

BEARING AND LINEAR REFERENCE GUIDE



Single Row Deep Groove Ball Bearings

Nomenclature

Basic Type & Series

- R:** Inch
- 600:** Metric, Extra Small
- 6000:** Metric, Extra Light
- 6200:** Metric, Light
- 6300:** Metric, Medium
- 6800:** Metric, Extra Thin Section
- 6900:** Metric, Very Thin Section
- 63200:** Metric, Light Cartridge
- 63300:** Metric, Medium Cartridge
- BL 200:** Metric, Maximum Capacity, Light
- BL 300:** Metric, Maximum Capacity, Medium

Cage Type

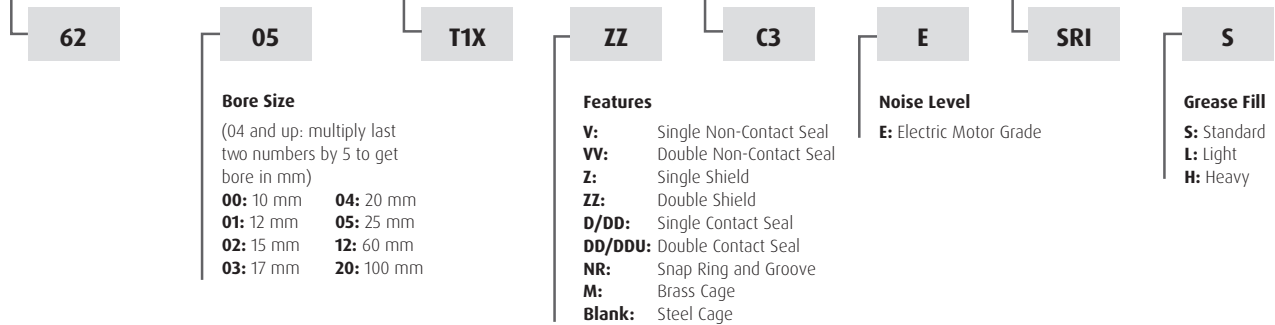
- M:** Brass
- Blank:** Steel
- T1X:** Polyamide

Internal Clearance

- C2:** Tight
- Blank:** Normal
- C3:** Greater than Normal
- C4:** Greater than C3

Grease Type

- NS7:** NS Hi-Tube
- AS2:** Alvania #2
- B32:** Beacon 325
- SRI:** Chevron SRI-2
- EEM:** Polyrex EM



Please refer to the bearing tables for exact part number options.

Interchange

Description	Interchange					
	NSK	SKF	FAF/TIMKEN	FAG	MRC	NTN
Part Number						
Inch	Rxx	Rxx	SxxK	Rxx	Rxx	Rxx
Extra Small	6xx	6xx	3xK	6xx	3x	6xx
Extra Light	60xx	60xx	91xxK	60xx	1xxK	60xx
Light	62xx	62xx	2xxK	62xx	2xxS	62xx
Medium	63xx	63xx	3xxK	63xx	3xxS	63xx
ExtraThin Section	68xx	618xx	--	618xx	18xxS	--
Very Thin Section	69xx	619xx	93xxK	619xx	19xxS	69xx
Thin Section	16xxx	16xxx	--	16xxx	--	--
Maximum Capacity, Light	BL2xx	2xx	2xxW	2xx	2xxM	BL2xx
Maximum Capacity, Medium	BL3xx	3xx	3xxW	3xx	3xxM	BL3xx
Cartridge Type	632xx	4622xx	W2xx	335xx	2xxC	632xx
	633xx	4623xx	W3xx	336xx	3xxC	633xx
Part Number Suffix						
Two Seals (Non Contact)	VV	--	--	2RSD	--	LLB
Two Seals (Contact)	DDU	2RS	PP	2RSR	ZZ	LLU
One Seals (Contact)	DU	RS	P	RSR	Z	LU
Two Shield	ZZ	ZZ	DD	2ZR	FF	ZZ
One Shield	Z	Z	D	ZR	F	Z
Snap Ring	NR	NR	G	NR	G	NR
Steel Cage	BLANK	J or BLANK	BLANK	J	BLANK or STL	BLANK
Polyamide Cage	T1X	TN9	PRB	TNH or TVH	TN9	T2
Brass Cage	M	M	MBR	Y	BRS	L1
Heat Stabilized 200C	X28	S1	--	S1	HT	PREFIX TS3
Tight Clearance	C2	C2	H	C2	C2	C2
Normal Clearance	BLANK	BLANK	R	BLANK	C0	BLANK
Greater than Normal Clearance	C3	(C3)	P	C3	C3	C3
Greater than C3 Clearance	C4	C4	J	C4	C4	C4
Radial Clearance in Microns	CGXX	RLXX	--	RXX	--	--
Electric Motor Grade	E	EM (C3)	--	--	EMQ	--

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

Double Row Angular Contact Ball Bearings

Nomenclature

Basic Type & Series

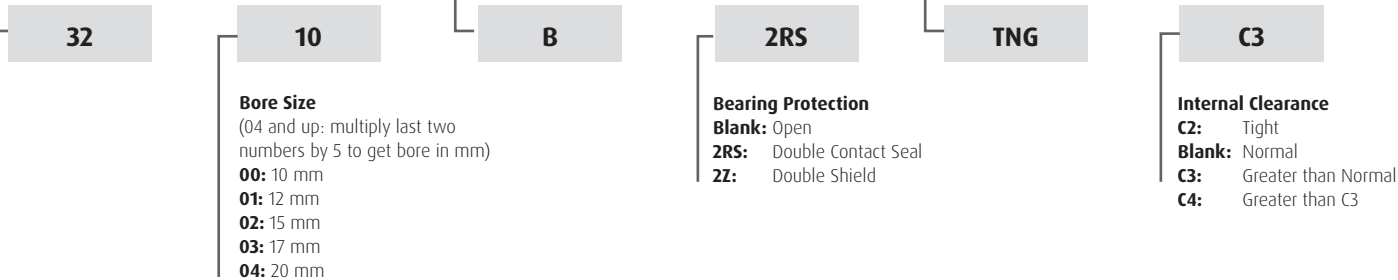
- 3200:** Metric, Max Capacity, Light, 32° Contact Angle
- 3200B:** Metric, Conrad, Light, 25° Contact Angle
- 3300:** Metric, Max Capacity, Medium, 32° Contact Angle
- 3300B:** Metric, Conrad, Medium, 25° Contact Angle
- 5200:** Metric, Conrad, Light, 25° Contact Angle
- 5300:** Metric, Conrad, Medium, 25° Contact Angle

Contact Angle

- Blank for 3xxx Series:** 32°
- Blank for 5xxx Series:** 25°
- B for 3xxx Series:** 25°

Cage Material

- J, Blank:** Steel
- TNG:** Polyamide



Please refer to the bearing tables for exact part number options.

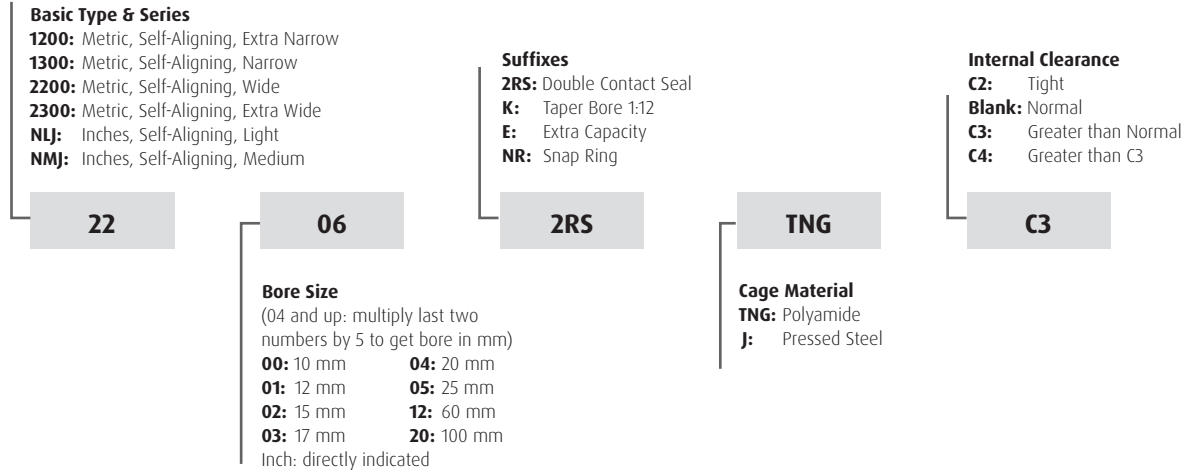
Interchange

Description	Interchange					
	NSK	SKF	FAG	NTN	FAF/TIMKEN	
Part Number	Maximum Capacity, Light	32xx, 32xxJ	52xE, 32xx	32xx, 32xxC	32xx	52xx, 52xxW
	Maximum Capacity, Medium	33xx, 33xxJ	53xE, 33xx	33xx, 33xxC	33xx	53xx, 53xxW
	Conrad, Light	32xxB, 52xx	52xxA, 32xxA	32xxB, 32xxBC	52xx	52xxK
	Conrad, Medium	33xxB, 53xx	53xxA, 33xxA	33xxB, 33xxBC	53xx	53xxK
Part Number Suffix	Polyamide Cage	TNG/TNH	TN9	TVP, TVH	--	PRB
	Steel Cage	Blank	Blank	Blank	Blank	Blank
	2 Contact Seals	2RS	2RS1	2RSR	LLU	PP
	2 Shields	2Z	2Z	2ZR	ZZ	FF
	Tight Clearance	C2	C2	C2	C2	H
	Normal Clearance	Blank	Blank	Blank	Blank	R
Greater than Normal Clearance	C3	C3	C3	C3	P	

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Self-Aligning Ball Bearings

Nomenclature



Please refer to the bearing tables for exact part number options.

Interchange

Description	Interchange				
	NSK	SKF	FAG	NTN	
Part Number	Metric, Self-Aligning, Extra Narrow	12xx	12xx	12xx	12xx
	Metric, Self-Aligning, Narrow	13xx	13xx	13xx	13xx
	Metric, Self-Aligning, Wide	22xx	22xx	22xx	22xx
	Metric, Self-Aligning, Extra Wide	23xx	23xx	23xx	23xx
Part Number Suffix	Polyamide Cage	TNG	TN9	TV	--
	Steel Cage	Blank, J	Blank	Blank	Blank
	2 Contact Seals	2RS	2RS1	2RSR	LLU
	Tight Clearance	C2	C2	C2	C2
	Normal Clearance	Blank	Blank	Blank	Blank
	Greater than Normal Clearance	C3	C3	C3	C3
	Tapered Bore 1:12	K	K	K	K

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Angular Contact Ball Bearings

Nomenclature

Basic Type & Series

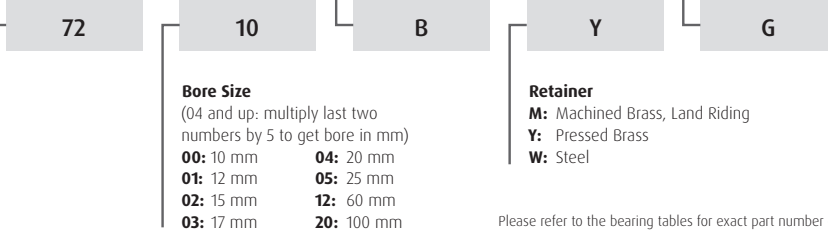
7200: Metric, Angular Contact, Light
7300: Metric, Angular Contact, Medium
7400: Metric, Angular Contact, Heavy

Contact Angle

B: 40°
C: 15°
A: 30°

Other Features

G: Ground on Both Sides for use in Universal Duplex Mounting with Clearance
PC: Combination of Flush Ground Faces, Normal Axial Clearance and ABEC3 (ISO Class 6) Tolerance



Please refer to the bearing tables for exact part number options.

