TOPAS®

Technologie-orientierte Partikel-, Analysen- und Sensortechnik

Dust Generator

Series SAG 410

Series SAG 410:
Solid Aerosol Generator SAG 410 (standard version)

Solid aerosols are used in a variety of applications, aerosol and powder science, industrial processes and quality assurance tasks. The technique for the dispersion of dry dust and powders comprises two steps, the continuous supply of material to the disperser and the dispersal of the material as an aerosol. A proven method for metering powder to the disperser is to use a moving toothed belt. The well-defined spaces between the teeth ensure a constant and reproducible supply of powder, even at low feed rates. The particle concentration of the output aerosol can easily be adjusted over a wide range by changing the speed of the feed belt.

The powder is removed from the belt by an ejector nozzle with ceramic outlet tube. A specially designed scraper ensures even filling of the belt spaces and minimises the influence of the powder level in the reservoir on aerosol mass flow.

Poor-flow test dusts and smallest feed rates

A new generation of dust disperser has been developed for substances, which are difficult to handle because of their poor-flow properties, such as titanium dioxide, aluminium oxide and soot. The innovative principle consists of loading the dust on a dosing ring from which it is drawn off by the dispersing nozzle. This enables reliable feed rates and dispersing of cohesive materials as well as delivery of very small quantities of powder at low dosing rates.

Special Advantages

- Constant dosing of various sorts of test dusts
- Continuous dosing with high accuracy and over long operational periods nearly independent of the powder level in the reservoir
- Dispersion at small scale dosing rates
- Reliable generation of dust aerosols from poor-flow powders (test dusts)
- Interchangeable dispersing units allow a single instrument to cover several dosing ranges (from mg/h to kg/h)
- Easy device control and operation

Applications

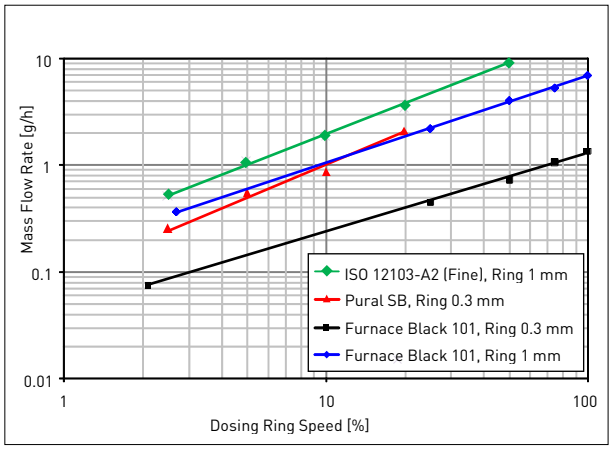
- Filter testing: dust loading and fractional efficiency testing with one instrument (wide dosing range)
- Basic aerosol research
- Optimization of combustion processes
- Flow visualisation
- Analysis of mixing and coating processes (e.g. in engineering ceramics)

Series SAG 410: Solid Aerosol Generator SAG 410/U for small scale dosing rates

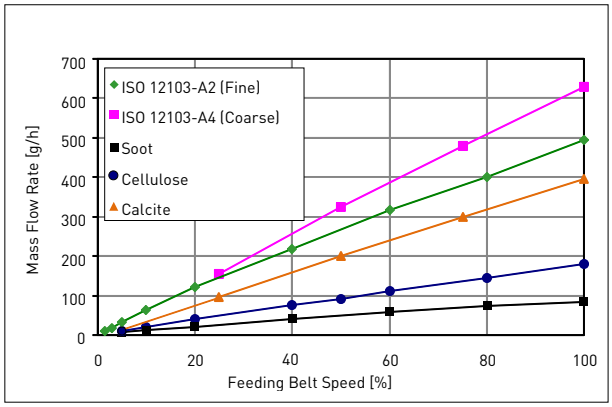
Specifications

Details

Optional accessories for the basic device:
Dispersing unit SAG 410 (left),
Dispersing unit on a scale for Online-Measurement (middle),
SAG 410 with remote control (right)

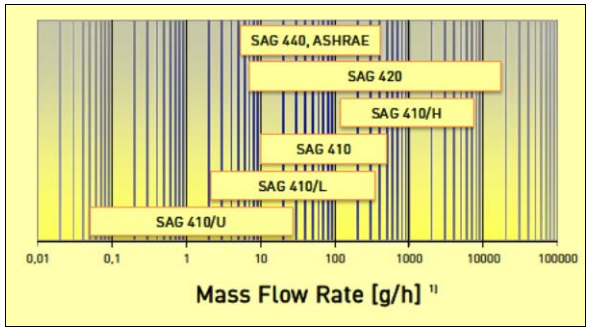


Model SAG 410/U: Mass Flow Rate vs. Dosing Ring Speed for different powders



Model SAG 410 (standard configuration): Mass Flow Rate vs. Feeding Belt Speed determined for different powders

Dosing Range



All dosing ranges of the series SAG 410 models are available when used with interchangeable dispersing units.

SAG model	Maximum filling amount [cm³]	Aerosol flow rate [m³/h]	Powder concentration, [g/m³]
410/U	50	1.5 ... 4	0.05 ... 17 1)
410/L	400	1.5 ... 4	0.5 ... 160 1)
410	400	1.5 ... 4	2 ... 325 1)
410/H	1420	8 ... 20	6 ... 770 1)

Technical Data

max. particle size	200 µm
Operation time without refilling	0.8 ... 44 h (SAG 410 standard configuration)
Compressed air supply	max. 6 bar / 600 kPa
Power supply	100...260 V AC, 50 ... 60 Hz
Dimensions	320 x 400 x 320 mm
Weight	approx. 12 kg

QMS certified to DIN EN ISO 9001.

12 100 11908 TMS

For more information please visit our website at www.topas-gmbh.de

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