

GMN
BEARING USA

Koyo

Cylindrical Roller Bearing Catalog



Introduction

At GMN Bearing USA, we're here to help you get the information you need fast, no matter where you are in your knowledge journey or engineering project.

This Cylindrical Roller Bearing Catalog is designed to provide a general understanding of cylindrical roller bearings, tolerance, and internal clearance guidelines as well as our range of product offerings.

GMN Bearing USA engineers are happy to answer any questions you may have and better learn how we can support your bearing needs!

Talk to a technical expert at **800-323-5725** or visit our website at www.gmnbt.com.



TABLE OF CONTENTS

Cylindrical Roller Bearings	3
Tolerance	4
Radial Internal Clearance	5
NN3000(K) series	6
NNU4900(K) series	7
N1000(K) series	8
3NCN1000(K) series Ceramic bearings	9

Cylindrical Roller Bearings

Cylindrical roller bearings have a high radial load capacity due to the line contact of the many rollers within the bearing that allow the surface load to spread over a larger area. High RPM is also possible because of optimized design and high precision.

Cylindrical roller bearings can have a straight or tapered bore. The internal clearance is specified at time of purchase, but can also be customized at install with both the shaft (radial press) and axial clamping fits.

Types and Features of Cylindrical Roller Bearings

Single and double row cylindrical roller bearings are very common. Most have separable inner and outer races to ease install, but this is not required. (see **Fig. 1** below).

1) DOUBLE ROW CYLINDRICAL ROLLER BEARINGS

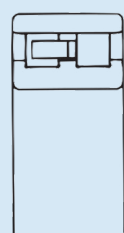
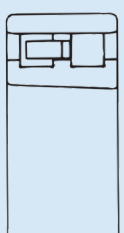
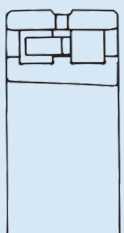
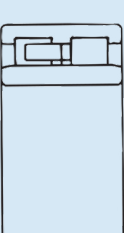
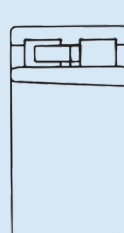
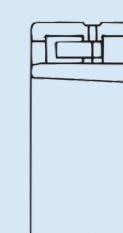
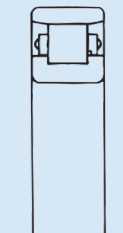
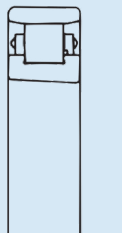
Double row cylindrical roller bearings are generally classified with part numbers starting with NN30xx or NNU49xx.

It is very common for these bearings to have OD lubrication holes for direct lubrication into the raceway(s).

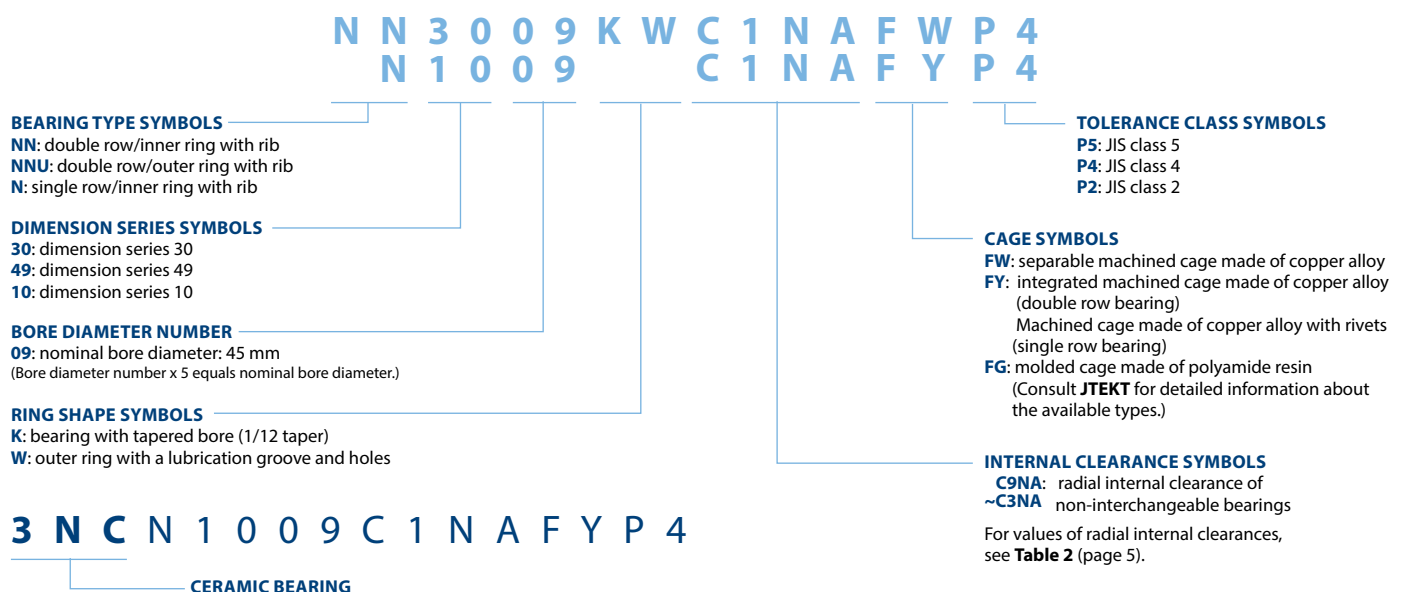
2) SINGLE ROW CYLINDRICAL ROLLER BEARINGS

