

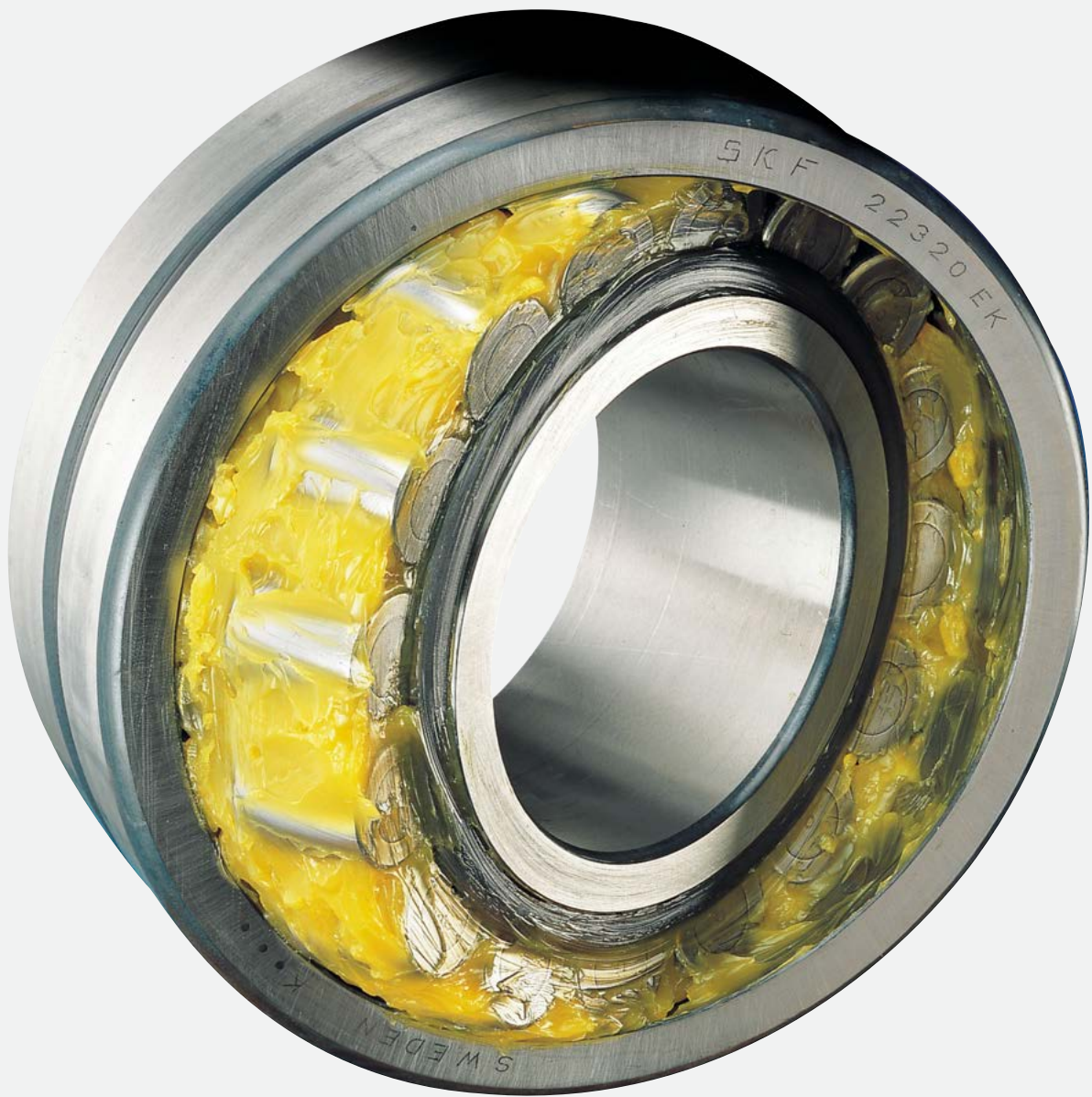
# SKF

# CEMENT INDUSTRY LUBRICATION SOLUTIONS

Increased machine reliability,  
productivity and digitalization  
to support sustainable growth



**LINCOLN**



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# Lubrication solutions for cement plant machinery

## Introduction

In cement machines, lubricants account for 2–3% of running costs, yet up to 70% of maintenance costs stem from poor lubrication. This underscores the importance of reliable lubrication and proper practices. Hence, we emphasise lubrication management as crucial for machine operation and vehicle maintenance. Operators aim for an Overall Equipment Effectiveness (OEE) of 85% for process critical machines like vertical roller mills e.g. achieving these targets requires sophisticated, market-proven lubrication management solutions, including lubricants, systems, and monitoring with master control or cloud connectivity.

Manual lubrication typically takes 20–40 minutes per machine per cycle. Inadequate lubrication can negatively impact schedules, maintenance costs, and performance. Automatic lubrication reduces downtime, ensuring equipment availability.

It enhances reliability, extends service life, reduces costs, and minimises environmental impact by preventing over-lubrication. Additionally, reducing manual lubrication lowers accident risks, freeing mechanics for other tasks. Effective lubrication for individual points is challenging; ensuring it for all points is even more so. With the right connectivity solution, we enhance reliable lubrication. This brochure provides an overview of SKF Lincoln lubrication solutions for cement machines.

For more information, visit:  
[SKF.com/lubrication](https://www.skf.com/lubrication)



The right  
lubricant...



in the right  
amount...



with the right  
method...



at the right  
time...



to the right  
lubrication point.

# Value added by lubrication

If dust, dirt, sand and water are allowed to work their way into critical machine components, they will form a “grinding compound” that reduces components life substantially.

Maintaining a proper lubricant film is key to reducing wear and downtime. Frequent lubrication acts as a means to reduce friction effectively and it virtually keeps bushing and bearings free of penetrating contaminants.

Being a bearing manufacturing company we discover again and again, that the high importance of reliable cement machinery lubrication is very often misjudged.



## 33%

Up to 33% lubricant savings by  
switching to automatic lubrication



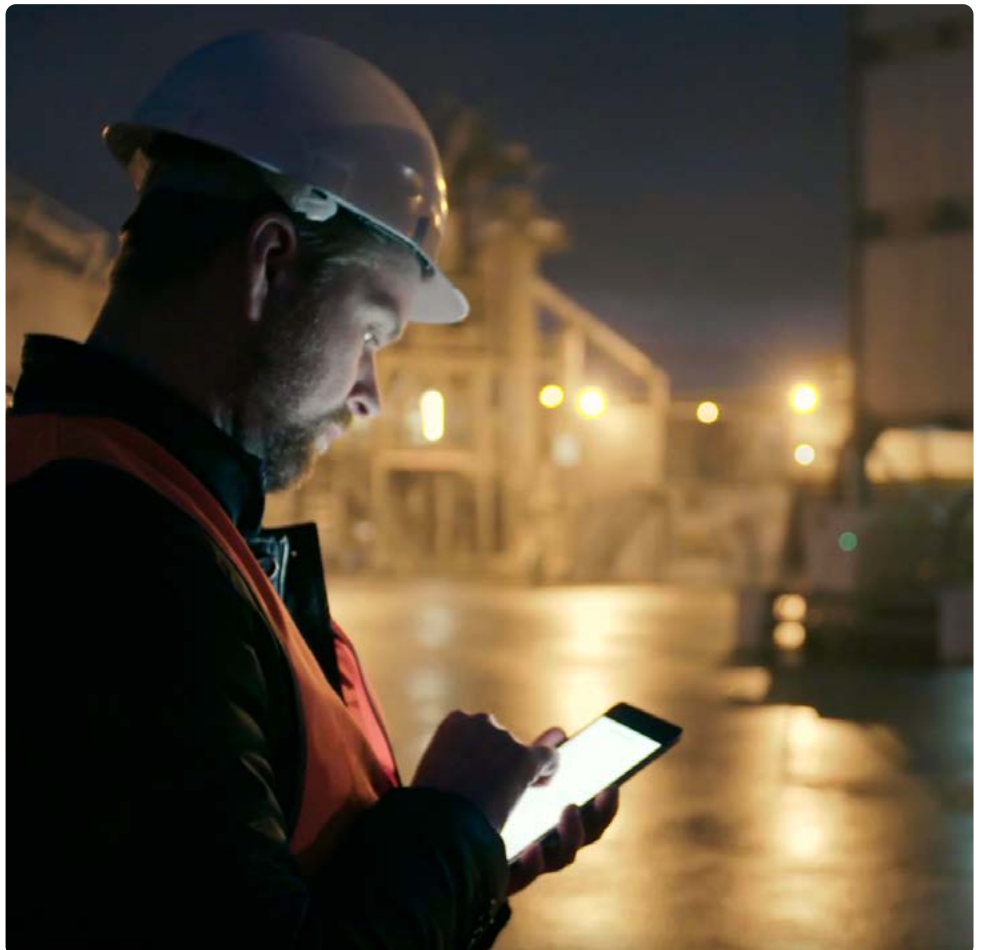
# It starts with a smart selection of lubricants

