

PODS *Pro*

PORTABLE OIL DIAGNOSTIC SYSTEM

PODS *Pro* is the new generation of portable oil-diagnostic instruments for simple, quick and reliable monitoring of oil cleanliness.

PODS *Pro* is based on many years of know how and represents the advanced version of PODS with newest technology. Many features were improved, thus PODS *Pro* is not only lighter than its predecessor, but also offers the classification according to SAE AS 4059.

Productive – Online & Bottle sample analysis by one instrument.

As before you can rely on PODS *Pro* even under severest operating conditions. The measurement results are reported simply, quickly and reliably. With PODS *Pro* you have the option to run online or bottle sample analysis with the same instrument.

Profitable – the PODS *Pro* Special:

The all-inclusive delivery program includes a robust rollerbox with all necessary accessories.

The ARGO-HYTOS software PODSWare sets new standards for service statistics and allows, for example, a detailed mapping of the machine life.

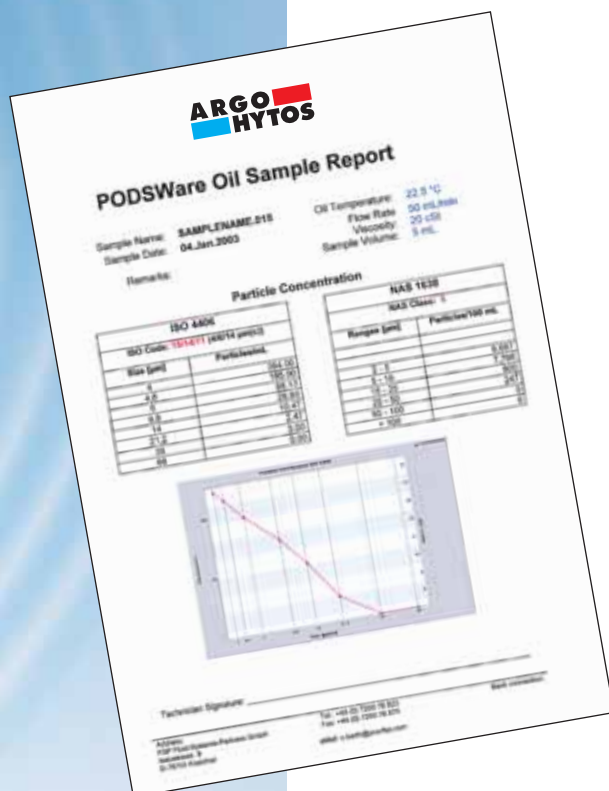
Proving – PODS *Pro* „live“

We would be happy to show you PODS *Pro* „live“. Simply ask for a noncommittal demonstration.

Rely on hightech oil diagnostic systems from ARGO-HYTOS.

Online and bottle measurement:

Bottle adapter for batch sampling and minimes connector for online measurement



Certificate for measurements according to the different standards. These certificates can be issued with individual labels.

Advantages at a glance



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1. Online and bottle sample analysis

With two turns of your hand, using the two fluid adapters in the all-inclusive delivery, PODS *Pro* is converted from a "Monitor" to a "Lab analyzer". In the online mode PODS *Pro* is connected directly to the hydraulic circuit via Minimesse™ tubing and allows specific and continuous monitoring of the oil cleanliness.

2. Flexibility

Due to its lower weight PODS *Pro* can be easily carried to each location. For longer distance transport the rollerbox is used.

3. All-included delivery

PODS *Pro* is supplied with a very robust rollerbox, which is air- and water tight and contains all necessary accessories such as gas cartridges, power adapter, fluid adapters for online and bottle mode, hand-pump for oil sampling as well as clean sample bottles. The box is lockable and can be used for safe shipping to the ARGO-HYTOS Service Center, for instance for calibration.

4. Pressure range up to 420 bar

By direct measurement at system pressures up to 420 bar without bypassing, the risk of outgasing and bubble counting is drastically reduced.

5. High viscosity and high contamination

PODS *Pro* can measure particle contamination up to code 24 according to ISO 4406:1999. This is achieved by a sensor with a limit concentration of 90.000 particles/mL at 10% optical coincidence and avoids time consuming and complicated dilution procedures. Another important advantage is its ability to measure oils with a viscosity up to 850 mm²/s.

