

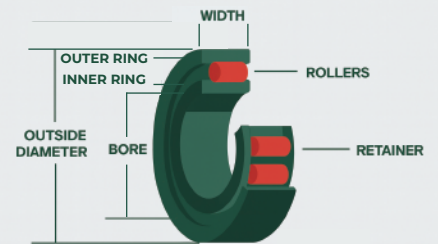
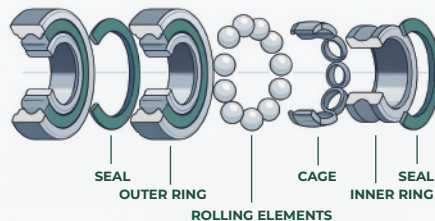
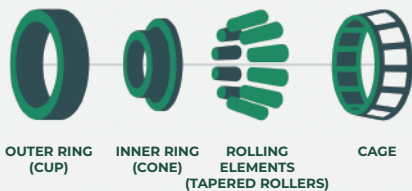


Understanding Bearing Numbers and Suffixes - Knowledge of bearings guarantees good maintenance.

LETS RECAP

- Rolling elements name the bearing.
- Different bearing types can share the same dimensions, but replacing one with the wrong type will be catastrophic.
- Replace bearings with the correct type for the application — if failure occurs, check that the correct type was previously installed.

BEARING COMPONENTS



LEARNING POINT 1:

The cage (retainer) spaces and guides the rollers. The raceway is the surface where rolling elements make contact with the inner and outer rings.

Bearing Numbers Explained

Bearing numbers often appear complex, but they tell part of the story. However, the numbering system does not cover all bearing types, and it's essential to consult proper catalogues for accurate replacement.

Quick Breakdown (Only true for Metric Bearings with a Parallel Bore)

First digit: Bearing type

- 0 – Double row angular contact ball bearing
- 1 – Double row self-aligning ball bearing
- 2 – Spherical roller bearing
- 3 – Tapered roller bearing
- 4 – Double row rigid ball bearing
- 5 – Thrust ball bearing
- 6 – Deep groove ball bearing
- 7 – Angular contact ball bearing
- N – Cylindrical roller bearing

Last two digits × 5 = Nominal bore size, except when it ends with:

- 00 → 10 mm
- 01 → 12 mm
- 02 → 15 mm
- 03 → 17 mm

Middle digits (Second and Third digits):
Indicate bearing width and diameter series.



Understanding Bearing Numbers and Suffixes - Knowledge of bearings guarantees good maintenance.

Bearing Number	Bearing Type	Last Two Digits x 5	Actual Bore (Shaft Size)	Bearing Width	Bearing OD
6005	Ball Bearing	05 x 5 = 25	25 mm	12 mm	47 mm
6205	Ball Bearing	05 x 5 = 25	25 mm	15 mm	52 mm
6305	Ball Bearing	05 x 5 = 25	25 mm	17 mm	62 mm
6002	Ball Bearing	02 x 5 = 10	15 mm	9 mm	32 mm
6202	Ball Bearing	02 x 5 = 10	15 mm	11 mm	35 mm
22205	Spherical Roller	05 x 5 = 25	25 mm	18 mm	52 mm
21305	Spherical Roller	05 x 5 = 25	25 mm	17 mm	62 mm
NU205	Cylindrical Roller	05 x 5 = 25	25 mm	15 mm	52 mm
NU2205	Cylindrical Roller	05 x 5 = 25	25 mm	18 mm	52 mm
NU305	Cylindrical Roller	05 x 5 = 25	25 mm	17 mm	62 mm



LEARNING POINT 2:

- Don't attempt to work out bearing numbers yourself - always confirm via a catalogue or bearing specialist.
- 99.9999% of the time, you should reinstall exactly the same bearing you removed.
- Bearing design is the job of engineers - never guess.

It's All in the Suffix

The suffix (letters after the bearing number) carries the real story - performance, application, and internal specifications. Two bearings with the same number but different suffixes can behave completely differently.

#	Bearing No. + Suffix	Brand	Application	Approx. Price
1	22328 CCJA/W33 VA405	SKF	Shaker screen spherical roller bearing, standard bore tolerances, C4 Clearance.	R25,000
2	22328 ME C4 U15 VS	NSK	Shaker screen spherical roller bearing, standard bore tolerances, C4 Clearance.	R15,000
3	22328 E4 C3	NSK	Standard spherical roller bearing for use in example industrial gearbox. C3 Clearance. (This bearing is not shaker screen rated.)	R5,000
4	22328 EAS.MA.T41B	FAG	Special shaker screen spherical roller bearing with modified bore tolerances. C4 Clearance.	R25,000

If you replace Item 4 with any of the others → catastrophic failure within hours.



Understanding Bearing Numbers and Suffixes - Knowledge of bearings guarantees good maintenance.



KEY LEARNING POINTS:

- It's not the bearing number only - the suffix determines success.
- Suffix decoding is not universal; consult the manufacturer.
- Changing brands is a technical decision, not a financial one.
- Buying based on price alone can lead to millions in damage.
- Never accept bearings with tampered or altered markings.
- Avoid suppliers who claim they can modify clearance or bore fit in-house - only manufacturers can do this safely.

Proper vs. Unacceptable Markings



Acceptable:

- Clear stamped/etched/cast manufacturer markings.



Unacceptable:

- Hand-engraved brand names.
- Added C3/C4 markings on packaging.
- Ground-off or altered branding.



**Bearing numbers guide you - suffixes protect you.
When in doubt, call a specialist.**