

CIVIC EC LB

SINGLE-ROOM AIR HANDLING UNITS

Features

- The **CIVIC EC LB** units are designed for singleroom ventilation of schools, offices and other public and commercial premises. Offer the ideal simple and efficient ventilation solutions for existing and renovated buildings and require no layout of air ducts.
- Efficient supply and extract ventilation for separate premises.
- EC motors with low energy consumption.
- Low-noise operation.
- Simple mounting.



Air flow:
up to 1240 m³/h
344 l/s



Heat recovery efficiency:
up to 96 %

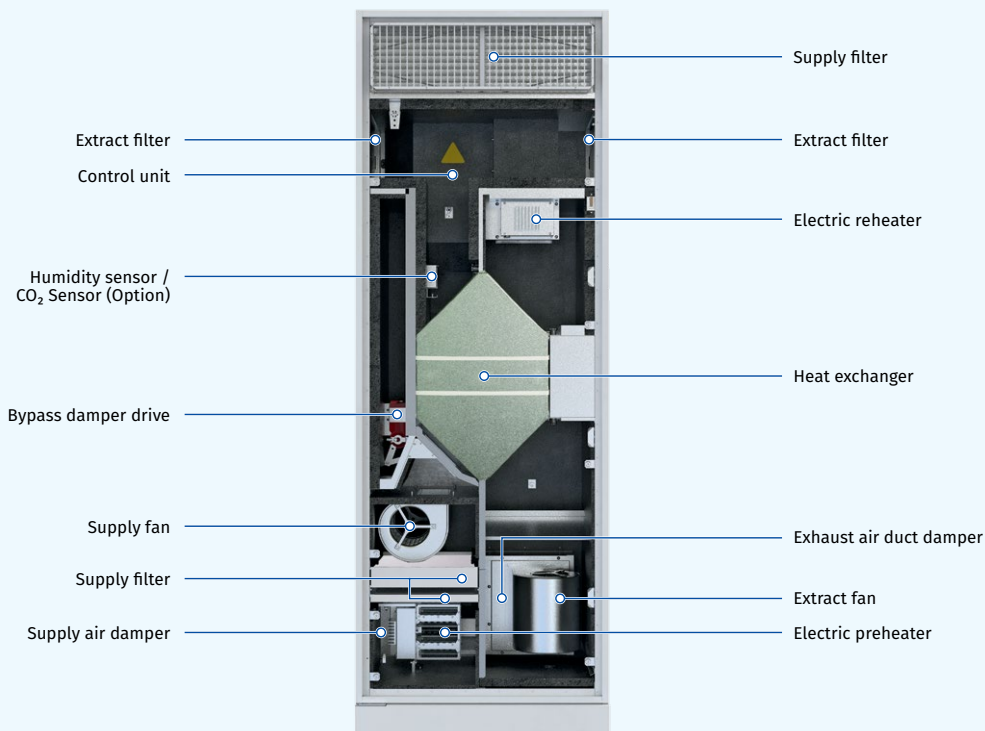


Design

- Made of high-quality polymer coated steel, internally lined with heat- and sound insulation of mineral wool, cellular synthetic rubber or other materials.
- Built-in preheater and reheater modifications available for cold climate conditions.

Motors

- High efficient electronically commutated motors with external motor and impeller with forward curved blades. Such motors are the most state-of-the-art energy saving solution.
- EC motors are featured with high performance and total speed controllable range. High efficiency reaching 90 % is the premium advantage of the electronically commutated motors.



Designation key

| Model | Motor type | Mounting | Bypass | Heater | Drain pump | Rated air flow [m ³ /h] | Heat exchanger type | Service side (for Civic...1200) | Control |
|-------|-------------------------------------------------|-------------------|----------------|------------------------------------------------------------------|----------------------------------------------|------------------------------------|-----------------------------------------|---------------------------------|------------|
| CIVIC | EC: synchronous electronically commutated motor | L: floor mounting | B: with bypass | _: without heater E: preheating E2: preheating + reheating | _: without drain pump CP: with drain pump | 300; 500; 1200 | _: heat recovery -E: energy recovery | L: Left R: Right | S21 S14 |

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Air filtration

- Supply and extract air is purified by a set of panel filters. Filtering class depends on the unit model.
- Panel G4 filter is used for extract air filtration.

