

## SKZ1062 Wet method laser particle size Analyzer



### Technical parameter:

Standard: ISO13320

1. Measuring range: 0.02~1200  $\mu\text{m}$
2. Accuracy tolerance:  $\pm 1\%$  (national standard D50)
3. Deviation of repeatability:  $\pm 1\%$  (national standard D50)
4. Electrical requirements: AC 220  $\pm$  10V, 50Hz, 200W
5. Dimension: 1000x330x320mm
6. Weights: 38KG

### Principle:

Mie scattering theory with full-scale, fully taking into account the refractive index of the optical properties of the particles and the dispersion medium measured particle size distribution data, depending on the size of the particles in each angle scattered light intensity changes on the anti-particle group performances.

Particle sizing calculations are generally divided into unconstrained fitting inversion and the constrained fitting inversion. Constrained fitting inversion before the calculation assumes that match a certain distribution of particle group, according to the law of inverse particle size distribution. This type of operation is relatively simple, but because of prior assumptions inevitably exists between the reality of bias, thereby testing the constrained fitting data do not reflect the actual particle size distribution of the particles.

Unconstrained fitting inversion test before the particle does not make any assumptions, by light intensity directly and accurately calculate the size distribution of particles. Such assumptions are reasonable detector and particle classification, to make high demands on the device itself. SKZ1062 Wet-laser particle size Analyzer, using optimum of non-uniform cross-dimensional fan-shaped array of detector arrays and reasonable size grading, making it possible to accurately measure particle size distribution.

**Technical characteristics:**

**Testing stable basis:** only system capable of providing a stable optical signal can fully guarantee the stability of test data. Using he-ne gas laser, wavelength of 0.6328 Micron, short wavelengths, line width is narrow, good stability, and more than 25,000 hours of service life, can be very good for the system to provide a stable laser source signal.

**Data reliable guarantee:** to ensure reliable test data, first is the rational design of signal detection system, effect of the measured sample dispersion and uniformity of dispersion being measured, is another decisive factor for real results obtained.

**Detectors:** photoelectric detecting system of unique design, high sensitivity detector, multiple auxiliary detector using non-uniform cross-dimensional fan-shaped array, maximal detection angle reaches 135 degrees, fully guarantee the comprehensive nature of the signal detection.

**Optical path:** using a range of design, unique converged light way, reducing the Fourier lens group, the measurement range is wider, higher-resolution, optical path free transfer.

**Sample dispersion:** ultrasonic dispersion system can be a test sample sufficient dispersion. High-power ultrasonic device (100W) and the host integration, automated ultrasonic time touch-button operation and continuous adjustment, set the time digital display, ultrasonic time from 0 to 9 minutes 50 seconds continuously adjustable, can be set according to the degree of difficulty of sample dispersion ultrasonic time, good shielding treatment so that an ultrasonic dispersing and sample testing may be performed simultaneously, even if the particles have a superior reunion can be sufficiently dispersed in order to obtain the true particle size distribution data. Sample dispersion pool (400ml) with the host integrated structure, stainless steel, unique design, rounded, circular drain easily, leaving no dirt, easy to clean. Using wet dispersion, available distilled water, pure water and alcohol and other liquids as dispersion medium.

**Dispersion was homogenized:** uniformity of dispersion to provide a stable prerequisite to the scattered light signal detection system, using a continuous stirring and circulating adjustable fully ensure the uniformity of dispersion.

**Stirring system:** according to the characteristics of the sample, select the appropriate stirring speed to prevent particle precipitation, the dispersion uniformly mixed stirring speed automatic operation and touch buttons continuously adjustable, set the speed digital display, stirring speed from 0 to 3000 rpm / min continuously adjustable, during the test, ultrasound can be open simultaneously to avoid stirring too fast to generate test error caused by air bubbles.

**Circulatory system:** according to the characteristics of the sample, select the appropriate circulation pump speed, to prevent the circulation line particle precipitation, circulation pump speed automatic operation and touch buttons continuously adjustable, set the speed digital display, circulation pump speed from 0 to 5000 rev / min continuously adjustable, during testing, ultrasound can open simultaneously to avoid excessive speed loop test error caused the bubble, but also to prevent the generation of particles agglomeration during the cycle.

**Analysis Software:**

PADMAS particle size measurement and analysis system (Particle Diameter Measure & Analysis System) is powerful, test data can be done: average, statistics, comparison, and mode conversion processing, the differential distribution, the cumulative distribution, standard grade, RR distribution, custom grading, by columns and quantity grade distribution. Default grading 130 within 0.02 to 2000 microns, within the range from 1 to 130 can be customized classification. Test report has particle size distribution and particle size of the graphic data table, there are D10, D50, D90, the average particle size and specific surface area and other characteristic parameters, with four custom parameter input according to requirements, the weight ratio of surface area to volume ratio of the surface area may be interchanged. Particle size data can be saved to EXCEL. Support Chinese and English test report format printing, headers and footers can be modified as needed, have a print preview feature, able to put particle size distribution graphs and data charts saved as an image or PDF format to facilitate interaction with the use of WORD. According to user needs, increase other processing functions. Operation is simple: standards, quantification, simple operation can be mastered in a short time, the test data is complete within one minute.

**Strong visibility:** Testing friendly software interface, the testing process is clearly visible, instantaneous refresh, visibility, and can be observed at any time of the instrument operating conditions, fluctuations in clear conditions of test data, analysis of the measured data authenticity and reliability.

Cycle, ultrasound, stirring and draining operation keys are on the intelligent touch control panel, standard, quantification, simple operation, shorten test time and reduce the operator's requirements.

**Equipment maintenance:** comprehensive technical training and content of detailed operating instructions to use the software online help allows the operator to accurately operate to resolve questions, troubleshooting.

**Technical support:** according to the sample: density, heterosexual, brittle, magnetic, toxicity, mobility, reunion, solubility and physical and chemical properties of the physical and chemical reactions, we conclude that a scientific, systematic and complete dispersion of the test program, with the instrument provided to the user. We not only sell equipment, but also provide decentralized testing program.