



Mist Collector Systems



Mist Elimination and Pollution Control Technology

**CECO
Filters**

CECO Filters offers a complete line of Fiber Bed (or Candle Filter) Mist Collector Systems to eliminate sub-micron liquid mist emissions, aerosols, soluble solids and pre-filtering insoluble solids. The innovative designs provide solutions to minimize the total cost of ownership with capital and operation expenditure (CAPEX & OPEX) saving in mind. CECO Filters' engineered systems and capabilities provide added value solutions through:

- Turnkey package systems
- Custom and standard designs
- Reduced footprint
- Corrosion resistant materials
- High sub-micron mist removal efficiency
- Quick and easy installations
- Simple operational procedures
- Minimal maintenance requirements
- Low pressure drop




CECO Filters' Mist Collector Systems are used extensively by companies seeking to reduce emissions and opacity issues to create a safer environment in a variety of industrial applications. Each Mist Collector System is engineered to remove / clean contaminated gas streams and reduce emissions to give clean air quality, reduced stack visibility / opacity, efficient processing, product purity and meet environmental output regulations. CECO Filters values customer feedback and as result, we work closely with our clients to find them the right solution. Understanding the issues and expectations allows us to tailor the design to the customer specific requirements.

Our engineering cycle considers our customers' needs and maximizes added value systems to the process in the following applications:

- Acid & Caustic Mist Emissions
- Asphalt (or Bitumen) Production
- Automotive
- Compressed Air Systems & Vacuum Pumps
- Electronics & Semiconductor
- Food Processing
- Fertilizer
- Hot Air Solder Levelling
- Incinerators and Fired Heaters
- Metal Polishing
- Plasticizer
- Power Generation
- Printed Wire Board
- Pulp & Paper
- Steel Rolling Mill & Lubricant Emissions
- Wet Machining & Metalworking
- Industrial Air Pollution Control
- Niche Chemical Processes

Single Filter Mist Collector System

CECO Filters single filter mist collector systems are compactly engineered and proven mist elimination units for small gas volume application throughout industry. Each unit has its own feature and is tailored for optimal performance to meet application requirements.

System Name	Filter-In-Duct (FID)	Tank Vent Filter (TVF)	DLM
Visual Model			
Functionality	Fits into existing duct work	Light weight unit designed to be placed on top of storage tanks	Double stage unit with prefiltration or condenser compartment and mist eliminator
Gas Flow Rate Capacities	300 – 1500 Aft ³ /min 500 – 2550 Am ³ /hr	10 – 950 Aft ³ /min 17 – 1620 Am ³ /hr	500 – 4500 Aft ³ /min 850 – 7650 Am ³ /hr
Fan Option	Yes	Yes	Yes
Output Silencer Option	Yes	Yes	Yes
Motor Starter & Controls Option	Yes	Yes	Yes
Bulk Pre-Filtration or Condenser Option	Not applicable	Not applicable	Yes
Sight Glass Liquid Drain Option	Yes	Yes	Yes
Instrumentation	Included	Included	Included
N-SERTS® or X- SERTS® Pre-Filters	Yes	Yes	Yes
TWIN-PAK®	Yes	Yes	Yes

Adding Value To Your System

Enabling variable frequency drives (VFD) to fans allows customers to adapt to varying flow rates of a fan for unsteady state batch and continuous process. Gives our customers the operational savings, as well as the functionality to effectively manage their process gas flow capacities! CECO Filters specifically and adequately designs each fan capacity to prevent overflows and back-pressure build-up.

Ask CECO Filters For Guidance

Filter-In-Duct (FID)



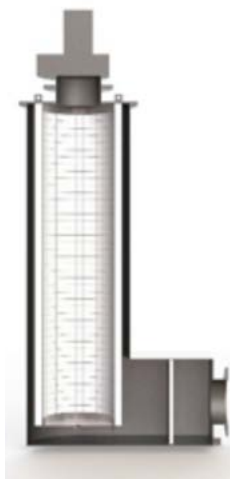
Model No:	Flow		Diameter		Height Without Fan		Height With Fan		Weight	
	ft ³ /min	m ³ /hr	Inches	mm	Inches	mm	Inches	mm	lbs.	Kg
FID-30A	300	510	20	508	44	1118	63	1600	240	109
FID-50A	500	850	20	508	58	1473	78	1981	300	136
FID-50B	500	850	30	762	52	1321	72	1829	390	177
FID-75B	750	1275	30	762	65	1651	85	2159	460	209
FID-100B	1000	1700	30	762	78	1981	103	2616	520	236
FID-150B	1500	2550	30	762	104	2642	129	3277	640	290

