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www.midwestair.com

M A P C O
MIDWEST AIR PRODUCTS CO., INC.



**MISTMASTER™
VERTICAL**

- wet scrubbers
- chrome (CMP) scrubbers
- mist eliminators (CMP)
- exhaust fans
- exhaust hoods
- canopy hoods
- ductwork
- installation
- maintenance programs
- custom fabrications
- design services

COMPOSITE MESH PAD (CMP)

- MISTMASTER™ IN-LINE MIST ELIMINATORS
- TERMINATOR™ EXHAUST HOOD
- HORIZONTAL MW-400



**TERMINATOR™
EXHAUST HOOD**



**MISTMASTER™
HORIZONTAL**

PO Box 5319
281 Hughes Drive
Traverse City, MI 49686

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Fax: 231-941-1636

WHY MAPCO?

In terms of efficiency, capital outlay, maintenance, longevity and minimized effluent, Mapco Mesh Pad Mist Eliminators offer the Optimum Solution for removal of chemical particulate from process exhaust streams. Mapco's experience with Mesh Pad Removal Technology is both extensive and field-proven, with literally hundreds of applications installed and operating since 1984.

Continual refinements in housing construction and operating requirements, in conjunction with Mapco's proprietary knitted mesh pad design, insure that you will be impressed with the resulting performance. Many process exhaust flows currently serviced by a wet packed bed fume scrubber could be cleaned more effectively with a

mesh pad eliminator, and without the large effluent flows that most wet scrubbers generate.

Mapco mesh pads operate dry, by impinging entrained chemical particulate on the knitted wire strands of the mesh pad material. Chemical particulate is removed from the pad with a brief, periodic washdown of fresh water, or lightly contaminated rinse water from the process line (i.e. a counter-flowing rinse tank).

Mapco's R & D efforts and experience with a wide spectrum of different applications has shown how pads can perform without encountering the historic problems of chemical plugging. Different applications and chemical loadings require

specific operating procedures, in terms of washdown frequency, to ensure the mesh pad material remains clean. All Mapco mesh pad eliminators feature built-in and easily removable spray headers and nozzles to make cleaning easy. Mapco pads do not require removal from the eliminator body in order to be washed! Pad wash downs involve very low effluent flows. Manual initiation of a pad washdown cycle is easy, as typical requirements involve durations of a minute or less. As an alternative, you may choose one of Mapco's simple and effective automatic washdown control packages. This option allows 365 day automated control of the washdown procedure, based on the pre-determined and programmed requirements for your application.

IDEAL APPLICATIONS FOR MESH PADS INCLUDE:

- **Hard Chrome**
- **Decorative Chrome**
- **Chrome Anodize**
- **Water Mist**
- **Phosphoric Acid**
- **Nitric Acid**
- **Sulfuric Acid**
- **Fine HCl Mist**
- **Caustic Etch**
- **Caustic Cleaners**
- **Plating Solution Mist**
- **Cyanide Based Mist**

Mapco Mesh Pad Mist Eliminators have been tested under actual operating conditions to an efficiency of 99.94% for removal of Hexavalent Chrome. Mesh pad mist eliminators will not remove gases or gaseous odors.

MOST EFFECTIVE

Mesh pad mist eliminators are significantly more effective at capturing chemical mists than Chevron Blades, Perforated Tubing or typical Scrubber Packing. Mapco offers mesh pads with efficiencies in the sub-micron range. Your specific application and the desired removal efficiency will dictate what kind and how many mesh pads will be required. Impingement operating characteristics including frequency of pad wash downs and design exhaust velocity through the pad will be determined by Mapco Application Engineers. Your mesh pad eliminator can be designed to allow periodic cleansing without shutdown of the exhaust

system, and without fear of entraining washdown water on the opposite side of the pad.

VERSATILITY

Mapco Mesh Pad Eliminators are designed to be versatile. The eliminator body can be mounted in either a horizontal or vertical configuration to best fit the allowable space in your plant. Vertical eliminators incorporate a unique Mapco design that prevents washdown effluent from draining down through the duct system. The effluent is trapped below the mesh pad and channeled off to a drain connection at the bottom of the shell as is the horizontal eliminator. If a single-stage unit is not

adequate, double or triple stages are available in both configurations. Units can be mounted in the trunkline or smaller units can be mounted in each riser thereby stopping build-up in the main ductwork. Mist eliminators when used in conjunction with a fume scrubber can reduce the inlet loading to the scrubber, thus reducing fresh water make-up, waste treatment costs and chemical reagent usage when equipped with a pH control system. Single stage eliminators are compact and require very little space. The addition of multiple stages will add only 24" or less to the overall length of the eliminator body.

