

FCU 1000 Series Fluid Control Units - Portable Models



Description

The FluidControl Unit FCU 1000 series combines the advantages of the portable contamination measurement units FCU 2000 series with the measurement technology of the ContaminationSensor CS 1000. The FCU 1000 is a portable service unit and is designed for temporary measurement of solid particle contamination in hydraulic systems. The integrated pump and the hoses which are contained in the scope of delivery of the FCU 1000 series.

- control circuits
- pressure circuits
- fluid sampling from pressureless reservoirs

Important instructions / Restrictions

- Designed for hydraulic oils up to ISO VG 68 (*viscosity range 10 to 350 cSt*)
- Designed for temporary operation up to max. 30 minutes, followed by a rest period of 10 minutes (*no continuous operation*)
- Operating pressure: -0.5 to 45 bar, with pressure adaptor: 15 to 345 bar
- Not designed as a Bottle Sampler (*minimal volume of 300 ml is required for a bottle sample analysis*)
- Measurement recording with HMG 3000 is not possible (*the HMG 3000 cannot process the data from both FCU 1000 sensors simultaneously*)

Applications

- Hydraulic systems
- Service for mobile hydraulics
- Maintenance

Features

- Two contamination calibrations in one instrument (reversible)
 - ISO 4406:1987; NAS 1638
 - ISO 4406:1999; SAE AS 4059 (D)
- Saturation and temperature measurement through the built-in AquaSensor 1000
- Integrated pump for measurement in pressureless reservoirs
- Operation with 24 VDC network adaptor included in scope of delivery
- Interfaces: 5-pole plug

Technical Details

General Data	
Self-diagnosis	continuously with error indication via status LED and display
Display	LED, 6 / 4 / 4 digits, in 17 segment format
Measured Value	ISO code/ SAE Class / NAS Class / Saturation level / Temperature
Measuring Range	Display from ISO code 9/8/7 (MIN) to ISO code 25/24/23 (MAX) Calibrated within the range ISO 13/11/10 to 23/21/18 Saturation level 0 to 100% / Temperature -13° to 212°F (-25 to 100°C)
Accuracy	+/-1/2 ISO class in the calibrated range / $\leq \pm 2\%$ Full scale max.
Seal Material	FPM
Ambient Temperature Range	32 to 113°F (0 to 45°C)
Storage Temperature Range	-40 to 176°F (-40 to 80°C)
IP class	IP 50 in operation IP67 closed
Weight	approx. 29 lbs (13 kg)
Hydraulic Data	
Operating Pressure	in: -0.5 to 45 bar / -7.25 to 650 psi out: 0 to 0.5 bar / 0 to 7.5 psi
with Adaptor for Pressure Lines	in: 15 to 345 bar / 217 to 5000 psi out: 0 to 0.5 bar / 0 to 7.5 psi
Pressure max.	345 bar / 5000 psi
Measurement Flow Rate	30 to 300 ml/min (<i>viscosity dependant</i>)
Maximal Suction Height	1 m
Permissible Viscosity Range with Adaptor for pressure lines	10 to 350 cSt 46 to 1622 / SUS 2 to 350 cSt 10 to 1622 / SUS
Fluid Temperature Range	32 to 158°F (0 to 70°C)
Electrical Data	
Power Supply Voltage	24 V DC $\pm 20\%$, residual ripple < 10%
Max. Power / Current Consumption	100 Watt / 4 A
Interface	Plug connection, 5-pole, male, M12x1 (<i>only for HYDAC Sensor Interface -HSI</i>)

We do not guarantee the accuracy or completeness of this information. The information is based on average working conditions. For exceptional operating conditions please contact our technical department. All details are subject to technical changes.

