

# GENERAL LIST

Quick and easy access  
to our entire industrial range



# NTN®



The expertise of a manufacturer,  
the scale of a leader

**NTN-SNR ROULEMENTS, part of the 3<sup>rd</sup> largest bearing manufacturing group in the world, is a major force as a designer, developer and manufacturer.**

Thanks to its strong brands, NTN-SNR is highly active in the automobile, industrial and aeronautics sectors. Each division meets the expectations of a global market and focuses on the business segments of its customers.



**NTN-SNR offers top quality technical products and can provide specialist solutions.**



With the widest range on the market, our teams work towards other requirements. Innovation is a decisive factor in our development: anticipating new solutions, enriching bearing functionalities, etc. More compact, lighter, more economical, more reliable, more effective, better for the environment... we are constantly innovating for and with our customers.

NTN-SNR is clearly focused on ecological solutions and is recognised as the partner and by developer of the companies of the future, ready to take up all market opportunities.



# Together, we can create the world of the future

The identity of NTN-SNR is based on strong, real and shared values.

**Proximity, a professional approach, quality and technical proficiency:** the key values for the group for nearly a century.

Both individually and as a group, we make significant commitments: **listening and performance** for those with which we work and live and who we serve.



## NTN-SNR, With You

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## With You

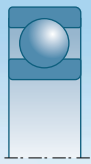
At the heart of the action,  
in the centre of change



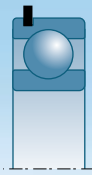


# Identification

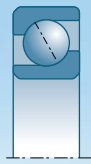
The code of these drawings are mentioned in the product listings in order to quickly identify the bearing design.



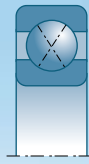
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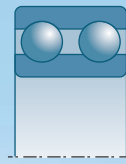
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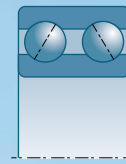
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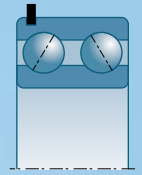
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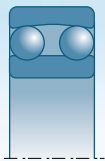
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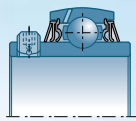
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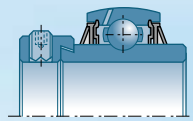
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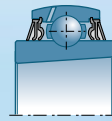
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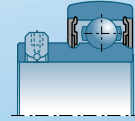
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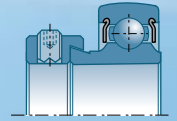
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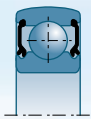
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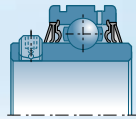
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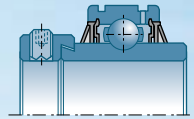
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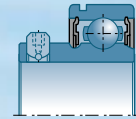
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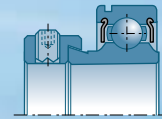
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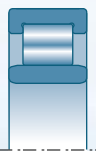
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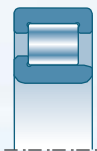
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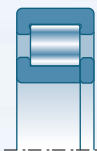
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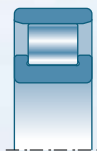
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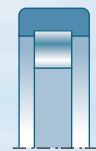
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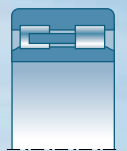
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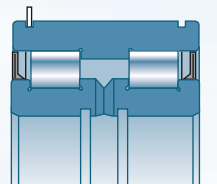
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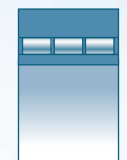
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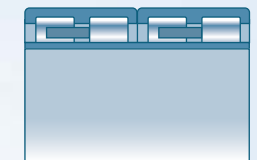
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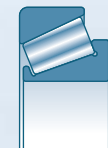
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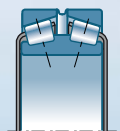
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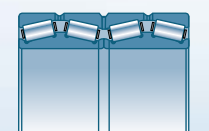
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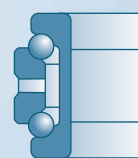
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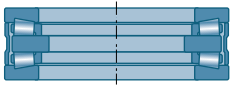
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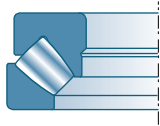
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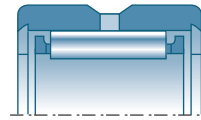
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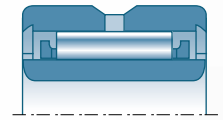
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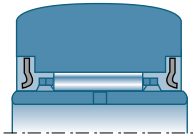
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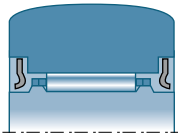
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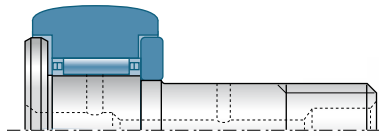
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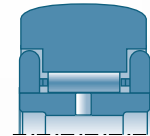
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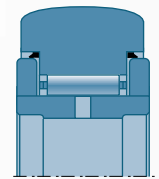
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45-A



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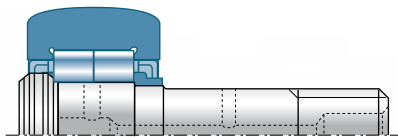
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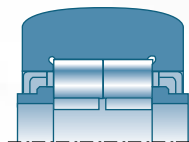
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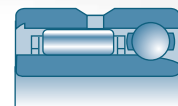
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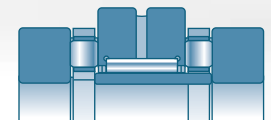
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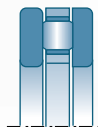
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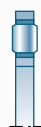
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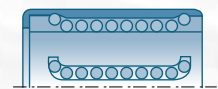
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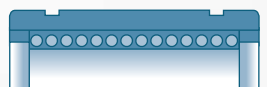
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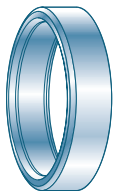
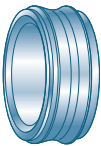



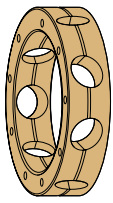
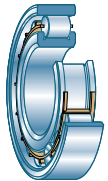
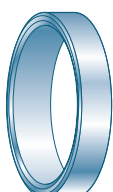

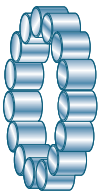
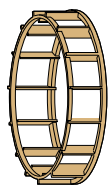
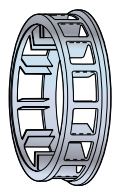
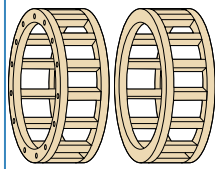
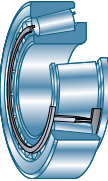
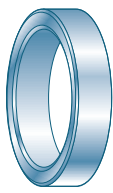




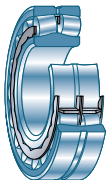
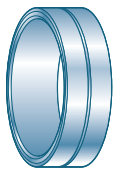
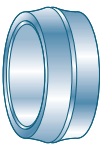

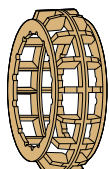
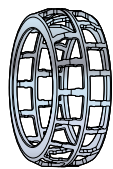
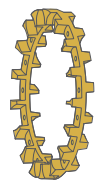
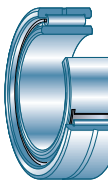

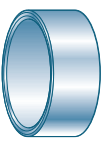



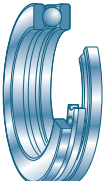


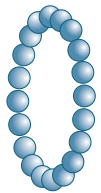

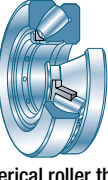
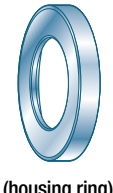
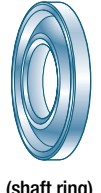
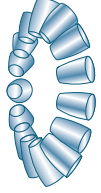
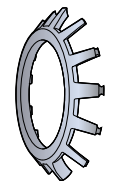



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

























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# Components and descriptions

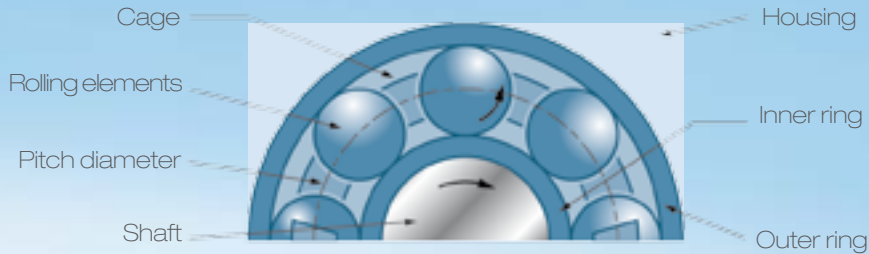
Type	Outer ring	Inner ring	Rolling elements	CAGES		
				Synthetic material	Pressed steel	Machined solid
 <b>Ball bearings</b>						
 <b>Cylindrical roller bearings</b>						
 <b>Tapered roller bearings</b>	 (cup)	 (cone)				
 <b>Double-row spherical roller bearing</b>						
 <b>Needle roller bearings</b>						
 <b>Ball thrust bearing</b>	 (housing ring)	 (shaft ring)				
 <b>Spherical roller thrust bearing</b>	 (housing ring)	 (shaft ring)				