Versatility

Quality assurance

Custom fabrication

Proven track record

Cost effective

Low maintenance

500 TO 10,000 CFM

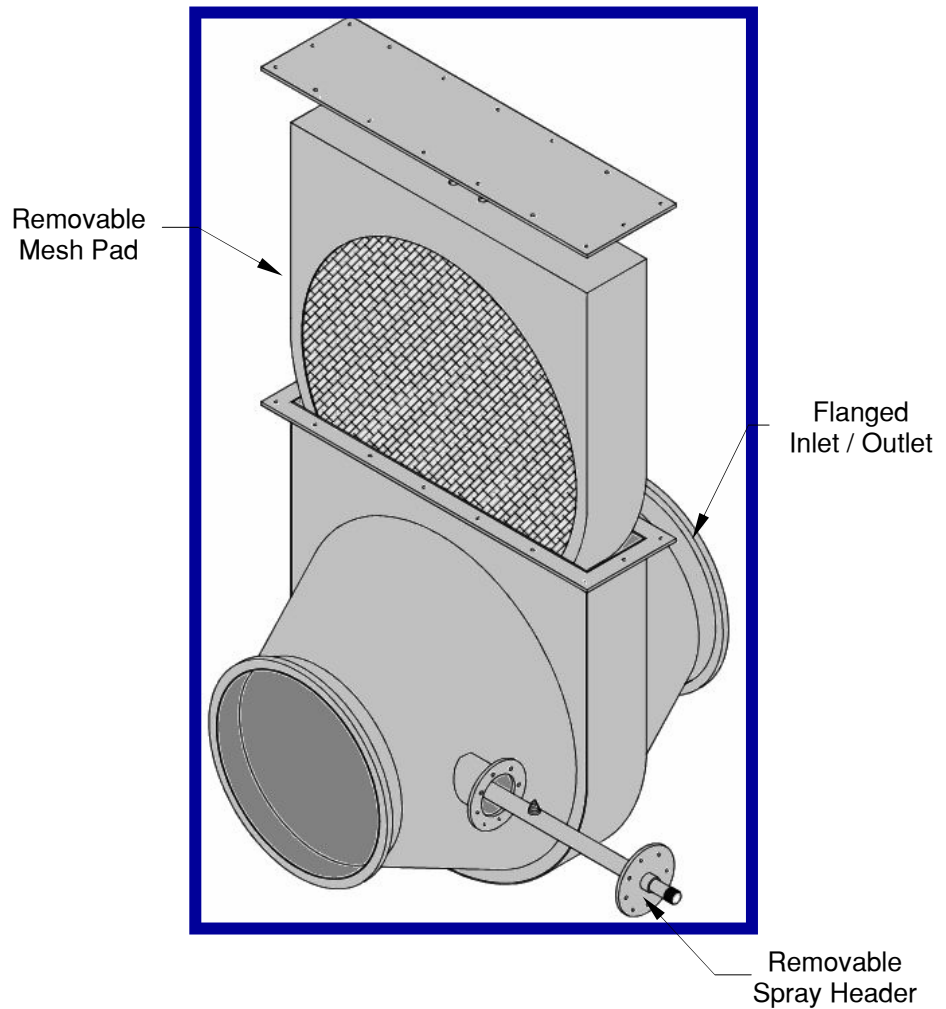
Horizontal / Vertical configuration

Corrosion resistant

Eliminates contaminant build-up in Duct

Magnehelic gauge

Dry operation with periodic washdown



OPTIONAL EQUIPMENT

Mapco Mist Eliminators are not off-the-shelf devices. Each is engineered to function best for your application. You can order a basic Eliminator and add control features yourself, or order a unit equipped with these features directly from Mapco.

MAGNAHELIC GAUGES

An inexpensive and worthwhile option, these gauges are easily mounted directly to the eliminator housing, or remote-mounted for easy access and high visibility. Visual reading of the actual static pressure assures proper operation or provides early warning of a problem.

