



## Product data sheet

### Glowing wire generator



#### Applications

- Filter industry
- Chemical engineering
- Chemical and pharmaceutical industry
- Aerosol research

#### Benefits

- Metal and oxide particles in the single digit nanometer size range
- High number concentrations
- High purity particles
- No combustion products or vapors in the gas phase

## Description

Particle generator for metal particles in the size range well below 100 nm at high concentrations. Operation with nitrogen or argon is possible. The housing is vacuum tight and made of stainless steel with standard vacuum flange connectors. Electrodes for the electrical connection of the wire are isolated in PTFE. Swagelok connectors for 6 or 8 mm tubing for the gas- and aerosol lines are provided. A power supply with 0-10 A and 0-10V

output, input 50Hz 240 V is used to heat the wire for particle production. The aerosol output is controlled variation of the electric current. Fig. 1 shows measurements taken with the Palas USMPS- system at 8 and 10 A. The data shows that the current allows for a good control over the particle size distribution. The stability of the aerosol over time is shown by repeated measurements over the course of 30 min.

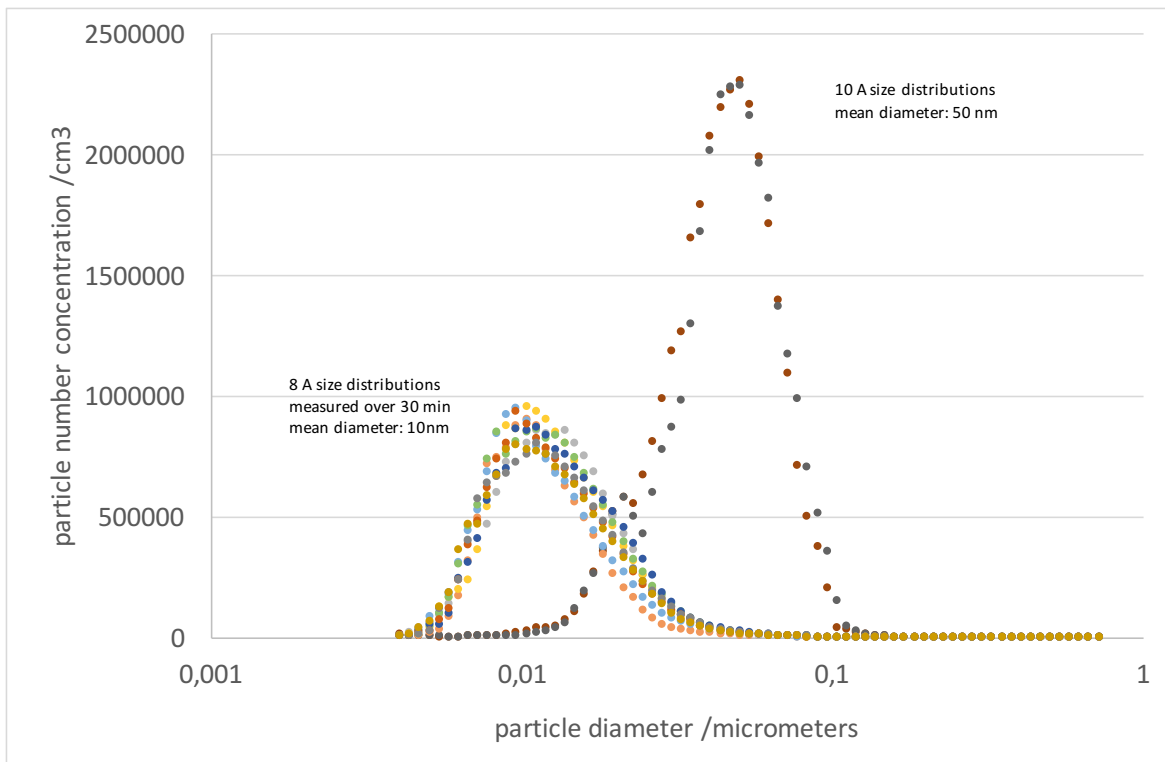


Fig.1: size distributions for Pt particles at 8 A and 10 A and a flow rate of 1 l/min of nitrogen. For 8 A repeated measurements over the duration of 30 min are shown, indicating the stability of the system

## Specifications

<b>Type:</b>	ParteQ GWG model I
<b>Medium</b>	Argon/nitrogen
<b>Size range</b>	4-20 nm
<b>Pre-pressure</b>	1 bar a
<b>Connection</b>	6 mm/ 8mm
<b>Material</b>	Stainless steel
<b>Seal material</b>	FKM
<b>Power supply</b>	0-10 A and 0-10V output, input 50Hz 240 V