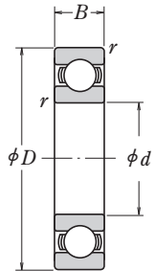
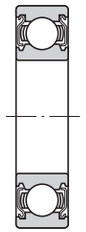
■SINGLE-ROW DEEP GROOVE BALL BEARINGS

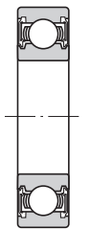
Bore Diameter 95 – 105 mm



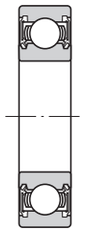
Open



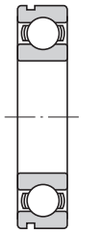
Shielded
ZZ



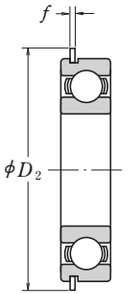
Non-Contact
Sealed
VV



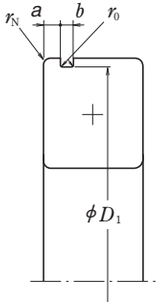
Contact
Sealed
DD · DDU

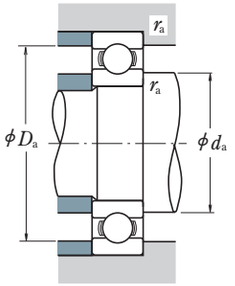


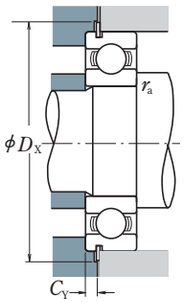
With Snap
Ring Groove
N



With
Snap Ring
NR







Dynamic Equivalent Load

$P = XF_r + YF_a$

$\frac{f_0F_a}{C_{0r}}$	e	$\frac{F_a}{F_r} \leqq e$		$\frac{F_a}{F_r} > e$	
		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

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

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

Boundary Dimensions (mm)				Basic Load Ratings (N)		Factor	Limiting Speeds (min⁻¹)			Bearing Designations				With Snap Ring Groove	With Snap Ring	Snap Ring Groove Dimensions (1) (mm)					Snap Ring (1) Dimensions (mm)		Abutment and Fillet Dimensions (mm)						Mass (kg)
							Grease		Oil																				
d	D	B	r min.	C_r	C_{0r}	f_0	Open Z · ZZ V · VV	DU DDU	Open Z	Open	Shielded	Sealed				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.	D_a(2) max.	r_a max.	D_x min.	C_Y max.	approx.
95	120	13	1	21 200	22 000	17.2	5 000	2 800	6 000	**6819**	**ZZ**	**VV**	**DD**	**N**	**NR**	2.10	1.3	117.6	0.4	0.5	125.7	1.12	100	101.5	115	1	127	2.9	0.297
	130	18	1.1	37 000	33 500	16.6	4 800	2 800	5 600	**6919**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.30	1.3	127.6	0.4	0.5	135.7	1.12	101.5	103.5	123.5	1	137	4.1	0.601
	145	16	1	47 000	42 000	16.4	4 500	—	5 300	**16019**	—	—	—	—	—	—	—	—	—	—	—	—	100	—	140	1	—	—	0.904
	145	24	1.5	66 500	54 000	15.8	5 300	2 600	6 000	**6019**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.71	3.1	140.23	0.6	0.5	154.7	2.82	103	108.5	137	1.5	157	6.1	1.23
	170	32	2.1	120 000	82 000	14.4	4 300	2 600	5 000	**6219**	**ZZ**	**VV**	**DDU**	**N**	**NR**	5.69	3.5	163.65	0.6	0.5	182.9	3.1	106	114	159	2	185	8.4	2.64
	200	45	3	168 000	119 000	13.3	3 400	2 400	4 300	**6319**	**ZZ**	**VV**	**DDU**	**N**	**NR**	5.69	3.5	193.65	0.6	0.5	212.9	3.1	108	123.5	187	2.5	215	8.4	5.76
100	125	13	1	21 500	23 000	17.3	4 800	2 800	5 600	**6820**	**ZZ**	**VV**	**DD**	**N**	**NR**	2.10	1.3	122.6	0.4	0.5	130.7	1.12	105	105.5	120	1	132	2.9	0.31
	140	20	1.1	47 000	42 000	16.4	4 500	2 600	5 300	**6920**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.30	1.9	137.6	0.6	0.5	145.7	1.7	106.5	111	133.5	1	147	4.7	0.828
	150	16	1	46 500	42 000	16.5	4 300	—	5 300	**16020**	—	—	—	—	—	—	—	—	—	—	—	—	105	—	145	1	—	—	0.945
	150	24	1.5	66 000	54 000	15.9	5 000	2 600	6 000	**6020**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.71	3.1	145.24	0.6	0.5	159.7	2.82	108	112.5	142	1.5	162	6.1	1.29
	180	34	2.1	134 000	93 000	14.4	4 000	2 400	4 800	**6220**	**ZZ**	**VV**	**DDU**	**N**	**NR**	5.69	3.5	173.66	0.6	0.5	192.9	3.1	111	121.5	169	2	195	8.4	3.17
	215	47	3	191 000	141 000	13.2	2 800	2 200	3 400	**6320**	**ZZ**	**VV**	**DDU**	—	—	—	—	—	—	—	—	—	113	133	202	2.5	—	—	7.04
105	130	13	1	21 800	23 900	17.4	4 800	2 600	5 600	**6821**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.10	1.3	127.6	0.4	0.5	135.7	1.12	110	110.5	125	1	137	2.9	0.324
	145	20	1.1	46 500	42 000	16.5	4 300	—	5 300	**6921**	**ZZ**	**VV**	—	**N**	**NR**	3.30	1.9	142.6	0.6	0.5	150.7	1.7	111.5	116	138.5	1	152	4.7	0.856
	160	18	1	57 000	50 500	16.3	4 000	—	4 800	**16021**	—	—	—	—	—	—	—	—	—	—	—	—	110	—	155	1	—	—	1.24
	160	26	2	79 500	66 000	15.8	4 500	2 400	5 600	**6021**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.71	3.1	155.22	0.6	0.5	169.7	2.82	114	120	151	2	172	6.1	1.58
	190	36	2.1	146 000	105 000	14.4	3 800	2 200	4 500	**6221**	**ZZ**	**VV**	**DDU**	**N**	**NR**	5.69	3.5	183.64	0.6	0.5	202.9	3.1	116	127.5	179	2	205	8.4	3.79
	225	49	3	202 000	154 000	13.2	2 600	2 000	3 200	**6321**	**ZZ**	—	**DDU**	—	—	—	—	—	—	—	—	—	118	138	212	2.5	—	—	8.09

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.

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.
3. Please consult NSK about the snap ring groove dimensions of Dimension Series 18 and 19 sealed and shielded bearings when the diameter is 50 mm or more.