BEG 1000



Many research, development, and quality assurance applications require solid particle aerosols from powders and dusts.

For over 20 years, the BEG 1000 has been successfully used for the reliable dispersion of non-cohesive powders, e.g., to generate test dusts and flame soot within the size range of < 100 nm - 200 μm. The unique advantage of this dispersion system is that it can be used continuously with high dosing constancy for low mass flows of up to 8 g/h with the BEG 1000 A and for high mass flows of up to 6 kg/h with the BEG 1000 B. The unique built-in components in the reservoir, the smooth conveyor belt, and the special ejector dispersion nozzle enable the BEG 1000 to provide a finely dispersed aerosol with optimal dosing constancy.

Model Variations



BEG 1000 A
Version with dispersing nozzle for low mass flows of approx. 8 g/h – 550 g/h



BEG 1000 B
Version with dispersing nozzle for high mass flows of approx. 100 g/h – 6 kg/h



BEG 1000 C
Version with dispersing nozzle for highest mass flows of approx. 350 g/h – 7.3 kg/h

OPERATION PRINCIPLE

GENERATION OF TEST AEROSOLS FROM POWDER, DUST, POLLEN

The powder to be dispersed is simply poured into the reservoir (see Fig. 1). A stirrer at the bottom of the reservoir ensures uniform loading of the conveyor belt. A rabble arm and various built-in components prevent bridging in the reservoir.

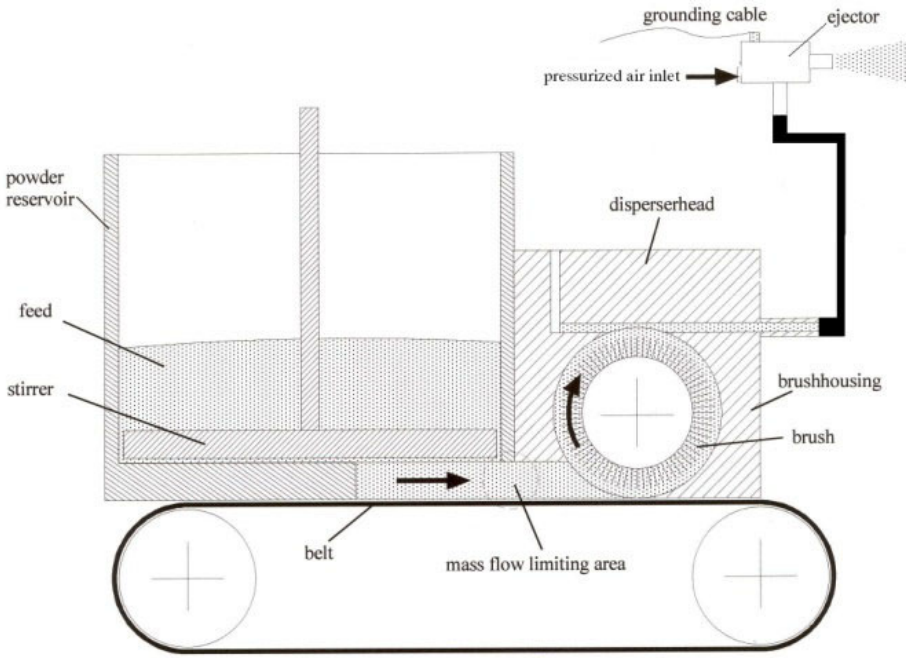


Fig. 1: Principle of operation of the BEG 1000/BEG 2000

The desired mass flows can be continuously and reproducibly adjusted with a controlled drive on the conveyor belt The even, smooth conveyor belt, the built-in components in the reservoir, and the precise drive on the conveyor belt ensure excellent dosing constancy.

The system can be operated in ″powder″/″no powder″ pulse mode with the ″Stop″ and ″Belt″ control keys and an electric timer switch in cycles of up to 5 sec, depending on the mass flow.

The ejector nozzles we developed provide excellent dispersion for various volume flows.

Benefits

- Excellent short-term and long-term dosing constancy
- Easy to operate
- Quick and easy to clean
- Remote control or computer-controlled
- Pulse mode
- Easy to fill while in operation
- Large reservoir (1,500 cm^3)
- Robust design, proven in industrial applications

- Reliable function
- Reduces your operating expenses
- Low maintenance

DATASHEET

Particle size range	0.1 – 200 μm
Maximum particle number concentration	Ca. 10^7 particles/cm^3
Volume flow	80–165 Nl/min
Mass flow (particles)	Type A: 8 g – 550 g/h (with reference to SAE Fine, A2 dust), Type B: 100 – 6,000 g/h (with reference to SAE Fine, A2 dust), Type C: 350 – 7,300 g/h (with reference to SAE Fine, A2 dust)
Filling quantity	500 g
Power supply	115 – 230 V, 50/60 Hz
Particle material	Non-cohesive powders and bulks
Dosing time	Several hours nonstop
Pre-pressure	4 – 8 bar
Carrier/dispersion gas	Random (generally air)
Compressed air connection	Quick coupling
Aerosol outlet connection	Type A: $Ø_{inside}$ = 6.4 mm, $Ø_{outside}$ = 10 mm | Type B: $Ø_{inside}$ = 8 mm, $Ø_{outside}$ = 12 mm | Type C: $Ø_{inside}$ = 8 mm, $Ø_{outside}$ = 12 mm
Reservoir volume	1,500 cm^3
Dimensions	Dosing unit: 610 • 260 • 340 mm (H • W • D), control unit: 195 • 260 • 340 mm (H • W • D)

Applications

- Filter industry: Loading test of
  - Engine filters as per ISO 5011
  - Hot gas filters
  - Bag filters
  - Air filters
  - Cyclones
- Chemical and pharmaceutical industry
- Cement industry

Mehr Informationen:
https://www.palas.de/en/product/beg1000