



APPLICATIONS

The cartridge filter model represent for many years an ideal solution to decrease the quantity of pollutants as fumes and dust generated by the industrial process.

Thanks to a high filtration surface and to a cleaning system that ensure a durability, they have more compact dimensions than the classical bag filters, allowing in this way a space saving and installation costs, in addition to maintenance costs.

Designed and built taking account of increasingly restrictive environmental and safety regulations, with the various production requirements focusing increasingly on optimisation of plant working and idle times, the self-unloading cartridge filter model IFC is utilised in the mechanical engineering, foundry, chemicals, and food industries and in operations of welding, deburring, grinding, and powder coating for all dedusting needs, when the quantity of particulate to be intercepted is not particularly high in terms of concentration and when humidity levels are only moderate.

CONSTRUCTION FEATURES

- The main structure is realized in powder coated steel and provided with removable self-loading panels for any maintenance operations, upon robust support legs.
- Dusty air plenum designed to house the filter elements, composed of self-loading heavy gauge panels made of powder coated sheet steel.
- Compressed air unloading system with certified compressed air accumulator, high response speed diaphragm valves with relative Full-Immersion type pilot solenoid valve.
- Electronic control unit with possibility of jet pulse adjustment and pause time and differential pressure gauge with digital indication of measured value.
- Dust collection bin located under the hopper, complete with sealing gaskets, quick-release system and castor wheels.
- Painted steel inspection hatches complete with safety locks and sealing gaskets.

The unloading system is cyclically programmed by means of an electronic controller equipped with an economizer designed to optimise consumption of compressed air on the basis of effective requirements. The IFC model filter is equipped as standard with an automatic unloading system with jets of compressed air.

Available versions:

- **IFC.** Cartridge filter with supporting legs.
- **IFCOMP.** Cartridge filter with suction fan mounted on board.
- **IFCT.** Cartridge filter for cutting.

CARTRIDGE FILTERS



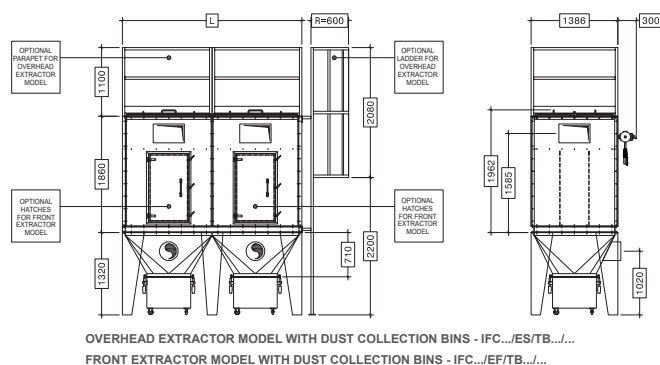
Dimensional table for cartridge filter selection

To allow a successful and durable functioning of filter section and unit it is important to make a correct selection, taking in consideration the nature of treated pollutants and their concentration (see scheme on next page).

The correct filter dimensioning can be accomplished in 4 phases:

- 1) Select the type of application and the type of pollutant in next page scheme, for example: welding fumes from pickled steel sheet.
- 2) Crossing the column "filtration speed" we obtain the range (max-min) of speed across filters recommended in this case: 0.010- 0.013 m/sec.
- 3) calculate the filtration surface area requested for a correct functioning. For example we need to filter 6000mc/h, please calculate:
 - Airflow capacity/ 3600 = mc/sec/ speed of filtration = cartridge surface in square mt.
 - In our case: 6000/3600 = 1.66 /0.010 (the speed obtained at point 2) = 166 mq.
- 4) this value must be used for choosing the correct dimensions of filter by using the table here under. As we can note the filter to be used is the one for model IFC 14 with 168 square mt. surface.

