ELECTROSTATIC MIST COLLECTORS

United Air Specialists, Inc.
a CLARCOR company

SHN/SG SERIES

Clean air. It’s what we do.
THE TIME-PROVEN ANSWER TO INDUSTRIAL FUME PROBLEMS

The most effective electrostatic precipitator (ESP) on the market today is the genuine Smog-Hog® SHN/SG Series, manufactured exclusively by United Air Specialists (UAS). No other ESP unit can match this system’s efficiency, effectiveness and long-term cost savings for the collection of oil smoke and coolant mist.

For more than three decades, UAS has invested in constant improvement of electrostatic precipitator technology. And, the Smog-Hog SHN/SG Series is made up of the most advanced ESP units available—better than electrostatic units of the past and superior to every alternative mist collection system.

APPLICATIONS

Engineered to perform long-term, heavy-duty industrial air cleaning, SHN/SG units eliminate smoke, mist and dust generated by a variety of applications—brazing, casting, flame cutting, drilling, grinding, milling, screw machining and more. Also, these systems are available in a variety of sizes and versatile configurations to fit your company’s needs.

SHN/SG units are equipped with airflow capacities ranging from 400 to 9,000 CFM. Systems can be ducted, unducted, free hanging and machine-mounted, depending on your specific application—eliminating the need to give up valuable floor space in your facility!
COMMON APPLICATIONS

- Brazing
- Casting
- Cold forming
- Flame cutting
- Forging
- Gear cutting
- Heat treating
- Induction heating
- Lathes
- Plastic and rubber forming
- Quenching
- Screw machining
- Soldering
- Threading
- Vacuum pumps
- Welding
- Wet grinding
- Wire drawing

ENSURE EMPLOYEE SAFETY WHILE MINIMIZING COSTS

SHN/SG mist collectors keep employees healthy and on the job by removing dangerous airborne contaminants that can cause respiratory problems. These powerful units eliminate dirty airborne particles before they settle on floors, land on expensive machinery or are inhaled—situations that can lead to accidents, workers’ compensation claims, OSHA compliance violations and expensive machine repairs.

These systems recirculate air into your plant and reduce exhaust air make-up requirements up to 80%!

Investing in the SHN/SG Series can also improve your company’s profitability by reducing energy and housekeeping costs. These systems recirculate air into your plant and reduce exhaust air make-up requirements up to 80%! Thousands of gallons of valuable resources such as cutting oils, lubricants, coolants and plasticizers are recycled each year by UAS’ SHN/SG Series customers.

CONTINUOUS CLEANING

SHN/SG units can be programmed to run continuously during and between shifts. This feature reduces the energy resources needed to power the system every day, as well as decreases the potential for contaminants to accumulate while the SHN/SG system is in the “off” mode.
PRODUCT ENHANCEMENTS REDUCE COSTS
UAS’ most recent improvement to the SHN/SG product line is the revolutionary Mist-Stop filter. Composed of heavy-duty aluminum mesh and a high-efficiency coalescing pad, the new filter dramatically reduces the amount of mist and smoke particles that pass through the Ionizer and ESP Collection Component. So, less time and money is spent servicing and cleaning a unit, because intervals between cleanings increase up to two to three times longer!

HOW ESP WORKS
SHN/SG mist collectors are configured using ESP technology—a proven concept used by UAS engineers for 40 years. By electronically charging both large and microscopic contaminants, these systems capture impurities like a magnet in collection cells. At the same time, recyclable coolants and oil are collected for reuse, and safe, breathable air is discharged back into the workplace.

Optional Mist-Stop Filter or Optional Oil Impingement
Offers additional filtration and reduces load to ESP section.

Optional Mist-Stop Filter

ESP Power Pack
Solid-state electronic circuitry ensures continual, high-efficiency operation.

Motor/Blower
Provides air movement, and is adjustable to accommodate airflow requirement.

Dirty Air

Clean Air

Expanded SHN Cabinet

Optional Inlet Impingement Plenum
Houses Mist-Stop Filter or oil impingement.

Aluminum Mesh Filter
Catches large dust particles.

Ionizer
Electronically charges smoke and mist particles.

ESP Collection Component
Collects electronically charged smoke and mist particles.
NOBODY COMPARES TO UAS’ SHN/SG SERIES

✓ Reusable ESP collection components eliminate costly filter replacements and disposal.

✓ Flexible installation options accommodate many application requirements including lack of floor space.

✓ Low energy consumptions can help increase company profitability.

✓ Contaminants drain off ESP collection component, reducing the frequency of unit maintenance and cleaning.

✓ Units maintain consistent airflow at all times for continuous clean air circulation.

✓ Low sound levels eliminate the need for expensive silencers.

COMPETITIVE UNITS

CARTRIDGE COLLECTORS
- Low-efficiency cartridges clog with contaminants, reducing airflow.
- Smoke applications require frequent and expensive replacement of HEPA filters.
- Large unit size takes up valuable floor space.
- Expensive, non-standard size filter replacement.
- High energy consumption.

