



Cassette SkySafe

Air purifier

TECHNICAL LEAFLET

SkySafe

Air purifier



Air purifier equipped with Crystall 50 certified and patented electrostatic filter.

The filtration efficiency on inorganic microscopic particles such as fine particles PM10, PM2.5 and PM1, and organic particles such as bacteria, fungi, moulds, viruses, up to 0.1 μm diameter, is certified by an independent laboratory according to the international standard EN ISO 16890, with filtration efficiencies up to 96% with reference to 0.1 μm particles (MPPS).

The SkySafe air purifier can be applied wherever it is not possible to operate on the previous installations, in order to improve the indoor air quality and reduce the pathogenic substances. The Sabiana SkySafe air purifier can be installed exposed, with the ABS casing, or in false ceilings.

It finds its simple and ideal application in offices, shops, beauty centres, schools, exhibition areas: in fact, it is sufficient to power the unit electrically, the absorption is limited to a few Watts.

A simple wall control allows switching on and off, with the possibility of manually varying the three operating speeds.



Air diffuser: Air intake grid, frame and adjustable air distribution louvers on each side made from ABS, RAL 9003, HTA version. MD-600 version metal diffuser, painted in RAL 9003 white colour, with 600 x 600 dimension, to perfectly fit into the false ceiling standard modules without over-lapping parts.

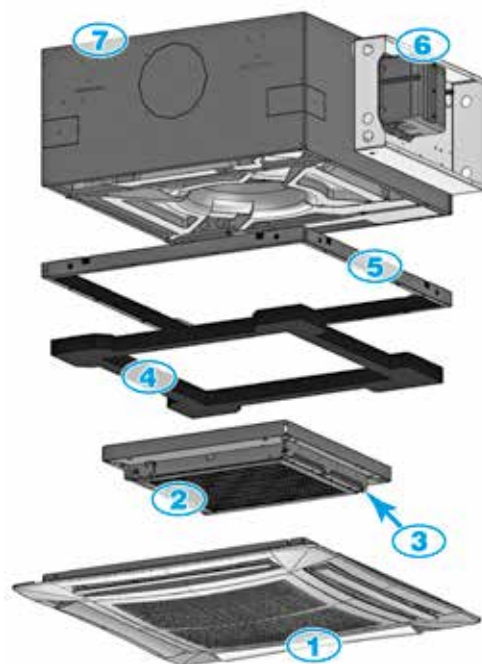
Casing: It is made of galvanized steel with internal thermal insulation with polyolefin (PO) foam (B-s2-d0 EN 13501-1) and external anti-condensate lining.

Control panel: Made of an external box with the electronic regulation board with easily accessible clamps.

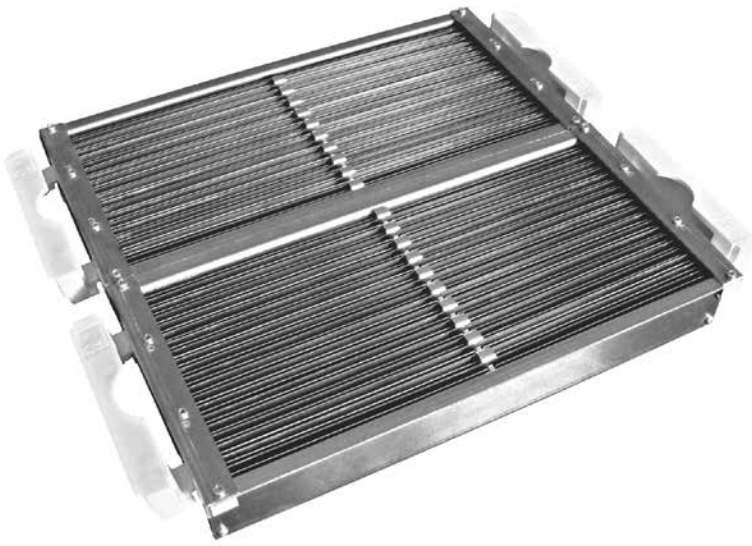
Fan assembly: The fan assembly, which is mounted on anti-vibrating supports, is extremely silent. The radial fan has been designed to optimise performance, using wing profile blades with a shape that reduces turbulence, increasing efficiency and reducing noise. The fan is connected to a single phase electric motor with winding features designed to optimize the performances and guarantee low energy consumption. The motor is single phase 230 V / 50 Hz supply, class B insulation and integrated Klaxon thermal contact for motor protection. The fan speed variation is managed with an autotransformer at 6 different voltage outputs. The units are supplied with 3 standard speeds connected and it is possible to change them on site if necessary.

Low efficiency pre-filter: Synthetic washable mechanical filter, easily removable.

High efficiency Crystall filter: The Crystall electrostatic filtering system consists of two parts: the first one is a plate type electrostatic active filter and is fitted into the air intake section of the unit, while the second is an electronic control and regulation board, fitted on the structure. All electrical connections are made in the factory: the Cassette SkySafe Sabiana installation with incorporated Crystall electrostatic filter is therefore similar to that of a normal Cassette fan coil unit: the only difference is the installation height according to the filter dimensions (30 mm).



