CAMSIZER X2

General Information

The quality control of fine powders can be substantially improved with the new CAMSIZER X2: More precise and faster analysis of particle size and particle shape helps to improve the product quality, reduce rejects and save labor costs, energy and raw materials.

The design of the CAMSIZER X2 is based on the well-proven optical particle measurement system Camsizer but is optimized for finer samples (from 0.8 µm to 8 mm). Not only the improved optical resolution but also new options for material feeding allow for an extended application range. Fine particles tend to agglomerate which makes it difficult to record the properties of a single particle. Therefore, it is important to have various possibilities of feeding the sample to the analysis area to be able to find for each material the optimum between the desired dispersion of the agglomerates and the undesired destruction of the individual particle.

The CAMSIZER X2 offers the flexible X-Change system: from the X-Fall module (free fall mode), which is the most gentle method for the material, to the X-Jet module with adjustable pressure and variable nozzle geometry and, additionally, the X-Flow module in which particles are dispersed in liquids, optionally by an ultrasonic probe.

Application Examples

abrasives (medium-size and small grit), activated carbon, cement, chemicals, construction materials, detergents and enzymes, foodstuffs (pulverized and granulated), glass beads, metal and ore powders, pharmaceutical powders / granules / fine pellets, plastic fibers, plastic powders, salts, sand, sugar, wood fibers, ...

Product Advantages

- Digital image processing with patented two-camera-system (acc. to ISO 13322-2)
- Wide dynamic measuring range from 0.8 µm to 8 mm (extended measuring ranges available, click here for more information)
- Newly developed optical system with ultra-strong LEDs for highest resolution and excellent depth of sharpness
- Reliable detection of smallest amounts of "undersize" and "oversize"
- Very short measurement time of 1 - 3 minutes
- Modular system X-Change for dry and wet dispersion
- Measurement results are 100% compatible to sieve analysis if required
- Intuitive software
- Several language versions (German, English and other languages)
- Detailed particle size analysis - results are saved in more than 1,000 size classes
- Simultaneous analysis of particle size, shape, number, density and transparency
- No-contact, non-destructive measurement
- Calibration in seconds

- Simple handling prevents operating errors
- Password protectet instrument settings
- Automatic measuring procedure
- Robust design, insensitive to dust and vibrations
- Self-cleaning, wear-free, maintenance-free
- Less time- and labor-intensive than sieve analysis

Features

Measuring principle	Dynamic Image Analysis (ISO 13322-2)
Measuring range	Standard 0.8 µm to 8 mm 10 µm to 8 mm (gravity dispersion) 0.8 µm to 5 mm (air pressure dispersion) 0.8 µm to 1 mm (wet dispersion) extended measuring ranges click here for more information
Type of analysis	dry and wet analysis
Measuring time	~ 1 to 3 min (depends on desired measuring statistics)
Number of cameras	2
Sample volume	< 20 mg - 500 g (depends on sample type and measurement mode)
Measuring methods	> 300 images/s, each with approx. 4.2 MPixel
Width of analysis area	~ 20 x 20 mm
Resolution	0.8 µm per pixel
Measurement parameters	particle size (smallest diameter, length, mean diameter, etc.) particle shape (aspect ration width to length, symmetry, sphericity, convexity etc., acc. to ISO 9276-6)
Dimensions (W x H x D)	~ 850 x 580 x 570 mm
Weight (Measuring unit)	~ 50 kg
Operating unit	Quad Core PC incl. Windows 10, monitor, keyboard and mouse, network card, PC interface cards for hardware communication, evaluation software

CAMSIZER X2

Videolink

http://www.retsch-technology.com/camsizerx2

Function Principle

The CAMSIZER X2 uses the principle of digital image processing. The patented principle is fairly simple: Dispersed particles pass in front of two bright, pulsed LED light sources. The shadows of the particles are captured with two digital cameras. One camera is optimized to analyse the small particles with high resolution, the other camera for the detection of the big particles with a good statistic, that means large field of view. Each camera is illuminated by one LED with optimized brightness, pulse length and field of view. A user-friendly software analyzes the size and shape of each particle, and finally calculates the respective distribution curves in realtime.