

## **PAMAS SBSS** Particle counting system for liquids

**Laboratory particle counter for liquids with a viscosity of up to 1600 cSt with an external pressure supply and precise flow rate control for numerous fluids including:**

- Hydraulic oils
- Turbine and insulation oils
- Gear and engine oils
- Water based hydraulic fluids
- Phosphate ester based hydraulic fluids
- Fuels
- Highly volatile fluids
- Parenterals, protein solutions according to common pharmacopoeias



# PAMAS SBSS

## Particle counting system for liquids



### Product features

- Customisable measurement settings
- 16 freely adjustable size channels (32 channels upon request)
- Pressure sampling up to 10 bar
- Optional vacuum cycle for sample degassing
- Integrated magnetic stirrer
- Use of any sample vessel with a max. diameter of 7 cm and a height of 18 cm
- Measuring volume of 1 to 1,000 ml
- Automatic sample flow and volume control via a stepper motor driven syringe module
- Interchangeable syringes with 1 ml, 10 ml and 25 ml volume

### Accurate single particle counting technique

The volumetric sensor cell and sophisticated optical components guarantee high resolution and accuracy. Every particle passing through the sensor is detected. This design ensures the true measurement of the fluid sample including ultra clean fluids.

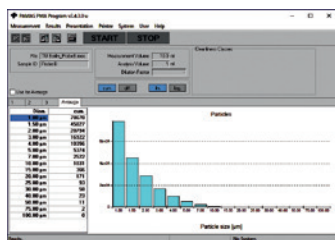
### Calibration

The system is calibrated according to international standards including ISO 11171, ISO 21501-2, ISO 21501-3 or USP <1788>. These calibrations are traceable to NIST standards. Historical calibrations including ISO 4402 are still available on request.

### Software

#### PAMAS PMA

- User-friendly setting of the measuring parameters
- Report and analysis of measuring results
- Measurement report including cleanliness codes and sample parameters in numerical and graphical presentation
- LIMS integration possible



User interface of PAMAS PMA software

### Software

#### PAMAS USP

- Straightforward selection of default measurement methods according to pharmacopoeias
- Easy setting of customer specific measurement methods
- Automatic evaluation of measurement results according to defined criteria (pass/fail)
- Software fulfils requirements of 21 CFR Part 11
- Electronic assessment and approval of measurement results

### Reporting of measurement results

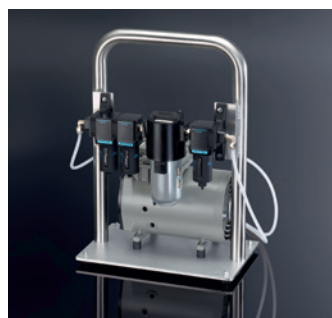
according to the following standards: ISO 4406, SAE AS4059, NAS 1638, GOST 17216, NAVAIR 01-1A-17, GJB 420B, SAE 749D, CHARN, ISO 11218.2, USP <787>, USP <788>, USP <789>, Ph.Eur. 2.9.19, BP XIII, JP XVI, KP X, and IP 2.5.8 as well as raw data.

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### Versions

- **PAMAS SBSS**  
standard version with accessory pump up to 5 bar
- **PAMAS SBSS HP**  
with high pressure pump up to 8 bar
- **PAMAS SBSS Small Volume Version**  
with small pressure container for small sample volumes
- **PAMAS SBSS WG**  
for water glycol based hydraulic fluids
- **PAMAS SBSS CL**  
for corrosive liquids
- **PAMAS SBSS Skydrol®**  
for phosphate ester based hydraulic liquids



External pump with filter and air dryer unit for pressure and vacuum

### Specifications

- 16 or 32 freely adjustable size channels
- LC display with keypad
- Integrated thermoprinter
- Data transfer: ASCII code, RS-232-C interface
- Power supply: 100-240 V, 50-60 Hz

### Volumetric sensors

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

Available size ranges:  
1-200 µm (ISO 21501-3),  
1-400 µm (ISO 21501-3)  
option on request  
1-100 µm (ISO 4402)  
4-70 µm(c) (ISO 11171)  
Max. particle concentration:  
24,000 P/ml\* at 25 ml/min\*\*

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

Available size ranges:  
1-200 µm (ISO 21501-3)  
1-100 µm (ISO 4402)  
4-70 µm(c) (ISO 11171)  
Max. particle concentration:  
120,000 P/ml\* at 25 ml/min\*\*

#### PAMAS SLS-25/25

Available size ranges:  
0,5-20 µm (ISO 21501-2)  
1-20 µm (ISO 4402)  
1.5-25 µm(c) (ISO 11171)  
Max. particle concentration:  
13,000 P/ml\* at 10 ml/min\*\*

Other sensors for larger particle sizes or higher concentrations are available on request.

### Size

400 mm x 600 mm x 280 mm  
(W x H x D)

### Weight

30 kg

- \* Coincidence error of 7.8 %
- \*\* Other flow rates are available on request



Management System  
ISO 9001:2015

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