

SPIRAL TUBE MIST COLLECTORS



Spiral Tube Mist Collector



18,000 CFM Spiral Tube Mist Collector at an automotive engine assembly plant

The advanced design of the **Monroe Environmental**® Spiral Tube Mist Collectors provide maximum mist and oil collection efficiency in a mechanical collector. These units have a lower lifetime cost of ownership than other filtration mist collectors because of reduced filter replacement costs. Air processed by the Monroe Spiral Tube Mist Collectors meet air quality standards for in-plant discharge as well as outside exhaust. Discharging clean, filtered air back into the work area can significantly reduce climate control costs.

Spiral Tube Mist Collector Design

The Monroe Spiral Tube Mist Collector is a two stage unit and does not require filter media for primary mist removal. The spiral tubes provide a high level of mist agglomeration and removal without using filters. Centrifugal force and impaction provide the mechanism for mist removal.

Dirty air is propelled down several spiral shaped impaction tubes and a fluid film is created. The oil drains into the collector bottom. Air changes direction 180°, then enters the second stage HEPA type filter typically rated at a minimum 95% efficiency at 0.3 micron particle size.

Ideally suited for production machining operations with water soluble, synthetic or mineral coolants.

Mist & Oil Re-Entrainment Eliminated

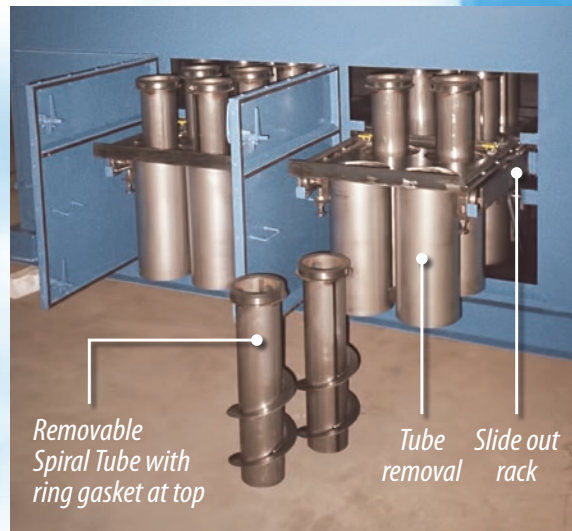
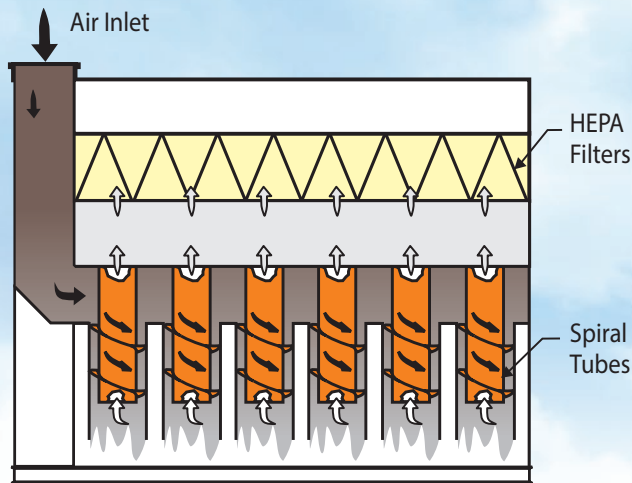
Due to the unique internal design of the Monroe mist collector, the cleaned air will not re-entrain collected pollutants after the primary stage. This improves the efficiency of the separation process and extends the life of the optional final filters.

Higher Efficiency Design

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Features

- Mechanical type, requires no filter media
- Oil, mist, smoke and vapor removal
- Efficiencies to 99.9% on 0.3 micron
- Capacities from 500 to 80,000 CFM
- Low energy requirement
- Continuous draining during operation
- Low maintenance
- Ergonomic considerations



Built for Durability

The Monroe Spiral Tube Collector design provides the following advantages and benefits.

- Stainless steel spiral tubes installed on a pull-out style drawer. No hand tools are required.
- Spiral tubes are positive gasket sealed.
- Easily removable HEPA type filters are accessible from the floor.
- All doors installed with vertical hinges for safety.
- Modular design spiral/HEPA/fan.
- Low energy requirement
- Low horsepower design for reduced operating costs.
- Mechanically fastened gasketing, no special tools or adhesives required.
- Top mounted fan assembly for compact size when required.
- 10 ga. and 7 ga. mild steel or stainless housing construction.
- Typical HEPA filter life of 4,500 hours or more, even under heavy inlet loading



Spiral tubes are easy to remove, no hand tools required.

Special Features

Large, easy to open access doors for all serviceable areas.

An AMCA rated fan on the outlet side of the collector with either a direct coupled motor or a "V" belt drive.

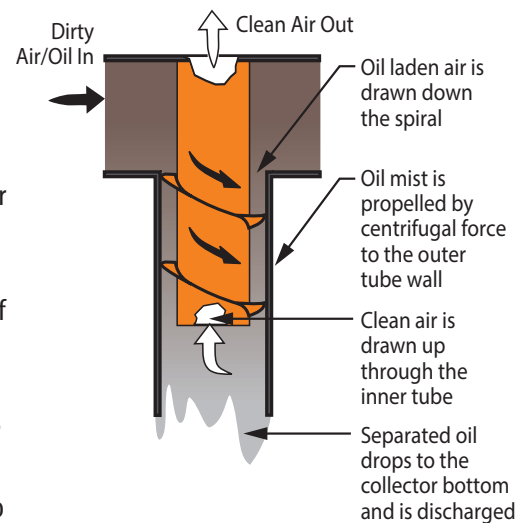
Quiet operation. Rubber isolation fan connection and sound attenuators are available if needed. Under 80 dba is typical.

Integral differential pressure gauges are available to indicate when filter maintenance is required.

Complete electrical controls are available to meet customer specific requirements.



1,000 CFM Spiral Tube Oil Mist Collector, stainless steel construction to filter mist from a washer at a food processing facility



Many Configurations Available

Monroe Spiral Tube Collectors can be configured to meet specific needs with numerous options available to provide maximum efficiency in any application.

Applications

- Wet machining
- Water based lubricants & coolants
- Parts washer exhaust
- Tool & die
- Food processing
- And many others



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