

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 %

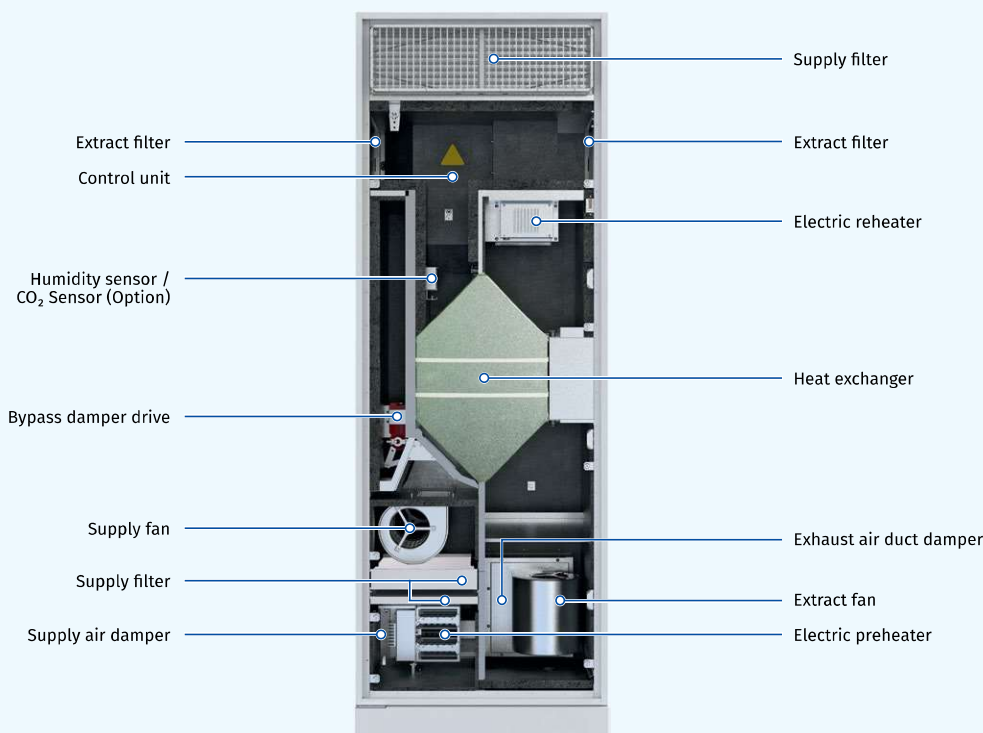


Design

- 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 [m³/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

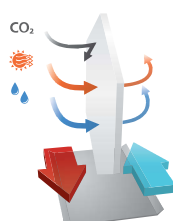
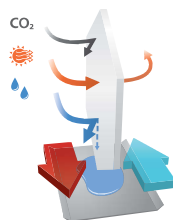
- CIVIC EC LBE** and **CIVIC EC LBE2** units are equipped with an electric preheater which protects the heat exchanger from freezing.

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+

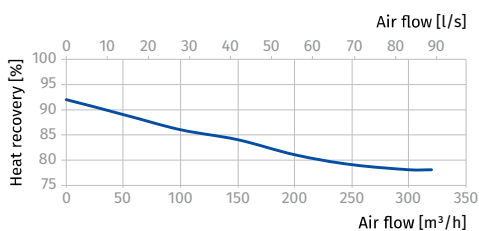
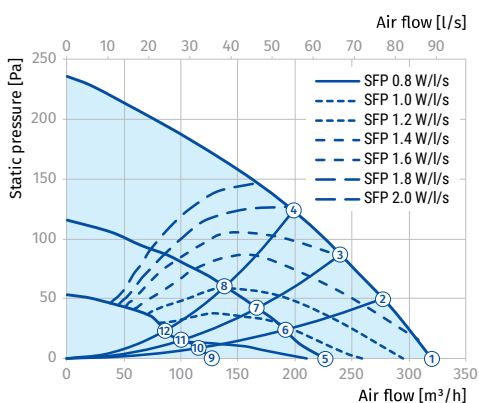
*Heat recovery efficiency is specified in compliance with EN 13141-8.

