



# Particle Pal Plus

**Portable oil and fuel cleanliness monitoring just got better**

Our all new *Particle Pal Plus* utilises state of the art digital imaging particle counting technology to give reliable ISO counts that are not affected by air bubbles or phantom particles/oil additives. Combine with water, density and viscosity sensors to better understand the condition of your oil/diesel.

**A self contained system, complete with integral pump and controlled flow rate.**

**Portable Oil and Fuel Diagnosis**



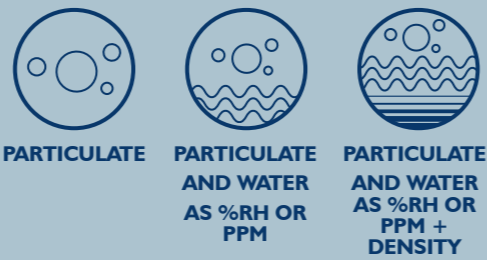
# ENGINEERED ON AN **AWARD** WINNING REPUTATION

## Particle Pal Plus

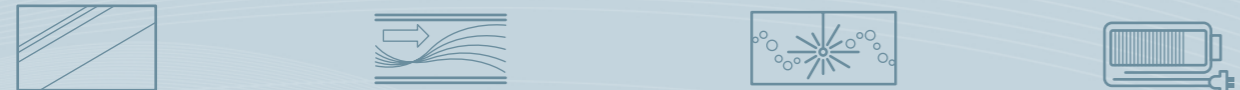
### OILS



### FUELS



*Particle Pal Plus* HAS A WIDE RANGE OF ADVANCES OVER LASER COUNTER TECHNOLOGY



#### Touchscreen LCD display showing all sensors connected

The Particle Pal Plus has a touchscreen to display data from sensors including particulate, water (as %RH or ppm), density and viscosity depending on the model chosen. It can display ISO codes as a single reading e.g. 18/16/15, or the full range of ISO codes, particulate and bubbles counts up to 70µm. Alarm levels can also be set so ISO codes are coloured green or red indicating if cleanliness targets have been achieved.

#### Improved fluid flow, pump feature set

We have adopted high pressure internal gear pumps throughout the range. Standard pumps can handle oils up to 320cSt, while the advanced stepper motor pump can handle oils up to 2400cSt. Find on the ordering guide.

A common input can accept pressurised live feeds up to 350 bar via a high pressure adaptor. All Particle Pal models can be connected directly to a live system using this optional extra.

#### Digital imaging particle counter

Precise digital imaging particle and air bubble readings up to a size of 70µm. Air bubble counts are eliminated from ISO codes.

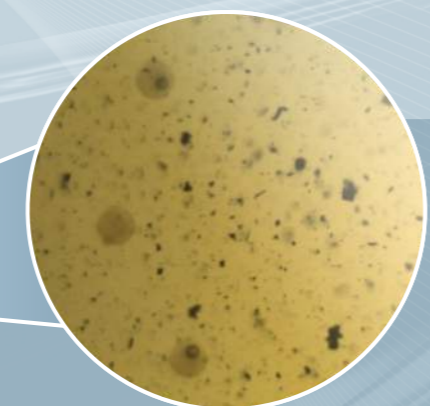
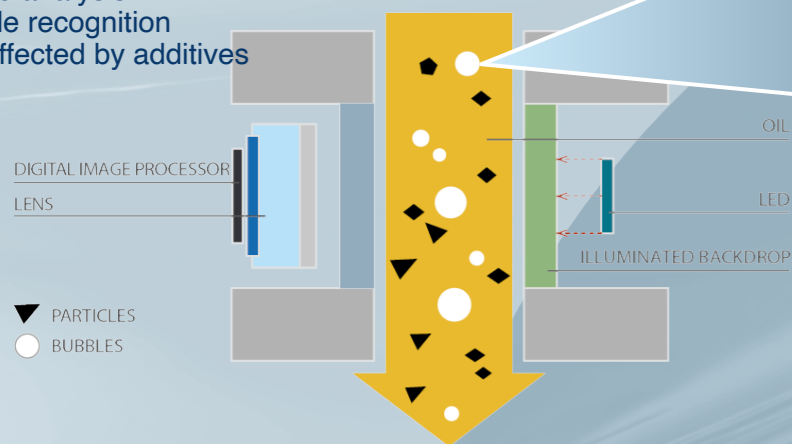
Digital imaging is not affected by phantom particles/additives which laser counters see as contamination.

