



# LT 2200

Intelligent Particle Size Analyzer

# LT2200 A new generation of intelligent particle sizing system

Linkoptik technical team has more than 20 years' experience in particle characterization, application and development. We developed the first commercial laser particle size analyzer in China and have a fantastic reputation throughout the world. LT2200 is a new generation of intelligent laser particle size analyzer with high data acquisition rate based on many years of scientific research. LT2200 has many excellent specifications breaking through the limitations and bottlenecks of existing particle size analysis. It has become a milestone in the particle size analyzer market.

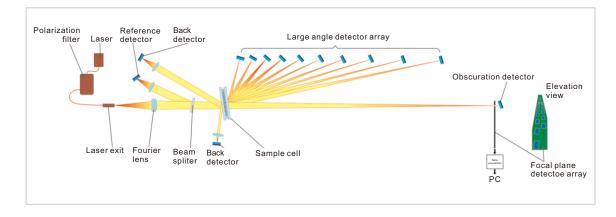
### LT2200 Integrated with multiple innovations:

- Spatial filter and polarization combined with fibre technology
- Correction of anomalous change of airy disk (ACAD) in diffraction
- Tilted cell windows with correction of total-reflection
- Grilling large angle detector array
- Optimization of inversion algorithm and self-adaptive technique
- Continuing dispersant level sensing and control



## LT2200 Optical system also featured with the followings:

- Fully comply with ISO13320 standard
- Unique optical path configuration, large continuous physical detection angle, no dead detection zone
- Improved inversion algorithm with high resolution and sensitivity
- Size range 0.02μm -- 2200μm with no need for lens change
- Data acquisition rate up to 20kHz
- ♦ Solid-state laser light source with automatic temperature stabilizing system
- Spatial filter and polarization with fibre technique, no pinhole needed



Principle diagram

#### Sample Dispersion Unit Automatic intelligent dry and wet dispersion system

Linkoptik technical team is well aware of the mechanism of particle dispersion and the importance of the sample dispersion system in the process of particle size analysis. The Hydrolink Wet Dispersion and Aerolink Dry Dispersion System have been featured prominently in intelligent change of the dispersing energy and used for fully dispersion and representative delivery of a variety of samples, regular or irregular, fragile or agglomerated, with different densities and size distribution.

#### Hydrolink SE Key features:

- Standard volume maximum 1000ml
- Powerful impeller pump and dual-stirrer to ensure uniform dispersion and delivery of wide distribution or high-density samples
- Bubble automatic elimination technology
- High efficiency ultrasonic dispersion unit
- Continuous and adjustable ultrasonic power
- Suspended liquid level sensing and continuous liquid volume control technology
- Automatic sample processing and cleaning
- SOP control and multi-user SOP sharing



# Hydrolink SV Key features:

- The minimum sample volume is 40ml
- Stainless steel design, Chemically compatible with a wide choice of organic and inorganic dispersants
- Built-in ultrasonic unit is optional
- Controlled by SOP or control panel integrated



- Based on multiple dispersion mechanism, automatically dispersing energy input, to achieve effective dispersion of diverse samples
- Automatic control of air pressure, 0 bar-4.5bar adjustable
- Air pressure control accuracy +/-0.1bar
- Sample feed rate controlled by SOP with precision better than 1%
- Venturi dispersion unit with variable energy, suitable for all types of samples
- Sample tray with continuously adjustable gap
- Automatic real-time vacuum detection to avoid contamination of the sample cell
- Straight-through sample path to reduce sample adherence



## LT2200 Particle Size Analyzer Specifications

| Item                               | Specification   |
|------------------------------------|---|
| Measurement principle              | Laser light scattering  |
| Analysis                           | Full Mie theory and Fraunhofer scattering   |
| Size range                         | 0.02μm 2200μm, No need for lens change and calibration  |
| Detection system                   | Super large angle of detector array with area compensation and gridded holder, no dead detection zone within angular range, Plus back-scattering detector |
| Light source                       | Max. 20mW, 638nm Solid-state laser with thermostat integrated   |
| Spatial filter                     | OF Filter with polarization   |
| Optical alignment system           | Smart rapid align system with full automation   |
| Typical measurement time           | Less than 10s   |
| Data acquisition rate              | 20kHz   |
| Accuracy                           | Better than 0.6% (The mean size of NIST latex standard)   |
| Repeatability                      | Better than 0.5% (Sample and sample preparation dependent)  |
| Laser class                        | Class 1   |
| Recommended computer specification | Intel Core i5 processor, 4GB RAM, 250GB HD and wide screen monitor as well as keyboard and mouse  |
| Computer interface                 | USB 2.0 or above  |
| Operating system                   | Windows 7 professional or Windows 10 professional   |
| Operational temperature            | 5°C-40°C  |
| Operational humidity               | 10% - 85% RH (Non-condensing) )   |
| Supply voltage                     | 220VAC, 50/ 60Hz  |
| Optical system weight              | 31kg  |
| Optical system dimensions          | 670mm x275mm x320mm   |

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