# LARGE-PARTICLE AEROSOL GENERATOR MODEL 8108

## PRODUCE HIGHLY CONCENTRATED SALT PARTICLES UP TO 10 µm IN DIAMETER

Capable of producing highly concentrated salt aerosol from 0.1 to 10 micrometers in diameter, the CertiTest® Large-particle Aerosol Generator Model 8108 meets the requirements of the established ISO/TS 11155-1 and ASHRAE 52.2 test codes, as well as the proposed ISO 16890 Part 2 code. Test aerosol is produced using potassium chloride (KCl). The Model 8108 generates, dries, and neutralizes the aerosol to ensure accurate, repeatable results, day after day.

**Applications**

+ Aerosol generation
+ Filter testing
+ Generates aerosol suitable for automotive-cabin and ventilation air-filter tests, vacuum-cleaner performance tests, and other industrial air-filtration studies

**Features and Benefits**

+ Produces a high concentration of aerosol particles from 0.1 to 10 µm
+ Produces potassium chloride (KCl) or other aerosols
+ Meets the requirements of the established ISO/TS 11155-1 and ASHRAE 52.2 test codes, as well as the proposed ISO 16890 Part 2 code.

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# SPECIFICATIONS

## LARGE-PARTICLE AEROSOL GENERATOR MODEL 8108

**Mode of Operation**
Constant liquid feed through a spray nozzle

**Particle Size Range**
0.1 to 10 µm in diameter

**Particle Concentration**
Approximately 600 particles/cm³ at 1 µm and 10 particles/cm³ at 10 µm (aerodynamic size* with 30% KCl concentration)

**Particle Type**
Potassium chloride (KCl), other materials are possible

**Liquid Feed Rate**
1.2 ml/min

**Operational Requirements**

| | |
|---|---|
| Electrical | 115 VAC, 60 Hz, 3 A; or 230 VAC, 50 Hz, 1.5A |
| Compressed Air | 344 kPa, 141 std. L/min (50 psi, 5 scfm) |

**Generator Column Dimenions**

| | |
|---|---|
| Height | 132 cm (52 in.) |
| OD | 30.5 cm (12 in.) |
| Base Plate | 47 × 47 cm (18.5 × 18.5 in.) |
| Weight | 24.5 kg (54 lb) |

**Control Box Dimensions**

| | |
|---|---|
| L x W x H | 43 × 56 × 32 cm (17 × 22 × 12.5 in.) without fill bottle and bracket installed |
| Weight | 20 kg (44 lb) |

**Operation**

TSI's Model 8108 consists of two parts: a generator column and a control box. The generator column includes a spray nozzle, drying cylinder, and electronic air ionizer (a nonradioactive aerosol-charge neutralizer). The control box contains an air-pressure regulator, air filter, peristaltic liquid pump, heater, flowmeters, and ionizer power supply.

The Model 8108 is designed for long-term, stable operation. When powered up, the generator sprays salt droplets into the top of the drying cylinder. The spray nozzle is easily accessible and can be removed from the drying cylinder for cleaning. The large volume inside the cylinder allows a residence time sufficient enough to dry the aerosol. Heated and ionized dilution air injected from the base of the cylinder aids in this process. The dilution air mixes and dries the droplets thoroughly to form solid salt particles, which exit the cylinder at the base of the generator column. Because there are no bends in the flow path, the aerosol can be directed into your test duct with minimal particle loss.

### TO ORDER

**Large-Particle Aerosol Generator**

| Specify | Description |
|---|---|
| 8108 | 8108 |

Please specify voltage requirements.

*Particle size determined using the TSI Model 3310 Aerodynamic Particle Sizer® Spectrometer.

Specifications are subject to change without notice.

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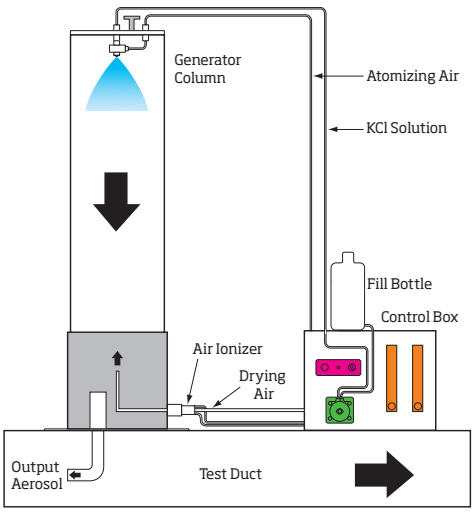


Typical application of Model 8108 Large-particle Aerosol Generator

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**TSI Incorporated** - Visit our website **www.tsi.com** for more information.

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