

# CONTAMINATION MONITORS

## FCU 1000 Series

Fluid Control Units - Portable Models



FCU1310



FCU 1315

### Description

The FluidControl Unit FCU 1000 is a portable service unit, designed for the temporary measurement of solid particle contamination, water saturation and fluid temperature in hydraulic systems as well as Diesel fuels.

The integrated pump and the hoses contained in the FCU 1000 series scope of delivery allow operation in

- control circuits (oil hydraulics only)
- pressure circuits (oil hydraulics only) and
- pressureless reservoirs (oil hydraulics and Diesel fuels)

### Important Instructions / Restrictions

- Designed for hydraulic oils (*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: -7.25 to 650 psi (-0.5 to 45 bar), with pressure adaptor: 215 to 5000 psi (15 to 345 bar)
- Not designed as a Bottle Sampler (*minimal volume of 300 ml is required for a bottle sample analysis*)

### Applications

- Hydraulic systems
- Service for mobile hydraulics
- Maintenance
- Diesel storage, transfer, and filling

### 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 24V DC network adaptor included in scope of delivery
- Interfaces: 5-pole plug, Bluetooth, USB data port

### Technical Specifications

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	<b>in:</b> -7.25 to 650 psi (-0.5 to 45 bar) <b>out:</b> 0 to 7.5 psi (0 to 0.5 bar)
with Adaptor for Pressure Lines	<b>in:</b> 217 to 5000 psi (15 to 345 bar) <b>out:</b> 0 to 7.5 psi (0 to 0.5 bar)
Pressure max.	5000 psi (345 bar)
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	46 to 1622 SUS (10 to 350 cSt)
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	Bluetooth via FluMoS Mobile App Plug connection, 5-pole, male, M12x1

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**

<b>Series</b>	FCU = Fluid Control Unit	
<b>Model</b>	1 = 1000 Series, 4 particle size channels	
<b>Contamination Code</b>	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
<b>Housing</b>	1 = for Hydraulic and lubrication fluids based on mineral oils 5 = Hydraulic and lubrication fluids based on mineral oils as well as diesel	
<b>Fluids</b>	0 = Mineral Oil, Synthetic Esters/PAO, Quintolubric, Cosmolubric (Consult factory for other fluid types.)	
<b>Options</b>	4 = with Integrated Pump	
<b>Supply Voltage</b>	U = 24 V DC	
<b>Integrated Sensor</b>	AS = AquaSensor (AS 1000 series)	
<b>Power Supply Adapter</b>	1 = 100 to 240 V AC / 50/60 Hz / 1 Phase, (Europe, USA/Canada, UK, Australia, Japan)	

*Model Codes containing RED are non-standard items – Minimum quantities and longer lead times may apply - Contact HYDAC for information and availability*

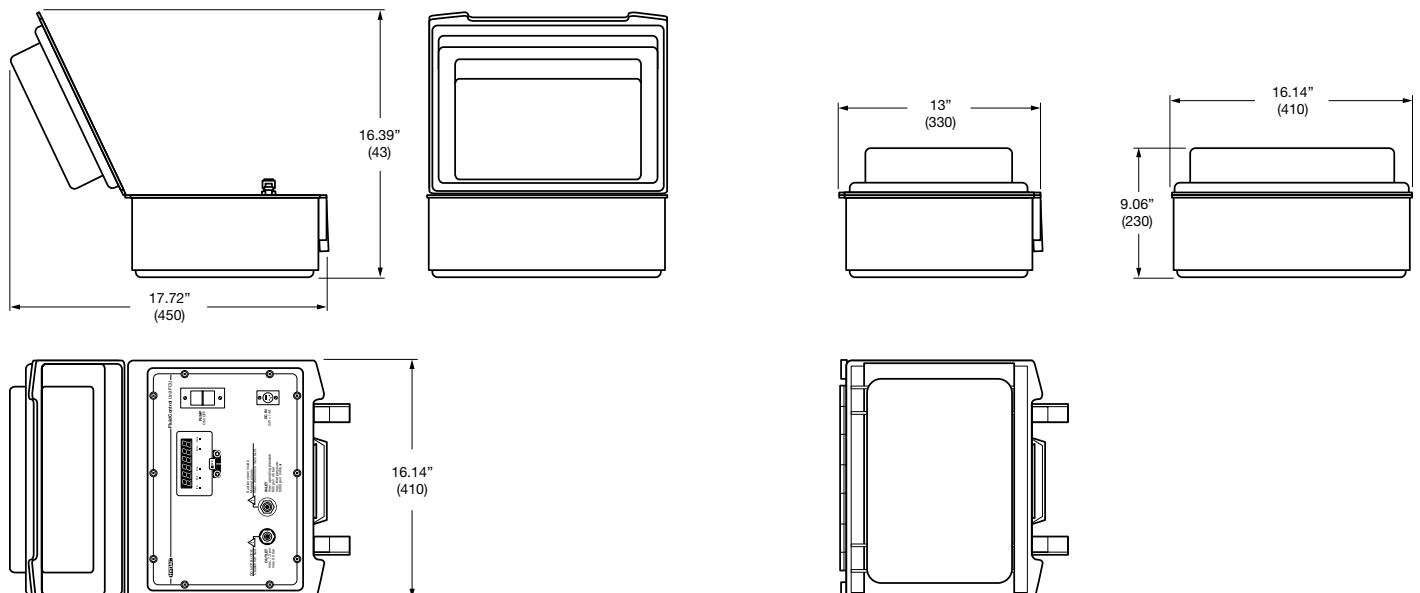
## Scope of Delivery

- Fluid Control 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 = 6.7 ft. (2 m)
- INLET suction hose, open end, transparent, length = 6.7 ft. (2 m) (only FCU 1315)
- INLET suction hose, open end, clear, length = 1 ft. (0.3 m)
- INLET Bottle Sampling suction pipe, angled
- OUTLET return hose, open end, clear, length = 3.3 ft. (1 m)
- Operating and Maintenance Instructions / Calibration certificate
- Ground cable; ESD protection (only FCU 1315)
- USB Memory Stick
- CD with FluMoS Light Software and manuals

## Accessories

- Battery pack - P/N 03504605
- Cable with universal plug (for cigarette lighter or socket from supply system on board), L = 32.8 ft. (10 m) - P/N 03306236
- Field Verification Start-up Kit - P/N 3443253
- Field Verification Refill Kit - P/N 3443249

## Dimensions



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