



Mist Collectors



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Made in the USA — Since 1983

Mist Collection Systems



Mist Collectors filter the air in machine shops in order to remove harmful oil mist from *CNC machines, milling and grinding processes*. These systems are commonly used for CNC machine shops to eliminate oil mist. However, they can also be used to collect and filter systems with *coolant mist, water mist or other oil mist*.

At Sentry Air Systems, we offer two types of systems:

- **Primary Control Mist Collectors** - Mounted on the machine to filter at the source. (Models 200, 300, 400, 450)
- **Secondary Control Mist Collectors** - Hang from ceiling or stand mounted to catch additional mist from processes. Also feasible for situations where direct mounting is not available. (Model 2000)

Our primary control mist collectors are portable and lightweight. Both types offer reliability, low maintenance, quiet operation, and energy efficiency. Depending on the applications, both types collect oil and either drain back to the machine or into a drain plug to be recycled.

Why Install a Mist Collection System?

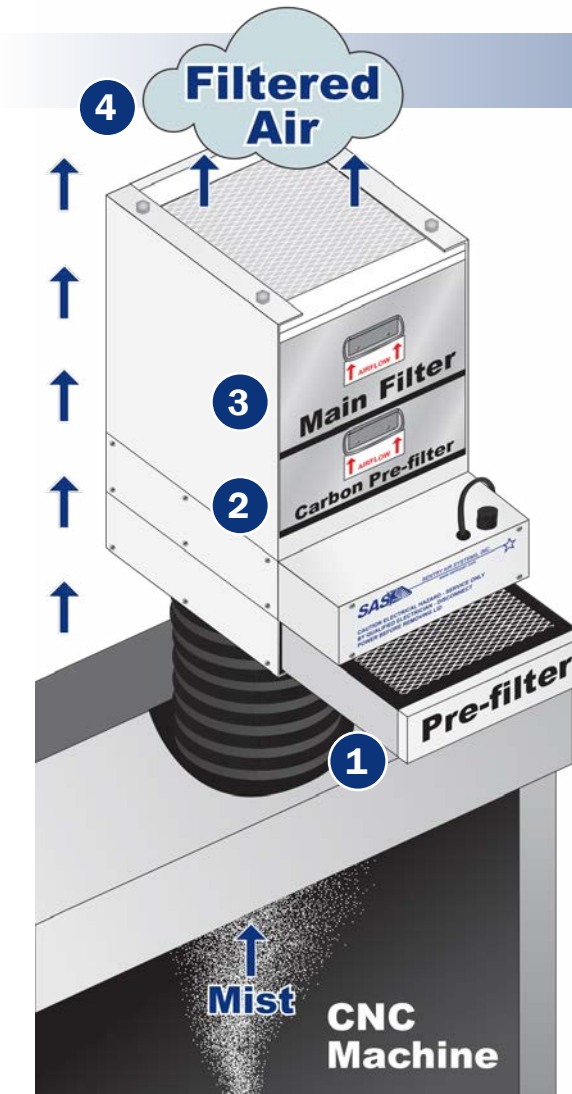
- Improve employee health & safety
 - Oil mist exposure is known to cause:
 - Eye and skin irritation, shortness of breath, vomiting, fever, rapid heartbeat, headaches, fatigue, and burning sensation in mouth or throat or stomach.
 - Increased risk of cancer
 - Diseases of the skin and respiratory system
- Reduce worker lawsuits and liability
- Government regulations -
 - OSHA Permissible Exposure Limits (PEL)
 - NIOSH Recommended Exposure Limits (REL) Short Term Exposure (ST)
 - ACGIH Threshold Limit Values (TLV)

Government Regulations

| | |
|-----------|--|
| OSHA PEL | 5 mg/m ³ over 8 hr/day, 40 hrs/wk [OSHA, Table Z-1, 9/6/12] |
| NIOSH REL | 5 mg/m ³ at 10 hr/day, 40 hrs/wk 10 mg/m ³ ST - 15 minute period [NIOSH Pocket Guide to Chemical Hazards, p 237, 7/7/16] |
| ACGIH TLV | 5 mg/m ³ over 8 hr/day, 40 hrs/wk [TLV and BEI Book, 7th Ed, 2018] |

*Figures as of date listed to be independently verified.

