SKF Integrated Condition Monitoring

Industry-leading tools and technologies
for optimized machine maintenance and reliability

The Power of Knowledge Engineering

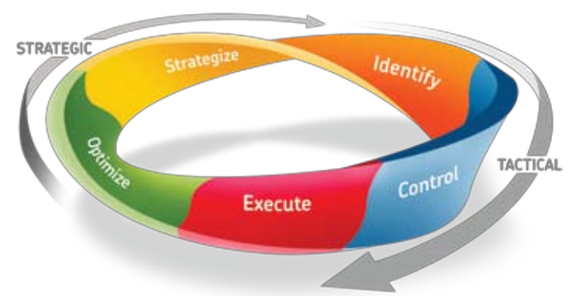
Interpreting the language of industrial machinery for over 100 years

As the graph at left shows, potential costs for lost productivity rise with the criticality of the asset. Therefore, while frequent walk around inspections may be appropriate for motors, pumps and fans, continuous on-line monitoring is recommended for the most critical equipment that drives your business. SKF can tailor a condition monitoring programme to your needs, taking into account the type and criticality of your machine assets.

More than a century of leadership in the design and manufacture of bearings has given SKF a unique understanding of rotating equipment and how machine components and industrial processes are interrelated. This expertise, combined with decades of application experience in every major industry, has given us the ability to understand the "language" spoken by a machine's moving components. Knowing what to listen for, how to interpret it and when to put this knowledge to use is the key to a successful condition monitoring programme.

Asset Efficiency Optimization

An integrated condition monitoring programme is a critical component of Asset Efficiency Optimization (AEO), a proven SKF methodology that combines a broad range of strategic and tactical tools to help you achieve maximum asset effectiveness and efficiency. A customized AEO programme can include everything from training and logistics, to a full predictive maintenance (PdM) service contract with qualified manpower and technology to help maintain your plant – even remotely. AEO methodology, combined with our unmatched credentials in the field of condition monitoring, makes SKF a uniquely qualified partner in your ongoing drive to reduce total cost of ownership.



Why SKF for condition monitoring?

- **Industry leadership:** A leader in the condition monitoring industry since its inception, SKF pioneered the development of many of the world's most advanced condition monitoring tools and technologies.
- **Full product portfolio:** Everything from handheld devices to on-line systems, hardware and software.
- **Proven success:** SKF technologies are at work in industrial facilities around the world, with documented performance.
- **Complete integration:** The SKF @ptitude asset management system combines hardware and software into one integrated suite of enabling technologies.
- **A wide range of reliability services:** SKF can support your operation with everything from remote data analysis to root cause failure analysis.
- **Expert training and technical support:** Expert user training for all of our hardware and software components, plus dedicated support.
- **Partnerships with OEMs:** As a technical partner to many of the world's leading original equipment manufacturers, SKF may well have supplied the bearings for, or helped design your machinery.
- **A global footprint:** SKF is represented in more than 130 countries and supported by a global distribution network.

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Basic condition monitoring products

Vibration measurement tools

SKF vibration measurement tools put the benefits of condition-based maintenance within reach for expert and novice users alike. Engineered for ease of use, this range of vibration measurement tools offers a simple way to begin using machine data to improve overall equipment effectiveness.

With minimal investment and training, you can use these tools to start a new condition monitoring programme or complement an existing one, evaluate electric motor bearings, lower energy costs and reduce CO_2 emissions. By spot-checking critical machines, vibration measurement tools from SKF enable you to identify problems early on, before they result in costly, unplanned downtime.

SKF Machine Condition Advisor

By measuring vibration signals and temperature at the same time, the SKF Machine Condition Advisor offers a powerful, user-friendly way to indicate machine health or bearing damage.

While small enough to fit in your pocket, this rugged tool delivers big signal processing capabilities, allowing you to quickly and accurately assess the condition of a range of rotating equipment.

SKF Advanced Bearing Analysis Kit

The SKF Advanced Bearing Analysis Kit is designed to provide fast, accurate results for multiple oil parameters, on-site maintenance decisions and assessment of overall machine condition. The kit consists of the Machine Condition Advisor, as well as a test cell, a lubrication assessment tool engineered to provide accurate results for water-in-oil (lubricants) and total base number tests.

SKF Electric Motor Assessment Kit

The SKF Electric Motor Assessment Kit makes the evaluation of electric motor bearings and general machine health simple. The kit contains the SKF Machine Condition Advisor and the SKF Electric Discharge Detector Pen (TKED 1), which help measure overall machine health and bearing condition.

SKF Basic Condition Monitoring Kit

This kit includes the SKF Machine Condition Advisor and sensor kit, which features a magnet to help users measure hard-to-reach surfaces. The kit also includes the heavy duty SKF Infrared Thermometer – a long range, dual laser non-contact device that reads temperatures in less than a second, as well as the SKF Inspector 400 Ultrasonic probe, which senses high-frequency sounds such as pressure or vacuum leaks and electrical discharges, making them audible even in noisy environments.

SKF Microvibe P

With the low-cost, compact SKF Microvibe P, vibration monitoring and analysis is as close as your PDA. Ideal for small-route data collection, this vibration meter expansion module fits in a PocketPC's compact flash card slot (CF Type II) and features the user-friendly Windows Mobile Operating System.

Built-in automatic functions virtually eliminate setup, while analytical displays and automatic judgment of machine vibration readings help users identify machine or bearing problems on the spot.

SKF Energy Monitoring Kit

By allowing users to monitor and optimize the energy used in their compressed air systems, the SKF Energy Monitoring Kit can help plants cut their energy costs and CO_2 emissions.

