

### Offsite Monitoring, Onsite Results

Most plants today recognize the value of online condition monitoring for critical and essential equipment assets. In fact, a majority already have condition monitoring systems in place. However, in study after study, what distinguishes the truly effective facilities from the rest is their ability to devote the necessary resources to actually use their CM systems on an ongoing basis. Without the right people, and without the time to regularly and proactively assess and apply the information from your CM system, it will consistently under-deliver its full value potential. This is often referred to as the “dusty keyboard syndrome” because unused systems don’t deliver value – they simply gather dust.

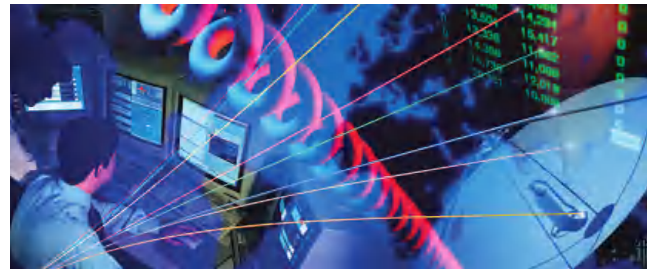
But let’s face it – devoting the right people, with adequate time and experience, can be downright difficult. Plant personnel today are spread more thinly than ever, yet competitive pressures have made maximum machinery reliability and availability an imperative. You can’t afford to ignore your machines or the processes they run.

The answer? Put the world’s most experienced team of machinery diagnostics engineers to work for you remotely with our Bently Nevada Remote Monitoring & Diagnostic (RM&D) Services. The Bently Nevada name is world-renowned as synonymous with the highest-quality machinery diagnostic engineers and condition monitoring systems. Now, the technology exists to harness this expertise remotely – gleaming the value of an onsite machinery engineer without the associated costs. The result is the comprehensive diagnostic coverage you need for your plant’s assets.



### The RM&D Concept

The concept behind RM&D is simple: our Bently Nevada machinery diagnostic engineers regularly access your compatible\*\* condition monitoring system(s) remotely, providing continuous and/or periodic review of your condition monitoring data as well as on-demand review when needed. We analyze the data and provide the results via easy-to-understand reports and recommendations that your plant can act on.



### Value

- **Affordable**  
RM&D is ideal for plants that cannot justify an on-staff machinery diagnostics engineer, or where a small staff must support numerous facilities.
- **Responsive**  
Our engineers can respond within minutes to machinery events requiring attention.
- **Comprehensive Scope**  
Bently Nevada machinery diagnostic engineers have decades of experience with expertise for virtually every machine type and every industry.
- **Root Cause Diagnostics**  
Our analyses go deeper than treating symptoms and get you to root cause – preventing recurring machinery problems and associated costs.

\*\* RM&D Services are currently available only for facilities with System 1\* or Bently Nevada Data Manager\* 2000 condition monitoring software installed.

## The RM&D Package

Depending on the level of communications technology available at (and permitted by) your plant, our RM&D Services can range from simple monthly or quarterly audits of your machinery health using a dial-up modem, all the way to 24/7/365 surveillance via the world wide web with a guaranteed response time to machinery events within minutes. Individually tailored to your specific requirements, budget, and available IT infrastructure, each RM&D package consists of the following five elements:

### 1 Recurring Data Review

At regular, recurring intervals, a machinery diagnostics engineer will connect to your system and review all relevant data. Findings are summarized into reports and transmitted to you in the format(s) and communications medium(s) you specify. The frequency of these audits can range from simple, once-per-quarter data review all the way to continuous 24/7/365 data review. While monthly or quarterly audits require little more than a conventional telephone modem for access, more frequent data review requires a high-speed connection – often via the internet and secure access technology sanctioned by your IT department, such as Virtual Private Network (VPN) capabilities. In addition to high-speed network access to the condition monitoring system, packages with a continuous or quasi-continuous level of data review must also have the appropriate Decision Support\* modules of Data Manager 2000 or System 1 software installed.



### 2 On-Demand Data Review

In addition to recurring data review, an RM&D package entitles you to live consultation with a machinery diagnostics engineer any time you need assistance collecting or analyzing data. Upon request, we will connect to your system and respond within a guaranteed time – often 30 minutes or less – with an assessment of the situation, its severity, and recommended actions to take. Examples for which a plant may require on-demand data review include:

- A machine unexpectedly trips due to a process upset; you rapidly need to answer the questions “Did mechanical damage occur to the machine?” and “Can it be restarted safely?”
- Following a planned outage, you need a machinery diagnostics engineer to remotely collect and review startup data, avoiding the onsite standby charges waiting for the machine to come up. As the machine ramps up, you need real-time advice on whether it is running within expected levels and can be brought to full speed and load.
- You need to balance a machine, but have no onsite expertise. You request the assistance of a machinery diagnostics engineer to connect to the system, make appropriate recommendations for balance shots, and monitor the effect of weight added or removed by onsite personnel.
- A vibration alarm occurs between regularly scheduled audit intervals. You request the assistance of a machinery diagnostics engineer to assess the severity and cause of the alarm, and provide recommended actions for the plant.
- Market or other conditions make it desirable to run the machine at more aggressive – or even off-design – operating conditions. You request the assistance of a machinery diagnostics engineer to advise whether the machine can run (or continue to run) under such conditions.

### 3 System Optimization

An often overlooked, but extremely important aspect in getting maximum value out of a condition monitoring system is the importance of “tuning” the system to your unique plant conditions. By continually refining alarm and other system configuration settings, the software is better able to assist its users in identifying asset abnormalities and inefficiencies. However, this level of system “personalization” requires someone who is regularly interacting with the software and the data it is collecting. Because our diagnostic engineers are regularly using your system as part of your RM&D services, they are also regularly optimizing the system for maximum performance.

### 4 System Support

The integrity of the underlying data is absolutely essential for effective remote diagnostics. All RM&D packages include provisions for both onsite and remote technical support to ensure the condition monitoring system is working within published specifications, software is updated regularly, and computer hardware is upgraded as required.

### 5 Site Support

There are a variety of occasions for which onsite machinery diagnostic engineering support may be warranted to augment the remote support in your RM&D package. Visual inspection during an outage, acceptance testing following major maintenance, and physical review of proposed machine modifications are just a few examples. Provisions for this onsite machinery diagnostics support can be included in all RM&D packages.



## Integrity

Since 1972, the Bently Nevada machinery diagnostics team has been delivering unbiased, accurate, and high-quality information that helps customers identify and resolve machinery problems. With a well-known reputation for “telling it like it is,” you can expect straight answers regardless of whether machine problems are the result of OEM design deficiencies, your own operating practices, off-design process conditions, normal wear & tear, or other factors.

## A Breed Apart

With over 30 years of experience and thousands of machinery diagnostic jobs to their credit, our Bently Nevada machinery diagnostic engineers are subject matter experts with the hands-on, practical experience you can trust. With a network of nearly 80 highly trained, highly experienced engineers providing these services around the globe, they can easily network with one another to bring their combined machinery knowledge to bear on your particular asset problems. While other providers may have diagnostic expertise on one particular manufacturer’s machinery or machine type(s), they often have little or no expertise outside of that niche. Our RM&D offerings are unique because our expertise spans every machine type – regardless of who manufactured it. While GE is in our name, our expertise, our scope, and our experience encompass all the assets in your plant.

GE Energy



Contact GE Energy today to learn more about our Bently Nevada Remote Monitoring & Diagnostic Services and for a proposal tailored to your specific needs.

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