



DUST COLLECTORS DCM2000 TO 50000 SERIES





OVERVIEW

THE DCM SERIES IS A POWERFUL AND ROBUST UNIT FOR YOUR INDUSTRIAL DUST COLLECTION NEEDS.



The DCM2000 to 50000 line of cartridge type dust collectors offer extremely efficient and economical systems due to the continuous reverse pulse jet cleaning system. The system allows on-line cleaning, without significant loading thus maintaining constant internal static pressure levels.

They are specially designed for blast rooms, and for sandblasting systems of whatever the treatment capacity is required.

They are also modular which means you can mount multiple units together depending on the extraction capacity of process required.



SELECTION CRITERIA OF A CARTRIDGE COLLECTOR :

- | | |
|---|-------------------------|
| 1- Type of dust | 4- Physical constraints |
| 2- Dust concentrations | 5- Duct static pressure |
| 3- Process conditions: | 6- Disposal method |
| <ul style="list-style-type: none"> • Temperature; • Humidity; • Corrosive Agents; • Dewpoint. | |

MARKETS

- | | | |
|--------------------------|--------------|------------------|
| • General manufacturing | • Marine | • Petroleum |
| • Aerospace and aviation | • Automotive | • Power & energy |
| | | • Pharmaceutical |

KEY FEATURES

Fast, simple and safe cartridge replacement:

The entire replacement of a set of cartridges is done from outside the dust collector and requires no tools. This way the worker is not exposed to the dust.

Economical buy :

The selection of a cartridge dust collector is a very economical choice because it requires a minimum maintenance. The maintenance is limited to an annual replacement of cartridges (depending the application), providing long term profitability.

Exceptional filtration capacity:

able to capture 99,9 % of all particles one (1) micron of larger.

Thanks to the high efficiency of the filtering media, it is possible to filter a larger air volume with a smaller filtering surface. This allows us to manufacture smaller collectors.

The dust collector operates with low pressure drops, between 1" and 3" of H₂O. These values can be maintained by periodic cleaning that is controlled by a standard adjustable timer.





OVERVIEW (CONT'D)

The ISTblast DCM 2 000 to 50 000 Series dust collectors distance themselves with the ability to filter highly contaminated air volumes while remaining extremely compact. The cartridges are combined with an efficient self-cleaning system of compressed air allowing the filtration of sub-micronics dust particles in a continuous operation and with a constant differential pressure loss.

Our DCM series includes sealed mechanisms and access doors for easy access and requires no tools to carry out the change of filter cartridges.

MAIN ADVANTAGES AT A GLANCE

- High filtration capacity
- Models from 6 to 224 cartridges and up to 50 000 CFM capacity.

CUSTOM ENGINEERING

- Special needs and custom designs available with DCM systems.
- Project integration
- Avoids particle accumulation in order to better comply with NFPA regulations.
- Vertical cartridge design
- Unlike horizontal cartridge designs that reduce filtering surface efficiency by up to 30%, ISTblast DCM series dust collectors maintain a 100% filtration rate at all times.

