



# SMART FLO DUST COLLECTORS

CARTRIDGE TYPE  
FOR DUST, MIST & FUMES



# SMART FLO DUST COLLECTORS



## CARTRIDGE TYPE

The cartridge **SmartFlo** Dust Collector is a modular style & continuously operated unit that utilizes the top dirty air inlet principle to minimize re-entrapment of material during the compressed air pulse cleaning process.

The original design of the **SmartFlo** Dust Collector with horizontal filters means that this type of collector offers savings in operation and maintenance costs, since the filters only have to be slid on the independent supports, meaning that during maintenance the time of each replacement is lower and the costs are minimal, saving the user's money.

**SmartFlo** Dust Collectors are modular in design and in each standard module there are two rows of cartridges across the width and two, three and four filters up. Each row has two filters towards the bottom. The unit model describes the module configuration such as FH2-, FH3-, FH4- indicating the number of rows up and the next number indicates the total number of filters in the collector. For example FH4-48 is four rows up and has 48 filters, FH3-12 has three rows up and 12 filters, there is a deviation to the standard modules and they are FH2-4 and FH3-6 which are not modular and have only one filter in each row.



**They have several component options that make them versatile for any type of application, these options include:**

- Anti-Abrasion Inlet
- Dirty Air Plenum Extension
- Air Modules (AAM)
- Explosion Vents
- Bag In / Bag Out, Among Others...

They have bridging-free discharge hoppers with their sides all greater than 60° incline. To maximize the cleaning system with bursts of compressed air, the equipment has blower tubes at the correct distance from the tubesheet to clean even the area closest to the mirror.



# PERFORMANCE & CARE

## OPERATION

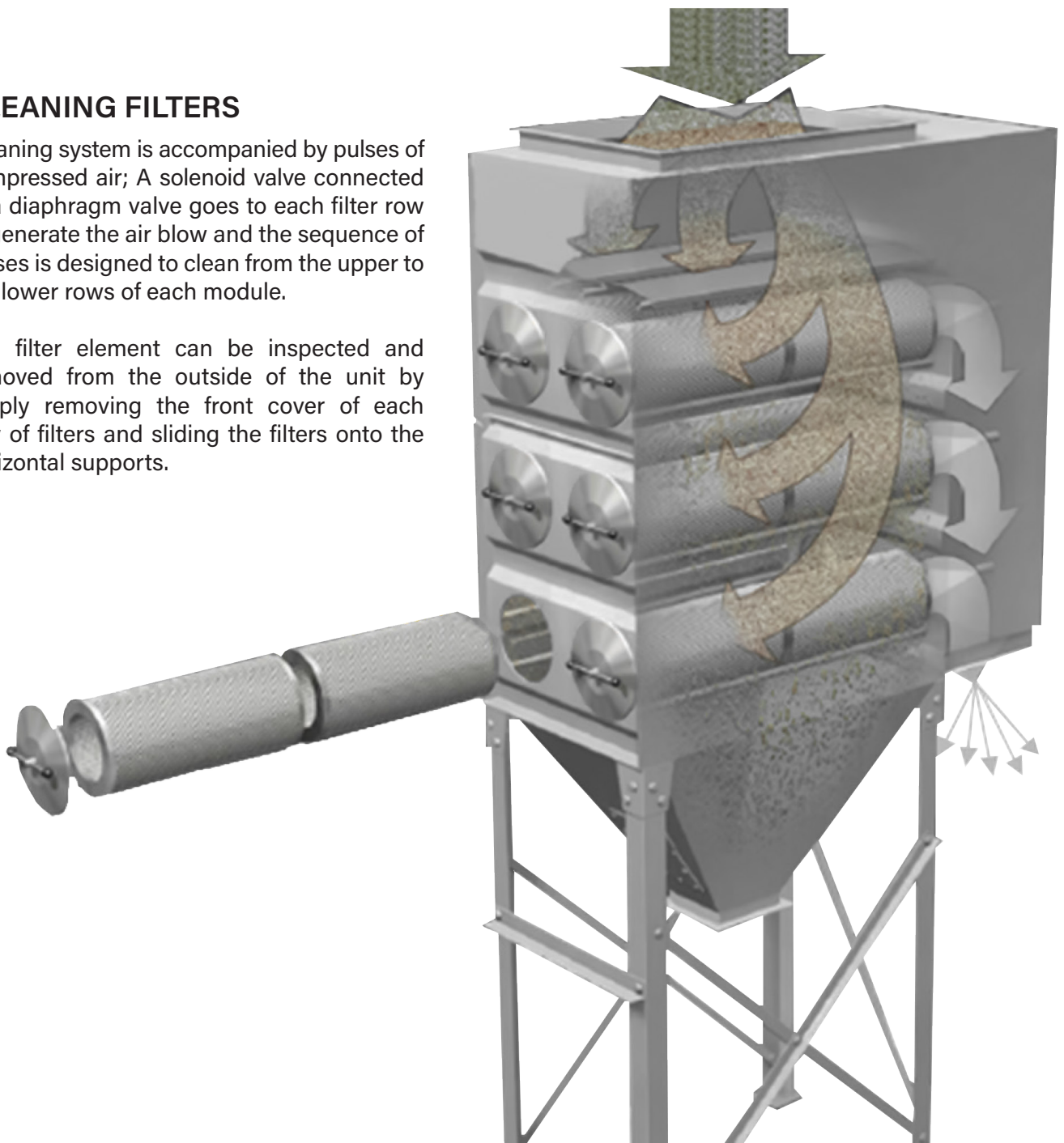
As the dirty air stream enters the top of the filters, the air stream is directed down through the collector causing much of the dust and big load to go directly into the discharge hopper below the filters, the fines are filtered by the cartridges which are horizontal and the filtered clean air goes through/into the clean air plenum of the collector at the rear of the collector.