Single row cylindrical roller bearings are generally classified with part numbers starting with N10xx.

Bore (ID) and outside diameters are generally shared between single and double row cylindrical roller bearings, but custom sizes are available.

	Cylindrical bore	Tapered bore	With a lubrication groove and holes	Cylindrical bore	Tapered bore	With a lubrication groove and holes	Cylindrical bore	Tapered bore
								
Bearing Series	NN3000	NN3000K	NN3000W NN3000KW	NNU4900	NNU4900K	NNU4900W NNU4900KW	N1000 3NCN1000	N1000K 3NCN1000K

Composition of Cylindrical Roller Bearing Numbers



Tolerance

The tolerance of precision cylindrical roller bearings follows JIS B 1514. This standard includes common precision classes, but custom tolerances are also available. Because some tolerances of tapered bores are not included in the standard, JTEKT has created their own standards (see **Table 1** below).

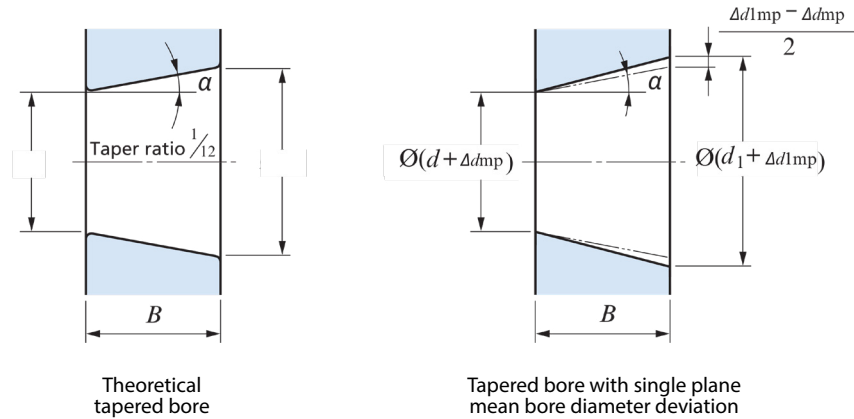


Table 1: Dimensional deviations and limits for tapered bores of radial bearings (classes 5, 4, and 2)

Unit : μm

Nominal bore diameter d (mm)		Δd_{mp}				$\Delta d_{1mp} - \Delta d_{mp}^{1)}$		$V_{dsp}^{2)}$				
		Class 5		Classes 4, 2		Classes 5, 4, 2		Diameter series 9		Diameter series 0		---
		upper	lower	upper	lower	upper	lower	Class 5	Class 4	Class 5	Class 4	Class 2
over	up to							max.		max.		max.
18	30	+10	0	+6	0	+3	0	6	5	5	4	2.5
30	50	+12	0	+8	0	+3	0	8	6	6	5	2.5
50	80	+15	0	+9	0	+5	0	9	7	7	5	4
80	120	+20	0	+10	0	+6	0	10	8	8	6	5
120	180	+25	0	+13	0	+8	0	13	10	10	8	7
180	250	+30	0	+15	0	+9	0	15	12	12	9	8
250	315	+35	0	+18	0	+10	0	18	15	14	11	---
315	400	+40	0	+23	0	+12	0	23	18	18	14	---

Notes:

- 1) Permissible dimensional deviation for the taper angle is $4^\circ 46' 18.8''$
- 2) Applied to all radial planes of tapered bores.

Remarks:

- 1) **Scope:** These values are applied to the tapered bores with a reference taper ratio of $1/12$.