AUTOMATIC WASHDOWN CONTROL

This feature frees your maintenance or plating shop personnel of performing regularly scheduled

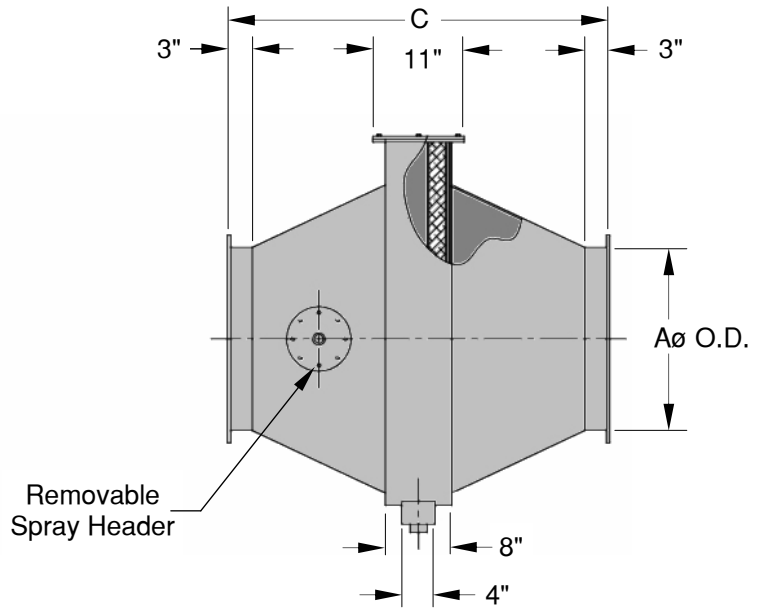
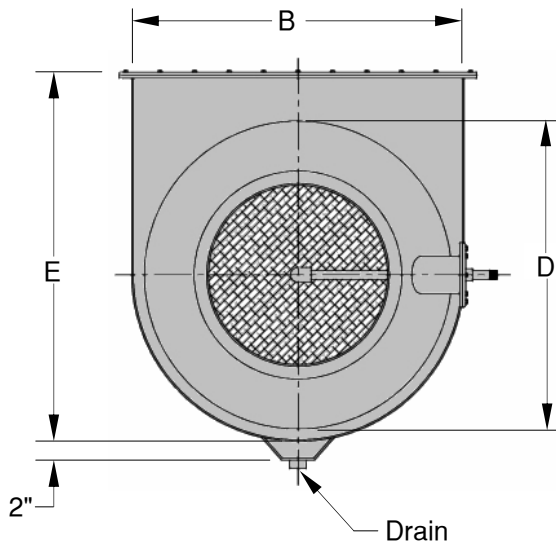
washdowns of the mist eliminator. Mapco can supply a complete control system with electronic programmable timer/PLC, actuated control valves and NEMA enclosure. Or, we will assist you in selecting a system designed for your special needs.

Kynar® MESH PADS

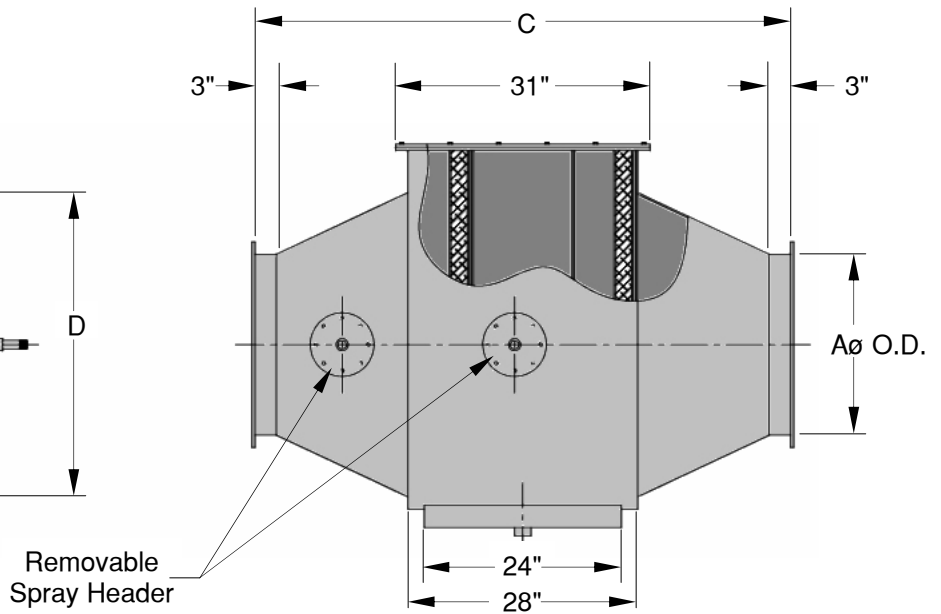
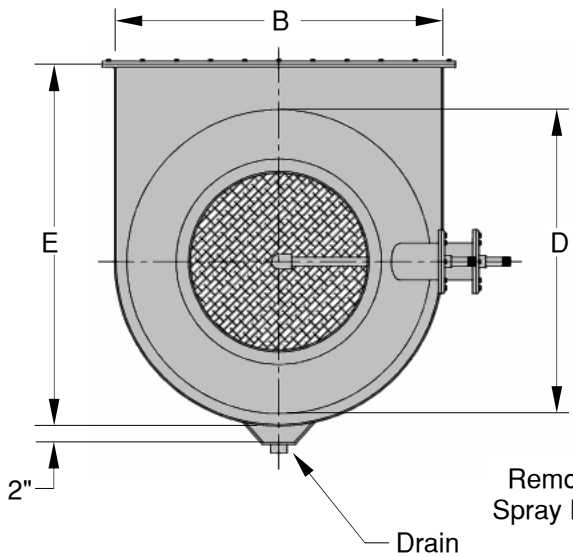
Applications such as hard chrome plating can result in shortened pad life even with proper washdown. As an alternative to our standard polypropylene mesh pads, Mapco offers a First-Stage pad of Kynar material. Although more expensive, this material is compatible with some of the more aggressive chemicals thereby extending pad life.

