



Pressure-resistant version up to 10 barg overpressure

Description

Unlike the AGF 2.0, the AGF 2.0 D is pressure-resistant up to 10 bar positive pressure and is thus able to be used for applications with an absolute pressure value of up to 11 bar, e.g. to test compressed air filters and optical flow measurement procedures with positive pressure values of up to 10 bar.



Fig. 1: AGF 2.0 D The AGF series aerosol generators are able to atomize liquids with a binary nozzle. Fig. 2 presents a schematic arrangement of the AGF 2.0 D generator components:

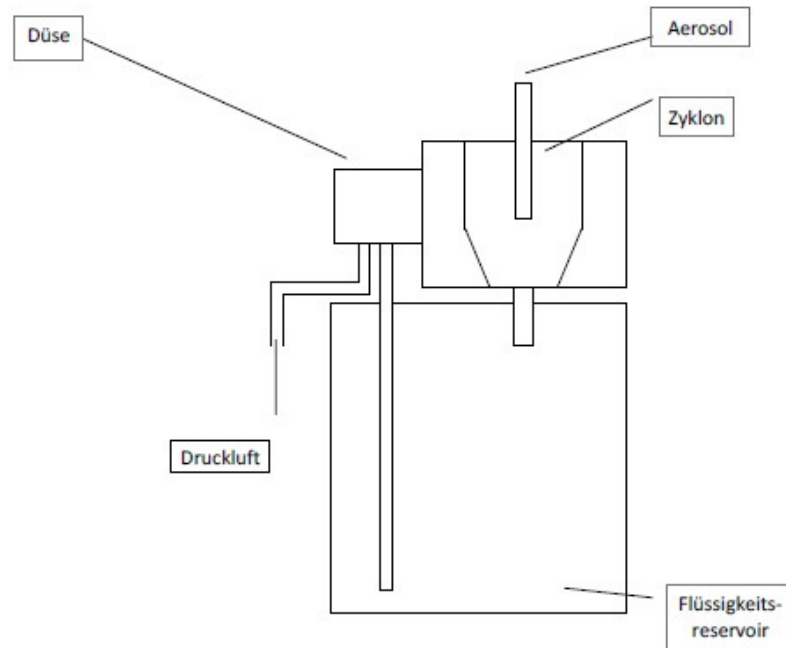


Fig. 2: Schematic diagram of the aerosol generator The AGF 2.0 D comprises an adjustable binary nozzle for adjustment of the desired mass flow and a cyclone with a cut-off of 2 μm . As a result, virtually no particles > 2 μm are generated. **Startup** Compressed air is supplied to a binary nozzle. The primary pressure on the nozzle is able to be adjusted to between 0 and 10 bar above the ambient pressure. The volume flow through the AGF 2.0 D should be determined using a pressure-tight flow meter. The volume flow must be between 12 and 22 L/min. The negative pressure in the nozzle suctions the liquid to be atomized from a reservoir, while the volume flow of this liquid is able to be adjusted using a needle valve that is incorporated into the nozzle.

	Dimensions WxHxD mm	Weight kg	$\dot{V}$ l/min	$\dot{m}_{\text{max}}^*$ g/h	dp_{mean}^{***} μm	d_{max} μm	115/230V 50/60 Hz	Pressure- tight up to 10 bar	Compressed air supply
AGF 2.0	300x330x240	ca. 9	6-17	4	0,25	2			x
AGF 2.0 iP	300x330x240	ca. 15	16-18	2	0,25	2	x		
AGF 10.0	$\varnothing 240 \times 385$	ca. 4	12-45	20	0,5	10			x
AGF 2.0 D	$\varnothing 200 \times 260$	ca. 8	12-45	4	0,25	2		x	x
AGF 10.0 D	$\varnothing 200 \times 300$	ca. 8	12-45	20	0,5	10		x	x
AGF 2.0 B**	$\varnothing 210 \times 300$	ca. 4	6 -25	4	0,25	2			x
UGF 2000	270x200x175	ca. 4	ca. 1 -13	1,5	0,2	1,5			x

*applied for DEHS **test rig version ***average number diameter

Table 1: Overview of the AGF and UGF systems

Benefits

- Pressure-resistant up to 10 barg overpressure
- Exact adjustment of the operating parameters
- Number concentration (C_N) can be varied by the factor 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, the AGF 2.0 does not generate any particles $> 2 \mu\text{m}$ thanks to its cyclone.
- Due to the fact that the AGF generates virtually no droplets $> 2 \mu\text{m}$, the consumption of materials is very low, thus ensuring a long dosing time.

Datasheet

Parameter	Description
Volume flow	
	12 – 45 l/min
Dimensions	
	200 • 260 mm (Ø • l)
Weight	
	approx. 8 kg
Particle material	DEHS, DOP, Emery 3004, paraffin oil, other non-resinous oils
Dosing time	
	> 24 h
Mass flow (particles)	
	up to 4 g/h (DEHS)
Compressed air connection	
	Quick coupling
Aerosol outlet connection	Ø _{inside} = 6 mm, Ø _{outside} = 8 mm
Special features	
	Pressure-tight up to 10 bar
Mean particle diameter (number)	0.25 µm
Biggest particle diameter	2 µm
Filling quantity	300 ml

Applications

- **Filter testing, quality control**
 - Filter cartridges
 - Car interior filters
 - Filter media, particulate air filters
 - Compressed air 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
- **Clean room technology**
 - Acceptance tests and leak tests as per ISO 14644 and VDI 2083
 - Leak tests, fit testing
 - Recovery tests
- **Calibration of counting particle measurement methods**
 - Nebulisation of latex suspensions < 1 µm
- **Smoke detector tests**

Palas GmbH
Partikel- und Lasermesstechnik
Greschbachstrasse 3 b
76229 Karlsruhe
Germany

Managing Partner:
Dr.-Ing. Maximilian Weiß
Commercial Register:
register court: Mannheim
company registration number: HRB 103813
USt-Id: DE143585902



Contact: E-Mail: mail@palas.de Internet: www.palas.de Tel: +49 (0)721 96213-0 Fax: +49 (0)721 96213-33