The kit includes all of the devices contained in the SKF Basic Condition Monitoring Kit, plus the Hioki Clamp-On Power Meter and Hioki Power Meter Clamps, which can be used to measure voltage, current, active power, reactive power, apparent power, power factor, integrated value, frequency and harmonics.

SKF Bearing Assessment Kit

Combining three easy-to-use measurement tools, the SKF Bearing Assessment Kit helps simplify bearing condition monitoring and analysis.

Along with the SKF Machine Condition Advisor, the kit features the heavy duty SKF Infrared Thermometer – a long range, dual laser non-contact device that reads bearing temperatures with just a squeeze of the trigger.

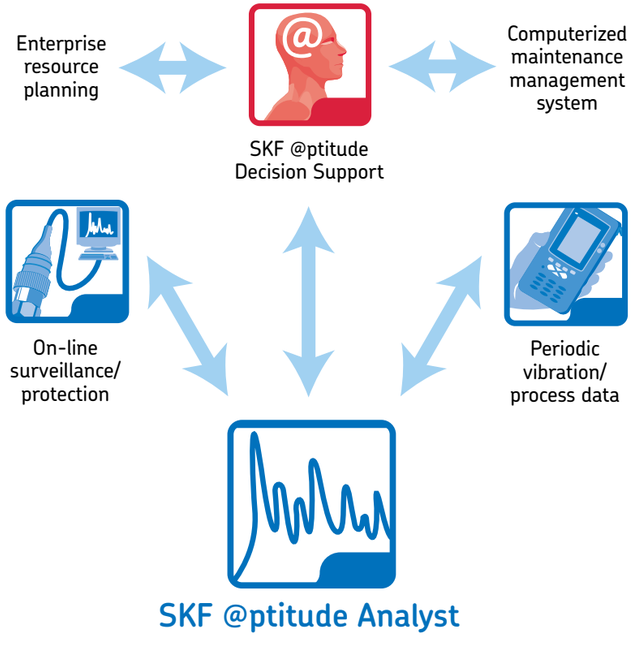
The kit also includes the SKF Oil Check Monitor, which measures oil degradation and contamination levels.

SKF @ptitude Asset Management System

One integrated platform for condition monitoring hardware and software

As the world's leading bearing manufacturer and a trusted partner to original equipment manufacturers of every type of industrial equipment, SKF has an intimate understanding of the factors affecting machine reliability. We've built this knowledge into the SKF @ptitude asset management system, a complete, integrated suite of enabling technologies, engineered to help you achieve overall equipment effectiveness in your facility or across your entire enterprise. Based on technology proven successful in industrial facilities of all kinds, this comprehensive system incorporates decades of application knowledge – both our own and that of our customers around the world.

Unlike other "systems" which are actually just assemblies of components from different sources, all hardware and software components within the SKF @ptitude system are designed to work seamlessly together and with your facility's CMMS. The simplicity and continuity of the system enables you to not only extract the right data from your machinery, but to use this data to optimize asset lifecycle management. The @ptitude system enables you to:



- **Integrate all machine condition data into one common program**
- **Share data seamlessly across functional lines**
- **Avoid long learning curves and software platform compatibility issues**
- **Replicate your success at other facilities**

All components of the SKF @ptitude system are supported by SKF @ptitude Analyst software, which provides a seamless interface to computerized maintenance management systems, enterprise asset management systems and other plant-wide systems.

Condition monitoring hardware

- Hand-held machine vibration collectors/analyzers
- Portable computers for collection, storage and review of machine condition and process data
- On-line systems for continuous machine surveillance and protection
- Wireless monitoring technologies, including mesh networking

Condition monitoring software

SKF @ptitude Analyst forms the basis for a completely integrated approach to condition monitoring, permitting fast, efficient and reliable storage, manipulation and retrieval of large amounts of complex machine and plant information. Designed from the ground up with robust open databases and the familiar Windows interface, this powerful software accepts data from the full range of SKF data collection devices and interfaces with SKF @ptitude Decision Support to facilitate consistent and reliable decision-making.

SKF @ptitude Decision Support

SKF @ptitude Decision Support is a dedicated decision support software that links with a range of data sources to facilitate accurate, timely, and consistent decision making and work order notification – within a single plant or across multiple facilities. By fusing knowledge from diverse sources, SKF @ptitude Decision Support provides the information essential to effective machine and process analysis, diagnosis, reporting and corrective action. Overall plant efficiency is improved by replacing labour-intensive data analysis with an automated process that identifies the probability of specific faults within an asset or process and then prescribes appropriate action.

Portable data collectors and analyzers

The SKF Microlog series

By allowing users to move from time-based to condition-based maintenance, the SKF Microlog series of portable data collectors and analyzers can help plants eliminate unplanned downtime, reduce operational costs and optimize manpower resources.

Whether your condition monitoring program is just getting started or moving to the next level, SKF Microlog can handle all of the tasks required to perform predictive maintenance on a wide range of rotating machinery. All units in the series are supported by SKF @ptitude software, and feature:

- **Data capture from a range of sources**
- **Additional functionality via application–specific firmware modules**
- **Rugged, ergonomic design**
- **128 MB flash memory***
- **PXA320 processors***
- **Windows CE OS**

* Except for the 51-IS

SKF Microlog Analyzer AX

The SKF Microlog Analyzer AX series are route-based data collectors/FFT analyzers offering four-channel measurement capabilities and simultaneous triaxial, with fast real-time rate and display updates. The large range of analyzer modules offer customization to meet your condition monitoring requirements. The result is fast data collection, saving valuable time and money.

