TOPAS®
Technologie-orientierte Partikel-, Analysen- und Sensortechnik

Dust Generator Unit

DGU 413

Dust Generator Unit (DGU 413) with SAG 410/U and cyclone.

For research and test purposes, aerosol concentrations above the occupational exposure limits or aerosols of hazardous substances are regulary used. There is always the risk of contamination of the user and the workplace. Equally, a contamination of the aerosol, caused by ambient air can critically affect high-purity processes.
The „Dust Generator Unit" DGU 413 supports the safe generation of solid aerosols from bulk powder with the proven aerosol generators of the SAG 410 series from Topas.
With its double-encapsulated construction, the DGU413 protects the user and workplace from escaping aerosols particulary reliably. The permanent flushing of the inner space additionally prevents the ingress of contaminants and moisture.

Applications

- Improve occupational safety when producing aerosols with high concentrations indoors
- Aerosol generation in clean environments
- Generation of high purity aerosols excluding environmental pollution for toxicity studies
- Generation of aerosols under difficult environmental conditions, for example high humidity

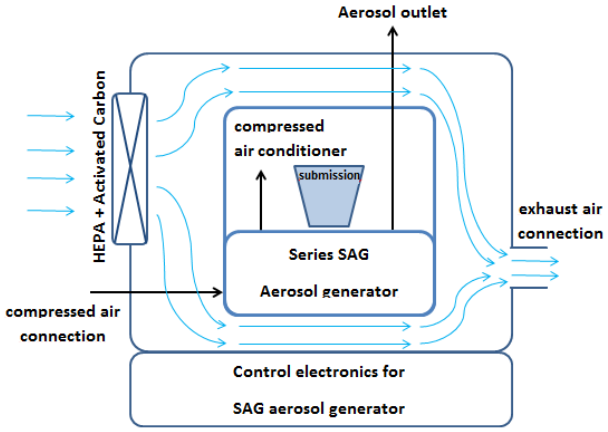
Special Advantages

- Safe generation of aerosols with possible suction
- Can be combined with all solid aerosol generators of the SAG 410 series
- Integrated control and compressed air control: only one DGU required for many generators of the SAG 410 series
- Quick change of aerosol generators for different material systems
- Conditioning of bulk powder and aerosol

Principle

The aerosol generated by the aerosol generator is prevented from escaping by a double-encapsulated construction.
The inner area of the DGU 413 is permanently rinsed with dry compressed air to preventing the ingress of moisture. This process improves the meterability of hygroscopic bulk powder. The resulting aerosol consists only of pure, dry air and solid particle.
The outer area has an exhaust air connection and can be permanently drained. A filter combination of HEPA filter and activated carbon filter only allows particle-free air without chemical or biological contamination. If no dying of the inner area is required the filtered air can be used for aerosol generation.

Specifications



Principle of the Dust Generator Unit DGU 413.

Options

The DGU 413 can be expanded with a cyclone to separate coarse particles from the aerosol.
For particulary metering substance systems or minimal aerosol concentrations, the bulk powder can be stretched with auxiliaries (for example glass beads). The glass beads improve the dosing ability and will be separated in the downstream cyclone again from the aerosol.

References

Hillemann et al. (2018) Charakterisierung von Partikelemissionen aus dem Trennschleifprozess von kohlefaserverstärktem Beton (Carbonbeton). Gefahrstoffe - Reinhalt. Luft, 78(6), 230-240.

Technical Data

aerosol generator	All generators of series SAG 410
massflow	0,05 – 6000 g/h depends on the solid
dust concentration	0,05 – 770 g/m³ depends on the solid
inlet filter	H12 + activated carbon
air supply	6 bar, ... m³/h, free of oil, dry
power supply	100 -240 VAC 50 – 60 Hz
dimensions	700 × 560 × 450 mm³
weight	22 kg (without SAG 410)

QMS certified according to DIN EN ISO 9001.

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For further information please visit our website:
www.topas-gmbh.de

Specifications are subjected to be changed without notice.

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