



**SABIANA**  
IL CLIMA AMICO



A leading brand of AFG



# Carisma CRC

## Fan Coil Unit with Centrifugal Fan with Asynchronous Motor

**R**ange includes **9 air flow rates** (from 105 to 1500 m<sup>3</sup>/h) and **5 models** (for wall and ceiling installation, with casing and concealed), each equipped with 3 or 4 row coil and with the possibility to add a 1 or 2 row coil for 4 pipe systems.

**I**t is the most comprehensive range, perfectly suited to meet all of the climate control needs of work environments such as offices, shops, restaurants and hotel rooms featuring ducted installations with available pressure **up to 50 Pa**.

# 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 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 1/2inch 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 operation can also be easily carried out on site during installation.**

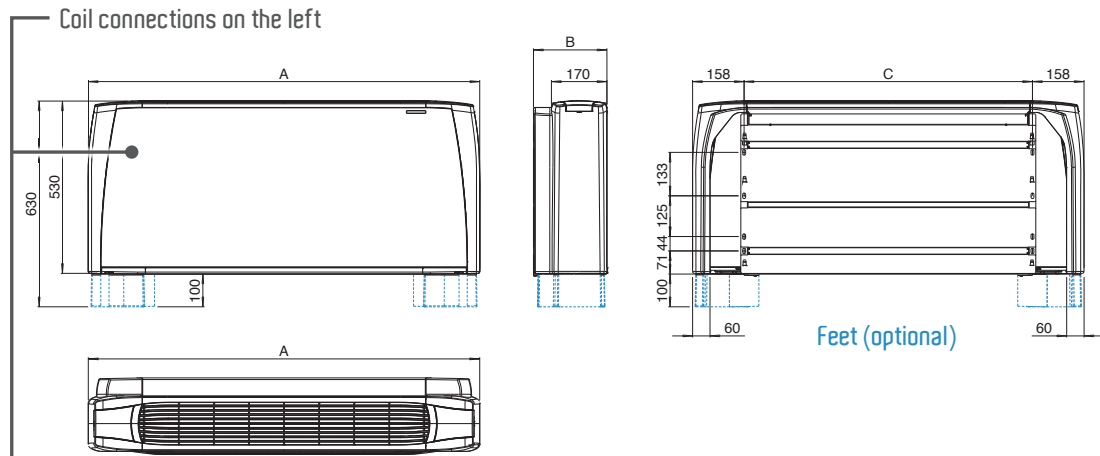
**Condensate collection tray:** made from plastic with an “L”-shaped plastic fitted on the inner casing; in the MO-MVB and IV-IO model the tray is insulated with polyolefin (PO) foam (class M1).

The outside diameter of the condensate discharge pipe is 15 mm.

