

# United Air Specialists, Inc.

a CLARCOR company



Clean air. It's what we do.®

# Weld Fume Collection Is Serious Business

Protecting your workers from occupational hazards is more than just good business practice or housekeeping. Welders, for example, who are in daily contact with workplace operational hazards, must be protected from exposure to contaminants such as weld-fume particulate that can lead to serious health concerns and illnesses.

# CAPTURE WELD FUME AT THE SOURCE

Through efficient removal of weld fume particulate, you can protect your workers' health, improve productivity and reduce lost time due to illness. The most effective method of capturing weld fume particulate from a welder's breathing zone is to collect it directly at the source. This is a difficult task given that up to 95% of weld fume particulate is submicron (less than 1 micron) in size. Particles in this size range are considered respirable, or so small that they simply pass through the body's normal filtering system and directly into the lungs.

UAS is serious about clearing the air of weld fume particulate, and has developed a unique line of proprietary solutions for welding applications. We've combined our exclusive Protura® Nanofiber cartridge filter with a series of portable and wall-mount systems for the source capture of weld fumes. These advanced technologies were engineered together specifically to achieve industry-leading filtration efficiency on submicron sized weld fume particulate, while enabling strong, long-lasting airflow to effectively capture weld fumes at the point of generation.



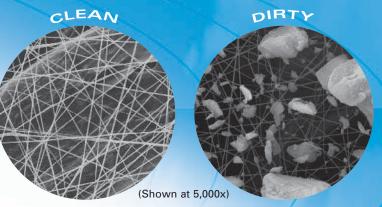
# UNSURPASSED FILTRATION TECHNOLOGY—PROTURA®

Unlike traditional or commodity media used by most manufacturers, UAS' W Series filter is unmatched in its capacity to capture and contain submicron-sized weld fume particulate. The secret to its superior performance is the use of our exclusive Protura Nanofiber with a special blend of fire retardant media, specifically designed for welding applications.

Protura Nanofiber media, with its nano-sized inter-fiber pores, enables a submicron-sized "dust cake" layer to quickly build on its surface to deliver exceptionally high filtration efficiency right out of the box. High filtration efficiencies on sub-micron-sized weld fume particulate is a necessity, but the true distinction of Protura technology resides in the performance of the nanofiber.

The nanofiber webbing traps submicron-sized weld fume particles on the surface of the media before they become deeply embedded or simply pass through the filtration media. As a result, the nanofiber surface coating actually increases the weld fume holding

of weld fume.



Submicron particulate is captured on the nanofiber webbing for easy release during filter cleaning cycles.

capacity of the filter and enables the system to maintain a lower pressure drop while providing strong, long-lasting suction power.

On UAS systems equipped with on-board filter cleaning, the weld fume particulate residing on the nanofiber surface coating will be easily released upon activation of the filter cleaning process—greatly extending the life of the filter.

Independent lab testing\* proves that there are significant differences in the efficiency rating of filter media when tested using submicron particulate. MERV, or Minimum Efficiency Reporting Value, is based on ASHRAE standard 52.2-99 and considered the industry benchmark to accurately rate the efficiency of filter media. According to this standard, UAS' MERV 15 filter is 50% more efficient than a MERV 13 filter when used on the particulate size that makes up the majority

ASHRAE 52.2 Standard	Average Particle Size Range Efficiency, % in Size Range, µm					
MERV Rating Categories	0.3 to 1.0 μm	1.0 to 3.0 μm	3.0 to 10 μm			
10	Not Rated	50% - 65%	≥ 85%			
11	Not Rated	65% - 80%	≥ 85%			
12	Not Rated	80% - 90%	≥ 85% ≥ 90%			
13	< 75%	≥ 90%				
14	75% - 85%	≥ 90%	≥ 90%			
15 UAS PROTURA®	85% - 95%	≥ 90%	≥ 90%			
16	≥ 95%	≥ 90%	≥ 90%			
Weld Fume Particle Size Distribution As % Total <sup>1</sup>	75% - 95%	≤ 15%	≤ 10%			

<sup>&</sup>lt;sup>1</sup>Particle Size Distribution GMAW and FCAW, Welding Journal 2005

### It's All About The Nanofiber

- MERV 15 Efficiency on Weld Fume Sized Particulate
- Lower Pressure Drop Provides Long-Lasting Suction Power
- Increased Weld Fume Contaminant Holding Capacity
- Easy-to-Clean Surface-Loading Filter Technology
- Greatly Extended Filter Life

<sup>\*</sup>UAS' Protura filter's MERV 15 efficiency has been tested per ASHRAE Standard 52.2-1999 and certified by independent lab testing. A copy of the certification is available upon request.

# THE BEST FILTER TECHNOLOGY IN

The combination of UAS' Protura Nanofiber filter technology and the W Series is the best solution for is ideal for companies that require weld fume extraction. These innovative weld fume extractors draw in cartridge filter captures dangerous submicron particulate and keeps it on top of its nanofiber layer—avoiding

# WP and WP-C Portable Collectors

UAS' portable weld fume extractors are function, and allow for welding in multiple locations within a facility.

