

Particle Measuring System Syringe

The particle measuring system Syringe is applied for the measurement of particle number and particle size in liquid media. It has been specifically developed for lab operation in the medical and pharmaceutical sector. The measuring system may be equipped with various sensors, and thus covers a measuring range from 0.7 µm up to 500 µm. The system is used, for example, for cleanliness control of water, pharmaceutical solutions, chemicals and beverages. Optionally it is possible to carry out particle size analyses with the equipment. The liquid to be tested for contamination is sucked from the sample glass through the laser sensor with the electronically controlled syringe system. The different syringes, 1 ml, 10 ml und 25 ml, are easily exchangeable. The particle measuring system Syringe allows you to measure even lowest volumes of 10 µl. The measuring tip, upon request made of polished stainless steel, may be quickly cleaned with very low flushing volume. Thus, you may measure samples in very rapid sequences. Due to the slanted cut of the measuring tip you can penetrate closed sample vessels without any problems. This enables you to avoid carrying in particles contained in the air. The particle measuring system Syringe works according to the optical particle counting method. With this method, you use the light absorbance – the extinction – when the particle passes the lighted cell as size determination. The advantage of this measuring method is that even in case of low particle occurrence single particles may be precisely detected and their size and number displayed. The electronic measuring component of the system is located on a circuit board that can be inserted into any common PC. The convenient measuring software with operator prompting features runs under Win 95 and Win NT. Up to 256 size classes may be programmed as precision classification for the measurement. The measuring results are stored on the hard disk of the PC and may be exported into MS Excel for further statistical processing. Syringe has an automatic calibration function with which you may check and recalibrate the system at any time.

Technical Specifications

Sample feeding device Syringe

| | | |
|---------------------------|---|-----------------------------|
| Syringe sizes | : | 1 ml, 10 ml, 25 ml |
| Lowest meas. volume | : | 10 µl |
| Magnetic stirrer (option) | : | adjustable; 0 – 200 U/min |
| Computer interface | : | RS 232 C (V. 24) |
| Power supply | : | 230 V/AC ; 115 V/AC |
| Dimensions in mm | : | 260 x 260 x 400 (L x W x H) |
| Weight | : | 8 kg |

PC measuring card SLC 1.0

| | | |
|-------------------|---|--|
| Slots | : | 16 Bit ISA-Slot (long) |
| Resolution | : | 12 Bit A/D converter equals 4096 channels |
| Encoding | : | Address of insert card in I/O area adjustable via DIP switch |
| Power consumption | : | +5 V / 350 mA, +/- 12 V / 20 mA |
| Dimensions | : | 276 x 99 mm |

Particle sensors

| Model | Max. flow rate in ml/min | Measuring range in µm with Latex calibration | Cell dimensions in µm | Max. concentration particle/ml |
|---------------|--------------------------|--|-----------------------|--------------------------------|
| LDS 23/25 bs | 20 | 0,7 – 120 | 230 x 250 | 150 000 |
| LDS 23/25 | 50 | 1– 120 (200) | 230 x 250 | 150 000 |
| LDS 23/25 usp | 50 | 1 – 50 | 230 x 250 | 100 000 |
| LDS 30/30 | 50 | 0,9 – 139 | 300 x 300 | 120 000 |
| LDS 45/50 | 100 | 1,5 – 150 (400) | 450 x 500 | 22 000 |
| LDS 1/1 | 500 | 5 – 500 | 1000 x 1000 | 4 000 |

The selected sensor is built into the measuring system depending on application and customer's requirement. The sensors are calibrated with certified Latex particles. The maximum concentration is indicated at a coincidence error of 7.8 %.