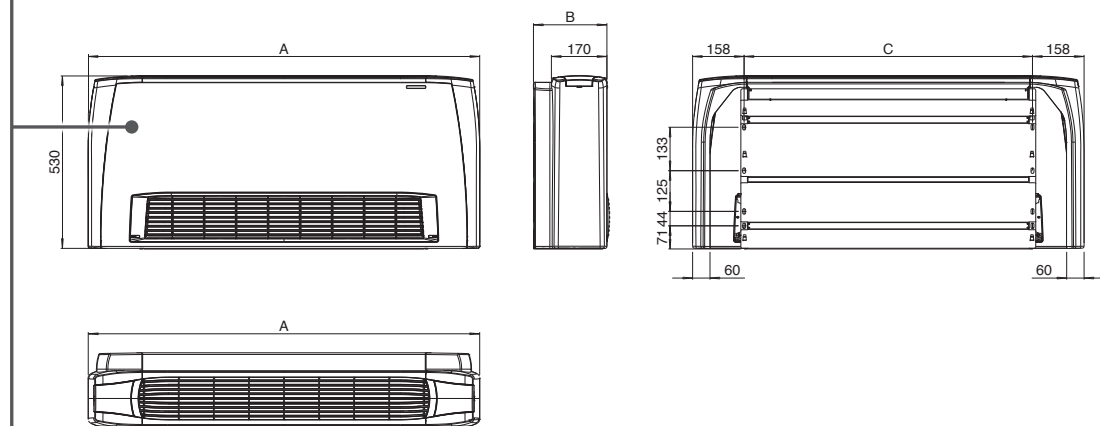


# Dimensions, Weight, Water content

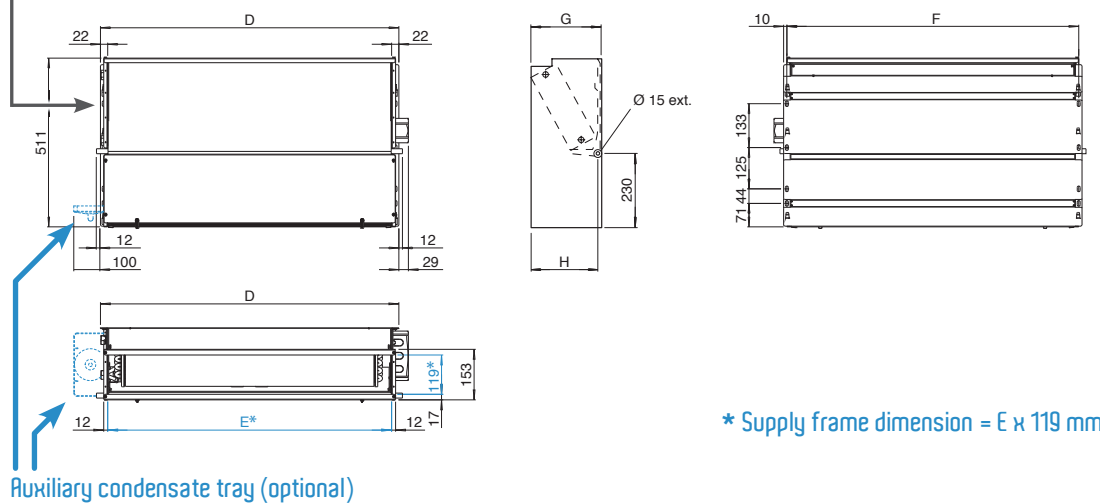
## MU model



## MO-MUB model



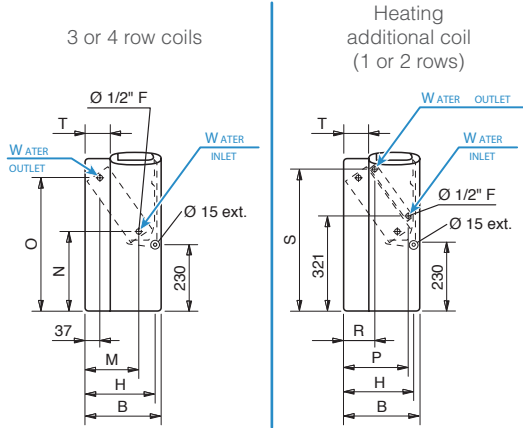
## IU-IO model



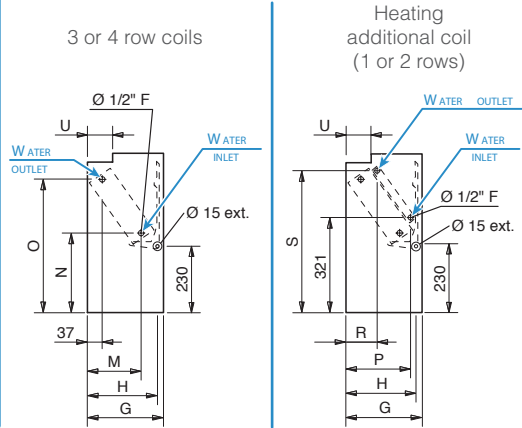
# Dimensions, Weight, Water content

## Coil connections

### MU and MO-MUB model



### IU-IO model



## Dimension (mm)

MODEL	1	2	3	4	5	6	7	8	9
A	670	770	985	985	1200	1200	1415	1415	1415
B	225	225	225	225	225	225	225	255	255
C	354	454	669	669	884	884	1099	1099	1099
D	374	474	689	689	904	904	1119	1119	1119
E	330	430	645	645	860	860	1075	1075	1075
F	354	454	669	669	884	884	1099	1099	1099
G	218	218	218	218	218	218	218	248	248
H	205	205	205	205	205	205	205	235	235
M	145	145	145	145	145	145	145	170	170
N	260	260	260	260	260	260	260	270	270
O	460	460	460	460	460	460	460	450	450
P	185	185	185	185	185	185	185	210	210
R	105	105	105	105	105	105	105	110	110
S	475	475	475	475	475	475	475	465	465
T	55	55	55	55	55	55	55	85	85
U	65	65	65	65	65	65	65	95	95