## SKF LubeSelect

SKF lubricants are designed for your needs and tested for performance in real applications. Our experience with bearings, lubricants and applications helps us to offer the most suitable lubricants for your application and improve your overall lubrication scheme. Testing and validating each production batch is our way to provide excellent lubricant quality around the globe. Specialized lubricant tests and continuous research in the field of lubrication help to optimize our knowledge further and support you with the right lubrication for your machines. The app LubeSelect for SKF greases is developed by SKF and accesses a knowledge base to help you select an appropriate lubricant for a particular application.

## Lubricant selection criteria:

- Operation conditions like temperature, humidity
- Engineering guidelines depending on component type and geometry, speed, load and temperature.



SKF LubeSelect

# Recommended and market proven solutions

## LGEV 2

SKF LGEV 2 is a mineral oil based grease, using a lithium-calcium soap. It has a high content of molybdenum disulphide and graphite, in conjunction with an extremely high viscosity oil. This provides outstanding protection under the harshest conditions involving high loads, slow rotations and severe vibrations.

### Features and benefits:

- Extremely suitable for lubricating large sized spherical roller bearings subject to high loads and slow rotations, a situation where microslip is likely to occur
- Extremely mechanically stable providing good water resistance and corrosion protection
- Suitable for medium to high loads



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## LGHB 2

SKF LGHB 2 is a high viscosity, mineral oil based grease, using calcium sulphonate complex thickener. Formulated to withstand high temperatures and extreme loads, it is suitable for a wide range of applications, especially in the cement, mining and metals segments. It also has very good pumpability properties.

### Features and benefits:

- Excellent load capacity, anti-oxidation and corrosion protection even with large water ingress
- Withstands peak temperatures of 200 °C (390 °F)



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## LGNL 2

SKF LGNL 2 is a mineral oil-based, anhydrous calcium soap thickened grease suitable for high-load applications. This premium quality, general-purpose grease is an effective alternative for traditional general-purpose and extreme pressure lithium-based greases.

### Features and benefits:

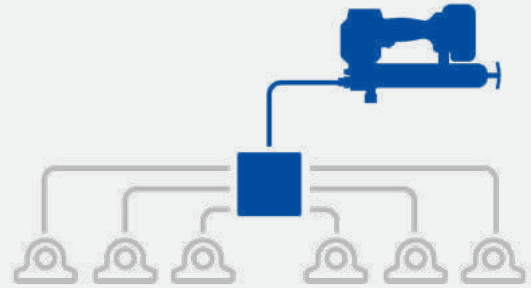
- Excellent water resistance and corrosion protection
- Good mechanical stability
- Excellent wear protection
- Good pumpability



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# Manual and semi-automated lubrication

## Manual lubrication

Manual lubrication of machines is a critical maintenance practice involving the application of lubricants to various components by hand via tools such as manual or electrical operated grease guns. This is the most simple but also time-consuming way of realizing lubrication.

### SKF offer

- Grease nipples
- Standard manual grease guns
- One-hand-operated grease guns
- Battery-driven grease guns

### Characteristics

- Low investment costs
- Very limited number of parts needed
- No installation complexity
- Low lubrication reliability
- Big maintenance effort

## Semi-automated lubrication

A centralized approach can be realized by connecting several lubrication points to lubricant metering devices with only one manual lubrication point at the metering device inlet left for manual lubrication tools. This represents an advanced, time-saving approach of realizing machinery lubrication while allowing at the same time to set the precise dosages for each lubrication point.

### SKF offer

- Grease guns
- Grease nipples
- Fittings and accessories
- Lubricant hoses and tubes
- Progressive metering devices
- Adjustable progressive metering devices

### Characteristics

- Medium investment costs
- Limited number of parts needed
- Limited installation complexity
- Medium lubrication reliability
- Limited maintenance effort



# Recommended and market proven solutions

## LAGM 1000E

The SKF Grease meter LAGM 1000E accurately measures the amount of grease dispensed. Generally, it is difficult to manually deliver an accurate quantity of grease per stroke to bearings. However, supplying the right amount of grease is critical for the bearings' service life, as both over-lubrication and under-lubrication can lead to bearing damage and machine breakdown. Factors such as backpressure and wear inside the grease gun can cause variations in the lubrication amount, even when the grease is weighed per stroke. Using a grease meter is the only way to measure the actual relubrication quantity with precision.

### Features and benefits:

- Corrosion-free aluminium housing with rubber sleeve protection
- Backlit LCD display with large and easy-to-read digits
- Small, compact and lightweight design
- Compatible with all SKF grease guns
- Suitable for most NLGI 0-3 greases



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on SKF.com

## TLGB 21

Developed to maximize lubrication efficiency, the TLGB 21 integrates advanced technology and a robust design for exceptional performance in a wide variety of lubrication tasks. Designed with an integrated grease meter, it ensures precise lubrication, preventing the risk of over or under-lubrication. The durable, ergonomic design with a four-point stand makes for operator comfort and convenience and the 20-volt, lithium-ion battery for longer life.

### Features and benefits:

- Integrated grease meter monitors and tracks the exact amount of grease dispensed
- Two-speed flow rate adjusts from low-volume to high-volume flow, tailoring lubrication
- Battery charge display shows the charge level of the lithium-ion battery
- Cartridge grease level indicator
- LED light illuminates the work area



## Premium lube trolley

Designed for convenience and portability, Lincoln's premium lube trolley package comes complete with all components needed for dispensing oil or grease directly from 55-gallon (208 l) or 400-pound (181 kg) drums. The lube trolley is suitable for servicing a full range of vehicles, as well as industrial and machinery processes. Available packages include a pneumatically operated Lincoln pump for oil or grease, a durable hose reel, metering device, air control with filter/regulator/gauge and connection hoses and fittings.

### Features and benefits:

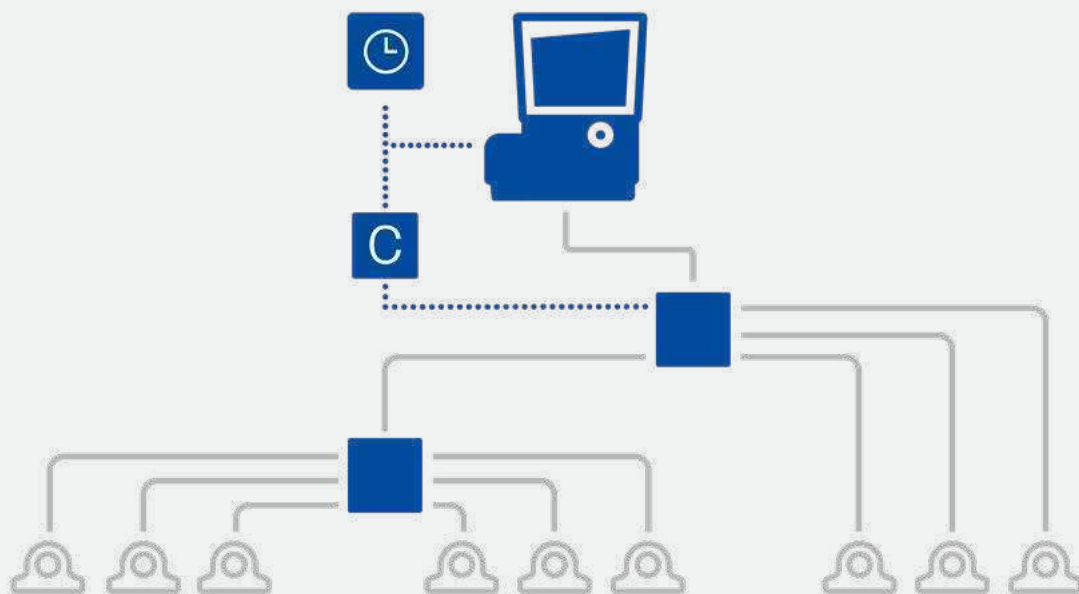
- Ability to dispense lubricant directly from 55-gallon (200 l) (oil) or 400-pound (180 kg) (grease) drums
- Easily maneuverable on uneven surfaces in shop or factory
- Makes dispensing possible without installed overhead reels or bench tanks



