

NTN[®]

ULTAGE[®]

**Spherical Roller Bearing
Interchange Guide**



Table of Contents

NOMENCLATURE SYSTEM..... 3

THE ULTAGE ADVANTAGE 3

22200 SERIES INTERCHANGE

 STEEL RETAINER, TAPERED BORE 4-5

 STEEL RETAINER, STRAIGHT BORE 6-7

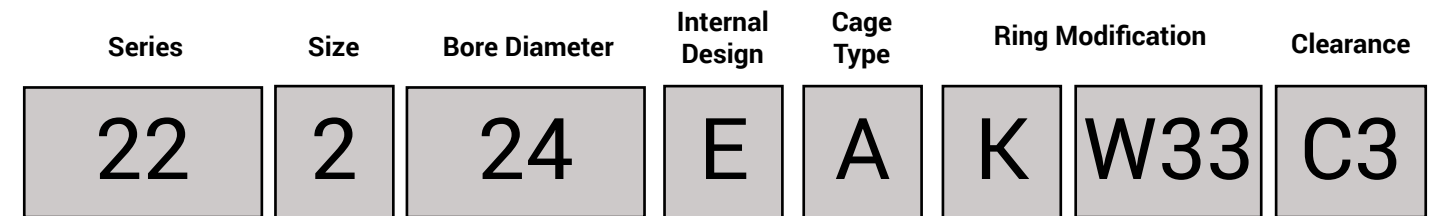
 BRASS RETAINER, TAPERED BORE 8-9

 BRASS RETAINER, STRAIGHT BORE 10-11

22300 SERIES INTERCHANGE

 BRASS RETAINER, STRAIGHT BORE 12-13

Spherical Roller Bearing Nomenclature System



1. Series & Size

- 22200: Spherical roller
- 22300: Spherical roller
- 23000: Spherical roller
- 23100: Spherical roller
- 23200: Spherical roller, wide
- 23900: Spherical roller
- 24000: Spherical roller, wide
- 24100: Spherical roller, wide

2. Internal Design

- E: High-capacity spherical roller bearing
- EF800: Shaker screen specification, special tolerance and C4 clearance

3. Cage

- A: Pressed-steel cage
- M: Machined-brass cage

4. Ring Modification

- Blank: Cylindrical Bore
- K: 1:12 Tapered Bore
- K30: 1:30 Tapered Bore
- W33: Oil groove and holes Outer ring

5. Clearance

- C1: Radial clearance less than C2
- C2: Radial clearance less than normal
- No Suffix: Normal radial clearance
- C3: Radial clearance greater than normal
- C4: Radial clearance greater than C3
- C5: Radial clearance greater than C4

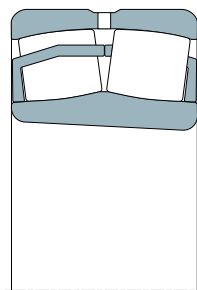
ULTAGE®

The ULTAGE Advantage

Combining premium-grade materials, optimized design and precision manufacturing, ULTAGE is the new generation of high-performance bearings from NTN that delivers unmatched service life, the highest limiting speeds and the best load capacities on the market to maximize the productivity of your equipment.

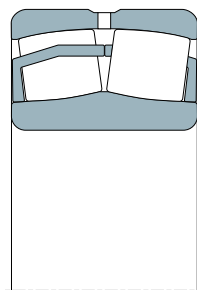
Encompassing a wide variety of key bearing types such as spherical roller, cylindrical roller, tapered roller, heavy-duty mounted roller, angular contact and radial ball bearings, the ULTAGE line of superior, high-performance bearings from NTN delivers:

- **Extended service life** for better return on our end-users' investment.
- **Greater performance**, longer production and less downtime.
- **Dependable product availability** thanks to a wide, robust distribution network.
- **Extras that go beyond** a standard offering, including on-site and web-based technical training, installation support, digital resources and more.



