

# SKF - A world of reliable rotation

Discover the full range of SKF products and service



# Bearings, bearing units, bearing housings and accessories



## Bearings

There is practically no ball or roller bearing type that **SKF** does not manufacture.

We also offer a wide range of **split bearings, spherical plain bearings and rod ends**.

They are all available in a variety of designs, featuring **different types of materials, seals and lubrication methods**.

## Bearing units

**SKF bearing units consist of bearings, seals, lubricants, shaft locking devices and bearing housings.**

The units are pre-assembled and ready for installation, including roller or ball bearings.

In addition to standard bearings, **SKF** produces and supplies roller bearings for specialized applications in the **agriculture, food or pharmaceutical industry**, where special materials, lubricants, seals or bearing housings of composite materials, polymers or stainless steel are required.

## Bearing housings and mounting accessories

To further improve the performance of its bearings, **SKF** designs and manufactures a wide range of bearing housings and mounting components – recognized for their quality and durability. **SKF** bearing housings feature a **unique design** which **facilitates mounting, alignment, lubrication and protection against contamination**. In addition, they are manufactured with tough precision so that, in combination with SKF bearings and with the use of an appropriate lubrication method, the bearing units ensure **maximum service life**.

# SKF Explorer performance class bearings

Combining their expertise in bearing design, tribology, metallurgy, lubrication and manufacturing, SKF engineers spent years maximizing SKF bearing service life. The result is a new standard of excellence in both bearing performance and precision manufacturing – one that is still unmatched in the marketplace.

**SKF Explorer is the world's leading performance standard introduced by SKF for most types of bearings.**

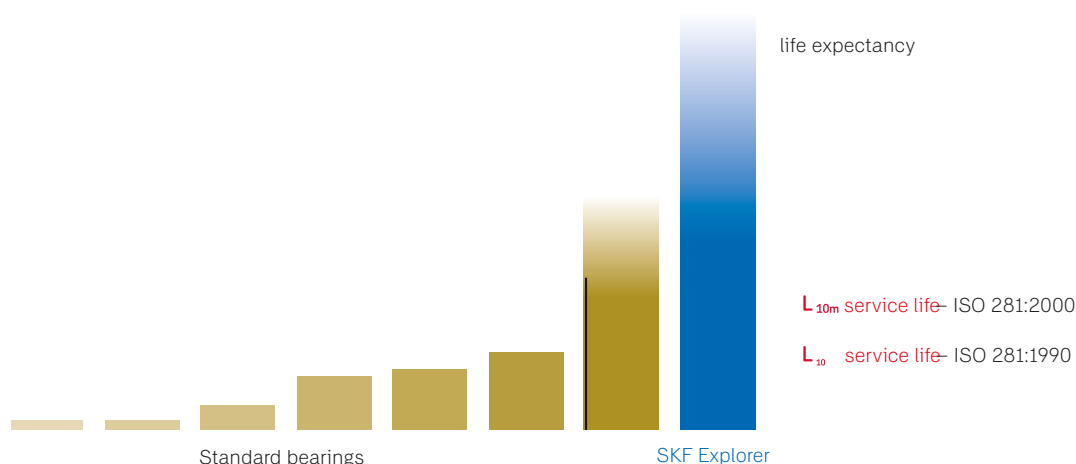
- **SKF Explorer** performance class bearings are superior to standard performance bearings in terms of dimensional accuracy, as they ensure better fit on the appropriate shaft, bearing housing, abutments, and (if applicable) when mounting in sets.
- **SKF Explorer** performance class bearings are distinguished by tighter dimensional and running accuracy, and for the high precision of rolling elements. The achieved running accuracy is significantly improved compared to the standard ISO class, providing low levels of vibration, reduced friction and reduced operating temperature, longer lubricant life, and less energy consumption.
- **SKF Explorer** performance class bearings have better thermal stability compared to standard performance bearings. During operation, thermal expansion of rings is reduced, thus the loading conditions remain relatively stable over a wide range of operating temperatures.



## Designed for maximum performance

SKF Explorer performance class bearings are distinguished by:

- **Optimized internal geometry** for reduced friction, wear and heat generation;
- **Optimized rolling elements** for load distribution and reduced level of vibrations;
- **Increased strength cages** designed for **optimal rolling element guidance** and efficient lubricant distribution;
- **Reduced roughness and improved raceway** finishing to lower the friction and lubrication film formation under optimal conditions;
- **Very clean and homogeneous steel**, contributing for the exceptional wear and fatigue resistance;
- **Patented unique heat treatment process** better controls the hardness, toughness and dimensional stability.



