

AGF 2.0 D



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:

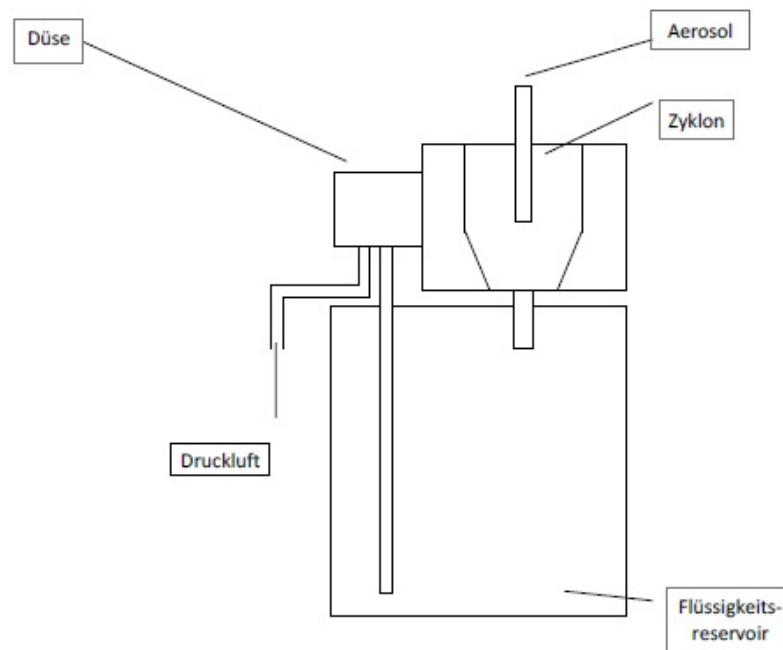


Fig. 2: Schematic diagram of the aerosol generator

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 $2 \mu\text{m}$. As a result, virtually no particles $> 2 \mu\text{m}$ 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 suction 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.

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

Table 1: Overview of the AGF and UGF systems

	Dimensions WxHxD mm	Weight Kg	Volume l/m	m_{max}^* g/h	dp_{mean}^{***} μ m	d_{max} μ m	115/230 V 50/60 Hz	Pressure tight up to 10 bar	Compressed air sup- ply
AGF 2.0	300x325x175	Approx. 9	6 - 17	4	0.25	2			x
AGF 2.0 ip	300x325x175	Approx. 15	12 - 14	2	0.25	2	x		
AGF 10.0	Ø240x385	Approx. 4	14 - 35	20	0.5	10			x
AGF 2.0 D	Ø200x260	Approx. 8	12 - 45	4	0.25	2		x	x
AGF 10.0 D	Ø200x300	Approx. 8	14 - 35	20	0.5	10		x	x
AGF 2.0 B**	Ø210x300	Approx. 4	6 - 25	4	0.25	2			x
UGF 2000	270x200x175	Approx. 4	Approx. 1 - 13	1.5	0.2	1.5			x

Table 2: Overview AGF System

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 $> 2 \mu$ m thanks to its cyclone.
- Due to the fact that the AGF generates virtually no droplets $> 2 \mu$ m, the consumption of materials is very low, thus ensuring a long dosing time.

DATASHEET

Volume flow	12 – 45 l/min
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	$\varnothing_{\text{inside}} = 6 \text{ mm}$, $\varnothing_{\text{outside}} = 8 \text{ mm}$
Mean particle diameter (number)	0.25 μm
Particle diameter (maximum)	2 μm
Special features	Pressure-tight up to 10 bar
Filling quantity	300 ml
Dimensions	200 • 260 mm (\varnothing • L)

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**



Mehr Informationen:
<https://www.palاس.de/product/agf2d>