

SKF

AGRICULTURAL SOLUTIONS

Solutions for effective and efficient
agricultural operations



Face any farming challenge head on

No two farming operations are the same, yet every farm's equipment endures many of the same challenging conditions. Bearings, in particular, need to be able to cope with heavy shock loads and environmental conditions, complete with dust, crop residue, and moisture. On top of that, they are expected to perform all year round, even during intense tillage, seeding, spraying, harvesting, and baling periods.

Meanwhile, providers of farm equipment look to address the urgent needs of their customers by sourcing and supplying the most reliable engineering components. After all, the agriculture market, albeit fertile, is undergoing immense change with the introduction of game-changing technologies, such as autonomous farming solutions. Only original equipment manufacturers (OEMs) that offer future-proof equipment with accompanying services will be able to outdo the competition now and in the years to come.



Experience and expertise make the difference

Millions of SKF solutions are already at work in the field, delivering excellent performance and reducing the total cost of ownership on farms worldwide. Drawing on expertise that spans bearings, seals, lubrication, power transmission, and condition monitoring, SKF Agri solutions are helping today's OEMs and farmers meet their challenges. With a full standard assortment from SKF you can achieve high reliability at low ownership and operating costs at all stages of the crop cycle. Global availability and a best-in-class bearing logistic network mean you can acquire any spare part and have it shipped to wherever you are located.

Agriculture-specific design

SKF Agri solutions are market-leading products engineered to meet the demands of modern farming. Integrated pre-assembled products can help drive machine speed and efficiency, reduce downtime, and automate manual processes. By involving SKF agriculture industry specialists early in the product planning and design process, SKF can support OEMs as



they optimize components, systems, and sub-systems.

The solutions also undergo harsh physical tests exposing them to mud, fiber, sand, stone, dust and more. Proprietary SKF dynamic modeling tools can further speed up design, testing, and validation processes. Out-of-the-box SKF solutions help reduce assembly time and the number of components and suppliers, while SKF's global distribution network cuts supply chain costs.

Whether designing agricultural equipment or using it to farm, high availability of machinery is crucial to meet productivity requirements. Whether you work on a big or small farm, you are looking for consistent performance and durability, striking the balance between performance and bearing protection. SKF has therefore developed products to fit your specific requirements.

The SKF Agri Hub T50 for example, is a good choice for farmers needing a hub for occasional or lighter-duty tillage, or for farms with a smaller tilling requirement. By combining larger components and a unique dual sealing system, the T400 for example is a good option for large, intensive farming operations where constant uptime is vital.

Benefits

OEM

- Improved equipment reliability, efficiency, and functionality
- Integrated, pre-assembled solutions and simplified assembly
- Robust designs
- Reduced time to market
- Lower warranty costs

End-users

- Lower costs per hectare
- Reduced maintenance
- Longer equipment service life
- Reduced fuel and grease usage
- Greater automation and precision
- Improved safety
- More efficient operation

Features are specialized for harsh agri applications.



SKF Agri Hub for seeding

Solutions for tractors

A Engine



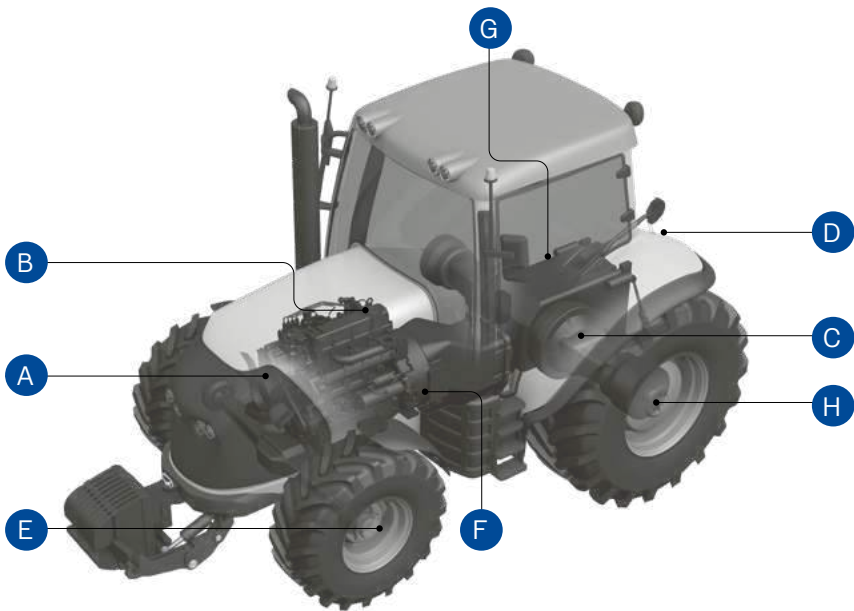
B Clutch / flywheel / coupling



C Parking brake



D Chassis and PTO



A Wheel end (front)



