Numbering System Quick Reference Guide

CAT. A-22NTNQREF

Table of Contents

Micro Bearing Numbering System

Prefix		Series	Basic Number	Bore Size	Cage	Seal/Shield	Clearance	Precision		Lubricant
F	—	FL	68	5	T2	ZZA	C4	P5	/	1K

1. PREFIX

No Symbol:	High carbon chrome bearing steel (equivalent to AISI E52100)
F:	Martensitic stainless steel (equivalent to AISI 440C)
N:	Beryllium Copper

2. BASIC NUMBER & SERIES

67, 68:	Metric Series
69, 60:	Metric Series
62, 63:	Metric Series
R:	Inch Series
W:	Wider than standard width (sealed type)
WA:	Non- standard sizes
RA:	Wider than standard width of inch series (open and sealed types)
FL:	Flanged outer ring
FLA:	Flanged outer ring, provided non-standard flange dimensions

3. BORE

X:	Bore size = X mm (Ex. 5 = 5mm)

4. CAGE

No symbol:	Pressed steel cage
J1:	Pressed stainless steel cage
T1:	Phenolic resin cage
T2:	Nylon cage
JR:	Pressed steel (riveted)
JS:	Pressed steel (spot welded)
JA:	Pressed steel (bent finger)
V:	Without cage

5. SEAL OR SHIELD*

No symbol:	Open type
Z, ZZ:	Steel shield(s)
ZA, ZZA:	Removable steel shield(s)
ZA1, ZZA1:	Removable stainless steel shield(s)
Z1, ZZ1:	Stainless steel shield(s)
LB, LLB:	Non-contact rubber seal(s)
LU, LLU:	Contact rubber seal(s)
SA, SSA:	Non-contact nylon seal(s)

*One letter signifies one shield or seal; two letters signifies two shields or seals

6. INTERNAL CLEARANCE

No symbol:	Normal clearance
C2:	Clearance less than normal
C3:	Clearance greater than normal
C4:	Clearance greater than C3
C2S:	Low group of C2 clearance
CNS:	Low group of normal clearance
CNM:	Medium group of normal clearance
CNL:	High group of normal clearance
C3S:	Low group of C3 clearance
C3M:	Medium group of C3 clearance
C3L:	High group of C3 clearance

7. PRECISION

No symbol:	ISO class 0 (equivalent to ABEC 1)
P6:	ISO class 6 (equivalent to ABEC 3)
P5:	ISO class 5 (equivalent to ABEC 5)
P4:	ISO class 4 (equivalent to ABEC 7)
P2:	ISO class 2 (equivalent to ABEC 9)
P5A:	ISO class 5A
P4A:	ISO class 4A
PS5:	NTN PS class 5
PS4:	NTN PS class 4
PX1:	Special tolerance

8. LUBRICANT

1K:	Kyodo Yushi Multemp PS No. 2
2AS:	Shell Alvania 2
1E:	Exxon Andok C
6K:	Kluber Isoflex Super LDS18
5C:	Chevron SRI2
5K:	Kyodo Yushi Multemp DRL
1W:	Anderson Oil Windsor Lube L245X (oil)
L627:	Exxon Polyrex EM

9. SPECIAL SPECIFICATION*

V1…Vx:	Special features from 1 onward (V1, V2,...)

*Contact NTN Engineering

Radial Ball Bearing Numbering System

Prefix		Type	Series	Bore Diameter	Internal Design	Chamfer	Cage	Seal/ Shield	Ring Modification	Clearance	Precision		Lubricant
	–	6	2	03		X1		LLB		C3	P5	/	2AS

1. PREFIX

No Prefix:	Heat stabilized up to 250°F (120°C)
TS2:	Heat stabilized up to 320°F (160°C)
TS3:	Heat stabilized up to 390°F (200°C)
TS4:	Heat stabilized up to 480°F (250°C)
5S:	Ceramic rolling elements
7MC3:	MEGAOHM® (ceramic coating)

2. TYPE

6:	Single row deep groove ball bearing
8, WC8:	Single row deep groove ball bearing
BL:	Maximum capacity
DE, DF:	Special double row ball bearing
SC, SX:	Special single row ball bearing
R:	Inch series
TMB:	Long life thermal mechanical bearing

3. SERIES

8:	ISO 18 series
9:	ISO 19 series
0:	ISO 10 series
2:	ISO 02 series
3:	ISO 03 series

4. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)

5. INTERNAL DESIGN

A:	Internal design change, from A onward
U:	Universal seal groove for open bearings
C:	Capacity up bearings
HT200:	Heat stabilized up to 390°F (200°C)
FT150:	Heat stabilized up to 300°F (150°C)

6. CHAMFER

Xn:	Special chamfer, from 1 onward (X1, X2…)

7. CAGE

No Symbol:	Standard cage
J:	Pressed steel cage
T1:	Phenolic cage
T2, T2X:	Nylon cage
L1:	Machined brass cage
JR:	Pressed steel (riveted)
JA:	Pressed steel (bent finger)

