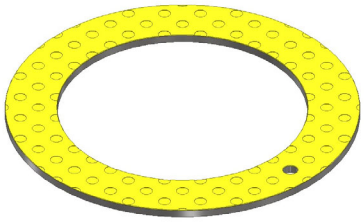
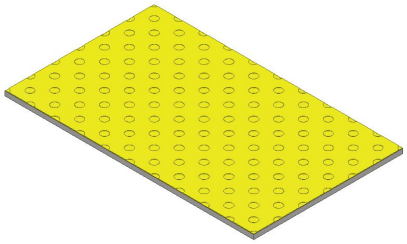
POM Lined Plain Bearing (Bushing)

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 and overlaid with an engineered thermoplastic bearing material 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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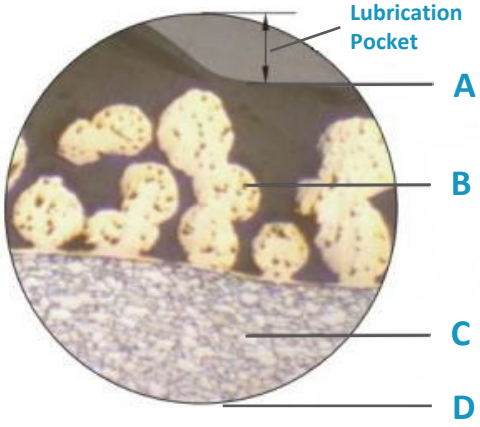
Material Structure



A Polyoxymethylene (POM) engineered thermoplastic bearing material 0.3 to 0.5 mm as sliding layer that provides high wear resistance and low friction even when small amounts of lubricant are supplied. Designed for use with grease lubrication, this bearing surface is normally provided with a uniform pattern of circular indents designed to provide the optimum distribution of lubricant over the bearing surface.

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 0.4 to 2.2 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 (Rotating Oscillating)	≤ 70 N/mm²
Friction Coefficient	0.05 to 0.25
Operating Temperature Range	-40 to 130 °C
Maximum Dry Running Pv (Short Term Operation)	3.6 N/mm²×m/s
Maximum Dry Running Pv (Continuous Operation)	1.8 N/mm²×m/s
Maximum Speed (Hydrodynamic Operation)	2.5 m/s

* Circular indents must be filled with a suitable lubricant before assembly.

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 Konschuh 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.

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