B Driveline (transmission and axle)



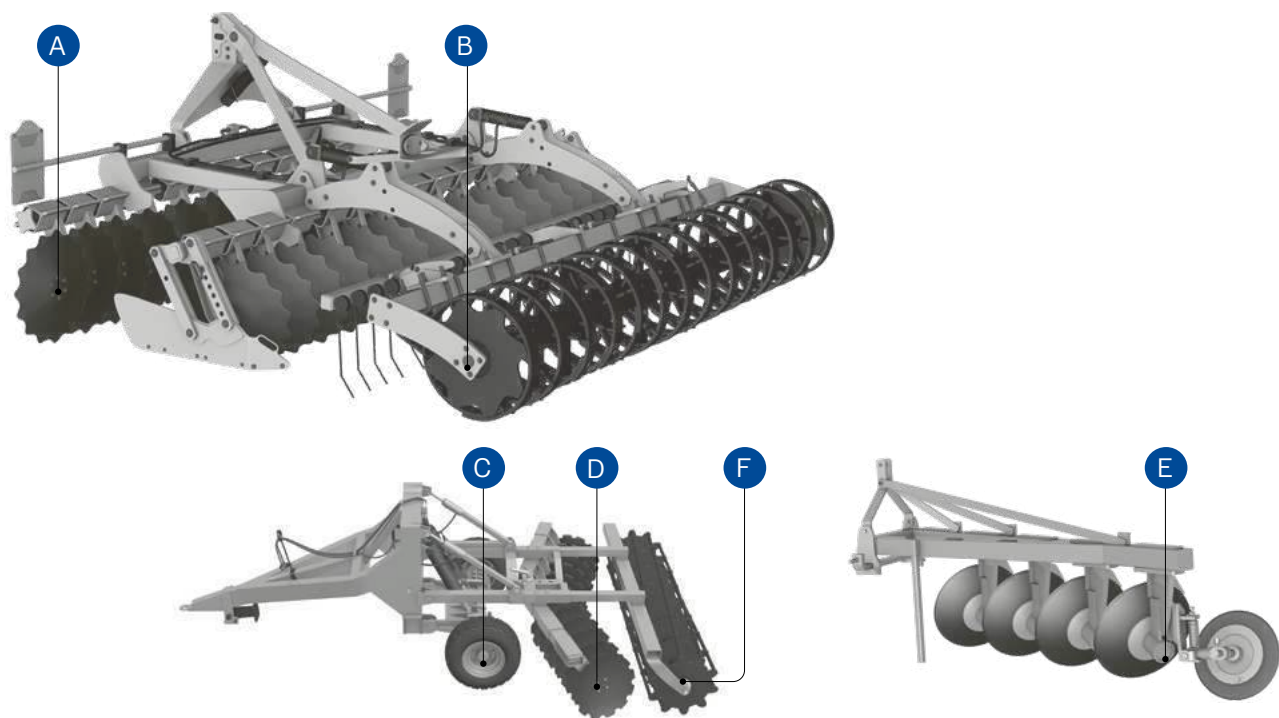
C Steering



D Wheel end (Rear)



