

AER

Control Systems

90 River Street • New Haven, CT 06513 • local: 203-772-4700 • toll free: 866-265-2372 • fax: 203-772-0020 • www.aercontrolsystems.com



**CM Centrifugal
Mist Collector**

Fundamentals.

Our traits transcend to value.

Mist and smoke generated from screw machines, CNC lathes, bar machines, grinders and machining centers contaminate in-plant air, AER Control Systems Centrifugal Mist Collectors eliminate, trap, and recover those contaminants right where they start – at the source. Designed to work on a variety of equipment using either petro-based or synthetic coolants the AER Control Systems Series Centrifugal Mist Collectors are compact, efficient, economical, and ready for direct machine mount. Our mist collector's direct machine mount capability makes installation simple, eliminates unattractive ductwork, reduces fire hazards, prevents cross contamination of coolants, and reduces plant costs. AER Control Systems Mist Collectors work to provide clean, contaminant-free, air, so plants can operate and promote cleaner, safer, and healthier work environments.



Features & Benefits

We manufacture AER Control Systems Mist Collectors with all the features that benefit not only the quality and appearance of your plant but it's morale and productivity.

Basic units include four stages of filtration. First, and inexpensive, easy to replace, first-stage throw-away filter acts as a preventive barrier, removing the majority of the solid particles in the collected mist. The second-stage, primary filter is behind the throwaway filter and consists of a special, high efficiency media designed to efficiently coalesce ultra-fine mist particles. The first two stages are housed in the rotating drum assembly. After exiting the drum, air passes through the third-stage filter, then exits through the fourth-stage exhaust filter.

Minimal gap between the cover and aerodynamic drum inlet minimizes potential bypass and ensures that the maximum amount of contaminant-laden air passes through the drum filters. The perforated drum is heavily reinforced and coated for durability and long life.

Manufactured with tough 16-gauge spun steel, the powder-coated housing withstands rough industrial environments.

Constructed to make installation and maintenance virtually effortless, units weigh from 74 to 124 lbs. AER Control Systems Mist Collectors are compact and easily machine mounted. Floor mounted pedestal stands are available if machine mounting is not possible.

Quiet operation, standard unit noise levels range from 70 to 76 dBA at 3'.^{*}

Direct mount capability saves floor space, simplifies installation, reduces ducting and the potential spread of fire should oil ignition occur.

Energy savings provide a rapid return of initial investment. Cleaned air returns back to the plant environment eliminating the need to exhaust air outside, the necessity for make-up air including associated heating and/or cooling costs.

Meets or exceeds OSHA requirements so plants comply with the tough clean air standards. The end result, a clean, healthy plant environment with improved morale and productivity.

*Noise levels can vary depending upon the size and nature of the installation area.

Options. What separates us from the rest.

Prefilters

Integrate a prefilter to improve unit performance and reduce maintenance. Prefilters remove larger solid particles that may be suspended in the captured mist. To prevent chips, turnings and a majority of the fines from "soft" metals or grinding swarf from entering and prematurely blocking off the drum filters, choose a high-performance, add-on, modular prefilter. The low cost, easy-to-replace, disposable filter discs can be used in single or multiple stages to tailor individual levels of pre-filtration.



In-Cover Prefilter Trap

In-Cover Prefilter Traps & In-Cover Impingers

DESCRIPTION	APPLICABILITY	A"	B"
In-Cover Prefilter Trap	Models CM-100, CM-200, CM-300, CM-500	4	14 1/2
In-Cover Prefilter Trap	Models CM-700, CM-900, CM-1200	4	18 1/8

HEPA Post Filters

We understand that every manufacturing plant is different – from what it produces to how it made, so we've designed not just one mist collector model, but an entire modular line to support the variety of needs in the marketplace. A number of add-on pre and post filter modules are available allowing plants to customize in-plant systems. Modules are easily added and/or modified in the field, providing the ultimate in adaptability.