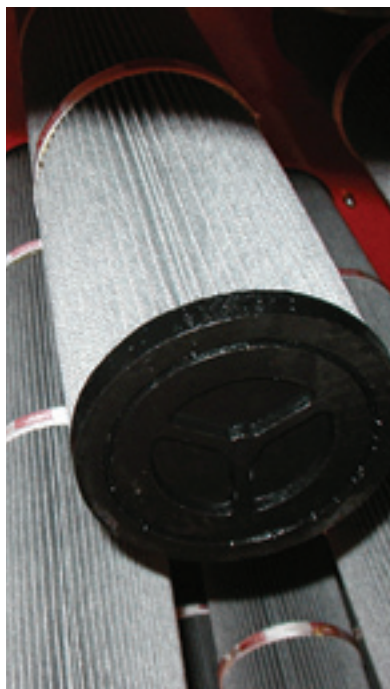
Dimensional table for filter selection



MOD.	FILTRATION SURFACE AREA	L	COMPLETE BAGHOUSE WEIGHT	LADDER WEIGHT	PARAPET WEIGHT	AIR CONSUMPTION
	mq	mm	Kg	Kg	Kg	5 BAR
4	48	1073	610	66	50	0.2 sec. pulse jet and 15 sec. pause 350 N/minute
6	72	1486	730		55	
8	96	1997	885		64	
10	120	2459	1130		72	
12	144	2872	1230		80	
14	168	3383	1385		88	
16	192	3845	1633		96	
18	216	4258	1735		104	

Version with rotary valve on request.

SELECTION TABLE	
P	Unwoven polyester
PA	Antistatic polyester
PAP	Antistatic polyester with precoating
PI	Water-repellent polyester
PIP	Water-repellent polyester with precoating
PT	Teflon coated polyester
PTS	Teflon coated polyester with precoating
PS	Spunbonded polyester
PSP	Spunbonded polyester with precoating
SELECTION EXAMPLE	
AIR HANDLING CAPACITY 6000 m³/h - CAST IRON DUST (m³/h 6000 rapp. filtration ratio 39) = mq 153 = Filter IFC14	



process / pollutant type	pollutant characteristics	filtration speed m/s		airflow capacity/area m³ / m² h		filter medium type
		Min.	Max	Min.	Max	
Cement	Hygroscopic	0,007	0,009	24	32	PT
Cold carbon ash	Very lightweight	0,008	0,011	29	39	P
Flour	Potentially explosive	0,008	0,010	27	36	PA
Fertilisers	Hygroscopic	0,008	0,010	27	36	PA
Welding fumes on pickled sheet metal	Very fine	0,010	0,013	36	48	PS
Welding fumes on grease contaminated sheet metal	Grease	0,008	0,011	29	39	PTP
Polishing of stainless steel	Presence of fibres	0,014	0,018	50	66	PS
Polishing of brass	Adherent	0,010	0,013	36	48	PS
Grinding of plastic	Electrostatic	0,015	0,020	54	72	PA
Metallisation	Presence of sub-micronic particulate	0,015	0,020	54	72	PA
Mixing of pigments	Electrostatic	0,007	0,009	25	33	PS
Metal grinding	Electrostatic	0,014	0,018	50	66	PA
Carbon black	Hygroscopic	0,006	0,008	23	30	PTP
Oxyacetylene cutting	Presence of sub-micronic particulate	0,009	0,011	31	40	PTP
Lime dust	Hygroscopic	0,004	0,006	15	20	PS
Coal dust	Potentially explosive	0,014	0,018	50	66	PA
Gypsum dust	Hydroscopic and packing	0,008	0,011	29	39	P
Marble dust Electrostatic	Elettrostatico	0,008	0,011	29	39	PA
Soil dust	Hydroscopic	0,013	0,017	45	60	P
Aluminium dust	Potentially explosive	0,008	0,010	27	36	PAP
Leather dust	Electrostatic	0,011	0,015	41	54	PA
Cast iron dust	Agglomerant	0,008	0,011	29	39	PS
Wood sanding dust	Fine dust <5µ	0,012	0,016	43	57	P
Coat sanding dust	Fine dust <5µ	0,007	0,009	25	33	PA
Brick dust	Fine dust <5µ	0,008	0,0010	27	36	PS
PVC dust	Electrostatic	0,0010	0,013	36	48	PA
Rubber cutting dust	Agglomerant	0,010	0,013	36	48	PSP
Pharmaceutical particulate	Hygroscopic	0,008	0,011	29	39	PS
Rubber cutting dust	Agglomerant	0,013	0,017	45	60	PSP
Sand blasting	Abrasive	0,016	0,020	58	72	P
Fine sawdust	Potentially explosive	0,014	0,018	50	66	P
Breather outlets of plastic powder silos	Fine dust	0,009	0,012	32	42	PS
Sanding of pickled sheet metal	Electrostatic	0,014	0,018	50	66	PA
Sanding of grease-contaminated sheet metal	Grease	0,010	0,013	36	48	PIP
Intensive laser cutting	Presence of sub-micronic particulate	0,006	0,008	21	27	PTP
Intensive plasma cutting	Presence of sub-micronic particulate	0,011	0,015	40	52	PTP
Occasional plasma cutting	Presence of sub-micronic particulate	0,016	0,021	58	76	PTP
Powder coatings	Electrostatic	0,011	0,014	38	51	PA
Icing sugar	Potentially explosive	0,010	0,013	36	48	PA

