

KOMFORT EC SB

250

AIRsupply

Features

- Air handling units for efficient energy saving supply and exhaust ventilation in flats, houses, cottages and other premises.
- Heat and humidity recovery minimizes ventilation heat losses during cold season and reduces air conditioner load during hot season.
- Controllable air exchange for creating the best suitable indoor microclimate.
- Compatible with round Ø160 mm air ducts.



Air flow:
up to 690 m³/h
192 l/s



Heat recovery efficiency:
up to 98 %



Design

- The casing is made of double-skinned polymer-coated steel panels, internally filled with 20, 25, 30, 40 mm (depending on the unit model) mineral wool layer for heat- and sound-insulation.
- The unit is equipped with a hinged service panel to enable convenient access for maintenance or repair operations.
- The spigots are located at the top of the unit and are equipped with rubber seals for airtight connection to the air ducts.

Fans

- The units are equipped with high-efficient EC motors with an external rotor and a centrifugal impeller with backward curved blades.
- EC motors have the best power consumption to air capacity ratio and meet the latest demands concerning energy saving and high-efficient ventilation.
- EC motors are featured with high performance, low noise level and optimum control across the entire speed range.
- The impellers are dynamically balanced.

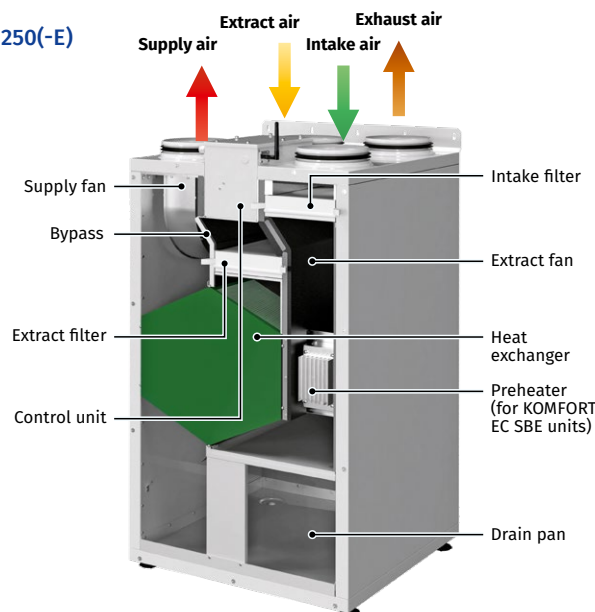
Air filtration

- The built-in F7 filter provides efficient supply air filtration. The G4 filter is used for extract air cleaning.
- Supply air in the **KOMFORT EC S(B) 250** units is purified by the G4 and F7 filters. The G4 filter is used for extract air cleaning.

Bypass

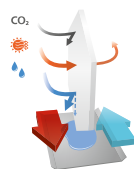
- The **KOMFORT EC SB(-E)** units are equipped with a bypass for ventilation (air cooling by the cool air from outside).

KOMFORT EC SB(E) 250(-E)

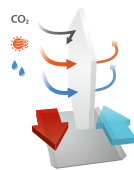


Heat recovery

- The **KOMFORT EC S(B)** 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 EC S(B)-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.
- 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).

Mounting

- The units are designed for wall or floor mounting.
- Universal casing design provides either left-handed or right-handed unit installation.

Control and automation

- The **KOMFORT EC S(B)(-E) S21** units are equipped with an integrated automation system. The remote control panel is not included in the delivery set (available separately).
- The S21 controller allows integrating the unit into the **Smart Home** system or **BMS (Building Management System)**.
- The unit can be controlled by the **Blauberg AHU** mobile application via Wi-Fi.



Download the **Blauberg AHU** app for Android







Download the **Blauberg AHU** app for iOS



- The **KOMFORT EC S(B)(-E) S14** units have an integrated automation system with a wall-mounted control panel S14 with a LED indication.

