



Particle Contamination Monitoring... Visualizing Fluid Cleanliness

The Particle Insight Raptor Portable for Fluid Analysis is designed to perform high resolution precision measurements of detected particles from 1um to 100um in a portable and benchtop configuration. By using Dynamic Image Analysis and a flexible sampling design users can get a full picture of machine wear and contamination.

Unique Features include:

- Compliant to new ISO 21018-1 for Fluid Contamination Monitoring
- Exceeds compliance to ASTM D7596 for Classification of Oils
- Detection & Shape Classification of particles down to 1µm.
- Reports standard count codes, ISO4406, NAS 1638, NAVIR.
- Portable design for field use and lab use.
- Multiple ways to suspend sample or on-line use for continuous monitoring.
- Disposable / interchangeable flow cells. System brings spare flow cell.
- Detects all metallic and non-metallic particles
- Air/water bubble detection
- Concentration measurements of all classes of particles down to 1µm.

Raptor Oil Analysis System – Seeing Beyond the Count

Unlock the Full Story Behind Your Particles

The Raptor Oil Analysis System redefines fluid cleanliness monitoring by combining Dynamic Image Analysis (DIA) with advanced wear debris classification. Unlike traditional Light Blockage and Automated Particle Counters, Raptor doesn't just count particles—it shows you what they are. Gain the insight you need to prevent failures and optimize your predictive maintenance programs.

Why Choose Raptor?

✓ **Visual Particle Identification:** Move beyond particle counts to see fatigue, cutting, sliding wear, fibers, and nonmetallic particles—based on Noria Wear Particle Atlas standards.

✓ **Trusted Expertise:** Backed by Vision Analytical's 30+ years in particle analysis, with 18 years dedicated exclusively to DIA technology.

✓ **Customizable & Clean:** One standard lens configuration with custom options available. The disposable, interchangeable flow cell eliminates carryover and ensures system cleanliness.

✓ Flexible Sampling Options:

- Manual analysis with sterile syringes—measure as little as 1ml with no mess.
- Upgradeable to an internal pump for high-volume or continuous monitoring applications.

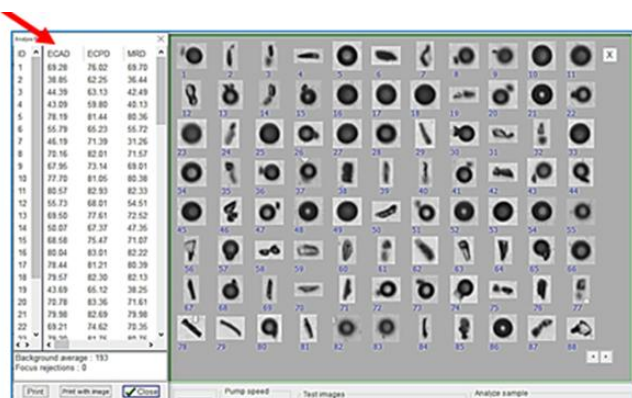
See the Difference That Counts

Raptor captures particle images >1µm, allowing you to visually identify wear modes and contamination sources—something traditional particle counters simply can't do.

Don't settle for numbers—see the particles that threaten your operations.

Discover how Raptor DIA technology aligns with the future of fluid monitoring and ISO 21018-1.

Contact Us Today to See What You've Been Missing.



