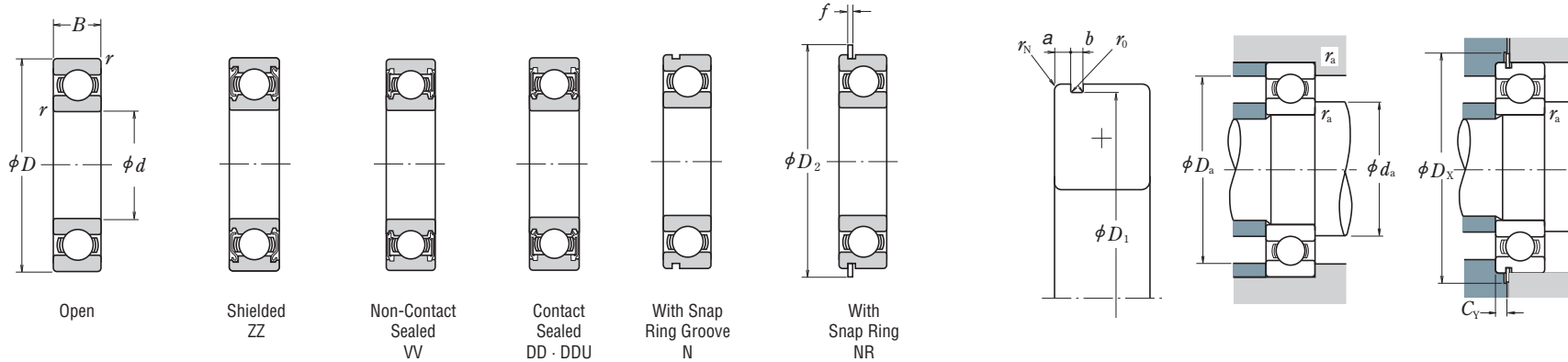


SINGLE-ROW DEEP GROOVE BALL BEARINGS

Bore Diameter 10 – 17 mm



Dynamic Equivalent Load

$$P = XF_r + YF_a$$

$\frac{f_0 F_a}{C_{0r}}$	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

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

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

Boundary Dimensions (mm)	Basic Load Ratings (N)		Factor f_0	Limiting Speeds (min ⁻¹)			Bearing Designations			Snap Ring Groove Dimensions (1) (mm)		Snap Ring (1) Dimensions (mm)		Abutment and Fillet Dimensions (mm)					Mass (kg) approx.										
	d	D		B	$r_{min.}$	C_r	C_{0r}	Grease	Oil	Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring Groove	a	b	D_1	r_0		r_N	D_2	f	$d_a^{(2)}$	$D_a^{(2)}$	r_a	D_x	C_γ		
10	19	5	0.3	1 890	840	14.8	34 000	24 000	40 000	6800	ZZ	VV	DD	—	—	—	—	—	—	—	—	12	12	17	0.3	—	—	0.005	
	22	6	0.3	2 970	1 270	14.0	32 000	22 000	38 000	6900	ZZ	VV	DD	N ⁽³⁾	NR ⁽³⁾	1.05	0.8	20.8	0.2	0.2	24.8	0.7	12	12.5	20	0.3	25.5	1.5	0.009
	26	8	0.3	5 050	1 970	12.4	30 000	22 000	36 000	6000	ZZ	VV	DDU	N ⁽⁴⁾	NR ⁽⁴⁾	1.35	0.87	24.5	0.2	0.3	28.7	0.84	12	13	24	0.3	29.4	1.9	0.018
30	9	0.6	5 600	2 390	13.2	28 000	18 000	34 000	6200	ZZ	VV	DDU	N	NR	2.06	1.35	28.17	0.4	0.5	34.7	1.12	14	16	26	0.6	35.5	2.9	0.032	
	35	11	0.6	8 900	3 450	11.2	26 000	17 000	30 000	6300	ZZ	VV	DDU	N	NR	2.06	1.35	33.17	0.4	0.5	39.7	1.12	14	16.5	31	0.6	40.5	2.9	0.052
12	21	5	0.3	2 110	1 040	15.3	32 000	20 000	38 000	6801	ZZ	VV	DD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.006	
	24	6	0.3	3 200	1 460	14.5	30 000	20 000	36 000	6901	ZZ	VV	DD	N ⁽³⁾	NR ⁽³⁾	1.05	0.8	22.8	0.2	0.2	26.8	0.7	14	14.5	22	0.3	27.5	1.5	0.010
	28	7	0.3	5 600	2 370	13.0	28 000	—	32 000	16001	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.019	
28	8	0.3	5 600	2 370	13.0	32 000	18 000	38 000	6001	ZZ	VV	DDU	N ⁽⁴⁾	NR ⁽⁴⁾	1.35	0.87	26.5	0.2	0.3	30.7	0.84	14	15.5	26	0.3	31.4	1.9	0.022	