8. SEAL OR SHIELD

No Symbol:	Open type
LB, LLB:	Non-contact type rubber seal(s)
LU, LLU:	Contact type rubber seal(s)
LH, LLH:	Light contact rubber seal
LUA, LLUA:	Polyacrylic seal
LUA1, LLUA1:	Fluorocarbon seal
Z, ZZ:	Steel shield(s)
Z1, ZZ1:	Stainless steel shield(s)
ZA, ZZA:	Removable steel shield(s)
ZA1, ZZA1:	Removable stainless steel shield(s)

9. RING MODIFICATION

N:	Snap ring groove on outer ring, without snap ring
NR:	Snap ring groove on outer ring, snap ring included
NRS:	Snap ring and groove on opposite side
/X.XX:	Special dimension, XX.XX in mm (Ex. 5/16" bore = /7.938)

10. INTERNAL CLEARANCE

No symbol:	Normal clearance
C1:	Clearance less than C2
C2:	Clearance less than normal
C3:	Clearance greater than normal
C4:	Clearance greater than C3
C5:	Clearance greater than C4
C3L:	Low group of C3 clearance
CSxx:	Clearance special(xx is mean value 0.001 mm)

11. PRECISION

No symbol:	ISO class 0 (equivalent to ABEC 1)
P6:	ISO class 6 (equivalent to ABEC 3)
P5:	ISO class 5 (equivalent to ABEC 5)
P4:	ISO class 4 (equivalent to ABEC 7)
P2:	ISO class 2 (equivalent to ABEC 9)
PXn:	Special radial tolerance from 1 onward (PX1, PX2,...)
HVZZ:	P6 precision and high speed design

12. LUBRICANT

2AS:	Shell Alvania 2
2E:	Exxon Unirex N3
3AS:	Shell Oil Alvania #3 grease
5C:	Chevron SRI#2 grease (MIL-G-18709A)
L627:	Exxon Polyrex EM
0G:	No grease

Angular Contact Ball Bearing Numbering System

Prefix		Type	Series	Bore Diameter	Angle	Chamfer	Cage	Duplex	Spacer		Preload	Precision
	–	7	3	05	B		L1	DB	+10	/	GN	P5

1. PREFIX

No Symbol:	Heat stabilized up to 250°F (120°C)
TS2:	Heat stabilized up to 320°F (160°C)
TS3:	Heat stabilized up to 390°F (200°C)
TS4:	Heat stabilized up to 480°F (250°C)
5S:	Ceramic rolling elements
7MC3:	MEGAOHM® (ceramic coating)

2. TYPE

3:	Double row angular contact w/ filling slot
5:	Double row angular contact w/o filling slot
7:	Angular contact ball bearing
BNT:	High speed angular contact bearing
BST:	Ball screw support
HSA:	High speed angular contact bearing
HSB:	High speed angular contact bearing
HSE:	High speed angular contact bearing
SF:	Special angle row angular contact
DE, DF:	Special double row angular contact
HTA, HTB:	High thrust angular contact bearing

3. SERIES

8:	ISO 18 series
9:	ISO 19 series
0:	ISO 10 series
2:	ISO 02 series
3:	ISO 03 series

4. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)

5. CONTACT ANGLE

No Symbol:	Contact angle 30°
B:	Contact angle 40°
C:	Contact angle 15°

6. CHAMFER

Xn:	Special chamfer, from 1 onward (X1, X2…)

7. CAGE

No Symbol:	Standard cage
J:	Pressed steel cage
L1:	Machined brass cage
L1B:	Machined brass cage, ball guided
T1:	Phenolic cage
T2:	Nylon cage

8. DUPLEX ARRANGEMENT

DB:	Duplex pair, back to back mounting
DF:	Duplex pair, face to face mounting
DT:	Duplex pair, tandem mounting
G:	Single bearing, flush ground, universal mount
GD2:	Pair of universally mountable bearings
+A:	Spacer (A is nominal width of spacer in mm)

9. PRELOAD

GL:	Light preload
GN:	Normal preload
GM:	Medium preload
GH:	Heavy preload
Gn:	Special Preload

10. PRECISION

No Symbol:	ISO class 0 (equivalent to ABEC-1)
P6:	ISO class 6 (equivalent to ABEC 3)
P5:	ISO class 5 (equivalent to ABEC 5)
P4:	ISO class 4 (equivalent to ABEC 7)
P2:	ISO class 2 (equivalent to ABEC 9)
PXn:	Special precision, from 1 onward (PX1, PX2,...)

