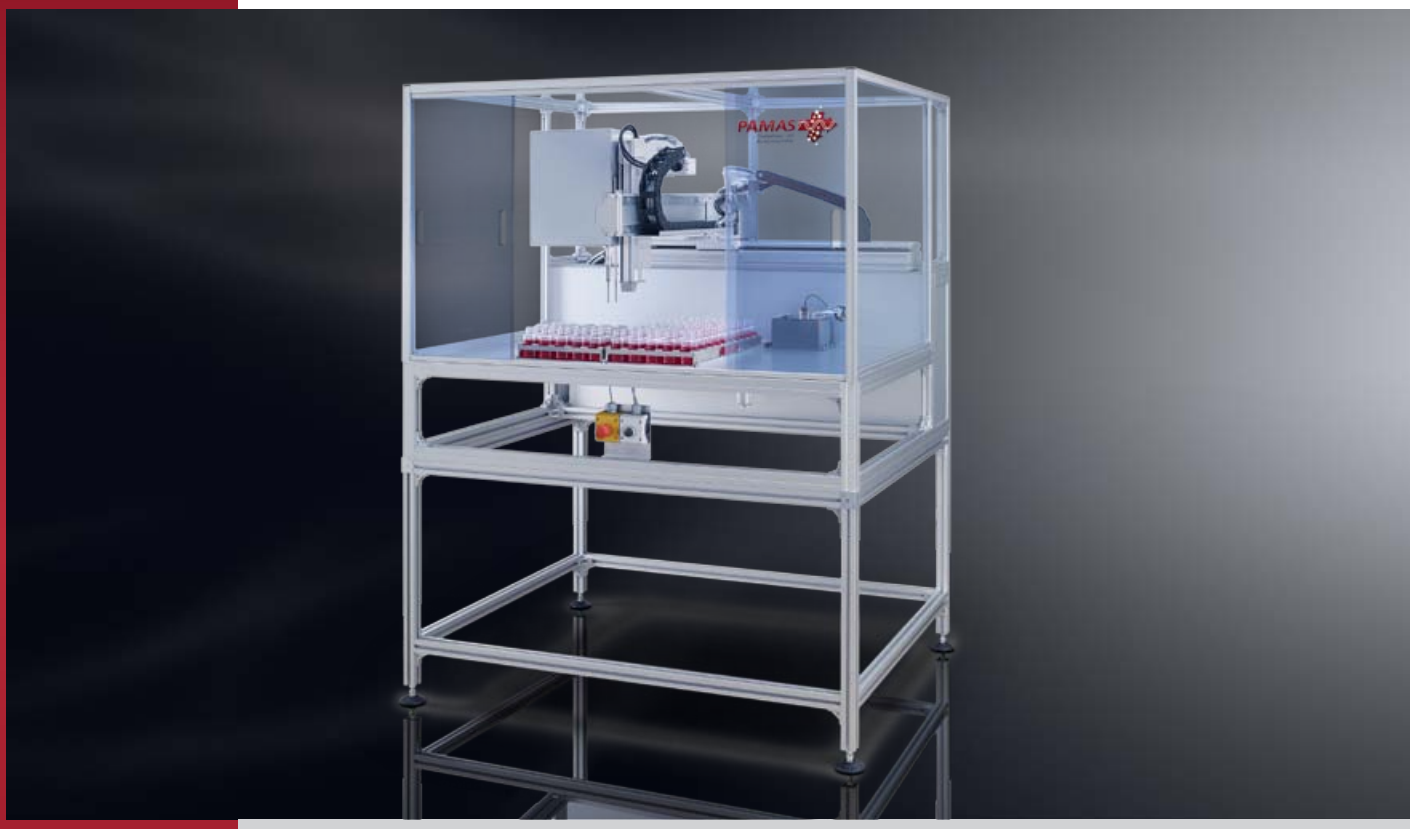
PAMAS
Partikelmess- und Analysesysteme



PAMAS AS3
Autosampler for fully automated Oil Contamination Analysis

Fully automated Particle Analysing System for unattended batch sampling of several hundred samples per day

Application:

Contamination analysis of a continuously high number of oil samples

- Fully automated analysis
- Up to 200 samples within 8 hours (i.e. up to 600 samples per day in case of continuous operation
- Data transfer in universal file format (.xml)
- Handling viscosities up to 200 cStokes
- Excellent reproducibility
- Free programmable time saving flushing cycles
- Automatic preparation and filtration of flushing liquid
- Adaptable to any application
- High resolution sensor with 4 µm(c) sensitivity according to ISO 11171
- Automated ultrasonic sample preparation before measurement
- integrated automatic dilution device

REV 09/2018

IN THE WORLD OF PARTICLES PAMAS COUNTS

PAMAS AS3

Autosampling system for almost every application

The fully automated **PAMAS AS3** autosampling system analyses high quantities of samples. This new system is designed to provide sample analysis of several hundred samples per day, with unattended operation. The system offers a multitude of features regarding sample preparation, sample handling, flushing and sample dilution.

Sample preparation

The **PAMAS AS3** system includes a sample preparation probe that breaks all agglomerates in the fluid before analysis. The ultrasonic probe prepares the subsequent sample whilst the current sample is being analysed. The sample preparation device is cleaned between samples to minimise cross contamination.

Sample handling

The new system has a XYZ stage, operating with samples on trays as these are the most widely used method in high quantity laboratories. RFID (Radio Frequency Identification) or barcode systems can be used optionally to automatically identify the trays. The system is servo motor driven. This increases the speed of operation and reduces the noise level below that of stepper motors.

Seamless integration to LIM system

The system can be linked to an existing LIM (Laboratory Information Management) system. If the existing LIM system can forward sample IDs based on tray number and x/y position within the tray, no individual sample identification procedure is necessary. If the samples carry RFID or barcode labels, samples can be identified with an attached reader (optional).

A close link to the LIM system helps to request information about samples. It is possible to transfer special condition options for samples using the LIM system.

Flushing

The PAMAS AS3 autosampling system is equipped with an intelligent flushing device which optimizes the sequence of samples.

Sample dilution

Some samples may either be too dirty or too viscous or may contain undissolved additives or undissolved water. In this case, sample dilution with low viscous solvents helps to get reliable measuring results. The new system has an automatic dilution system that adds a programmable amount of solvent online to the raw sample.

Options

The **PAMAS AS3** autosampling system can be built to match existing trays. Large systems with several hundred samples to analyse, allow continuous unattended operation (three shifts within 24 hours). The system optionally can be equipped with an integrated drain trap that collects any spillage. A drainage system can be connected to feed the spillage to a central collection system.

Technical data

Particle counter:
- Particle counts in 8 channels
- 32-bit high performance CPU with sophisticated programmable digital domain signal conditioning and 4096 internal channels
  Data transfer: 8 bit ASCII code through RS 232 port (57600 baud)
  Power supply via alternating current (110 V, 115 V, 220 V, 240 V or 50-60 Hz)

Volumetric Sensor PAMAS HCB-LD-50/50:
Calibration range:
4 - 70 µm(c) according to ISO 11171

Software:
- The Autosampling software is individually developed for the customer's specific application and thus can be specifially adapted to individual laboratory infrastructures and to existing LIM systems.
- With the aid of the software, the PAMAS AS3 Autosampler reports measuring results in full compliance with common cleanliness standards including e.g. ISO 4406, NAS 1638 and SAE AS 4059.

Sample bottle volume:
up to 250 ml

Viscosity:
up to 200 cSt

Relative humidity:
0-95%, non condensing

Size:
various size models available,
e.g. 195 cm x 114 cm x 182 cm

Weight:
268 kg

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