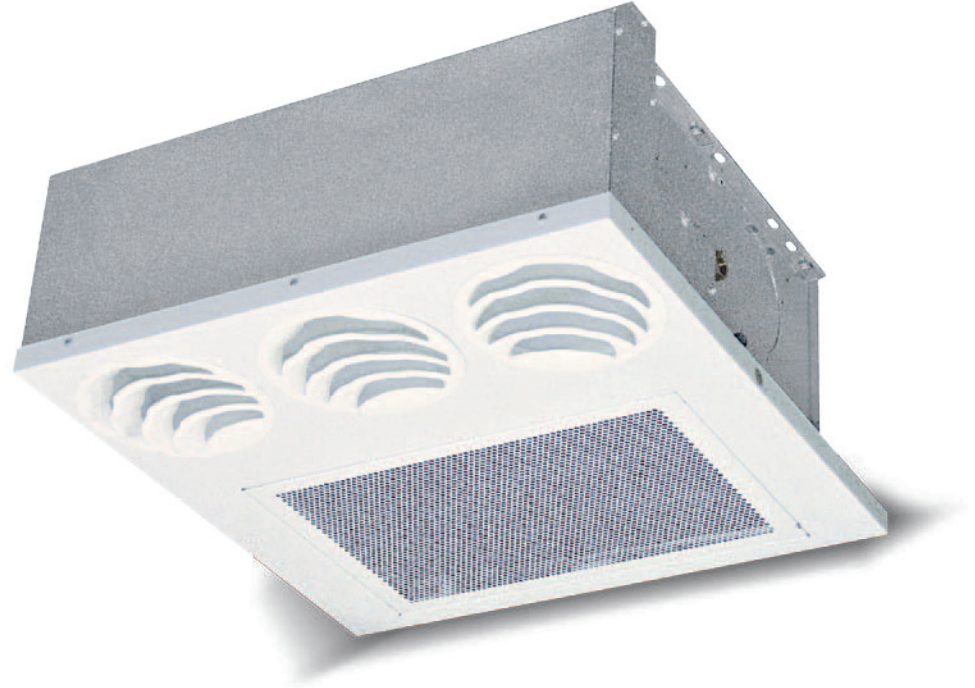




SABIANA
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Carisma Coanda

One Way Cassette Fan Coil Unit with Asynchronous Motor

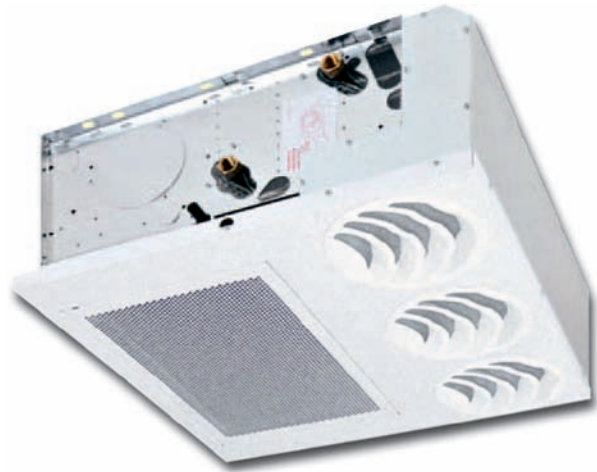
The **Carisma Coanda** one way Cassette fan coil units are available in **3 sizes**. Thanks to the particular air handling section, the units generate an airflow **with a “coanda” effect**. The unit is suitable for installation in a suspended ceiling. Air intake is from the bottom while the air supply is parallel to the ceiling, through practical and functional intake and outlet grids.

The “coanda” effect creates **excellent circulation of the air** inside the room.

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.