Angular Contact Ball Bearing Numbering System (NTN-SNR)

Prefix	Seals	Style	Type	Series	Bore Diameter	Angle	Cage	Lubrication Holes	Arrangement	Preload	Precision
ML	E	CH	7	19	12	C	V		U	J7	4S

1. PREFIX
- ML: High speed range (small ball)

2. SEALS
- E: Sealed bearing

3. STYLE
- CH: Hybrid bearing (ceramic balls)
- N: HNS bearing (stainless steel)

4. TYPE
- 7: Angular contact

5. SERIES
- 19: ISO 19 (equivalent to NTN 7900 series)
- 0: ISO 10
- 2: ISO 02

6. BORE DIAMETER
- 00: 10mm
- 01: 12mm
- 02: 15mm
- 03: 17mm
- 04+: # * 5 = Bore diameter in mm (ex. 04=20 mm)

7. CONTACT ANGLE
- C: Contact angle 15° (ML: 17°)
- H: Contact angle 25° (ML: 25°)

8. CAGE
- V: Phenolic cage - (Series 719-70)
- G1: Phenolic cage - (Series 72)

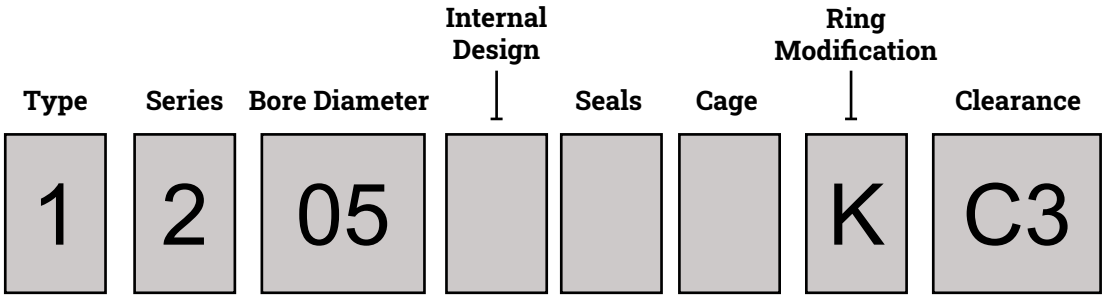
9. LUBRICATION HOLES
- No Symbol: Standard Ring
- L1: The relubrication hole is on the thick (back) side of the ACBB
- L2: The relubrication hole is on the thin (front) side of the ACBB

10. ARRANGEMENT
- U: Universal single bearing
- DU: Universal pair
- TU: Arrangement of 3 universal bearings
- QU: Arrangement of 4 universal bearings
- DB: Back to back pair
- DF: Face to face pair
- DT: Tandem pair
- Q16: Back to back pair with single tandem
- Q21: Two tandem sets back to back
- Q18: Three tandem with single back to back
- Q34: Back to back bearings with different contact angles
- Q30: Back to back pair with single tandem

10. PRELOAD
- J7: Light
- J8: Medium
- J9: Heavy
- JX: Special
- J0: No preload

11. PRECISION
- 4: ISO class 4 (equivalent to ABEC 7)
- 4S: ISO class 4 (equivalent to ABEC 7) for ML and MLE
- 2: ISO class 2 (equivalent to ABEC 9)

Self-Aligning Ball Bearing Numbering System



1. TYPE

1:	Standard self-aligning ball bearing
2:	Wide self-aligning ball bearing

2. SERIES

2:	ISO 02 series
3:	ISO 03 series

3. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)

4. INTERNAL DESIGN

S:	Internal design

5. SEALS

EE:	Full contact seals on both sides

6. CAGE

No Symbol:	Standard cage
J:	Pressed steel cage
T2:	Plastic cage (nylon or PTFE)
L1:	Machined brass cage
G15:	Plastic cage

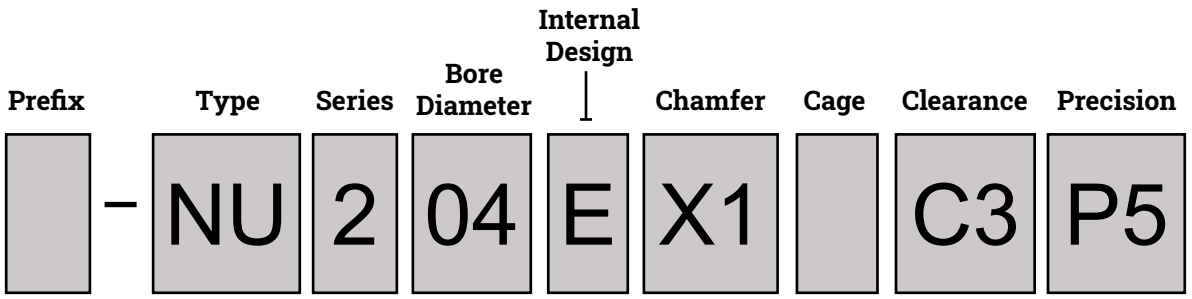
7. RING MODIFICATION

No Symbol:	Cylindrical bore
K:	Tapered bore (1:12)

8. INTERNAL CLEARANCE

No symbol:	Normal clearance
C1:	Clearance less than C2
C2:	Clearance less than normal
C3:	Clearance greater than normal
C4:	Clearance greater than C3
C5:	Clearance greater than C4
CSxx:	Clearance special (xx is mean value 0.001 mm)

