

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

### Features

- The **CIVIC EC LB V.2** 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 m<sup>3</sup>/h  
344 l/s



**Heat recovery efficiency:**  
up to 96 %

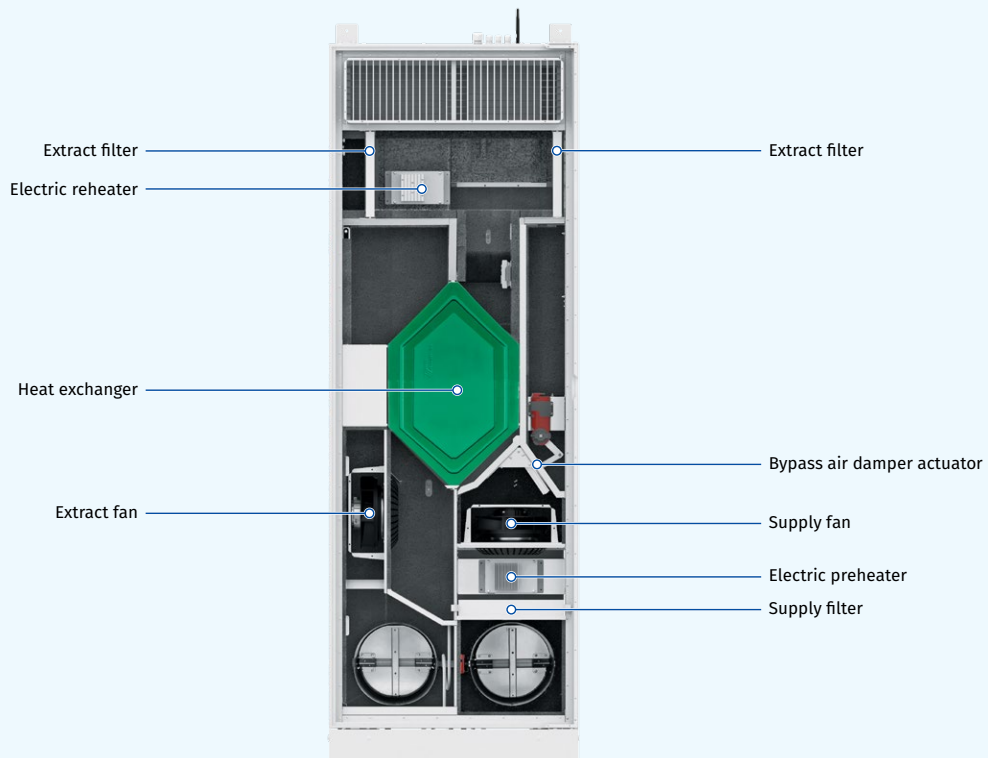


### Design

- 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 <sup>3</sup> /h]	Heat exchanger type	Service side (for Civic...1200)	Control	Modernization
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	V.2: second modernized generation

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### Air filtration

- Exhaust cassette filter: ISO Coarse >60 % (G4).
- Supply cassette filter: ISO ePM1 60 % (F7)

### 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

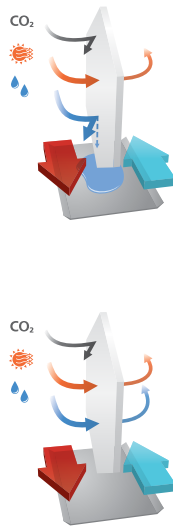
- CIVIC EC LBE V.2** and **CIVIC EC LBE2 V.2** units are equipped with an electric preheater which protects the heat exchanger from freezing.

#### REHEATING

- CIVIC EC LBE2 V.2** units feature an electric reheater to raise the supply air temperature.

### Heat exchanger

- The **CIVIC EC LB V.2** 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 V.2** 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 V.2** 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 Home** mobile application via Wi-Fi.






