

PAMAS SBSS WG

Particle Counting System for Water Based Hydraulic



PAMAS SBSS WG

Syringe Bottle Sampling System

Dedicated Water/Glycol
particle counting system

Applications

- Water/Glycol hydraulic fluids
- Subsea Christmas tree and well head assemblies
- HPU's
- Hydraulic Accumulators
- Subsea Umbilical's
- Hydraulic valves and control systems

Compatible with water/glycol
hydraulic fluids including
the following;

- MacDermid Oceanic
- HW540,443,443R etc.
- Castrol Transaqua
- Niche Products Pelagic 100

**Volumetric cell design
of PAMAS sensors guarantees highest accuracy
and resolution for best
statistical information.**

- 1 μm sensitivity according to ISO 4402
- 4 $\mu\text{m(c)}$ sensitivity according to ISO 11171
- 1 μm sensitivity according to ANSI/NFPA

Constant sample flow and exact volume control

The PAMAS SBSS is designed to test water/glycol hydraulic fluids for the off shore oil and gas industry. It is a workshop/laboratory instrument and simple and easy to use producing accurate and precise results quickly. For applications where the frequency of testing is high such as engineering workshops with multiple flushing rigs.

The PAMAS SBSS laser light blockage particle counting system is tried and tested in the demanding off shore oil and gas engineering area. Pressure and vacuum can be selected during the testing procedure and applied to the sample chamber to remove the effect of air bubbles common to water/glycol fluids straight from the flushing equipment.

The PAMAS SBSS is compatible with water/glycol fluids of all types and can be easily used to test alternating samples of different fluids without time consuming adjustments. Known for its ruggedness and reliability the PAMAS SBSS is a stand-alone test station with a built in printer to produce results where they are needed. With its simple and intuitive user interface results can be toggled quickly and easily between standards such as NAS1638 and SAE AS 4059 and ISO 4406.

PMA Software for operation and recording of results is supplied with the PAMAS SBSS for those applications where results are required in a digital format.



Complete remote control using PAMAS PMA program with data storage in ASCII code.

Remote control with PAMAS PMA program

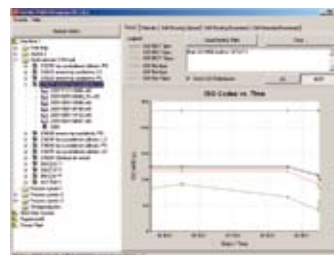
- Automatic storage and documentation in readable format
- highest flexibility
- Printout including all sample parameters, numerical and graphical presentation and all main cleanliness classes.

Classification according to any standard

Classification of particle number and size within the sensors size range is according to any national and international standard. Printouts according to ISO 4406, ISO 4406: 1999 (c), SAE/AS 4059, NAS-1638, GOST-17216, GJB-420A.

Calibration of sensors

according to ISO 4402 as well as ISO 11171. Pulseheight calibration with latex standards, according to ANSI/NFPA T2.9.6R1-1990, ASTM F 658-80 or calibration according to individual standards, as well as calibration according to USP XXVIII.



PAMAS CMDM, is the state-of-the-art Contamination Monitoring Data Manager.

Results coming from PAMAS SBSS, S40, and digital membrane pictures, CMDM allows perfect and flexible Trend Monitoring of the different sampling points so that the necessary actions can be taken in time to create economical payback in Hydraulic Maintenance.

PAMAS CMDM is compatible with Windows® 95/NT or higher (incl. XP® Prof.).

PAMAS SBSS

- Preadjustable and automated sample evacuation
- Up to 32 free adjustable size channels
- Threshold adjustment with D/A converter
- Pneumatic sampling with pressure up to 10 bar
- High pressure sampling up to 30 bar (option)
- Sample volume: 5 ml up to 1,000 ml
- LV-container up to 2,000 ml
- Analysis volume: 1 ml up to 1,000 ml
- Constant sample flow and exact volume control by adjustable piston movement against pressure

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-50/50

Size range: 1-400 µm
1 µm sensitivity (ISO 4402)
4 µm(c) sensitivity (ISO 11171)

Max. particle concentration:
24.000 p/ml* at 25 ml/min**

• HCB-LD-25/25

Size range: 1-200 µm
1 µm sensitivity (ISO 4402)
3 µm(c) sensitivity (ISO 11171)

Max. particle concentration:
120.000 p/ml* at 10ml/min**

Size:

400 mm x 300 mm x 600 mm
(W x D x H)

- * Coincidence error less than 7.8 %
- ** Various flow-rates can be selected

9001: 2000



DIN EN ISO 9001:2000
Zertifikat: 01 100 061898