

DESIGN, TYPES, AND FEATURES

SINGLE-ROW DEEP GROOVE BALL BEARINGS

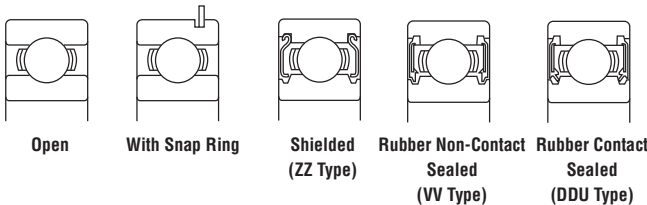
Single-row deep groove ball bearings are classified into the types shown below.

The proper amount of good quality grease is packed in shielded and sealed ball bearings. A comparison of the features of each type is shown in Table 1.

Table 1 Features of Sealed Ball Bearings

	Shielded (ZZ Type)	Rubber Non-Contact Seal (VV Type)	Rubber Contact Seal (DDU Type)
Torque	Low	Low	Higher than ZZ and VV types due to contact seal
Speed capability	Good	Good	Limited by contact seals
Grease-sealing effectiveness	Good	Better than ZZ type	Slightly better than VV type
Dust resistance	Good	Better than ZZ type (usable in moderately dusty environments)	Best (usable even in very dusty environments)
Water resistance	Not suitable	Not suitable	Good (usable even if fluid is splashed on bearing)
Operating temperature (1)	-10 to +110 °C	-10 to +110 °C	-10 to +100 °C

Note (1) The above temperature range applies to standard bearings. By using cold- or heat-resistant grease or changing the type of rubber, the operating temperature range can be extended. Please contact NSK for such applications.



Pressed cages are usually used for deep groove ball bearings. For large bearings, machined brass cages are used (refer to Table 2).
Machined cages are also used for high-speed applications.

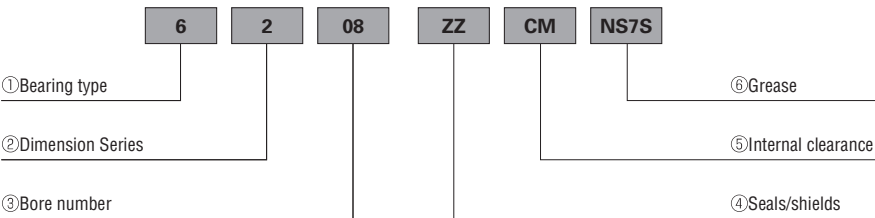
Table 2 Standard Cages for Deep Groove Ball Bearings

Series	Pressed Steel Cages	Machined Brass Cages
68	6800 - 6838	6840 - 68/800
69	6900 - 6936	6938 - 69/800
160	16001 - 16026	16028 - 16064
60	6000 - 6040	6044 - 60/670
62	6200 - 6240	6244 - 6272
63	6300 - 6332	6334 - 6356

Formulation of Bearing Designations

Single-row deep groove ball bearings

Example:



- ① Bearing type 6: Single-row deep groove ball bearings
- ② Dimension Series 2: 02 Series, 3: 03 Series, 9: 19 Series, 0: 10 Series
- ③ Bore number Bore diameter for 03 and under—00: 10 mm, 01: 12 mm, 02: 15 mm, 03: 17 mm
04 and over—Bore diameter = Bore number × 5 (mm)
- ④ Seals/shields ZZ: Shield on both sides, DDU: Rubber contact seal on both sides, VV: Rubber non-contact seal on both sides, Z: Shield on one side, DU: Rubber contact seal on one side, V: Rubber non-contact seal on one side
- ⑤ Internal clearance Omitted: CN clearance*1, C3: Clearance greater than CN, C4: Clearance greater than C3, CM: For electric motors*1
- ⑥ Grease designation*2 NS7: NS HI-LUBE

* 1 CM clearance may be used instead of CN clearance (the reverse is not possible).

* 2 The grease designation is required when seals/shields are used on both sides.