The clean air outlet can be down, side or top to be connected to the fan suction duct. In this equipment, the cartridge filters are the heart for the correct operation and are from SmartFlo products specifically for their application.

## CLEANING FILTERS

Cleaning system is accompanied by pulses of compressed air; A solenoid valve connected to a diaphragm valve goes to each filter row to generate the air blow and the sequence of pulses is designed to clean from the upper to the lower rows of each module.

The filter element can be inspected and removed from the outside of the unit by simply removing the front cover of each row of filters and sliding the filters onto the horizontal supports.





# APPLICATIONS



**The SmartFlo Dust Collector is a very competitive alternative to any other cartridge or bag collector in continuous operation and for many applications.**

The unit is designed to operate in-line using compressed air pulses for automatic cleaning which allows the unit to maintain system airflow while the filters are being cleaned.

The collector is designed to operate in-line using short bursts of compressed air at 90 -100 Psi.

**SmartFlo Dust Collectors are used in sanitary, process and fugitive dust applications where dust loadings are less than 5 gr/ft<sup>3</sup> (4.69 gm/m<sup>3</sup>).**

The high efficiency with which these units operate compared to baghouse collectors is especially beneficial for returning filtered air to the work area. Some of the more typical applications include sand blasting, polishing, grinding, pharmaceutical, powder coating and welding fumes.

**Care must be taken in certain applications and precautions should be taken depending on the application and type of powder. These recommendations or suggestions are as follows:**

**A)** For fibrous powders, cartridges with open pleats should be used and additional care should be taken to remove the powder in the hoppers and that the collected product does not bridge the filters.

**B)** Pneumatic conveying for applications with dust loads greater than 20 gr/ft<sup>3</sup> (46 gm/m<sup>3</sup>) should be avoided unless a cyclone before the collector, a settling box and/or some equipment to reduce the dust Load of material that reaches the cartridges.

**C)** Processes involving high temperature and humidity require special attention. When this is present in the application it is necessary to make modifications to the collector as an alternative to resist.

**D)** Hygroscopic dusts such as fertilizers, salt, and sugar should be handled under air conditions and a controlled environment (low relative humidity) and preferably use synthetic filter media.

**E)** Hazardous Dusts such as cadmium, chromium, lead, can be filtered with a type of cartridge that can be easily destroyed and reduce disposal costs.

