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 new SAE J1669 and the proposed ASHRAE 52.2 test codes. 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 proposed SAE J1669, ISO/CD 11155-1, and ASHRAE 52.2 test codes

TSI®

UNDERSTANDING, ACCELERATED

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/cm^3 at 1 µm and 10 particles/cm^3 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

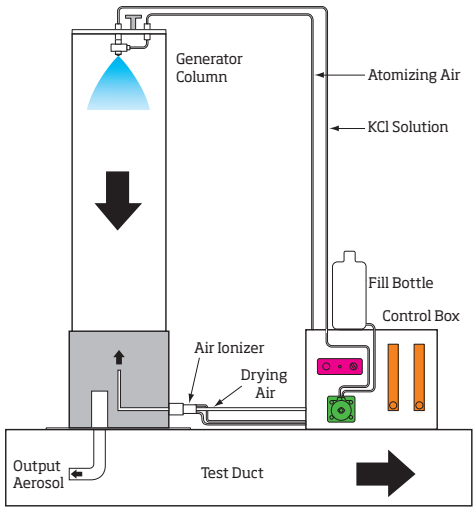
Specify	Description
8108	8108

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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