Bypass

- The units are equipped with a bypass. The bypass damper opens for free cooling ventilation mode in summer.

Air dampers

- The automatic supply and extract air dampers are used to prevent uncontrollable air draughts during the unit standstill.

Heaters

PREHEATING

- CIVIC EC LBE** and **CIVIC EC LBE2** units are equipped with an electric preheater which protects the heat exchanger from freezing.

REHEATING

- CIVIC EC LBE2** units feature an electric reheater to raise the supply air temperature.

Heat exchanger

- The **CIVIC EC LB** unit has a counter-flow heat exchanger made of polystyrene.
 - In cold season** the heat energy of the extract air flow is absorbed by intake air flow, thus decreasing the heat losses caused by ventilation. Condensate generated during heat recovery is collected in a drain pan and removed to the sewage system.
 - In warm season** the heat of the outdoor air is absorbed by extract air flow. This way the supply air temperature decreases and heat recovery reduces operation loads for the air conditioner.
- The **CIVIC EC LB... -E** unit is equipped with a counter-flow heat exchanger made of enthalpy membrane.
 - In cold season** the heat and moisture of the extract air are absorbed by supply air through the enthalpy membrane, thus decreasing the heat losses caused by ventilation.
 - In warm season** the heat and humidity of the outdoor air is absorbed by extract air flow through the enthalpy membrane. This way the supply air temperature and humidity decreases and heat recovery reduces operation loads for the air conditioner.



Functioning

- Cold outside air** flows through the filters and heat exchanger and is moved to the room with a supply centrifugal fan.
- Warm polluted air from the premise** flows through the filter and the heat exchanger and is exhausted outside with an extract centrifugal fan through an air duct in the wall.



Control and automation

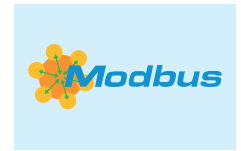
- The **CIVIC EC LB... S21** units are equipped with an integrated automation system.
- The S21 controller allows integrating the unit into the **BMS (Building Management System)**.
- The unit can be controlled by the **Blauberg AHU** mobile application via Wi-Fi.



Download the **Blauberg AHU** app for Android



Download the **Blauberg AHU** app for iOS



- The **CIVIC EC LB... S14** units are equipped with an integrated automation system and the S14 wall mounted sensor control panel with LED-indication.

Automation functions

| Functions | CIVIC EC LB... S21 | CIVIC EC LB... S14 |
|-----------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------|
| Unit control via Wi-Fi using the mobile application | + | - |
| Unit control via remote control panel | S22 control panel (option) | S14 control panel |
| Unit control via remote wireless control panel | S22 Wi-Fi control panel (option) | - |
| Unit control via a wired remote LCD control panel | S25 control panel (option) | - |
| BMS (Building Management System) | RS-485 | - |
| | Wi-Fi | - |
| | Ethernet | - |
| | MODBUS (RTU, TCP) | - |
| Blauberg Cloud Server service | + | - |
| Speed switch | + | + |
| Filter replacement indication | by filter timer (in the Blauberg AHU App or on the optional control panel S25) | by filter timer (on the S14 control panel) |
| Alarm indication | full alarm description in the mobile application | LED indication about alarms |
| Week scheduled operation | + | - |
| Bypass | automatic | - |
| | manual | manual |
| Timer | + | - |
| Boost mode | + | - |
| Fireplace mode | + | - |
| Freeze protection | using cyclical stops of the supply fan | using cyclical stops of the supply fan |
| | using 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: the functionality is available when purchasing the appropriate accessory (see the "Accessories" section)

