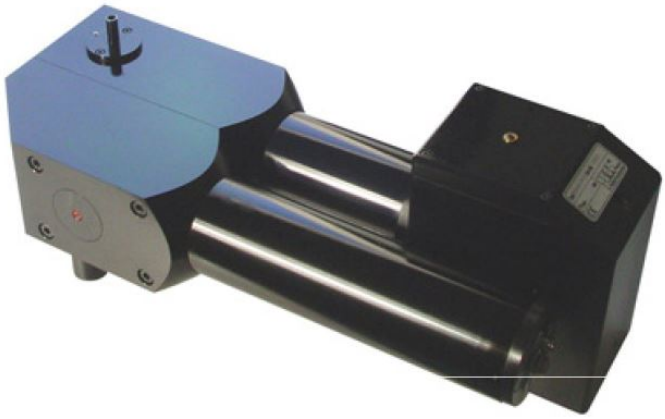
AEROSOL SENSOR WELAS®
1200 HP



Depending on the aerosol composition to be measured, i.e., the carrier gas component and the particle material, pressure changes in the carrier gas can significantly influence the particle size distribution, e.g., due to condensation or evaporation.

For this reason, the welas® aerosol sensors welas® 1100 HP and welas® 1200 HP are equipped with a pressure-resistant and heatable cuvette to ensure isobaric and isothermal sampling down to the sensor's measurement volume.

The cuvettes are made of anodized aluminum (black). If the sensor is used in aggressive and corrosive aerosols, the cuvette can be made of stainless steel or other special materials, such as Hastelloy.

Sealed additional disks prevent aerosol from the cuvette from escaping into the surroundings.

The additional disks are easy to clean and replace by the operator.

Benefits

- Widest measuring range of 200 nm to 40 μm (3 measuring ranges selectable in one device)
- Calibration curves for different refractive indices
- Widest concentration range of 0 particles/cm^3 up to 5 • 10^4 particles/cm^3
- Very high and reproducible counting efficiency rate starting at 0.12 μm (see Graph 1)
- High temporal resolution down to 10 ms
- Extensive PDControl and FTControl software
- Strong, powerful external suction pump ASP 1000
- Calibration, cleaning and lamp replacement can all be performed independently by the customer
- Simple operation
- Low maintenance
- Reliable function
- Reduces your operating expenses

Applications

- Determination of the separation efficiency of car interior filters, engine air filters, room air filters, compressed air filters, vacuum cleaner filters, cleanable filters, electrostatic precipitators, oil separators, cooling lubricant separators, wet scrubbers, cyclones and other separators
- Isothermal and isobaric particle size and quantitative determination, for instance in the automobile, chemical, pharmaceutical and food industries
- Analysis of fast, transient processes
- Inspection of smoke detectors
- Particle formation for cloud formation
- Emission measurements
- Immission measurements

Measurement range (number C_N)	$0 – 5 • 10^4$ particles/cm^3
Measurement range (size)	0.2 – 40 μm (3 measurement ranges)
Volume flow	1.6 l/min, 5 l/min (others on demand)
Thermodynamic conditions	120°C, 10 bar
Light source	Xenon high pressure lamp 75 W
Power supply	115 – 230 V, 50/60 Hz
Cuvette	Heatable, pressure-resistant
Cooling	Air cooling
Dimensions	200 • 530 • 530 mm (H • W • D)
Weight	Approx. 19 kg