

# Nano-ID<sup>®</sup> NPC10

NanoParticle Counter



The Nano-ID NPC10 is the first Condensation Particle Counter specifically developed for ultra-clean manufacturing environments. This instrument combines 10 nm sensitivity with high sample flowrate and the lowest zero count specification on the market.

The Nano-ID NPC10 provides single-particle-detection for the cleanest manufacturing and testing applications, and uses the shortest time intervals in the industry to obtain statistically valid measurements.

Designed for plug-and-play operation, the unit is ready to sample aerosol particles in minutes. Set up is simply applying power and connecting the input and output sample lines.

All of the user-selectable variables are configured through the touchscreen display. The color display provides graphical trending of particle contamination. Data is automatically saved to the onboard memory and can be exported via Ethernet connection or USB port.

The proprietary non-hazardous working fluid is superior to isopropyl alcohol, n-butyl alcohol, and water-based condensation particle counters. The fluid provides long use between refills, no odors, and a sample reservoir that captures and recycles most of the working fluid.

The Nano-ID NPC10 is suitable for use in ISO Class 1 through Class 3 environments.

## FEATURES

- 10 nm sensitivity
- 2.83 LPM sample flow rate
- Up to 2,000 hours continuous run time
- Large color IR touchscreen display
- Data export via Ethernet interface and USB
- Sample high-pressure gases using an optional high-pressure diffuser
- Real time data output via ModBus TCP/IP

## BENEFITS

- **Continuous and Unattended Operation**
  - Working fluid reservoir only needs fluid replenished at about 2,000 hours of use
- **Working Fluid**
  - Does not use n-butyl or isopropyl alcohol
  - No special handling and storage requirements as associated with alcohol-base fluids
- **Data Storage**
  - Internal memory can store one year of data
- **Pump**
  - Quiet pump provides regulated sample flow

## APPLICATIONS

- **Semiconductor**
  - Point-of-use monitoring troubleshooting
- **Disk Drive**
  - 2.8 LPM flow rate does not disrupt air flow and 10 nm sensitivity provides essential data for hard disk manufacturing
- **Quality Control**
  - Manufacturing quality control of ultra-fine nanoparticles size distribution during synthesis
- **Air Quality Monitoring**
  - Detection of airborne ultra-fine and nanoparticles in workplaces and other sensitive environments
- **Exposure Monitoring**
  - Risk assessment of exposure to airborne nano objects and exposure-dose relationships

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## Specifications

<b>Size range</b>	10 – 1,000 nm
<b>Aerosol flow rate</b>	2.8 LPM (0.1CFM) ±5%
<b>Sampling period</b>	10 to 600 seconds, user-selectable
<b>Max. particle concentration</b>	10 <sup>5</sup> /L
<b>Instrument warm-up time</b>	5 minutes nominal at 72 °F (22 °C) ambient
<b>Working fluid</b>	Proprietary non-hazardous organic compound
<b>Working fluid consumption and instrument volume</b>	2,000 hours between refills. Reservoir has a volume of 20 ml when full.
<b>Laser classification</b>	Class 1, complies with US 21 CFR 1040.10 and EN60825-1. Internally an enclosed Class 3B laser is used per EN60825-1.
<b>Data storage</b>	>1,000 days of continuous sampling
<b>Dimensions, l,w,h</b>	11.8 x 13 x 10.2 in (30 x 33 x 26 cm)
<b>Weight</b>	13.2 lb (6 kg)
<b>Power</b>	100 – 240 VAC, 1.5 A, 50/60 Hz
<b>Data output/communications</b>	USB flash drive and ModBus TCP/IP
<b>User interface</b>	Color front-mounted touchscreen. Optional USB mouse (not supplied)
<b>Temperature range</b>	59 – 82 °F (15 – 28 °C)
<b>Humidity range</b>	10 – 90% RH, non-condensing
<b>Operating pressure</b>	1 Atmosphere (ambient)
<b>Maximum altitude</b>	6,562 ft (2,000 m)
<b>Use</b>	Indoor use only
<b>Warranty</b>	1 year

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Particle Measuring Systems, Inc. reserves the right to change specifications without notice.

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