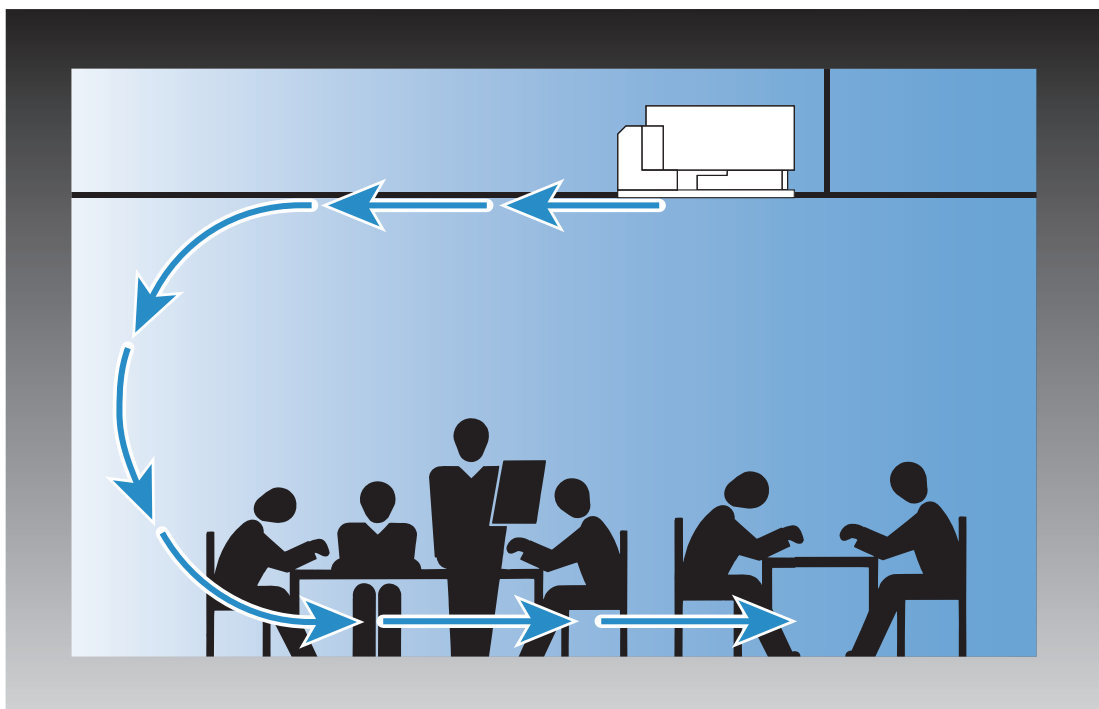


A condensate pump

may also be supplied as an accessory.

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

It is also possible to use the completely **wireless** electronic control system based on radio communication, called **FreeSabiana**, with great advantages in terms of installation flexibility and maximum precision in measuring room temperature.



Technical characteristics of the main components:

Casing: made from galvanized steel insulated with polyolefin (PO) foam (class M1).

Diffuser with intake grid:

in prepainted metal sheet in RAL 9003 colour with intake grid that can be opened for inspection and maintenance of the air filter.



Air filter: polypropylene cellular fabric regenerating filter.

Fan assembly: the fans have aluminium or plastic blades directly keyed on the motor with double aspiration and they are dynamically and statically balanced during manufacture in order to have an extremely quiet operation.

Electric motor: the motor is wired for single phase and has **six speeds, three of which are connected**, with capacitor. The motor is fitted on sealed for life bearings and is secured on anti-vibration and self-lubricating mountings. Internal thermal protection with automatic reset, protection IP 20, class B.

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 1/2 inch BSP internal connections and 1/8 inch BSP air vent and drain. The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

The connection side cannot be changed on site.

