OPCom Portable Oil Lab

Particle Counting - The Easy Way

OPCom Portable Oil Lab

Dimensions

261 mm (10.28 inch)
233 mm (9.17 inch)
298 mm (11.73 inch)
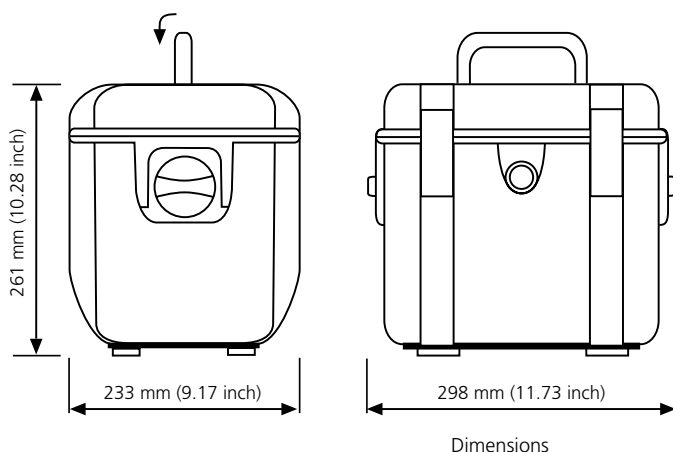
Mobile oil laboratory for oil cleanliness and condition monitoring - easy, compact and cost-efficient

The OPCom Portable Oil Lab is a mobile oil laboratory for service, with which the oil cleanliness and the oil condition in hydraulic and lubrication systems can be measured quickly and easily.

Sampling can be carried out directly via a pressure line or via the integrated pump. Measurement can be effected either manually or automatically in an adjustable time interval.

The OPCom Portable Oil Lab enables particle measuring according to the latest standard and displays the cleanliness classes according to ISO 4406:1999, SAE AS4059, NAS 1638 and GOST 17216. In addition, the relative humidity and oil temperature are displayed. Optionally, further information on the oil condition, which results from the conductivity and polarity of the oil, can be shown via the integrated display or with an integrated mobile application.

All functions of the OPCom Portable Oil Lab can intuitively be operated via the integrated keypad or with the LubMon BT*lite* (mobile application). The internal data memory allows saving of more than 1250 data records, which may comfortably be transferred to a computer via USB adapter, SD card or by generating a report as pdf file (only with LubMon BT*lite*). Furthermore, the OPCom Portable Oil Lab includes an integrated printer to print any data record on the spot.

The real-time clock, integrated in the OPCom Portable Oil Lab, adds a time-stamp to all measured data in order to facilitate a later allocation. The measured data can additionally be marked with a freely definable indication of the measuring point.

The integrated powerful battery is available in two capacity classes and allows operation of several hours. The used battery is characterized by a low self-discharge, long operating state as well as a recharging of less than one hour. The compact particle counter is supplied with a power supply, hoses and couplings. Amongst others, the OPCom Portable Oil Lab can additionally be delivered together with a convenient carrying bag with separated pockets for hoses and samples as well as for the recharger and other accessories.

The portable oil service device OPCom portable Oil Lab offers an intelligent and cost-efficient possibility for monitoring of your system and oil parameters.