**F)** For flammable or explosive powders, use cartridges with metal covers and caps for better and effective insulation.

**G)** Applications with a high content of hydrocarbons and/or oil should be avoided since this type of contaminant will increase the dust load and will cover the filter media to the point of not being able to clean them effectively.



# STANDARD FEATURES

## SIZE SELECTION

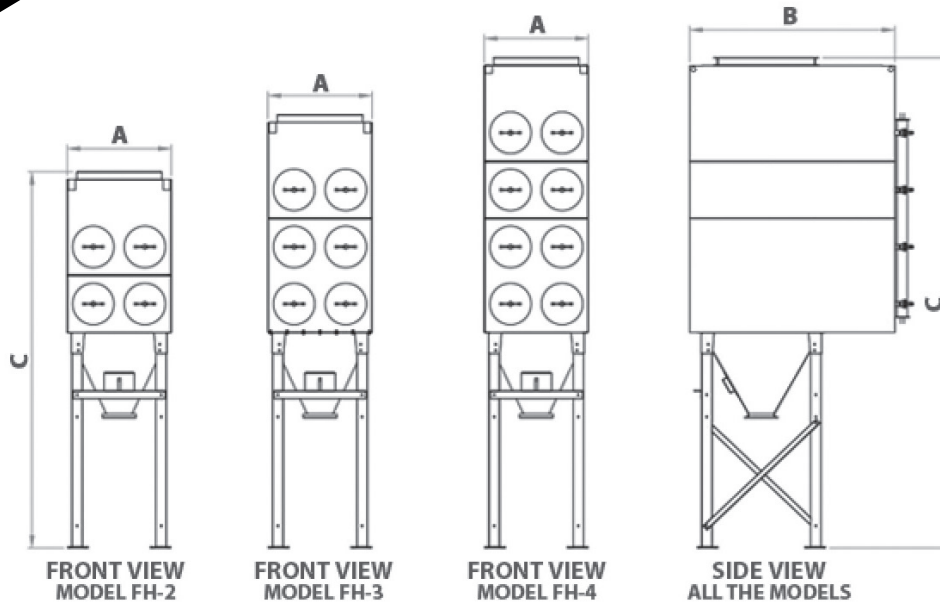
These type of equipments are selected by air cloth to ratio. Based on experience, there is a list of recommended maximum values for each type of contaminant.

**To determine the number of filters required, we use the following formula:**

**Number of filters = CFM (Filtration ratio x Ft2 per filter)**

Once the number of filters has been defined, the configuration of the unit can be selected according to the user's needs.

FEATURES	ADVANTAGES	BENEFITS
<ul style="list-style-type: none"><li>• Modular design with different height (low profile) options.</li></ul>	<ul style="list-style-type: none"><li>• Allows flexibility in system design.</li></ul>	<ul style="list-style-type: none"><li>• Adaptable to space limitations.</li></ul>
<ul style="list-style-type: none"><li>• Downflow Airflow Pattern</li></ul>	<ul style="list-style-type: none"><li>• Improvements in filtration, and filter cleaning</li></ul>	<ul style="list-style-type: none"><li>• Low operating pressure drops at a given airflow per filter.</li><li>• Higher airflows per filter for a given pressure drop.</li></ul>
<ul style="list-style-type: none"><li>• Multiple cartridge filter options for fine, fibrous, non-fibrous, agglomerated, and high temperature applications.</li></ul>	<ul style="list-style-type: none"><li>• Excellent Cartridge Filter</li><li>• Specific execution for each application.</li></ul>	<ul style="list-style-type: none"><li>• High Filtration Efficiency</li><li>• Low Pressure Drop (Operating Costs)</li><li>• Longer Filter Life</li><li>• Less Maintenance</li></ul>
Filter assembly & accessibility: <ul style="list-style-type: none"><li>• Horizontal Filter Support</li><li>• No tool required for service.</li><li>• Quick access front covers.</li></ul>	<ul style="list-style-type: none"><li>• Easy to service filters from outside the collector.</li><li>• There is no tool to drop, lose or break.</li></ul>	<ul style="list-style-type: none"><li>• Less time to change filters.</li><li>• Less exposure to collected dust.</li><li>• Easy to Maintain</li></ul>
<ul style="list-style-type: none"><li>• Factory assembled with filters installed.</li></ul>	<ul style="list-style-type: none"><li>• Easy of Installation</li></ul>	<ul style="list-style-type: none"><li>• Low Installation Costs</li></ul>
Cleaning system: <ul style="list-style-type: none"><li>• Each module has its own air manifold with solenoids and diaphragms.</li><li>• One solenoid-diaphragm per row of filters.</li><li>• Different brand solenoids, diaphragms and timers.</li><li>• Mass Flow Hoppers</li></ul>	<ul style="list-style-type: none"><li>• Modular Design</li><li>• Higher Cleaning System</li><li>• Standard Components</li></ul>	<ul style="list-style-type: none"><li>• Easy to Service</li><li>• Longer Filter Life</li></ul>