# Solutions for Food & Beverage

## SKF Blue Range

Completely sealed, lubricated for life and designed for increased bearing performance, The SKF Food Line ball bearing units – Blue Range have been developed to offer a complete range of hygienic and high-performance bearing unit solutions for the most demanding Food and Beverage environments.



## High temperature bearings

SKF high temperature bearings incorporate a graphite-based lubrication that continuously lubricate the bearing, eliminating the use of grease and oil.



Ideal for applications in industries such as metals and food & beverage, these bearings are designed for trouble-free operation at temperatures up to 350°C.

## Bearings with Solid Oil

SKF bearings with Solid Oil are designed for use in applications where high levels of moisture and incidental contact with water and other contaminants are real issues.

These bearings are also an excellent choice for applications where relubrication is impractical or dangerous.



Solid Oil is an oil saturated, polymer material that virtually fills all of the free space in the bearing. In service, oil is released from the material into the narrow gaps between it and the bearing components, thus providing effective minimum quantity lubrication.

## Food grade grease

NSF Certified for use in applications where incidental food contact cannot be excluded. They rely on the ISO 21469 standard which helps ensure that they are produced and delivered according to the highest hygienic requirements.



## SKF Food line spherical roller bearings

The bearing, which is self-aligning, is manufactured to the Explorer performance class. The bearing is pre-filled with NSF category H1 grease, which is optimised for food industry use. A high-performance, nitrile butadiene rubber contact seal – both FDA- and EC-approved – protects against water, detergent and contaminant ingress. It minimises the risk of grease leaking from the bearing, which reduces relubrication and raises bearing performance and service life. The seal is also coloured blue, making it easier to detect fragments should they end up in the food.



## SKF Food line stainless steel deep groove ball bearings

SKF Food Line stainless steel deep groove ball bearings (suffix VP311) offer high corrosion resistance for virtually all food and beverage environments. Compliance with food safety requirements make the SKF Food Line stainless steel deep groove ball bearings an ideal solution for virtually all applications in food and beverage processes.



- High quality grease suitable for typical food and beverage application conditions
- The seal compound is a synthetic rubber, coloured blue for optical detectability should any fragments enter the food stream

## SKF Food line deep groove ball bearings with seals

SKF Food line deep groove ball bearings are compliant with food safety regulations. Designed with food grade seals and grease, they enhance food safety, increase reliability and support sustainable development in non-corrosive environments (VA947).

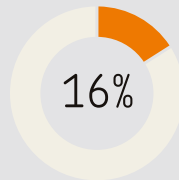
Single row deep groove ball bearings with seals are particularly versatile, have low friction and are optimized for low noise and low vibration, which enables high rotational speeds.





# Tools for mounting and dismounting

Did you know that 16% of the premature failures of bearings are due to improper installation?



Mounting and dismounting are critical stages in the bearing service cycle. Applying appropriate maintenance practices and using appropriate tools, significantly extends the service life of the bearing, and has a positive effect on machine performance and efficiency.

## Mechanical tools

### Bearing fitting tool kits

Designed for quick and precise mounting of bearings, while minimizing the risk of bearing damage.



### Hook spanners



### Mechanical and hydraulic jaw puller kits



# Induction heaters

Induction heaters allow for efficient and accurate heating of bearings and cylindrical parts.

Available in a wide range of designs and sizes.

## TWIM 15



## TMBH 5



## TIH



# Hydraulic tools

Pumps rated for operating pressure of 30 to 400 MPa.



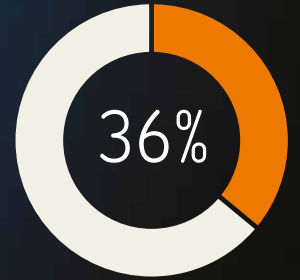
All procedures can be supported by the **SKF Drive-Up Method** applications available in the Apple AppStore and Google Play.



Scan the QR code for direct access to the **SKF Drive-Up Method** application.

# Lubrication products and solutions

Did you know that 36% of the premature failures of bearings are due to poor lubrication?