# Standard series and part numbers

60 10

		BORE CODE		BORE DIAMETER (mm)	
	<b>Bearings with single or double rows of radial contact balls</b>  Standard  Protected by 1 or 2 shields  Sealed with 1 or 2 seals  With retaining ring  2 rows of balls	<b>SERIES CODE</b> 1 row of balls 600 16000 620 6000 630 6200 6300 6400 6700 6800 6900	<b>SERIES CODE</b> 2 rows of balls 4200 4300	3	3
		<b>Angular contact bearings, with single or double rows of balls</b> Type B $\alpha = 40^\circ$ Type C $\alpha = 15^\circ$ Type H $\alpha = 25^\circ$  1 row ( $\alpha = \text{Standard} = 30^\circ$ )  2 rows	<b>SERIES CODE</b> 1 row of balls 7000 C or H * 7200 B, C or H * 7300 B, C or H * 71900 or 7900C or H or AD 7800 (*high precision machining)	<b>SERIES CODE</b> 2 rows of balls 3200 3300 5200 (open or sealed) 5300 (open or sealed)	
	<b>Double row spherical roller bearings</b>  Cylindrical bore  Tapered bore  Sealed		<b>SERIES CODE</b> 1200 - 1300 2200 - 2300 (open or sealed)	6	6
		<b>Bearings with one or several rows of cylindrical rollers</b> Type N NU NJ NUP NN SL 4R  1 row  2 rows  4 rows	<b>SERIES CODE</b> 1 row of rollers N, NU, NJ, NUP, NF 200, 300, 400 1000 2200 - 2300 available in K	<b>SERIES</b> 2 rows NN, NNU 3000 3900 4000 4900 SL available in K	<b>SERIES</b> 4 rows 4R
	<b>Tapered roller bearings</b>  1 row  2 rows  4 rows	<b>SERIES CODE</b> METRIC DIMENSION 30200 30300 31300 or 32300 B 30300 D 32000 32200 32200 B ISO 355 series	<b>SERIES CODE</b> IMPERIAL DIMENSION (INCHES) A E EE H HH HM LM M JM, JHM, JLM...	10	10
		<b>Double row spherical roller bearings</b>  Without shoulder  Without central shoulder  With shoulder  Sealed		<b>SERIES CODE</b> 2 rows of rollers 21300 23900 22200 24000 22300 24100 23000 24800 23100 24900 23200 23300 23800	22
	<b>Thrust bearings, with ball or spherical /cylindrical rollers</b>  With balls  With rollers	<b>SERIES CODE</b> with balls 51100 51200 51300	<b>SERIES CODE</b> with rollers 29300 29400 29300 E 29400 E	04	04x5 = 20
		<b>Needle roller bearings – Cam and roller followers</b>  Cam roller on stud  Cam roller without stud  Needle roller bearing	Needle roller bearings Drawn cup needle roller bearings Needle roller and cage bearings Needle roller thrust bearings Complex needle roller bearing Cam followers with and without studs	05	05x5 = 25
	<b>Bearing housings</b>  Two-part bearing unit type SNC  Special bearing unit	Pillow block bearing units for ball or roller bearings.	Double bearing units with integrated ball or cylindrical roller bearings.	06	06x5 = 30
		...	...	07	07x5 = 35
		...	...	08	08x5 = 40
		...	...	/500	500
		...	...	/1200	1200

# Shaft and housing



## Seal

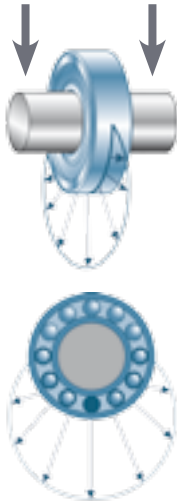
Type of seal	Characteristics	Suffixes	
Shield	Metallic Pressed steel	-Z / -ZZ (NTN) 	-Z / -ZZ (SNR) 
Seal	Standard friction Nitrile	-LU / -LLU (NTN)  T°: -25°C / +120°C	-E / -EE (SNR)  T°: -25°C / +120°C
Seal	Non friction (labyrinth seal) Nitrile	-LB / -LLB (NTN) 	T°: -25°C / +120°C
Seal	Low torque friction with pressure equalizing system Nitrile	-LH / -LLH (NTN) 	T°: -25°C / +120 °C
Seal	Standard friction for high temperatures (+150°C) Polyacrylic	-LUA / -LLUA (NTN) 	
Seal	Standard friction for very high temperatures (+200°C) Fluorinated elastomer	-LUA1 / LLUA1 (NTN) 	E3 (SNR) 
Seal	Standard friction for extreme temperatures (from -100°C to +200°C) Silicone rubber	-LUA2 / -LLUA2 	



# Loads

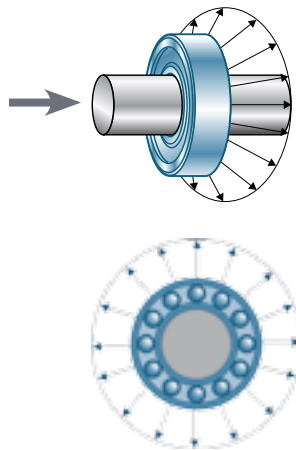
## DISTRIBUTION OF LOADS ON A BEARING

**RADIAL LOADS**



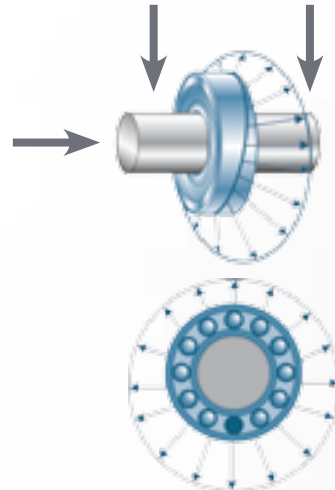
*180° sector maximum*

**AXIAL LOADS**



*Distributed over 360°*

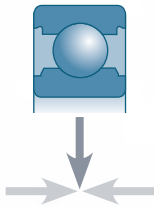
**COMBINED LOADS**



*Non-uniform distribution*

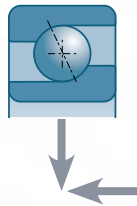
## LOAD CAPABILITIES OF THE DIFFERENT BEARINGS

**BALL BEARING**

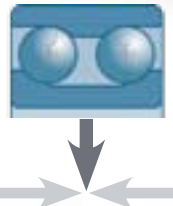


*Moderate radial and axial load*

**ANGULAR CONTACT BEARING WITH SINGLE OR DOUBLE ROWS OF BALLS**

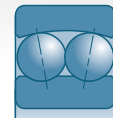


*Combined radial and axial load (1 direction)*



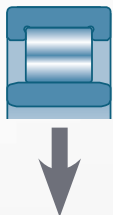
*Radial load/axial load (2 directions)*

**DOUBLE ROW SELF-ALIGNING BALL BEARINGS**



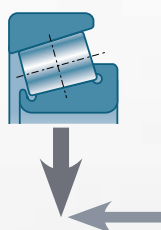
*Moderate radial load  
Low axial load (2 directions)  
Accepts misalignment*

**CYLINDRICAL ROLLER BEARING**



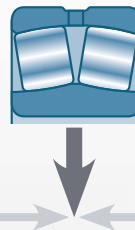
*Very high radial load  
No axial load*

**TAPERED ROLLER BEARING**



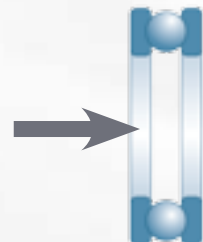
*Very high radial load  
High axial load (1 direction)*

**SPHERICAL ROLLER BEARING**



*Very high radial load  
Moderate axial load (2 directions)  
Accepts misalignment*

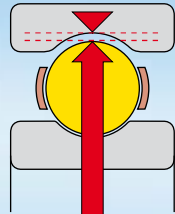
**BALL THRUST BEARING**



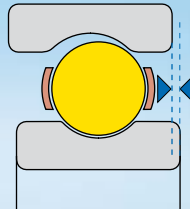
*Axial load  
No radial load*

# Clearances

The standardisation of the internal clearance of the bearings only concerns the radial clearance.  
ISO 5753 standard.



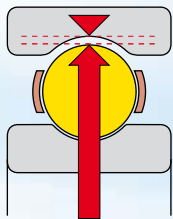
Yes



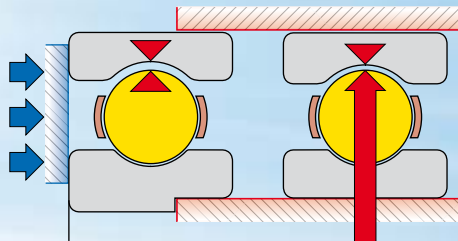
No

This radial clearance is necessary to take into account:

- Deformations of the bearing rings when fitted due to interference

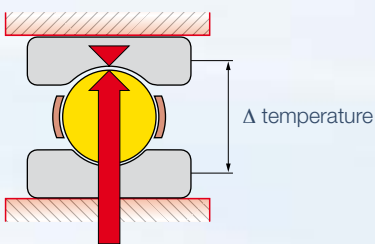


Initial radial clearance



Residual radial clearance after fitting

- Differences in the expansion of the inner and outer rings due to differences in temperature, when operating.



Radial operating clearance

**Clearances used for machine-tool / high precision**  
 C9 reduced clearance less than C0  
 C0 reduced clearance less than C1  
 C1 reduced clearance less than C2

**ISO 5753 standard**  
 C2 reduced clearance  
 CN normal clearance  
 C3 increased clearance  
 C4 increased clearance greater than C3  
 C5 increased clearance greater than C4

**Special clearances (NTN)**  
 CS special clearance  
 CM special clearance (specially for electric motors)

## Tools for fitting/removal

Fitting and removing a bearing: these are essential steps that determine the life and correct operation of your installation.

Experts  
& Tools



### Cold assembly:

Set of mounting sleeves to fit the bearings in complete safety, quickly and precisely.



### Heated assembly:

Induction heated: rapid, practical, simple, safe, ecological ...



