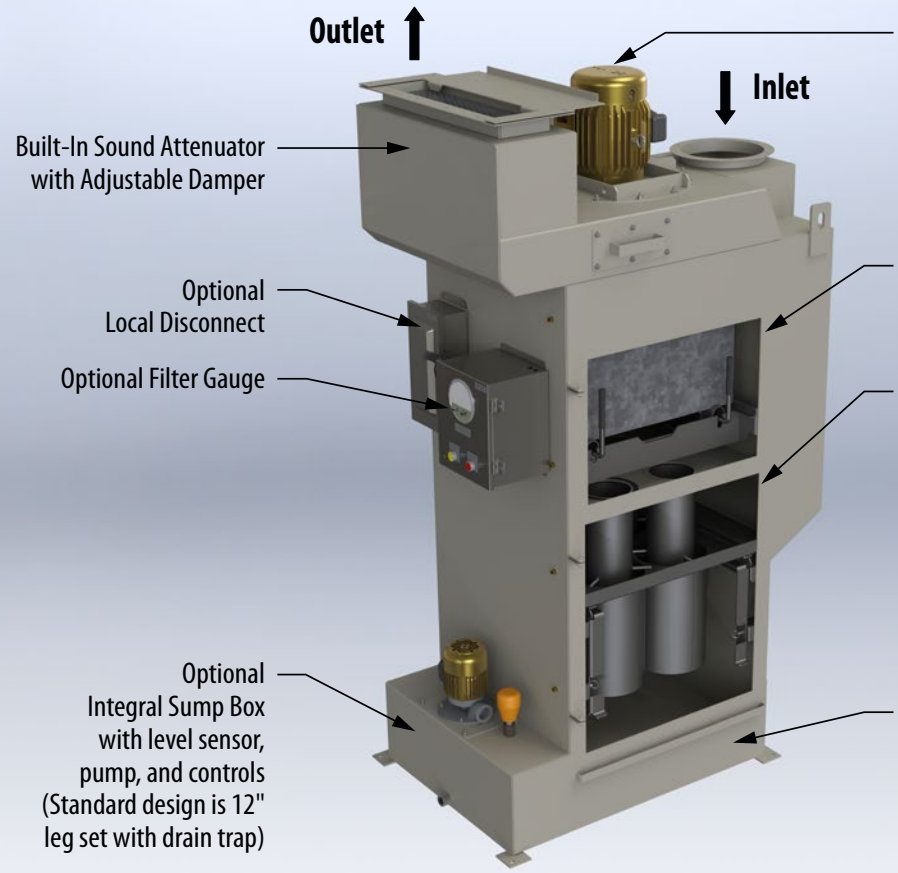
MONROE ENVIRONMENTAL
Water & Wastewater Treatment | Air Pollution Control

Monroe Compact Spiral Tube Mist Collectors



New Low-Profile, Reduced Footprint Design

The NEW Monroe Compact Spiral Tube Mist Collector from **Monroe Environmental**® – the world-class leader in mist collection technologies – is a highly improved, optimized design of the widely popular, industry leading, and operator-preferred Monroe Spiral Tube Mist Collector. These latest design improvements are the result of an extensive collaboration with today's leading machining and manufacturing experts, who demand the highest standards in collector performance, worker safety, low-maintenance operation, and space optimization.

The Compact Spiral Tube Mist Collector combines the cost saving and maintenance-reducing benefits of mechanical separation (verses consumable filters) with a low-profile, reduced-footprint design that saves floor space and minimizes integration and layout challenges in the modern production plant. The unit is designed to meet the most stringent ergonomic, service, and performance standards of 21st century production plants. The unit can be integrated into any machining operation or can stand alone to exhaust operations using water soluble, synthetic, or mineral cutting fluids.

The Compact Spiral Tube Mist Collector is a continuously draining, mechanical-type collector that has capabilities to exceed 99% efficiency, while minimizing the maintenance requirements and floor space issues of competitive mist collector designs. The unit is capable of removing airborne mist and sub-micron vapors generated by high production machining, cold forming, and a wide variety of related applications. The installation of a Monroe Compact Spiral Tube Mist Collector allows you to discharge clean, filtered air back into the work area, reducing climate control costs and improving worker safety.