Cylindrical Roller Bearing Numbering System



1. PREFIX

No Symbol:	Heat stabilized up to 250°F (120°C)
TS2:	Heat stabilized up to 320°F (160°C)
TS3:	Heat stabilized up to 390°F (200°C)
TS4:	Heat stabilized up to 480°F (250°C)
E:	Case-carburized material

2. TYPE

N:	Straight outer ring w/inner ring and roller assembly
NU:	Straight inner ring w/outer ring and roller assembly
NF:	One lip outer ring w/inner ring and roller assembly
NJ:	One lip inner ring w/outer ring and roller assembly
NH:	NJ series bearing w/HJ thrust collar (NJ+HJ = NH)
NN:	Double row cylindrical roller bearing
HJ:	Separate thrust collar
R, RN, RNU:	Special cylindrical roller bearing
NUP:	Non-separable ring and roller assembly

3. SERIES

10:	ISO 10 Series
2:	ISO 02 Series
22:	Wide ISO 02 Series
23:	Wide ISO 03 Series
3:	ISO 03 Series
4:	ISO 04 Series

4. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)

5. INTERNAL DESIGN

E:	High capacity CRB
EA:	ULTAGE®

6. CHAMFER

Xn:	Special chamfer, from 1 onward (X1, X2…)

7. CAGE

No Symbol:	Standard cage
F1:	Machined steel cage
J:	Pressed steel cage
JC:	Pressed steel cage (ULTAGE®)
G1:	Machined brass cage
L1:	Machined brass cage
GR:	Machined brass cage (ULTAGE®)
T2:	Nylon cage
T2X:	Nylon cage

8. INTERNAL CLEARANCE

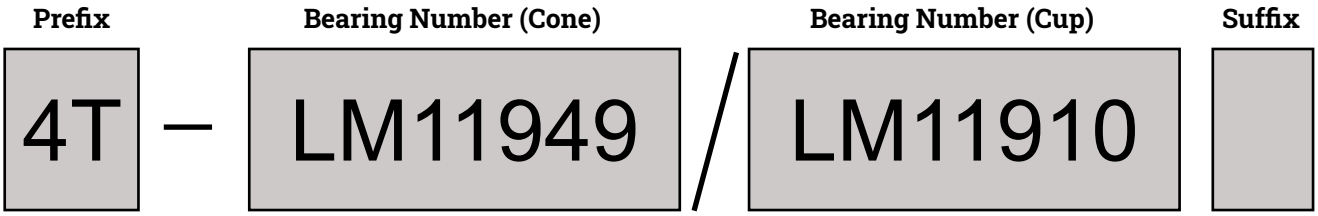
No Symbol:	Normal clearance
NA:	Radial clearance of cylindrical roller bearing with non-interchangable components
C1:	Clearance less than C2
C2:	Clearance less than normal
C3:	Clearance greater than normal
C4:	Clearance greater than C3
C5:	Clearance greater than C4
CSxx:	Clearance special (xx is mean value 0.001 mm)

9. PRECISION

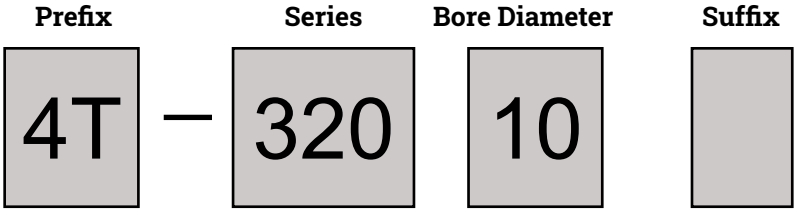
No Symbol:	ISO class 0 (equivalent to ABEC 1)
P6:	ISO class 6 (equivalent to ABEC 3)
P5:	ISO class 5 (equivalent to ABEC 5)
P4:	ISO class 4 (equivalent to ABEC 7)
P2:	ISO class 2 (equivalent to ABEC 9)
PXn:	Special precision, from 1 onward (PX1, PX2, ...)
UP:	Ultra-high precision

Tapered Roller Bearing Numbering System

Inch Series



ISO (Metric) Series



1. PREFIX

- ET: NTN endurance taper roller bearing, case hardened
- 4T: NTN 4-top tapered roller bearing, case hardened
- E: Case hardened steel
- T: Internationally interchangeable dimensions

