



**LUDECA**



**BETAVIB**

# VIBRATION SOLUTIONS

- PORTABLE COLLECTORS
- ONLINE SYSTEMS
- CM MANAGEMENT



# VibWorks U.H.D.M



## INCREASE EFFICIENCY

Ultra HD Monitoring is a unique feature offering the widest range of tools.

On 40" to 60" 4K (4096px) display for unmatched monitoring efficiency.



## IMPROVE PERFORMANCE

Create databases for your assets, kinematic parameters, assign analysis configurations, machines and routes, take readings, perform a complete analysis and generate reports.

Using our ClickOnce™ technology.



## GAIN PRODUCTIVITY

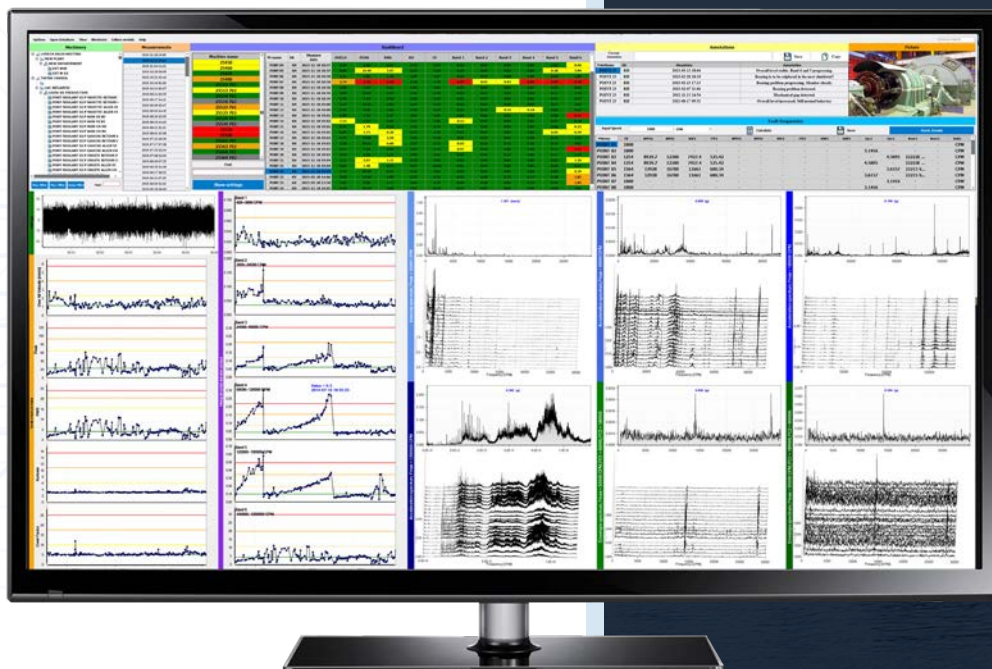
Thanks to its revolutionary acquisition process, route acquisition is 5 to 10 times faster than any other conventional collector WITHOUT ANY LOSS of data.



## TIME TRAVELER

Changing any analysis configuration is now possible, VibWorks will reprocess old vibration data and reconstruct machine history.

You can easily change your mind and make modifications after collecting data.





# VibWorks DAQ Lite

## Easier Visualization

Of machine state with realtime over-all indicators color-coded according to alarms.

## Higher accuracy

With real-time waveform, customizable velocity and acceleration spectrum.

## Advanced Analysis

Ability to perform real-time analysis on raw data coming from the sensor.





# VibWorks

# COLLECTOR

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## HOW FAST WE ARE

5 seconds per point (3 Axes) is enough to analyze machines running at conventional speeds (around 1800 CPM).



## TAKE THE RIGHT DECISION

When you have the right tool at your disposal you will increase asset uptime, protect your investments and maintain economic operations.





## INNOVATIVE

Real time audio from vibration sensors, embedded digital camera, manual process, trending parameters, machine recognition with bar code reader.  
Direct real time audio from sensors.



