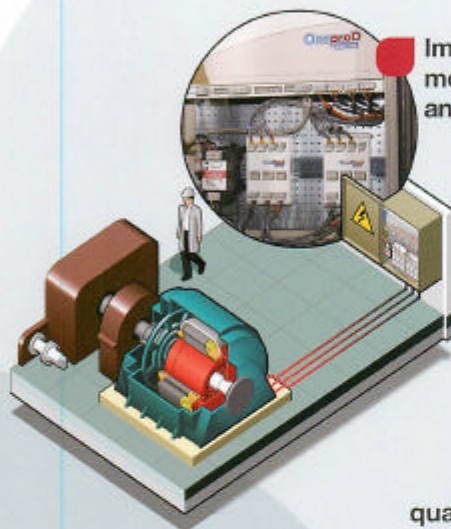


Solutions for Electrical Diagnosis

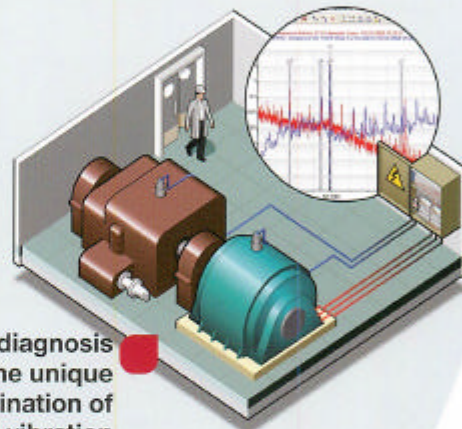
OneProd

ESA

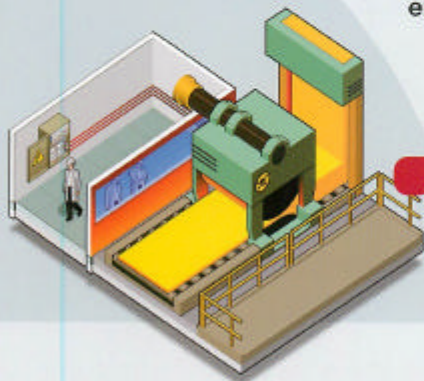
Electrical Analysis meets Vibration Analysis for the best of your diagnosis



Improve motor reliability by
monitoring their mechanical
and electrical failures



Improve diagnosis
quality with the unique
combination of
electrical and vibration
analyses



Extend your capabilities by
monitoring inaccessible
machines through their
electrical system

And also...

*Become quickly operational thanks
to easy set-up and automatic
diagnosis*

*Catch very low frequency
phenomena by using the unique
capabilities of ESA in this domain*

OneProd System integrates electrical diagnosis or Electrical Signature Analysis (ESA) to its wide range of **condition monitoring systems**. ESA is a diagnosis and analysis module designed to evaluate the mechanical and electrical behaviours of asynchronous motors. This technology enables you to **monitor operating electrical equipment and detect mechanical and electrical problems** in the motor, power supply, and driven machine.

ESA allows clearly detecting motor problems, such as rotor bar deterioration, static and dynamic rotor eccentricity, stator current imbalance, and monitoring the power factor. ESA also identifies **power supply problems** by monitoring the input power, voltage imbalance and harmonics. Overall, ESA captures **mechanical deteriorations** from the motor up to the driven machine on bearings, couplings, belts, pumps, fans, gears...
With ESA, the motor monitoring job is complete.

Systems for condition monitoring,
vibration analyses, balancing and
vibration sensors

