

# CLARION

by **RoboVent**<sup>®</sup>



***Powerful Filtration Solutions  
for Oil Mist Hazards  
in Manufacturing***





## ***Superior Oil Mist Solutions. Guaranteed.***

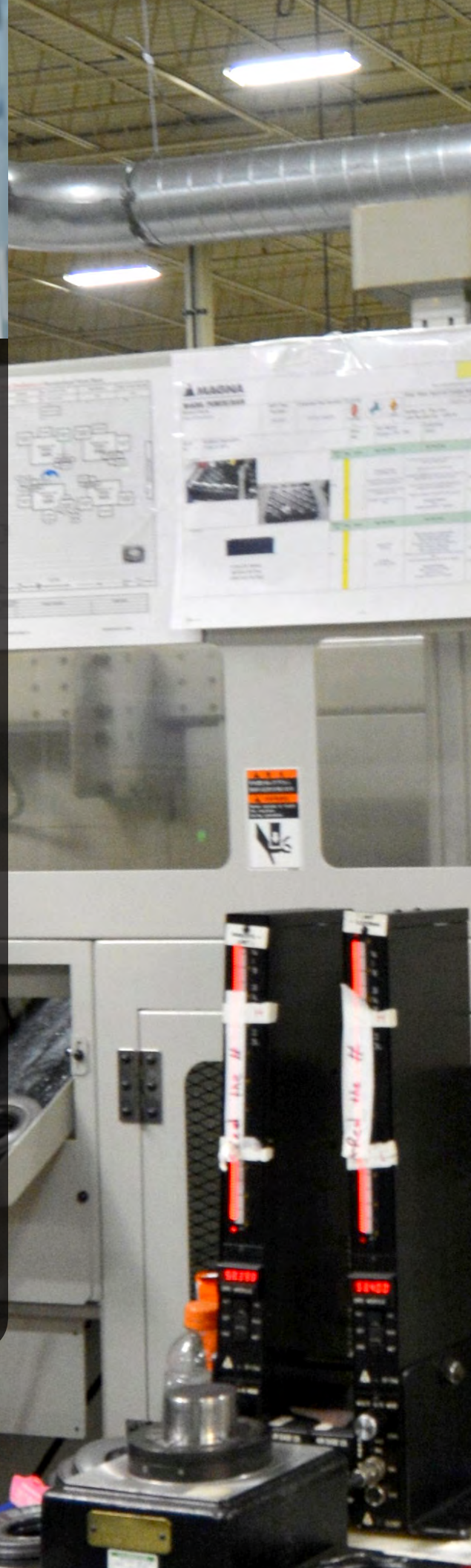
Oil mists create unique health and safety challenges for manufacturers. Nobody understands those challenges better than RoboVent.

For more than 25 years, we have been committed to delivering clean air solutions for safer, healthier manufacturing workplaces. Our clients count on us for effective, innovative collection and filtration systems to address a wide range of air quality challenges—including oil mists. Everything we do is backed by unrivaled expertise and the best guarantee in the industry, so you can have confidence in your RoboVent equipment and services.

If your manufacturing process generates oil mist, it's important to work with a supplier who fully understands the health, regulatory and technical challenges that must be addressed. We're proud to be industry leaders in oil mist collection and filtration. The RoboVent Clarion Series uses a revolutionary design that safely and efficiently removes aerosolized oil-based contaminants from the air, while minimizing maintenance time and costs.

Our success is driven by a simple principle: take care of customers by carefully listening to their needs. We know that when it comes to oil mists, one solution does not fit all. We take the time to understand your processes, characterize the oil mists produced, and configure a system to meet your needs. And we stand behind our work with the RoboVent guarantee.

**Breathe easy.**





CLARION  
by *RoboVent*  
Ph: (888) ROBOVENT





## Effective Clean Air Solutions for Oil Mist Hazards

Metalworking fluids (MWFs) are a necessary part of many manufacturing processes. But when they are aerosolized by thermal or mechanical means, the resulting mist can jeopardize worker safety and productivity. Protect your workers and keep your environment clean and inviting with the RoboVent Clarion Series for oil mist collection and filtration.

### The Hazards of Oil Mists

Uncontrolled oil mists create an unappealing and unsafe work environment. Aerosolized coolants and lubricants can spread throughout the facility, leaving a haze in the air and a layer of grease over floors and surfaces. This not only leaves a bad impression on workers and customers, but can also create potential slip-and-fall hazards in the facility.

Oil mists also have serious health concerns. Specific health impacts vary depending on the chemicals in the fluid and the size of the particles generated by the manufacturing process. Some mists may contain chemicals that irritate the skin, eyes, nose, throat or lungs. Thermal processes can create sub-micron aerosolized particles that are easily breathed in by workers. Depending on the chemistry of the fluid and the level of exposure, workers exposed to oil mists may develop sore throats, nosebleeds, coughing and wheezing, shortness of breath and other cold- or flu-like symptoms. Prolonged exposure has been linked to asthma, chronic bronchitis, chronically impaired lung function, hypersensitivity pneumonitis (HP), fibrosis of the lung and cancer. Workers may also be exposed to other disease-causing pathogens if MWF is contaminated by microorganisms.

It's important to protect workers from the effects of oil mist exposure. Appropriate collection and filtration can reduce the potential health risks and increase worker satisfaction and productivity.