Parameter	Size	Unit
Operating pressure		
High-pressure connection[1]	5 ... 320 (73 ... 4,640)	bar (psi)
With pump operation	0	bar (psi)
Viscosity range fluid[2]	5 ... 1000	mm²/s
Operating temperature range fluid	0 ... +60 (+32 ... +140)	°C (°F)
Operating conditions		
Temperature	-10 ... +60 (+14 ... +140)	°C (°F)
Rel. humidity	0 ... 95	% r.H. (non-condensing)
Compatible fluids	mineral oils (H, HL, HLP, HLPD, HVLP), synthetic esters (HETG, HEPG, HEES, HEPR), polyalkylenglycols (PAG), zinc and ash-free oils (ZAF), polyalphaolefins (PAO)	
Wetted materials	chrome, aluminum, stainless steel, Viton, steel, brass, HNBR, NBR, polyurethane resin, epoxy resin, chemical nickel/gold (ENIG), soldering tin (Sn96,5Ag3Cu0,5NiGe), aluminum oxide, glass (DuPont QQ550), gold, silver-palladium, sapphire, PVC (hoses)	
Power supply device		
Power supply	24	VDC
Power consumption	max. 8	A
Power supply for the according power adaptor		
Power supply	100 ... 240	VAC (50/60 Hz)
Power consumption	max. 4	A
Power at 24VDC-output	max. 221	W
Characteristics battery		
Nominal capacity	7500	mAh
Loading time	< 1	h
Running time when measuring without pump (When measuring with pump the running time decreases depending on the oil viscosity)	> 24	h
Display particle measurement		
ISO 4406:99	0 ... 28 (calibrated area 10...22)	ordinal number (OZ)
SAE AS 4059E	000 ... 12	ordinal number (OZ)
NAS 1638 (based)[3]	00 ...12	ordinal number (OZ)
GOST 17216 (based)[3]	00 ...17	ordinal number (OZ)
Size channels	4, 6, 14, 21	µm(c)
Measuring range oil parameter		
Rel. permittivity	1 ... 7	-
Rel. humidity	0 ... 100	%
Conductivity	100 ... 800,000	pS/m
Temperature	-20 ... +120 (-4 ... +248)	°C (°F)
Measuring accuracy		
Particle measurement (within calibr. range) - ISO 4 / ISO 6	± 1	ordinal number (OZ)
Particle measurement (within calibr. range) - ISO 14 / ISO 21	± 2	ordinal number (OZ)
Rel. dielectric number[4]	± 0.015	-
Rel. humidity (10 ... 90%)[5]	± 3	% r.H.
Rel. humidity (<10%, >90%)[5]	± 5	% r.H.
Conductivity (100 ... 2000 pS/m)	± 200	pS/m
Conductivity (2000 ... 800,000 pS/m)	Typ. < 10	%
Temperature	± 2	K

Parameter	Size	Unit
Interfaces	USB-B, SD-card (SD or SD-HC in FAT/FAT16/FAT32-data format) Bluetooth Low Energy	
Size internal data memory	1250 readings (with time stamp)	
Weight	< 10 (22)	kg (lbs)
Scope of delivery	Manual, power supply 100-240V, power cable, low-pressure hose set incl. connection couplings, high-pressure hose	

[1] Depending on the oil viscosity
[2] Depending on the permissible operating pressure
[3] From software version 1.70.15 upwards
[4] Calibrated to n-Pentan at 25 °C (77 °F)
[5] Calibrated to air at room temperature

Order code

OPCom Portable Oil Lab	PPCO 300-1000		**Optional accessories (not included in the scope of delivery)**	
OPCom Portable Oil Lab, Bluetooth	PPCO 300-1010		Carrier bag for accessories	PPCO 200-5020
			Carrying strap	PPCO 200-5010
Spare parts			SD-card	SCSO 900-5050
Set, cover for SD and USB	PPCO 300-5090		SD-card reader	SCSO 900-5040
Hose set with couplings	PPCO 300-5050		Power cable with non-European plug on demand	
Minimess hose 2 m (6.6 ft) M16 x 2	PPCO 100-5280		LubMon BT*lite*	free download*
Paper rolls for thermal printer	SCSO 900-5075		LubMon Config	**free download**
Power supply	PPCO 300-5120		LubMon PC*Light*	**free download**
Power cable	PPCO 300-5130			
Protection caps (2x)	PPCO 300-5080			
Suction connection	PPCO 300-5060			
Protective strainer	PPCO 300-5070			

Software and application

A PC software for data recording and evaluation of the measured values can be downloaded from our website at
https://www.argo-hytos.com/products/sensors-measurement/software.html

* The LubMon BT*lite* application is currently in the testing phase and is available only upon special request with Bluetooth module. To obtain it, please contact our company directly: info.pl@argo-hytos.com