Solutions for tillage

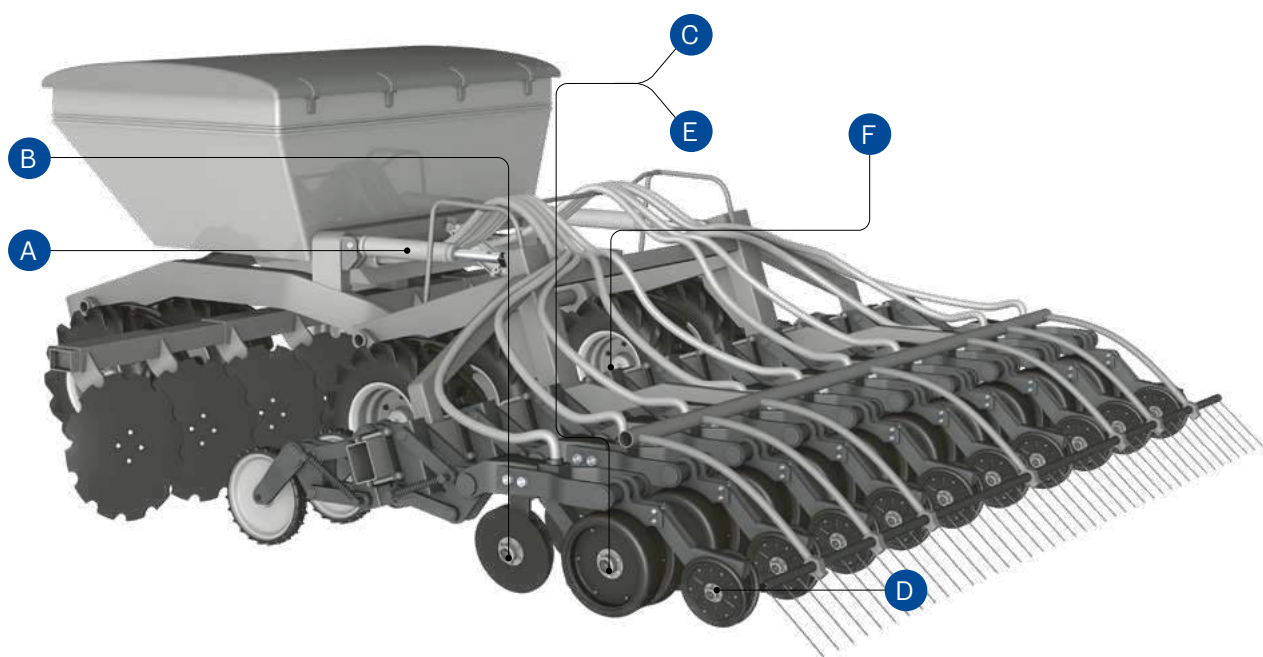


- A** Independent disc
- B** Rolling basket
- C** Implement wheel
- D** Gang disc
- E** Disc plough



Our agriculture-specific solutions are available in a range of performance classes, tailored to application needs and farm size.

