



United Air Specialists, Inc.

a CLARCOR company

## SHN/SG SERIES



ELECTROSTATIC MIST COLLECTORS

*Clean air. It's what we do.™*

# SHN/SG SERIES

THE  
complete solution  
TO  
oil smoke AND  
coolant mist  
PROBLEMS IN THE  
INDUSTRIAL WORK AREA.



## 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!

*...equipped with airflow capacities  
ranging from 400 to 9,000 CFM.*



SHN-20 with optional inlet plenum



Clean air. It's what we do.™

## 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!

Another product enhancement is the newly **expanded SHN cabinet** design (pictured below). Now standard on all SHN units, the larger cabinet allows room for the 1" aluminum mesh filter and optional 2" Mist-Stop filter — eliminating the need to add an inlet plenum.

Mist-Stop filters are available for use on all SHN, SH and SG units that use an impingement plenum, as well as the newly expanded SHN systems.

## HOW ESP WORKS

SHN/SG mist collectors are configured using ESP technology—a proven concept used by UAS engineers for more than 35 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.

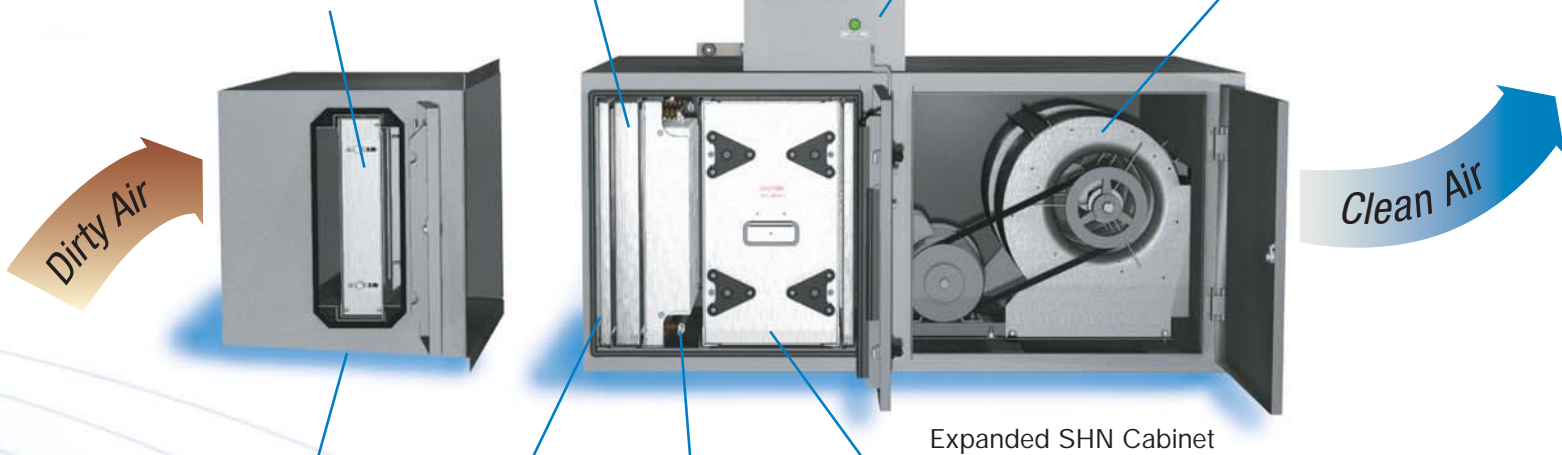
### *Optional Mist-Stop Filter*

### *ESP Power Pack*

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

### *Motor/Blower*

Provides air movement, and is adjustable to accommodate application.