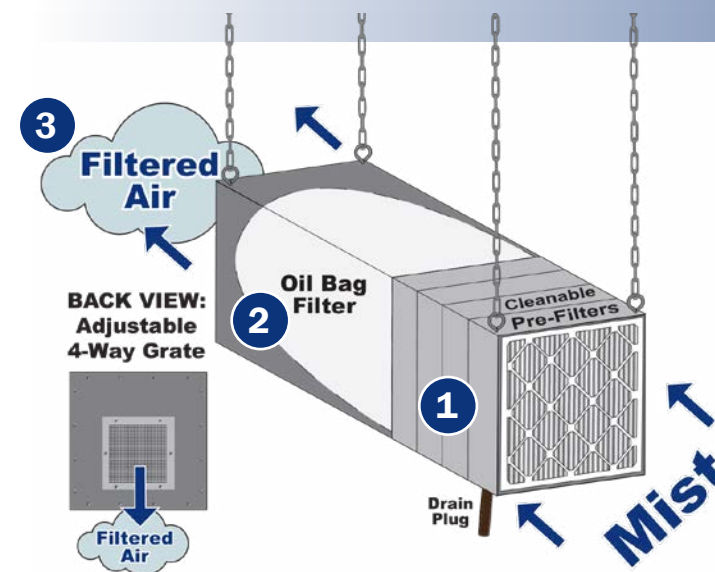
How do mist collection systems work?



Primary Control Mist Collectors

- 1 Pre-filter**
Mist enters mist pre-filter. Depending on the application, collected oil, coolant or water drains back into the machinery to be reused.
- 2 Carbon Pre-filter**
Air is filtered through a carbon pre-filter where large particulates are captured.
- 3 Main Filter**
Air is purified by passing through a final filter. This final stage will capture fine particulates. Filter choices include:
 - ASHRAE Filter (up to 95% efficiency on particles down to 0.5 microns)
 - HEPA Filter (up to 99.97% efficiency on particles down to 0.3 microns)
 - ULPA Filter (up to 99.9995% efficiency on particles down to 0.12 microns)
- 4 Filtered Air**
Filtered air is discharged back into work area.

Secondary Control Mist Collectors



- 1 4 Cleanable Mesh Pre-filters**
Mist enters the system and is filtered through a set of 4 cleanable mesh pre-filters.
- 2 Oil Bag Filter**
Any remaining oil and fine particulates are then filtered out of the air with the oil bag filter and drained into the drain plug to allow collection of oil for repurpose.
- 3 Filtered Air**
Filtered Air is released back into the workspace through an adjustable four-way grate.

Primary Control Mist Collectors



Model 200
SS-200-MIST



Model 300
SS-300-MIST



Model 400/450
SS-400-MIST/SS-450-MIST

Secondary Control Mist Collectors



Model 2000
SS-2000-MIST



Key Features

- Washable mist pre-filter
- Reliable, low maintenance system
- Quiet operation
- Low power consumption
- Small footprint
- Long filter life
- Portable and lightweight (Models 200 & 300 only)
- Simple, quick, "no tool" filter change
- Main filter media made of all flame retardant materials

Applications

- CNC machines oil mist
- Metal processing coolants
- Synthetic fiber processing oils
- Parts washer exhaust



Key Features

- Washable mist filter
- Reliable, low maintenance system
- Quiet operation
- Sturdy construction
- Long filter life
- Simple, quick, "no tool" filter change
- Oil drain plug to collect oil for repurposing
- Four way adjustable grate air exit pathway
- Main filter media made of all flame retardant materials

