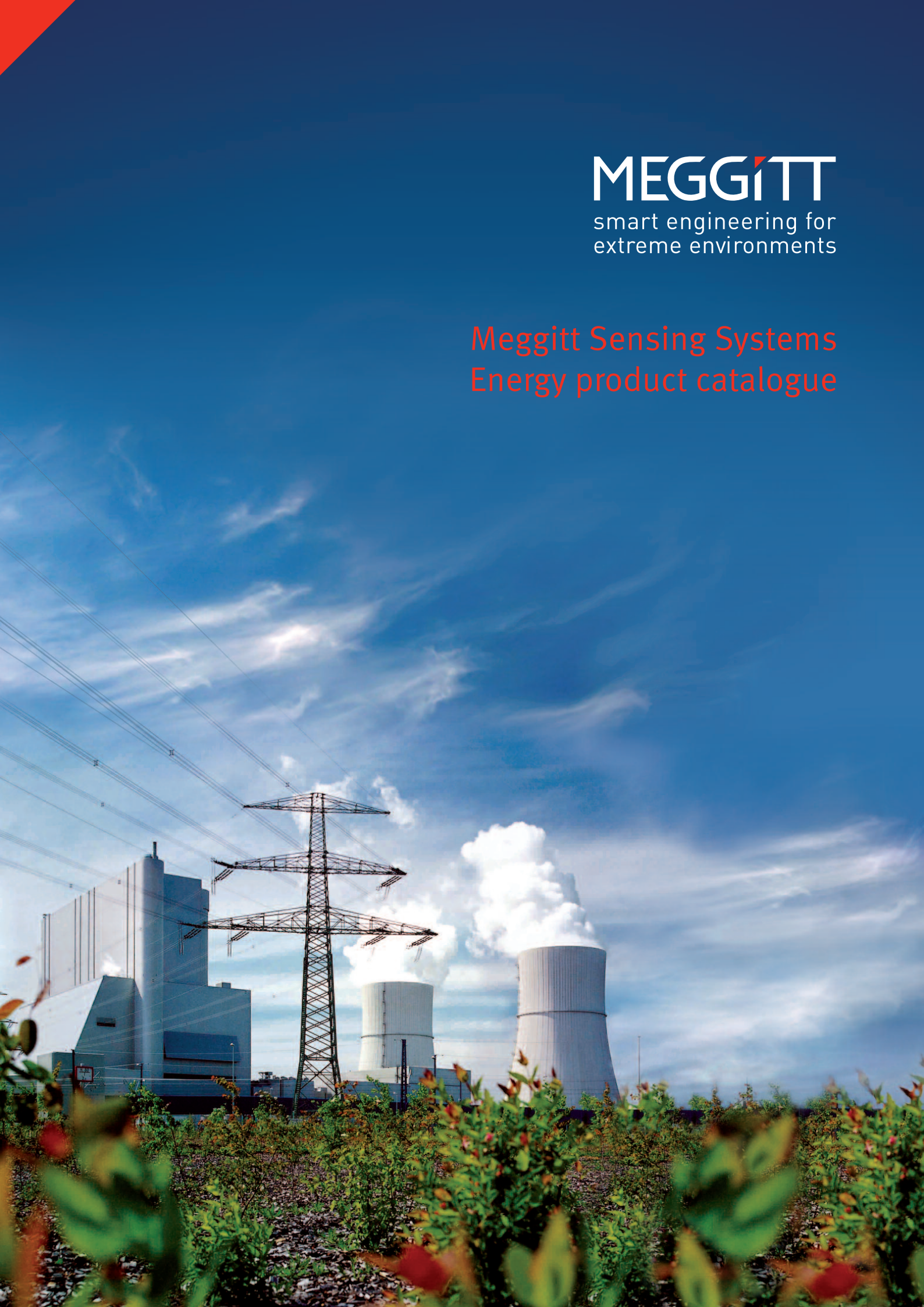
MEGGiTT

smart engineering for
extreme environments

Meggitt Sensing Systems
Energy product catalogue



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Meggitt Sensing Systems

The world's leading provider of high performance sensing and condition monitoring solutions for extreme environments

Meggitt Sensing Systems, a Meggitt group division, has operated through its antecedents since 1927 under the names of Endevco, Wilcoxon Research, Sensorex, ECET, Vibro-Meter, Lodge Ignition and Ferroperm Piezoceramics. Today their operations are integrated under one strategic business unit called Meggitt Sensing Systems to provide complete systems with these renowned product brands from a single supply base.

We are leaders in the aerospace, power generation, nuclear, oil and gas, industrial, laboratory measurement, automotive and medical markets: in fact anywhere where sensing and condition monitoring are deployed in difficult environments. Meggitt Sensing Systems employs a wide array of technologies, including piezoelectric, piezoresistive, capacitive, resistive, inductive, magnetic, microwave and optical, to address our customers' key challenges in high temperature, high shock, limited space and weight, biocompatibility and communications.

With our nine development and manufacturing sites located in Switzerland, France, the UK, Denmark, Germany and the USA, we have unmatched capabilities to deliver more critical sensing solutions. An extensive sales and support network extends across Europe, Asia and the Americas, to serve our customers worldwide.

Monitoring and sensing solutions for high value machinery
Our facilities in Fribourg, Switzerland, in Rugby and Basingstoke, UK, in Angoulême, France and in Londonderry, New Hampshire, were all formerly known as Vibro-Meter. These facilities specialise in ignition, sensing and condition monitoring equipment for gas and steam turbines, hydro turbines and auxiliary machines. Our facility in Basingstoke supplies integrated sensor packages and sensors for aerospace.

Industrial sensing and simplified condition-based maintenance
Our facility in Germantown, Maryland, formerly known as Wilcoxon Research, specialises in highly reliable industrial vibration sensors for condition monitoring and predictive maintenance applications. The facility produces a wide range of vibration sensors for industrial, energy, process control, military and test and measurement applications.