Tank Vent Filter (TVF)



Model No:	Flow Without Fan		Flow With Fan		Length		Width		Height Without Fan		Height With Fan		Weight	
	ft ³ /min	m ³ /hr	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	lbs.	Kg
TVF-10	10	17	110	190	19	483	25	635	44	1118	N/A	N/A	360	163
TVF-20	20	35	190	325	25	635	31	787	46	1168	64	1626	410	186
TVF-40	40	70	470	800	25	635	31	787	82	2083	100	2540	560	254
TVF-70	70	120	950	1620	33	838	39	991	94	2388	101	2565	820	372

DLM



Model No:	Flow		Length		Width		Height Without Fan		Height With Fan		Weight	
	ft ³ /min	m ³ /hr	Inches	mm	Inches	mm	Inches	mm	Inches	mm	lbs.	Kg
DLM-500	500	850	57	1448	29	737	63	1600	83	2108	1900	862
DLM-750	750	1275	59	1499	29	737	63	1600	90	2286	2000	907
DLM-1000	1000	1700	59	1499	29	737	100	2540	128	3251	2300	1043
DLM-1500	1500	2550	60	1524	29	737	100	2540	128	3251	2500	1134
DLM-2000	2000	3400	76	1930	43	1092	78	1981	106	2692	3800	1724
DLM-3000	3000	5100	76	1930	43	1092	100	2540	133	3378	4500	2041
DLM-4500	4500	7650	76	1930	43	1092	179	4547	-	-	4900	2222

Mist Collector (MMC) System

CECO Filters' MMC systems are vertically designed and engineered system to handle medium gas volumes in a compact multi-stage unit. MMC unit stages achieve a variety of separation functions to get the desired output performance.



Visual Model

Functionality	Tailored to reduce footprint and achieve desired performance through vertical arrangement design.
Gas Flow Rate Capacities	500 – 2000 Aft ³ /min 850 – 3400 Am ³ /hr
Fan Option	Yes
Output Silencer Option	Yes
Motor Starter & Controls Option	Yes
Spray System Washing Option	Yes
Bulk Pre-Filtration or Condenser Option	Yes
HEPA Filter	Optional
Sight Glass Liquid Drain Option	Yes
Instrumentation	Included
N-SERTS® or X- SERTS® Pre-Filters	Yes

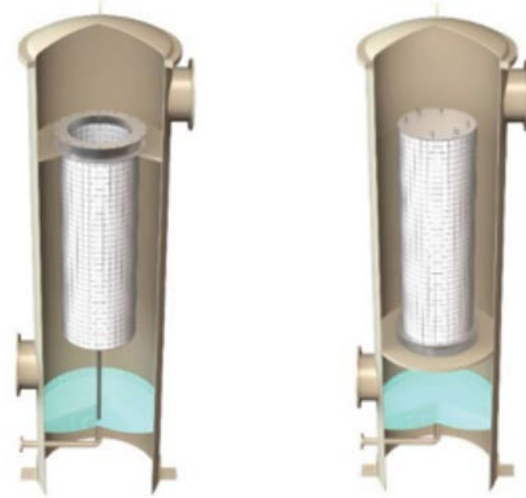
Mist Collector (MMC)

Model No:	Flow		Height Without Fan		Height With Fan		Width		Length	
	ft ³ /min	m ³ /hr	Inches	mm	Inches	mm	Inches	mm	Inches	mm
MMC-500	500	850	53	1346	83	2108	36	915	36	915
MMC-1000	1000	1700	63	1600	94	2388	36	915	36	915
MMC-1500	1500	2550	74	1880	104	2642	36	915	36	915
MMC-2000	2000	3400	84	2134	115	2921	36	915	36	915

Filter-In-Vessel (FIV) System

CECO Filters' FIV systems are custom designed solutions for all types of industry. FIV enhances conventional mist eliminator systems to give practical and performing results for the user. FIV comes with many different features which can be tailored or altered to give desired functionality for a vast range of applications.

Visual Model



Functionality	Customized mist elimination system in cylindrical vessels for inline operational processes and environmental control applications.
Gas Flow Rate Capacities	Custom designed to meet your requirements, with a broad spectrum of sizes to meet gas flow rates.
Fan Option	Yes
Output Silencer Option	Yes
Motor Starter & Controls Option	Yes
Internal Coalescer and Scrubber Packing Option	Yes
Spray System Washing Option	Yes
Bulk Pre-Filtration or Condenser Option	Not applicable
Sight Glass Liquid Drain Option	Yes
Instrumentation	Included
N-SERTS® or X- SERTS® Pre-Filters	Yes
TWIN-PAK®	Yes

Adding Value To Your System

CECO Filters understands the issues around pressure drop spikes through soluble solid build-up on filtration media. Our extensive knowledge of chemicals and process operations allows us to design smart inline wash system which can be triggered at high pressures drop to wash out soluble solids from filtration media. Allowing for a safer, practical and cost-effective solution to remove soluble solid contaminants or process material for recovery or waste.