### Hydraulic assembly:

Precise, no forcing thanks to the hydraulic nut, always ready to use with its "automatic piston recoil" function.



### Removal tools:

Hydraulic or mechanical extractor:  
All types of extractors (2 or 3 claws) for safe and correct use, regardless of the position and dimensions of the bearing.



### Instruments:

Simple, reliable and precise measurement of the operating temperature of your machine with the laser targeting thermometer.






And many other tools for fitting and handling bearings...

# Lubrication solutions: Lub'solutions

LUB'SOLUTIONS: from design through to manufacture, we can support you in your lubrication project by offering you lubricants specially selected for your applications as well as single or multi point lubrication systems suited to the size and requirements of your process.

**Greases**

Chosen to satisfy the specific requirements of your application to ensure optimum operation of your bearing units.

 Universal	 Heavy Duty	 Vib	 High Temp
 Ultra High Temp	 Food	 High Speed+	 Chain Oil



**Single point automatic greasers**



Our wide technological range combined with our bearing lubricants allows us to offer you the best solution for your application. We can satisfy all of your requirements.



**Central lubrication systems**



For the centralised lubrication of your processes with oil or grease, we can offer you all types of pumps and accessories: displacement system, progressive, air-oil mist, multi-line or double-line. The choice is yours!



**Design and installation of the lubrication system**



The LUB'SOLUTIONS experts accompany you throughout your turnkey lubrication projects, from their design through to their installation. Lubrication has never been so simple!

## Services available

### Training



Provide your staff (work study office, maintenance...) with training on the selection and maintenance of bearings. Either in our training centre or on your site with our BEBOX software, we can offer personalised courses that combine theory and practice because each customer has different requirements.

On top of that, our teaching expertise makes all the difference!

### Bearing diagnostic



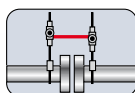
In our laboratory or on your site, together with our experts discover the causes of failed bearings. Their rapid response and advice will enable you to improve your performance...

### Reconditioning of bearings and repairing of machines-tool spindles



Have your industrial bearings reconditioned and your spindles renovated by a company specializing in the renovation of bearings for customers in industry, aviation and railways.

### Technical assistance and shaft alignment



You can trust our experts to supervise your maintenance work: removal and fitting of bearings, creation and enhancement of lubrication systems, shaft alignment by laser technology.

With our BEBOX mobile workshop, our experts come to you!

### Maintenance audit



Benefit from the advantages provided by a pragmatic assessment of your maintenance organisation, carried out by our industrial maintenance experts. Improve productivity with an action plan proposed by NTN-SNR.

### Tool rental



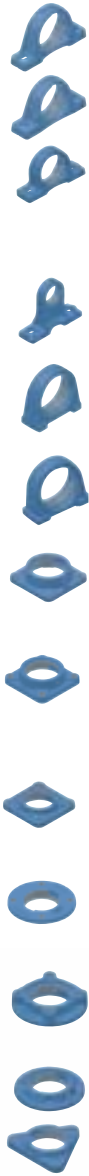
Experts & Tools provides you with a wide range of large tools to rent for the maintenance of your bearings: bearing heaters, hydraulic nuts...

# Theoretical equivalency tables

## Standard bearings

Type of bearing	Technical specification	NTN	SNR	FAG	SKF	NSK
<b>With a single row of balls</b> 600-6700-6800 series (61800)-6900(61900)- 6000-6200-6300-6400 200-300-16000- 16100 / BL200-BL300	1 or 2 pressed steel shields	Z / ZZ	Z / ZZ	ZR / 2ZR	Z / ZZ	Z / ZZ
	1 or 2 seals with contact	LU / LLU	E / EE	RSR / 2RSR	RS1 / 2RS1	DU / DDU
	1 or 2 seals non contact	LB / LLB		RSR/2RSR-BRS/2BRS	RZ / 2RZ	V / VV
	Groove without/with retaining ring	N / NR	N / NR	N / NR	N / NR	N / NR
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
<b>With a double row of balls</b> 4200-4300 series	Polyamide cage		No suffix		TN9	TNG
	Without filling slot		A		A	B
	Internal clearance (if diff. from normal radial clearance)		J20 / J30 etc...		C2 / C3 etc...	C2 / C3 etc...
<b>With a single row of balls</b> <b>With angular contact</b> <b>(standard range)</b> 7000-7800 (71800) series -7900(71900)-7200- 7300-7400	Contact angle 40°	B	B	B	B	B
	Contact angle 15°	C	C		E	C
	Polyamide cage	T2	A	TVP	P	T85 / TYN
	Pressed steel cage	No suffix			J	W
	Solid brass cage	L1	M	MP	M	No suffix
	Can be paired	G	G	UA / UO	CB / G	G / SU
<b>Double-row self-aligning</b> <b>ball bearings</b> 1200-1300 series 2200-2300-100 11200-11300-11500	Pressed steel cage	J	No suffix		No suffix	No suffix
	Polyamide cage	T2	G15	TV	TN, TN9	TNG
	2 seals with contact		EE	2RS	2RS1	2RS
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	J20 / J30 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
<b>With a double row of balls</b> <b>Angular contact</b> 3200-3300 series 5200-5300 series	Tapered bore 1:12	K	K	K	K	K
	Contact angle 32 to 35° with slot	No 3xxx	A	No suffix	No suffix	No suffix
	Contact angle 25 to 32° with slot	3xxxS	B	B	A	B
	Polyamide cage	T2	G15	TVH / TVP	TN9	TNG
	Pressed steel cage	No suffix	No suffix	No suffix	No suffix	J
	1 or 2 pressed steel shields	5xxxSCZZ	5000 ZZ	ZR / 2ZR	Z / ZZ	Z / ZZ
	1 or 2 seals with contact	5xxxSCLLD/LLU	5000 EE	RSR / 2RSR	RS1 / 2RS1	DU / DDU
	1 or 2 seals without contact	5xxxSCLLM	5000 EE	RSR / 2RSR	RS1 / 2RS1	V / VV
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	J20 / J30 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
<b>Single direction</b> <b>ball thrust bearings</b> 51100-51200- 51300-51400 series	Pressed steel cage	J	No suffix	No suffix	No suffix	No suffix
	Solid brass cage			M, MP	No suffix	M
	Polyamide cage	T2				
<b>With a single row of balls</b> <b>With 4 contact points</b> QJ2000 - QJ300 series	Polyamide cage		G15	TVP	TN, TN9	
	Solid cage	L1	MA	MPA	No suffix	M, MA
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	J20 / J30 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
<b>With a single row</b> <b>of cylindrical rollers</b> N, NU, NUP, NJ/200 - 300 - 400 series N, NU, NUP, NJ/1000 - 2200 - 2300 series	Polyamide cage	T2 or T2X	G15	TVP2	P	T
	Steel cage	No suffix	No suffix	No suffix	J	W
	Solid cage	G1, L1	M	M, M1	M	M
	Reinforced capacity	E	E	E	EC	E
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	J20 / J30 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
<b>With a double row</b> <b>of cylindrical rollers</b> NN, NNU ... series	Internal clearance for paired rings	C1NA, CONA etc...				
<b>With a single row</b> <b>of tapered rollers</b> 30200/300-31300 32000/200/300 series	Steel cage	No suffix	No suffix	No suffix	No suffix	No suffix
	Reinforced capacity	Prefix 4T, ET	A, V	No suffix	No suffix	Prefix HR
	Polyamide cage	T2				
<b>With a double row</b> <b>of spherical rollers</b> 21300 series 22200 - 22300 23000 - 23100 23200 - 23900 series 24000 - 24100	Polyamide cage	T2	EG15	TVPB		-
	Pressed steel cage		EA	No suffix	C, CC, EC, ECC, E	C, CD, EA
	Solid brass cage	L1	EM, MB	M, MA, MB	CA, CAC, ECA, ECAC	M
	Extra capacity	Ultage	E, Ultage	E1, X-life	E, Explorer	HPS
	Internal clearance (if diff. from normal radial clearance)	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...	C2 / C3 etc...
	Tapered bore/taper 1:12	K	K	K	K	K
	Tapered bore/taper 1:30	K30	K30	K30	K30	K30
	Grease holes and groove	D1	W33	No suffix, S	No suffix	E4
	Stabilisation treatment	TS	No suffix	No suffix	No suffix	No suffix, S11
	Specification of screen/ vibrating applications	UAVS1, UAVS2	F800, F801	T41A, T41D	VA405	U15VS
	<b>Thrust bearings with a single</b> <b>row of spherical rollers</b> 29300-29400 series	Pressed steel cage			No suffix	No suffix
Solid brass cage		No suffix		MB	No suffix	M
Extra capacity			E	E	E	E

