

Optimise equipment and plant efficiency

SKF (Zambia) Limited's Core Technologies and Services





A world of
reliable
rotation



Relentless
innovation and
continuous
improvement



SKF solutions across the globe

The SKF Group is the leading global supplier of products, services and solutions in six interrelated core technologies comprising bearings and units, power transmission, seals, mechatronics, services and lubrication solutions.

As the world leader and innovator in bearing technology for more than 100 years, SKF has a unique understanding of rotating equipment and how machine components and industrial processes are interrelated, in every major industry worldwide.

This knowledge – coupled with our expertise in sealing solutions, lubrication systems, linear motion, machinery maintenance, mechatronics, and services – enables us to deliver real-world solutions that help maximize mechanical performance over the entire lifecycle of an asset.

As a result, SKF is your single source for off-the-shelf and customised technology products, solutions and services.

Global resources, local deployment

SKF is represented in more than 130 countries and has 15 000 distributor locations worldwide. Our global footprint provides local access to our extensive range of technologies and services and ensures that you can benefit from local support.

Many of the core products and technologies covered in this brochure are available from your local SKF Authorised Distributor. Some of our more specialized products, systems and consultancy services are available by contacting your nearest SKF representative, or at our expanding network of SKF Solution Factories. Wherever and however we deliver them, SKF solutions can help your operation:

- Improve productivity
- Reduce maintenance costs
- Improve energy efficiency
- Optimise design
- Reduce time to market
- Reduce total cost of ownership

SKF (Zambia) Limited

SKF (Zambia) Limited was established in Zambia in 1959 as a branch reporting to SKF Salisbury in Southern Rhodesia. In 1963, the company started trading as SKF East and Central Africa and later in 1969 had an engineering workshop set to handle general engineering jobs.

In 1975 the company was incorporated as SKF (Zambia) Limited prior to setting up a branch office in Lusaka in 1972.

SKF (Zambia) Limited opened a Maintenance Support Centre in 1990 for the purposes of undertaking training in bearing technology in order to assist customers achieve trouble free operations with plant and equipment. The company went on to establish shaft rebuilding facility in the workshop by employing thermal spray welding in 1992 and later in 2001 had incorporated a machine reliability services with emphasis on predictive maintenance scheduling as opposed to breakdown maintenance.

SKF (Zambia) Limited was appointed distributor of Goodyear industrial power transmission belts in 1996 as was already established with most of the users of transmission belts.

In 2000 SKF (Zambia) Limited introduced the Centralized system of lubrication and immediately had some installation made at some major mines in lubricating mill and pinion bearings.

In the year 2002 the company undertook the responsibility to distribute power transmission parts and later in 2003, Non Destructive Testing was introduced as part of the predictive maintenance program.

In the year 2010, SKF (Zambia) Limited has added on to the list of its predictive maintenance portfolios the Baker on and off line motor testing. SKF (Zambia) Limited continues to be innovative and through the years of wide experience in all sectors of industries, both as a local entity and the group has added on the range of products and services to foster growth with emphasis centred on customer value creation.

Bearings, units and housings

Backed by more than a century of bearing expertise, SKF is the world leader in the design, development and manufacture of high performance rolling bearings, plain bearings, bearing units and housings. Our products help companies in countless industries extend equipment lifecycles, increase uptime, reduce maintenance and cut total operating costs.

SKF bearings

Recognized worldwide for their superior quality and long service life, SKF ball, roller and plain bearings are the perfect choice for a wide range of applications. Depending on the bearing type, design and size, many SKF bearings are available in four performance classes: Standard, SKF Explorer, SKF Energy Efficient and SKF super-precision.

SKF Explorer bearings

In response to the ever-demanding performance requirements of modern machinery, SKF developed the SKF Explorer performance class of rolling bearings. SKF Explorer bearings reduce environmental impact by enabling downsizing and reducing both lubricant and energy consumption. Just as importantly, SKF Explorer bearings can reduce the need for maintenance and contribute to increased productivity.

SKF Slewing bearings

Slewing bearings comprise an inner ring and an outer ring, one of which usually incorporates a gear. Together with attachment holes in both rings, they enable an optimised power transmission with a simple and quick connection between adjacent machine components. The bearing raceways, in conjunction with the rolling elements and cages or spacers, are designed to accommodate loads acting singly or in combination, and in any direction.

SKF super-precision bearings

Bearings in the SKF super-precision performance class are designed and manufactured for machine tools, centrifuges, printing presses and other applications that require a high degree of running accuracy and long bearing service life.

SKF units and housings

SKF produces a wide range of ball and roller bearing units and housings to meet the needs of virtually any application. Bearing units, which consist of SKF bearings, housings, seals and lubricant, are pre-greased and pre-assembled for quick and easy installation.



Power transmission

Along with linking moving mechanical components, power transmission products play an important role in overall equipment performance. Backed by deep SKF knowledge about the interplay between bearings and transmissions, SKF Power Transmission products can help customers improve machine reliability and performance. For more info visit: www.skfptp.com

SKF can offer more than other suppliers – a deep understanding of how bearings and power transmission products work together.

We apply this knowledge to help maintenance teams identify and solve transmission-related bearing problems, and choose the best products for a given application.

SKF Power Transmission products are supplied via our own sophisticated worldwide warehousing and logistics system, ensuring fast, reliable access to 30 000 products. This means customers can keep smaller, less costly parts inventories.

