

# RBG 1000



Low-concentration solid particle aerosols produced from powders are required for many research, development, and quality assurance applications and for calibrating particle measurement devices.

For more than 25 years, the RBG system has been used worldwide with great success for the reliable dispersion of non-cohesive powders such as mineral dusts, active pharmaceutical ingredients, pollen, etc., in size range of  $< 100 \mu\text{m}$  and with a fine fraction of  $< 100 \text{ nm}$ . Also, monolithic solid materials such as blackboard chalk are finely dispersed with the highest dosing constancy.

The unique advantage of this dosing and dispersion system is that in the case of the RBG 1000, mass flows ranging from approx. 10 mg/h up to approx. 430 g/h are dispersed with the highest level of dosing constancy. Optional:

- Pressure-resistant up to 3 bar
- Low-pressure operation from 300 mbar (absolute pressure), operation with nitrogen

## BENEFITS

- Highest short-term and long-term dosing constancy
- Disperses virtually all non-cohesive dusts
- Easy exchange of different solid material reservoirs and dispersing covers
- Easy determination and adjustment of the mass flow
- Pulse mode
- Device easy to clean
- Quick and easy to operate
- Reliable operation
- Little maintenance required
- Reduces your operating expenses

## 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
- Calibration of particle measurement devices
- Flow visualization
- Inhalation tests
- Tracer particles for LDA, PIV, etc.

## MODEL VARIATIONS

... model available in additional variations

## DATASHEET

Particle size range	0.1 – 100 $\mu\text{m}$	Maximum particle number concentration	Ca. $10^7$ particles/ $\text{cm}^3$
Volume flow	0.5 – 5.0 $\text{m}^3/\text{h}$	Mass flow (particles)	0.04 – 430 g/h (with an assumed compacted density of 1 $\text{g}/\text{cm}^3$ )
Filling height	70 mm	Filling quantity	2.7 g (reservoir $\varnothing = 7$ mm), 5.5 g (reservoir $\varnothing = 10$ mm), 10.8 g (reservoir $\varnothing = 14$ mm), 22 g (reservoir $\varnothing = 20$ mm), 43 g (reservoir $\varnothing = 28$ mm)
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)	Maximum counter pressure	0.2 barg
Compressed air connection	Quick coupling	Feed rate	5 – 700 mm/h
Reservoir inner diameter	7, 10, 14, 20, 28 mm	Aerosol outlet connection	Dispersion cover type A: $\varnothing_{\text{inside}} = 5$ mm, $\varnothing_{\text{outside}} = 8$ mm Dispersion cover type B: $\varnothing_{\text{inside}} = 3.6$ mm, $\varnothing_{\text{outside}} = 6$ mm Dispersion cover type: $\varnothing_{\text{inside}} = 2.5$ mm, $\varnothing_{\text{outside}} = 6$ mm
Dispersion cover	Type A, type B, type C, type D	Dimensions	465 • 320 • 200 mm (H • W • D)
Weight	Approx. 19 kg		