

## Machining Recommendations for Sintered Bearings

Machining of self-lubricating bearings should be avoided whenever possible in order to maintain the best bearing properties. When machining is absolutely unavoidable it is important that the recommendations below are followed. Machining should be carried out with the bearing impregnated with oil if possible.

Oilube Bronze, Oilube Ferro Bronze and Graphite Bronze can be turned. Diamond or carbide tips, quality ISO K 20, with a tip radius of 0.1/0.2mm max. should be used for final turning. Suitable cutting speeds are:- for Oilube Bronze and Graphite Bronze 100-200 m/min. and for Ferro Bronze 50-100 m/min.

It is imperative that the bearings are thoroughly cleaned after machining to remove any turning debris.

The bearing surface of self-lubricating bearings must not be ground, as the oil transportation pores are then closed. The outer surface of the bearing can, however, be machined in any way required. If external additional lubrication is used then even the pores on the outside diameter must be kept open.

The bearing can be heated on an electrical hot plate after machining to check that the pores are still open. Oil will then ooze out of the bearing.

Bearings usually lose oil during the turning operation and the oil should be replaced before the bearing is used. A simple method of doing this is by immersing the bearing in oil SAE 20 heated to 80 degrees C. The bearing should be immersed until the oil has cooled. The pores are filled with the oil by this process and the bearing is then ready for use.

The edge strength of the Graphite Bronze is rather low and special care should therefore be taken when turning end surfaces. When drilling, the bearing should be placed as shown in the adjoining sketches.