HORIZONTAL INLINE MIST ELIMINATOR

SINGLE STAGE



TWO STAGE

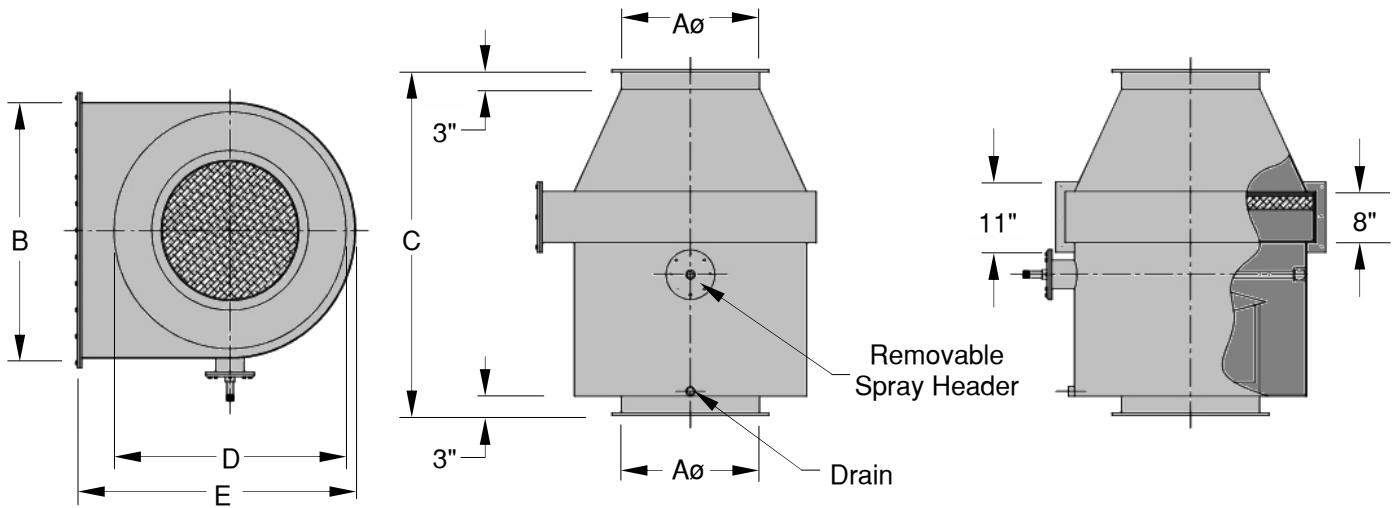


DIMENSIONS [INCHES]