Download the **Blauberg Home** app for Android



Download the **Blauberg Home** app for iOS



### Automation functions

Functions	Description
Unit control via Wi-Fi using the mobile application	+
Unit control via remote control panel	S22 control panel (option) 
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)
Speed switch	+
Filter replacement indication	by filter timer
Alarm indication	full alarm description in the mobile application
Week scheduled operation	+
Bypass	automatic manual
Timer	+
Boost mode	+
Fireplace mode	+
Freeze protection	using cyclical stops of the supply fan using preheating (option)
Reheater connection	option
Cooler connection	option
Minimum supply air temperature control	+
Humidity control	option
CO <sub>2</sub> control	option
VOC control	option
PM2.5 control	option
Fire alarm sensor connection	option

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

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

### Technical data

Parameters	Civic EC LB 300 S21 V.2	Civic EC LBE 300 S21 V.2	Civic EC LBE2 300 S21 V.2	Civic EC LB 300-E S21 V.2	Civic EC LBE 300-E S21 V.2	Civic EC LBE2 300-E S21 V.2
Voltage [V / 50 (60) Hz]	1~230	1~230	1~230	1~230	1~230	1~230
Max. power consumption without an electric heater [W]	96	96	96	96	96	96
Preheater power [W]	-	1050	1050	-	1050	1050
Reheater power [W]	-	-	700	-	-	700
Max. current without an electric heater [A]	0.75	0.75	0.75	0.75	0.75	0.75
Max. current with an electric heater [A]	-	7	11	-	7	11
Maximum air flow [m³/h (l/s)]	320 (89)	320 (89)	320 (89)	320 (89)	320 (89)	320 (89)
Sound pressure level at 1 m [dBA]	47	47	47	47	47	47
Sound pressure level at 3 m [dBA]	37	37	37	37	37	37
Max. 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	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)
Supply filter	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)
Connected air duct diameter [mm]	200	200	200	200	200	200
Weight [kg]	100	101	103	100	101	103
Heat recovery efficiency* [%]	85...94	85...94	85...94	73...89	73...89	73...89
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
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 V.2	Civic EC LBE 500 S21 V.2	Civic EC LBE2 500 S21 V.2	Civic EC LB 1200 S21 V.2	Civic EC LBE 1200 S21 V.2	Civic EC LBE2 1200 S21 V.2
Voltage [V / 50 (60) Hz]	1~230	1~230	1~230	1~230	3~400	3~400
Max. power consumption without an electric heater [W]	370	370	370	345	345	345
Preheater power [W]	-	1050	1050	-	3150	3150
Reheater power [W]	-	-	700	-	-	2110
Max. current without an electric heater [A]	2.5	2.5	2.5	2.3	2.3	2.3
Max. current with an electric heater [A]	-	9.1	13.3	-	12	18.7
Maximum air flow [m³/h (l/s)]	580 (161)	580 (161)	580 (161)	1240 (344)	1240 (344)	1240 (344)
Sound pressure level at 1 m [dBA]	47	47	47	40	40	40
Sound pressure level at 3 m [dBA]	38	38	38	30	30	30
Max. 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	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)	ISO Coarse >60 % (G4)
Supply filter	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)	ISO ePM1 60 % (F7)
Connected air duct diameter [mm]	250	250	250	400	400	400
Weight [kg]	139	140	142	352	358	363
Heat recovery efficiency* [%]	75...94	75...94	75...94	84...96	84...96	84...96
Heat exchanger type	counter-flow	counter-flow	counter-flow	counter-flow	counter-flow	counter-flow
Heat exchanger material	polystyrene	polystyrene	polystyrene	polystyrene	polystyrene	polystyrene
SEC class	A	A	A	-	-	-

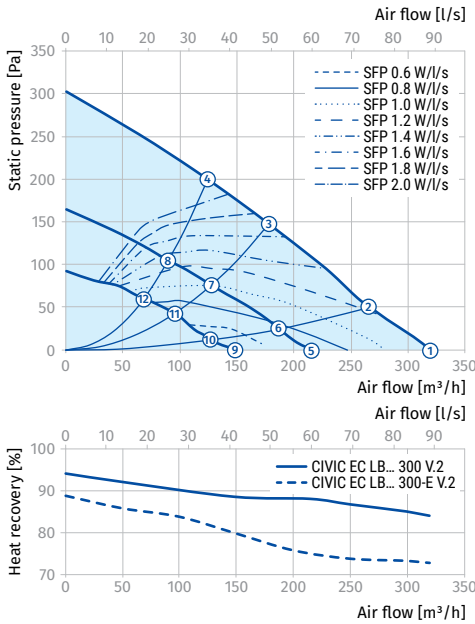
\*Heat recovery efficiency is specified in compliance with EN 13141-8.