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CIVIC EC LB/LBE/LBE2 300

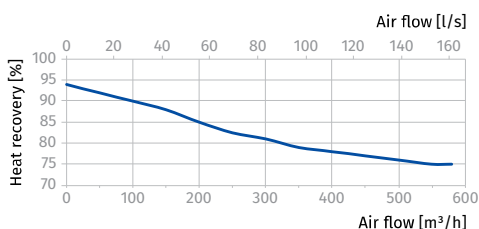
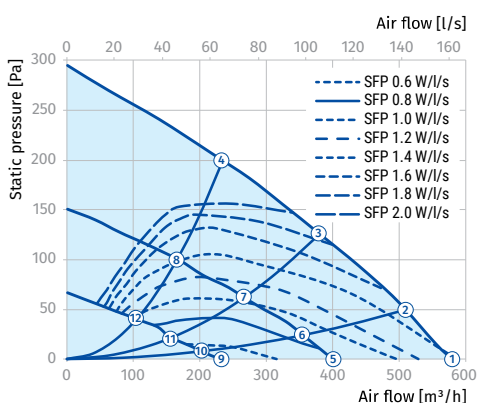
Sound-power level, A - weighted	Total	Octave frequency band [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to environment @ point 1 [dBA]	42	25	28	30	37	36	36	29	21	21	31
L _{WA} to environment @ point 5 [dBA]	36	22	26	32	25	29	27	21	14	15	25
L _{WA} to environment @ point 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		
L _{WA} to environment @ point 1 [dBA]	46	21	32	38	41	41	35	25	15	25	35
L _{WA} to environment @ point 5 [dBA]	39	14	20	29	29	36	28	29	13	18	28
L _{WA} to environment @ point 9 [dBA]	33	8	18	21	20	32	19	21	12	13	23



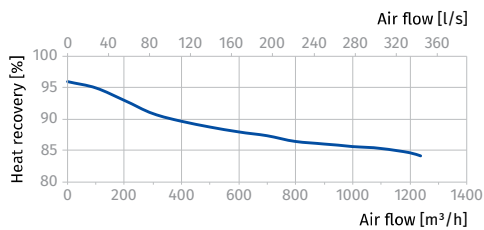
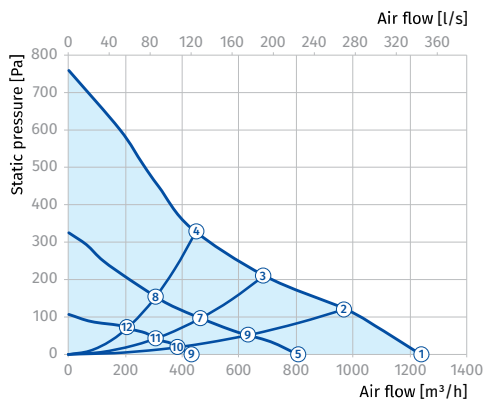
Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [dBA]
1	230	25 (35)
2	215	25 (35)
3	170	24 (34)
4	168	24 (34)
5	98	18 (28)
6	92	18 (28)
7	85	18 (28)
8	75	17 (28)
9	33	13 (23)
10	31	13 (23)
11	30	12 (22)
12	29	12 (22)

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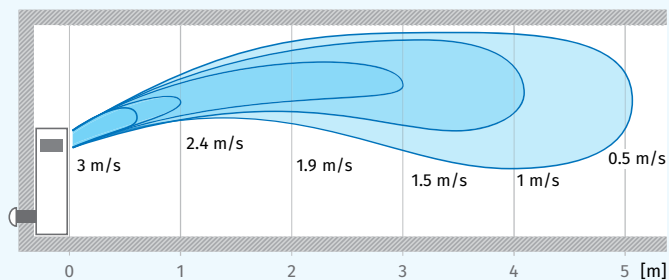
CIVIC EC LB/LBE/LBE2 1200

Sound-power level, A - weighted	Total	Octave frequency band [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L _{WA} to environment @ point 1 [dBA]	44	31	35	40	37	36	36	28	17	24	34
L _{WA} to environment @ point 5 [dBA]	38	27	31	33	29	30	27	22	13	17	27
L _{WA} to environment @ point 9 [dBA]	32	21	27	21	25	17	19	24	16	11	21