High Performance Standard (HPS)

Basic Type & Series

7200: Metric, Angular Contact, Light
7300: Metric, Angular Contact, Medium

Contact Angle

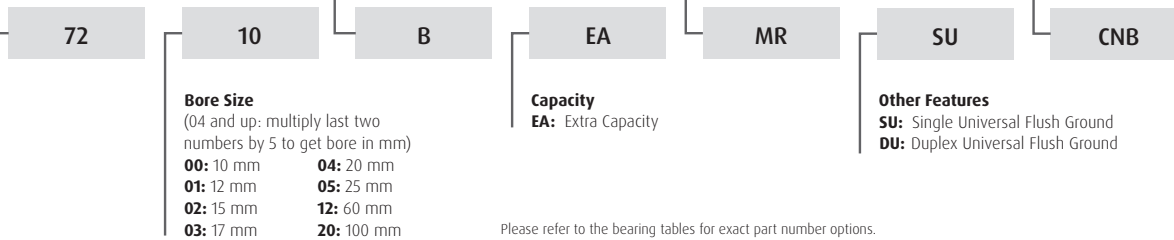
B: 40°

Retainer

MR: Machined Brass, Ball Riding
T85: Polyamide 46 Resin Cage
T7: L-PPS Resin Cage

Internal Clearance

CNB: Normal
GA: Light Preload



Please refer to the bearing tables for exact part number options.

Interchange

Description		Interchange					
		NSK	SKF	FAF/TIMKEN	FAG	MRC	NTN
Part No.	Light	72xx	72xx	72xx	72xx	72xx	72xx
	Medium	73xx	73xx	73xx	73xx	73xx	73xx
	Heavy	74xx	74xx	74xx	74xx	74xx	74xx
Part Number Suffix	40° Contact	B	B	WN	B	P	B
	30° Contact	A	A	--	--	BLANK	BLANK
	25° Contact	A5	ACD, AC	--	E	--	--
	15° Contact	C	CD	--	C	R	C
	Machined Brass Cage	M	M	MBR	MP	BRZ	L1
	Pressed Brass Cage	Y	Y	BLANK	YP	--	--
	Polyamide Cage	TY	P	PRC	TVP	BKE	T2
	Steel Cage	W	J	--	JP	BLANK	J
	Universal Ground Faces	G	CA, CB	SU	UA	DE	G
Petrochemical	BMPC	BECBM	--	--	PumpPac*	--	

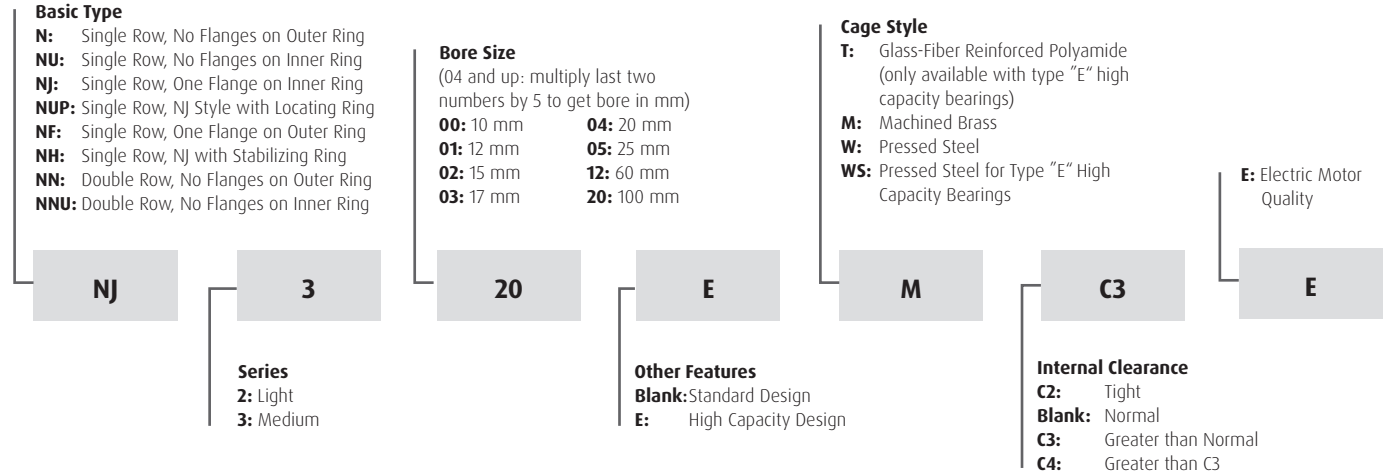
The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please consult NSK Engineering. NSK assumes no liability with respect to errors or omissions. *PumpPac is a registered trademark of SKF USA.

Interchange - HPS

Interchange				
Series	Clearance	NSK	SKF	FAG
72xx, 73xx	Normal	BEAMRSUCNB	BECBY BECBM	BMPUA BMPUO
	Light	BEAMRSUGA	BEGAM	BMPUL

Cylindrical Roller Bearings

Nomenclature



Please refer to the bearing tables for exact part number options.

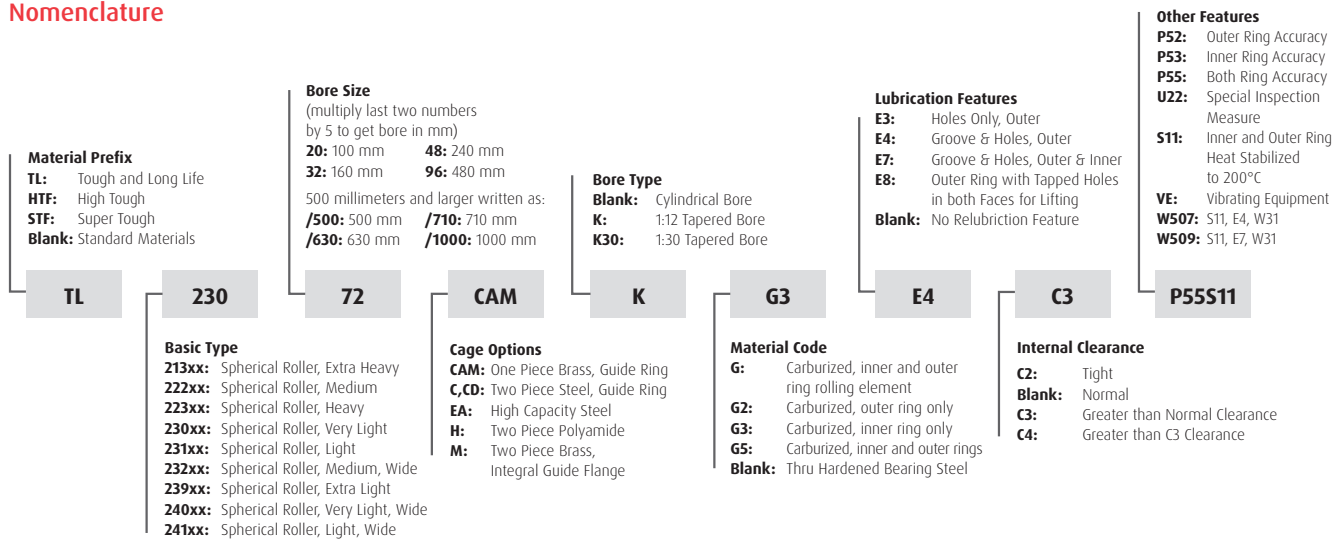
Interchange

Description	Interchange			
	NSK	SKF	FAG	
Part Number Prefix	Single Row, No Flanges on Outer Ring	N	N	N
	Single Row, No Flanges on Inner Ring	NU	NU	NU
	Single Row, 1 Flange Inner	NJ	NJ	NJ
	Single Row, 1 Flange Outer	NF	NF	--
	Single Row, 1 Flange Inner with Retaining Ring	NUP	NUP	NUP
	Single Row, 1 Flange Inner with Stabilizing Ring	NH	NH	NH
	Stabilizing Ring	HJ	HJ	HJ
	Double Row, Flanges Outer/Flanges Inner	NNU/NN	NNU/NN	NNU/NN
Part Number	Light	2xx	2xx	2xx
	Medium	3xx	3xx	3xx
	Heavy	4xx	4xx	4xx
	Extra Light	10xx	10xx	10xx
	Light, Wide	22xx	22xx	22xx
	Medium, Wide	23xx	23xx	23xx
Part Number Suffix	Polyamide Cage	T	P	TVP2
	Composite High Temp Cage	T7	--	--
	Machined Brass Cage	M	M	M, M1
	Pressed Steel Cage	W,WS	J	JP1
	High Capacity Design	E	EC	E
	Full Complement (No Cage)	V	V	V
	Tight Clearance	C2	C2	C2
	Normal Clearance	BLANK	BLANK	BLANK
	Greater than Normal Clearance	C3	C3	C3
Greater than C3 Clearance	C4	C4	C4	

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Spherical Roller Bearings

Nomenclature



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Interchange

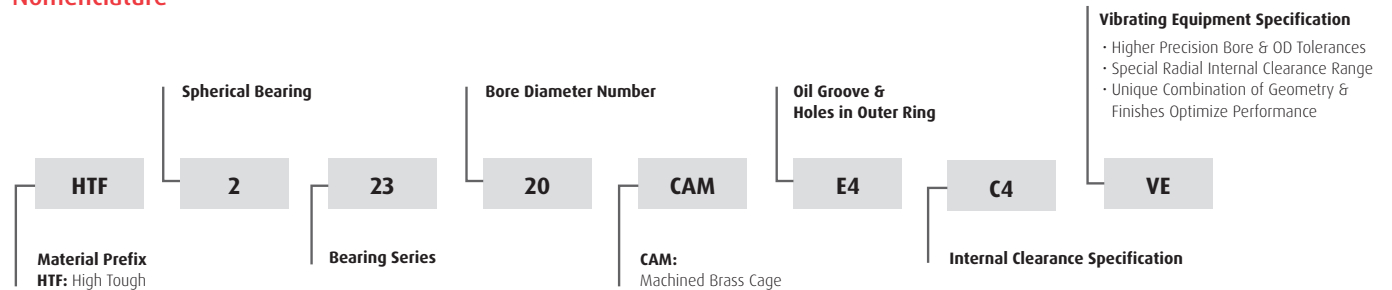
Description		Interchange			
		NSK	SKF	TORR/TIMKEN	FAG
Part Number	Very Light	239xx*	239xx	239xx	239xx
	Light	230xx*	230xx	230xx	230xx
	Light, Wide	240xx*	240xx	240xx	240xx
	Medium	231xx*	231xx	231xx	231xx
	Medium, Wide	241xx*	241xx	241xx	241xx
	Heavy	222xx*	222xx	222xx	222xx
	Heavy, Wide	232xx*	232xx	232xx	232xx
	Extra Heavy	213xx*	213xx	213xx	213xx
	Extra Heavy, Wide	223xx*	223xx	223xx	223xx
Part Number Suffix	Brass Cage, One Piece, Guide Ring	CAM, AM	CA, CACM	YM	M, MB, MA
	Brass Cage, Two Piece, Guide Flange	M	MC	BR	--
	Steel Cage, Two Piece, Guide Ring	C, CD	CJ, CC	CJ, VJ	BLANK
	High Capacity Steel Cage	EA	--	--	--
	Polyamide Cage, Two Piece	H	--	VCF	TVPB
	Tapered Bore 1:12	K	K	K	K
	Tapered Bore 1:30	K30	K30	K	K30
	Carburized Steel, Complete Bearing	G	ECB	W40	W209
	Carburized Steel, Inner Ring Only	G3	ECB	W40I	W209B
	Lube Groove & Holes Outer Ring	E4	W33	W33	S
	Lube Groove & Holes Outer Ring, and Inner Ring	E7	W513	W33W94	SH40AB
	Outer Ring, Tapped Holes One Face for Lifting	--	W56	W45A	--
	Outer Ring, Tapped Holes Both Face for Lifting + E4 Feature	E8	--	--	--
	Holes Only Outer Ring	E3	W20	W20	SY
	Inner Ring Lube Groove and Holes	E5	W26	W94	H40AB
	No Relube Features	BLANK	BLANK	BLANK	--
	Plugs Provided for Outer Ring Holes	E42	W77	W84	H40
	Combination S11, E4 & W31	W507	W507	W33W4W31	--
	Combination W33, W31	E4U22	W506	W33W31	--
	Combination S11, E7 & W31	W509	W509	W33W94W31	SH40A
	Outer Ring with Extra Close Running Accuracy	P52	C04	C04	T52BN
	Inner Ring with Extra Close Running Accuracy	P53	C02	C02	T52BE
	Inner and Outer Ring with Extra Close Running Accuracy	P55	C08	C08	T52BW
	Special Inspection Measures	W31	W31	W31	--
	Inner Ring and Outer Ring Heat Stabilized to 200°C	S11	S1	--	--
	Tight Clearance	C2	C2	C2	C2
	Normal Clearance	BLANK	BLANK	BLANK	BLANK
	Greater than Normal Clearance	C3	C3	C3	C3
	Greater than C3 Clearance	C4	C4	C4	C4