## AUTO SYNC/SERVER

Share all data between Vibworks collections.  
Centralization and/or backup operations.  
Sync your data with network or cloud server (provided by Betavib).  
Keep your data safe.



# VibWorks

# ANALYZER

Designed for expert jobs, VibWorks ANALYZER comes in 4,8,16,or 32 channels,with fewer machine shutdowns VibWorks ANALYZER is fully loaded with all the essential tools to perform expert analysis and is scalable according to your needs.

The product is entirely compatible with BETAVIB SUITE Hardware (Balancing and Collector).



## **ADVANCED SIGNAL PROCESSING:**

All the tools required to investigate structural dynamic behavior are embedded within VibWorks ANALYZER as well as long time data logger for post-processing.



## **AUTO REGRESSIVE MOVING AVERAGES:**

is an advanced signal processing technique embedded in VibWorks ANALYZER and used to perform Frequency Response Functions (FRF) without an impact hammer.





## APPLICATIONS:

VibWorks ANALYZER reflects BETAVIB's vision in our solutions interfaces: interaction is clean and simple while providing more power on demand whenever it's needed.



## REAL TIME ANALYZER :

Multichannels functions provide a means to better understand your assets dynamic behavior .

Cross channel phase analysis can help deduct deflection.



# VibWorks

# BALANCER

VibWorks Balancer is an add-on module to the BETAVIB Suite. Runs on the same hardware platform as the VibWorks Collector and Analyzer. Like all BETAVIB products, VibWorks Balancer comes with user-friendly interface, simple yet powerful.



## Single Shot

VibWorks Balancer will save shaft sensitivities coefficients, future balancing of machinery are made with a single shot measurement without a trial run.



## Dynamic Vectors

Real-time phase stability is indicated on polar graphs during measurements, to ensure proper balancing conditions.





## Report Generation

Balancing reports are generated automatically and available in several universal formats (PDF, Doc, HTML, etc).







Vibworks server responds to the need of reliability engineers, supervisors and maintenance staff for accurate and up-to-date information