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# Fully automated lubrication systems

Automatic lubrication means a 100% reduction of manual lubrication activities. It is realized by connecting all lubrication points via a system consisting of metering devices and lubrication lines and fittings with a central pump unit including a lubricant reservoir. This system can become also connected to an internal or external controller that enables precise and reliable, automatic machine lubrication. You will become prewarned about low reservoir filling levels.

## SKF offer

- Single-line automatic lubrication systems
- Dual-line automatic lubrication systems
- Progressive automatic lubrication systems
- Oil circulation automatic lubrication systems
- Grease spraying lubrication systems (for open gears)
- Lubrication system components (pumps, metering devices, control and monitoring devices, fittings and accessories)
- Refill and barrel pumps

## Characteristics

- Virtually maintenance free
- Higher lubrication reliability  
- lubrication while machine is running
- Adjustable lubrication cycles
- Monitoring possibilities - automatic control of the reservoir filling level incl. low level alarm



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# Recommended and market proven solutions

## Multilube pump unit

The Multilube pumping unit is specially designed for heavy machines and equipment. It is very compact but still includes all key components and functions required for a lubrication pumping unit, such as a control unit, pump, reservoir, directional valve, and pressure monitor. The Multilube pumping unit is compatible with all grease metering devices used in single-line, dual-line, and progressive lubrication systems. One of the built-in features is a heating device, which also enables operation in extremely cold and demanding environments.

### Features and benefits:

- Compact, all-in-one structure
- Modular and durable design
- Easy to install and start up
- Pumping element equipped with pressure-relief valve
- Filling connection equipped with filling filter
- Equipped with a heating device



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## OSU oil circulation unit

OSU (Oil Supply Unit) is a compact oil circulation unit with various reservoir sizes from 15 to 200 liters that supply oil to machines that require a total flow of 0.1 to 19 l/min. The system pressure is adjusted by pressure control valves. The reservoirs can be equipped with heaters to control oil viscosity at start-up. Optional water or air coolers lower the temperature of the filtered oil to the desired level. Single or double filters with a default filtration rate of 10 µm care for reliable operations. OSU works reliably with SKF flow meters or flow limiters.

### Features and benefits:

- Reliable oil condition and oil supply
- Designed for 24/7 operation
- Extending oil and machine life with optimized cooling and lubrication



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## Open gear grease spraying system

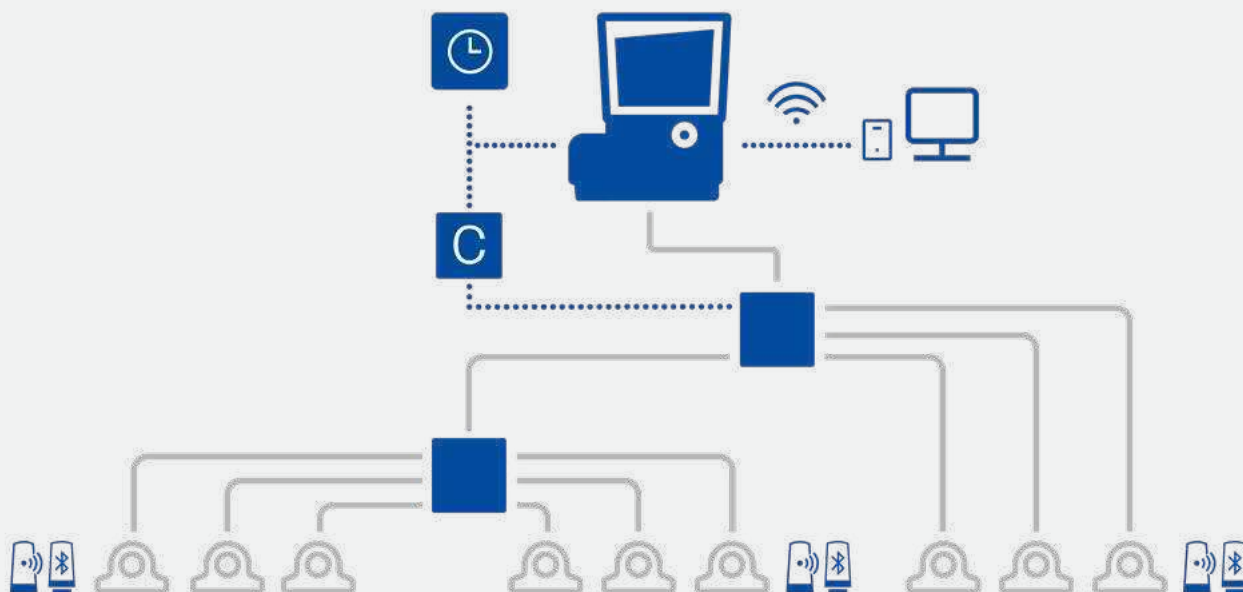
SKF Lincoln open gear comprehensive spraying systems containing all necessary mechanical, hydraulic, pneumatic, and electrical components for operating lubrication systems on large open gears. These systems are essential for process industries, where equipment like kilns, mills, rotary dryers, and presses require high power transmission. The SKF Lincoln spray open gear lubrication system enhances gear and pinion service life while reducing lubricant consumption, supporting efficient and reliable operation of critical machinery.

### Features and benefits:

- Compact system for reliable open gear lubrication
- Enhanced efficiency by automatic lubrication
- Extended gear and pinion service life
- Improved operational efficiency



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# Connected automated lubrication systems

Connected or intelligent lubrication systems mean you are aware of all machinery lubrication-related data in real-time. You have access to lubrication-related statistics such as lubricant consumption or lubrication cycles e.g. so you can align smartly with all collected machinery data to optimize machine performance and availability.

## Characteristics

- Virtually maintenance free
- Higher lubrication reliability - lubrication while machine is running
- Adjustable lubrication cycles
- Monitoring possibilities - automatic control of the reservoir filling level incl. low level alarm
- Data collection and lubrication related statistics
- Remote control and accessibility

## SKF eLube

SKF eLube is a new generation of connected automatic lubrication solutions – a complete line of smart and user-friendly components that you combine in a system to fit your needs best.

SKF eLube can help you identify issues at a glance, track machine health data, get early warning of potential failures and take preventive action. Connect it to a cloud and receive machine performance insights based on data from both your lubrication system and your bearings.

SKF eLube products are compact, fit-for-purpose and easy to integrate into your equipment.