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* Indicates NSK **HPS** High Performance Standard Bearing

Shaker Screen Bearings

Nomenclature



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Interchange

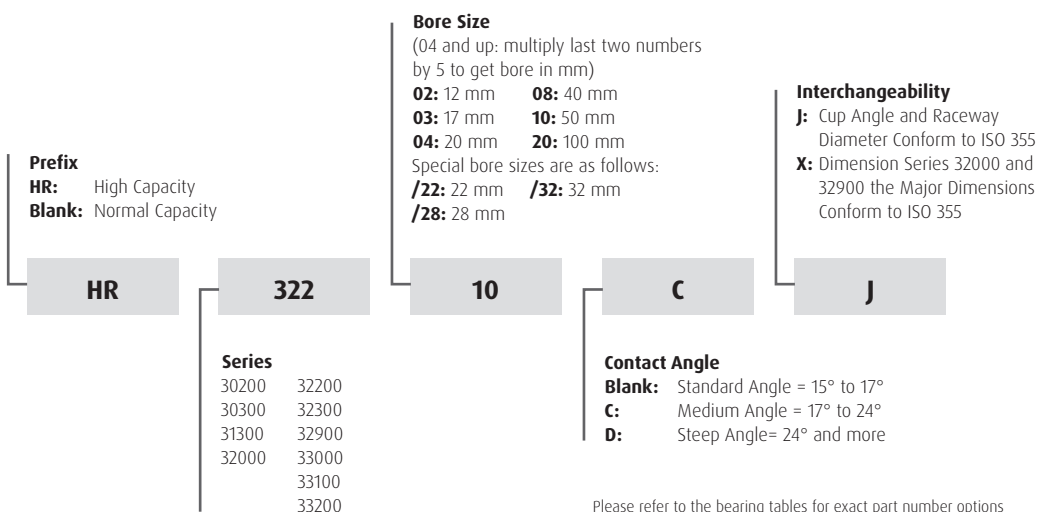
NSK	TORR/TIMKEN	SKF	FAG [☆]
22308CAME4C4VE	22308YMW33W800C4	452308CM2/W502	22308ASMAC4F80
22309CAME4C4VE	22309YMW33W800C4	452309CM2/W502	22309ASMAC4F80
22310CAME4C4VE	22310YMW33W800C4	452310CM2/W502	22310ASMAC4F80
22311CAME4C4VE	22311YMW33W800C4	452311CM2/W502	22311ASMAC4F80
22312CAME4C4VE	22312YMW33W800C4	452312CM2/W502	22312ASMAC4F80
22313CAME4C4VE	22313YMW33W800C4	452313CM2/W502	22313ASMAC4F80
22314CAME4C4VE	22314YMW33W800C4	452314CM2/W502	22314ASMAC4F80
22315CAME4C4VE	22315YMW33W800C4	452315CM2/W502	22315ASMAC4F80
22316CAME4C4VE	22316YMW33W800C4	452316CM2/W502	22316ASMAC4F80
22317CAME4C4VE	22317YMW33W800C4	452317CM2/W502	22317ASMAC4F80
22318CAME4C4VE	22318YMW33W800C4	452318CM2/W502	22318ASMAC4F80
22319CAME4C4VE	22319YMW33W800C4	452319CM2/W502	22319ASMAC4F80
22320CAME4C4VE	22320YMW33W800C4	452320CM2/W502	22320ASMAC4F80
22322CAME4C4VE	22322YMW33W800C4	452322CM2/W502	22322ASMAC4F80
22324CAME4C4VE	22324YMW33W800C4	452324CM2/W502	22324ASMAC4F80
22326CAME4C4VE	22326YMW33W800C4	452326CM2/W502	22326ASMAC4F80
22328CAME4C4VE	22328YMW33W800C4	452328CM2/W502	22328ASMAC4F80
22330CAME4C4VE	22330YMW33W800C4	452330CM2/W502	22330AMAC4F80
22332CAME4C4VE	22332YMW33W800C4	452332CM2/W502	22332AMAC4F80
22334CAME4C4VE	22334W33W800C4	452334CM2/W502	22334AMAC4F80
22336CAME4C4VE	22336W33W800C4	452336CM2/W502	22336AMAC4F80
22338CAME4C4VE	22338W33W800C4	452338CM2/W502	22338AMAC4F80
22340CAME4C4VE	22340W33W800C4	452340CM2/W502	22340AMAC4F80
23322CAME4C4VE	23322W33W800C4	453322CM2/W502	23322ASMAC4F80
23324CAME4C4VE	23324W33W800C4	453324CM2/W502	23324ASMAC4F80
23326CAME4C4VE	23326W33W800C4	453326CM2/W502	23326ASMAC4F80
23328CAME4C4VE	23328W33W800C4	453328CM2/W502	23328ASMAC4F80
23330CAME4C4VE	23330W33W800C4	453330CM2/W502	23330ASMAC4F80
23332CAME4C4VE	23332W33W800C4	453332CM2/W502	23332ASMAC4F80
23338CAME4C4VE	23338W33W22BRC4	453338CM2/W502	23338ASMAC4F80
23340CAME4C4VE	23340W33W22BRC4	-	23340ASMAC4F80

[☆] NSK bearings with "CAME4C4VE" suffix may also be used in place of bearings with FAG suffix "T41A", "T41B", "T41".

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Metric Tapered Roller Bearings

Nomenclature



Interchange

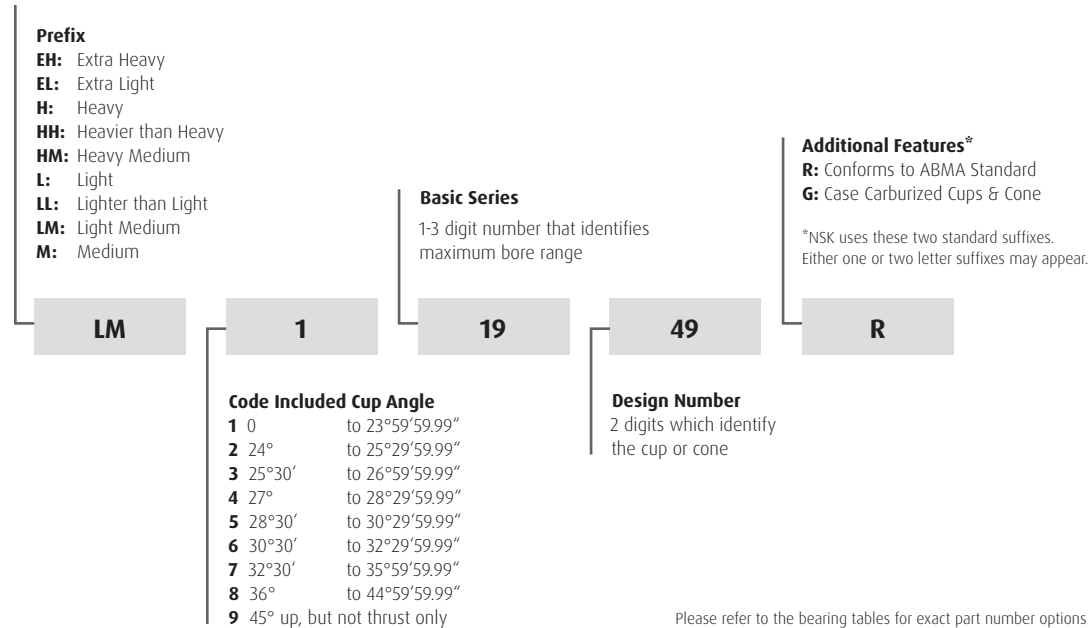
Description		Interchange			
		NSK	SKF	Timken	FAG
Part Number	High Capacity Design	HR	--	--	--
	Light	HR302xx	302xx	302xx	302xx
	Medium	HR303xx	303xx	303xx	303xx
	Medium, Steep Angle	HR313xx	313xx	313xx	313xx
	Extra Light, Wide	HR329xx	329xx	329xx	329xx
	Very Light, Wide	HR320xx	320xx	320xx	320xx
	Light, Wide	HR322xx	322xx	322xx	322xx
	Medium, Wide	HR323xx	323xx	323xx	323xx
	Very Light, Extra Wide	HR330xx	330xx	330xx	330xx
	Light, Extra Wide	HR331xx	331xx	331xx	331xx
Medium, Extra Wide	HR332xx	332xx	332xx	332xx	
Suffix	Medium Contact Angle	C	B	B	B
	Steep Contact Angle	D	--	--	--
	Modified Internal Design	X	X	X	X
	Conforms to ISO 355	J	--	--	A

*HR313xx is directly equal to HR303xxD.

