

# AGF 10.0 D



## DESCRIPTION

Unlike the AGF 10.0, the AGF 10.0 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 10.0 D

The AGF series aerosol generators are able to atomize liquids with a binary nozzle. Fig. 2 presents a schematic arrangement of the AGF 10.0 D generator components:

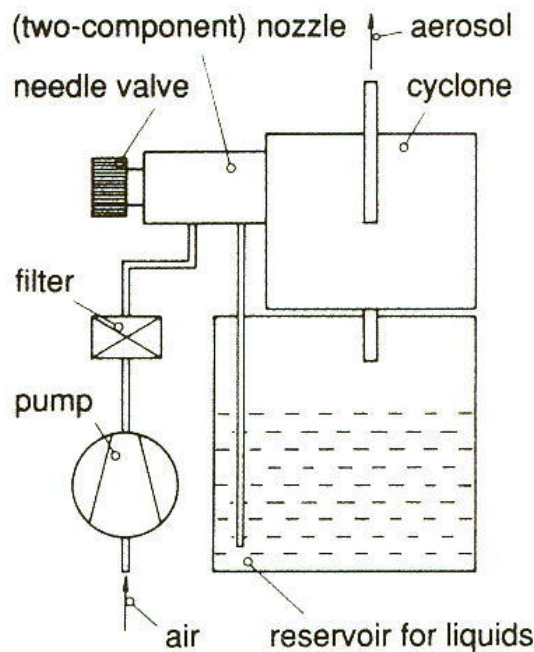


Fig. 2: Schematic diagram of the aerosol generator

### 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 10.0 D should be determined using a pressure-tight flow meter and must be between 12 and 22 L/min. The negative pressure in the nozzle suction draws 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	Volume l/m	$m_{max}^*$ g/h	$dp_{mean}^{***}$ μm	$d_{max}$ μm	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

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

Table 1: Overview of the AGF and UGF systems

## BENEFITS

- Generation of high mass flows of up to approx. 25 g/h
- 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
- Long dosing time

## DATASHEET

Volume flow	14 – 35 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)	< 20 g/h (DEHS)
Compressed air connection	Quick coupling
Aerosol outlet connection	$\varnothing_{\text{inside}} = 20 \text{ mm}$ , $\varnothing_{\text{outside}} = 30 \text{ mm}$
Mean particle diameter (number)	0.5 $\mu\text{m}$
Particle diameter (maximum)	10 $\mu\text{m}$
Special features	Pressure-tight up to 10 bar
Filling quantity	300 ml
Dimensions	200 • 300 mm ( $\varnothing$ • L)

## 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  $\mu\text{m}$
- **Smoke detector tests**



Mehr Informationen:  
<https://www.palas.de/product/agf10d>