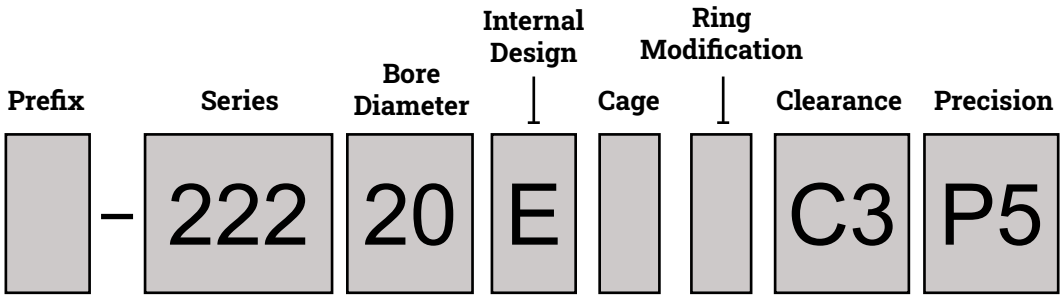
2. BEARING NUMBER

- HH: Heavier than heavy
- H: Heavy
- HM: Heavy-medium
- M: Medium
- LM: Light medium
- L: Light
- LL: Extra light
- J: J-metric series (ex: 4T-JM736110)

3. SUFFIX

- A: Different bore, OD, width or radius from basic pn
- D: Denotes double ring (inch series only)
- L: Seal
- PK: Class K for J metric
- PXn: Special tolerance from 1 onward (PX1, PX2,...)
- S: Different bore, OD, width or radius from basic pn
- U: ISO series, internationally interchangeable through hardened steel
- W: Slot or keyway
- X: Different bore, OD, width or radius from basic pn
- -3: AFBMA class 3
- -0: AFBMA class 0
- -00: AFBMA class 00
- +ACBnnn: Spacer assembly with nnn end play in 0.0001 in
- +ACSnnn: Spacer assembly with nnn end play in 0.001mm
- #G: Cup only (metric series only)
- -G: Cone only (metric series only)
- G2: Pin-type cage
- E1, EW: Special crowning

Spherical Roller Bearing Numbering System



1. PREFIX

TS2:	Heat stabilized up to 320°F (160°C)
TS3:	Heat stabilized up to 390°F (200°C)
TS4:	Heat stabilized up to 480°F (250°C)
MX:	Outer surface rings phosphate coated
LH:	Long life and high temperature series

2. SERIES

213:	Standard narrow series spherical roller bearing
222, 223:	Standard series spherical roller bearing
230, 231:	Standard series spherical roller bearing
232, 239:	Standard series spherical roller bearing
240, 241:	Standard series spherical roller bearing
W:	Wide series spherical w/integral seals
WA:	Wide series with standard seals
2P:	Special series spherical roller bearing

3. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)
/XXX:	Special large bore greater than 500 mm in XXX mm (ex. /530 = 530 mm)

4. INTERNAL DESIGN

E:	High capacity spherical roller bearing, temperature stabilized to 200°C
B:	One piece ribbed inner ring, asymmetrical roller, center guide rib
UA:	Inner ring w/o center guide; asymmetrical rollers & outer ring center guided retainer
C:	Two-piece pressed cage, symmetrical roller for bore sizes of 50mm or smaller

5. CAGE

No Symbol:	Standard cage
J:	Pressed steel
T2:	Nylon
L1:	Machined brass
A:	Pressed steel (E type)
G15:	Nylon (E type)
M:	Machined brass (E type)
MA:	Machined brass for shaker screen applications (E type)

6. SEALS

LL:	Two integral garter seals w/steel backing plate

7. RING MODIFICATION

D1:	Oil groove and holes
W33:	Oil groove and holes
K:	Tapered bore (1:12)
K30:	Tapered bore (1:30) (240, 241 series)

8. INTERNAL CLEARANCE

No Symbol:	Normal clearance
C1:	Clearance less than C2
C2:	Clearance less than normal
C3:	Clearance greater than normal
C4:	Clearance greater than C3
C5:	Clearance greater than C4
CSxx:	Nominal clearance value (xx is mean value 0.001 mm)

9. PRECISION

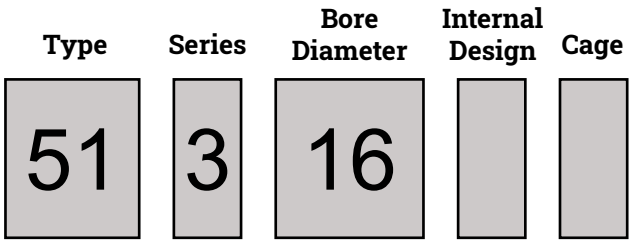
No Symbol:	ISO class 0 (equivalent to ABEC 1)
PXn:	Special precision, from 1 onward (PX1, PX2, ...)

