Product data sheet

Palas® Aerosol Generator for Liquids AGF 10.0

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, HEPA/ULPA filters
    - Compressed air filters
- Tracer particles
    - Optical flow measurement procedures with positive pressure values of up to 10 bar (model version AGF 10.0 D)
    - Inhalation experiments
    - LDV
- Calibration of counting particle measurement methods
    - Nebulization of latex suspensions < 5 µm
- Smoke detector tests

ParteQ

Benefits

- Generation of high mass flows of up to approx. 25 g/h
- Exact adjustment of the operating parameters
- Number concentration (CN) can be varied by the factor 10
- Particle size distribution remains virtually constant, if CN 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
- Long dosing time

ParteQ

Description

The AGF 10.0 is an aerosol generator for the atomization of liquids and latex suspensions with a constant particle rate and defined particle spectrum.

The AGF 10.0 system comprises an adjustable binary nozzle for adjustment of the desired mass flow and a cyclone with a cut-off of 10 µm. The figure below presents a schematic arrangement of the generator components:

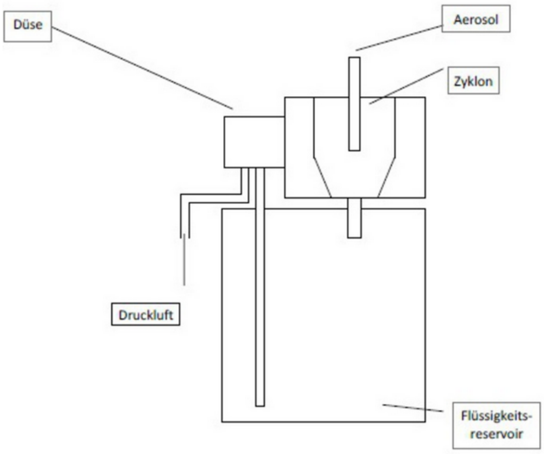

Fig. 2: Schematic diagram of the aerosol generator

Startup

The liquid to be dispersed is filled in the reservoir and the AGF 2.0 is connected to the compressed air connection. A manometer enables the mass flow of the liquid to be continuously adjusted using the primary pressure on the nozzle. The mist of droplets generated by the nozzle flows tangentially into a cyclone. Large particles are separated here by centrifugal force and drip back into the reservoir. The remaining droplets leave the cyclone via the so-called "immersion tube". The size spectrum of these droplets is determined on the one hand by the primary droplet spectrum generated by the nozzle, but especially by the separation characteristics of the cyclone on the other hand.

The separation size is able to be calculated: $d_{aerodyn.max}$ = 10 µm, i.e. regardless of the liquid to be atomized, the max. particle size is $d_{aerodyn} \approx$ 10 µm.

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Specifications

Volume flow	12 - 45 l/min
Dimensions	240 mm • 385 mm (∅ • L)
Weight	Approx. 4 kg
Particle material	DEHS, DOP, Emery 3004, paraffin oil, other non-resinous oils
Dosing time	> 24 h
Mass flow (particles)	< 25 g/h (DEHS)
Compressed air connection	Quick coupling
Mean particle diameter (number)	0.5 µm
Biggest particle diameter	10 µm

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