Displacement sensors and inertial systems
Our facility in Archamps, France, formerly known as Sensorex, specialises in linear and rotary displacements, inertial sensors and systems, hybrids and (micro) electronics for aerospace and industrial markets.

Sensing for challenging measurement applications
Our facility in San Juan Capistrano, California, formerly known as Endevco, specialises in mission-critical measurements in the aerospace, defence, automotive, industrial and medical sectors.

Piezoceramic components production
Our facility in Kvistgaard, Denmark, formerly known as Ferroperm Piezoceramics, specialises in manufacturing advanced piezoelectric ceramic components and integrated piezoelectric thick film devices.

Machinery monitoring systems

Why monitor your machinery?

Monitoring is fundamental to plant asset management. If you are an operator of critical machinery then understanding its condition brings you the following benefits.

Safety
Avoids catastrophic failures, protecting your personnel and your investment.

Return on assets

- Reduce unplanned outages and costly breakdowns
- Higher availability
- Maintenance planning is optimised
- Improved machine efficiency
- Lower spare parts inventory
- Better decision making

Emissions and environment
Performance and emissions monitoring can reduce fuel consumption as well as CO_2 and NO_X emissions, in order to comply with environmental regulations.

VM600 online advanced monitoring system

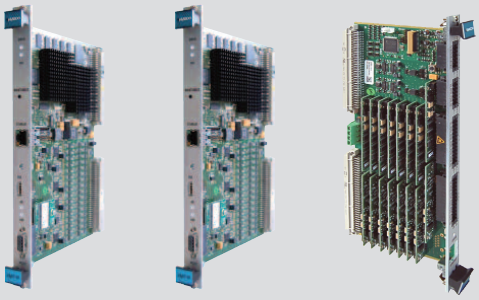
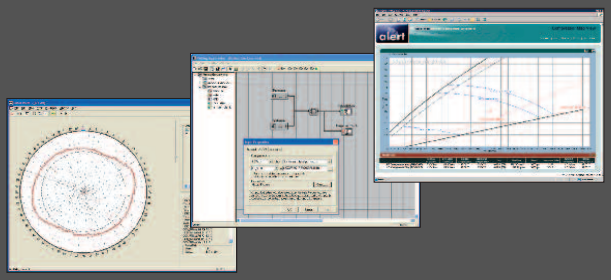
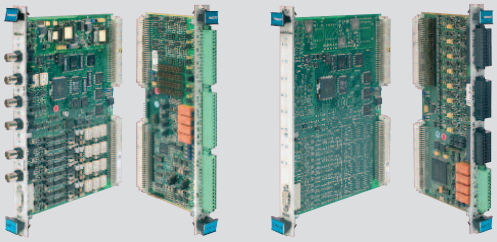
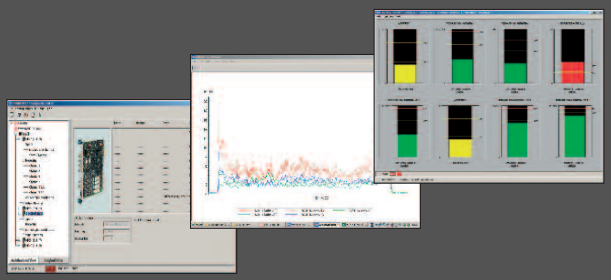
The VM600 systems from Meggitt's Vibro-Meter® product line provide protection, condition and performance monitoring for high value rotating machinery such as gas and steam turbines, hydro generators, large pumps, compressors and fans.

This powerful system for machinery monitoring has received SIL1 certification from TÜV Nord. It meets the highest industry standards for reliability and safety (IEC 61508 and EN ISO 13849-1). The VM600 has been certified to operate reliably as a safety related system for the broadest range of safety functions: helping to prevent injury to people and damage to machinery while safeguarding the environment.

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.

VM600 system architecture

VM600

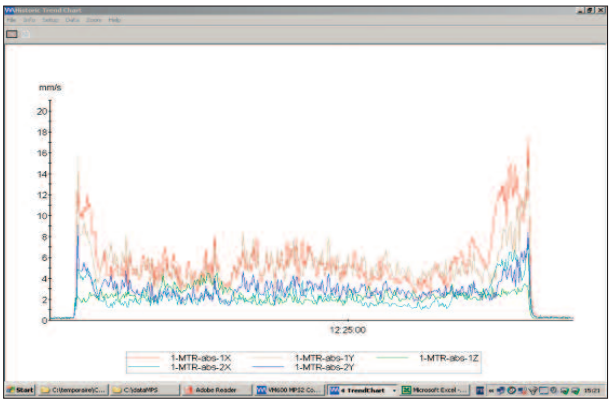
	HARDWARE	SOFTWARE
CONDITION MONITORING	 XMC16, XMV16 and XIO16T	 Monitoring and performance software
MACHINERY PROTECTION	 MPC4 and IOC4T AMC8 and IOC8T	 Protection software

Software

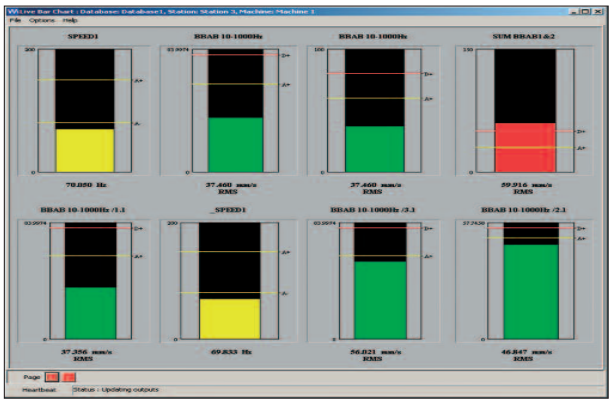
Meggitt's **machinery protection** and **condition monitoring** software are dedicated to the support of technicians, operators and engineers, enabling them to identify a problem rapidly, evaluate the situation and determine the appropriate action to take.