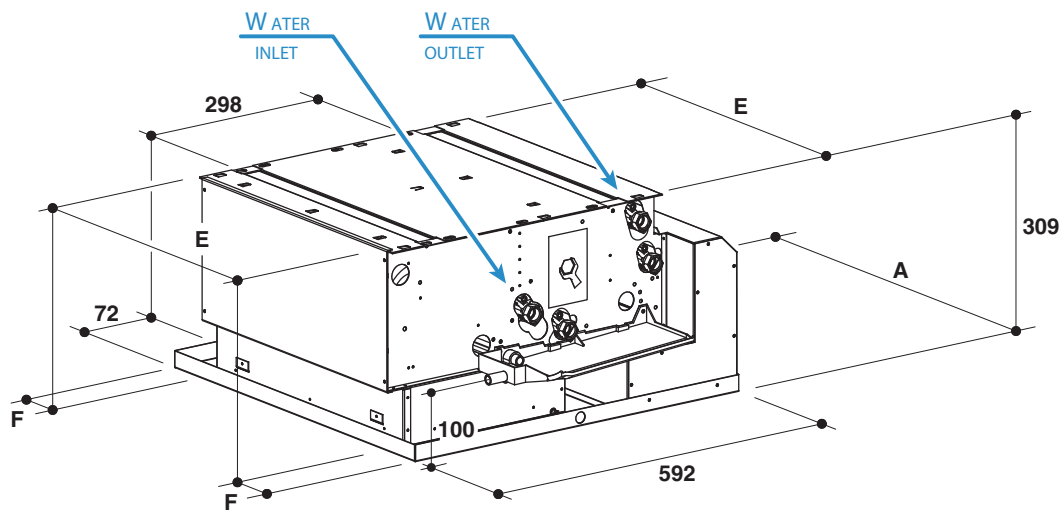
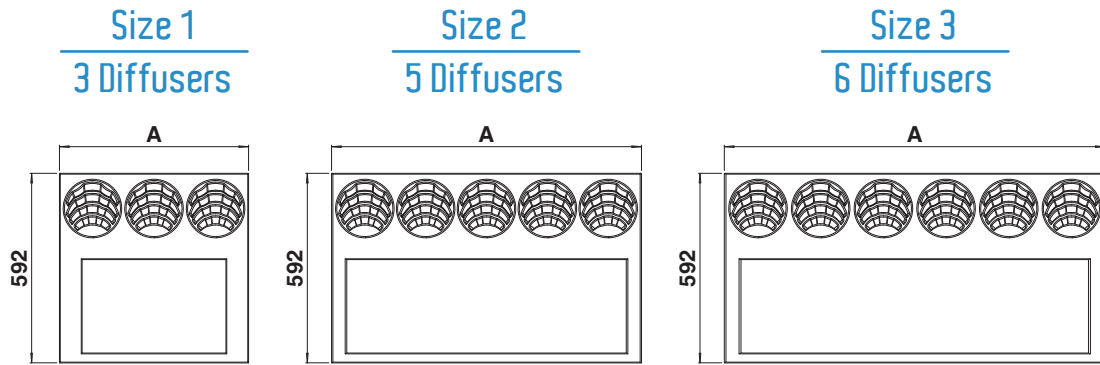
Condensate collection tray: made from plastic with an “L”-shape fitted on the inner casing; the tray is insulated with polyolefin (PO) foam (class M1). The outside diameter of the condensate discharge pipe is 15 mm.

Round diffuser: the units are supplied with round diffusers suitably designed to generate an airflow with “coanda” effect.

The direction of diffuser air flow can be adjusted on site.



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)

		WEIGHT WITH PACKAGING			WEIGHT WITHOUT PACKAGING		
MODEL		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



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 13						CCN 23						CCN 33						
	1 (E)	2 (E)	3	4	5 (E)	6	1 (E)	2 (E)	3	4 (E)	5	6	1 (E)	2	3 (E)	4 (E)	5	6	
Speed	MIN MED		MAX				MIN MED		MAX				MIN		MED MAX				
Air flow	m ³ /h	140	180	220	245	280	305	200	240	305	380	470	560	290	360	440	540	620	680
Cooling total emission (E)	kW	0,88	1,06	1,26	1,35	1,50	1,60	1,37	1,62	1,97	2,37	2,81	3,23	1,97	2,37	2,84	3,34	3,75	4,05
Cooling sensible emission (E)	kW	0,66	0,81	0,98	1,06	1,18	1,27	1,00	1,19	1,47	1,77	2,13	2,47	1,44	1,74	2,11	2,51	2,83	3,07
Heating (E)	kW	1,08	1,33	1,59	1,73	1,93	2,08	1,60	1,91	2,35	2,86	3,43	3,95	2,30	2,79	3,37	4,02	4,53	4,88
Heating - Water 70-60°C	kW	1,84	2,26	2,71	2,94	3,29	3,54	2,68	3,20	3,95	4,79	5,77	6,64	3,85	4,67	5,65	6,73	7,61	8,20
Dp Cooling (E)	kPa	2,4	3,3	4,5	5,1	6,1	6,8	2,9	3,9	5,5	7,6	10,3	13,1	6,4	8,8	12,1	16,2	19,8	22,7
Dp Heating (E)	kPa	1,8	2,6	3,5	4,0	4,9	5,6	2,3	3,1	4,5	6,3	8,4	10,8	5,2	7,3	9,8	13,4	16,3	18,6
Fan (E)	W	16	22	32	38	49	66	24	27	34	44	57	71	27	33	42	59	72	84
Sound power (E)	dB(A)	35	41	46	49	52	55	33	36	42	48	54	57	35	41	46	52	55	57
Sound pressure (★)	dB(A)	26	32	37	40	43	46	24	27	33	39	45	48	26	32	37	43	46	48