6. Variable flow rate

PODS *Pro* automatically regulates the flow rate to an appropriate value between 15 and 50 mL/min, depending on the oil pressure and the viscosity. This feature makes it insensitive to variations in the hydraulic system during the measurement.

7. Controlled cleaning with ECOLINE

The oil service filter unit ECOLINE cleans oils up to a selected cleanliness class with PODS *Pro*. For this purpose ECOLINE pumps the oil over a filter. At the same time PODS *Pro* measures the cleanliness of the oil in front of the filter online and turns off ECOLINE when the target cleanliness class is reached. The cleanliness class is documented on a printout.



Technical information

| | | | | | | | | | |
|----------------------------|--|----|-----|----|-----|-----|------|-----|-----|
| Detection | Light extinction | | | | | | | | |
| Sensitivity | complies with Japanese Industry Standard (JIS-B-9925:1997) | | | | | | | | |
| Size ranges | 4 - 100 µm(c) (ISO-MTD); ~1 - 100 µm (ACFTD) | | | | | | | | |
| Size channels | 4 - 100 µm(c) (ISO-MTD); ~1 - 100 µm (ACFTD) | | | | | | | | |
| | 8 channels | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | ISO-MTD sizes [µm (c)] | 4 | 4,6 | 6 | 9,8 | 14 | 21,2 | 38 | 68 |
| | ACFTD sizes [µm] | ~1 | 2 | ~5 | 10 | ~15 | 25 | ~50 | 100 |
| Flow rate | 15-50 mL/min automatic regulation | | | | | | | | |
| Calibration | ISO-MTD in oil (ISO 11171:1999) | | | | | | | | |
| Cleanliness classification | ISO 4406; NAS 1638; MIL-STD-1246C; NAVAIR 01-1A17, SAE AS 4059 | | | | | | | | |
| Cleanliness classes | ISO 4406 code 1 to 24 | | | | | | | | |
| Concentration limit | 90.000 particles/mL @ 10% optical coincidence | | | | | | | | |
| Measurement results | Oil cleanliness classes (according to standard), concentration (particles/mL), viscosity (mm ² /s, cSt or SUS), temperature | | | | | | | | |
| Light source | Laser diode | | | | | | | | |
| Counting efficiency | By JIS-B-9925:1997 | | | | | | | | |
| Wetted materials | Stainless steel, sapphire, aluminium, Aflaz™, PTFE | | | | | | | | |
| Fluid pressure | 0,5 - 420 bar | | | | | | | | |
| Temperature | 0-90°C oil at 25°C ambient; 0-50° C ambient; 5 - 40° C housing | | | | | | | | |
| Relative humidity | 20 - 85% non-condensing, up to 98% when stored | | | | | | | | |
| Viscosity | 5-500 mm ² /s particle counting with viscosity measurement, 1-850 mm ² /s particle counting only | | | | | | | | |
| Material compatibility | Mineral oils, Skydrol™, environmentally compatible pressure fluids and phosphate esters | | | | | | | | |
| Pressure medium | CO ₂ , liquid (1 cartridge for about 60 oil samples), or pressurized shop air | | | | | | | | |
| Sample bottles | 100 mL | | | | | | | | |
| System properties | Metal housing / Carry handle and shoulder strap / Universal power adapter/charger (90-240 VAC) Built-in thermal printer / LCD-display and keyboard / Memory for 500 samples / RS232C-interface Tube connector for filtered and dry pressurized shop air / Exchangeable CO ₂ -gas cartridges, refillable, 100 g filling NiMH-battery, computer controlled recharging for extended battery life Digitaloutput 0-5VDC / < 20 mA, potential-free output 0-5VDC / Online-adapter with Minimess™ tubing M16x2 | | | | | | | | |
| Operating modes | Bottle sample analysis (4-7 bar); online-analysis (0,5-420 bar); Monitoring of ECOLINE UMP-45 by ARGO-HYTOS | | | | | | | | |
| Software (optional) | PODSWare for download, storage and management of PODS <i>Pro</i> data under Windows 9X/Me/2000 and XP | | | | | | | | |
| Weight | 8,5 kg | | | | | | | | |
| Dimensions | (B x H x T) 330 x 350 x 200 mm | | | | | | | | |