



CAAPC1 Series

Automatic Particle Counter



Description and features

Portable automatic particle counter, for online hydraulic system's oil analysis and solid contamination particles detection.

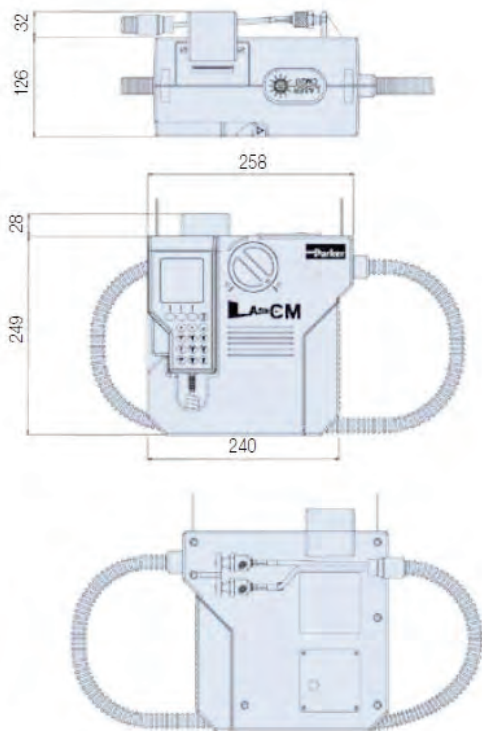
- Particle sizes detected: MTD >4, >6, >14, >21, >38, >70 micron_(c);
ACFTD >2, >5, >15, >25, >50, >100 micron
- Contamination classes: ISO 7 to 22 , NAS 0 to 12
- Computer compatibility: interface via RS232 connection; RS232 to USB computer interface.
- Accurate results achieved with a 2 minute test cycle
- 32 characters dot matrix LCD Alpha numeric keypad
- Integral 16 column printer
- Data entry allows individual equipment test log details to be recorded and individual equipment footprint record.
- Data retrieval of test results from memory via handset display.
- Data graphing selectable via the integral printer
- Memory store : 300 test memory
- Automatic test cycle logging of up to 300 tests can be selected via handset display
- Automatic calibration reminder
- Re-calibration – Annual certification by an approved Service Centre

Materials and operation features

- Mechanical composition: brass, plated steel, stainless steel, aluminium
- Seals: fluorocarbon
- Minimum working pressure: 2 bar
- Max system working pressure: 420 bar
- Compatibility: mineral oil and petroleum based fluid
- Viscosity range: 2 to 100 cSt
- Operating temperature: +5 to +80°C
- Ambient temperature: +5 to + 40°C
- Net unit weight: 8 Kg
- Unit + case weight: 13 kg