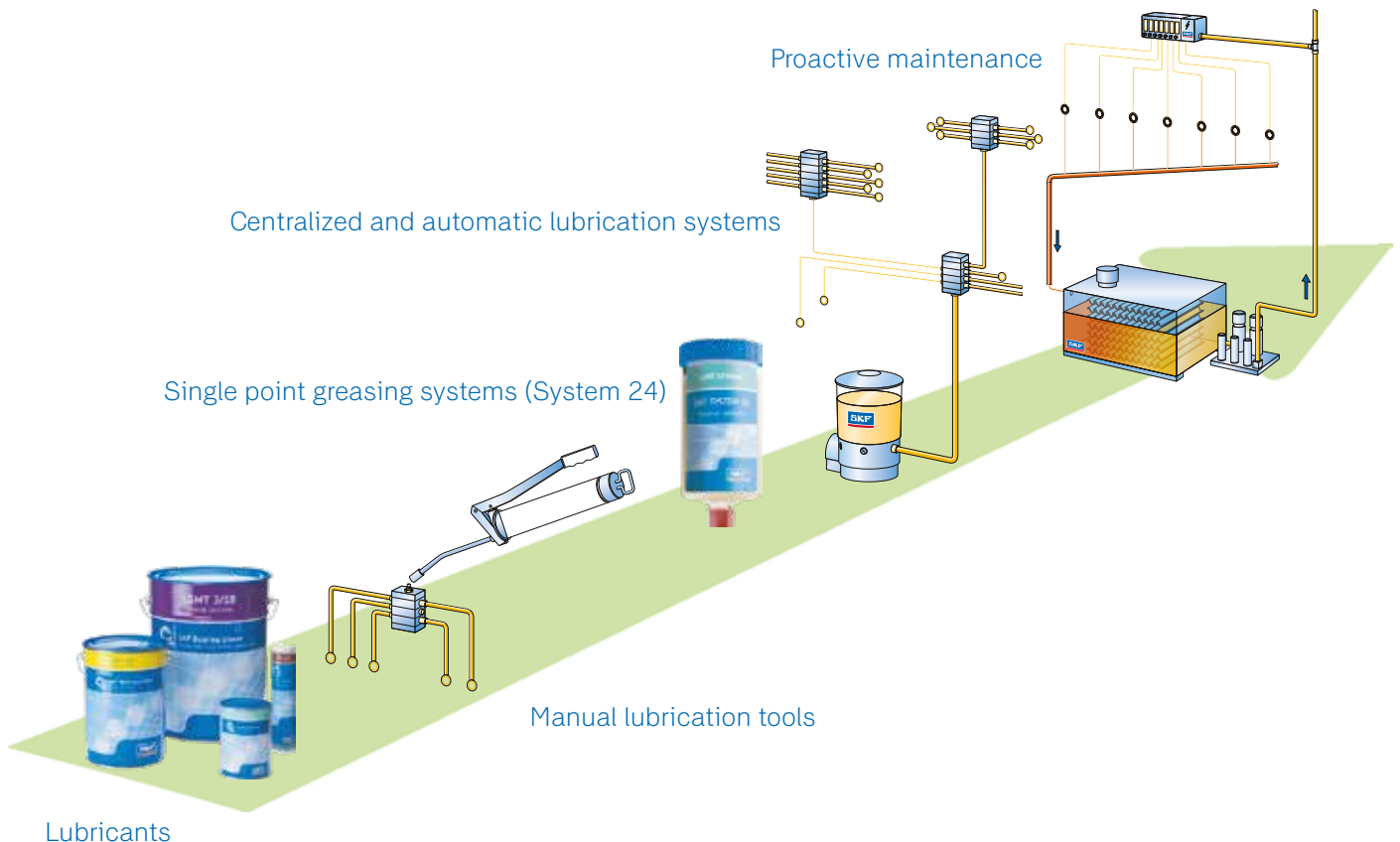


## Experts in lubrication

Drawing on over **200 years of combined experience**, **SKF and Lincoln** offer a complete lubrication solution portfolio. Regardless of industry or application, **SKF offers products and solutions to help you reduce maintenance costs, increase productivity, and improve the reliability of your equipment.**

**SKF integrated lubrication solutions** combine the experience in the field of bearings, seals and machine monitoring with expertise in tribology – friction study, wear and lubrication.

