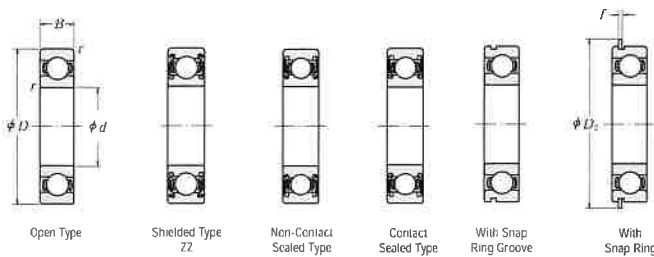


# SINGLE-ROW DEEP GROOVE BALL BEARINGS

Bore Diameter 25 – 45 mm



Boundary Dimensions (mm)				Basic Load Ratings (N)				Factor		Limiting Speeds (min <sup>-1</sup> )				Bearing Numbers		
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> <sub>min</sub>	<i>C<sub>r</sub></i>	<i>C<sub>0r</sub></i>	<i>C<sub>r</sub></i>	<i>C<sub>0r</sub></i>	<i>f<sub>0</sub></i>	Grease		Oil		Open	Shielded	Sealed	
									Open ZZ	ZZ VV	DD	DDU	Open Z			
25	37	7	0.3	4 500	3 150	455	320	16.1	18 000	10 000	22 000		8805	ZZ	VV	DD
25	42	9	0.3	7 050	4 550	715	460	15.4	16 000	10 000	19 000		8905	ZZ	VV	DDU
25	47	8	0.3	8 850	5 600	905	570	15.1	15 000		18 000		10005			
25	47	12	0.6	10 100	5 850	1 030	595	14.5	15 000	9 500	18 000		8905	ZZ	VV	DDU
25	52	15	1	14 000	7 950	1 430	830	13.9	13 000	9 000	15 000		8205	ZZ	VV	DDU
25	62	17	1.1	20 600	11 200	2 100	1 150	13.2	11 000	8 000	13 000		6305	ZZ	VV	DDU
28	52	12	0.6	12 500	7 400	1 270	755	14.5	14 000	8 500	16 000		60/28	ZZ	VV	DDU
28	58	16	1	16 600	9 500	1 700	970	13.9	12 000	8 000	14 000		62/28	ZZ	VV	DDU
28	68	18	1.1	26 700	14 000	2 730	1 430	12.4	10 000	7 500	13 000		63/28	ZZ	VV	DDU
30	42	7	0.3	4 700	3 650	480	370	16.4	15 000	9 000	18 000		8806	ZZ	VV	DD
30	47	9	0.3	7 250	5 000	740	510	15.8	14 000	8 500	17 000		8906	ZZ	VV	DDU
30	55	9	0.3	11 200	7 350	1 150	750	15.2	13 000		15 000		10006			
30	55	13	1	13 200	8 300	1 350	845	14.7	13 000	8 000	15 000		8906	ZZ	VV	DDU
30	62	16	1	19 500	11 300	1 980	1 140	13.8	11 000	7 500	13 000		6206	ZZ	VV	DDU
30	72	19	1.1	26 700	15 000	2 720	1 530	12.3	9 500	6 700	12 000		6306	ZZ	VV	DDU
32	58	13	1	15 100	9 150	1 530	935	14.5	12 000	7 500	14 000		60/32	ZZ	VV	DDU
32	65	17	1	20 700	11 600	2 120	1 190	13.6	10 000	7 000	12 000		62/32	ZZ	VV	DDU
32	75	20	1.1	29 900	17 000	3 050	1 730	13.2	9 000	6 300	11 000		63/32	ZZ	VV	DDU
35	47	7	0.3	4 900	4 100	500	420	16.7	14 000	7 500	16 000		8807	ZZ	VV	DD
35	55	10	0.6	10 600	7 250	1 080	740	15.5	12 000	7 500	15 000		8907	ZZ	VV	DDU
35	62	9	0.3	11 700	8 200	1 180	835	15.6	11 000		13 000		10007			
35	62	14	1	16 000	10 300	1 630	1 050	14.8	11 000	6 700	13 000		8907	ZZ	VV	DDU
35	72	17	1.1	25 700	15 300	2 620	1 560	13.8	9 500	6 300	11 000		6207	ZZ	VV	DDU
35	80	21	1.5	33 500	19 200	3 400	1 960	13.1	8 500	6 000	10 000		6307	ZZ	VV	DDU
40	52	7	0.3	6 350	5 550	650	585	17.0	12 000	6 700	14 000		8808	ZZ	VV	DD
40	62	12	0.6	13 700	10 000	1 390	1 020	15.7	11 000	6 300	13 000		8908	ZZ	VV	DDU
40	68	9	0.3	12 600	9 650	1 280	985	16.0	10 000		12 000		10008			
40	68	15	1	16 800	11 500	1 710	1 180	15.3	10 000	6 000	12 000		8908	ZZ	VV	DDU
40	80	18	1.1	29 100	17 900	2 970	1 820	14.0	8 500	5 800	10 000		6208	ZZ	VV	DDU
40	90	23	1.5	40 500	24 000	4 150	2 450	13.2	7 500	5 300	9 000		6308	ZZ	VV	DDU
45	58	7	0.3	6 600	6 150	670	625	17.2	11 000	6 000	13 000		8809	ZZ	VV	DD
45	68	12	0.6	14 100	10 900	1 440	1 110	15.9	9 500	5 600	12 000		8909	ZZ	VV	DDU
45	75	10	0.6	14 900	11 400	1 520	1 160	15.9	9 000		11 000		10009			
45	75	16	1	20 900	15 200	2 140	1 550	15.3	9 000	5 300	11 000		8909	ZZ	VV	DDU
45	85	19	1.1	31 500	20 400	3 200	2 080	14.4	7 500	5 300	9 000		6209	ZZ	VV	DDU
45	100	25	1.5	53 000	32 000	5 400	3 250	13.1	6 700	4 600	8 000		6309	ZZ	VV	DDU