FEATURES & BENEFITS

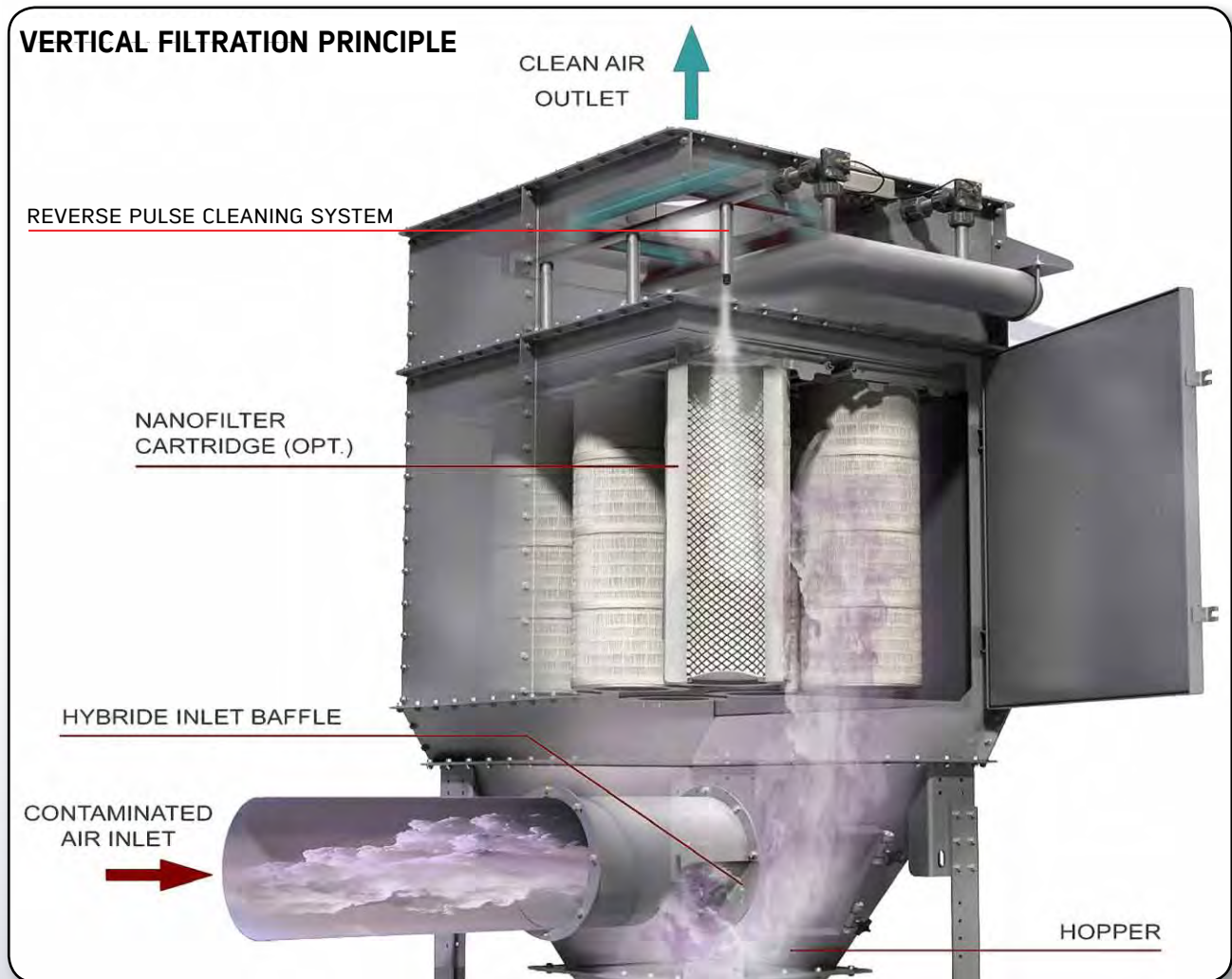
- 36" 80/20 Blend Vertical Cartridge Design
- True Welded Hoppers
- Goyen Solenoid Block Kit
- 1½" Goyen Valves
- 12 Gauge Construction
- Service Ladder and Platform (optional)
- Manual Cam Compression System (No tools required)
- Lifting Lugs
- Dirty Side Pressure Differential Line Filter
- Full Logic (cleaning) Control Board
- Belt & Direct Drive Blowers



HOW THE DCM SERIES CARTRIDGE DUST COLLECTOR WORKS

The dust-laden air enters through the side intake of the dust collector's hopper, under vacuum or pressure (except for bin vents, where the air comes in from the bottom).

The air is then filtered through the cartridges and exits through the air jets into the clean air plenum. The clean air can either be channeled outside or re-circulated depending on the application.



ADVANTAGES

FAST, SIMPLE AND SAFE CARTRIDGE REPLACEMENT

Cartridge replacement is performed outside the dust collector and requires no tools. This eliminates the need to work within a confined space and allows the worker to access the cartridge without getting dirty. The cartridge comes with a rectangular top plate that simplifies manipulation and eliminates potential installation errors.

CONTINUOUS OPERATION

Unlike other types of dust collectors such as the shaker, the cartridge dust collector does not have to be stopped in order to remove and clean dust particles from its filters.