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Technical data

| Parameters | Civic EC LB 300 S21 Civic EC LB 300 S14 | Civic EC LBE 300 S21 | Civic EC LBE2 300 S21 | Civic EC LB 300-E S21 Civic EC LB 300-E S14 | Civic EC LBE 300-E S21 | Civic EC LBE2 300-E S21 |
|------------------------------------------------|--------------------------------------------|---------------------------------|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------|
| Voltage [V / 50 (60) Hz] | 1~230 | 1~230 | 1~230 | 1~230 | 1~230 | 1~230 |
| Power consumption without heater(s) [W] | 125 | 125 | 125 | 125 | 125 | 125 |
| Preheater power consumption [W] | - | 1400 | 1400 | - | 1400 | 1400 |
| Reheater power consumption [W] | - | - | 1400 | - | - | 1400 |
| Max. current consumption without heater(s) [A] | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Max. current consumption with heater(s) [A] | 0.9 | 7 | 13.1 | 0.9 | 7 | 13.1 |
| Maximum air flow [m³/h (l/s)] | 320 (89) | 320 (89) | 320 (89) | 320 (89) | 320 (89) | 320 (89) |
| RPM [min ⁻¹] | 2150 | 2150 | 2150 | 2150 | 2150 | 2150 |
| Sound pressure level at 1 m [dBA] | 31 | 31 | 31 | 31 | 31 | 31 |
| Sound pressure level at 3 m [dBA] | 21 | 21 | 21 | 21 | 21 | 21 |
| Transported air temperature [°C] | -25...+40 | -25...+40 | -25...+40 | -25...+40 | -25...+40 | -25...+40 |
| Casing material | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel |
| Insulation | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool |
| Extract filter | G4 x 2 | G4 x 2 | G4 x 2 | G4 x 2 | G4 x 2 | G4 x 2 |
| Supply filter | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) |
| Connected air duct diameter [mm] | 200 | 200 | 200 | 200 | 200 | 200 |
| Weight [kg] | 138 ± 3 % | 139 ± 3 % | 140 ± 3 % | 136 ± 3 % | 137 ± 3 % | 138 ± 3 % |
| Heat exchanger type | counter-flow | counter-flow | counter-flow | counter-flow | counter-flow | counter-flow |
| Heat exchanger material | polystyrene | polystyrene | polystyrene | enthalpic membrane | enthalpic membrane | enthalpic membrane |
| Heat recovery efficiency* [%] | 78...92 | 78...92 | 78...92 | 73...89 | 73...89 | 73...89 |
| SEC class | A | A | A | A | A | A |

*Heat recovery efficiency is specified in compliance with EN 13141-8.

| Parameters | Civic EC LB 500 S21 Civic EC LB 500 S14 | Civic EC LBE 500 S21 | Civic EC LBE2 500 S21 | Civic EC LB 1200 S21 | Civic EC LBE 1200 S21 | Civic EC LBE2 1200 S21 |
|------------------------------------------------|--------------------------------------------|---------------------------------|---------------------------------|----------------------|-----------------------|------------------------|
| Voltage [V / 50 (60) Hz] | 1~230 | 1~230 | 1~230 | 1~230 | 3~400 | 3~400 |
| Power consumption without heater(s) [W] | 230 | 230 | 230 | 350 | 350 | 350 |
| Preheater power consumption [W] | - | 1400 | 1400 | - | 6300 | 6300 |
| Reheater power consumption [W] | - | - | 2800 | - | - | 6300 |
| Max. current consumption without heater(s) [A] | 1.7 | 1.7 | 1.7 | 1.6 | 1.6 | 1.6 |
| Max. current consumption with heater(s) [A] | 1.7 | 7.8 | 20 | 1.6 | 9.6 | 18.7 |
| Maximum air flow [m³/h (l/s)] | 580 (161) | 580 (161) | 580 (161) | 1240 (344) | 1240 (344) | 1240 (344) |
| RPM [min ⁻¹] | 1280 | 1280 | 1280 | 3630 | 3630 | 3630 |
| Sound pressure level at 1 m [dBA] | 35 | 35 | 35 | 34 | 34 | 34 |
| Sound pressure level at 3 m [dBA] | 25 | 25 | 25 | 24 | 24 | 24 |
| Transported air temperature [°C] | -25...+40 | -25...+40 | -25...+40 | -25...+40 | -25...+40 | -25...+40 |
| Casing material | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel | polymer coated steel |
| Insulation | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool | 40 mm, mineral wool |
| Extract filter | G4 x 2 | G4 x 2 | G4 x 2 | G4 | G4 | G4 |
| Supply filter | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + F8 (option: F8 C + H11) | G4 + (option: F7) | G4 + (option: F7) | G4 + (option: F7) |
| Connected air duct diameter [mm] | 250 | 250 | 250 | 400 | 400 | 400 |
| Weight [kg] | 191 ± 3 % | 193 ± 3 % | 194 ± 3 % | 394 | 398 | 402 |
| Heat exchanger type | counter-flow | counter-flow | counter-flow | counter-flow | counter-flow | counter-flow |
| Heat exchanger material | polystyrene | polystyrene | polystyrene | polystyrene | polystyrene | polystyrene |
| Heat recovery efficiency* [%] | 75...94 | 75...94 | 75...94 | 84...96 | 84...96 | 84...96 |
| SEC class | A | A | A | A+ | A+ | A+ |