Discover more  
on [SKF.com](https://www.skf.com)





# Smart monitoring at its easiest

## Datalog controller

### Features and benefits:

- Enables datalogging
- Provides operator control from the cab
- Communicate to device via Bluetooth using SKF eLube app
- Verify proper procedures were followed in rental applications
- Small size to conveniently fit into cabin



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## P253 Smart

### Features and benefits:

- Powerful lubrication pump with up to three pump elements and a range of reservoir sizes
- For oil and grease applications
- Remote monitoring, control and setting using the SKF eLube App



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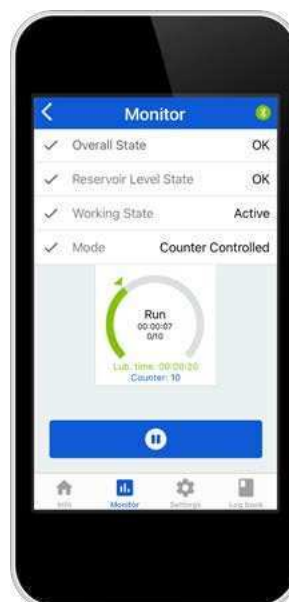


## SKF eLube app

Using the SKF eLube app allows users to determine lubricant levels and pump functions remotely. There is no need to stop the machine or physically access the pump to check lubricant levels, for instance. This can save time and also reduce the risk of accidents. Wireless access to pump information helps to spot problems – such as a blocked line or low lubricant levels – very quickly. Remedial action can then be taken immediately to avoid damage to the bearing.

### Features and benefits:

- Easy and intuitive setting of pump configuration
- Share settings via email and WhatsApp
- Clear visual indication of operational status
- Early warning of potential failures to take preventive action
- Log book functionality



Available on:





## Shovels and draglines

**50+**  
Lubrication points

Shovels and draglines today face harsh operating conditions and high demands, pushing them to new limits. In addition, these critical assets must often endure extreme temperatures. To operate more profitably, especially in the cement industry environments, these machines must move more material faster, while at the same time offering reliability, fuel efficiency, and operator comfort. Uptime is key, and unplanned downtime needs to be avoided. The management of a high number of lubrication points, often exceeding fifty, also leads to challenges for lubrication practices. However, reliable automatic lubrication is crucial to achieving all key performance indicators related to productivity and reaching professional predictive maintenance levels. With reliable lubrication solution, experienced operators know that they have also invested in productivity and machine lifetime extensions.

### Components that require reliable lubrication:

- Joints, bolts, bearings and pivot points
- Axles, pins and bushings
- Hydraulic cylinders
- Steering system
- Swing points
- Open gears
- Wire ropes



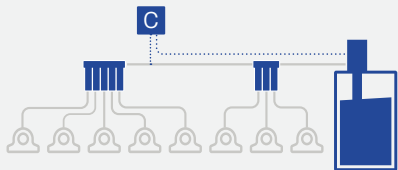


## Lubricants

Product name	Description
LGLS 2	KP2K-20 high viscosity grease NLGI 2
LGCC 2	K1/2 G-50 general purpose grease NLGI 2
LGGB 2	KPE 2K-40 environmentally accepted grease NLGI 2
LGHB 2	KP2N-20 high load, high temperature grease NLGI 2
LGTE 2	KPE2G-40 biodegradable grease NLGI 2



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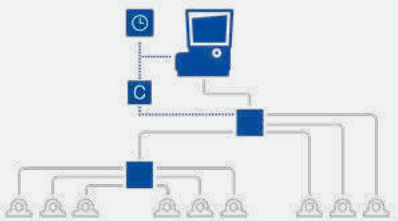


## Automatic single-line lubrication system components

Product name	Description
BPH30	hydraulically driven barrel pump
FlowMaster	hydraulically or electrically driven barrel pumps
LMC 301	compact control and monitoring device
SL-1	single-line (high-pressure) metering device
SL-V	single-line (high-pressure) metering device
SL-6	single-line (high-pressure) metering device
H	customized and prefilled high-pressure hose



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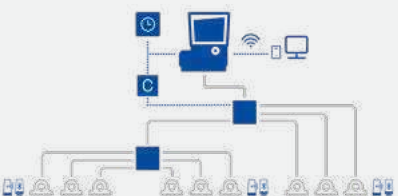


## Automatic dual-line lubrication system components

Product name	Description
ZPU	electrically driven high-volume pump
LMC301	lubrication system controller
VSG	dual-line metering device



SKF Lincoln Offer



## Connected automatic lubrication system components

Product name	Description
Datalog controller	lubrication system controller (SKF eLube app)



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# Haul trucks

**40+**  
Lubrication points

Haul trucks are off-road commercial vehicles used to transport loose bulk materials such as ore, gravel or rock. Operating under diverse and often extremely challenging conditions, these vehicles are exposed to water and dirt, which can infiltrate machine parts, abrade bearing surfaces, and lead to premature wear and corrosion. The working conditions involve high loads and significant contamination, numerous lubrication points with limited accessibility, and high lubricant consumption necessitating large reservoirs. Reliable lubrication is performed best while the truck is in operation, to serve all critical machine parts, when lubrication is most required. While small to medium-sized machines tend to be lubricated with progressive systems, single-line lubrication systems for large haul trucks are the best solution to handle the required large lubricant quantities and high pressures.

## Components that require reliable lubrication:

- Joints, bolts, bearings and pivot points
- Suspension and shock absorbers
- Axles and bushings
- Hydraulic cylinders
- Steering system





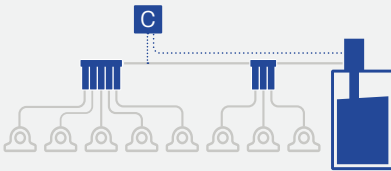


## Lubricants

Product name	Description
LGLS 2	KP2K-20 high viscosity grease NLGI 2
LGCC 2	K1/2 G-50 general purpose grease NLGI 2
LGGB 2	KPE 2K-40 environmentally accepted grease NLGI 2
LGHB 2	KP2N-20 high load, high temperature grease NLGI 2



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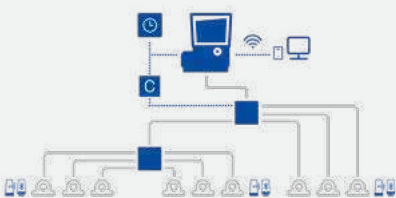


## Automatic single-line lubrication system components

Product name	Description
BPH30	hydraulically driven barrel pump
FlowMaster	hydraulically or electrically driven barrel pumps
LMC 301	compact control and monitoring device
SL-1	single-line (high-pressure) metering device
SL-V	single-line (high-pressure) metering device
SL-6	single-line (high-pressure) metering device
H	customized and prefilled high-pressure hose



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## Connected automatic lubrication system components

Product name	Description
Datalog controller	lubrication system controller (SKF eLube app)



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## Wheel loaders

**23+**  
Lubrication points

Quick reversals, frequent stops and starts, along with contaminated and vibrating conditions, create significant challenges for lubricating wheel loader drive trains. These assets have a high number of lubrication points that are critical to keeping them running. Manual lubrication necessitates halting the vehicle to apply the lubricant, with an immediate impact on productivity. Given the working conditions, heavy loads, elevated temperatures, and significant exposure to contaminants, there is a clear requirement for robust lubrication solutions to enhance machine uptime, availability, reliability, and safety.

### Components that require reliable lubrication:

- Differentials and final drives
- Steering components
- Hydraulic cylinders
- Joints and bearings
- Bolts and bushings
- Control valves





## Lubricants

Product name	Description
LGLS 2	KP2K-20 high viscosity grease NLGI 2
LGCC 2	K1/2 G-50 general purpose grease NLGI 2
LGGB 2	KPE 2K-40 environmentally accepted grease NLGI 2
LGHb 2	KP2N-20 high load, high temperature grease NLGI 2
LGTE 2	KPE2G-40 biodegradable grease NLGI 2



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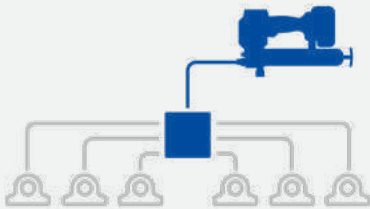


## Manual lubrication

Product name	Description
LAGN 120	grease fitting kit (120 conical fittings)
TLGH 1	manual grease gun
1077600	manual grease gun
1077600H	manual grease gun with flexible hose
1077600/SET	complete manual grease gun set



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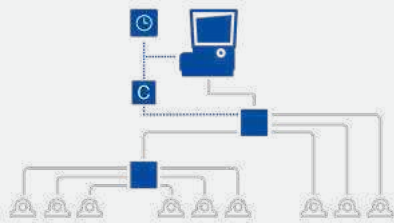


