

Particle Counting System PZG-3 / PZG-4

The sample feeding systems PZG-3 / PZG-4 with the particle counter Abakus or the PC measuring card SLC 1.0 is an evaluation device for the measurement of particle number and size in liquids and very viscous media. The variable equipment with various sensors enables the system to cover a measuring range from 0.7 μm up to 1800 μm and to be applied for manifold purposes. Application areas include cleanliness control of water, pharmaceutical solutions, chemicals, beverages and particle size analysis of technical suspensions. With the sample feeders PZG-3 and PZG-4 liquid samples from bottles and vessels with a volume of up to 1 liter can be taken and pressed through the sensor. In order to be able to keep larger particles suspended, the system can also be additionally equipped with a magnetic or rod stirrer. The particle number can be shown in up to 32 freely definable size classes on the LCD display of the particle counter Abakus; for representing a particle size course there are 4096 channels available. Sensor characteristic lines and measuring rows can be archived in the device's memory. The external printer enables you to print a measuring protocol. Evaluation in accordance to the standard USP 23 is possible. With the software "Log and Show", you can do further processing of the measuring results at the PC in various programs (MS Excel, Lotus 1-2-3 etc.); the software also allows direct measuring and archiving. The system features an automatic calibration function with which the particle counter may be checked and recalibrated at any time.

The measuring volume at the **PZG-3** is adjusted with the help of the light barrier. The flow rate is controlled via pressure admission. You can use all sensors in this case. At the **PZG-4**, a built-in double piston pump ensures a constant flow independent of the viscosity. The measuring volume is adjusted at the particle counter. In this case you may only use the sensors LDS 23/25, LDS 45/50 and LDS 23/25 bs.

Technical Specifications

Particle Counter Abakus

Display and control	:	background-lighted graphical LCD display, 5-key-operation
Measuring mode	:	Single measurement with 1 – 9 measurements per cycle or continuous measurement
Data contents per data batch	:	date, time, sample ID / number, measuring time, pause time, 32 freely programmable particle size channels with distributive, cumulative particle number and volume distribution, mean value depending on setting, alarms
Printer:	:	thermal printer DPU 414
Computer interface	:	RS 232 C (V. 24)
Power supply	:	230/115 VAC, 50/60 Hz, max. 20 W
Accessories	:	evaluation software "Log and Show"
Option:	:	magnet stirrer, pump for air pressure and vacuum creation, system with Kalrez seals (only possible for PZG-4)

PZG-3 / PZG-4

Lowest measuring volume	:	10 ml – 100 ml (PZG-3), 10 ml – 1000 ml (PZG-4)
Max. viscosity	:	350mm ² /s (pressure 4 bar, laser sensor LDS 45/50)
Pressure/vacuum	:	5 bar (special version 12 bar) / 0 – 0,8 bar depending on compressor
Flow rate	:	25ml – 500ml/min
Power supply	:	230 VAC, 50/60 Hz, 20 W
Dimensions /Weight	:	440 x 230 x 700 (L x W x H) mm / 16kg

Particle sensors

Model	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 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	1 000 x 1 000	4 000
LDS 2/2	1 000	15 – 1 800	2 000 x 2 000	1 000

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 %.