Electrostatic Precipitator (ESP) Mist Collectors

DYNACOM
Industrial Filtration
Since 1978

Dynacom Inc.
16711 Hilltop Park Place
Chagrin Falls, OH 44023

Toll Free: 800.229.7664
Phone: 440.543.1900
Fax: 440.543.9390
info@dynacomonline.com
www.dynacomonline.com

Parker
PREMIER
DISTRIBUTOR

SMOGHOG®

United Air Specialists is now part of Parker Hannifin, the same company that provides aftermarket filtration products for a wide array of industries from power generation to pigment. This combined, global business brings you a larger breadth of products backed with leading-edge technology and the most knowledgeable people in the filtration industry. With 50 years' experience in air quality management expertise to serve you, Parker Hannifin is committed to providing clean air solutions that protect your employees, improve plant performance and enable you to realize your operating goals.

The SmogHog® Advantage

SmogHog are the most recognized names for effective removal of mist, smoke and fumes from industrial processes. The SmogHog is unmatched in efficiency, effectiveness and long-term cost savings for the collection of oil smoke, coolant mist and industrial process fumes. The SmogHog Electrostatic Precipitator (ESP) mist collector series delivers superior results.

SmogHog ESP Collectors Deliver

- **Save costs, recycle thousands of gallons of valuable resources** such as cutting oils, lubricants, coolants and plasticizers
- **Helps meet OSHA air quality standards** by capturing hazardous pollutants, filtering them and then exhausting clean air
- Benefit from **operational savings** and a quieter operation with low horsepower per CFM
- Eliminate costly filter replacements and disposal with **reusable ESP collection components**
- **Lowers energy costs and reduces make-up air requirements** up to 80% by cleaning and recirculating the air
- **Improves worker safety and productivity** by providing a cleaner work space
- **Reduces maintenance costs** by eliminating smoke and mist before particles can settle on equipment and work surfaces
- **Continuous clean air circulation** with units that maintain consistent airflow at all times
- **Flexible installation options** to accommodate application requirements, including lack of floor space

Effectively Capture Contaminants

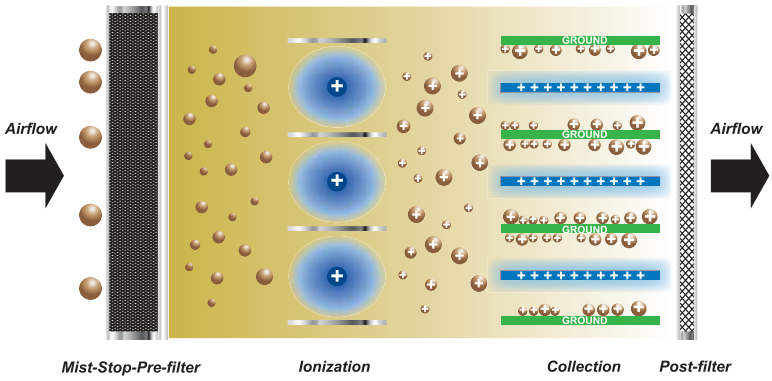
Mist	gas-suspended liquid droplets with diameters of less than 10 microns
Fumes	aerosol consisting of dispersed dry solids having particles smaller than approximately 1 micron
Smoke	an aerosol suspension of small particulate matter consisting of carbon, ash, and other materials formed by combustion or sublimation

Proven Technology and Optimum Performance

How ESP Works

SmogHog ESP systems are over 95% efficient on mist, smoke and fume removal to keep factory air clean and your processes running at peak performance. Unlike bag or box filters that remove only the largest particles, ESP electrically charges both large and microscopic contaminants, and then strips them from the air stream collecting on grounded collection plates.

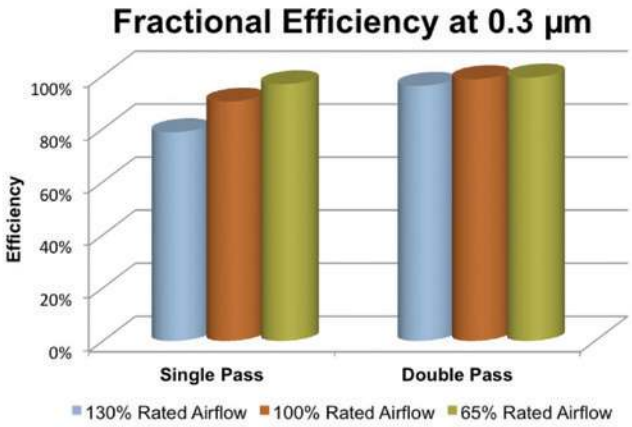
The resulting discharged air leaves virtually no oil mist, grease or hazardous particle untouched, releasing only clean air from the system to help you comply with even the strictest federal, state and local environmental standards and keep your workers safe. The ESP technology ensures constant airflow, unlike barrier filters that can plug and become ineffective. Since the ESP cells are washable, reusing the collection cells eliminates costly filter replacements and disposal which allows for a greener environment and increased operational savings.