# VIBWORKS SERVER

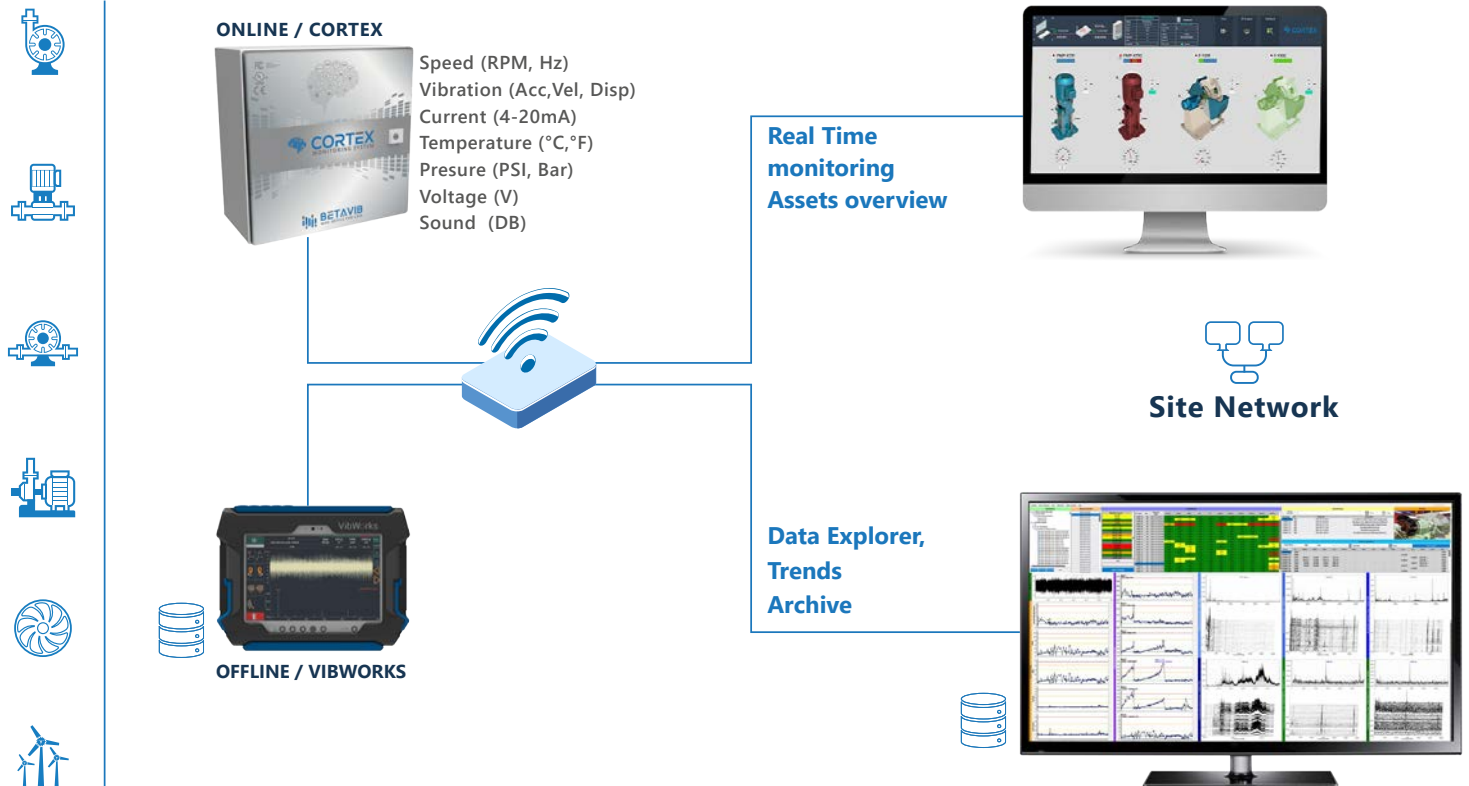


**Vibworks Server** transforms your collector into an OCA (Occasionally Connected App.) Allowing you to access all the database while off-line, in the field and sync the data with a central DB and/or with other users while on-line.

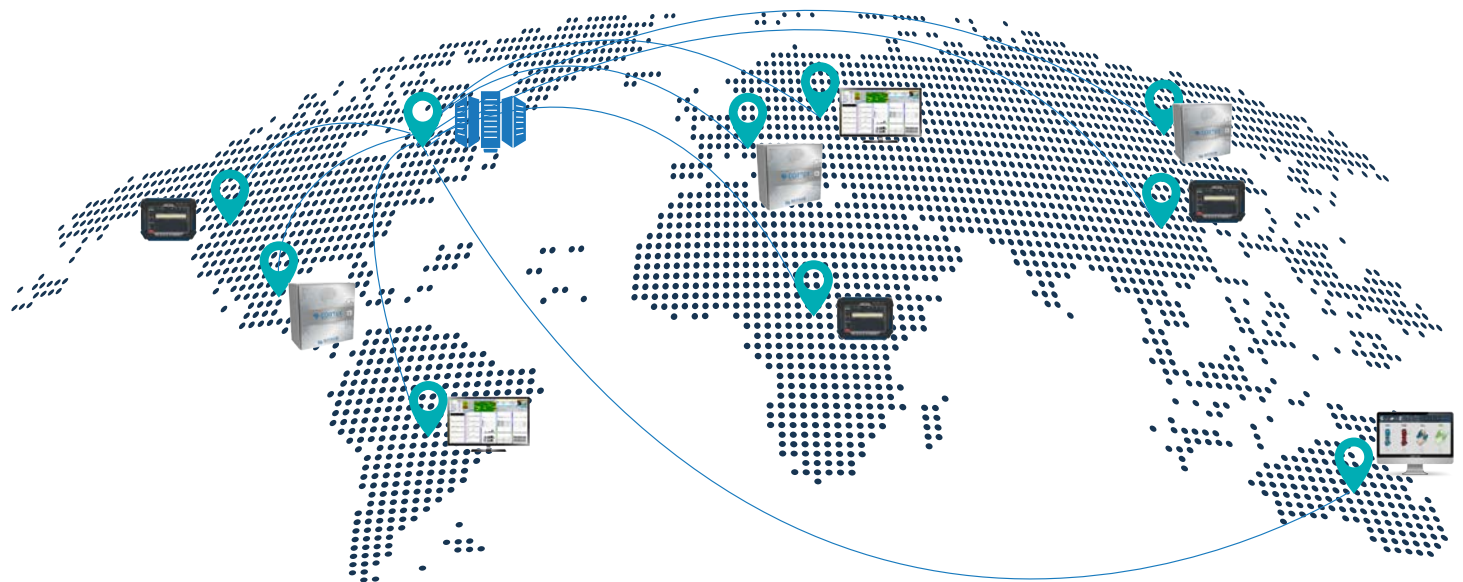
This means you can generate reports, analyze data and perform all your daily tasks even when you are off-line, and as soon as a connection to the server becomes available all your data will be synchronized to the server and immediately become visible to supervisors/reliability leaders/higher enterprise management.