10. SHAKER SCREEN DESIGNATIONS

(replaces cage, ring mod, and clearance if used)

VS1:	Special tolerance for UA type shaker screen bearing (C3 clearance)
VS2:	Special tolerance for UA type shaker screen bearing (C4 clearance)
F800:	Special tolerance and machined brass cage for E type shaker screen bearing (C4 clearance)
F801:	Special tolerance and machined brass cage for E type shaker screen bearing (C3 clearance)
F802:	Special tolerance and machined brass cage for E type shaker screen bearing (C0 clearance)

Ball and Roller Thrust Bearing Numbering System



1. TYPE

51, 53*:	Single direction thrust ball bearing
52, 54*:	Double direction thrust ball bearing
56:	Angular contact thrust bearing
292:	Spherical thrust roller bearing
293:	Spherical thrust roller bearing
294:	Spherical thrust roller bearing
29:	Single direction thrust ball bearing
9:	Single direction thrust ball bearing

*Self-aligning outside diameter

2. SERIES

8:	ISO 18 series
9:	ISO 19 series
0:	ISO 10 series
2:	ISO 02 series
3:	ISO 03 series

3. 3. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)

4. INTERNAL DESIGN

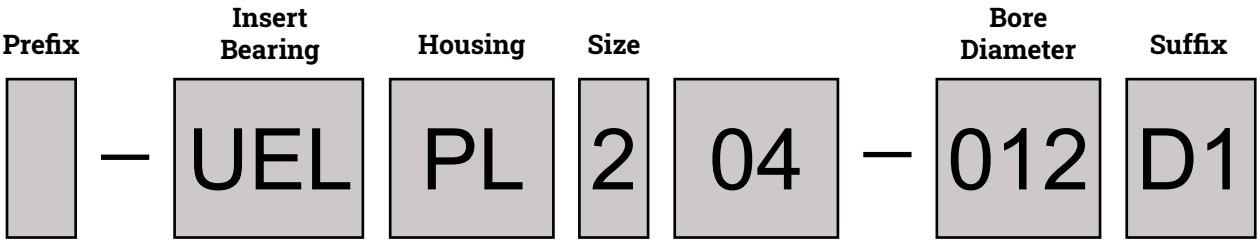
E:	Internal design, not interchangeable with standard series.
U:	Misaligning ring included (type 53 and 54 only)

5. 5. CAGE

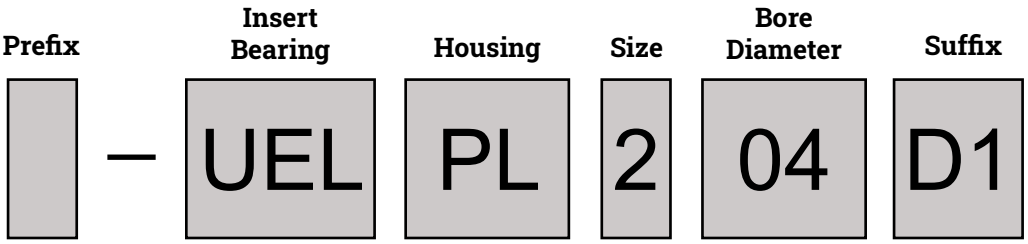
No Symbol:	Standard cage
J:	Pressed steel cage
L1:	Machined brass cage
T2:	Nylon cage

Mounted Bearing Unit Numbering System

Inch Series



ISO (Metric) Series



1. PREFIX

F:	Stainless
A:	Lube on non-locking mechanism side
C:	Open cover (cast iron)
CM:	Closed cover (cast iron)
S:	Open cover (pressed steel)
SM:	Closed cover (pressed steel)

2. BEARING INSERTS*

AEL:	Narrow inner ring, locking collar
AR:	Narrow inner ring, set screw type
AS:	Narrow inner ring, set screw type
JEL:	Narrow inner ring, eccentric locking collar
REL:	Wide inner ring, eccentric locking collar
UR:	Wide inner ring, set screw type
UC:	Wide inner ring, set screw type w/flinger
UEL:	Wide inner ring, locking collar w/flinger
UK:	Tapered bore, w/ flinger
CS:	Cylindrical bore type

*For cylindrical OD, add "S" to pn (ex: JELS)

3. HOUSING

F:	Flanged unit, cast 4-bolt square housing
FA:	Flanged unit, cast rhombus housing
FC:	Flange piloted unit, cast, round housing
FD:	Flanged unit, cast, short 2-bolt housing
FH:	Flanged unit, cast, 3-bolt bracket housing
FL:	Flanged unit, cast, 2-bolt housing
FS:	Flanged piloted unit, cast, 4-bolt square housing
FU:	Flanged unit, cast, 4-bolt square bearing
PF:	Flanged unit, pressed steel, 3-bolt round housing
PFL:	Flanged unit, pressed steel, 2-bolt housing
RPF:	Flanged unit, pressed steel w/rubber ring, 3-bolt round housing

3. HOUSING (CONT.)

HP:	Pillow block, cast housing, high center height
P:	Pillow block, cast housing
PL:	Pillow block, cast housing, low center height
PP:	Pillow block, pressed steel housing
RPP:	Pillow block, pressed steel housing w/rubber ring
UP:	Pillow block, cast housing, tapped base
C:	Cylindrical cartridge unit
HB:	Hanger unit, cast housing
PT:	Mini stretcher
T:	Take-up unit, cast housing

