RBG solo

Low-concentration solid particle aerosols produced from powders are required for many research, development, and quality assurance applications and calibrating particle measurement devices. The RBG system disperses reliable non-cohesive powders such as mineral dusts, active pharmaceutical ingredients, pollen, etc., in the size range of < 200 μm and with a fine fraction of < 100 nm. Monolithic solid materials like blackboard chalk are finely dispersed with the highest dosing constancy.The unique advantage of this dosing and dispersion system is that in the RBG system, mass flows range from approx. 40 mg/h up to approx. 800 g/h are dispersed with the highest level of dosing constancy.

RBG solo has an integrated pump and can be operated independently of a compressed air supply.

Benefits

- Very high short-term and long-term dosing constancy
- Dispersion of virtually all non-cohesive dusts
- Easy and fast exchange of different solid material reservoirs and dispersing covers
- Integrated pump replaces compressed air supply
- Remote operation with included software
- Device easy to clean
- Little maintenance required
- Low operating expenses

Features

- Integrated pump for operation without compressed air supply
- Automatic determination and adjustment of the mass flow
- Pulse mode with cycle lengths down to one second
- Five interchangeable solid material reservoirs (Ø 7 to 32 mm)
- Four interchangeable dispersing covers for different particle sizes
- Remote operation via included software on Windows computer or tablet

Applications

- Filter industry:
  - Determination of fractional separation efficiency
  - Determination of total separation efficiency
  - Long-term dusting
  - Filter media and ready-made filters
  - Dust removal filters
  - Vacuum cleaners and vacuum cleaner filters
  - Car interior filters
  - Engine air filters
- Calibration of particle measurement devices
- Flow visualization
- Inhalation tests
- Tracer particles for LDA, PIV, etc.
- Coating of surfaces

DATASHEET

Particle size range	0.1 – 200 μm
Maximum particle number concentration	Approx.10^7 particles/cm³
Volume flow	8 – 40 Nl/min
Mass flow (particles)	0.04 – 800 g/h (with an assumed compacted density of 1 g/cm^3)
Filling height	110 mm
Filling quantity	2.7 g (reservoir Ø = 7 mm), 5.5 g (reservoir Ø = 10 mm), 17 g (reservoir Ø = 14 mm), 35 g (reservoir Ø = 20 mm), 88 g (reservoir Ø = 32 mm) (with an assumed compacted density of 1 g/cm^3)
Interfaces	USB type B
Power supply	115 – 230 V, 50/60 Hz
Particle material	Non-cohesive powders and bulks
Dosing time	Several hours nonstop
Carrier/dispersion gas	Air, nitrogen
Maximum counter pressure	0.1 barg
Compressed air connection	Quick coupling
Feed rate	1 – 1,000 mm/h
Reservoir inner diameter	7, 10, 14, 20, 32 mm
Aerosol outlet connection	Øinside= 5 mm, Øoutside = 8 mm
Dispersion lid	Type A, type B, type C, type D
Dimensions	515 • 330 • 240 mm (H • W • D)
Weight	Approx. 19 kg