The SKF Power Transmission product range includes six main areas:

- Belts
- Pulleys
- Chains
- Sprockets
- Couplings
- Bushings and Hubs

SKF Couplings

Suitable for many applications and environments, SKF Couplings cover a wide range of coupling types, sizes and capacity ratings. For large, heavy-duty applications, SKF Grid and SKF Gear Couplings provide optimum contact with the shaft, and can accommodate high torque values, reduce power loss and minimize the effects of misalignment.



SKF Xtra Power Belts

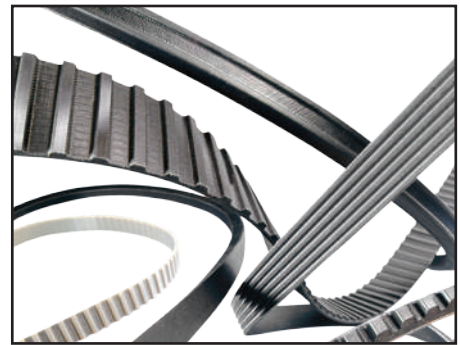
Compared to standard wrapped belts, SKF Xtra Power Belts can deliver up to 40% more power and up to 40% longer application service life. The extended service life, combined with reduced downtime and maintenance, helps cut operating costs.

Advantages

- Reduced pulley groove wear due to optimised cover fabric
- Up to 97% drive efficiency
- Oil- and heat-resistant, antistatic cover
- One-shot belt tensioning – no retensioning after initial run-in
- Smoother running and lower vibration levels
- Good resistance to shock loads

Available profiles

- SPZ, SPA, SPB, SPC (ISO wedge standard)
- 3V, 5V, 8V (RMA standard narrow wedge)



SKF FX Keyless Bushings

SKF FX Keyless Bushings are designed to secure gears, couplings and pulleys to a shaft using mechanical friction rather than using traditional keyways, splines or an interference fit. SKF FX Keyless Bushings are available in 16 different designs, enabling machine designers to match the best bushing solution to the application.



SKF Xtra Chains

For most industrial applications, roller chains are one of the most cost- and energy-efficient ways to transmit mechanical power between two or more shafts. Robust SKF Xtra Chains improve on these standard chain benefits by delivering even better performance and longer service life.

The different types of SKF Xtra Chains are as follows:

- SKF Xtra Corrosion Resistant Chains
- SKF Xtra Strength Chains
- SKF Xtra Performance SLR Chains



SKF Belt Frequency Meter

The SKF Belt Frequency Meter is one of the most accurate and reliable tools when it comes to measuring belt tensions. It consists of a hand-held meter which is attached to an optical sensor for measuring the belt tension. It is suitable for measuring the tension of V-Belts, Banded belts and timing belts.

The tool offers:

- A most precise way of measuring belt tension compared to other tools

- Quick and reliable tension checks, especially if more than one belt measured at a time
- Accurate, repeatable measurements
- Low risk of human error
- Suitability for use in a noisy environment



This solution offers the following benefits:

- alignment is done only once
- quick and reliable tension checks
- safe, simple and fast belt replacements

It provides better reliability for the whole belt drive, which results in:

- reduced cost due to prolonged belt life
- fewer time-consuming breakdowns
- less vibration and therefore higher efficiency

SKF Belt Tensioner System

The SKF Belt Tensioner System is an innovative tool, which facilitates quick, easy belt drive maintenance and belt replacements.



SKF Solution Factory*

SKF's value proposition is to offer its customers leading edge technology products and integrated solutions for reduced TCO and enhanced asset performance. SKF Solution Factory Africa allows us to deliver on this promise by integrating SKF technology products, service capability and industry / application knowledge to provide value adding solutions.

** Supported from SKF South Africa*

To provide our customers with direct access to SKF's global capabilities, SKF has created a unique concept: the SKF Solution Factory. Here, under one roof, we offer a wide range of specialized services that draw on all of our core competencies and industry-specific knowledge.