ECONOMICAL

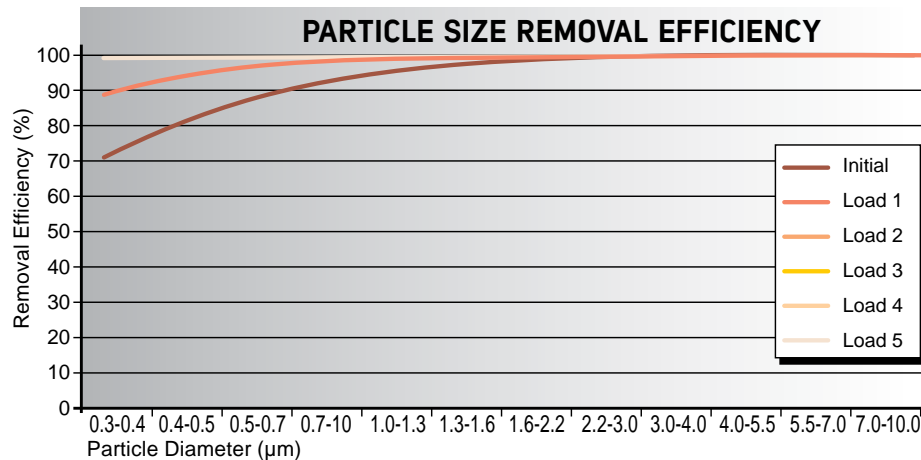
The cartridge dust collector is an economical choice because it requires minimal maintenance: only periodic cartridge replacement is necessary (depending on the application).



NANOFIBER FILTRATION TECHNOLOGY

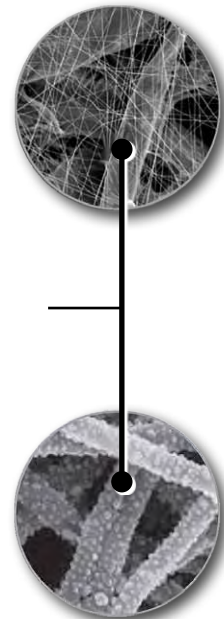
Provides unequalled surface loading capabilities with nano sized interfiber pores. Dust particles easily pulse off the surface layer, keeping the media clean. Other types of cartridge filters enable particulate to become embedded deep within the media substrate. These depthloading filters require intensive cleaning and are subject to continual abrasion and wear. Although cellulose filters use a melt blown surface treatment to capture particles on the surface, they also form a layer approximately 100 times thicker than nanofiber filters do. This creates very deep and wide pores that allow particles to penetrate deep within the media substrate, similar to other depth-loading cartridge filters.

PARTICLE SIZE RANGE (μm)	GEOMETRIC MEAN DIAMETER (μm)	PARTICLE REMOVAL EFFICIENCY (%)							
		CME	INITIAL	LOAD 1	LOAD 2	LOAD 3	LOAD 4	LOAD 5	
0.30 - 0.40	0.35	71.0	71.0	88.9	99.9	99.9	99.9	100.0	
0.40 - 0.55	0.47	80.8	80.8	93.3	100.0	99.9	100.0	100.0	
0.55 - 0.70	0.62	88.0	88.0	96.9	100.0	100.0	100.0	100.0	
0.70 - 1.00	0.84	92.2	92.2	98.3	100.0	100.0	100.0	100.0	
1.00 - 1.30	1.14	95.8	95.8	99.3	100.0	100.0	100.0	100.0	
1.30 - 1.60	1.44	98.1	98.1	99.8	100.0	100.0	100.0	100.0	
1.60 - 2.20	1.88	98.6	98.6	99.8	100.0	100.0	100.0	100.0	
2.20 - 3.00	2.57	99.3	99.3	99.9	100.0	100.0	100.0	100.0	
3.00 - 4.00	3.46	99.8	99.8	100.0	100.0	100.0	100.0	100.0	
4.00 - 5.50	4.69	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
5.50 - 7.00	6.20	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
7.00 - 10.00	8.37	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
		CME	INITIAL	LOAD 1	LOAD 2	LOAD 3	LOAD 4	LOAD 5	
Resistance after dust charge (in WG)		0.73	1.52	2.35	3.17	4.00			
Dust Load (gms)		17	237	407	554	668			



NANOFILTER MEDIA

This media is made of the industries smallest fibers (10 microns)



CONVENTIONAL MEDIA

Spacing is 6 times larger than that of the nanofiber allowing small particles to become deeply embedded within the media.