SKF Microlog Consultant

The SKF Microlog Consultant is a stand-alone, four-channel vibration analyzer, delivering both sophisticated dynamic signal analysis and an automated diagnosis expert system in a single rugged, Class 1 Div 2 and IP 65 rated unit. The Consultant offers the performance and features of PC-based alternatives in a portable instrument designed to cope with demanding industrial environments. Additionally, it delivers on-the-spot, fast and easy to understand machine condition diagnosis, and production test quality indications.

SKF Microlog Advisor Pro

A "stand-alone" device, the SKF Microlog Advisor Pro is ideal for service, maintenance, inspection, and diagnostic applications, and does not require advanced PdM software. Additionally, this three-channel, portable maintenance tool combines an intuitive user interface, simple wizard-driven measurement instructions, and an automated analysis system based on pre-programmed ISO standards. Green, yellow and red color-codes quickly and clearly indicate test status, invalid or abnormal measurements, and machinery condition.

SKF Microlog Analyzer GX Series

Developed for maintenance engineers in a range of industries, the SKF Microlog Analyzer GX series are high performance, one-to-three channel, route-based data collectors/FFT analyzers. Three-channel, simultaneous triaxial input with separate tachometer input enables faster and more comprehensive data collection, without adding more collection time.

The modular design of the GX series offers customers the option to upgrade and expand functionality without having to buy another instrument. Accessories are inter-changeable between models. Because the entire SKF Microlog product line uses the same high speed processor, digital boards and firmware; with the ease of entering a license key, units can be upgraded to more advanced models.

SKF Microlog Analyzer 51-IS

A route-based instrument, the SKF Microlog Analyzer CMXA 51-IS offers ATEX Zone 0 certification and is ideal for proactive maintenance programmes within petrochemical, oil and gas facilities, water treatment, pharmaceutical plants, or any plant where potentially explosive atmospheres preclude the use of all but the most highly certified electronic instrumentation.

Operator driven reliability (ODR) tools and technologies

Inspection systems and data managers

Because of their proximity to equipment, operators are usually the first to detect even the slightest changes in process conditions and machinery health. Too often, their observations go unreported or are not effectively acted upon. With SKF inspection tools and technologies, operators can accurately and consistently record, trend, store, communicate and act on process and inspection data, helping to reduce unplanned downtime and increase plant productivity and safety.

SKF Microlog Inspector

Compatible with most Windows Mobile portable devices, the SKF Microlog Inspector system uses technology to enable automated machine inspections and seamless sharing of collected data – across the plant or across the planet.

This advanced inspection system integrates condition monitoring, workflow management, safety and regulatory inspections, and more in one easy-to-use system.

- **Intuitive interface prompts for corrective actions when alarm levels are met**
- **Inspection data documented for compliance reporting and audits**
- **Collects velocity, acceleration, temperature and FFT data via wireless sensor**
- **Supports communication over LAN, USB, WiFi and even cellular data network (3G/GPRS) connections, allowing data transfer to a remote computer**
- **Share plant wide data across the entire SKF @ptitude suite, and seamlessly interface to CMMS, ERP or other information management systems**

SKF @ptitude Monitoring Suite

Serving as a common platform for operations and maintenance information, SKF @ptitude Monitoring Suite links operations and maintenance teams while facilitating process data analysis. Using data captured with SKF Microlog Inspector, @ptitude Monitoring Suite displays trend plots to identify small process changes not yet in alarm, but possibly heading toward a problem situation.

SKF @ptitude Decision Support

Integrating SKF @ptitude Decision Support software with the SKF @ptitude Monitoring Suite greatly expands inspection capabilities. SKF @ptitude Decision Support uses the common SKF @ptitude Monitoring Suite platform to provide all departments with a dynamic resource for automated machine and process diagnosis, analysis, reporting and corrective actions.

SKF Microlog Inspector hardware system

Designed to work with SKF Microlog Inspector and SKF @ptitude Monitoring Suite software, a range of equipment is available from SKF to help ensure the success of your programme.

On-line systems

Machine monitoring

Ideal for continuous, automated monitoring of machines in harsh, remote, unsafe, or hard-to-reach locations, SKF Multilog on-line systems warn of machine condition changes that could lead to unplanned downtime. SKF Multilog machine monitoring systems cover a broad range of applications, from general process machinery to industry-specific solutions.

SKF Multilog On-line System WMx

Offering the functionality of a portable data collector/analyzer, the wireless SKF Multilog WMx is much more cost-effective to install and implement than a traditional on-line system. Compact and field-mounted, the WMx enables remote, wireless monitoring of critical machinery, with less project engineering and documentation.

SKF Multilog On-line System IMx-S

Designed for harsh industrial environments, the SKF Multilog IMx-S is an affordable, powerful condition monitoring solution for many applications. When used with SKF @ptitude software, the IMx-S provides an early fault detection, prevention, and condition-based maintenance system.

SKF Multilog On-line System IMx-P

The SKF Multilog On-line System IMx-P is a powerful, versatile device designed to meet the needs of vibration analysts, service providers, and condition monitoring professionals. The analog signal inputs are configurable for a wide variety of sensors, and can be used as a troubleshooting device or as part of a condition monitoring system with several other units together in a network.

SKF Multilog On-line System IMx-T

Designed to fit into a standard 19" rack enclosure, the Multilog IMx-T works with SKF @ptitude software as a machine condition monitoring system with several other units together in a network.

SKF Multilog On-line System IMx-W

Designed to extend wind turbine maintenance intervals, better manage maintenance resources, and reduce unexpected downtime and per-kWh operating costs, SKF WindCon continuously monitors single units or entire wind farms, on land or sea.

At the heart of the SKF WindCon system is the SKF Multilog IMx-W. Together with SKF @ptitude Observer software, the SKF Multilog IMx-W provides a complete system for early fault detection and prevention, automatic advice for correcting existing or impending conditions, and advanced condition-based maintenance.