Superior ESP Efficiency

SmogHog ESP technology offers proven performance as a superior solution for challenging industrial air pollution control applications. SmogHog ESP technology provides high levels of particle removal efficiency on submicronic particulate (less than 1 µm) which is common in smoke, fume and mist applications.

A single pass SmogHog ESP unit removes up to 95%* of 0.3 µm particles while a double pass SmogHog ESP configuration increases the overall removal efficiency to over 97%.



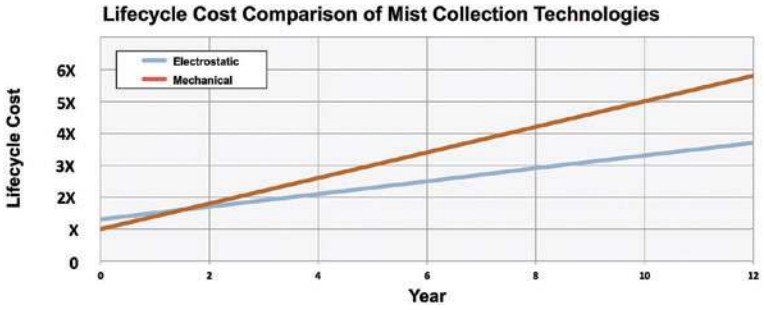
*95% efficiency has been independently verified in accordance with EN-1822-5 standards.

SmogHog Cost Analysis

When choosing the most appropriate industrial filtration solution for your application, it is essential to consider the life-cycle cost of the equipment which includes the initial equipment purchase price, ongoing maintenance, replacement filters, disposal costs, and energy consumption.

SmogHog ESP technology offers quantifiable value and operational savings when compared to other mist collection technologies. Unlike barrier filters, ESP technology has a low operational pressure loss resulting in lower blower horsepower requirements and the associated energy consumption. ESP filters are also cleanable and do not require regular replacements like media filters.

Over the life of the mist collector, SmogHog ESP technology from Parker Hannifin offers years of operational savings.



Multiple, Flexible Configurations

Parker Hannifin has a wide selection of configurations and sizes of the SmogHog ESP mist collectors for virtually any industrial process and performance requirement. Depending upon building design parameters and system configuration, units can be installed inside or outside of a facility. Optional filter modules can be added to select units to increase filtration efficiencies up to 99.99%.

Inlet Module
Designed to deliver air evenly to the SmogHog and including optional diffuser, impingement and Mist-Stop configurations.

Electrostatic (ESP) Filter Module
Configurable modules in height and depth to achieve target airflow requirements. Available in multiple passes for increased filtration efficiency.

ESP available with individual ionizer and collection cells or combined unicell arrangement

Additional module options include pre-filters, in-place cleaning and fire suppression.

After-filter Modules
Optional secondary filter modules available including HEPA and odor control filters to capture additional pollutants.

Discharge Modules
Integrated motor/ blower combinations sized for the target airflow and static pressure. Outlet plenums are also available for additional installation flexibility.

Additional Options
Additional options including remote blowers, skid mounted systems, remote status monitoring and complete control packages that integrate the SmogHog solution directly into your process.

Electrostatic (ESP) Filter Module

Mist-Stop Filter

Machine Mount Solutions

Self-contained SmogHog mist collectors mounted directly on machining centers are ideal for controlling coolant mists and smokes. Valuable floor space is saved by mounting the mist collector directly onto a machining center. The need for installing costly ducting is eliminated, and the machine tool operator has easy access to the mist collector for routine maintenance.

Machine mounted mist collectors are the most cost effective way to capture coolant smokes and mists because they capture the pollutant directly at or near the point of generation before it can migrate uncontrolled in the factory. Capturing at the machine tool saves energy costs by minimizing the amount of air required to control the pollutant. It also protects the operators from breathing in harmful smoke, mists, and fumes.

SmogHog machine mount mist collectors are available in a variety of configurations with optimized extraction velocities for most machine enclosures to meet customer needs. The MSH Series (machine mount) is available as a horizontal or a vertical model. Both the MSH Series and the SHN series of mist collectors are designed to mount directly onto machining centers to control coolant mists and smoke directly at the source for a cleaner work environment.

Machine mount
— a big impact in a small space

Source Capture Solutions

Source capture solutions involve the use of fixed hoods or extraction arms ducted directly to a dedicated electrostatic mist collection unit. Alternatively, multiple hoods can be ducted together to allow for cleaning with a central collection system.

Save energy by capturing mists, fumes and smoke at the source, minimizing the amount of air required to control the pollutant. Additionally, capturing the pollutant at the source protects the worker's breathing zone from hazardous airborne mists, smoke and fumes.

SmogHog source capture systems are available in multiple configurations to perform long-term, heavy-duty industrial air cleaning. Systems include the MSH Series, SHN Series and SG Series for dedicated machines and the PSG Series and PSH Series for central systems.

For quick and easy smoke and fume extraction at the source the PCN portable unit is ideal for situations where large hoods are impractical, smoke-producing machinery is used intermittently or an employee moves from one work station to another.

