

PARTICLE PAL RAPTOR

Portable hi-resolution digital imaging contamination monitor
For Water. Oil. Fuel. Pharmaceutical. Powder.



PARTICLE PAL RAPTOR

Powered by
Vision
ANALYTICAL

The **Particle Pal Raptor** redefines fluid cleanliness monitoring by combining Dynamic Image Analysis (DIA) with advanced wear debris classification to perform high resolution precision measurements of detected particles down to **1µm**.

Unlike traditional light blockage particle counters, Raptor doesn't just count particles - it shows you what they are, categorising each particle into over 30 categories. Gain the insight you need to prevent failures and optimise your predictive maintenance programs.

Introduction

The Raptor provides particle counts and codes for the most popular industry requirements.

Compliant to ISO 21018-1 for fluid contamination monitoring, and exceeds compliance to ASTM D7596 for the classification of oils.

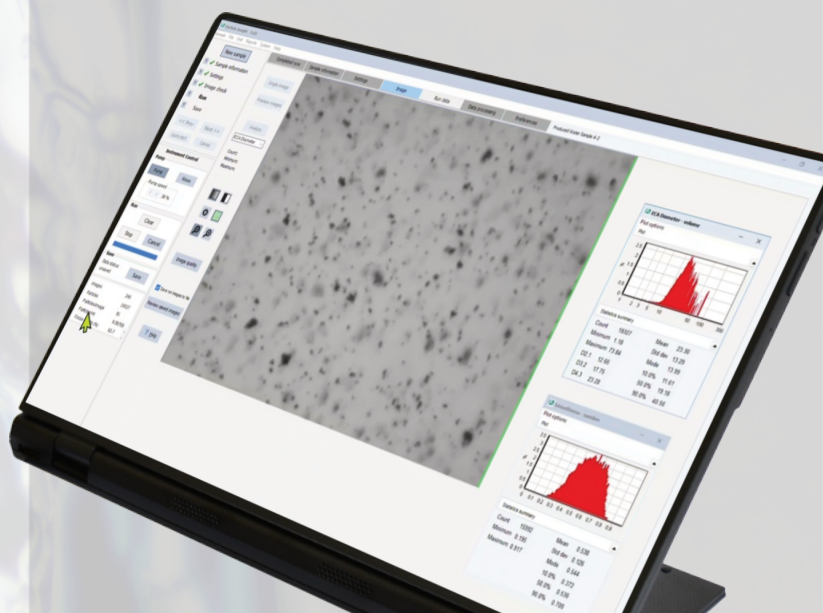
Detection and shape classification of particles down to $1\mu\text{m}$, the Raptor reports standard count codes including ISO4406, NAS 1638, and NAVAIR.

Analysis can be carried out with as little as 1ml of fluid using sterile syringes for ad-hoc testing, or using the internal pump to for higher-volume or continuous monitoring applications.

The detection process detects all metallic and non-metallic particles, and allows air/water bubbles to be easily detected and excluded.

Features

- Analyse particle size, shape, and texture.
- ISO/NAS classification.
- Over 30 custom categories such as fatigue, sliding, and cutting wear.
- Thumbnail images of all measured particles.
- Correlation plots provide clear, auditable proof.
- 5-hour battery life for field work.



Ordering codes

The Raptor is available in four models, each featuring a distinct magnification range that determines the visible particulate range.

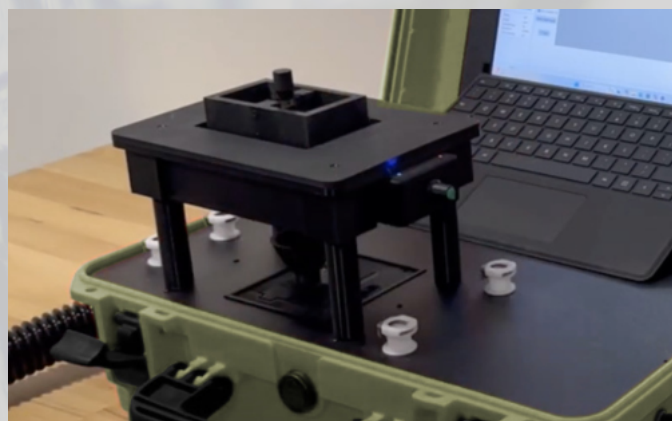
The available models are as follows.

Camera model	Range of visibility	Ordering code
High magnification	0.5 to $90\mu\text{m}$	FS9VR-HM
Standard magnification	1 to $300\mu\text{m}$	FS9VR-SM
Low magnification	10 to $800\mu\text{m}$	FS9VR-LM
Super-low magnification	20 to $2500\mu\text{m}$	FS9VR-SLM

Powder analysis

The Raptor is capable of analysing many sample types, including pharmaceuticals, adhesives, oils, fuels, and more.

With the addition of the powder analysis kit, the Raptor can be used to analyse powders.