## Semi-automated lubrication

Product name	Description
LAGN 120	grease fitting kit (120 conical fittings)
TLGB 21	20V Li-ion PowerLuber, 1 battery
SSV	progressive metering device
SSVD	adjustable progressive metering device
VPK	sectional progressive metering device
H	customized and prefilled high-pressure hose



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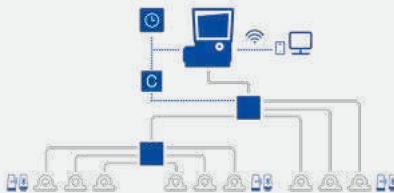


## Automatic lubrication system components

Product name	Description
CLP	electrically driven compact grease pump
P203	electrically driven grease pump
SSV	progressive metering device
SSVD	adjustable progressive metering device
VPK	sectional progressive metering device
TLMP	multi-point automatic lubricator
H	customized and prefilled high-pressure hose



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## Connected automatic lubrication system components

Product name	Description
P253 Smart	electrically driven connected grease/oil pump
CLP Smart	electrically driven connected compact grease pump
Datalog controller	lubrication system controller (SKF eLube app)



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# Gyratory crushers and apron feeders

**15+**  
Lubrication points

Gyratory crushers and apron feeders are essential components in the cement production process. With only a few of these machines per plant, unplanned outages can significantly disrupt production. These machines must operate reliably under conditions of heavy loading, low speed, and exposure to dusty environments. Lubrication is crucial for ensuring the smooth and efficient operation of gyratory crushers and apron feeders. Proper lubrication reduces friction and wear on moving parts, which is vital under the heavy loads and low speeds typical of these machines. It also helps protect components from the abrasive effects of dust, preventing premature failure and costly downtime. Advantages of proper lubrication include extended equipment life, enhanced reliability, improved efficiency, and cost savings. By maintaining proper lubrication, gyratory crushers and apron feeders can continue to operate effectively and reliably, even in challenging conditions.

Components that require reliable lubrication:

- Pinion shaft and bearings
- Pinion and eccentric gears
- Eccentric bushing
- Spider bearing
- Step bearing
- Open gear drive
- Motor and gearbox





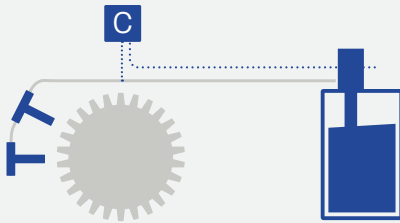


## Lubricants

Product name	Description
LGEV 2	KPF2K-10 extremely high viscosity grease NLGI 2
LGHB 2	KP2N-20 high load, high temperature grease NLGI 2
LGEP 2	KP2G-20 high load, extreme pressure grease NLGI 2



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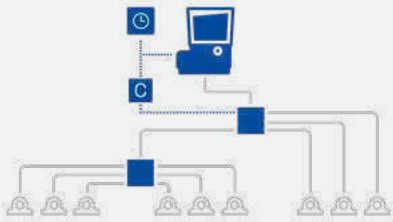


## Automatic open gear lubrication system components

Product name	Description
SD	grease spraying nozzle
SDL	grease spraying nozzle, air controlled
SAF	grease barrel pump
P215	electrically driven grease pump
SPL-CC	spraying lubrication system controller cabinet



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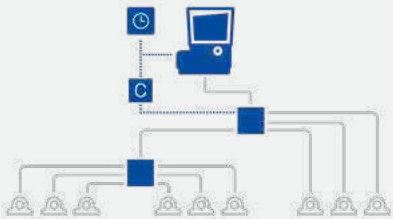


## Automatic oil circulation lubrication system components

Product name	Description
OCU	oil conditioning unit
OSU	compact oil circulation unit
RecondOil Box	oil regeneration with double separation technology



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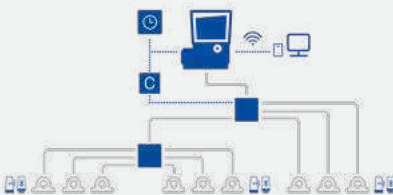


## Automatic dual-line lubrication system components

Product name	Description
ZPU	electrically driven high-volume pump
Multilube	electrically driven pump for heavy equipment
SG / SGA	dual-line metering devices
VSG	dual-line metering device
LMC301	compact control and monitoring device



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## Connected automatic lubrication system components

Product name	Description
Datalog controller	lubrication system controller (SKF eLube app)



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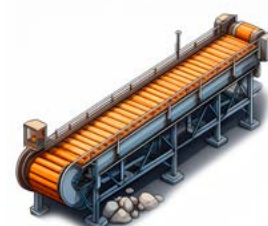
# Conveyors

**30+**  
Lubrication points

Conveyors are essential to the material handling process at cement production sites, transporting ore and other materials over long distances and often across challenging terrains. These conveyors operate under demanding conditions, including high levels of dust contamination, rock impacts, and remote locations. The efficient operation of these conveyors is critical, and lubrication plays a significant role in achieving this. Proper lubrication is necessary to minimise friction and wear, ensuring the longevity and reliability of the conveyor system. Additionally, it helps to prevent unexpected breakdowns, thereby maintaining continuous operation. Automatic conveyor lubrication systems have been designed to increase efficiency, even with fewer lubrication points. This saves maintenance time and costs, and helps to reduce workers' health and safety risks caused by manual lubrication and maintenance of remote, difficult-to-access areas.

Components that require reliable lubrication:

- Conveyor pulley bearings
- Conveyor drive system
- Conveyor HT motor
- Gearbox
- Motor



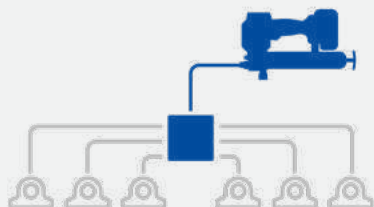


## Lubricants

Product name	Description
LGNL 2	K2KP-30 high load grease NLGI 2
LGGB 2	KPE 2K-40 environmentally accepted grease NLGI 2
LGMT 2	K2K-30 general purpose grease NLGI 2
LGHQ 2	K2P-30 electric motor bearing grease NLGI 2
LGWA 2	KP2N-30 high load, extreme pressure, wide temperature grease NLGI 2



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## Semi-automated lubrication

Product name	Description
LAGN 120	grease fitting kit (120 conical fittings)
TLGB 21	20V Li-ion PowerLuber, 1 battery
SSV	progressive metering device
SSVD	adjustable progressive metering device
VPK	sectional progressive metering device
H	customized and prefilled high-pressure hose



SKF Lincoln Offer

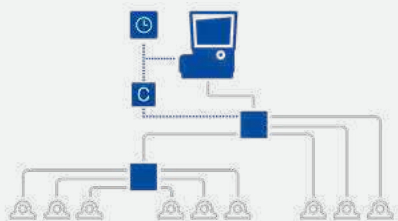


## Automatic single-point lubrication

Product name	Description
TLSD	single-point automatic lubricators
TLMR	single-point automatic lubricant dispenser
LAGD	gas driven single-point automatic lubricators



SKF Lincoln Offer

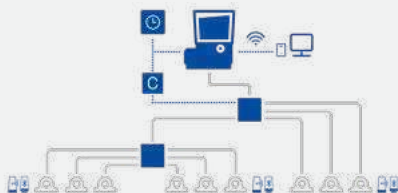


## Automatic dual-line lubrication system components

Product name	Description
ZPU	electrically driven high-volume pump
Multilube	electrically driven pump for heavy equipment
SG / SGA	dual-line metering devices
VSG	dual-line metering device
LMC301	compact control and monitoring device