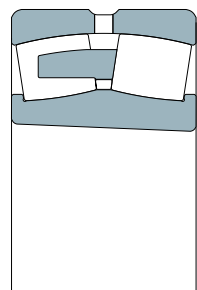
22200 Series Interchange Guide - Steel Retainer, Tapered Bore

Bore Size (mm)	Base P/N	NTN	SKF	FAG	Timken	NSK
25	22205	22205EAKW33C3	22205EK/C3	22205-E1-K-C3	22205KEJW33C3	22205EAKE4C3
30	22206	22206EAKW33C3	22206EK/C3	22206-E1-K-C3	22206KEJW33C3	22206EAKE4C3
35	22207	22207EAKW33C3	22207EK/C3	22207-E1-K-C3	22207KEJW33C3	22207EAKE4C3
40	22208	22208EAKW33C3	22208EK/C3	22208-E1-K-C3	22208KEJW33C3	22208EAKE4C3
45	22209	22209EAKW33C3	22209EK/C3	22209-E1-K-C3	22209KEJW33C3	22209EAKE4C3
50	22210	22210EAKW33C3	22210EK/C3	22210-E1-K-C3	22210KEJW33C3	22210EAKE4C3
55	22211	22211EAKW33C3	22211EK/C3	22211-E1-K-C3	22211KEJW33C3	22211EAKE4C3
60	22212	22212EAKW33C3	22212EK/C3	22212-E1-K-C3	22212KEJW33C3	22212EAKE4C3
65	22213	22213EAKW33C3	22213EK/C3	22213-E1-K-C3	22213KEJW33C3	22213EAKE4C3
70	22214	22214EAKW33C3	22214EK/C3	22214-E1-K-C3	22214KEJW33C3	22214EAKE4C3
75	22215	22215EAKW33C3	22215EK/C3	22215-E1-K-C3	22215KEJW33C3	22215EAKE4C3
80	22216	22216EAKW33C3	22216EK/C3	22216-E1-K-C3	22216KEJW33C3	22216EAKE4C3
85	22217	22217EAKW33C3	22217EK/C3	22217-E1-K-C3	22217KEJW33C3	22217EAKE4C3
90	22218	22218EAKW33C3	22218EK/C3	22218-E1-K-C3	22218KEJW33C3	22218EAKE4C3
95	22219	22219EAKW33C3	22219EK/C3	22219-E1-K-C3	22219KEJW33C3	22219EAKE4C3
100	22220	22220EAKW33C3	22220EK/C3	22220-E1-K-C3	22220KEJW33C3	22220EAKE4C3
110	22222	22222EAKW33C3	22222EK/C3	22222-E1-K-C3	22222KEJW33C3	22222EAKE4C3
120	22224	22224EAKW33C3	22224EK/C3	22224-E1-K-C3	22224KEJW33C3	22224EAKE4C3
130	22226	22226EAKW33C3	22226EK/C3	22226-E1-K-C3	22226KEJW33C3	22226EAKE4C3
140	22228	22228EAKW33C3	22228CCK/W33/C3	22228-E1-K-C3	22228KEJW33C3	22228EAKE4C3
150	22230	22230EAKW33C3	22230CCK/W33/C3	22230-E1-K-C3	22230KEJW33C3	22230EAKE4C3
160	22232	22232EAKW33C3	22232CCK/W33/C3	22232-E1-K-C3	22232KEJW33C3	22232EAKE4C3
170	22234	22234EAKW33C3	22234CCK/W33/C3	22234-E1-K-C3	22234KEJW33C3	22234EAKE4C3
180	22236	22236EAKW33C3	22236CCK/W33/C3	22236-E1-K-C3	22236KEJW33C3	22236EAKE4C3
190	22238	22238EAKW33C3	22238CCK/W33/C3	22238-E1-K-C3	22238KEJW33C3	22238EAKE4C3
200	22240	22240EAKW33C3	22240CCK/W33/C3	22240-E1-K-C3	22240KEJW33C3	22240EAKE4C3
220	22244	22244EAKW33C3	22244CCK/W33/C3	22244-E1-K-C3	22244KEJW33C3	22244EAKE4C3



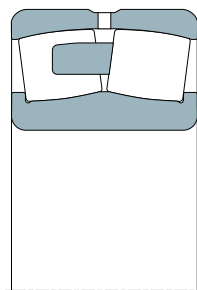
22200 Series Interchange Guide - Steel Retainer, Straight Bore