# CORTEX ARCHITECTURE

## ON SITE



## OFF SITE



### REMOTE VISUAL

Dashboard  
Time Waveform  
Spectrums  
Navigation Tree



### WEB SERVICES

Worldwide access from any connected device: PC, i-pad, i-phone, Android.



### NOTIFICATION

SMS  
Email



# Cortex Monitoring System



## ONBOARD STORAGE

Autonomous analysis and data logging to prevent network failures. Maximum autonomy with onboard decision.



## ARCHITECTURE

CMS comes fully cabled, fully wireless or cabled/wireless.



## FLEXIBLE & INNOVATIVE

Over 50 input/output modules to measure and interact with all parameters.  
Online and offline measurements share events.



## REMOTE ACCESS

Email notification on alarm crossing and accessible data through web services from any connected device.



## ONBOARD DECISION

Machine shutdown on Alarm Crossing  
Sound or light warning on exception events.



## SCALABLE AND RUGGED

CMS will fit your needs in terms of channel count and multiple sensors.  
CMS is certified Class 1 Div 2 ATEX and has extended temperature range.



## CMS-Ox16 / CMS-Ox32

Standard, off the shelf permanent monitoring solution allowing multiplexed measurements from accelerometers and proximity probes.

Vibration is routed in real time to dynamic dashboard from the sensors and local signal processing is performed to ensure proper and safe operating conditions.

A real time assets viewer will help locate the status of each monitored point. Recording can be triggered with programmable timers, and/or with RPM counters (2 counters available). 8 output voltage channels are available to share valuable information as alarm crossing/network malfunction... with other systems.

## CMS-OC

High-end online monitoring solution allowing simultaneous measurements from any type of sensor (vibration, voltage, current temperature, pressure, prox, 4-20mA, sound).

Cortex Monitoring System OC is a custom built solution that will fit exactly your application: exact number of sensors, trigger handling, recording parameters, communications, environment... No matter how complex your application is (parameters, channel count, variable operating monitor dynamic signature of your assets but also relate their behavior to the process variables).



# CRAFTED FOR RELIABILITY READY TO RUN

Achieve permanent health monitoring of your critical equipment with a unique and scalable turnkey solution, developed to fit your needs.



## Higher Accuracy

Manual measurements increase the possibility of data errors and missed events; with CMS you can ensure high data accuracy thanks to continuous data collection.



## Optimized Performance

On-line condition monitoring can help you ensure an optimized distribution of a limited reliability staff to perform the most valuable tasks required for maintenance.



## Thorough Diagnosis

CMS provides you with unique tools to improve asset monitoring and guarantee consistent analysis based on stored historical baseline data.



# POWERFUL REPORTING

Without proper reporting tools to spread the information across your organization ,faster data acquisition and efficient analysis are simply useless .

