

# BRECHTEL

**Solutions for your  
research challenges**

## Soft X-Ray Charger Model 9002



The Model 9002 is a Bipolar charger that uses Soft X-rays to charge particles instead of a radioactive source such as Am241 (Americium-241), Kr85 (Krypton-85), or Po210 (Polonium-210). Soft X-rays are easily absorbed by a thin layer of air and have been widely used for anti-static applications. The unit is safe, easy to use and requires minimal maintenance. It is also easy to import for use in scientific applications such as aerosol research.

### Features:

- Easy to operate, safe and simple
- No particle or ozone generation
- Environmentally safe non-radioactive source
- Low maintenance
- Compressed air not required
- Built-in controller
- No transportation restrictions; simplifies handling
- Compatible with Brechtel's SEMS Model 2100 and HTDMA Model 3100

**[www.brechtel.com](http://www.brechtel.com)  
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# Providing Aerosol Measurement Solutions

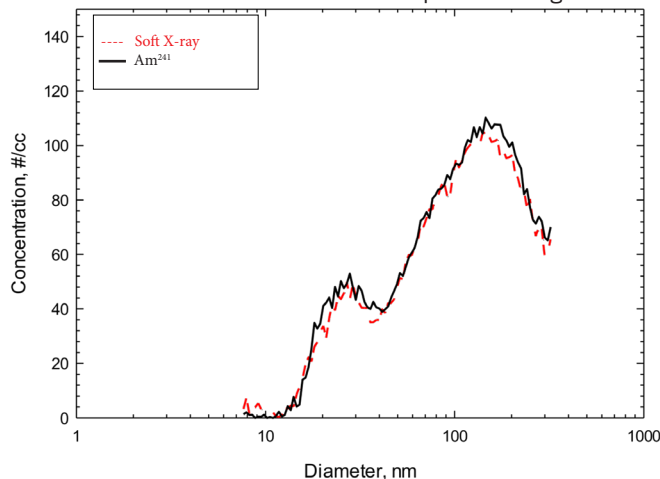
The Model 9002 charger is qualified as a fully protective type device. It can be safely used since a separate radiation shield is not required.

The charger has a useable “power-on” lifetime of 10,000 hours, its built-in yellow LED turns on when the operating lifespan is reached. Return the charger to Brechtel or its authorized representative for repair and calibration.

## Applications

- Particle charging
- Particle generation
- Particle sizing

Particle size distribution measurements with Model 9002 and American-based particle chargers.



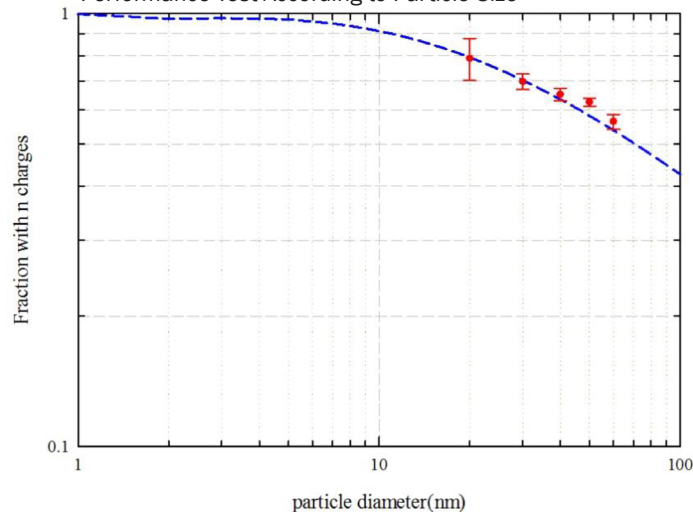
## Specifications

Description	Value
Ion Generation Method	Soft X-ray <9.5 keV
Source	Sort X-ray tube
Flow Rate Range	0.3-4.0 L/min
Equivalent X-ray Dose	<0.13 $\mu$ Sv/h at 10 cm distance
Aerosol Medium	Air or N <sub>2</sub> only
Power Consumption	7.2W
Cooling Method	Natural cooling
Aerosol Ports	1/4 inch O.D.
Weight	1.11 kg/2.45 lbs
Input Power	100~240VAC, 50/60Hz (Adaptor input) DC/12V, 3.33A
Warranty	1 Year
Dimensions (LWH)	10.8 x 2.8 x 7.5 in/ 27.3 x 7.2 x 19.1 cm
Maximum Input Concentration	10 <sup>7</sup> particles/cm <sup>3</sup>

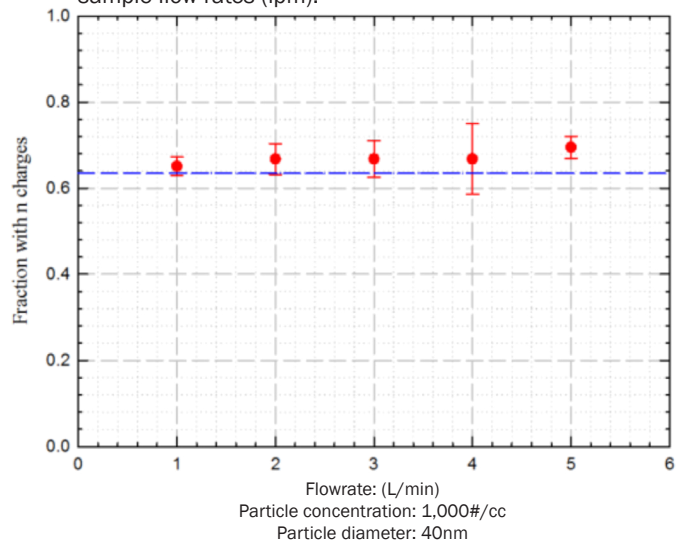
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\*Some products may be shown with optional accessories, which are sold separately. Items shown may not be to scale.

Performance Test According to Particle Size



Fraction of particles with one charge for various operating sample flow rates (lpm).



## How to Order

Description	Value
9002	Soft X-Ray Charger
ACC-Dryer	Sample flow drying package MCPC