Oil mist is not the only contaminant produced in machining environments. Smoke is another difficult and typical byproduct from today's high-speed operations. If you produce both mist and smoke, then our HEPA post filter is the right choice for your air filtration needs. Adding a HEPA filter to our standard unit, licenses our mist collector to handle the combination of sub-micronic mist and smoke – a contaminant composition often associated with high speed or heavy metal removal



CMH Models Available

MODEL	A"	B"	C"
CMH-100	31	15	12 1/2
CMH-200	31	15	12 1/2
CMH-300	36	24 1/2	13 1/2
CMH-500	36	24 1/2	13 1/2
CMH-700	38	24 1/2	13 1/2
CMH-900	38	24 1/2	13 1/2
CMH-1200	38	24 1/2	13 1/2

Note: Dimensions are for standard size HEPA equipped CMH units. Hi-Capacity HEPA filter modules are available for Models 300 thru 1200.

applications and or thermal processes like EDM, oil; quenching or lube oil sump reservoirs. When equipped with a HEPA filter the particulate efficiency rating increases from 98% efficiency at one micron – standard model rating – to 99.97% efficiency at 0.3 microns. Higher efficiencies available. Our HEPA filter assemblies are factory installed or field retrofitted.

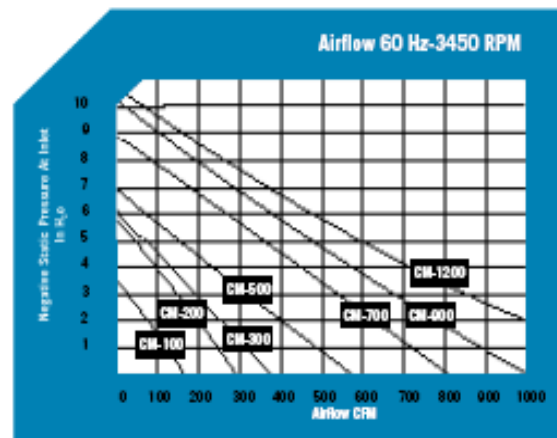
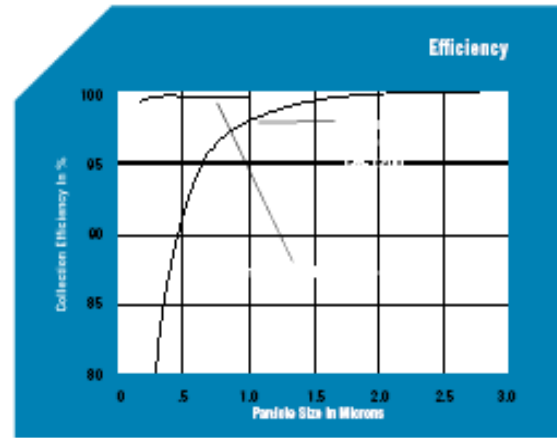
Carbon & Gas Vapor Filters

In addition to mist and smoke, some operations may generate gas/vapors or "odors" that require control with gas/vapor filters such as carbon. A variety of gas/vapor filters and/or filter modules are available for control of these contaminants. On most typical applications, our standard, high capacity, refillable carbon filter module can be utilized. High quality, high capacity coconut shell carbon is standard but alternate media such as treated or reactive carbons, potassium permanganate/activated alumina pellets, zeolite or combinations of all three (CEZ) can be provided for more difficult applications. The standard carbon modules are available for use with the basic CM unit (Models CMC) or for units with HEPA post filters (Models CMHC) or can be field retrofitted.

Floor Mounted Pedestals & Other Options

For applications on machines where there is limited access, mounting space or where direct machine mounting is not advisable, optional Floor Mounted Pedestal stands are available. Standard Pedestals have predrilled, 12" square top and bottom mount/base plates and are available in 18" or 6' 6" heights (other heights available). Other available CM options include machine specific mounting brackets, hoods, non-sparking drums, heaters, special motors, spray wash nozzles and specialized inlet and outlet fittings.