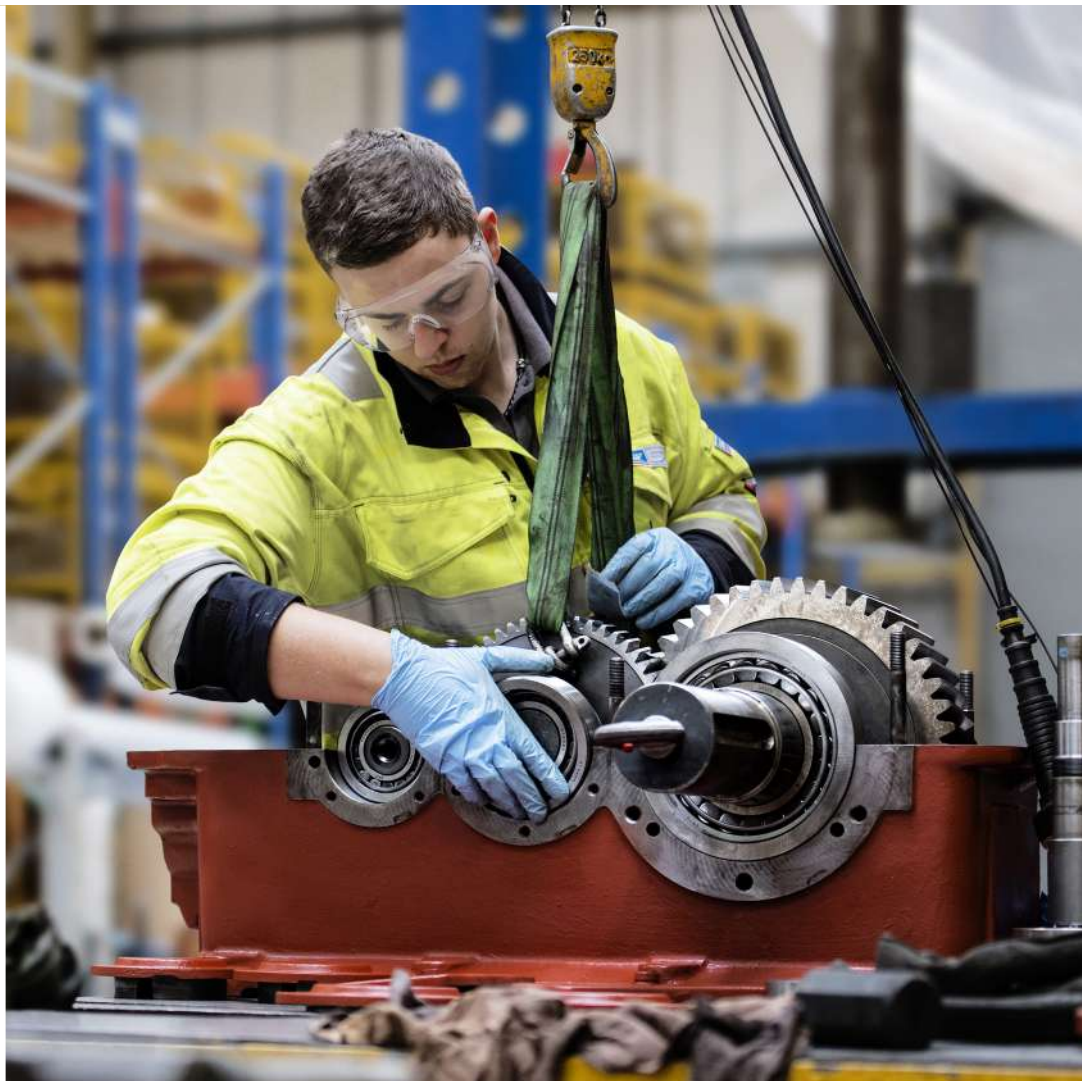
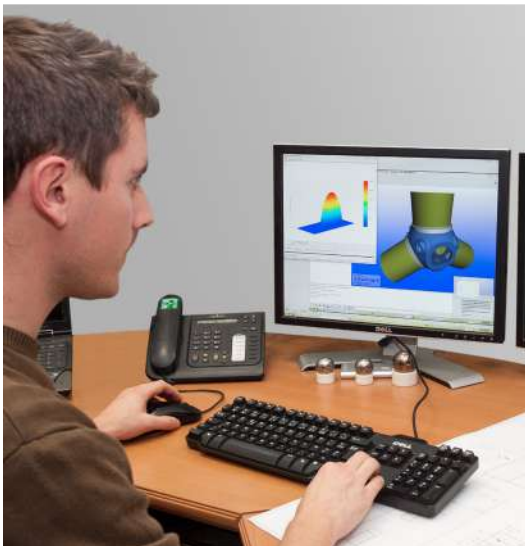
At SKF Solution Factories, customers can solve difficult application challenges, consult with lubrication specialists and have a custom-machined seal designed and manufactured on the spot.

Solution

Value creation by leveraging knowledge from SKF core technologies (bearings, seals, lubrication systems, mechatronics, services and power transmission), industry and application experience to offer customers integrated solutions.

Factory

- Infrastructure, workshop facilities and equipment
- Specialist technical resources and applications
- Optimised business processes



Seals, Power Transmission and Customisation Centre

The Seals, Power Transmission and Mechatronics Customisation Centre is where products are customised and augmented to customer specifications as part of SKF's value selling proposition.

SKF Training Solutions

SKF's Training Solutions is an extension of the SKF Group vision, 'Equipping the world with SKF knowledge' and serves as a global vehicle to place knowledge into the hands of customers and employees. SKF's Training Solutions affirms SKF's philosophy of continued investment in people through training, irrespective of the economic climate.

Maintenance Products Repairs Centre and Solutions Van

The Maintenance Products Repairs Centre is equipped to repair damaged bearing heaters and other maintenance products, whether still under warranty or not. The SKF Solutions Van - the mobile maintenance products, laser alignment and condition monitoring demonstration and training vehicle, is used across the country to do training and product/ solution demonstrations at customers' premises.



Mechanical engineering

SKF has a team of qualified mechanical engineers and service technicians to provide value adding technical support and specialised installation and maintenance services to optimise the performance and reliability of rotating mechanical equipment.