SKF Lincoln Offer



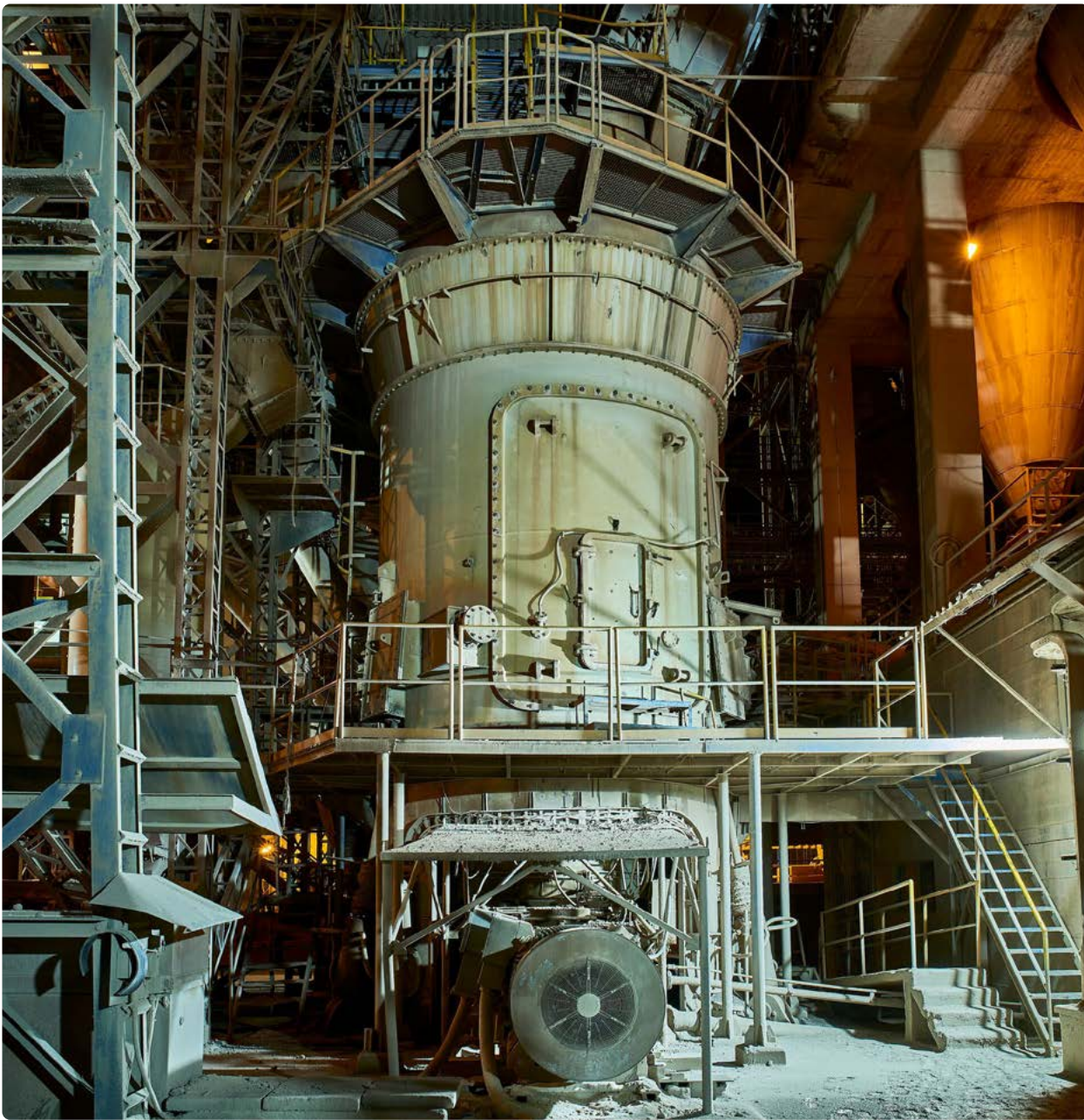
## Connected automatic lubrication system components

Product name	Description
TLDD	connected single-point automatic lubricators
Datalog controller	lubrication system controller (SKF eLube app)



SKF Lincoln Offer





## Vertical roller mills

**20+**  
Lubrication points

Vertical roller mills are critical assets in cement production. They must operate reliably under moderate to high loading, low speed, and dusty environments. Lubrication is essential for smooth operation, reducing friction and wear on moving parts under heavy loads and low speeds. It also protects components from dust, preventing premature failure and costly downtime. Automated and connected lubrication systems ensure consistent application to all critical points, reducing human error and enhancing performance. They allow for real-time monitoring and adjustments, improving reliability and efficiency. Advantages include extended equipment life, enhanced reliability, improved efficiency, and cost savings. Proper lubrication keeps vertical roller mills operating effectively and reliably, even in challenging conditions.

Components that require reliable lubrication:

- Grinding roller bearings
- Main drive bearings
- Separator bearings
- Motors and gearboxes





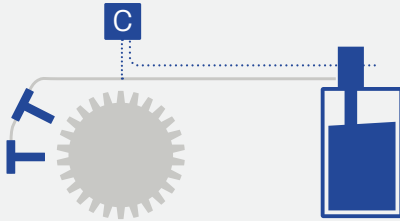


## Lubricants

Product name	Description
LGEV 2	KPF2K-10 extremely high viscosity grease NLGI 2
LGHB 2	KP2N-20 high load, high temperature grease NLGI 2
LGHQ 2	K2P-30 electric motor bearing grease NLGI 2
LGHP 2	K2N-40 high performance, high temperature grease NLGI 2



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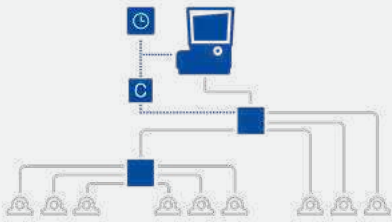


## Automatic open gear lubrication system components

Product name	Description
SD	grease spraying nozzle
SDL	grease spraying nozzle, air controlled
SAF	grease barrel pump
P215	electrically driven grease pump
SPL-CC	spraying lubrication system controller cabinet



SKF Lincoln Offer

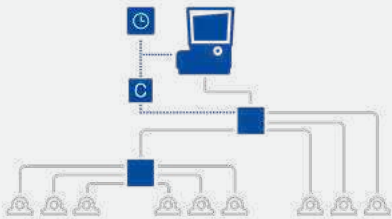


## Automatic oil circulation lubrication system components

Product name	Description
OCU	oil conditioning unit
OSU	compact oil circulation unit
RecondOil Box	oil regeneration with double separation technology



SKF Lincoln Offer

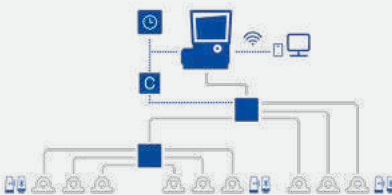


## Automatic dual-line lubrication system components

Product name	Description
ZPU	electrically driven high-volume pump
Multilube	electrically driven pump for heavy equipment
SG / SGA	dual-line metering devices
VSG	dual-line metering device
LMC301	compact control and monitoring device



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## Connected automatic lubrication system components

Product name	Description
Datalog controller	lubrication system controller (SKF eLube app)



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# Rotary kilns

**20+**  
Lubrication points

Cement kilns are among the most critical assets in the cement production process. With only one or two kilns per plant, unplanned outages can halt production entirely. These kilns must operate reliably under conditions of high temperatures, heavy loading, and exposure to dusty environments.

Lubrication is essential for ensuring the smooth and efficient operation of cement kilns. Proper lubrication reduces friction and wear on moving parts, which is crucial under the extreme temperatures and heavy loads typical of these kilns. It also helps protect components from the abrasive effects of dust, preventing premature failure and costly downtime.

Advantages of proper lubrication include extended equipment life, enhanced reliability, improved efficiency, and cost savings. By maintaining proper lubrication, cement kilns can continue to operate effectively and reliably, even in challenging conditions.