	32	10	0.6	7 500	3 050	12.3	26 000	17 000	32 000	6201	ZZ	VV	DDU	N	NR	2.06	1.35	30.15	0.4	0.5	36.7	1.12	16	17	28	0.6	37.5	2.9	0.037
	37	12	1	10 700	4 200	11.1	24 000	16 000	28 000	6301	ZZ	VV	DDU	N	NR	2.06	1.35	34.77	0.4	0.5	41.3	1.12	17	18	32	1	42	2.9	0.060
15	24	5	0.3	2 280	1 260	15.8	28 000	17 000	34 000	6802	ZZ	VV	DD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.007	
	28	7	0.3	4 750	2 260	14.3	26 000	17 000	30 000	6902	ZZ	VV	DD	N ⁽³⁾	NR ⁽³⁾	1.30	0.95	26.7	0.25	0.3	30.8	0.85	17	17	26	0.3	31.5	1.8	0.015
	32	8	0.3	6 150	2 840	13.9	24 000	—	28 000	16002	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.027	
32	9	0.3	6 150	2 840	13.9	26 000	15 000	32 000	6002	ZZ	VV	DDU	N	NR	2.06	1.35	30.15	0.4	0.3	36.7	1.12	17	19	30	0.3	37.5	2.9	0.031	
	35	11	0.6	8 400	3 750	13.2	22 000	14 000	28 000	6202	ZZ	VV	DDU	N	NR	2.06	1.35	33.17	0.4	0.5	39.7	1.12	19	20.5	31	0.6	40.5	2.9	0.045
	42	13	1	12 600	5 450	12.3	19 000	13 000	24 000	6302	ZZ	VV	DDU	N	NR	2.06	1.35	39.75	0.4	0.5	46.3	1.12	20	22.5	37	1	47	2.9	0.083
17	26	5	0.3	2 890	1 570	15.7	26 000	15 000	30 000	6803	ZZ	VV	DD	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.007	
	30	7	0.3	5 050	2 550	14.7	24 000	15 000	28 000	6903	ZZ	VV	DDU	N ⁽³⁾	NR ⁽³⁾	1.30	0.95	28.7	0.25	0.3	32.8	0.85	19	19.5	28	0.3	33.5	1.8	0.017
	35	8	0.3	6 600	3 250	14.4	22 000	—	26 000	16003	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.033	
35	10	0.3	6 600	3 250	14.4	24 000	13 000	28 000	6003	ZZ	VV	DDU	N	NR	2.06	1.35	33.17	0.4	0.3	39.7	1.12	19	21.5	33	0.3	40.5	2.9	0.041	
	40	12	0.6	10 500	4 800	13.2	20 000	12 000	24 000	6203	ZZ	VV	DDU	N	NR	2.06	1.35	38.1	0.4	0.5	44.6	1.12	21	23.5	36	0.6	45.5	2.9	0.067
	47	14	1	15 000	6 650	12.4	17 000	11 000	20 000	6303	ZZ	VV	DDU	N	NR	2.46	1.35	44.6	0.4	0.5	52.7	1.12	22	25.5	42	1	53.5	3.3	0.113

- 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.
 - (4) Snap ring groove dimensions and snap ring dimensions do not conform to ISO464.

- 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.