

CMAXX

DUST & FUME COLLECTION SYSTEM



IMPERIAL SYSTEMS INC.

Located just north of Pittsburgh, Pennsylvania in the small town of Jackson Center, Imperial Systems is among the top dust collection equipment manufacturing businesses in North America. Our values are built on designing and installing custom industrial dust collection systems with the strongest, most durable fabrication to meet our customer's needs.

We also manufacture industry leading products, engineered for outstanding quality, safety and value. We maintain a large inventory of Imperial Systems manufactured dust collection equipment. As a customer-driven solutions provider, we've earned credibility and have established strong relationships by exceeding expectations with professional service and attitude.

Our product line includes: CMAXX Dust and Fume Cartridge Collectors, DeltaMAXX Cartridge and Bag Filters, BRF Baghouse Dust Collectors, Pulse Jet Baghouses, Cyclone Dust Collectors, Airlocks, Slide Gates, Diverter Valves, Abort Gates, Backdraft Dampers, Flex Hose and all duct and components.

Our network of Imperial Systems Inc. representatives are all highly trained problem solvers with specialized training in supporting our clients. Contact us about your operation and one of our local representatives will give you a call.

MARKETS SERVED

Nearly every manufacturing process generates dust. We design innovative but practical and useful dust collection solutions for just about every industry, including, but not limited to: recycling, seed, grain, carpentry, welding, CNC plasma/laser cutting, thermal spray, grinding, mining, aggregate, sand blasting, aluminum, powder coating, biofuels, food processing, pet food, fiberglass, agricultural, chemical processing, paper scrap, fiberglass and many more.

INSTALLATION & SERVICE

Imperial Systems, Inc. field crews are fully trained to install and service a wide variety of dust collection systems all over the United States and Canada. Our field crews are committed to safe working practices and following customer facility regulations.



THE NEW STANDARD OF DUST & FUME COLLECTION SYSTEMS



ENERGY EFFICIENT

High Performance
Manifold Mounted
Pulse Valves

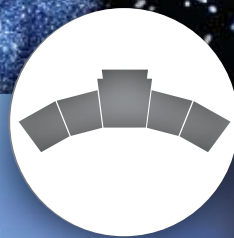
Less Service Time



HEAVY DUTY

7 & 10 Gauge
Construction

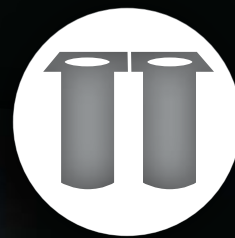
Military Grade
Door Latches



DOMED ROOF

No Water Pooling
or Bolts to Rust

Weather & Water
Proof Exterior



VERTICAL FILTERS

Longer Filter Life

Easy Filter Exchange

Even Gasket Pressure

CMAXX IDA TESTING

IN-LINE DEFLAGRATION ARRESTER

The CMAXX, along with the proprietary IDA DeltaMAXX filters, has been **PROVEN** to isolate a deflagration and stop a flame front. Third party testing of the CMAXX shows explosive flame front being forced through the vent. With the explosion vent covered, 100% of the flame front was forced through the IDA DeltaMAXX filters and NO spark or flame was present.



Using a CMAXX without explosion venting, the unit's body was also tested to withstand a deflagration of corn starch at 185 KST with pressures exceeding 4 PSI. The entire explosion diverted through the IDA DeltaMAXX filters, which showed no sign of deformation. The internal cages of the filters remained in perfect shape and the seals were not deformed or melted whatsoever. All testing, proving that the CMAXX can be used as a flame front deflagration arrestor/arrester when used in conjunction with IDA DeltaMAXX filters, is backed by third party testing. Reports and test results can be provided upon request.

In addition, the IDA DeltaMAXX filters work off of the same primary cleaning system that the CMAXX uses, ensuring that the filters are consistently cleaned during operation. Similar systems that use after filters do not have any means for online cleaning.

The results conform to NFPA 69 12.2.5.2 Static Dry Flame Arrestor Designs and Chapter 5 under performance based option, both NFPA 654 to prevent the "extension of the flame front outside the compartment or equipment of origin except where intentionally vented to a safe location" 5.2.5 (2) and NFPA 69 "to limit and risk of flame spread from vessel to vessel via interconnecting ducts" 5.2.4 (3), 5.2.5 (2).

