# MAG 3000


The MAG 3000 operates based on the Sinclair-LaMer principle (1943). It comprises a core source to generate condensation cores with a particle diameter of approx. 85 nm, a vaporizer to vaporize the particle-forming material, a reheating unit, and a condensation flue, in which the particle-forming material condenses on the condensation core. The condensation process here is heterogeneous.

## Benefits

- Particle size adjustable from approx. 0.2 to 8 $\mu$m for DEHS (other particle materials upon request)
- Reproducible particle size adjustment (uncharged aerosols)
- Minimal use of the saline solution, approx. 20 mL in 10 h
- No drying system, no silica gel
- Reliable bypass adjustments for the evaporator and core source
- Rapid particle size modification up to factor 2.5 within approx. 10 seconds using the bypass adjustments
- Robust design
- Reliable function, high reproducibility
- Low maintenance
- Reduces your operating expenses

## Applications

- Calibrating particle measurement devices
- Comparison of device parameters about particle size:
  - Resolution capacity
  - Classification accuracy
  - Lower counting efficiency rate
  - Upper counting efficiency rate
  - Border zone error
- Inhalation tests
- Tracer particles/flow visualization
- Filter inspection

## DATASHEET

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|---|---|---|---|
| Maximum particle number concentration | $10^6$ particles/$cm^3$ | Volume flow | 3.5 – 4.5 l/min |
| Filling quantity | 300 ml (DEHS), 70 ml (salt solution) | Power supply | 115 – 230 V, 50/60 Hz |
| Particle material | DEHS, others on request | Carrier/dispersion gas | $N_2$ |
| Aerosol outlet connection | Outlet 1: $Ø_{inside}$ = 8 mm, $Ø_{outside}$ = 10 mm; Outlet 2: $Ø_{inside}$ = 18 mm, $Ø_{outside}$ = 20 mm | Mean particle diameter (number) | 0.2 – 8 $\mu$m (DEHS) |
| Geometric standard deviation (number) | < 1,15 | Dimensions | 610 • 300 • 300 mm (H • W • D) |
| Weight | Approx. 22 kg | | |