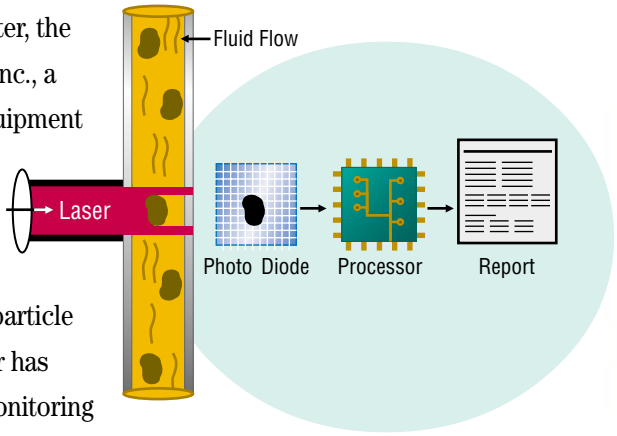
Parker
Filtration

Fluid Condition Monitoring Products

Global Filtration Technology

Introduction

In 1995, Parker became one of the first to successfully market the concept of a portable particle counter, the PLC-2000. Since then, we have acquired UCC, Inc., a recognized pioneer in condition monitoring equipment such as the LCM20 particle counter and H_2Oil water-in-oil monitor.



Along with the development of new, innovative products, such as the IQ200 dedicated on-line particle counter and the MS100 moisture sensor, Parker has grown into the industry leader for condition monitoring products. A variety of both proven and leading-edge products are now available for applications in both the industrial and mobile marketplace.

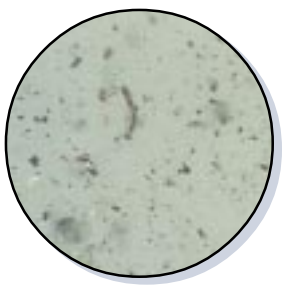
Why on-site fluid condition monitoring?

- Certification of fluid cleanliness levels.
- Early warning tool to help prevent catastrophic failures in critical systems.
- Immediate results with laboratory accuracy.
- To comply with customer cleanliness requirements and specifications.
- New equipment warranty compliance.
- New oil cleanliness testing.
- Identification of a fluid's saturation point and/or water content.
- Continuous monitoring for water contamination.

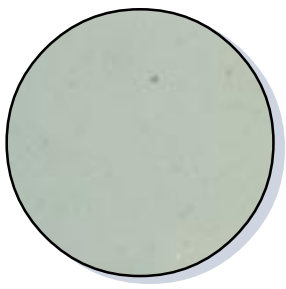
Visual Effects of Water in Oil

1000 ppm (.10%)

300 ppm (.03%)



ISO 21/19/17 fluid (magnification 100x)



ISO 16/14/11 fluid (magnification 100x)

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IQ 200

Continuous on-line laser particle counter

The **IQ200** particle counter is specifically designed to provide continuous, on-line monitoring of the particulate contamination level of hydraulic and lubrication fluids.

The small, compact IQ200 can connect to virtually any system to give the user real-time data from every 3 seconds to 24 hours. The data is easily transferred and organized to a laptop computer or PC station using the supplied software. All of this for about 1/2 the price of traditional portable particle counters.

- Remote and multiple system monitoring from one location.
- Completely automatic.
- Laser accurracy and repeatability.
- Programmable test intervals from 3 seconds to 24 hours.
- Adjustable contamination level alarms.
- Integral flow and calibration check.
- ISO 4406-1999 reporting format (4, 6, 14 micron) and correlation to NAS 1638.
- User friendly Windows-based software.
- Data displayed instantly in chronological or graphic form.

