

# KOMFORT ULTRA EC L2 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 m<sup>3</sup>/h  
83 l/s



**Heat recovery efficiency:**  
up to 79 %

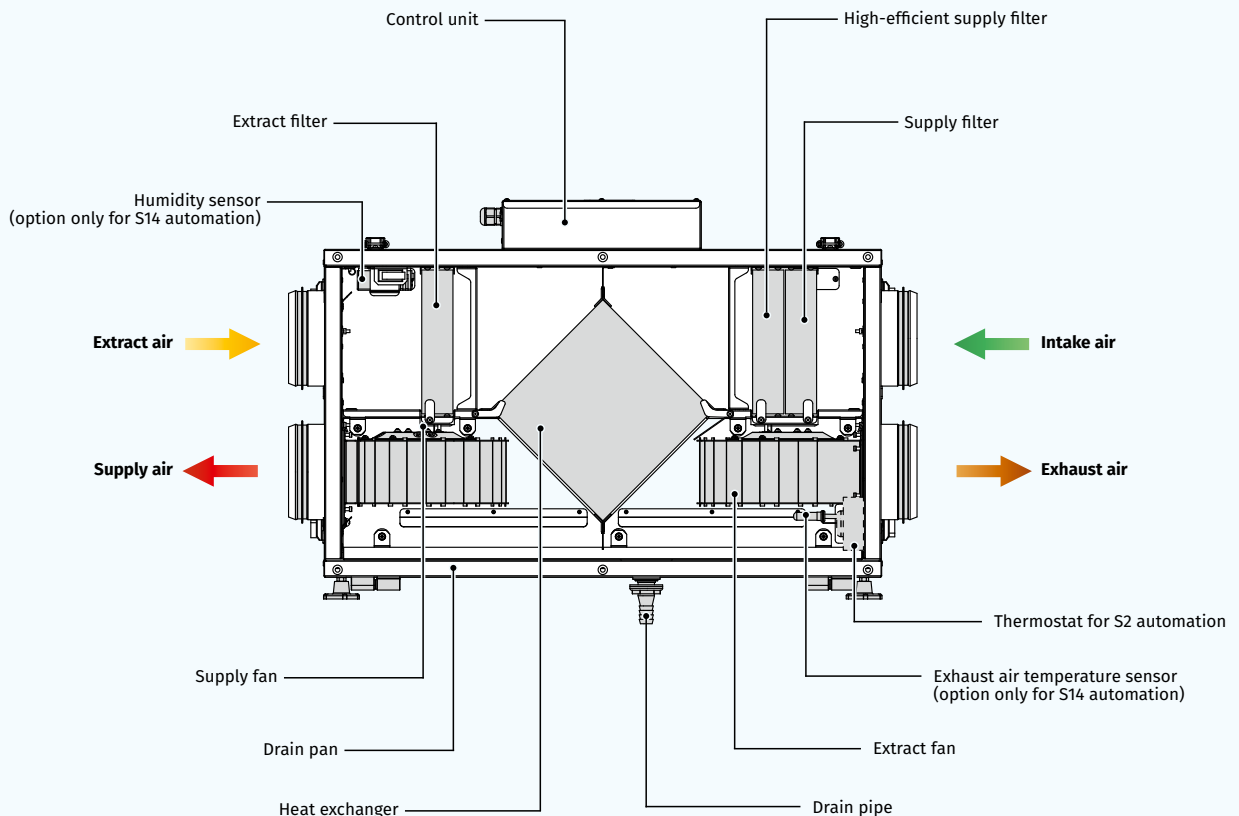


## Design

- The casing of **KOMFORT Ultra EC L2 300 ... white** 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 sides of the unit and are equipped with rubber seals 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

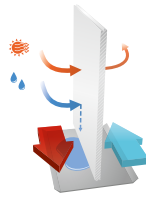
- The unit is equipped with high-efficient external rotor EC motors and centrifugal impellers with forward curved blades.
- EC motors have the best power consumption to air flow ratio and meet the latest demands concerning energy saving and high-efficient ventilation.
- EC motors are featured with high performance, low noise level and totally controllable speed range.
- The impellers are dynamically balanced.



