PAG 1000

The autonomous PAG 1000 (Portable Aerosol Generator) offers maximum flexibility for generating droplet aerosols, for example, from DEHS or low-concentration salt solutions.

The generator is small and, with a weight of only 5 kg, quite handy; being battery-powered makes it independent and quickly ready for operation. The fact that no compressed air connection is required demonstrates its flexible application options even more. A battery charge is sufficient for one working day, and if needed, the device also operates on mains operation.

Operation principle

Portable aerosol generatorof droplet aerosols

Thanks to the changeover operation of the internal pump for aerosol generation, the PAG 1000 offers a wide range of settings for concentration. The electrical control via the internal display permits the reproducible set of the particle concentration. Sample applications for the PAG 1000 include testing of laminar flow boxes, a clean room acceptance test, a test of smoke detectors, HEPA/ ULPA filter testing, laboratory applications, or flexible aerosol supplies on site.

Setting	Low (20 % $\triangleq$ 0.9 l/min)	High (100 % $\triangleq$ 4.6 l/min)
Number concentration from 0.02 μm	2.2 • 10^3 particles/cm^3	4.7 • 10^7 particles/cm^3
Number concentration from 0.2 μm	1.3 • 10^3 particles/cm^3	1.6 • 10^7 particles/cm^3
Number concentration from 0.3 μm	1.1 • 10^3 particles/cm^3	9 • 10^6 particles/cm^3
Particle flow from 0.02 μm	3.3 • 10^4 particles/s	3.6 • 10^9 particles/s
Particle flow from 0.2 μm	2 • 10^4 particles/s	1.2 • 10^9 particles/s
Particle flow from 0.3 μm	1.7 • 10^4 particles/s	6.9 • 10^8 particles/s
Medium particle diameter (number)	0.19 μm	0.15 μm
Largest particle diameter (number)	Approx. 6 μm	Approx. 6 μm

Table 2: Aerosol generation with DEHS

Temperature 22 °C; rel. humidity 50 %; ambient pressure 1013 mbar

BENEFITS

- Small, portable
- Easiest handling
- Internal pump for autonomous operation
- Particle size distribution and concentration
  - Wide setting range by high-/low-switching
  - Highest stability even for very low concentrations
  - Best reproducibility
- Robust, long-living, low-maintenance

DATASHEET

Volume flow	0.9 – 4.6 l/min
Mass flow (particles)	< 0.9 g/h (DEHS)
Filling quantity	70 ml
Battery operation	Min. 6h (running time), Li-ion batteries 75 Wh (14,4 V; 5.200 mAh),8 cells, non-removable
Particle material	DEHS and similar oils; NaCl and KCl
Aerosol outlet connection	$Ø_{innen}$ = 7 mm,$Ø_{außen}$ = 8 mm
Dimensions	220 • 160 • 230 mm (H • W • D)
Weight	Approx. 5 kg

Applications

- Test of Laminar-Flow-Boxes
- Clean room acceptance test
- Recovery test
- Smoke detector test
- HEPA/ ULPA filter testing
- Laboratory applications
- Flexible aerosol supplies on side

Mehr Informationen:
https://www.palas.de/en/product/pag1000