



Carisma Whisper CFF-ECM

Residential Fan Coil Unit

TECHNICAL LEAFLET

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Range includes 5 air flow rates (from 75 to 645 m³/h) and 2 versions (standard with casing and for concealed installation), each one equipped with 2 row coil.

The Carisma Whisper CFF-ECM fan coil unit combines a reduced dimension with a modern aesthetic, while maintaining great performances in terms of sound and consumption.

Carisma Whisper CFF-ECM includes the MV version for wall installation and the IV version for concealed installation; the MV version combines a reduced dimension, until 126 mm depth only, with a modern aesthetic that perfectly suits with any kind of furnishing, while maintaining great performances in terms of sound and consumption.

The Carisma CFF-ECM range is equipped with a synchronous inverter driven BLAC brushless and sensorless electronic motor with permanent magnets, controlled by an inverter board designed and developed in Italy. The air flow can be varied continuously with a 1-10V signal.

The extreme efficiency, also at a low speed, makes possible a great reduction in electric consumption with absorption values, under normal operating conditions, that are no greater than 5 Watt.

The excellent values in terms of sound levels have been maintained in all working conditions, without any resonance phenomenon at any frequency.

The CB-Touch EASY or CB-Touch advanced controls with Bluetooth and Wi-Fi features allow the management via APP and moreover make this fan coil unit the ideal solution for the air-conditioning of all residential ambients.



Outer casing: made of galvanized steel and with plastic outer casing. The air diffuser, that is placed over the top of the unit, is of adjustable type. White RAL 9003 color.

Inner casing: made of 1 mm galvanized steel, a rear panel and two lateral sides insulated with 3 mm polyolefin (PO) foam B-s2-d0 EN 13501-1.

Filter: polypropylene cellular fabric regenerating filter. The filter frame, made of synthetic material, is inserted into special plastic sliding guides fastened to the internal structure for easy insertion and removal of the filter.

Fan assembly: made of plastic tangential fan with anti-vibration fins. The fan hub, dynamycally and statically balanced, is directly secured onto the motor shaft.

Synchronous brushless electronic motor: with three phase permanent magnet that is controlled with reconstructed current according to a BLAC sinusoidal wave. The inverter board that controls the motor operation is powered by 230 Volt, single-phase and, with a switching system, it generates a three-phase frequency modulated, wave form power supply. The electric power supply required for the machine is therefore single-phase with voltage of 230 V and frequency of 50 - 60 Hz.

Coil: it is manufactured from drawn copper tube and the aluminium fins are mechanically bonded onto the tube by an expansion process. The coil has two Ø 1/2 inch BSP internal connections. The coil has Ø 1/8 inch BSP air vent and drain. The heat exchanger is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

Flow and return pipe connections are situated at the same end on the left side looking at the unit. On request we can deliver the unit with the connections on the right end side: this must be specified on the order as this operation can not be carried out on site during installation.

Radiant panel (CFF-ECM-MVR-CB-T / CFF-ECM-MV-R-CB-TES version)

The casing front panel is equipped with electric heating panel at low energy consumption, that allows to heat the room successfully by reducing the fan operation, thanks to the irradiation contribution.

Valves: The versions without valves or with mounted valves are available for all sizes. The available valves are: 2 way and 3 way. The valves can be ordered separately and easily installed on the basic units without valves.

Condensate collection tray: made of plastic (ABS UL94 HB) and fixed to the internal structure. The outside diameter of the condensate discharge pipe is Ø 15 mm.



(*)

Sabiana WiFi

Sabiana WiFi is the App for the control at a distance of your Sabiana system of climatization. Free and easy to use, it needs only a wireless network and a smartphone with internet connection. Using the "Cloud" it allows to manage, program and supervise the status of Your air conditioners wherever You are.



