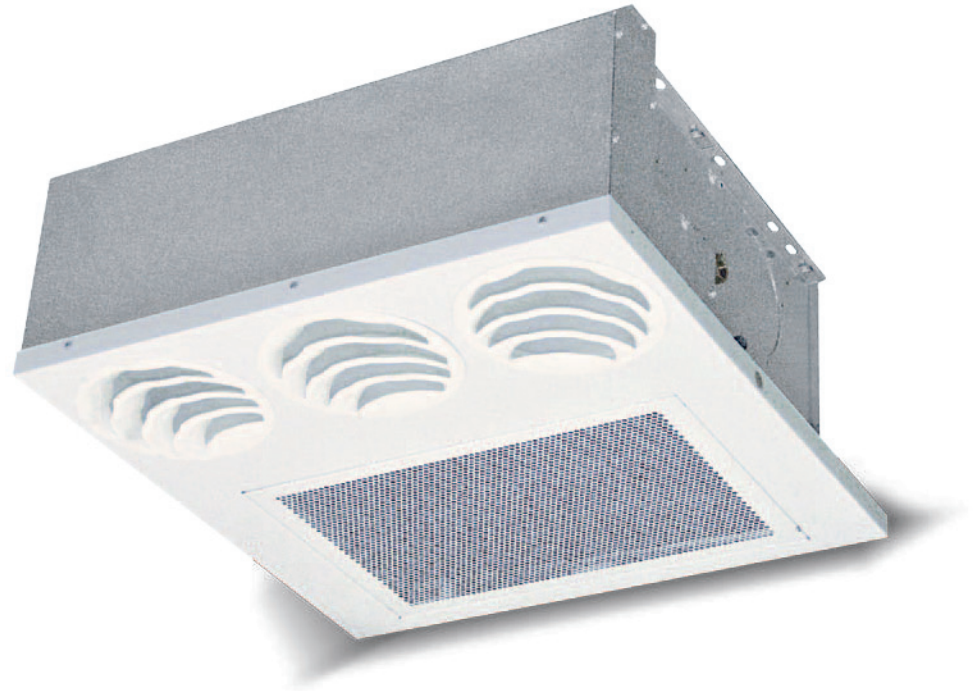




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Carisma Coanda-ECM

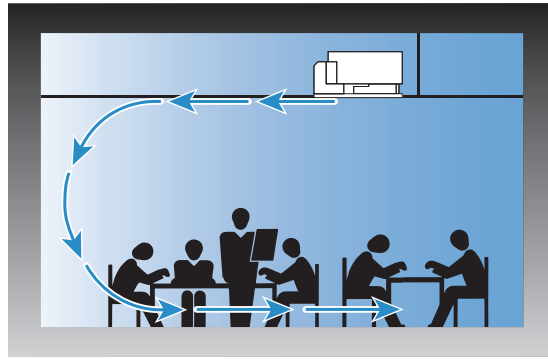
One Way Cassette Fan Coil Unit with EC Brushless Electronic Motor and Inverter Board

The **Carisma Coanda-ECM** one way Cassette fan coil units are available in **3 sizes**.

Thanks to the particular air handling section, the units generate an airflow **with a “coanda” effect**.

The variable flow rate enhances the product's main virtues: **excellent air circulation**, with a high degree of comfort, especially during the summer months.

Every unit is supplied with an electronic motor with extremely low energy consumption, **brushless** and **sensorless** type, controlled by an inverter board. By continuously varying the air flow, the ambient temperature can be more precisely monitored and regulated, **saving over 50%** of the electricity used and reducing the average perceived noise level.



Every unit can be supplied with 1 coil (2 pipe system) and possibly an electric heating element, or with 2 coils (4 pipe system) with one or two rows heating coil, for low temperature hot water.

Fresh air may be mixed with room air.

A **condensate pump** may also be supplied as an accessory.

In addition to the conventional temperature and speed control systems, there is also the possibility to **control operation** of each unit through a single remote control with central supervisor software installed on a PC (**called Sabianet**).