ACCESSORIES IFC FILTERS



SUCTION FAN



Single suction centrifugal fan in painted steel, having an impeller with welded backward curved blades in heavy gauge steel, suitable for handling air including very dusty air. The characteristics of airflow capacities and available pressures in addition to an extensive range of sizes (also in special or transmission versions) mean that these units are frequently used in centralised extraction systems. The impeller geometry and construction style allow these units to be used in several different fields: exhaust gas, welding fumes, dust-laden fumes with temperatures of up to 80°C and, for the special versions, higher.

SOUND-INSULATED ENCLOSURES FOR SUCTION FANS



Sound-insulated enclosure for centrifugal fans to reduce noise levels induced by rotation speed of motors and air flows. Coupling to intake and delivery silencers guarantees a high level of noise suppression. The aluminium loading structure and 25 mm prepainted sandwich paneling impart mechanical strength and resistance to external agents.

FLUE TYPE SILENCERS



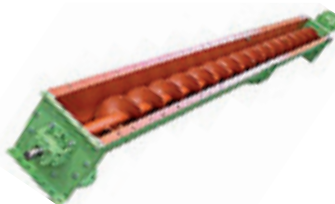
Made of galvanized sheet steel with collars for fixing to rigid ducts and clad in high-density mineral wool sound absorbing material. The silencers are used for noise suppression.

STAR VALVES



Star valves are installed to provide continuous particulate discharge from hoppers. The capabilities and construction materials differ in relation to the quantity and nature of particulate to be handled.

AUGERS



For continuous discharge from the hopper of large particulate quantities. For example, augers are utilised when the baghouse is installed in pneumatic conveyor systems or on separate collection containers.

LADDERS AND PARAPETS



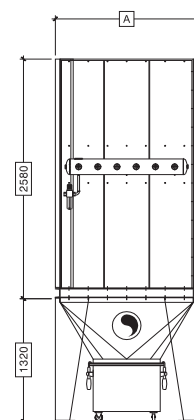
Constructed in compliance with standards applicable particularly to baghouse filters with filter inspection doors located on the roof.

Dimensional table of filters IFCOMP series with suction fan on board

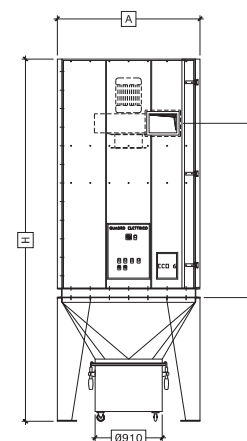
MOD.	FILTRATION SURFACE AREA	A X B	H	BAGHOUSE WEIGHT	POWER	SUCTION AIRFLOW CAPACITY		RESIDUAL RESSURE		AIR CONSUMPTION
	m ²	mm	mm	Kg	kW	m ³ /h min.	m ³ /h max	Pa min.	Pa max	5 BAR
6 / 4.0	72	1486 X 1386	3900	760	4,0	2700	5400	2780	2630	0.2 sec. pulse jet and 15 sec. pause 350 N / minute
6 / 5.5				770	5,5	1900	5400	3220	2100	
6 / 7.5				810	7.5	3850	5400	2030	1930	



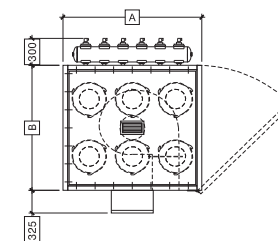
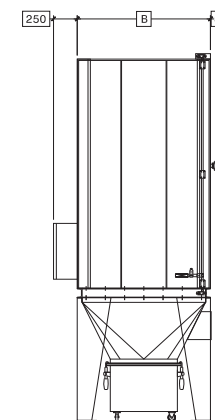
VIEW OF SUCTION SIDE



VIEW OF ELECTRICAL PANEL SIDE



VIEW OF DOOR SIDE



PLAN VIEW

APPLICATIONS

The **IFCOMP** is different from IFC by the presence on board of a centrifugal fan, which makes it more compact. The range is composed of three different sizes of filtration surface areas, suction fan power and overall size.