



ACCU SIZER

Single Particle Optical Sizing

A flexible liquid particle size and count analyzer that can be built to the requirements of your application.

All AccuSizer SPOS systems measure particles size and concentration using a sensor, counter, and fluidics combination. The sensors can be based on light extinction, scattering, or both. The counters are fast, multi-channel pulse height analyzers than can report results in up to 512 size bins. The fluidics delivers the sample to the sensor directly or with autodilution to avoid coincidence errors. The AccuSizer counts and sizes individual particles with single particle sensitivity. This method is unlike all other ensemble measurements that look at a signal generated by a group of particles in the view volume. SPOS is a first principal measurement that builds distributions one particle at a time. Talk with your local PSS representative about your application and we can suggest the best combination for your specific requirements.

The AccuSizer AD provides exponential autodilution to your sample, automating sample preparation while still providing accurate concentration information. Inject your sample into the mixing vessel and let the AD system do the rest.



The AccuSizer APS offers a two stage autodiluter providing the ability to increase measurement statistics for LPC (large particle counts) in the tail of a distribution. The system provides exceptional count accuracy and reproducibility for distributions where there are low levels of particles in the area of interest. Ideal for USP<729> PFAT 5 testing.



The AccuSizer SIS uses a syringe to deliver an accurate volume of sample through the sensor for analysis. This system is designed for pharmaceutical applications including USP <788> and <787> testing for sub visible particles but provides higher sensitivity and resolution than other available technologies.



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Technical Specifications

Principle	Single particle optical sizing (SPOS) for high resolution particle size and count analysis as well as concentration (particles/mL) analysis. Counts and sizes particles individually, not an ensemble method.
Configurations	780 AD; Autodilution option provides automatic continuous dilution of samples to their optimal concentration for analysis. Options include: mechanical stirring, metered drain, fast flush, organic solvent compatible fluidics and 21 CFR Part 11 Compliant Software 780 SIS; Syringe Injection Sampler provides accurate volumetric sampling for low volume applications. Options include: syringe sizes from 0.5, 1, 2.5, 5, 10, 25 mL, sample conservation software, sample loop reservoir, sample stirring, ultra-low volume configurations, and 21 CFR Part 11 Compliant Software. Conforms to USP <788>, USP <789>, USP <787> test methods. 780 APS; Automatic Particle Sampler provides a fully automated system that delivers accurate LPC (large particle count) information on tails of distributions several standard deviations away from the mean. Options include: single or two stage auto-dilution configurations, autosampler, organic compatible fluidics, 21 CFR Part 11 Compliant Software and a DLS (Dynamic Light Scattering) module to extend the lower size limit to below 10 nanometers. A2000; Oil Contamination Monitor provides high resolution particle count and size information on viscous fluids, organic solvents, and large volume aqueous samples. Options include: single or multiple pump configurations, no dilution or auto-dilution system, 8 to 512 size channel resolution, single particle sensitivity sensors. Meets or exceeds oil monitoring criteria including, ISO, NAS, MIL-STD, DEF STAN, NAV AIR, USP, etc...
Sensors	LE400-05; 0.5-400 µm, light extinction and scattering, summation calibration, particle sensitivity to 10 PPT, concentration limit 9000 particles/mL, size accuracy 2%, count accuracy 10%, recommended flow rate = 60 mL/min, but can be calibrated at other flow rates depending on configuration LE1000-2; 2-1000 µm, light extinction & summation, particle concentration 4000/mL flow rate 100 mL/min LE2500-20; 25-2500 µm, light extinction & summation, particle concentration 2000/mL, flow rate 600 mL/min

[Sample dependent and may require hardware options, subject to change without notice]

October 2014

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Building solutions one particle at a time.



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Technical Specifications

Sensors (continued)	<p>FX Sensor; 0.70-20 µm, light extinction, using patented focused beam technology, extinction calibration, concentration limits 400 times greater than conventional SPOS sensor technology</p> <p>FX Nano; 0.15-20 µm, light extinction and scattering, using patented focused beam technology, summation calibration, concentration limits 200 times greater than conventional sensors</p> <p>FX/FX Nano; coupled with the LE400 sensor provides a wide dynamic range optical sizing sensor for looking at tails of mostly submicron particle size distributions with a size range from 0.15 to 150 microns. The system requires a proprietary sampling and data acquisition system.</p> <p>HFX; Hydro Focused Extinction Sensor delivers ultra-high concentration particle size and counting information exceeding 10 million particles per mL. Using a patented sheath flow design also ensures that the particle stream does not come in contact with the flow cell and is measured in approximately its original native concentration.</p>
Options	Online (with multiplexing) and point of use (POU) systems Autosampler Magnetic stirrer for autosampler Dynamic light scattering (DLS) module can be coupled with APS system IQ/OQ documentation for user or complete PSS installation 21 CFR Part 11 software
Power	Operates on 120/240 (60/50 Hz) VAC

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