CML2

Compact Twin Laser Contamination Monitor

Description

Automatic Particle Counters

Compact Twin Laser Contamination Monitor

The CML is a portable, accurate instrument-suitable for 'on-site' applications. It can automatically measure and display particulate contamination, moisture and temperature levels in various hydraulic fluids.

> Features & Benefits

- Compact
- Light and portable
- Mains Operated/battery (if fitted)
- Full Calibration based on ISO11171
- Measures and displays the following international standard formats: ISO 4406:2017, NAS 1638, AS 4059E and ISO 11218
- Data logging and 600 test result memory
- Manual and remote control flexibility

Scope of Supply

- 1 x CML2 (Specific model will be as per ordered item)
- 1 x M16x2 microbore pressure hose, 1500mm long
- 1 x Quick release waste hose for LPA2
- 1 x 1L waste receptacle
- 1 x 12V, 2A power adapter c/w UK/EU/US/AUS/CN heads
- 1 x 9 pin serial cable
- 1 x USB to serial converter
- 1 x Hard copy of product user guide
- 1 x Digital copy of user guides/software/drivers
- 2 x Hard copy of calibration certificate
- 1 x Carry bag

See Accessories at page 77.

Front facing view

Right facing view

Closed case
Right facing view

Closed case
Left facing view

Technical data

Technology
Twin laser and twin optical diode detectors Based Light Extinction Automatic Optical Contamination Monitor

Particle Sizing
>4, 6, 14, 21, 25, 38, 50, 70 $\mu m_{(c)}$ to ISO 4406:2017 Standard

Analysis range
ISO 4406:2017 Code 8 to 24
NAS 1638 Class 2 to 12
AS4059 Rev.E. Table 1 Size Codes 2-12
AS4059 rev E, Table 2 Size Codes, A:000 to 12, B:00 to 12, C:00 to 12, D:2 to 12, E: 4 to 12,F: 7 to 12

Accuracy
Better than 3% typical

Calibration
Each unit individually calibrated with ISO Medium Test Dust (MTD) based on ISO 11171, on equipment certified by I.F.T.S. To ISO 11943

Viscosity range
Up to 400 cSt

Fluid temperature
From +5 °C to +80 °C

Ambient Temperature
From -10 °C to +60 °C

Temperature Measurement
±3 °C

Pressure
Minimum: 2 bar
Maximum: 400 bar

Sample Volume / Test time
8 ml. (short): 2:50
15 ml. (normal): 5:00
30 ml. (dynamic): 10:00
24 ml. (bottle sampler): 8:00
15 ml. (continuous): 5:00

Data Storage
600 tests

Communication options
RS232 9 pin D plug

Environmental Protection
IP51 (lid open)

Moisture Sensing
% RH (Relative Humidity) ±3%

Weight
6 kg

Electrical Supply
Voltage 9-36V DC

Power
Internal rechargeable battery (series 41)

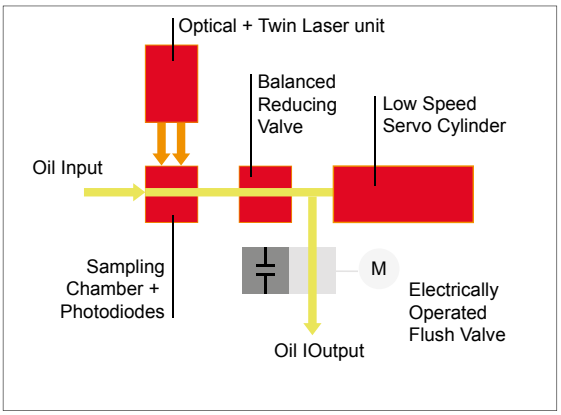
Outer Casing Finish
Injection Molded Ultra High Impact structural copolymer

Wetted parts
M - C46400 Cu alloy, 316 stainless steel, FPM, FR4, sapphire.
N - 316 stainless steel, FPM, sapphire.
S - 316 stainless steel, perfluoro elastomer, sapphire, EPDM.

