



Pressure-resistant at positive pressure values of up to 3 bar, also nitrogen as a dispersing gas

Description

This device disperses particles at positive pressure values of up to 3 bar and is able to use, besides air, nitrogen as dispersion gas. **Please note:** The 16-, 20-, and 28-mm solid material reservoirs are pressure-resistant; the 32-mm solid material reservoir is not pressure-resistant. The solid material reservoir with a diameter of 32 mm is able to be used in the RBG 2000 SD exclusively under atmospheric conditions. Nitrogen cannot be used as the dispersing gas in the pressure-resistant version of the RBG 2000.

RBG 1000				
Reservoir Ø	Fill quantity	Feed rate 1 mm/h	Feed rate 5 mm/h	Feed rate 700 mm/h
7 mm	2.7 g	38 mg/h	190 mg/h	27 g/h
10 mm	5.5 g	79 mg/h	395 mg/h	55 g/h
14 mm	10.8 g	154 mg/h	770 mg/h	107 g/h
20 mm	22 g	314 mg/h	1570 mg/h	219 g/h
28 mm	43 g	616 mg/h	3080 mg/h	430 g/h
RBG 2000				
16 mm	36 g	0.2 g/h	1 g/h	140 g/h
20 mm	56 g	0.3 g/h	1.5 g/h	220 g/h
28 mm	110 g	0.6 g/h	3 g/h	430 g/h
32 mm	144 g	0.8 g/h	4 g/h	562 g/h

Table 1: Mass flows of RBG system (compacted density 1 g/cm³)

	Particle size	Reservoir ∅	Volume flows
Cover A	<0,1–100 µm	7-32 mm	2–5 m ³ /h
Cover B	<0,1–100 µm	7, 10 and 14 mm	1–2.5 m ³ /h
Cover C	<0.1–100 µm	7 mm	0.5–1.2 m ³ /h
Cover D	200–1000 µm	7-32 mm	2–5 m ³ /h

Table 2: Dispersion covers

	Feed rate mm/h	Reservoir ∅ mm	Reservoir length mm
RBG 1000	700	7–28	70
RBG 1000 D	700	7–20	70
RBG 1000 G	300	7–28	70
RBG 1000 GD	300	7–20	70
RBG 1000 L	700	10, 14	70
RBG 1000 SD	700	7-20	70
RBG 1000 SG	300	7-20	70
RBG 1000 I	700	7-28	70
RBG 1000 ID	700	7-20	70
RBG 1000 ISD	700	7-20	70
RBG 2000	700	16 - 32	180
RBG 2000 D	700	16, 20, 28	180
RBG 2000 SD	700	16, 20, 28	180

Table 3: Different versions of the RBG system I = version for inhalation= pressure-resistant= low feed rate= easily removable and weighable dosing unit= nitrogen version

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

Datasheet

Parameter	Description
Volume flow	2.5 – 5.0 m ³ /h
Power supply	115/230 V, 50 – 60 Hz
Dimensions	1,160 • 530 • 500 mm (H • W • D)
Weight	approx. 40 kg
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)	1 – 560 g/h (with an assumed compacted density of 1 g/cm ³)
Particle size range	0.1 – 100 µm
Carrier/dispersion gas	random (generally air)
Pre-pressure	4 – 8 bar
Feed rate	5 – 700 mm/h
Reservoir diameter	16, 20, 28, 32 mm
Maximum counter pressure	200 mbar _g
Reservoir length	180 mm
dispersion cover	Type A, type D
Compressed air connection	Quick coupling
Aerosol outlet connection	Dispersion cover type A: Ø _{inside} = 5 mm, Ø _{outside} = 8 mm; Dispersion cover type D: Ø _{inside} = 5 mm, Ø _{outside} = 8 mm
Filling quantity	36 g (reservoir Ø = 16 mm), 56 g (reservoir Ø = 20 mm), 110 g (reservoir Ø = 28 mm), 144 g (reservoir Ø = 32 mm)

Applications

- Filter industry
 - Determination of fractional separation efficiency
 - Determination of total separation efficiency
 - Long-term dusting
 - Filter media and assembled filters
 - Dust filters
 - Vacuum cleaners and vacuum filters
 - Car interior filters
 - Engine air filters
- Calibrating particle measurement devices
- Flow visualization
- Inhalation experiments
- Tracer particles for LDV, PIV, etc.
- Surface coatings

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