### Meeting Regulations for Oil Mist Control

Currently, two OSHA air contaminant permissible exposure limits apply to metalworking fluids:

- **For mineral oil mists:** 5 mg/m<sup>3</sup> for an 8-hour time weighted average (TWA)
- **For all other metalworking fluids:** 15 mg/m<sup>3</sup> (8-hour TWA)

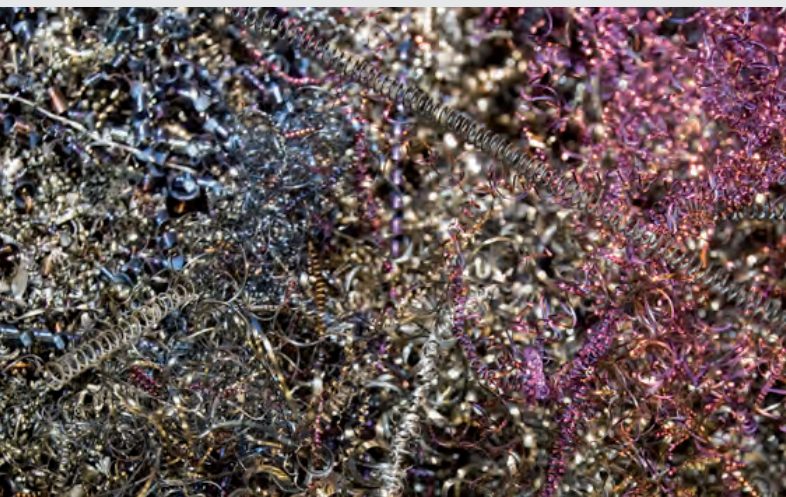
There are also additional recommended exposure limits:

- The National Institute for Occupational Safety and Health (NIOSH) recommends an exposure limit of 0.4 mg/m<sup>3</sup> for thoracic particulate mass as a 10-hour TWA.
- The American Conference of Governmental Hygienists (ACGIH) threshold limit value for mineral oils is 5 mg/m<sup>3</sup> for an 8-hour TWA and 10 mg/m<sup>3</sup> for a 15-minute short-term exposure limit.
- The OSHA Metalworking Fluids Standards Advisory Committee recommends an 8-hour TWA exposure limit of 0.4 mg/m<sup>3</sup> thoracic particulate or 0.5 mg/m<sup>3</sup> total particulate..

### Types of Metalworking Fluids

Oil mist characteristics, and the resulting health risks and filtration challenges, depend heavily on the type of MWF used as well as the additives present.

- **Straight Oil:** Straight oils can be mineral (petroleum) or vegetable oils, and are generally used for lubrication rather than cooling.
- **Soluble Oil:** Soluble oil is composed of 30%-85% refined petroleum-based oil along with emulsifiers and other additives. Soluble oils can be used for both lubrication and cooling, but can result in more smoke and residues.
- **Semisynthetic:** These fluids contain 5%-30% petroleum-based oil along with a complex emulsifier package. They provide good lubrication and heat reduction, and are cleaner than soluble oils.
- **Synthetic:** Synthetics are composed of detergent-like compounds rather than petroleum. They are generally the cleanest option and offer good heat reduction.



## Application Types and Characteristics

A wide variety of manufacturing processes create oil mists—but not all oil mists are the same. Depending on the chemistry involved and the process you are using, the characteristics of the mist (e.g. particle size, concentration, “stickiness”) can vary widely. These characteristics have important implications for the type of filters needed, air flow requirements, and other aspects of system configuration. Our engineers can help you analyze your processes and the characteristics of your oil mist and recommend the right system and configuration for your application.

<b>Group 1</b> <i>Average Use</i>	<b>Group 2</b> <i>Heavy Particulate</i>	<b>Group 3</b> <i>High Concentration</i>	<b>Group 4</b> <i>Hot &amp; Sticky</i>	<b>Group 5</b> <i>Fine Mist</i>
<b>Applications:</b> <ul style="list-style-type: none"> <li>• Turning</li> <li>• Drilling</li> <li>• Milling</li> <li>• Cutting</li> </ul>	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Grinding</li> <li>• Honing</li> </ul>	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Cold Rolling</li> <li>• Cold Heading</li> <li>• Pressing</li> </ul>	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Die Cast Aluminum</li> <li>• Deep Drawing</li> </ul>	<b>Applications:</b> <ul style="list-style-type: none"> <li>• Synthetic Welding</li> <li>• Heat Treat</li> <li>• EDM</li> </ul>
<b>Machines:</b> <ul style="list-style-type: none"> <li>• Cutting Tools</li> <li>• Screw Machines</li> <li>• Lathes</li> <li>• Drilling</li> </ul>	<b>Machines:</b> <ul style="list-style-type: none"> <li>• Centerless Grinders</li> <li>• Vertical Grinders</li> <li>• Cylindrical Grinders</li> </ul>	<b>Machines:</b> <ul style="list-style-type: none"> <li>• Roll Forming</li> <li>• Roll Forming with ERW</li> <li>• Stamping</li> <li>• Cold Headers</li> </ul>	<b>Machines:</b> <ul style="list-style-type: none"> <li>• Die Casting Machines</li> <li>• Deep Draw Tools</li> <li>• Metal Spinning</li> </ul>	<b>Machines:</b> <ul style="list-style-type: none"> <li>• Heat Treating / Quenching</li> <li>• Plastic Injection Molding</li> </ul>
<b>Characteristics:</b> <ul style="list-style-type: none"> <li>• Slow Rotating/Low Pressure Coolant</li> <li>• Particle Size: 10 - 20 microns</li> <li>• Concentration: Less than 10 mg/m<sup>3</sup></li> <li>• Processes and machines with high RPM, high pressure coolant (up to 800 psi), or where heat is present, will generate higher concentrations and smaller particle sizes than noted above.</li> </ul>	<b>Characteristics:</b> <ul style="list-style-type: none"> <li>• Creates significant particulate that will entrain in coolant mist.</li> <li>• Abrasive material to remove metal</li> <li>• Particle Size: 0.5 - 10 microns</li> <li>• Concentration: +30 mg/m<sup>3</sup></li> </ul>	<b>Characteristics:</b> <ul style="list-style-type: none"> <li>• Heat is always generated</li> <li>• Fine to large mist and particulate</li> <li>• High concentrations</li> <li>• Heat creates tacky or sticky particulate</li> <li>• Particle Size: 0.1 - 20 microns</li> <li>• Concentration: +30 mg/m<sup>3</sup></li> </ul>	<b>Characteristics:</b> <ul style="list-style-type: none"> <li>• Coolants contain waxes and soaps as release agents</li> <li>• Heat makes waxes and soaps very sticky and blinds filter media</li> <li>• Must use pre-filters</li> <li>• Particle Size: 0.5 - 50 micron</li> <li>• Concentration: 15-50 mg/m<sup>3</sup></li> </ul>	<b>Characteristics:</b> <ul style="list-style-type: none"> <li>• Higher material density and volume</li> <li>• Smaller particulate in mist/fume</li> <li>• May require a mist pulsing system</li> <li>• Carry very little fluid</li> <li>• Particle Size: 0.5 - 2 microns</li> <li>• Concentration: 2 - 20 mg/m<sup>3</sup></li> </ul>