Bore Size (mm)	Base P/N	NTN	SKF	FAG	Timken	NSK
25	22205	22205EAW33C3	22205E/C3	22205-E1-C3	22205EJW33C3	22205EAE4C3
30	22206	22206EAW33C3	22206E/C3	22206-E1-C3	22206EJW33C3	22206EAE4C3
35	22207	22207EAW33C3	22207E/C3	22207-E1-C3	22207EJW33C3	22207EAE4C3
40	22208	22208EAW33C3	22208E/C3	22208-E1-C3	22208EJW33C3	22208EAE4C3
45	22209	22209EAW33C3	22209E/C3	22209-E1-C3	22209EJW33C3	22209EAE4C3
50	22210	22210EAW33C3	22210E/C3	22210-E1-C3	22210EJW33C3	22210EAE4C3
55	22211	22211EAW33C3	22211E/C3	22211-E1-C3	22211EJW33C3	22211EAE4C3
60	22212	22212EAW33C3	22212E/C3	22212-E1-C3	22212EJW33C3	22212EAE4C3
65	22213	22213EAW33C3	22213E/C3	22213-E1-C3	22213EJW33C3	22213EAE4C3
70	22214	22214EAW33C3	22214E/C3	22214-E1-C3	22214EJW33C3	22214EAE4C3
75	22215	22215EAW33C3	22215E/C3	22215-E1-C3	22215EJW33C3	22215EAE4C3
80	22216	22216EAW33C3	22216E/C3	22216-E1-C3	22216EJW33C3	22216EAE4C3
85	22217	22217EAW33C3	22217E/C3	22217-E1-C3	22217EJW33C3	22217EAE4C3
90	22218	22218EAW33C3	22218E/C3	22218-E1-C3	22218EJW33C3	22218EAE4C3
95	22219	22219EAW33C3	22219E/C3	22219-E1-C3	22219EJW33C3	22219EAE4C3
100	22220	22220EAW33C3	22220E/C3	22220-E1-C3	22220EJW33C3	22220EAE4C3
110	22222	22222EAW33C3	22222E/C3	22222-E1-C3	22222EJW33C3	22222EAE4C3
120	22224	22224EAW33C3	22224E/C3	22224-E1-C3	22224EJW33C3	22224EAE4C3
130	22226	22226EAW33C3	22226E/C3	22226-E1-C3	22226EJW33C3	22226EAE4C3
140	22228	22228EAW33C3	22228CC/W33/C3	22228-E1-C3	22228EJW33C3	22228EAE4C3
150	22230	22230EAW33C3	22230CC/W33/C3	22230-E1-C3	22230EJW33C3	22230EAE4C3
160	22232	22232EAW33C3	22232CC/W33/C3	22232-E1-C3	22232EJW33C3	22232EAE4C3
170	22234	22234EAW33C3	22234CC/W33/C3	22234-E1-C3	22234EJW33C3	22234EAE4C3
180	22236	22236EAW33C3	22236CC/W33/C3	22236-E1-C3	22236EJW33C3	22236EAE4C3
190	22238	22238EAW33C3	22238CC/W33/C3	22238-E1-C3	22238EJW33C3	22238EAE4C3
200	22240	22240EAW33C3	22240CC/W33/C3	22240-E1-C3	22240EJW33C3	22240EAE4C3
220	22244	22244EAW33C3	22244CC/W33/C3	22244-E1-C3	22244EJW33C3	22244EAE4C3



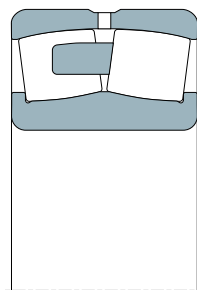
22200 Series Interchange Guide - Brass Retainer, Tapered Bore