Optional Floor Mounted Pedestal Stand



Special OEM units

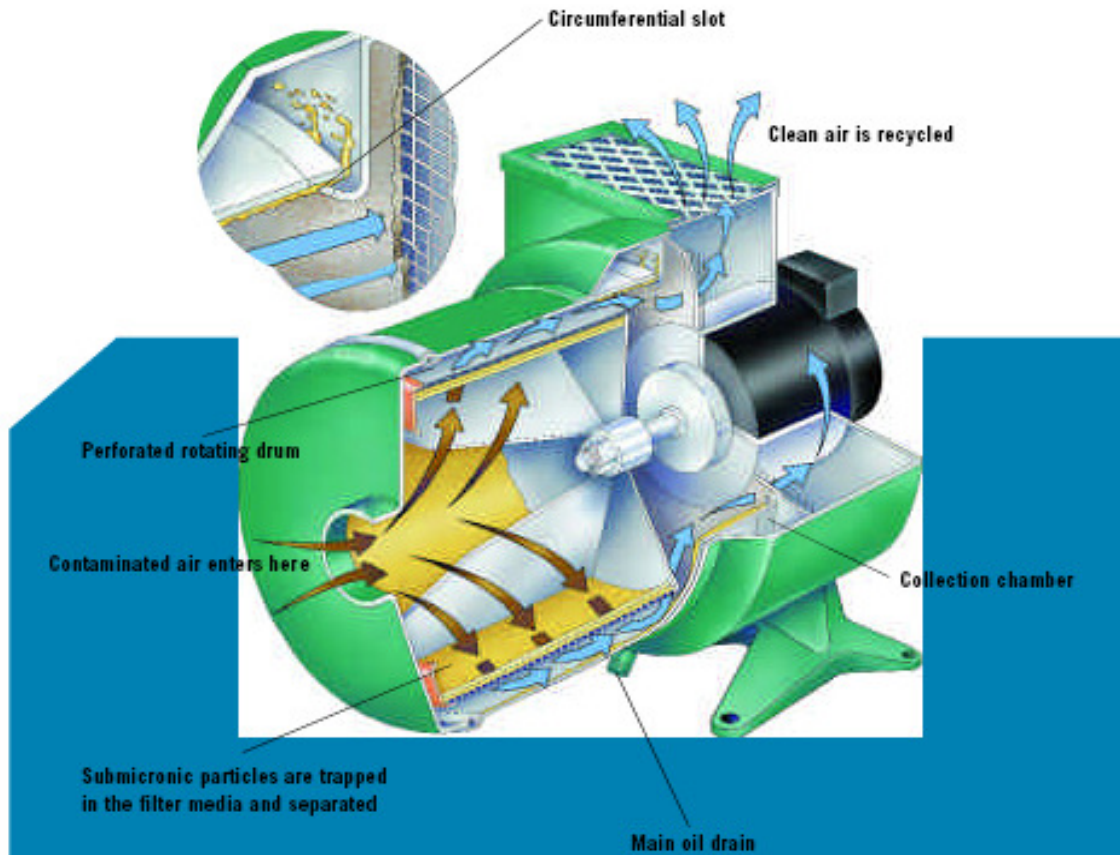
Lube Sump Reservoir Packages – special inlet and outlet fittings such as collars, flanges, 150 lb. flanges and NPT fittings.

Full Factory Service and Refurbishment program.

Technical support, application and design engineering.

Performance. It's in the force.

We've integrated the law of centrifugal force into the design of our mist collectors.



How it works

During operation the perforated drum/radial blade fan assembly spins at a high speed, providing air movement as well as filtration. Mist laden air enters the Centrifugal Mist Collector through a flexible hose or air duct. As air passes through the filter media, coalescence occurs and sub-micron mist particles are trapped and retained until they have grown to droplet size. The droplets are

thrown free of the perforated drum to the inner wall of the casing by centrifugal force. High velocity air drives the liquids along the inner wall of the collector forcing them into the circumferential slot of the primary drain chamber. The higher air pressure in the chamber force drains liquids from the system for reuse or disposal while clean air is exhausted or returned to the plant environment.

