



SABIANA
IL CLIMA AMICO



A leading brand of



Carisma CRT

Fan Coil Unit with Tangential Fan with Asynchronous Motor

Range includes **6 air flow rates** (from 90 to 945 m³/h) and **5 models** (for wall and ceiling installation, with casing and concealed), each equipped with 3 row coil and with the possibility to add a 1 row coil for 4 pipe systems.

Among fan coils with asynchronous motors, the CRT series is the one that offers the best compromise between electrical consumption, performance and cost. At minimum speed (Eurovent estimates that this is 65% of its operating time), electrical absorption ranges between 6 and 19W according to size and the sound pressure levels are between 19 and 23 dB(A). Therefore, it is the ideal solution for aesthetic systems, in areas with low background noise.

Technical characteristics of the main components:

Outer casing: made with strong synthetic lateral corners and from galvanized and pre-painted front steel panel. The plastic top grid has fixed louvres and is reversible in order to distribute the air in two different directions.

Standard colours:

- Lateral corners and top grid: **Pantone Cool Grey 1C (light grey)**
- Front panel: **RAL 9003 (white)**
- Other colours on request.

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

Filter: polypropylene cellular fabric regenerating filter. The filter frame of galvanized steel is inserted into special plastic sliding guides fastened to the internal structure for easy insertion and removal of the filter. Filter presence is highlighted by a plastic front cover featuring the same colour as the top grid.

Fan assembly: the tangential fan assembly is composed of two fan shrouds: an external one in ABS and an internal one of perforated, shaped steel. The fan has an external diameter of 120mm and is the length of the coil. The fins are concave and are positioned in a spiral shape along the whole length of the fan.

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 1/2inch 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.

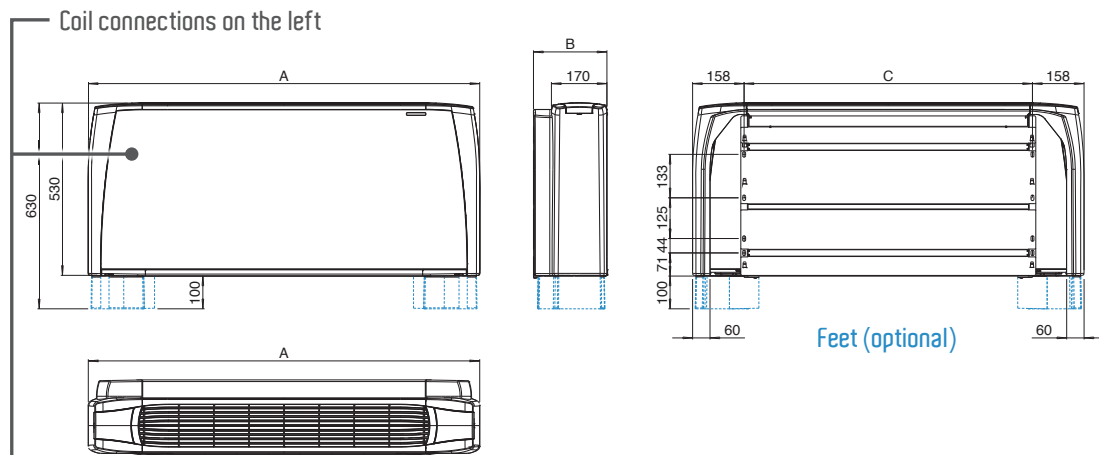
Flow and return pipe connections are situated at the same end on the left side looking at the unit. On request we can deliver the unit with the connections on the right end side: this must be specified on the order as this operation can not be carried out on site during installation.