## Clarion® by RoboVent

### A Breakthrough in Oil Mist Collection Technology

The RoboVent Clarion Series is a revolutionary design in industrial air-cleaning equipment that efficiently separates solid particulate in oil and water in the most demanding manufacturing environments.

Traditional oil-mist collectors rely on dated technologies—such as centrifugal, pocket filters, individual cartridge or panel filters, electrostatic precipitators and others—with limited success. We believed there was a better way, so we investigated the entire process in order to redesign the way oil mist is collected.

The result is the RoboVent Clarion Series.

- Robust Construction
- Superior Filter Technology
- Exceptional Performance
- Guaranteed Satisfaction



### Integrated Controls

The CFX Source Capture Clarion unit can be very simply controlled by connecting to the dedicated terminal or interlock on the CNC machine. Upgrades to an independent motor starter and disconnect, as well as our proprietary eTell Intelligent Controls, are available.

### eDrive™ Automatic VFD (option)

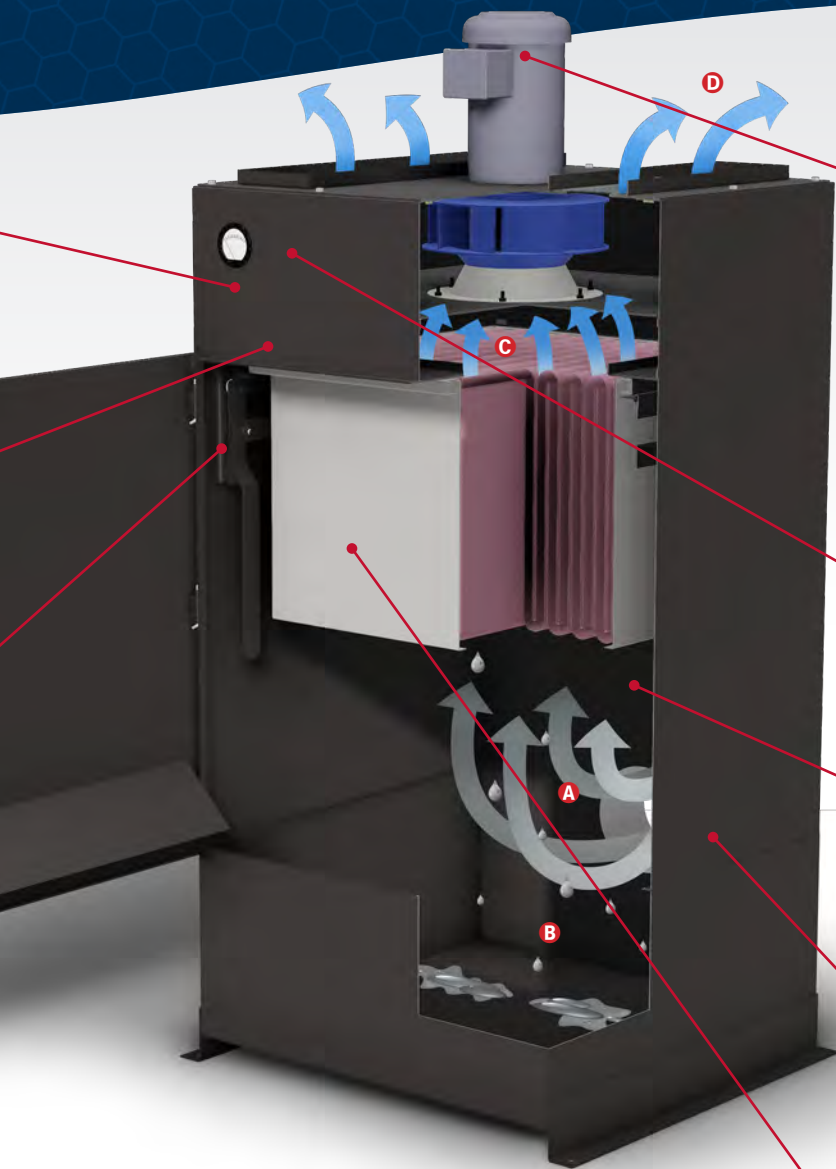
The eDrive constantly monitors airflow, and automatically adjusts the motor RPM to compensate for filter loading. Energy peaks and valleys are evened out, cutting energy usage by approximately 40% and increasing filter life by as much as 30%. See page 11 for details.