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Inch Tapered Roller Bearings

Nomenclature



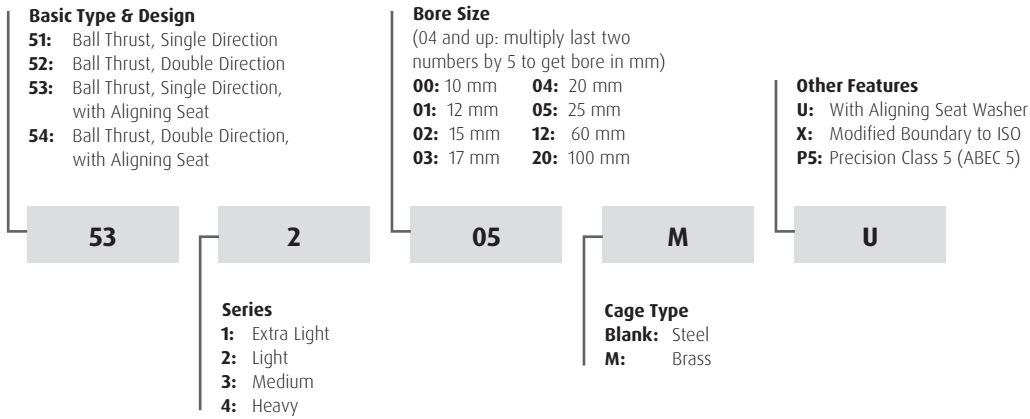
Interchange

Description		Interchange			
		NSK	SKF	Timken	FAG
Prefix	Extra Heavy	EH	EH	EH	KEH
	Heavier Than Heavy	HH	HH	HH	KHH
	Heavy	H	H	H	KH
	Heavy Medium	HM	HM	HM	KHM
	Medium	M	M	M	KM
	Light Medium	LM	LM	LM	KLM
	Light	L	L	L	KL
	Lighter Than Light	LL	LL	LL	KLL
Extra Light	EL	E	L EL	KEL	
Cup Angle	0° To 23°59'59.99	1xxxx	1xxxx	1xxxx	1xxxx
	24° To 25°29'59.99	2xxxx	2xxxx	2xxxx	2xxxx
	25°30' To 26°59'59.99	3xxxx	3xxxx	3xxxx	3xxxx
	27° To 28°29'59.99	4xxxx	4xxxx	4xxxx	4xxxx
	28°30' To 30°29'59.99	5xxxx	5xxxx	5xxxx	5xxxx
	30°30' To 32°29'59.99	6xxxx	6xxxx	6xxxx	6xxxx
	32°30' To 35°59'59.99	7xxxx	7xxxx	7xxxx	7xxxx
	36° To 44°59'59.99	8xxxx	8xxxx	8xxxx	8xxxx
	45° Up, But Not Thrust Only	9xxxx	9xxxx	9xxxx	9xxxx
	Conforms To ABMA Standard	R	--	blank	--
	Case Carburized Cup & Cone	G	--	blank	--

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Ball Thrust Bearings

Nomenclature



Please refer to the bearing tables for exact part number options

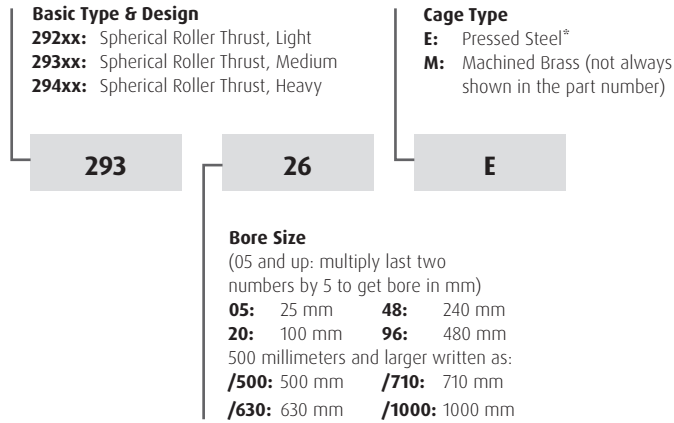
Interchange

Description		Interchange		
		NSK	SKF	FAG
Part Number	Single Direction	511xx	511xx	511xx
	Single Direction	512xx	512xx	512xx
	Single Direction	513xx	513xx	513xx
	Single Direction	514xx	514xx	514xx
	Single Direction with Aligning Seat	532xx	532xx	532xx
	Single Direction with Aligning Seat	533xx	533xx	533xx
	Single Direction with Aligning Seat	534xx	534xx	534xx
	Double Direction	522xx	522xx	522xx
	Double Direction	523xx	523xx	523xx
	Double Direction	524xx	524xx	524xx
	Double Direction with Aligning Seat	542xx	542xx	542xx
	Double Direction with Aligning Seat	543xx	543xx	543xx
	Double Direction with Aligning Seat	544xx	544xx	544xx
	Suffix	Steel Cage	BLANK	J
Brass Cage		M	M	MP
Boundary Dimensions Adopted to ISO		X	--	X
With Self-Aligning Seat Washer		U	U	U
ABEC 5 Precision Class		P5	P5	P5

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Spherical Thrust Bearings

Nomenclature



Please refer to the bearing tables for exact part number options

*The "E" designation has replaced the "H." This is nomenclature change only, not a design change.

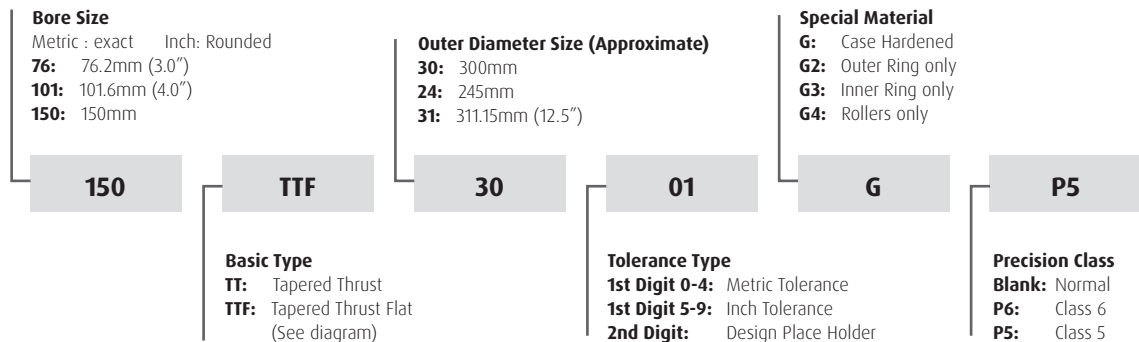
Interchange

Description		Interchange			
		NSK	SKF	FAG	TORR/TIMKEN
Part Number	Light	292xx	292xx	292xx	292xx
	Medium	293xx	293xx	293xx	293xx
	Heavy	294xx	294xx	294xx	294xx
Suffix	Steel Cage	E	EJ	E	EJ
	Brass Cage	M	M	EMB	EM

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Tapered Roller Thrust Bearings

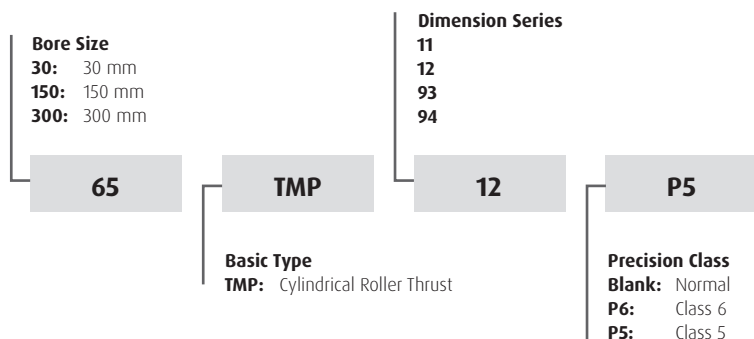
Nomenclature



Please refer to the bearing tables for exact part number options.

Cylindrical Roller Thrust Bearings

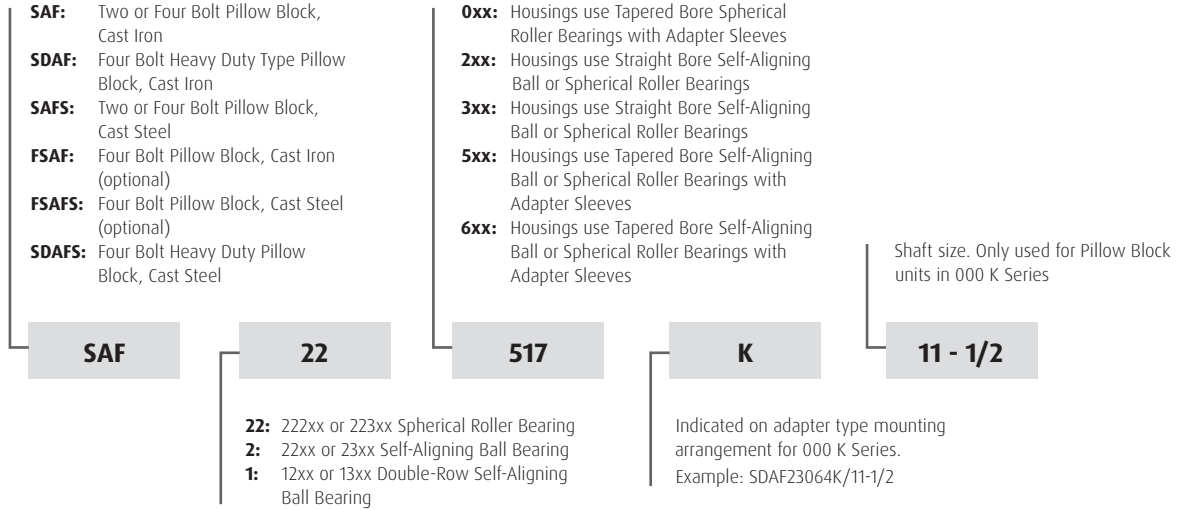
Nomenclature



Please refer to the bearing tables for exact part number options.

Pillow Blocks

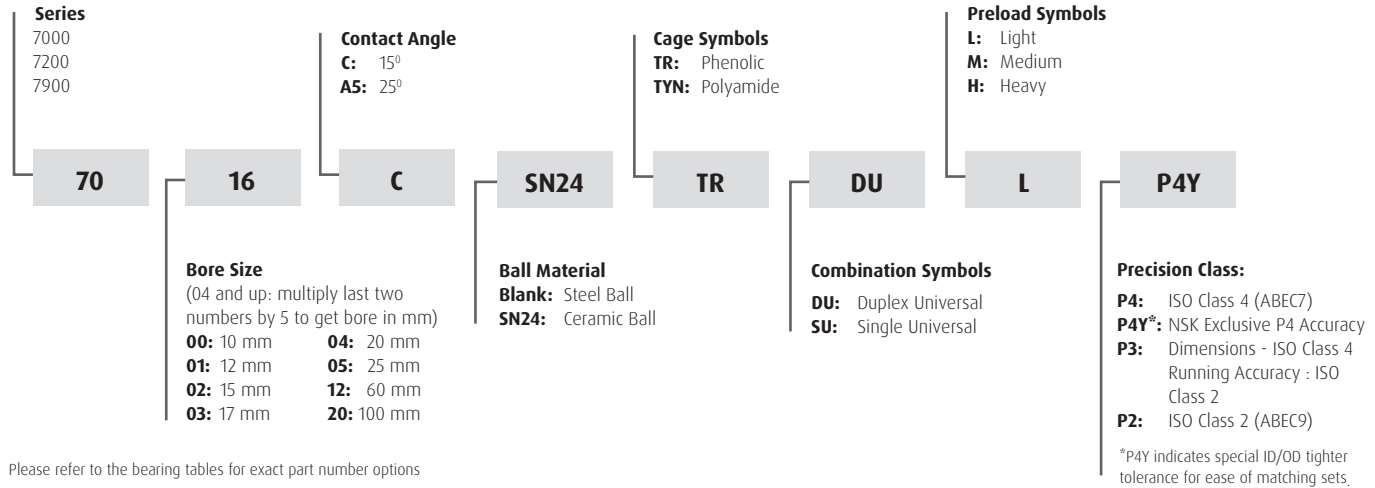
Nomenclature



Please refer to the bearing tables for exact part number options

Super Precision Angular Contact Bearings

Nomenclature



Please refer to the bearing tables for exact part number options

Interchange

Description	Interchange									
	NSK	*OLD NSK	SKF	FAG	BARDEN	OLD BARDEN	FAF/TIMKEN	SNFA	NTN	
Part No.	79XX	79XX	719XX	719XX	19XX	-	93XXWI	EB/ESP	79XX	
Ultra Light Series	79XX	79XX	719XX	719XX	19XX	-	93XXWI	EB/ESP	79XX	
Extra Light Series	70XX	70XX	70XX	70XX	1XX	1XX	91XXWI	EX/ESX	70XX	
Light Series	72XX	72XX	72XX	72XX	2XX	2XX	2XXWI	E2/ES2	72XX	
Part Number Suffix										
15° Contact Angle	C	C	CD	C	C	BLANK	2**	1	C	
25° Contact Angle	A5	A5	ACD	E	E	2**	3**	3	AD	
Polyamide Cage	TYN	TY	-	-	TMT	-	PRC	P	T2	
Phenolic Cage	TR	T	BLANK	T	T, TA	BLANK	CR	C	T1	
Seals	V1V	-	S**	2RSD OR S**	RR	VV, PP	-	/S	-	
Duplex Universal	DU	DU	DG	DU	DU	D	DU	DU	GD2	
Single Universal	SU	SU	G	U	U	-	SU	U	G	
Extra Light Preload	EL	EL	-	-	-	-	X	-	GL	
Light Preload	L	L	A	L	L	L	L	L	GN	
Medium Preload	M	M	B	M	M	M	M	M	GM	
Heavy Preload	H	H	C	H	H	H	H	H	-	
Ceramic Balls	SN24	SN24	HC	HCB**	C**	-	C**	/NS	5S**	
ABEC 7 Precision	P4Y	P4	P4A	P4S	BLANK	BLANK	MM/MMV**	7	P4	
ABEC 9 Precision	P2	P2	PA9A, P9	-	ABEC 9	ABEC 9	MMX**	9	P2	