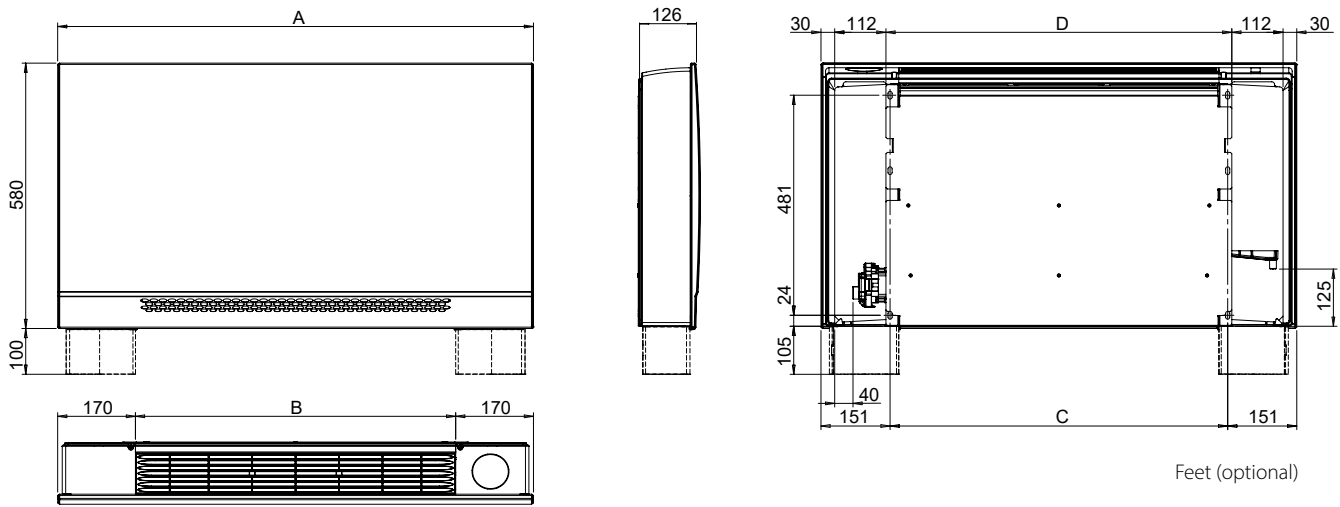
(*)

Sabiana BLE

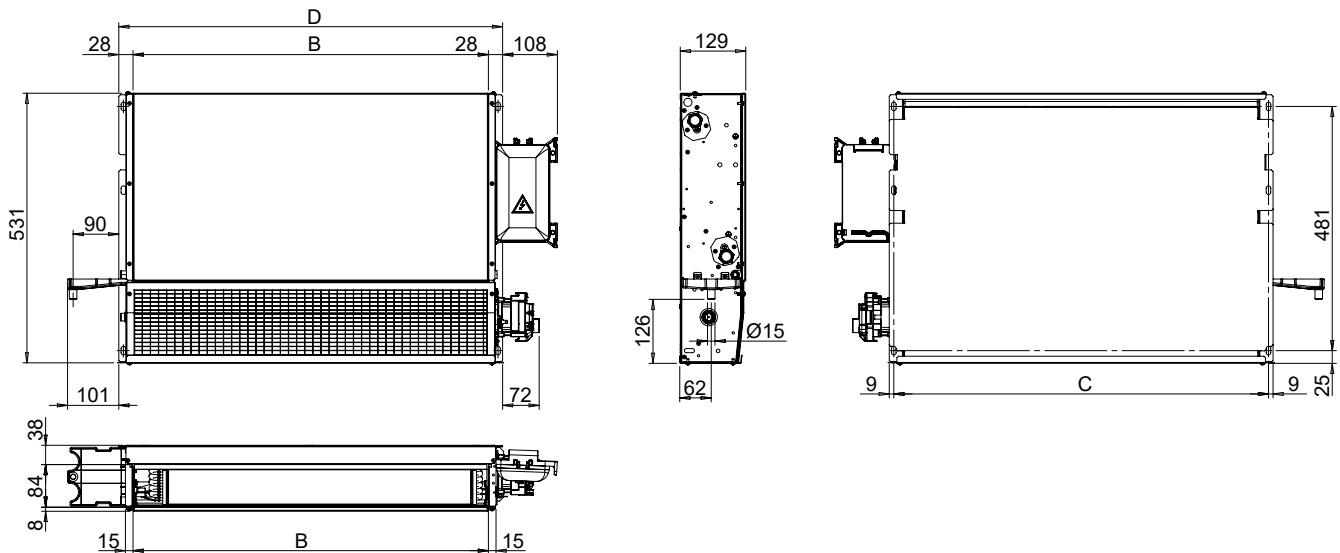
Sabiana BLE is the new App for Android™ and iOS systems to set, manage and control Your climatization system via Bluetooth Low Energy (BLE) transmission. Free and easy to configure and use, it needs only a smartphone with a Bluetooth connection (version 4.0 or later versions).