SKF Multilog On-line System IMx-R

Part of the next generation cost-effective solutions for railway vehicles, SKF Multilog IMx-R delivers condition monitoring and diagnostics which helps move railway maintenance from time-based to condition-based maintenance and reduce maintenance cost. Along with early fault detection of different components, the SKF Multilog IMx-R offers protection against bogie instability with bogie hunting criteria, plus protection against hot axle box detection in compliance with TSI regulations.

Machine condition transmitters

Machine condition transmitters from SKF

SKF offers a complete line of machine condition transmitters, engineered to deliver added value to essential production equipment. They provide vital information on machine and bearing performance that helps maximize potential machine utilization. Each stand-alone monitoring device is connected to a permanently mounted sensor on a machine. The devices provide low-cost continuous monitoring of specific machine, gear and bearing performance parameters in pumps, fans, motors and other general purpose machinery in a number of specific industries.

Machine monitoring and protection

Critical plant assets can suffer sudden failure, with resulting high costs for unexpected downtime and repair. SKF Multilog monitoring and protection systems can reduce operating and maintenance costs, improve profitability, and contribute to a better and safer working environment.

SKF Multilog On-line System DMx

Providing condition monitoring and machine protection, the intrinsically safe SKF Multilog DMx is the first-ever 4-channel vibration monitoring solution that allows transducer to dynamic data processing right on the machine skid.

SKF Multilog On-line System IMx-M

The SKF Multilog On-line System IMx-M is a powerful, cost effective solution for a variety of condition monitoring and machine protection applications. Together with SKF @ptitude Monitoring Suite software, the SKF Multilog IMx-M provides a complete system for machinery shutdown/trip and early fault detection and diagnosis.

Electric motor testing

Baker Instrument Company are part of the SKF Group, extending the SKF condition monitoring portfolio to include a range of advanced electric motor evaluation products. Backed by more than 45 years of patented insulation test technologies, this comprehensive product line features innovative test equipment for both dynamic and static applications. Designed to help maintenance professionals cut costs by avoiding unplanned downtime, SKF/Baker equipment is fully IEEE and NEMA compliant.

Static testers

As the industry's most established range of portable testing products, SKF/Baker Instrument static testers help detect insulation problems within electric motors before costly failures occur.

The AWA family of products

The AWA instrument range supports all major electric tests in a single field portable unit, including surge, polarization index, DC HiPot, MegOhm and winding resistance. All AWA units meet IEEE recommendations.

Digital testers – D-Series instrumentation

D-Series testers deliver maximum testing capabilities in a lightweight, sturdy unit. All D-Series testers feature high precision testing capabilities, allowing advanced data collection in the shop or in the field.

High range/voltage instrumentation

These high-performance, stand-alone impulse generators diagnose faults in large electric motors and windings, helping to improve quality in the shop and reduce costly unplanned downtime in the field.

Analog Instrumentation

Designed for both shop or field performance, these analog instruments offer shops a cost-effective motor testing solution.

Dynamic Analyzers

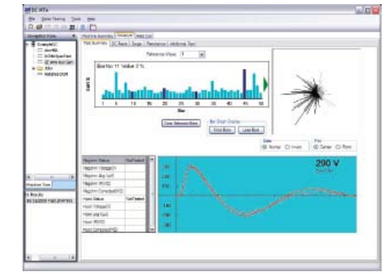
The EXP Family of Products

Portable and highly durable, EXP instruments allow remote monitoring from the Motor Control Center (MCC) or through the Baker EP connection. These non-hazardous, low-voltage, battery-operated units provide data on the machine, load and incoming power.

Motor QC Systems

This rugged, field-tested range of rack-style systems enable stator and armature testing in manufacturing environments. They combine the most common process electrical tests with automated instrumentation, and include:

- WinAST 8800 – Automatic Winding Test System
- WinTATS 8800 – Traction Armature Test System



Software and accessories

SKF/Baker Instrument offers a variety of software applications for EXP analyzers and AWA testers, including desktop monitoring and analysis software. Many offline and online tester accessories are also available, including an external port data collection tool for EXP analyzers, plus a range of voltage extensions, clamps and clips, CTs and more.

On-line Systems

SKF On-line Motor Analysis System NetEP

Combining SKF on-line monitoring capabilities with Baker Instrument motor analysis expertise, the NetEP is a fully automated, network capable system for 24/7 rotating equipment monitoring. Able to continuously monitor 40+ parameters on up to 32 motors on 7 voltage busses, the NetEP is fully networked and extends EXP3000 capabilities.

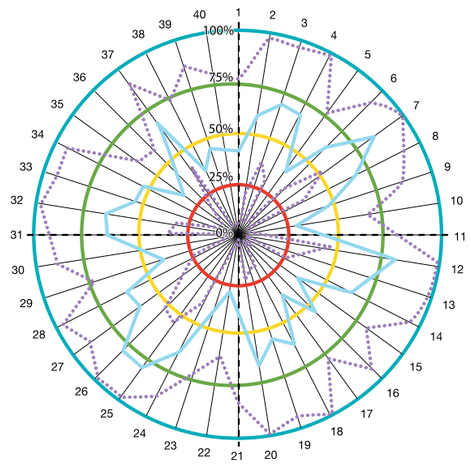
Energy and sustainability management solutions

Many of the tools and techniques that enable effective condition monitoring also enable effective energy management. SKF Energy and Sustainability Management solutions are helping our customers develop ways to control energy consumption and identify energy saving opportunities plant wide. These solutions feature several products and services – many of them in use at our own manufacturing facilities worldwide.

