

# AccuSizer® FX and FX Nano

*Accurate high-concentration single particle counting and sizing*

## **SINGLE PARTICLE OPTICAL SIZING DOWN TO 0.15 MICRONS WITH LITTLE OR NO DILUTION**

The AccuSizer® uses the method of single particle optical sizing SPOS to quickly count and size a large number of particles, one at a time, constructing a true particle size distribution. The AccuSizer FX takes this method of measurement one setup further by making the measurement at much higher particle concentrations.

The AccuSizer FX and AccuSizer FX Nano utilize focused beam technology that allows the sensor to focus on a specific area of the flow channel to count and size individual particles starting at 0.15 microns and at concentration levels exceeding 1 million particles per mL. These are concentration levels that are thousands of times higher than traditional sensors. Although this type of approach has been tried by other techniques to monitor high concentration process streams, it has been plagued by low resolution and accuracy. The FX and FX Nano utilize a patented electro-optical configuration that maintains the same levels of resolution and accuracy found in our traditional SPOS sensors.

The AccuSizer FX Nano monitors a scattering signal that extends the lower size limit to 0.15  $\mu\text{m}$ . Classically one of the limiting factors in the lower size limit of single particle optical sizers was the need to find diluents that are clean enough so that they do not add or make up most of the background counts of the sample being analyzed. Since the FX sensors are able to detect at lower size ranges, the background count levels are no longer a concern. In the past a few thousand counts in the background would cause great concern but now with concentrations exceeding 10 million a few thousand background counts do not affect the overall distribution. This becomes critical when looking at nanoparticles below 0.15 microns.



## **APPLICATIONS**

The AccuSizer FX is the only automated particle size analyzer with the sensitivity to detect particle outliers down to parts per billion. It is ideal for analyzing:

- Chemical Mechanical Planarization (CMP)
- Inks/pigments
- Emulsions
- Dispersions
- Pharmaceutical injectables
- Stability analysis
- Ceramics/abrasives
- Polymers
- Nanoparticles

## PROVIDING RELIABLE TECHNOLOGY FROM LABORATORY TO PROCESS LINE

The AccuSizer Mini FX and Mini FX Nano slurry monitor reduces the footprint of our lab instrument and allows for point of use monitoring with continuous data acquisition at the process line. Unlike any other instrument, the FX counts and sizes hundreds of thousands of particles in minutes, not hours.

## THE ACCUSIZER FX SYSTEM

### Options

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#### Autodilution

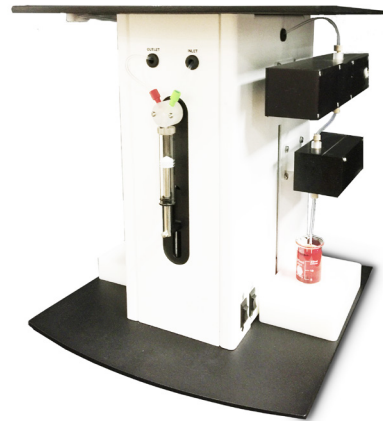
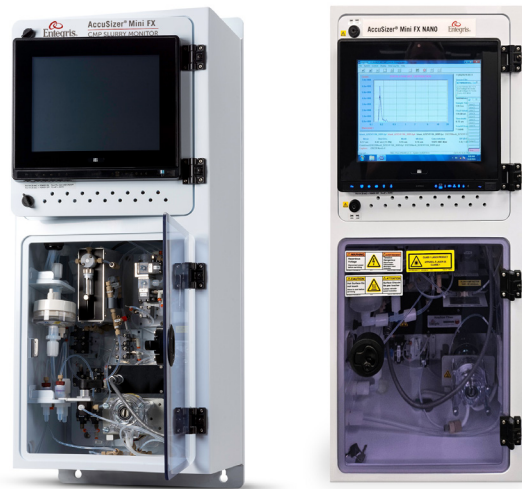
Sample is automatically diluted to a useable concentration suitable for particles to be counted and sized one at a time.

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#### AccuSizer Online

Systems offer a range of autodilution fluidics that can be used to monitor processes including homogenization, grinding, and CMP polishing. Autosampler module allows for automated batch sampling.

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## START ACHIEVING ULTIMATE CONFIDENCE IN YOUR RESULTS WITH OUR COMPLETE FAMILY OF PARTICLE ANALYZERS

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Designed and manufactured to uncompromising standards, Our particle analyzers deliver reliable, repeatable particle size, and zeta potential measurements on nanometer to micrometer-sized particles.

**Nicomp® N3000 DLS Particle Size Analyzer** – measures nano particle size distribution and concentrations in complex mixtures.

**Nicomp Z3000 ZLS Zeta Potential Analyzer** – delivers reliable zeta potential measurements without sample dilution.

Unique solutions that no one else provides including:

- Autodilution
- Online
- Autosampler
- Multi-angle goniometer

### FOR MORE INFORMATION

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