Particle Count, Concentration, Size, Shape, Wear Classification

Comly to the new ISO 21018-1 for Fluid Contamination Monitoring

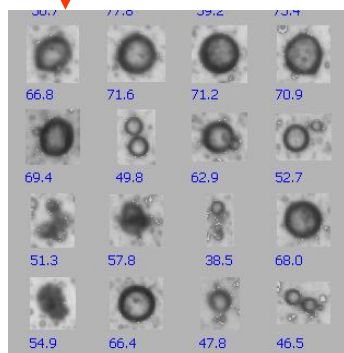
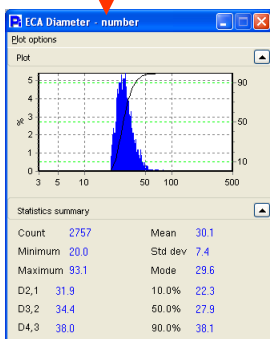
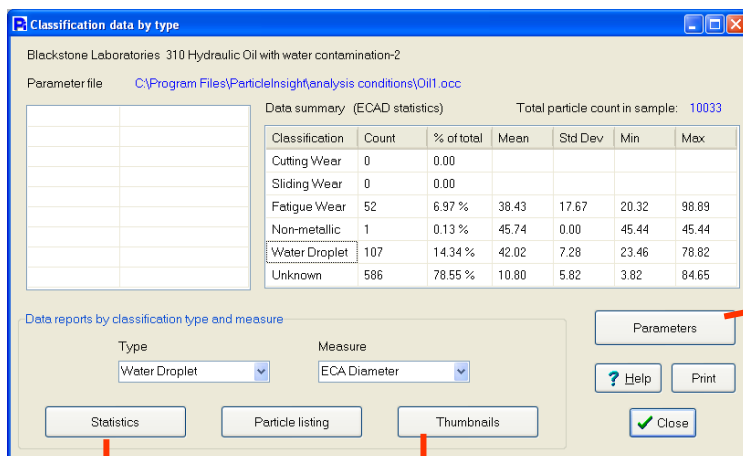
The **Particle Insight Oil Analysis System** provides particle counts and codes for the most popular industry requirements. Software upgrades available free of charge when new regulations are released. Available accessories include cleaning fluid, calibration check fluid, and virtual based training.

Simple user interface packed with information

- 1 – Select count code desired and results are updated with total count per size class and concentration.
- 2 – Select to view thumbnail images for particles in a specific size class offering objective evidence and identification to take accurate and immediate action to correct problems. Thumbnails available for particles $>1\mu\text{m}$.
- 3 – Class codes reported on-screen, can be printed, or can be added to spreadsheet for tracking and trending.
- 4 – Statistics can be recomputed to view 32+ size histogram and statistics for selected size class.

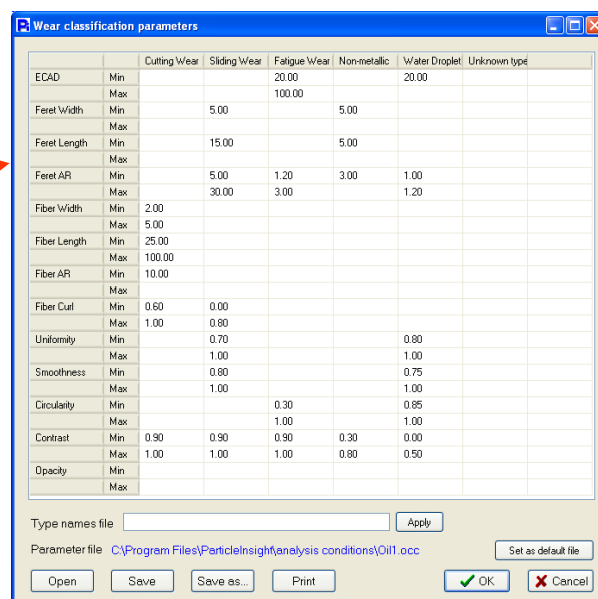
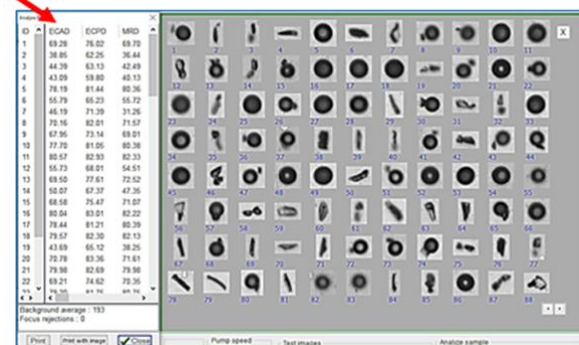
Thumbnails shown in greyscale view to enhance users understanding of all particles starting at $1\mu\text{m}$.

The Wear Classification window allows the user to view statistics, statistical listing, and particle thumbnails for each desired type of particle $>1\mu\text{m}$. Wear classifications can be adjusted to meet users needs. Additional classification types can also be created.



Statistics windows allows for 32+ shape measures for each wear classification.

Greyscale view of all particles in each classification. Can easily detect unimportant particles such as air bubbles.



Although the classification parameters set forth by the Wear Atlas is available as a default, sometimes users would like to adjust these parameters or even create new classification parameters for their specific application.

Wear Classification Parameter flexibility to adjust default parameters to suit any application or wear debris type.