- 2) **Symbols for quantities:**

d_1 : reference diameter at theoretical large end of tapered bore $d_1 = d + \frac{1}{12} B$

Δd_{1mp} : single plane mean bore diameter deviation at theoretical large end of tapered bore

V_{dsp} : single plane bore diameter variation

B : nominal inner ring width

α : $\frac{1}{2}$ of the nominal taper angle of tapered bore

$\alpha : = 2^\circ 23' 9.4''$

$= 2.38594^\circ$

$= 0.041643 \text{ rad}$

Radial Internal Clearance

To increase the accuracy of high-speed applications, it is suggested to match the internal clearance values of cylindrical roller bearings to other bearings in the system.

Table 3 below shows values of tapered bore radial internal clearances for cylindrical roller bearings.

The inner and outer rings of cylindrical roller bearings for spindles of machine tools are not always interchangeable, and engineering support should be consulted to ensure interchanges are compatible.

Table 2: Bearings with cylindrical bores

Unit : μm

Nominal bore diameter d (mm)		Values of non-interchangeable clearances of bearings with cylindrical bores							
		C1NA		C2NA		CNNA		C3NA	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.
24	30	5	10	10	25	25	35	40	50
30	40	5	12	12	25	25	40	45	55
40	50	5	15	15	30	30	45	50	65
50	65	5	15	15	35	35	50	55	75
65	80	10	20	20	40	40	60	70	90
80	100	10	25	25	45	45	70	80	105
100	120	10	25	25	50	50	80	95	120
120	140	15	30	30	60	60	90	105	135
140	160	15	35	35	65	65	100	115	150
160	180	15	35	35	75	75	110	125	165
180	200	20	40	40	80	80	120	140	180
200	225	20	45	45	90	90	135	155	200
225	250	25	50	50	100	100	150	170	215
250	280	25	55	55	110	110	165	185	240
280	315	30	60	60	120	120	180	205	265
315	355	30	65	65	135	135	200	225	295
355	400	35	75	75	150	150	225	255	330

Table 3: Bearings with tapered bores

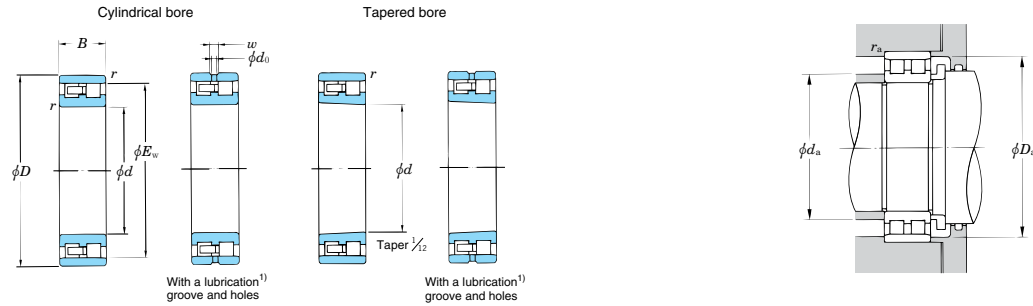
Unit : μm

Nominal bore diameter d (mm)		Values of non-interchangeable clearances of bearings with tapered bores											
		C9NA ¹⁾		C0NA		C1NA		C2NA		CNNA		C3NA	
over	up to	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
24	30	5	10	10	20	10	25	25	35	40	50	50	60
30	40	5	12	10	20	12	25	25	40	45	55	55	70
40	50	5	15	10	20	15	30	30	45	50	65	65	80
50	65	5	15	10	20	15	35	35	50	55	75	75	90
65	80	10	20	15	30	20	40	40	60	70	90	90	110
80	100	10	25	20	35	25	45	45	70	80	105	105	125
100	120	10	25	20	35	25	50	50	80	95	120	120	145
120	140	15	30	25	40	30	60	60	90	105	135	135	160
140	160	15	35	30	45	35	65	65	100	115	150	150	180
160	180	15	35	30	45	35	75	75	110	125	165	165	200
180	200	20	40	30	50	40	80	80	120	140	180	180	220
200	225	20	45	35	55	45	90	90	135	155	200	200	240
225	250	25	50	40	65	50	100	100	150	170	215	215	265
250	280	25	55	40	65	55	110	110	165	185	240	240	295
280	315	30	60	45	75	60	120	120	180	205	265	265	325
315	355	30	65	45	75	65	135	135	200	225	295	295	360
355	400	35	75	50	90	75	150	150	225	255	330	330	405

Notes:

1) The clearance C9NA is applied to cylindrical roller bearings with tapered bores made to JIS tolerance classes 5 and 4.