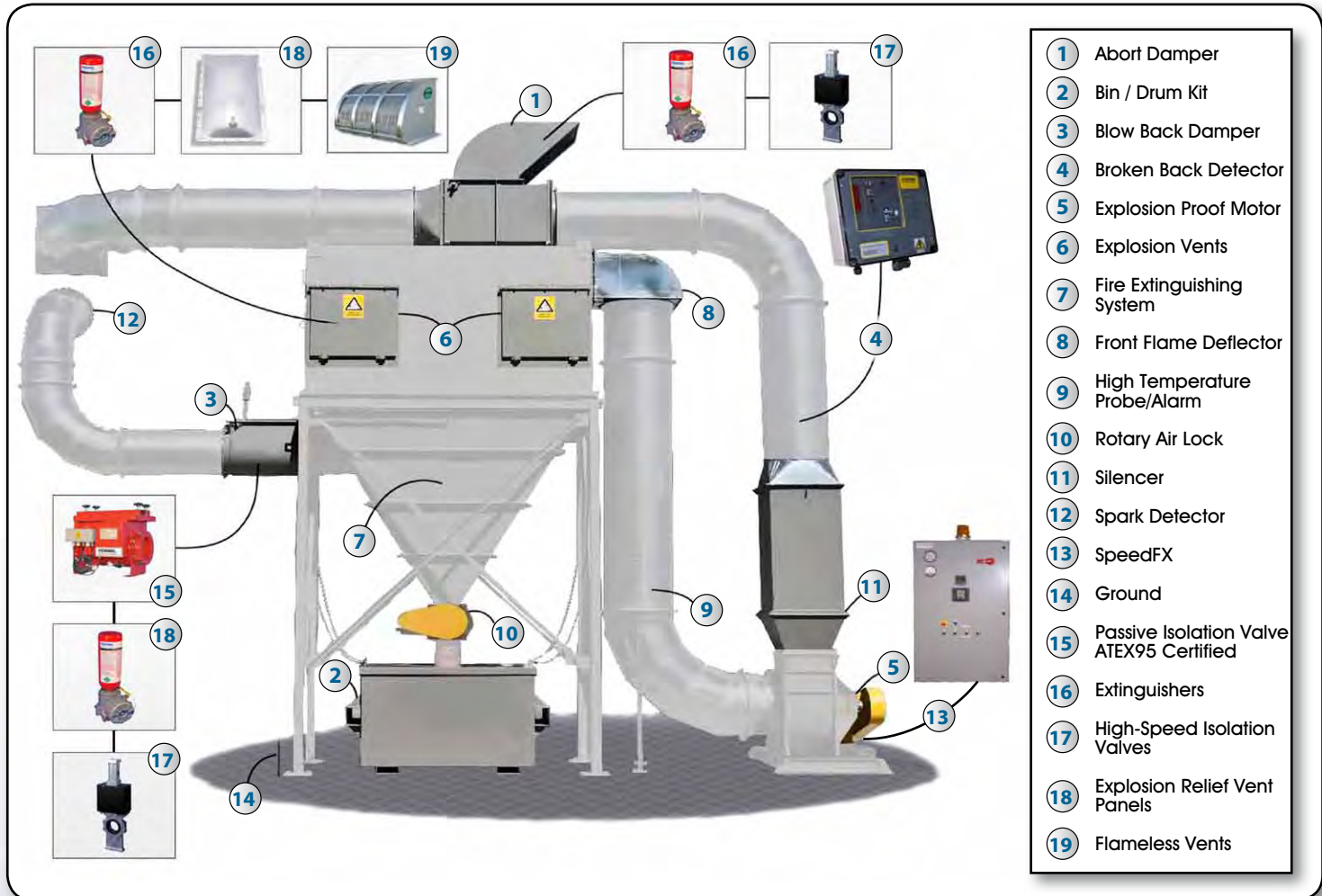
FILTER FEATURES

- Best in class MERV 15 efficiency on sub micron particulate.
- Lower initial & operating pressure drop.
- Reduction in cleaning cycles, prolongs filter life.
- Compressed air and energy savings.
- Reduced outlet emissions.
- Reduced downtime..