Notes (1) For tolerances for the snap ring grooves and snap ring dimensions, refer to Pages A50 to A53.  
 (2) When heavy axial loads are applied, increase *d<sub>f</sub>* and decrease *D<sub>s</sub>* from the above values.  
 (3) Ring types N and NR applicable only to open-type bearings. Please consult NSK about the snap ring groove dimensions of sealed or shielded bearings.

B 10 (1) Not conforming to ISO 15.

# NSK

### Dynamic Equivalent Load

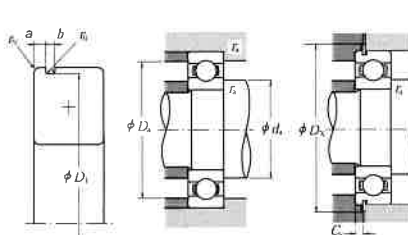
$$P = X F_r + Y F_a$$

<i>f<sub>0</sub>F<sub>r</sub></i> <i>C<sub>0r</sub></i>	<i>c</i>	<i>F<sub>r</sub> ≤ F<sub>e</sub></i>		<i>F<sub>r</sub> &gt; F<sub>e</sub></i>	
		X	Y	X	Y
0.172	0.19	1	0	0.56	2.30
0.345	0.22	1	0	0.56	1.99
0.689	0.26	1	0	0.56	1.71
1.03	0.28	1	0	0.56	1.55
1.38	0.30	1	0	0.56	1.45
2.07	0.34	1	0	0.56	1.31
3.45	0.38	1	0	0.56	1.15
5.17	0.42	1	0	0.56	1.04
8.99	0.44	1	0	0.56	1.00

