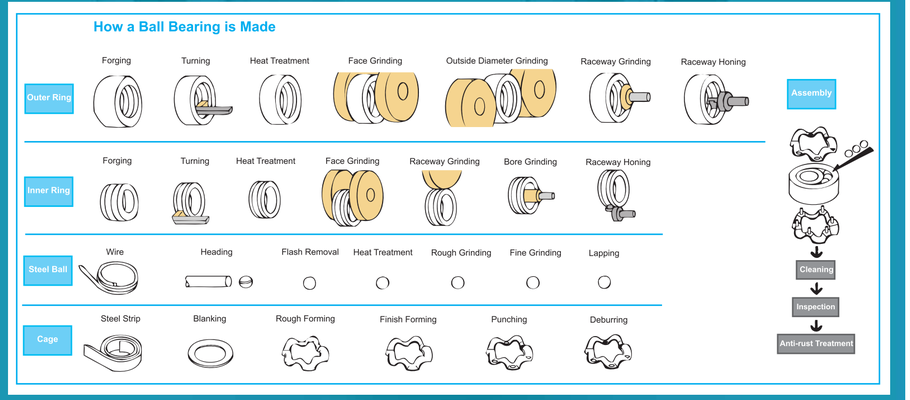
Bear With Us:
Bearings 101

Defined:
BEARING, derived from the verb “to bear,” being a machine element that allows one part to bear (support) another

History:
Ball bearings can be found in ANCIENT EGYPTIAN drawings as well as DA VINCI’s and GALILEO’s notebooks.

Anatomy:
A standard BEARING consists of FOUR essential elements. • **Outer Ring** • **Inner Ring** • **Steel Ball** • **Cage**



Emerson Bearing

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Types: Rolling bearings have evolved to include a wide variety of special TYPES for unique applications.

Single Row Deep Groove Ball Bearings
These bearings have deep and continuous raceway grooves, which in turn have a close osculation with the balls, allowing them to accommodate axial and radialloads in either direction.

Double Row Self Aligning Ball Bearings
Designed for use in applications involving severe misalignment from either shaft deflection or mounting, these bearings feature a concave outer ring with two rows of balls that operate on a variety of contact angles.

Super Precision Angular Contact Ball Bearings
These bearings are ideal for applications needing precise accuracy of rotating parts and high speeds.

Cylindrical Roller Bearings
Despite a wide variety of series, designs, and sizes, the basic form of this bearing is a single row with ta cage, which can support heavy radial loads, high speeds, and rapid acceleration.

Spherical Roller Bearings
These bearings have two rows of rollers as well as a circular outer and two inner ring raceways. The center point of the outer raceway is at the bearing axis, making these bearings self-aligning and great for both heavy radial and axial loads in both directions.

Tapered Roller Bearings
With tapered inner and outer ring raceways as well as tapered rollers, these bearings can handle simultaneous axial and radial loads, providing low friction and true rolling.

Needle Roller Bearings
These bearings feature cylindrical rollers that are smaller than the diameter of the bearing and slightly relieved at the end to modify the line contact between raceways and rollers, preventing stress peaks and helping extend service life.

Applications: Rolling bearings serve INDUSTRIES of all kinds.

- Aggregate/ Concrete/Mining
- Electric Motor Repair
- Machine Tools
- Marine Spares
- Material Handling
- Metal Processing
- Packaging/ Food Processing
- Plastic Processing and Forming
- Power Generation
- Pulp, Paper Converting and Printing
- Pump, Compressor and Oil Fields
- Recreation
- Robotics and Automation
- Transportation
- Wastewater Treatment
- Wood Products