# Self-aligning ball bearing units in grey cast iron



SNR	UCPE	USPE	UKPE..H	EXPE	ESPE
INA	RASEY	PASEY	-	RASE..N	PASE..N
SKF	SY..TF	-	SY..J.KF	SY..WF	SY..FM
RHP	NP	NP..A	NP10...K	NP..DEC	NP..EC
SNR	UCPLE	USPLE	UKPLE..H	EXPLE	ESPLE
RHP	SL	-	-	SL..EC	-
NTN	UCR..D1*	ASP	UKP..D1..H23..X*	UEL..D1W3**	AEL..D1
SNR	UCP**	USP	UKP..H**	EXP**	ESP
NSK	UCP	-	UKP..+H23..	EWP	ENP
ASAHI	UCP	-	UKP..+H23..	-	-
INA	RASEY - JIS	-	-	-	-
KOYO/JTEKT	UCP	-	UKP	NAP..M	SAP..M
NTN	UCHP..D1	-	-	UELHP..D1W3	-
SNR	UCPH	USPH	UKPH..H	EXPH	ESPH
NSK	UCPH	-	UKPH..+H23..	-	-
ASAHI	UCPH	-	-	-	-
KOYO/JTEKT	UCPH	-	-	-	-
SNR	UCPAE	USPAE	UKPAE..H	EXPAE	ESPAE
INA	RSHEY	PSHEY	-	RSHE..N	PSHE..N
SKF	SYF..TF	-	-	SYF..FM	-
RHP	SNP	SNP..A	-	SNP..DEC	SNP..EC
NTN	UCUP..D1	ASUP..	UKUP..D1..H23..X	UELUP..D1W3	AELUP..D1
SNR	UCPA/UCPG	USPA/USPG	UKPA..H/UKPG..H	EXPA/EXPG	ESPA/ESPG
NSK	UCPA	UBPA	-	EWPA	-
ASAHI	UCPA	-	-	-	-
KOYO/JTEKT	UCPA	-	-	-	-
SNR	UCFE	USFE	UKFE..H	EXFE	ESFE
INA	RCJY	PCJY	-	RCJ..N	PCJ..N
SKF	FY..TF	-	FY..J.KF	FY..WF	FY..FM
RHP	SF	SF..A	MSF..K	SF..DEC	SF..EC
NTN	UCF..D1*	ASF..D1	UKF..D1..H23..X*	UEL..D1W3**	AEL..D1
SNR	UCF**	USF	UKF..H**	EXF**	ESF
NSK	UCF	-	UKF..H23..	EFW	-
ASAHI	UCF	-	UKF..H23..	-	-
INA	RCJY.. -JIS	-	-	-	-
KOYO/JTEKT	UCF	-	UKF	-	SAF..FM
NTN	UCFS..D1	-	UKFS..D1..H23..X	UELFS..D1W3	-
SNR	UCFS	-	UKFS..H	EXFS	-
NSK	UCFS	-	UKFS..H23..	-	-
ASAHI	UCFS	-	-	-	-
KOYO/JTEKT	UCFS	-	UKFS	-	-
SNR	UCFCE	USFCE	UKFCE..H	EXFCE	ESFCE
INA	RMEY	PMEY	-	RME	PME
RHP	FC	FC..A	-	FC..DEC	FC..EC
NTN	UCFC..D1***	ASFC..D1	UKFC..D1..H23..X***	UELFC..D1W3	AELFC..D1
SNR	UCFC	USFC	UKFC..H	EXFC	ESFC
SKF	FYC..TF	-	FYC..WF	FYC..FM	-
NSK	UCFC	-	UKFC..+H23..	EWFC	-
ASAHI	UCFC	-	UKFC..+H	-	KHFC
KOYO/JTEKT	UCFC	-	UKFC	-	-
SNR	-	USFEE	-	-	ESFEE
INA	-	-	-	RFE	-
SNR	-	USFTE	-	-	ESFTE
INA	-	-	-	-	PCFTR

SNR	UCFLE	USFLE	UKFLE..H	EXFLE	ESFLE
INA	RCJTY	PCJTY	-	RCJT..N	PCJT..N
SKF	FYTB..TF	-	FYTJ..KF	FYTB..WF	FYTB..FM
RHP	SFT	SFLA	MSFL..K	SFT..DEC	SFT..EC
NTN	UCFL..D1*	ASFL..D1	UKFL..D1..H23..X*	UELFL..D1W3**	AELFL..D1
SNR	UCFL**	USFL	UKFL..H**	EXFL**	ESFL
NSK	UCFL	UBFL	UKFL..+H23..	EWFL	-
INA	RCJTY.. -JIS	-	-	-	-
ASAHI	UCFL	BFL	UKFL..+H	-	KHFL
KOYO/JTEKT	UCFL	-	UKFL	-	SAFL..FM
SNR	UCFLZ	USFLZ	UKFLZ..H	EXFLZ	ESFLZ
INA	-	-	-	RCJTZ	-
NTN	-	ASFD..D1	-	-	AELFD..D1
SNR	-	USFD	-	-	ESFD
INA	-	FLCTEY	-	-	GLCTE
NSK	-	UBFD	-	-	ENFD
ASAHI	-	BLCTE	-	-	ENFD
RHP	-	LFTCA	-	-	LFTC..EC
SNR	-	USFAE	-	-	ESFAE
INA	-	-	-	-	PSFT
NTN	UCFA..D1	-	UKFA...H23..X	-	AELFA..D1
SNR	UCFA	USFA	UKFA..H	EXFA	ESFA
NSK	UCFA	-	-	-	-
ASAHI	UCFA	-	-	-	-
KOYO/JTEKT	UCFA	-	-	-	-
NTN	UCT..D1*	AST..D1	UKT..D1..H23..X*	UEL..D1W3**	AEL..D1
SNR	UCT**	UST	UKT..H**	EXT**	EST
INA	RTUEY	PTUEY	-	-	PTUE
SKF	TUJ..TF	-	-	RTUE	TUJ..FM
RHP	ST	ST..A	MST..K	-	ST..EC
NSK	UCT	-	UKT..+H23..	ST..DEC	-
ASAHI	UCT	-	UKT..+H	EWT	KHT
KOYO/JTEKT	UCT	-	UKT	-	-
NTN	UCT...D1	UKT...D1	-	-	-
SNR	UCT+WB	UST+WB	UKT..H+WB	EXT+WB	EST+WB
NSK	UCT+WB	-	-	-	-
ASAHI	UCT+WB	-	-	-	-
NTN	-	ASPT2...10	-	-	AELPT2...10
SNR	UCSP	USSP	UKSP..H	EXSP	ESSP
RHP	BT	BT..A	-	-	BT..EC
SNR	SPR 1	SPR 11 & 21	SPR 12 & 22	SPR 14 & 24	-
INA	-	HUSE..	-	-	-
RHP	BT	-	-	-	-
NTN	UCHB..D1	-	-	-	-
SNR	UCHE	USEHE	UKEHE..H	EXEHE	ESEHE
RHP	SCH	-	-	-	-
INA	-	PHEY	-	RHE	PHE
NSK	UCEH	-	-	-	-
ASAHI	UCECH	-	-	-	-
NTN	UCC..D1	ASC..	UKC..D1..H23..X*	UEL..D1W3**	AEL..D1
SNR	UCC	USC	UKC..H**	EXC**	ESC
NSK	UCC	-	UKC..+H23..	-	-
ASAHI	UCC	-	-	-	-
KOYO/JTEKT	UCC	-	UKC	-	-

\*\* Also available in 300 series / \*\*\* Also available in 300 series / \*\* Also available in X series (medium size)  
(1) For SP 4 casing versions available

## Specific bearings

Square, cylindrical and hexagonal bores



NTN	1AS... (1)	3SAS... (1)
NBCA	DC..	DS..
NSK-BSC	W2..PPB../GW2..PPB..	W2..PPB../GW2..PPB..
INA	GVK...-KTT-B/VK...KTT-B (A.H.)	-
Fafnir	W2..PPB../GW2..PPB..	W2..PPB../GW2..PPB..



NTN	1AH... (1)	2AH... (1)
NBCA	HPC	HPS
NSK-BSC	..KRR..	..KRRB..
INA	-	SK...KRR-B
Fafnir	..KRR..	..KRRB..



NTN	1AC... (1)	3AC... (1)
NBCA	DC2..	DS2..
NSK-BSC	W2..PPB../GW2..PPB..	W2..PPB../GW2..PPB..
Fafnir	W2..PPB../GW2..PPB..	W2..PPB../GW2..PPB..

(1) Other designs on request

## Insert bearings

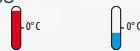
With cylindrical outer ring



NTN	UCS2..D1**	UCS2..D1N	UELS2..D1**	UELS2..D1N	AELS2..NW3	AELS2..D1NW3	ASS2..N	ASS2..D1N
SNR	-	CUC2..	-	CEX2..	CES2..	-	CUS2..	-
RHP	-	UR2..	ENR2..	-	13...EC	13...ECG	13...-	-
RHP	11...-	11...CG	11...DEC	11...DECG	-	-	-	-
KOYO/JTEKT	RB..	ER..	-	-	-	-	-	-
ASAHI	-	SER2..	-	-	KHR2..	-	-	-
INA	-	-	E..KRR	-	RAE..NPP NR	-	-	-

\*\* also available in 300 series

### Temperatures



NTN	..HT2	..CT1
SNR	..T20	..T04
INA	..FA164.1	..FA101T
SKF	..VA201	..VA201
ASAHI	..HR 5	..CR 2A
RHP	HLT	HLT
NSK	..HT2	..CT1

### Seals



NTN	..LLJ	..L4
SNR	..L3	..L4
INA	..KPP(B)-3	-
SKF	-	..2RF
ASAHI	-	-
RHP	T...-	FS
NSK	..LLJ	-
KOYO/JTEKT	..L3	-

## Self-aligning ball bearing units

Stainless steel



NTN	F-UCPM..	-
SNR	SUCP	SESP
ASAHI	MUCP	-
DODGE	P2B-SCEZ	-
NTN	F-UCFM../LP03	-
SNR	SUCFL	SESFL
ASAHI	MUCFL	-
DODGE	F2B-SCEZ	-
SNR	SUCPA	SESPA
ASAHI	MUCPA	-

SNR	SUCF	SESF
ASAHI	MUCF	-
DODGE	F4B-SCEZ	-
SNR	SUCT	SEST
ASAHI	MUCT	-

## Self-aligning ball bearing units

Thermoplastic



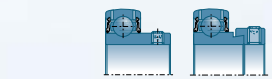
NTN	F-UCPR2..**
SNR	GNP
SKF	SYK..TH/GFA
INA	RASEY..TN VA
RHP	PNP..CR
NTN	F-UCFR2../LP03*
SNR	GSF
SKF	FYK..TH/GFA
INA	RCJY..TN VA
RHP	PSF..CR

