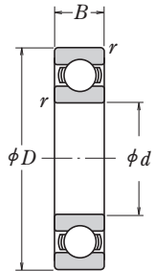
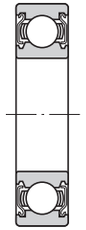
■SINGLE-ROW DEEP GROOVE BALL BEARINGS

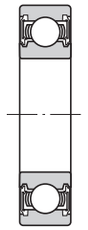
Bore Diameter 10 – 17 mm



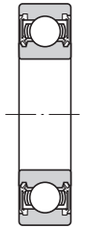
Open



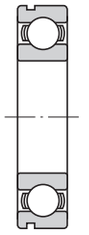
Shielded
ZZ



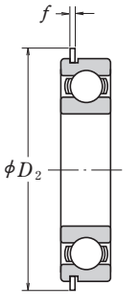
Non-Contact
Sealed
VV



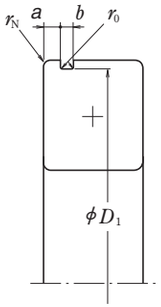
Contact
Sealed
DD · DDU

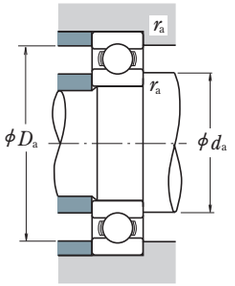


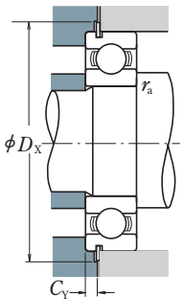
With Snap
Ring Groove
N



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.
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**	—	—	—	—	—	—	—	—	—	14	14	19	0.3	—	—	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**	—	—	—	—	—	—	—	—	—	—	—	—	14	—	26	0.3	—	—	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**	—	—	—	—	—	—	—	—	—	17	17	22	0.3	—	—	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**	—	—	—	—	—	—	—	—	—	—	—	—	17	—	30	0.3	—	—	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**	—	—	—	—	—	—	—	—	—	19	19	24	0.3	—	—	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**	—	—	—	—	—	—	—	—	—	—	—	—	19	—	33	0.3	—	—	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.

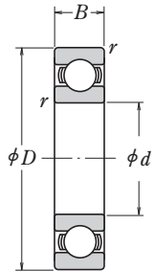
(4) Snap ring groove dimensions and snap ring dimensions do not conform to ISO464.

Remarks 1. Diameter Series 7 (extra-thin wall) bearings are also available; please contact NSK for details.

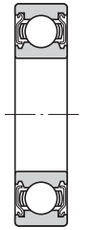
2. When using bearings with rotating outer rings, contact NSK if they are sealed, shielded, or have snap rings.

■SINGLE-ROW DEEP GROOVE BALL BEARINGS

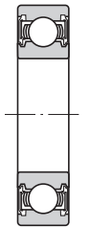
Bore Diameter 32 – 45 mm



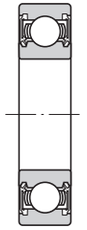
Open



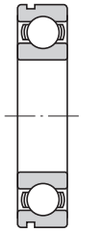
Shielded
ZZ



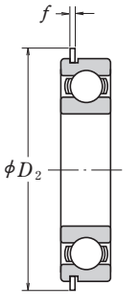
Non-Contact
Sealed
VV



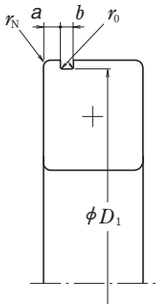
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Sealed
DD · DDU