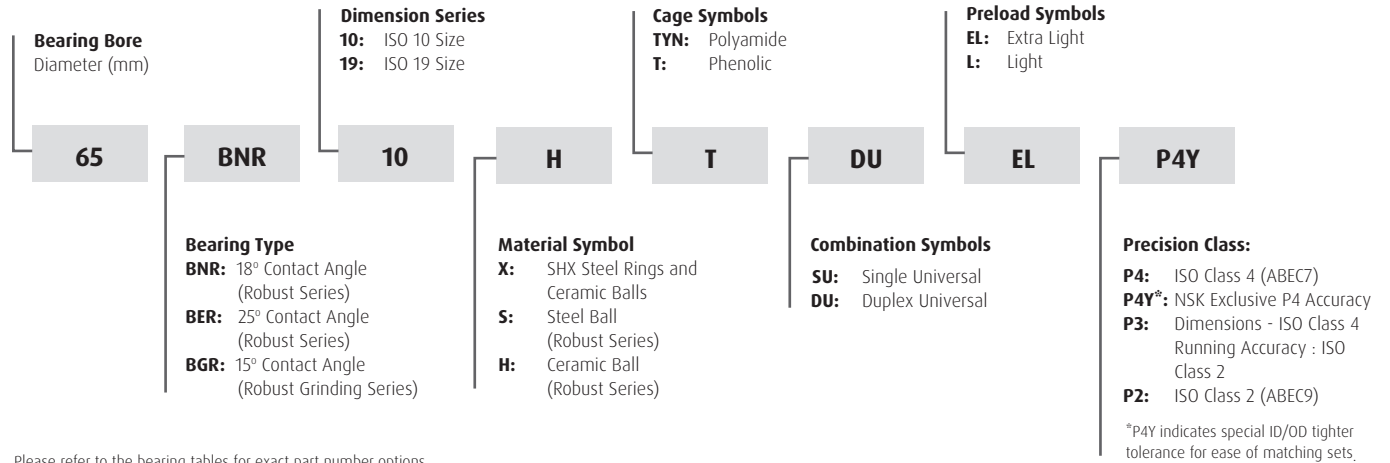
*TYN cage replaces TY, TR cage replaces T. Sealed (V1V) versions are a new option and P4Y tolerance specification replaces P4. P4Y tolerance specification has tighter bore and OD control than ABEC 7 (class 4 or P4). NSK supplies the following bearing series with P4Y tolerance: 7000; 7200.

**Indicates prefix not suffix.

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

High Speed Super Precision Angular Contact Ball Bearings

Nomenclature



Interchange

Description	Interchange						
	NSK	*OLD NSK	SKF	BARDEN	FAF/TIMKEN	SNFA	NTN
Part No.							
Ultra Light Robust High Speed Series	XXBNR19	XXBNC19	719XXCE	ZSB19XX	93XXWO,WN,HX	VEBXX	HSB9XX
Extra Light Robust High Speed Series	XXBNR10	XXBNC10	70XXCE	ZSB1XX	91XXWO,WN,HX	VEXXX	HSB0XX
Ultra Light Robust High Speed Series for Grinding Spindles	XXBGR19	XXBNT19	-	-	-	-	BNT9XX
Extra Light Robust High Speed Series for Grinding Spindles	XXBGR10	XXBNT10	-	XXBX48	-	-	BNT0XX
Part Number Suffix							
Polyamide Cage	TYN	TY	BLANK, TNH	TMT	PRC	P	T2
Phenolic Cage	TR	T	-	T, TA	CR	C	T1
Duplex Universal	DU	DU	DG	DU	DU	DU	D
Single Universal	SU	SU	G	U	SU	U	BLANK
Extra Light Preload	EL	EL	A	-	X	-	GL
Light Preload	L	L	B	L	L	L	GN
Ceramic Balls	H	SN24	HC	C**	C**	/NS	5S**
Steel Balls	S	BLANK	BLANK	BLANK	BLANK	BLANK	BLANK
ABEC 7 Precision	P4Y	P4	P4	BLANK	MM/MMV**	7	P4
ABEC 9 Precision	P2	P2	P2	ABEC 9	MMX**	9	P2

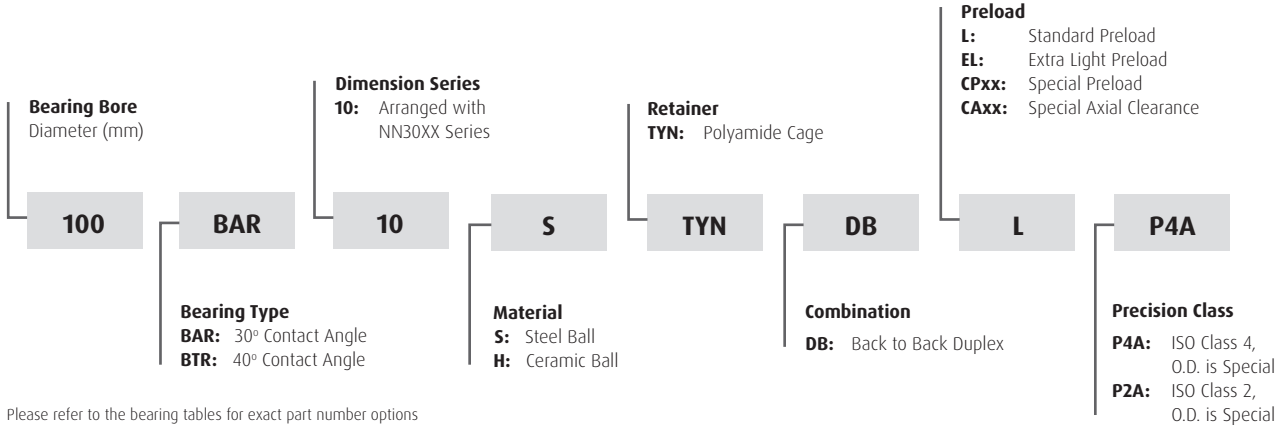
*BNR has replaced BNC series. P4Y tolerance specification replaces P4. P4Y tolerance specification has tighter bore and OD control than ABEC 7 (class 4 or P4). NSK supplies the following bearing series with P4Y tolerance: 7000; 7200; 7900; and BNR.

** Indicates prefix not suffix

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

Super Precision Angular Contact Thrust Ball Bearings

Nomenclature



Interchange

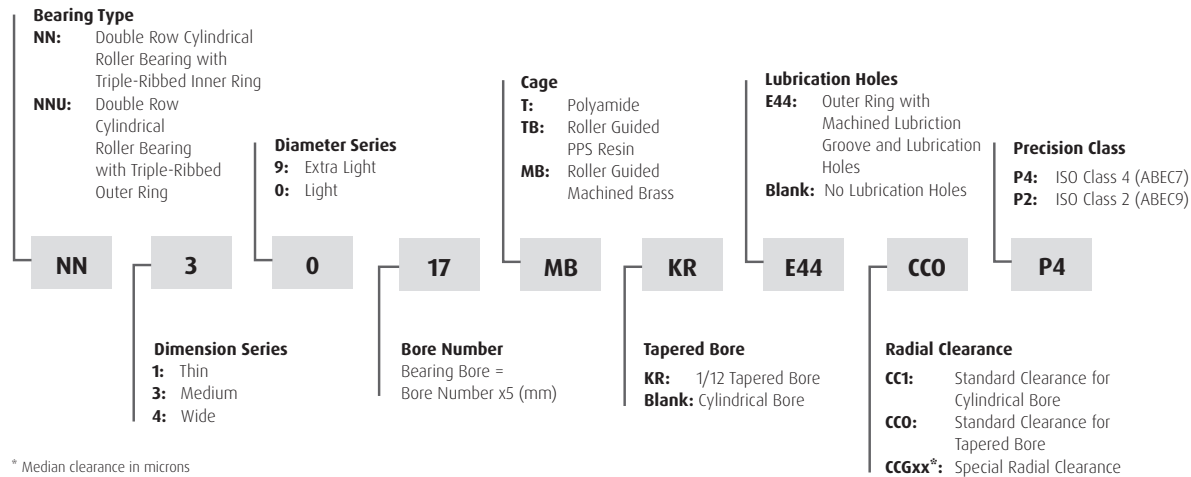
Description	Interchange			
	NSK	*OLD NSK	SKF	NTN
Part No.				
30° Angular Contact Thrust Bearings	XXBAR10	XXBA10	BTMXXA	HTA0XXA
40° Angular Contact Thrust Bearings	XXBTR10	XXBT10	BTMXXB	HTA0XX
Part Number Suffix				
Polyamide Cage	TYN	TY	BLANK	T2
Phenolic Cage	TR	T	-	BLANK
Duplex Universal	DU	DU	DB	GD2
Single Universal	SU	SU	-	G
Extra Light Preload	EL	EL	-	-
Light Preload	L	L	A	GN
Ceramic Balls	H	SN24	HC	5S**
Steel Balls	S	BLANK	BLANK	BLANK
ABEC 7 Precision	P4A	P4A	PC	P4
ABEC 9 Precision	P2A	P2A	PA9A	P2

*BAR and BTR series have replaced BA and BT series.
** indicates prefix not suffix

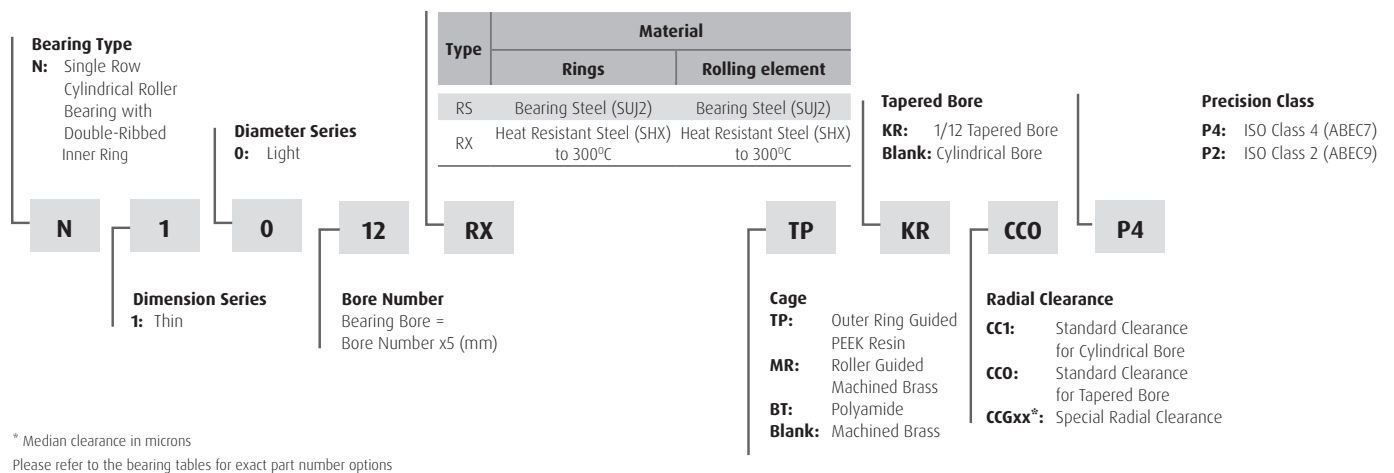
The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