Software
LPA View software (included)

FOCUS ON

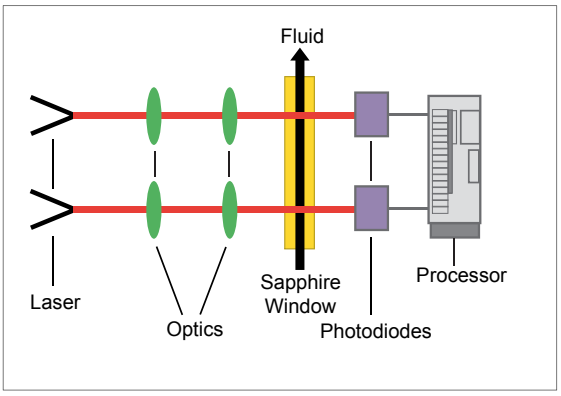
Exclusive MP Filtri technology
The combination of the two lasers with the unique optics and photodiode package enables the CML2 to give increased accuracy combined with excellent repeatability.



W-Option
Water Saturation level (RH%) and fluid temperature sensor option.

Laser 1
A single point high accuracy laser measures particles of contamination at 4 $\mu m_{(c)}$ and 6 $\mu m_{(c)}$ giving increased accuracy with excellent repeatability.

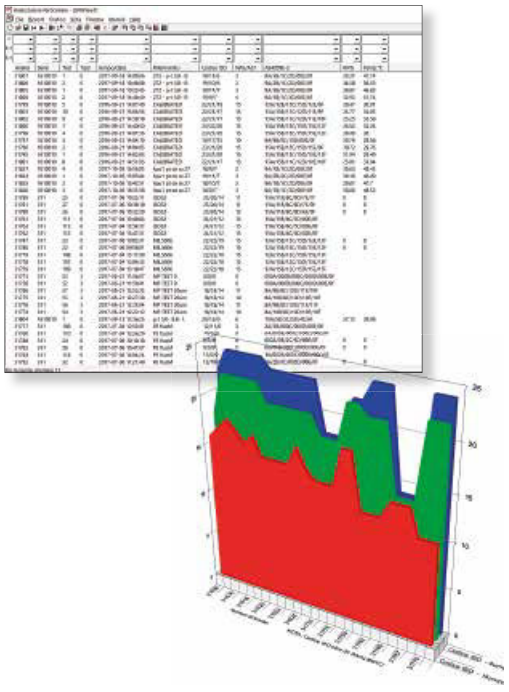
Laser 2
Standard accuracy laser specifically designed for system contaminants between 6 $\mu m_{(c)}$ and 70 $\mu m_{(c)}$.



