



What are some general guidelines regarding bearing fitting practice?

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One thing that is just as important as choosing a good quality bearing, is deciding how to mount the bearing to the desired assembly. Although every application is unique, there are some general guidelines to use when deciding how to mount bearings.

- The press fit should be applied to the ring that is rotating. For example, if the application requires the outer ring to rotate and the inner ring to remain stationary, then the press fit should be applied between the housing and outer ring.
- Applications where heavy or shock loading exist typically require tighter press fits.
- Tighter press fits result in an increase in rigidity, which is desirable for some applications
- If the press fit is too tight, then clearance may be completely removed. This may result in deformed rolling elements/raceways, excessive heat generation, cracked rings, and reduced bearing life.
- If the press fit is too loose, then the bearing ring may creep and damage either the shaft or housing bore.
- Heat generation causes materials to expand. Different materials have different heat expansion coefficients which cause them to expand at different rates. This difference in heat expansion between the shaft, housing, and bearing materials will affect the shaft and housing fits.

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