Protection software

The machinery protection software has an easy-to-use graphical user interface for the protection of critical rotating machinery. It allows stand-alone hardware configuration and data display through a serial connection to the VM600. It provides on-line protection of vibration, speed, displacement, temperature, dynamic pressure in GT combustors and many other machine parameters.



Trend chart



Real-time bar graph

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.

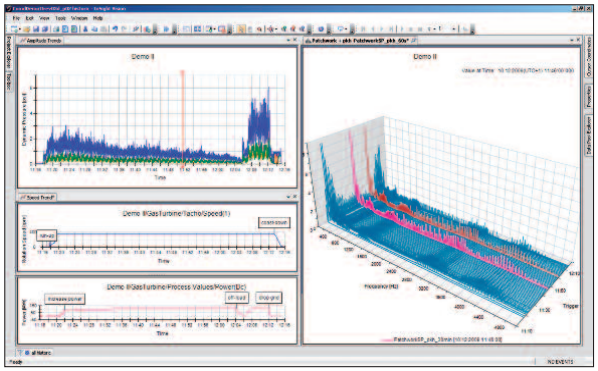
Condition monitoring and performance software

Together with the highly reliable VM600 system and a wide range of sensor products, Meggitt offers a software platform that allows monitoring and analysis of machinery state. All condition and performance monitoring functions are truly integrated in one single software environment.

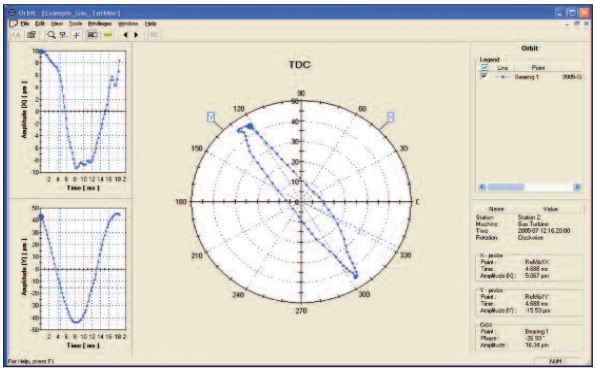
Meggitt's software is comprised of several monitoring and performance modules. It runs under Windows, uses an SQL database and can be remotely accessed through the web. Standard communication interfaces enable data transfer to and from any third-party system.

Technical highlights

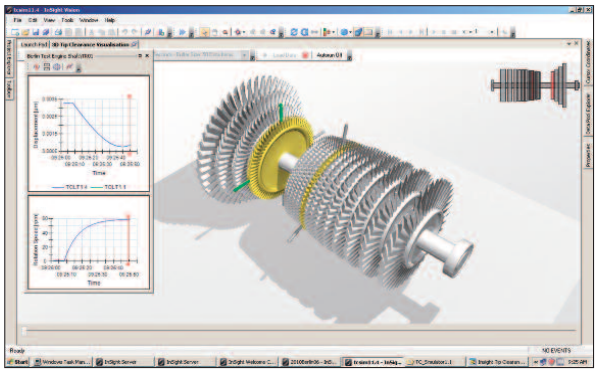
- Graphical interface, designed in collaboration with OEMs and end users
- Gigabit data communications
- Correlation of dynamic parameters and process parameters
- Data search and sorting functions
- Hardware fully configurable through software
- Highly responsive