Bore Size (mm)	Base P/N	NTN	SKF	FAG	Timken	NSK
25	22205	22205EMKW33C3	22205ECAK/C3	22205-EA1-K-M-C3	22205EMKW33C3	22205CAMKE4C3
30	22206	22206EMKW33C3	22206ECAK/C3	22206-EA1-K-M-C3	22206EMKW33C3	22206CAMKE4C3
35	22207	22207EMKW33C3	22207ECAK/C3	22207-EA1-K-M-C3	22207EMKW33C3	22207CAMKE4C3
40	22208	22208EMKW33C3	22208ECAK/C3	22208-EA1-K-M-C3	22208EMKW33C3	22208CAMKE4C3
45	22209	22209EMKW33C3	22209ECAK/C3	22209-EA1-K-M-C3	22209EMKW33C3	22209CAMKE4C3
50	22210	22210EMKW33C3	22210ECAK/C3	22210-EA1-K-M-C3	22210EMKW33C3	22210CAMKE4C3
55	22211	22211EMKW33C3	22211ECAK/C3	22211-EA1-K-M-C3	22211EMKW33C3	22211CAMKE4C3
60	22212	22212EMKW33C3	22212ECAK/C3	22212-EA1-K-M-C3	22212EMKW33C3	22212CAMKE4C3
65	22213	22213EMKW33C3	22213ECAK/C3	22213-EA1-K-M-C3	22213EMKW33C3	22213CAMKE4C3
70	22214	22214EMKW33C3	22214ECAK/C3	22214-EA1-K-M-C3	22214EMKW33C3	22214CAMKE4C3
75	22215	22215EMKW33C3	22215ECAK/C3	22215-EA1-K-M-C3	22215EMKW33C3	22215CAMKE4C3
80	22216	22216EMKW33C3	22216ECAK/C3	22216-EA1-K-M-C3	22216EMKW33C3	22216CAMKE4C3
85	22217	22217EMKW33C3	22217ECAK/C3	22217-EA1-K-M-C3	22217EMKW33C3	22217CAMKE4C3
90	22218	22218EMKW33C3	22218ECAK/C3	22218-EA1-K-M-C3	22218EMKW33C3	22218CAMKE4C3
95	22219	22219EMKW33C3	22219ECAK/C3	22219-EA1-K-M-C3	22219EMKW33C3	22219CAMKE4C3
100	22220	22220EMKW33C3	22220ECAK/C3	22220-EA1-K-M-C3	22220EMKW33C3	22220CAMKE4C3
110	22222	22222EMKW33C3	22222ECAK/C3	22222-EA1-K-M-C3	22222EMKW33C3	22222CAMKE4C3
120	22224	22224EMKW33C3	22224ECAK/C3	22224-EA1-K-M-C3	22224EMKW33C3	22224CAMKE4C3
130	22226	22226EMKW33C3	22226ECAK/C3	22226-EA1-K-M-C3	22226EMKW33C3	22226CAMKE4C3
140	22228	22228EMKW33C3	22228CACK/C3	22228-EA1-K-M-C3	22228EMKW33C3	22228CAMKE4C3
150	22230	22230EMKW33C3	22230CACK/C3	22230-EA1-K-M-C3	22230EMKW33C3	22230CAMKE4C3
160	22232	22232EMKW33C3	22232CACK/C3	22232-EA1-K-M-C3	22232EMKW33C3	22232CAMKE4C3
170	22234	22234EMKW33C3	22234CACK/C3	22234-EA1-K-M-C3	22234EMKW33C3	22234CAMKE4C3
180	22236	22236EMKW33C3	22236CACK/C3	22236-EA1-K-M-C3	22236EMKW33C3	22236CAMKE4C3
190	22238	22238EMKW33C3	22238CACK/C3	22238-EA1-K-M-C3	22238EMKW33C3	22238CAMKE4C3
200	22240	22240EMKW33C3	22240CACK/C3	22240-EA1-K-M-C3	22240EMKW33C3	22240CAMKE4C3
220	22244	22244EMKW33C3	22244CACK/C3	22244-EA1-K-M-C3	22244EMKW33C3	22244CAMKE4C3