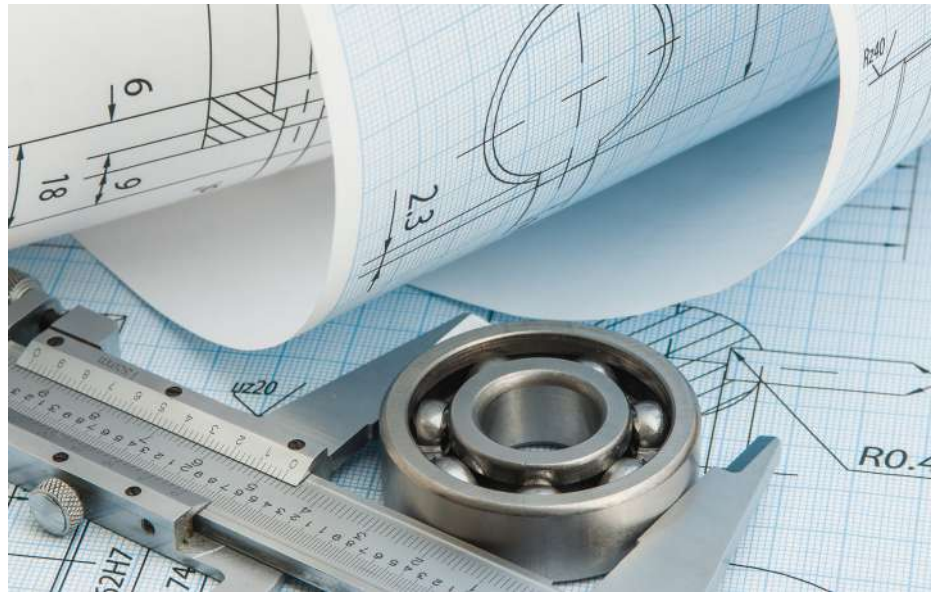
Mechanical Field Services

Specialised skills and equipment are required for the installation of large-sized and precision bearings. SKF has a team of service technicians that are experienced in the installation and removal of rolling bearings and associated components used in rotating mechanical equipment.

Our technicians have a comprehensive range of SKF Maintenance products and custom-designed tools at their disposal to facilitate easy mounting and dismounting.

Services offered include:

- On-site mounting and dismounting of rolling bearings and associated components.



- Bearing replacement and reconditioning of rotating equipment in the service workshop at SKF Witfield.
- Periodic bearing inspection services on critical, high value bearing assemblies.
 - Wear trending
 - Visual assessment of bearing condition
- Lubrication servicing
 - Lubricant replacement / replenishment
 - Oil / grease analysis

Assisted by SKF factories, development and research centres, and industry specialists across the world, services offered include:

- Product selection advice
- Advanced bearing life calculations
- Root cause failure analysis
- Lubricant selection and lubrication recommendations
- Mounting and dismounting guidelines for SKF products
- On site troubleshooting
- Design of bearing arrangements
- Finite element analysis
- System simulations

Application Engineering:

Our team of mechanical engineers are available to provide value adding technical support and ensure optimum performance of SKF's broad range of products and services.

Project engineering*

The SKF Project Engineering Department offers custom designed, value adding solutions that yield superior performance, improved reliability and optimised service life of rotating mechanical equipment. SKF has designed and manufactured specialised engineering products in South Africa since the early 1960's and we are the original equipment manufacturer of many specialised engineering assemblies used in critical equipment across a broad range of key local industry segments.

Our team of qualified mechanical engineers is available to assess problematic equipment and develop and implement customized solutions by integrating:

- Leading edge SKF products from our 6 core technologies
- Custom designed, locally manufactured SKF products to meet specific application requirements.
- Advanced design, industry and application knowledge.

- Comprehensive service delivery capability.

SKF Project Engineering capability includes:

- Design and manufacture of specialised engineering components
- Reconditioning of worn or damaged equipment
- On site quality assurance assessment of shaft and housing seating's for critical equipment to assess whether they conform to the recommended dimensional, geometric form and surface finish specifications
- Customisation of standard SKF Products ie. Matched bearing sets, bearing modifications, special grease fills for sealed bearings, modification of housings to accommodate vibration sensors and temperature probes etc.

Key products and solutions include:

Specialised housing assemblies for mill trunnions

SKF offers a comprehensive range of mill trunnion housing assemblies to accommodate large diameter spherical roller bearings.

Our standard design incorporates bearings with tapered bore mounted on tapered sleeves with oil injection features for ease of mounting and dismounting. Variants are available for bearings with bore diameters from 530 to 1 800 mm. A wide variety of alternative sealing arrangements are available to suit specific application requirements.

Complete kiln support roller assemblies.

SKF offers complete radial and thrust roller assemblies for rotary kilns. We have the experience and capability to optimize the design of the housing, roller, shaft, bearing arrangement and sealing arrangement for superior performance and service life. SKF also offers a reconditioning service for existing assemblies which become worn or damaged in service. Disassembly, assessment and assembly of the units is performed in our service workshop at SKF South Africa.

** Supported from SKF South Africa.*



Specialised housing assemblies for mill pinions

SKF offers a broad range of specialised mill pinion housing assemblies which have been developed to withstand arduous operating conditions at mineral processing plants. Variants are available for grease and oil lubrication which incorporate highly effective sealing arrangements offering superior contaminant inclusion and lubricant retention for oil lubricated assemblies. Our product range includes modified SNL housings, and locally manufactured SDJD and SDAF housings. Our larger housings are manufactured from spheroidal graphite ductile iron for increased strength and resistance to impact loading.



Customised solutions for fans

Industrial fans are widely used in all industry segments. Typical operating conditions for many fans include high speeds, high temperatures from the process, unbalance and a heavily contaminated operating environment. This places high performance demands on the bearings, lubricants and sealing arrangements. SKF has developed customised bearing / housing assemblies for a broad range of industrial fans. These include dual bearing housing assemblies for smaller high speed fans, customized split SNL plummer block housing assemblies for grease lubrication and customized split SONL plummer block housings for oil bath or circulating oil lubrication.