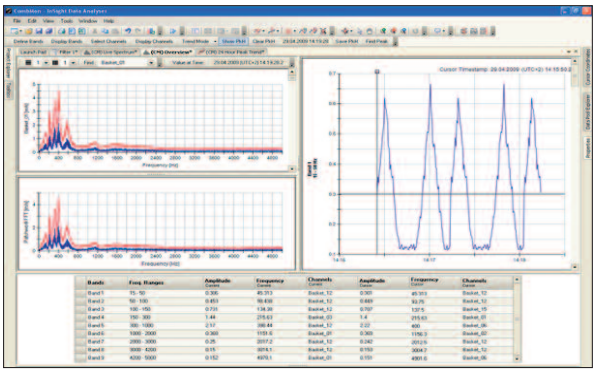
Vibration



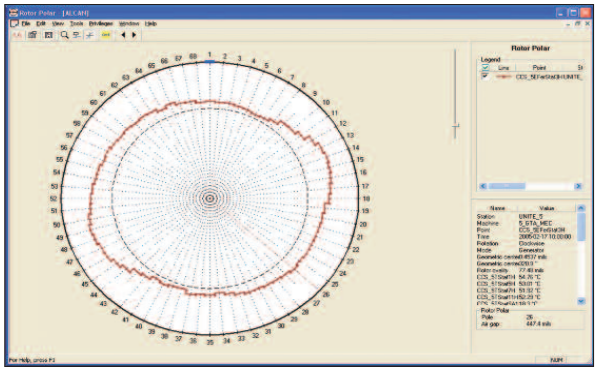
Data analyser - orbit



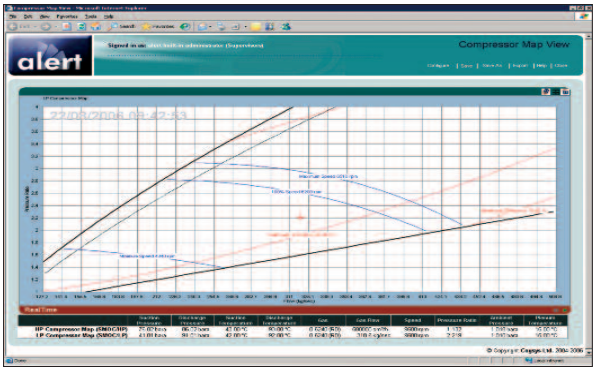
Tip clearance



Combustion dynamics



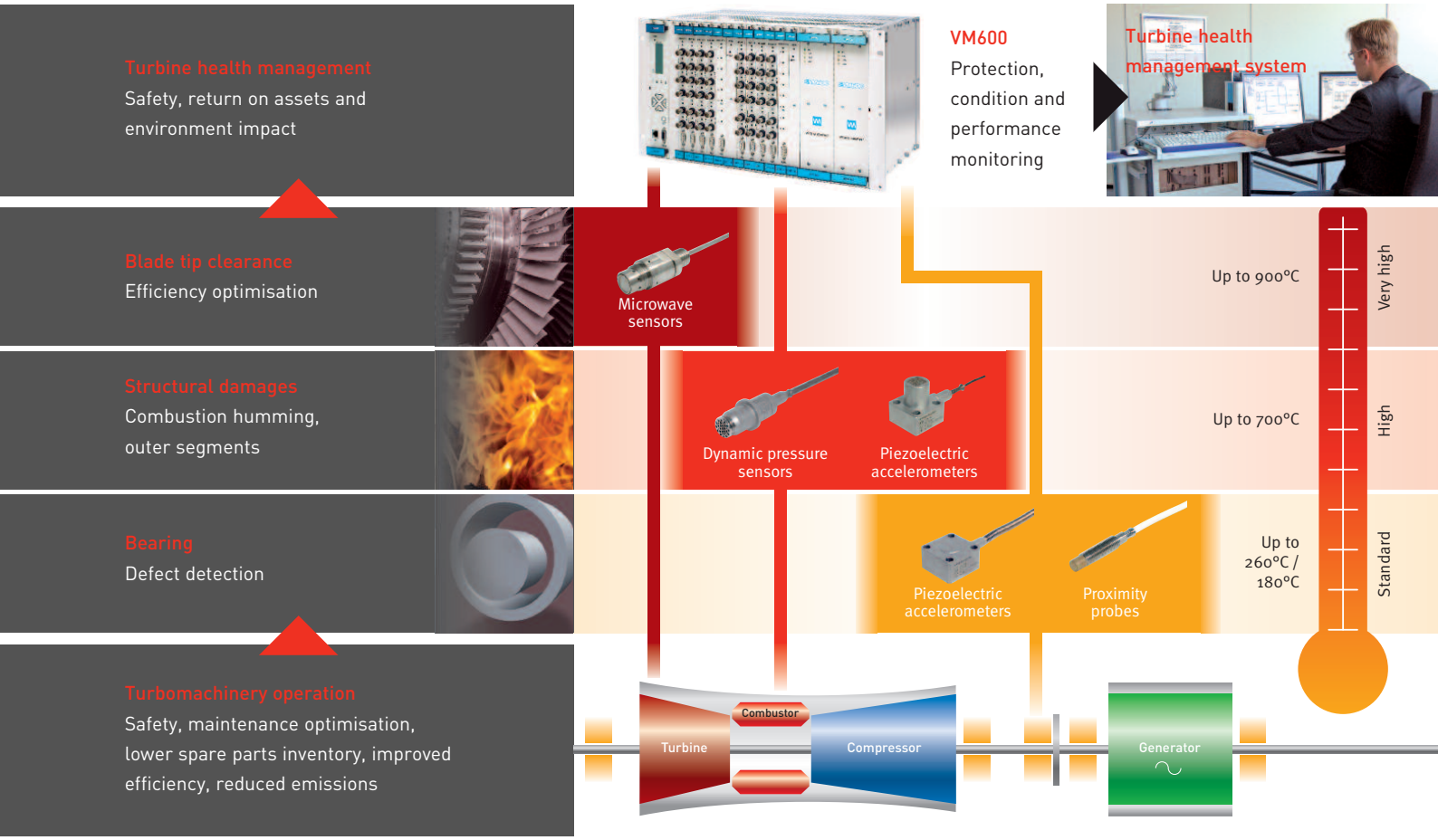
Air gap - rotor shape



Alert performance - compressor map

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.

Complete monitoring solutions



Portable vibration meter

Meggitt's PVM 100 vibration meter is highly portable and can be carried in your shirt pocket. Its one-button operation switches between acceleration, velocity and displacement – or click and hold for a digital reading. The PVM 100 is supplied in a convenient carrying case with all the necessary accessories.

Intelligent vibration transmitter series

Meggitt's Intelligent Transmitter (iT) series product line starts with a vibration transmitter to convert dynamic sensor data to a 4-20 mA signal proportional to overall vibration. This 4-20 mA signal interfaces directly with a PLC, DCS, or SCADA system for cost effective 24/7 condition based maintenance. Pair the transmitter with the programmable iT Alarm for continuous alarming capability or add the iT communication module to interface with a PC or laptop.

For more detailed product data, refer to Meggitt's Wilcoxon Research® product catalogue.

Sensors

Whether measuring acceleration, displacement or dynamic pressure, Meggitt offers the most accurate, reliable and cost-effective solutions available. Our solutions are standard with numerous OEMs and have been adopted by major plant operators worldwide.

General purpose accelerometers

Meggitt's IEPE product line offers the widest selection of hazardous area rated sensors for industrial condition monitoring. Options include top exit, side exit and integral cable sensors; dynamic vibration output or 4-20 mA overall vibration output; standard and compact size sensors; dual output of vibration and temperature data; Class I Division 1 (Zone 0) and Class I Division 2 (Zone 2) ratings, and explosion proof models. FM, CSA, ATEX, IECEx, and other certifications make these sensors available for use in hazardous areas.

Meggitt's general purpose accelerometers allow vibration measurements for monitoring most industrial machinery such as motors, fans, pumps, compressors, moderate speed gearboxes and machine tools.