### *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.



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## 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

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

#### CENTRIFUGAL MIST COLLECTORS

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

#### BAG FILTER UNITS

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

#### MEDIA MIST COLLECTORS

- x Low-efficiency cartridges quickly fill up and minimize airflow.
- x High energy consumption.
- x Expensive filter replacement.
- x 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

- 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



SHN-10 with optional inlet plenum



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## SPECIFICATIONS

Model	Horsepower	Unit Weight	Nominal CFM Capacity
SHN-6-XB	–	85 lbs./38 kg	400 to 750
SHN-6	1/2	175 lbs./79 kg	400 to 750
SHN-6-M	1/2	265 lbs./120 kg	400 to 750
SHN-10-XB	–	120 lbs./54 kg	1,000 to 1,250
SHN-10	1/2	215 lbs./97 kg	1,000 to 1,250
SHN-10-H	1	225 lbs./102 kg	1,000 to 1,250
SHN-10-M	1/2	335 lbs./152 kg	1,000 to 1,250
SHN-10-HM	1	345 lbs./156 kg	1,000 to 1,250
SHN-20-XB	–	200 lbs./90 kg	2,000 to 2,500
SHN-20	1	324 lbs./147 kg	2,000 to 2,500
SHN-20-H	2	340 lbs./155 kg	2,000 to 2,500
SHN-20-M	1	524 lbs./237 kg	2,000 to 2,500
SHN-20-HM	2	540 lbs./244 kg	2,000 to 2,500
SHN-40-XB	–	344 lbs./156 kg	4,000 to 5,000
SHN-40	3	680 lbs./309 kg	4,000 to 5,000
SHN-40-H	5	691 lbs./314 kg	4,000 to 5,000
SHN-40-M	3	1,024 lbs./464 kg	4,000 to 5,000
SHN-40-HM	5	1,035 lbs./469 kg	4,000 to 5,000
SHN-40-HH	7-1/2	710 lbs./323 kg	2,500 to 5,500
SHN-50-T	3	660 lbs./300 kg	4,000 to 5,200
SG-2-XB	–	250 lbs./113 kg	2,200 to 3,000
SG-2	2	400 lbs./181 kg	2,200 to 3,000
SG-2-H	3	400 lbs./182 kg	2,200 to 3,000
SG-2-M	2	650 lbs./294 kg	2,200 to 3,000
SG-2-HM	3	650 lbs./294 kg	2,200 to 3,000
SG-4-XB	–	375 lbs./170 kg	4,000 to 6,000
SG-4	3	730 lbs./341 kg	4,000 to 6,000
SG-4-H	5	825 lbs./375 kg	4,000 to 6,000
SG-4-HH	7-1/2	850 lbs./385 kg	4,000 to 6,000
SG-4-M	3	1,150 lbs./385 kg	4,000 to 6,000
SG-4-HM	5	1,150 lbs./385 kg	4,000 to 6,000
SG-4-HHM	7-1/2	1,200 lbs./543 kg	4,000 to 6,000
SG-4-T	3	825 lbs./375 kg	4,000 to 6,000
SG-4-TH	5	825 lbs./375 kg	4,000 to 6,000
SG-6-XB	–	550 lbs./249 kg	6,600 to 9,000
SG-6	5	1,075 lbs./486 kg	6,600 to 7,000
SG-6-H	7-1/2	1,100 lbs./498 kg	6,600 to 9,000
SG-6-HH	10	1,125 lbs./509 kg	6,600 to 9,000
SG-6-M	5	1,625 lbs./735 kg	6,600 to 9,000
SG-6-HM	7-1/2	1,625 lbs./735 kg	6,600 to 9,000
SG-6-HHM	10	1,625 lbs./735 kg	6,600 to 9,000

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 35 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.

### UAS HEADQUARTERS – USA

4440 Creek Road  
Cincinnati, Ohio 45242  
1-800-252-4647  
[www.uasinc.com](http://www.uasinc.com)

AN ISO9001 CERTIFIED COMPANY

### UAS – GERMANY

Otto-Hahn-Strasse 6  
D-65520 Bad Camberg  
Ph: +49-6434-94220  
E-mail: [info@uas-inc.de](mailto:info@uas-inc.de)

### UAS – UNITED KINGDOM

PO Box 17  
Folly Lane  
Warrington, Cheshire  
England WA5 0NP  
Ph: +44-1925-654321  
E-mail: [post@clarcoruk.com](mailto:post@clarcoruk.com)

### UAS – ASIA

Flat 1, 15/F, Block 1  
Grand Pacific Views, Palatial Coast  
Siu Lam, Tuen Mun  
New Territories, Hong Kong  
Ph: +852-2814-7722  
E-mail: [dlee@clarcor.com](mailto:dlee@clarcor.com)



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