Solutions for seeding

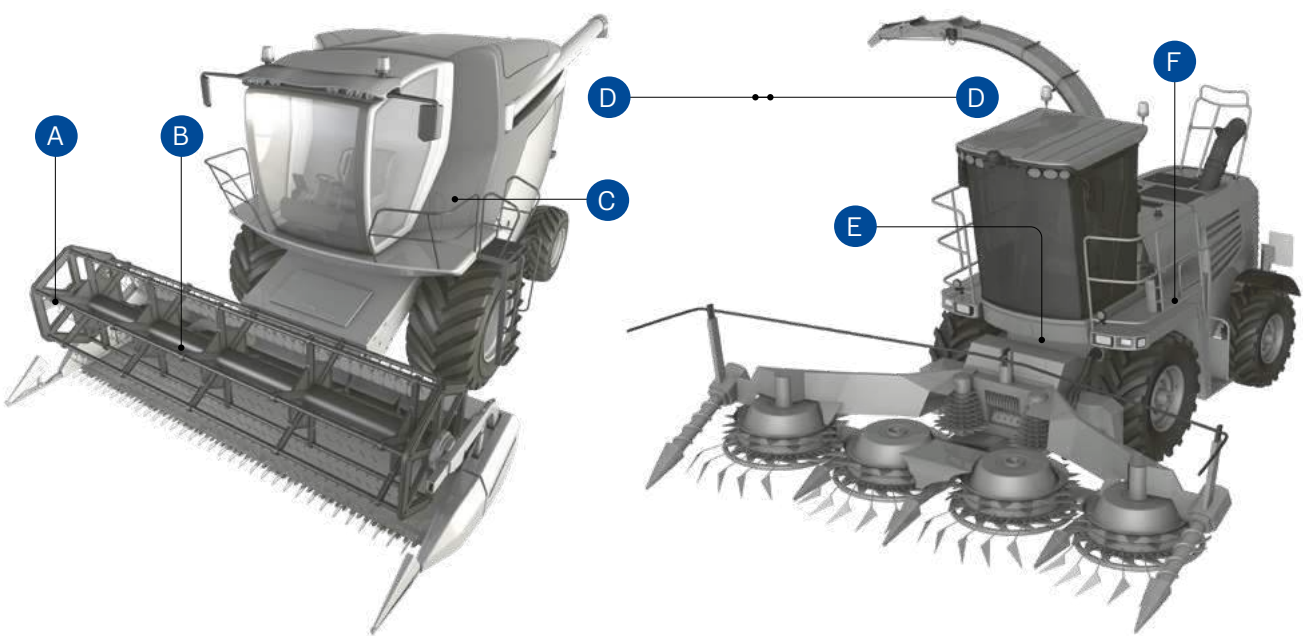


- A** Seedmeter drive shaft
- B** Row cleaners
- C** Disc opener
- D** Closing disc
- E** Gauge wheel
- F** Implement wheel

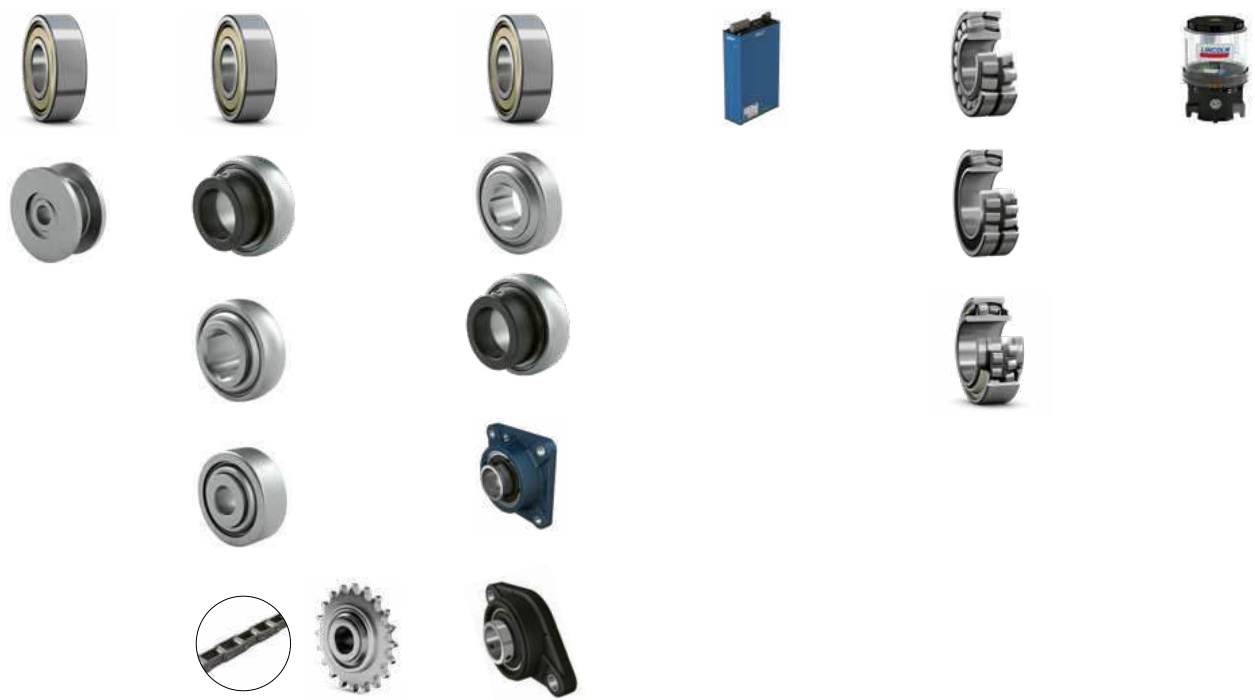


Our agriculture-specific solutions are available in a range of performance classes, tailored to application needs and farm size.

