



# PRODUCT APPLICATION

## PERMAGLIDE® PLAIN BEARINGS GEARBOX ROTOR SHAFT IN WIND TURBINE SYSTEMS

SECTOR: POWER ENGINEERING

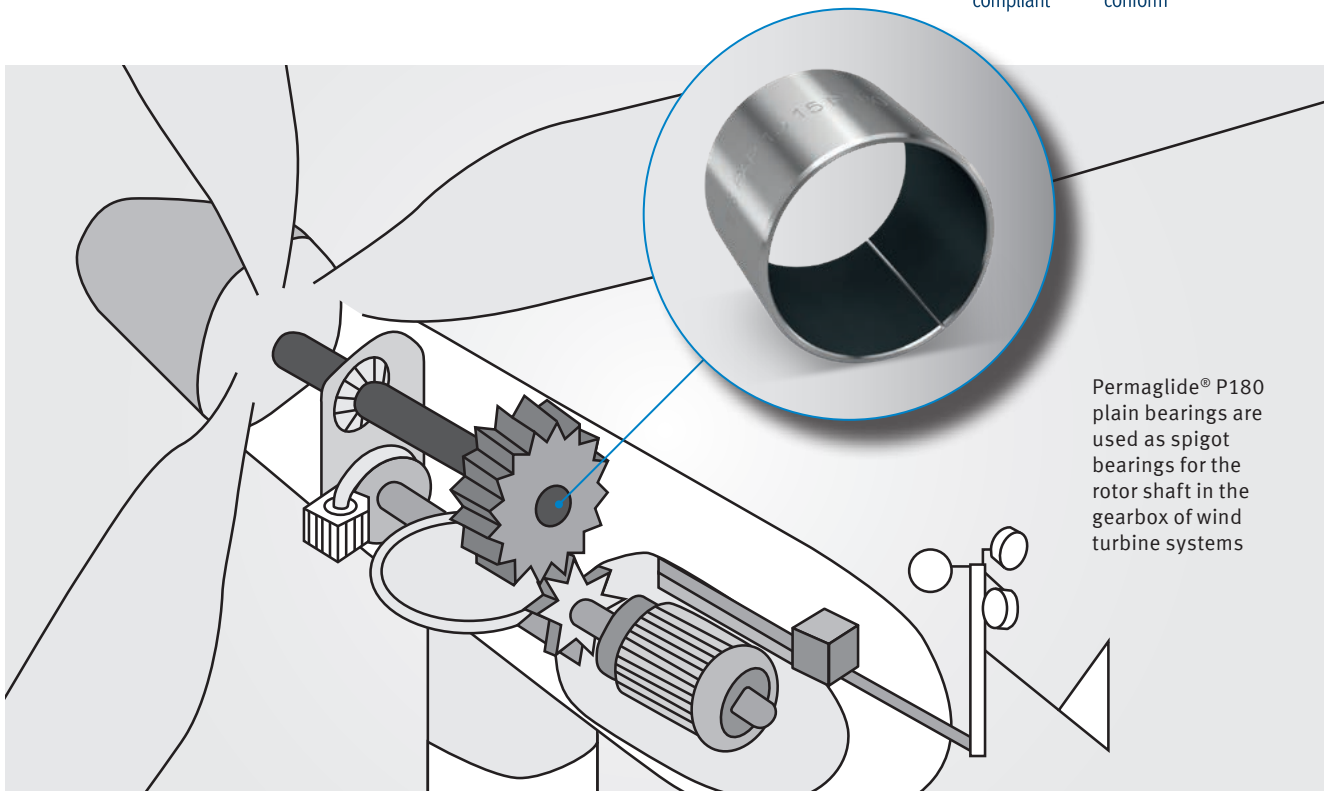
### PRODUCT USED

Permaglide® cylindrical plain bearing bush, design PAP ... P180

### 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. The low speeds of the rotor are converted at a ratio of 1:25 by a

gearbox for generator operation. The rotor shaft is installed in the hollow shaft of the gearbox in the input stage. The rotor shaft and hollow shaft are connected on one side and rotate synchronously. The rotor shaft twists as a result of the strong alternating stresses. This leads to micro-movements on the guide parts. Such strained contact points are usually subject to tribo-chemical corrosion.



**Bearing with Permaglide® P180 plain bearing bushes**

With a maintenance-free Permaglide® P180 plain bearing, tribo-chemical corrosion is prevented and the guide quality of the bearing position is improved. The negative impact from stick-slip is minimised thanks to the low friction coefficient of Permaglide® P180 plain bearings.

**Advantage: reliable function of the bearing with Permaglide® P180 plain bearings**

- Maintenance-free
- Protected from tribo-chemical corrosion
- Low operating bearing clearance
- Low level of wear, even with alternating stresses
- Low friction coefficient

**Description of material**

Permaglide® P180 is a universal plain bearing material for both dry and lubricated applications. The composite, multi-layered material excels thanks to its high rigidity, durability, high chemical resistance and good emergency running properties. These properties are primarily achieved due to the tin bronze sintered onto a steel base and the friction-reducing additives consisting of the fluoropolymer PTFE and barium sulphate.

**Alternative designations for wind turbine systems**

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

**Further information about Permaglide® P180 plain bearing bushes**

- Permaglide® catalogue, Item no. 50003863-02
- Permaglide® OnlineShop [shop.permaglide.de](http://shop.permaglide.de)