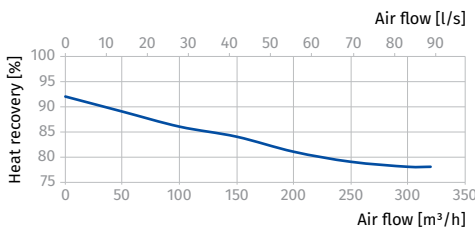
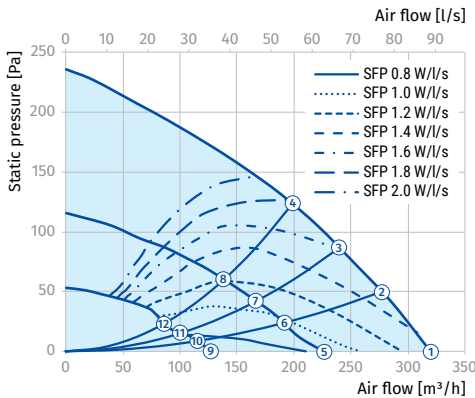
*Heat recovery efficiency is specified in compliance with EN 13141-8.

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CIVIC EC LB/LBE/LBE2 300

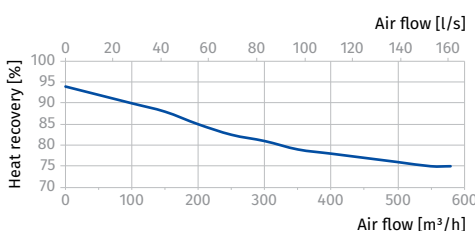
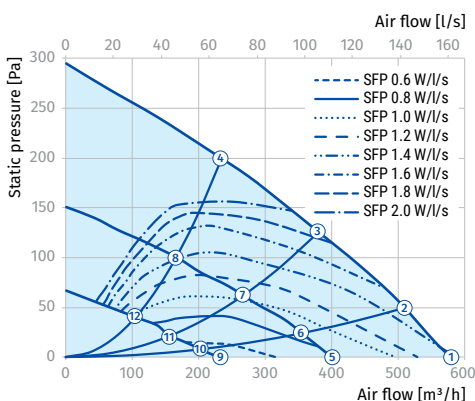
| Sound-power level, A - weighted | Total | Octave frequency band [Hz] | | | | | | | | LpA 3 m | LpA 1 m |
|------------------------------------|-------|----------------------------|-----|-----|-----|------|------|------|------|---------|---------|
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | | |
| LwA to environment @ point 1 [dBA] | 42 | 25 | 28 | 30 | 37 | 36 | 36 | 29 | 21 | 21 | 31 |
| LwA to environment @ point 5 [dBA] | 36 | 22 | 26 | 32 | 25 | 29 | 27 | 21 | 14 | 15 | 25 |
| LwA to environment @ point 9 [dBA] | 31 | 13 | 18 | 22 | 23 | 18 | 27 | 25 | 16 | 11 | 21 |



| Point | Total power of the unit [W] | Total sound pressure level at 3 m (1 m) [dBA] |
|-------|-----------------------------|-----------------------------------------------|
| 1 | 125 | 21 (31) |
| 2 | 113 | 20 (30) |
| 3 | 108 | 20 (30) |
| 4 | 100 | 19 (29) |
| 5 | 55 | 15 (25) |
| 6 | 52 | 15 (25) |
| 7 | 50 | 15 (25) |
| 8 | 45 | 14 (24) |
| 9 | 24 | 11 (21) |
| 10 | 23 | 11 (21) |
| 11 | 23 | 11 (21) |
| 12 | 23 | 10 (20) |