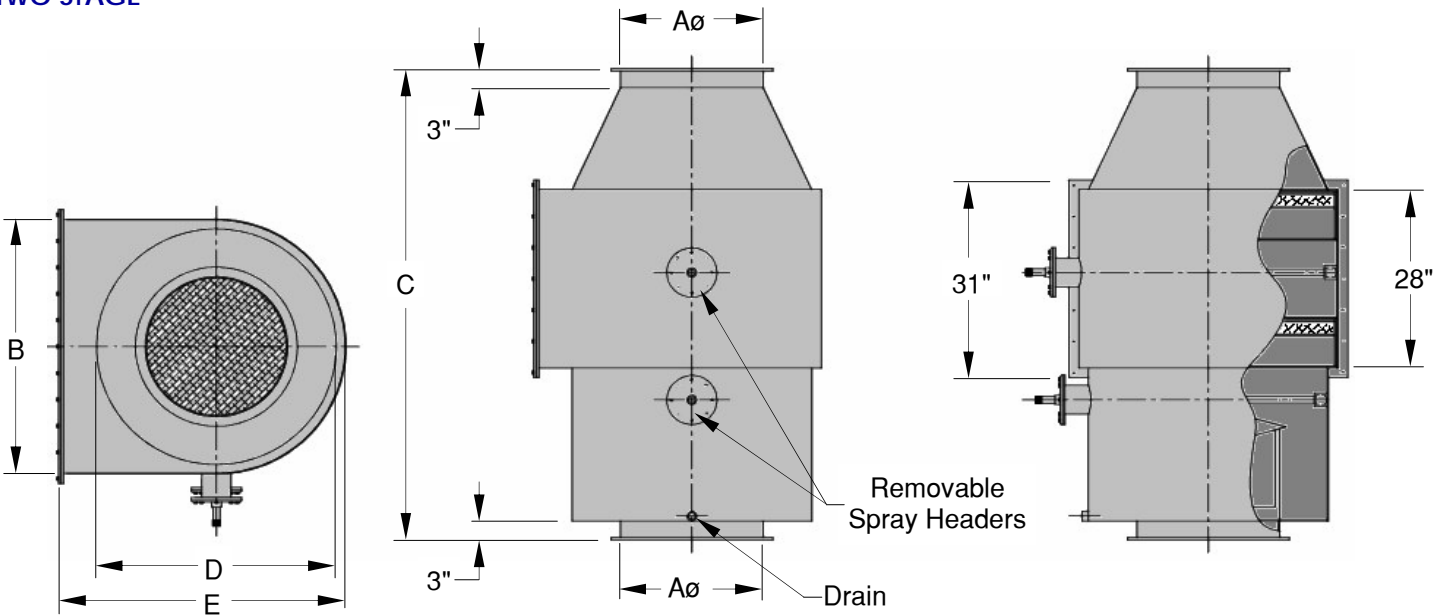
CFM	A	B	C One Stage	C Two Stage	D	E	Flange Size	Nozzles Per Stage	Drain Size	Header Size	GPM Per Header	Weight # One Stage	Weight # Two Stage
500	6 5/8"	14"	34"	54"	11"	18"	1-1/2"	1	1"	3/4"	5.3	85	130
800	8 5/8"	16"	34"	54"	13"	20"	1-1/2"	1	1"	3/4"	5.3	97	149
1000	10 3/4"	20"	34"	54"	17"	24"	1-1/2"	1	1"	3/4"	5.3	122	188
1500	12 3/4"	22"	34"	54"	19"	26"	1-1/2"	1	1"	3/4"	5.3	148	227
2000	14"	26"	34"	54"	23"	30"	1-1/2"	1	1-1/2"	3/4"	5.3	162	246
3000	16"	30"	34"	54"	27"	34"	1-1/2"	1	1-1/2"	3/4"	5.3	188	286
4000	18"	34"	38"	58"	31"	38"	1-1/2"	1	1-1/2"	3/4"	5.3	238	348
5000	20"	36"	38"	58"	33"	40"	1-1/2"	1	1-1/2"	3/4"	5.3	252	369
6000	22"	40"	46"	66"	37"	44"	1-1/2"	1	2"	3/4"	5.3	334	465
8000	24"	44"	46"	66"	41"	48"	1-1/2"	1	2"	3/4"	5.3	370	514
10000	26"	48"	46"	66"	45"	52"	1-1/2"	1	2"	3/4"	5.3	406	563

VERTICAL INLINE MIST ELIMINATOR

SINGLE STAGE



TWO STAGE



DIMENSIONS [INCHES]