SKF Client Needs Analysis – Energy and Sustainability

This extensive, web-enabled assessment tool helps operations uncover opportunities for energy efficiency improvements. Combined with a variety of condition monitoring inspection tools that collect thermography and vibration data, the SKF Client Needs Analysis – Energy and Sustainability (CNA-ES) also examines chemical treatments, lubrication use and other operating processes that could be improved to reduce your facility's environmental impact.

Typically, a CNA-ES begins with a client consultation to review four key energy efficiency areas. SKF then provides a detailed report that highlights improvement opportunities and offers specific solutions for saving energy, making environmental improvements and operating more sustainably.



Energy Monitoring Service – Pump Systems

The Energy Monitoring Service – Pump Systems is a comprehensive energy management program designed to help plants identify opportunities to reduce pump-related energy costs.

Either by using your plant staff (trained by SKF), or SKF experts to carry out routine condition monitoring measurements and monitor pump energy efficiency, you can determine when it is cost-effective to repair a worn pump. The Energy Monitoring Service – Pump Systems can work in parallel with your condition monitoring program as part of a comprehensive asset management system.

Energy Monitoring Service – Compressed Air Systems

According to US Department of Energy assessments, up to 30% of compressed air system capacity can be lost to leaks if no comprehensive leak detection and repair program is in place. The Energy Monitoring Service – Compressed Air Systems from SKF can help plants prevent such losses, cutting CO_2 emissions and costs in the process.

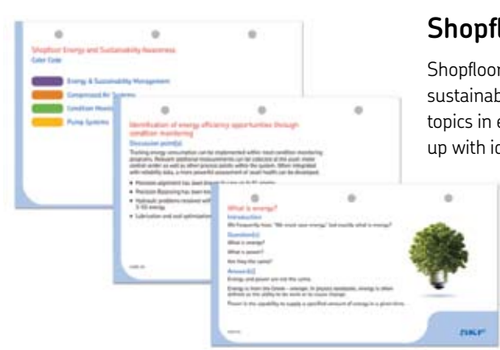
Our approach uses proven methodologies for compressed air leak detection and calculation of system losses and energy efficiency. The service integrates with condition monitoring programs, and can be executed using internal staff trained by SKF, or by SKF under a field service contract.

The SKF Energy Monitoring Kit (CMAK 450-ML) includes all the basic measurement and maintenance technologies necessary to measure energy efficiency of compressed air systems, including the SKF Machine Condition Advisor, Infrared Thermometer (CMSS 3000-SL), Inspector 400 Ultrasonic Probe, Hioki Clamp-on Power Meter CPT 3169-20, and Hioki Power Meter Clamps CPT 9661.

Energy Monitoring Service – Fan Systems

The Energy Monitoring Service – Fan Systems from SKF helps identify opportunities to reduce energy bills and improve fan and system efficiency.

Many assessments suggest that energy costs for fan systems can be reduced by 20 percent or more, simply by improving fan and system efficiency. Ideal for industrial facilities that spend a significant amount on energy to operate fan systems or have specific goals for energy or CO_2 emissions reduction, the energy monitoring service – fan systems from SKF offers sustainable improvements through regular monitoring or selected systems. Also, by combining the service with an existing condition monitoring program, facilities can improve overall reliability and employ in-house maintenance personnel to create one comprehensive asset management system.



Shopfloor Awareness Cards

Shopfloor Awareness cards from SKF give frontline managers the tools to keep energy and sustainability issues in front of employees on a regular basis. Along with presenting specific topics in easy-to-understand, non-technical terms, the cards encourage employees to come up with ideas for saving energy and money across the plant.

Condition monitoring support and services

To help you get the most out of SKF condition monitoring products and technologies, SKF provides an extensive range of support services.

SKF Remote Monitoring Services

With our hosted software and monitoring services, implementing a world-class predictive maintenance (PdM) program for periodic or continuous monitoring of critical machinery is just an Internet connection away.

SKF Remote Monitoring Services combine SKF condition monitoring tools such as SKF Microlog data collectors and analyzers and the SKF Multilog On-line System WMx to collect data, SKF experts to analyze data, and the Internet to communicate management of machine health for informed decision-making.

These services are ideal for plants with limited staff trained in predictive maintenance techniques, operations with sites located remotely from a central facility, and original equipment manufacturers that want to provide a value-added service to their customers. Benefits include:

- Capitol investment cost savings
- Increased data integrity
- Expert SKF analysis and recommendations
- Global, 24/7 access to reports and data

Product support plans

SKF offers several product support plans to help you protect your technology investments, extend product service life and better achieve reliability success. From software upgrades and equipment calibrations to annual preventive maintenance and unlimited technical support, SKF product support includes many exclusive benefits and options.

Technical support

SKF customers enjoy access to a range of resources to help answer questions and resolve challenges. Our expertly trained technical support team is ready to assist you on everything from problems during start-up to single-incident issues.

Equipment calibration

To help ensure that your equipment provides reliable data, we offer calibration services for most SKF condition monitoring products. All calibrations are traceable to either NIST standards or to UK National Standards; calibrations to ISO10012-1 (Mil Spec) are also available.