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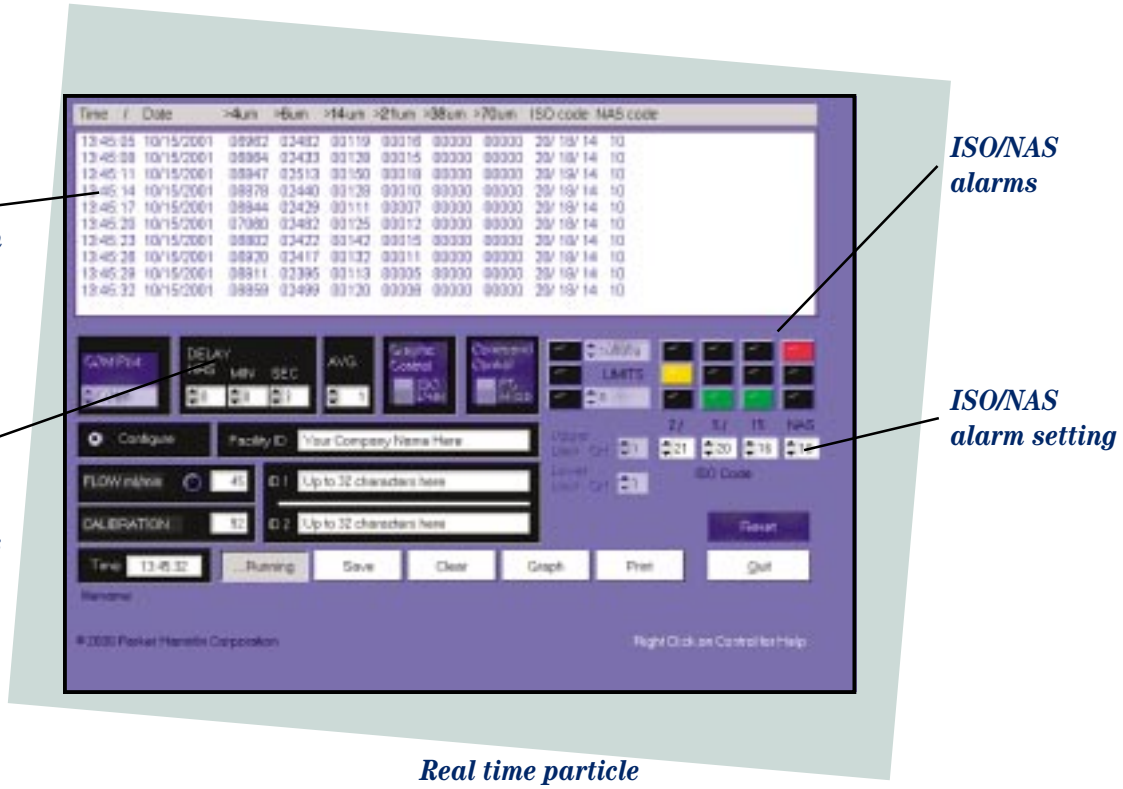
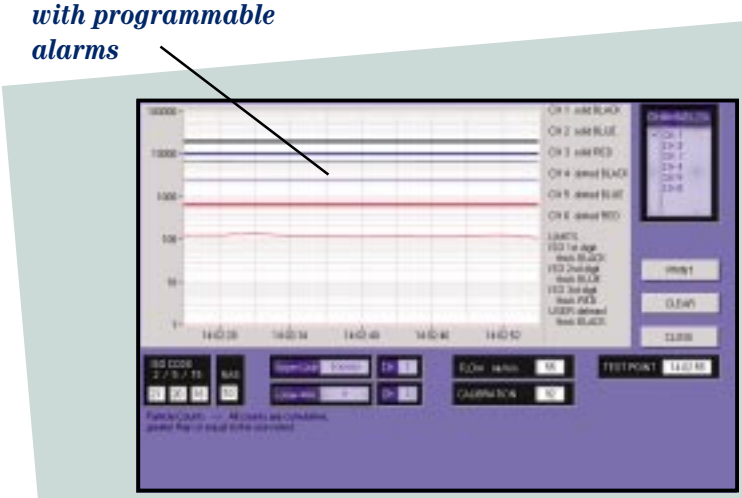
Output data



Real time particle count graphing with programmable alarms



Specifications

Pressure
3000psi (207 bar) maximum operating. Minimum pressure required depends on fluid viscosity, connections, and length of hose assemblies

Operating temperature
Maximum: 165°F(74°C)
Minimum: 32°F(0°C)

Flow thru sensor cell
Maximum allowed for accuracy: 60 ml/min
Minimum required for accuracy: 40 ml/min

Viscosity range
20-430 cSt (100-2000 SUS)

Inlet/outlet port connections
SAE-4 straight thread female

Particle size range
4+, 6+, 14+, 21+, 38+, 70+ microns

Output
RS-232/485 with 6 channels of particle counts and flow rate, 1/2" - 20 UNF (BH-5 pin)

Power
12-24 VDC, 1/2" - 20 UNF (BH-4 pin)

Materials
Wetted: anodized aluminum. Viton seals. Display cover: ABS thermoplastic

Interface software (included)
Windows based data acquisition (LABWINDOWS CVI)

Size and weight
6⅞"D x 6⁹⁄₁₆"W 5⅝"H / 12 lbs.