Model	786A-M12	786F	787A, B	785A	780A, B, C
Description	Standard accelerometer with M12 connector	Integral cable accelerometer	Standard side exit accelerometer	Compact side exit accelerometer	Compact accelerometer
Sensitivity	100 mV/g	100 mV/g	100 mV/g	100 mV/g	100 mV/g
Frequency	0.5 to 14000 Hz	0.5 to 13000 Hz	0.7 to 10000 Hz	1 to 12000 Hz	0.4 to 14000 Hz
Temperature	to 120 °C	to 120 °C	to 120 °C	to 120 °C	to 120 °C
Product line	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research

Low frequency accelerometers

Low frequency accelerometers to monitor slow turning machinery like wind turbines and cooling towers.


Model	793L	799LF
Description	Premium low frequency accelerometer	Low frequency accelerometer
Sensitivity	500 mV/g	500 mV/g
Frequency	0.2 to 2300 Hz	0.1 to 2500 Hz
Temperature	to 120 °C	to 120 °C
Product line	Wilcoxon Research	Wilcoxon Research

High frequency accelerometers

High frequency accelerometers for monitoring machinery with high frequency gear mesh or early bearing failure.

Model	997
Description	High frequency ring type accelerometer with integral cable
Sensitivity	10 mV/g
Frequency	0.5 to 29000 Hz
Temperature	to 125 °C
Product line	Wilcoxon Research

For more detailed product data, refer to Meggitt's Wilcoxon Research® product catalogue.

High temperature accelerometers (without electronics)

Meggitt's CA series work in the most severe environments. These piezoelectric sensors have sensitivities from 10 to 100 pC/g, for the widest range of temperatures: from cryogenic (-196°C) up to extreme (700°C).

Vibration monitoring of heavy duty, industrial and aeroderivative gas turbines, steam turbines, gearboxes, compressors and marine applications.





Model	CA202	CA280	CA306	CA134	CA901
Application	Heavy duty gas and steam turbines	Gas turbines, gear-boxes and marine applications	Aero-derivative and industrial gas turbines	Cryogenic applications and gas turbines	Heavy duty gas turbines
Sensitivity	100 pC/g (400g)	100 pC/g (500g)	50 pC/g (100g)	10 pC/g (500g)	10 pC/g (500g)
Frequency	0.5 to 8000 Hz	0.5 to 10000 Hz	5 to 3000 Hz	0.5 to 6000 Hz	3 to 3700 Hz
Note	Works with IPC704 external electronics conditioners				
Temperature	-55 to 260°C	-55 to 260°C	-55 to 500°C	-196 to 500°C	-196 to 700°C
Product line	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter

High temperature accelerometers (with electronics)

Meggitt's CE and SE series include conditioners and are hence more economical and simpler to integrate. CE piezoelectric sensors measure vibration in harsh industrial conditions, with temperatures from standard (120°C) up to high (350°C).

The CE series are for monitoring of heavy duty, industrial and aeroderivative gas turbines, steam turbines, gearboxes, compressors and auxiliary machines. SE piezoresistive sensors are for slow speed rotating machines, hydro turbines and fans.



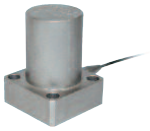
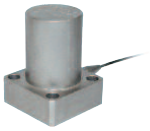


Model	CE134	CE281	CE311	CE680	SE120
Application	Heavy duty and aero-derivative gas turbines, compressors	Gearboxes, compressors, pumps and fans	Heavy duty gas and steam turbines	Auxiliary machines, balance-of-plant	Slow speed machines, hydro turbines and fans
Sensitivity	5 µA/g (400g)	10 µA/g (200g)	50 µA/g (40g)	100 mV/g (80g)	2 mA/g (4g)
Frequency	5 to 10000 Hz	3 to 10000 Hz	2 to 8000 Hz	0.5 to 9000 Hz	0.2 to 750 Hz
Temperature	-55 to 350°C	-55 to 260°C	-55 to 125°C	-55 to 120°C	0 to 75°C
Product line	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.

Nuclear certified accelerometers

Meggitt's nuclear certified accelerometers operate at a wide range of temperatures: from cryogenic (-196°C) up to extreme (780°C). They have over 25 years proven reliability in primary circuits on 50 PWR/VVER nuclear reactors in Europe and Asia.

Model	CA952	CA962	CA602	CA606
Application	Primary circuit of PWR, BWR, FBR and HTGR	Transverse sensor. In-core measurement, primary circuit of PWR, BWR, FBR and HTGR	Biaxial sensor. Primary circuit of PWR, BWR, ABWR, FBR and HTGR	Miniature biaxial. In-core measurement. Permanent measurement in primary circuit, contaminated water. Start-up and hot functional test.
Sensitivity	50 pC/g (200g)	250 pC/g (200g)	5 pC/g (500g)	2 pC/g (100g)
Frequency	2 to 2500 Hz	0.5 to 400 Hz	5 to 700 Hz	5 to 300 Hz
Note	Works with IPC629 external electronics conditioners			
Temperature	-196 to 650°C	-196 to 650°C	-196 to 650°C	-196 to 780°C
Product line	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.


Loop powered accelerometers

Meggitt's 4-20 mA Loop Powered Sensors (LPS™) allow vibration trending for basic condition based maintenance applications: output signal proportional to overall vibration, peak, RMS, peak-to-peak, or true peak-to-peak, within frequency range. Optional output of dynamic vibration data. Applications include motors, fans, pumps, gearboxes, and reciprocating compressors.





Model	PC420	PCC421	PCC423	PC425	PC427
Description	LPS, top exit connector	LPS, side exit connector	LPS, side exit, integral cable	LPS with temperature sensor and side exit connector	LPS, with temp sensor and side exit integral cable
Full scale, acceleration versions	5, 10, 20, 50 g	5, 10, 20 g	5, 10, 20 g	5, 10, 20 g	5, 10, 20 g
Frequency	10 to 1000 Hz	10 to 1000 Hz	10 to 1000 Hz	10 to 1000 Hz	10 to 1000 Hz
Temperature	to 105 °C	to 105 °C	to 105°C	to 85 °C	to 85 °C
Product line	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research	Wilcoxon Research

For a comprehensive product list and more detailed product data, refer to Meggitt's Wilcoxon Research® product catalogue.