Applications

- Ambient air mist collection
- Open CNC lathes
- Waterjet machines



Technical Specifications Comparison Chart

| | SS-200-MIST | SS-300-MIST | SS-400-MIST | SS-450-MIST | SS-2000-MIST |
|------------------------------------|--|--|--|--|---|
| Included | • Mounting Brackets | • Mounting Brackets • Variable Speed Controller (115V only) • On/Off Toggle Switch (220 V only) | • Mounting Brackets • Variable Speed Controller (115V only) • On/Off Toggle Switch (220 V only) | • Mounting Brackets • Variable Speed Controller (115V only) • On/Off Toggle Switch (220 V only) | |
| Optional | • Variable Speed Controller (115V only) • Hour Counter | • Hour Counter • Magnehelic Gauge • Mist Stand • Remote Control Box | • Hour Counter • Magnehelic Gauge • Mist Stand • Remote Control Box | • Hour Counter • Magnehelic Gauge • Mist Stand • Remote Control Box | • Mist Stand • Side Exhaust |
| Base Dimensions L x W x H | 10.5" x 9" x 11" <i>includes brackets</i> | 15.5" x 13" x 21.25" <i>includes brackets</i> | 22.5" x 20" x 25.25" <i>length includes control box</i> | 22.5" x 20" x 25.25" <i>length includes control box</i> | 45" x 24" x 24" |
| Approximate Air Volume | up to 100 CFM <i>(Varies with filter media)</i> | 350 CFM High 50 CFM Low | 700 CFM High 50 CFM Low | 950 CFM High 50 CFM Low | 2,000 CFM High |
| Inlet | 8" X 8" | 5" diameter | 4", 5", 6", 10" | 4", 5", 6", 10" | 23.66" x 23.375" |
| Weight (approximately) | 15 lbs <i>(depends on filter media)</i> | 55-60 lbs <i>(depends on filter media)</i> | 50-100 lbs <i>(depends on filter media)</i> | 62-112 lbs <i>(depends on filter media)</i> | 124 lbs |
| Cabinet Material | 16 ga. carbon steel with polyester powder coating | 16 ga. carbon steel with polyester powder coating | 16 ga. carbon steel | 16 ga. carbon steel | 16 ga. carbon steel with polyester powder coating |
| Sound Level (approximately) | 55 dba at 3' | 66 dba at 3' | 60 dba at 3' | 72 dba at 3' | 70 dba at 6' |
| Electrical A = amps | 115/1/60; 0.3 A 220/1/50; 0.2 A 8' grounded power cord with NEMA 5-15 P | 115/1/60; 2 A 220/1/50; 0.75 A 8' grounded power cord with NEMA 5-15 P | 115/1/60; 2.5A 220/1/50; 1.5 A 8' grounded power cord with NEMA 5-15 P | 115/1/60; 10.7 A 220/1/50; 5.35 A 8' grounded power cord with NEMA 5-15 P | 208-230/1/60; 5.6 A 8' grounded power cord with pigtail |
| Pre-filters | Washable Mist Filter, Activated Carbon Pre-filter | Washable Mist Filter, Activated Carbon Pre-filter | Washable Mist Filter, Activated Carbon Pre-filter | Washable Mist Filter, Activated Carbon Pre-filter | (4) Cleanable Mesh Pre-filters |
| Main Filter Options | ASHRAE*, HEPA°, ULPA" | ASHRAE*, HEPA°, ULPA" | ASHRAE*, HEPA°, ULPA" | ASHRAE*, HEPA°, ULPA" | Oil Mist Bag |
| Warranty | Limited two year warranty from date of shipment on defects due to materials or workmanship | | | | |
| Patent | #5,843,197 | #5,843,197 #8,353,745 | #5,843,197 #8,353,745 | #5,843,197 #8,353,745 | |

* ASHRAE Filters - up to 95% efficiency on particles down to 0.5 microns, °HEPA Filters - up to 99.97% efficiency on particles down to 0.3 microns. "ULPA Filters - up to 99.995% efficiency on particles down to 0.12 microns.



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About Sentry Air Systems



Founded in 1983, Sentry Air Systems designs and manufactures high quality air purification systems in order to provide engineering control devices for clean air for a variety of applications. Our patented line of quiet, compact and durable air cleaners offers simple and effective solutions to control and extract harmful fumes and particulates in the workplace environment.

Our diverse line of fume extractors includes floor, benchtop, mounted, and portable units as well as solutions for mist collection, portable clean rooms, and ductless/ducted fume hoods. Our products can be utilized in various applications including but not limited to: welding, soldering, manufacturing, laboratory and pharmaceutical operations. Most products have the option of high quality filters including ULPA, HEPA, ASHRAE, Carbon, Acid Gas and other specialty blended filters. At Sentry Air, we stringently test our filter media against a variety of chemicals and use only flame retardant materials to improve safety.

Partial Client List



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|--|---|---|--|---|--|
| International Canadian National Railway Catepillar Mexico Honeywell Aerospace Mexico National Research Council, CA Siemens Canada Ottawa Fertility Centre Inc. United Nations University of Hong Kong Transport Canada Aircraft Services Universite Laval University of Alberta University of Guelph University of Oxford University of Toronto Winstron Mexico | Corporate 3M American Broadcasting Co American Airlines Avery Labs Bayer Bioderm Boeing North America Bosch Boston Scientific Corp BP Solar Cadbury Schweppes Cardinal Health Catepillar Chevron Phillips CoorsTek Dell Computers Dominion Nuclear DOW Chemical Dreyer's Dupoint | Eastman Kodak Co Emerson Process Mgmt Exxon Mobile Fastenal Company Fox Racing General Electric Gibson Goodrich Corp Heinz North America Halliburton Hewlett Packard Hitachi America Ltd Honda America Honeywell | Duke University Emory University - Med Florida State University Georgia Tech Harvard Indiana University Massachusetts Institute of Technology (MIT) Michigan State University North Carolina State University Notre Dame University NYU Medical Center State University of NY Texas A&M Pennsylvania State University Purdue University UCLA University of Oklahoma University of Texas | Government Bureau of Reclamation Hydropower Program California Department of Transportation CDC National Institute for Occupational Safety and Health City of Los Angeles City of Phoenix Environmental Protection Agency Los Alamos National Lab Miami Dade Police Department Crime Lab | NASA Johnson Space Center Secret Services State of NY Water Assessment and Mgmt The Federal Reserve Bank The Pentagon United Space Alliance US Air Force US Army US Coast Guard US DOT Research US Fish & Wildlife Services US Naval Air Warfare Center US Navy US Dept of Energy USDA |
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MADE IN THE USA

SINCE 1983