Components that require reliable lubrication:

- Trunnion bearings
- Kiln tires and pads
- Open gear drive (girth ring)
- Pinion shaft bearings
- Motor and gearboxes
- Riding ring



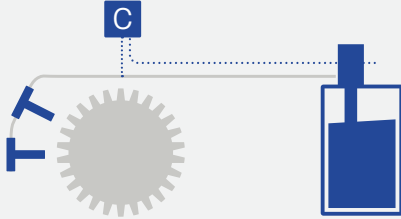


## Lubricants

Product name	Description
LGEV 2	KPF2K-10 extremely high viscosity grease NLGI 2
LGH2 2	KP2N-20 high load, high temperature grease NLGI 2
LGHQ 2	K2P-30 electric motor bearing grease NLGI 2
LGHP 2	K2N-40 high performance, high temperature grease
LGEM 2	KPF2K-20 high viscosity grease with solid lubricants
LGTE 2	KPE2G-40 biodegradable grease NLGI 2



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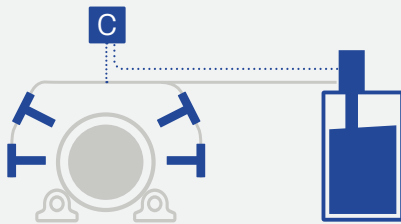


## Automatic open gear lubrication system components

Product name	Description
SD	grease spraying nozzle
SDL	grease spraying nozzle, air controlled
SAF	grease barrel pump
P215	electrically driven grease pump
SPL-CC	spraying lubrication system controller cabinet



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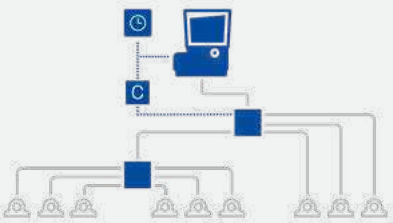


## Automatic riding ring lubrication system components

Product name	Description
Lubrigun	drum pump for kilnjets
Lubrigun control	mechanical drum pump control unit
Nozzle block ASS	lubrication nozzle and valves block for kilnjets
Control unit F.1	control unit f.1 for ASS nozzle blocks
RRL-CC	riding ring lubrication systems controller cabinet



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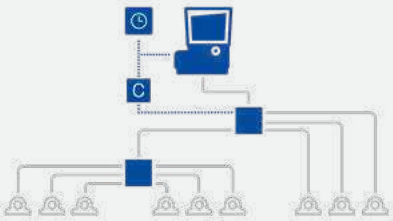


## Automatic oil circulation lubrication system components

Product name	Description
OCU	oil conditioning unit
OSU	compact oil circulation unit
RecondOil Box	oil regeneration with double separation technology



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## Automatic lubrication system components

Product name	Description
P203	electrically driven grease pump
CLP	electrically driven compact grease pump
SSV	progressive metering device
VPK	sectional progressive metering device
H	customized and prefilled high-pressure hose



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## Ball mills

**26+**  
Lubrication points

Cement plant ball mills are among the most critical assets in the cement production process. With only one or two ball mills per plant, unplanned outages can halt production entirely. These mills must operate reliably under conditions of moderate to high loading, low speed, and dusty environments.

Lubrication is essential for ensuring the smooth and efficient operation of cement plant ball mills. Proper lubrication reduces friction and wear on moving parts, which is crucial under the heavy loads and low speeds typical of these mills. It also helps protect components from the abrasive effects of dust, preventing premature failure and costly downtime.

Advantages of proper lubrication include extended equipment life, enhanced reliability, improved efficiency, and cost savings. By maintaining proper lubrication, cement plant ball mills can continue to operate effectively and reliably, even in challenging conditions.

### Components that require reliable lubrication:

- Open gear drive (girth ring)
- Pinion shaft bearings
- Motor and gearbox
- Jacking systems
- Trunion support
- Trunion seals





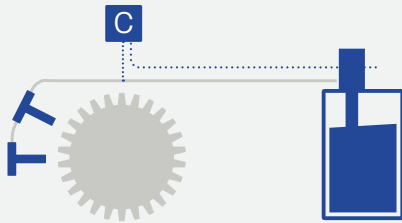


## Lubricants

Product name	Description
LGEV 2	KPF2K-10 extremely high viscosity grease NLGI 2
LGHB 2	KP2N-20 high load, high temperature grease NLGI 2
LGHQ 2	K2P-30 electric motor bearing grease NLGI 2
LGHP 2	K2N-40 high performance, high temperature grease
LGEM 2	KPF2K-20 high viscosity grease with solid lubricants



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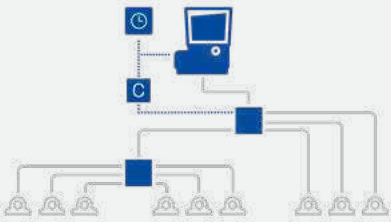


## Automatic open gear lubrication system components

Product name	Description
SD	grease spraying nozzle
SDL	grease spraying nozzle, air controlled
SAF	grease barrel pump
P215	electrically driven grease pump
SPL-CC	spraying lubrication system controller cabinet



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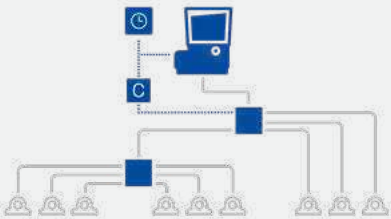


## Automatic oil circulation lubrication system components

Product name	Description
OCU	oil conditioning unit
OSU	compact oil circulation unit
RecondOil Box	oil regeneration with double separation technology



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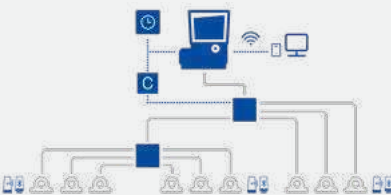


## Automatic dual-line lubrication system components

Product name	Description
ZPU	electrically driven high-volume pump
Multilube	electrically driven pump for heavy equipment
SG / SGA	dual-line metering devices
VSG	dual-line metering device
LMC301	compact control and monitoring device



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## Connected automatic lubrication system components

Product name	Description
Datalog controller	lubrication system controller (SKF eLube app)



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## Fans and blowers

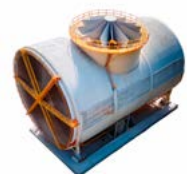
**6+**  
Lubrication points

Fans and blowers are employed in applications where air or gas needs to be moved efficiently. These machines operate under high loads and varying speed levels, which can affect bearing life. Additionally, they are exposed to harsh environmental conditions that can cause rust and corrosion.

Effective lubrication systems are essential for ensuring smooth operation when handling these demanding conditions. Proper lubrication reduces friction and wear, extending the lifespan of the fan and blower components. It also helps to prevent unexpected breakdowns, ensuring reliable and continuous operation.

Components that require reliable lubrication:

- Bearings
- Motor



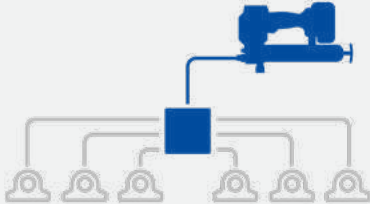


## Lubricants

Product name	Description
LGHP 2	K2N-40 high performance, high temperature grease
LGHQ 2	K2P-30 electric motor bearing grease NLGI 2
LGWA 2	KP2N-30 high load, extreme pressure, wide temperature grease NLGI 2



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## Semi-automated lubrication

Product name	Description
LAGN 120	grease fitting kit (120 conical fittings)
TLGB 21	20V Li-ion PowerLuber, 1 battery
SSV	progressive metering device
SSVD	adjustable progressive metering device
VPK	sectional progressive metering device
H	customized and prefilled high-pressure hose



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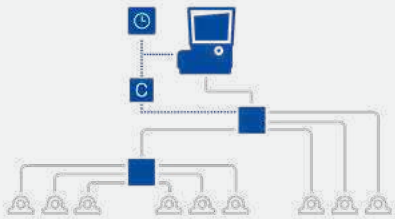


## Automatic single-point lubrication

Product name	Description
TLSD	single-point automatic lubricators
TLMR	single-point automatic lubricant dispenser
LAGD	gas driven single-point automatic lubricators



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## Automatic lubrication system components

Product name	Description
P203	electrically driven grease pump
CLP	electrically driven compact grease pump
SSV	progressive metering device
VPK	sectional progressive metering device
H	customized and prefilled high-pressure hose