CIVIC EC LB/LBE/LBE2 500

| 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 environment @ point 1 [dBA] | 46 | 21 | 32 | 38 | 41 | 41 | 35 | 25 | 15 | 25 | 35 |
| LwA to environment @ point 5 [dBA] | 39 | 14 | 20 | 29 | 29 | 36 | 28 | 29 | 13 | 18 | 28 |
| LwA to environment @ point 9 [dBA] | 33 | 8 | 18 | 21 | 20 | 32 | 19 | 21 | 12 | 13 | 23 |



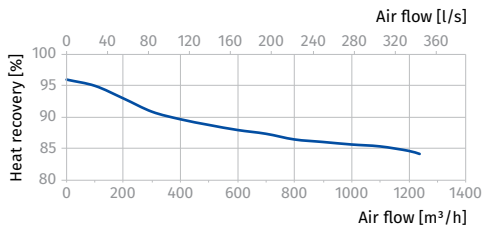
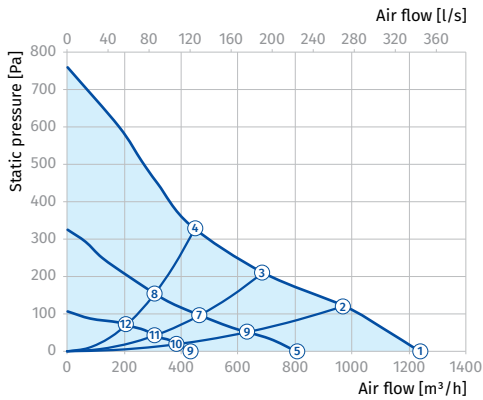
| Point | Total power of the unit [W] | Total sound pressure level at 3 m (1 m) [dBA] |
|-------|-----------------------------|-----------------------------------------------|
| 1 | 230 | 25 (35) |
| 2 | 215 | 25 (35) |
| 3 | 170 | 24 (34) |
| 4 | 168 | 24 (34) |
| 5 | 98 | 18 (28) |
| 6 | 92 | 18 (28) |
| 7 | 85 | 18 (28) |
| 8 | 75 | 17 (28) |
| 9 | 33 | 13 (23) |
| 10 | 31 | 13 (23) |
| 11 | 30 | 12 (22) |
| 12 | 29 | 12 (22) |

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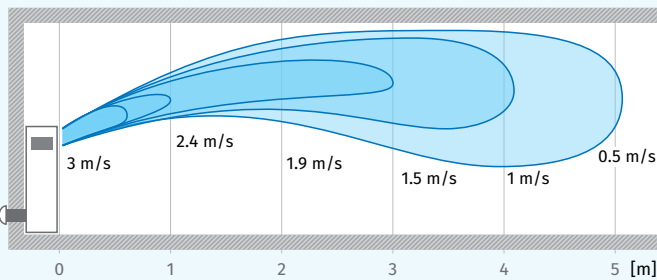
CIVIC EC LB/LBE/LBE2 1200

| 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 environment @ point 1 [dBA] | 44 | 31 | 35 | 40 | 37 | 36 | 36 | 28 | 17 | 24 | 34 |
| LWA to environment @ point 5 [dBA] | 38 | 27 | 31 | 33 | 29 | 30 | 27 | 22 | 13 | 17 | 27 |
| LWA to environment @ point 9 [dBA] | 32 | 21 | 27 | 21 | 25 | 17 | 19 | 24 | 16 | 11 | 21 |

