



KS PERMAGLIDE® plain bearings: Ball head in steering linkages

Sector: Agricultural machinery

Product used

KS PERMAGLIDE® plain bearing spherical shell design **PAX ... P20**

Function

The steering system of a tractor is connected to the steering levers on the wheel via the steering linkage. A ball joint in the tie rod carries out the force transmission with spring suspension.

The bearings of the ball joint are constantly subjected to the influences of dirt, moisture, temperature fluctuations and vibrations with heavy impacts under extremely harsh operating conditions. No play may occur in the ball joint over the entire service life. The ball joint should be maintenance-free over the entire service life.

Bearing with KS PERMAGLIDE® plain bearing spherical shell design **PAX ... P20**

The bearing with KS PERMAGLIDE® plain bearing spherical shells design PAX ... P20 fulfils these requirements and guarantees precise guidance over the long-term despite all these influences. The high wear resistance of the KS PERMAGLIDE® plain bearings ensures that the ball joints have a long service life.

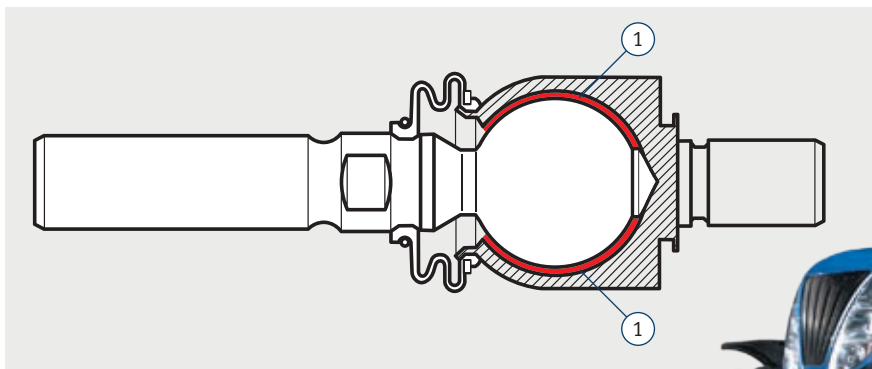
Solid plastic bearing shells are less suited to the application, as plastic bearing shells have a tendency towards creepage or cold flow under the stresses, resulting in play.

The KS PERMAGLIDE® plain bearings used are rigid and free from play thanks to their multi-layer composite system. The sliding surface also has oil distributing pockets

and is initially lubricated to guarantee maintenance-free, low friction values over the entire service life. The bearing is protected from dirt with a rubber sleeve.

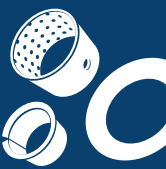
Advantages of KS PERMAGLIDE® P20 plain bearings

- High wear resistance
- Insensitivity to shocks and impacts
- Highly stressable
- Free-of-play bearing
- Resistant to moisture, no swelling tendency
- Low frictional losses, meaning hardly any loss of power on the steering system
- High damping performance
- Maintenance-free with initial lubrication



Ball head in tractor steering linkage, bearing with KS PERMAGLIDE® plain bearing spherical shells design **PAX ... P20 (1)**





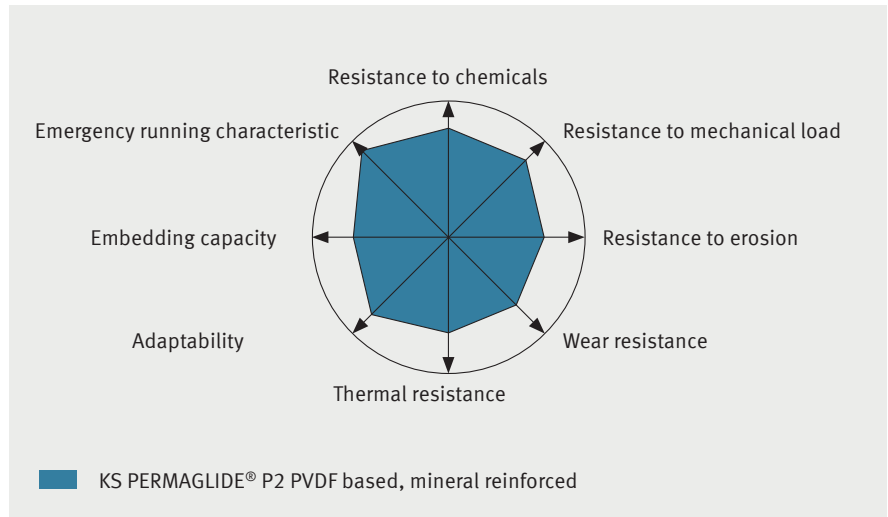
Description of material

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 are largely achieved by a sliding layer system made of polyvinylidene fluoride (PVDF), polytetrafluoroethylene (PTFE) and lead. 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. Also available are versions with a different wall thickness, suitable for rework when installed, or with a smooth sliding surface for hydrodynamic applications.

Other designations

Tractors tie rod
Spherical head
Tie rod end



Characteristic profile KS PERMAGLIDE® P2 PVDF based, mineral reinforced

Further information on KS PERMAGLIDE® plain bearings

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



KS PERMAGLIDE® P20