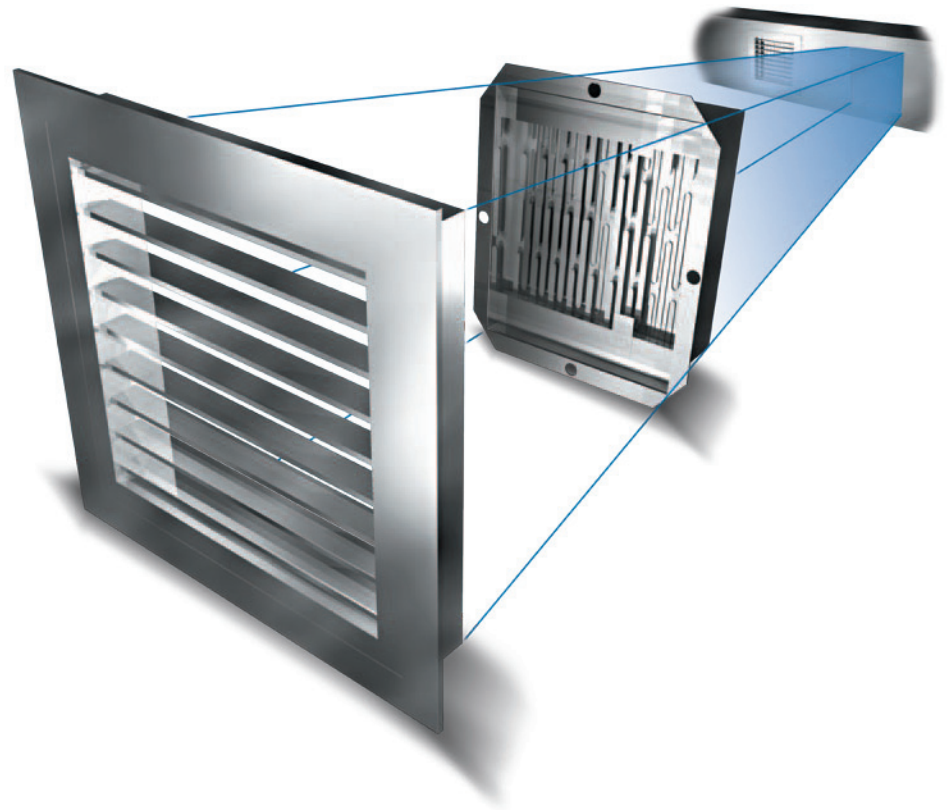




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A leading brand of **AFG**



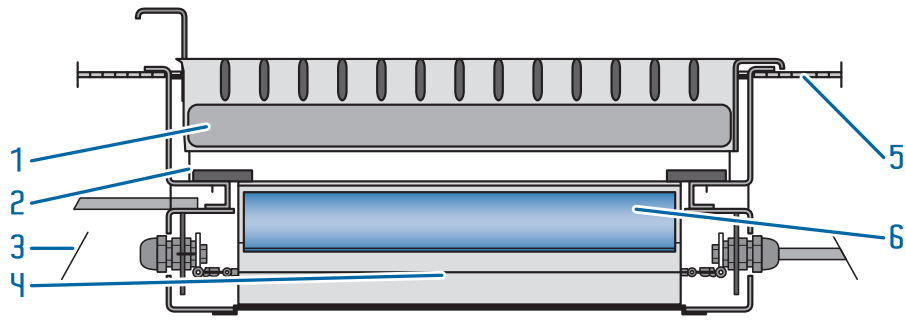
Crystall Duct System Electronic Filter

The **Crystall Duct System** is an innovative filtering system to be mounted on air outlets or inside ducting.

It is made up of **3 elements**:

- a) patented electronic plate filter ("Femec" type)
- b) electronic control and power board
- c) high voltage flexible connection cable

The system has been designed to reduce the indoors diffusion of various types of pollutants found in the ducting of air conditioning systems. As a result, it is ideal for various types of environments, such as schools, hospitals and rest homes (corridors, waiting rooms, wards), doctors' surgeries, hotels and anywhere indoor air quality needs to be improved.



- | | | |
|---------------------------|-----------------------|---------------------------------|
| 1) Air outlet grid | 3) High voltage cable | 5) Duct |
| 2) Electronic filter lock | 4) Ionic field | 6) "Crystall" electronic filter |

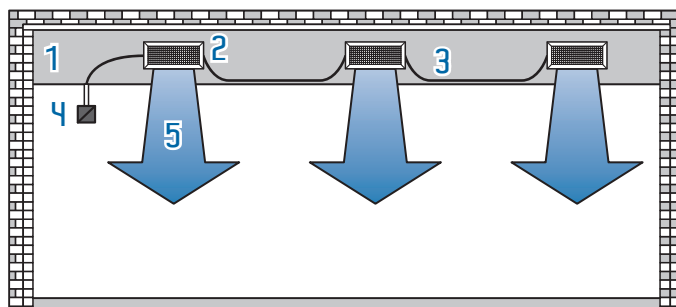
Advantages of the Crystall Duct System:

- Installation possible on existing systems
- Low impact on the thermal and aeraulic equilibrium of the installation
- Reduced pressure drop even when the filter is dirty
- Significant bactericide action on biological pollutants
- No cost for replacing the filters (the filters are totally regenerable by simply washing them)
- Very low additional energy costs
- Simple and fast maintenance
- No system downtime for the maintenance of the filter
- Remote power supply that can supply multiple filtering units at the same time

Tests and Certification:

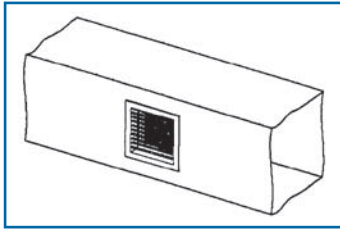
the Crystall Duct System has been the subject of numerous efficiency and effectiveness tests to assess the functions and performance of the systems in real conditions. At the Turin Polytechnic Department of Energy, efficiency and pressure drop tests were performed using the EN 779 international filter classification standards, where applicable. The University of Ancona carried out over 180 laboratory tests on micro-biological substances (total airborne microbiological load), including bacteria, mould, fungi, etc., which confirmed, through the statistical analysis of the data taken from the Fischer test, the effectiveness of the Crystall electronic filter in reducing the bacterial load.

Other tests have been carried out **in the SABIANA laboratories** on the flow-rate, pressure drop, electrical safety and instrumental efficiency of the filtration process on micro-particles by numerically counting the most common particle size categories in various rooms. The particles monitored had the diameters specified by the WHO (World Health Organization) and the EPA (Environmental Protection Agency) as being the most harmful to our health (<2.5 micron PM 2.5), with volumetric counts (number/m³) being performed in a common living environment, using a laser particle counter (LPC).



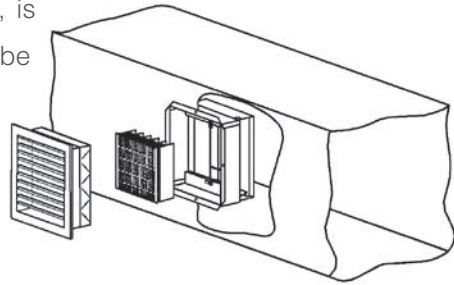
- | |
|---------------------------------|
| 1) Duct |
| 2) Air outlet grid |
| 3) Shielded high voltage cable |
| 4) Power supply and control box |
| 5) Air outlet |

Contruction features: for more details, see "*Crystall Flex System*"

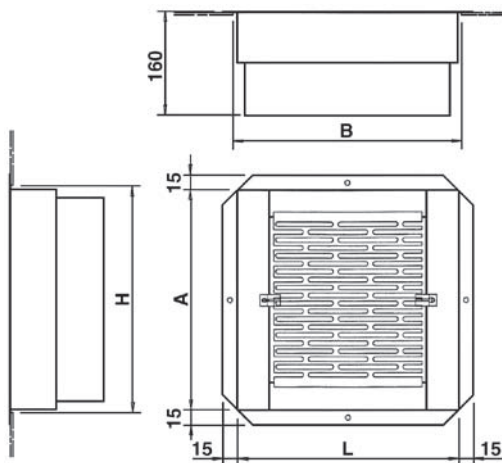


"CDS-E" filter

The **CDS-E external duct filter** is equipped with a perimeter flange that allows to be mounted on standard openings currently on the market. Mounting is done using the same flange that can be screwed or riveted to the outer wall of the duct. The design of the structure takes into account the fact that the air distribution terminals may or may not be equipped with a damper. The filter collar, in fact, is of the telescopic type and therefore the depth can be varied during installation.



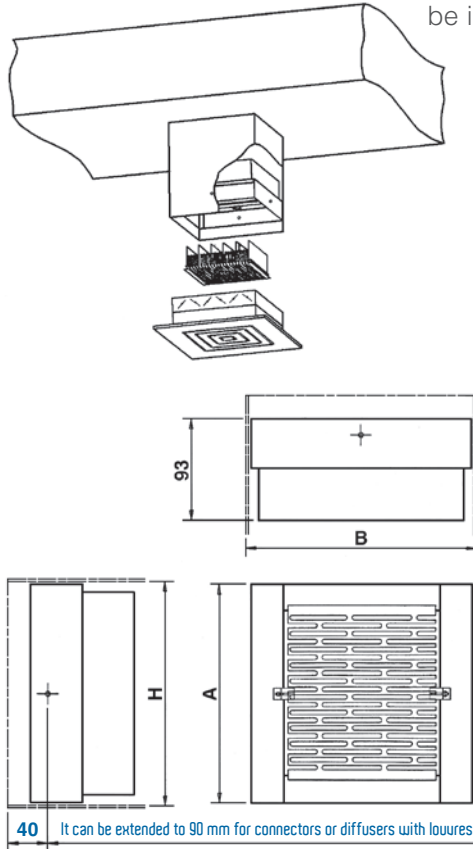
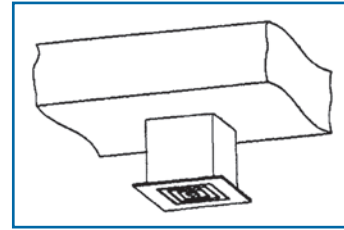
Dimensions