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

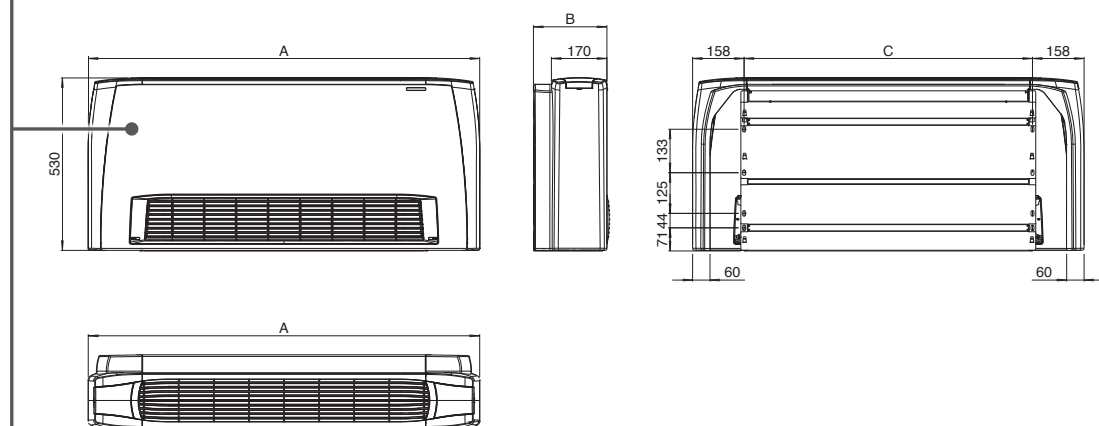


Dimensions, Weight, Water content

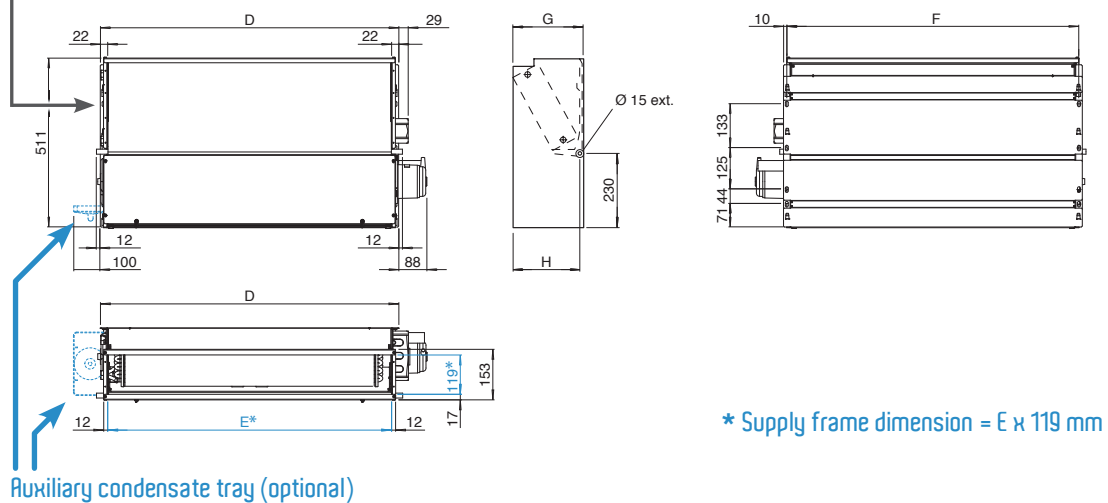
MU model



MO-MUB model



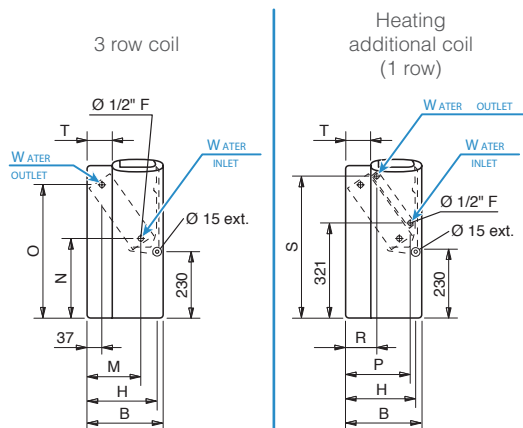
IU-IO model



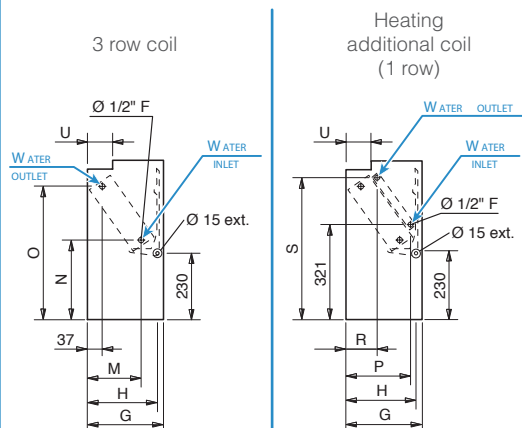
Dimensions, Weight, Water content

Coil connections

MU and MO-MUB model



IU-IO model



Dimension (mm)

MODEL	1	2	3	5	6	7
A	670	770	985	1200	1200	1415
B	225	225	225	225	225	225
C	354	454	669	884	884	1099
D	374	474	689	904	904	1119
E	330	430	645	860	860	1075
F	354	454	669	884	884	1099
G	218	218	218	218	218	218
H	205	205	205	205	205	205
M	145	145	145	145	145	145
N	260	260	260	260	260	260
O	460	460	460	460	460	460
P	185	185	185	185	185	185
R	105	105	105	105	105	105
S	475	475	475	475	475	475
T	55	55	55	55	55	55
U	65	65	65	65	65	65