Submersible accelerometers

Underwater accelerometers for deep water vibration measurements up to 450 meters depth.


Model	746	757
Description	Integral cable underwater accelerometer	Biaxial low profile underwater accelerometer
Sensitivity	100 mV/g	100 mV/g
Frequency	1 to 15000 Hz	1 to 4000 Hz
Temperature	to 80 °C	to 80 °C
Product line	Wilcoxon Research	Wilcoxon Research

Biaxial and triaxial accelerometers

Biaxial and triaxial sensors measure vibration in multiple perpendicular directions.

Model	993B-7
Description	Triaxial accelerometer
Sensitivity	100 mV/g
Frequency	2 to 7000 Hz
Temperature	to 120 °C
Product line	Wilcoxon Research

For more detailed product data, refer to Meggitt's Wilcoxon Research® product catalogue.

Eddy current displacement sensors

Meggitt's TQ series are eddy current transducers for contactless measurements of relative vibration or axial displacement in turbines, alternators, turbo-compressors and centrifugal pumps. They are API 670 compliant, available for high-pressure and watertight applications, with measuring ranges up to 12 mm.

Model	TQ401	TQ402	TQ412	TQ422	TQ403
Measurement range and description	2 mm range	2 and 4 mm range	2 and 4 mm ranges, reverse mount with adaptator	4 mm range, pressure proof to 100 bar	12 mm range
Sensitivity	8 mV or 2,5 µA /µm	8 mV or 2.5 µA /µm 4 mV or 1.2 µA /µm	8 mV or 2.5 µA /µm 4 mV or 1.2 µA /µm	4 mV or 1.2 µA /µm	1.33 mV or 0.417 µA /µm
Tip diameter	5 mm	8.2 mm	8.2 mm	12.7 mm	18.0 mm
Temperature	-40 to 180°C	-40 to 180°C	-40 to 180°C	-25 to 180°C	-40 to 180°C
Product line	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter	Vibro-Meter

Velocity sensors

Meggitt's CV series are widely installed on all types of low speed turbomachinery, especially hydro turbine-generator sets. The CV series measure absolute vibration down to very low frequencies, thanks to the conditioner's low frequency linearization function.

Meggitt's PV102 PiezoVelocity sensors are internally integrated to output velocity. Optional certifications are available: CSA certified, Intrinsically Safe, and Class I Div 2 ATEX certified, Class I Zone 0 and Class I Zone 2.

Model	CV210	CV213	PV102
Description	For hydro generators, very low speed (50 mm/s). For moist and corrosive environments	For hydro and steam turbines, low speed (1000 mm/s). Resistant to dust and moisture (IP64)	Premium PiezoVelocity transducer
Sensitivity	50 mV / mm/s or 50µA / mm/s	20 mV / mm/s	3.94 mV/mm/s - 100 mV/ips
Frequency	1 to 400 Hz	10 to 1000 Hz	4.5 to 5000 Hz
Temperature	-40 to 100°C	-29 to 204°C	-50 to 120°C
Product line	Vibro-Meter	Vibro-Meter	Vibro-Meter

For more detailed product data, refer to Meggitt's Vibro-Meter® product catalogue.

LVDT displacement sensors

Meggitt's LVDT sensors are designed to measure linear displacements in harsh environments like offshore platforms and radioactive tanks. Rotary sensors (RVDT) complete the product line. Some available options: submersible sensors, long strokes (up to 300 mm), rugged versions for hydraulic jacks.



Model	SX12 CKW series	SX CER series	SX 36 RV series
Description	Compact LVDT, high performance	LVDT for harsh environments, inox and ball joint	Rugged RVDT
Measurement ranges	+/- 3 mm to +/- 150 mm	+/- 3 mm to +/- 150 mm	+/- 10° to +/- 60°C
Environment	ATEX, IP 66 or IP 67	ATEX, IP 67, Intrinsically Safe	ATEX
Temperature	-40 to 200°C	-40 to 80°C/200°C	-40 to 125°C
Product line	Sensorex	Sensorex	Sensorex

Airgap sensors

The LS systems use a capacitive technology to measure the air gap between rotor and stator, an important indicator of machine condition in hydroelectric generators.

Model	LS 120
Description	For large hydro generators
Measurement range	2 to 33 mm Longer ranges available on request
Note	Works with ILS 730 conditioner
Temperature	-15 to 125 °C
Product line	Vibro-Meter

Inclinometers

Submersible servo-inclinometers are designed to measure angular tilt with respect to the horizon or boom angle in harsh environments. Applications are in offshore, marine (LNG transport) and petroleum industry.


Model	SX41170	SX41600
Description	1-axis submersible servo-inclinometer	2-axis submersible servo-inclinometer
Measurement ranges	+/- 3° to +/- 90°	+/- 1° to +/- 90°
Environment	ATEX IP 68 100 bar Intrinsically safe	IP 67
Temperature	-40 to 200°C	-40 to 80°C/200°C
Product line	Sensorex	Sensorex

For more detailed product data, refer to Meggitt's Sensorex® and Vibro-Meter® product catalogues.

Turbine combustor dynamic pressure

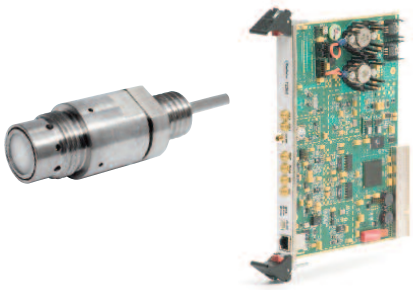
Meggitt's CP series are qualified by major OEMs for combustor pulsation monitoring in gas turbines. They use a patented technology and reach the highest sensitivity in the industry, with an extreme temperature capability (up to 777°C) and a very high frequency response range.