15 YEAR LIMITED

INDUSTRY LEADING WARRANTY

Imperial Systems, Inc. warrants to the original purchaser that the major structural components of the dust collector will be free from defects in materials and workmanship for Fifteen (15) years from the date of shipment, if properly installed, maintained and operated under normal conditions. Imperial Systems, Inc. warrants all other Imperial Systems, Inc. - built components and accessories including Imperial Systems, Inc. airlocks, fans, cyclones, dampers and valves housings for Twelve (12) months. Imperial Systems, Inc. warrants filters to be free from defects in materials and workmanship for twelve (12) months from date of shipment. Imperial Systems, Inc. does not warrant damages which are due to corrosion, abrasion, normal wear and tear, product modification or product misapplication. Imperial Systems, Inc. also makes no warranty whatsoever as to any goods manufactured or supplied by others, including, but not limited to, electric motors and control components. After Imperial Systems, Inc. has been given adequate opportunity to remedy any defects in material or workmanship, Imperial Systems, Inc. retains the sole

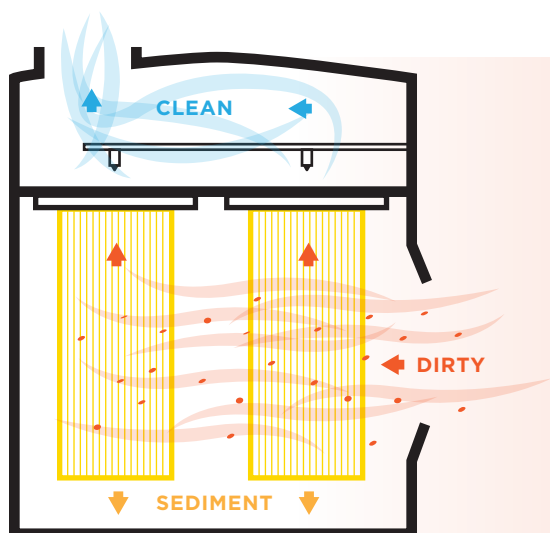
option to accept return of the goods, with freight paid by the purchaser, and to refund the purchase price for the goods after confirming the goods are returned undamaged and in usable condition. Such a refund will be the full extent of Imperial Systems, Inc. liability. Imperial Systems, Inc. shall not be liable for any other

costs, expenses or damages, whether direct, indirect, special, incidental, consequential or otherwise. The terms of this warranty may be modified only by a special warranty document signed by the President of Imperial Systems, Inc. There exist no other representations, warranties or guarantees except as stated in this paragraph. All other warranties, including merchantability and fitness for a particular purpose, whether express or implied, are hereby expressly excluded and disclaimed.



**FAILURE TO USE GENUINE IMPERIAL
SYSTEMS, INC. REPLACEMENT PARTS
& FILTERS WILL VOID THIS WARRANTY.**

COMPARISON CHECKLIST	CMAXX DUST & FUME COLLECTION SYSTEM	Leading Vertical Filter Cartridge Dust Collector	Leading Horizontal Filter Cartridge Dust Collector
Domed Roof	●		
Vertical Cartridge Filters	●	●	
No External Bolt Holes	●		
Modular Design	●	●	●
Military Grade Doors	●		
Heavy Duty 7 & 10 Gauge Construction	●		
Various Filter Medias	●	●	●
Variety of Applications	●	●	●
Easy Filter Access	●	●	
Most Efficient	●		
Even Lock Technology Lift Rails	●		
Self Cleaning	●	●	●
15 Year Warranty	●		
In-line Pulse Valves	●		
Custom Design	●		



HOW IT WORKS

Dirty air is pulled in from duct work and particulates are captured by the DeltaMAXX™ filters. The clean air is pulled through the filter media and up into the clean air plenum. The air then exits the collector and goes to the return air duct. Compressed air pulses down into the filter cleaning it from the inside out. The dust cake built on the filter is then knocked down into the grating below or into a hopper.

CMAXX APPLICATIONS

Imperial Systems has a long line of successful grain dust collection systems installations. Our CMAXX dust collection systems span from small processing mills to some of the country's largest grain export terminals.

GRAIN INDUSTRY



PLASMA CUTTING

Imperial Systems' CMAXX is the perfect modular collector for plasma cutting dust collection. The CMAXX comes in many different variations and is modular in design so making a standard model custom is an easy task.

The CMAXX Dust Collector is the perfect solution for welding shops and schools. From Source Capture to Ambient Systems, the CMAXX easily handles any of your welding fume extraction needs and more.