NN3000(K) series



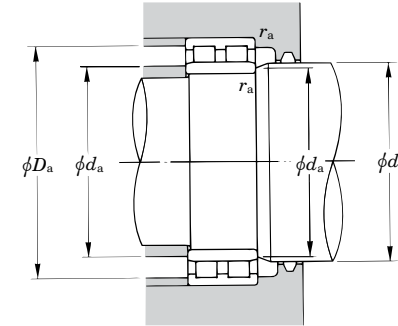
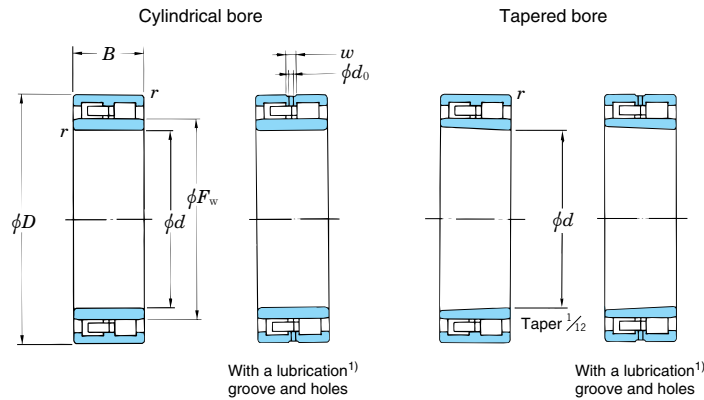
Dynamic equivalent load $P_r = F_r$
Static equivalent load $P_{0r} = F_r$