SKF WJSN and WJSD taconite seals

These locally manufactured taconite seals were specifically developed for bearing assemblies that operate in arduous operating environments locally in the mining / material handling industries where standard seals offer inadequate protection against contaminant / water ingress. They are widely used on pulleys for long overland conveyors and customer benefits include:

- Highly effective sealing performance.
- Increased bearing service life.
- Lower maintenance requirements.
- Reduced grease consumption.



Other products and services

- Bearing / housing assemblies for crushers.
- Bearing / housing assemblies for paper-making machines.
- Bearing / housing assemblies for continuous casting machines.
- Bearing / housing assemblies for sugar cane knives and shredders.
- Bearing / housing assemblies for sheave wheels.
- Reconditioning of tapered journals.
- Adapter sleeves, withdrawal sleeves, lock nuts, sealing components, locating rings, skip guide rollers, raffinator assemblies for refiners etc.

Services

Thanks to a century of bearing manufacturing, plus hands-on experience in every major industrial application area, SKF has unmatched rotating machinery expertise. By combining this knowledge with the latest technologies, we can offer many specialized services and solutions to help you reduce Total Cost of Ownership, reduce maintenance, cut energy consumption and reduce environmental impact. SKF services range from training and logistics to full PdM service contracts with qualified manpower and technology to help maintain your plant – even remotely.

Reliability Maintenance Services

SKF Reliability Maintenance Services offer specialised machine maintenance services via skilled and experienced SKF Reliability Technicians to improve machine reliability and enhance plant performance and up time.

Services offered include:

- Precision shaft alignment
- Precision geometric alignment

- Pinion / girth gear alignment
- Precision balancing
- Oil / grease sample collection and analysis
- Vibration data collection and analysis
- Machine reliability assessments

Maintenance service contracts

PdM Services: SKF can provide the skilled workforce and associated technologies to perform Predictive Maintenance Services (PdM) at your plant.

PRM Services: Want to move from reactive maintenance to a Proactive Reliability Maintenance (PRM) programme? SKF can supply all necessary resources and manage the entire process.

Training

SKF training programmes can give your staff the knowledge and hands-on experience to help your operation:

- Achieve higher levels of personnel and machine efficiency
- Determine and fix the root cause of machine and component problems

- Reduce accidental damage or under-utilization of equipment
- Increase machine uptime and productivity
- Enhance plant safety

Mounting and dismounting of bearings

Bearings have to be mounted in the correct way and work under prescribed conditions to give expected life. Mounting bearings with wrong tools or wrong methods and/or on components with incorrect dimensions can be extremely costly, in particular where large bearings are involved. Our Mobile Service Team has long experience in mounting and dismantling large size bearings like bearings for mill trunnions, pinions, crushers, support rollers only to mention a few. We have the required tools and measuring equipment to ensure a professional result. This Service is available from our company in Zambia.

Girth gear/pinion lubrication

Girth gears and pinions are extremely expensive equipment and to ensure a long and trouble free life they have to be properly installed and lubricated. We offer design, installation and maintenance of spray systems using equipment manufactured by Bijur-Farval. We are the agent for Klueber products, which has proved to be second to none in protection of these drives. We offer a scheduled survey of gear drives including vibration analysis of the pinion bearings, temperature measurement of the gears by infrared thermography and a visual inspection of the gear flanks by means of strobe light. This survey is carried out without any disturbance to the operation.



Services

Machine reliability systems

The demand for reliable, trouble free operation and higher utilization of equipment is constantly increasing and the days are gone when the machines were allowed to run until they broke down. We are today assisting our Customers in Predictive Maintenance by either scheduled Condition Monitoring analysis or on-line systems. We can offer different levels of involvement depending on the Customer's preference, i.e. we can do full Condition Monitoring as per agreed schedule, carry out the analysis and present reports or we can train the Customer's own staff do the data collection which is normally e-mailed to us and we carry out the analysis and e-mail back the reports. For Customers who have fully qualified staff to carry out analysis, we can provide training programmes and audits if so required.

Balancing and laser alignment

We have full range of equipment for on site balancing and laser alignment of shafts. We only work with calibrated equipment and with well-trained staff with documented experience. For Customers who prefer to buy their own equipment we are able to provide training.

Non destructive testing

We are fully equipped to carry out NDT using Ultra Sonic Flow Detection (UT), Magnetic Particle Inspection (MPI) and Liquid Penetrant Inspection (PT). Our UT equipment is digital and capable to test-

ing shafts up to 10 m lengths. We have approval from Mine Safety Department to carry out Statutory Inspections. Our people are qualified to level II in all fields.

Oil analysis

Oil Analysis is today a recognized tool to monitor the condition of industrial gearboxes, combustion engines, hydraulic systems and transformers. The tests for industrial gearboxes include particle counts and sizing and we can test transformer oil for dissolved gasses and also for PCP if this should be required. Test results are normally forwarded by e-mail to the Customer and each report shows the trend for the last four tests.

Thermographic and ultrasonic surveys

We offer Thermographic surveys by infrared camera to determine possible hot spots in electrical as well as mechanical installations. We also use Ultrasonic equipment to determine problems, which cannot be detected by infrared cameras. Typical problems are defective insulators on overhead lines, faulty steam traps just to mention a few. We have personnel with vast experience and extremely high qualifications.