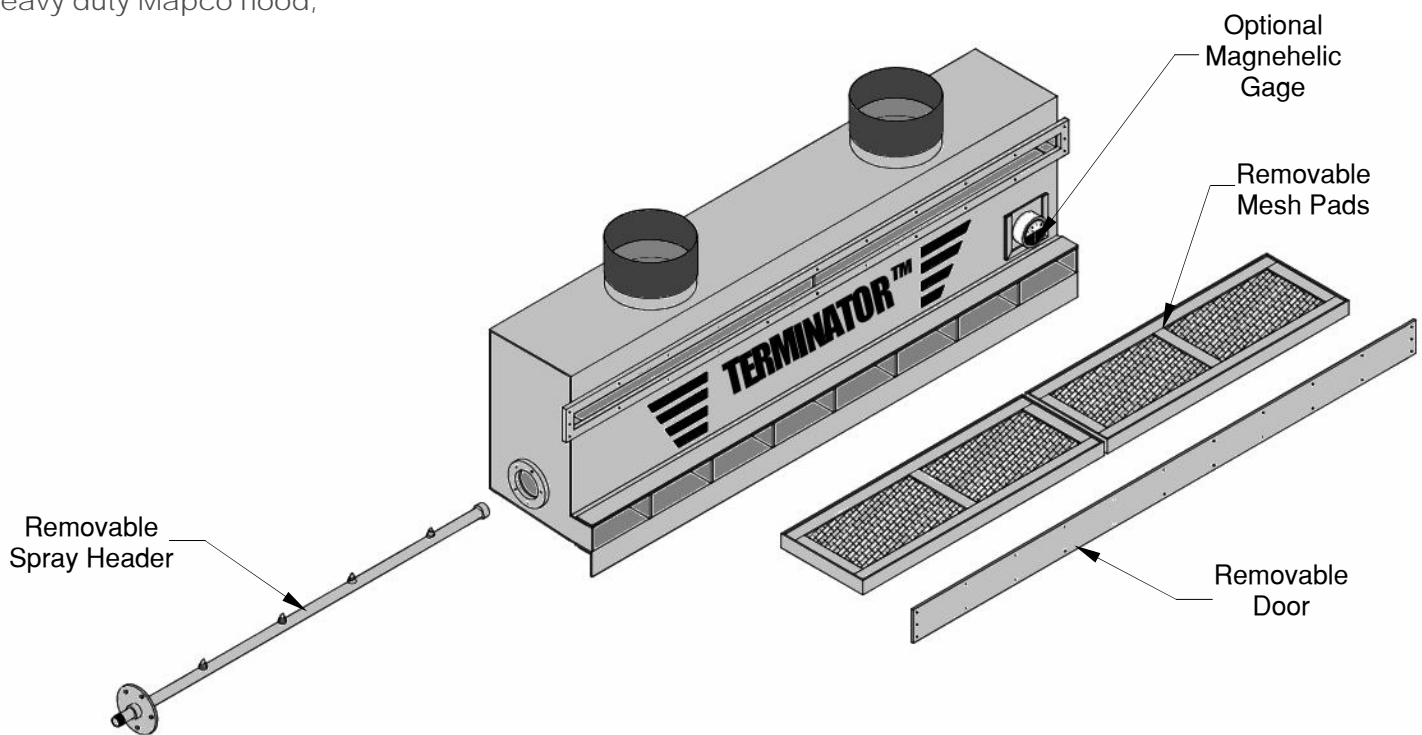
CFM	A	B	C One Stage	C Two Stage	D	E	Flange Size	Nozzles Per Stage	Drain Size	Header Size	GPM Per Header	Weight # One Stage	Weight # Two Stage
500	6 5/8"	14"	46"	66"	12"	18"	1-1/2"	1	1"	3/4"	5.3	112	158
800	8 5/8"	16"	46"	66"	14"	20"	1-1/2"	1	1"	3/4"	5.3	129	181
1000	10 3/4"	20"	46"	66"	18"	24"	1-1/2"	1	1"	3/4"	5.3	162	228
1500	12 3/4"	22"	46"	66"	20"	26"	1-1/2"	1	1"	3/4"	5.3	195	274
2000	14"	26"	46"	66"	24"	30"	1-1/2"	1	1-1/2"	3/4"	5.3	212	298
3000	16"	30"	46"	66"	27"	34"	1-1/2"	1	1-1/2"	3/4"	5.3	246	345
4000	18"	34"	48"	68"	31"	38"	1-1/2"	1	1-1/2"	3/4"	5.3	292	404
5000	20"	36"	48"	68"	33"	40"	1-1/2"	1	1-1/2"	3/4"	5.3	310	428
6000	22"	40"	54"	74"	37"	44"	1-1/2"	1	2"	3/4"	5.3	386	478
8000	24"	44"	54"	74"	41"	48"	1-1/2"	1	2"	3/4"	5.3	427	529
10000	26"	48"	54"	74"	45"	52"	1-1/2"	1	2"	3/4"	5.3	469	579