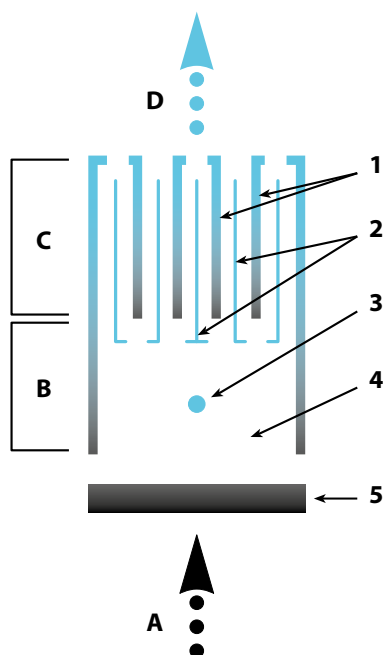
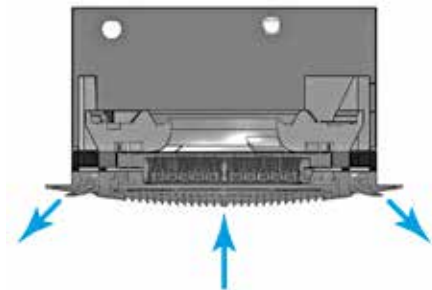
- 1 Diffuser with return air grid
- 2 Active plate type electrostatic filter
- 3 Plastic opening
- 4 Insulation
- 5 Filter containment frame
- 6 Electronic board
- 7 Cassette SkySafe



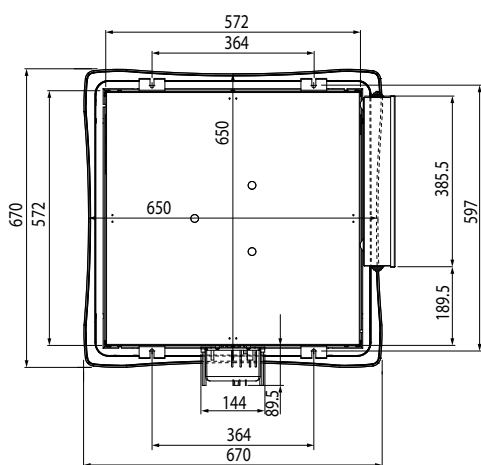
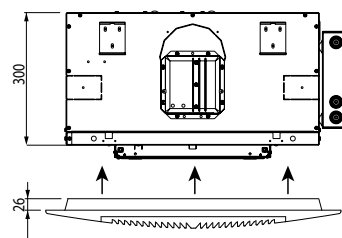
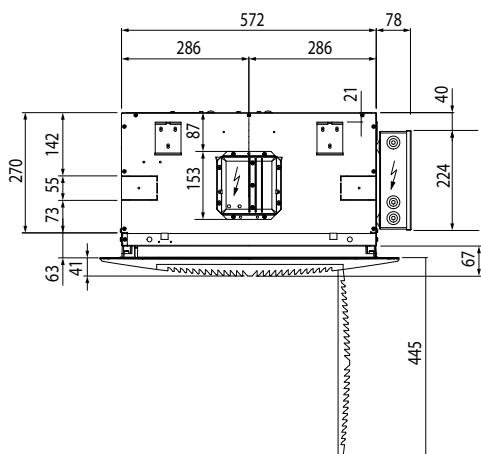
The **Crystall electrostatic filter** is patented and certified according to Standard EN ISO 16890 Class A+ (Eurovent).

Operating principle

When the polluted air goes through the mechanical pre-filter the particles $> 50 \mu\text{m}$ are eliminated (powder, insects, etc) (A - Fase A). Then the smallest particles ($50 \div 0.01 \mu\text{m}$) are exposed to an intensive ionizing field and are polarized (B - B Phase). The charged particles passing through the second filter section, are pushed back by the anode and attracted to the collection surfaces by a strong, induced magnetic field (C - C Phase). The air which leaves the unit is free from polluting particles (D - Fase D).

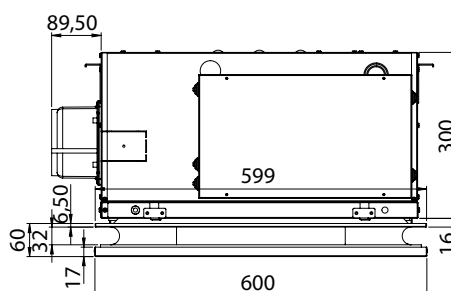
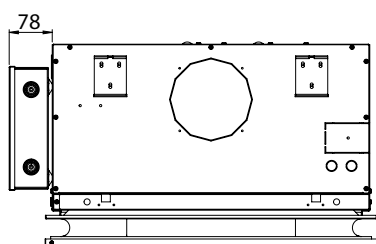
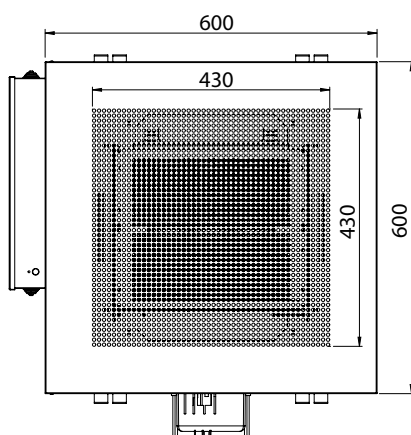


