

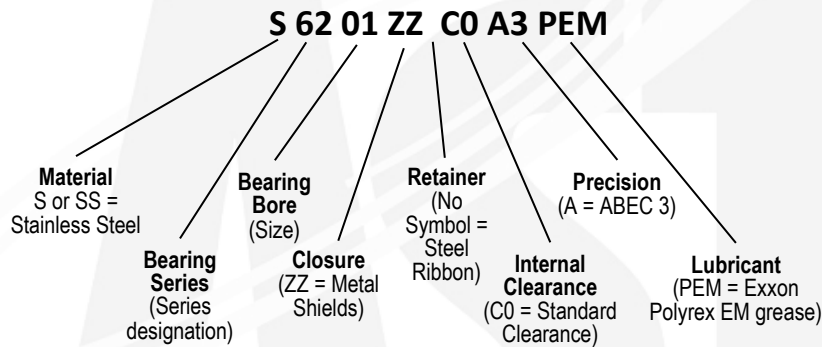
Deep Groove Radial Ball Bearing Nomenclature and Numbering System

There are many different numbering systems used in the bearing industry today. The boundary dimensions for certain series of bearings are defined in various standards, such as ABMA, JIS and ISO. In addition, most manufacturers have created their own numbering systems that are a combination of the actual part, or bearing, number and a series of codes that define additional specifications.

Interchanging bearing numbers between different numbering systems requires attention to detail and full knowledge of the codes that define the specifications. AST's Engineers and Sales reps are experts with all numbering systems and can assist you with breaking down any bearing part number.

To assist you in understanding AST Bearings' radial ball bearing nomenclature and numbering system, we offer the following examples and codes.

Numbering Example of AST Deep Groove Ball Bearings:



Note: 1) Typical bore size designation: 00=10mm, 01=12mm, 02=15mm, 03=17mm, >03=BBx5 (example: 6208, 08x5=40mm).
2) No symbol for material code = high carbon chromium steel SAE 52100

Material Codes for AST Ball Bearings:

Blank or no symbol = High carbon chromium steel SAE 52100

S or SS as prefix, or **H** as suffix = Martensitic stainless steel, AISI 440C, KS440

Ball Bearing Type Codes:

F prefix = Flanged

NR suffix = Snap ring groove in OD (this code appears after the bearing number)

Ball Bearing Closure (seals and shields) Codes:

ZZ = Pressed steel shields, **Z** = single shield

2RS = Contact rubber (buna-N) seals, **RS** = single seal

2RU = Non-contact rubber (buna-N) seals, **RU** = single seal

2VS = Contact Viton seals, **VS** = single seal

Seal and shield combinations are also available

Ball Bearings Retainer (ball separator) Codes:

No code = Steel ribbon, riveted

Other codes = Retainers in other materials

Radial (Internal) Clearance Codes for Ball Bearings:

C0 = Normal clearance

C2 = Lower than normal clearance

C3, C4 = Greater than normal clearance

Ball Bearing Lubrication:

Standard Greases for Ball Bearings

PEM = Exxon Polyrex EM

SRL = Kyodo Yushi Multi Temp SRL

AV2 = Shell Alvania No.2

B32 = Exxon Mobil Beacon 325

SRI2 = Chevron SRI-2

Standard Oils for Ball Bearings

AF2 = Aero Shell Fluid No.12

002 = Rust preservative only

There are hundreds of lubricants, both oils and greases, used in rolling element bearings. Different lubricants are available that are designed to operate in various conditions, such as high or low temperatures, high speeds, vacuum, extreme loads, and high moisture or humidity to name a few. In addition certain greases should not be used in miniature or instrument bearings due to increased noise levels. There are lubricants that are approved for use in the food industry and others that are qualified to US military specifications for use in the defense industry. Consult with an AST Applications Engineer to ensure the proper lubricant is specified.

Typically, the last code in a bearing part number identifies the lubricant. Aside from the codes for the standard lubricants listed above, the following system is used to identify the lubricant.

Other Codes for Ball Bearings:

There are additional codes that may appear in various positions within a bearing part number. These include codes that indicate types of functional testing performed, such as noise or torque, type of packaging, paired duplex arrangements, special dimensions, and bore or OD calibration.