Super Precision Cylindrical Roller Bearings

Double Row



Single Row



Interchange

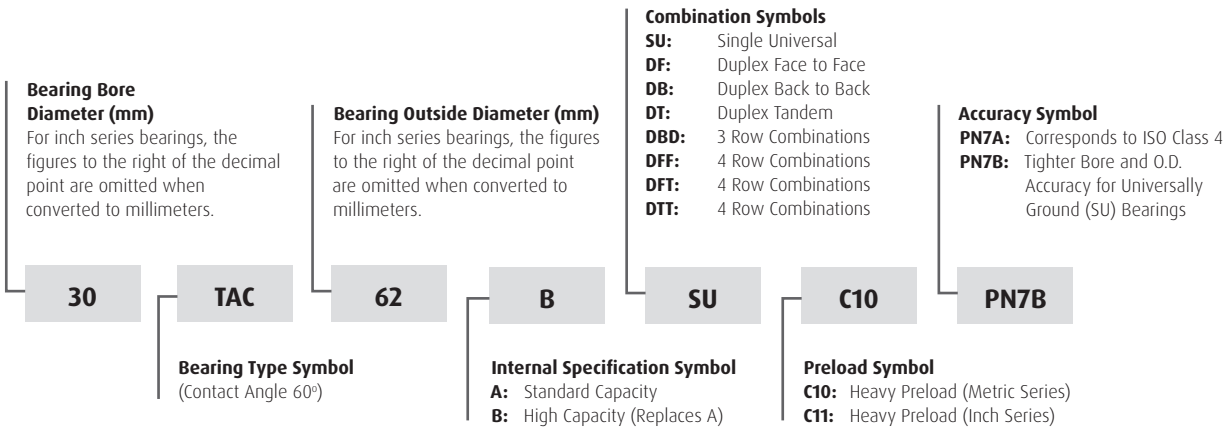
Description	Interchange				
	NSK	*OLD NSK	SKF	FAG	NTN
Part No.					
Ultra Light Double Row Cylindrical Series	NN39XX	NN39XX	-	-	-
Extra Light Double Row Cylindrical Series	NN30XX	NN30XX	NN30XX	NN30XX	NN30XX
Extra Light Single Row Cylindrical Series	N10XX	N10XX	N10XX	N10XX	N10XX
Part Number Suffix					
Non-Metallic Cage	TB	T	TN, TN9, TNHA	-	T6
Brass Cage	MB	M	BLANK	M, MI	BLANK
Tapered Bore	KR	K	UPK	K	K
Lube Groove And Holes On Outer Ring	E44	-	W33, U33X	AS	-
Matched Clearance, Rings Not To Be Mixed	CCX	CCX	CX	CX	CXNA
ABEC 7 Precision	P4	P4	SP	SP	P4

*The outer ring machined lubrication groove and holes (E44) is now a standard feature. TB cage replaces T cage, MB replaces M and KR replaces K.

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

Ball Screw Support Bearings

Nomenclature



Please refer to the bearing tables for exact part number options

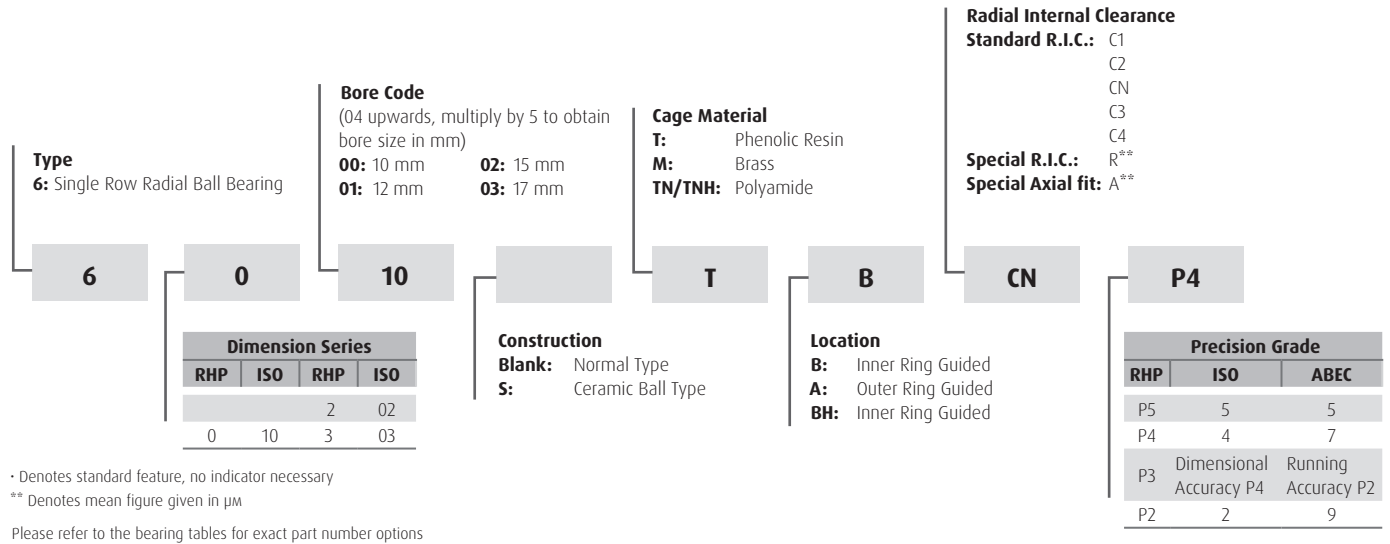
Interchange

Description	Interchange				
	NSK	SKF	FAF/TIMKEN	MRC	NTN
Part No.					
Metric Type	xxTACxxx	BDAB6342xx	MMxxBSxxx	--	BSTxxXxx
Inch Type	xxTACxxx	BDAB6342xx	MM93xxWI xH	Jxxx	--
Part Number Suffix					
Internal Specifications (Standard Capacity)	A	--	--	--	X
Internal Specifications (High Capacity)	B	C	--	--	-1B
Single Universal	SU	G	SU	DS	G
Duplex Universal	DU	DG	DU	DU	GD2
Duplex Face to Face	DF	DF	DU	DF	DF
Duplex Back to Back	DB	DB	DU	DB	DB
Duplex Tandem	DT	DT	DU	DT	DT
Quad Set \\ \\ //	DFD	QFC	QU	--	DTFT
Quad Set \ \ / /	DFT	QFT	QU	DFDT	--
Quad Set / / \ \	DBB	QBC	QU	--	--
Quad Set / \ \ \	DBT	QBT	QU	--	DTBT
Quad Set / / / /	DTT	QT	QU	--	--
Metric Series Preload	C10	BLANK	H	--	BLANK
Inch Series Preload	C11	BLANK	H	BLANK	--
Corresponds to ISO Class 4	PN7A	P4(PA7)	MM	BLANK	P4
Tighter Bore and O.D. Accuracy for SU Bearings	PN7B	P4(PA7)	MM	BLANK	UP

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please consult NSK Engineering. NSK assumes no liability with respect to errors or omissions.

Precision Deep Groove Ball Bearings

Nomenclature



Interchange

Description	Interchange		
	NSK	FAF/TIMKEN	Barden
Part Number	ISO 19	69xx	---
	ISO 10	60xx	91xxK 1xx
	ISO 02	62xx	2xxK 2xx
	ISO 03	63xx	3xxK ---
Prefixes / Suffixes	Polyamide Cage	T1X	PRB TMT
	High Speed Polyamide Cage	TYA	---
	Phenolic Cage	T	CR T
	Shield	Z	--- S
	Non-contact Seal	V	V A
	Contact Seal	(D)DU	--- Y
	Radial Clearance (Loose)	C3	P (K)5
ABEC 7 Precision	P4	MM ---	

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please contact NSK. NSK assumes no liability with respect to errors or omissions.

Linear Guides Interchange

Description	Interchange																						
	NSK				THK				THOMSON				SKF										
Carriage Part Number	NAH	20	AN	Z	HSR	20	R	C1	511	H	20	C	1	LLRHC	20	A-	T1						
	1	2	3	7	1	2	3	7	1	6	2	3	7	1	2	3	7						
Rail Part Number	N1H	20	XXXX	Z	HSR	20+	XXXXL		521	H	20	A	+XXXX	LLRHR	20x	XXXX	P5						
	1	2	4	7	1	2	4	6	1	6	2		4	1	2	4	6						
Assembly Part Number	NH	25	XXXX	AN	C	X	PC	Z	HSR	20	R	2	SS	C1	+XXXXL	LLRHS	20	A	2	T1	XXXX	P5	
	1	2	3	4	5	6	7	8	1	2	3	5	8	7	4	6	1	2	3	5	7	4	6

The competitive manufacturers are provided for a convenient source of unit substitution. They can be considered interchangeable in most instances, but for special applications, please consult NSK Engineering. NSK assumes no liability with respect to errors or omissions.

1 - Linear Guide Series

NSK	THK	THOMSON		SKF
		Old	New	
NH	HSR (SHS)	CG	511	LLRHS/LLTHS
NS	SR (SSR)			LLRHS
LW	HRW			
PU	RSR	CD	TSR-Z	LLMHS
PE	RSR W	LLMWS	TSR-WZ	LLMWS

2 - Linear Guide Series (rail width)

NSK	THK	THOMSON	SKF
Number indicated rail width	Same as NSK	Same as NSK with the exception of the CD series	Same as NSK

3 - Linear Guide Carriage Styles ## = size (rail width)

NSK	THK		THOMSON		SKF
	Common	Less Common	Old	New	
NAH##AN	HSR##R (SHS##R/V)	HSR##TR/TRX/CR	CG##CE	511H##E	LLRHC##R/U (20,45)
NAH##BN	HSR##LR (SHS##LR/LN)	HSR##HTR/HR	CG##DE	511H##F	LLRHC##LR
NAH##EM	HSR##A/B/CA/CB (SHS##C)	HSR##TA	CG##AA	511H##A	LLRHC##A
NAH##GM	HSR##HA/LA/HB/LB (SHS##LC)	HSR##HTA/HTB	CG##BA	511H##B	LLRHC##LA
NAH##AL	(SHS##V)			511H##C (25,30,35)	LLRHC##U (25,30,35)
NAH##BL	(SHS##LV)			511H##D (25,30,35)	
NAS##EM	SR##TB (SSR##XTB)				
NAS##AL	SR##W (SSR##XW)	SR##TX/WY (SSR##XWY)			LLRHC15U
NAS##AN	SR##W (45,55)				
NAS##CL	SR##V (SSR##XV)	SR##SX/VY (SSR##XVY)			LLRHC##SU (15,30,35)
LAW##EL	HRW##CA/CR				
PAU##AR	RSR07M/RSR07N				LLMHC##TA
PAU##TR	RSR05M/##N (5,9)	RSR09KM/RSR12VM			LLMHC##TA
PAU##UR	RSR12N				
PAU##AL	RSR15VM				
PAE##AR	RSR05WM/##WN (5,12,15)	RSR12WVM/RSR15WVN			LLMWC##TA
PAE##TR	RSR07WM/##WN (7,9)	RSR09WVM			LLMWC##TA

4 - Linear Guide Rail Length (mm) ## = size (rail width) XXXX = length

NSK	THK	THOMSON		SKF
		Old	New	
N1H##XXXXZ	HSR##+XXXXL	RG##NLXXXX	521H##A+XXXX	LLRHR##xXXXXP5
N1S##XXXXZ	SR##+XXXXL			LLRHR##xXXXXP5
L1W##XXXXZ	HRW##+XXXXL			
P1U##XXXXZ	RSR##+XXXXL	RD##HLXXXX	TSR##Z+XXXX	LLMHR##xXXXXP5
P1E##XXXXZ	RSR##W+XXXXL		TSR##WZ+XXXX	LLMWR##xXXXXP5

5 - Carriages

The number following the carriage style equals the number of carriages per rail.