Online Support

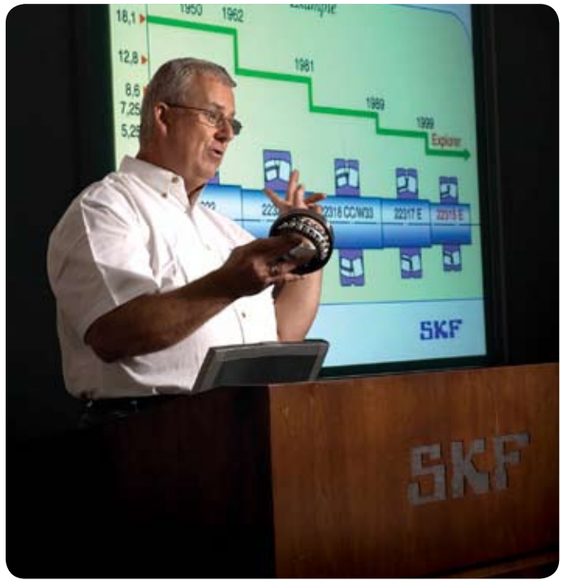
Along with a wealth of information about SKF products and services, www.skf.com features two robust self-help resources:

SKF @ptitude Exchange Forum

This comprehensive knowledge portal includes white papers, articles and tutorials as well as live discussions on a range of reliability topics. Open to anyone with an interest in plant reliability and condition monitoring, SKF @ptitude Exchange Forum is up 24/7 to help build your staff's asset maintenance and reliability expertise.

Inquire

The technical support center's knowledge database, SKF Inquire, features FAQs, application notes and in-depth technical support articles. SKF Inquire utilizes Google search technologies to deliver the most relevant articles based on your search query.



Training

The SKF Reliability Maintenance Institute (RMI) offers a comprehensive range of training courses designed to help plants reduce machinery problems and increase overall reliability and productivity. SKF RMI product training courses focus on specific SKF condition monitoring products, while our technology courses cover more general condition monitoring techniques and skills.

SmartStart courses feature an on-site SKF instructor who will train your employees on a given product or system, and help them implement your program quickly and effectively.

Industries	Components	Railways	Renewable power (wind energy)	Marine	Food, beverage and pharmaceutical	Pulp and paper	Metals	Mining and mineral	General manufacturing / machine tools	HPI, oil & gas	Traditional power
Basic condition monitoring products	**Vibration measurement tools**										
	SKF Machine Condition Advisor	■	■	■	■	■	■	■	■	■	■
	SKF Machine Condition Detector	■	■	■	■	■	■	■	■	■	■
	SKF MicroVibe P	■	■	■	■	■	■	■	■	■	■
	SKF Basic Condition Monitoring Kit	■	■	■	■	■	■	■	■	■	■
	SKF Bearing Assessment Kit	■	■	■	■	■	■	■	■	■	■
	SKF Advanced Bearing Analysis Kit	■	■	■	■	■	■	■	■	■	■
	SKF Electric Motor Assessment Kit	■	■	■	■	■	■	■	■	■	■
	SKF Energy Monitoring Kit	■	■	■	■	■	■	■	■	■	■
Software	**Monitoring Suite**										
	SKF @ptitude Monitoring Suite	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Analyst	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Inspector	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Observer									■	■
	Decision Support										
	SKF @ptitude Decision Support	■	■	■	■	■	■	■	■	■	■
	Analysis and reporting										
	SKF Results Reporter	■	■	■	■	■	■	■	■	■	■
	Analysis and Reporting module for the AX, GX and MX	■	■	■	■	■	■	■	■	■	■
Portable data collectors and analyzers	**Vibration analyzers**										
	Route based										
	SKF Microlog Analyzer GX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer AX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer GX series – ATEX Zone 2			■							
	SKF Microlog CMXA 51-IS			■		■					
	Stand alone										
	SKF Microlog Consultant	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Advisor Pro	■	■	■	■	■	■	■	■	■	■
	Firmware Applications modules	■	■	■	■	■	■	■	■	■	■
	Analyzer kits										
	SKF Spindle Assessment Kit			■							
	SKF Idler Sound Monitoring Kit	■	■	■	■	■	■	■	■	■	■
	SKF Balancing Kit	■	■	■	■	■	■	■	■	■	■
Inspection systems	**Data managers**										
	SKF Microlog Inspector	■	■	■	■	■	■	■	■	■	■
Surveillance systems	**On-line systems**										
	Monitoring systems										
	SKF Multilog On-line system IMx-W									■	
	SKF Multilog On-line system IMx-S	■	■	■	■	■	■	■	■	■	
	SKF Multilog On-line system IMx-T	■	■	■	■	■	■	■	■	■	
	SKF Multilog On-line system IMx-R										■
	SKF Multilog On-line system TMU - CMMA 7720			■							
	SKF Copperhead on-line systems				■						
	Wireless systems										
	SKF Multilog On-line System WMx	■	■	■	■	■	■	■	■		
	Protection systems										
	Distributed Protection System										
	SKF Multilog on-line system – DMx	■	■	■	■	■	■	■	■	■	■
	Rack-based Protection System										
	SKF Multilog On-line system IMx-M	■	■	■	■	■	■	■	■	■	■
	Transmitter based systems										
	Machine Condition Transmitters	■	■	■	■	■	■	■	■	■	
Electric motor testing systems	**Electric motor analyzers**										
	Dynamic Motor Analyzer EXP4000	■					■			■	■
	Static Motor Analyzer AWA	■					■			■	■
	On-line systems										
	SKF Online Motor Analysis System NetEP	■					■			■	■
	Static motor quality test systems										
	Motor QC systems	■					■			■	■
Energy & sustainability management	Energy Monitoring Service – Compressed air systems	■	■	■	■	■	■	■	■	■	■
	Energy Monitoring Service – Pump systems	■	■	■	■	■	■	■	■	■	■
	Energy Monitoring Service – Fan systems	■	■	■	■	■	■	■	■	■	■
	Shopfloor awareness cards	■	■	■	■	■	■	■	■	■	■

