

# PAMAS SVSS

## Particle Counting System for Infusion Solutions and Clean Fluids



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

### **21 CFR Part 11** **Compliant Software**

#### **Ideal for**

- Infusion solutions
- Clean fluids
- Water analysis
- Suspensions
- Partscleaning application
- **Particle measurement for infusion solution according to USP, EP, BP, JP, KP.**

**Instruments are continuous adapted to most recent standards and guidelines.**

- Measurement of small volumes down to 250 µl ampules
- 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 USP

# Universal particle counting system

## Specific software solutions



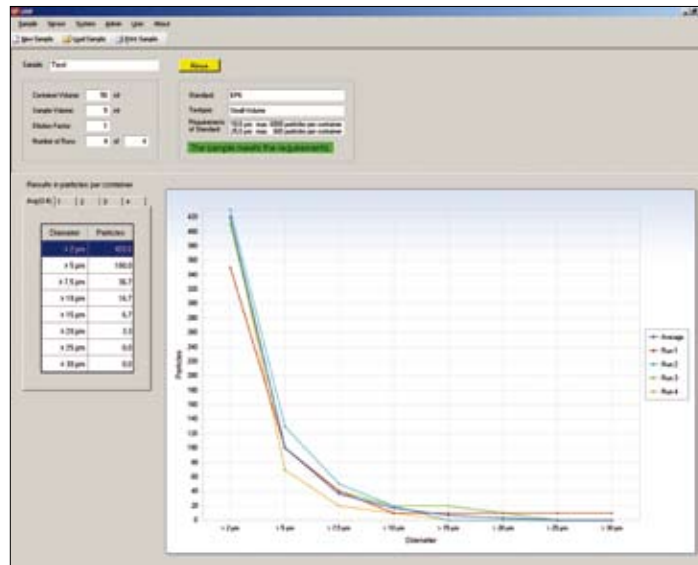
The PAMAS SVSS is an easy to use highly sophisticated particle measuring system. It can be operated by PAMAS USP software or by PAMAS PMA software. The mainframe however can be operated without software.



PAMAS SVSS stand alone.

### Sampling

The user can process multiple samples and observe the particle concentration in as many as 32 operator 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 HCB-sensor at the optimum flow rate. An accurate sample volume with 10 µl resolution is achieved with the SVSS gaining reproducible measurement results. Using interchangeable syringes, the SVSS is capable of sampling volumes from 50 µl - 1 liter for low to medium viscous fluids.



Complete remote control using PAMAS USP or PAMAS PMA software with data storage in ASCII code.



PAMAS SBSS system for high viscosities or high vapour pressure.

### Calibration of sensors

Sensor calibration check according to USP XXIX by operator. Calibration of sensors with latex spheres according to ANSI/NFPA T2.9.6R1-1990. ASTM F 658-80, individual, or additional calibration.

### PAMAS SVSS

- Preadjustable and automated sampling routines
- Up to 32 free adjustable size channels
- Threshold adjustment with D/A-converter
- Size of sample container 250 µl - 2,000 ml
- Analysis volume: 50 µl - 1,000 ml
- Constant sample flow and exact volume control using a stepper motor actuated precision syringe
- Exchangeable syringes with 1 ml, 10 ml and 25 ml volume

### Technical data

#### Counter:

- Freeadjustable 8, 16 or 32 channel D/A-converter system
- Backlit graphical LC-display with 320 x 240 pixel resolution.
- 32 column built-in thermoprinter
- Data transfer: 8 Bit ASCII code, RS-232C port
- Power supply: 100 V, 120 V, 230 V, 240 V 50-60 Hz AC

#### Sensors:

##### HCB-LD-25/25

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

##### HCB-LD-25/15

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

##### HCB-LD-50/50

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

##### HCB-LD-100

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