### Snap-Lock Filter Clamp

The Clarion double-rail clamping mechanism ensures an airtight seal for every filter. The gusseted support structure is welded to the 3/16-inch reinforced tube sheet and provides over 200 pounds of compression force on the gasket. With this system, filter change-outs are fast and easy, require no tools and can be performed from outside the filter cabinet.







#### **Clarion Air Filtration Process**

Air enters the bottom section of the collector **A** and larger droplets **B** fall out before entering the filter. The air is then pulled up through the packed-bed media filter **C**. The packed-bed media filter separates the remaining oil from the air and clean air is returned to the plant through the integrated blower and motor **D**. RoboVent's all-in-one configuration coupled with the proprietary packed-bed filter media makes oil mist filtration easy!

#### **All-In-One Motor/Blower Combination**

Clarion oil mist collectors are truly all-in-one. Much more than just the sum of all the individual components, these units are a seamless integration of all the components needed, bringing together what would typically be so complex into one incredibly simple package. The energy-efficient motor is directly coupled to the airfoil blower and prewired to the onboard controls. The unit is completely assembled and powered up, and then all operating systems are put through their paces before the Clarion oil mist collector is ready to leave the factory.

#### **SafeSensor™ Particulate Monitoring (option)**

SafeSensor is an advanced particulate-monitoring device that can detect leaks that make it past the filters. If one should occur, SafeSensor will shut the equipment down and trigger an alarm.

#### **Supprex200™ Fire Suppression System (option)**

This is a dual-stage system activated by smoke or heat. If smoke is detected, a fire damper closes, stopping all airflow and oxygen supply. If heat is detected, FM-200 gas is instantly deployed, suppressing the fire.

#### **Rugged Cabinet Design**

Clarion oil mist collectors feature a rugged modular cabinet design that aligns with our signature protocol. The cabinet is fully welded 14-gauge steel with heavy-duty components. The entire cabinet and all structural components are backed by the 15-year warranty that is RoboVent's assurance of quality.

#### **Single Packed Bed Media Filter**

RoboVent's packed-bed media filter design simplifies the filter change-out process, cutting maintenance costs. The filters come in three different depths and two different efficiency ratings. The Clarion packed-bed media filter range ensures that you will receive the right filter for your application.



#### **Helpful Hint**

Ask us how our packed-bed filters can reduce your filter replacement and maintenance costs.

## **RoboVent Clarion® Ambient Systems**

### **Clarion® Vortex System**

Made especially for oil mist applications, the Clarion Vortex System is based on a proprietary design that creates a circulating airflow to effectively capture and filter oily particles in a plant. Cleaner air is then re-introduced to the plant in a seamless process. The system utilizes a unique mechanism consisting of eight to 12 nozzles that can be adjusted directionally to maximize the efficiency at which the air is cleaned.

### **Is The Clarion Vortex System right for you?**

There are many benefits to installing a vortex system in your facility:

- It allows for the air to be filtered and cleaned in situations where source capture of oil mist is not possible or feasible.
- It does not interfere with overhead cranes or other obstructions that cause trouble for the ventilation systems.
- No ductwork is required, which lowers installation costs and improves sight lines and visual appeal.
- It reduces collector noise levels by decreasing static pressure.

### **Typical Clarion Vortex System:**

The system is engineered to create a plant-wide environmental vortex that turns the air at a consistent and steady rate. The design of our Vortex system is especially suited to the capture of dirty air in the most challenging places.

### **Integrated Controls**

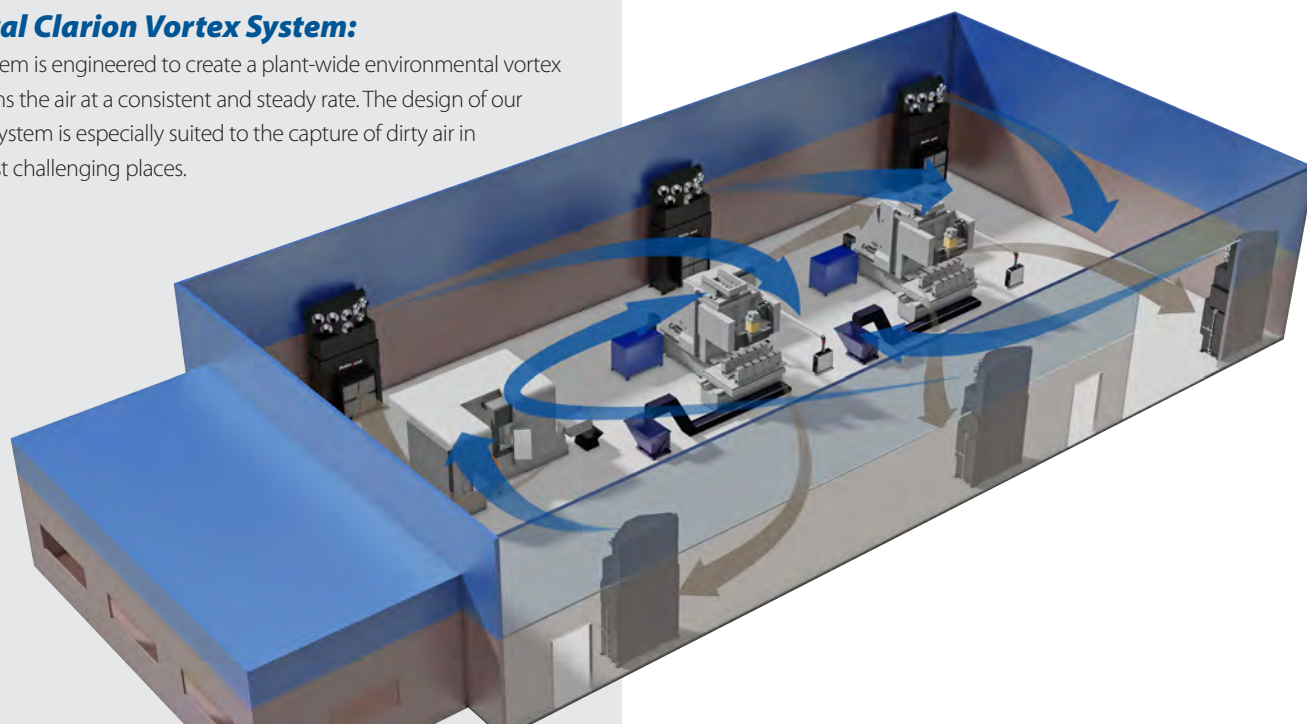
All units come complete with a built-in motor starter, disconnect and minihelic gauge. Upgrades to our proprietary eTell Intelligent Controls are available. All control panels are built in our UL Certified panel shop in Sterling Heights, Michigan. See page 12 for details.

