AGF 2.0 iP

The AGF 2.0 iP aerosol generator can atomize liquids with a binary nozzle.

Unlike the other versions in the AGF series, the AGF 2.0 iP has a built-in pump that generates volume flow, making an additional compressed air connection unnecessary to operate the device.

Operation principle

Aerosol generator with built-in pump

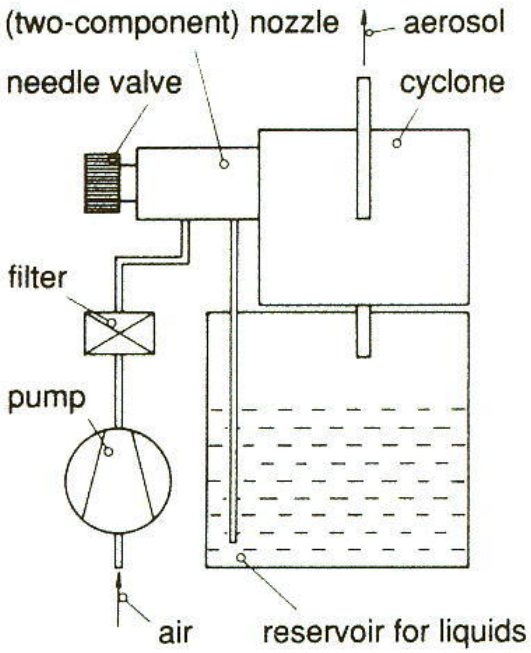

Fig. 1: Schematic diagram of the AGF 2.0 iP aerosol generator

A built-in pump suctions ambient air via a prefilter and directs it to a binary nozzle via a particulate air filter. The primary pressure on the nozzle is 0.6 bar above ambient pressure. The negative pressure in the nozzle suctions the

liquid to be atomized from a reservoir. The volume flow of the liquid and, thus, the aerosol concentration can be adjusted via a needle valve integrated in the nozzle.

BENEFITS

- No compressed air required during operation

- Exact adjustment of the operating parameters
- Number concentration (C_N) can be varied by the factor of 10
- Particle size distribution remains virtually constant if C_N is modified
- Number distribution maximum is within the MPPS range
- Virtually no power losses
- Optimal concentration, no coagulation losses
- Resistant to numerous acids, bases, and solvents
- Robust design, stainless steel housing
- Easy to operate
- As opposed to the collision method, AGF 2.0 does not generate particles > 2 μm thanks to its cyclone.
- Because the AGF generates virtually no droplets > 2 μm, the consumption of materials is very low, thus ensuring a long dosing time.
- With the use of DEHS, the mean particle size is within the MPPS range for HEPA/ULPA filters

NORMS AND CERTIFICATES

ISO 14644, VDI 2083

DATASHEET

Volume flow	12 – 14 l/min
Mass flow (particles)	< 2 g/h (DEHS)
Filling quantity	300 ml
Power supply	115 – 230 V, 50/60 Hz
Particle material	DEHS, DOP, Emery 3004, paraffin oil, other non-resinous oils
Dosing time	> 24 h
Compressed air connection	No
Aerosol outlet connection	$Ø_{inside}$ = 6 mm, $Ø_{outside}$ = 8 mm
Mean particle diameter (number)	0.25 μm
Particle diameter (maximum)	2 μm
Dimensions	325 • 300 • 175 mm (H • W • D)
Weight	Approx. 15 kg

Applications

- Clean room technology
  - Acceptance tests and leak tests as per ISO 14644 and VDI 2083
  - Leak tests, fit testing
  - Recovery tests
- Filter testing, quality control
  - Filter cartridges
  - Car interior filters
  - Filter media, particulate air filters
  - Aerosol generation for MPPS determination of HEPA/ULPA filters
- **Tracer particles**
  - Inhalation experiments
  - Optical flow measurement procedures with positive pressure values of up to 10 bar (model version AGF 2.0 D)
  - LDV
- Calibration of counting particle measurement methods
  - Nebulization of latex suspensions < 1 μm
- Smoke detector test

Mehr Informationen:
https://www.palas.de/en/product/agf2ip