Ordering Information

PART #	DESCRIPTION
935372	IQ200, compatible with mineral oils and petroleum based fluids. Calibrated in accordance to ISO 4402 (2, 5, 15 format).
936493	IQ200E, compatible with Skydrol/phosphate ester fluids. Calibrated in accordance to ISO 4402 (2, 5,15 format).
936494	IQ200M, compatible with mineral oils and petroleum based fluids. Calibrated in accordance to ISO 11171 ($4_{(c)}$, $6_{(c)}$, $14_{(c)}$ format).
936495	IQ200EM, compatible with Skydrol/phosphate ester fluids. Calibrated in accordance to ISO 11171 ($4_{(c)}$, $6_{(c)}$, $14_{(c)}$ format).

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LCM20

Portable Laser Particle Counter

The new **LCM20** is an engineered product progression from the original best-selling CM20 “white light” particle counter. It is designed primarily for on-line applications, with the flexibility for analyzing bottle samples. Laboratory accuracy and repeatability, along with its user-friendly operation, makes the LCM20 a great choice for your portable particle counting needs.

Features

- CE certified.
- Weatherproof cover.
- RS-232 communication port.
- ISO 4406-1999 and correlation to NAS 1638.
- Lightweight (18 lbs.) and portable.
- LCD display and hard copy printout.
- Datum software included for data transfer.
- Bar code reader.
- Removable hand-set for easy data entry.
- 32-character alpha numeric data entry.
- 2 minute testing time.

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Specifications

Ambient temperature
41°F(5°C) to 104°F(40°C)

Calibration
Compliant with ISO 11171. Former ISO 4402 available upon request

Computer interface
RS-232 communication port

Configuration
On-line laser automatic particle counter
Light blockage

Data storage
300 test scrolling memory

Dimensions
9.75"L x 9.375" W x 5.00" D

Displays
LCD readout, integral impact printer

Fluids
Compatible with mineral oil and petroleum based fluids. Skydrol/phosphate ester compatibility is optional

Limitations
Light blockage technology will not accurately work with some high water content fluids. Excessive water contamination or aeration will also result in invalid data

Materials
Viton seals throughout. Kevlar hoses with SS ends

Operating temperature
41°F(5°C) to 176°F(80°C)

Pressure
6000psi (414 bar) maximum

Power supply
Battery operated with (6) alkaline "D" cells, or 12VDC power supply, or rechargeable battery pack

Report format
ISO 4406-1999 and correlation to NAS 1638.
ISO 4406-1991 available upon request

Sensitivity
4+, 6+, 14+, 21+, 38+, 70+ micron ranges.
2+, 5+, 15+, 25+, 50+, 100+ micron ranges available upon request

Software
Datum windows-based. Data compilation and trending

Testing
2 minutes flushing between tests. 10ml of fluid tested. Counts multiplied to get reported values per 100ml

Viscosity
To 465 SUS (100 cSt) with single point sampler

Weight
17.6 pounds (8 Kg.)
28.6 pounds (13 Kg.) with carrying case

Ordering Information

PART #	DESCRIPTION
LCM20.2022	Portable on-line laser particle counter calibrated in accordance to ISO 11171 with reports based on ISO 4406-1999 (4, 6, 14 format). Mineral oil and petroleum based fluids only.
LCM20.2062	Same as above. Phosphate ester and Skydrol only.
LCM20.2021	Portable on-line laser particle counter calibrated in accordance to ISO 4402 with reports based on ISO 4406-1991 (2, 5, 15 format).
LCM20.2061	Same as above. Phosphate ester and Skydrol only.
B.84.3702	Spare printer ribbon
B.84.702	Spare printer paper rolls (5)
B.84.729	12 VDC power supply
B.84.609	Replacement re-chargeable battery pack
B.84.779	Datum trending software
B.84.708	Cable and adapter

```
    LCM20 Test
      ON LINE
TEST NUMBER 013
PLEASE ENTER A
TEST ID CODE
              D M Y
Date      06-11-01
Time         17-47
ISO:  22/20/16(c)
   Count/100ml
>4/µ(c)    2579242
>6/µ(c)     664627
>14/µ(c)     32535
>21/µ(c)      6288
>38/µ(c)       495
>70/µ(c)        30
NOTES
```

ISO 4406-1999

```
    LCM20 Test
      ON LINE
TEST NUMBER 013
PLEASE ENTER A
TEST ID CODE
              D M Y
Date      06-11-01
Time         17-47
NAS CLASS    12(c)
   Count/100ml
4/6µ(c)     1914615
6/14µ(c)     632092
NAS CLASS     12(c)
14/21/6µ(c)   26247
NAS CLASS     10(c)
21/38µ(c)      5793
NAS CLASS     10(c)
38/70µ(c)       465
NAS CLASS     10(c)
>70µ(c)          30
NAS CLASS     10(c)
NOTES
```