### **Clarion mWrap™ Cartridge Filters**

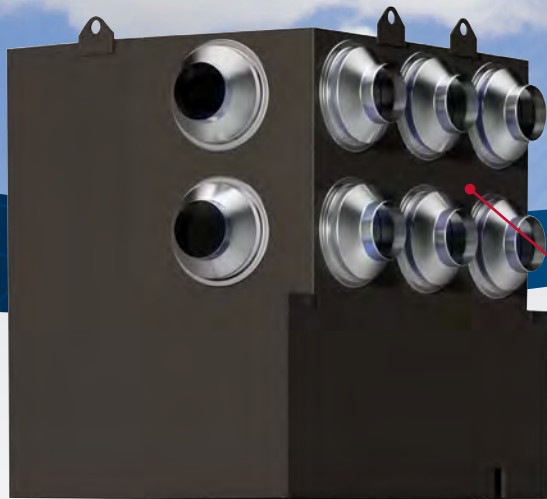
RoboVent's Clarion series Vortex collectors use square flange cartridge filters designed specifically for oil mist. Our specially designed mWrap filters are built to last using RMO Technology and proprietary filter media.

### **Rugged Cabinet Design**

Clarion oil mist collectors feature a rugged modular cabinet design that aligns with our signature protocol. The fully welded 10-gauge steel cabinet has a 3/16-inch (4.76 mm) tube sheet and 1/4-inch (6.35 mm) thick steel for the base. The entire cabinet and all structural components are backed by the 15-year warranty that is RoboVent's assurance of quality.







### **Vortex Return Air Nozzles and Integrated Silencer Plenum**

The Clarion Vortex series oil mist collectors come equipped with an integrated silencer and return air nozzles. This eliminates the need for return air ductwork and cuts down installation time. Clarion Vortex return air nozzles can be adjusted to create the airflow patterns that will work best in your facility. The integrated silencer ensures that your Clarion oil mist collector is running at a reasonable sound level.



### **Supprex200™ Fire Suppression System** (option)

This is a dual-stage system activated by smoke or heat. If smoke is detected, a fire damper closes, stopping all airflow and oxygen supply. If heat is detected, FM-200 gas is instantly deployed, suppressing the fire.

### **eDrive™ Automatic VFD** (option)

The eDrive constantly monitors airflow and automatically adjusts the motor RPM to compensate for filter loading. Energy peaks and valleys are evened out, cutting energy usage by approximately 40% and increasing filter life by as much as 30%. See page 11 for details.

### **Snap-Lock Filter Clamp**

The Clarion double-rail clamping mechanism ensures an airtight seal for every filter. The gusseted support structure is welded to the 3/16-inch (4.76 mm) reinforced tube sheet and provides over 200 pounds (91 kg) of compression force on the gasket. With this system, filter change-outs are fast and easy, require no tools and can be performed from outside the filter cabinet.

### **Vortex Intake Plenum**

Clarion Vortex series oil mist collectors are equipped with an integrated intake plenum. This Intake plenum spreads the air entering the collector to maximize filter life and removes any need for intake ductwork. Combined with the Vortex Return Air Nozzles, the Vortex Intake Plenum creates a solution for ductless full-plant ambient oil mist concerns.



#### **Helpful Hint**

RoboVent Clarion Vortex assemblies in **60 minutes** on-site.\*

\* Collector Assembly only. Does not include time for ducting, electrical connections, etc.

## RoboVent Clarion Filters

No one knows filters better than RoboVent. Our packed-bed and cartridge filters have been specially engineered for oil mist applications to provide you with the very best filtration protection for your plant and employees. We combine superior filter media and engineering innovation to create efficient, durable filters that stand up to the most demanding manufacturing environments.

### Packed Bed Filters

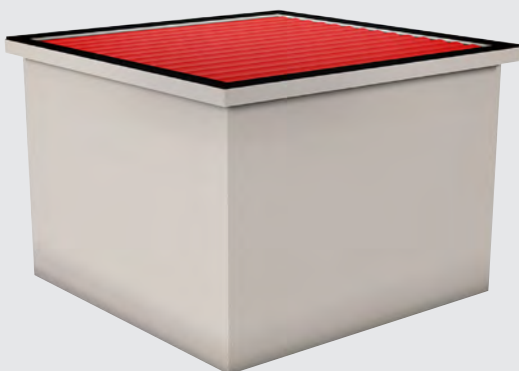
Why use two, three or four different filters when you can have one filter that does it all? Our packed-bed filter media have been especially designed to maximize filter life and efficiency for oil mist applications.