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

### CIVIC EC LB/LBE/LBE2 300 V.2

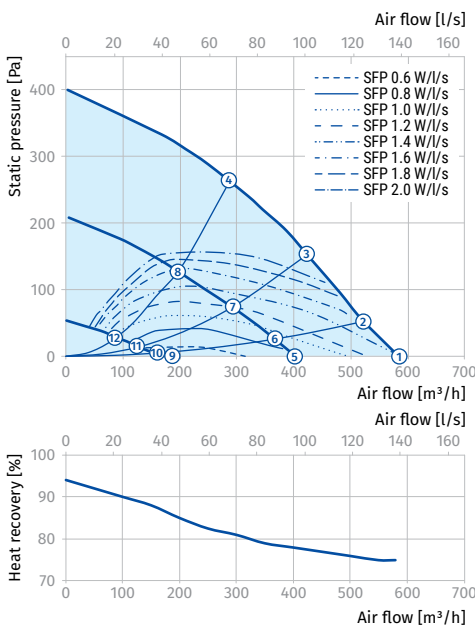
Sound-power level, A - weighted	Total	Octave frequency band [Hz]										LpA 3 m	LpA 1 m								
		200	250	315	400	500	630	800	1000	1250	1600			2000	2500	3150	4000	5000	6300	8000	10000
LWA to environment @ point 1 [dBA]	58	46	50	48	44	49	48	43	46	46	47	48	45	39	32	27	24	26	25	37	47
LWA to environment @ point 5 [dBA]	49	29	39	34	40	41	39	35	38	38	39	39	35	28	22	20	20	23	24	29	38
LWA to environment @ point 9 [dBA]	42	30	33	31	29	36	32	26	31	30	30	30	26	21	19	19	19	23	24	22	31
LWA to environment @ point 3 [dBA]	58	46	50	47	44	49	48	44	46	46	47	47	44	39	33	28	24	25	25	37	47
LWA to environment @ point 4 [dBA]	58	46	50	48	45	50	48	43	46	46	47	48	45	39	32	27	23	25	25	38	47



Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [dBA]
1	92	37 (47)
2	91	-
3	85	37 (47)
4	75	38 (47)
5	40	29 (38)
6	38	-
7	35	-
8	32	-
9	19	22 (31)
10	18	-
11	17	-

### CIVIC EC LB/LBE/LBE2 500 V.2

Sound-power level, A - weighted	Total	Octave frequency band [Hz]										LpA 3 m	LpA 1 m								
		200	250	315	400	500	630	800	1000	1250	1600			2000	2500	3150	4000	5000	6300	8000	10000
LWA to environment @ point 1 [dBA]	57	47	52	51	48	47	44	45	45	44	46	48	45	38	30	27	25	26	27	38	47
LWA to environment @ point 5 [dBA]	49	44	37	36	42	38	38	37	38	37	39	41	37	29	24	23	22	25	26	28	39
LWA to environment @ point 9 [dBA]	37	28	27	26	31	29	28	28	29	27	27	28	25	21	20	21	22	25	27	17	27
LWA to environment @ point 3 [dBA]	55	47	46	42	47	46	43	43	43	43	43	45	42	35	29	27	24	26	27	35	45
LWA to environment @ point 4 [dBA]	47	49	48	49	52	51	50	50	49	48	46	46	44	38	33	30	27	28	28	28	37