### Static Equivalent Load

$$F_s > 0.8 F_r, P_s = 0.6 F_r + 0.5 F_a$$

$$F_s \leq 0.8 F_r, P_s = F_r$$



	Snap Ring Groove Dimensions (1)				Snap Ring (1) Dimensions			Abutment and Fillet Dimensions					Mass [kg]	
	<i>a</i>	<i>b</i>	<i>D<sub>1</sub></i>	<i>r<sub>0</sub></i>	<i>r<sub>1</sub></i>	<i>D<sub>2</sub></i>	<i>f</i>	<i>d<sub>f</sub></i>	<i>D<sub>s</sub></i>	<i>r<sub>s</sub></i>	<i>D<sub>3</sub></i>	<i>C<sub>r</sub></i>		approx.
N NR	1.3	0.95	35.7	0.25	0.3	39.8	0.85	27	27	35	0.3	40.5	1.8	0.021
N NR	1.7	0.95	40.7	0.25	0.3	44.8	0.85	27	28.5	40	0.3	45.5	2.3	0.042
N NR	—	—	—	—	—	—	—	27	—	45	0.3	—	—	0.059
N NR	2.06	1.35	44.6	0.4	0.5	52.7	1.12	29	30	43	0.6	53.5	2.9	0.079
N NR	3.28	1.9	59.61	0.6	0.5	67.7	1.7	31.5	36	55.5	1	68.5	4.6	0.235
N NR	2.06	1.35	49.73	0.4	0.5	57.9	1.12	32	34	48	0.6	58.5	2.9	0.098
N NR	2.46	1.35	55.6	0.4	0.5	63.7	1.12	33	35.5	53	1	64.5	3.3	0.175
N NR	3.28	1.9	64.82	0.6	0.5	74.6	1.7	34.5	38	61.5	1	76	4.6	0.287
N NR	1.3	0.95	40.7	0.25	0.3	44.8	0.85	32	32	40	0.3	45.5	1.8	0.024
N NR	1.7	0.95	45.7	0.25	0.3	49.8	0.85	32	34	45	0.3	50.5	2.3	0.052
N NR	—	—	—	—	—	—	—	32	—	53	0.3	—	—	0.067
N NR	2.08	1.35	52.6	0.4	0.5	60.7	1.12	35	36.5	50	1	61.5	2.9	0.116
N NR	3.28	1.9	68.81	0.6	0.5	77.7	1.7	35	38.5	57	1	68.5	4.6	0.199
N NR	3.26	1.9	68.81	0.6	0.5	78.6	1.7	36.5	42.5	65.5	1	80	4.6	0.345
N NR	2.08	1.35	55.6	0.4	0.5	63.7	1.12	37	38.5	53	1	64.5	2.9	0.122
N NR	3.28	1.9	62.6	0.6	0.5	70.7	1.7	37	40	60	1	71.5	4.6	0.225
N NR	3.28	1.9	71.83	0.6	0.5	81.6	1.7	38.5	44.5	68.5	1	83	4.6	0.389
N NR	1.3	0.95	45.7	0.25	0.3	49.8	0.85	37	37	45	0.3	50.5	1.8	0.027
N NR	1.7	0.95	53.7	0.25	0.3	57.8	0.85	39	39	51	0.6	58.5	2.3	0.075
N NR	—	—	—	—	—	—	—	39	—	60	0.3	—	—	0.107
N NR	2.08	1.9	59.61	0.6	0.5	67.7	1.7	40	41.5	57	1	68.5	3.4	0.151
N NR	3.28	1.9	68.81	0.6	0.5	78.6	1.7	41.5	44.5	65.5	1	80	4.6	0.284
N NR	3.28	1.9	76.81	0.6	0.5	86.6	1.7	43	47	72	1.5	88	4.6	0.464
N NR	1.3	0.95	50.7	0.25	0.3	54.8	0.85	42	42	50	0.3	55.5	1.8	0.031
N NR	1.7	0.95	60.7	0.25	0.3	64.8	0.85	44	46	58	0.6	65.5	2.3	0.112
N NR	—	—	—	—	—	—	—	42	—	66	0.3	—	—	0.13
N NR	2.49	1.9	64.82	0.6	0.5	74.6	1.7	45	47.5	63	1	76	3.8	0.19
N NR	3.28	1.9	76.81	0.6	0.5	86.6	1.7	46.5	50.5	73.5	1	88	4.6	0.366
N NR	3.28	2.7	86.79	0.6	0.5	98.5	2.46	48	53	82	1.5	98	5.4	0.636
N NR	1.3	0.95	56.7	0.25	0.3	60.8	0.85	47	47.5	56	0.3	61.5	1.8	0.038
N NR	1.7	0.95	66.7	0.25	0.3	70.8	0.85	49	50	64	0.6	72	2.3	0.126
N NR	—	—	—	—	—	—	—	49	—	71	0.6	—	—	0.167
N NR	2.49	1.9	71.83	0.6	0.5	81.6	1.7	50	53.5	70	1	83	3.8	0.241
N NR	3.28	1.9	81.81	0.6	0.5	91.6	1.7	51.5	55.5	78.5	1	93	4.6	0.42
N NR	3.28	2.7	96.8	0.6	0.5	106.5	2.46	53	61.5	92	1.5	108	5.4	0.829

Remarks 1. Diameter Series 7 (extra thin section bearings) are also available, please contact NSK.  
 2. When using bearings with rotating outer rings, contact NSK if they are sealed, shielded, or have snap rings.

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