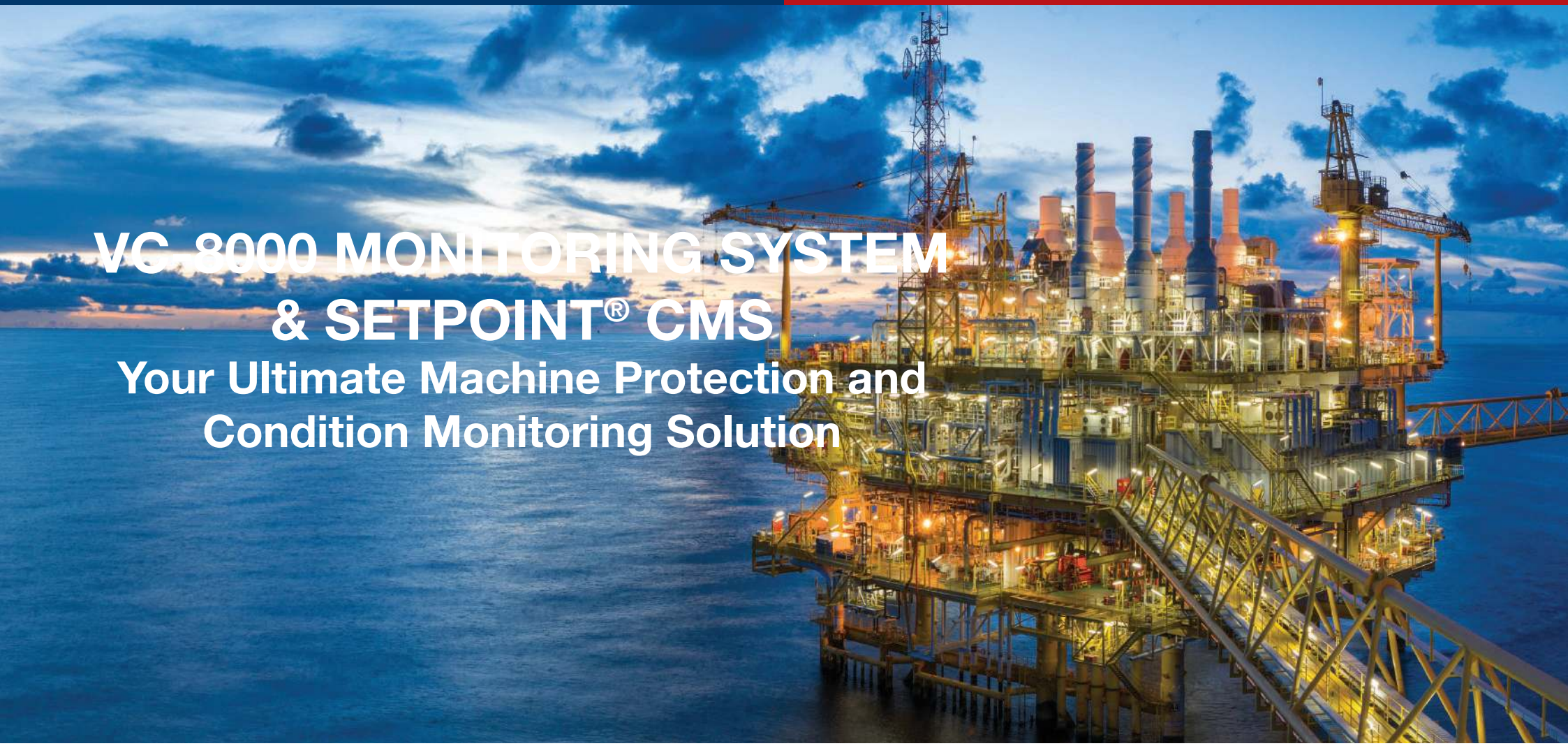
Brüel & Kjær Vibro

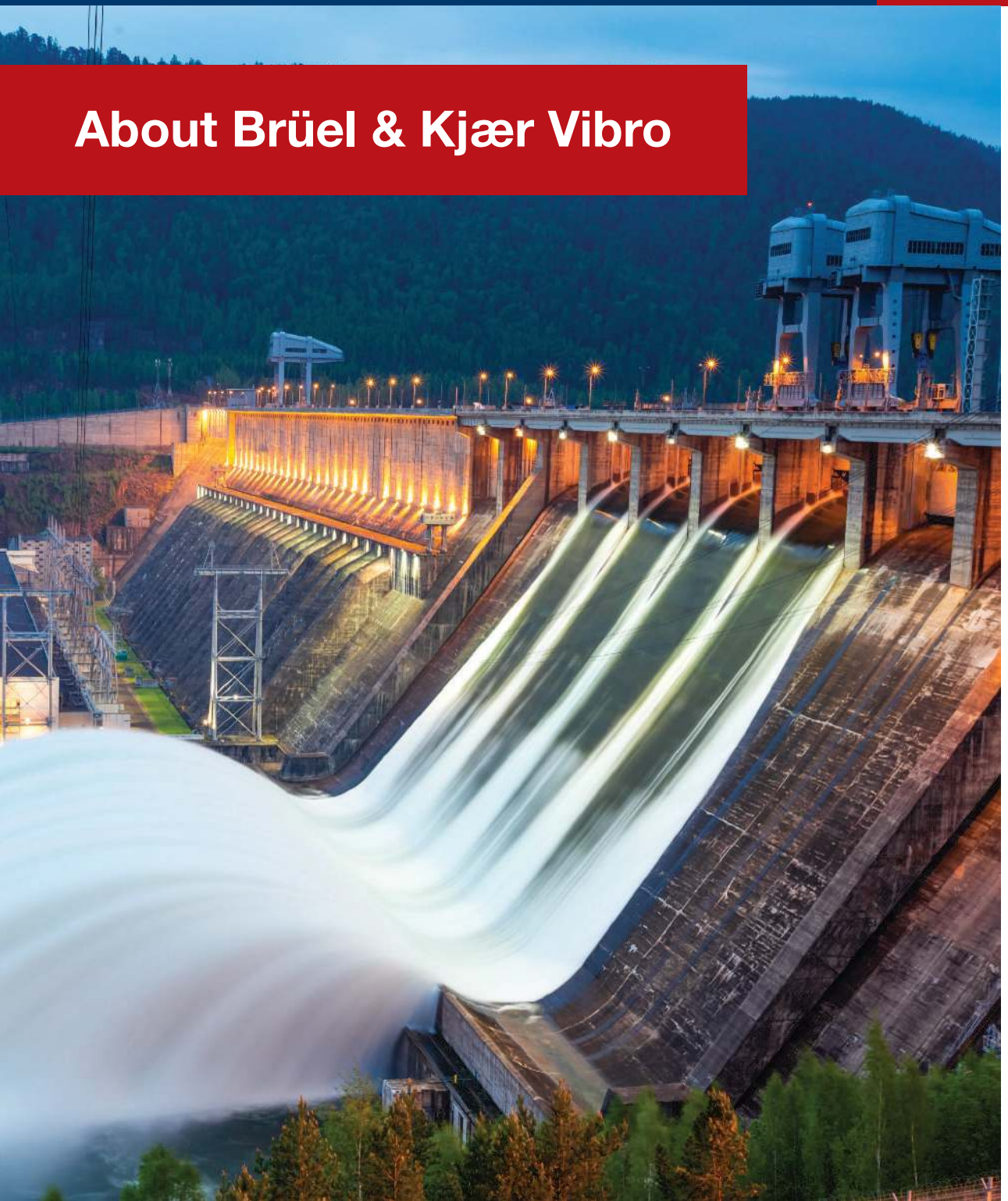
A member of the NSK Group



VC-8000 MONITORING SYSTEM & SETPOINT® CMS

Your Ultimate Machine Protection and Condition Monitoring Solution

About Brüel & Kjær Vibro



Brüel & Kjær Vibro (B&K Vibro) has a proud history of protecting and monitoring the world's most important machinery, dating back to the late 19th century.

The trademarked name we know today was formed in 2000, rapidly becoming the preferred choice for customers that need to ensure optimal healthcare of both critical and auxiliary rotating machinery. From complex waste heat recovery and combined cycle gas turbine power plants, hydro-electric power plants, and wind turbines to simple pumps, fans and gearboxes, we keep our customers' world spinning.

