

## Ball Bearing Installation

Below are the steps detailing proper installation of ball bearings.

### Internal Clearance

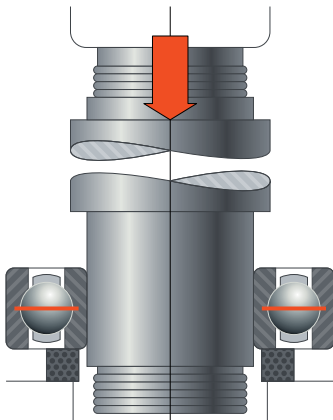
In the manufacture of ball bearings, standard practice indicates assembling the rings and balls with a specified internal clearance. This characteristic proves necessary to provide pre-engineered clearance to compensate for the tight fit effects of press fitting the bearing rings on shafts or housings at installation. Internal clearances compensate for thermal expansion

of bearings, shafts and housings or for a contact angle in the bearing after installation. Radial clearance used to create a contact angle is typically used in angular contact ball bearings. Radial measurement is accepted as the more significant characteristic because it is more directly related to shaft and housing fits. Plus, the American Bearing Manufacturers Association (ABMA) prescribes this method.

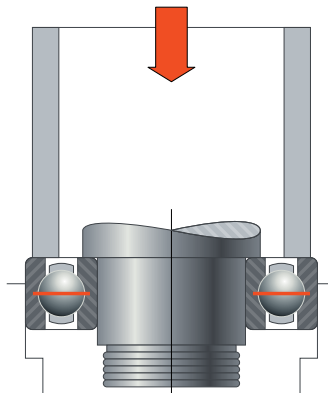
### Proper Installation Procedures

Exert slow, even force against the rings when installing a bearing. When installing a bearing tight fit on a shaft, the pressure should be applied against the inner ring. When installing a bearing tight fit in a housing, you should apply pressure against the outer ring. Below are three different guides for installing ball bearings.

Proper Shaft Mounting



Proper Housing Mounting – Rotating Housing and Loose Shaft



Proper Simultaneous Housing/ Shaft Mounting