WELDING FUMES

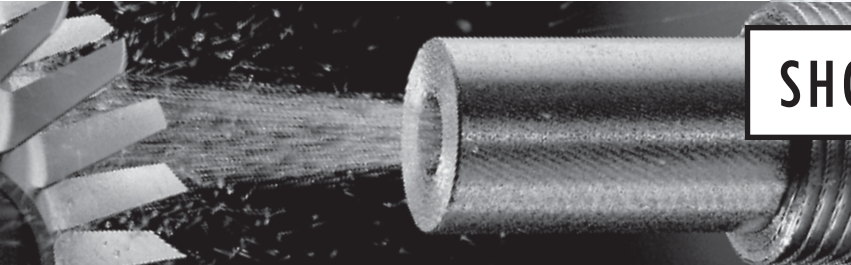


SILICA DUST

The CMAXX Silica Dust Filtration System can be customized to fit your dust collection needs. The CMAXX dust collector with DELTAMAXX Cartridge Filters will make most any Silica Dust application process an easy task. We work with many customers that need custom solutions.

Imperial Systems has a long line of successful dust collection installations in fiberglass. With our turn key capabilities and extensive background in fiberglass dust collection we are truly one of the country's biggest names in the fiberglass industry.

FIBERGLASS DUST



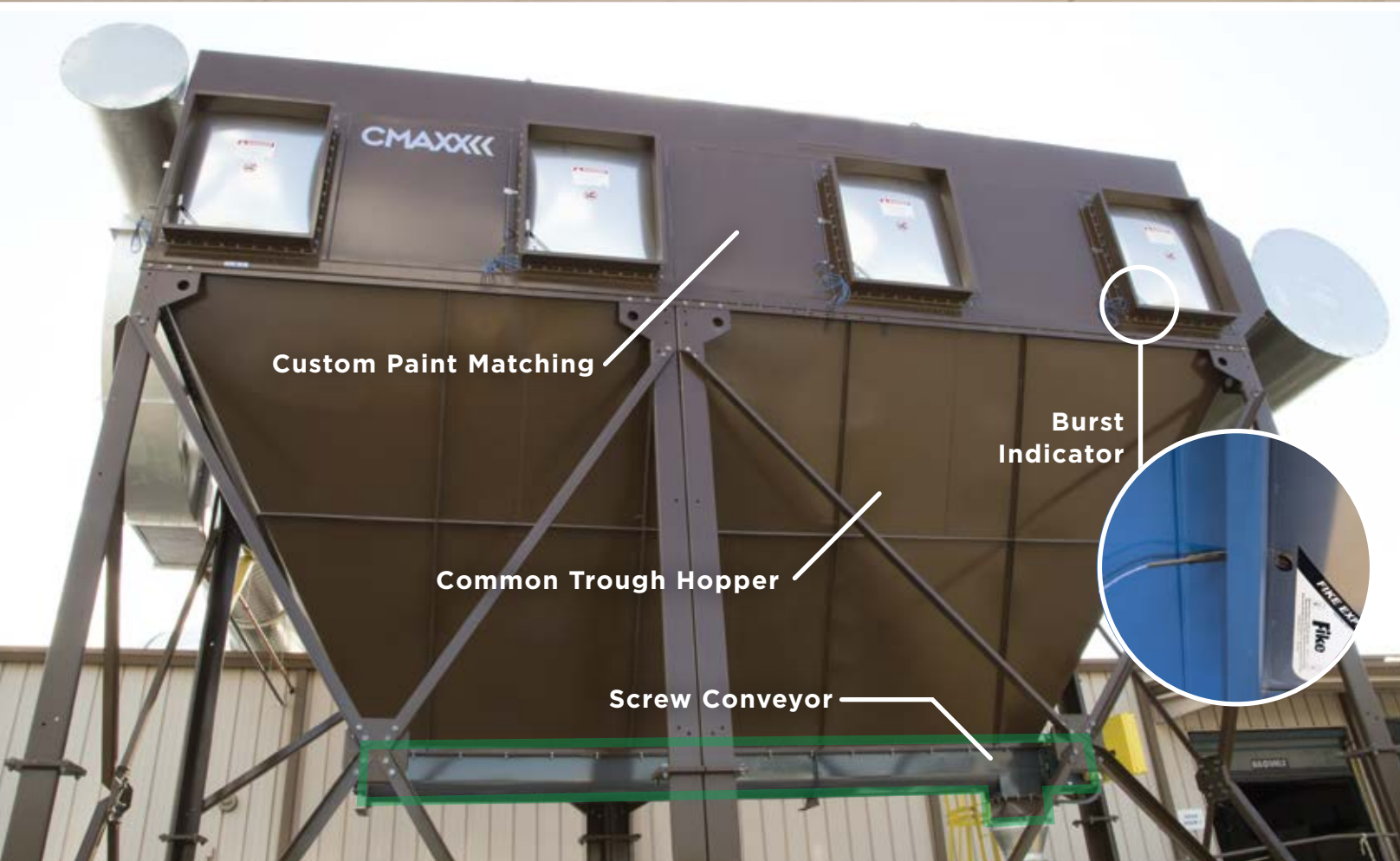
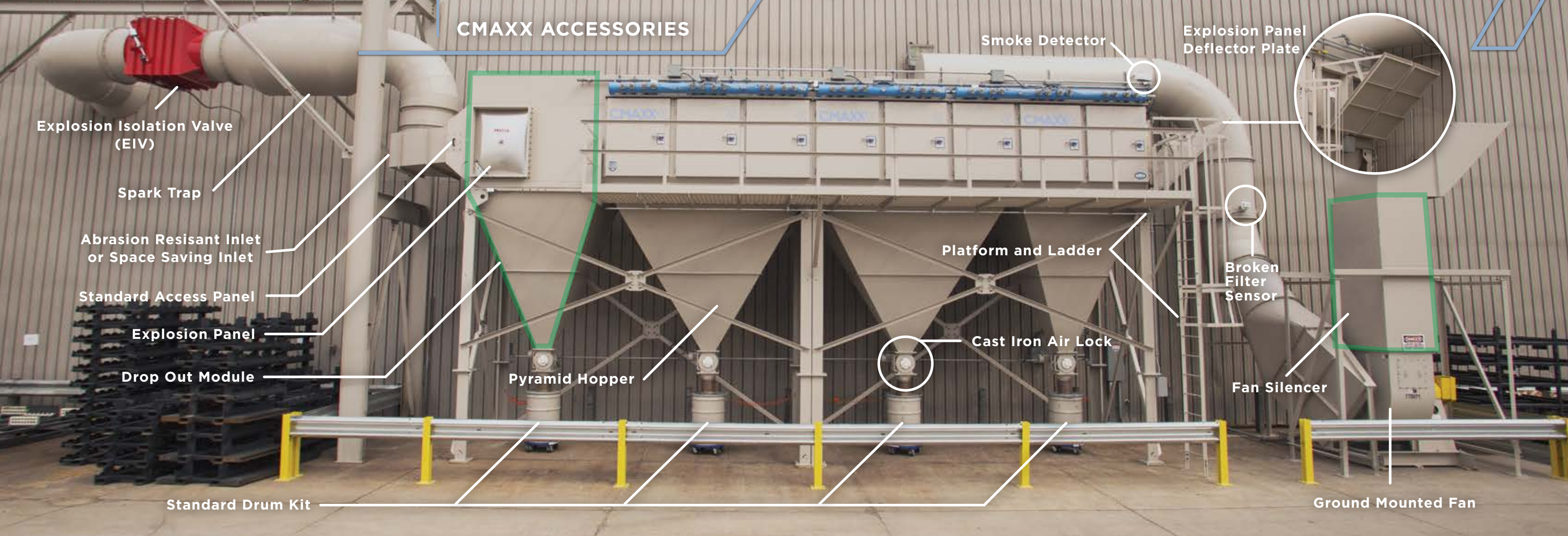
SHOT BLASTING