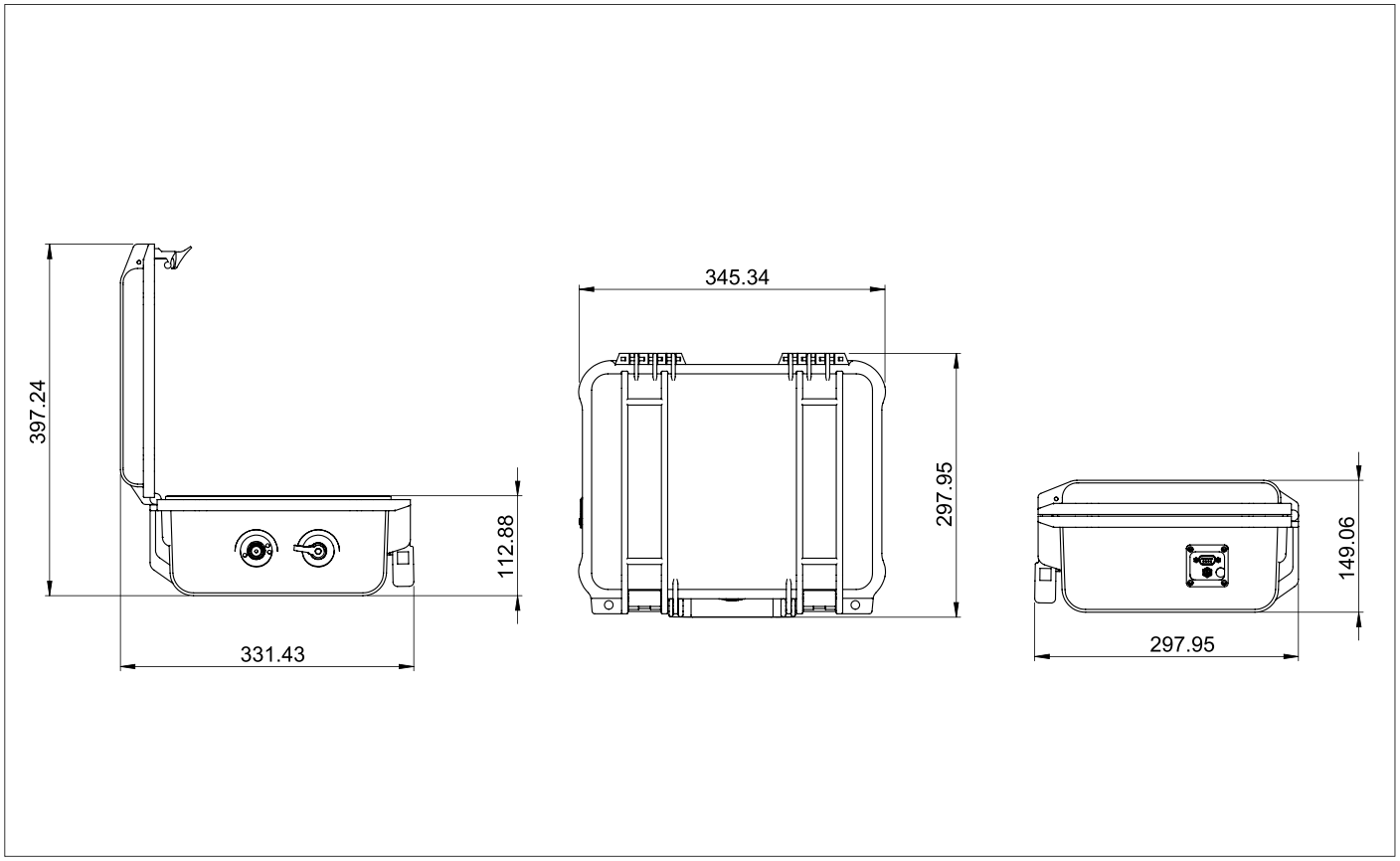
LPA View Software

The LPA View software is used with the LPA2, CML2 and ICM particle counters. When connected to LPA View, MP Filtri CMP's can transfer results in realtime, or alternatively historical results can be downloaded from the CMP's inbuiltmemory.

- Runs on Windows 2000, XP, Vista and Windows 10.
- Full adjustment & control of product settings, test times and alarms
- Easy test report generation
- Trend analysis
- Graphical display options
- Universal format across our contamination monitoring product range



Dimensions



Designation & Ordering code

AUTOMATIC PARTICLE COUNTER CML2

Configuration example: CML2 | W | M | S | X | 41

Series
CML2 Compact twin laser contamination monitor

Moisture Sensor (RH%)
0 Without moisture and temperature sensor
W With moisture and temperature sensor

Fluid compatibility
M Mineral / synthetic oil
N Subsea fluids and water based fluids (*)
S Phosphate ester and aggressive fluids (*)

Option
S Standard units

Option bottle sampler
X Without bottle sampling

Series
41 With display and push buttons, with internal rechargeable battery

(*) **N** and **S** version, moisture sensor (W) not available