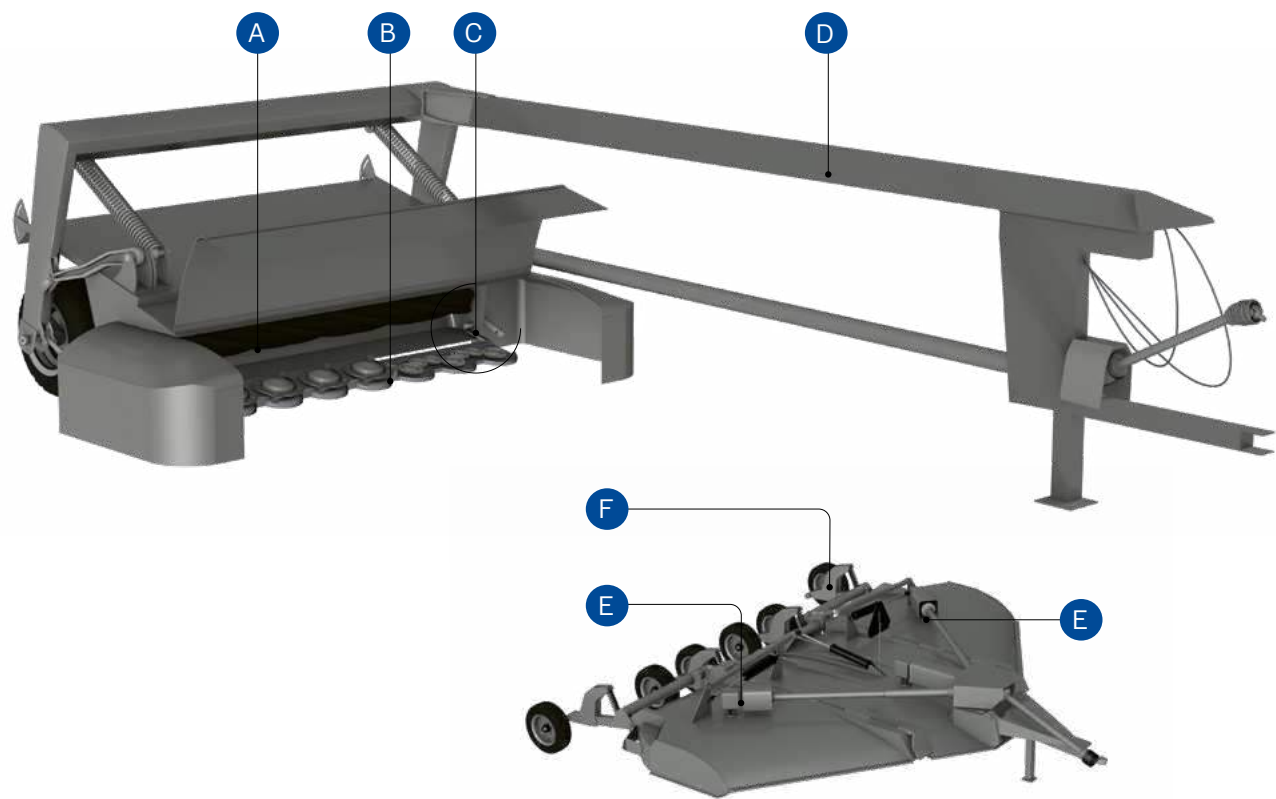
Solutions for harvesting



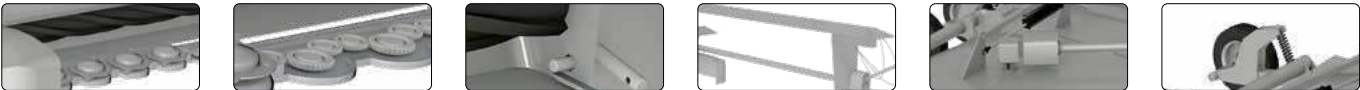
- A** Reel cam follower
- B** Head
- C** Clean grain / residue
- D** Condition monitoring
- E** Chopper / kernal processor / accelerator
- F** Lubrication systems



