

# CIVIC EC DB

## SINGLE-ROOM AIR HANDLING UNITS

### Features

- The **CIVIC EC DB** units are designed for single-room 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 1000 m<sup>3</sup>/h  
278 l/s



**Heat recovery efficiency:**  
up to 93 %

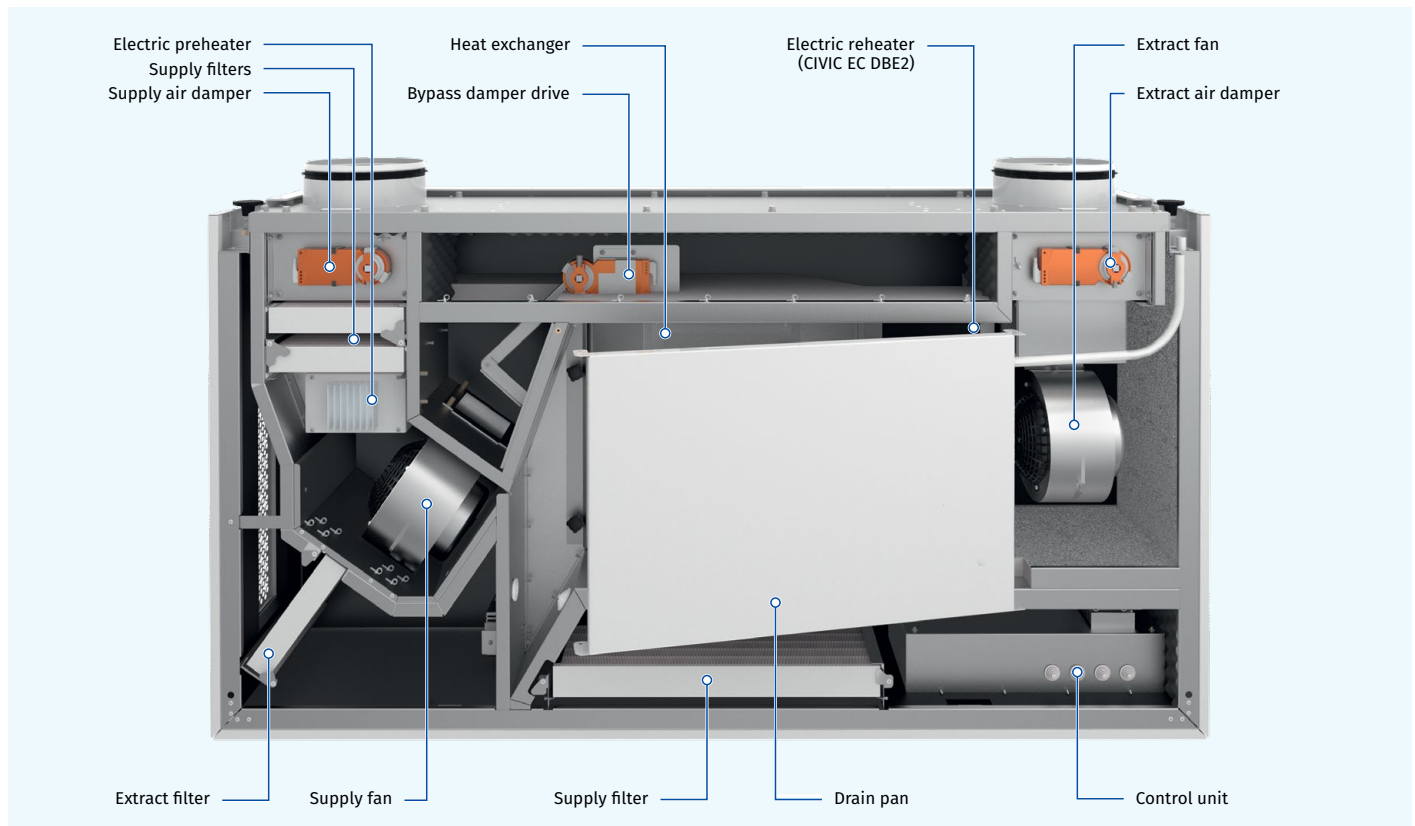


### Design

- Made of high-quality polymer coated steel, internally lined with heat- and sound insulation of mineral wool or other materials.
- Available modifications with an integrated preheater and reheater for cold climate applications.