- Engineered media layers separate the oil from the air
- Folded layered filter creates drain-back and allows the separated oil to drain out of the filter
- Coalescing filters continue to work even when fully saturated, extending the useful life of the filter and reducing maintenance and lifecycle costs

#### Filter Specifications

Square filter with a range of depth and media options:

- Depths for light, medium and heavy applications
- Medium-efficiency and high-efficiency media options available



#### Helpful Hint

Replacement filters can be purchased through the RoboVent ClientCare program—or let us replace them for you!

### Vortex Series mWrap Filters

Our innovative Vortex Series mWrap cartridge filters have a proven track record for high efficiency filtration of oil-laden particulate in a variety of manufacturing processes. Endurex™ D12 RMO media and a proprietary pre-filter layer combine to make our filters more durable, effective and efficient than other alternatives and provide extended filter life.

- Specially formulated media with resin impregnated fibers for extreme durability against liquids and oils
- Proprietary pre-filter layer engineered for efficient drain-back and separation of the oil droplets from the air stream
- RMO technology keeps filter pleats at optimal spacing and the integral support ribs ensure that pleats do not collapse, maximizing filter life and durability

#### Filter Specifications

- Square flange cartridge filter
- Filtration efficiency down to 0.15 microns
- 210 °F / 99 °C max operating temperature
- Square flange for easy filter replacement







## eDrive™ Automatic VFD

To optimize oil mist collection, you need to maintain the right airflow for the character of your mist. With the RoboVent eDrive, your oil mist collector's airflow is monitored and the motor's RPM is automatically adjusted to compensate for filter loading. That means energy can be conserved early in the lifecycle, and optimal airflow is maintained as the filter becomes saturated.

Benefits of the RoboVent eDrive include:

- Less stress on filter media, which leads to longer filter life
- Decrease in energy usage by 20% to 40%
- Improved equipment performance
- Decreased filter and maintenance costs

Using the RoboVent eDrive with your oil mist collector will compress and straighten energy peaks and valleys, cutting energy usage by approximately 40% and increasing filter life by as much as 30%.

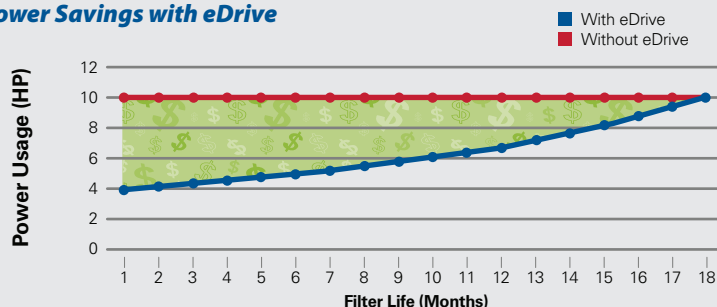
### The RoboVent eDrive Saves You Money by Decreasing Energy Use and Extending Filter Life

In the example on below, this 10 HP unit would be using 7.457 KWs per hour of operation. This example shows that you would save 41% over the 18 month period. For filters in this example you have increased the filter life by 4 months or 29% Filter Life Savings.

**Helpful Hint**

ROI on the eDrive varies from 8 to 14 months depending on energy costs.

#### Power Savings with eDrive



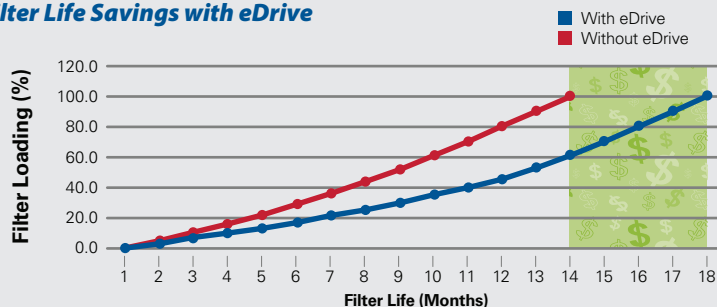
#### Results

Total KWHs without eDrive: 44,742 KWHs  
 Total KWHs with eDrive: 26,396 KWHs  
**Total KWH's Saved: 18,346 KWHs**

**Power Savings with RoboVent eDrive**

**41% SAVINGS**

#### Filter Life Savings with eDrive



#### Results

Filter Life without eDrive: 14 Months  
 Filter Life with eDrive: 18 Months  
**Filter Life Saved: 4 Months**

**Filter Life Savings with RoboVent eDrive**

**29% SAVINGS**

## eTell™ Intelligent Controls

### Forget about your air filtration equipment.

With patent-pending eTell™ Intelligent Controls from RoboVent, your dust collectors will tell you what they need and when they need it. It's not about preventative maintenance—it's about predictive maintenance.

eTell eliminates costly and time-consuming maintenance routines and targets your efforts where they are truly needed. Just install the cloud-based software once, and let it tell you what needs to be done each month, or in real time. It will even tell you how to perform maintenance activities with easy-to follow video instructions delivered right when you need them. eTell is the only control system that is:

- **Predictive:** eTell can predict exactly how much life is left in your filters and when maintenance tasks should be performed based on system usage patterns.
- **Cloud-based:** Our cloud-based application gives you anywhere, anytime visibility for all of your equipment from multiple facilities on a single application.
- **Smart:** eTell learns your systems and processes and makes real-time adjustments to save energy and extend filter life.

### Maintenance Scheduling

Plant managers can easily monitor system performance and plan maintenance schedules based on needs for each collector. eTell lets you track updates, alerts and maintenance tasks for every collector in one place and will generate a task list for each machine in your facility.