Boundary dimensions (mm)					Bearing No. 1)		Basic load ratings (kN)		Limiting speeds (min ⁻¹)		Dimensions of lubrication groove and holes (mm)		Mounting dimensions (mm)				Interspace volume (cm ³)	(Refer.) Mass (kg)	
d	D	B	r min.	E _w	Cylindrical bore	Tapered bore	C _r	C _{0r}	Grease lub.	Oil lub.	D ₀	w	d ₀ min.	D ₀ max.	r ₀ min.	r ₀ max.		Cylindrical bore	Tapered bore
25	47	16	0.6	41.3	NN3005	NN3005K	25.7	30.0	19 000	23 000	2	4	29	43	42	0.6	3.5	0.127	0.123
30	55	19	1	48.5	NN3006	NN3006K	36.8	44.1	16 000	20 000	2	4	35	50	49	1	6.0	0.198	0.192
35	62	20	1	55	NN3007	NN3007K	39.1	50.0	14 000	17 000	2	4	40	57	56	1	8.0	0.253	0.246
40	68	21	1	61	NN3008	NN3008K	41.3	55.9	13 000	15 000	2	4	45	63	62	1	10	0.307	0.298
45	75	23	1	67.5	NN3009	NN3009K	53.4	71.9	12 000	14 000	3	6	50	70	69	1	13	0.404	0.382
50	80	23	1	72.5	NN3010	NN3010K	52.8	72.6	11 000	13 000	3	6	55	75	74	1	14	0.429	0.415
55	90	26	1.1	81	NN3011	NN3011K	71.2	101	9 600	12 000	3	6	61.5	83.5	82	1	20	0.637	0.618
60	95	26	1.1	86.1	NN3012	NN3012K	72.8	106	9 000	11 000	3	6	66.5	88.5	87	1	22	0.685	0.664
65	100	26	1.1	91	NN3013	NN3013K	74.5	111	8 400	10 000	3	6	71.5	93.5	92	1	23	0.728	0.705
70	110	30	1.1	100	NN3014	NN3014K	96.9	148	7 600	9 200	3	6	76.5	103.5	101	1	33	1.04	1.02
75	115	30	1.1	105	NN3015	NN3015K	99.0	155	7 200	8 700	3	6	81.5	108.5	106	1	35	1.11	1.08
80	125	34	1.1	113	NN3016	NN3016K	119	186	6 700	8 100	4	7	86.5	118.5	114	1	48	1.55	1.50
85	130	34	1.1	118	NN3017	NN3017K	121	194	6 400	7 700	4	7	91.5	123.5	119	1	50	1.63	1.58
90	140	37	1.5	127	NN3018	NN3018K	142	228	5 900	7 100	4	7	98	132	129	1.5	65	2.07	2.01
95	145	37	1.5	132	NN3019	NN3019K	150	246	5 700	6 800	4	7	103	137	134	1.5	67	2.17	2.10
100	150	37	1.5	137	NN3020	NN3020K	153	256	5 500	6 500	4	7	108	142	139	1.5	68	2.28	2.21
105	160	41	2	146	NN3021	NN3021K	197	322	5 200	6 200	4	7	114	151	148	2	94	2.88	2.81
110	170	45	2	155	NN3022	NN3022K	221	361	4 800	5 800	4	7	119	161	157	2	117	3.65	3.56
120	180	46	2	165	NN3024	NN3024K	232	392	4 500	5 400	4	7	129	171	167	2	127	4.00	3.87
130	200	52	2	182	NN3026	NN3026K	283	476	4 100	4 900	5	8.5	139	191	183	2	185	5.94	5.76
140	210	53	2	192	NN3028	NN3028K	297	516	3 800	4 600	6	10	149	201	194	2	193	6.41	6.21
150	225	56	2.1	206	NN3030	NN3030K	334	587	3 500	4 200	6	10	161	214	208	2	239	7.74	7.50
160	240	60	2.1	219	NN3032	NN3032K	398	695	3 300	4 000	6	10	171	229	221	2	281	9.38	9.08
170	260	67	2.1	236	NN3034	NN3034K	471	824	3 000	3 600	6	10	181	249	238	2	371	12.8	12.4
180	280	74	2.1	255	NN3036	NN3036K	561	958	2 800	3 300	8	14	191	269	257	2	468	16.8	16.3
190	290	75	2.1	265	NN3038	NN3038K	598	1 020	2 700	3 200	8	14	201	279	267	2	494	17.6	17.1
200	310	82	2.1	282	NN3040	NN3040K	638	1 120	2 400	2 900	8	14	211	299	285	2	636	22.5	21.8
220	340	90	3	310	NN3044	NN3044K	752	1 370	2 200	2 600	8	14	233	327	313	2.5	859	29.3	28.4
240	360	92	3	330	NN3048	NN3048K	864	1 590	2 000	2 400	10	17	253	347	333	2.5	954	32.8	31.8
260	400	104	4	364	NN3052	NN3052K	1 030	1 830	1 800	2 200	10	17	276	384	367	3	1 340	47.4	46.0
280	420	106	4	384	NN3056	NN3056K	1 090	2 010	1 700	2 000	10	17	296	404	387	3	1 470	51.2	49.6
300	460	118	4	418	NN3060	NN3060K	1 290	2 460	1 500	1 800	10	17	316	444	421	3	1 960	70.8	68.7
320	480	121	4	438	NN3064	NN3064K	1 350	2 670	1 400	1 700	10	17	336	464	442	3	2 160	76.4	74.0
340	520	133	5	473	NN3068	NN3068K	1 580	3 090	1 200	1 500	12	20	360	500	477	4	2 890	101	97.8
360	540	134	5	493	NN3072	NN3072K	1 560	3 090	1 200	1 400	12	20	380	520	497	4	3 530	107	104
380	560	135	5	510	NN3076	NN3076K	1 650	3 350	1 100	1 300	12	20	400	540	514	4	3 270	113	109
400	600	148	5	548	NN3080	NN3080K	2 030	4 140	990	1 200	12	20	420	580	552	4	4 150	146	141

Note: 1) For the dimensions of the spacers for oil / air lubrication, contact GMN Bearing USA.

2) RPM ratings are based on P4 precision.

NNU4900(K) series

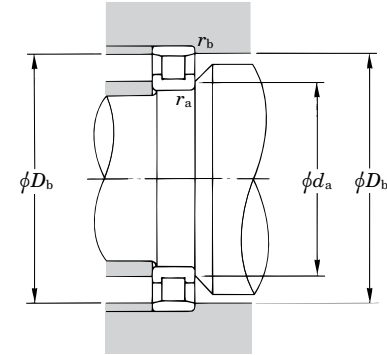
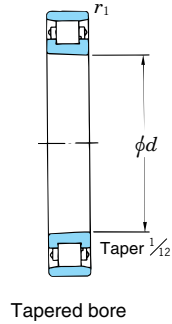
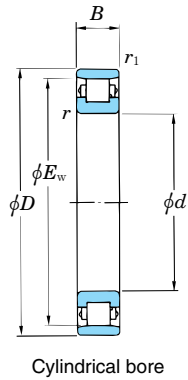


