Cordant™

Ideal for asset-intensive industries like:

- Refining
- Power generation
- Metals and mining
- Petrochemical
- LNG

With so many assets to manage in a typical facility—let alone across an entire enterprise—incumbent approaches can no longer keep you competitive. Why? Because they require **too much time**.

- **Too much time** setting/ maintaining alarm thresholds just to detect whether something is wrong
- **Too much time** sifting real alarms from non-issues just to know what is real and what isn't
- **Too much time** diagnosing and getting to root cause because expertise is missing
- **Too much time** trying to bring issues to resolution because you're wrestling with ad hoc tools

Cordant™ Asset Health Analytics

Harness purpose-built AI simultaneously with physics-based models for best-in-class capabilities to spot asset issues earlier, resolve them faster, and use your people more efficiently

Cordant™ Asset Health Analytics enables a superior approach

Move from threshold-based detection to AI-based detection

Incumbent practices are characterized by threshold-based alarms that must be set, optimized, and maintained. This approach is nearly impossible to deploy at scale across hundreds or thousands of assets because each asset is unique and thus thresholds must be individually tailored to avoid false positives and false negatives. AI-based approaches circumvent this and can automatically determine normal versus abnormal behaviors, even under changing operating conditions.

Leverage the industry's deepest, richest physics-based models

Detecting something is wrong is only half the battle—you must also quickly get to what is wrong. Systems based purely on AI are great at finding anomalies, but not at isolating the anomalies to specific faults and then providing prescriptive guidance. Physics-based models excel at this task, acting on detected anomalies to accurately identify them and then providing prescriptive guidance that can be implemented by operations and maintenance personnel.

Employ a collaborative case management environment

Acting on detected faults requires a system where tasks can be assigned, collaboration can occur, relevant data can be exchanged with stakeholders, and issues can be tracked to closure. Ad hoc tools leave much to be desired and represent their own burden that adds no value. A much better approach is to use the same system that detects and diagnoses issues for informing others, collaborating with them, tracking progress, and managing the issues all the way to full resolution and closure.

Benefits

55%
Reduction in machine failures

50%
Increase in your machinery experts' productivity

40%
Reduction in unplanned downtime

30%
Improvement in machinery availability and life

Driving better insights for better operations

Condition monitoring data has historically come with a hidden price: the burden of interpreting it all and then sifting the gold from the gravel—all within the context of ever-changing factors like process conditions and market dynamics. While the power of AI and automated diagnostics has moved from a curiosity to the mainstream, it's important to understand that not all solutions are the same. Detection accuracy (something is wrong) and diagnostic accuracy (this is what is wrong) need to work hand-in-hand and only Cordant™ Asset Health Analytics puts industry-leading AI and the world's deepest, proven repository of physics-based approaches together in an integrated package to deliver superior, truly actionable insights from your condition monitoring data.

Cordant™ Asset Health Analytics is a key component in our Cordant™ suite of solutions. It allows operators to monitor more assets without added labor costs, detecting issues earlier and more accurately than with legacy approaches relying on alarm thresholds. Our solution is specifically designed for scalability, enabling ease of deployment across the entire enterprise.

Feature summary

Dynamic adaptation
Machinery fault detection criteria dynamically adapt to operational and process variations. Enhanced alarm accuracy means fewer "is it real?" discussions and more "let's act".

Single-platform integration
Physics-based and AI approaches are integrated into the same, easy-to-use solution.

Embedded, deep-domain intelligence
60 years of root-cause machinery diagnostics is embedded in Cordant™ Asset Health Analytics, allowing specific mechanical, process, and auxiliary malfunctions to be pinpointed across dozens of asset types using a library of 400+ physics-based diagnostic models.

Flexible deployment
Cordant™ Asset Health Analytics can be deployed on-premises, in the cloud, or as a hybrid of both—meaning the flexibility to adapt to your particular infrastructure and IT/OT constraints.

Asset-agnostic hand raising
There's value in knowing something meaningful has changed—even when the exact cause can't be determined. Cordant™ Asset Health Analytics spots such changes, regardless of asset type—rotating, reciprocating, or fixed—and whether thermodynamic or rotodynamic.

Diagnostic accuracy
Fault identification intelligence is based on hundreds of thousands of machines and terabytes of data—and it constantly learns and improves to get even better with time.

True scalability
Designed to scale from a handful of machines to hundreds of thousands, ensuring a solution that can be economically deployed on not just a unit-wide basis, but enterprise-wide.

Out-of-the-box usability
Cordant™ Asset Health Analytics starts delivering results right out of the box. No tedious data training is required and unlike generic AI, its purpose-built AI capabilities offer far more than unguided data science can bring to the table.

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