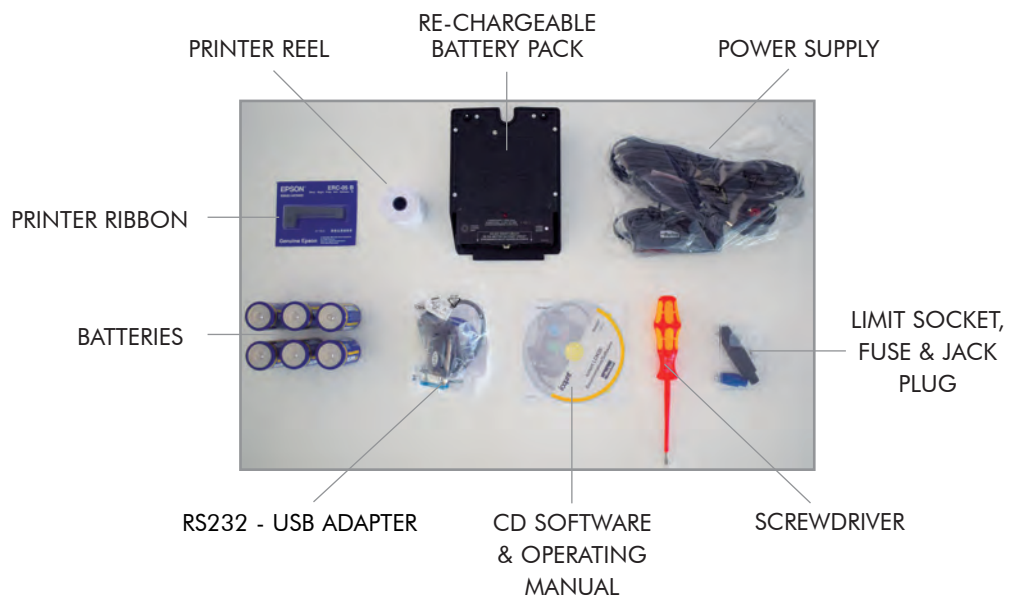
Ordering information

COMPLETE UNIT	
CAAPC1	Portable Automatic Particle Counter (MTD calibrated)
STANDARD SPARES	
CAAPC1PROL	Printer roll (5 pcs)
CAAPC1PRIB	Printer ribbon
CASPS1	Online analysis valve (spare)
ACCESSORIES ON DEMAND	
CAAPC1RBP	Rechargeable battery pack
CAAPC1WPC	Weather protector cover
CAAPC1USB	USB to RS232 connection cable



The unit includes:

- Online analysis valve CASPS1
- ABS structural foam and injection moulded case
- ABS handheld display
- Nylon hoses (Kevlar braided microbore)
- Stainless steel armoured hose ends
- 1,2 mt fluid connection hose
- Rechargeable battery pack
- 12 V. DC power supply
- Fast blow fuse
- Battery operated 6 x 1,5 D cells
- ParSmart software and cable link pack
- Weather protector cover
- CE certification
- Certification of calibration to ISO standards



Operation



Operating the Counter is very simple: just pressing the start button and turning the dial. The test procedure is automatic and it takes less than 2 minutes to complete.

Data download management



A dedicated software provides the link between the CAAPC1 and your computer management system.

icountLaserCM Test		icountLaserCM Test	
ON LINE TEST		ON LINE TEST	
TEST NUMBER 022		TEST NUMBER 022	
Date	D M Y	Date	D M Y
04-03-10	04-03-10	04-03-10	04-03-10
15-52	15-52	15-52	15-52
20/15/09	20/15/09	7	7
Count / 100ml		Count / 100ml	
>4µ (c)	820721	4/6µ (c)	789157
>6µ (c)	31564	6/14µ (c)	31250
>14µ (c)	314	NAS CLASS	7
>21µ (c)	64	14/21µ (c)	250
>38µ (c)	14	NAS CLASS	3
>70µ (c)	0	21/38µ (c)	50
		NAS CLASS	3
		38/70µ (c)	14
		NAS CLASS	4
		>70µ (c)	0
		NAS CLASS	0
NOTES		NOTES	

ISO 4406 - 1999

Correlation to NAS 1638

The unit includes a 16 column printer for hard copy data. The on-board printout data graphing option supports predictive maintenance procedures.

FILTREC
under PARKER Technology



How does the Automatic Particle Counter works



A focused light source is projected through a moving column of oil, in which the contaminants being measured are contained, causing an image of the contaminant to be projected on to a photo diode cell, changing light intensity to a voltage output which is recorded against time.

The electrical output of the photo diode cell will vary in accordance with the size of the particle contained in the column of oil: the larger the particle, the bigger the change in the photo diode electrical output. This "voltage" lost relates directly to the area of the particle measured, is changed into a "positive" voltage and then in turn changed into a capacitance value. This value is counted and stored in the particle counter computer in one of the 6 channels, according to particle size.

Readouts are displayed on the hand-held LCD in the accepted ISO and NAS standards ready for hard copy printing or RS232 computer download. (The on-board computer allows storage of up to 300 test results.)