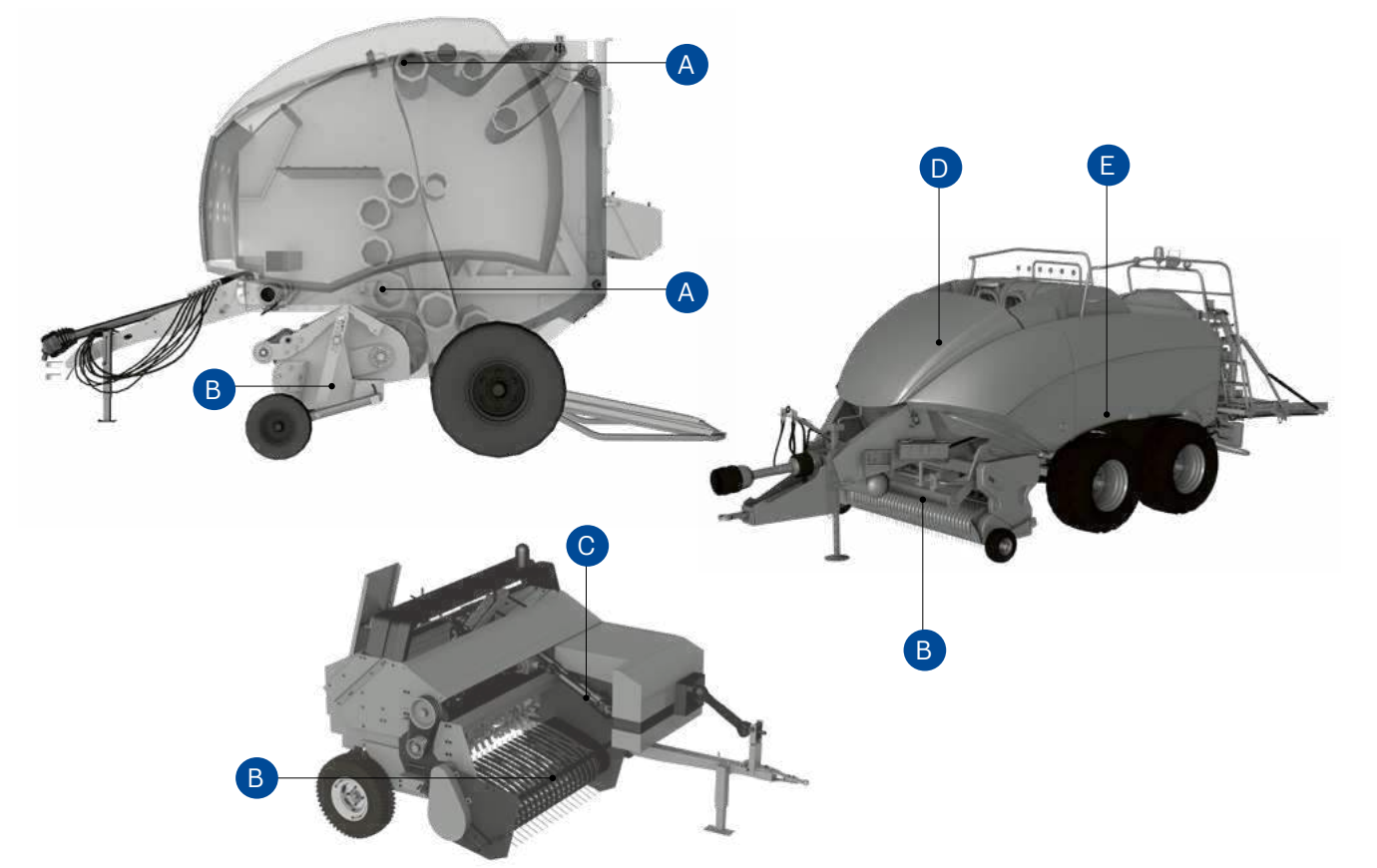
Solutions for mowing



- A** Conditioner roll
- B** Disc / blade
- C** Idler gear
- D** PTO driveshaft
- E** Idler pulley / Blade spindle
- F** Wheel / Caster



Solutions for baling



- A** Idler rolls / drive rolls
- B** Pickup
- C** Plunger
- D** Lubrication systems
- E** Twine guide / tensioner



Digitalization

SKF offers a variety of technology solutions that monitor and diagnose the condition of your farming machinery, meaning you increase the chance of catching a fault before production is affected. Condition monitoring in farming is on the rise, but the operator is the most important factor in making it work. Removing the human aspect requires additional equipment to ensure performance, uptime, and notification of potential issues.



SKF IMx-8 and SKF IMx-16, for example, are compact devices that support proactive maintenance practices and provide a complete system for early fault detection. Machine intelligence from IMx data will help you avoid unplanned downtime and proactively schedule maintenance, prolong machine availability, and minimize maintenance and repair costs. Similarly, we offer automatic lubrication solutions which help ensure the right amount of grease is continuously applied to the correct component. This can range from potential fault detection in rotating parts to automated lubrication practices.

Sealing solutions



HMSA10 V
Radial shaft seal



HMSA10 RG
Radial shaft seal



CRWH1
Radial shaft seal



CRWA5
Radial shaft seal



CRWA1
Radial shaft seal



DO
Metal face seal



RMSA75
Transmission seal



S1S
Rod and buffer seal

SKF offers standard and customized seals for rotating and reciprocating applications in a wide range of materials. SKF can also offer engineering service and help evaluate sealing performance on OEM test rigs or on SKF testing equipment, including 3D modeling, and simulation software.