Using our solutions will ensure that the right information is delivered to the right resource in a simple and readable format for all your organization staff.

Machine pictures and details, observation, analysis and actions, status vs. alarms along with equipment criticality are embedded in the analysis report.



# Vib

# SUPERVISOR

## Global Overview



Make informed decisions thanks to the enterprise-wide access to the data offered by VibWorks Supervisor.

## Actions Impact

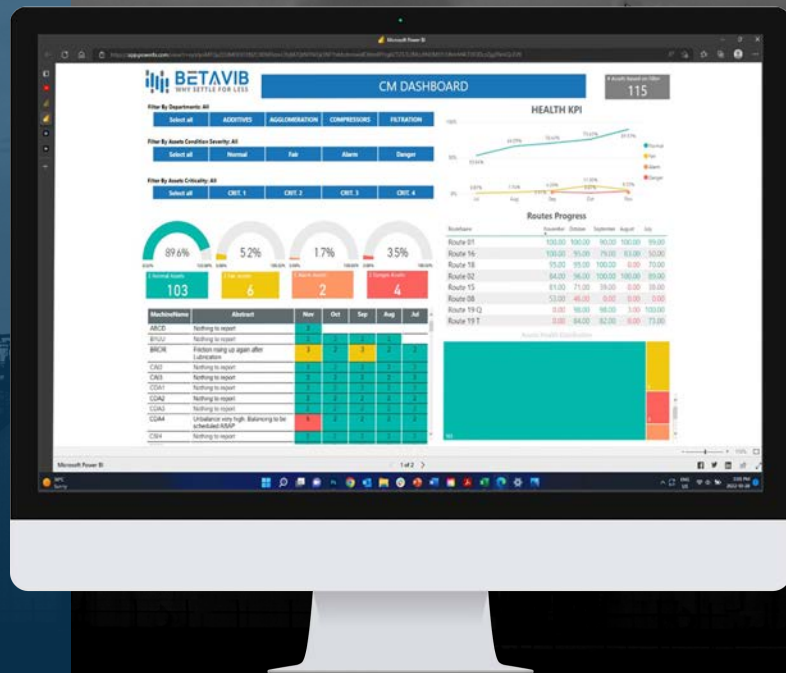


You have the opportunity to see detailed analysis over departments, machine types, criticality and date.

## Precise Analysis



Quantify the result of your management actions and strategies based on up-to-date information.