Technical characteristics of the main components:

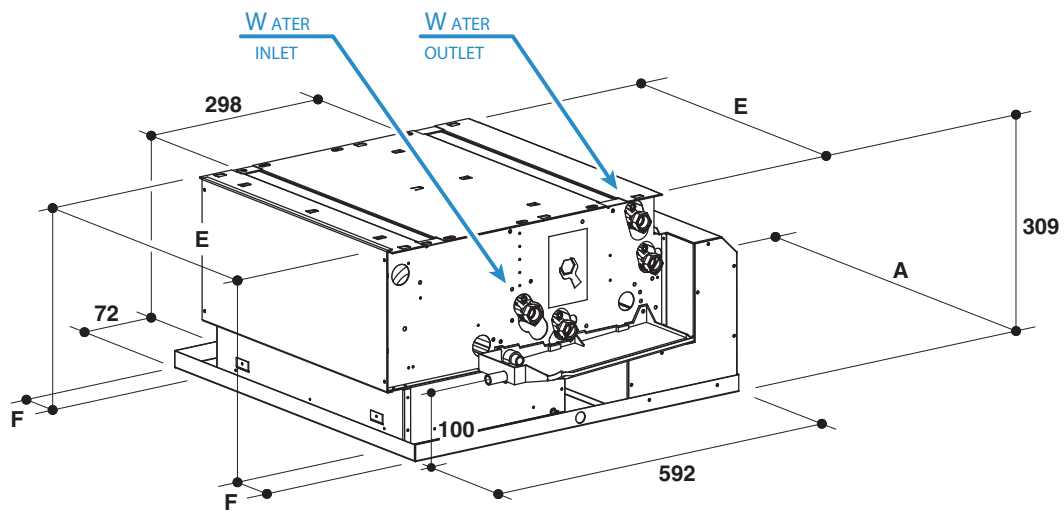
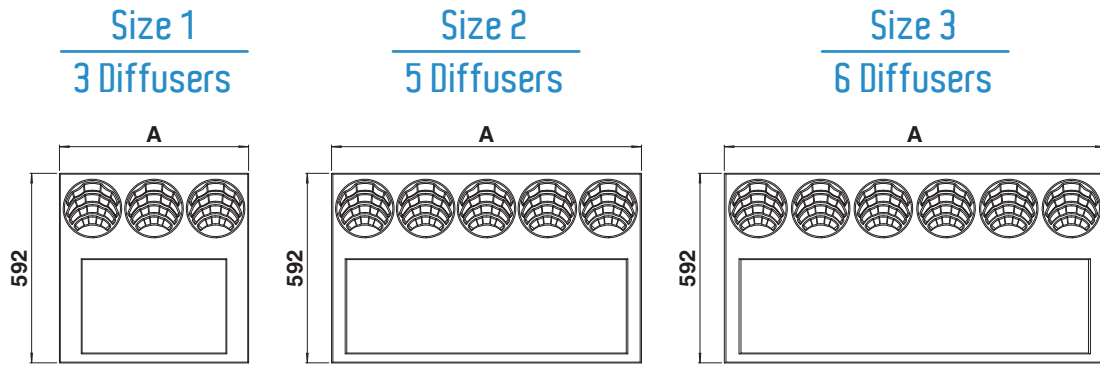
For the technical characteristics of the various components refer to Carisma CORNDA Fan Coil Unit, except for

Electronic motor: three phase permanent magnet brushless electronic motor that is controlled with current reconstructed 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 - 240 U** and frequency of **50 - 60 Hz**.

Dimensions, Weight, Water content



Dimension (mm)

MODEL	1	2	3
A	592	970	1192
E	454	884	1099
F	78	43	46,5
W	750	1130	1350

Weight (kg)