Electrical motor testing

In 2007, SKF acquired Baker Instrument Company which is the industry world leader in electrical motor test equipment for condition monitoring, predictive maintenance, motor manufacturing and repair. The state of the art equipment SKF enables us provide a wide range of tests for static and dynamic motor monitoring that assist maintenance professionals in avoiding unex-

pected downtime and electric motor failure.

Trouble shooting

When a bearing has failed it is important to determine what has caused the failure and only when that is known can the correct actions be taken to avoid a repeat. To be able to carry out a professional investigation into a bearing failure requires highly skilled and experienced people and we can with confidence claim that we have the most experienced people for this task in Zambia.

Conversions

We are frequently requested to work out conversions to existing bearing or sealing arrangements. Reasons for this can be that environmental factors have changed and are not what the designers had taken into account, increased production demand requires improved performance from the bearing arrangement or sometimes simply poor designs. We have our own local design facility and we have also access to all designs carried out by the SKF Group. With the continuous improvement in bearing design it is often possible to improve the performance of a machine and at the same time reduce space required for the bearing and/or sealing arrangement, alternatively increase performance.

Condition monitoring technologies

With the right machine data – and the right tools to interpret it – you can optimise your maintenance programme for greater productivity and more effective asset lifecycle management. SKF has a complete, integrated range of condition monitoring tools and technologies to make it happen. SKF hardware and software is designed to make it easier to collect, analyse, use and share machine condition data.

Whether your maintenance programme is just getting off the ground or you are executing an enterprise-wide strategy to take it to the next level, SKF condition monitoring solutions can help: Minimize the risk of unplanned downtime, Improve operational efficiency, Reduce maintenance costs, Optimise manpower resources

Basic condition monitoring products

Designed for experts and novices, this basic proactive maintenance equipment helps users spot-check machines and establish trends to identify problems early before they result in costly, unplanned downtime.

Portable data collectors and analysers

The SKF Microlog series of portable data collectors and analysers can handle all tasks needed to perform predictive maintenance on a range of rotating machinery. Route-based systems are supported by SKF @ptitude Monitoring Suite software.

Online surveillance and protection

Ideal for installation in unsafe or hard-to-reach locations, the SKF Multilog Series of on-line monitoring systems automatically collects vibration and process data 24/7, transmits data into the SKF @ptitude Monitoring Suite and alerts plant personnel to machine condition changes.

Maintenance products

SKF maintenance products help achieve maximum bearing service life, optimise machine performance and improve machine and operator safety. Products include pullers, fitting tools, heaters, instruments, lubricants, lubricators and oil injection equipment.

Shaft alignment tools

Shaft misalignment in rotating equipment generates loads and vibration that can damage bearings, seals and couplings, and increase energy consumption. SKF shaft alignment tools use advanced technologies to detect and correct shaft misalignment, quickly and easily.

Wireless monitoring

Our market-leading portfolio of wireless condition monitoring solutions includes options for WiFi, wireless HART and Bluetooth. SKF wireless technologies are ideal for monitoring assets in hard-to-reach or hazardous areas, or locations encompassing large amounts of real estate, such as tank farms and refineries.



Bearing remanufacturing*



SKF has established a state of the art Bearing Remanufacturing facility at our Witfield premises. This forms part of a global SKF project to offer quality remanufacturing facilities to service local markets.

The centre offers the highest possible quality for remanufactured products using custom designed washing machines, polishing stands, measurement equipment, preservation machines and a cage sandblasting machine based on specifications from the SKF Industrial Service Centre in Steyr, Austria.

Today SKF expertly remanufactures bearings that were previously destined for scrapping, thereby saving costs, raw materials and energy.

Target market for remanufacturing

- Bearings removed from service for routine maintenance or other reasons which have operated for periods that are below their design life.

- High value bearings that have been stored for intervals that exceed the recommended shelf-life of the preservative.

Suitable bearings

- Bearings with a bore diameter greater than $\pm 250\text{mm}$ can generally be economically remanufactured.
- Small bearings can be accommodated but the price of the remanufactured bearing can be close to that of a new bearing.
- Bearings that can be non-destructively disassembled.
 - Spherical roller bearings and CARB bearings
 - Spherical and cylindrical roller thrust bearings
 - Single row angular contact ball bearings
 - Certain 4-row cylindrical, taper roller and slew ring bearings

Detailed bearing assessment

Before any bearing is remanufactured it is assessed by a skilled SKF technician.

A comprehensive bearing assessment report is compiled that includes:

- A summary of the condition of the components
- A description of any damage observed on components
- Measurements taken to assess dimensional accuracy of components and internal raceway and rolling element wear levels

Customer Benefits

Significant cost savings

- Remanufactured bearing cost is between 10 and 50% of the price of a new bearing

Extended service life

- Removal of stress concentrations on internal surfaces prolongs residual bearing service life

Risk minimisation due to:

- Optimised process
- Stringent quality control requirements, which are an integral part of the process
- Clearly defined acceptance criteria

Short term availability

- Remanufactured bearings can alleviate production stoppages associated with extended lead times for certain large size bearings
- Lead times for remanufactured bearings vary from 1 day to three weeks, depending on the scope of work

Suitability for long term storage

- Remanufactured bearings are preserved and wrapped according to stringent SKF global standards

** Supported from SKF South Africa.*

Lubrication solutions

Did you know that poor lubrication causes about 36% of all premature bearing failures? Along with helping to reduce premature bearing failures and machine downtime, proper lubrication can increase energy efficiency. At SKF, we can help you realize the true potential of lubrication.