NTN	F-UCFLR2../LP03**
SNR	GSFT
SKF	FYTBK..TH/GFA
INA	RCJTY..TN VA
RHP	PSFT..CR

\*: black  
\*\*: white or black

## Self-aligning ball bearing units

Pressed steel



NTN	ASPP	AELPP..W3
SNR	USPP	ESPP
INA	PBY	PB
SKF	P..RM	P..FM
RHP	-	LPB..EC
ASAHI	BPP..Z2	KHPP..Z2
KOYO/JTEKT	SBPP	SAPP..FM
SNR	USPFT	ESPFT
INA	RATRY	RATR
SKF	PFD..RM	PFD..FM
RHP	SLFT..A	SLFT..EC
ASAHI	BPFT	-

NTN	ASPFL	AELPFL
SNR	USPFL	ESPFL
INA	RATY	RAT
SKF	PFT..RM	PFT..FM
RHP	SLFL..A	SLFL..EC
NSK	UBPFL	ENPFL
ASAHI	BPFL	KHPFL
KOYO/JTEKT	SBPFL	SAPFL..FM
SNR	USPFE	ESPFE
INA	-	MSTU
NTN	ASPF	AELPF..W3
SNR	USPF	ESPF
INA	RAY	RA
SKF	PF..RM	PF..FM
RHP	SLFE..A	SLFE..EC
NSK	UBPF	ENPF
ASAHI	PBF	KHPF
KOYO/JTEKT	SBPF	SAPF..FM

## Covers



Materials		NTN	SNR	KOYO/JTEKT	ASAHI	RHP	INA	SKF
Steel cover (stainless steel)	Closed	SM-	SCC../SCCE..	D..	E	-	-	-
	Open	S-	SCO../SCOE..	C	C	-	-	-
Cast iron cover	Closed	CM-	-	FD	C	-	-	-
	Open	C-	-	FC	CE	-	-	-
Pressed steel cover	Closed	-	PCC..	-	-	.P	KASK	ECY..
	Open	-	PCO..	-	-	-	-	-
Thermoplastic cover	Closed	RM	CF..	-	-	-	-	ECL..
	Open	R	CV..	-	-	-	-	ECYB..

Covers to be used for ball bearing units made of  
A: cast iron-stainless steel/B: cast iron/ C: cast iron/ D: thermoplastic

## Insert bearings

200 series      300 series      X series

	200 series	300 series	X series
NTN	UC2..D1	UC3..D1	UCX..D1
SNR	UC2..G2	UC3..G2	-
INA	GYE..KRRB / GYE..KRRB-FA107	-	-
SKF	YAR2..2F	-	-
RHP	10..G	-	10...G
NSK	UC2...D1	UC3...D1	UCX...D1
ASAHI	UC2	UC3	UCX
KOYO/JTEKT	UC2	UC3	UCX
NTN	UEL2..D1W3	UEL3..D1W3	-
SNR	EX2..G2	EX3..G2	-
INA	GE..KRRB	-	-
SKF	YEL2..-2F	-	-
RHP	10..DECG	-	-
NSK	EW2	-	-
ASAHI	UG2..+ER	-	-
KOYO/JTEKT	NA2	-	-
NTN	UK2..D1, H23..X	UK3..D1, H23..X	UKX.., H23..X
SNR	UK2..G2H	UK3..G2H	-
SKF	YSA2..-2FK, H23	-	-
RHP	10..KG, H3	-	-
NSK	UK2..+H23	UK3..H23	UKX..H23
ASAHI	UK2..+H23	UK3	UKX
KOYO/JTEKT	UK2.., H23..X	UK3.., H23..X	UKX.., H23X
NTN	AS2	-	-
SNR	US2..G2	-	-
INA	GAY..NPPB	-	-
SKF	YAT2	-	-
RHP	12..G	-	-
NSK	AS2	-	-
ASAHI	B	-	-
KOYO/JTEKT	SB2	-	-
NTN	AEL2..W3D1	-	-
SNR	ES2..G2	-	-
INA	GRAE..NPPB	-	-
SKF	YET2	-	-
RHP	12..ECG	-	-
NSK	AEL2..W3D1	-	-
ASAHI	KH2..AE	-	-
KOYO/JTEKT	SA2	-	-
NTN	F-UC2..D1	-	-
SNR	SUC2	-	-
DODGE	SCEZ	-	-
ASAHI	MUC2	-	-
KOYO/JTEKT	UC2..S6	-	-
NTN	-	-	-
SNR	SES2	-	-
ASAHI	-	-	-
DODGE	-	-	-
NTN	F-UC2..D1	-	-
SNR	MUC2..FD	-	-
SKF	YAR2..-2RF/HV/GFA	-	-
INA	GYE..KRRB VA	-	-
RHP	J10...-GCR	-	-
NTN	CS2..LLU	-	-
SNR	62..SEE	-	-
INA	2..NPPB	-	-
SKF	17262..2RS1	-	-
RHP	17262..2RS1	-	-
NSK	CS2..LLU	-	-
KOYO/JTEKT	CB2	-	-
FAG	762..2RSR	-	-

Rubber bearing      Insert bearing      Rubber ring

	Rubber bearing insert ring	Insert bearing	Rubber ring
SNR	ESR2..B	ES2..SRS	SRBB2
INA	RABR-B	RAE..NPPB	RABR
SKF	-	YET	RIS
NSK	-	AEL	T2066
SNR	CESR2..A	CES2..SRS	SRCA2
INA	RCSM-B	RAE..NPP	RCSM

▲ Adapted to the stainless steel body

✗ Adapted to the pressed steel body

■ Adapted to the cast iron body

● Adapted to the thermoplastic body

The table provides information on comparable forms. It does not guarantee the exact interchangeability from a dimensional point of view.



# Machined-ring needle roller bearings



	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	NK (Fw < 14 mm)	NK	TAF	NK	NB	NQ	NK	-	
	NK...R	-	-	-	-	-	-	-	
	NK...T2	NK...TV	-	NK...TN	-	-	NK...TN	-	
	RNA48	RNA48	RNA48	RNA48	-	-	RNA48	-	
	RNA49 (Fw < 14 mm)	RNA49	RNA49	RNA49	RNA49	RNA49...R	RNA49	-	
	RNA49...R	-	-	-	-	-	-	-	
	RNA49...L	RNA49...RSR	RNA49...U	RNA49...RS	-	-	RNA49...RS	-	
	RNA49...LL	RNA49...2RSR	RNA49...UU	RNA49...2RS	-	-	RNA49...2RS	-	
	RNA59	-	-	-	-	RNA59	-	-	
	RNA69 (Fw < 14 mm)	RNA69 (Fw<40mm)	RNA69	RNA69	-	RNA69	RNA69	-	
	RNA69...R	RNA69...ZW	(Fw <= 35 mm: 1 row) (Fw > 35 mm: 2 rows)	(Fw < 40 mm: 1 row) (Fw >= 40 mm: 2 rows)	-	-	-	-	
	NKS	NKS	TR	NKS	-	NQS	NKS	-	
	RPNA	RPNA	-	-	-	-	RPNA	-	
	NK+1R (Fw < 14 mm)	NKI	TAFI	NKJ	NBI	NQI	NKI	-	
	NK...R+1R	-	-	-	-	-	-	-	
	NK...T2+1R	NKI...TV	-	NKJ...TN	-	-	NKI...TN	-	
	NA48	NA48	NA48	NA48	-	-	NA48	-	
	NA49 (d < 10mm)	NA49	NA49	NA49	-	NA49, NA49...R	NA49	-	
	NA49...R	-	-	-	-	-	-	-	
	NA49...L	NA49...RSR	NA49...U	-	-	-	NA49...RS	-	
	NA49...LL	NA49...2RSR	NA49...UU	-	-	NA49...UU	NA49...2RS	-	
	NA59	-	-	-	-	NA59	-	-	
	NA69 (Fw < 10mm)	NA69 (Fw<32mm)	NA69	NA69	-	NA69	NA69	-	
	NA69...R	NA69...ZW	(Fw <= 30 mm: 1 row) (Fw > 30 mm: 2 rows)	(Fw < 32 mm: 1 row) (Fw >= 32 mm: 2 rows)	-	-	-	-	
	NKS+1R	NKIS	TRI	NKJS	-	NQIS	NKIS	-	
	PNA	PNA	-	-	-	-	-	-	
	1R	IR	IRT	JR, JRZ	IM...P	IRM	IR	-	
	1R...D	IR...IS1	-	JR...JS1	-	-	IR...IS1	-	
	RNAO	RNAO	RNAF	RNAO	-	-	RNAO	-	
	RNAO...T2	RNAO...TV	RNAF...N	RNAO...TN	-	-	RNAO...TN	-	
	RNAO...ZW	RNAO...ZW-ASR1	RNAFW	-	-	-	-	-	
	NAO	NAO	NAF	NAO	-	-	NAO	-	
	NAO...T2	NAO...TV	-	NAO...TN	-	-	NAO...TN	-	
	NAO...ZW	NAO...ZW-ASR1	NAFW	-	-	-	-	-	
	inch	MR	NCS	BR	HJ	-	-	-	MR
		MR+MI	NCS+PI	BRI	HJ+IR	-	-	-	MR+MI
		MI	PI	IRB	IR	-	-	-	MI