BAG FILTER UNITS
- Standard HVAC-grade ASHRAE-rated pocket bag filters have low efficiency on mist and smoke particles.
- Bags load with oil, clog and drain poorly.
- Frequent and expensive filter replacement.
- Potential for solid hazardous waste disposal costs.

CENTRIFUGAL MIST COLLECTORS
- Large droplets cause unit imbalance and frequent maintenance.
- Smoke particles too small for centrifuge are returned to work environment.
- Vibration transmitted to machine tool can cause loss of precision and quality problems.

MEDIA MIST COLLECTORS
- Low-efficiency cartridges quickly fill up and minimize airflow.
- High energy consumption.
- Expensive filter replacement.
- Possible expenses needed for solid waste disposal.
SHN OR SG?
All SHN and SG units use the same electrostatic precipitator technology to clean industrial mist and oil smoke. Both systems are available in a variety of sizes and configurations depending upon your company’s application. However, there are a few differences to consider when choosing the right ESP mist collector.

SHN systems collect oil smoke and mist particles, and handle airflows from 400 to 5,200 CFM. Comprised of an ionizer section and an ESP collection cell, SHN units can accommodate additional filtration options for heavy-duty applications. These filters, as well as the ESP components, conveniently slide in and out of the system for easy manual cleaning. SHN units can be ducted, unducted, machine mounted and hung.

SG units collect high-volume oil smoke and coolant emissions, and are equipped for airflow capacities ranging from 2,200 to 9,000 CFM. Instead of using two separate components, these powerful systems employ a single ESP unicell, which combines the ionizer and collection cell. Supplemental filtration accessories are available, as well as an automated in-place cleaning option. SG systems can be ducted, unducted and hung.

Depending on your specific application, airflow requirements and size restrictions, a UAS representative can help you select the unit that matches your company’s industrial air quality need.

OPTIONS AND ACCESSORIES
- 95% DOP or HEPA After-filters
- Application-specific power packs
- Custom paint colors
- Drain bottle
- Drain loop trap
- Dual polarity
- High- or low-static pressure blowers
- In-place cleaning system (SG only)
- Inlet plenums
- Machine-mount kit (SHN only)
- Mist-Stop filter
- Motor starter
- Odor control modules
- Oil impingement filter
- Outlet plenums
- Remote status indicator panels
- Side discharge plenums
- Source capture parts and accessories
- Tandem-pass configuration
- USA agency-approved
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Horsepower</th>
<th>Unit Weight</th>
<th>Nominal CFM Capacity</th>
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<tr>
<td>SHN-6-XB</td>
<td>–</td>
<td>85 lbs./38 kg</td>
<td>400 to 750</td>
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<td>SHN-6</td>
<td>1/2</td>
<td>175 lbs./79 kg</td>
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<td>825 lbs./375 kg</td>
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<tr>
<td>SG-4-HH</td>
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<td>850 lbs./385 kg</td>
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<tr>
<td>SG-4-M</td>
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<td>1,150 lbs./385 kg</td>
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<tr>
<td>SG-4-HM</td>
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<tr>
<td>SG-4-HHM</td>
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<td>1,200 lbs./543 kg</td>
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<tr>
<td>SG-4-T</td>
<td>3</td>
<td>825 lbs./375 kg</td>
<td>4,000 to 6,000</td>
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<tr>
<td>SG-4-TH</td>
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<td>825 lbs./375 kg</td>
<td>4,000 to 6,000</td>
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<td>SG-6-XB</td>
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<td>550 lbs./249 kg</td>
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<tr>
<td>SG-6</td>
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<td>1,100 lbs./498 kg</td>
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<td>1,125 lbs./509 kg</td>
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<td>SG-6-M</td>
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<td>1,625 lbs./735 kg</td>
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<tr>
<td>SG-6-HM</td>
<td>10</td>
<td>1,625 lbs./735 kg</td>
<td>6,600 to 9,000</td>
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Customized configurations are available. Contact UAS Factory for more information.

H: High Static  
HH: Higher Static  
M: Multiple-Pass or Tandem  
T: T-Shape Configuration  
XB: No Motor/Blower
WHY CHOOSE UNITED AIR SPECIALISTS?

A world-renowned reputation. For more than 40 years, we’ve been the industry leader in air quality technology — a proven track record that speaks for itself.

Commitment to quality products. Measuring our quality against documented expectations, we practice continuous improvement methods to anticipate challenges and implement successful solutions.

Unparalleled customer support. As a customer-driven solutions provider, we earn credibility and establish successful relationships by exceeding expectations for professional service and attitude.

Innovative technical leadership. Always, we keep technology at the forefront — ensuring continuous product advancements through ongoing investments in design and manufacturing.

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