PLG 2100



The PLG 2100 uses a nozzle system developed by Palas . Depending on the application, a special nozzle that is able to be heated to 120°C is used in order to enable quick and reproducible adjustment to the desired particle size distribution and concentration. Among other uses, the PLG 2100 is used on the HMT 1000 filter test rig to test oil nebulizers in order to disperse a corresponding motor oil, e.g. 10w-40.

The heating of the oil changes the number concentration, as well as particle size distribution, of the material to be dispersed due to a change in the viscosity. This additionally enables materials to be dispersed which are unable to be nebulized at cooler temperatures due to their viscosity. The PLG 2100 is equipped with two replaceable nozzles: Nozzle 1 for low mass flows of up to 20 g/h max. (depending on the aerosol substance in use), nozzle 2 for high mass flows of up to 100 g/h max. (depending on the aerosol substance in use).

Model Variations



PLG 2100 S
Version with automatic refill unit

OPERATION PRINCIPLE

AEROSOL GENERATOR FOR THE DEFINED ATOMIZATION OF OILS

The liquid to be dispersed is filled in the reservoir. The nozzle system developed by Palas® is immersed in the liquid. This nozzle system is based on the Laskin principle and guarantees extremely precise dosing constancy with uniform particle size. The mass flow is adjusted using the volume flow through the nozzle. A pressure regulator and a manometer on the device control the volume flow.

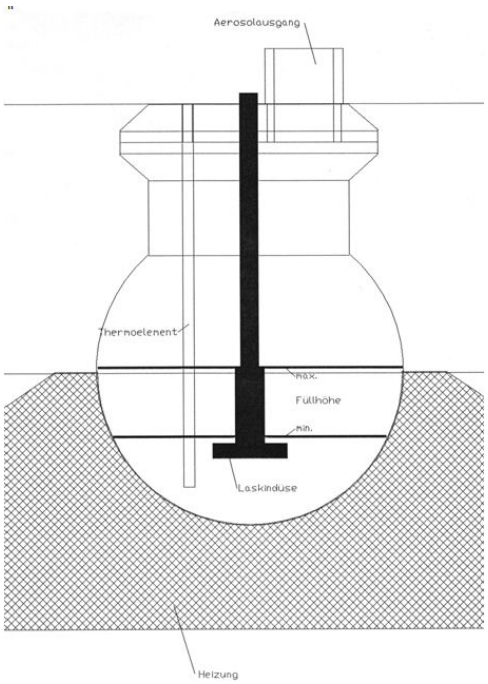


Fig. 1: Schematic diagram of the PLG 2100 aerosol generator

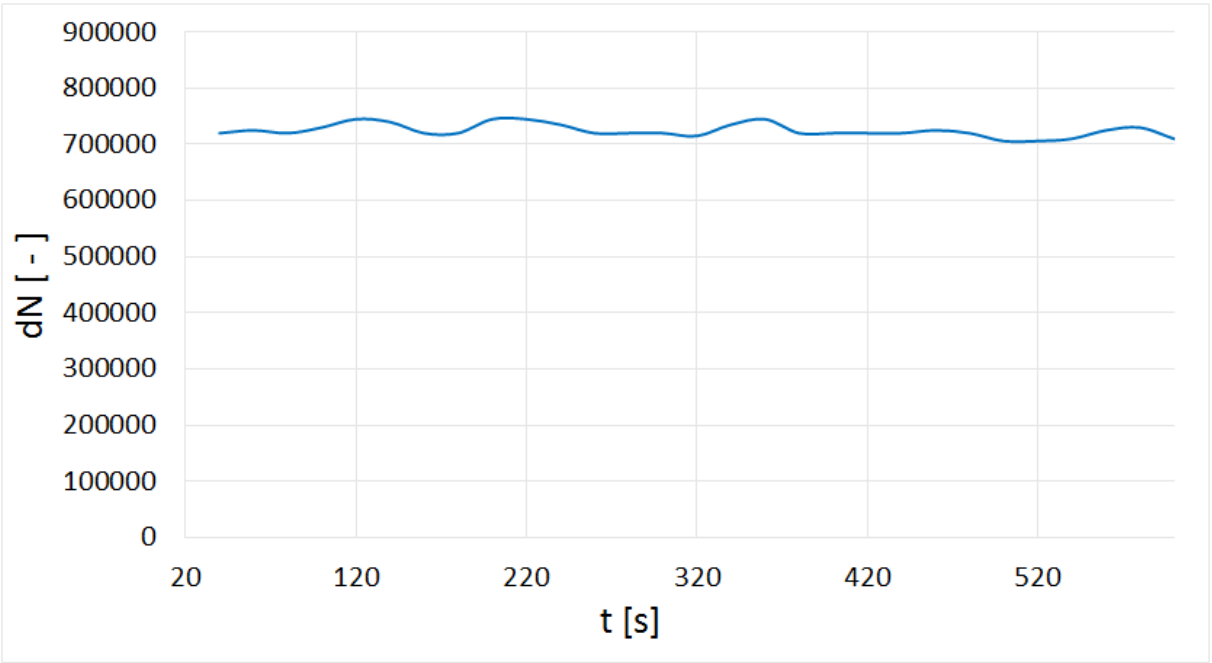


Fig. 2: Highly constant particle concentration over time at a resolution of 30 s

BENEFITS

- Excellent short-term and long-term dosing constancy
- Heatable
- Best reproducibility with respect to particle size distribution and particle concentration
- Large mass volume range (very low and very high)
- Long dosing time over several days with automatic refilling (optional)
- Robust design (optionally resistant against chemically aggressive liquids)
- Compact and light
- Easy to operate, proven in industrial applications

DATASHEET

Volume flow	3 – 110 l/min
Mass flow (particles)	< 100 g/h (white oil)
Filling quantity	1,000 ml
Power supply	115 – 230 V, 50/60 Hz
Aerosol outlet connection	$Ø_{inside}$ = 32 mm, $Ø_{outside}$ = 42 mm
Mean particle diameter (number)	1.5 μm
Dimensions	440 • 380 • 380 mm (H • W • D)
Weight	Approx. 16 kg
Special features	Heatable up to 120°C

Applications

- Filter industry/oil separators
  - Determination of separation efficiency
  - Determination of fractional separation efficiency
  - Loading test
- Test of cooling lubricant separators
- Used on the HMT 1000 filter test rig to test oil nebulizers
- Comparison of particle measurement devices
- Tracer particles
- Flow visualization

Mehr Informationen:
https://www.palas.de/en/product/plg2100