### 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]	Control
CIVIC	EC: synchronous electronically commutated motor	D: Suspended mounting, horizontally oriented spigots; D1: Suspended mounting, vertically oriented spigots	B: with bypass	_: without heater E: preheating E2: preheating + reheating	_: without drain pump CP: with drain pump	300; 500; 1000	S21

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### Air filtration

- Supply and extract air is purified by a set of panel filters. Filtering class and component parts depend on the size of a unit.
- 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.

### Heater

#### PREHEATING

- CIVIC EC DBE and CIVIC EC DBE2 units are equipped with an electric preheater which protects the heat exchanger from freezing.

#### REHEATING

- CIVIC EC DBE2 units feature an electric reheater to raise the supply air temperature.

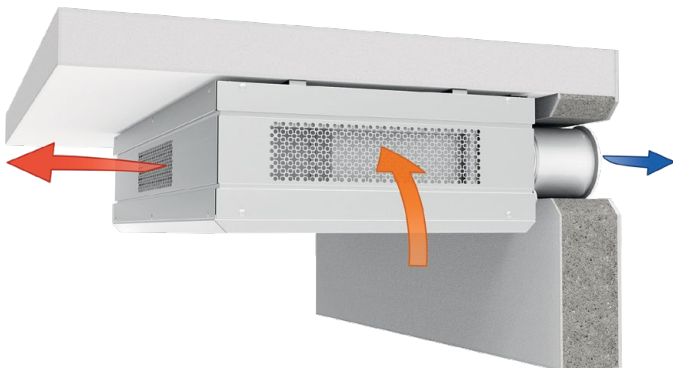
### Heat exchanger

- The CIVIC EC DB 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 through the drain pipes 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.



### 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.



### Control and automation

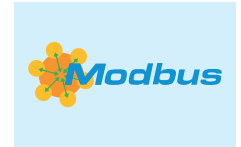
- The CIVIC EC DB S21 units are equipped with an integrated automation system.
- The S21 controller allows integrating the unit into the **BMS (Building Management System)**.
- The unit can be controlled by the **Blauberg AHU** mobile application via Wi-Fi.






Download the **Blauberg AHU** app for Android



Download the **Blauberg AHU** app for iOS



### 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)
Blauberg Cloud Server service	+
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 DB

## SINGLE-ROOM AIR HANDLING UNITS

### Technical data

Parameters	CIVIC EC DB 300 S21	CIVIC EC DBE 300 S21	CIVIC EC DBE2 300 S21	CIVIC EC DB 500 S21	CIVIC EC DBE 500 S21	CIVIC EC DBE2 500 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	170	170	170
Preheater power consumption [W]	-	1050	1050	-	1750	1750
Reheater power consumption [W]	-	-	1400	-	-	1750
Max. current consumption without heater(s) [A]	1.3	1.3	1.3	1.7	1.7	1.7
Max. current consumption with heater(s) [A]	1.3	7.3	13.6	1.7	10.4	18.2
Maximum air flow [m <sup>3</sup> /h (l/s)]	300 (83)	300 (83)	300 (83)	510 (142)	510 (142)	510 (142)
RPM [min <sup>-1</sup> ]	2150	2150	2150	1700	1700	1700
Sound pressure level at 3 m [dBA]	22	22	22	24	24	24
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	30 mm, polyester	30 mm, polyester	30 mm, polyester	30 mm, polyester	30 mm, polyester	30 mm, polyester
Extract filter	G4	G4	G4	G4	G4	G4
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	250	250	250
Weight [kg]	78	79	80	126	128	130
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* [%]	76 ... 88%	76 ... 88%	76 ... 88%	74 ... 86%	74 ... 86%	74 ... 86%
SEC class	A	A	A	A	A	A