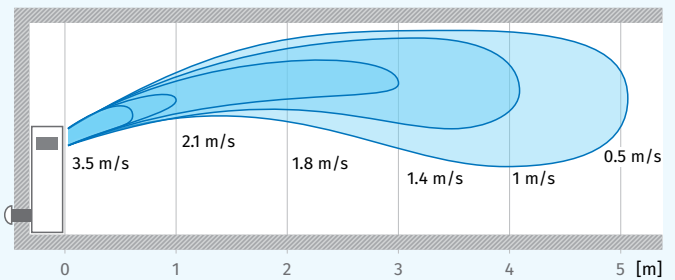


| Point | Total power of the unit [W] | Total sound pressure level at 3 m (1 m) [dBA] |
|-------|-----------------------------|-----------------------------------------------|
| 1 | 350 | 24 (34) |
| 2 | 356 | 24 (34) |
| 3 | 358 | 23 (33) |
| 4 | 356 | 23 (33) |
| 5 | 127 | 15 (25) |
| 6 | 129 | 15 (25) |
| 7 | 129 | 14 (24) |
| 8 | 129 | 14 (24) |
| 9 | 50 | 11 (21) |
| 10 | 50 | 11 (21) |
| 11 | 50 | 11 (21) |
| 12 | 48 | 10 (20) |

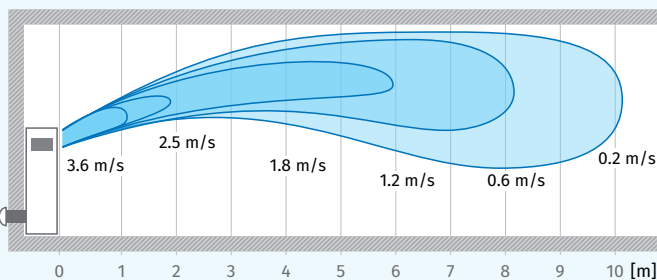
Fresh air flow distance for CIVIC EC LB 300



Fresh air flow distance for CIVIC EC LB 500



Fresh air flow distance for CIVIC EC LB 1200



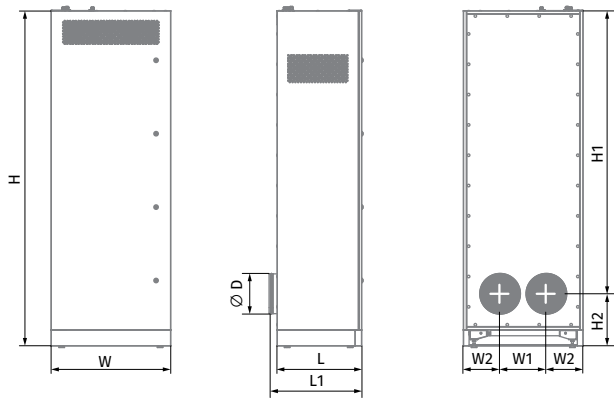
The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80%.

CIVIC EC LB

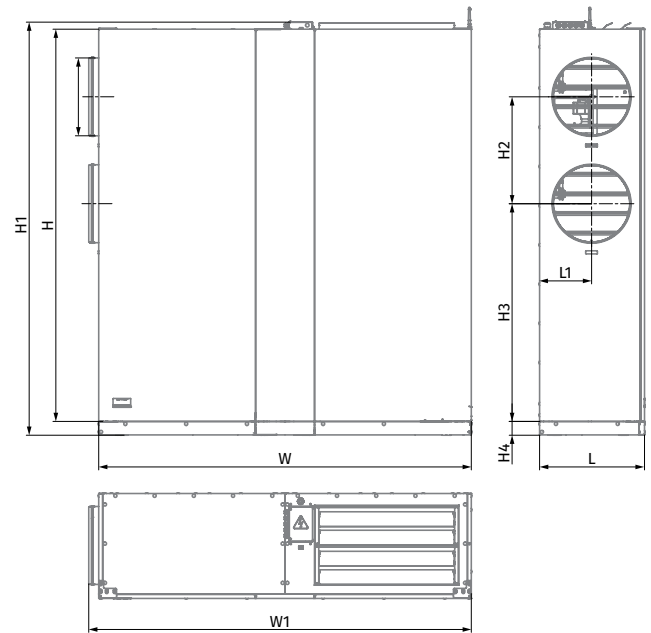
SINGLE-ROOM AIR HANDLING UNITS

Overall dimensions [mm]