Dynamic equivalent load $P_r = F_r$
Static equivalent load $P_{0r} = F_r$

Boundary dimensions (mm)					Bearing No. ¹⁾		Basic load ratings (kN)		Limiting speeds (min ⁻¹)		Dimensions of lubrication groove and holes (mm)		Mounting dimensions (mm)					Interspace volume (cm ³)	(Refer.) Mass (kg)	
d	D	B	$r_{min.}$	F_w	Cylindrical bore	Tapered bore	C_r	C_{0r}	Grease lub.	Oil lub.	d_o	w	d_a min.	d_a max.	d_b min.	D_o max.	r_o max.		Cylindrical bore	Tapered bore
100	140	40	1.1	113	NNU4920	NNU4920K	139	258	5 600	6 800	4	7	106.5	111	115	133.5	1	61	1.95	1.87
105	145	40	1.1	118	NNU4921	NNU4921K	157	306	5 400	6 500	4	7	111.5	116	120	138.5	1	61	2.00	1.91
110	150	40	1.1	123	NNU4922	NNU4922K	163	326	5 200	6 200	4	7	116.5	121	125	143.5	1	60	2.10	2.01
120	165	45	1.1	134.5	NNU4924	NNU4924K	187	373	4 700	5 700	4	7	126.5	132	137	158.5	1	84	2.90	2.77
130	180	50	1.5	146	NNU4926	NNU4926K	216	428	4 300	5 200	5	8.5	138	143.5	148	172	1.5	116	3.90	3.73
140	190	50	1.5	156	NNU4928	NNU4928K	222	456	4 000	4 800	6	10	148	153.5	158	182	1.5	125	4.15	3.97
150	210	60	2	168.5	NNU4930	NNU4930K	343	692	3 700	4 400	6	10	159	166	171	201	2	192	6.50	6.22
160	220	60	2	178.5	NNU4932	NNU4932K	340	695	3 400	4 100	6	10	169	176	182	211	2	186	6.95	6.65
170	230	60	2	188.5	NNU4934	NNU4934K	361	763	3 200	3 900	6	10	179	186	192	221	2	216	7.20	6.88
180	250	69	2	202	NNU4936	NNU4936K	458	964	3 000	3 600	8	14	189	199.5	205	241	2	297	10.5	10.1
190	260	69	2	210	NNU4938	NNU4938K	465	996	2 900	3 400	8	14	199	207	215	251	2	313	11.0	10.5
200	280	80	2.1	223	NNU4940	NNU4940K	509	1 050	2 600	3 200	8	14	211	219.5	228	269	2	469	15.4	14.7
220	300	80	2.1	244	NNU4944	NNU4944K	561	1 220	2 400	2 900	8	14	231	241	248	289	2	493	16.7	16.0
240	320	80	2.1	263	NNU4948	NNU4948K	588	1 340	2 200	2 600	10	17	251	260	269	309	2	527	18.0	17.2
260	360	100	2.1	287	NNU4952	NNU4952K	941	2 050	1 900	2 300	10	17	271	284	296	349	2	873	31.4	30.0
280	380	100	2.1	308	NNU4956	NNU4956K	976	2 200	1 800	2 100	10	17	291	305	316	369	2	982	33.1	31.6
300	420	118	3	339	NNU4960	NNU4960K	1 170	2 720	1 600	1 900	10	17	313	335	343	407	2.5	1 430	51.9	49.7
320	440	118	3	352	NNU4964	NNU4964K	1 220	2 750	1 500	1 800	10	17	333	348	363	427	2.5	1 630	53.7	51.4
340	460	118	3	372	NNU4968	NNU4968K	1 270	2 930	1 400	1 700	12	20	353	368	383	447	2.5	1 690	56.8	54.3

Note: 1) The symbol W is added to the end of bearing numbers to denote bearings whose outer ring has a lubrication groove and holes.
2) RPM ratings are based on P4 precision.

N1000(K) series



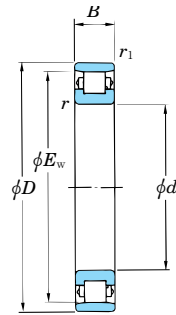
Dynamic equivalent load $P_r = F_r$
 Static equivalent load $P_{0r} = F_r$

