



KS PERMAGLIDE® plain bearings

Blade adjustment unit in wind turbine systems

Sector: power engineering

Product used

KS PERMAGLIDE® cylindrical plain bearing bush, design PAP ... P20

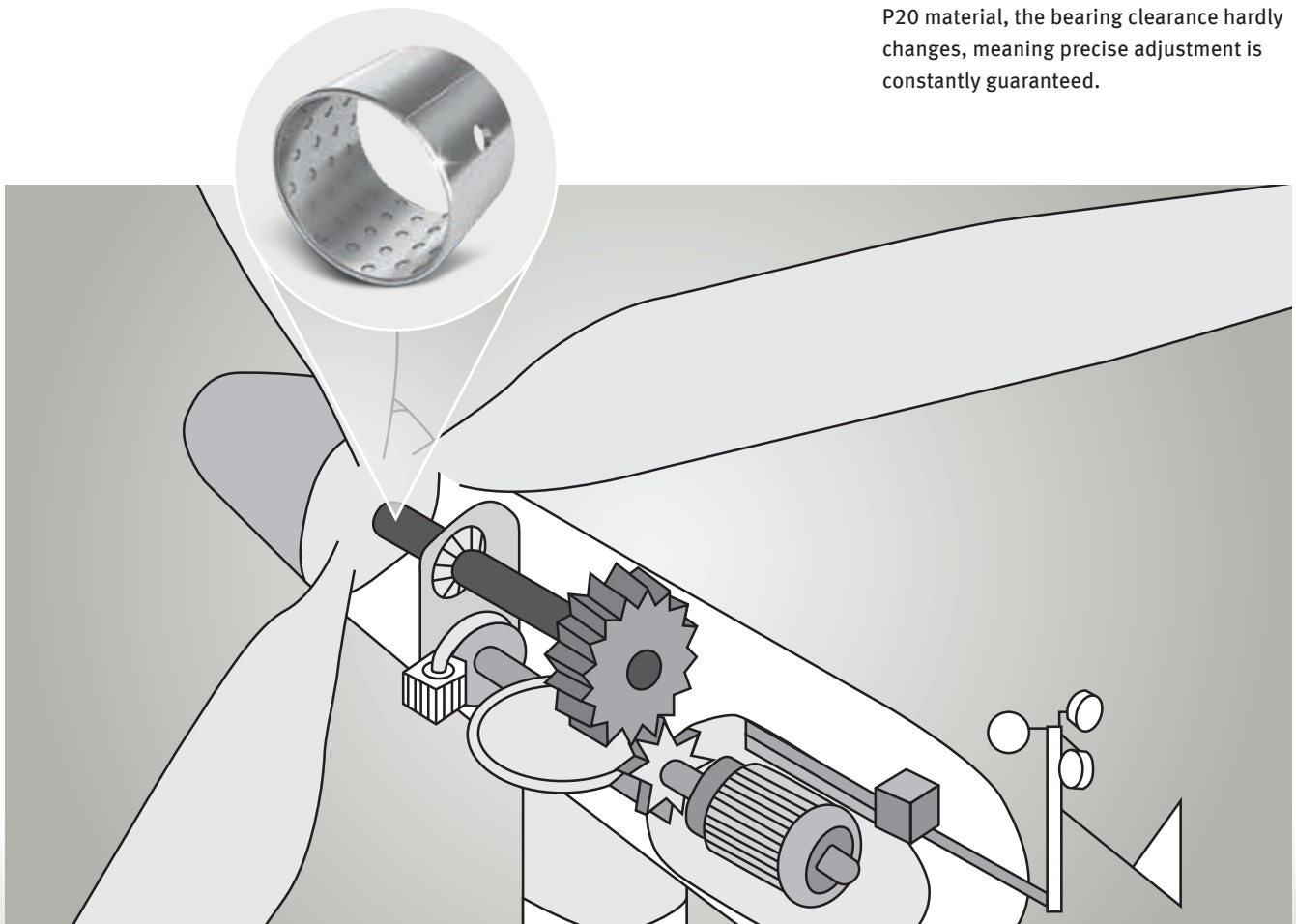
Function

Most wind turbine systems have a horizontally-mounted 3-blade rotor. The wind causes the rotor blades to rotate. The mechanical rotary motion is transferred from the rotor hub to the rotor shaft and is converted by the gearbox for generator operation. In order to take full advantage of

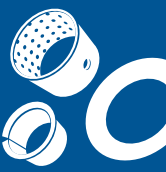
the wind, the nacelle and rotor blades are continually adjusted. The rotor blades are mounted in the hub so that they are rotatable and are adjusted hydraulically using a push rod. The push rod must not be bent and must be guided using damping because of permanent vibrations.

Bearing with KS PERMAGLIDE® P20 plain bearing bushes

The linear spigot bearing of the push rod is realised using two low-maintenance KS PERMAGLIDE P20 plain bearings. The plain bearings are initially lubricated with grease, which ensures low adjusting forces and smooth guiding. Thanks to the high wear resistance of the KS PERMAGLIDE® P20 material, the bearing clearance hardly changes, meaning precise adjustment is constantly guaranteed.



Blade adjustment unit bearing with KS PERMAGLIDE® P20 plain bearings

**Advantage: reliable function of the bearing with KS PERMAGLIDE® P20 plain bearings**

- Low-maintenance operation with lubrication
- High wear resistance
- Constant and low friction coefficient
- Good damping characteristics
- Insensitivity to shocks and impacts

Description of material

KS PERMAGLIDE® P20 is a low-maintenance, leaded bearing material with a high performance. It 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 polyvinylidenfluoride (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.

Alternative designations for wind turbine systems

- Wind turbine
- Wind energy plant
- Wind energy converter
- Wind power station

Further information about KS PERMAGLIDE® P20 plain bearing bushes

KS PERMAGLIDE® catalogue,
Item no. 50003863-02

KS PERMAGLIDE® online catalogue
www.permaglidge.com/onlineshop