Correlation to NAS 1638

Standard LCM20 Components

QUANTITY	DESCRIPTION
1	Heavy duty carrying case
6	"D" cell alkaline batteries
1	Spare printer ribbon
2	Roll printer paper
1	Fuse
1	Screwdriver
1	12V jack plug for DC power supply
1	Operation manual (English-French-Spanish)
1	Re-chargeable battery pack

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Universal Bottle Sampler

For use with the LCM20 particle counter

The **UBS** Universal Bottle Sampler is designed to attach to the LCM20 particle counter, enabling the user to have the flexibility of bottle sample particle counting and on-line particle counting. Though generally not as accurate as on-line particle counting, bottle sample particle counting is fast and easy with the UBS attachment.

Specifications

- Fast/slow running speeds for varying viscosity oils
- Viscosities up to 580 SUS (125 cSt)
- Lightweight design for portability. 8.8 pounds (4Kg.)
- CE approved
- Mineral oil/petroleum based and phosphate ester/Skydrol versions available
- Operating temperature 41ºF (5ºC) to 176ºF (80ºC)

Ordering Information

PART #	DESCRIPTION
UBS.9002	Universal bottle sampler kit. Includes attachments, vacuum chamber, degassing pump, and travel case. For mineral oils and petroleum based fluids.
UBS.9005	Same as above. For phosphate ester and Skydrol fluids.
B.89.910	Sample bottle kit (100 count).

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Single Point Sampler

For use with the LCM20 particle counter

The new **SPS** Single Point Sampler attachment to the LCM20 is an easy means to allow the user a way to connect the LCM20 to any pressurized flow system for particle counting. The SPS is designed with a flow control valve and connects with the hose assemblies on the LCM20, enabling flow rate adjustment through the LCD monitor. Once set, the SPS automatically compensates for pressure changes in the system.

Specifications

- 6000 psi (414 bar) maximum pressure
- CE certified
- Mineral oil/petroleum based and phosphate ester/Skydrol versions available
- Viscosities up to 2318 SUS (500 cSt)
- Small and lightweight. 1.1 pounds (.5 Kg)

Ordering Information

PART #	DESCRIPTION
SPS.2021	Single point sampler for mineral oil and petroleum based fluids.
SPS.2061	Single point sampler for phosphate ester and Skydrol based fluids.

System 20

sensors & monitors

For use with the LCM20 or separately

System 20 inline sensors were developed to provide dynamic simultaneous measurement of flow, pressure, and temperature using an analog or electronic hand-held monitor. The user obtains data while the system is up and running. The LCM20 can obtain particle counts by being connected to the System 20 inline sensors.

Analog

Electronic

Sensor Specifications

- **6000 psi maximum pressure**
- Size "0" SAE 6 ports, .5-7 gpm
- Size "1" SAE 12 ports, 2-26 gpm
- Size "2" SAE 20 ports, 10-100 gpm
  At maximum rated flow, pressure drop is 15 psi (1.4 bar)
- **Weights**
  Size "0" 2 pounds (.9 Kg)
  Size "1" 7 pounds (3.2 Kg)
  Size "2" 10 pounds (4.5 Kg)
- CE certified
- Contruction is machined steel body with electroless nickel coating. Brass and SS internal components.

Monitor Specifications

- Analog or electronic
- Kevlar-lined nylon hoses 39.4" (1000mm) long.
- Flow reported in GPM/LPM dual scales.
- Pressure reported in PSI/bar dual scales. Analog readings up to 6000psi (419 bar). Electronic readings up to 6000psi, with spikes up to 11,600psi (800bar).
- Temperature reported in °F/°C dual scales from 0°F +230°F (-18°C +110°C).
- **Size and Weight**
  11.5"L x 4.1"W x 2.9"D/ 3lbs.
- CE certified
- Electronic monitor uses (6) x AA batteries.
- **Electronic Data Logging**
  Test number, equipment description, time and date, sensor size, flow, temperature, and pressure.
- **Electronic Data Download**
  Via RS-232 communication port to a compatible PC. Also to a 16-column serial printer.

Ordering Information System 20 Sensors

PART #	DESCRIPTION
STI.0344.100	Size "0" Industrial sensor for oils and petroleum based fluids.
STI.1344.100	Size "1" Industrial sensor for oils and petroleum based fluids.
STI.2344.100	Size "2" Industrial sensor for oils and petroleum based fluids.
STI.0348.100	Size "0" Industrial sensor for phosphate ester and Skydrol.
STI.1348.100	Size "1" Industrial sensor for phosphate ester and Skydrol.
STI.2348.100	Size "2" Industrial sensor for phosphate ester and Skydrol.