PERFORMANCE AND SECURITY

Some options like the SpeedFX™ can vary motor speed and energy consumption thus improving efficiency. A number of ISTblast accessories aim to meet NFPA regulations, preventing against fire and explosions while better protecting workers and facilities.



- 1 Abort Damper
- 2 Bin / Drum Kit
- 3 Blow Back Damper
- 4 Broken Back Detector
- 5 Explosion Proof Motor
- 6 Explosion Vents
- 7 Fire Extinguishing System
- 8 Front Flame Deflector
- 9 High Temperature Probe/Alarm
- 10 Rotary Air Lock
- 11 Silencer
- 12 Spark Detector
- 13 SpeedFX
- 14 Ground
- 15 Passive Isolation Valve ATEX95 Certified
- 16 Extinguishers
- 17 High-Speed Isolation Valves
- 18 Explosion Relief Vent Panels
- 19 Flameless Vents

FIRE PROTECTION ACCESSORIES

ABORT DAMPER

Connected with a proper spark or fire detection system, the abort damper redirects exhaust air into the atmosphere as soon as a spark is detected.

BLOW BACK DAMPER

Ensure there is a seal, if a fire or explosion occurs in the dust collector, preventing return of smoke and fire to the shop by the intake ductwork.

EXPLOSION VENTS

The explosion vents redirect a propagating flame or explosion to atmosphere via pressure rated washers.

ROTARY AIR LOCK

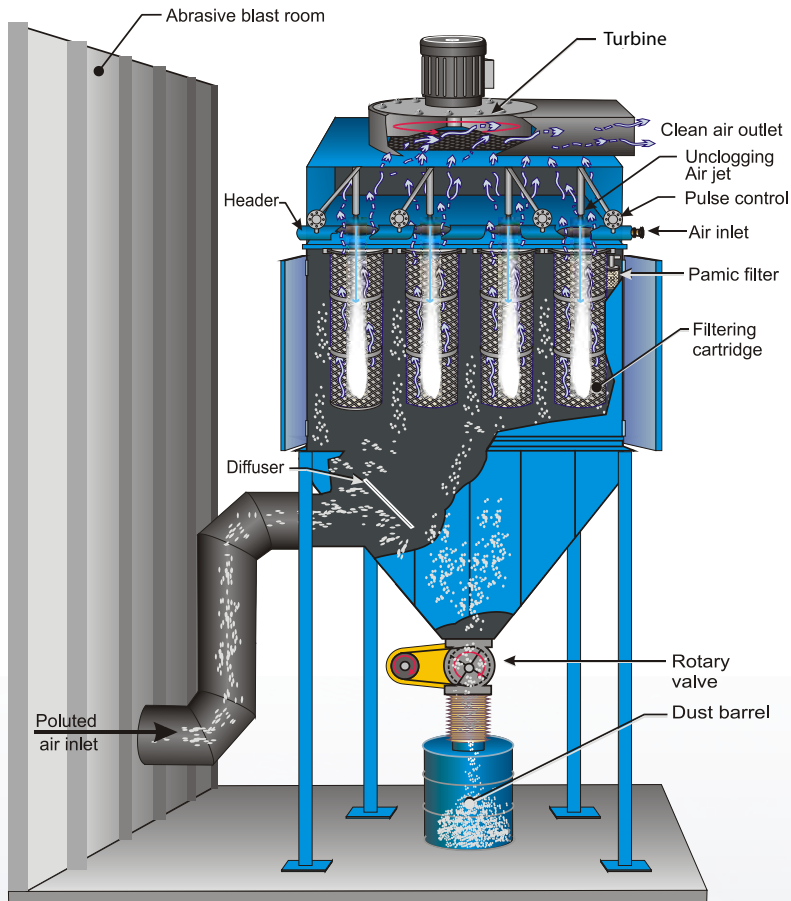
Designed to control the flow of discharge material from a dust collector or other type of process while maintaining an air seal.

