

**ANY SYSTEM
ANY TIME
ANYWHERE**

**PORTABLE
CONTAMINATION
MONITOR**

CML4



PASSION TO PERFORM



CML4

A compact and portable contamination monitor that delivers a fast, accurate assessment of contamination in the field and is the perfect solution for the mobile, construction and plant hire sectors.

Easy to master, the new CML4 features cutting-edge contamination control technology to anyone wishing to protect their critical systems.

The CML4 features a metering pump which enables analysis of both 'live' and unpressurised systems, delivering comprehensive contamination checks on any machine in any condition.

FIVE KEY REASONS

CML4

WILL TRANSFORM YOUR CONTAMINATION CONTROL STRATEGY



PORTABILITY

Compact and light.
Work all day on a single battery charge.



SIMPLICITY

Straightforward enough for anyone to use.
On-screen prompts - no formal training required.



INTUITIVE

Full colour touchscreen interface.
Simple software for sophisticated results.



FLEXIBILITY

Measures pressurised and unpressurised systems.



ACCURACY

LED technology.
 $\pm 1/2$ code for 4, 6, 14 $\mu\text{m}_{(c)}$. ± 1 code for larger sizes.

Simple and intuitive

Easy to master with no need for a laptop.

Made tough

Durable
co-polymer case.

Long-life battery

Work all day on
a single charge.

Instant results

On screen and
downloadable via USB.



Measure anywhere, any time!

The built-in pump enables operators to work on both pressurised and unpressurised systems.

Oil can be tested from samples, tanks, or system test points.

Integrated pump

For testing unpressurised oil samples.

High Pressure Sampling

Up to 420 bar / 6091 PSI.

Memory capacity

Store up to 4000 results.

Connectivity

Integrated USB C port.

High-resolution

7" full-colour touchscreen.

CML4**As tough as you need**

IP65 rating for enhanced protection.

Bluetooth-enabled

Optional printer accessory available.

Compact and portable

Easy to store and carry at just 14" (35cm) wide.

EASY AS 1-2-3

Using the CML4 is as easy as 1-2-3 with just three stages required to take you from connecting up your portable contamination monitor to the oil sample and then accessing real-time results through to long-term trend analysis and proactive maintenance.



1

CONNECT YOUR OIL / HYDRAULIC FLUIDS

The first step is simply to connect the CML4 to an Online M16 test point (pressure range 2-420 bar / 29-6091 psi) or to the applications reservoir (zero pressure). The CML4 features a self-priming metering pump which enables analysis of unpressurised systems. Easy-fit standard hydraulic connections maintain high environmental protection ratings.



Suction connection and waste outlet in use

EASY TO USE INTERFACE



Simple yet sophisticated software with a highly-responsive touch-screen, designed to deliver bright visuals for outside working in sunny conditions, and an intuitive home screen enabling you to view all your key performance information at a glance.

The CML4 can be mastered without the need for formal training and enables operators to begin measuring the condition of hydraulic oils in a matter of minutes.

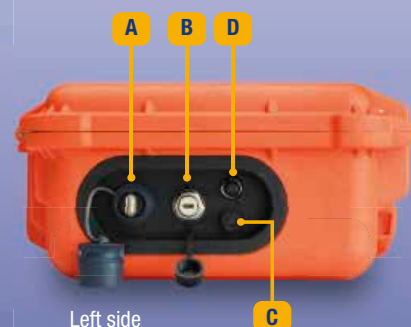
The 7" high-resolution touchscreen display delivers fast, accurate results in a wide variety of reporting standards. You can also set languages, alarms and tolerance limits at the tap of the screen.

Electrics

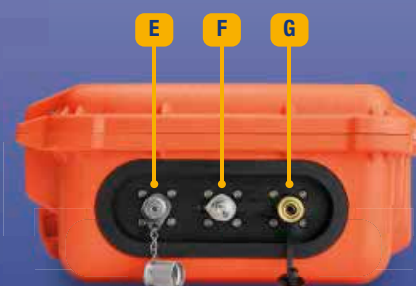
- A: USB data stick download port
- B: USB C PC connection port
- C: DC charging port
- D: Power on/off

Hydraulics

- E: Pressure connection port
- F: Suction connection port
- G: Waste outlet



Left side



Right side

HAND-HELD BLUETOOTH PRINTER

2

ACCESS REAL-TIME ONBOARD RESULTS

The CML4 shows real time results on its high-resolution display. Designed for simplicity the software allows new users to get up and running in minutes without the need for formal training.



Intuitive bespoke software system

Should you need to output a physical analysis report there is an option to use this hand-held printer as part of the analysis process for instant hard copy results.