# VibWorks CLOUD

## ANYTIME! ANYWHERE!

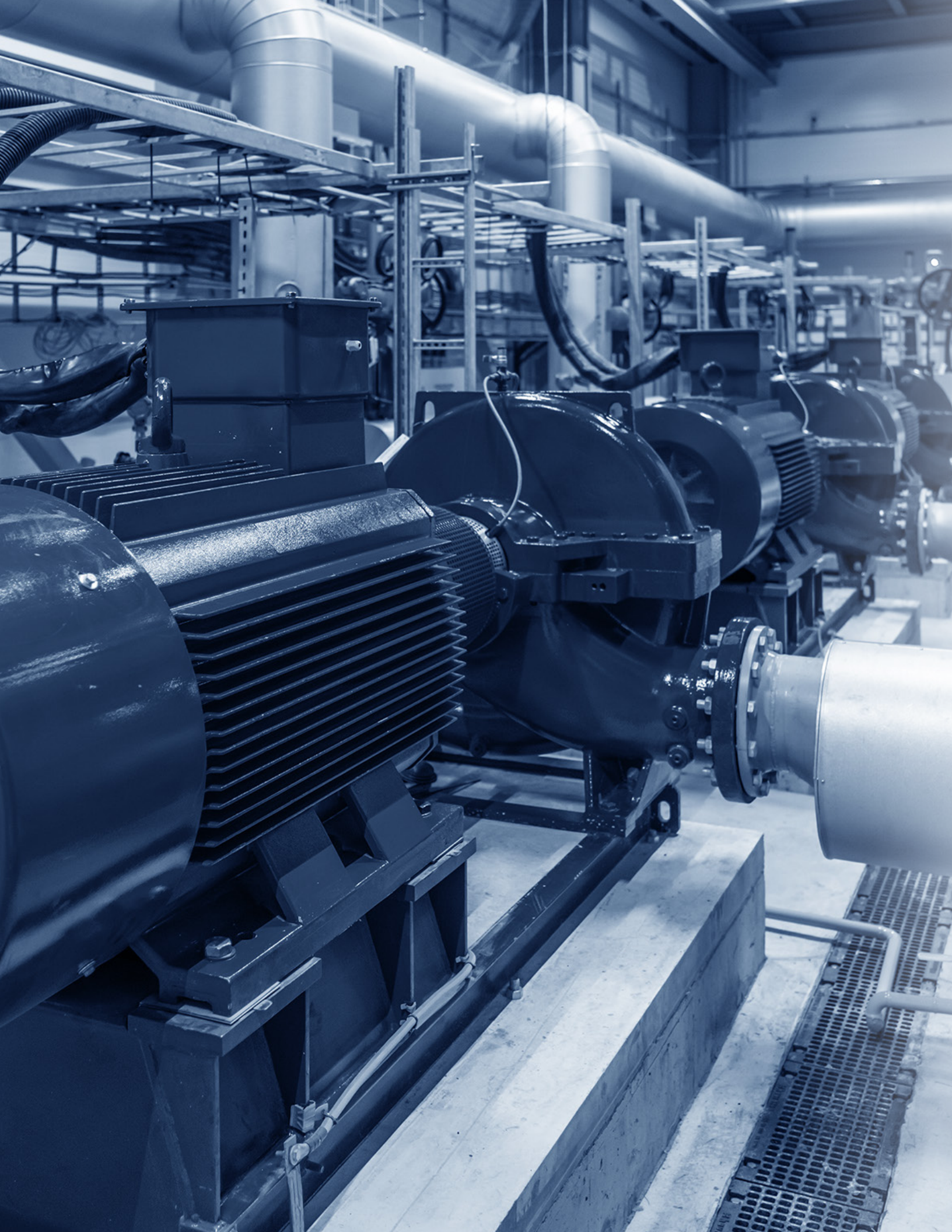
Using VibWorks Cloud applications, your assets' health remains always accessible, anytime, anywhere in the world. An extraordinary management tool to keep track of your machine behavior without locking valuable resources and depriving your analysts from their instruments.

## YOUR DEVICE, OUR VISION.

VibWorks Cloud applications are built to provide reliability engineers with useful features and KPI to manage their assets: Pareto charts focusing on failures distribution, machines history, overall behavior per sector or for the entire plant... and you can achieve all this on any device you want PC, tablets, Smart Phones using fast and secured web services...











RELIABILITY KPI THROUGH  
VIBWORKS CLOUD

**W VIBWORKS**

CLOUD

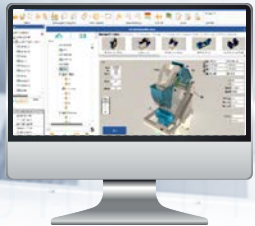


ADVANCED ANALYSIS

REALTIME VIBRATION  
MONITORING  
ONLINE CONFIGURATION



STANDARD ANALYSIS



VIBWORKS



U.H.D.M

SERVER



CORTEX



VIBWORKS COLLECTOR



VIBWORKS  
ANALYZER



VIBWORKS BALANCER

ON THE SAME  
DEVICE

- Create Machines
- Configure parameters
- Collect vibration
- Analyze
- Report

OFFLINE MONITORING SOLUTIONS (VIBWORKS SUITE)

SMART ONLINE  
MONITORING

- All types of inputs
- Onboard storage
- Onboard signal processing
- Industrial ruggedness