Ordering Information System 20 Monitors

PART #	DESCRIPTION
STM.6611.110	Analog monitor
EM20.9000	Electronic monitor
P.653607	Carrying case

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PLC-3000

Portable laser particle counter

The **PLC-3000** portable laser particle counter is a sampler (both on-line and bottle), sensor, and counter packaged together to form a highly advanced portable field instrument utilizing laboratory standards. It is designed primarily as a bottle sampler, but has the flexibility to become an on-line sampler without any additional options.

Features

- LCD and hard copy printout of results.
- Internal thermal printer.
- RS-232 computer communication interface port.
- ISO and NAS report formats.
- AC operation with universal power supply or DC operation with internal NiCd battery.
- On-line and bottle sampling in one compact package.
- Completely automatic “one touch” testing procedure takes about 60 seconds.
- Lightweight, rugged and portable for easy on-site analysis.
- Compressed air and CO_2 connection for bottle sampling flexibility.
- ISO reporting in the 4/6/14 format.
- Skydrol® and petroleum based fluid compatibility with the same unit.
- Windows based software included for data analysis and trending.
- CE approved.

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Specifications

Bottle Sampling Flow Method
Compressed air or CO_2 cartridge.

Computer Interface
RS-232 communication port and 9-pin to 9-pin standard serial cable.

Data Storage
100 tests, scrolling memory.

Displays
LCD readout, integral thermal printer.

Flexibility
On-line and bottle sampling as one package.
No special connections or equipment needed.

Flow Rate
Adjustable from 20-100ml per minute.

Fluids
Compatible with standard mineral and petroleum based fluids. Also compatible with phosphate ester (Skydrol) fluids.

Light Source
5mV infrared laser diode. 300,000 hours typical life.

Limitations
Light blockage technology will not accurately work with some high water content fluids. High water contamination or excessive aeration will also result in invalid data.

Power Source
12 VDC rechargeable NiCd battery and 90-250 VAC universal power supply. Detachable power cord.

Report
ISO 4406-1999 and NAS 1638.
ISO 4406-1991 available upon request.

Sensitivity
4+, 6+, 14+, 21+, 38+, 70+ micron ranges.
2+, 5+, 15+, 25+ 50+ 100+ micron ranges available upon request.

Software
Windows based, menu driven. Data compilation and trending.

Technology
Automatic optical particle counting. Light blockage.

Temperature
Fluid, 165˚F (74˚C) maximum.
Ambient, 35°F (2°C) to 120° F (49°C).

Testing
15 ml flush followed by (3) 10 ml runs averaged to give the cleanliness classifications. Particle counts are reported per ml (ISO 4406) and 100 ml (NAS 1638).

Testing Time
60 seconds at 50 ml/flow rate.

Viscosity
To 2000 SUS (430 centistokes).

Weight
22 pounds (10 kilograms), 55 pounds (25 kilograms) with travel case.

On-line Sampling
Pressures to 6000 psi (414 bar) maximum.

Standard PLC-3000 Components

QUANTITY	DESCRIPTION
1	Heavy duty portable travel case with protective foam insert, tilt wheels and retractable handle
1	Universal power supply/battery charger with power cord
2	68 gram CO_2 cartridges
2	Rolls thermal printing paper
3	120 cc pre-cleaned sample bottles
1	On-line sampling adapter
1	RS-232 communication cable
1	Software
1	Operations manual

Ordering

DESCRIPTION	P/N
PLC-3000, MTD calibration ($4_{(c)}$, $6_{(c)}$, $14_{(c)}$ format)	321553
PLC-3000, ACFTD calibration (2, 5, 15 format)	325740
10-pack of 68 gram CO_2 cartridges	601895
25-pack of pre-cleaned 120cc sample bottles	601896
Thermal printing paper	601897

```
Sample: 00014                Parker PLC-3000
Date: 08/01/00          Time: 11:40:13
Sample Volume:          10ML/RUN
Flow Rate:              50ML/MIN
Reported Values:        COUNTS/100ML

SIZE RANGE        RUN1        RUN2        RUN 3
 6-14um(c):      200060      199190      198660
14-21um(c):       11160       10730       11280
21-38um(c):        2120        2160        2330
38-70um(c):          70          40         150
 +100um(c):          10           0          40


   SAMPLE AVERAGE
  6-14u(c):    199383.3        NAS: 10
 14-21u(c):     11056.7
 21-38u(c):      2203.3
 38-70u(c):        86.7
   +70u(c):        16.7
```

