BEG 3000

Test aerosols from powder, dust, pollen, etc.; mass flow approx. 8 g/h – 7.3 kg/h; with automatic mass flow monitoring and refill unit

Model Variations

BEG 3000 A
Powder disperser with weighing unit for low mass flows of approx. 8 g/h – 550 g/h; mass flow monitoring and control with automatic refill unit

BEG 3000 B
Powder disperser with weighing unit for low mass flows of approx. 100 g/h – 6 kg/h; mass flow monitoring and control with automatic refill unit

BEG 3000 C
Powder disperser with weighing unit for highest mass flows of approx. 350 g/h – 7.3 kg/h; mass flow monitoring and control with automatic refill unit

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Description

With automatic mass flow control and automatic refill unit The refill system (see Figure) that was developed to automatically refill the BEG 3000 ensures uninterrupted dispersion over several days. The dosing unit on the BEG 3000 is continuously weighed for automatic mass flow control. The data from a touchscreen PC are continuously acquired and analyzed via a serial interface. As a result, the dispersed quantity of powder is always known and able to be automatically adjusted. **Dosing output on the BEG 3000 controlled using internal firmware**

- Input of the mass flow in g/h
- Automatic mass flow control
- Recording of powder-specific calibration curves
- External control via PC or Modbus RTU
- Network-compatible

Function 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 in the reservoir prevent bridging in the reservoir.

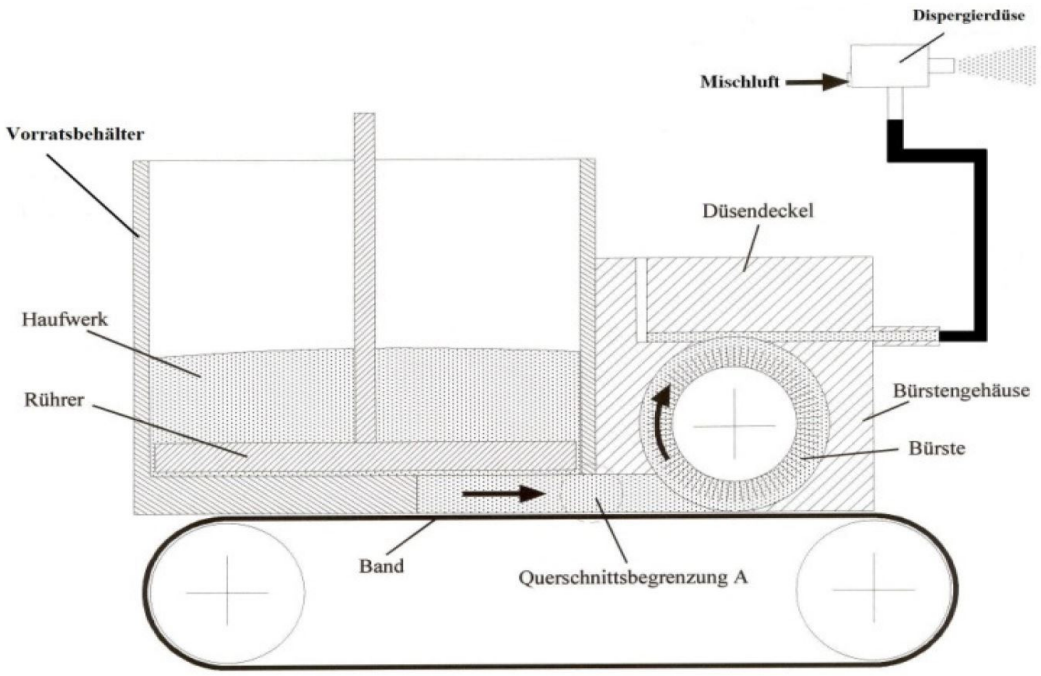

Fig. 1: Principle of operation of the BEG 1000/BEG 2000/BEG 3000

Dosing The desired mass flows are able to 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. **Pulsed operation** 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. **Dispersing** The ejector nozzles we developed provide excellent dispersion for various volume flows.

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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 (1500 cm^3)
- Automatic mass flow control with the BEG 2000
- Long dosing time over several days with the BEG 3000
- Robust design, proven in industrial applications
- Reliable function
- Reduces your operating expenses
- Low maintenance

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Datasheet

Parameter	*Description*
Volume flow	5 – 10 m^3/h
Power supply	115 – 230 V, 50 – 60 Hz
Particle material	Non-cohesive powders and bulks
Dosing time	Several hours nonstop
Maximum particle number concentration	ca. 10^7 particles/cm^3
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)
Particle size range	0.1 – 200 µm
Carrier/dispersion gas	random (generally air)
Pre-pressure	4 – 8 bar
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
Filling quantity	15 kg

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Applications

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

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