# Combined bearings



	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL
mm	NKX	NKX	NAX	-	-	-	NKX	-
	NKX...Z	NKX...Z	NAX...Z	-	-	-	NKX...Z	-
	NKX + 1R	NKX + IR	NAXI	-	-	-	-	-
	NKX...Z + 1R	NKX...Z + IR	NAXI...Z	-	-	-	-	-
	NKIA59	NKIA59	NATA59	-	-	-	NKIA59	-
	NKIB59...R	NKIB59	NATB59	-	-	-	NKIB59	-
	NKXR	NKXR	-	-	-	-	-	-
	NKXR...Z	NKXR...Z	NBX...Z	NAXR...Z	-	-	NKXR...Z	-
	NKXR + 1R	NKXR + IR	-	-	-	-	-	-
	NKXR...Z + 1R	NKXR...Z + IR	NBXI...Z	-	-	-	-	-
	AXN	-	-	-	AXNB	-	-	-
	ARN	ZARN	-	-	ARNB	-	-	-

# Cage and roller bearings



	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	K	K	KT	K, K...F	B	R, RS	K	-	
	K...T2	K...TV	KTN	K...TN	-	RFN	K...TN	-	
	KMJ	-	-	-	-	V, VS	-	-	
	PK	KZK	KT...EG	K...BE, WK...BE	-	VS...P	-	-	
	KBK	KBK	KTV...EG	K...SE	-	R...P, UR...P	-	-	
	GP, GK	-	-	-	MB	RFNU	-	-	
	K...ZW	K...ZW	KTW	K...ZW	BB	WR, WRS	K...ZW	-	
	inch	PCJ	C	-	WJ, WJC	-	-	-	-

# Drawn cup needle roller bearings



	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	HK, HK...F(M)	HK	TLA...Z	HK	HK, (DB)	BTM	HK	-	
	HK...T2	HK...TV	-	-	-	BFNM	HK...TN	-	
	HK...L	HK...RS	-	HK...RS	HK...E, (DB...E)	BTM...U	HK...RS	-	
	HK...LL	HK...2RS	TLA...UU	HK...2RS	-	BTM...UU	HK...2RS	-	
	HK...ZWD	HK...ZW	TLAW...Z	-	-	-	HK...ZW	-	
	HK...D	HK...AS1	-	HK...AS1	-	BTM...OH	-	-	
	HMK	-	TA...Z	-	-	BHTM	-	-	
	HMK...L	-	-	-	-	BHTM...U	-	-	
	HMK...LL	-	-	-	-	BHTM...UU	-	-	
	HMK...ZWD	-	TAW...Z	-	-	-	-	-	
	BK	BK	TLAM	BK	BK, (DBF)	MKM	BK	-	
	BK...T2	BK...TV	-	-	-	-	BK...TN	-	
	BK...L	BK...RS	-	BK...RS	-	MKM...U	BK...RS	-	
	BK...ZWD	BK...ZW	TLAMW	-	-	-	-	-	
	inch	DCL, DCL...T2	SCE, SCE...TV	BA...Z	J, JH	-	BT	-	-
		DCL...L	SCE...P	-	JT	-	-	-	-
		DCL...LL	SCE...PP	-	JTT	-	-	-	-
		DCH	SCH	BHA...Z	JH	-	BHT	-	-



## Other item - Components

	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL
mm	F	NRB	F	NRO.B	AIG...BP	LF	RN...BF	-
	A	-	A	NRO	AIG...BR	LA	RN...B	-
	WR	WR	WR	-	-	-	SW	-
	BR	BR	AR	-	-	-	BR	-
	G	G	OS	-	ET	-	G	-
	GD	SD	DS	-	-	-	SD	-



## Cam and roller followers

	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	KR	KR (<22mm)	CF...R	KR	-	KM...R	KR	MCFR	
	KR...H	KR...SK (<22mm) KR (>= 22 mm)	CF...BR	KR...SK	-	-	KR...SK	MCFR...B	
	KRT	-	CF-RU1	-	-	-	-	-	
	KR...X	KR...X (<22mm)	CF	KR...DZ	-	KM	KR...X	MCFR...X	
	KR...XH	KR...SKX (<22mm) KR...X (>= 22 mm)	CF...B	-	-	-	-	MCFR...BX	
	KRT...X	-	-	-	-	-	-	-	
	KR...LL	KR...PP (<22mm)	CF...UUR	KR...2RS	-	KM...UUR	KR...PP	MCFR...S	
	KR...LLH	KR...PPSK (<22mm) KR...PP (>= 22 mm)	CF...BUUR	-	-	-	KR...PPSK	MCFR...SB	
	KRT...LL	-	-	-	-	-	-	-	
	KR...XLL	KR...XPP (<22mm)	CF...UU	KR...DZ.2RS	-	KM...UU	KR...PPX	MCFR...SX	
	KR...XLLH	KR...XPPSK (<22mm) KR...XPP (>= 22 mm)	CF...BUU	-	-	-	-	MCFR...SBX	
	KRT...XLL	-	-	-	-	-	-	-	
	KRV...H	KRV (>= 22 mm)	CF...VBR	-	-	-	KRV...SK	MCF...B	
	KRVT	-	-	-	-	-	-	-	
	KRV...XH	KRV...SKX (<22 mm) KRV...X (>=22mm)	CF...VB	-	-	-	-	MCF...BX	
	KRVT...X	-	-	-	-	-	-	-	
	KRV	KRV (<22mm)	CF...VR	KRV	GC	CM...R	KRV	MCF	
	KRV...X	KRV...X (<22mm)	CF...V	KRV...DZ	GCL	CM	KRV...X	MCF...X	
	KRV...LL	KRV...PP (<22mm)	CF...VUUR	KRV...2RS	GC...EE	CM...UUR	KRV...PP	MCF...S	
	KRV...LLH	KRV...PPSK (<22 mm) KRV...PP (>=22mm)	CF...VBUUR	-	-	-	KRV...PPSK	MCF...SB	
	KRVT...LL	-	-	-	-	-	-	-	
	KRV...XLL	KRV...XPP (<22mm)	CF...VUU	KRV...DZ.2RS	GCL...EE	CM...UU	KRV...PPX	MCF...SX	
	KRV...XLLH	KRV...XPPSK (<22 mm) KRV...XPP (>=22mm)	CF...VBUU	-	-	-	-	MCF...SBX	
	KRVT...XLL	-	-	-	-	-	-	-	
	KRMV...XH	-	CF...V	-	GC	-	-	-	
	NUKR	-	NUCF...R	NUKR	-	DKM...R	NUKR	MCFD	
	NUKR...H	NUKR	-	NUKR...2.SK	-	-	-	-	
	NUKR...X	-	-	NUKR...DZ	-	-	-	-	
	NUKR...XH	NUKR...X	-	-	-	-	-	-	
	NUKRT	-	-	-	-	-	-	-	
	NUKRT...X	-	-	-	-	-	-	-	
	KRM...XH	-	CFS	-	-	-	-	-	
	KRX	-	CF-SFU	-	-	-	-	-	
	KRU	-	CFES...R	-	-	-	-	-	
	KRU...X	-	CFES	-	-	-	-	-	
	KRU...LL	-	CFES...UUR	-	-	-	-	-	
	KRU...XLL	-	CFES...UU	-	-	-	-	-	
	KRVU	-	CFES...VR	-	-	-	-	-	
	KRVU...X	-	CFES...V	-	-	-	-	-	
	KRVU...LL	-	CFES...VUUR	-	-	-	-	-	
	KRVU...XLL	-	CFES...VUU	-	-	-	-	-	
	NUKRU	-	-	-	-	-	-	-	
	NUKRU...X	-	-	-	-	-	-	-	
	Inch	CR	-	CR...R	-	-	-	-	-
		CR...X	-	CR	-	-	-	-	-
		CR...H	-	CR...BR	-	-	-	-	-
		CR...XH	-	CR...B	-	-	-	-	-
		CR...LL	-	CR...UUR	-	-	-	-	-
		CR...XLL	-	CR...UU	-	-	-	-	-
		CR...LLH	-	CR...BUUR	-	-	-	-	-
CR...XLLH		-	CR...BUU	-	-	-	-	-	
CRV		CF...Y	CR...VR	CRV	-	-	-	CCF	
CRV...X		CF	CR...V	CR	-	CR	-	CF	
CRV...H		-	CR...VBR	CRVB	-	-	-	CCF...B	
CRV...XH		-	CR...VB	CRV	-	-	-	CF...B	
CRV...LL		CF...YPP	CR...VUUR	CRVS	-	-	-	CCF...S	
CRV...XLL		CF...PP	CR...VUU	CRS	-	-	-	CF...S	
CRV...LLH		-	CR...VBUUR	CRVSB	-	-	-	CCF...SB	
CRV...XLLH	-	CR...VBUU	CRVSB	-	-	-	CF...SB		



## Thrust roller bearings

	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	AXK11	AXK	NTB	AXK	-	TP	AXK	-	
	K811	K811...M	AZK	K811...LPB	-	-	K811...M	-	
	K811...T2	K811...TV	-	K811...TVP	-	-	K811...TN	-	
	K812	K812...M	AZK	K812...LPB	-	-	K812...M	-	
	K812...T2	K812...TV	-	K812...TVP	-	-	K812...TN	-	
	K874	K874	-	-	-	-	-	-	
	K893	K893...M	-	-	-	-	K893...M	-	
	AS11	AS	AS	AS	-	W	AS	-	
	WS811	WS811	WS	WS811	-	-	WS811	-	
	WS812	WS812	WS	WS812	-	-	WS812	-	
	WS874	WS874	-	-	-	-	-	-	
	WS893	WS893	-	-	-	-	WS893	-	
	GS811	GS811	GS	GS811	-	-	GS811	-	
	GS812	GS812	GS	GS812	-	-	GS812	-	
	GS874	GS874	-	-	-	-	-	-	
	GS893	GS893	-	-	-	-	GS893	-	
	811	811...M	AZ	811...LPB	-	-	811...M	-	
	811...T2	811...TV	-	811...TVP	-	-	811...TN	-	
	812	812...M	AZ	812...LPB	-	-	812...M	-	
	812...T2	812...TV	-	812...TVP	-	-	812...TN	-	
	874	874	-	-	-	-	-	-	
	893	893...M	-	-	-	-	893...M	-	
	inch	NTC	TC	-	NTA	-	-	-	-
		NWA	TWA	-	TRA	-	-	-	-
		NWB	TWB	-	TRB	-	-	-	-
		NWC	TWC	-	TRC	-	-	-	-
NWD		TWD	-	TRD	-	-	-	-	