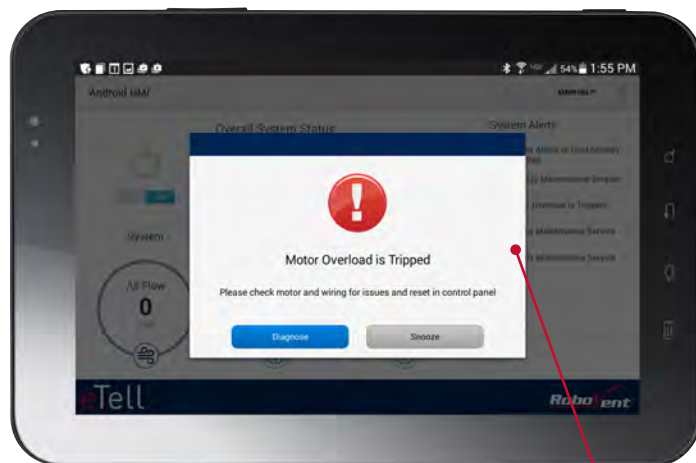


### Manage Multiple Collectors

View and manage dust collectors across all of your facilities in one easy application. eTell lets you monitor the entire facility and see the alerts and alarms for all of your machines in one place.

### Predictive Analytics

eTell uses advanced machine learning to analyze your systems and processes and make smart predictions on how future activities will impact filter life and maintenance needs. It uses this information to make simple, automatic adjustments that save energy and reduce costs. Easy-to-understand reports allow you to monitor energy use, filter life and other key metrics for each machine in your network.



### Reminders and Emergency Alerts

Get alerts and reminders right on your smartphone, tablet or computer. eTell will alert you if your dust collector needs immediate attention and send timely maintenance reminders. You can set your communication preferences so you can be reminded as often (or as seldom) as you like.



## Fire Mitigation System

### Is your oil mist collector a fire hazard?

According to the Bureau of Labor Statistics, fires and explosions account for 3% of workplace fatalities. Because processes involving oil mist are often high-heat and oil fumes are flammable, companies must have a plan in place to reduce the risks of fire and explosions.

### Supprex-200™ Technology

RoboVent's Supprex-200 Fire Suppression system is a key component of a safe working environment for oil mist collection. Supprex-200 is a clean agent fire suppressant that is discharged near the source of the fire through tubing inside the oil mist collector. This interrupts combustion the fire and extinguishes the fire at the source, eliminating the risk of the fire spreading to other areas of the collector or your facility. The Supprex-200 Fire Suppression System delivers ease of mind for everyone in your facility!



### Mitigate Fires with the RoboVent Supprex-200 Fire Suppression System

#### STEP 1: SafeSensor™

The SafeSensor **A** particulate-monitoring device detects leaks past your filters, either smoke or dust. If a leak occurs, the system shuts the equipment down and sets off an alarm **B**.

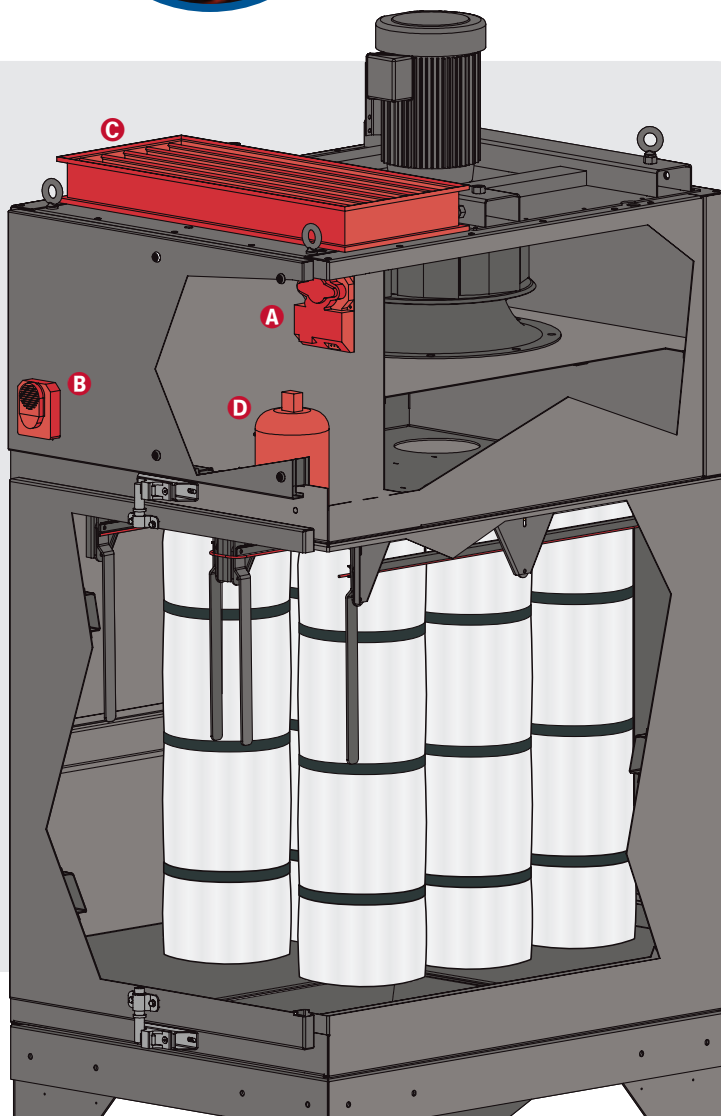
#### STEP 2: Supprex-200 Damper™

The Supprex-200 Damper System **C** closes when smoke is detected, stopping the oxygen from feeding the fire. If a fire is present, it typically is contained to one filter and the Supprex-200 does not disperse.