TERMINATOR™ EXHAUST HOOD

Mapco offers a special line of fume collection hoods that feature built-in mesh pad mist eliminators. Similar to the in-line style eliminators, Mapco's Terminator™ fume hoods are equipped with removable washdown spray headers and single or multiple stage mesh pads contained in removable drawer assemblies. This unique design is incorporated into a heavy duty Mapco hood,

custom-built for your application. Terminator™ fume hoods can be designed to drain all washdown effluent directly back to your process tank. This is accomplished via a sloped hood bottom and drip lip that directs effluent back to the tank. Each time the pads are washed, the hood interior is also cleaned. The Terminator™ design is ideal for applications where chemical

reclamation and zero-discharge are desirable, and where contamination of tank solution is unlikely. Terminator™ fume hoods require little more physical space than a typical exhaust hood. These hoods are available in nearly all typical fume hood configurations, and each is custom engineered to suit your exhaust application.

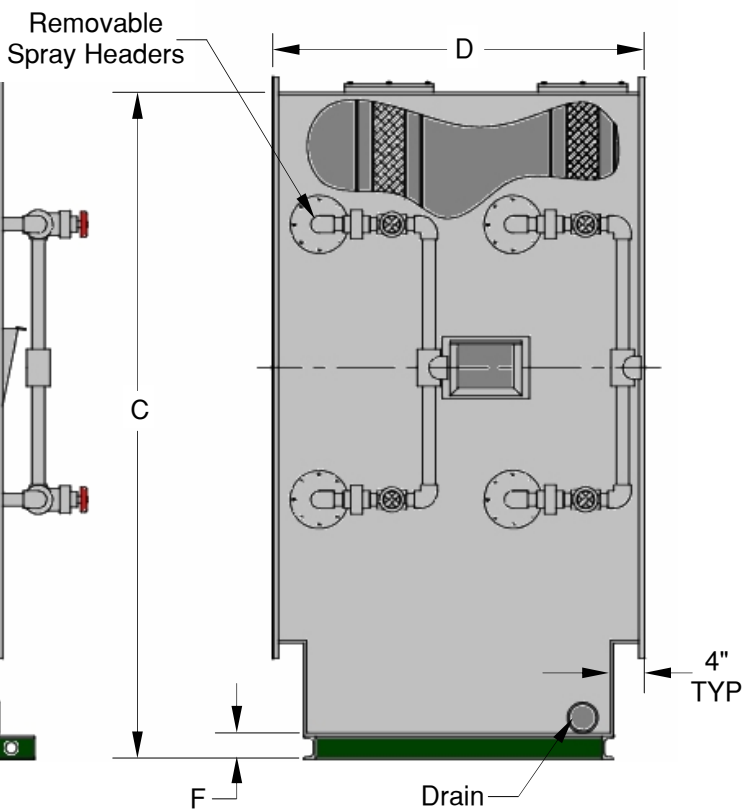
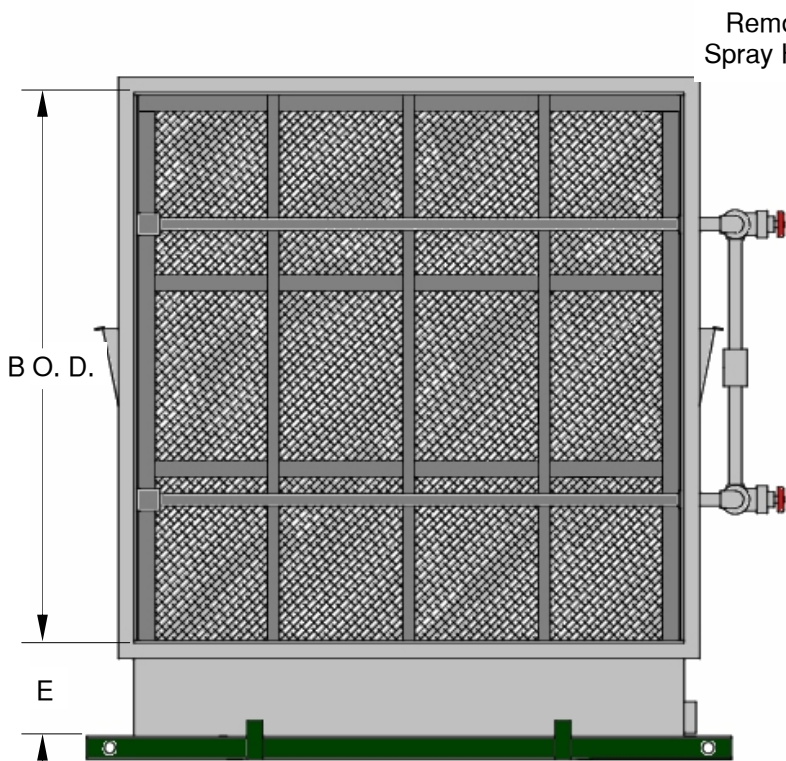
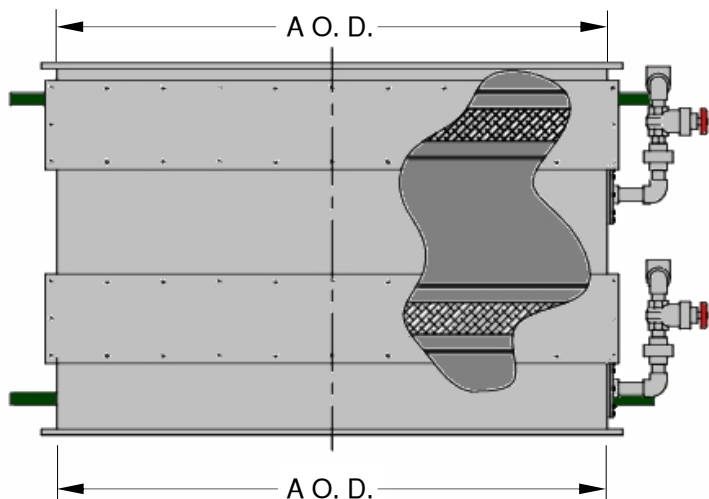