Compact Spiral Tube Mist Collector

- Mechanical type, requires no filter media
- Mist, smoke and vapor removal
- Standard efficiency is 95% on 0.3 micron
- Capacities from 500 to 1,200 CFM
- Low energy requirement
- Continuous draining during operation
- Low maintenance
- Machine mounting capabilities
- Welded construction

System Design

The Monroe Compact 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 mist drains from 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.

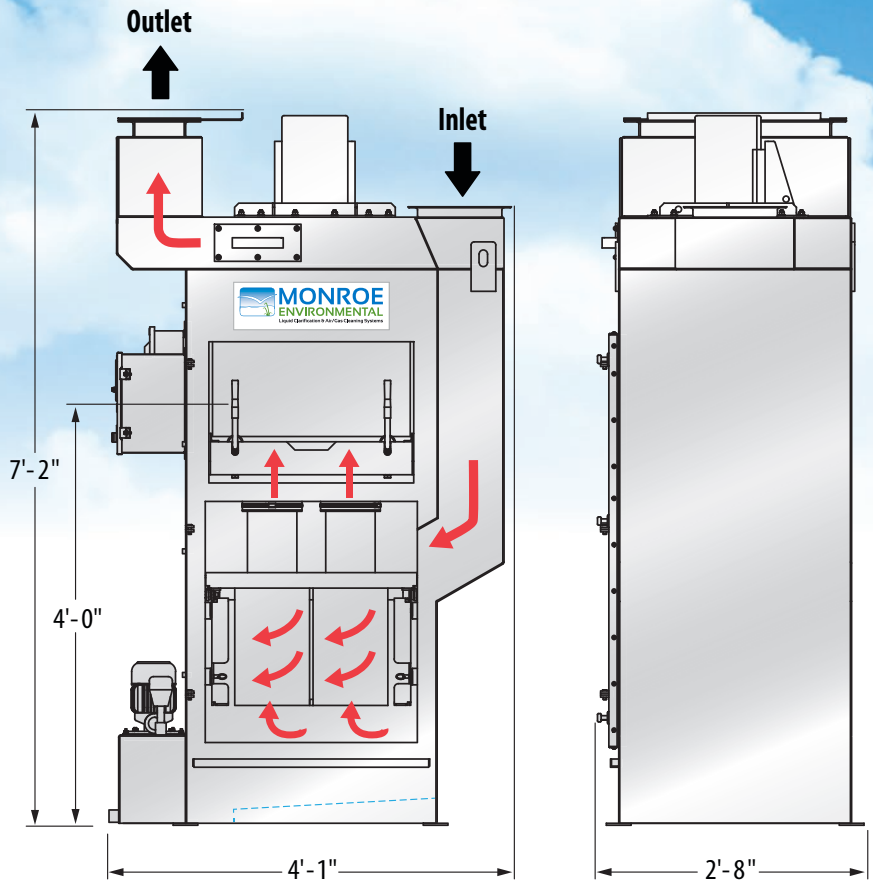
Ideally suited for production machining operations with water soluble, synthetic or mineral coolants.

Oil Re-Entrainment Eliminated

Due to the unique internal design of the 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.

HEPA Type Filters

The Monroe Compact Spiral Tube Mist Collector is available with specially constructed HEPA type fiberglass filter cartridges as the optional final filter system. These filters are normally supplied with a 95% efficiency rating at 0.3 micron. Final filters have a long service life because the majority of airstream contaminants are removed by the Spiral Tube stage. Slide-out design for easy filter removal is included.



Approximate dimensions

Built for Durability

The Monroe Compact Spiral Tube Mist 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 12 ga. mild steel or optional stainless housing construction.
- Typical HEPA type filter life of 4,500 hours or more, even under heavy inlet loading.

Applications

- Machining operations
- Metal cutting
- Metal forming
- Steel and aluminum
- Rolling mills
- Tool and die
- Parts washer exhaust
- Synthetic fiber processing
- Food processing
- Packaging systems
- Produced oils and coolants
- And many others

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