#### Battery life

Complete with a rechargeable battery, giving up to 10 hours of continual use, fluid dependent, making the Particle Pal Plus perfect for field use.

#### Digital imaging technology

Wide particle range  
Shape analysis  
Bubble recognition  
Not affected by additives



Learn more about the tech here:



Scan me for an example report



NEW FEATURE!  
See above example

### Example report & features

QR ISO: 18 / 16 / 13		Battery: 88%	Date/Time: 04/02/2022 14:38:02
Test Name: -			
Size	ISO	Particles	Bubbles
4µm	18.6	1921	4
6µm	16.2	364	3
14µm	13.4	54	2
21µm	11.5	15	2
38µm	9.3	3	1
70µm	8.2	1	0
Density: 886 kg/m <sup>3</sup>		Viscosity: 188 mPa.S 212 cSt	
NAS: 7	SAE: 4	RH: 56%, 22°C	
Fatigue: 44		Sliding: 6	
Cutting: 12		Fibre: 1	

Clear and easy to read ISO code which changes between green, white and red to indicate the oil cleanliness.

Oil cleanliness for each size category details the ISO code, number of particles per millilitre and the bubbles detected.

Additional sensors give an unprecedented insight into the overall condition of the oil.

Particles are analysed and sorted into fatigue wear, cutting wear, and fibre identification to give root cause analysis.

Oil cleanliness is trended over time to show how its condition changes.

Additional settings allow control of the pump speed for priming and flushing, datalogging, ISO cleanliness alarm limits and changing the time zone.

*Particle Pal Plus* is a modular design; choose the option best suited to your application:

SPECIFICATION TABLE							
	FS9V4	FS9V4-RH	FS9V4-PPM	FS9V4-PPM-DEN	FS9V4-HV	FS9V4-RH-HV	FS9V4-RH-V-D-HV
<b>FLUID COMPATIBILITY</b>							
Mineral oils	✓	✓			✓	✓	✓
Organic oils	✓	✓			✓	✓	✓
Synthetic oils	✓	✓			✓	✓	✓
High viscosity oils (gear oil)					✓	✓	✓
Diesel fuel	✓	✓	✓	✓	✓	✓	✓
Skydrol	Please contact Filtertechnik for this product						
<b>DISPLAYED INFORMATION</b>							
ISO 4406, SAE AS4059 & NAS 1638	✓	✓	✓	✓	✓	✓	✓
Trending graph (ISO 4406)	✓	✓	✓	✓	✓	✓	✓
Relative humidity* (%RH)		✓				✓	✓
Part per million (PPM)			✓	✓			
Density				✓			✓
Viscosity							✓
Root cause analysis	✓	✓	✓	✓	✓	✓	✓
Temperature		✓	✓	✓		✓	✓
<b>MODES OF OPERATION</b>							
Bottle sampling	✓	✓	✓	✓	✓	✓	✓
Tank sampling	✓	✓	✓	✓	✓	✓	✓
High pressure live system connection (up to 350 bar)	Please contact Filtertechnik for this product						
<b>MEMORY</b>							
Internal data logging for 500 lines of data (16.6 hours of testing)	✓	✓	✓	✓	✓	✓	✓
<b>TRENDING/ SOFTWARE</b>							
PC software for extracting and analysing data. Generate CSV files for advanced reporting.	✓	✓	✓	✓	✓	✓	✓

We also offer the Particle Pal Life & Particle Pal Pro versions which give extended particulate, water & oil life analysis.



Scan to explore the full range:



**Filtertechnik Ltd**  
 I Central Park,  
 Lenton Lane,  
 Nottingham,  
 NG7 2NR

Tel: +44 (0)115 9003 600  
 Email: sales@filtertechnik.co.uk

[www.filtertechnik.co.uk](http://www.filtertechnik.co.uk)

Made in the UK 