An extensive range of solutions: **specialized lubricants, manual lubrication tools, automated single point lubrication systems, centralized lubrication systems and lubricant management programs.**



Lubricants

## Manual lubrication tools

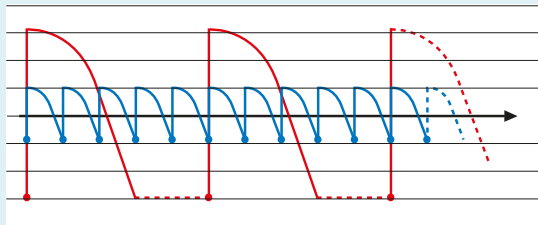
The SKF range of manual lubrication tools is designed to help you **store, manipulate, dispense and deliver the optimal amount of lubricant** to machine lubrication points in a **clean and correct manner**.



## Advantages of automatic lubrication compared to manual lubrication

### Reduce the risks of failure

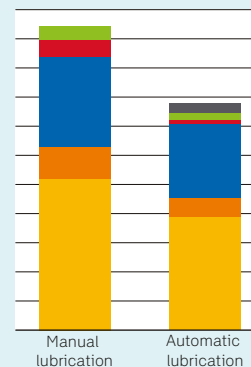
– Over-greased = overheating, waste and pollution



— Manual lubrication  
— Automatic lubrication

— Optimal lubrication

– Under-greased = wear, premature repairs, high repair costs



Cost for SKF SYSTEM 24  
Grease consumption  
Lubrication labor  
Machinery repair costs  
Planned downtime  
Unplanned downtime

## Single-point greasing systems

To ensure proper lubrication, you need to: apply the right lubricant in the right amount, use the correct lubrication method at the right time and apply lubrication to the right point.

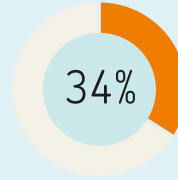
Automated SKF lubrication systems provide the **optimal amount of lubricant at the right time**, reducing friction and wear and **optimizing the service life of bearings and machines**.





# Alignment tools

Did you know that 34% of the premature failure of bearings is due to increased wear caused by misalignment, poor balance, mechanical defects?



Shaft misalignment is a major factor in rotating equipment failures. Proper shaft alignment can prevent a large number of malfunctions, reduce energy losses and the risk of machine downtime.



	TKSA11	TKSA31	TKSA41	TKSA51	TKSA71
Category	BASIC	BASIC	MIDDLE	MIDDLE	HIGH-END
Wireless communication by phone/tablet	●		●	●	●
Measuring distance (m)	0.2	2	4	5	10
Minimum angle of rotation	180°	140°	90°	40°	40°
Horizontal alignment		●	●	●	●
Vertical alignment				●	●
"Soft foot" feature		●	●	●	●
Machine train alignment					●
Dial indicator feature					●
Wireless charging					●

# Basic condition monitoring products

## Thermometers



In order to extend the service life of bearings and reduce overall maintenance costs, SKF has developed a wide range of measuring instruments to analyze the critical factors that affect bearings and indirectly influence machine performance.

SKF measuring instruments can be used for measuring temperature, revolutions, and identifying performance abnormalities.

## Digital tachometers



## Endoscopes



## Electronic stethoscopes



## Stroboscopes



## Ultrasonic leak detectors



# 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](http://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

# 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.





# Machine health monitoring systems

## SKF Enlight Collect IMx-1

SKF Enlight Collect IMx-1 sensors allow you to build an automated machine monitoring system powered by cloud based IoT solutions and AI driven analytics. It is wireless, easily scalable and connected to SKF Rotating Equipment Performance Centers.

IMx-1 sensors communicate machine data over a low energy mesh network – designed to navigate data around the wireless obstacles presented by typical industrial environments – back to a gateway. This, in turn connects to the plant's network, or to the internet for use by hosted monitoring services via SKF Cloud and expertise from SKF Rotating Equipment Performance Centres. SKF Enlight Collect IMx-1 is one system that can replace many, and a key to proactive maintenance that allows you to avoid unplanned downtime.



## SKF Multilog IMx-8 and IMx-16Plus

The smaller and more compact IMx-8 and IMx-16Plus let you monitor the health of your equipment the way that works for you, whatever your industry. SKF Multilog IMx-8 and IMx-16Plus pack high specification condition monitoring into compact spaces.

The book-sized units offer 8 (16) analogue and 2 (4) digital channels, with connectivity to mobile devices as well as laptops for easy monitoring and setup. Insights from IMx-8 and IMx-16Plus data will help you avoid downtime and plan maintenance proactively, prolonging machine life and optimising costs. As well as integration with other IMx units, IMx-8 and IMx-16Plus customers can get direct access to world-class software, analytics and support through SKF @ptitude Observer. It's the compact, cost-effective solution for better performance.