6 - Accuracy Class

NSK	THK	THOMSON	SKF
PC (interchangeable)	BLANK	N	P5
P6	H	H	P3
P5	P	P	P1
P4	SP	S	P01
P3	UP	U	P001

7 - Preload

NSK (Matched Assembly)	THK	THOMSON		SKF
		Old	New	
T or (0)	BLANK	A	0	T0
Z or (1)	C1	B	1	T1
(2)	C1	B	1	T1
H or (3)	C0	C	2	T2
(4)	C0	C	3	T3

8 - Seals

NSK	THK	THOMSON		SKF
		Old	New	
Standard (End Seals)	UU-End Seals		Standard	Standard
Standard (Side Seals)	SS-Side Seals+End Seals	LDS	Standard	Standard
-P (Protector/Scraper)	ZZ-End, Side, Inner Seals and Scraper	ZZ	Z	S1
-D (Double End Seals)	DD-Double End, Side, and Inner Seals	DD	W	S2
-DP (Double End Seals, Protector)	KK-Double End, Side, Inner Seals and Scraper	KK	WZ	S3

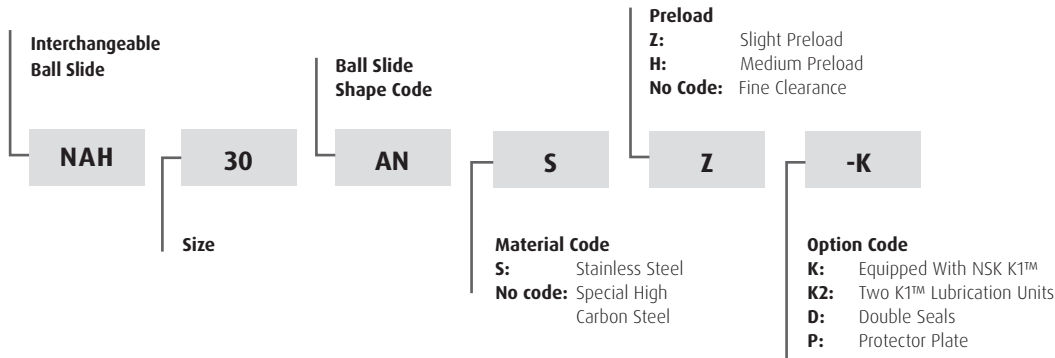
Lubrication Systems

NSK	THK	THOMSON	SKF
-K1™	QZ	LL	Standard
External to the Carriage	External to the Carriage	External to the Carriage	Internal Foam Insert

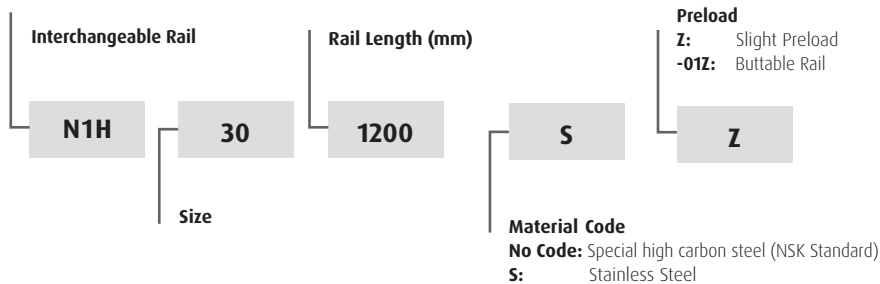
Linear Guides: NH Series

Nomenclature

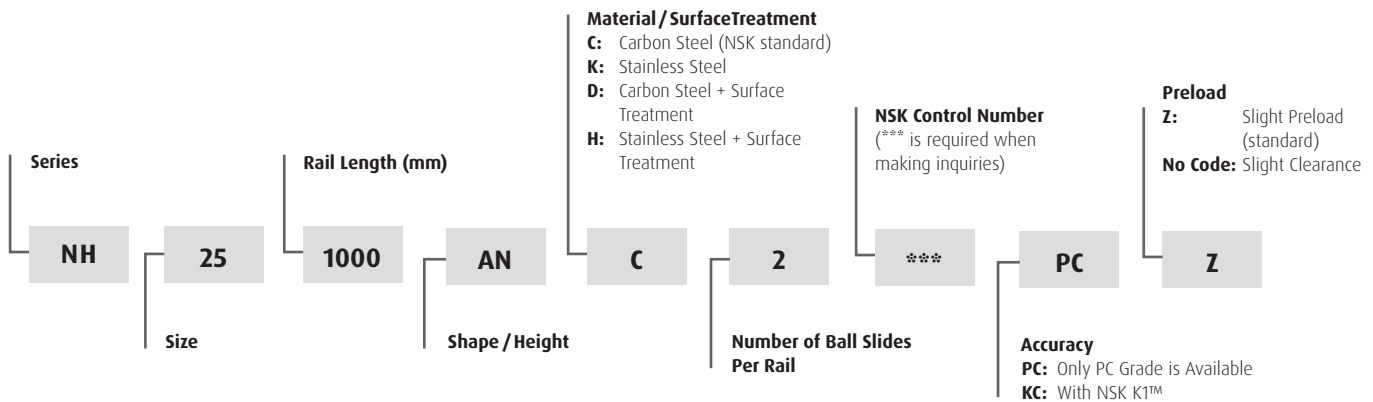
Part Number Example for Ball Slide Only



Reference Part Number for Rail Only



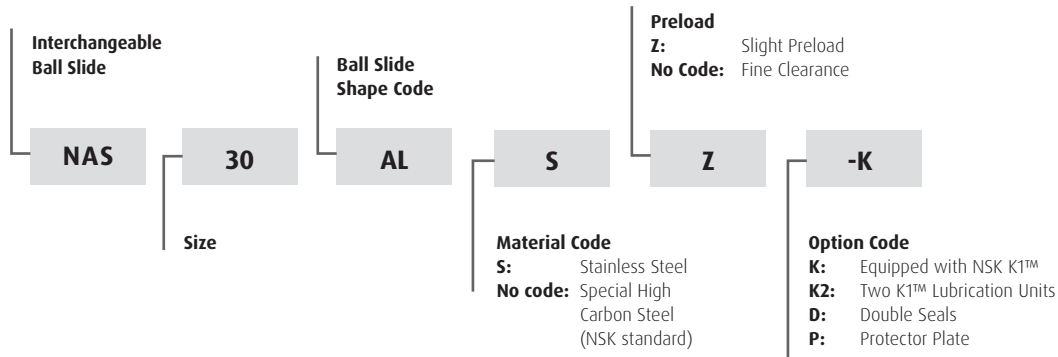
Reference Part Number for Interchangeable Assembly (Ball Slide + Rail)



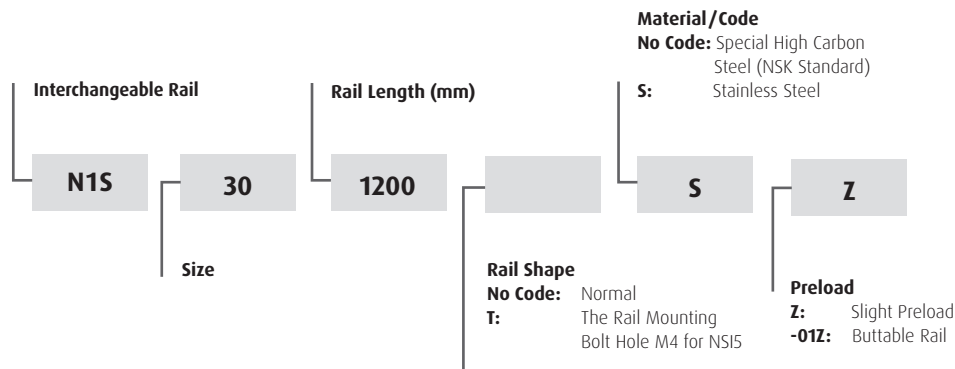
Linear Guides: NS Series

Nomenclature

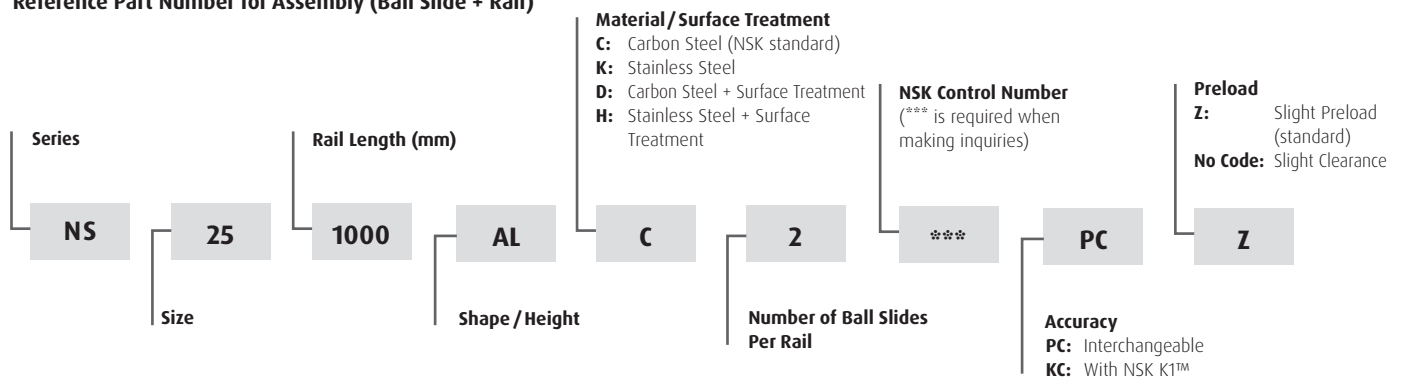
Part Number Example for Ball Slide Only



Reference Part Number for Rail Only



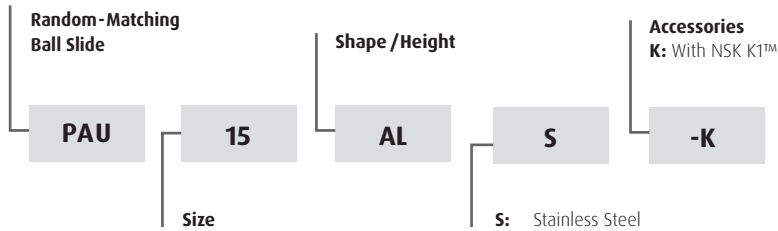
Reference Part Number for Assembly (Ball Slide + Rail)