Automation functions

| Functions | KOMFORT EC S(B)(-E) S21 | KOMFORT EC S(B)(-E) S14 |
|---|--|---|
| Unit control via Wi-Fi using a mobile application | + | - |
| Unit control via a wired remote control panel | S22 control panel (option)  | S14 control panel  |
| Unit control via a wireless remote control panel | S22 Wi-Fi control panel (option)  | - |
| Unit control via a remote wired LCD control panel | S25 control panel (option)  | - |
| BMS (Building Management System) | RS-485 | - |
| | Wi-Fi | - |
| | Ethernet | - |
| | MODBUS (RTU, TCP) | - |
| Blauberg Cloud Server service | + | - |
| Speed selection | + | + |
| Filter replacement indication | by filter timer | by filter timer |
| | by filter clogging differential pressure switch (KOMFORT EC SB 550) | - |
| Alarm indication | full alarm description in the mobile application | LED alarm indication |
| Week-scheduled operation | + | - |
| Bypass | automatic | - |
| | manual | manual |
| Timer | + | - |
| Boost mode | + | - |
| Fireplace mode | + | - |
| Freeze protection | through cyclic stops of the supply fan | through cyclic stops of the supply fan |
| | through preheating (option) | - |
| Reheater connection | option | - |
| Cooler connection | option | - |
| Minimum supply air temperature control | + | - |
| Humidity control | option | option |
| CO ₂ control | option | option |
| VOC control | option | - |
| PM2.5 control | option | - |
| Fire alarm sensor connection | option | option |

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

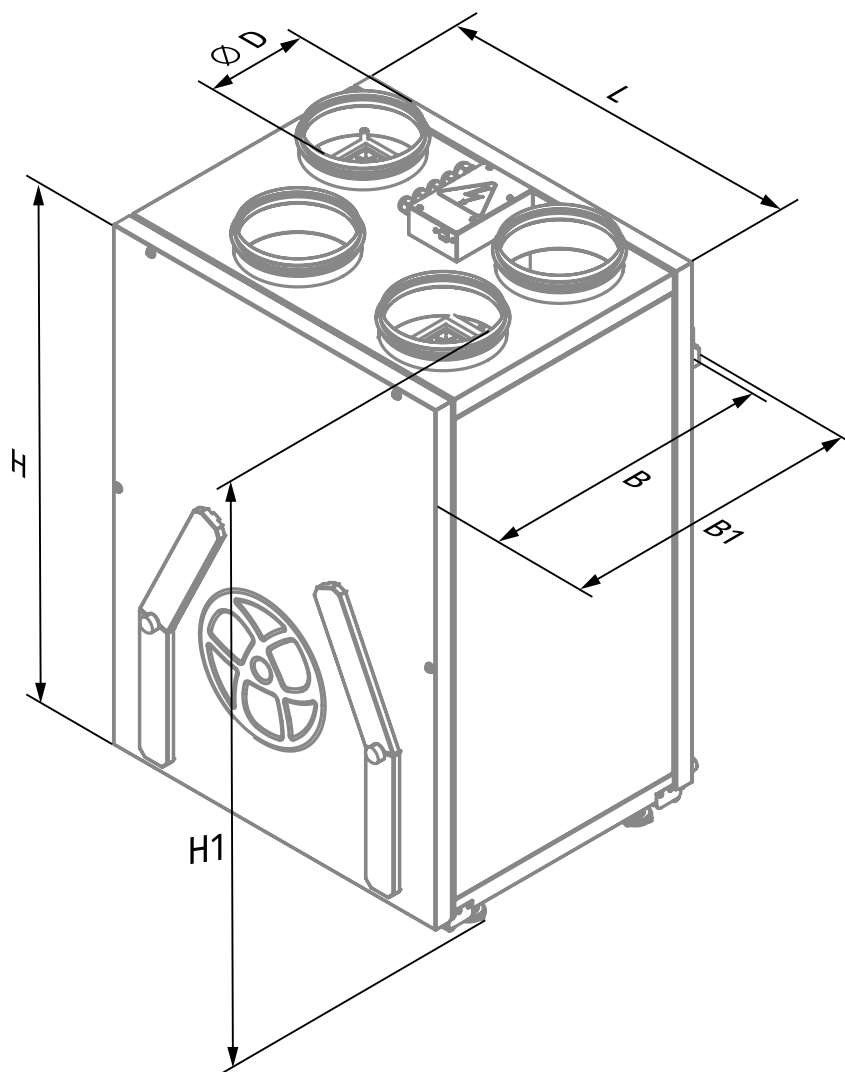
Designation key

| Series | Motor type | Spigot modification | Bypass | Rated air flow, [m ³ /h] | Heat exchanger type | Control |
|---------|-------------------------------------|--------------------------------|------------------|-------------------------------------|---|------------|
| KOMFORT | EC: electronically commutated motor | S: vertical spigot orientation | B: with a bypass | 250 | _: heat recovery -E: energy recovery | S21 S14 |