#### STEP 3: Supprex-200 Fire Suppression™

If and when heat is detected, FM-200 gas is released at the location of the fire. With the Supprex-200 System **D** there is little or minimal cleanup after a fire.

- A** SafeSensor Monitor
- B** SafeSensor Horn Alarm & Strobe Light
- C** Supprex-200 Damper
- D** Supprex-200 Fire Suppression



## Equipment Configurations & Options

### *The Clarion Series can be configured to meet your specific need!*

RoboVent's Clarion Series covers all solutions from source capture to ambient full-plant solutions. The smaller CFX units are suited to single machining centers while the larger CFX units are modular and can be ducted to multiple systems or very large machining centers. Ambient systems are convenient for applications with open top machines or where general ambient oil mist is a concern.



### **CFX-1000 Source Capture Unit**

RoboVent's Clarion CFX-1000 is perfect for small to medium machining stations. Built to sit right on top of the machining center, it is a simple and compact solution for capturing oil mist at the source.



### **Clarion Ambient Vortex Series**

RoboVent's Clarion Vortex series collectors are configured in multiple filter quantities and air flow ranges. Includes the Vortex intake plenum on the side of the unit and the Vortex Return Air Nozzles integrated with a silencer on top of the unit.



### **CFX-3000 Source Capture Unit**

The Clarion CFX-3000 is built for ducting to very large machining systems, or multiple systems. This unit is modular and can be expanded to fit any application.



### **CFX-2000 Source Capture Unit**

Ideal for medium to large machining centers, the CFX-2000 is the big brother to the CFX-1000, with the option for deeper filters. The CFX-2000 is typically used for large stand-alone machining applications.



## Equipment Specifications

Clarion Model #	Series	Dimensions (D x W x H Excluding Motor or Options)	CFM (depending on HP)	Filter Configuration
<b>CFX-1000</b>	Source Capture	35" X 35" X 39"	500 - 800	(1) 12" deep Packed Bed Filter
<b>CFX-2000</b>	Source Capture	35" X 35" X 63"	500 - 1200	(1) 18" or 24" Packed Bed Filter
<b>CFX-3000</b>	Source Capture	63" X 33" X 94"	1200 - 2400	(2) 18" or 24" Packed Bed Filters
<b>CFX-6000</b>	Source Capture	63" X 66" X 94"	2400 - 4800	(4) 18" or 24" Packed Bed Filters
<b>CFX-9000</b>	Source Capture	63" X 99" X 94"	3600 - 7200	(6) 18" or 24" Packed Bed Filters
<b>CTS-3000-2</b>	Ambient Filtration	51" X 30" X 97"	1000 - 4000	(2) 52" Square Flange Cartridge Filters
<b>CTS-4000-3</b>	Ambient Filtration	67" X 30" X 97"	1000 - 6000	(3) 52" Square Flange Cartridge Filters
<b>CTS-5000-4</b>	Ambient Filtration	83" X 30" X 97"	1000 - 8500	(4) 52" Square Flange Cartridge Filters
<b>CTS-8000-6</b>	Ambient Filtration	67" X 49" X 97"	2000 - 12000	(6) 52" Square Flange Cartridge Filters
<b>CTS-10000-8</b>	Ambient Filtration	83" X 49" X 97"	2500 - 15000	(8) 52" Square Flange Cartridge Filters
<b>CTS-13000-10</b>	Ambient Filtration	99" X 49" X 97"	2500 - 15000	(10) 52" Square Flange Cartridge Filters

## Recommended Upgrades and Options

- Air Quality Monitoring
- AutoSaver Sensor
- eDrive Automatic VFD
- ePad Controls
- eTech Controls
- Explosion Panels\*
- HEPA After-Filter
- Noise-Reduction Packages
- Outdoor-Prep Packages
- Pre-Filters
- Service Platform with Ladder
- Sprinkler Head Port
- Supprex-200 Fire-Suppression System

\* Explosion Panels are sized according to the application and NFPA regulations.

## Service and Ongoing Support

### RoboVent 24-Hour Hotline: 888.ROBOVENT

The RoboVent 24-hour hotline is available seven days a week. We understand your requirements for production and stand ready to help at any time.

### Maintenance Contracts Available

Sophisticated air-filtration equipment represents a costly investment in your plant and the health of your employees. Proper maintenance is critical to the performance of that investment. RoboVent preventative maintenance programs provide the regularly scheduled expert maintenance needed to properly maintain your oil mist filtration systems, and greatly reduce the risk of unexpected system breakdowns and production delays.

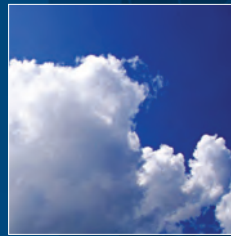


## Best Warranty in the Industry

RoboVent Clarion collectors come with the Best Warranty in the Industry;  
**15 Years on the cabinet and up to 5 Years on components.**

See Warranty Document for further details.

*Manual  
Welding Fume  
Extraction*



*Integrated  
Cooling  
Equipment*



*Robotic  
Welding Fume  
Collection*



*Maintenance  
Programs*



*Oil Mist  
Extraction*



*Full-Plant /  
Ambient Air  
Cleaning Systems*

*Dust Collection  
Systems*



*Mobile Dust  
Collectors*



*Laser & Plasma  
Cutting Fume  
Collection*

*Aftermarket  
Replacement  
Filters*



**RoboVent®**

*Improving Lives through Clean Air™*

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