



FluidControl Unit FCU 1000 Series

Description

The FCU 1000 is a portable service unit designed for short-term measurement of particle contamination, humidity level in % saturation and temperature of the fluid in hydraulic systems.

The integral pump and hoses supplied make it possible to use the FCU 1000 series for the following applications:

- control circuits
- pressure circuits
- unpressurized tanks

All measured data (ISO, SAE/NAS, % saturation and temperature in °C or °F) are stored in files (measured value files) and folders (measurement points).

Data is stored with a time stamp.

Evaluation can then be carried out conveniently on a PC in MS Excel or in our FluidMonitoring Software (FluMoS), Version 1.30 or higher.

Applications

- Hydraulic systems
- Service for mobile hydraulics
- Servicing

Advantages

- Cleanliness classes to ISO and SAE or NAS
- Integrated AquaSensor AS 1000 for measuring humidity and temperature
- Suitable for hydraulic fluids up to 350 mm²/s (hydraulic fluids up to ISO VG 68)

Technical specifications

General data	
Type of operation	Short-term operation (S4, to DIN EN 60034/VDE 0530)
Self-diagnostics	Continuously with error display via status LED and display
Display	LED, 6 / 4 / 4-digit, each with 17 segments
Measured value	ISO code / SAE Class / NAS Class / Saturation level / Temperature
Measuring range	Display of ISO Code 9/8/7 (MIN) to ISO Code 25/24/23 (MAX) Calibrated in the range ISO 13/11/10 ... ISO 23/21/18 Saturation level 0 ... 100 % Temperature -25 ... 100 °C / -13 ... 212 °F
Accuracy	+/- 1/2 ISO code in the calibrated range / ≤ ± 2 % max. over the whole range
Material of seal	FPM
Ambient temperature range	0 ... +45 °C / 32 ... 113 °F
Storage temperature range	-40 ... +80 °C / -40 ... 176 °F
Protection class	IP50 in operation IP67 when closed
Weight	≈ 13 kg
Hydraulic specifications	
Operating pressure	IN: - 0.5 ... 45 bar / -7.25 ... 650 psi OUT: 0 ... 0.5 bar / 0 ... 7.5 psi
when using adapter for pressure lines	IN: 15 ... 345 bar / 217 ... 5000 psi OUT: 0 ... 0.5 bar / 0 ... 7.5 psi
Pressure max.	345 bar / 5000 psi
Measurement flow rate	30 ... 300 ml/min (depending on viscosity)
Max. suction height	0.5 m
Permitted viscosity range	10 ... 350 mm ² /s; 46 ... 1622 Sus (for hydraulic oils up to ISO VG 68)
Temperature range of medium	0 ... +70 °C / 32 ... 158 °F
Electrical data	
Supply voltage	24 V DC ±20%, residual ripple < 10% The FCU must not be used with vehicle supply systems without load dump protection of maximum 30 V DC.
Max. power / current consumption	100 Watt / 4000 mA
Interfaces	Male connection 5 pole, M12x1, USB stick and Bluetooth 1.2, class 3 (only HYDAC Sensor Interface - HSI)

Model code

FCU 1 3 1 0 - 4 - U - AS - 1

Type	FCU = FluidControl Unit
Series	1 = 1000 series, 4 particle size channels
Contamination codes	3 = ISO 4406:1987; NAS 1638 / 2-5 µm, 5-15 µm, 15-25 µm, > 25 µm can be switched over to ISO 4406:1999; SAE AS 4059 (D) / > 4 µm _(c) > 6 µm _(c) > 14 µm _(c) > 21 µm _(c)
Housing	1 = for portable use (plastic case with external compartment for hoses and cables)
Media	0 = based on mineral oils
Options	4 = with integrated pump
Supply voltage	U = 24 V DC
Integrated sensor	AS = AquaSensor (AS 1000 series)
Power supply adaptor	1 = 100 ... 240 V AC / 50/60 Hz / 1 Phase / 5000 mA (Europe, USA/Canada, UK, Australia, Japan)

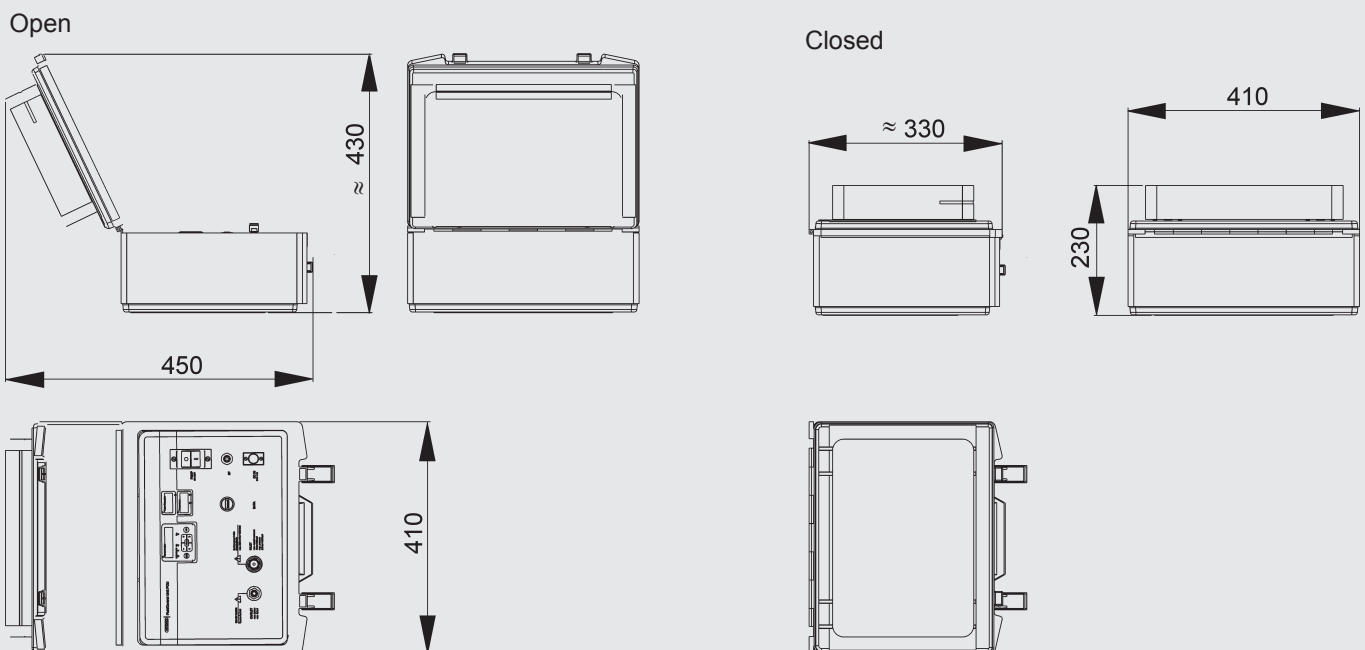
Items supplied

- FluidControl Unit FCU 1000
- Power supply adapter for Europe, USA/Canada, UK, Australia and Japan
- Adapter for pressure lines
- INLET pressure hose with screw connection for test point type 1620, black, length = 2 m
- INLET suction hose, open end, transparent, length = 0.3 m
- OUTLET return line hose, open end, transparent, length = 1 m
- Operating and maintenance instructions / calibration certificate
- USB memory stick

Accessories

- Battery pack
- Cable with universal plug (for cigarette lighters or vehicle electrical supply connection), length = 10 m

Dimensions



Note

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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