Model Code

		FCU 1 3 1 0 - 4 - U - AS - 1
Series	FCU = Fluid Control Unit	
Model	1 = 1000 Series, 4 particle size channels	
Contamination Code	3 = ISO 4406:1987; NAS 1638 / 2-5 µm, 5-15 µm, 15-25 µm, > 25 µm ISO 4406:1999; SAE AS 4059 (D) / > 4 µm(c) > 6 µm(c) > 14 µm(c) > 21 µm(c)] reversible between
Housing	1 = for portable use (plastic case with appending bag for hoses and cables)	
Fluids	0 = Mineral Oil, Synthetic Esters/PAO, Quintolubric, Cosmolubric (Consult factory for other fluid types.)	
Options	4 = with Integrated Pump	
Supply Voltage	U = 24 V DC	
Integrated Sensor	AS = AquaSensor (AS 1000 series)	
Power Supply Adapter	1 = 100 to 240 V AC / 50/60 Hz / 1 Phase, (Europe, USA/Canada, UK, Australia, Japan)	

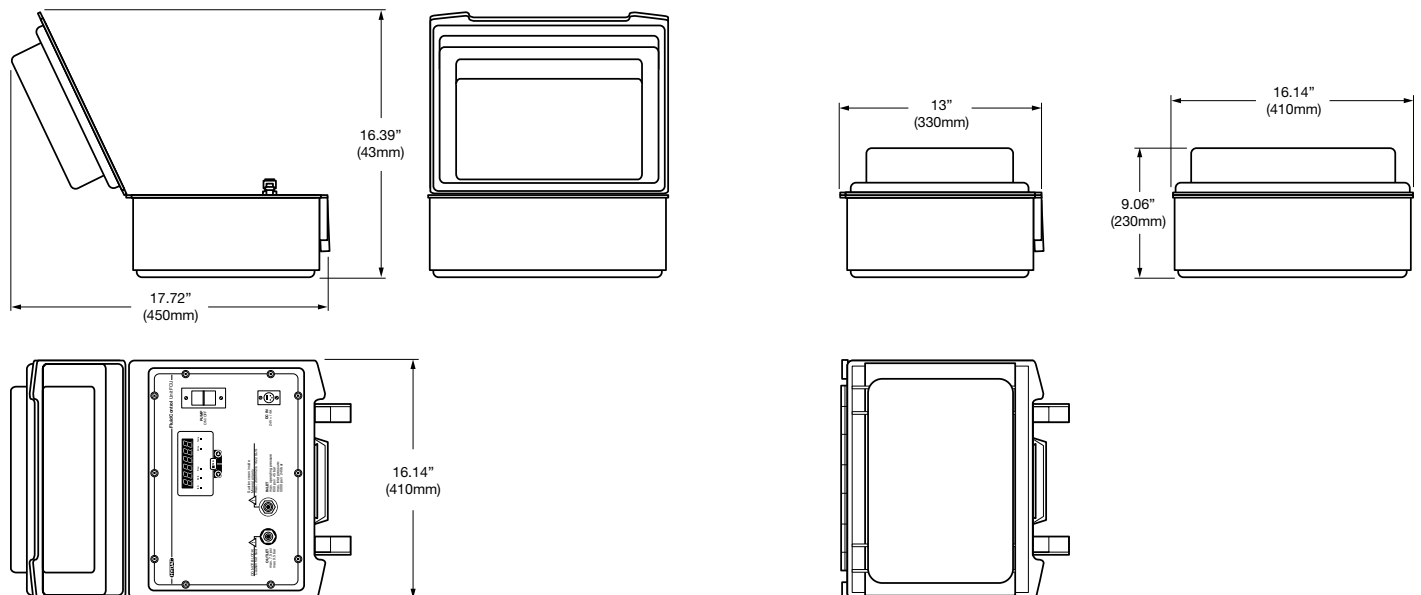
Scope of Delivery

- FluidControl Unit FCU 1000
- Power supply AC adaptor with connecting cables to supply voltage for Europe, USA/Canada, UK, Australia, Japan
- Adaptor for pressure lines
- INLET pressure hose with screw connection for Test Point 1620, black, length = 2 m
- INLET suction hose, open end, clear, length = 0.3 m
- OUTLET return hose, open end, clear, length = 1 m
- Operating and Maintenance Instructions / Calibration certificate
- USB Memory Stick

Accessories

- Battery pack - P/N 03504605
- Cable with universal plug (for cigarette lighter or socket from supply system on board), L = 10 m - P/N 03306236

Dimensions



Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.