MODEL	NOMINAL DIMENSIONS	L	A	NOMINAL SECTION	FILTER SURFACE
	H X B			Sn	Sf
	mm	mm	mm	mq	mq
CDS.E	150 x 300	298,5	148,5	0,045	0,023
CDS.E	150 x 400	398,5	148,5	0,060	0,033
CDS.E	150 x 500	498,5	148,5	0,075	0,043
CDS.E	150 x 600	598,5	148,5	0,090	0,053
CDS.E	200 x 400	398,5	198,5	0,080	0,043
CDS.E	200 x 500	498,5	198,5	0,100	0,057
CDS.E	200 x 600	598,5	198,5	0,120	0,070
CDS.E	200 x 800	798,5	198,5	0,160	0,096
CDS.E	300 x 500	498,5	298,5	0,150	0,085
CDS.E	300 x 600	598,5	298,5	0,180	0,105
CDS.E	300 x 800	798,5	298,5	0,240	0,145
CDS.E	400 x 600	598,5	398,5	0,240	0,168
CDS.E	400 x 800	798,5	398,5	0,320	0,232
CDS.E	400 x 1000	998,5	398,5	0,400	0,296

"CDS-I" filter

The **CDS-I internal duct filter** is equipped with a smooth containment frame to allow insertion in the terminal duct. It can be mounted using screws or rivets which must be inserted from inside.

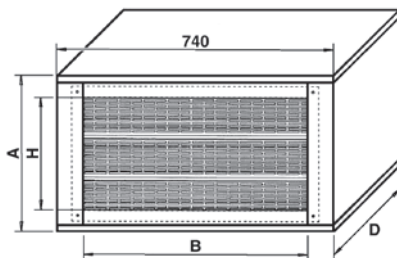
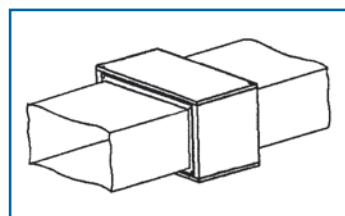


Dimensions

MODEL	NOMINAL DIMENSIONS	L	A	NOMINAL SECTION Sn	FILTER SURFACE Sf
	H X B				
	mm	mm	mm	mq	mq
CDS.I	150 x 225	223	148	0,033	0,015
CDS.I	150 x 300	298	148	0,045	0,023
CDS.I	150 x 375	373	148	0,056	0,030
CDS.I	225 x 225	223	223	0,050	0,025
CDS.I	225 x 375	373	223	0,084	0,050
CDS.I	225 x 450	448	223	0,101	0,062
CDS.I	225 x 525	523	223	0,118	0,075
CDS.I	300 x 300	298	298	0,090	0,045
CDS.I	300 x 375	373	298	0,112	0,060
CDS.I	300 x 450	448	298	0,135	0,075
CDS.I	300 x 525	523	298	0,158	0,090
CDS.I	300 x 600	598	298	0,180	0,105
CDS.I	375 x 375	373	373	0,141	0,080
CDS.I	375 x 450	448	373	0,169	0,100
CDS.I	375 x 600	598	373	0,225	0,140

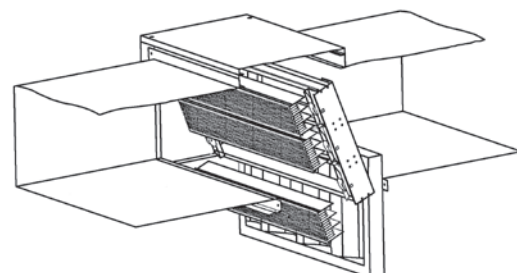
"CDS-C" filter

This type of equipment was specifically created to be able to be inserted **on the duct** upstream from the air handling units. The structure is in galvanised, prepainted plate and is ready for coupling to flanged ducts. Inside there is a mechanical filter section with a depth of 48mm and an electronic filter section. The unit has a closing panel that allows easy access for mounting and maintenance operations.



Dimensions

MODEL	NOMINAL DIMENSIONS	A	D	NOMINAL SECTION Sn	FILTER SURFACE Sf
	H X B				
	mm	mm	mm	mq	mq
CDS.C	600 x 300	415	380	0,18	0,207
CDS.C	600 x 600	715	680	0,36	0,414



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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