Weight (kg)

		WEIGHT WITH PACKAGING							WEIGHT WITHOUT PACKAGING						
		MODEL	1	2	3	5	6	7	1	2	3	5	6	7	
MU	MO-MUB	ROWS	3	14,8	16,2	19,6	24,2	24,9	28,7	13,2	14,4	17,3	21,4	22,1	25,4
			3+1	15,5	17,0	20,8	25,7	26,4	30,5	13,9	15,2	18,5	22,9	23,6	27,2
IU-IO		ROWS	3	11,5	12,6	15,3	19,2	20,0	23,6	9,9	10,8	13,5	16,9	17,7	20,8
			3+1	12,2	13,4	16,5	20,7	21,5	25,4	10,6	11,6	14,7	18,4	19,2	22,6

Water content (litres)

MODEL		1	2	3	5	6	7
ROWS	3	0,5	0,6	0,9	1,3	1,6	1,7
	3+1	0,2	0,2	0,3	0,4	0,5	0,5

Units with 3 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		CRT 13						CRT 23						CRT 33					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN		MED		MAX		MIN		MED		MAX		MIN		MED		MAX	
Air flow	m³/h	95	115	140	175	200	240	125	150	180	225	250	305	170	205	275	315	370	440
Cooling total emission (E)	kW	0,51	0,59	0,69	0,79	0,87	0,99	0,73	0,85	0,96	1,14	1,24	1,41	1,09	1,29	1,63	1,83	2,04	2,36
Cooling sensible emission (E)	kW	0,40	0,48	0,56	0,66	0,74	0,86	0,56	0,66	0,75	0,91	0,99	1,15	0,81	0,96	1,23	1,39	1,56	1,83
Heating (E)	kW	0,68	0,80	0,94	1,11	1,24	1,44	0,94	1,11	1,27	1,53	1,66	1,93	1,32	1,57	2,02	2,27	2,55	2,99
Heating - Water 70-60°C	kW	1,17	1,39	1,64	1,94	2,17	2,52	1,59	1,88	2,16	2,61	2,86	3,33	2,21	2,64	3,41	3,83	4,31	5,07
Dp Cooling (E)	kPa	0,7	0,9	1,2	1,5	1,8	2,2	1,6	2,1	2,6	3,6	4,1	5,2	5,0	6,7	10,1	12,3	15,2	20,0
Dp Heating (E)	kPa	0,5	0,7	0,9	1,2	1,5	1,9	1,3	1,8	2,2	3,0	3,3	4,3	4,1	5,3	8,3	10,2	12,5	15,6
Fan (E)	W	6	8	11	14	17	23	7	9	12	16	19	25	8	10	15	18	23	31
Sound power (E)	dB(A)	27	31	36	41	44	47	26	31	35	40	43	47	28	31	36	40	44	48
Sound pressure (★)	dB(A)	18	22	27	32	35	38	17	22	26	31	34	38	19	22	27	31	35	39

MODEL		CRT 53						CRT 63						CRT 73					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN		MED		MAX		MIN		MED		MAX		MIN		MED		MAX	
Air flow	m³/h	225	285	360	440	495	610	305	370	475	560	635	780	360	445	570	680	780	945
Cooling total emission (E)	kW	1,46	1,77	2,17	2,53	2,76	3,23	1,88	2,19	2,67	3,02	3,33	3,87	2,29	2,72	3,32	3,77	4,18	4,82
Cooling sensible emission (E)	kW	1,08	1,32	1,64	1,93	2,12	2,52	1,41	1,66	2,05	2,34	2,61	3,07	1,70	2,04	2,52	2,89	3,23	3,78
Heating (E)	kW	1,77	2,17	2,69	3,16	3,47	4,13	2,31	2,73	3,34	3,83	4,26	5,03	2,78	3,33	4,10	4,71	5,27	6,16
Heating - Water 70-60°C	kW	2,97	3,65	4,54	5,34	5,87	6,98	3,89	4,59	5,66	6,49	7,23	8,55	4,66	5,62	6,91	7,96	8,91	10,44
Dp Cooling (E)	kPa	3,3	4,6	6,5	8,5	9,9	13,1	5,1	6,6	9,4	11,6	13,8	18,0	8,5	11,5	16,6	20,9	25,1	31,7
Dp Heating (E)	kPa	2,7	3,7	5,4	7,0	8,1	11,0	4,1	5,5	7,6	9,7	11,4	15,2	7,0	9,1	13,1	16,2	19,8	25,2
Fan (E)	W	12	15	22	27	33	46	15	20	28	35	44	60	19	24	34	43	53	72
Sound power (E)	dB(A)	26	31	37	41	43	48	31	36	43	47	50	54	32	36	43	47	50	55
Sound pressure (★)	dB(A)	17	22	28	32	34	39	22	27	34	38	41	45	23	27	34	38	41	46