- A** A Phase - Polluted air inlet
- B** B Phase - Positive polarization of the particles
- C** C Phase - Ionized particles induced electric field collector
- D** D Phase - Clean air outlet
- 1** Collection surfaces
- 2** Induced anode
- 3** Polarized electrode
- 4** Ionic field
- 5** Mechanical pre-filter



Model		SkySafe
Unit weight	kg	24
Diffuser weight	kg	3

MD-600 version metal diffuser
(not to be used with the MCT SKSF casing)



Cassette SkySafe performances

Model		SkySafe		
Speed		1	2	3
Flow rate	m ³ /h	245	400	575
Flow rate	m ³ /s	0,068	0,111	0,160
Filter length	mm	356	356	356
Filter depth	mm	292	292	292
Filtering section	m ²	0,104	0,104	0,104
Speed	m/s	0,65	1,07	1,54
MPPS	%	MPPS > 96,99%	82,25% < MPPS < 96,99%	69,71% < MPPS < 85,25%
Efficiency measured on PM1	%	Eff. M. PM1 > 98%	92% < Eff. M. PM1 < 98%	84% < Eff. M. PM1 < 92%
ISO ePM1	%	ISO ePM1 [95%]	ISO ePM1 [90%]	ISO ePM1 [80%]
Efficiency measured on PM2,5	%	Eff. M. PM2,5 > 98%	93% < Eff. M. PM2,5 < 98%	88% < Eff. M. PM2,5 < 93%
ISO ePM2,5	%	ISO ePM2,5 [95%]	ISO ePM2,5 [90%]	ISO ePM2,5 [85%]
Efficiency measured on PM10	%	Eff. M. PM10 > 95%	92% < Eff. M. PM10 < 95%	89% < Eff. M. PM10 < 92%
ISO ePM10	%	ISO ePM10 [95%]	ISO ePM10 [90%]	ISO ePM10 [85%]

Filtering Efficiency **ISO ePM1-2,5-10** certified in compliance with Standard EN ISO 16890:2016

Cassette SkySafe technical data

Model		SkySafe		
Speed		1	2	3
Flow rate	m ³ /h	245	400	575
Sound power (Lw)	dB(A)	35	47	55
Sound pressure (Lp) ¹⁾	dB(A)	26	38	46
Total power absorption	W	37	53	70
Total current absorbed	A	0,17	0,24	0,32

(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.

Operating limits

Description		UoM	Value
Ambient air	Maximum temperature	°C	+40
Power supply	Single-phase rated operating voltage	V/Hz	230/50

MCT-SKSF casing

The **MCT-SKSF** version has been designed for all environments where false ceilings are not featured or cannot be constructed.

The casing fits perfectly to the air inlet and outlet diffuser, maintaining the appealing design that defines the SkySafe Cassette.

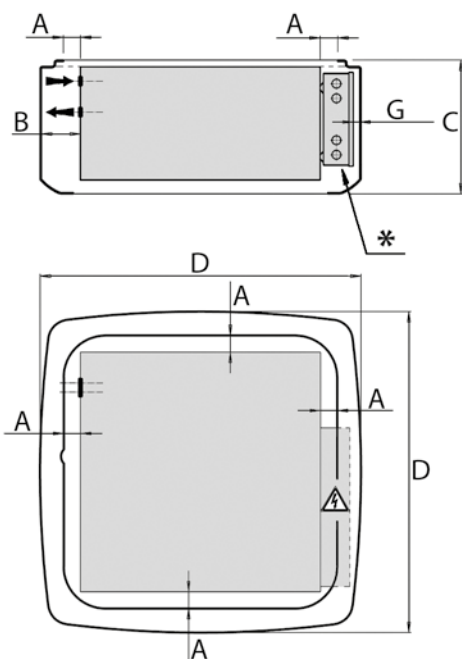
The **MCT-SKSF** version allows an installation height of up to 4 m thanks to the great versatility of adjustment of the air diffusion fins.

All the technical characteristics described in the previous pages still apply, bearing in mind that treatment with primary air is not possible.

The **MCT-SKSF** version features a special casing, in COOL GREY 1C colour, delivered in separate packaging; this must only be fitted after having installed the SkySafe unit and completed the electrical connections.



Dimensions



* = Cables output

Model		MCT-SKSF
A	mm	40
B	mm	93
C	mm	320
D	mm	768
G	mm	15 max
Weight	kg	5

Controls

WM-3V	3 speed switch
SEL2M	Speed switch for WM-3V control



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