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

CROWN TECH™ DOMED ROOF
No Water Pooling
or Bolts to Rust
Weather & Water
Proof Exterior

VERTICAL FILTERS
Longer Filter Life
Easy Filter Exchange
Even Gasket Pressure
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 Arrester 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).
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.
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.
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**

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.

**PLASMA CUTTING**

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**

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.

**SILICA DUST**

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**

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.

**SHOT BLASTING**

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**
DIRTY AIR IN

CLEAN AIR RETURN

EXPLOSION ISOLATION VALVE
The installation of an explosion isolation device on all suction side ducts that transport material with a Kst value above zero is an NFPA requirement. Installing an Explosion Isolation Valve will protect workers and facilities from the damaging effect of a baghouse or filter explosion.

SMOKE DETECTOR
It detects smoke and will automatically shut down the collector. It can also engage any action that can be directly wired to the smoke detector to further prevent a flame front or damage to the collector or facility.

EXPLOSION VENT
Rupture style membrane vents
Stainless steel
All vents are sized based on material being classified at a ST1 with a 200 Kst or lower value.
Includes Burst Indicator used to activate alarms, bells, remote annunciators or interfaced with process control systems.

FLAMELESS EXPLOSION VENTING
Extinguishes the flame from an explosion, not allowing it to exit the device. Bed-use with limitations on ducting or location.
Economical installation compared to other expensive explosion protection systems.
ATEX certified / NFPA 68 and 61 compliant.

HEAVY DUTY ABORT GATE
Engineered to keep your employees and business safe. They are an important part of any explosion protection system.
Fair-safe electropneumatics
Robust 3/16 inch plate and 10 gauge welded construction
Compatible with any fire protection system

HEAVY DUTY CONSTRUCTION
Industry leading 7 & 10 gauge construction.
All nickel plated hardware.
Military grade door latches.
Fully welded seams, no bolt holes.
Graphite Industrial Enamel: Corrosive resistant paint inside and out.

FLAME ISOLATION VALVE
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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.
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.

To replace filters just do these steps in reverse.

LIFT RAILS.

REMOVE FILTER.

REPEAT.
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

Human Hair Thickness = 80-100 Microns
Pollen = 30 Microns
Household Dust = 10 Microns
Pet Dander = 5 Microns
Weld Fume Particle = 1 Micron

<table>
<thead>
<tr>
<th>MERV 10</th>
<th>MERV 11</th>
<th>MERV 15</th>
<th>MERV 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 - 1 Microns</td>
<td>3 - 1 Microns</td>
<td>1 - 0.3 Microns</td>
<td>1 - 0.3 Microns</td>
</tr>
<tr>
<td>70-80% Efficiency</td>
<td>70-80% Efficiency</td>
<td>85-95% Efficiency</td>
<td>85-95% Efficiency</td>
</tr>
</tbody>
</table>

FILTER EFFICIENCY

SUMMARY OF RESULTS

<table>
<thead>
<tr>
<th>EMISSIONS</th>
<th>CELLULOSE BLEND 325 SQ. FT.</th>
<th>MELT BLOWN 325 SQ. FT.</th>
<th>DELTAMAXX NANOFIBER 350 SQ. FT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Emissions</td>
<td>126,735 mg</td>
<td>11,825 mg</td>
<td>2,560 mg</td>
</tr>
<tr>
<td>Average Emissions/Hour</td>
<td>1,320 mg/hour</td>
<td>123 mg/hour</td>
<td>27 mg/hour</td>
</tr>
<tr>
<td>Emissions Before 1st Pulse</td>
<td>185 mg</td>
<td>10 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>Average Emission/Pulse</td>
<td>9.84 mg</td>
<td>1.09 mg</td>
<td>1.65 mg</td>
</tr>
</tbody>
</table>

PULSE CLEANING

| Time to First Pulse | 1:40 hours | 1:07 hours | 1:01 hours |
| Number_of_Pulses | 12,861 pulses | 10,874 pulses | 1,545 pulses |
| Average Pulses/Hour | 134 pulses | 113 pulses | 16 pulses |