Today, our customers rely on the insights provided by the combination of our high-quality sensors, smart "edge" devices, easy-to-use software and connected services to keep their rotating equipment running reliably and efficiently. With a focus on continued innovation, B&K Vibro offer world class, end-to-end, smart, integrated solutions giving our customers the productivity they deserve.

Versatile, robust machine protection

VC-8000 is the flagship solution for critical machinery protection from Brüel & Kjær Vibro. It provides standard solutions for continuous machinery monitoring, which can be configured to meet your needs. We have pre-built applications for every machinery asset type – including steam, gas and hydro turbines, reciprocating and rotating compressors, and many more.

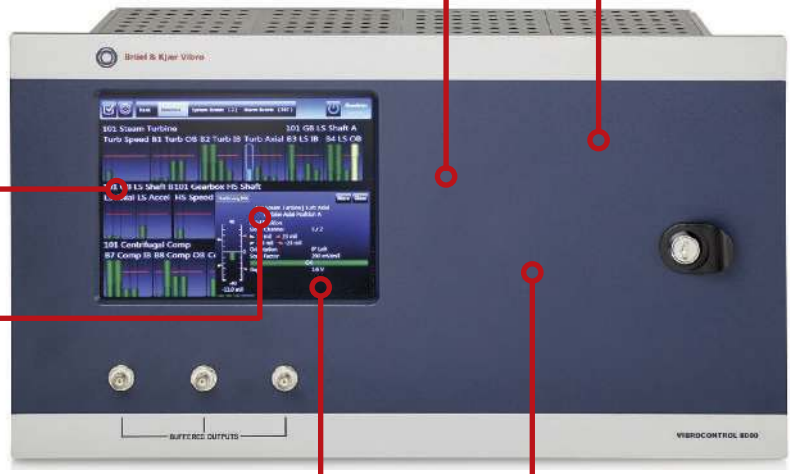
- ✓ Easy to configure out of the box, with built-in applications for many machine types. No need to add or exchange modules
- ✓ Monitor multiple machine states to lower the risk of false alarms
- ✓ Easy upgrade to condition monitoring with SETPOINT® CMS software
- ✓ Interface with other plant-wide databases and historians, such as AVEVA™ PI System™
- ✓ 56 channels in just 19” of rack space
- ✓ Fully API 670, ISO 20816, SIL2, ATEX, & IEC Ex compliant
- ✓ Flight Recorder mode that independently captures up to 1-year of data
- ✓ Fully secure remote access without the need to visit the site
- ✓ If you already have another protection system, that’s OK. Simply connect the buffered outputs of that system to VC-8000 and SETPOINT® CMS software.

Benefits of the VC-8000 and SETPOINT® CMS Solution

Reduced Risk & Improved Reliability
Ensure safe operation of your assets

Flight recorder
Internal memory stores all the data (including waveforms), with or without server connection

Extended Asset Health
Evaluates and records the ongoing health of assets



Corroboration & Problem Solving
Share asset operations and diagnostic data on your AVEVA™ PI System™

Simplify IT
Easy upgrade to condition monitoring and cyber secure connectivity to AVEVA™ PI System™

Lower Total Cost of Ownership
Easy installation, upgrade to CMS & available SETPOINT® Software without subscription

Getting Value from Your Data

A machinery protection system is designed to avoid catastrophic failures but does not protect against losses in uptime or productivity during an unplanned shutdown. Did you know that your vibration data contains much more value than just machinery protection?

By simply adding SETPOINT® CMS software together with native connectivity to AVEVA™ PI System™, you can turn your machinery protection system into a comprehensive machine condition monitoring platform with advanced diagnostics. This will help you achieve optimal asset reliability with minimal investment.



