltage [V / 50 (60) Hz]	1 ~ 230	1 ~ 230
Power [W]	165	165
Current [A]	1.3	1.3
Maximum air flow [m³/h (l/s)]	300 (83)	300 (83)
RPM [min⁻¹]	2050	2050
Sound pressure level at 3 m [dBA]	33	33
Transported air temperature [°C]	-25...+60	-25...+60
Insulation	20 mm, mineral wool	20 mm, mineral wool
Extract / supply filter	G4	G4
Replaceable filter	G4, F7	G4, F7
Connected air duct diameter [mm]	125	125
Weight [kg]	32	28
Heat recovery efficiency [%]*	55-79	51-73
Humidity recovery efficiency [%]	-	26-45
Heat exchanger type	cross-flow	cross-flow
Heat exchanger material	aluminium	polymerized cellulose
SEC class for S2 automation	B	C
SEC class for S14 automation	A	A
ErP	2016, 2018	2016, 2018

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

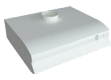
Sound power level, A-filter applied.

Sound power level, A-weighted	General	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]	56	48	43	53	44	44	40	26	24		
L _{WA} to supply outlet [dBA]	71	53	53	68	65	60	59	52	51		
L _{WA} to exhaust inlet [dBA]	57	43	51	52	52	45	37	26	21		
L _{WA} to exhaust outlet [dBA]	72	53	60	66	67	61	62	55	48		
L _{WA} to environment [dBA]	53	33	44	47	50	44	38	29	24	33	43

* Data provided for point 1 of the air flow diagram



Accessories

		KOMFORT Ultra EC S2 300-H(-E) S2	KOMFORT Ultra EC S2 300-H(-E) S14
G4 panel filter		FP 184x240x40 G4	FP 184x240x40 G4
F7 panel filter		FP 184x240x40 F7	FP 184x240x40 F7
Syphon kit		SFK 20x32	SFK 20x32
Internal humidity sensor		–	FS2
CO ₂ sensor with indication		–	CD-1
CO ₂ sensor		–	CD-2
Humidity sensor		–	HR-S
Kitchen hood		–	DAH 251-13
Silencer		SD 125	SD 125
Silencer		SDF 125	SDF 125
Backdraft air damper		VRV 125	VRV 125
Air damper		VKA 125	VKA 125
Electric actuator		LF230	LF230