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

Parameters	CIVIC EC DB 1000 S21	CIVIC EC DBE 1000 S21	CIVIC EC DBE2 1000 S21
Voltage [V / 50 (60) Hz]	3~400	3~400	3~400
Power consumption without heater(s) [W]	260	260	260
Preheater power consumption [W]	-	6300	6300
Reheater power consumption [W]	-	-	6300
Max. current consumption without heater(s) [A]	1.85	1.85	1.85
Max. current consumption with heater(s) [A]	1.85	11.2	20.5
Maximum air flow [m <sup>3</sup> /h (l/s)]	1000 (278)	1000 (278)	1000 (278)
RPM [min <sup>-1</sup> ]	2070	2070	2070
Sound pressure level at 3 m [dBA]	25	25	25
Max. transported air temperature [°C]	-25...+40	-25...+40	-25...+40
Casing material	polymer coated steel	polymer coated steel	polymer coated steel
Insulation	45 mm, polyurethane foam	45 mm, polyurethane foam	45 mm, polyurethane foam
Extract filter	G4 x 2	G4 x 2	G4 x 2
Supply filter	G4x2 + (option: F7 x 2)	G4x2 + (option: F7 x 2)	G4x2 + (option: F7 x 2)
Connected air duct diameter [mm]	315	315	315
Weight [kg]	267	271	275
Heat exchanger type	counter-flow	counter-flow	counter-flow
Heat exchanger material	polystyrene	polystyrene	polystyrene
Heat recovery efficiency* [%]	83...93	83...93	83...93
SEC class	A+	A+	A+

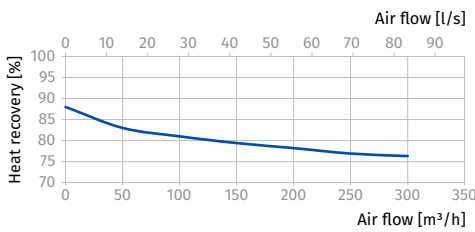
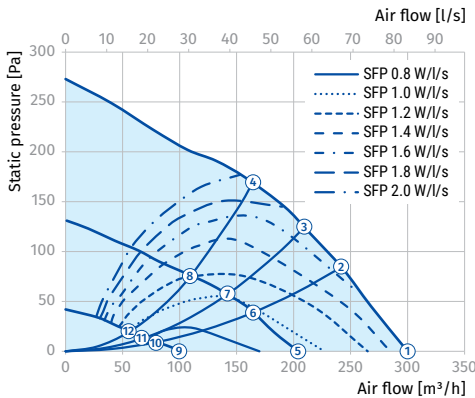
\*Heat recovery efficiency is specified in compliance with EN 13141-8.

# CIVIC EC DB

## SINGLE-ROOM AIR HANDLING UNITS

### CIVIC EC DB/DBE/DBE2 300

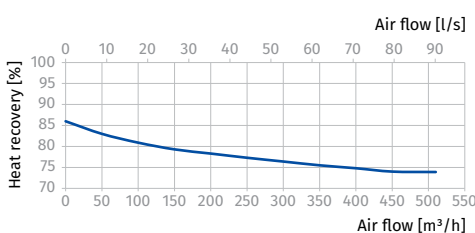
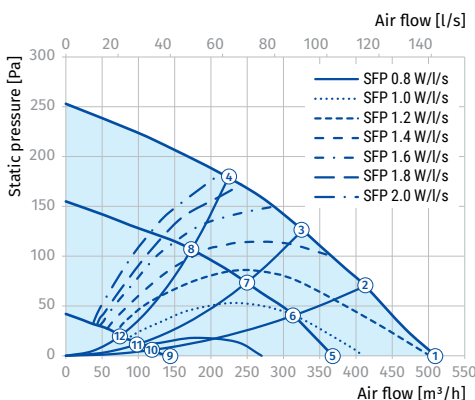
Sound-power level, A - weighted	Total	Octave frequency band [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to environment @ point 1 [dBA]	42	27	30	32	36	37	35	27	25	22	32
L <sub>WA</sub> to environment @ point 5 [dBA]	35	22	22	32	24	29	25	20	17	15	25
L <sub>WA</sub> to environment @ point 9 [dBA]	27	12	16	19	19	15	21	17	17	6	16



Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [LBA]
1	125	22 (32)
2	116	21 (31)
3	104	21 (31)
4	86	20 (30)
5	48	15 (25)
6	44	15 (25)
7	42	15 (25)
8	36	15 (25)
9	17	6 (16)
10	17	6 (16)
11	16	6 (16)
12	16	6 (16)

### CIVIC EC DB/DBE/DBE2 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 <sub>WA</sub> to environment @ point 1 [dBA]	44	22	28	38	41	37	33	25	16	24	34
L <sub>WA</sub> to environment @ point 5 [dBA]	40	18	24	32	32	36	28	29	17	19	29
L <sub>WA</sub> to environment @ point 9 [dBA]	34	10	17	22	21	33	18	18	17	13	23



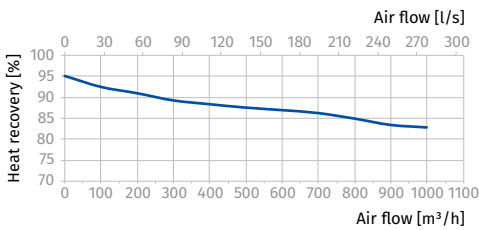
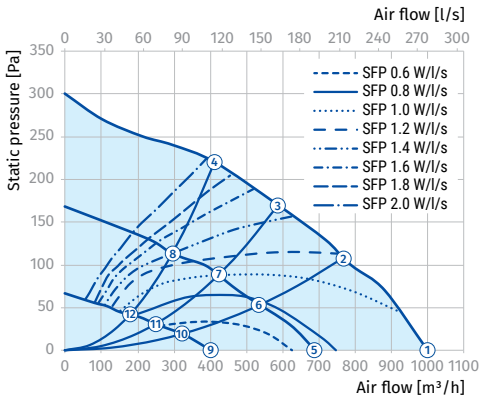
Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [LBA]
1	170	24 (34)
2	153	23 (33)
3	135	23 (33)
4	116	22 (32)
5	95	19 (29)
6	86	19 (29)
7	80	19 (29)
8	68	18 (28)
9	25	13 (23)
10	24	13 (23)
11	24	13 (23)
12	22	13 (23)

# CIVIC EC DB

## SINGLE-ROOM AIR HANDLING UNITS

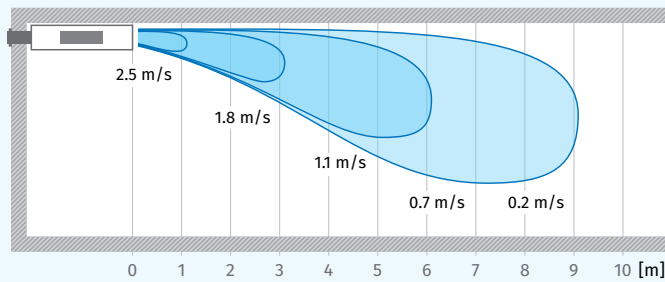
### CIVIC EC DB/DBE/DBE2 1000

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 <sub>WA</sub> to environment @ point 1 [dBA]	46	32	38	41	38	37	37	30	21	25	35
L <sub>WA</sub> to environment @ point 5 [dBA]	41	29	33	36	33	33	33	27	20	21	31
L <sub>WA</sub> to environment @ point 9 [dBA]	36	25	31	24	29	22	24	29	24	16	26