## SKF Microlog Analyzer dBX

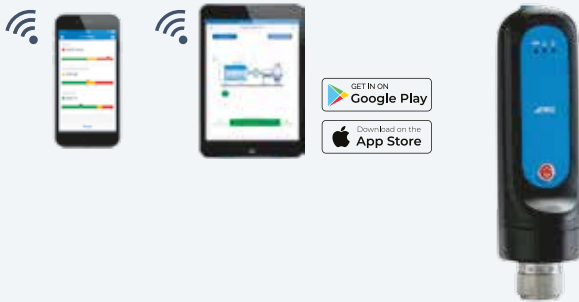
The SKF Microlog Analyzer dBX is an advanced vibration data analyzer with a large display for efficient on-site analysis. Standalone operation is possible. The device can carry out measurements and evaluate data from rotating machines to determine the machine condition. It can be connected to SKF monitoring software such as SKF @ptitude Analyst to upload data and download measurement routes.

- Portable vibration data analyzer with many functions
- Clear display thanks to the large touchscreen
- Easy to learn, minimal training required
- Suitable for a variety of industrial sectors
- Basic version with tools for most tasks

## SKF Enlight QuickCollect

SKF Enlight QuickCollect gives you access to unrivalled expertise, helping you improve asset performance, raise productivity and reduce mechanical failure.

Combining an easy-to-use sensor with mobile apps, SKF Enlight QuickCollect enables you to quickly and easily identify your machine condition and share inspection, process and machine health data across your company. You can also tap directly into SKF's remote diagnostic centres for expert analysis and advice. And it's easy to get started straight away: with entry-level setup costs, there's no need to make the case for capital expenditure.



# 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.

## Customer Benefits

- Significant cost savings
- Extended service life
- Risk minimisation due to:
- Short term availability
- Suitability for long term storage

## Suitable bearings

- Bearings with a bore diameter greater than  $\pm 250$  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





# Customer training



## Increase knowledge to improve reliability

Manufacturers today are under tremendous pressure to provide the highest possible quality at the lowest possible cost. Therefore, achieving maximum machine reliability is critical. The profitability of all manufacturers is reliant on the skills of its personnel and how employers' and industry support these personnel to fulfill their potential.

## Making the most out of your knowledge investment

The course portfolio follows a blended learning approach using an array of methodologies such as e-learning, classroom, practical exercises and onsite mentoring to reach the learning objectives.

SKF can also assist by conducting a Training Needs Analysis online assessment to map your personnel's current competencies in a variety of areas and is designed to identify areas where employees' skills are deficient in order to improve plant efficiency.



## Why SKF for reliability maintenance training?

Our training courses are backed by over 100 years of experience and knowledge of rotating machine reliability that is unmatched in the world. Close working partnerships with our clients have given us a unique and intimate understanding of the processes and challenges specific to every major industry.

SKF courses focus on enhancing the efficiency of plant machinery and equipment assets, which are the very heart of the production process.

# We might not be able to tell the difference. But your machine will!

Given that the appearance of fake products may be identical to that of the original products, most users find it difficult to distinguish SKF's original products from counterfeit products.

## Protect your business!

**The best way to safeguard authenticity is to source SKF products from SKF Authorized Distributors only.**

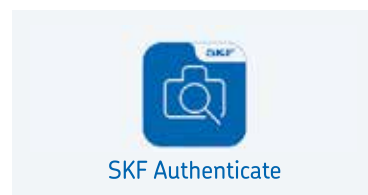
A list of **SKF Authorized Distributors in your country** or region can be found on your local SKF website or visit [www.skf.com](http://www.skf.com).

Always buy SKF products from an Authorized SKF Distributor and take advantage of the warranty and safety of the purchased products.

## Would you like to check the authenticity of SKF products?

The SKF Authenticate application allows you to send pictures of suspicious products, as only experts from SKF can verify authenticity of a product or package marked with SKF trademarks. You can use this application regardless of where you purchased the bearings.

You can also contact us at [genuine@skf.com](mailto:genuine@skf.com)



**Enter and check!** Check the products using the **SKF Authenticate** app, which you can download for free from *Apple AppStore* and *Google Play*.



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