Model	CP103	CP235	522M17	CP211	CP50x
Description	Extreme temp, standard with numerous OEMs	High temp, highest sensitivity, standard with numerous OEMs	High temp, use with single-ended charge amplifiers	Extreme temp, compact, used in laboratory measurements	Outstanding linearity. No pyroelectric effects from temp changes. Cooperation with Piezocryst.
Sensitivity	232 pC/bar (20 bar)	750 pC/bar (20 bar)	12 pC/psi	25 pC/bar (250 bar)	90 pC/bar (50 bar)
Frequency	2 to 10000 Hz	2 to 10000 Hz	to 45000 Hz	2 to 15000 Hz	2 to 10000 Hz
Temperature	-196 to 700 °C	-55 to 520 °C	to 538°C	-196 to 777 °C	-70 to 560°C
Product line	Vibro-Meter	Vibro-Meter	Endevco	Vibro-Meter	Vibro-Meter

For more detailed product data, refer to Meggitt's Vibro-Meter® and Endevco® product line catalogues.

Turbine blade tip clearance

Meggitt's microwave product line is designed especially to measure blade tip clearance in turbomachinery. Turbine blade and disc failures often provide advance warning through subtle changes in blade tip clearance or blade time-of-arrival. Meggitt's microwave system enables closed-loop control and predictive maintenance in the turbine hot section. Probes are designed for operation at extreme temperatures and can be installed in the first stage turbine. The turbine tip clearance system can be an integral part of a complete VM600 online monitoring system (see page 4).



Turbine ignition systems

Meggitt's ignition products offer low voltage, high-energy igniters and complementary ignition leads for gas turbine engines.

High energy igniters

High energy systems are designed to ignite gases and heavier oils in damp and otherwise adverse conditions with stored levels of up to 16 joules.

High tension ignition electrodes and caps

High tension systems are designed to ignite medium distillate fuel oils and most gas installations and generate up to 18000 volts.

Flameproof ignition unit

Flameproof ignition equipment provides special protective measures to avoid accidental combustion in hazardous environments, including flammable gases, vapors, dust, and volatile liquids.

Customer services

Are you looking for support services for your power generation plant or industrial process facility? At Meggitt Sensing Systems, our focus is on customer service.

Maintenance solutions

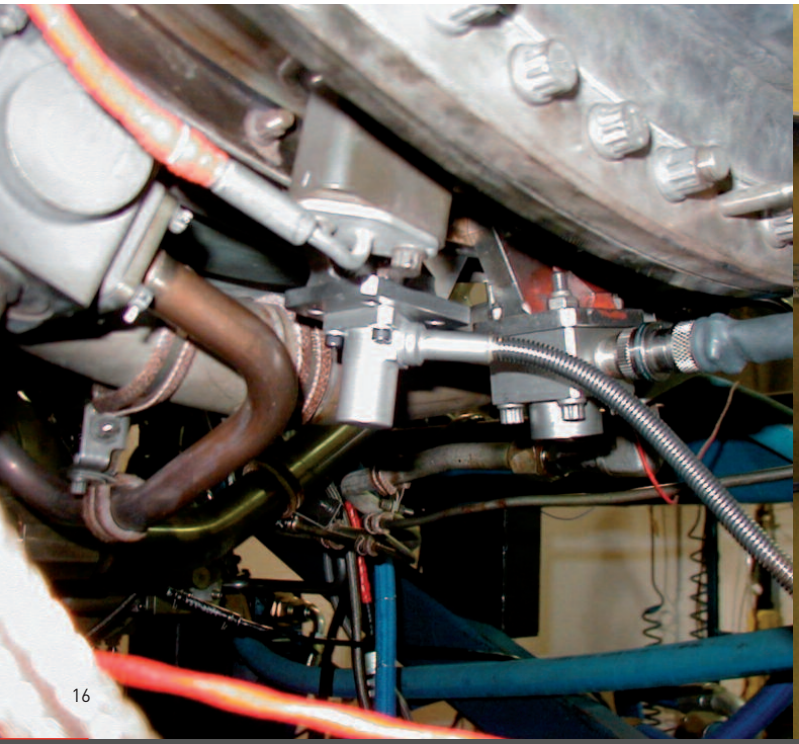
Meggitt Sensing Systems' technical support group has a comprehensive understanding of system applications and operational requirements, and will work with you to ensure cost-effective solutions for

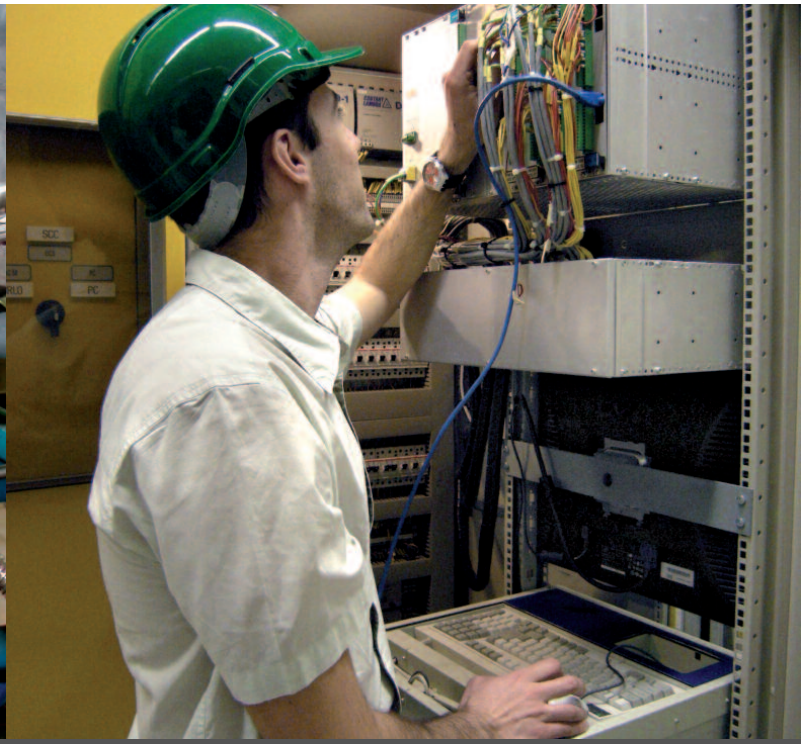
- Calibration and repair services
- Sensor and monitoring system installation and commissioning
- Factory and/or site acceptance tests
- On-site system troubleshooting and repairs
- Annual system checks
- New system requirement and scope definition
- Project management and turnkey installation services
- System upgrades and retrofit solutions
- Remote system diagnostics

