

RBG 2000



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

For more than 25 years, the RBG system has been successfully used worldwide for the reliable dispersion of non-cohesive powders, e.g., mineral dusts, active pharmaceutical ingredients, pollen, etc., within the size range of $< 100 \mu\text{m}$ and with a fine fraction of $< 100 \text{ nm}$. Monolithic solid materials, e.g., blackboard chalk, are finely dispersed with optimal dosing constancy.

The difference between RBG 2000 and RBG 1000 make the feedstock reservoirs of RBG 2000, which are longer than the feedstock reservoirs of RBG 1000, and the availability of a reservoir with a bigger diameter. The fill level of the feedstock reservoir of RBG 2000 is 180 mm. Thus, the unique advantage of RBG 2000 compared to RBG 1000 is that the dosing time with the same mass flow can be extended by more than a factor of 3. Mass flows of between approx. 200 mg/h and 560 g/h are dispersed with optimal dosing constancy.

Optional: Pressure-resistant up to 3 bar

BENEFITS

- Optimal short-term and long-term dosing constancy
- Double the dosing time in comparison with the RBG 1000
- Disperses virtually any non-cohesive dusts
- Easy to switch out different solid material reservoirs and dispersion covers
- Easy to determine and adjust the mass flow
- Able to adjust higher mass flows than the RBG 1000
- Pulse mode
- Easy to clean
- Quick and easy to operate
- Reliable function
- Low maintenance
- Reduces your operating expenses

APPLICATIONS

- Filter industry
 - Determination of fractional separation efficiency
 - Determination of total separation efficiency
 - Long-term dusting
 - Filter media and assembled filters
 - Dust filters
- Calibrating particle measurement devices
- Flow visualization
- Inhalation experiments
- Tracer particles for LDV, PIV, etc.

MODEL VARIATIONS

... model available in additional variations

DATASHEET

Particle size range	0.1 – 100 μm	Maximum particle number concentration	Ca. 10^7 particles/ cm^3
Volume flow	40 – 80 Nl/min	Mass flow (particles)	1 – 560 g/h (with an assumed compacted density of 1 g/cm^3)
Filling height	180 mm	Filling quantity	36 g (reservoir $\varnothing = 16$ mm), 56 g (reservoir $\varnothing = 20$ mm), 110 g (reservoir $\varnothing = 28$ mm), 144 g (reservoir $\varnothing = 32$ 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	16, 20, 28, 32 mm	Aerosol outlet connection	Dispersion cover type A: $\varnothing_{\text{inside}} = 5$ mm, $\varnothing_{\text{outside}} = 8$ mm; Dispersion cover type D: $\varnothing_{\text{inside}} = 5$ mm, $\varnothing_{\text{outside}} = 8$ mm
Dispersion cover	Type A, Type D	Dimensions	1.160 • 530 • 500 mm (H • B • T)
Weight	Approx. 40 kg		