



Torrington.

Fafnir.

Kilian.

Bearing Terminology

ABEC-1,-3,-5,-7,-9—Annular Bearing Engineers Committee classes or grades of ball bearing precision.

ABMA—American Bearing Manufacturers Association.

AFBMA—Anti-Friction Bearing Manufacturers Association.

Adapter Assembly—Assembly consisting of adapter sleeve, locknut and lockwasher.

Adapter Sleeve—Axially slotted sleeve with cylindrical bore, tapered outside surface and male screw thread at small end used with locknut and lockwasher for mounting of bearing with tapered bore on cylindrical outside surface of shaft. Also called pull-type sleeve.

Angular Contact Ball Bearing—Ball bearing whose internal clearance and race location result in predetermined angle of contact. Usually of counterbore construction.

Axial Internal Clearance—In ball or roller bearing assembly, total maximum possible movement parallel to bearing axis of inner ring in relation to outer ring. Also called bearing end play.

Axial Load—Load acting in direction parallel with bearing axis.

Basic Dynamic Load Rating—Basic dynamic load rating C_0 is calculated constant radial load (thrust load for thrust bearings) which group of apparently identical bearings with stationary outer rings can theoretically endure for rating life of 1 million revolutions of inner ring.

Cage—Bearing component which separates rolling elements for uniform distribution of load. Also called retainer or separator.

Cam Follower—See Track Roller.

Cone—Inner ring of tapered roller bearing.

Conrad Ball Bearing—Radial ball bearing with uninterrupted grooves of circular cross section. Also called deep groove ball bearing.

Contact Angle—Angle between plane perpendicular to bearing axis and line of action to resultant forces transmitted by bearing ring to rolling element.

Drawn Cup Needle Roller Bearing—Needle roller radial bearing with thin pressed steel outer ring (drawn cup), which may have one closed end or both ends open. Usually employed without inner ring.

Duplex Ball Bearings—Two single row angular contact bearings selected dimensionally to be functionally matched pair or set.

Fillet Radius—Shaft or housing corner dimension which bearing corner must clear.

Fixed Bearing—Bearing which positions shaft against axial movement in both directions.

Floating Bearing—Bearing so designed or mounted as to permit axial displacement between shaft and housing.

Full Complement Bearing—Rolling bearing without cage in which sum of clearances between rolling elements in each row is less than diameter of rolling elements and small enough to give satisfactory function of bearing.

Housing Fit—Amount of interference or clearance between bearing outside surface and housing bearing seat.

Hydraulic Nut—Collar temporarily fixed to shaft which incorporates hydraulic annular piston to transmit axial mounting or dismounting force to bearing inner ring.

ISO—International Standards Organization.

Life—"Life" of individual rolling bearing is number of revolutions (or hours at some given constant speed) which bearing runs before first evidence of fatigue develops in material of either ring or washer or any of rolling elements.

Locking Collar, Concentric—Ring fitting over extended inner ring of insert bearing and having set screws which pass through holes in inner ring to make contact with shaft.

Locking Collar, Cam—Ring having recess on one side which is eccentric in relation to bore and fits over equally eccentric extension of inner ring of insert bearing. Collar is turned in relation to inner ring until it locks and then secured to shaft by tightening of set screw.

Misalignment—Lack of parallelism between axis of rotating member and stationary member.

Needle Roller—Cylindrical roller of small diameter with large ratio of length to diameter. Generally accepted that length is between three and ten times diameter which is usually less than 5 mm.

Preload—Internal load on the rolling elements of bearing which is result of mounting conditions or design. Can be intentional or unintentional.

Radial Internal Clearance—In ball or roller bearing assembly, total maximum possible movement perpendicular to bearing axis of inner ring in relation to outer ring. Also called radial play or diametrical clearance.

Radial Load—Load acting in direction perpendicular with bearing axis.

Rating Life— L_{10} of group apparently identical bearings is life in millions of revolutions that 90% of group will complete or exceed.

RBEC—Roller Bearing Engineers Committee.

RBEC-1,-5—Class or degree of precision of anti-friction roller bearings.

Relieved End Roller—Roller with slight modification of diameter at ends of outside surface to reduce stress concentration at contacts between rollers and raceways.

Runout, of Assembled Bearing—Displacement of surface of bearing relative to fixed point when one raceway is rotated with respect to other raceway.

Seal—Internal closure affixed to one bearing ring and extending toward other ring, with which it makes contact or forms narrow labyrinth shaped gap for purposes of retaining lubricant and guarding against contaminants.

Self Aligning Bearing—Rolling bearing which can accommodate angular misalignment and angular motion between axis of raceways due to one raceway being spherical.

Shaft Fit—Amount of interference or clearance between bearing inside diameter and shaft bearing seat outside diameter.

Shield—Circular closure, usually pressed sheet metal, affixed to one bearing ring and extending towards other, closing space but not making contact with other ring.

Snap Ring—Removable ring used to axially position bearing or bearing components.

Spacer—Sleeve or sleeves serving to space different bearings on same shaft or different rows of rolling elements in multi-row bearing.

Spherical Roller Bearing—Self-aligning, radial rolling bearing with convex rollers or concave rollers as rolling elements. With convex rollers outer ring has spherical raceway, with concave rollers inner ring has spherical raceway.

Tolerance—The permissible range of variation in a dimension.

Track Roller—Radial rolling bearing with heavy section outer ring, intended to roll on track, e.g. cam track.

Wide Inner Ring Bearing—Bearing with inner ring extended on one or both sides in order to achieve greater shaft support and/or to permit addition of locking device and/or provide additional space for sealing devices.

Withdrawal Sleeve—Axial slotted sleeve with cylindrical bore, tapered outside surfaced and male screw thread at large end. Used for mounting, and dismounting (by means of nut) of bearing with tapered bore on cylindrical outside surface of shaft. Also called push-type sleeve.