Choose on-board cleaning for heavy welding.



Quick filter change.



locations.

# THE BEST WELD FUME COLLECTOR

weld fume extraction in the industry. Designed specifically for the collection of weld fume, the W Series harmful contaminants at the source, prior to entering a welder's breathing zone. Next, the Protura re-entrainment into the work environment. The result is a cleaner and safer work environment for everyone.

# WS and WS-C Wall Mount Collectors

Easy-to-operate and non-intrusive, the wall-mount extraction system provides a more permanent location for weld fume collection. Choose to connect one or two extraction arms to the filter housing cabinet.





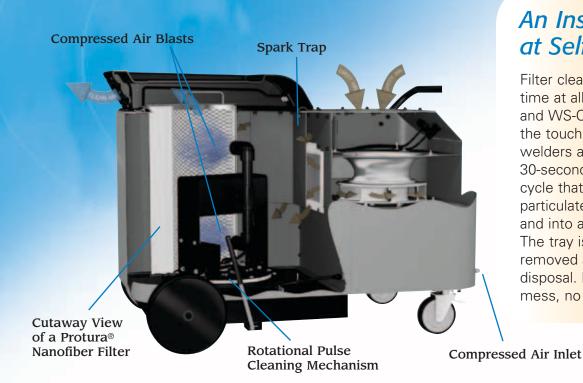


WS-C system shown with one or two extraction arms.

# **SPECIFICATIONS**

Model	Input Power	Motor Power	Nominal Airflow	Sound Level*	Filter Media	Extraction Arm/Flex Duct Connection Diameter	Dimensions L x W x D	Weight	Shipping Weight
WP							48-¾" x 34-¼" x 34-½" (124 cm x 80 cm x 88 cm)	238 lbs. (108 kg)	273 lbs. (124 kg)
WP-C	115/1/60 11.9 amps	1 HP (0.75 kW)	875 CFM (1,486 m <sup>3</sup> /hr)	71 dBA	490 ft <sup>2</sup> (45.5 m <sup>2</sup> )	8" (20.3 cm)		300 lbs. (136 kg)	345 lbs. (156 kg)
WS							34-½" x 27-¼" x 29" (88 cm x 70 cm x 74 cm)	130 lbs. (59 kg)	150 lbs. (68 kg)
WS-C							34-½" x 27-¼" x 33-½" (88 cm x 70 cm x 85 cm)	195 lbs. (89 kg)	224 lbs. (102 kg)

<sup>\*</sup>AMCA sound levels at 5 ft. using a UAS-supplied fan.



# An Inside Look at Self-Cleaning

Filter cleaning takes no time at all with the WP-C and WS-C systems. With the touch of a button, welders activate a 30-second pulse cleaning cycle that dislodges weld particulate from the filter and into a collection tray. The tray is then easily removed and ready for disposal. No tools, no mess, no problem.

# TOOL-FREE MAINTENANCE

Routine maintenance, like filter changes and collection tray disposal, takes just seconds with the W Series. Forget the tools and forget the mess. Filters are easily accessible for change out by flipping two side latches and lifting the hatch. Simply lift each filter using the convenient end cap handles to avoid touching the dirty filter media area. Collection tray disposal is just as quick. For the WP-C, pull down the lever to release the drawer and slide it out. For the WS-C, unclip the tray from the base.



Emptying the collection drawer requires no tools.

# **EXTRACTION ARM**

UAS' extraction arm features a large bell-mouth hood to capture smoke and fumes at a greater distance from the source than other designs—resulting in cleaner air and fewer adjustments for longer welds. Also, the arm itself is easy to position and maintains its placement over time.



Large Bell-Mouth Hood

features 360° rotation for unlimited positioning. As one of the largest hoods in the industry, it collects fume from a wide area.

# **Options & Accessories**

- 7', 10' and 12' (2.1m, 3.0m and 3.7m) extraction arms
- Dual arm expansion kit (WS and WS-C only)
- Flex duct in place of extraction arm
- Hoods
- Remote on/off switch
- Remote on/off switch with light kit
- Remote on/off switch with light kit and arc sensor

# USE THE RIGHT TECHNOLOGY FOR THE RIGHT PROBLEM

Clean air is essential for productivity in any facility, but is especially important where welding operations are performed. Without the right air pollution control equipment, fumes and smoke are spread throughout a plant, and inhaled by all personnel—with the greatest concentration levels impacting welders.

But, you can take action and capture these dangerous emissions before they enter your workers' breathing zones with Protura Nanofiber filters and the W Series. Any system can suck up weld fumes and push them towards a filter, but only Protura cartridges are capable of containing the tiniest, submicron particles so they are not reintroduced into the workplace. No other weld fume collection system can make that claim.



# 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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