[Ask CECO Filters For Guidance](#)

CECO Mist Collector (CMC) System

CECO Filters' CMC systems are compact engineered and proven mist elimination units for large gas volumes. As an industry leader, CMC units have been a favorite amongst our customers. The system has many features which reduce operational/capital cost and total cost of ownership. Specifically designed to utilize space and reduce capital cost of the system. Each CMC system is a compact unit which allows for simple and quick maintenance.

Visual Model



Functionality	Large gas volume system design to handle heavy duty process applications and environmental applications through innovative design and engineering.
Gas Flow Rate Capacities	2400 – 36000 Aft ³ /min 4080 – 61200 Am ³ /hr
Fan Option	Yes
Output Silencer Option	Yes
Motor Starter & Controls Option	Yes
Spray System Washing Option	Yes
Bulk Pre-Filtration or Condenser Option	Yes
Sight Glass Liquid Drain Option	Yes
Instrumentation	Included
N-SERTS® or X- SERTS® Pre-Filters	Yes

Adding Value To Your System

Often hot gas is released from the process due to extensive temperatures/heat requirements or even, exothermic reaction processes. As a result, potential liquid contaminants at lower temperatures remain as gas and can be emitted into the environment or further downstream processes.

CECO Filters can evaluate the gas composition of the process gas stream to potentially remove gas contaminants by condensing them into liquids prior to mist elimination. Thus, allowing CECO Filters mist eliminators to remove the condensed liquid contaminants!

[Ask CECO Filters For Guidance](#)

CECO Mist Collector (LMC) System

CECO Filters' LMC systems are our highest gas flow rate capacity systems. The LMC is the CMC design with longer filters yielding the maximum capacity per footprint area. The LMC units is a industry leader and specifically designed to manage large volumes while maintaining effective performance. The system has been specifically designed to reduce the capital cost and total cost of ownership of operating larger volume systems and minimize the maintenance costs requirements for large systems. Our enhanced designs have high collection efficiency with higher volumes of gas flow through intuitive arrangement and increased sizes of filters.



Visual Model

Functionality Largest gas volume system design to adapt to higher gas flow rates in an effective design to meet environmental regulations.

Gas Flow Rate Capacities 3600 – 36000 Aft³/min
6120 – 61200 Am³/hr

Fan Option Yes

Output Silencer Option Yes

Motor Starter & Controls Option Yes

Spray System Washing Option Yes

Bulk Pre-Filtration or Condenser Option Yes

Sight Glass Liquid Drain Option Yes

Instrumentation Included

N-SERTS® or X- SERTS® Pre-Filters Yes

Adding Value To Your System

Insoluble solid particulate can often create plugging issues in bulk volumes. Bulk pre-filtration system with in-line wash systems can be designed by CECO Filters to remove insoluble solids upstream of mist eliminators to effectively remove plugging issues. CECO Filters' bulk pre-filtration units are designed to efficiently minimize insoluble solid carryover to increase operational life span with minimal capital costs and operational expenditure.

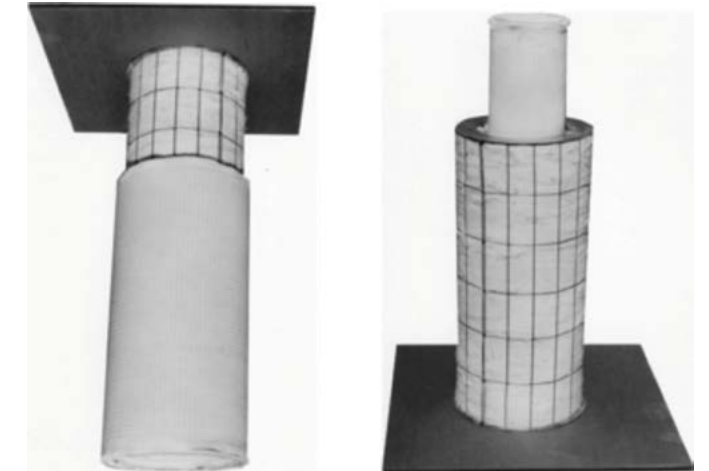
Ask CECO Filters For Guidance

N-SERTS® or X-SERTS® Pre-Filter Technology

CECO Filters intuitive pre-filter technology called N-SERTS® or X- SERTS®, collects insoluble solids on inlet surface area of filters. The clever technology fits on the internal layer of the filters to act as a pre-filter to remove bulk insoluble solids.