## Weight (kg)

		WEIGHT WITH PACKAGING									WEIGHT WITHOUT PACKAGING									
		MODEL	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
MU MO-MUB	ROWS	3	15,5	17,2	21,4	22,5	26,9	27,7	32,1	35,7	35,9	13,9	15,4	19,1	20,2	24,1	24,9	28,8	32,0	32,2
		3+1	16,2	18,0	22,6	23,7	28,4	29,2	33,9	37,5	37,7	14,6	16,2	20,3	21,4	25,6	26,4	30,6	33,8	34,0
		3+2	16,7	18,6	23,3	24,4	29,3	30,1	35,0	38,6	38,8	15,1	16,8	21,0	22,1	26,5	27,3	31,7	34,9	35,1
		4	16,0	18,0	22,4	23,5	28,1	29,0	33,6	37,2	37,4	14,4	16,2	20,1	21,2	25,3	26,2	30,3	33,5	33,7
IU-IO	ROWS	3	12,2	13,6	17,1	18,1	21,9	22,8	27,0	30,2	30,4	10,6	11,8	15,3	16,3	19,6	20,5	24,2	27,1	27,3
		3+1	12,9	14,4	18,3	19,3	23,4	24,3	28,8	32,0	32,2	11,3	12,6	16,5	17,5	21,1	22,0	26,0	28,9	29,1
		3+2	13,4	15,0	19,0	20,0	24,3	25,2	29,9	33,1	33,3	11,8	13,2	17,2	18,2	22,0	22,9	27,1	30,0	30,2
		4	12,7	14,4	18,1	19,1	23,1	24,1	28,5	31,7	31,9	11,1	12,6	16,3	17,3	20,8	21,8	25,7	28,6	28,8
		4+1	13,4	15,2	19,3	20,3	24,6	25,6	30,3	33,5	33,7	11,8	13,4	17,5	18,5	22,3	23,3	27,5	30,4	30,6

## Water content (litres)

MODEL	1	2	3	4	5	6	7	8	9
ROWS	3	0,5	0,6	0,9	0,9	1,3	1,6	1,9	1,9
	4	0,7	0,8	1,3	1,3	1,7	2,2	2,8	2,8
	+1	0,2	0,2	0,3	0,3	0,4	0,5	0,6	0,6
	+2	0,4	0,4	0,6	0,6	0,8	1,0	1,0	1,2



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

Certification

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

Table with 4 columns: MODEL, CRC 13, CRC 23, CRC 33. Rows include Speed, Air flow, Cooling total emission, Heating, Dp Cooling, Dp Heating, Fan, Sound power, etc.

Table with 4 columns: MODEL, CRC 43, CRC 53, CRC 63. Rows include Speed, Air flow, Cooling total emission, Heating, Dp Cooling, Dp Heating, Fan, Sound power, etc.

Table with 4 columns: MODEL, CRC 73, CRC 83, CRC 93. Rows include Speed, Air flow, Cooling total emission, Heating, Dp Cooling, Dp Heating, Fan, Sound power, etc.

(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.



[www.eurovent-certification.com](http://www.eurovent-certification.com)

[www.certiflash.com](http://www.certiflash.com)

# Certification

## Units with 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	CRC 14						CRC 24						CRC 34								
	1 (E)	2	3	4 (E)	5	6 (E)	1 (E)	2	3 (E)	4	5 (E)	6	1	2 (E)	3 (E)	4	5 (E)	6			
Speed	MIN			MED			MIN			MED			MIN			MED			MAX		
Air flow	m³/h						m³/h						m³/h								
Cooling total emission (E)	kW						kW						kW								
Cooling sensible emission (E)	kW						kW						kW								
Heating (E)	kW						kW						kW								
Heating - Water 70-60°C	kW						kW						kW								
Dp Cooling (E)	kPa						kPa						kPa								
Dp Heating (E)	kPa						kPa						kPa								
Fan (E)	W						W						W								
Sound power (E)	dB(A)						dB(A)						dB(A)								
Sound pressure (★)	dB(A)						dB(A)						dB(A)								
1 row heating additional coil (Water 70/60°C)	Heating (E)	kW					kW					kW									
	Dp Heat. (E)	kPa					kPa					kPa									

