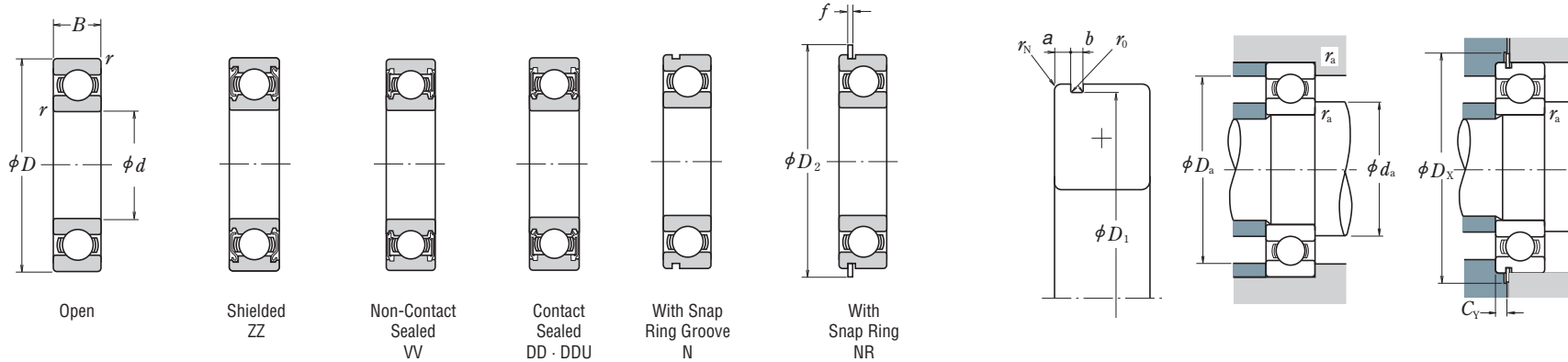


**SINGLE-ROW DEEP GROOVE BALL BEARINGS**

Bore Diameter 20 – 30 mm



**Dynamic Equivalent Load**

$$P = X F_r + Y F_a$$

$\frac{f_0 F_a}{C_{0r}}$	$e$	$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
		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
6.89	0.44	1	0	0.56	1.00

