

Welas Digital 3000 Light Scattering Spectrometer



- Particle size resolution capability
- Particle size classification accuracy
- Counting efficiency
- Two Welas Sensors

On the new **welas® digital 3000**, two **welas®** sensors are supplied with one light source and the scattered light pulses are detected by a photomultiplier. This enables a quasi-simultaneous particle measurement at two sampling locations that are up to 100 metres apart.

The quasi-simultaneous particle size and particle number determination offers particular advantages for characterizing separators with fluctuating raw gas concentrations.

With the **welas® digital 3000, it's as if the user has two light-scattering spectrometers in one device, with the same characteristics**

Opto-mechanical switching

Using opto-mechanical switching, the two sensors that are connected can be easily controlled. The sensors are controlled automatically with the software.

The particular advantage over a manual measurement selector switch

- Faster change of the measurement location
- No deposits in sampling lines
- Long service life; no wear of the seals due to dust particles

Application examples

- Determination of separation efficiency of car interior filters, engine air filters, room air filters, compressed air filters, vacuum filters, cleanable filters, electrostatic precipitators, oil separators, cooling oil separators, wet scrubbers, cyclones and other separators
- Isothermal and isobaric particle size and number determination, for instance in the automobile, chemical, pharmaceutical and foodstuffs industries
- Analysis of fast, transient processes
- Inspection of smoke detectors
- Particle measurement for cloud formation
- Emission measurements
- Respiratory function: inhaled/exhaled aerosol (size and quantity)

Specifications

Measurement range: 0,2 µm – 105 µm
 $C_n \leq 10^6$ P/cm³
 Thermodynamic conditions:
 -90°C ≤ T ≤ 70°C
 Optional: T ≤ 250°C, p ≤ 10 bar
 Suction flow rate: 5 l/min
 Digital individual signal acquisition:
 20 MHz processor, 256 raw data channels
 Light source: 35 W Xenarc lamp
 Interface: USB
 Power supply: 115V/230V, 50/60 Hz
 Case: Desktop case (19" compatible, 4 RU, 84 HP, D = 435 mm), optional with mounting brackets for rack installation