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Nano Particle Technology

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Ultrapure Fogger, AP35

The AP35, Ultrapure Fogger produces a high volume of ultrapure fog to visualize airflow turbulence and conduct 3D video evaluations in clean rooms, sterile rooms, ISO suites and medical rooms. The AP35 provides about 5 cubic meters of ultrapure fog per minute with 533 ml / minute fog density for up to 75 minutes to visualize airflow for 20 to 30 feet; surpassing all other ultrapure foggers with 2X more fog volume, 2X more fog density and 2X more visual airflow distance - for about the same cost as other ultrapure foggers.

Patterns of air flow, turbulence and velocity can be viewed with a non-contaminating fog; thus no clean up is required. The AP35 ultrapure fog generator is used in Semiconductor and Pharmaceutical companies to visualize airflow patterns, turbulence, find dead zones, see direction and visualize velocity. The ultrapure fogger provides a very dense fog by generating vapor fog droplets at 2-3 micron diameter, permitting the fog to travel much further in the air stream. As the fog evaporates, it reverts back to the same air we breathe. The exit temperature of the fog is about 78 F degrees with a very low exit pressure, ensuring a neutrally buoyant fog entering the airflow. The high purity fog floats into the airflow, rather than dropping as with ultrasonic foggers. Included is 1) Remote Control Wireless FOB; 2) 5 M x 88mm, Fog Hose. The ultrapure fogger rolls easily across a floor with wheel casters. A front storage



AP35, Optional Fog Wands

parts drawer is provided to hold small accessories. 9 optional accessories are available.

AP35 Advantages:

Very High Fog Density	Provides 533 ml / minute fog density with 20-30 feet visible airflow for about 75 minutes					
Highest Fog Volume	about 5 Cubic Meters per minute, Adjustable Fog volume output, Adjustable Airflow Velocit					
Low Fog Exit Pressure	Minimal fog entry pressure is created					
Ultrapure Fog, SS Enclosure	No cleanup required, no contamination, fog evaporates back to air we breathe					
Neutrally Buoyant Fog	Fog floats into airflow without dropping					
Video Capabilities	Video of the airflow turbulence is very easy with dense fog					
Fog Curtain Wand	Optional Fog Curtain Wand to spread out the fog visibility					
Y Adaptor and T Adaptor	Optional Y Adaptor for two fog inputs, Optional T Adaptor to provide extra wide fog curtain					
Fog Illumination	Optional LED Light Contrast, Fog Illuminator, to contrast airflow visualization					
Fog Curtain Wand Y Adaptor and T Adaptor	Optional Fog Curtain Wand to spread out the fog visibility Optional Y Adaptor for two fog inputs, Optional T Adaptor to provide extra wide fog curtain					

Fog purity is achieved by bringing DI water to a high temperature creating an ultrapure water vapor. The DI water vapor is then combined with LN2, liquid nitrogen, which boils at room temperature. The two vapors combine to form a highly dense, ultrapure fog to

visualize airflow, patterns and turbulence in clean rooms, ISO suites and sterile rooms. The fog generated is the highest volume, highest density, highest purity to visualize airflow and turbulence. The fog is neutrally buoyant, thus when entering the airflow, the fog travels with the airflow. The AP35, Cleanroom Ultrapure Fogger fog leaves no contamination behind; requiring no cleanup of any kind after fog operations. The very high fog density increases the airflow visualization distance. The AP35 is CE Mark, meets guidelines for ISO 14644-3 ANNEX B7 and USP 797 Insitu Airflow Analysis.

Visualize airflow patterns around equipment, tools, hallways, door entries and personnel. Balance airflow pressure on two sides of a closed clean room or ISO suite. Locate standing vortices that can transport particle contamination into critical work areas and sterile rooms. Visually track air flow direction and velocity, as well as 3D airflow modeling to ensure air flow balance between clean rooms, ISO suites and sterile rooms. Detect unwanted air infiltration into a clean room to verify process environments are operating properly. The AP35 Ultrapure Fogger produces a very dense, ultrapure fog, providing superb visual & video observations for the very best ultrapure fogger available today. Please review optional accessories below.



Dense Fog To Visualize Airflow



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Model	Fog Purity	Fog Volume	Fog Density	Fog Duration	Visual Airflow Distance	Liquids Used	Where Used	Standard Power	Other Power
AP35 Ultrapure Fogger	Ultra Pure	≈ 5 cubic meters / minute	≈ 533 ml / minute	≈ 75 minutes	≈ 20 - 30 feet visual airflow	LN2 + DI Water or LN2 + WFI Water	for mid sized clean rooms, sterile rooms and ISO suites	115 VAC	220 VAC, 100VAC
<u>AP100</u> <u>Ultrapure</u> Fogger	Ultra Pure	≈ 15.5 cubic meters / minute	≈1520 ml / minute	≈ 75 minutes	≈ 30 – 40 feet visual airflow	LN2 + DI Water or LN2 + WFI Water	for large clean rooms, sterile rooms and ISO suites	115 VAC	220 VAC, 100VAC
Other Ultrapure Foggers	Ultra Pure	#1: ≈ 1.5 cubic meters / min #2: ≈ 1 cubic meter / min	#1: ≈ 250ml per minute #2: ≈ 125ml per minute	#1: ≈ 45 Minutes #2: ≈ 25 Minutes	#1: ≈ 10 -15 feet visual airflow #2: ≈ 10 feet visual airflow	LN2 + DI Water or LN2 + WFI Water	for mid sized clean rooms, sterile rooms and ISO suites	115 VAC	220 VAC, 100VAC
<u>CRF4</u> <u>Cleanroom</u> <u>Fogger</u>	Pure	≈ 1.25 cubic meters / minute	≈ 170 ml / minute at max fog volume; and 57 ml / minute at low fog volume	≈ 45 minutes at max fog volume; and ≈ 90 minutes at low fog volume	≈ 10 - 15 feet visual airflow	DI Water or WFI Water	for mid sized clean rooms, sterile rooms and ISO suites, RABs, Barrier Isolators	115 VAC	220 VAC, 100VAC
<u>CRF2</u> <u>Cleanroom</u> <u>Fogger</u>	Pure	≈ 0.26 cubic meters / minute	≈ 55 ml / minute	≈ 50 minutes	≈ 7 - 8 feet visual airflow	DI Water or WFI Water	for smaller barrier isolators, fume hoods, flow hoods and glove boxes	115 VAC	220 VAC, 100VAC
CO2 Fogger	CO2	≈ 0.20 cubic meters / minute	≈ 20 ml / minute, decreasing over fog duration	≈ 8 – 10 minutes	≈ 6 - 7 feet visual airflow	DI Water or WFI Water	for smaller barrier isolators, fume hoods, flow hoods and glove boxes	115 VAC	220 VAC, 100VAC
<u>Portable</u> <u>Glycol</u> Fogger	Glycol	≈ 0.10 cubic meter / minute	≈ 1.0 ml / minute	≈ 45 minutes	≈ 3 - 4 feet visual airflow	DI Water + 90% Glycol	For industrial clean rooms	115 VAC	220 VAC, 100VAC

Fogger Performance Comparisons

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