

Mechanical Drawing I

Code: MAE217

Bearing

Bearing:

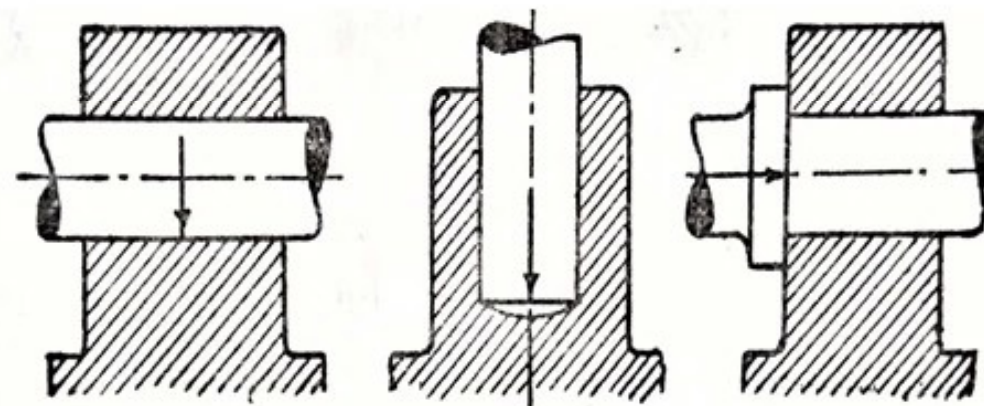
Bearings provide supports for rotating shafts. They should be such as to permit free and smooth rotation.



Kinds of Bearing:

There are three main kinds of bearings:

1. **Journal bearing:** The bearing pressure is perpendicular to the axis of the shaft.
2. **Pivot bearing:** the pressure is parallel to the axis of the shaft and the end of the shaft rests on the bearing surface.
3. **Collar or thrust bearing:** the pressure is parallel to the axis of the shaft which is passed and extended through the bearing.



(i) Journal

(ii) Pivot

(iii) Thrust

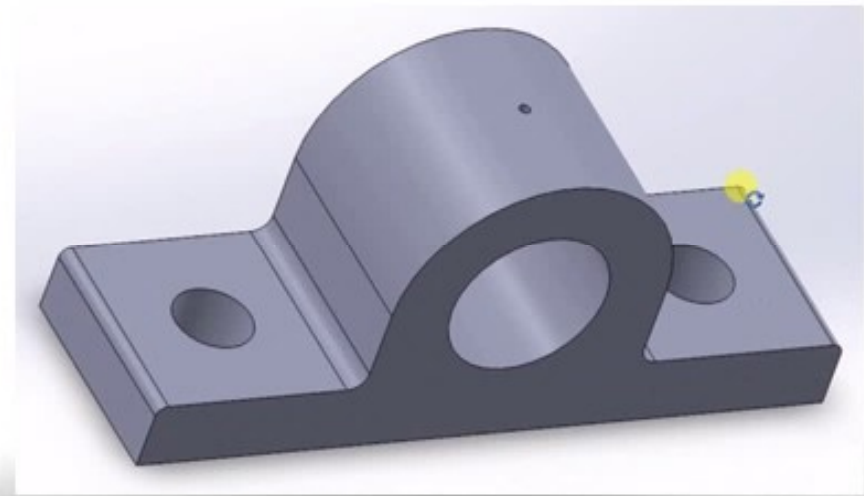
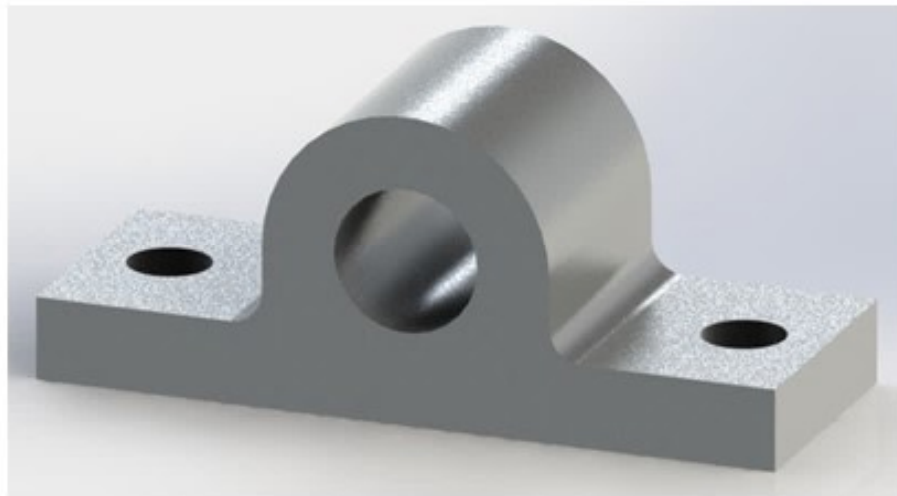
Journal Bearing:

There are many kinds of Journal bearings:

1- Solid bearing:

This is the simplest form of a journal bearing. It is made of cast iron. A hole, equal to the diameter of the shafts, is bored in its cylindrical part.

It used for shafts which carry light loads and rotate at slow speed.

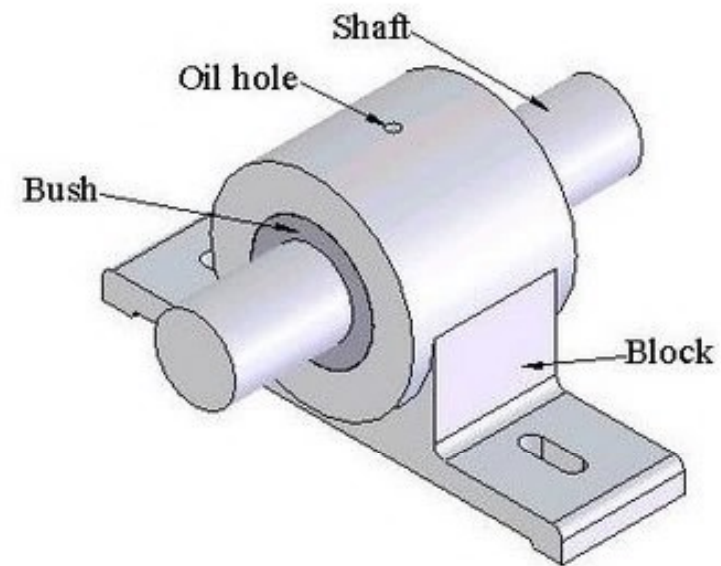
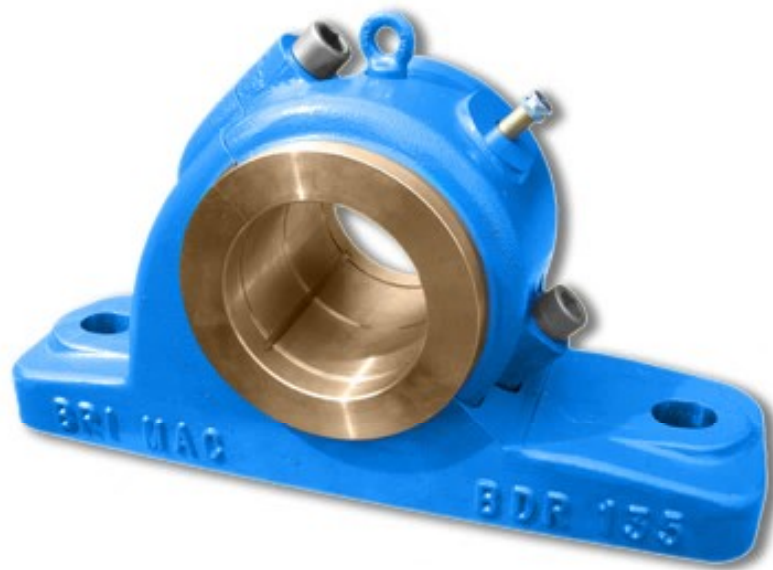


Journal Bearing:

There are many kinds of Journal bearings:

2- Bushed bearing:

It is lined with a hollow bush of brass or gun-metal.



Journal Bearing:

There are many kinds of Journal bearings:

3- Pedestal bearing or Plummer Block:

This bearing consists of

- a) A cast iron *pedestal* or *block* with a sole.
- b) Gun metal *brasses* or *steps* made in two halves.
- c) A cast iron *cap*.
- d) Two mild steel *bolts*.

