



A major part of any Total Asset Management Program is the ability to predict and manage the condition of an organisations critical plant and equipment.

Most forward thinking companies today are moving away from the traditional reactive or scheduled maintenance programmes both of which can typically result in unplanned downtime and high repair costs. Truly predictive maintenance or live condition-based monitoring is the only way to realistically reduce the significant costs of unplanned downtime and to deliver the best protection for an organisations capital assets.

Key Features

MachineGuard is a live, flexible and cost-effective, condition based monitoring system, which has been specifically designed for use on critical plant machinery and equipment. It is a physical "hardware" product that has been developed by DMS to continuously monitor equipment for changes in state such as vibration, temperature, oil condition, motor current and various other conditions via a 4-20mA signal.

DMS supply, install and commission the MachineGuard system on a client's site either as a stand-alone remote monitor, alarm sensor and data-logger, or as part of a larger network using wired or wireless communication to bring condition monitoring information to the desktop.

The display system is a user-friendly interface which allows the acquired data to be viewed remotely on a PC in real time, in a visual format which is immediately identifiable with the plant and parameters being monitored.



Historically the implementation costs for a predictive maintenance programme have been prohibitive but with MachineGuard from DMS this has all changed.

During commissioning DMS set up the MachineGuard system with the required warnings and alarms which can inform the client of the condition in question by SMS text message, e-mail, fax or by a flashing light or klaxon fitted locally to the equipment.

Other features include:

- **RS232 & RS485 serial communications as standard.**
- **Automatic housekeeping including routine capture of logged data and event logging of significant events.**
- **Trends display of all parameters relevant to each separate area of machinery, and on screen analysis**



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Each MachineGuard module has been developed with four input modules configured to monitor all of, or a combination of the following:

- **Vibration – via standard accelerometers**
- **Oil condition & temperature – via a LubriGuard sensor**
- **Temperature, via a RTD**
- **Motor current, via a Pt100 or thermocouple**
- **Any 4-20mA output signal**



Each MachineGuard system can be supplied and installed as a simple stand alone unit, alternatively, it can be supplied as part of a integrated system, which can comprise of one of the following communication methods:

- **500m, 1km or 4km (nominal range) radio modems for wireless use and 10km-20km line of sight longer range modems. Longer ranges than these specified are available on request**
- **Wireless networks of up to 255 clusters of 255 instruments may be installed**
- **MachineGuard devices can be distributed across networks and the internet. IP addressable, traditional LANS and wireless LANS can be directly accessed through the internet**
- **GSM / GPRS & satellite addressable devices are currently under development**

DMS offer a managed service to accompany the physical product – a service which can include the monitoring of devices on site on a regular basis, a weekly / monthly performance report identifying changes in the performance, a full condition based monitoring service with root cause analysis reports and so on.

Benefits

Some of the key benefits offered by the MachineGuard system are:

- **Insurance against unplanned downtime**
- **Reduction in lost production**
- **Fewer instances of secondary machine damage**
- **Reduced labour costs**
- **Reduced repair costs**
- **Increased profitability**

“The specialist team from DMS really understood what we needed and have worked closely with us to provide a solution that is delivering real benefits.”
Mark Logan - Mechanical Engineer, Knauf Drywall.

About DMS

DMS was established in 2004 as a specialist engineering consultancy that offers a unique range of innovative products and services designed specifically to help clients realise the benefits of true “Total Asset Management”.

We operate throughout the UK, delivering solutions to clients from a broad range of industry sectors from manufacturing to water treatment, from building supplies to glass production. We work in partnership with our clients to deliver tailored solutions that meet the individual needs of the business, supporting them in achieving the common goals of improved performance and reduced cost.

The concept of Total Asset Management is not new – delivering it is! DMS can help to turn the vision into reality.

For more information contact Allan Findlow, Sales Director.



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Other products and services from DMS



An asset management solution to help organisations manage their critical plant drive assets



An oil condition sensor that provides real-time lubrication analysis and monitoring.



A managed service to pro-actively monitor rotating plant and equipment using conventional condition based monitoring methods such as ultrasound, vibration, thermography and oil sampling.