

The power of lubrication

SKF and Lincoln: The world's most complete portfolio of lubrication systems and solutions



Two leading brands.

Combining more than 100 years of SKF and Lincoln expertise, SKF offers the industry's most complete portfolio of lubrication management solutions. Whatever your industry or application, SKF has the products and resources to help you optimize your process, reduce maintenance, improve productivity, enhance safety and minimize environmental impact. Both SKF- and Lincoln-branded products, systems and services are being made available through our global network of distributor partners, supported by one global sales organization committed to your success.



One global resource.

The power of optimized lubrication

Studies have shown that half of all bearing failures are caused by lubrication issues, whether the result of poor lubrication, the wrong type of lubricant or contamination of the lubricant by water, air, dirt or particles.

The right lubrication solution can provide new opportunities to increase profitability by reducing costs to operate machinery, improving reliability and safety, extending service intervals and optimizing manpower resources.

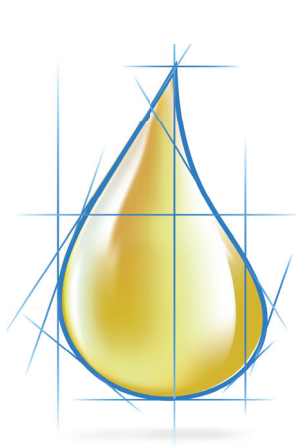
With the merging of SKF and Lincoln product portfolios, we have created the Lubrication Business Unit (LBU). Drawing on the history and core expertise of both brands, we now offer the industry's widest range of SKF oil-based and Lincoln grease-based lubrication solutions. This means you now have one go-to resource for advanced lubrication solutions for almost any friction-related application. We provide everything from manual and single-point lubricators, to the most advanced centralized and automatic lubrication systems on the market.

Reliability, efficiency, productivity

SKF knowledge of the benefits of proper lubrication, enhanced through the acquisition of leading lubrication companies over the past decade, has made SKF the global leader in automatic lubrication technologies.

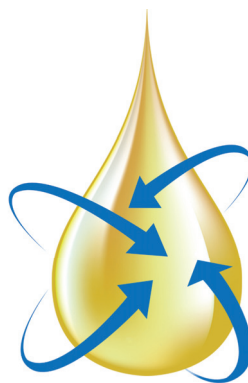
Our in-depth application experience, as well as engineering partnerships with original equipment manufacturers, gives us a unique perspective on how complex systems operate – and how to optimize lubrication to achieve results that are both efficient and cost-effective.

Superior product innovation



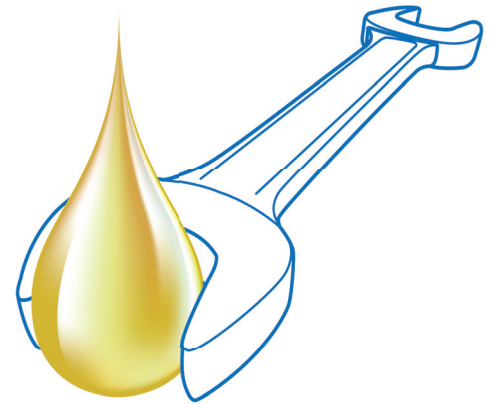
A continuous flow of innovative new products and systems, engineered with 100+ years of application experience

Unequaled global support



A worldwide distributor network of experienced system houses and application centres located on every continent

World-class installation support



Expert lubrication system installation and start-up, plus servicing of existing systems, lubricant testing and training by qualified SKF distributors

Engineered to meet your goals

Integrated, systems-based solutions

SKF pursues advanced research and development in tribology, a branch of engineering that deals with friction, wear and lubrication. In addition, our engineers design products that solve real, every-day customer problems. As a result, we understand the challenges of your industry and know that the right lubrication solution involves the capability to integrate technologies in the areas of bearings, seals, services, mechatronics and lubrication systems.

Optimizing machine designs

For original equipment manufacturers, even small design improvements can make a big difference. The earlier you involve SKF as an engineering partner in the planning and design process, the bigger the potential benefits. SKF distributors and application engineers can work with your team to optimize designs for long life and reliability.

