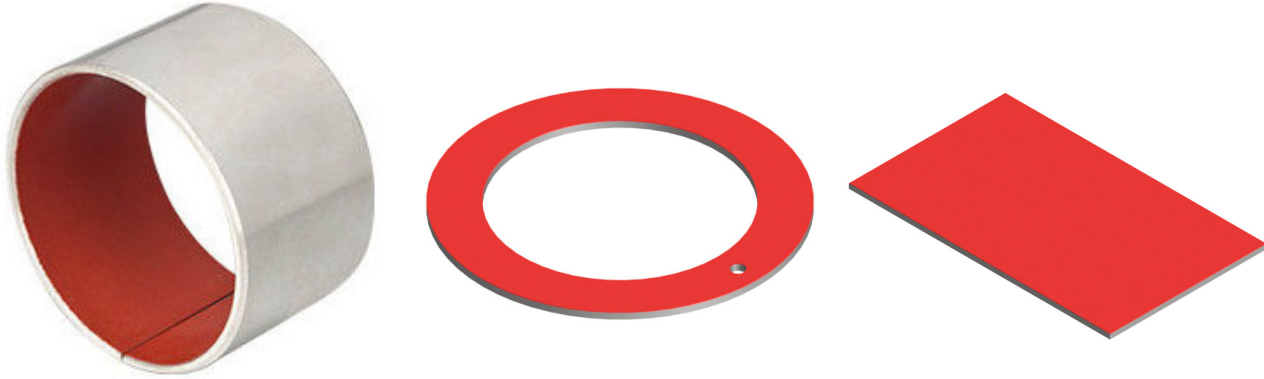


PTFE Lined Plain Bearing (Bushing)

Excellent Low Friction and High Wear Resistance



Q: Where do you find a dependable, robust and cost-effective bearing solution for your sliding, rotating, oscillating or reciprocating motion applications?

A: Stag Energy Solution's selection of plain bearings use materials designed to obtain running surfaces that offer anti-friction and wear resistant bearing properties that can operate dry or with lubrication...all this in a nice compact and inexpensive package!

Also known as a bushing, slide bearing, or sleeve bearing, this plain bearing is usually cylindrical in shape and consists of a metal backing, usually steel or bronze, onto which is sintered a porous bronze layer that is impregnated with a PTFE-fiber mixture to obtain a running surface that offers anti-friction and wear resistant bearing properties.

Plain Bearing Features and Benefits

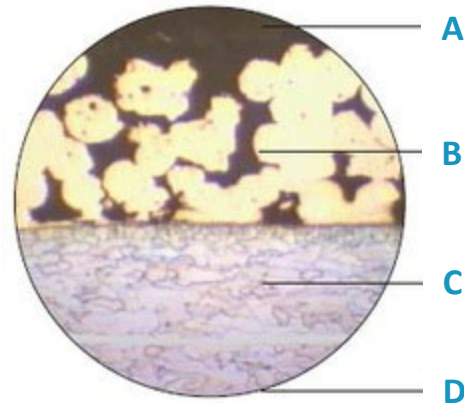
- Cost effective because there are no moving parts (i.e. no rollers or balls).
- The absence of moving parts in plain bearings results in quieter operation.
- Greater contact area and conformability allow plain bearings to withstand higher load capacity and resist high shock loads and edge loading.
- The slim, one-piece design of plain bearings enable a reduction in housing size which allows for space and weight savings.
- The straightforward installation of plain bearings into a simple machined housing virtually eliminates fitting damage compared with rolling-element bearings.
- Plain bearings offer greater resistance to damage from oscillatory movements which improves bearing life.
- Plain bearings are not subject to wear damage resulting from skidding of the rolling-elements when operating at high speed and too low a load.
- Plain bearings can operate dry eliminating the additional cost of lubricant systems and the associated downtime caused by maintenance activities for these systems.
- Plain bearings can operate dry at high temperatures.

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Material Structure

- A PTFE-fiber mixture 0.01 to 0.03 mm as sliding layer that provides an excellent initial transfer film which effectively coats the mating surface of the bearing assembly forming a homogeneous oxide-type solid lubricant film.
- B Porous bronze 0.2 to 0.3 mm provides maximum thermal conductivity away from bearing surface and serves as a reservoir for the PTFE-fiber mixture.
- C Low-carbon steel backing 0.7 to 2.3 mm provides fundamental structural support and gives exceptionally high load carrying capacity as well as excellent heat dissipation.
- D Tin plating 0.005 mm or copper plating 0.008 mm provides good corrosion resistance.



| Technical Data | |
|-----------------------------------------------|---------------------------------------|
| Specific Load Capacity (Static) | ≤ 250 N/mm ² |
| Specific Load Capacity (Dynamic) | ≤ 140 N/mm ² at low speeds |
| Specific Load Capacity (Rotating Oscillating) | ≤ 60 N/mm ² |
| Friction Coefficient | 0.03 to 0.25 |
| Operating Temperature Range | -200 to 280 °C |
| Maximum Dry Running Pv (Short Term Operation) | 3.6 N/mm ² ×m/s |
| Maximum Dry Running Pv (Continuous Operation) | 1.8 N/mm ² ×m/s |
| Maximum Speed (Dry Running) | 2 m/s |
| Maximum Speed (Hydrodynamic Operation) | > 2 m/s |

Plain bearings can be used in the following applications:

- Downhole Drilling Tools
- Lifting Equipment
- Hydraulics and Valves
- Pneumatic Equipment
- Medical Equipment
- Textile Machinery
- Agricultural Equipment
- Construction Equipment
- Materials Handling
- Packaging Equipment
- Automotive
- Etc.

For information about our plain bearings, please contact Rob Boyne at (780) 983-4514.

For general information about Stag Energy Solutions, please contact Chris Kenschuh at (403) 992-7824.

Plain bearings are available in a variety of different materials, sizes (both metric and imperial) and geometries. Contact us to discuss your current plain bearing requirements or let us customize a solution for you.