MODEL	CCN 14						CCN 24						CCN 34						
	1 (E)	2 (E)	3	4	5 (E)	6	1 (E)	2 (E)	3	4 (E)	5	6	1	2 (E)	3	4 (E)	5 (E)	6	
Speed	MIN MED		MAX				MIN MED		MAX				MIN		MED MAX				
Air flow	m ³ /h	140	180	220	245	280	305	200	240	305	380	470	560	290	360	440	540	620	680
Cooling total emission (E)	kW	0,97	1,19	1,44	1,55	1,74	1,87	1,44	1,72	2,12	2,57	3,09	3,58	2,05	2,49	3,00	3,56	4,02	4,36
Cooling sensible emission (E)	kW	0,71	0,88	1,07	1,17	1,31	1,42	1,04	1,24	1,54	1,88	2,28	2,67	1,48	1,81	2,20	2,63	2,98	3,25
Heating (E)	kW	1,14	1,42	1,72	1,88	2,10	2,27	1,69	2,03	2,54	3,12	3,79	4,44	2,38	2,90	3,51	4,20	4,77	5,20
Heating - Water 70-60°C	kW	1,92	2,37	2,89	3,14	3,52	3,80	2,82	3,40	4,25	5,22	6,37	7,46	3,96	4,83	5,87	7,04	8,00	8,72
Dp Cooling (E)	kPa	4,7	6,7	9,2	10,6	12,9	14,6	4,4	6,0	8,6	12,1	16,8	21,7	4,7	6,7	9,3	12,6	15,5	17,9
Dp Heating (E)	kPa	3,7	5,4	7,6	8,8	10,7	12,3	3,5	4,8	7,1	10,2	13,6	17,9	3,9	5,5	7,3	10,0	12,6	14,6
Fan (E)	W	16	22	32	38	49	66	24	27	34	44	57	71	27	33	42	59	72	84
Sound power (E)	dB(A)	35	41	46	49	52	55	33	36	42	48	54	57	35	41	46	52	55	57
Sound pressure (★)	dB(A)	26	32	37	40	43	46	24	27	33	39	45	48	26	32	37	43	46	48

(E) = Eurovent certified performance.

MIN-MED-MAX = Standard connected speeds.

(★) = 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.



Certification

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 13+1						CCN 23+1						CCN 33+1					
Speed		1 (E)	2 (E)	3	4	5 (E)	6	1 (E)	2 (E)	3	4 (E)	5	6	1 (E)	2	3 (E)	4 (E)	5	6
		MIN	MED			MAX		MIN	MED		MAX		MIN		MED	MAX			
Air flow	m ³ /h	140	180	220	245	280	305	200	240	305	380	470	560	290	360	440	540	620	680
Cooling total emission (E)	kW	0,88	1,06	1,26	1,35	1,50	1,60	1,37	1,62	1,97	2,37	2,81	3,23	1,97	2,37	2,84	3,34	3,75	4,05
Cooling sensible emission (E)	kW	0,66	0,81	0,98	1,06	1,18	1,27	1,00	1,19	1,47	1,77	2,13	2,47	1,44	1,74	2,11	2,51	2,83	3,07
Heating (E)	kW	0,92	1,08	1,25	1,34	1,47	1,56	1,49	1,71	2,02	2,35	2,73	3,07	2,12	2,47	2,87	3,30	3,64	3,89
Dp Cooling (E)	kPa	2,4	3,3	4,5	5,1	6,1	6,8	2,9	3,9	5,5	7,6	10,3	13,1	6,4	8,8	12,1	16,2	19,8	22,7
Dp Heating (E)	kPa	1,6	2,1	2,7	3,1	3,6	4,0	0,9	1,2	1,6	2,0	2,6	3,2	2,0	2,6	3,4	4,3	5,1	5,8
Fan (E)	W	16	22	32	38	49	66	24	27	34	44	57	71	27	33	42	59	72	84
Sound power (E)	dB(A)	35	41	46	49	52	55	33	36	42	48	54	57	35	41	46	52	55	57
Sound pressure (★)	dB(A)	26	32	37	40	43	46	24	27	33	39	45	48	26	32	37	43	46	48

