

# Flow Focusing Monodisperse Aerosol Generator

## Model 1520

Produces monodisperse droplets and solid particles.

The Flow Focusing Monodisperse Aerosol Generator (FMAG) 1520 uses the aerodynamic flow-focusing effect to accurately control the diameter of a liquid jet for generating monodisperse droplets from 15 to 90 µm in diameter, which can then be dried to produce particles from 0.8 to 12 µm in diameter. In normal operation, a built-in syringe pump pushes liquid out of a 100-µm-diameter nozzle and is stretched to a much thinner stream by the focusing gas flow. The resulting thin liquid jet then breaks up into uniform-sized droplets after passing through a vibrating ceramic aerosol generation head. A coaxial flow of clean air is introduced to dry the droplets into solid particles. The aerosol then exits the top of the FMAG after passing by a built-in electrical corona ionizer and inspection light for easy viewing. The large 100-µm-diameter nozzle in the FMAG enables aerosol generation over extended periods of time without experiencing nozzle clogging problems, and at a very low liquid pressure. This low shear stress generally enables biological cells to remain viable, even after dispersion as uniform particles. The closely-related model 1530 omits the drying air, ionizer, and light, and has provisions for remotely mounting the aerosol generation head upside down for generating large droplets.



# Polydisperse Generators

This type of generator is typically capable of spraying aqueous solutions (e.g. salt), suspensions PSL, gold or glass nanoparticles), or oil or similar substances. They serve a variety of applications from laboratory research, field tests of detectors, and filter testing.

Model	3073	3079A	3076	9302/9306	8026	8108	9307/9307-6
Particle Size Range (µm)	0.01 to 2.0 (nominal 0.3 count mean diameter)				0.1 to 10		0.01 to 2.0 (PSL spheres)
Particle Concentration (particles/cm <sup>3</sup> ) in Output	10 <sup>2</sup> to 10 <sup>7</sup>	>10 <sup>8</sup>	>10 <sup>7</sup>	>10 <sup>7</sup>	10 <sup>6</sup>	<10 <sup>3</sup> at 1 µm	>10 <sup>7</sup>
Nominal Flow Rate (L/min)	0.3 to 4.5	1.0 to 4.2	3.0	6.5 to 39	1.25	140	30 to 10 <sup>3</sup>
Note	Portable, battery option available	Portable	Laboratory grade	Collision atomizers	Portable	Designed for ISO 16890-2 and ASHRAE 52.2 filter testing	Laskin nozzle atomizers

# Portable Test Aerosol Generator

## Model 3073

A portable test aerosol generator for low and high concentration polydisperse aerosols. It generates submicron aerosols from oils, and from salt or PSL gold or glass solutions. The innovative new flow control reduces power consumption and achieves highly stable particle production rates, ideal for calibration of particle sizing instruments. Its compact and lightweight design coupled with battery operation (sold separately) make it a perfect fit for use in field test applications.