World-class support services

Meggitt Sensing Systems not only supports single-event service or turnkey project needs, but will also partner with you to provide on-going maintenance services including

- Diagnostics services on machinery issues, regardless of manufacturer
- Regularly scheduled sensor and monitoring system verification
- Condition monitoring system configuration, optimization and machinery auditing
- Factory or site-based technical training





Training

Meggitt's courses are open to plant operators, equipment manufacturers, or any user starting to work with our monitoring systems.

These hands-on training sessions are especially designed to provide users with the fundamental knowledge required to operate our systems. After a training program, participants will feel at ease with all main protection and monitoring functionalities.

List of courses

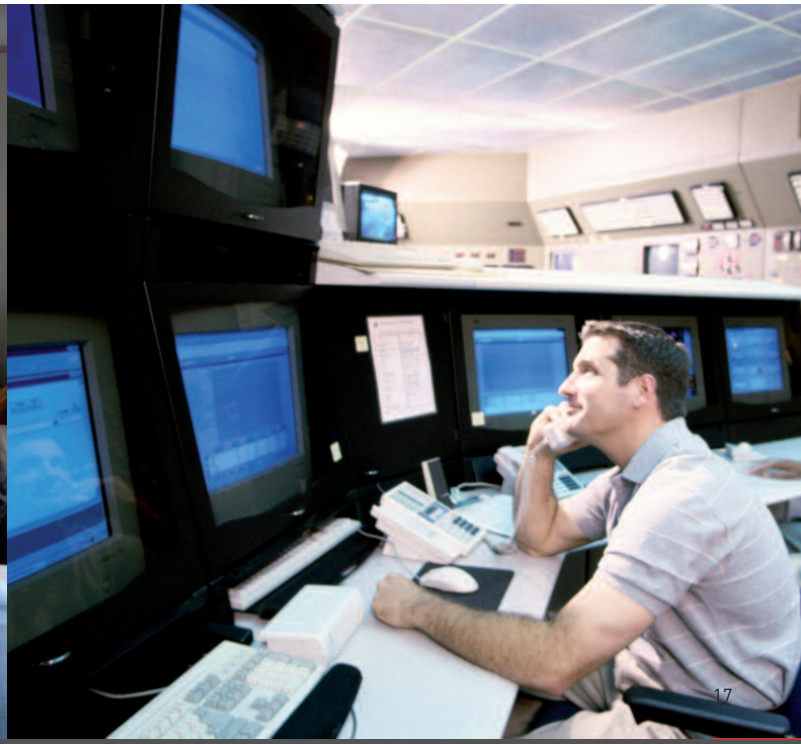
- VM600 system installation and commissioning
- VM600 system operation and maintenance
- Condition monitoring software basic user course
- Condition monitoring software advanced user course
- Condition monitoring and machinery diagnostics

Our regional training centres are located in

- **Europe** Fribourg, Switzerland
- **Asia** Bangalore, India
  Shanghai, China
  Singapore
- **Americas** Montreal, Canada
  Londonderry NH, USA
  São José dos Campos, Brazil

We organise customised training for our customers at their sites. For further information, please contact your local Meggitt representative, or

- **Europe, Middle-East, Africa** mss.europe-mea@meggitt.com
- **North America** mss.north.america@meggitt.com
- **Latin America** mss.latin.america@meggitt.com
- **Asia** mss.asia@meggitt.com



Worldwide sales and support

We offer customer support through our worldwide sales organisation.

- **Americas**
  Irvine CA, USA
  Germantown MD, USA
  Londonderry NH, USA
  Montreal, Canada
  São José dos Campos, Brazil
- **Europe**
  Fribourg, Switzerland
  Archamps, France
  Paris, France
  Rugby, England
  Offenbach, Germany
  Zaporozhye, Ukraine
- **Asia**
  Bangalore, India
  Shanghai, China
  Singapore

If you have not done business with us yet, or do not have a direct contact with our representative in your country, please contact one of our Energy support centres.

Energy support centres

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Headquartered in the UK, Meggitt PLC is a global engineering group specialising in extreme environment components and smart sub-systems for aerospace, defence and energy markets.

Some 10,000 people are employed across manufacturing facilities in Asia, Europe and North America and regional bases in India and the Middle East.

Meggitt's civil aerospace presence covers large commercial transports, regional aircraft, business jets, helicopters and general aviation.

Its defence markets cover all military aircraft types, land systems, naval platforms and aerial, land-based and marine threat simulation training and weapons systems development. The firearms element of this capability extends into law enforcement and security organisations.

The group's growing presence in energy is driven by our core fluid controls, heat management and sensing and monitoring capabilities, many of which are deployed to help reduce the maintenance costs, fuel consumption and carbon emissions of industrial gas and steam turbines.

www.meggitt.com

Meggitt Sensing Systems is the world's leading provider of high performance sensing and condition monitoring solutions for extreme environments

Meggitt Sensing Systems, a Meggitt group division, has operated through its antecedents since 1927 under the names of Endevco, Wilcoxon Research, Sensorex, ECET, Vibro-Meter, Lodge Ignition and Ferroperm Piezoceramics. Today their operations are integrated under one strategic business unit called Meggitt Sensing Systems to provide complete systems with these renowned product brands from a single supply base.

www.meggittsensingsystems.com

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MEGGITT
smart engineering for extreme environments

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