Overall dimensions [mm]

| Model | ∅ D | B | B1 | H | H1 | L |
|-------------------------------|-----|-----|-----|-----|-----|-----|
| KOMFORT EC SB 250(-E) S21/S14 | 160 | 450 | 489 | 790 | 853 | 567 |

KOMFORT EC SB 250(-E) S21/S14



| Parameters | KOMFORT EC SB 250 S21 KOMFORT EC SB 250 S14 | KOMFORT EC SB 250-E S21 KOMFORT EC SB 250-E S14 |
|---|--|--|
| Supply voltage [V / 50 (60) Hz] | 1~ 230 | 1~ 230 |
| Power [W] | 115 | 115 |
| Current [A] | 0.9 | 0.9 |
| Maximum air flow [m³/h (l/s)] | 290 (81) | 290 (81) |
| RPM [min ⁻¹] | 2050 | 2050 |
| Sound pressure level at a distance of 3 m [dBA] | 25 | 25 |
| Transported air temperature [°C] | -25...+40 | -25...+40 |
| Casing material | polymer-coated steel | polymer-coated steel |
| Insulation | 30 mm mineral wool | 30 mm mineral wool |
| Extract filter | G4 | G4 |
| Supply filter | G4+F7 | G4+F7 |
| Connected air duct diameter [mm] | 160 | 160 |
| Weight [kg] | 51 | 51 |
| Heat recovery efficiency [%] | 85-94 | 78-90 |
| Heat exchanger type | counter-flow | counter-flow |
| Heat exchanger material | polystyrene | enthalpy |
| SEC class | A+ | A |
| ErP | 2016, 2018 | 2016, 2018 |

KOMFORT EC S(B) 250 (-E)

| Sound power level, A-weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|-------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| LWA to supply inlet [dBA] | 52 | 28 | 46 | 50 | 41 | 36 | 33 | 36 | 29 | | |
| LWA to supply outlet [dBA] | 61 | 33 | 53 | 60 | 48 | 38 | 37 | 43 | 36 | | |
| LWA to exhaust inlet [dBA] | 52 | 28 | 46 | 50 | 42 | 36 | 33 | 35 | 30 | | |
| LWA to exhaust outlet [dBA] | 62 | 32 | 51 | 61 | 49 | 37 | 37 | 42 | 33 | | |
| LWA to environment [dBA] | 45 | 25 | 41 | 42 | 35 | 32 | 28 | 27 | 22 | 25 | 35 |

Data provided for point 1 of the air flow diagram

| Point | Total power of the unit [W] | Sound pressure level at 3 m (1 m) [dBA] |
|-------|-----------------------------|---|
| 1 | 106 | 25 (35) |
| 2 | 95 | 24 (34) |
| 3 | 82 | 24 (34) |
| 4 | 44 | 20 (30) |
| 5 | 40 | 19 (29) |
| 6 | 36 | 19 (29) |
| 7 | 16 | 13 (23) |
| 8 | 15 | 12 (22) |
| 9 | 15 | 12 (22) |

BRE

| Exhaust spigot configuration | Air flow [l/s] | Specific fan power input [W/l/s] | Heat exchange efficiency [%] |
|---|----------------|----------------------------------|------------------------------|
| Kitchen + 1 additional room with high level of humidity | 21 | 0.65 | 92 |
| Kitchen + 2 additional rooms with high levels of humidity | 29 | 0.68 | 91 |
| Kitchen + 3 additional rooms with high levels of humidity | 37 | 0.77 | 90 |
| Kitchen + 4 additional rooms with high levels of humidity | 45 | 0.94 | 89 |
| Kitchen + 5 additional rooms with high levels of humidity | 53 | 1.12 | 88 |
| Kitchen + 6 additional rooms with high levels of humidity | 61 | 1.35 | 87 |
| Kitchen + 7 additional rooms with high levels of humidity | 69 | 1.70 | 86 |