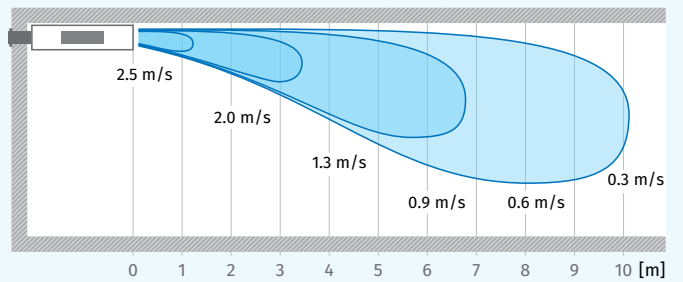


Point	Total power of the unit [W]	Total sound pressure level at 3 m (1 m) [LBA]
1	260	25 (35)
2	251	24 (34)
3	235	24 (34)
4	221	23 (33)
5	136	21 (31)
6	130	21 (31)
7	125	21 (31)
8	120	20 (30)
9	47	16 (26)
10	45	16 (26)
11	44	16 (26)
12	42	16 (26)

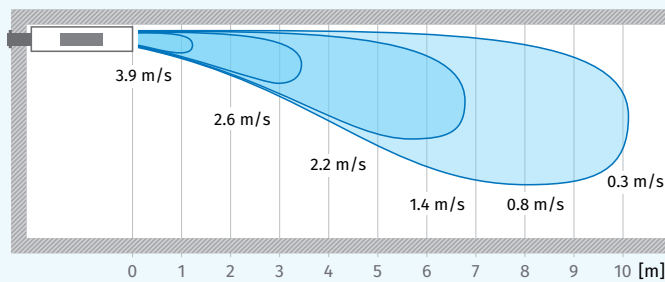
Fresh air flow distance for CIVIC EC DB 300



Fresh air flow distance for CIVIC EC DB 500



Fresh air flow distance for CIVIC EC DB 1000



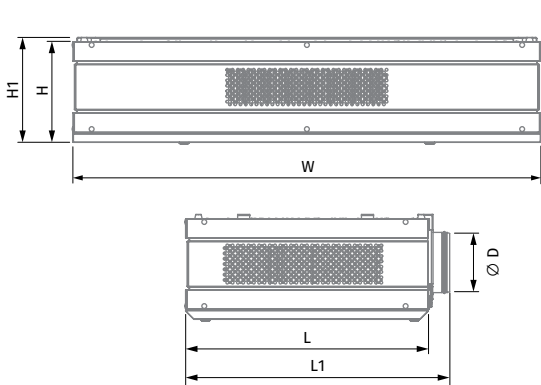
The unit is rated for indoor application with the ambient temperature ranging from +1 °C to +40 °C and relative humidity up to 80%

# CIVIC EC DB

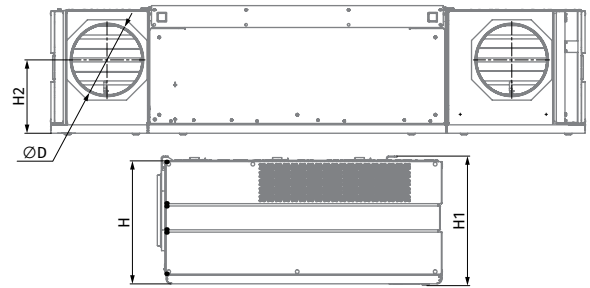
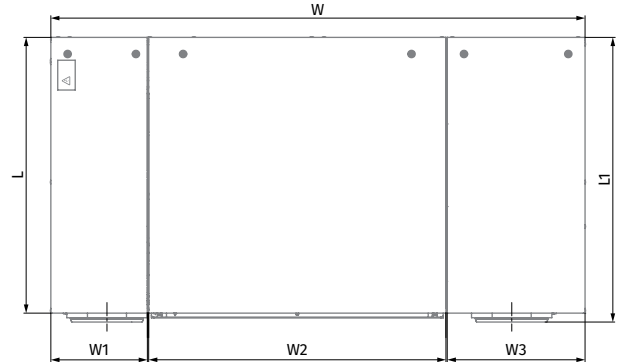
## SINGLE-ROOM AIR HANDLING UNITS