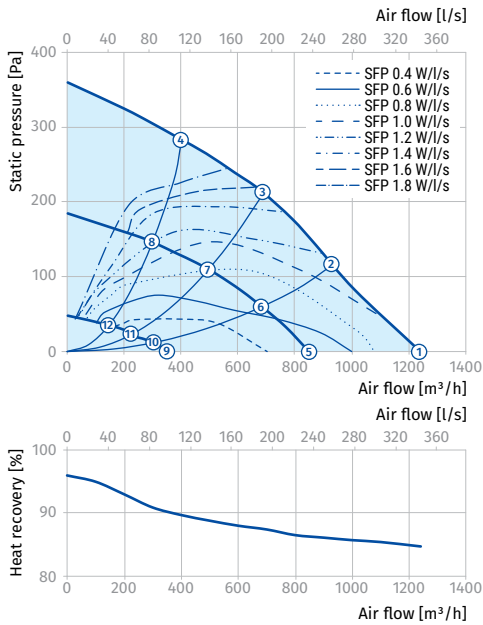
Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [dBA]
1	236	37 (47)
2	236	-
3	234	35 (45)
4	234	28 (37)
5	80	28 (39)
6	78	-
7	76	-
8	75	-
9	21	17 (27)
10	19	-
11	20	-

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

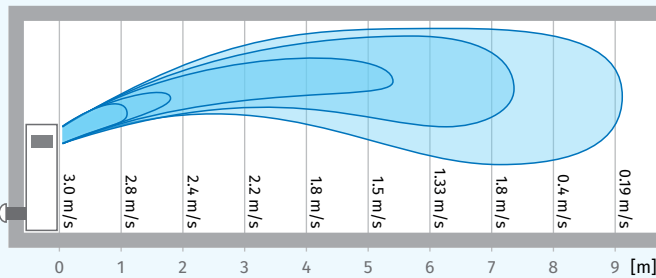
### CIVIC EC LB/LBE/LBE2 1200 V.2

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]	50	31	35	40	37	36	36	28	17	30	40
LWA to environment @ point 5 [dBA]	47	27	31	33	29	30	27	22	13	26	36
LWA to environment @ point 9 [dBA]	32	21	27	21	25	17	19	24	16	11	21

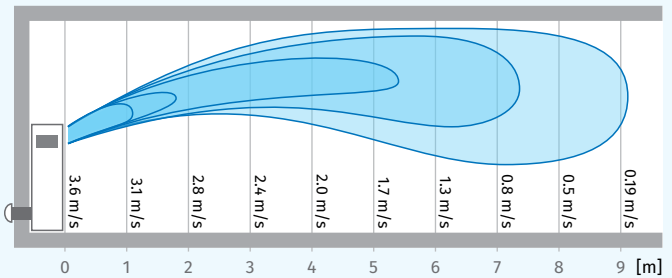


Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [dBA]
1	315	30 (40)
2	312	-
3	311	30 (40)
4	308	26 (36)
5	122	15 (25)
6	121	-
7	120	-
8	118	-
9	24	11 (21)
10	23	-
11	22	-

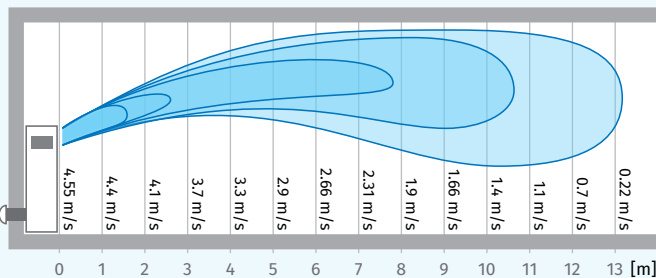
Fresh air flow distance for CIVIC EC LB 300 V.2



Fresh air flow distance for CIVIC EC LB 500 V.2



Fresh air flow distance for CIVIC EC LB 1200 V.2



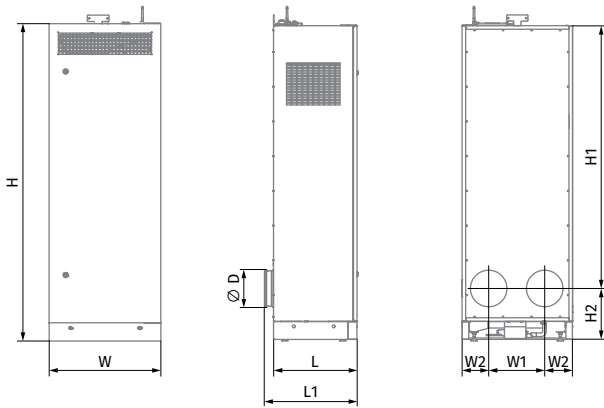
The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80%.

