UF-CPC 100

The UF-CPC 100 is a butanol-based nanoparticle counter with high efficiency. It measures the number concentrations of ultrafine particles (UFP) in aerosols. Model 100 is designed for concentrations up to 10^5 particles/cm^3. This makes it very suitable for determining the particle concentrations of aerosols, not only in ambient air but also for synthetically produced aerosols, for example, for measuring the efficiency of filter media. In nephelometer mode, measurements up to $2 \cdot 10^7$ particles/cm³ are possible. The counter can be easily combined with the Palas size classifiers (Scanning Mobility Particle Spectrometer / Mobility Particle Size Spectrometer).

The patented evaporator and condensation module is maintenance-free. This allows continuous operating times of up to one year.

Benefits

- Intuitive user interface with sophisticated software for data analysis
- Unlimited network compatibility that supports remote control and data storage on the Internet
- Visualization of all operating and measurement data
- Integrated interface for process control applications
- Lower detection efficiency D50 adjustable to 10 nm (others on request)

Applications

- Aerosol research
- Testing of filters and air purifiers
- Environmental measurements
- Workplace exposure and occupational safety studies
- Studies concerning inhalation and health impacts
- Process control
- Printer emission studies

Features

- Expandable to U-SMPS spectrometer
- Automatic measurement data storage
- Measurement of the particle size distribution of condensed particles for quality assurance
- Integrated pump
- Integrated computer with 7″ touchscreen

DATASHEET

Measurement range (number C_N)	10^5 particles/cm^3 (single count mode), 10^5 – 10^7 particles/cm^3 (nephelometric mode)
Measurement range (size)	4 – 5,000 nm
Volume flow	0.9 L/min (butanol) 0.3–1 L/min (adjustable for research applications) (others on request)
Time resolution	Min. 1s
User interface	Touchscreen, 800 • 480 pixel, 7″ (17.78 cm)
Data logger storage	4 GB
Software	PDAnalyze
Detection efficiency (at low particle size)	D50 = 4.5 nm (others on request)
Data acquisition	Digital, 20 MHz processor, 256 raw data channels
Light source	LED
Installation conditions	+10 – +30 °C (others on request)
Accuracy	5% (single count mode), 10% (nephelometric mode)
Response time	$t_{90} < 2.8$ s, $t_{90-10} < 2.0$ s
Working fluid	1-Butanol
Dimensions	290 • 240 • 350 mm (H • W • D)

NORMS AND CERTIFICATES

ISO 27891:2015