Blasting is a very diverse market and includes a large variety of different medias from sand to plastic. The CMAXX Dust Collector System has specially designed features that are suitable for all blasting applications.

Imperial Systems has a long line of successful woodworking dust collection system installations in the industry. Our woodworking dust collection systems span from small cabinet shops to some of the largest names in flooring.

WOODWORKING





Integrated Controller

With this addition to your dust collector you can control every switch and electrical addition on your collector. The Integrated Controller comes standard with cleaning controls and system starter. It is also pre-set for auto downtime cleaning. It is pre-programmed for automatic fan regulation as well. It is housed in a NEMA 12 enclosure with NEMA 4x weather proof case available for outdoors.





DELTATMMAXX

BEST • FILTERS • PERIOD

DeltaMAXX Dust Collector
Cartridge Filters are manufactured
for all makes and models of
cartridge dust collectors.

Regardless of the nature of your
dust collection and air pollution
control application, Imperial
Systems Inc. has the answer for all
of your cartridge filtration needs.

***DeltaMAXX filters are
very durable and they
last much longer for us.
My expectations were
exceeded and you can
count on us to be a
returning customer***

– WELDING TECHNOLOGY WELDING INSTRUCTOR

HOW TO REMOVE USED FILTERS



OPEN DOOR.



LIFT RAILS.



REMOVE FILTER.



REPEAT.

To replace filters just do these steps in reverse.