Solve Your Misting Problems Right At The Tank!

- Superior Chemical Reclamation
- Extends Life of Duct System
- Drip-Lip Returns to Tank
- Optional Plumbing Connection to Drain
- Optional Adjustable Hood Slots
- Easily Removable Internals
- Zero-Discharge
- Simple, Foolproof Operation
- Eliminates Chemical Build-up in Ductwork
- Reduce Loading to Downstream Controls
- Airflow Adjusting Damper
- Less Costly Than A Fume Scrubber

HORIZONTAL MW-400 MIST ELIMINATOR

This multi-stage mist eliminator is a dry, impingement type collector equipped with spray headers for periodic wash-down of the internals. The MW-400 mist eliminator can be configured with either or both mesh pads and chevron blade type mist eliminators with four 30° changes in air flow. As the mists enter the separator, the larger particles are removed as they pass through the first stage coarse pad. Remaining small micron sized particles are removed through a series of Mapco proprietary mesh pads. Superior performance is achieved on mists such as chromic acid, sulfuric acid, alkaline, cyanide, etc. Designed for the quality conscious plater, the MW-400 is fabricated from durable corrosion-resistant materials. Fundamental controls and recirculation system further enhance the value of this product.



DIMENSIONS [INCHES]

CFM	0.5	1	2	3	4	5	6	8	10	12	14	16	18	20	22	24	26	28	30	35	40	45	50	
A	14	19	27	33	38	42	47	54	60	65	71	76	86	94	104	114	124	134	144	166	188	212	236	
B	14	19	27	33	38	42	47	54	60	65	71	75	75	75	75	75	75	75	75	75	75	75	75	75
C	24	29	37	43	48	52	57	65	71	80	86	90	91	91	91	91	91	91	91	91	93	93	93	
D	66																							
E	8										12													
F	2						3						4						6					
GPM	1	3	5	8	10	12	15	20	25	29	35	40	45	49	54	59	65	70	75	86	98	110	123	
WEIGHT	143	176	236	286	331	369	420	531	601	663	741	802	888	940	1004	1069	1133	1198	1262	1404	1592	1747	1901	

Highest Value
Exhaust and Pollution
Control Equipment

“and the
beat
goes
on”

Corrosion Resistant PVC Duct
Corzan™ Duct
Fiberglass Overlaid Duct



Turnkey
Installations



Corzan™
Duct



Motorized Dampers



Terminator™
Composite Mesh Pad
Exhaust Hoods

