

KS PERMAGLIDE® plain bearings: Steering pivots potato harvester

Sector: Agricultural machinery



Products used

KS PERMAGLIDE® plain bearing bush

design PAP ... P20

KS PERMAGLIDE® thrust washer

design PAW ... P20

Function

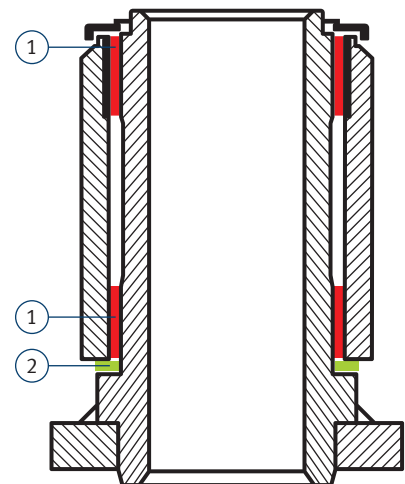
Potato harvesters dig up potatoes with ploughshares, separate the leaves and clean the potatoes. Some machines have integrated reservoirs.

Potato harvesters with their own drive have hydraulic steering. The steering pivots of the machines swivel 90°. The steering pivots are subjected to high weights of up to 15 t. Due to the uneven terrain, the steering pivots are subjected to stress from knocks and impacts. The plain bearings in the steering pivots therefore face high impact loads and edge loads.

Bearing with KS PERMAGLIDE® P20 plain bearing bushes and thrust washers

The bearing positions are subjected to harsh conditions, such as temperature fluctuations, dirt and moisture. During harvest time, the machines are in constant use and must work reliably at all times without maintenance. Signs of corrosion after longer downtime periods must not lead to the bearing becoming stuck.

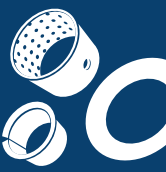
Using the KS PERMAGLIDE® P20 plain bearing bushes and P20 thrust washers means that the bearing functions reliably despite the difficult operating conditions. The thick plastic sliding layer over the sintered bronze dampens knocks and impacts. The wear resistance of the KS PERMAGLIDE® P20 plain bearings ensures that the steering pivots have a long service life. The bearings retain their good sliding properties even with inadequate lubrication due to lack of maintenance.



1 Bush PAP ... P20

2 Thrust washer PAW ... P20

*Bearing of the steering pivot with
KS PERMAGLIDE® P20 plain bearings*



Advantages of KS PERMAGLIDE® P20 plain bearings

- Highly stressable
- High wear resistance
- Insensitive to shocks and impacts
- Good damping characteristics
- Insensitive to edge loads
- Insensitive to moisture due to low swelling tendency
- Insensitive to dirt
- Low friction coefficient, resulting in low steering forces
- Low-maintenance operation with lubrication
- Good sliding properties even with inadequate lubrication
- Small installation space
- Easy mounting

Description of material

KS PERMAGLIDE® P20 is a low-maintenance, high-performance leaded bearing material. The material is designed for grease-lubricated or liquid-lubricated applications. This composite, multi-layered material excels thanks to its high rigidity, durability and resistance to oscillation and vibration. These characteristics require a layer system comprising a polymer sliding layer, a compound layer of sintered bronze and a supporting steel back. The wear-resistant material has already proven itself many times in industry.

The standard P20 version features oil distributing pockets as per DIN ISO 3547.

The bearings are provided ready to install for recommended connection-design installation dimensions. Variations in the sliding layer are also available:

- Wall thicknesses with machining allowance, for reworking in installed state for increased precision
- With a smooth sliding surface for hydrodynamic applications

Further information on KS PERMAGLIDE® plain bearings

- KS PERMAGLIDE® catalogue, item no. 50003863-02
- KS PERMAGLIDE® OnlineShop www.permaglide.com/onlineshop