Analysis

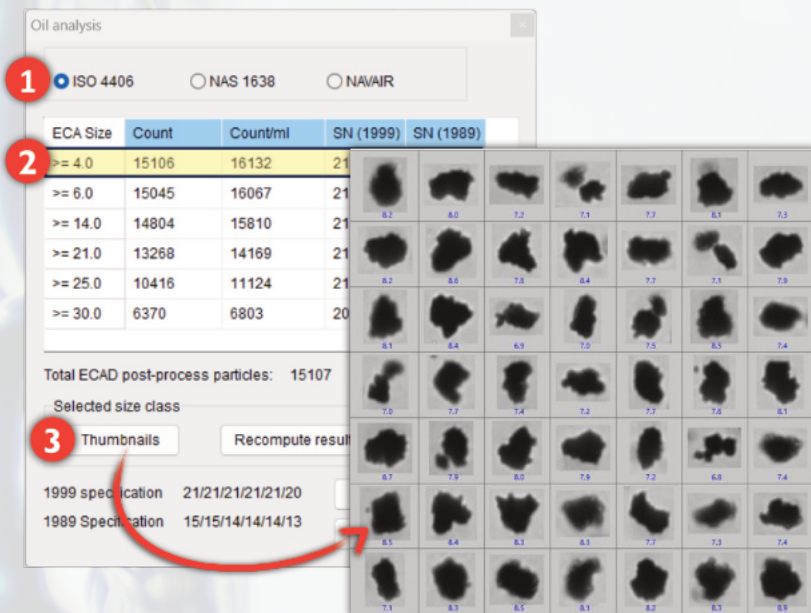
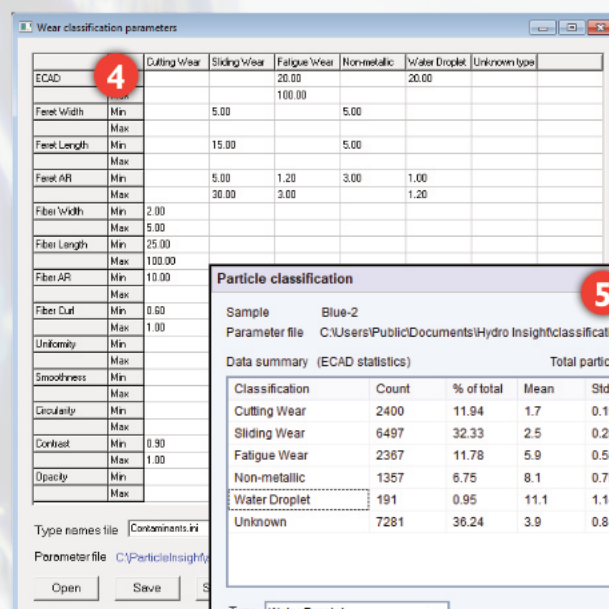
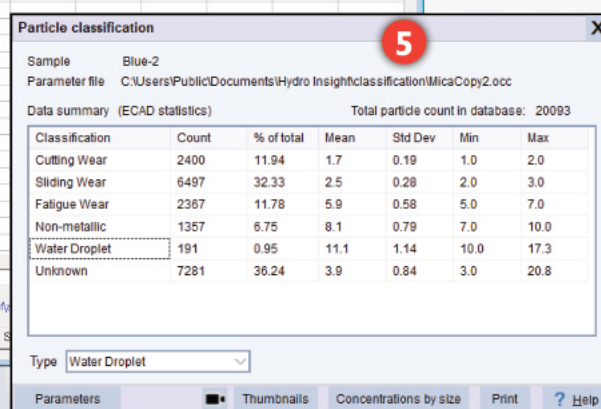
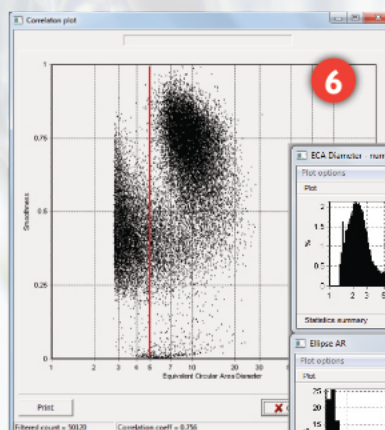
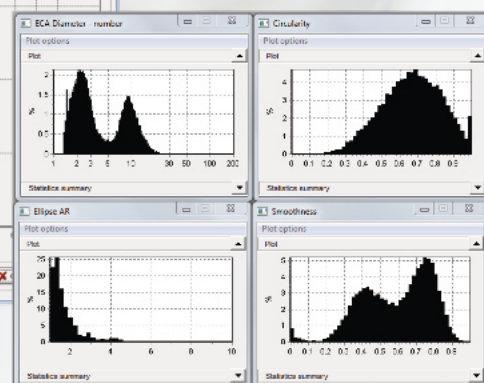
The Raptor's Dynamic Image Analysis and flexible software design gives users a full picture of machine wear and contamination.

Once the relevant standard is selected (1), the total particle count, and the particles per ml count are shown by size within each relevant grouping (2).

Every particle counted is saved as an image, each of which can be browsed visually as evidence (3), and to provide further insights into shape.

Wear classifications such as cutting, sliding and fatigue are available. Further to this, custom parameters can be defined (4) for inclusion in analysis (5). Image thumbnails can be viewed, grouped by custom category.

Additional analysis tools are available for even more detailed analysis (6), including correlation plots for the identification of relationships between different particle properties and distribution plots which show the frequency of particles within specified size or shape ranges.



Find out more



Find out more and watch the introductory video on our website:

filtertechnik.co.uk/raptor



...or scan me