

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/cm³. 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 (number C_N)	range	10^5 particles/cm ³ (single count mode), $10^5 - 10^7$ particles/cm ³ (nephelometric mode)	Measurement (size)	range	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. 1 s
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	Arbeitsflüssigkeit		1-Butanol
Dimensions		290 • 240 • 350 mm (H • W • D)			