# CIVIC EC LB V.2

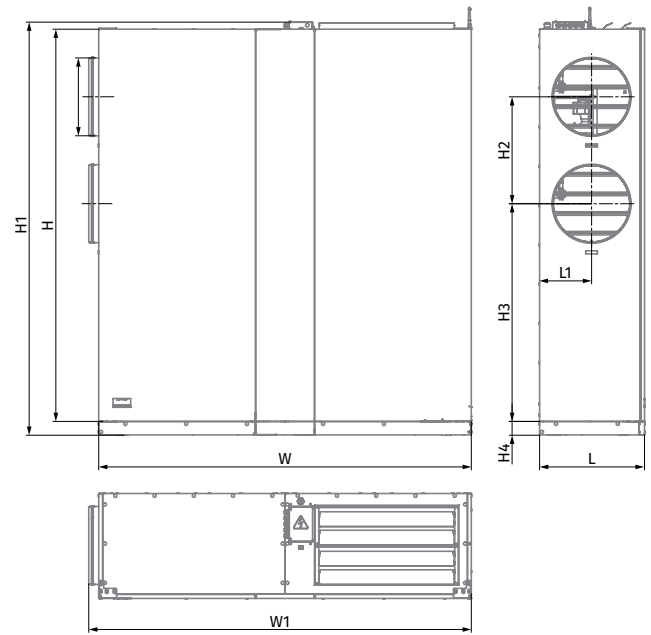
## SINGLE-ROOM AIR HANDLING UNITS

### Overall dimensions [mm]

Model	∅ D	H	H1	H2	H3	H4	L	L1	W	W1	W2
CIVIC EC LB 300 V.2	200	1775	1485	285	-	-	470	520	620	310	155
CIVIC EC LB 500 V.2	250	2170	1865	305	-	-	535	585	750	350	200
CIVIC EC LB 1200 V.2	400	2000	2106	545	1110	70	535	265	1900	1951	-



CIVIC EC LB 300 V.2 / CIVIC EC LB 500 V.2
















CIVIC EC LB 1200 V.2

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

### Accessories

		Civic EC LB... 300 S21 V.2	Civic EC LB... 500 S21 V.2	Civic EC LB... 1200 S21 V.2
Outer ventilation hood made of brushed stainless steel		AH Civic 300 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 1200 LB white
Extract filter ISO Coarse >60 % (G4)		FP 203x308x20 G4 (2 pcs.)	FP 255x448x25 G4 (2 pcs.)	FP 450x395x48 G4
Supply filter ISO ePM1 60 % (F7)		FP 384x273x60 F7	FP 449x318x60 F7	FP 540x450x48 F7
Control panel		S22	S22	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
Humidity sensor		DPWC11200	DPWC11200	DPWC11200
CO <sub>2</sub> sensor		DPWQ40200	DPWQ40200	DPWQ40200
CO <sub>2</sub> sensor with indication		CD-1	CD-1	CD-1
CO <sub>2</sub> sensor		CD-2	CD-2	CD-2
CO <sub>2</sub> sensor		CD-3	CD-3	CD-3

# CIVIC EC LB V.2

## SINGLE-ROOM AIR HANDLING UNITS

		Civic EC LB... 300 S21 V.2	Civic EC LB... 500 S21 V.2	Civic EC LB... 1200 S21 V.2
Internal humidity sensor		FS2	FS2	FS2
Humidity sensor		HR-S	HR-S	HR-S
Syphon kit		SFK 20x32	SFK 20x32	SFK 20x32
Drain pump		CP-2	CP-2	CP-2