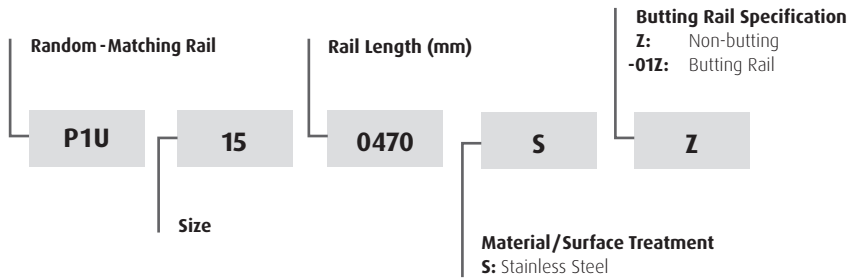
Linear Guides: PU Series

Nomenclature

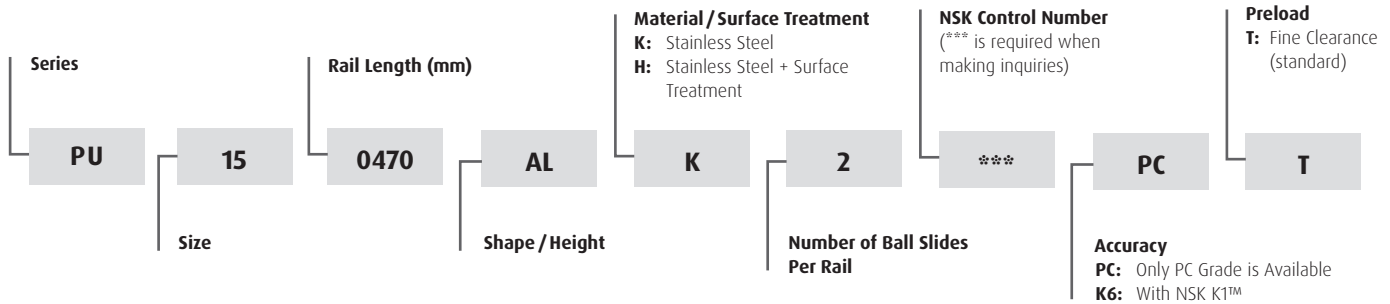
Part Number Example for Ball Slide Only



Reference Part Number for Rail Only



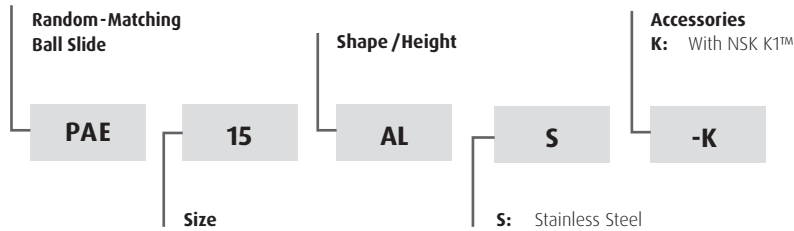
Reference Part Number for Assembly (Ball Slide + Rail)



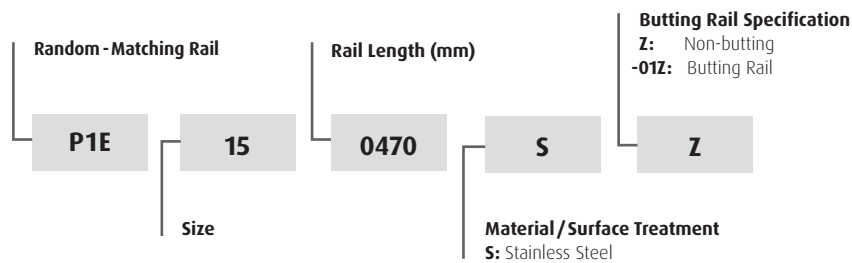
Linear Guides: PE Series

Nomenclature

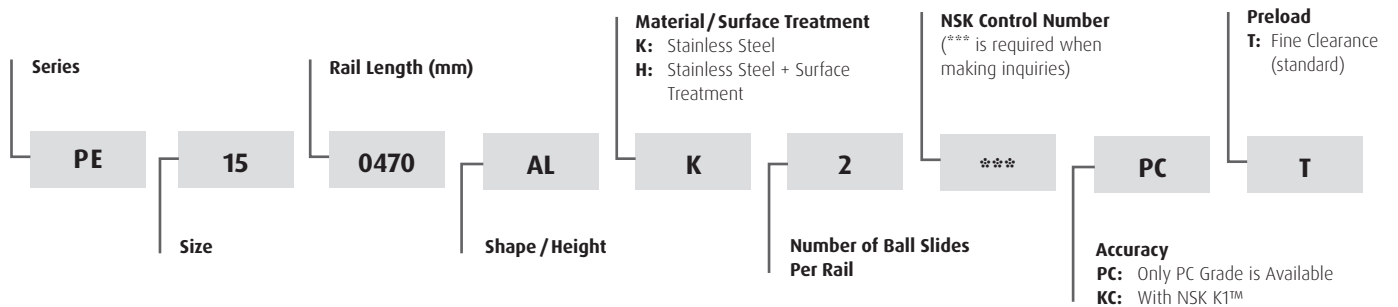
Part Number Example for Ball Slide Only



Reference Part Number for Rail Only



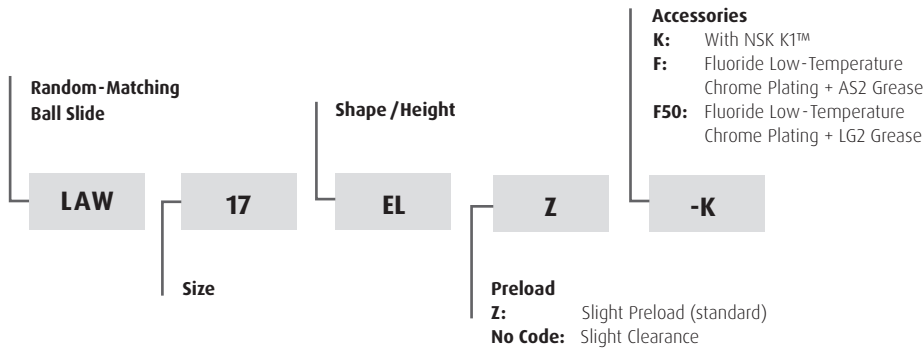
Reference Part Number for Assembly (Ball Slide + Rail)



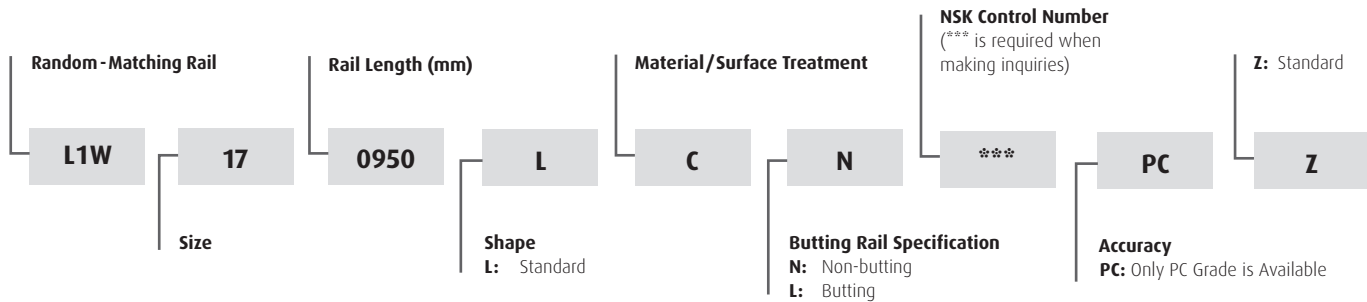
Linear Guides: LW Series

Nomenclature

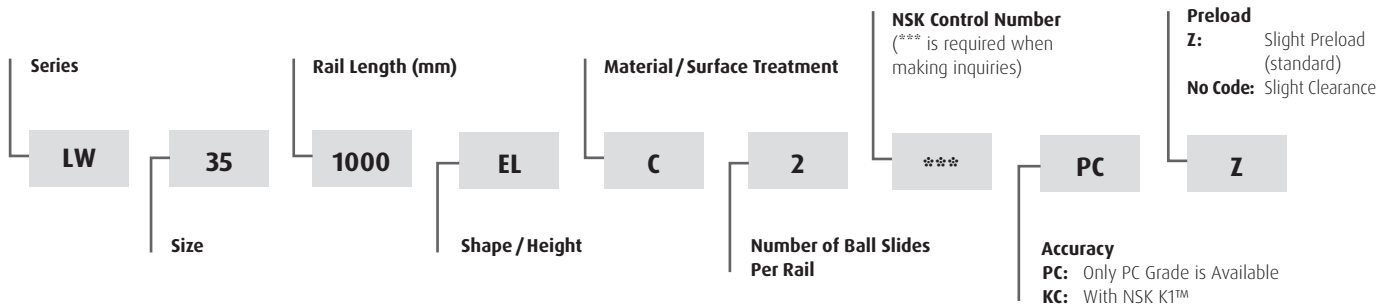
Part Number Example for Ball Slide Only



Reference Part Number for Rail Only



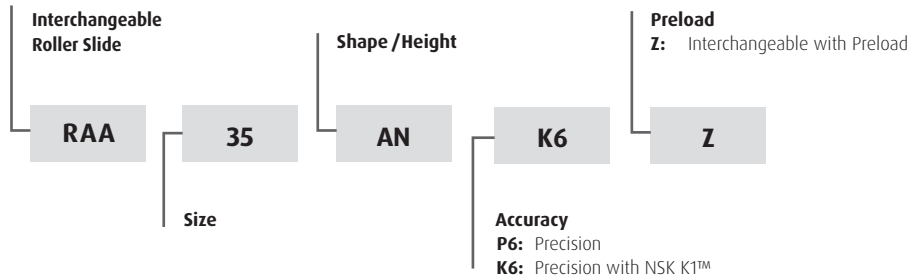
Reference Part Number for Assembly (Ball Slide + Rail)



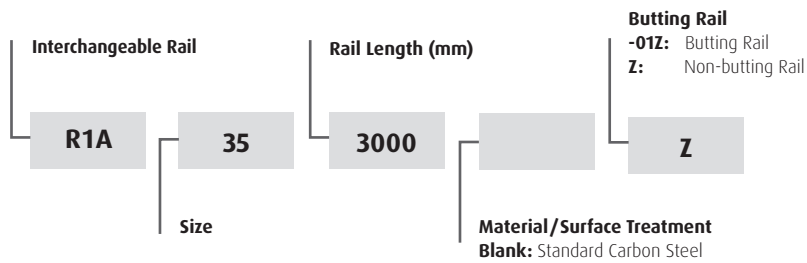
Linear Guides: RA Series

Nomenclature

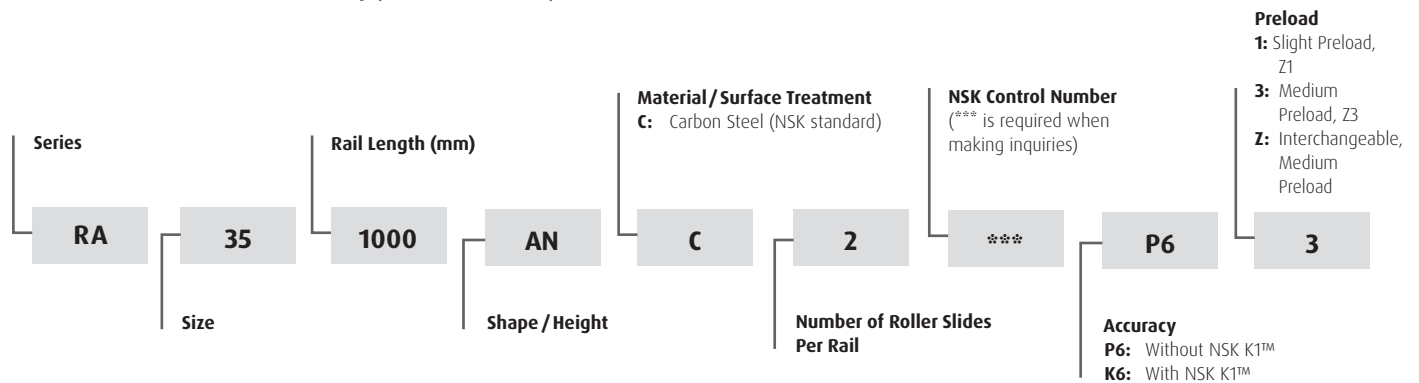
Part Number Example for Roller Slide Only



Reference Part Number for Rail Only



Reference Part Number for Assembly (Roller Slide + Rail)



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Korea:

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