22200 Series Interchange Guide - Brass Retainer, Straight Bore

Bore Size (mm)	Base P/N	NTN	SKF	FAG	Timken	NSK
25	22205	22205EMW33C3	22205ECA/C3	22205-EA1-M-C3	22205EMW33C3	22205CAME4C3
30	22206	22206EMW33C3	22206ECA/C3	22206-EA1-M-C3	22206EMW33C3	22206CAME4C3
35	22207	22207EMW33C3	22207ECA/C3	22207-EA1-M-C3	22207EMW33C3	22207CAME4C3
40	22208	22208EMW33C3	22208ECA/C3	22208-EA1-M-C3	22208EMW33C3	22208CAME4C3
45	22209	22209EMW33C3	22209ECA/C3	22209-EA1-M-C3	22209EMW33C3	22209CAME4C3
50	22210	22210EMW33C3	22210ECA/C3	22210-EA1-M-C3	22210EMW33C3	22210CAME4C3
55	22211	22211EMW33C3	22211ECA/C3	22211-EA1-M-C3	22211EMW33C3	22211CAME4C3
60	22212	22212EMW33C3	22212ECA/C3	22212-EA1-M-C3	22212EMW33C3	22212CAME4C3
65	22213	22213EMW33C3	22213ECA/C3	22213-EA1-M-C3	22213EMW33C3	22213CAME4C3
70	22214	22214EMW33C3	22214ECA/C3	22214-EA1-M-C3	22214EMW33C3	22214CAME4C3
75	22215	22215EMW33C3	22215ECA/C3	22215-EA1-M-C3	22215EMW33C3	22215CAME4C3
80	22216	22216EMW33C3	22216ECA/C3	22216-EA1-M-C3	22216EMW33C3	22216CAME4C3
85	22217	22217EMW33C3	22217ECA/C3	22217-EA1-M-C3	22217EMW33C3	22217CAME4C3
90	22218	22218EMW33C3	22218ECA/C3	22218-EA1-M-C3	22218EMW33C3	22218CAME4C3
95	22219	22219EMW33C3	22219ECA/C3	22219-EA1-M-C3	22219EMW33C3	22219CAME4C3
100	22220	22220EMW33C3	22220ECA/C3	22220-EA1-M-C3	22220EMW33C3	22220CAME4C3
110	22222	22222EMW33C3	22222ECA/C3	22222-EA1-M-C3	22222EMW33C3	22222CAME4C3
120	22224	22224EMW33C3	22224ECA/C3	22224-EA1-M-C3	22224EMW33C3	22224CAME4C3
130	22226	22226EMW33C3	22226ECA/C3	22226-EA1-M-C3	22226EMW33C3	22226CAME4C3
140	22228	22228EMW33C3	22228CAC/C3	22228-EA1-M-C3	22228EMW33C3	22228CAME4C3
150	22230	22230EMW33C3	22230CAC/C3	22230-EA1-M-C3	22230EMW33C3	22230CAME4C3
160	22232	22232EMW33C3	22232CAC/C3	22232-EA1-M-C3	22232EMW33C3	22232CAME4C3
170	22234	22234EMW33C3	22234CAC/C3	22234-EA1-M-C3	22234EMW33C3	22234CAME4C3
180	22236	22236EMW33C3	22236CAC/C3	22236-EA1-M-C3	22236EMW33C3	22236CAME4C3
190	22238	22238EMW33C3	22238CAC/C3	22238-EA1-M-C3	22238EMW33C3	22238CAME4C3
200	22240	22240EMW33C3	22240CAC/C3	22240-EA1-M-C3	22240EMW33C3	22240CAME4C3
220	22244	22244EMW33C3	22244CAC/C3	22244-EA1-M-C3	22244EMW33C3	22244CAME4C3