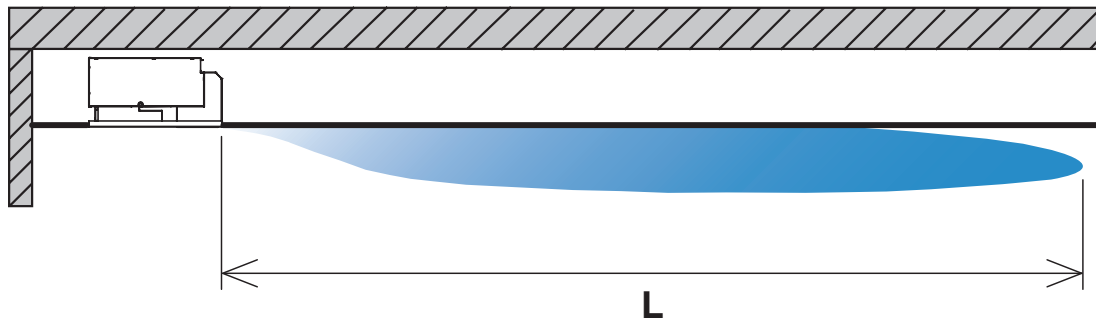
MODEL	WEIGHT WITH PACKAGING			WEIGHT WITHOUT PACKAGING		
	1	2	3	1	2	3
ROWS						
3	18	34	44	16	33	42
3+1	20	40	51	19	38	48
3+2	23	46	58	22	43	54
4	20	37	48	18	35	45
4+1	23	42	54	21	40	51

Water content (litres)

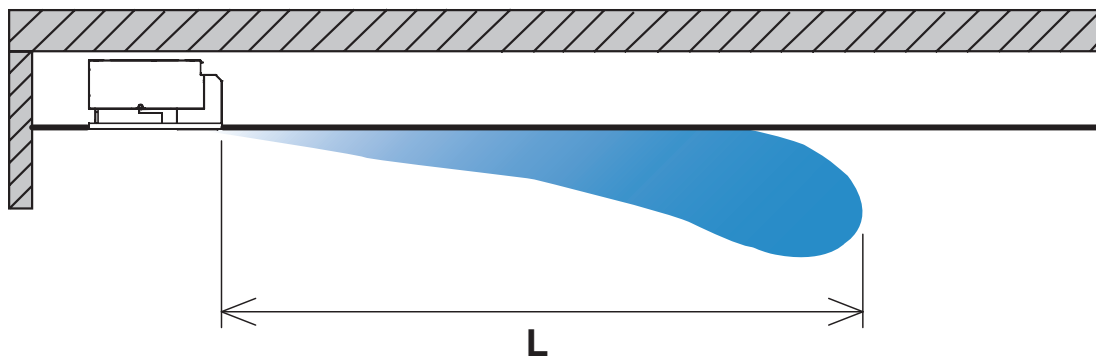
MODEL	1	2	3
ROWS			
3	0,6	1,3	1,7
4	0,8	1,7	2,4
+1	0,2	0,4	0,5
+2	0,4	0,8	1,0

Installation Heights and Air throw

C1) Heating



C2) Cooling



MODEL		CCN 1	CCN 2	CCN 3
INSTALLATION HEIGHT (m)	Min.	2,6	2,6	2,6
	Max.	3,2	3,2	3,5

MODEL		CCN 1						CCN 2						CCN 3					
SPEED		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
AIR THROW L (m)	C1	3,6	4,5	5,8	6,3	6,8	7,2	4	5	6,1	7	8	9	4,5	5,2	6,3	7,5	8,8	9,5
	C2	3	3,6	4,6	5	5,4	5,7	3,2	4	4,8	5,6	6,4	7,2	3,6	4,1	5	6	7	7,6



www.eurovent-certification.com
www.certiflash.com

Certification

Units with 3 and 4 row coil

2 pipe units. The following standard rating conditions are used:

COOLING (summer mode)

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

HEATING (winter mode)

Entering air temperature: +20°C
Entering water temperature: +50°C

Water flow rate as for the cooling conditions

MODEL	CCN-ECM 13					CCN-ECM 23					CCN-ECM 33				
	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)
Inverter Power (V)															
Speed	MIN			MED		MAX			MIN			MED		MAX	
Air flow	m ³ /h														
Cooling total emission (E)	kW														
Cooling sensible emission (E)	kW														
Heating (E)	kW														
Heating - Water 70-60°C	kW														
Dp Cooling (E)	kPa														
Dp Heating (E)	kPa														
Fan (E)	W														
Sound power (E)	dB(A)														
Sound pressure (*)	dB(A)														
Energy classification FCEER (**)	(E)					C					B				
Energy classification FCCOP (***)	(E)					C					B				