**Static Equivalent Load**

$$\frac{F_a}{F_r} > 0.8, P_0 = 0.6 F_r + 0.5 F_a$$

$$\frac{F_a}{F_r} \leq 0.8, P_0 = F_r$$

Boundary Dimensions (mm)	Basic Load Ratings (N)		Factor	Limiting Speeds (min <sup>-1</sup> )			Bearing Designations			With Snap Ring Groove		Snap Ring Groove Dimensions (1)					Snap Ring (1) Dimensions (mm)		Abutment and Fillet Dimensions (mm)					Mass (kg)					
												Grease		Oil	a	b	D <sub>1</sub>	r <sub>o</sub>	r <sub>N</sub>	D <sub>2</sub>	f	d <sub>a</sub> (2)	D <sub>a</sub> (2)		r <sub>a</sub>	D <sub>x</sub>	C <sub>Y</sub>		
												Open	DU	Open														Open	Shielded
<b>20</b>	32	7	0.3	4 400	2 470	15.5	22 000	13 000	26 000	<b>6804</b>	<b>ZZ</b>	<b>VV</b>	<b>DD</b>	<b>N</b>	<b>NR</b>	1.30	0.95	30.7	0.25	0.3	34.8	0.85	22	22	30	0.3	35.5	1.8	0.017
	37	9	0.3	7 000	3 700	14.7	19 000	12 000	22 000	<b>6904</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	1.70	0.95	35.7	0.25	0.3	39.8	0.85	22	24	35	0.3	40.5	2.3	0.037
	42	8	0.3	8 700	4 450	14.5	18 000	—	20 000	<b>16004</b>	—	—	—	—	—	—	—	—	—	—	—	—	22	—	40	0.3	—	—	0.048
	42	12	0.6	10 300	5 000	13.8	20 000	11 000	24 000	<b>6004</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.06	1.35	39.75	0.4	0.5	46.3	1.12	24	25.5	38	0.6	47	2.9	0.068
	47	14	1	14 100	6 600	13.1	17 000	11 000	20 000	<b>6204</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.46	1.35	44.6	0.4	0.5	52.7	1.12	25	26.5	42	1	53.5	3.3	0.107
	52	15	1.1	17 500	7 900	12.4	16 000	10 000	19 000	<b>6304</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.46	1.35	49.73	0.4	0.5	57.9	1.12	26.5	28	45.5	1	58.5	3.3	0.145
<b>22</b>	44	12	0.6	10 300	5 050	14.0	17 000	11 000	20 000	<b>60/22</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.06	1.35	41.75	0.4	0.5	48.3	1.12	26	26.5	40	0.6	49	2.9	0.074
	50	14	1	14 200	6 800	13.5	14 000	9 500	16 000	<b>62/22</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.46	1.35	47.6	0.4	0.5	55.7	1.12	27	29.5	45	1	56.5	3.3	0.119
	56	16	1.1	20 200	9 250	12.4	13 000	9 500	16 000	<b>63/22</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.46	1.35	53.6	0.4	0.5	61.7	1.12	28.5	30.5	49.5	1	62.5	3.3	0.179
<b>25</b>	37	7	0.3	4 950	3 150	16.1	18 000	10 000	22 000	<b>6805</b>	<b>ZZ</b>	<b>VV</b>	<b>DD</b>	<b>N</b>	<b>NR</b>	1.30	0.95	35.7	0.25	0.3	39.8	0.85	27	27	35	0.3	40.5	1.8	0.021
	42	9	0.3	7 750	4 550	15.4	16 000	10 000	19 000	<b>6905</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b> (3)	<b>NR</b> (3)	1.70	0.95	40.7	0.25	0.3	44.8	0.85	27	28.5	40	0.3	45.5	2.3	0.042
	47	8	0.3	9 750	5 600	15.1	15 000	—	18 000	<b>16005</b>	—	—	—	—	—	—	—	—	—	—	—	—	27	—	45	0.3	—	—	0.059
	47	12	0.6	11 100	5 850	14.5	18 000	9 500	22 000	<b>6005</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	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
	52	15	1	15 400	7 850	13.9	15 000	9 000	18 000	<b>6205</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.46	1.35	49.73	0.4	0.5	57.9	1.12	30	32	47	1	58.5	3.3	0.129
	62	17	1.1	22 600	11 200	13.2	13 000	8 000	16 000	<b>6305</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	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
<b>28</b>	52	12	0.6	13 700	7 400	14.5	14 000	8 500	16 000	<b>60/28</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	2.06	1.35	49.73	0.4	0.5	57.9	1.12	32	34	48	0.6	58.5	2.9	0.096
	58	16	1	18 300	9 500	13.9	12 000	8 000	14 000	<b>62/28</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	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
	68	18	1.1	29 400	14 000	12.4	10 000	7 500	13 000	<b>63/28</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	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
<b>30</b>	42	7	0.3	5 200	3 650	16.4	15 000	9 000	18 000	<b>6806</b>	<b>ZZ</b>	<b>VV</b>	<b>DD</b>	<b>N</b>	<b>NR</b>	1.30	0.95	40.7	0.25	0.3	44.8	0.85	32	32	40	0.3	45.5	1.8	0.024
	47	9	0.3	7 950	5 000	15.8	14 000	8 500	17 000	<b>6906</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	1.70	0.95	45.7	0.25	0.3	49.8	0.85	32	34	45	0.3	50.5	2.3	0.052
	55	9	0.3	12 400	7 350	15.2	13 000	—	15 000	<b>16006</b>	—	—	—	—	—	—	—	—	—	—	—	—	32	—	53	0.3	—	—	0.087
	55	13	1	14 600	8 300	14.7	15 000	8 000	18 000	<b>6006</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	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
	62	16	1	21 400	11 300	13.8	12 000	7 500	15 000	<b>6206</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	3.28	1.9	59.61	0.6	0.5	67.7	1.7	35	38.5	57	1	68.5	4.6	0.199
	72	19	1.1	29 300	15 000	13.3	11 000	6 700	13 000	<b>6306</b>	<b>ZZ</b>	<b>VV</b>	<b>DDU</b>	<b>N</b>	<b>NR</b>	3.28	1.9	68.81	0.6	0.5	78.6	1.7	36.5	42.5	65.5	1	80	4.6	0.345

- Notes** (1) For tolerances of snap ring grooves and snap ring dimensions, refer to Pages A116 to A119.  
 (2) When heavy axial loads are applied,  $d_a$  and  $D_a$  can be adjusted up to the shoulder diameter of the races. Please consult NSK for details.  
 (3) Ring types N and NR are applicable only to open bearings. Please consult NSK about the snap ring groove dimensions of sealed or shielded bearings.

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