COMPACT HEAT RECOVERY AIR HANDLING UNITS

## Heat recovery

The **KOMFORT Ultra EC L2 300-H ... white** unit is equipped with a plate cross-flow polystyrene heat exchanger that recovers heat. The drain pan under the heat exchanger block of the **KOMFORT Ultra EC L2 300-H ... white** is used for condensate collection and drainage.



The **KOMFORT Ultra EC L2 300-E ... white** unit is equipped with a plate cross-flow enthalpy heat exchanger made of polymerized cellulose that recovers heat and humidity. Due to humidity recovery the enthalpy heat exchanger produces no condensate.



## Control and automation

- The **KOMFORT Ultra EC L2 300-H(E) S2 white** unit is equipped with the CDT E/0-10 speed controller that is included in the delivery.
- The **KOMFORT Ultra EC L2 300-H(E) S14 white** units have an integrated control system with a wall-mounted control panel S14 with a LED indication.



### The 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 L2 300-H(E) S14 white 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 control unit (to be ordered separately)
- Temperature setting for freeze protection system activation
- Control and operation adjustment of the filter maintenance timer
- External relay status 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 L2 300-E ... white** unit is also suitable for ceiling mounting.
- The **KOMFORT Ultra EC L2 300-H ... white** unit mounting position must provide condensate collection and drainage.
- While mounting provide free access to the service panel for filter replacement and servicing.
- Due to universal casing design both left and right mounting is possible. It requires swapping the service and the back panel.

- The air flows are fully separated within the heat exchanger. 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 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 heat losses, which reduces the cost of space heating. In summer the heat exchanger performs reverse and intake air is cooled in the heat exchanger by the cool extract air. This reduces load on air conditioners and saves electricity.
- When the indoor and outdoor temperature difference is small heat recovery is not reasonable. In this case the heat exchanger can be temporary replaced with a summer block for warm seasons (available separately).

## FREEZE PROTECTION

- The electronic freeze 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.

## Air filtration

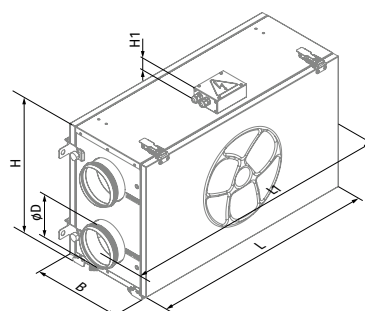
- Two built-in G4 and F8 filters provide efficient supply air filtration.
- The G4 filter is used for extract air filtration.

## Designation key

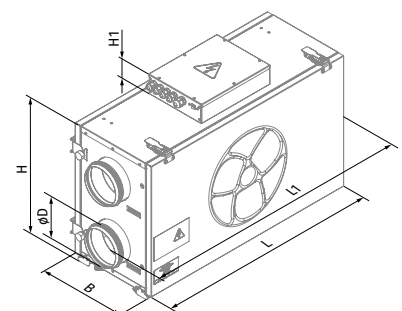
Serie	Unit type	Motor type	Spigot modification	Casing	Nominal air flow [m³/h]	Heat exchanger type	Control	Casing
KOMFORT	<b>Ultra:</b> compact unit	<b>EC:</b> electronically commutated motor	<b>L:</b> horizontal spigot orientation	<b>2:</b> Insulation 20 mm	<b>300</b>	— <b>H:</b> heat recovery <b>E: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

## Overall dimensions [mm]

Model	D	B	H	H1	L	L1
KOMFORT Ultra EC L2 300-H(E) S2 white	125	300	443	43	713	810
KOMFORT Ultra EC L2 300-H(E) S14 white	125	300	443	63	713	810