## Roller followers

	NTN	INA	IKO	TORRINGTON	NADELLA	KOYO	SKF	Mc GILL	
mm	RNAB2	RSTO	RNAST...R	RSTO	-	-	RSTO	-	
	RNAB2...X	RSTO...X	RNAST	RSTO...DZ	-	-	RSTO...X	-	
	NAB2	STO	NAST...R	STO	-	-	STO	-	
	NAB2...X	STO...X	NAST	STO...DZ	-	-	STO...X	-	
	NABR	-	NAST...ZZR	-	-	CZM...R	NAST...ZZ	-	
	RNA22...LL	RNA22...2RSR	-	RNA22...2RS	-	-	RNA22...2RS	-	
	RNA22...XLL	RNA22...2RSRX	-	RNA22...2RS.DZ	-	-	RNA22...2RSX	-	
	NA22...LL	NA22...2RSR	-	NA22...2RS	-	-	NA22...2RS	-	
	NA22...XLL	NA22...2RSRX	-	NA22...2RS.DZ	-	-	NA22...2RSX	-	
	NATR	NATR	NART...R	NATR	-	CXM...R	NATR	MCYRR	
	NATR...X	NATR...X	NART	NATR...DZ	-	CXM	NATR...X	MCYRR...X	
	NATR...LL	NATR...PP	-	-	-	CXM...UUR	NATR...PP	MCYRR...S	
	NATR...XLL	NATR...XPP	-	-	-	CXM...UU	NATR...PPX	MCYRR...SX	
	NATV	NATV	NART...VR	-	FG	CYM...R	NATV	MCYR	
	NATV...X	NATV...X	-	-	FGL	CYM	NATV...X	MCYR...X	
	NATV...LL	NATV...PP	NART...VUUR	-	FG...EE	CYM...UUR	NATV...PP	MCYR...S	
	NATV...XLL	NATV...PPX	-	-	FGL...EE	CYM...UU	NATV...XPP	MCYR...SX	
	NUTR	NUTR	NURT...R	NUTR	FGU	DCZM...R	NUTR	MCYRD	
	NUTR...X	NUTR...X	NURT	NUTR...DZ	FGUL	-	NUTR...X	-	
	NUTW	-	-	-	-	-	-	-	
	NUTW...X	-	-	-	-	-	-	-	
	inch	NACV	RF...Y	CRY...VR	-	-	-	-	CCYR
		NACV...X	RF	CRY...V	YCR	-	-	-	CYR
		NACV...LL	RF...YPP	CRY...VUUR	-	-	-	-	CCYR...S
		NACV...XLL	RF...PP	CRY...VUU	YCRS	-	-	-	CYR...S

## NTN and SNR prefixes

Brand	Prefixes	Description
NTN	AC	Bearings with anti creep
SNR	CH	Hybrid bearing, steel rings and ceramic balls
NTN	E	Bearings in case hardened steel
NTN	EA	Bearings in nitrided case hardened steel
NTN	EC	Bearings with thermal expansion compensation
NTN	EC1	Bearings with thermal expansion compensation, high temperature version
NTN	ECO	Longer life tapered roller bearings
NTN	ET	Tapered roller bearings in strengthened case hardened steel
NTN	ETA	Tapered roller bearings in nitrided strengthened case hardened steel
NTN	F	Bearings in stainless steel
NTN	FL	Bearings with flange on outer ring OD
NTN	HL	Surface treatment
NTN	LH	Longer life double row spherical roller bearings
NTN	M	Bearings with surface treatment
SNR	ML	High precision angular contact bearings for high speeds
SNR	MLCH	High precision angular contact bearings with ceramic balls for high speeds
SNR	MLE	High precision angular contact bearings for high speeds, double sided non-contact seal
SNR	MLECH	High precision angular contact bearings with ceramic balls for high speeds, double sided non-contact seal
NTN	MX-	Anticorrosion treatment
NTN	N	Special material composition
NTN	TA	Bearings in nitrided steel
NTN	TM	Bearings in specially treated steel
NTN	TS	Bearings for high operating temperatures
NTN	TS2	Stabilisation treatment for temperatures over 160°C
NTN	TS3	Stabilisation treatment for temperatures over 200°C
NTN	TS4	Stabilisation treatment for temperatures over 250°C
NTN	4T	Tapered roller bearings in case hardened steel
NTN	5S	Bearings with ceramic rolling elements

# NTN and SNR suffixes

Brand	Suffixes	Description
NTN	A	Modification of the internal design
SNR	A	Bearings with a single row of radial contact balls with higher capacity
SNR	A	Bearings with a single row of angular contact balls, polyamide cage
SNR	A	Bearings with a double row of radial contact balls, without slot, polyamide cage
SNR	A	Bearings with a double row of angular contact balls, without slot, polyamide cage
SNR	A	Seal V-Ring version A for SNC Ball bearing unit (optional with FS seal)
NTN	AD	Contact angle 25°
SNR	A1	Removable
NTN	B	Standard production of double row spherical roller bearings
NTN	B	Contact angle 40° for angular contact ball bearings
SNR	B	32° for double row angular contact ball bearings
SNR	B	40° for single row angular contact ball bearings
SNR	B	20° for tapered roller bearings
SNR	BG	Single row of angular contact balls bearings for non-preload universal pairing
NTN	B3, B5, B7	Precision in compliance with ABEC 3, 5 or 7 standards
NTN	C	Contact angle 15° for angular contact ball bearings
NTN	C	Increased contact angle for tapered roller bearings
NTN	C9, C0, C1	Special clearance, high precision
NTN / SNR	C2	Internal clearance smaller than normal clearance
NTN / SNR	C3	Internal clearance larger than normal clearance
NTN / SNR	C4	Internal clearance larger than C3
NTN / SNR	C5	Internal clearance larger than C4
NTN	CMxx	Average clearance in microns for bearings with balls of between diameter 10 and diameter 50 mm
NTN	CM09	Special internal clearance, medium value between 5 and 13 µm
NTN	CM13	Special internal clearance, medium value between 9 and 17 µm
NTN	CM17	Special internal clearance, medium value between 13 and 21 µm
NTN	CM21	Special internal clearance, medium value between 17 and 25 µm
NTN	CM25	Special internal clearance, medium value between 21 and 29 µm
NTN	CM30	Special internal clearance, medium value between 25 and 35 µm
NTN	CM35	Special internal clearance, medium value between 30 and 40 µm
NTN	CM40	Special internal clearance, medium value between 35 and 45 µm
NTN	CM45	Special internal clearance, medium value between 40 and 50 µm
NTN	CM50	Special internal clearance, medium value between 45 and 55 µm
NTN	CSxx	Average internal clearance in microns (1 micron = 1 µm = 0.001 mm)
NTN	CT1	Ball bearing unit for low temperatures -60°C
NTN	CxNA	Reduced clearance ranges (but identical average clearance), paired rings
NTN	CNL, CNS	Internal clearances for miniature precision bearings
SNR	C/C12	Internal design issue for tapered roller bearings
SNR	CC	Stainless steel closed protection plug for self-aligning ball bearing units
SNR	CO	Stainless steel open protection plug for self-aligning ball bearing units
NTN	D	Contact angle increased for tapered roller bearings
NTN	D	Lubrication holes (without grooves)
SNR	D	High precision lubricated angular contact ball bearings
NTN	DB	O layout
NTN	DF	X layout
SNR	D**	SNR greases
SNR	DS	Double lippled seal for SNC Ball bearing unit