SKF Mudblock MUD11

SKF Mudblock

SKF Mudblock seal design MUD11 is a new generation of cassette seal, specifically developed for heavy-duty applications in harsh environments and tough operating conditions, including agriculture and construction vehicles. A high speed version (HS) is available on request.

Benefits MUD11

- Up to 50% longer service life and 20% less friction*
- Interchangeable, easy to handle, and install
- Increased productivity
- Reduced maintenance
- Lower operating costs

* Figures are rounded off and compared to other top-quality cassette seal designs in the market. Savings will vary in specific applications.



Power transmission products

SKF power transmission products are designed to respond to the high-performance that OEMs strive for, while enabling more effective farming by increasing its reliability and functionality. With a wide range of belts, chains, pulleys, sprockets, couplings, bushings, and hubs, we offer you high-quality components for designing and maintaining a power transmission system. Each can be customized to meet your specific needs.



Chains

To help farmers overcome their challenges, SKF agricultural chains are often developed in cooperation with OEMs and end-users. They are fully interchangeable with industry-standard chains. We offer agriculture roller chains, combine chains, and drive chains.



Sprockets

With SKF's comprehensive range, you will easily find the correct sprocket size for your application. All sprockets have a black oxide coating, and those with 25 teeth and below are hardened. They are oiled, bagged, sealed, and then boxed, ensuring the product reaches the customer in good condition every time.



Belts

SKF offers a wide range of both standard and engine belts which can increase working load limits and extend belt life.



Pulleys

SKF pulleys can significantly extend belt life and, in turn, reduce cost. SKF offers a comprehensive range of v-belt pulleys. For better corrosion resistance, SKF pulleys are electrophoretic painted. They are statically balanced as standard.



Bushings

Easily installed and removed by using basic tools, SKF bushings allow minimal downtime each time they are fitted. With a wide variety of taper, QD and keyless bushings, as well as weld-on and bolt-on hubs, no customization is needed, and a matching product is available off-the-shelf on short notice.

Maintenance solutions

Technicians and operators need to rely on professional mounting and dismounting tools to apply their maintenance practices. With SKF maintenance solutions, bearings, chains, sprockets, belts, pulleys, bushings, couplings, pinions and rings mounted in agricultural machines, can easily and confidently be maintained. This will allow the farmer to achieve reliable performance.

Mounting tools

Fitting tool kit

The TMFT 36 fitting tool kit facilitates the mounting of different designs of bearings, pinions, sprockets, and bushings with a bore diameter of 10 to 55 mm.



Portable induction heater

Overheating must be avoided for sensitive bearings or components which need to be installed with an interference fit. The TWIM 15 is an innovative heater that can detect the bearing size and heat bearings with a weight of up to 20 kg and a maximum outer diameter of 360 mm.



SKF Hook spanners

The comprehensive range of SKF spanners are used to tighten and loosen many types and sizes of bearing lock nuts that are used on bearings mounted directly on a shaft or on sleeves. They can reduce the risk of damaging the nuts. Depending on application and bearing size, SKF spanners can be used to drive a bearing up a tapered seating. Adjustable hook spanners facilitate an easy and safe tightening and loosening for up to 24 different nut sizes.



Anti-fretting agent

Fretting corrosion caused by slight oscillations and vibrations can make dismounting difficult. That usually occurs with agricultural machines. Applying the LGAF 3E paste on the bearings with a loose fit arrangement, and on bolts, nuts, flanges, studs or guide pins, before mounting them, can help prevent fretting corrosion, and allow users to dismount them more easily after operation.





Dismounting tools

SKF Bearing Puller Kit

The SKF Bearing Puller Kit is designed for dismounting bearings from housings, where the fit is on the outer ring. The pullers are constructed for optimal strength and durability and suit a wide range of bearing bore diameters from 6 to 70 mm. A sliding hammer allows high impact forces to be applied and is ergonomically designed to enhance user safety.



Reversible jaw puller

The multipurpose TMMR F series of reversible jaw pullers are suitable for both external and internal pulling of bearings and other mechanical components. These pullers with zinc passivated arms and beams can enhance corrosion resistance even in tough conditions and have a wide gripping range from 23 mm internal to 350 mm external.