MODEL	CCN-ECM 14					CCN-ECM 24					CCN-ECM 34				
	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)
Inverter Power (V)															
Speed	MIN			MED		MAX			MIN			MED		MAX	
Air flow	m ³ /h														
Cooling total emission (E)	kW														
Cooling sensible emission (E)	kW														
Heating (E)	kW														
Heating - Water 70-60°C	kW														
Dp Cooling (E)	kPa														
Dp Heating (E)	kPa														
Fan (E)	W														
Sound power (E)	dB(A)														
Sound pressure (*)	dB(A)														
Energy classification FCEER (**)	(E)					C					B				
Energy classification FCCOP (***)	(E)					C					B				

(E) = Eurovent certified performance.

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

(**) FCEER = Energy classification in Cooling.

(***) FCCOP = Energy classification in Heating.

Units with 1 row additional coil

4 pipe units. The following standard rating conditions are used:

COOLING (summer mode)

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

HEATING (winter mode)

Entering air temperature: +20°C
Water temperature: +70°C E.W.T. +60°C L.W.T.

MODEL	CCN-ECM 13+1					CCN-ECM 23+1					CCN-ECM 33+1					
Inverter Power (V)	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)	1 (E)	3	5 (E)	7,5	10 (E)	
Speed	MIN		MED		MAX	MIN		MED		MAX	MIN		MED		MAX	
Air flow	m ³ /h	130	165	205	250	295	215	295	370	450	540	275	345	430	525	620
Cooling total emission (E)	kW	0,82	1,00	1,18	1,37	1,56	1,46	1,92	2,31	2,74	3,16	1,87	2,31	2,78	3,28	3,75
Cooling sensible emission (E)	kW	0,62	0,76	0,91	1,07	1,24	1,07	1,42	1,73	2,07	2,41	1,37	1,70	2,06	2,45	2,83
Heating (E)	kW	0,87	1,03	1,18	1,35	1,52	1,58	1,97	2,31	2,66	3,01	2,04	2,42	2,82	3,24	3,64
Dp Cooling (E)	kPa	2,1	3,0	4,0	5,2	6,5	3,2	5,2	7,3	9,8	12,6	5,8	8,4	11,7	15,7	19,8
Dp Heating (E)	kPa	1,4	1,9	2,5	3,1	3,8	1,0	1,5	2,0	2,5	3,1	1,8	2,5	3,3	4,2	5,1
Fan (E)	W	8	11	14	21	29	8	11	16	24	37	10	13	19	29	42
Sound power (E)	dB(A)	35	41	46	51	55	34	40	46	52	56	36	42	48	54	58
Sound pressure (*)	dB(A)	26	32	37	42	46	25	31	37	43	47	27	33	39	45	49
Energy classification FCEER (**)	(E)	C					B					B				
Energy classification FCCOP (***)	(E)	D					B					B				

Wall electronic controls

CR-T-ECM	Continuous fan speed control with electronic thermostat and summer/winter switch
CR-DI-ECM	Continuous fan speed control with electronic thermostat and summer/winter switch
UPM-ECM	Power unit for CR-T-ECM and CR-DI-ECM remote control, fitted on the unit
UPS-ECM	Power unit for CR-T-ECM and CR-DI-ECM remote control, not fitted on the unit

Electronic controls for MB boards

MB-ECM-M	MB electronic board fitted on the unit
MB-ECM-S	MB electronic board supplied with separate packaging
T-MB	Wall control (to be used with MB board only)
RS-RT03	RT03 infra-red remote control with receiver supplied with separate packaging (to be used with MB board only)
RT03	RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)
RS	Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)
PSM-DI	Multifunction control (to be used with MB board only)

Sabianet management system for a network of fan coils

Sabianet	Sabianet (to be used with MB board only)
ROUTER-S	Router for Sabianet
SIOS	Relay output board for Sabianet

The descriptions and illustrations provided in this publication are not binding: Sabiana reserves the right, whilst maintaining the essential characteristics of the types described and illustrated, to make, at any time, without the requirement to promptly update this piece of literature, any changes that it considers useful for the purpose of improvement or for any other manufacturing or commercial requirements.



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