4. SERIES

2:	Light
X:	Medium
3:	Heavy

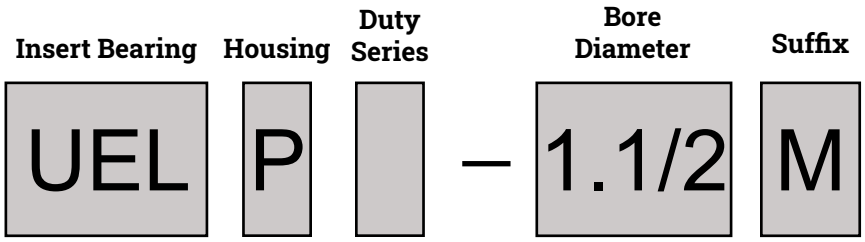
5. BORE

00:	10mm
01:	12mm
02:	15mm
03:	17mm
04+:	# * 5 = Bore diameter in mm (ex. 04=20 mm)
Xnn:	X is number of inch; nn is number of 1/16" (ex: 115 = 1.15/16")

6. SUFFIX

D1:	Relube type
W3:	Cup point set screw
N:	Snap ring groove
NR:	Snap ring and groove
R:	Meets ISO series
HT1D1:	Heat stabilized up to 284°F (140°C)
HT2D1:	Heat stabilized up to 356°F (180°C)
CT1:	Cold stabilized down to -58°F (-50°C)
LLS, LLJ:	Triple-lip contact seals

Ultra-Class™ Mounted Bearing Unit Numbering System



1. BEARING INSERTS

AR:	Narrow inner ring, set screw type
JEL:	Narrow inner ring, eccentric locking collar
UC:	Wide inner ring, set screw type w/flinger
UEL:	Wide inner ring, eccentric locking collar w/ flinger

2. HOUSING

FLU:	Flanged unit, cast, 2-bolt housing
FU:	Flanged unit, cast, 4-bolt square bearing
P:	Pillow block, cast housing
PL:	Pillow block, cast housing, low center height

3. DUTY SERIES

No Symbol:	Standard duty (equivalent to 2 series)
X:	Medium duty (equivalent to X series)

4. BORE DIAMETER

X.X/X:	Bore diameter in inches (ex. 1.1/2 = 1.1/2”)
nn:	Bore diameter in mm (ex. 25 = 25mm)

5. SUFFIX

M:	Black oxide coating
FG1:	Food grade solid lube, no relube feature included
LP03:	Standard solid lube
LP09:	Food grade solid lube
S:	Smaller size if same bore offered in larger unit
R:	Non-industry dimensions

Sentinel Series™ Numbering System (NTN-SNR)

Material	Insert Type	Housing	Size		Bore Diameter	Suffix	Grease
S	UC	PA	208	–	24	CC	FG1

1. MATERIAL
- S: Stainless steel
- Z: Clear zinc chromate

2. INSERT TYPE
- UC: Wide inner ring, set screw type w/slinger

3. HOUSING

Stainless Steel
- P: Pillow block
- PA: Tapped-base pillow block
- FL: Two-bolt flange
- FB: Three-bolt bracket flange
- F: Four-bolt flange
- T: Take up unit

Thermoplastic
- PPL: Pillow block
- TBL: Tapped-base pillow block
- NFL: Two-bolt flange
- FBL: Three-bolt flange bracket
- FPL: Four-bolt flange
- TPL: Take-up unit

4. SIZE
- 2xx: Basic size

5. BORE DIAMETER
- XX: Bore diameter in 16ths of an inch (ex: 24/16 = 1.5”)

6. SUFFIX
- CC: Closed cover †
- CO: Open cover †
- Blank: No cover

† - 1 additional open cover included for pillow blocks

7. GREASE
- Blank: Food-grade grease
- FG1: Food-grade solid lube

Spherical Housed Bearing Unit Numbering System

Inch Series

Prefix		Housing Series	Bearing Series		Bore Diameter	Suffix
C	–	SPA	W22	11	– 115	N1

ISO (Metric) Series

Prefix		Housing Series	Bearing Series	Bore Diameter	Suffix
C	–	SP	W22	11	N1

1. PREFIX

C: Taconite service seals with open covers
CM: Taconite service seal with closed cover

2. HOUSING SERIES

SP: Sealed metric spherical pillow block (inch or metric shaft)
SPA: Sealed inch spherical pillow block (inch or metric shaft)
SFC: Sealed metric spherical, flanged block (inch or metric shaft)
SAF: Split pillow block, cast iron housing (inch bore shaft)
SAFS: Split pillow block, cast steel housing (inch bore shaft)
FSAF: Split pillow block, cast iron, four-bolt base
FSPA: Sealed pillow block, inch, four-bolt base

3. BEARING SERIES

W22: Sealed, wide spherical roller bearing

4. BORE DIAMETER

Xnn: Number of 1/16” (ex: 115 = 1.15/16”)
04+: # * 5 = Bore diameter in mm (ex. 04=20 mm)

5. SUFFIX

N1: Ductile cast iron housing
F: Solid base
G: One stabilizing ring included (when ordering housing only)
-C: Covers are not included
Vn: Special features (ex. V1, V2, etc.)