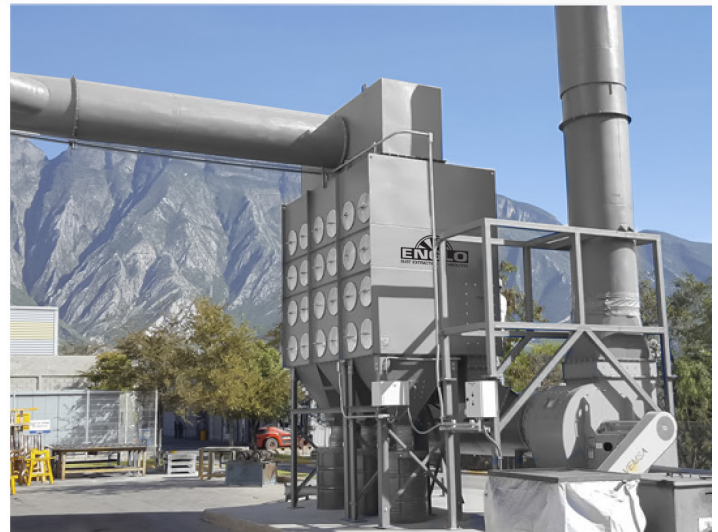


MODELS	FILTERS	FILTER AREA	DIAPHRAGM VALVES		MEASURES			APPROXIMATE WEIGHT (lbs.)
			#	Measure	A (in)	B (in)	C (in)	
2-4	4	1,016	4	3/4"	40	53	146	1,127
2-8	8	2,032	4	1"	40	79	146	1,936
2-12	12	3,048	6	1"	57	79	146	2,307
2-16	16	4,064	8	1"	80	79	146	3,388
2-24	24	6,096	12	1"	120	79	146	4,318
2-36	36	9,144	18	1"	171	79	146	5,698
3-6	6	1,524	6	3/4"	40	79	168	1,350
3-12	12	3,048	6	1"	40	79	168	2,301
3-18	18	4,572	9	1"	57	79	168	2,737
3-24	24	6,096	12	1"	80	79	168	3,597
3-36	36	9,144	18	1"	120	79	168	5,326
3-48	48	12,192	24	1"	161	79	168	6,837
3-54	54	13,716	27	1"	171	79	168	7,090
3-60	60	15,240	30	1"	201	79	168	6,223
3-72	72	18,288	36	1"	241	79	168	9,904
4-16	16	4,064	8	1"	40	79	189	2,787
4-24	24	6,096	12	1"	57	79	189	4,380
4-32	32	8,128	16	1"	80	79	189	4,793
4-48	48	12,192	24	1"	120	79	189	6,707
4-64	64	16,256	32	1"	161	79	189	8,773
4-80	80	20,320	40	1"	201	79	189	10,634
4-96	96	24,384	48	1"	241	79	189	12,713
4-112	112	28,448	56	1"	281	79	189	14,698
4-128	128	32,512	64	1"	322	79	189	16,517





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**OUR EXPERIENCE GUARANTEES  
YOUR EFFICIENCY**



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