With SKF, you are able to offer your customers a more compact, energy-efficient and cost-effective lubrication solution that is easy to install, use and maintain. Equally important, we can work together to develop designs that fit your needs and provide a competitive advantage in the marketplace.



Increase:

- Productivity
- Reliability
- Machine uptime
- Service intervals
- Safety
- Health conditions
- Sustainability

Reduce:

- Energy consumption
- Lubricant consumption
- Heat generation
- Bearing wear
- Noise due to friction
- Product contamination
- Operating costs

Expert lubrication services

From system design to training

SKF provides a full range of lubrication services including system design and installation of automatic lubrication systems, servicing of existing automatic systems, lubricant analysis and testing and training.

Designing an optimum lubrication programme

Drawing on knowledge gained from decades of SKF experience, SKF can assist you in determining optimum lubrication levels and intervals. This knowledge will drive the decision-making process to ensure that you receive the best lubrication system design for your application.



SKF lubrication consulting services

SKF provides a full range of lubrication consulting services, including a lubrication audit that provides an in-depth analysis of your facility's lubrication programme and identifies opportunities for improvement. Using a proprietary savings calculation tool, SKF can help you estimate the potential savings from your investment in specific lubrication improvements.

Services

- SKF Lubrication Management
- Audits and lubrication consulting
- Return-on-investment (ROI) calculations
- System installation and start-up
- Service of existing automatic SKF lubrication systems
- Training

Superior product innovation

Automatic lubricators

Injecting the correct quantity of grease at proper intervals is critical to bearing performance. SKF has developed around-the-clock solutions that provide precise amounts of contaminant-free grease with minimal risk of over- or under-lubrication.

With SKF automatic lubricators, including SKF SYSTEM 24 or the SKF MultiPoint Lubricator, the correct amount of grease can be applied 24 hours per day, seven days per week, 52 weeks per year, if required. All you have to do is set the automatic timer.

Advantages:

- Significant time and labor savings compared to manual lubrication
- Easily controls the amount of grease used in each application

Single-line systems

The SKF portfolio includes both SKF MonoFlex and Lincoln Centro-Matic system components including pumps, metering units, control and monitoring devices and accessories.

Regardless of the application, the principle of single-line lubrication remains the same: a central pump station automatically delivers lubricant through a single supply line to the lubricant metering device. Each metering device serves only one lubrication point and may be adjusted to deliver the precise amount of grease or oil required. Systems can service one machine, different zones on one machine or even several separate machines.

Advantages:

- Easy to understand, install and maintain
- Available in both preset and adjustable models
- Suitable for almost all lubricants
- Easy system expansion
- System continues to operate if one point becomes blocked
- Integrated system control and monitoring
- Able to pump long distances and within a wide temperature range



SKF offers the world's most complete portfolio of automatic lubrication systems and components. This broad product line, marketed under the SKF and Lincoln brands, includes both oil- and grease-based systems – off-the-shelf or customized – for virtually every industrial application.

Dual-line systems

SKF dual-line systems, including SKF DuoFlex and Lincoln Helios, are designed for large machines with many lubrication points, long lines and harsh operating conditions. Typical applications include heavy industry, metal working plants, pulp and paper, mining, mineral processing and cement factories, deck cranes, power plants, sugar mills and more. These systems utilize two main lines that are supplied alternately with lubricant.

Advantages:

- Ideal for many lubrication points over long distances
- Very reliable when using high-viscosity greases
- Flexibility in adjusting metered quantity
- Parallel metering device setup enables simple system design

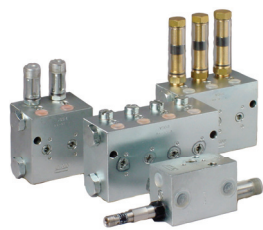
Progressive lubrication systems

Each SKF ProFlex and Lincoln Quicklub progressive system typically dispenses small measured amounts of lubricant at frequent intervals while machines are operating. The grease flow created by the pump is proportioned by progressive metering devices and distributed to each bearing according to its needs.

These systems are designed to provide a relatively simple and inexpensive method of automating the lubrication of machinery bearings, pins and bushings.