22300 Series Interchange Guide - Brass Retainer, Straight Bore

Shaker Screen Bearings

Bore Size (mm)	NTN Industry P/N	SKF	FAG	Timken	NSK
40	22308EF800	22308E/VA405	22308.E1..T41A	22308EMW33W800C4	22308HE4C4U15-VS
45	22309EF800	22309E/VA405	22309.E1..T41A	22309EMW33W800C4	22309HE4C4U15-VS
50	22310EF800	22310E/VA405	22310.E1..T41A	22310EMW33W800C4	22310HE4C4U15-VS
55	22311EF800	22311E/VA405	22311.E1..T41A	22311EMW33W800C4	22311CAME4C4U15-VS
60	22312EF800	22312E/VA405	22312.E1..T41A	22312EMW33W800C4	22312CAME4C4U15-VS
65	22313EF800	22313E/VA405	22313.E1..T41A	22313EMW33W800C4	22313CAME4C4U15-VS
70	22314EF800	22314E/VA405	22314.E1.T41A	22314EMW33W800C4	22314CAME4C4U15-VS
75	22315EF800	22315EJA/VA405	22315.E1.T41A	22315EMW33W800C4	22315CAME4C4U15-VS
80	22316EF800	22316EJA/VA405	22316.E1.T41D	22316EMW33W800C4	22316CAME4C4U15-VS
85	22317EF800	22317EJA/VA405	22317.E1.T41D	22317EMW33W800C4	22317CAME4C4U15-VS
90	22318EF800	22318EJA/VA405	22318.E1.T41D	22318EMW33W800C4	22318CAME4C4U15-VS
95	22319EF800	22319EJA/VA405	22319.E1.T41D	22319EMW33W800C4	22319CAME4C4U15-VS
100	22320EF800	22320EJA/VA405	22320.E1.T41D	22320EMW33W800C4	22320CAME4C4U15-VS
110	22322EF800	22322EJA/VA405	22322.E1.T41D	22322EMW33W800C4	22322CAME4C4U15-VS
120	22324EF800	22324CCJA/W33VA405	22324.E1.T41D	22324EMW33W800C4	22324CAME4C4U15-VS
130	22326EF800	22326CCJA/W33VA405	22326.E1.T41D	22326EMW33W800C4	22326CAME4C4U15-VS
140	22328EF800	22328CCJA/W33VA405	22328.E1.T41D	22328EMW33W800C4	22328CAME4C4U15-VS
150	22330EF800	22330CCJA/W33VA405	22330.E1.T41D	22330EMW33W800C4	22330CAME4C4U15-VS
160	22332EF800	22332CCJA/W33VA405	22322.E1.JPA.T41A	22332EMW33W800C4	22332CAME4C4U15-VS
170	22334EF800	22334CCJA/W33VA405	22334.E1.JPA.T41A	22334EMBW33W800C4	22334CAME4C4U15-VS
180	22336EF800	22336CCJA/W33VA405	22336.E1.JPA.T41A	22336EMBW33W800C4	22336CAME4C4U15-VS
200	22340EF800	22340CCJA/W33VA405	22340.E1.JPA.T41A	22340EMBW33W45AW800C4	22340CAME4C4U15-VS



Since 1918, NTN has been a trusted OE manufacturer of high-performing bearing products that increase companies' productivity and efficiency.

- NTN has been the world's broad-line bearing manufacturer for nearly 100 years.
- NTN has the largest bearing manufacturing footprint in the United States.
- NTN is the largest supplier of American-made products to the construction and mining industries.
- NTN is a major supplier to over two-thirds of the world's "Fortune 500" manufacturing companies.
- More cars worldwide ride on NTN bearings and drivetrains than any other manufacturer's product.



- ◀ NTN was the first bearing manufacturer to be awarded the prestigious Deming Prize for recognition of its quality products and systems.

Beyond Bearings

Training. Installation Support.
Trouble-shooting. And more.

When you choose NTN, your team is equipped with all the necessary tools and resources to get the job done right. From installation to problem-solving, we'll be there with the hands-on support you need to take on your toughest challenges. This includes extra services such as:



Technical Training Unit

On-site, mobile training unit offering specialized, hands-on instruction from NTN engineers



Product Training School

Three days of in-depth instruction from NTN engineers at NTN headquarters
(go.ntnamericas.com/trainingschool)



eKnowledge

WEB-BASED TRAINING PROGRAM

Six online product training modules covering different bearing types and nomenclature
(www.ntnamericas.com/eknowledge)



NTN Bearing Finder

Customizable search tool featuring exhaustive data sets, comprehensive part interchanges and interactive CAD drawings
(bearingfinder.ntnamericas.com)



Ready to get rolling? Contact us today for full details at
1-800-323-2358 or eng@ntnamerica.com.

NTN[®]

NTN BEARING CORPORATION OF AMERICA • 1600 E. Bishop Court • Mount Prospect, IL 60056-7604, U.S.A.

Tel: 847-298-7500 • Fax: 847-294-1205 • www.ntnamericas.com