UP TO TWICE THE FILTER LIFE

Most Advanced Nanofiber Technology

The Nanofiber surface stops sub-micron particles from entering and becoming embedded into the media beneath the Nanofiber

Reduced Dust Collector Operational Costs

Lower Operational Mass Emissions

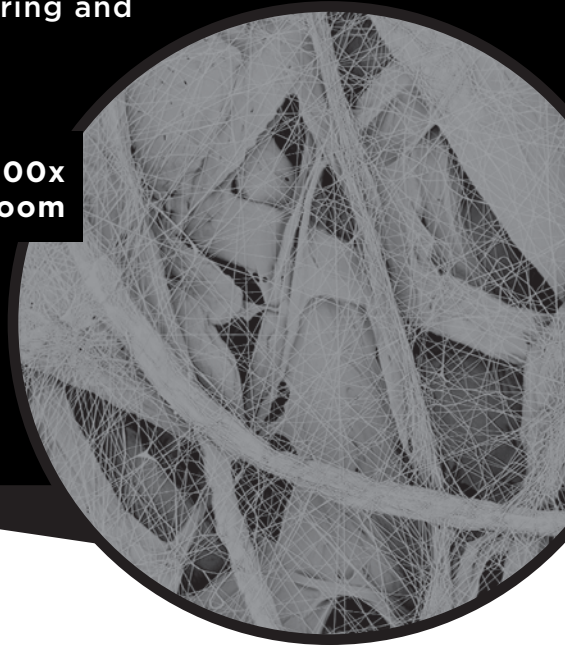
Less Pulse Cleaning

Dust is easily pulsed off of the Nanofiber media because it remains on the surface

Industry's Best Surface Loading Technology

Enhances dust cake release, leading to longer filter life

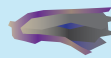
2000x
Zoom



Human Hair Thickness
= 80-100 Microns



Pollen
= 30 Microns



Household Dust
= 10 Microns



Pet Dander
= 5 Microns



Weld Fume Particle
= 1 Micron

40 Microns Invisible to the human eye 0.3 Microns

MERV 10

3 - 1 Microns
70-80% Efficiency

DELTA MAXX™
80/20
CELLULOSE/
POLYESTER

MERV 11

3 - 1 Microns
70-80% Efficiency

DELTA MAXX™
8 oz SPUNBOND
POLYESTER

MERV 15

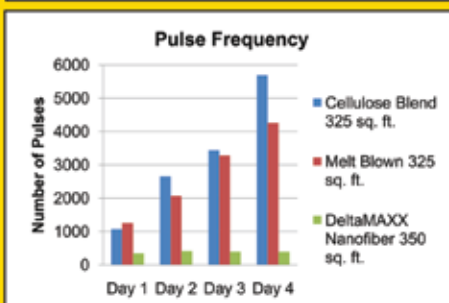
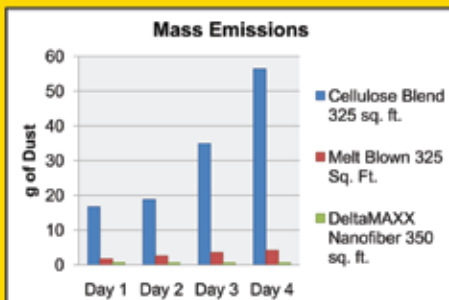
1 - 0.3 Microns
85-95% Efficiency

DELTA MAXX™
NANOFIBER

MERV 16

1 - 0.3 Microns
85-95% Efficiency

DELTA MAXX™
SPUNBOND
POLYESTER
with PTFE

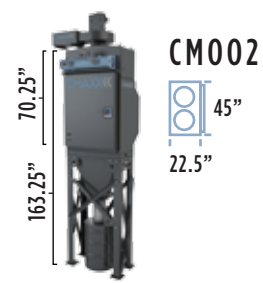


FILTER

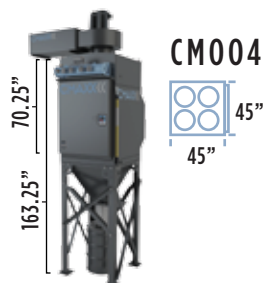
EFFICIENCY

SUMMARY OF RESULTS

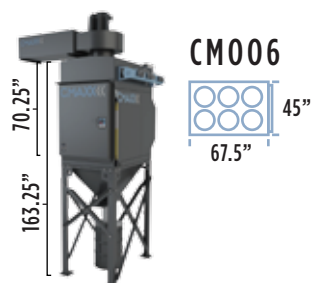
	CELLULOSE BLEND 325 SQ. FT.	MELT BLOWN 325 SQ. FT.	DELTAMAXX NANOFIBER 350 SQ. FT.	
EMISSIONS				
Total Emissions	126,735	11,825	2,560	mg
Average Emissions/Hour	1,320	123	27	mg/hour
Emissions Before 1st Pulse	185	10	10	mg
Average Emission/Pulse	9.84	1.09	1.65	mg/pulse
PULSE CLEANING				
Time to First Pulse	1:40	1:07	1:01	hours
Total Number of Pulses	12,861	10,874	1,545	pulses
Average Pulses/Hour	134	113	16	pulses