Correlation to NAS 1638

```
Sample: 00014                Parker PLC-3000
Date: 08/01/00          Time: 11:40:13
Sample Volume:          10ML/RUN
Flow Rate:              50ML/MIN
Reported Values:        COUNTS/ML

   SIZE       RUN1      RUN2      RUN 3    SMPL AVG
   4um(c):    5467      5445       5425      5446.0
   6um(c):    2121      2121       2124      2126.7
  14um(c):     133       129        138       133.6
  21um(c):      22        22         25        23.1
  38um(c):       0         0          1         1.0
  70um(c):       0         0          0         0.2

ISO:       20/18/14
NAS:       10
```

Standard

```
Sample: 00014                Parker PLC-3000
Date: 08/01/00          Time: 11:40:13
Sample Volume:          10ML/RUN
Flow Rate:              50ML/MIN
Reported Values:        COUNTS/ML

      SIZE     RUN1     RUN2     RUN 3     SMPL AVG
      4um(c):  5467     5445      5425       5446.0
      6um(c):  2134     2121      2124       2126.7
     14um(c):   133      129       138        133.6


ISO:       20/18/14
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ISO 4406: 1999

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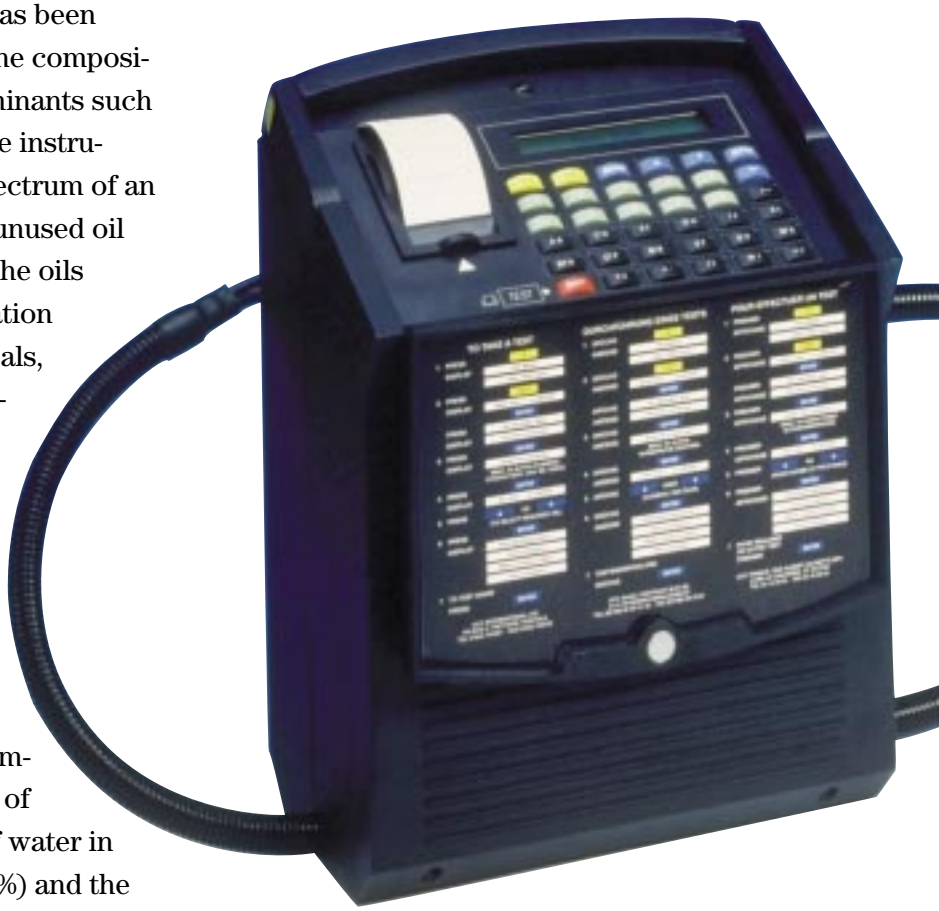
H_2Oil

Water-in-Oil Monitor

Infrared Spectroscopy is one of the most fundamental tools of laboratory analysis available and has been widely used to provide analytical data on the composition of oils and the identification of contaminants such as water. Sophisticated FTIR and dispersive instruments can provide a picture of the total spectrum of an oil and comparisons with spectra from an unused oil will give valuable information concerning the oils degradation. Oils will absorb infrared radiation across the spectrum; the individual chemicals, which make up the oil, absorb at one wavelength or across a narrow band of wavelengths. Contaminants also absorb at distinct wavelengths and, by monitoring the part of the spectrum that the contaminants affect, changes in condition can be seen and specific contaminants identified.



The H_2Oil is the first portable 2-channel non-dispersive infrared absorption spectrometer designed specifically for the detection of water. The unit can measure the content of water in PPM (Parts Per Million) or percent water (%) and the detection range is 0 to 3,000 PPM or 0 to 3% absorbed

- Accurate measurement of low levels of water contamination in oil.
- On-line operation to 6000 psi (414 bar).
- Results displayed as percentage water content or parts per million.
- RS 232 communications port.
- Optional oil delivery kit for customer offline oil sampling.
- 0-3000 ppm absorbed water detection.
- Easy use with System 20 sensors or SPS single point sampler.

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water depending on the oil type. The integral hoses allow the H_2Oil to measure the water content in a dynamic flowing system with pressures as high as 6,000 psi having no impact on the users systems' performance. As a non-dispersive spectrometer, the unit can store up to 20 specific oil calibration curves. Each unit comes with 15 generic calibration curves loaded for the standard ISO grade oils. At the same time the unit can store 20 different sample identifiers for data trending.

Once connected to a flowing system the monitor will produce results in 90 seconds. Within the 90 seconds the monitor will take six readings, three from the reference and three from the measurement filter, if the results are within the allowable limits the result will be displayed. If the test results are out of tolerance then the unit will take one more test to succeed, if it fails the error message of "sample inconsistent" will appear. With the H_2Oil's internal error messaging it will keep the user informed of the monitor's performance and how to resolve any issue.

