

Technical data

Mobile dust monitor TM data II	
Principle of operation	Scattered-light measurement (Tyndall effect)
Measured particle range	Respirable dust acc. to Johannesburg Convention, BMRC/ACGIH curve, max. sensitivity for particles of 1 µm aerodynamic diameter
Calibration method	Comparison with gravimetric measurement
Measurement volume	approx. 0.5 cm ³
Measurement range [mg/m³, calibrated]	0-100 (DEHS particles, d = 1 µm)
Resolution [mg/m³, calibrated]	0.01 (DEHS particles, d = 1 µm)
Detection limit [mg/m³]	0.01 (measurement time at least 1 min. and with exact zero-point adjustment)
Linearity	1 %
Temperature dependence	approx. 5 % between 10 °C and 40 °C
Measurement modes	<ul style="list-style-type: none"> • Continuous momentary value • Average values
Memory capacity	at least 80.000 measurement values
Interfaces	<ul style="list-style-type: none"> • USB • Bluetooth
User interface	Touchscreen, resistive (8.1 cm/3.2")
Charging time	approx. 6 h
Operating time when fully charged	approx. 8 h
Dimensions [mm]	201 x 101 x 51 (L x W x H)
Weight	approx. 600 g
USB power supply	100 V ... 240 V AC (1 A max.), 50 ... 60 Hz, Output: 5 V / 2,1 A (10,5 W max.), Adapter set EU / GB / US / CN
Min. system requirements	PC with Windows 7, 8.1 or 10, dual-core processor, 2 GB RAM, harddisk with 200 MB free memory, 1 free USB or Bluetooth interface
Accessories (optional)	<ul style="list-style-type: none"> • Leather carrying belt • Zero-point adjustment kit • Calibration set • Analysis software
Technical data subject to modifications	

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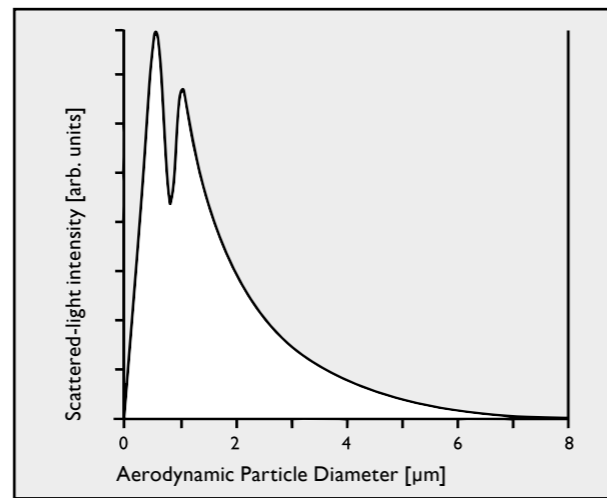
Mobile dust monitor TM data II