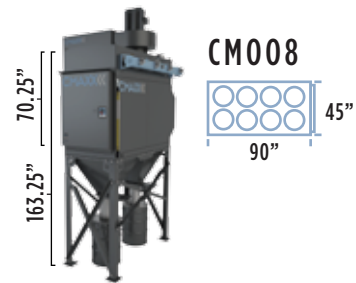
CM002
Filter Area (sq. ft.) - 700
Nominal CFM Range - 350-3150
Weight (lbs.) - 1600



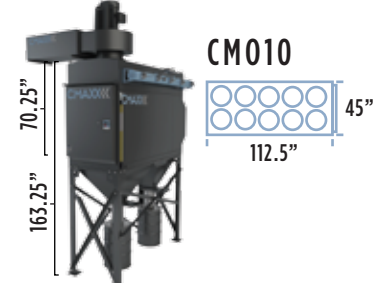
CM004
Filter Area (sq. ft.) - 1400
Nominal CFM Range - 700-6300
Weight (lbs.) - 2000



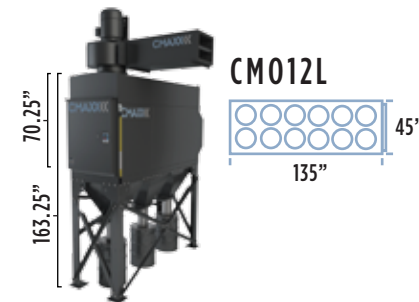
CM006
Filter Area (sq. ft.) - 2100
Nominal CFM Range - 1050-9450
Weight (lbs.) - 2700



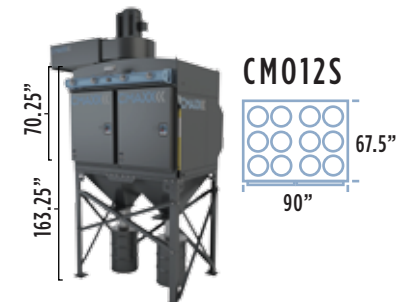
CM008
Filter Area (sq. ft.) - 2800
Nominal CFM Range - 1400-12600
Weight (lbs.) - 3150



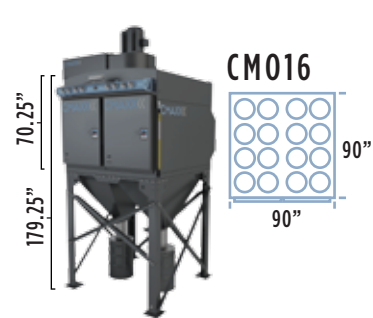
CM010
Filter Area (sq. ft.) - 3500
Nominal CFM Range - 1750-15750
Weight (lbs.) - 3600



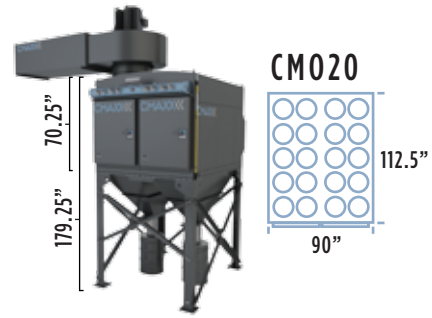
CM012L
Filter Area (sq. ft.) - 4200
Nominal CFM Range - 2100-18900
Weight (lbs.) - 4500



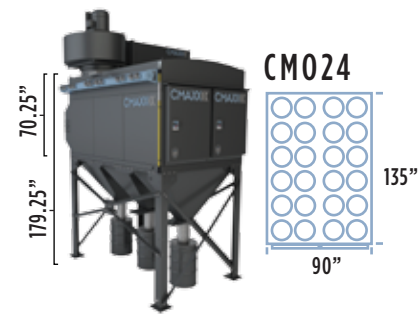
CM012S
Filter Area (sq. ft.) - 4200
Nominal CFM Range - 2100-18900
Weight (lbs.) - 4260