### Overall dimensions [mm]

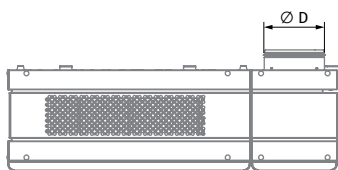
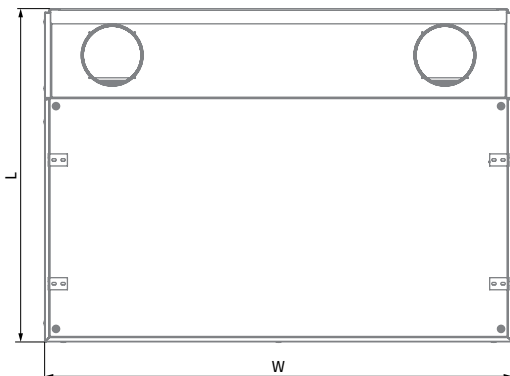
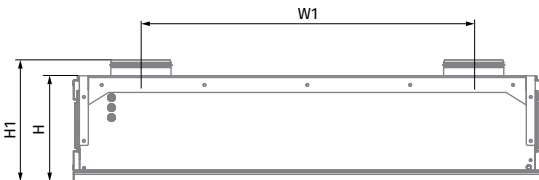
Model	∅ D	H	H1	H2	H3	L	L1	W	W1	W2	W3
CIVIC EC DB 300 S21	199	333	347	145	188	806	873	1547	196	1155	-
CIVIC EC D1B 300 S21	199	333	399	-	-	1547	1101	1547	196	-	-
CIVIC EC DB 500 S21	249	386	400	169	217	1006	1083	1806	244	1316	-
CIVIC EC D1B 500 S21	249	386	462	-	-	1806	1314	1806	244	-	-
CIVIC EC DB 1000 S21	312	538	563	320	-	1202	1242	1900	420	1295	600



CIVIC EC DB 300 S21 / CIVIC EC DB 500 S21

















CIVIC EC DB 1000 S21






CIVIC EC D1B 300 S21 / CIVIC EC D1B 500 S21

**CIVIC EC DB**
**SINGLE-ROOM AIR HANDLING UNITS**
**Accessories**

		CIVIC EC DB 300 S21 CIVIC EC DBE 300 S21 CIVIC EC DBE2 300 S21	CIVIC EC DB 500 S21 CIVIC EC DBE 500 S21 CIVIC EC DBE2 500 S21	CIVIC EC DB 1000 S21 CIVIC EC DBE 1000 S21 CIVIC EC DBE2 1000 S21
G4 filter		FP 270x216x48 G4	FP 325x388x48 G4;	FP 480x327x48 G4 2 pcs.
G4 filter		FP 270x216x48 G4	FP 325x314x48 G4	FP 480x327x48 G4 2 pcs.
F7 filter		-	-	FP 480x327x48 F7 2 pcs.
F8 filter		FP 270x216x48 F8	FP 325x314x48 F8	-
F8 carbon filter		FP 518x270x48 F8 C	FP 714x320x48 F8 C	-
H11 HEPA filter		FP 518x270x48 H11	FP 714x320x48 H11	-
Outer grill		VDA 200 CFn Al	VDA 250 CFn Al	VDA 315 CFn Al
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
CO <sub>2</sub> sensor		DPWQ40200	DPWQ40200	DPWQ40200
Humidity sensor		DPWC11200	DPWC11200	DPWC11200
Internal humidity sensor		FS2	FS2	FS2

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## SINGLE-ROOM AIR HANDLING UNITS

		CIVIC EC DB 300 S21 CIVIC EC DBE 300 S21 CIVIC EC DBE2 300 S21	CIVIC EC DB 500 S21 CIVIC EC DBE 500 S21 CIVIC EC DBE2 500 S21	CIVIC EC DB 1000 S21 CIVIC EC DBE 1000 S21 CIVIC EC DBE2 1000 S21
Humidity sensor		HR-S	HR-S	HR-S
Syphon kit		SFK 20x32	SFK 20x32	SFK 20x32
Drain pump		CP-2	CP-2	CP-2