This lightweight and compact unit (just 185 x 120 x 50mm) can be easily connected to the CML4 via Bluetooth. It offers high-speed, low-noise, black and white printing using thermal printing technology with a print width of 48mm onto a 15mm core paper roll. This portable printer comes equipped with a large capacity rechargeable lithium battery to guarantee power for extended working in the field.



3

CONNECT TO CMP VIEW FOR TREND ANALYSIS

Results can be downloaded onto a USB Data Stick and transferred to a PC, or you can connect directly to the computer via a USB C connection. CMP View software enables operators to analyse data over time, opening up the potential for long-term trend monitoring and preventative monitoring strategies.

Created in-house especially for MP Filtri's range of contamination monitors, the award-winning CMP View is the most advanced software of its type in the industry.

Results and analysis can be viewed at-a-glance on a single screen in a variety of different graphical formats, tracking not just trends in particle contamination but also relative humidity, as well as temperature levels.



Compatible with
CMP View

THE PERFECT PORTABLE CONTAMINATION MONITOR

Rugged and robust, the CML4 thrives in the most challenging working conditions.

Compact and portable, it's ideal in the field, while a long-life battery enables the operator to work all day without the need for recharging.

Effective hydraulic healthcheck

Quickly identify levels of contamination in systems, the CML4 is an ideal tool for operators who need to ensure their hydraulic systems are always functional.

Any system, anytime, anywhere

The inclusion of an in-built, self-priming pump means it can analyse particle contamination in both pressurised and unpressurised systems, making it an ideal tool for service engineers.

Boosting your business

Featuring predictive maintenance technology, the CML4 flags up potential problems before they impact on performance. This delivers such key benefits to your business as: reduced downtime, lower operating and service costs, and longer lifespans of machinery.

KEY INDUSTRY SECTORS



Mobile

Portable and precise, the CML4 is ideal for applications where accuracy is vital even in challenging and variable conditions.



Construction

Keeps your fleet and key operational machines at peak performance without the risk of unplanned downtime.



Industrial

Keeps production lines working at full capacity – ensuring the best in performance and productivity.



Renewable energy

Minimises unplanned downtime, dramatically reducing operational and maintenance costs.



Plant hire

Delivers peace of mind after servicing and after the vehicle is rented to customers.



Injection moulding

Ideal for precision tooling, injection moulding, presses and power packs - supports a wide range of industries.

CML4 SPECIFICATION



Technology	High precision LED light extinction automatic optical contamination monitor
Particle Sizing	>4, >6, >14, >21, >25, >38, >50, >70 $\mu\text{m}_{(c)}$
Reporting Standards	ISO 4406, ISO 11218 NAS 1638 AS4059 Rev G, Table 1 AS4059 Rev G, Table 2 GBT 14039 GJB 420 B GOST 17216
Accuracy	$\pm 1/2$ code for 4, 6, 14 $\mu\text{m}_{(c)}$ ± 1 code for larger sizes
Calibration	Calibrated with ISOMTD in accordance with ISO 21018 - Part 1 and Part 4
Viscosity Range	Up to 400cSt
Fluid Temperature	Minimum: +5°C / +41°F Maximum: +80°C / +176°F
Ambient Temperature	Minimum: -10°C / +14°F Maximum: +60°C / +140°F
Operating Pressure	Offline: Maximum 2 bar / 29 PSI Online: Maximum 420 bar / 6091 PSI
Moisture Sensing	% RH (Relative Humidity) $\pm 3\%$
Temperature Measurement	$\pm 3\%$
Data Storage	Up to 4000 tests
Environmental Protection	IP65 (Lid closed) IP54 (Lid open)
Power	Lithium-Ion rechargeable battery
Battery Life	8 hrs approx
Weight (unit only)	8.5 kg / 18.5 lbs
Product Dimensions	Width: 352 mm / 13.8" Height: 149 mm / 5.8" (not including handle) Depth: 297 mm / 11.7"

Designation & Ordering code

COMPACT PORTABLE CONTAMINATION MONITOR						
Series	Configuration example: CML4 W 0 M 00 1					
CML4 Compact portable contamination monitor						
Moisture Sensor						
W With moisture and temperature sensor						
Design Reference						
0 Standard option						
Fluid Compatibility						
M Mineral oil and synthetic fluids						
Design Reference						
00 Standard option with full accessory kit and carry bag						
Country Plug Type						
1 UK						
2 US						
3 EU						
4 CN/AUS						



WORLDWIDE NETWORK

CANADA ♦ CHINA ♦ FRANCE ♦ GERMANY ♦ INDIA ♦ SINGAPORE
UNITED ARAB EMIRATES ♦ UNITED KINGDOM ♦ USA



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