Advantages:

- Delivers frequent and measured amounts of grease to each lubrication point
- Easy system monitoring and simple blockage control
- Integrated system control and monitoring



Turnkey solutions, from design to installation

Multi-line lubrication systems

These products, including SKF MultiFlex and Lincoln 205 and 215 systems, supply lubricant directly to lube points without extra metering devices. Each lubrication point has its own pumping element. The system design is simple, accurate and reliable and is used for demanding applications in the machine tool industry, oil and gas and heavy industries.

SKF and Lincoln multi-line systems include a wide range of pumps featuring one to 32 outlets and are able to generate system pressures as high as 350 bars (5,076 psi). They operate in a wide temperature range and can be used to pump greases up to NLGI #3.

Advantages:

- Sturdy and durable pump series
- Continuous lubrication of machines that operate in harsh environments
- Longer maintenance intervals compared to manual lubrication

Circulating oil lubrication systems

SKF oil circulating systems circulate oil to lubricate and cool bearings in many machines used in the pulp and paper sector and heavy industry. They also efficiently remove dirt, water and air particles.

An oil supply system delivers the lubricant to the metering devices with individual settings. The feed rates can be controlled visually or electronically. Monitoring systems are available for predictive maintenance.

SKF CircOil systems include a wide range of customized turnkey solutions. All are simple to service and feature a modular design that can be easily expanded.

Advantages:

- Patented air-removal design prolongs oil life
- Precise flow meter
- 1/3 the volume compared to conventional systems – provides cost savings



Though many operations share the same challenges, each typically requires a unique set of solutions to achieve optimum machine reliability, efficiency and safety. SKF lubrication experts can help design and implement the ideal solution for your process.

Oil and air lubrication systems

The SKF Oil+Air line and Lincoln ORSCO lubrication systems, are designed for high-speed bearings, spindles, rack pinions, chains and special applications in the steel industry.

A pump, progressive feeder or single-line metering device injects a small, metered amount of oil into a mixing valve. Utilizing compressed air, the oil moves slowly to the lubrication point and provides the bearing or chain with a small, continuous stream of oil and air.

SKF Oil+Air lubrication systems are designed to your specifications and utilize leading oil-streak sensor technology for monitoring.

Advantages:

- Provides a continuous, finely metered oil flow
- Protects sensitive bearings from dirt
- Does not create oil mist or oil fog

Minimal quantity lubrication systems (MQL) and Microdosage systems (MDS)

SKF MQL systems for machining processes use oil droplets finely dispersed in an air stream to provide precise, minimal quantities of lubricant between the tool and production line work piece.

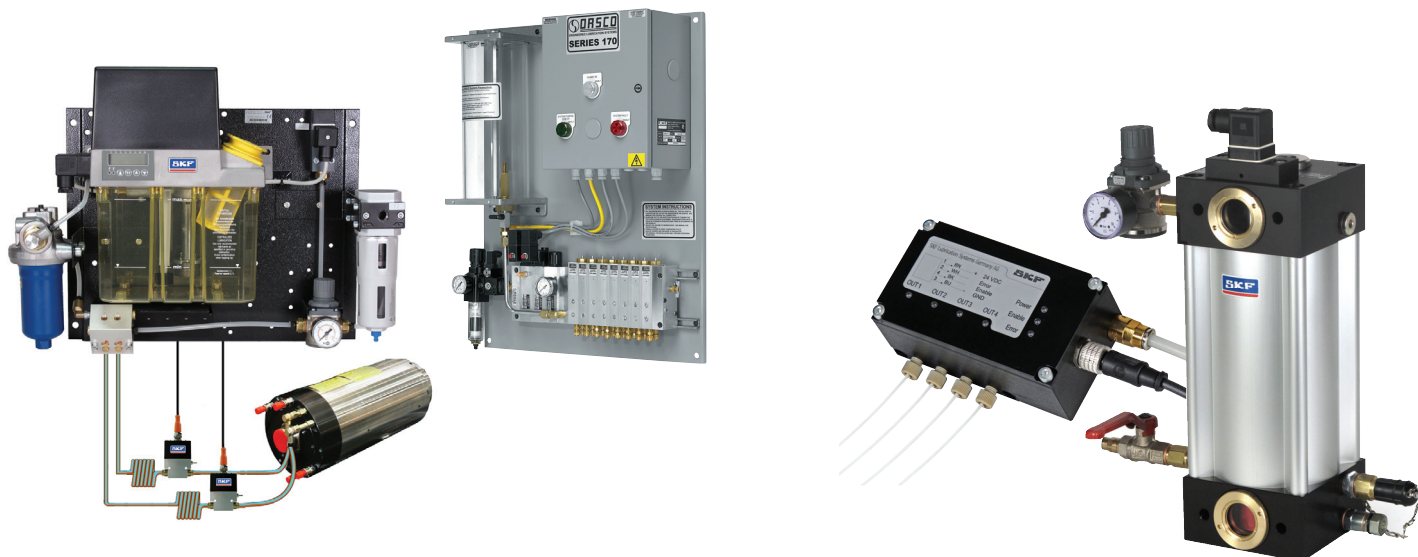
Advantages:

- Can help reduce overall production time by up to 30 percent and significantly increase tool life
- Contributes to a more precise cutting process, better surface quality and a more environmentally friendly workplace

SKF MDS is an intelligent microdosage system for demanding applications. The perfectly matched components, high-precision valve, micro flow sensor and sophisticated control unit make it possible to precisely meter and monitor minute quantities of lubricant.

Advantages:

- Extremely energy-efficient
- Considerable potential cost savings over conventional systems



Lubrication tools and equipment

From grease guns to used fluid systems, SKF offers a comprehensive line of premium lubrication tools and equipment.

Hand-held lubrication equipment

Lincoln grease guns are designed with power and performance in mind. These tools are used around the world by technicians, mechanics, maintenance teams, farmers and others for almost every lubrication and preventative-maintenance task.



Pumps and accessories

SKF offers a wide range of Lincoln medium- and high-pressure pumps used for pumping grease, oil and other fluids. We provide air-operated Series 20, 25 or 40 reciprocating pumps, diaphragm and transfer pumps, bulk oil systems and corresponding accessories to meet specific application requirements.



Reels and meters

Years of engineering, testing and experience preceded the introduction of Lincoln hose reels and meters, which are manufactured with the quality and reliability that professionals expect.



Used fluid systems

Portable upright drains are designed for collecting fluids under lift-mounted vehicles. All models feature a height-adjustable collection bowl and large reservoir with capacity for multiple fluid changes. A combination of two ball-bearing swivel casters and two fixed-axle wheels makes them portable and easy to handle.



Global support

SKF combines global capabilities, localized service and unmatched engineering expertise to make it easy to get the technical service and support you need – when, where and how you need it.



Integrated software solutions

SKF automatic lubrication systems can be integrated with condition monitoring solutions, providing operators with a complete overview of the lubrication system, including pump status and lubricant levels.

For example, SKF WindLub, an automatic lubrication system for wind turbines, can be linked to the SKF WindCon online condition monitoring system for optimum, automatic lubrication of wind turbine main shafts, gearboxes and generators. In addition, SKF also has developed VisioLub, a condition monitoring software for lubrication systems used on chain applications.

Supporting your sustainability goals

SKF lubrication solutions are designed to optimize the amount of lubricant required for each application, reducing both the costs and environmental impact of lubricant use. Also, an optimally lubricated machine is more energy efficient and experiences minimal leakage and less friction, thereby improving worker safety and reducing noise levels.

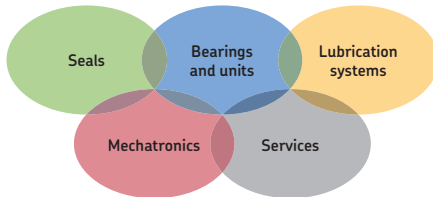
System house support

Our system house distributors offer turnkey solutions and extensive aftermarket support. In addition to maintaining a local inventory of system components and spare parts, these factory-trained lubrication specialists can provide:

- **Application design and system recommendations**
- **Professional installations and customized kits**
- **In-plant service and repair**
- **Lubrication training**
- **Warranty support**
- **System maintenance contracts**
- **Plant surveys**
- **Return-on-investment (ROI) analysis**
- **Guidance on safety and environmental issues**

We're here for you – worldwide

When you choose SKF, you get a stable and secure global partner with the people, products and support you need to optimize your lubrication management programme. Contact your SKF representative or visit www.skf.com/TheFormula.



The Power of Knowledge Engineering

Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

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