

PAMAS SVSS

Particle Counting System for Infusion Solutions and Clean Fluids



PAMAS SVSS **Small Volume** **Syringe System**

Operating software
PAMAS USP is fully
compliant with
21 CFR Part 11.

Applications:

- Infusion solutions
- Clean fluids
- Water analysis
- Suspensions
- Partscleaning application

Particle measurement
of infusion solutions
according to USP, EP,
BP, JP, KP.

Instruments are conti-
nuously adapted to most
recent standards and
guidelines.

- Measurement of small volumes down to 1 ml ampoules
- Large dynamic size range
- Simplest operation
- Highest particle concentrations up to 200,000 p/ml
- Software validation package
- IQ/OQ/PQ validation
- Calibration software according to pharmaceutical standard USP

PAMAS SVSS

Universal particle counting system with specific software solutions



The **PAMAS SVSS** is an easy-to-use highly sophisticated particle measuring system. Two different software programmes are available for operation: PAMAS USP or PAMAS PMA. The software PAMAS USP reports measuring results according to the pharmaceutical standard USP. With the help of the software PAMAS PMA (Particle Measuring and Analysing software), single measurements and average results of test series are shown on a table or graph. The instrument **PAMAS SVSS** can also be used without any software.



PAMAS SVSS

Sampling

The user can process multiple samples and observe the particle concentration in up to 32 free selectable size channels. Calibrating with polystyrene latex spheres of different sizes, the user can establish a calibration curve over the full range. An operator selectable flushing volume allows the user to discard a specific amount of the fluid at the beginning of each sample to remove any fluid

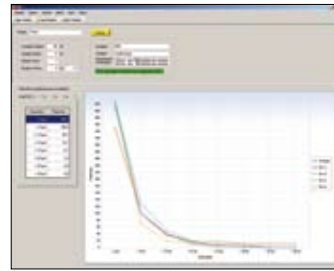
remaining from the previous sample. A stepper motor actuated precision syringe moves the sample through the particle sensor at the optimum flow rate. Due to its volume resolution of 10 µl, **PAMAS SVSS** provides an accurate sample volume and guarantees reproducible measurement results. With the help of interchangeable syringes, **PAMAS SVSS** can handle sample volumes of 100 µl to one litre. The laboratory instrument **PAMAS SVSS** is designed especially for the particle analysis of water and aqueous solutions with a low viscosity degree. For the contamination analysis of higher viscosities, PAMAS offers the particle analysing system **PAMAS SBSS** (see picture).

Calibration of sensors

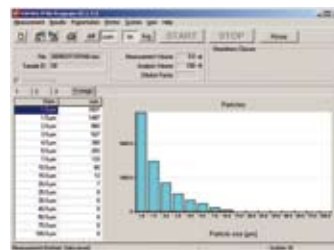
Sensor calibration check according to USP by operator. Calibration of sensors with latex spheres according to ISO 21501 or according to individual standards (on request).

PAMAS SVSS

- Preadjustable and automated sampling
- Up to 32 free adjustable size channels
- Threshold adjustment with D/A-converter
- Size of sample container 1 ml - 2,000 ml
- Analysis volume: 100 µl - 1,000 ml
- Constant sample flow and exact volume control via stepper-motor-driven syringe
- Interchangeable syringes with 1 ml, 10 ml and 25 ml volume



Measuring results according to USP with software PAMAS USP.



Complete remote control and report of measuring results using software PAMAS PMA.



PAMAS SBSS system for high viscosities or high vapour pressure.

Technical data

Counter:

- Free adjustable 8, 16 or 32 channel D/A-converter system
- Backlit graphical LC-display with 320 x 240 pixel resolution.
- Integrated 32-column-thermoprinter
- Data transfer: ASCII code, RS 232 port
- Power supply via alternating current: 100 V, 120 V, 230 V, 240 V 50-60 Hz AC

Volumetric sensors: PAMAS HCB-LD-25/25

Size range: 1-200 µm
Max. particle concentration: 120,000 p/ml* at 10 ml/min**

PAMAS HCB-LD-15/25

Size range: 1-100 µm
Max. particle concentration: 200,000 p/ml* at 10 ml/min**

PAMAS HCB-LD-50/50

Size range: 1-400 µm
Max. particle concentration: 24,000 p/ml* at 25 ml/min**

PAMAS HCB-LD-100

Size range: 2-800 µm
Max. particle concentration: 1,200 p/ml* at 50 ml/min**

PAMAS SLS-25/25

Size range 0.5-20µm
Max. particle concentration: 13,000 p/ml* at 10ml/min**

Size:

450 mm x 280 mm x 400 mm (W x D x H)

* Coincidence error less than 7.8 %

** Various flow-rates can be selected

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