Bower® Type E Numbering System

Housing	Housing Configuration	Mounting Bolt Configurations		Bore Size Designation
E	PB	2	—	115

1. HOUSING
- E: Type E dimensions

2. HOUSING CONFIGURATION
- PB: Pillow block, cast iron

3. MOUNTING BOLTS CONFIGURATION
- 2: Two-bolt
- 4: Four-bolt

4. BORE SIZE DESIGNATION
- 115: 1 15/16"
- 203: 2 3/16"
- 307: 3 7/16"
- 415: 4 15/16"

Prefix & Suffix Interchange

CHARACTERISTICS	NTN	SKF	FAG	TIMKEN	NSK	NTN
CLOSURES						
One Non-Contact Seal	LB	RZ	RZ	RZ	V	LB
Two Non-Contact Seals	LLB	2RZ	2RZ	2RZ	VV	LLB
One Contact Seal	LU	RS1	ELS	RS	DU	LU
Two Contact Seals	LLU	2RS1	2ELS	2RS	DDU	LLU
One Shield	Z	Z	Z	Z	Z	Z
Two Shields	ZZ	2Z	2Z	ZZ	ZZ	ZZ
One Snap Ring	NR	NR	NR	NR	NR	NR
PRECISION CLASSES						
ABEC 3	P6	P6	P6	M*	P6, PA3	P6
ABEC 5	P5	P5	P5	V*	P5, PA5	P5
ABEC 7	P4	P4	P4S	MM, MMV	P4, PA7	P4
ABEC 9	P2	PA9A	P2	MMX*	P2, PA7	P2
CONTACT ANGLES						
15°	C	C	C	2*	C	C
25°	H	AC, ACD	E	3*	A5	H
30°	-	A	N/A	N/A	A	-
40°	B	B	B	-	B	B
PRELOAD						
Extra Light	GL	-	-	UX	EL	GL
Light	GN, J74	GA	L	UL	L, C7	GN, J74
Medium	GM, J84	GB	M	UM	M, C8	GM, J84
Heavy	GH, J94	GC	H	UH	H, C9	GH, J94
CAGE						
Phenolic	T1	TP	TA, TB, TH, TP	CR	T	T1
Pressed Brass	Y	Y	MP	NO SYM	Y	Y
Polyamide/Nylon	T2	TN, P, TN9	TN, T, TV	PRB/PRC, CF	TY	T2
Brass	L1	M, MA, MB	M, MP	MBR	CAM, M	L1
Pressed Steel	J	J	J	C, CD	W	J
DUPLEX						
Universal Ground	G, U	G**	U	SU	SU	G, U
SPHERICAL FEATURES						
Taper Bore	K	K	K	K	K	K
Oil Groove	W33, D1	W33	S	W33	E4	W33, D1
Shaker Screens	UAVS, EF800, EMADIVS	CACM2/W502	F80	W800	VS3(4)	UAVS, EF800, EMADIVS

NTN Ball Bearing Contact Seal Design Features:

- Dual lip design
  - As one lip wears, the secondary lip makes contact
  - Longer seal life
- Tighter contact pressure
- Available in various higher temp materials
- Available in low torque design
- Most competitors use a single lip design

* Prefix

** Old Nomenclature; New = CA, CB, CC, GA, GB, GC

Bearing Series Interchange

CHARACTERISTICS	NTN	SKF	FAG	TIMKEN	NSK	NTN
CYLINDRICALS						
	N	N	N	000RN0	N	N
	NU	NU	NU	000RU0	NU	NU
	NF	NF	N/E	000RF0	NF	NF
	NJ	NJ	NJ	000RJ0	NJ	NJ
	NH	NH	NJ & HJ	N/A	NH	NH
	NN	NN	NN	N/A	NN	NN
BALL BEARINGS						
	R	EE OR R	R	S	R	R
	600	600	600	30K	600	600
	6800	61800	61800	-	6800	6800
	6900	61900	61900	9300K	6900	6900
	6000	6000	6000	9100K	6000	6000
	6200	6200	6200	200K	6200	6200
	6300	6300	6300	300K	6300	6300
	6400	6400	6400	6400	6400	6400
MAX CAPACITY	BL200	200	200	200W	BL200	BL200
	BL300	300	300	300W	BL300	BL300
ANGULAR CONTACT						
	7800	71800	71800	-	-	7800
	7900 (71900)	71900	71900	2MM9300WI	7900	7900 (71900)
	7000	7000	7000	7100	7000	7000
	7200	7200	7200	7200	7200	7200
	7300	7300	7300	7300	7300	7300
SPHERICALS						
	21300	21300	21300	21300	21300	21300
	22200	22200	22200	22200	22200	22200
	22300	22300	22300	22300	22300	22300
	23000	23000	23000	23000	23000	23000
	23100	23100	23100	23100	23100	23100
	23200	23200	23200	23200	23200	23200
	23400	23400	23400	23400	23400	23400
	24000	24000	24000	24000	24000	24000
	24100	24100	24100	24100	24100	24100

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