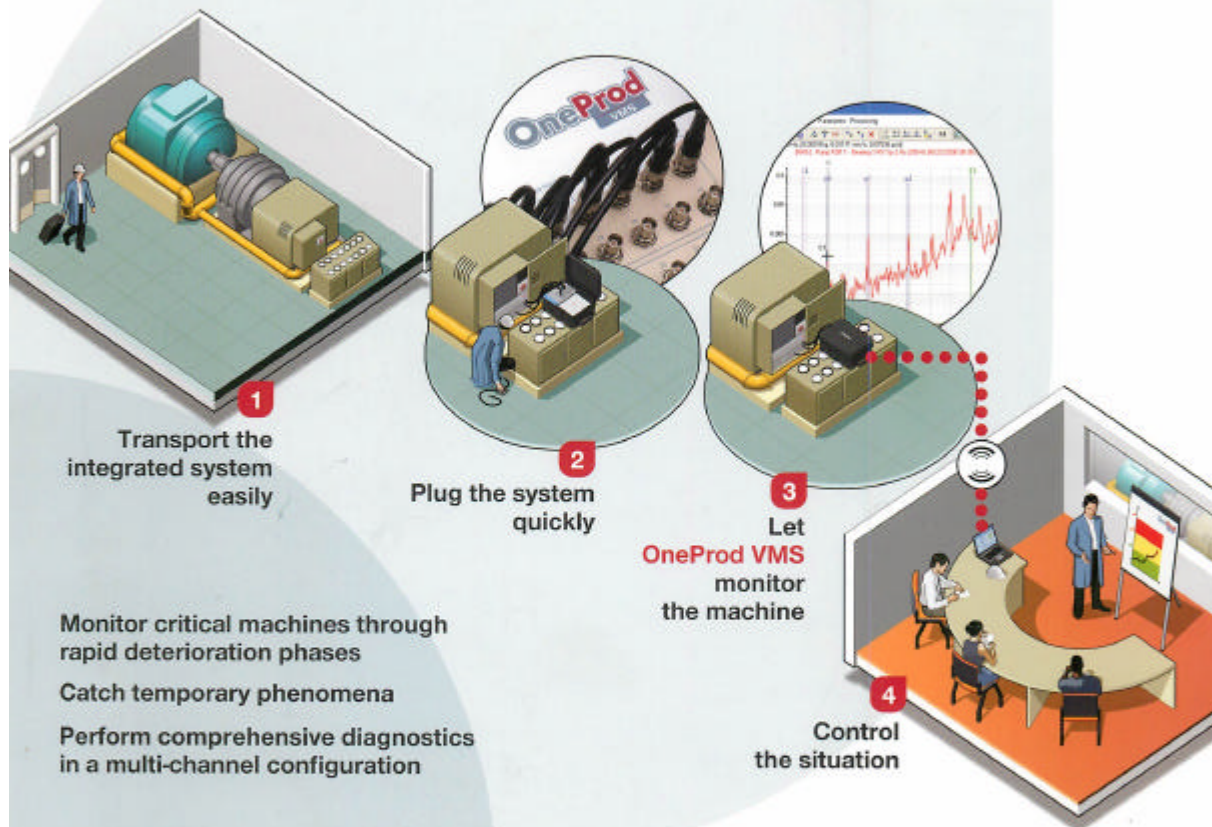
VIBRO CONTROLS

Portable Online Monitoring System

OneProd

VMS

Catch the problem
where and when it happens



And also...

Use online monitoring with a quick and flexible installation

Integrate the online data to existing offline data through OneProd System

Benefit from a powerful online monitoring system that is always on the go

To develop autonomy in the predictive maintenance of rotating machines, OneProd VMS is a Versatile Monitoring Station putting online condition monitoring on a portable mode. The OneProd VMS system packages ready-to-use vibration analysis tools **to temporarily monitor a machine at risk, catch a momentary phenomenon, or perform a comprehensive diagnostic.**

The suitcase shelters a fully wired OneProd MVX monitoring system, and can operate in many configurations: stand-alone or in network, operated or left alone by the machine, open or closed. OneProd VMS is a truly versatile equipment available in many packages and options to best match your needs.

OneProd VMS gives you independence of action with the power of OneProd system.

Systems for condition monitoring,
vibration analyses, balancing and
vibration sensors

VIBRO CONTROLS

OneProd wind system

>> a simple solution
to a complex problem



The MVX Unit

Specific features for relevant
measurements

- **'Apple to apple' comparison:**
Synchronous acquisition of all measurement channels matched with wind turbine operating conditions.
- **Relevant diagnosis of complex and non-stationary machines:**
Proven data acquisition procedures and algorithms for low and variable speed machines.
- **Local optimum surveillance without false alarm:**
Onboard calculation of parameters specific to wind turbine monitoring provided by special analysis algorithm.
- **Quick installation:**
Pre-wired connections.
- **No data loss:**
Internal Flash.
- **Remote data sharing and remote configuration:**
Ethernet & RS485 communication. Simultaneous dialogue with the control/command of the wind turbine and the remote monitoring body.
- **Robust and reliable**
No rotating parts, IP65 enclosure and 50000-hours MTBF.



XPR software

Your reliability dashboard

- **Productive:**
Automatic Defect Detection Grid (DDG) for a quick visual display of the wind turbine status.
- **Simple to use:**
All monitoring parameters and data are available on a single screen.
- **Robust and reliable:**
Oracle database.
- **Alarm management:**
For an early detection of defects with SMS or e-mail alarms.
- **Powerful analysis tools:**
For quick and reliable diagnosis.
- **Automatic reports:**
Customised and remotely available at any time.
- **Communicating:**
Web architecture with OPC & CMMS interface. Dialogue with the operator information system.
- **Multiple techniques:**
 - *Vibration analysis.*
 - *Electric diagnosis.*
 - *Continuous oil analysis.*
 - *Thermography.*



OneProd-VMS Versatile Monitoring Station

With its 'all-in-one' design, the VMS case is designed to monitoring and troubleshooting of wind turbine problems. An integrated fully autonomous MVX module with extensive communication capabilities guarantees un-compromised performance with particular attention given to quick and simple installation and use. Monitoring a wind turbine has never been so simple and affordable.