Boundary dimensions (mm)						Bearing No.		Basic load ratings (kN)		Limiting speeds (min ⁻¹)		Mounting dimensions (mm)						Interspace volume (cm ³)	(Refer.) Mass (kg)	
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> min.	<i>r</i> ₁ min.	<i>E</i> _w	Cylindrical bore	Tapered bore	<i>C</i> _r	<i>C</i> _{0r}	Grease lub.	Oil lub.	<i>d</i> _a min.	<i>d</i> _b		<i>r</i> _a max.	<i>r</i> _b max.	Cylindrical bore		Tapered bore	
30	55	13	1	0.6	48.5	N1006	N1006K	18.7	18.4	18 000	21 000	35	50	49.5	1	0.6	4.8	0.138	0.135	
35	62	14	1	0.6	55.0	N1007	N1007K	20.2	21.3	15 000	18 000	40	57	56	1	0.6	6.4	0.176	0.173	
40	68	15	1	0.6	61.0	N1008	N1008K	22.4	25.4	14 000	16 000	45	63	62	1	0.6	8.3	0.215	0.210	
45	75	16	1	0.6	68.5	N1009	N1009K	32.5	34.2	13 000	15 000	50	70	68.5	1	0.6	11	0.268	0.262	
50	80	16	1	0.6	72.5	N1010	N1010K	35.2	38.9	11 000	13 000	55	75	73.5	1	0.6	12	0.292	0.285	
55	90	18	1.1	1	81.0	N1011	N1011K	37.4	43.9	10 000	12 000	61.5	83.5	82	1	1	17	0.429	0.420	
60	95	18	1.1	1	86.1	N1012	N1012K	38.4	46.4	9 600	11 000	66.5	88.5	87	1	1	18	0.458	0.448	
65	100	18	1.1	1	91.5	N1013	N1013K	40.8	51.2	9 000	11 000	71.5	93.5	92	1	1	20	0.486	0.475	
70	110	20	1.1	1	100	N1014	N1014K	57.9	70.4	8 300	9 700	76.5	103.5	101	1	1	27	0.676	0.662	
75	115	20	1.1	1	106	N1015	N1015K	59.5	74.5	7 800	9 100	81.5	108.5	106	1	1	29	0.711	0.696	
80	125	22	1.1	1	113	N1016	N1016K	63.1	82.2	7 200	8 500	86.5	118.5	114	1	1	36	0.957	0.937	
85	130	22	1.1	1	118	N1017	N1017K	64.8	86.2	6 900	8 100	91.5	123	119	1	1	39	1.01	0.989	
90	140	24	1.5	1.1	129	N1018	N1018K	96.2	122	6 400	7 500	98	132	129	1.5	1	52	1.30	1.27	
95	145	24	1.5	1.1	133	N1019	N1019K	99.2	129	6 200	7 200	103	137	134	1.5	1	53	1.36	1.34	
100	150	24	1.5	1.1	139	N1020	N1020K	98.6	129	5 900	6 900	108	142	139	1.5	1	56	1.42	1.39	
105	160	26	2	1.1	146	N1021	N1021K	108	149	5 500	6 500	114	151	148	2	1	66	1.82	1.78	
110	170	28	2	1.1	157	N1022	N1022K	134	171	5 200	6 100	119	161	157	2	1	84	2.24	2.20	
120	180	28	2	1.1	167	N1024	N1024K	137	181	4 800	5 700	129	171	167	2	1	92	2.40	2.35	
130	200	33	2	1.1	182	N1026	N1026K	171	238	4 400	5 100	139	191	184	2	1	135	3.64	3.57	
140	210	33	2	1.1	192	N1028	N1028K	175	250	4 100	4 800	149	201	194	2	1	140	3.88	3.80	
150	225	35	2.1	1.5	207.5	N1030	N1030K	201	281	3 800	4 400	161	214	208	2	1.5	177	4.68	4.58	
160	240	38	2.1	1.5	219	N1032	N1032K	236	330	3 500	4 100	171	229	221	2	1.5	191	5.80	5.68	

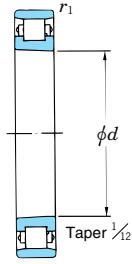
Note: 1) For the dimensions of the spacers for oil / air lubrication, contact GMN Bearing USA.

2) RPM ratings are based on P4 precision.