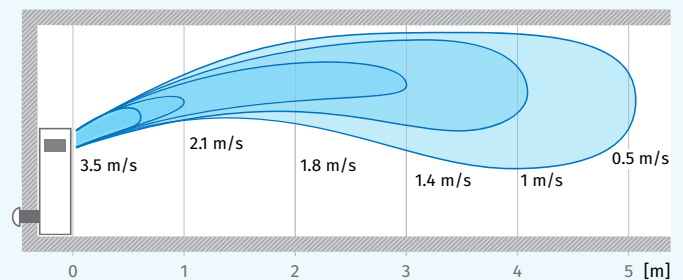


Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [dBA]
1	350	24 (34)
2	356	24 (34)
3	358	23 (33)
4	356	23 (33)
5	127	15 (25)
6	129	15 (25)
7	129	14 (24)
8	129	14 (24)
9	50	11 (21)
10	50	11 (21)
11	50	11 (21)
12	48	10 (20)

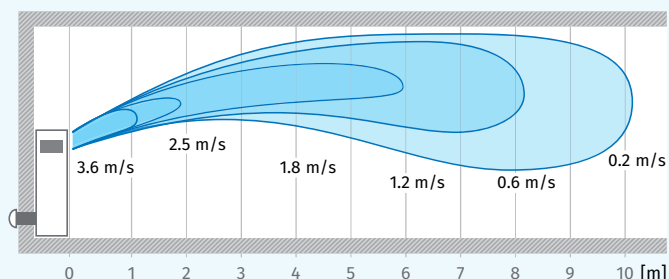
Fresh air flow distance for CIVIC EC LB 300



Fresh air flow distance for CIVIC EC LB 500



Fresh air flow distance for CIVIC EC LB 1200



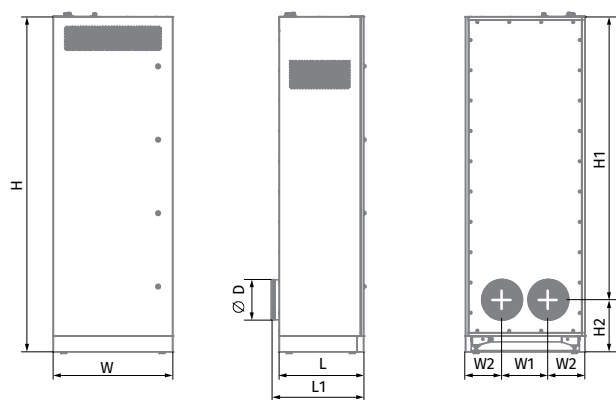
The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80 %.

CIVIC EC LB

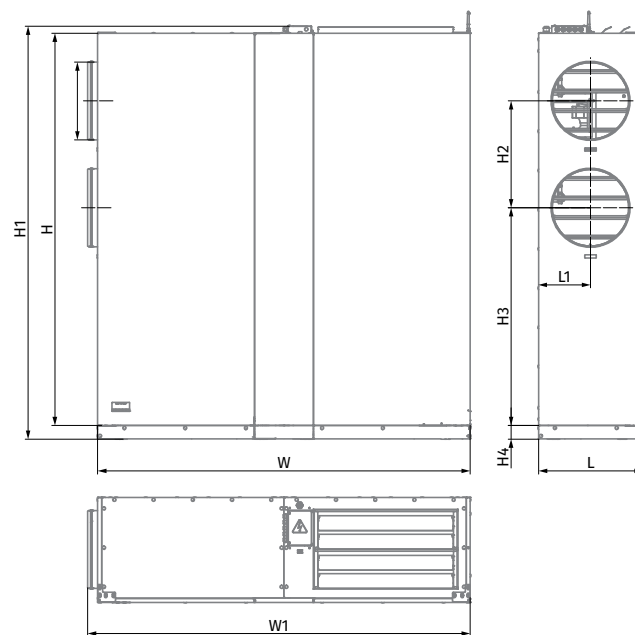
SINGLE-ROOM AIR HANDLING UNITS

Overall dimensions [mm]

Model	Ø 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

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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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		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