N-SERTS® Or X-SERTS® Benefits

- Easily removable and simple maintenance procedures
- 90% or more removal of insoluble solids
- Limited to less than 1 inWC or 25 mmWC for existing filters
- Can be incorporated into new filter designs without additional pressure drop
- Less than 20% of the cost of complete filter replacements
- Can be incorporated on to any existing candle filter system



Repacking

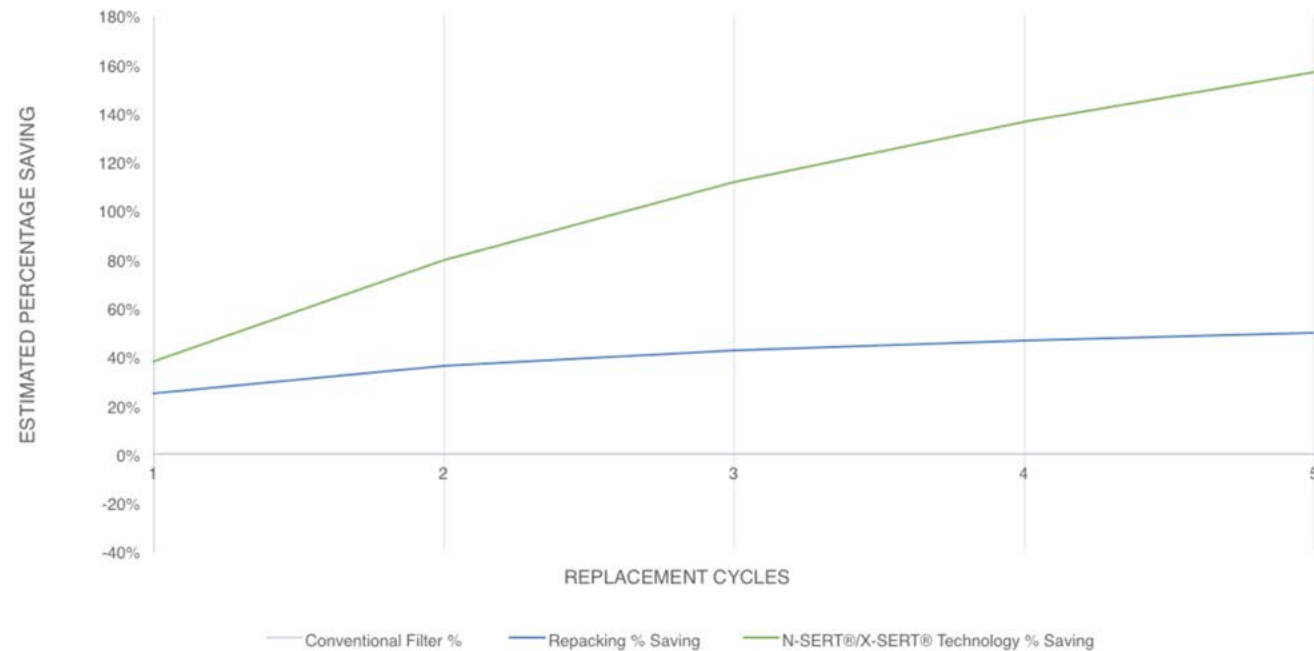
CECO Filters offers candle filter restoration services by repacking new fiber media within the original filter structures. Often, filter structures are unphased or undamaged by the process and can be re-used. This is an economical and effective solution to avoid unnecessary procurement of new filter replacements. This cost saving solution is available to all customers as an economical and effective way of renewing the existing candle filters. We offer repacking services at customers site and our own facility.



CECO Filters offers all customers a free evaluation for filter replacement cost saving technology

Combined savings through repacking services and N-SERT®/X-SERT® solutions

CECO Filters - Cost Saving Technology Solutions



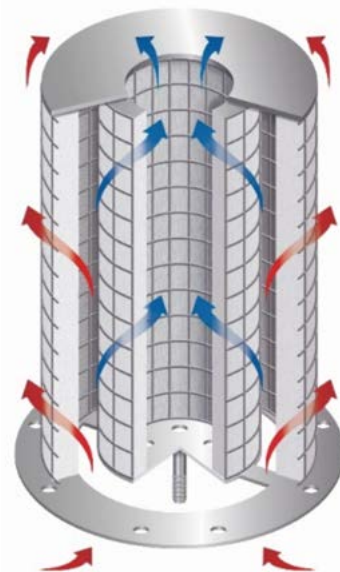
Taken Example from CMC System: \$300,000 USD cost of 5 cycles = \$100,000 USD through Repacking and \$185,000 USD through N-SERT®/X-SERT® Pre-Filter Technology.