SKF lubrication solutions range from specialized lubricants to state-of-the-art lubrication systems. Integrated SKF lubrication solutions combine our expertise in bearings, seals and condition monitoring with our tribology knowledge – the study of friction, wear and lubrication. You can also count on leading technical support and services, including management programmes to help with lubricant selection, lubrication planning and lubrication system condition monitoring – all from a single, reliable partner.

Lubricants

SKF's vast experience in the development of rolling bearings forms the basis for the development of a specialised range of lubricants, the superior quality of which is obtained through continuous testing and research. A comprehensive range of SKF Greases is available to cover the specialised lubrication requirements of a broad range of industrial and automotive applications, which include the following conditions:

- Extreme temperatures
- High and low speeds
- Heavy loads
- Requirement for food compatibility
- Water resistance
- Pumpability



Lubrication management tools

Developed to provide applications with the right lubricant at the right time, SKF lubrication management tools include:

- SKF LubeSelect, which assesses bearing operating conditions to determine the optimum grease
- SKF Grease Test Kit, to assess grease condition in the field
- SKF Lubrication Planner, to develop and manage a lubrication plan
- SKF LuBase, which provides details about 2 000+ bearing lubricants for comparison and selection purposes

Automatic lubricators

From single-point to multi-point units, SKF automatic lubricators are an easy to use, cost-effective and reliable way to improve machine lubrication and save time on manual lubrication. Around-the-clock solutions, such as SKF SYSTEM 24 and SKF MultiPoint, provide consistent, controlled dosages of SKF lubricants, thereby minimising the risk of over- or under-lubricating.

Manual lubrication

From grease guns and packers to pumps and meters, SKF manual lubrication tools include everything maintenance professionals need to help keep bearings supplied with the precise amount of contaminant-free grease.

Lubrication services and support

SKF offers a wide and growing range of lubrication services, including centralized lubrication system installation, start-up and maintenance, oil and grease analysis and training. Using the SKF Client Needs Analysis – Lubrication Management, we can identify your plant's maturity with regard to lubrication practices and recommended actions for improvement.



Lincoln Lubrication



South African-based lubrication specialist Lincoln Lubrication SA (Pty) Limited form part of SKF's Lubrication Systems core technology.

Lincoln Lubrication SA specialises in Asset Protection Management with Full Circle Reliability. Our understanding of assets includes not only machines, and equipment, but also staff and their safety.

Lincoln Lubrication specialises in automated lubrication systems that can be fitted to any application, machine or piece of equipment.



In addition to lubrication systems and equipment, Lincoln Lubrication also offers other asset protection management technology including hose reels, liquid Fast Fill, and fire suppression systems. As a complementary product, GreenLinc offers environmentally accredited spill kits.

The hose reel product line offers a complete range of hose and cable reels for any application, including bespoke hose reels for those unusual applications.

The fire suppression range specializes in superior AFFF systems for mobile and stationary equipment.

Fast Fill is a dry break rapid filling system for oils, fluids and diesel. Coloured coded, and non-interchangeable, oil nozzles and receivers for different functions virtually eradicate cross contamination.



LINCOLN
LUBRICATION SA

Sealing solutions

Being the world's only bearing company with seal manufacturing capabilities, SKF supplies a wide range of sealing solutions for rotating, reciprocating and static applications to industries worldwide. Innovative SKF sealing solutions help customers to increase productivity and process reliability as well as to reduce Total Cost of Ownership.

Based on extensive knowledge and experience in material technology, design and manufacturing processes, SKF offers standard seals and custom engineered sealing solutions in a broad range of elastomer, thermoplastic and thermoplastic elastomer materials. Our dedicated local teams of experts are there to solve your challenging application demands.

Seals for general industrial applications

With a variety of designs and materials, SKF can offer shaft sealing solutions for almost any power transmission application. Examples include standard metric rubber outside diameter seals and low-friction seals with the SKF WAVE lip design. SKF also offers solutions with PTFE sealing lips, which can withstand aggressive environments, high temperatures and pressures, as well as dry running.

Fluid power sealing systems

SKF offers a wide range of fluid power seals, designed to optimally work together in well-balanced sealing system solutions in a hydraulic cylinder. The assortment includes rod, piston and wiper seals as well as guides, O-rings and back-up rings. SKF fluid power seals are available in a multitude of materials to provide optimal compatibility with the various hydraulic fluids encountered in service.



SKF machined seals and customised sealing solutions

Independently of improving an existing design or creating a new solution, SKF can help analyse the application requirements and then select/create the optimal sealing solution. Thanks to SKF SEAL JET manufacturing processes for machined seals, customers benefit from high flexibility and short delivery times for customised sealing solutions.



Seals for heavy industry applications

SKF seals for heavy industry are designed to work under tough operating conditions, such as high speeds and temperatures, while retaining the lubricant and excluding contaminants. Options include heavy-duty metal-cased seals, rubber outside diameter seals with metal inserts or fabric-reinforced and all-rubber seals.



