BEG 1000 / BEG 2000 / BEG 3000

Powder disperser
for medium and high mass flows

Fig. 1: **BEG 1000**

Solid aerosols from powders and dusts are needed for many applications in research, development and quality control.

For more than 20 years the BEG 1000 has been used successfully for the reliable dispersing of non-cohesive powders, like for example test dusts, in the size range < 200 µm up to flame soot in the size range < 100 nm.

The special advantage of this dispersion system is the fact that it can be used continuously with highest dosing constancy, both for low mass flows with the **BEG 1000 type A** (e.g. **8 g/h**) and for high mass flows with the **BEG 1000 type B** (e.g. **6 kg/h**).

Due to the special built-in components in the reservoir, the plane conveyor belt and the special ejector dispersion nozzle, the BEG 1000 supplies a finely dispersed aerosol with highest dosing constancy.

Generating very low mass flows

For the generation of very low mass flows starting from 40 mg/h the Palas® powder disperser RBG 1000 has been successfully used world-wide for more than 25 years (see product data sheet RBG).

Particular advantages:

- Very good short-time and long-time dosing constancy
- Easy handling
- Quick and simple cleaning
- Remote control or computer control
- Pulsed operation
- Filling during operation
- Big 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 and tested in industrial applications
- Reliable function
- Reduces your operating expenses
- Low maintenance

Application examples:

- Filter industry: loading test of
    - Engine filters according to ISO 5011
    - Hot gas filters
    - Baghouse filters
    - Air filters
    - Cyclones
- Chemicals and pharmaceutical industry
- Cement industry

Technical data:

- Particle material: non-cohesive powders and dusts
- Particle size: < 200 µm
    - Mass flow dependent on powder:
      Type A ≈ 8 g/h – 550 g/h*
      Type B ≈ 100 g/h – 6 kg/h*
      ***related to SAE Fine, A2 dust**
- Volume flow: ≈ 5 – 10 m^3/h
- Electrical connection: 115/230 V; 50/60 Hz
- Dimensions BEG 1000 (HxWxD)
    - Dosing unit: 610 x 260 x 340 mm
    - Control unit: 195 x 260 x 340 mm
- Volume of the reservoir: 1500 cm^3

Accessories:

- Transportation case for BEG 1000
- Compressed air adapter
- Cleaning brush

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BEG 1000 / BEG 2000 / BEG 3000
Quality in Detail

Function
The powder to be dispersed is simply poured into the reservoir (see Figure 2). A stirrer at the bottom of the reservoir ensures the constant loading of the conveyor belt. A rabble arm and different built-in components in the reservoir prevent the bridging of the powders.

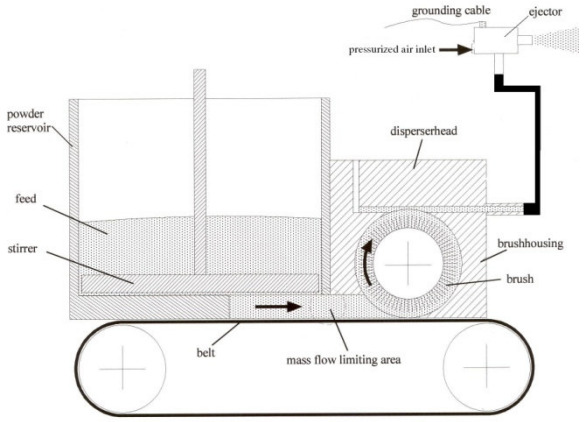

Fig. 2: Schematic of the BEG 1000 / BEG 2000

Dosing
The desired mass flows can be adjusted continuously and reproducibly with a regulated drive of the conveyor belt. The even, plane conveyor belt, the built-in components in the reservoir and the precise drive of the conveyor belt provide a very good dosing constancy.

Pulsed operation
With the control keys „stop "and „belt" or via an electrical timer a pulsed operation - dust/no dust - is possible in dependence of the mass flow within a cycle up to 5 s.

Dispersing
The very good dispersion effect is realized with internally developed ejector nozzles for different volume flows.

BEG 2000
with automatic mass flow control

For the automatic mass flow control, the dosing unit of the BEG 2000 is continuously weighed.

Via a serial interface, the data are continuously registred and evaluated by a touchscreen PC.

Thus, the quantity of powder dispersed is always known and can be readjusted automatically.

Fig.3: BEG 2000

Controlling the dosing output via internal firmware at the BEG 2000
- Input of the mass flow in g/h
- Automatic mass flow control
- Recording of dust specific calibration curves
- External control via PC or Modbus RTU
- Network-compatible

Technical data BEG 2000:
- Working range balance BEG 2000 dosing unit = 30 kg
- Tare weight BEG 2000 dosing unit = 12,5 kg
- Power supply: 115/230 V; 50/60 Hz (optional)
- Power input: 200 W

BEG 3000
with automatic mass flow control and automatic refill unit

The refill unit BRU 2000 (see Figure 4), which was developed for the automatic refilling of the BEG 1000, allows a dispersion without interruption over several days.

Fig. 4: BEG 3000 (Aerosol generator BEG 2000 with automatic refill unit BRU 2000)

Technical data BEG 3000:
- Powder reserve dosing chute ≈ 10 kg
- Working range balance dosing chute = 30 kg
- Tare weight dosing chute ≈ 20 kg
- Power supply: 115/230 V; 50/60 Hz (optional)
- Power input: 200 W

The technical data on this sheet are for information only. They are subject to change without notice.
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