Ambient Solutions

Cleaning ambient factory air is a viable solution when capturing contaminants at the source or via a machine mount method is impractical. Parker Hannifin ambient systems offer a flexible industrial filtration solution for complex manufacturing processes. Common applications for ambient mist collector solutions include facilities with overhead cranes, process configurations which prohibit direct source capture and instances where facilities and / or processes have variable contaminant generation points.

Ambient systems work by achieving a targeted number of air changes in the containment area. The number of air changes required is based on contaminant properties, generation rates, and acceptable concentration levels.

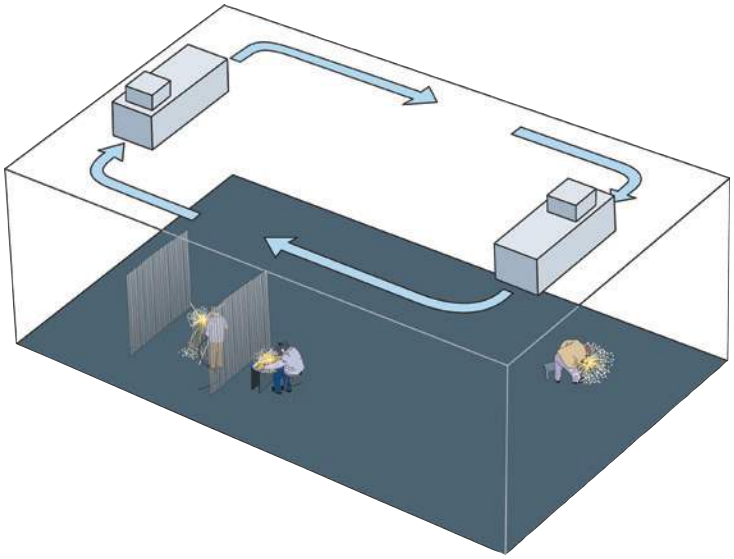
Airflow patterns are developed by strategically locating hoods or SmogHog mist collection units throughout the containment area to entrain the airborne contaminants and mix the air. The clean air exhausted from the system can be used to further develop circulation patterns to enhance contaminant capture. Both the inlet and outlet airflow directions are configurable and systems are available for wall, ceiling or rooftop installation to provide a customized solution to meet a variety of facility and process needs.

Ambient systems offer operational cost savings by recirculating clean air, avoiding exhausting conditioned air and minimizing make-up air needs.

SmogHog systems available in an ambient configuration include the SHN Series and SG Series.

SmogHog systems are arranged in a racetrack configuration.

Multiple mist collection units are used to circulate the air inside the facility from unit to unit in a circular racetrack configuration. Airborne contaminants are drawn into the units and safely contained. Clean air is recirculated back into the building for energy savings



SMOGHOG®

Providing Clean Air Solutions

Parker Hannifin is committed to providing clean air solutions that protect your employees, improve plant performance and enable you to realize your operating goals.

State-of-the-Art Labs and Advanced Filtration Research for Optimized Performance. Purpose-built labs and test facilities with the latest equipment allow our engineers and technicians to quickly and accurately assess filter capabilities and develop innovative new medias.

High Performance Filters & Specialized Equipment Solutions. With decades of experience manufacturing high performance original equipment and aftermarket filters to meet a variety of system types and configurations, we can satisfy whatever requirement is needed including customized solutions.

World-class Manufacturing Processes with a Global Footprint. We produce top quality filtration solutions through stringent manufacturing processes.

Application Expertise for Any Filtration Challenge. Our ability to design a solution to fit your application begins with engineering expertise proven by hundreds of global installations.

Industrial Applications

- Abrasive Blasting
- Carbon Black
- Cement
- Chemicals
- CNC Machining
- Coal-Fired Boilers
- Cold Heading
- Die Casting
- Food Processing
- Lime
- Metals
- Metalworking
- Pharmaceutical
- Plasma & Laser Cutting
- Plastics Processing
- Powder Paint
- Thermal Metal Spraying
- Utility
- Waste-to-Energy
- Welding
- Woodworking
- Other Applications
- Custom or OEM Applications

Germany
Otto-Hahn-Strasse 6
D-65520 Bad Camberg
Germany
T: +49-6434-94220
Email: info@uas-inc.de
www.uas-inc.de

United Kingdom
Aston Lane North
Preston Brook
Runcorn, Cheshire
United Kingdom WA7 3GA
T: +44-1925-654321
Email: uas@clarcoruk.com
www.uasuk.com

China
1002 Unit 02-04, Floor 10
Tower I, Shanghai Arch
No.523 Loushanguan Rd, Shanghai
China
T: +86-21-52768288
Email: uasinfo@uasinc-cn.com
www.uasinc-cn.com

© 2020 Parker Hannifin Corporation

DY-PH1810-001

DYNACOM
Industrial Filtration
Since 1978

Dynacom Inc.
16711 Hilltop Park Place
Chagrin Falls, OH 44023

Toll Free: 800.229.7664
Phone: 440.543.1900
Fax: 440.543.9390
info@dynacomonline.com
www.dynacomonline.com

Parker
PREMIER DISTRIBUTOR