SPARK DETECTION & FIRE EXTINGUISHING SYSTEM

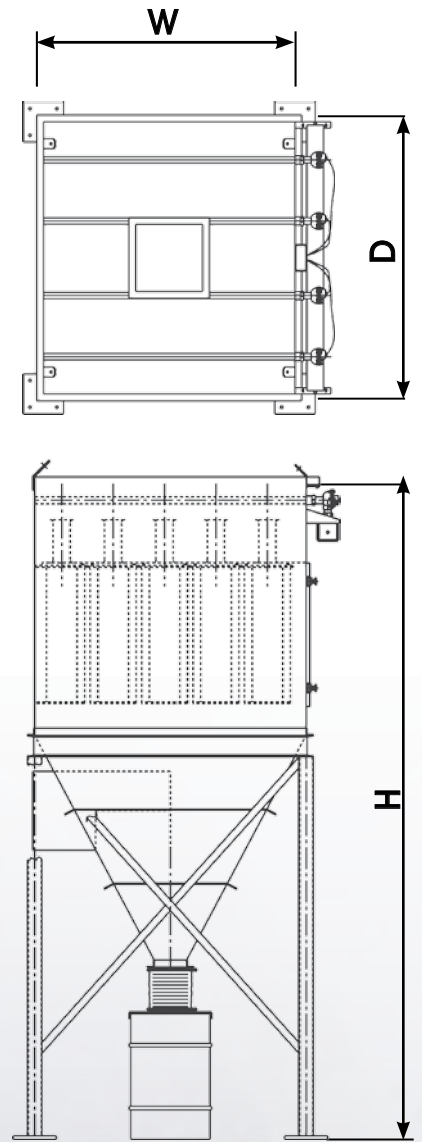
Counters the spread of fire with a temperature probe and sprinkler. : Spraying the collector and stops the blower (eliminating oxygen intake).



HOW IT WORKS



FLOOR PLAN



OPTION

Outside access
ladder & platform

SPECIFICATIONS

DESCRIPTION	DCM 2 000	DCM 3 000	DCM 4 000	DCM 6 000	DCM 8 000	DCM 10 000	DCM 12 000	DCM 14 000	DCM 16 000	DCM 18 000	DCM 20 000	DCM 22 000	DCM 24 000	DCM 26 000	DCM 30 000 35 000	DCM 50 000
Filter area (in sq. in.)	1260	1 890	2 835	3 780	5 040	6 300	4 560	9 450	12 600	15 120	20 160	30 240				
Cartridges number	6	9	12	16	20	24	30	36	40	48	50	56	64	112		
Fan motor (cfm)	2 000	3 000	4 000	6 000	8 000	10 000	12 000	14 000	16 000	18 000	20 000	22 000	24 000	26 000	30 000 35 000	50 000
Weight (lb)	1472	1 599	1 989	2 607	2 830	3 019	4 214	4 460	4 498	6 066	6 476	7 570	11 694			
Overall Dim's (WxD)		46" x 57"	46" x 75"	61" x 75"	75" x 75"	61" x 111"	75" x 111"	75" x 148"	89" x 148"	118" x 148"	118" x 257"					



SOME OTHER OPTIONS



Outside access ladder and platform (shown in yellow) can be very useful to access the cartridges in order to make necessary periodic control and maintenance.



Pulse system (control panel)

With the Dust Collector Timer Controller. You have selected a state of the art dust collector timer control that will provide years of dependable operation and service.

The Dust Collector Timer Controller was designed to be used with pulse-jet type dust collectors for on-demand or continuous cleaning applications.

Continuous cleaning applications do not require external inputs and can be used for time based "on-demand" cleaning through use of the cycle delay feature.



A FEW EXAMPLES OF OUR ACCOMPLISHMENTS





ABOUT THE COMPANY

WHO WE ARE

IST is a leading industrial manufacturer of standard and custom engineered equipment for the surface treatment industry and the solvent recycling industry.

MISSION

IST is dedicated to being an innovative and trusted supplier in the conception, fabrication and distribution of surface treatment equipment and recycling equipment.

The products, technologies and industry expertise of IST are used in a wide range of manufacturing and industrial applications, including but not limited to :

- General Manufacturing
- Industrial Equipment
- Metal forming
- Aerospace and Aviation
- Rail and Transit
- Marine
- Automotive
- Petroleum
- Flexography (Labeling) & Lithography
- Wood finishing
- Power & Energy
- Pharmaceutical