(*) See availability function on controls.

Standard version with casing - MV / MV-R

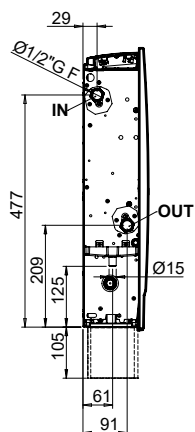


Version for concealed installation - IV

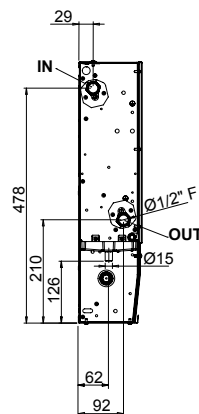


Coil connections

MV / MV-R version



IV version



Dimension (mm)

Model	10	20	30	40	50
A	640	840	1040	1240	1440
B	300	500	700	900	1100
C	338	538	738	938	1138
D	356	556	756	956	1156

Weight (kg)

Model	Weight with packaging					Weight without packaging				
	10	20	30	40	50	10	20	30	40	50
MV version	11,6	14,9	18,5	21,9	25,7	10,1	13,2	16,4	19,6	23,0
MV-R version	12,1	16,1	20,3	24,9	29,4	10,5	14,2	18,1	27,5	26,6
IV version	10,1	13,6	17,3	20,9	24,9	8,5	11,7	15,1	18,5	22,1

Water content (litres)

Model	10	20	30	40	50
	0,4	0,7	1,1	1,4	1,7

The following standard rating conditions are used:

COOLING

Entering air temperature: +27 °C d.b. +19 °C w.b.
Water temperature: +7 °C E.W.T. +12 °C L.W.T.

HEATING

Entering air temperature: +20 °C
Water temperature: +45 °C E.W.T. +40 °C L.W.T.

Model	CFF-ECM 10						CFF-ECM 20						CFF-ECM 30					
	1	2	3,5	5	7,5	10	1	2	3,5	5	7,5	10	1	2	3,5	5	7,5	10
Inverter power	MIN		MED		MAX		MIN		MED		MAX		MIN		MED		MAX	
Eurovent certified performances	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)
Air flow m ³ /h	75	90	110	130	170	205	125	145	175	205	255	305	190	225	270	315	395	470
Cooling total emission (E) kW	0,40	0,48	0,58	0,66	0,80	0,92	0,67	0,83	1,01	1,15	1,39	1,62	0,92	1,08	1,56	1,91	2,30	2,61
Cooling sensible emission (E) kW	0,30	0,36	0,44	0,52	0,64	0,75	0,50	0,62	0,76	0,88	1,08	1,28	0,67	0,79	1,15	1,41	1,72	1,99
Heating emission (E) kW	0,55	0,60	0,68	0,78	0,96	1,10	0,97	1,01	1,16	1,32	1,57	1,81	1,52	1,62	1,85	2,10	2,53	2,90
Dp Cooling (E) kPa	4,9	6,0	7,5	9,1	12,0	14,7	3,1	3,6	4,3	4,9	6,1	7,4	4,5	5,4	8,6	11,5	15,2	18,6
Dp Heating (E) kPa	6,1	6,7	8,0	9,6	13,0	16,2	3,7	3,9	4,4	5,0	6,1	7,3	7,1	7,7	9,2	11,0	14,6	18,2
Motor power input (E) W	3,2	3,5	4,2	5,2	7,4	10,3	3,7	4,0	4,9	6,3	9,5	14,0	4,1	4,8	6,3	8,6	14,1	21,6
Sound power (Lw) (E) dB(A)	31	33	36	40	45	50	30	33	38	42	47	52	32	34	39	43	47	53
Sound pressure (Lp) ⁽¹⁾ dB(A)	22	24	27	31	36	41	21	24	29	33	38	43	23	25	30	34	38	44