Brand	Suffixes	Description
NTN	DT	Tandem layout
NTN	D0	Absence of groove and grease holes (for standard)
NTN	D1	Groove and grease holes in the outer ring
NTN	D2	D1 + anti-rotation ball on external diameter for Insert bearings
NTN / SNR	E	Increased capacity cylindrical roller bearings and double row spherical roller bearings
NTN / SNR	EA	Increased capacity double row spherical roller bearings with pressed steel cage
NTN / SNR	EM	Increased capacity double row spherical roller bearings with solid brass cage
SNR	EE/2RS	Double side contact seal
SNR	EC	End cover for SNC ball bearing unit
NTN	En	Special roller crowning
NTN	F	Solid Plummer block without holes. Ex. SN520F
NTN	F1	Solid Plummer block with holes. Ex. UCP320F1
NTN	F2	Ball bearing unit without attachment holes. Ex. UCP322F2
SNR	FD	Grease for food contact
SNR	FS	Felt seal for SNC ball bearing unit
SNR	FT150	Sealed bearings for high temperatures up to +150° C
SNR	FT150ZZ	Shielded bearings for high temperatures up to +150° C
NTN	F1	Solid steel cage
NTN	F3	Turned solid steel cage
SNR	F600	High temperature bearings for furnace kiln cars
SNR	F604	High temperature bearings for furnace kiln cars greased and shielded
SNR	F800	Increased load capacity double row spherical roller bearing for vibrating applications
NTN	-G	Inner ring + rollers (+cage) for tapered roller bearings (cone only)
NTN	#G	Outer ring only for tapered roller bearings (cup only)
NTN	G	Universal production
SNR	G	Removal sleeves – modified thread – compliant with ISO 2982-1
NTN	G	Fixed bearing unit that does not require a retaining ring. Ex. SD3130G
NTN	G(n)	Ball bearing unit with special attachment holes (n=1,2,3...). Ex. UCHB204G6
NTN	GD2	2 universal bearings
NTN	GL GN GM GH	Preloads (Light, Normal, Medium, Heavy)
NTN	G1	Solid brass cage
SNR	G2	Re-greasing system for Insert bearings
SNR	G14	Polyamide cage
SNR	G15	Polyamide cage strengthened with glass fibre
SNR	H	Clamping sleeves with oil injection device (ex AH24T48H)
NTN	HT	Special internal design to withstand axial loads on cylindrical roller bearings
NTN	HT2	Ball bearing insert for high temperatures +200° C
SNR	HT200	Sealed bearings for high temperatures up to +200° C
SNR	HT200ZZ	Protected bearings for high temperatures up to +200° C
SNR	HVZZ	Protected bearings for high speeds up to 700 000 N.Dm
NTN	J	Pressed steel cage
NTN / SNR	K	Tapered bore 1/12
NTN / SNR	K30	Tapered bore 1/30
NTN	-L	NUP without end plate
NTN	#L	End plate for NUP
NTN	L1	Plummer block with greaser and drain hole. Ex. SN515L1Z
NTN	L5	Plummer block with greaser hole and drain hole
SNR	LA	Labyrinth seal for SNC ball bearing unit
NTN	LLJ	Bearing housing with low torque three lipped seals
NTN	LLS	Bearing housing with high torque three lipped seals
SNR	LT	Sealed bearings for low temperature down to -40° C
SNR	LTZZ	Protected bearings for low temperature down to -60° C

Brand	Suffixes	Description
NTN	LU, LLU	Nitrile friction seal (-20 to +120°C)
NTN	LUA, LLUA	Polyacrylic friction seal (-15 to +150°C)
NTN	LUA1, LLUA1	Fluorinated elastomer friction seal (-30 to +230°C)
NTN	LUA2, LLUA2	Silicone friction seal (-60 to +200°C)
NTN	LUA4, LLUA4	Nitrile high temperature friction seal (+20 to +140°C)
NTN	LUAX12, LLUAX12	Polyacrylic high temperature friction seal (-15 to +175°C)
NTN	LB, LLB	Nitrile non-friction seal (-25 to +120°C)
NTN	LBA, LLBA	Polyacrylic non-friction seal (-10 to +150°C)
NTN	LBA1, LLBA1	Fluorinated elastomer non-friction seal (-30 to +200°C)
NTN	LBA2, LLBA2	Silicone non-friction seal (-100 to +200°C)
NTN	LH, LLH	Low torque nitrile friction seal (-25 to +120°C)
NTN	LHA, LLHA	Low torque Polyacrylic friction seal (-10 to +150°C)
NTN	LHA1, LLHA1	Low torque fluorinated elastomer friction seal (-30 to +200°C)
NTN	LHA2, LLHA2	Low torque Silicone friction seal (-100 to +200°C)
NTN	LHA4, LLHA4	Low torque nitrile high temperature friction seal (-20 to +130°C)
NTN	LHAX12, LLHAX12	Low torque Polyacrylic high temperature friction seal (-10 to +150°C)
NTN	LP03	Standard solid grease (-20 to +80°C)
NTN	LP05	High temperature solid grease (-20 to +120°C)
NTN	LP06	Food compatible solid grease -10 to +100°C (80°C continuous)
NTN	LP08	High temperature Solid grease for needle rollers (-20 to +120°C)
NTN	LX	Special sealing system
NTN	L1	Riveted solid brass cage
SNR	L3	Three lipped seal triple for insert bearings
NTN	L417	Grease: Kyodo Yushi/E5 (-30 to +180°C)
NTN	L453	Grease: Kluber/Asonic HQ72-102 (-40 to +180°C)
NTN	L627	Grease: Exxon Polyrex EM (-25 to +170°C)
SNR	M	Solid cage, centred on the rolling elements
NTN	-N	Outer ring + rollers (+cage) for cylindrical roller bearings
NTN	#N	Inner ring only for cylindrical roller bearings
NTN / SNR	N	Groove for retaining ring on the outer ring
NTN	N	Ball bearing unit in steel. Ex. P315N
NTN	N1	Ball bearing unit in GS ductile cast iron. Ex. P315N1
NTN / SNR	NR	Groove and retaining ring on the outer ring
NTN	NRS	NR of opposite side to standard
NTN / SNR	N2	Retaining slot
NTN	PM	Special bearing precision for electric motors
NTN / SNR	P42	Precision class JIS 4 for the dimensions and JIS 2 for the run out in rotation
NTN	P63E	Precision P6 and clearance C3/DIN standard for electric motors
NTN / SNR	P6	Precision class JIS 6
NTN / SNR	P5	Precision class JIS 5
NTN / SNR	P4	Precision class JIS 4/BAS 4 for tapered rollers
NTN	PK	Precision class K for tapered rollers, J series
NTN / SNR	PXn	Special precision with issue level
NTN	QD	Fill with grease: from 5 to 10%
NTN	QE	Fill with grease: from 7.5 to 12.5%
NTN	QF	Fill with grease: from 10 to 15%
NTN	QG	Fill with grease: from 12.5 to 17.5%
NTN	QH	Fill with grease: from 15 to 20%
NTN	QJ	Fill with grease: from 17.5 to 22.5%
NTN	QK	Fill with grease: from 20 to 25%
NTN	QL	Fill with grease: from 22.5 to 27.5%
NTN	QM	Fill with grease: from 25 to 30%
NTN	QP	Fill with grease: from 27.5 to 32.5%

Brand	Suffixes	Description
NTN	QQ	Fill with grease: from 30 to 40%
NTN	QR	Fill with grease: from 35 to 45%
NTN	QS	Fill with grease: from 40 to 50%
NTN	QT	Fill with grease: plus from 50%
SNR	S	Spherical external diameter
NTN	Snn	Specific check (S20: railway/S30: wind turbine) (S10 Traction motor), (S80 Aerospace)
NTN	ST	Modified internal design (low torque)
NTN	STVn	Modified internal design (n = 1, 2, 3...) (low torque)
SNR	SV	Complete V-Ring seal for SNC ball bearing unit
SNR	TA	Taconite seal for SNC ball bearing unit
NTN	TKBAnnnn	Special spacer. Nnnn: order number
NTN	TKZnnnn	Special spacer. Nnnn: order number
NTN	TKBNnnnn	Special spacer. Nnnn: order number
NTN	T1	Phenolic fabric cage
NTN	T2	Plastic, nylon or Teflon cage
NTN	T2X	Special Polyamide cage for sealed ball bearings
NTN	T2X	Polyamide cage 4.6 for cylindrical roller bearings
NTN	T6	Peek cage for NN bearings
SNR	T04	Insert bearings for operating temperatures up to - 40° C
SNR	T20	Insert bearings for operating temperatures up to +200°C
NTN	U	Through hardened version for tapered roller bearings
NTN	UA	Double row spherical roller bearings for vibrating applications
NTN	UP	Ultra precision
SNR	V	Internal design for double row spherical roller bearings
NTN	V	Full complement cylindrical rollers bearings without cage
NTN	Vn	Specific: groups the other suffixes (n = 1, 2, 3...)
NTN	VS1, VS2	Special tolerance for screen bearings
NTN	W3	Bearing housing with standard type set screw
NTN	W5	Bearing housing with cap head type set screw alternative to W3
NTN	W6	Bearing housing with special type set screw alternative to W5
SNR	W33	Groove and grease holes on outer ring
NTN	Xn	Special chamfer n:1,2...
SNR	Y	Pressed brass cage for thin section ball bearings
NTN	Z	Plummer block with Z type rubber seal
NTN / SNR	Z	Single sided protection flange
NTN	Z2	Plummer block with felt seal
NTN / SNR	ZZ	Double sided protection flange
NTN	ZA, ZZA	Removable shield(s)
NTN	Z1, ZZ1	Stainless steel shield(s)
NTN	2AS	Grease: Shell/Alvania Grease S2 (-25 to +120°C)
NTN	3AS	Grease: Shell/Alvania Grease S3 (-25 to +135°C)
NTN	-3, -2, -0	Precisions in compliance with the AFBMA standards for tapered rollers in inches
NTN	5C	Grease: Chevron/SRI-2 (-29 to +177°C)
NTN	5K	Grease: Kyodo Yushi/Multemp SRL (-40 to +150°C)
NTN	5S	Grease: Shell/Aero Shell Grease 7 (-73 +149°C)
NTN	6K	Grease: Kluber/Isoflex Super LDS 18 (-60 to +130°C)



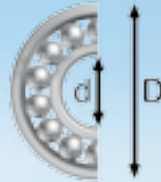


User guide

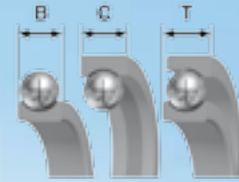
Graphic part numbers from product lists



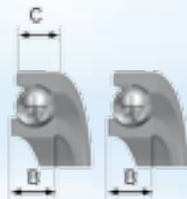
Part numbers of bearings



Bore: d  
External diameter: D  
Dimensions in mm



Widths:  
Inner ring: B  
Outer ring: C  
Total: T  
Dimensions in mm



Widths:  
Inner ring: B  
Outer ring: C  
Dimensions in mm



Total mass in kg



Identification  
The figure N° refers to the diagrams on the front pages.

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