DURAG GROUP

GRIMM **SMPS+E**

Scanning Mobility Particle Sizer

With Faraday Cup Electrometer

- Electrical Mobility Particle Size Spectrometer covering 0.8 to 1090 nm
- Ultra-fast measurement of particle size distribution
- High performance FCE detector
- Reliable Vienna type DMAs

Digital Version



BENEFITS

- **Versatile GRIMM DMA Controller 5706** - Precise control of DMA sheath air and sample flow with stand-alone operation for monodisperse particle classification – no computer needed.
- **High-Performance Faraday Cup Electrometer (GRIMM FCE 5705)** - Trusted by leading metrology institutes worldwide, offering exceptionally low current noise and superior measurement accuracy.
- **Reliable Vienna-Type Differential Mobility Analyzers (GRIMM DMAs)** - Available as S-, M-, and L-DMA for a wide range of particle sizes and applications. U-DMA allows adaptation of the classification and measurement range.
- **Modular, Ready-to-Use System** - Complete solution with rapid setup and precise flow control. No consumables required. Fully compatible with all GRIMM aerosol neutralizers.
- **Designed for a Wide Range of Nanoparticle Applications**. Aerosol instrument calibration, fundamental aerosol and atmospheric research, engine exhaust and emission measurements, combustion process optimization, nanomaterial characterization

TECHNICAL DATA

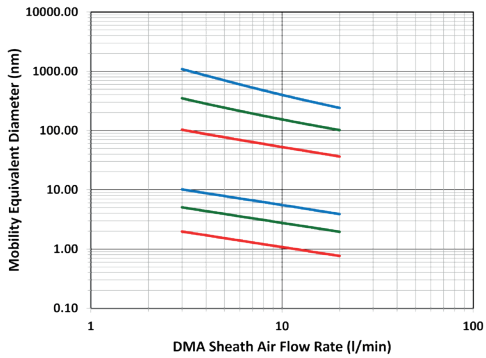
Measurement principle	Electrostatic classification with subsequent detection in a faraday cup electrometer
Particle size range	maximum covered range 0.8 to 1090 nm; depending on DMA and sheath flow rate
Particle size resolution	• Stepping mode: 45 to 255 channels • Scanning mode: 32, 64 and 128 channels per decade, logarithmic equidistant spacing
Min. scan time	14 s
Max. particle concentration	Up to 10^7 particles /cm^3 total number concentration, depending on aerosol neutralizer
Output HV module	0 to 10 000 V positive polarity; negative polarity on request
Maximum Current	± 4000 fA
Current resolution	0 to 40 fA: ± 0.01 fA 40 to 400 fA: ± 0.1 fA 400 to 4000 fA: ± 1.0 fA
Average noise level	0.35 fA
FCE response time t10 - t90	< 0.25 s
FCE Data sampling rate	1 to 16 Hz adjustable in 2^n Hz (n = 0 to 4)
FCE sample air flow rate	1 to 5 l/min
DMA sheath air flow rate	3 to 20 l/min

Standards and Certificates	ISO 27891:2015 ISO 15900:2020
Operation and display	LCD display, status LEDS, keypad for direct configuration on the instrument, GRIMM Nano software 5477 for comprehensive instrument control and data analysis
Connectivity	RS-232 data interface, analog input for optional GRIMM T/p/RH sensor
Power requirements	240 VAC ± 10% VAC; 50 Hz; * max. 100 W
Operating Conditions	Ambient temperature: 0 to 40 °C (32 to 104 °F) Ambient humidity: 0 to 95 % RH, non-condensing Absolute pressure range: 600 to 1,100 mbar
Transport and storage	0 to + 50 °C (32 to 122 °F), RH < 95%
System components	GRIMM DMAC 5706 GRIMM FCE 5705 GRIMM Aerosol Neutralizer (optional) GRIMM DMA 55-S, -M, -L or –U (convertible)
Dimensions (h x w x d)	GRIMM DMAC 5706: 31 x 25.5 x 22 cm (12.2 x 10 x 8.7″) GRIMM FCE 5705: 19 x 9 x 9 cm (7.5 x 3.5 x 3.5″) GRIMM DMA 55-S/M/L: 16.1/23.4/47.8 x 14 x 15.6 cm (6.3/9.2/18.8 x 5.5 x 6.1″)
Weight	GRIMM DMAC 5706: 12.2 kg (26.9 lbs) GRIMM FCE 5705: 2.0 kg (4.4 lbs) GRIMM DMA 55-S/M/L: 5.6/5.7/7.9 kg (12.2/12.6/17.3 lbs)

*a voltage converter is provided for different line voltages and frequencies

Optional accessories:

5523-NI	Ni-63(95 MBq) aerosol neutralizer
5524-X	Soft X-ray (< 11 keV) aerosol neutralizer
5525-X	Soft X-ray (< 4.99 keV) aerosol neutralizer
5522-A	Am-241 (3.7 MBq) aerosol neutralizer
5540	Sheath air dryer and activated charcoal adsorber
7917	Emission Sampling System (ESS)



accessible size ranges of GRIMM S/M/L DMA for 3 to 20 L/min sheath air flow

© DURAG GROUP 09/2026 | Subject to change

GRIMM AEROSOL TECHNIK GMBH
OT Friedersdorf | Vordere Aue 4 | 06774 Muldestausee, Germany
Phone: +49 3493 51407-0 Mail: info@grimm.durag.com