Specifications

Test Cycle:
90 seconds

Test Modes:
Single test
Data logging at user defined time intervals
Continuous sampling
Computer controlled testing

Detection Range:
0 – 3,000 PPM

Maximum Working Pressure:
6,000 psi

Data Entry:
Via built-in key pad to back-lit display

Repeatability/Accuracy:
Better than 5% (typical)

Memory:
500 test (scrolling) capacity

Data Retrieval:
Via RS232 port or direct access via alphanumeric keypad

Power:
12VDC rechargeable batteries (2 supplied)

Fluid Compatibility:
Mineral oil and petroleum based fluids; all others consult the factory

Size and Weight:
9.25"L x12.51"W x7.09" D / 13 lbs.

Ordering Information

Part #	Description
WOM.9100	H_2Oil Water-in-Oil Monitor
B.91.701	Spare printer paper (5 rolls/bx)
S.840134	Oil delivery unit

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MS100

Water enters hydraulic and lubricating systems from a variety of sources. Atmospheric ingression of water vapor, as well as internal heat exchanger leaks, create unfavorable operating conditions. The **MS100** Moisture Sensor eliminates the guess-work by providing real time condition monitoring. It is designed to work well in petroleum/synthetic hydraulic and lubricating oil applications.

Remote indicator display

Sensor

Specifications

Pressure
Maximum allowable operating pressure (MAOP): 6000 psi (420 bar)

Operating temperature
Maximum: 180°F(82°C)
Minimum: -40°F(-40°C)

Flow thru sensor cell
Installed in active flowstream

Fluid compatibility
Mineral oils and petroleum-based phosphate ester and Skydrol

Viscosity range
Unlimited

Port connection
1/4" NPT or SAE-6

Outputs
.85 - 4.05 volts

Power
24 VDC, M12

Materials
Stainless Steel 303

Sensor size and weight
4.21"H x 2.00"D/.5 lbs.

Ordering Information

Part #	Description
MS100-4	1/4" NPT with fluorocarbon seal
MS100-4E	1/4" NPT with EPDM seal
MS100-5	SAE-6 (9/16 - 18 UNF 2A) with fluorocarbon seal
MS100-5E	SAE-6 (9/16 - 18 UNF 2A) with EPDM seal
P.9732PVC-05	M12 straight, 5-way IP68, 5 meter cable
P.9732PUR-05	M12 straight, 5-way IP68, 5 meter cable for EPDM MS100
936817	MS100 Kit* with 1/4" NPT
936818	MS100 Kit* with SAE-6
935754	Remote Indicator Display

*Kit includes power distribution module, MS100 sensor, and remote indicator display with cables.

Interpreting Data

MS100 Kit

The Parker MS100 Moisture Sensor is designed to provide real time, accurate and repeatable results reported as % saturation of water.

Percent saturation is a useful measurement that offers the user a simple, quantitative method in determining how wet or dry a hydraulic or lubricating system may be. In contrast, PPM and % water by volume measurements provide little information about a fluid's free or dissolved water condition. However, % saturation can be converted to PPM as long as the fluid's saturation point is known at the system operating temperature.

Example

Oil type: Texaco Rando 46
Saturation point: 400ppm @ 150°

At the above operating condition, the meter displays 100% saturation. As the meter's scale indicates a reduction in the saturation percentage, there is also a corresponding reduction in PPM at a constant temperature. In the example above, a meter reading of 50% saturation could be interpreted as 200ppm at 150°F.

Sensor

Using only the sensor as a go/no-go device, a red LED will indicate when the oil's water concentration reaches ≥ 45% saturation and trigger a corresponding voltage output.

The unit also features an analog output proportional to % Saturation with a dynamic range of 0.85 to 4.05 volts.

Example:
<0.8V = Fault
0.85 = 0% Saturation
2.45 = 50% Saturation
4.05 = 100% Saturation
>4.05 = >100% Saturation
4.3V = Fault