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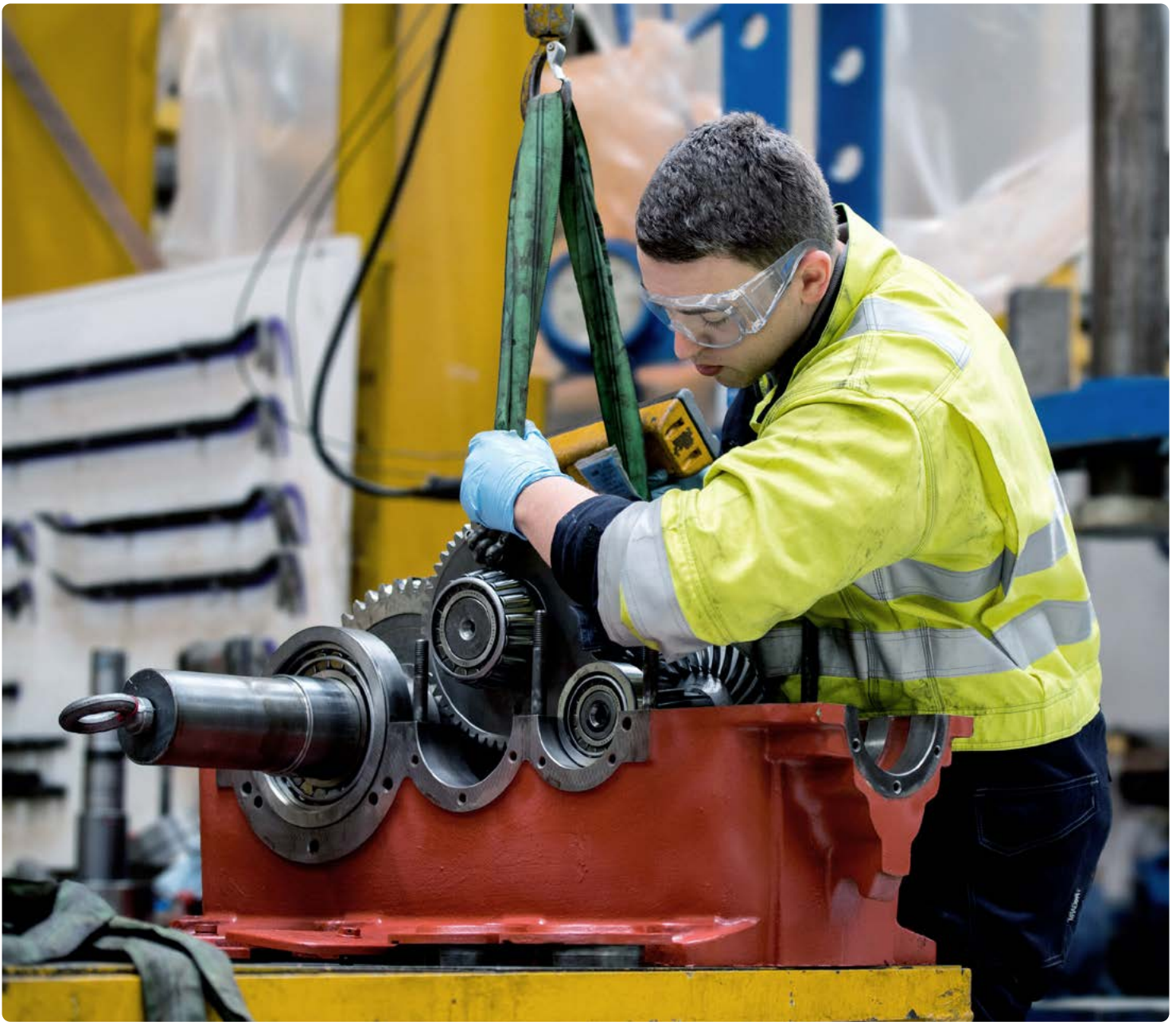
## Connected automatic lubrication system components

Product name	Description
TLDD	connected single-point automatic lubricators
P253 Smart	electrically driven connected grease/oil pump
CLP Smart	electrically driven connected compact grease pump
Datalog controller	lubrication system controller (SKF eLube app)



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## Cement plant maintenance solutions

Cement plant maintenance teams play a crucial role in ensuring the longevity and efficient operation of machinery used in cement production. To support these teams, we offer advanced lubrication solutions designed to meet the unique challenges of cement plant environments. Our solutions reduce maintenance costs and extend machinery lifespan by minimising friction and wear, preventing costly breakdowns, and ensuring continuous operation. They also protect components from rust and corrosion, common in harsh cement plant conditions. Reliable lubrication improves equipment performance, reduces downtime, and provides significant cost savings, making it an essential part of maintenance practices in cement plant workshops and garages.

A wide portfolio is waiting to be discovered by you:

- Greases and chain oils in various containers
- High-pressure hoses, pipes and plastic tubes
- Hose reels for varying lengths and diameters
- Manual and battery driven grease guns
- Grease nipples, couplings and fittings
- Refilling and lubricant barrel pumps
- Repair kits



# Maintenance lubrication solutions

## PowerMaster III

Designed to fit large drums or containers, PowerMaster III pump units are ideal for lubrication systems using substantial quantities of lubricant. The modular combination of various air motors with pump tubes enables optimum adaptation to lubrication system requirements. The PowerMaster III is available in carbon steel to fit any drum size. A complete line of priming equipment and mounting devices are offered.

### Features and benefits:

- Modular design for easy repair
- Only five moving parts and no metal-to-metal contact for longer service life
- Pump tubes provide ratios and outputs for any application



Discover more  
on SKF.com



## High-pressure hoses

Tailored high-pressure hoses are configurable hoses in custom lengths and fittings for quick and easy mounting. They are available prefilled with standard greases and come with nominal diameters of 6, 8 and 10 mm. In case of demanding operating environments of the lubrication system consider using hose protections. To simplify installation of more complex systems with many lubrication lines SKF offers customer-specific markings, for example with a hose label, printing or with clips.

### Features and benefits:

- Individual hose lengths and customized fittings
- Quick and easy installation
- Easy online configuration
- Prefilled with greases



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on SKF.com



## RecondOil box

The RecondOil Box is a state-of-the-art filtration system designed to remove all types of contamination from your oil. It effectively eliminates nano-sized particles, bacteria, free, bound, and emulsified water, sludge, varnish, and soluble oxidation products. This ensures your oil remains clean, protecting your machinery and extending its lifespan. Experience superior contamination control with the RecondOil Box.

### Features and benefits:

- Cost-effective maintenance
- No oil changes = environmentally friendly
- Change filters instead of changing oil
- Increased machine lifetime
- Less downtime
- No oxidation in oil



Discover more  
on SKF.com



# Become a trained lubrication manager

## Lubrication training

Lubrication should be considered a skilled job and treated as such. That is why SKF offers dealers and end customers a range of different online and classroom training courses to better disseminate knowledge of friction management and lubrication technology and to introduce the latest trends and solutions.

In addition to basic courses on lubrication systems, we are also happy to offer training on special topics such as lubricant selection, storage, transfer, applications and lubricant preparation.

Contact us!

As an introduction to the topic, we are pleased to offer best-practice videos and tutorials for lubrication products on our webpage. Have a look!



Best practices!



# Discover the benefits of lubrication management

Lubrication management plays a vital role in the reliability and efficiency of machinery and equipment. It is a proactive maintenance strategy that, when executed correctly, can help prevent breakdowns, reduce downtime, lower maintenance costs, and extend the lifespan of equipment. It involves the systematic application and control of lubricants to reduce friction, heat, and wear between moving parts, ultimately extending the life of equipment and ensuring its optimal performance.

With a thought-through lubrication management approach, we can organize resources properly, improve reliability effectively, reduce inefficiencies and costs and increase safety and environmental compliance.

To better understand this complex topic, we recommend following the lubricant through its lifetime.

This is what we call the lubricant lifecycle. Discover lubrication insights on our website.



Lubrication  
Management



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