



RBG SYSTEM

AEROSOL GENERATOR

For dust and powders

Made in Germany

Fast. Simple. Reproducible.

RBG SYSTEM

Low-concentration solid particle aerosols produced from dust and powders are required for many applications in research, development, and quality assurance and for the calibration of particle measurement devices.

A high level of dispersion constancy is required for those substances to the point of lowest dosing rates. Additionally, a good reproducibility during aerosol generation must be guaranteed.



The **RBG SYSTEM** fulfills these requirements for mass flows between 0.04 up to 800 g/h.

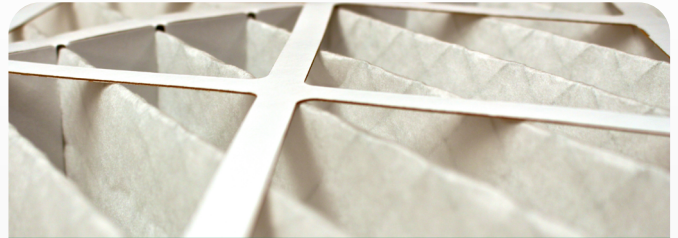
A special advantage:

The dosing and dispersion systems are fast and simple adaptable to different application conditions.

Application examples



TEST OF CABIN FILTER



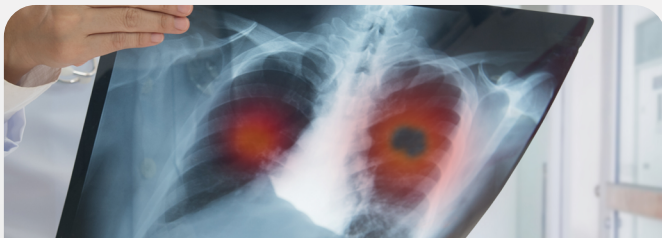
DEVELOPMENT OF NEW FILTER AND FILTER MATERIAL



CALIBRATION



PARTICLE IMAGE VELOCIMETRY



INHALATION TEST



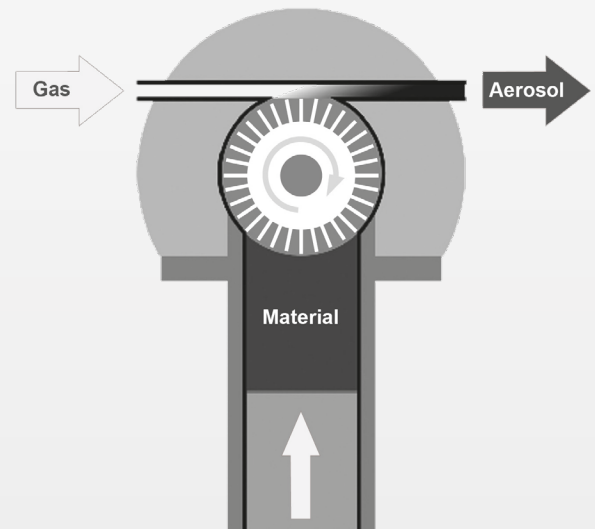
MASK CHECK

Principle of operation

The **RBG SYSTEM** from Palas GmbH is characterized by its precision and easy handling. The required mass flow can be fast and reproducibly determined: from the cross section of the powder reservoir, the exactly settable feed rate of the reservoir and the compact density of the powder in the reservoir.

The powder separated from the reservoir by the precision brush is almost completely dispersed into the constituent particles by the carrier gas. The dispersion gas flow can be set manually or fully automated with the integrated volume flow control. Four different dispersing covers can be used for optimal dispersion.

The construction design of the **RBG SYSTEM** allows dispersion of dust with cycle lengths ranging down to a second. This and other functions can be set manually via the display keys or via a connected computer with the Palas® control software included in the shipment.



RBG SYSTEM

	RBG PROFESSIONAL	RBG BASIC	RBG SOLO
Stepping motor for solid material reservoir allows high and low feed rates	X	X	X
Solid material reservoir with up to 110 mm filling height	X	X	X
Electrical supply by wide-range power supply unit (24 V)	X	X	X
USB connection for digital remote control	X	X	X
LCD functional display with foil keyboard	X	X	X
Robust plastic housing	X	X	X
Operation with different carrier gases, e. g., nitrogen	X	X	X
Automatic volume flow control with integrated mass flow meter & valve	X		X
Capsuled maintenance-free motor for dispersion brush, pressure-tight up to 10 bar	X		
Integrated pump for operation without compressed air supply			X

Special advantages and benefits

RELIABILITY

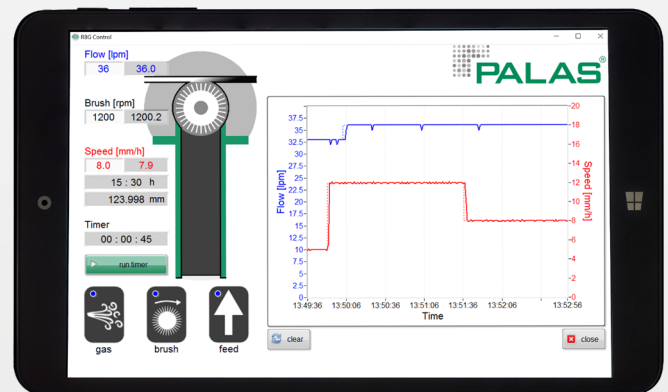
- High reproducibility for measurements due to very good long-term dosing consistency
- Ideal for dispersion of many non-cohesive dusts

FLEXIBILITY

- Fast adaptation to changing test conditions with different solids containers and dispersion lids
- Wide application range up to 10 bar back pressure and with different carrier gases

USER FRIENDLINESS

- Easy to operate due to automatic monitoring of the volume flow and LCD display for all parameters
- Convenient remote control of the **RBG SYSTEM** via supplied Palas® software via USB interface



Technical features

Particle material	Non-cohesive powders and bulks
Volume flow	8 – 180 NI/min (RBG PROFESSIONAL, RBG BASIC) 8 – 40 NI/min (RBG SOLO)
Maximum particle number concentration	Approx. 10^7 particles/cm ³
Mass flow (particles)	0.04 – 800 g/h (with an assumed compacted density of 1 g/cm ³)
Particle size range	0.1 – 100 µm
Pre-pressure	4 – 13 bar (RBG PROFESSIONAL) 4 – 8 bar (RBG BASIC)
Maximum counter pressure	10 barg (RBG PROFESSIONAL) 0.2 barg (RBG BASIC) 0.1 barg (RBG SOLO)
Filling quantity	2.7 – 88 g (with an assumed compacted density of 1 g/cm ³)
Dispersion cover	Type A, type B, type C, type D
Aerosol outlet connection	Øinside = 5 mm, Øoutside = 8 mm
Interfaces	USB type B
Dimensions (H • W • D)	515 • 330 • 240 mm
Weight	Approx. 15 kg (RBG PROFESSIONAL, RBG BASIC) Approx. 19 kg (RBG SOLO)

Palas® is a leading developer and manufacturer of highprecision instruments for the generation, measurement and characterization of particles in air.

With more than 30 active patents, Palas® develops technologically leading and certified fine dust and nanoparticle analyzers, aerosol spectrometers, generators and sensors as well as related systems and software solutions. Palas® was founded in 1983 and employs more than 100 people.

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