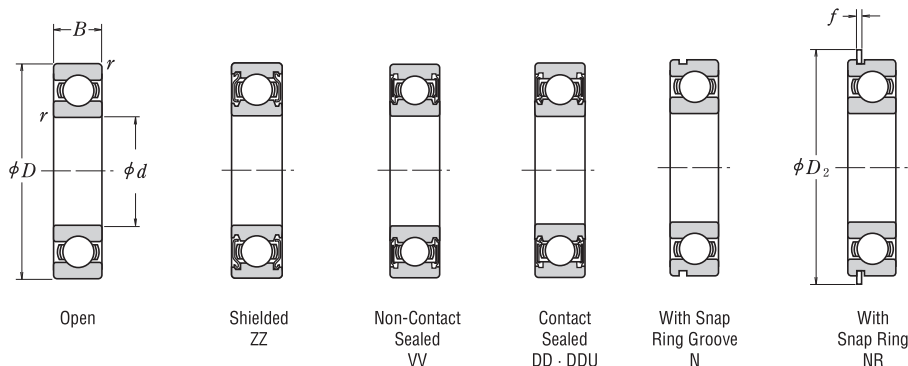


**SINGLE-ROW DEEP GROOVE BALL BEARINGS**

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	Limiting Speeds (min <sup>-1</sup> )			Bearing Designations	Snap Ring Groove Dimensions (1) (mm)					Snap Ring (1) Dimensions (mm)		Abutment and Fillet Dimensions (mm)					Mass (kg)												
	$d$	$D$		$B$	$r$ min.	$C_r$		$C_{0r}$	$f_0$	Grease	Oil	Open	Shielded	Sealed	With Snap Ring Groove	With Snap Ring	$a$ max.	$b$ min.	$D_1$ max.		$r_0$ max.	$r_N$ min.	$D_2$ max.	$f$ max.	$d_a$ (2) min.	$D_a$ (2) max.	$r_a$ max.	$D_x$ min.	$C_V$ max.	approx.		
10	19	5	0.3	1 890	840	14.8	34 000	24 000	40 000	6800 ZZ VV DD 6900 ZZ VV DD 6000 ZZ VV DDU	N(3) N(4)	NR(3) NR(4)	1.05	0.8	20.8	0.2	0.2	24.8	0.7	12	12	17	0.3	—	—	—	—	0.005				
	22	6	0.3	2 970	1 270	14.0	32 000	22 000	38 000				1.35	0.87	24.5	0.2	0.3	28.7	0.84	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				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.018		
30	9	0.6	5 600	2 390	13.2	28 000	18 000	34 000	6200 ZZ VV DDU 6300 ZZ VV DDU	N N	NR 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	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 6901 ZZ VV DD 16001 — — —	N(3) N(3)	NR(3) NR(3)	1.05	0.8	22.8	0.2	0.2	26.8	0.7	14	14	19	0.3	—	—	—	—	—	—	0.006		
	24	6	0.3	3 200	1 460	14.5	30 000	20 000	36 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.010			
	28	7	0.3	5 600	2 370	13.0	28 000	—	32 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.019		
28	8	0.3	5 600	2 370	13.0	32 000	18 000	38 000	6001 ZZ VV DDU 6201 ZZ VV DDU 6301 ZZ VV DDU	N(4) N N	NR(4) NR NR	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	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	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 6902 ZZ VV DD 16002 — — —	N(3) N(3)	NR(3) NR(3)	1.30	0.95	26.7	0.25	0.3	30.8	0.85	17	17	22	0.3	—	—	—	—	—	—	—	0.007	
	28	7	0.3	4 750	2 260	14.3	26 000	17 000	30 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.015			
	32	8	0.3	6 150	2 840	13.9	24 000	—	28 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.027		
32	9	0.3	6 150	2 840	13.9	26 000	15 000	32 000	6002 ZZ VV DDU 6202 ZZ VV DDU 6302 ZZ VV DDU	N N N	NR NR 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	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	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 6903 ZZ VV DD 16003 — — —	N(3) N(3)	NR(3) NR(3)	1.30	0.95	28.7	0.25	0.3	32.8	0.85	19	19	24	0.3	—	—	—	—	—	—	—	—	0.007
	30	7	0.3	5 050	2 550	14.7	24 000	15 000	28 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.017		
	35	8	0.3	6 600	3 250	14.4	22 000	—	26 000				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.033		
35	10	0.3	6 600	3 250	14.4	24 000	13 000	28 000	6003 ZZ VV DDU 6203 ZZ VV DDU 6303 ZZ VV DDU	N N N	NR NR 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	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	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.