Machinery	Components	Electric motors	Cranes	Cooling towers	Conveyors	Continuous casters	Compressors	Coilers	Chocks	Carousels, boring equipment	Ball mills
Basic condition monitoring products	**Vibration measurement tools**										
	SKF Machine Condition Advisor	■	■	■	■	■	■	■	■	■	■
	SKF Machine Condition Detector	■	■	■	■	■	■	■	■	■	■
	SKF MicroVibe P	■	■	■	■	■	■	■	■	■	■
	SKF Basic Condition Monitoring Kit	■	■	■	■	■	■	■	■	■	■
	SKF Bearing Assessment Kit	■	■	■	■	■	■	■	■	■	■
	SKF Advanced Bearing Analysis Kit	■	■	■	■	■	■	■	■	■	■
	SKF Electric Motor Assessment Kit										■
	SKF Energy Monitoring Kit						■				■
Software	**Monitoring Suite**										
	SKF @ptitude Monitoring Suite	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Analyst	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Inspector	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Observer						■			■	
	Decision Support										
	SKF @ptitude Decision Support	■	■	■	■	■	■	■	■	■	■
	Analysis and reporting										
	SKF Results Reporter	■	■	■	■	■	■	■	■	■	■
	Analysis and Reporting module for the AX, GX and MX	■	■	■	■	■	■	■	■	■	■
Portable data collectors and analyzers	**Vibration analyzers**										
	Route based										
	SKF Microlog Analyzer GX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer AX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer GX series – ATEX Zone 2	■	■	■	■	■	■	■	■	■	■
	SKF Microlog CMXA 51-IS	■	■	■	■	■	■	■	■	■	■
	Stand alone										
	SKF Microlog Consultant	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Advisor Pro	■	■	■	■	■	■	■	■	■	■
	Firmware Applications modules	■	■	■	■	■	■	■	■	■	■
	Analyzer kits										
	SKF Spindle Assessment Kit										
	SKF Idler Sound Monitoring Kit							■		■	
Inspection systems	**Data managers**										
	SKF Microlog Inspector	■	■	■	■	■	■	■	■	■	■
Surveillance systems	**On-line systems**										
	Monitoring systems										
	SKF Multilog On-line system IMx-W										
	SKF Multilog On-line system IMx-S	■	■	■	■	■	■	■	■	■	■
	SKF Multilog On-line system IMx-T			■	■	■	■	■			■
	SKF Multilog On-line system IMx-R										
	SKF Multilog On-line system TMU - CMMA 7720										
	SKF Copperhead on-line systems	■			■			■			
	Wireless systems										
	SKF Multilog On-line System WMx	■	■	■	■	■	■	■	■	■	■
	Protection systems										
	Distributed Protection System										
	SKF Multilog on-line system – DMx	■	■	■	■	■	■	■	■	■	■
	Rack-based Protection System										
	SKF Multilog On-line system IMx-M						■				■
	Transmitter based systems										
	Machine Condition Transmitters	■	■	■	■	■	■	■	■	■	■
Electric motor testing systems	**Electric motor analyzers**										
	Dynamic Motor Analyzer EXP4000										■
	Static Motor Analyzer AWA										■
	On-line systems										
	SKF Online Motor Analysis System NetEP										■
	Static motor quality test systems										
	Motor QC systems										■
Energy & sustainability management	Energy Monitoring Service – Compressed air systems						■				
	Energy Monitoring Service – Pump systems										
	Energy Monitoring Service – Fan systems										
	Shopfloor awareness cards	■	■	■	■	■	■	■	■	■	■

Machinery	Components	Screen shakers	Rolling mills	Pumps	Pulp and paper processing equipment – chippers, refriners, shredders, agitators	Paper machine – rolls, felts, drives	Mixers	Machine tool spindles	Generators	Gearboxes	Fans and blowers
Basic condition monitoring products	**Vibration measurement tools**										
	SKF Machine Condition Advisor	■	■	■	■	■	■	■	■	■	■
	SKF Machine Condition Detector	■	■	■	■	■	■	■	■	■	■
	SKF MicroVibe P	■	■	■	■	■	■	■	■	■	■
	SKF Basic Condition Monitoring Kit	■	■	■	■	■	■	■	■	■	■
	SKF Bearing Assessment Kit	■	■	■	■	■	■	■	■	■	■
	SKF Advanced Bearing Analysis Kit	■	■	■	■	■	■	■	■	■	■
	SKF Electric Motor Assessment Kit										
	SKF Energy Monitoring Kit	■		■					■		
Software	**Monitoring Suite**										
	SKF @ptitude Monitoring Suite	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Analyst	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Inspector	■	■	■	■	■	■	■	■	■	■
	SKF @ptitude Observer			■							
	Decision Support										
	SKF @ptitude Decision Support	■	■	■	■	■	■	■	■	■	■
	Analysis and reporting										
	SKF Results Reporter	■	■	■	■	■	■	■	■	■	■
	Analysis and Reporting module for the AX, GX and MX	■	■	■	■	■	■	■	■	■	■
Portable data collectors and analyzers	**Vibration analyzers**										
	Route based										
	SKF Microlog Analyzer GX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer AX	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Analyzer GX series – ATEX Zone 2	■	■	■	■	■	■	■	■	■	■
	SKF Microlog CMXA 51-IS	■	■	■	■	■	■	■	■	■	■
	Stand alone										
	SKF Microlog Consultant	■	■	■	■	■	■	■	■	■	■
	SKF Microlog Advisor Pro	■	■	■	■	■	■	■	■	■	■
	Firmware Applications modules	■	■	■	■	■	■	■	■	■	■
	Analyzer kits										
	SKF Spindle Assessment Kit				■						
	SKF Idler Sound Monitoring Kit						■				
Inspection systems	**Data managers**										
	SKF Microlog Inspector	■	■	■	■	■	■	■	■	■	■
Surveillance systems	**On-line systems**										
	Monitoring systems										
	SKF Multilog On-line system IMx-W										
	SKF Multilog On-line system IMx-S	■	■	■	■	■	■	■	■	■	■
	SKF Multilog On-line system IMx-T	■	■	■			■	■	■	■	■
	SKF Multilog On-line system IMx-R										
	SKF Multilog On-line system TMU - CMMA 7720				■						
	SKF Copperhead on-line systems										
	Wireless systems										
	SKF Multilog On-line System WMx	■	■	■	■	■	■	■	■	■	■
	Protection systems										
	Distributed Protection System										
	SKF Multilog on-line system – DMx	■	■	■	■	■	■	■	■	■	■
	Rack-based Protection System										
	SKF Multilog On-line system IMx-M	■	■	■							
	Transmitter based systems										
	Machine Condition Transmitters	■	■	■	■	■	■	■	■	■	■
Electric motor testing systems	**Electric motor analyzers**										
	Dynamic Motor Analyzer EXP4000										■
	Static Motor Analyzer AWA										■
	On-line systems										
	SKF Online Motor Analysis System NetEP										■
	Static motor quality test systems										
	Motor QC systems										■
Energy & sustainability management	Energy Monitoring Service – Compressed air systems										
	Energy Monitoring Service – Pump systems								■		
	Energy Monitoring Service – Fan systems	■									
	Shopfloor awareness cards	■	■	■	■	■	■	■	■	■	■