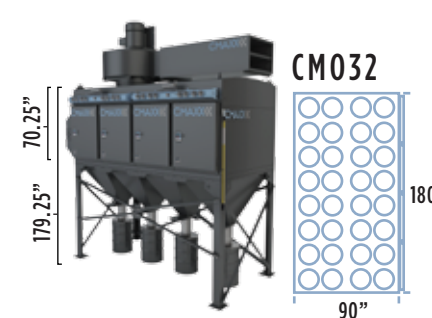
CM016
Filter Area (sq. ft.) - 5600
Nominal CFM Range - 2800-25200
Weight (lbs.) - 5250



CM020
Filter Area (sq. ft.) - 7000
Nominal CFM Range - 3500-31500
Weight (lbs.) - 6050



CM024
Filter Area (sq. ft.) - 8400
Nominal CFM Range - 4200-37800
Weight (lbs.) - 7200



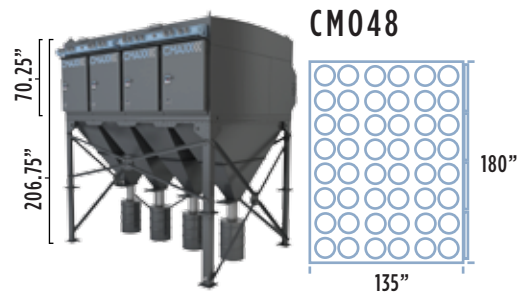
CM032
Filter Area (sq. ft.) - 11200
Nominal CFM Range - 5600-50400
Weight (lbs.) - 10000



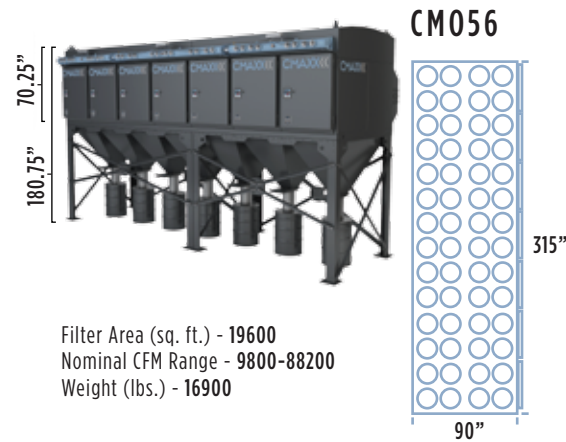
CM036
Filter Area (sq. ft.) - 12600
Nominal CFM Range - 6300-56700
Weight (lbs.) - 10900



CM040
Filter Area (sq. ft.) - 14000
Nominal CFM Range - 7000-63000
Weight (lbs.) - 12000



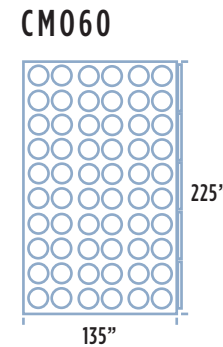
CM048
Filter Area (sq. ft.) - 16800
Nominal CFM Range - 8400-75600
Weight (lbs.) - 13000



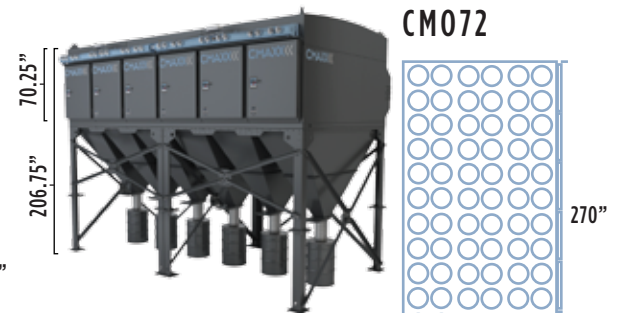
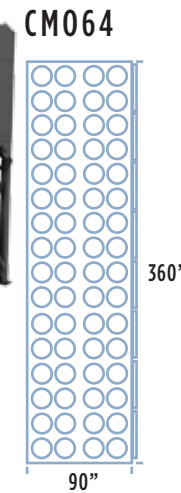
CM056
Filter Area (sq. ft.) - 19600
Nominal CFM Range - 9800-88200
Weight (lbs.) - 16900