Model	CFF-ECM 40						CFF-ECM 50					
	1	2	3,5	5	7,5	10	1	2	3,5	5	7,5	10
Inverter power	MIN		MED		MAX		MIN		MED		MAX	
Eurovent certified performances	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)	-	(E)
Air flow m ³ /h	220	260	320	380	480	575	255	300	365	430	535	645
Cooling total emission (E) kW	1,14	1,45	2,06	2,50	2,97	3,36	1,44	1,95	2,55	2,92	3,37	3,81
Cooling sensible emission (E) kW	0,82	1,05	1,48	1,80	2,17	2,49	1,04	1,40	1,82	2,10	2,47	2,83
Heating emission (E) kW	1,79	1,91	2,23	2,58	3,13	3,62	2,19	2,25	2,61	3,00	3,60	4,20
Dp Cooling (E) kPa	7,3	10,2	17,3	23,7	31,7	39,1	4,6	6,4	9,1	11,2	13,9	16,9
Dp Heating (E) kPa	11,7	12,9	16,3	20,6	28,3	36,2	6,4	6,6	8,0	9,7	12,8	16,2
Motor power input (E) W	4,7	5,4	7,2	9,9	16,4	25,4	5,3	6,1	8,2	11,4	19,0	29,5
Sound power (Lw) (E) dB(A)	33	37	41	45	51	55	34	38	42	46	51	55
Sound pressure (Lp) ⁽¹⁾ dB(A)	24	28	32	36	42	46	25	29	33	37	42	46

(E) Eurovent certified performance

(1) The sound pressure levels are 9 dB (A) lower than the sound power levels, apply to the reverberant field of a 100 m³ room and a reverberation time of 0.5 sec

Radiant panel heating emission

Model	Ph* kW
CFF-ECM-MV-R10	0,06
CFF-ECM-MV-R20	0,09
CFF-ECM-MV-R30	0,12
CFF-ECM-MV-R40	0,15
CFF-ECM-MV-R50	0,18

*Additional emission once the panel is activated



The kit is available in **3 sizes** and allows the **wall** installation of the recessed Carisma Whisper IV version (20 - 30 - 40) fan coil units.

The kit includes a top closing panel that prevents the access to technical spaces and coil ensuring **the safety of the end user**.

The aesthetic frame includes:

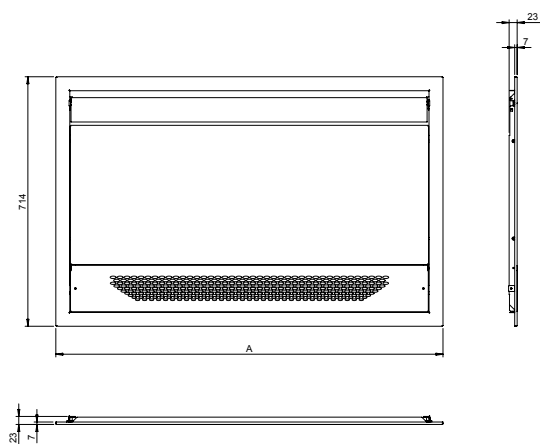
- the closing frame;
- the air supply louvre;
- the front panel;
- the air intake grid.

The air supply louvre is made of extruded aluminium and painted with epoxy polyester coat, dried in a furnace at 180 °C , colour RAL 9003.

Perimeter frame, front panel and air intake grid made of steel painted with epoxy polyester coat, dried in a furnace at 180 °C, colour RAL 9003. It is possible to repaint the entire frame of the same color as the wall.

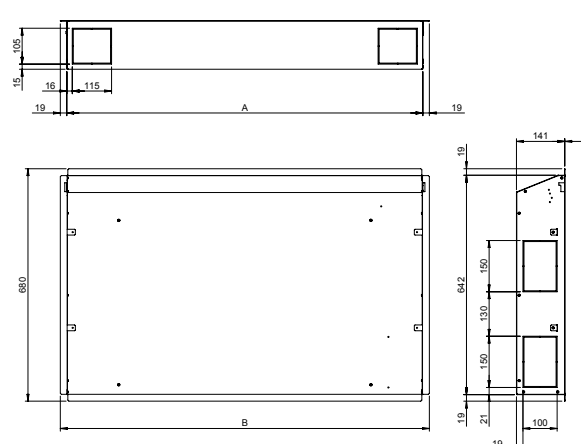
The recessed box is made of galvanized steel with openings for the electrical and hydraulic connections.