Machinery	Components	Railway applications	Mobile equipment	Winders	Wind turbines	Vacuum pumps	Turbomachinery	Transfer lines			
Basic condition monitoring products	**Vibration measurement tools**										
	SKF Machine Condition Advisor	■	■	■	■	■					
	SKF Machine Condition Detector	■	■	■	■	■					
	SKF MicroVibe P	■	■	■	■	■					
	SKF Basic Condition Monitoring Kit	■	■	■	■	■					
	SKF Bearing Assessment Kit	■	■	■	■	■					
	SKF Advanced Bearing Analysis Kit	■	■	■	■	■					
	SKF Electric Motor Assessment Kit										
	SKF Energy Monitoring Kit										
Software	**Monitoring Suite**										
	SKF @ptitude Monitoring Suite	■	■	■	■	■					
	SKF @ptitude Analyst	■	■	■	■	■					
	SKF @ptitude Inspector	■	■	■	■	■					
	SKF @ptitude Observer		■		■				■	■	
	Decision Support										
	SKF @ptitude Decision Support	■	■	■	■	■					
	Analysis and reporting										
	SKF Results Reporter	■	■	■	■	■					
	Analysis and Reporting module for the AX, GX and MX	■	■	■	■	■					
Portable data collectors and analyzers	**Vibration analyzers**										
	Route based										
	SKF Microlog Analyzer GX	■	■	■	■	■					
	SKF Microlog Analyzer AX	■	■	■	■	■					
	SKF Microlog Analyzer GX series – ATEX Zone 2	■	■	■	■	■					
	SKF Microlog CMXA 51-IS	■	■	■	■	■					
	Stand alone										
	SKF Microlog Consultant	■	■	■	■	■					
	SKF Microlog Advisor Pro	■	■	■	■	■					
	Firmware Applications modules	■	■	■	■	■					
	Analyzer kits										
	SKF Spindle Assessment Kit										
	SKF Idler Sound Monitoring Kit										
Inspection systems	**Data managers**										
	SKF Microlog Inspector	■	■	■	■	■					
Surveillance systems	**On-line systems**										
	Monitoring systems										
	SKF Multilog On-line system IMx-W				■						
	SKF Multilog On-line system IMx-S	■	■	■		■					
	SKF Multilog On-line system IMx-T	■	■	■		■					
	SKF Multilog On-line system IMx-R								■	■	
	SKF Multilog On-line system TMU - CMMA 7720										
	SKF Copperhead on-line systems										
	Wireless systems										
	SKF Multilog On-line System WMx	■	■	■	■	■					
	Protection systems										
	Distributed Protection System										
	SKF Multilog on-line system – DMx	■	■	■	■	■					
	Rack-based Protection System										
	SKF Multilog On-line system IMx-M		■	■							
	Transmitter based systems										
	Machine Condition Transmitters	■	■	■	■	■					
Electric motor testing systems	**Electric motor analyzers**										
	Dynamic Motor Analyzer EXP4000										
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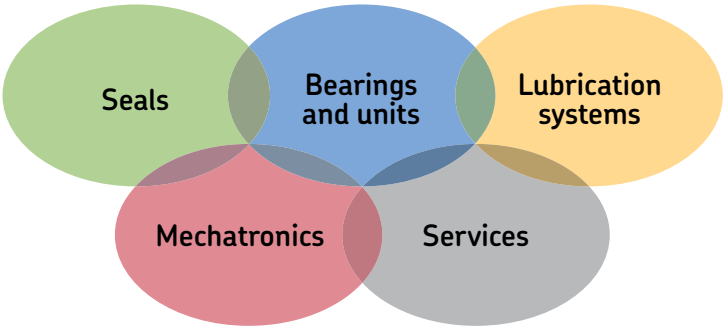
	SKF Online Motor Analysis System NetEP										
	Static motor quality test systems										
	Motor QC systems										
Energy & sustainability management	Energy Monitoring Service – Compressed air systems										
	Energy Monitoring Service – Pump systems										
	Energy Monitoring Service – Fan systems										
	Shopfloor awareness cards	■	■	■	■	■					



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