| Model | ∅ D | H | H1 | H2 | H3 | H4 | L | L1 | W | W1 | W2 |
|------------------|-----|------|------|-----|------|----|-----|-----|------|------|-----|
| CIVIC EC LB 300 | 200 | 1770 | 1476 | 294 | - | - | 470 | 520 | 620 | 230 | 195 |
| CIVIC EC LB 500 | 250 | 2170 | 1833 | 337 | - | - | 535 | 585 | 750 | 290 | 230 |
| CIVIC EC LB 1200 | 397 | 2000 | 2106 | 545 | 1110 | 70 | 535 | 265 | 1900 | 1951 | - |



CIVIC EC LB 300 / CIVIC EC LB 500

















CIVIC EC LB 1200

CIVIC EC LB



SINGLE-ROOM AIR HANDLING UNITS

Accessories

| | | Civic EC LB... 300 S21 | Civic EC LB... 500 S21 | Civic EC LB... 500 S14 | Civic EC LB... 1200 S21 |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------------------------|------------------------|-------------------------|
| Outer ventilation hood made of brushed stainless steel |  | AH Civic 300 LB chrome | AH Civic 500 LB chrome | AH Civic 500 LB chrome | AH Civic 1200 LB chrome |
| Outer ventilation hood made of white coated stainless steel |  | AH Civic 300 LB white | AH Civic 500 LB white | AH Civic 500 LB white | AH Civic 1200 LB white |
| G4 filter |  | FP 308x238x22 G4 PPI | FP 450x257x27 G4 PPI | FP 450x257x27 G4 PPI | FP 450x395x48 G4 PET |
| G4 filter |  | FP 265x213x48 G4 | FP 318x290x22 G4 | FP 318x290x22 G4 | FP 540x450x48 G4 |
| F7 filter |  | - | - | - | FP 540x450x48 F7 |
| F8 filter |  | FP 384x273x60 F8 | FP 318x290x60 F8 | FP 318x290x60 F8 | - |
| F8 carbon filter |  | FP 533x135x48 F8 C | FP 666x196x48 F8 C | FP 666x196x48 F8 C | - |
| H11 HEPA filter |  | FP 533x135x60 H11 | FP 666x196x60 H11 | FP 666x196x60 H11 | - |
| Control panel |  | S22 | S22 | S14 | S22 |
| Wi-Fi control panel |  | S22 Wi-Fi | S22 Wi-Fi | - | S22 Wi-Fi |
| LCD Control panel |  | S25 | S25 | - | S25 |
| VOC sensor |  | DPWQ30600 | DPWQ30600 | - | DPWQ30600 |
| CO ₂ sensor |  | DPWQ40200 | DPWQ40200 | - | DPWQ40200 |
| Humidity sensor |  | DPWC11200 | DPWC11200 | - | DPWC11200 |

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SINGLE-ROOM AIR HANDLING UNITS

| | | Civic EC LB... 300 S21 | Civic EC LB... 500 S21 | Civic EC LB... 500 S14 | Civic EC LB... 1200 S21 |
|----------------------------------------|-------------------------------------------------------------------------------------|------------------------|------------------------|------------------------|-------------------------|
| CO ₂ sensor with indication |  | CD-1 | CD-1 | CD-1 | CD-1 |
| CO ₂ sensor |  | CD-2 | CD-2 | CD-2 | CD-2 |
| Internal humidity sensor |  | FS2 | FS2 | FS2 | FS2 |
| Humidity sensor |  | HR-S | HR-S | HR-S | HR-S |
| Syphon kit |  | SFK 20x32 | SFK 20x32 | SFK 20x32 | SFK 20x32 |
| Drain pump |  | CP-2 | CP-2 | CP-2 | CP-2 |