SETPOINT® CMS for post-processing diagnostics:

- ✓ Users can view and analyze time waveform data in a multitude of industrial tools and plots
- ✓ Used by vibration analysis experts and reliability engineers who want to detect and diagnose issues with their rotating machinery and require a long lead-time for planning maintenance
- ✓ VC-8000 internal memory can be used as a flight recorder for diagnostics and root cause analysis, with or without server connection
- ✓ Used by operators who need a simple, quick overview on the status of machines, such as offered by AVEVA™ PI Vision dashboards
- ✓ Any user can download and install SETPOINT® CMS on their computer – without paying a license or registration fee
- ✓ Vibration data is saved in a .CMS file format, which can be shared with anyone via email, file transfer, or USB drive. This is a unique feature in our industry

AVEVA™ PI System™ for condition monitoring:

- ✓ VC-8000 acts as an AVEVA™ PI System™ gateway and accepts raw vibration signals directly from sensors and other existing protection systems with buffered outputs
- ✓ Users can compare and correlate plant process and vibration data at no additional cost
- ✓ Insights into machine health that otherwise would be difficult or impossible without much more investment
- ✓ No proprietary condition monitoring server is needed
- ✓ AVEVA™ PI Server Data Archive offers possibility to build Big Data for analytics
- ✓ All AVEVA™ PI System™ condition monitoring and analytic functionality is assessable

POWERED BY AVEVA

Plant-Wide Integrated Platform

VC-8000 can be fully integrated with the VCM-3 field monitor, so data from both systems can be fed directly into SETPOINT® CMS and AVEVA™ PI System™ for a plant-wide, integrated monitoring solution. This will protect the critical machines and provide plant-wide condition monitoring of all critical and balance-of-plant assets while using a common user interface for both systems. As a plant-wide solution, this makes life easier.

Our extensive experience and range of products have helped many customers save millions of dollars while providing machine insights and analysis capability that was previously impossible.

With a huge installed base covering several decades, we have optimized our monitoring solution for detecting and diagnosing potential failure modes for many types of machines in processes within many industries worldwide. We have reduced the life-cycle costs and increased machine uptime, productivity, and efficiency of countless assets. We have many long-term customers to show for it, and you can be part of this group.



Contact us to find out more



BRÜEL & KJÆR VIBRO: Pioneers in Machine Monitoring Solutions

Brüel & Kjær Vibro is the leading worldwide independent supplier of condition monitoring solutions for rotating machinery. The comprehensive product range comprises vibration sensors (acceleration, velocity, and displacement), field monitors, handhelds, and rack-based plantwide integrated monitoring solutions. These products, plus a suite of comprehensive services, fulfil the most demanding applications for safety, condition, and performance monitoring of rotating machinery.

Case Studies



Early fault detection of unique pump bearing faults at a major US refinery

The legacy online system couldn't always detect developing bearing faults on the solvent booster pumps, which often led to seal leaks and several times even resulted in catastrophic fires. The legacy handheld device could accurately detect these faults at an early stage of development, but was ineffective for faults that resulted in a failure within 6 hours. The SETPOINT® CMS replaced both systems by detecting bearing faults early – and continuously. It also provided vibration-temperature voting-logic protection, which ensured reliable protection without false trips for super-fast developing faults. The newly installed system provided an ROI of less than one year.

Online condition monitoring for fast decision making & identifying critical asset health

Portland General Electric (PGE), in the USA, who operate wind towers, coal plants, and hydro projects, wanted to centralize their monitoring efforts. A system integrator was tasked with updating the system and consolidating data sources into one easily accessible database. The existing setup offered no remote access and the collected data resided in a closed, proprietary database. A total of 8 standalone machine protection systems from legacy setups were replaced with VC-8000 hardware, additional sensors were added and SETPOINT® CMS software was installed. All data could now be fed into a AVEVA™ PI System™ database and synched with process data. PGE built asset health dashboards and shared them with plant management. All data analysis could now be completed without visiting site, and diagnostics that had previously taken fifteen hours or more could now be completed in under sixty minutes.

Protection and monitoring of generating units at major power station

Huntly Power Station, the largest in New Zealand - a 250MW gas/coal fired steam turbine, generator and main boiler feed pump. The generating units are mounted on steel frame foundations as a means of providing earthquake protection. The VC-8000 and SETPOINT® CMS helps provide adaptive speed control to eliminate vibration resonances close to the operating speed, which is due to the flexible foundation. Thanks to full AVEVA™ PI System™ database integration more advanced data analysis can be carried out for continuous identification of machinery problems and to proactively notify plant personnel.

Want to learn more about VC-8000 & SETPOINT® CMS

Follow the link of the QR code to access our website with videos on how to use VC-8000 & SETPOINT® CMS Software

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