The high-output large-particle aerosol generator produces very stable high concentrations of particles in the 0.1 to 10 μm size range for extended periods of time that can be used for filter testing and research.

**Features and Benefits:**
- Produces a stable and high concentration of aerosol particles in the 0.1 to 10 μm size range
- Continuous generation times of up to 3 hours
- Variable mass concentration output
- Operates on compressed air (no mechanical pump required)
- Produces KCl, oil and other aerosols
- Meets the requirements of SAE J1669, ISO/CD 11155-L

**Applications:**
- High output aerosol generation
- ASHRAE 52.2 filter testing
- ASHRAE 2519-05 grease filter testing
- Automobile cabin ventilation filter testing
- Other filter testing
- Research

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**Operating Principle**

The high output, large particle aerosol generator uses an atomizer made of stainless steel to aerosolize salt or oil particles. The aerosol solution from a pressurized tank is fed through a capillary forming a liquid jet at the exit of the atomizer. High velocity dispersion air from a compressed air source flows through the annular slit at the top of the atomizer which is directed at the liquid jet causing it to break up and form a polydisperse aerosol. Dilution air containing bipolar ions from an air ionizer cartridge flows up and around the atomizer where the aerosol is neutralized and dried in a drying column. The aerosol generator provides a high output, conditioned and stable concentration aerosol.

**Specifications**

**Mode of Operation**

Constant liquid feed through an atomizer

**Particle Size Range**

0.1 to >10 μm in diameter

**Particle Concentration at Aerosol Generator Outlet (100 L/min)**

- Approximately 1.7 E5 particles/cm at 1 μm and 4.7 E2 particles/cm3 at 10 μm (with 10% KCl concentration)
- Approximately 3.0 E5 particles/cm at 1 μm and 8.0 E2 particles/cm3 at 10 μm (with 30% oleic acid concentration)

**Pressurized Tank Liquid Holding Volume**

2.0 Liter

**Liquid Feed Rate**

15 ml/min (variable)

**Operational Requirements**

- Compressed Air for Dilution and Dispersion Air 200 kPa, 70 std. L/min (30 psi, 2.5 SCFM)
- Compressed Air for Pressurizing Tank 35 kPa, (5 PSI)
- Electrical 115 VAC, 60 Hz or 230 VAC, 50 Hz, < 1 W for Air Ionizer

**Generator Box Dimensions**

- LxWxH 25.4 × 45.7 × 17.8 cm (10 × 18 × 7 in.)
- Weight 8.0 kg (17.6 lb) (with tank empty)

**Dilution Column Dimensions**

- Height 68.6 cm (27 in.)
- OD 11.4 cm (4.5 in.)
- Weight 1.0 kg (2.2 lb)

**Safety**

Pressure Release at 420 kPa (60 PSI) using Pressure Relief Valve