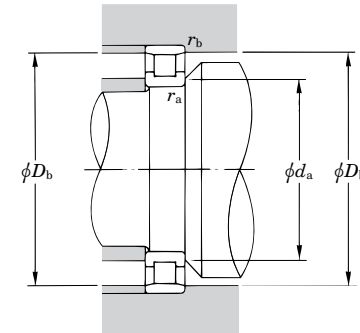
3NCN1000(K) series Ceramic bearings



Cylindrical bore



Tapered bore



Dynamic equivalent load $P_r = F_r$
Static equivalent load $P_{0r} = F_r$

Boundary dimensions (mm)						Bearing No.		Basic load ratings (kN)		Limiting speeds (min ⁻¹)		Mounting dimensions (mm)						Interspace volume (cm ³)	(Refer.) Mass (kg)	
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> min.	<i>r</i> _i min.	<i>E</i> _w	Cylindrical bore	Tapered bore	<i>C</i> _i	<i>C</i> _{0r}	Grease lub.	Oil lub.	<i>d</i> _o min.	<i>D</i> _o max.	<i>D</i> _o min.	<i>r</i> _o max.	<i>r</i> _o max.	Cylindrical bore		Tapered bore	
30	55	13	1	0.6	48.5	3NCN1006	3NCN1006K	18.7	18.4	23 000	27 000	35	50	49.5	1	0.6	4.8	0.126	0.123	
35	62	14	1	0.6	55.0	3NCN1007	3NCN1007K	20.2	21.3	20 000	23 000	40	57	56	1	0.6	6.4	0.163	0.160	
40	68	15	1	0.6	61.0	3NCN1008	3NCN1008K	22.4	25.4	18 000	21 000	45	63	62	1	0.6	8.3	0.199	0.194	
45	75	16	1	0.6	68.5	3NCN1009	3NCN1009K	32.5	34.2	17 000	20 000	50	70	68.5	1	0.6	11	0.238	0.232	
50	80	16	1	0.6	72.5	3NCN1010	3NCN1010K	35.2	38.9	14 000	17 000	55	75	73.5	1	0.6	12	0.259	0.252	
55	90	18	1.1	1	81.0	3NCN1011	3NCN1011K	37.4	43.9	13 000	16 000	61.5	83.5	82	1	1	17	0.392	0.383	
60	95	18	1.1	1	86.1	3NCN1012	3NCN1012K	38.4	46.4	12 000	14 000	66.5	88.5	87	1	1	18	0.419	0.409	
65	100	18	1.1	1	91.5	3NCN1013	3NCN1013K	40.8	51.2	12 000	14 000	71.5	93.5	92	1	1	20	0.445	0.434	
70	110	20	1.1	1	100	3NCN1014	3NCN1014K	57.9	70.4	11 000	13 000	76.5	103.5	101	1	1	27	0.618	0.604	
75	115	20	1.1	1	106	3NCN1015	3NCN1015K	59.5	74.5	10 000	12 000	81.5	108.5	106	1	1	29	0.635	0.620	
80	125	22	1.1	1	113	3NCN1016	3NCN1016K	63.1	82.2	9 400	11 000	86.5	118.5	114	1	1	36	0.874	0.854	
85	130	22	1.1	1	118	3NCN1017	3NCN1017K	64.8	86.2	9 000	11 000	91.5	123	119	1	1	39	0.923	0.902	
90	140	24	1.5	1.1	129	3NCN1018	3NCN1018K	96.2	122	8 300	9 800	98	132	129	1.5	1	52	1.14	1.11	
95	145	24	1.5	1.1	133	3NCN1019	3NCN1019K	99.2	129	8 100	9 400	103	137	134	1.5	1	53	1.19	1.17	
100	150	24	1.5	1.1	139	3NCN1020	3NCN1020K	98.6	129	7 700	9 000	108	142	139	1.5	1	56	1.25	1.22	
105	160	26	2	1.1	146	3NCN1021	3NCN1021K	108	149	7 200	8 500	114	151	148	2	1	66	1.64	1.60	
110	170	28	2	1.1	157	3NCN1022	3NCN1022K	134	171	6 800	7 900	119	161	157	2	1	84	2.02	1.98	
120	180	28	2	1.1	167	3NCN1024	3NCN1024K	137	181	6 200	7 400	129	171	167	2	1	92	2.10	2.05	
130	200	33	2	1.1	182	3NCN1026	3NCN1026K	171	238	5 700	6 600	139	191	184	2	1	135	3.23	3.16	
140	210	33	2	1.1	192	3NCN1028	3NCN1028K	175	250	5 300	6 200	149	201	194	2	1	140	3.45	3.37	
150	225	35	2.1	1.5	207.5	3NCN1030	3NCN1030K	201	281	4 900	5 700	161	214	208	2	1.5	177	4.14	4.04	
160	240	38	2.1	1.5	219	3NCN1032	3NCN1032K	236	330	4 600	5 300	171	229	221	2	1.5	191	5.13	5.01	

Note: 1) For the dimensions of the spacers for oil / air lubrication, contact GMN Bearing USA.

2) RPM ratings are based on P4 precision.



GMN
BEARING USA



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