SKF EasyPull – mechanical and hydraulic

Equipped with spring-operated arms and a solid design, SKF EasyPull is one of the most user-friendly and safe tools on the market. Ergonomically designed, the spring-operated arms enable the user to position the puller behind the component with just one movement. The pullers are available in mechanical or hydraulic versions and can save precious time in maintenance.



Standard puller

One of the easiest and most effective ways to dismount small to medium-size bearings is to use a mechanical puller. Using an SKF jaw puller helps ensure that no damage is caused to the bearing or the bearing seating during dismounting, allowing you an easy and safe operation.



Alignment tools for pulleys and sprockets

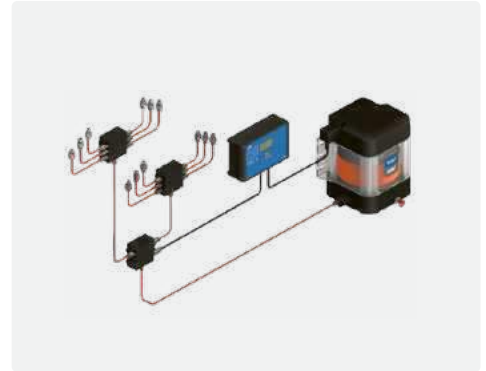
Pulley misalignment can speed up wear on pulleys and belts, as well as increase the noise and vibration level that can result in unplanned machinery downtime. Another side effect of misalignment is premature bearing failure. This too can cause unplanned machinery downtime. SKF offers a range of three different belt alignment tools to enable accurate alignment: TKBA 10 and TKBA 20 for pulley and sprocket alignment and TKBA 40 for v-belt pulley alignment. The tools are designed for easy use without any special training. The laser position indicates the type of misalignment, whether it is parallel, angular or a combination of the two, in both planes horizontal and vertical, allowing for an easy and accurate adjustment.

Lubrication systems, tools and lubricants

SKF and Lincoln lubrication solutions help you make the most of your time in the field, as they are designed to keep your machines running reliably throughout the season. Typical applications are harvesting machines (e.g., combine harvesters, forage harvesters, grape harvesters).

Single-line or progressive automatic lubrication systems

- Standard greases up to NLGI Grade 2, provided by your supplier
- Easily adjustable delivery volumes
- Optional monitoring
- All necessary accessories for your specific lubrication solution



Automatic chain lubrication system OCL-M

- Standard oil and grease NLGI Grade 00, 000, provided by your supplier
- Easily adjustable delivery volumes to match working conditions and chain size and length
- Pre-configured kits are available



Single-point automatic lubricators

- High water and dust protection
- Available with non-refillable cartridges in two sizes
- Greases and chain oils available
- Adjustable dispense rate
- Compact size permits installation in restrictive areas



Automatic Electric Cartridge Pump (AECF)

- Suitable for lubrication of farm machinery like balers
- Simplifies machine maintenance
- Easy to retrofit
- Compact footprint fits into tight spaces
- Robust design withstands harsh working environment





Scan the QR code or contact your SKF authorized distributor or a local representative for more details.



Hydraulically operated lubrication pump MGH

- Efficient retrofit solution for automatic lubrication of agricultural attachments
- Designed for 24/7 operation
- Easy to install and start up
- Market verified technology



High-performance manual lubrication tools

- Wide range of manual tools to simplify lubrication tasks
- Battery-driven grease guns with high-pressure or high-volume dispensing modes can speed up the lubrication process



Complete in-shop maintenance equipment

- Proven pump designs for any type of container and lubricant
- Range of hose reels for varying lengths and diameters



Greases

Using the correct grease is the key to reducing wear, avoiding breakdowns, and increasing the reliability of agricultural machines. There are number of greases available from SKF to meet the requirements of the various agricultural machines and processes, including biodegradability challenges if applicable.

Selection of available greases

- | | |
|---------------|--|
| LGEP 2 | General purpose extreme pressure grease for joints and high load applications |
| LGFG 2 | Food grade grease (NSF ISO 21469 registered as well as Halal and Kosher certified) |
| LGGB 2 | Biodegradable general purpose grease to avoid environmental contamination |
| LGMT 2 | General purpose grease |
| LGMT 3 | Recommended for wheels and for vertical shaft applications |
| LGWA 2 | General purpose grease for high loads, high temperatures, and wet applications |