MODEL	CRC 44						CRC 54						CRC 64								
	1	2 (E)	3 (E)	4	5 (E)	6	1	2 (E)	3	4 (E)	5 (E)	6	1 (E)	2	3 (E)	4	5 (E)	6			
Speed	MIN			MED			MIN			MED			MIN			MED			MAX		
Air flow	m³/h						m³/h						m³/h								
Cooling total emission (E)	kW						kW						kW								
Cooling sensible emission (E)	kW						kW						kW								
Heating (E)	kW						kW						kW								
Heating - Water 70-60°C	kW						kW						kW								
Dp Cooling (E)	kPa						kPa						kPa								
Dp Heating (E)	kPa						kPa						kPa								
Fan (E)	W						W						W								
Sound power (E)	dB(A)						dB(A)						dB(A)								
Sound pressure (★)	dB(A)						dB(A)						dB(A)								
1 row heating additional coil (Water 70/60°C)	Heating (E)	kW					kW					kW									
	Dp Heat. (E)	kPa					kPa					kPa									

MODEL	CRC 74						CRC 84						CRC 94								
	1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)	1	2 (E)	3	4 (E)	5	6 (E)			
Speed	MIN			MED			MIN			MED			MIN			MED			MAX		
Air flow	m³/h						m³/h						m³/h								
Cooling total emission (E)	kW						kW						kW								
Cooling sensible emission (E)	kW						kW						kW								
Heating (E)	kW						kW						kW								
Heating - Water 70-60°C	kW						kW						kW								
Dp Cooling (E)	kPa						kPa						kPa								
Dp Heating (E)	kPa						kPa						kPa								
Fan (E)	W						W						W								
Sound power (E)	dB(A)						dB(A)						dB(A)								
Sound pressure (★)	dB(A)						dB(A)						dB(A)								
1 row heating additional coil (Water 70/60°C)	Heating (E)	kW					kW					kW									
	Dp Heat. (E)	kPa					kPa					kPa									

(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.

# IAQ accessory (only for CRC/CRC-ECM version)



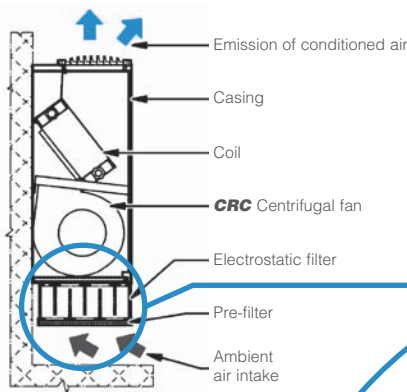
Crystall

The **Crystall Sabiana** electrostatic filter matches the need for better air conditioning with the concepts of space and design.

With this filter the various stages of air treatment are combined in one appliance.

**Thanks to** this new patented filter (efficiency compliant with new Standard UNI 11254), air pollutants such as cigarette smoke, dust (PM10, PM2.5), pollen and most biological organisms **are eliminated.**

In addition, as fresh air is not being introduced to obtain the best climatic conditions, there are consequential energy savings.