- Parker's MS100 Moisture Sensor provides a com pact, real time solution to continuous water contamination monitoring
- Simple LED's provide local Go/No-Go indication
- Panel meter for local or remote display reports 0-100% saturation
- Meter scale is color coded for positive/easy identification
- Power distribution module provides 0-10 VDC analog and 120 VAC logic output

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Pressure Transducers

A comprehensive range of pressure transducers is available from Parker Filtration. Features include:

- One-piece body and diaphragm machining ensures long-term product stability
- All stainless steel construction
- Six transducer pressure ratings, 0-5V and 1-6V outputs.
- Micro plug and M12 connector options

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7
PTD	V	B	250	4	A1	C2

Box 1	
Symbol	Description
PTD	***Pressure Transducer (Voltage output)***

Box 2	O/P Combination
Symbol	Description
S	1-6V
V	***0-5V***
R	0.5-4.5V Ratiometric
P	0.1-4.9V

Box 3	
Symbol	Description
B	***Bar***

Box 4	Pressure Range – Bar
Symbol	Description
020	0 to 20
060	0 to 60
100	0 to 100
250	***0 to 250***
400	***0 to 400***
700	***0 to 700***

Box 5	Thread Forms
Symbol	Description
1	G1/4" (1/4" BSPP) for Bonded
2	G1/4" (1/4" BSPP) for Integral Seal
3	R1/4" (1/4" BSPT)
4	***1/4" NPT***
5	1/8" NPT
6	***7/16-20 UNF***
7	M12 x 1.75 Pitch with Spigot

Box 6	
Symbol	Description
A1	

Box 7	
Symbol	Description
C1	***Micro Din 43650***
C2	***M12***

Note 1: The bold options reflect standard options with a reduced lead-time. Consult factory on all other lead-time options.

Note 2: For a flying lead assembly, select the appropriate M12 option above and add a suitable cable from the 'Associated Products" options below.

Example: PTD.VB4006A1C2 + P.833PVC-5M = A 400 bar Transducer, 7/16-20 UNF thread, M12 connector with a 5m PVC flying lead.

Note 3: Integral Thread options are also available in above ranges

Associated Products	
Part Number	Description
P.833PVC-1M	1 Meter PVC
P.833PVC-2M	2 Meter PVC
P.833PVC-5M	5 Meter PVC
P.833PVC-10M	10 Meter PVC

PVS

Parker's PVS Oil Purification System Has the Competitive Edge

With increasing concern over the environment, many manufacturers have designed industrial equipment that will assist in controlling industrial waste disposal. Parker's PVS models of oil purification systems comply with today's environmental requirements. The PVS oil purifier removes dirt, water and air from oils efficiently and economically. Also, the PVS oil purifier captures residual moisture within its condensate holding tanks. This feature eliminates health hazards to employees and the environment. The PVS oil purifier is the most compact oil purifier on the market today. Its dimensional envelope, coupled with high processing rates and open frame design, makes it an obvious choice for preventative maintenance programs. Please contact the factory for more information

Typical Performance	
Tank Size	60 Gallons (227 liters)
Run Time	62 Minutes
Parker Model	PVS 600 (10 gpm)
Water Content (ppm)	Start: 10,000 PPM (1.0%) Stop: 500 PPM (0.005%)

Contamination Level — Start: ISO 21/18/16, Stop: ISO 16/14/11

Start — Stop

Potential Contaminant	PVS Performance
Solid particulate	ISO Cleanliness Code* 14/13/10 Attainable
Water	Removes 100% of free water, 95%+ of dissolved water
Air	Removes 100% of free air, 95% of dissolved air
Gases	Removes 100% of free gasses, 95% of dissolved gases

*When utilizing 2Q media

Parker Hannifin Corporation
Hydraulic Filter Division
Metamora, OH

Parker Worldwide Sales Offices

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Note: *The (+) sign in front of the country code indicates that you may need to dial an additional prefix.*

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