SKF Trackstar seals

SKF Trackstar seals are track pin seals designed for oil-lubricated, off-highway track chains. Installed on the pin connecting a pair of chain links, SKF Trackstar seals feature a rubber energizer and a polyurethane sealing ring. There is also a heavy-duty design including a metal reinforcement ring moulded into the polyurethane sealing ring, providing additional rigidity for severe operating conditions.



SKF SCOTSEAL

Designed for hub bearing arrangements typically found on commercial and off-road vehicle axles, SKF SCOTSEAL is a robust, customised sealing unit. All three different designs – Classic, Longlife and PlusXL – install easily and accommodate all driving conditions.



SKF Mudblock



SKF Mudblock cassette seals are radial shaft sealing units developed for heavy-duty applications in harsh environments. All SKF Mudblock seals are designed with an integrated wear sleeve, but can

have any one of a number of sealing lip and auxiliary lip configurations. Their geometry provides excellent lubricant retention and optimum protection against water, dust, mud and other contaminants.

V-ring seals

V-ring seals are all-rubber seals for rotating shafts. Featuring a conical-shaped sealing lip joined to the body with a resilient “hinge,” V-ring seals install directly on the shaft and rotate with it, retaining lubricants and excluding water spray and solid contaminants. They can also act as a grease valve. SKF offers V-ring seals in different designs, materials and sizes to meet most application requirements.



SKF SPEEDI-SLEEVE

SKF SPEEDI-SLEEVE is a well-proven solution to fix worn shafts within minutes, providing an excellent sealing surface without having to disassemble the shaft or change the seal dimensions.

The sleeve combined with an SKF radial shaft seal provides an enhanced sealing system, resulting in a consistent and increased operating durability. This improved service life predictability assists with maintenance planning. For large shafts, SKF can also offer wear sleeves for heavy industrial applications.



Metal face seals

SKF metal face seals HDDF are designed for severe operating conditions at relatively low circumferential speeds. HDDF seals consist of two identical metal sealing rings and two similar Belleville washers. Originally developed for off-road and tracked vehicles, the seals are also suitable for other applications exposed to sand, soil, moisture and more.



SKF Machined seals

SKF is the global market and technology leader in high quality custom engineered sealing solutions offering a comprehensive range of machined seals for many industries.

The innovative production system – SKF SEAL JET – reduces manufacturing and dispatch time to a minimum. Virtually any kind of seal for any conceivable application, in any dimension and design, can be produced.

SKF offers machined sealing solutions for fluid power, fluid handling and power transmission applications including special large diameter seals with a virtually unlimited diameter range.



SKF Authorised Distributors



SKF South Africa has dedicated Authorised Distributor networks for the industrial, lubrication and agricultural aftermarket.

Our authorised distributor networks deliver a valuable mix of resources to SKF customers across South Africa and the neighbouring countries. SKF Authorised Distributors combine local knowledge, infrastructure and capability with support from expert SKF application Engineers to offer our customers the highest level of service.

SKF serves the industrial aftermarket exclusively through Authorised Distributors that are geographically situated to better serve the needs of the customers. The Authorised Distributors are linked directly to the SKF systems and operate as an extension of SKF.

SKF Authorised Distributors



When you purchase your bearings from an SKF Authorised Distributor, you can do so with confidence, knowing that you have access to expert advice, plus the assurance that you will avoid the problems associated with counterfeit bearings. In addition to supplying genuine SKF bearings, your SKF Authorised Distributor can provide you with seals, lubrication, linear motion, power transmission, services and related products.

SKF Certified Maintenance Partners

SKF Certified Maintenance Partners (CMP) are SKF

Authorised Distributors who have received advanced machine reliability training to help you monitor machine operation, predict machine failures and uncover hidden cost-saving opportunities. Using a range of proprietary SKF tools and analysis software, they collect and analyse much more machinery and process data than most predictive-maintenance service providers.



SKF Agricultural Distributors

To better assist end-user customers in the agricultural industry, SKF has dedicated Agricultural Distributors around the country.



SKF Documented Solutions Program

Using web-based software that calculates the expected value of a machine solution, the SKF Documented Solutions Program lets you see how SKF technologies can benefit your unique situation. The program calculates total cost reductions in areas such as energy, lubrication, inventory, warranty costs, manpower, machine life, reliability, output and quality, equipment downsizing and over 250 others.

The program can also generate specific solutions for targets identified by the SKF Client Needs Analysis – a program that compares a company's own operating information to global best practices in order to identify the most promising areas for improvement.

SKF Logistics Services

SKF South Africa's central warehouse is located at SKF's Head Office in Witfield, Boksburg.

This warehouse services 44 local Distributors (Industrial, Lubrication and Agricultural) as well as 7 Distributors located in Namibia, Mozambique, Zambia, Zimbabwe, Swaziland, and Botswana.

The Logistics Department handles over 39,000 stock items and the central warehouse offers a 24/7 breakdown service.



SKF have a number of international distribution centres that are located in Belgium, Singapore and the USA. Factory warehouses are located in Sweden, Germany, Italy and France.

One core advantage of these international distribution centres is that one can check availability of products and place necessary orders on-line, thereby saving time and money.

SKF Certified Electric Motor Rebuilders

For many companies, electric motor failures cause a continual cycle of costly repairs and unplanned downtime – factors that can hurt the bottom line. SKF Certified Electric Motor Rebuilders apply exacting standards and specifications to enhance motor reliability, and performance thereby increasing profitability.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Notes

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Distributor Listing

Authorised Distributors:

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