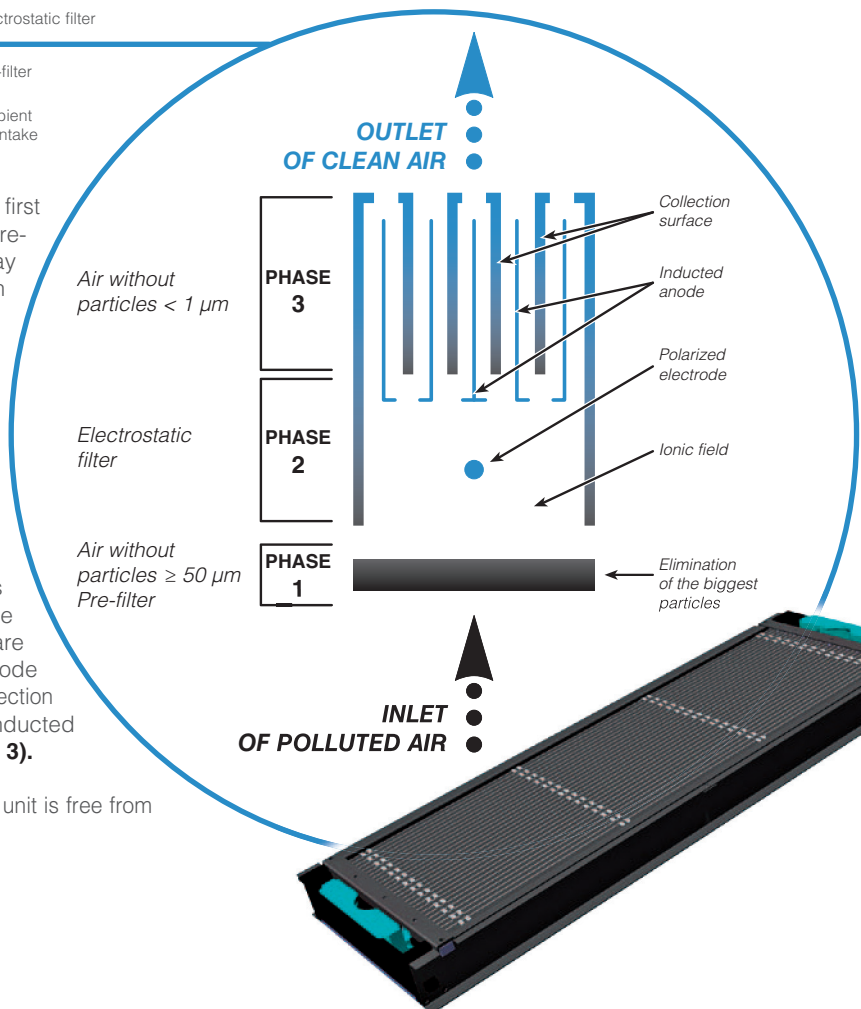
## Operating principle of the Crystall electronic filter

The air is sucked in and first passes a mechanical pre-filter, which stops away particles of more than  $50 \mu\text{m}$  (dust, insects, etc.) **(PHASE 1).**

Then the smallest particles ( $50 \div 0.01 \mu\text{m}$ ) are exposed to an intensive ionic field and are polarized **(PHASE 2).**

The charged particles passing through the second filter section, are pushed back by the anode and attracted by the collection surfaces by a strong, inducted magnetic field **(PHASE 3).**

The air which leaves the unit is free from polluting particles.



# Electronic controls included

## Standard MU–MUB models

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

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

# Wall electronic controls

## Standard MU, MO–MUB and IU–IO models

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

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

## FreeSabiana wireless control system

<b>Free-Com</b>	Remote control to be used with electronic boards described at Page 229
-----------------	--

# Electronic controls for MB boards

<b>MB-M</b>	MB electronic board fitted on the unit
<b>MB-S</b>	MB electronic board supplied with separate packaging
<b>T-MB</b>	Wall control (to be used with MB board only)
<b>T-MB-M</b>	Control fitted on the unit, for MV/MVB models with left connections (available with right connections, to be used with MB board only)
<b>T-MB-S</b>	Control supplied with separate packaging, for MV/MVB models with left connections (available with right connections, to be used with MB board only)
<b>RM-RT03</b>	RT03 infra-red remote control with fitted receiver, for MV/MO-MVB models (to be used with MB board only)
<b>RS-RT03</b>	RT03 infra-red remote control with receiver supplied with separate packaging (to be used with MB board only)
<b>RT03</b>	RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)
<b>RM</b>	Receiver for RT03 infra-red remote control fitted on the unit, for MV/MO-MVB models (to be used with MB board only)
<b>RS</b>	Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with MB board only)
<b>PSM-DI</b>	Multifunction control (to be used with MB board only)

## Sabianet management system for a network of fan coils

<b>Sabianet</b>	Hardware/software supervisory system (to be used with MB board only)
<b>ROUTER-S</b>	Router for Sabianet
<b>SIOS</b>	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.



**SABIANA**  
IL CLIMA AMICO

A leading brand of  **AFG**

Sabiana s.p.a. • via Piaue, 53 • 20011 Corbetta • Milano • Italy

phone +39.02.97203.1 r.a. / +39.02.97270429 / +39.02.97270576

fax +39.02.9777282 / +39.02.9772820

[www.sabiana.it](http://www.sabiana.it) • [info@sabiana.it](mailto:info@sabiana.it)