TWIN-PAK®

CECO Filters Invented and Patented TWIN-PAK® mist eliminators and because of the new technology enhancements, our systems achieve a more compact design and better performances to conventional filters. With decades of experience, installations and true technical knowledge of TWIN-PAK® filters, CECO Filters is the only solution who guarantees your best and correct designs to utilize TWIN-PAK® Technology.

Our Technology Gives the Following Benefits:

- Reduces footprint and total size to give a compact system
- Allows up to 60% more gas flowrates
- Quantities of filters are reduced in comparison to conventional filters
- Lowers pressure drop in comparison to conventional filters
- Available in Sitting or Hanging arrangements
- Increases element life
- Perfect for retro-fitting (Fits into existing tubesheet)



CECO ENVIRONMENTAL

CECO Environmental enables industrial companies to grow by providing clean, safe and more efficient air quality improvement solutions that protect people and preserve our shared environment.

CECO Industrial Solutions Portfolio



Product / Project Line:
Adwest

Challenge: VOC, HAP, and Odor Control

Solutions: Regenerative Thermal Oxidizers (RTO) and VOC Concentrators



Product / Project Line:
Busch

Challenge: Metals industry rolling mill fume exhaust, industrial ventilation for equipment and personal protection, and metal strip cooling and drying

Solutions: Custom Engineered Systems for Fume Exhaust, and Jet*Star heavy gauge metal strip cooling and drying



Product / Project Line:
CECO Filters

Challenge: Liquid Mist & Aerosol Emissions

Solutions: Candle Filters and Fiber Bed Mist Eliminators



Product / Project Line:
Fisher-Klosterman

Challenge: PM Control

Solutions: High-Efficiency Industrial Cyclones for Severe Service / Process Conditions (e.g., High Temperatures, High Pressure, Corrosive Gases, and Erosive Solids)



Product / Project Line:
Flex-Kleen

Challenge: PM Control

Solutions: Dust Collectors - Bin Vent, Pulse Jet, High-Pressure, High-Vacuum, High-Temperature; ASME VIII and ASME Code Vessels; FDA Compliance; Corrosive Environment and Explosion Protection per NFPA; and HEPA Filter Systems



Product / Project Line:
HEE- Dual

Challenge: Acid Gas, Particulate Mist, and Odor Control

Solutions: Scrubbers - Wet, Dry, Chemical and Biological Odor Control, Bio-filter, and Emergency Gas; Aerators and Degasifiers; Carbon Absorbers; Mist Eliminators; and Duct Hoods and Exhaust Fans



Product / Project Line:
KB Duct

Challenge: Duct that can be installed quickly

Solutions: Quick, Modular, Clamp-Together Duct and Flanged Duct. Heavier gauges for more abrasive applications. Component parts



Product / Project Line:
Kirk & Blum

Challenge: Design, Fabrication, & Installation of Heavy-Duty Industrial Air Systems specifically for Dust, Fume, and Mist Collection

Solutions: Design, Fabrication, and Installation to SMACNA Standards. Turn-key System Integration and Project Management for a "Single-Source" Solution

Our Comprehensive Industrial Air Quality Improvement Solutions, Products and Services are Designed to Optimize:

- Efficiency - processes and production
- Safety - employees and public
- Environmental stewardship
- Regulatory compliance
- Total cost of ownership (TCO) - first / initial / capital cost, operating costs, energy / fuel cost, installation, commissioning, preventative maintenance, repairs, spare parts, and the avoided cost of minimizing process downtime

Pollutants and Emissions Controlled

- Particulate Matter (PM)
- Hazardous Air Pollutants (HAP)
- Fume Exhaust
- Liquid Mist
- Volatile Organic Compounds (VOC)
- Acid Gas and Odors
- Nitrogen Oxides (NOx)
- Aerosol Emissions

Excellence in Pollution Control Technology, Service and Support Worldwide

CECO Filters' focus on unsurpassed customer service and innovative mist eliminator designs for the pollution control and process enhancements, has earned us a reputation as an industry leader by providing cutting edge technology solutions for the past 5 decades. CECO Filters are designed to create cleaner processing and safer environment.



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