KOMFORT Ultra EC L2 300-H(E) S2 white



KOMFORT Ultra EC L2 300-H(E) S14 white

**Technical data**

Parameters	KOMFORT Ultra EC L2 300-H S2 white KOMFORT Ultra EC L2 300-H S14 white	KOMFORT Ultra EC L2 300-E S2 white KOMFORT Ultra EC L2 300-E S14 white
Voltage [V/50 (60) Hz]	1 ~ 220-240	1 ~ 220-240
Power [W]	165	165
Current [A]	1.3	1.3
Maximum air flow [m³/h (l/s)]	300 (83)	300 (83)
RPM [min <sup>-1</sup> ]	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 filter	G4	G4
Supply filter	G4, F8	G4, F8
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	polysterene	polymerized cellulose
SEC class for S2 automation	B	C
SEC class for S14 automation	A	A
ErP	2016, 2018	2016, 2018

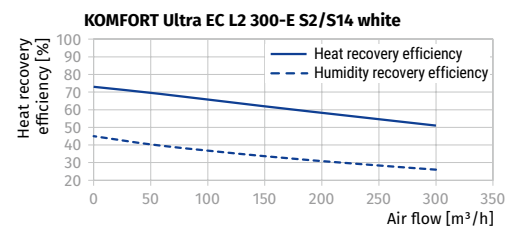
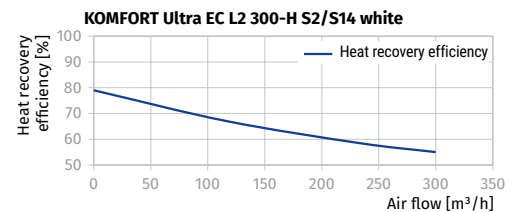
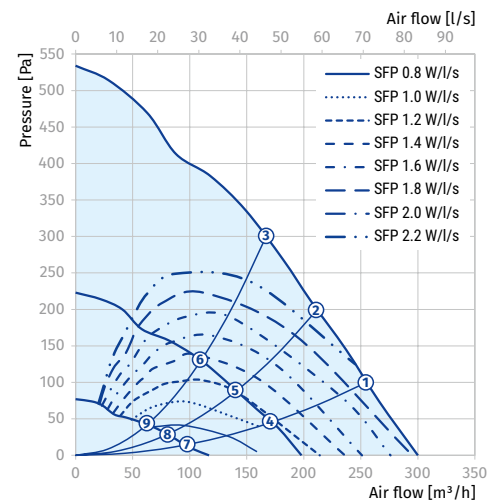
\* Heat recovery efficiency is specified in compliance with the EN 13141-7.

Sound power level, A-weighted	General	Octave frequency band [Hz]								LpA 3 m [dBA]	LpA 1 m [dBA]
		63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to supply inlet [dBA]	56	48	43	53	44	44	40	26	24		
L <sub>WA</sub> to supply outlet [dBA]	71	53	53	68	65	60	59	52	51		
L <sub>WA</sub> to exhaust inlet [dBA]	57	43	51	52	45	37	26	21			
L <sub>WA</sub> to exhaust outlet [dBA]	72	53	60	66	61	62	55	48			
L <sub>WA</sub> to environment [dBA]	53	33	44	47	50	44	38	29	24	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	150	33 (43)
2	138	33 (43)
3	121	32 (42)
4	52	31 (41)
5	48	28 (38)
6	41	27 (37)
7	17	27 (37)
8	16	23 (33)
9	14	23 (33)



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**Accessories**

		KOMFORT Ultra EC L2 300-H S2 white KOMFORT Ultra EC L2 300-E S2 white	KOMFORT Ultra EC L2 300-H S14 white KOMFORT Ultra EC L2 300-E S14 white
G4 panel filter		FP 240x184x40 G4	FP 240x184x40 G4
F8 panel filter		FP 240x184x40 F8	FP 240x184x40 F8
Internal humidity sensor		-	FS2
CO <sub>2</sub> sensor with indication		-	CD-1
CO <sub>2</sub> sensor		-	CD-2
Humidity sensor		-	HR-S
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
Summer block		SB C4 200/240	SB C4 200/240