(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		CRT 13+1						CRT 23+1						CRT 33+1					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN		MED	MAX			MIN		MED	MAX			MIN		MED	MAX		
Air flow	m³/h	90	110	135	165	190	225	115	140	170	210	240	290	165	200	255	300	345	415
Cooling total emission (E)	kW	0,49	0,57	0,67	0,76	0,84	0,95	0,68	0,80	0,92	1,08	1,20	1,36	1,05	1,25	1,54	1,73	1,94	2,22
Cooling sensible emission (E)	kW	0,38	0,46	0,55	0,63	0,71	0,81	0,52	0,62	0,71	0,86	0,96	1,11	0,78	0,93	1,16	1,32	1,49	1,73
Heating (E)	kW	0,60	0,69	0,80	0,91	1,01	1,13	0,82	0,95	1,07	1,25	1,38	1,56	1,25	1,45	1,74	1,93	2,14	2,43
Dp Cooling (E)	kPa	0,6	0,8	1,1	1,4	1,6	2,0	1,4	1,9	2,4	3,3	3,9	4,9	4,5	6,1	8,8	10,8	13,2	16,8
Dp Heating (E)	kPa	0,6	0,8	1,0	1,3	1,5	1,9	1,3	1,6	2,0	2,6	3,1	3,9	3,4	4,4	6,1	7,3	8,8	11,0
Fan (E)	W	6	8	11	14	17	23	7	9	12	16	19	25	8	10	15	18	23	31
Sound power (E)	dB(A)	27	31	36	41	44	47	26	31	35	40	43	47	28	31	36	40	44	48
Sound pressure (★)	dB(A)	18	22	27	32	35	38	17	22	26	31	34	38	19	22	27	31	35	39

MODEL		CRT 53+1						CRT 63+1						CRT 73+1					
Speed		1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6
		MIN		MED	MAX			MIN		MED	MAX			MIN		MED	MAX		
Air flow	m³/h	215	275	345	420	475	580	285	345	440	520	600	735	345	420	540	640	735	895
Cooling total emission (E)	kW	1,41	1,72	2,09	2,44	2,67	3,11	1,77	2,09	2,53	2,87	3,19	3,70	2,21	2,59	3,17	3,62	4,04	4,63
Cooling sensible emission (E)	kW	1,04	1,28	1,57	1,85	2,05	2,41	1,32	1,57	1,93	2,21	2,48	2,93	1,64	1,93	2,40	2,76	3,11	3,61
Heating (E)	kW	1,64	1,95	2,31	2,65	2,87	3,30	2,00	2,31	2,74	3,07	3,39	3,90	2,52	2,89	3,46	3,90	4,31	4,91
Dp Cooling (E)	kPa	3,0	4,3	6,1	8,0	9,4	12,2	4,6	6,1	8,5	10,6	12,8	16,6	7,8	10,3	14,8	18,6	22,6	28,7
Dp Heating (E)	kPa	1,1	1,5	2,0	2,5	2,9	3,7	1,5	2,0	2,7	3,2	3,9	4,9	2,7	3,4	4,7	5,8	6,9	8,7
Fan (E)	W	12	15	21	27	33	46	15	20	28	35	44	60	19	24	34	43	53	72
Sound power (E)	dB(A)	26	31	37	41	43	48	31	36	43	47	50	54	32	36	43	47	50	55
Sound pressure (★)	dB(A)	17	22	28	32	34	39	22	27	34	38	41	45	23	27	34	38	41	46

(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.

Electronic controls included

Standard MU-MUB models

CB	3 speed control
CB-T	3 speed control with electronic thermostat and manual summer/winter switch
CB-C	3 speed control with electronic thermostat and centralized summer/winter switch
CB-AU	Automatic 3 speed control with electronic thermostat and summer/winter switch

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

Wall electronic controls

Standard MU, MO-MUB and IU-IO 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)
T-MB-M	Control fitted on the unit, for MV/MVB models with left connections (available with right connections, to be used with MB board only)
T-MB-S	Control supplied with separate packaging, for MV/MVB models with left connections (available with right connections, to be used with MB board only)
RM-RT03	RT03 infra-red remote control with fitted receiver, for MV/MO-MVB models (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)
RM	Receiver for RT03 infra-red remote control fitted on the unit, for MV/MO-MVB models (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	Hardware/software supervisory system (to be used with MB board only)
ROUTER-S	Router for Sabianet
SIOS	Relay output board for Sabianet



**Built-in
electronic
control**

**Wall
electronic control**



TMO-T

FREE



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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