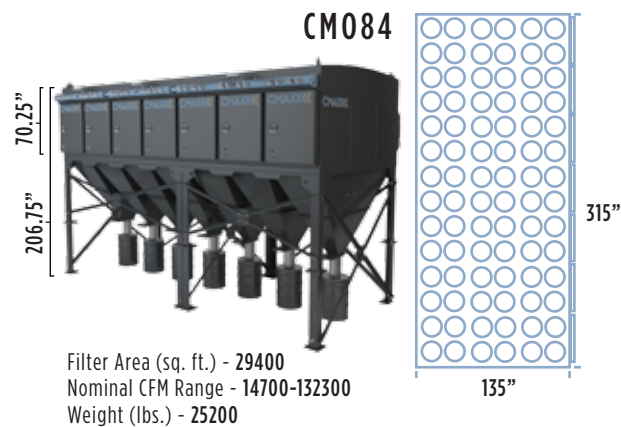
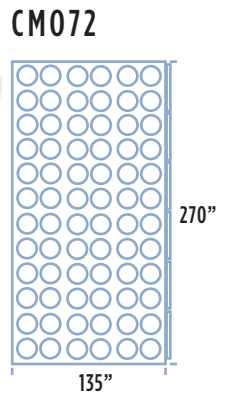
CM060
Filter Area (sq. ft.) - 21000
Nominal CFM Range - 10500-94500
Weight (lbs.) - 18100



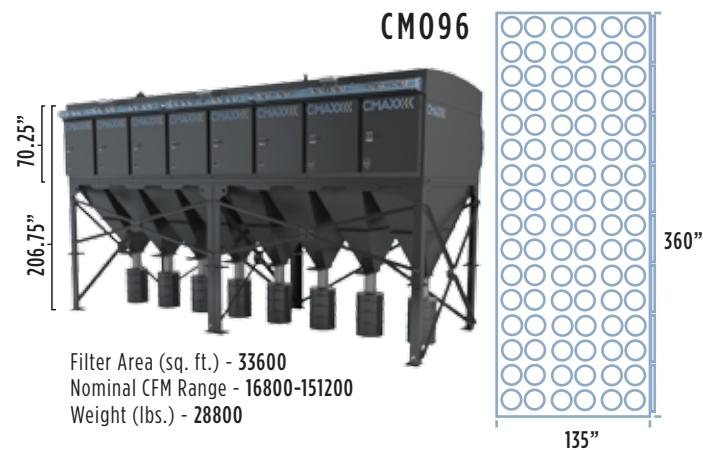
CM064
Filter Area (sq. ft.) - 22400
Nominal CFM Range - 11200-100800
Weight (lbs.) - 19200



CM072
Filter Area (sq. ft.) - 25200
Nominal CFM Range - 12600-113400
Weight (lbs.) - 21600



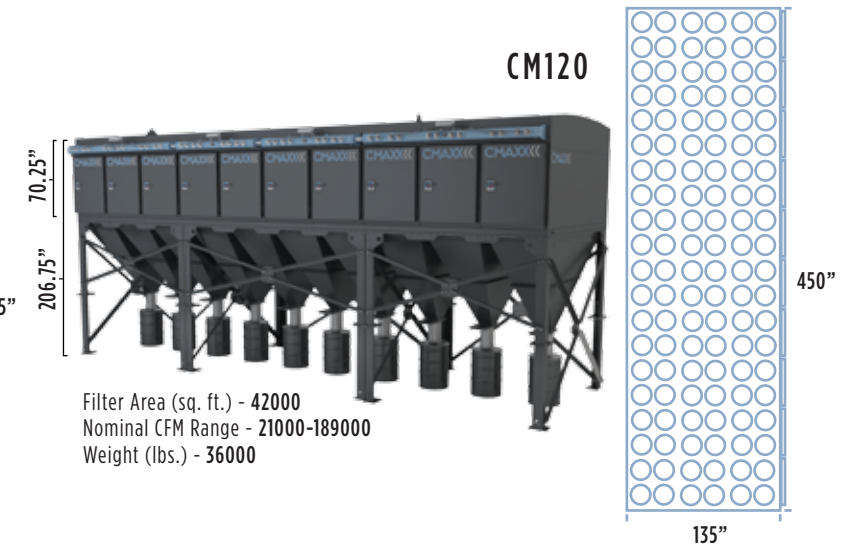
CM084
Filter Area (sq. ft.) - 29400
Nominal CFM Range - 14700-132300
Weight (lbs.) - 25200



CM096
Filter Area (sq. ft.) - 33600
Nominal CFM Range - 16800-151200
Weight (lbs.) - 28800



CM108
Filter Area (sq. ft.) - 37800
Nominal CFM Range - 18900-170100
Weight (lbs.) - 32400



CM120
Filter Area (sq. ft.) - 42000
Nominal CFM Range - 21000-189000
Weight (lbs.) - 36000



IMPERIAL SYSTEMS INC.

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