Aesthetic frame dimensions





Size	A mm
20	908
30	1108
40	1308

Recessed box dimensions



Size	A mm	B mm
20	842	880
30	1042	1080
40	1242	1280

On board controls

MV / MV-R version	
CB-Touch EASY	Automatic speed touch EASY control with electronic thermostat and seasonal/ventilation mode selection (to be used with UP-Touch EASY power unit only)
CB-Touch	Automatic speed on board touch control with WiFi/BLE connectivity with electronic thermostat and ventilation/summer/winter switch (to be used with UP-Touch power unit only)  
UP-Touch EASY	UP-Touch power unit kit supplied with separate packaging, for CB-Touch EASY on board control
UP-Touch	UP-Touch power unit supplied with separate packaging, for CB-Touch on board control

Wall controls

MV / MV-R and IV version	
WM-AU	Automatic speed wall control with electronic thermostat and summer/winter switch (to be used with UP-Touch power unit only) ⁽¹⁾
T-MB2	Wall control with LCD color display and WiFi (to be used with UP-Touch power unit or MB board only) ⁽¹⁾
UP-Touch	UP-Touch power unit supplied with separate packaging, for WM-AU and T-MB2 wall controls
WM-503-AC-EC	Automatic speed control with electronic thermostat to be mounted in the 503 box (to be used with UP-503-AC-EC only)
UP-503-AC-EC	Power unit UP-503 not fitted on the unit, for WM-503-AC-EC remote control (to be used with Kit 503-KNX only)

Controls for MB board or UP-Touch power unit ^{(1) (2)}

MB-CF-M	MB electronic board fitted on the unit
MB-CF-S	MB electronic board supplied with separate packaging
T-MB2	Wall control with LCD color display and WiFi (to be used with UP-Touch power unit or MB board only) ⁽¹⁾
PSM-DI	PSM-DI multifunction control panel (to be used with UP-Touch power unit or MB board only) ⁽¹⁾
T-DI	T-DI touch screen multifunction control panel (to be used with UP-Touch power unit or MB board only) ⁽¹⁾
SabWeb	Web gateway for Sabiana Cloud (to be used with UP-Touch power unit or MB board only) ⁽¹⁾

Management system for a network of fan coils with MB electronic board

Sabianet	Hardware/software supervisory system (to be used with UP-Touch power unit or MB board only) ⁽¹⁾
Router-S	Router for Sabianet (default) or for BMS systems not provided by Sabiana
SIOS	Relay output board

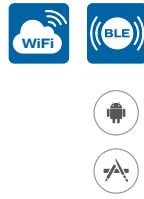
⁽¹⁾Not to be used with UP-Touch EASY power unit

⁽²⁾To the UP-Touch power unit max. 15 units can be connected

Controls for KNX systems

WM-KNX	Wall control with electronic thermostat and summer/winter switch (to be used with UP-KNX and PL mounting plate only)
UP-KNX	UP-KNX power unit supplied with separate packaging (to be used with Kit 503-KNX only)
PL-503-B	Mounting plate for wall rectangular box
PL-QUA-B	Mounting plate for wall round or square box

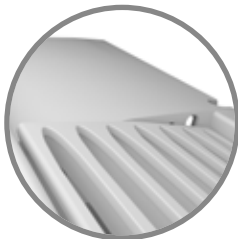
NOTE: for more detailed information about Controls and for the complete list of the main Accessories, see the dedicated pages.



Digital touch control manageable via Wi-Fi and Bluetooth® with the app available into the Android™ and IOS® version

Interfaced with Modbus e KNX home automation systems

Adjustable grid for the maximum comfort towards the air flow



Tangential fan: strength and silent at the same time

The double aspiration reduces the noise and maximizes the emissions



Available also into the recessed box version and with Kit Breeze

Maximum performance, compact dimension: there is not such efficient and compact fan coil unit on the market

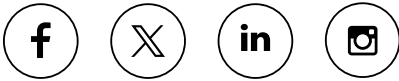
EC motor with inverter at low energy consumption

Controls and valves already assembled: easier installation

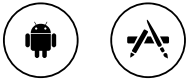
Electronic board with contacts for the activation of boiler or heat pump



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01/2025



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Sabiana 4 - Operative unit "via Zanella 27 - Corbetta (MI)"