



M2045—High Output PSL Aerosol Generator

- *A high output polystyrene latex (PSL) aerosol generator for filter efficiency measurement, leak detection and cleanroom certification*
- *Produces PSL aerosols at rates up to 7.2×10^{10} particles per minute at $0.12 \mu\text{m}$.*



DESCRIPTION

The Model 2045 is a high output aerosol generating system designed to produce polystyrene latex (PSL) aerosols of a uniform particle size at a high rate for high efficiency filter (ULPA/HEPA) testing, leak detection and in-situ cleanroom certification.

The system can generate up to 7.2×10^{10} PSL spheres per minute at $0.12 \mu\text{m}$. When this aerosol is mixed with 720 cfm of air for testing a 24" x 48" filters at 90 ft per minute, the system output will produce an upstream aerosol challenge of 1×10^8 per cubic foot. For a six nine efficiency (99.9999%) ULPA filter, this challenge will produce a downstream aerosol concentration of 100 particles/ft³ or a count rate of 100 particles per minute in a nominal 1.0 cfm laser particle counter (LPC). The filter efficiency, as well as any associated leaks in the filter can be easily detected by a LPC.

This high output PSL aerosol generator replaces the DOP (dioctyl phthalate) and other oil-based aerosol generators used in traditional filter testing and cleanroom certification. These oily substances can collect in the filter and continue to outgas organic molecular contamination over an extended period of time that is unacceptable in many applications, especially in cleanrooms used in the semiconductor industry.

FEATURES

- Generates up to 7.2×10^{10} PSL spheres per minute at $0.12 \mu\text{m}$.
- Monodisperse size distribution with minimal number of doublets and triplets present
- High efficiency atomizer reduces rate of liquid consumption and the cost of PSL solutions used
- Stable and repeatable operation
- High purity, all stainless steel atomizer for easy cleaning and maintenance.
- Atomizer can be turned on and off just for the duration of the test to further reduce PSL liquid consumption (optional)
- Remotely-operable atomizer allows easy integration into filter test systems (optional)

APPLICATIONS

- Production testing of HEPA and ULPA filter testing in the factory
- Acceptance testing of HEPA and ULPA filters at customer sites
- Filter scan to locate leaks for repair
- In place testing of HEPA and ULPA filters in the cleanroom for efficiency measurement and leak detection.

SPECIFICATIONS

Subject to change without notice

High Output PSL Aerosol Generator

PSL size range	0.1 to 0.5 μm
PSL output	7.2×10^{10} per minute
Output flow rate	8.0 cfm
Dimensions (HxDxW)	18"x20"x12"
Weight	45 lb
Dry compressed air or N2	8 cfm @ 80 - 100 psig
Remote control option	115 VAC, 2A

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