Scattered-light photometer for
respirable-dust measurements

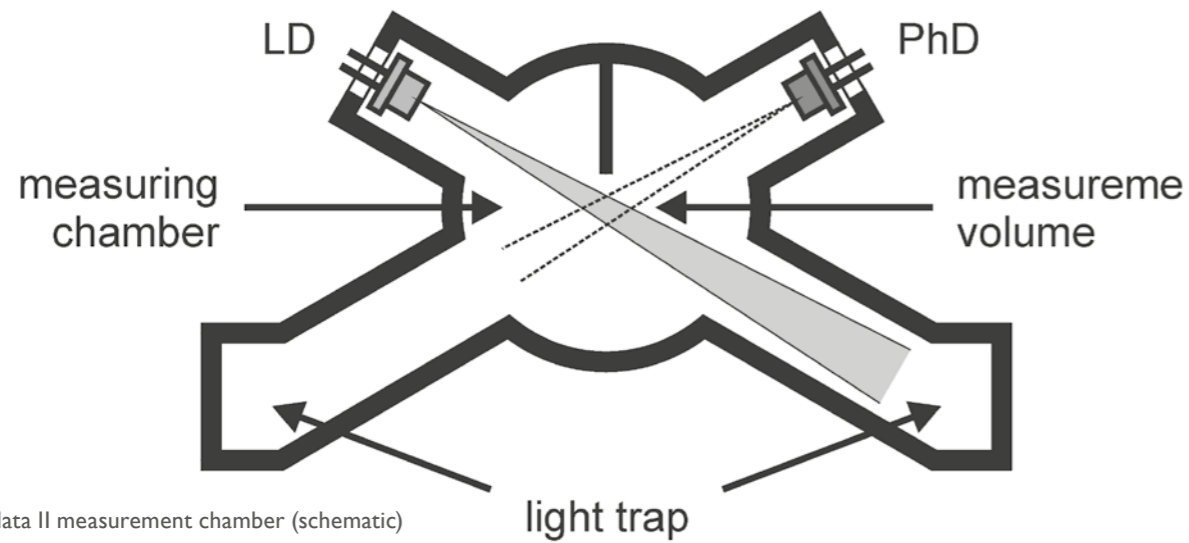
Mobile fine-dust monitor TM data II

For respirable-dust measurements

The TM data II utilizes the Tyndall effect for scattered-light measurements. Maximum intensity is achieved for particles with dimensions comparable to the wavelength of the light source. As this technique is insensitive towards coarse particles, no pre-separation is necessary. With no pump required, the instrument does not affect the aerodynamic and concentration situation at the measurement site.



Sensitivity TM DATA II vs. particle size

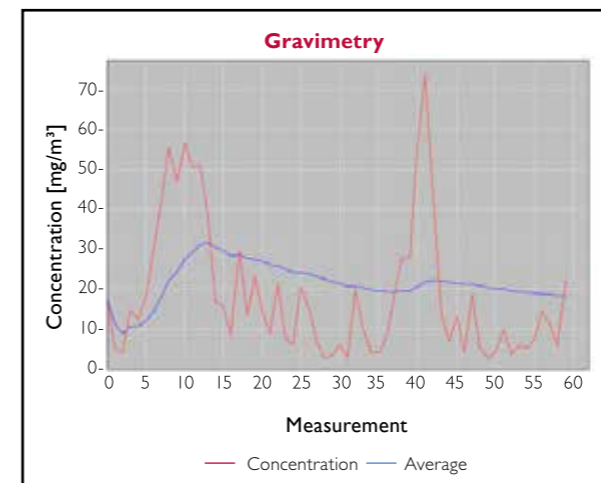


TM data II measurement chamber (schematic)

Mobile measurement and monitoring of dust emissions

The measurement chamber of the TM data II was designed for maximum sensitivity towards respirable dust. For this fraction, the scattered-light intensity is proportional to the dust mass concentration. Thus, calibration on different kinds of dust becomes possible. The user may choose from a list of predefined calibration factors or, by employing an optional calibration set, determine a specific factor for the actual measurement.

- Workplace monitoring
- Monitoring of dust-intensive production processes
- Localization and evaluation of emission sources
- Process monitoring during the production of delicate components
- Monitoring of ventilation systems
- Monitoring dust development during filling processes



Powerful analysis software

- Numerical display of date, time, momentary and average values
- Graphic display of time-domain curves for momentary and average values
- Export to MS Excel
- Selection of pre-defined calibration factors from a table
- Calibration factors from own measurements can be stored to table

Main features and benefits

- Little maintenance requirements
- Very long battery operation time
- Intuitive operation
- Direct display of measurement results via touchscreen
- Straightforward evaluation with analysis software
- Measurement range $10 \mu\text{g}/\text{m}^3$ to $100 \text{mg}/\text{m}^3$
- Interfaces: USB, Bluetooth
- Gravimetric calibration set available

Applications

- Construction sites
- Handling of bulk goods
- Tunnel construction
- Wood processing
- Mining (daylight and deep)
- Filter monitoring
- Oil fume
- Welding fume
- Venting systems
- Production of delicate components