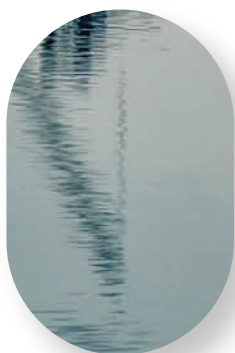
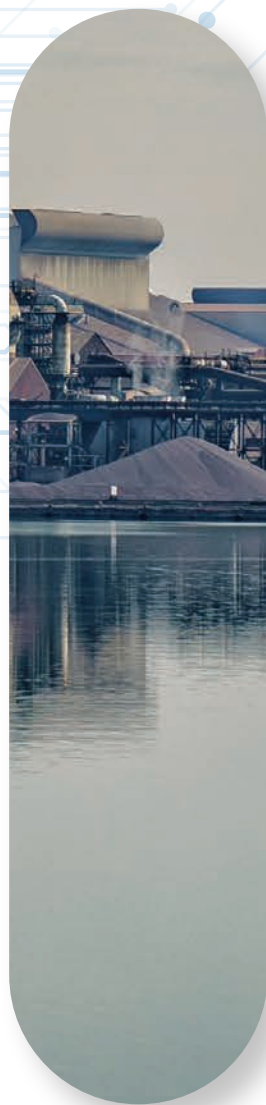
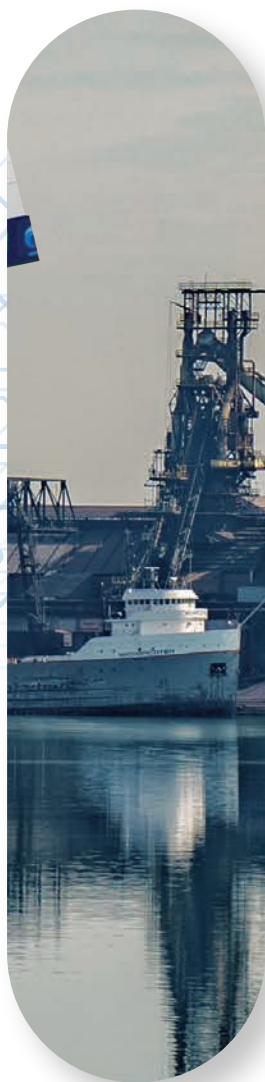
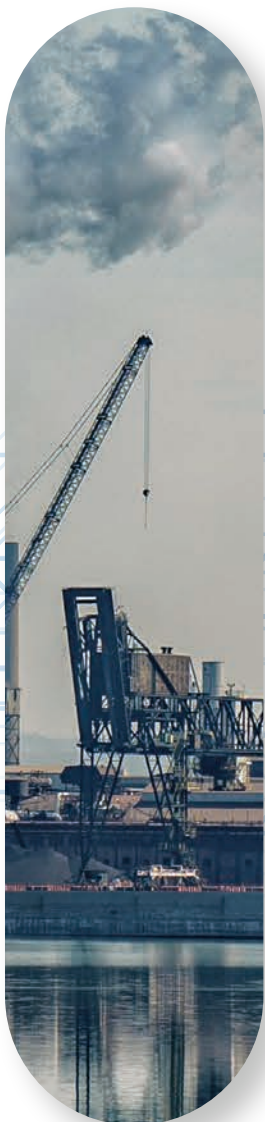
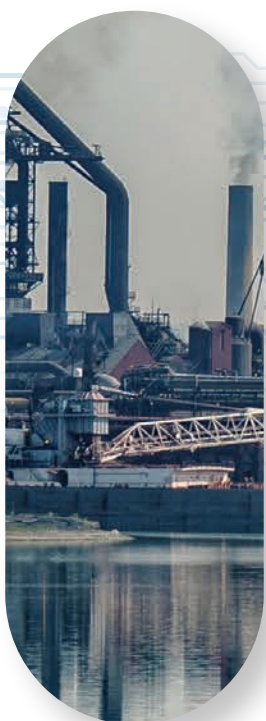
CMS-Ox



CMS-Oc

ONLINE MONITORING SOLUTIONS (CMS)





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