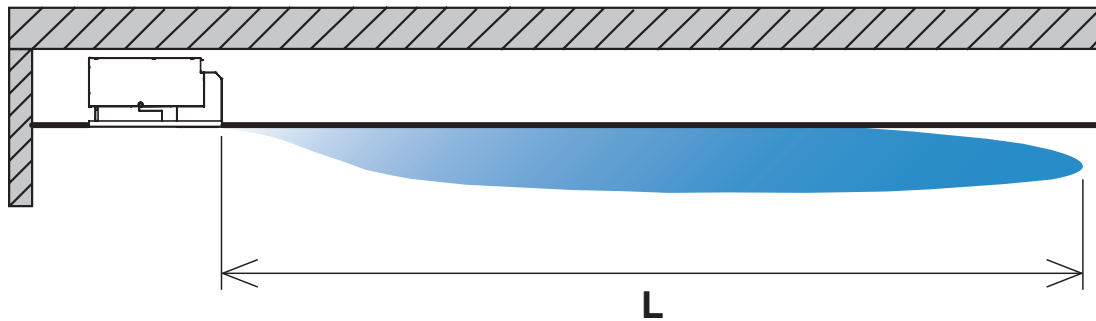
(E) = Eurovent certified performance.

MIN-MED-MAX = Standard connected speeds.

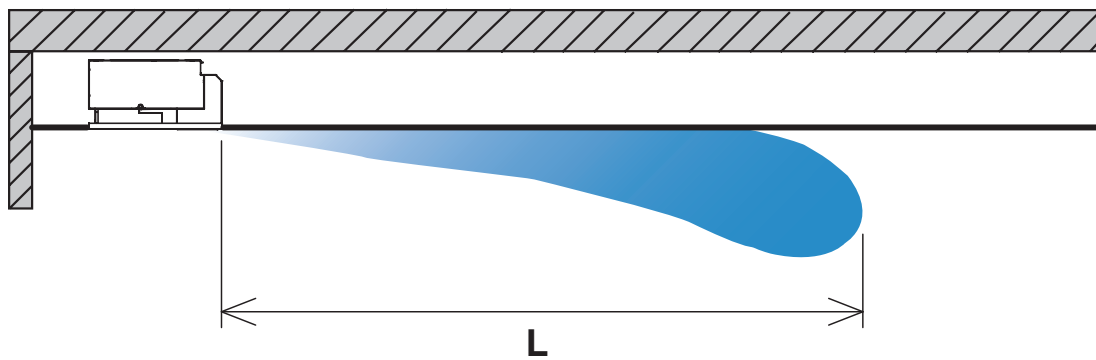
(★) = The sound pressure levels are 9 dB(A) lower than the sound power levels and apply to the reverberant field of a 100 m³ room and a reverberation time of 0.5 sec.

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

Wall electronic controls

Standard models

MO-3V	3 speed control
CR-T	3 speed control with electronic thermostat and manual summer/winter switch
TMO-T	3 speed control with electronic thermostat and summer/winter switch
TMO-T-AU	Automatic speed control with electronic thermostat and summer/winter switch
TMO-DI	Automatic speed control with electronic thermostat, summer/winter switch and liquid crystal display
TMO-503-SV2	Automatic speed control with electronic thermostat to be mounted in the DIN 503 box (for units with valves)
T2T	Electromechanical thermostat with summer/winter switch (only for 2 pipe units)

N.B.: if the electric heater is mounted, use the **"IAQ"** controls.

FreeSabiana wireless control system

Free-Com	Remote control to be used with electronic boards described at Page 229
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Electronic controls for MB boards

MB-M	MB electronic board fitted on the unit
MB-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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