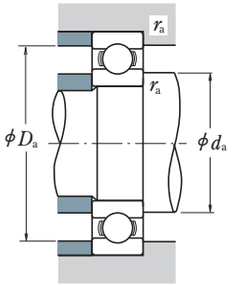


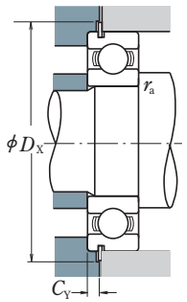
With Snap
Ring Groove
N



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.
32	58	13	1	16 600	9 150	14.5	12 000	7 500	14 000	**60/32**	**ZZ**	**VV**	**DDU**	**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
	65	17	1	22 800	11 600	13.6	10 000	7 100	12 000	**62/32**	**ZZ**	**VV**	**DDU**	**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
	75	20	1.1	33 000	17 000	13.2	9 000	6 300	11 000	**63/32**	**ZZ**	**VV**	**DDU**	**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
35	47	7	0.3	5 400	4 100	16.7	14 000	7 500	16 000	**6807**	**ZZ**	**VV**	**DD**	**N**	**NR**	1.30	0.95	45.7	0.25	0.3	49.8	0.85	37	37	45	0.3	50.5	1.8	0.027
	55	10	0.6	11 600	7 250	15.5	12 000	7 500	15 000	**6907**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.70	0.95	53.7	0.25	0.5	57.8	0.85	39	39	51	0.6	58.5	2.3	0.075
	62	9	0.3	12 800	8 200	15.6	11 000	—	13 000	**16007**	—	—	—	—	—	—	—	—	—	—	—	—	37	—	60	0.3	—	—	0.107
	62	14	1	17 600	10 300	14.8	13 000	6 700	15 000	**6007**	**ZZ**	**VV**	**DDU**	**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
	72	17	1.1	28 200	15 300	13.8	11 000	6 300	13 000	**6207**	**ZZ**	**VV**	**DDU**	**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
	80	21	1.5	36 500	19 200	13.2	10 000	6 000	12 000	**6307**	**ZZ**	**VV**	**DDU**	**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
40	52	7	0.3	7 000	5 550	17.0	12 000	6 700	14 000	**6808**	**ZZ**	**VV**	**DD**	**N**	**NR**	1.30	0.95	50.7	0.25	0.3	54.8	0.85	42	42	50	0.3	55.5	1.8	0.031
	62	12	0.6	15 000	10 000	15.7	11 000	6 300	13 000	**6908**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.70	0.95	60.7	0.25	0.5	64.8	0.85	44	46	58	0.6	65.5	2.3	0.112
	68	9	0.3	13 900	9 650	16.0	10 000	—	12 000	**16008**	—	—	—	—	—	—	—	—	—	—	—	—	42	—	66	0.3	—	—	0.13
	68	15	1	18 400	11 500	15.3	12 000	6 000	14 000	**6008**	**ZZ**	**VV**	**DDU**	**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
	80	18	1.1	32 000	17 900	14.0	9 500	5 600	12 000	**6208**	**ZZ**	**VV**	**DDU**	**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
	90	23	1.5	45 000	24 000	13.2	9 000	5 300	11 000	**6308**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.28	2.7	86.79	0.6	0.5	96.5	2.46	48	53	82	1.5	98	5.4	0.636
45	58	7	0.3	7 250	6 150	17.2	11 000	6 000	13 000	**6809**	**ZZ**	**VV**	**DD**	**N**	**NR**	1.30	0.95	56.7	0.25	0.3	60.8	0.85	47	47.5	56	0.3	61.5	1.8	0.038
	68	12	0.6	15 500	10 900	15.9	9 500	5 600	12 000	**6909**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.70	0.95	66.7	0.25	0.3(3)	70.8	0.85	49	50	64	0.6	72	2.3	0.126
	75	10	0.6	16 400	11 400	15.9	9 000	—	11 000	**16009**	—	—	—	—	—	—	—	—	—	—	—	—	49	—	71	0.6	—	—	0.167
	75	16	1	23 000	15 200	15.3	10 000	5 300	12 000	**6009**	**ZZ**	**VV**	**DDU**	**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
	85	19	1.1	34 500	20 400	14.4	9 000	5 300	11 000	**6209**	**ZZ**	**VV**	**DDU**	**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
	100	25	1.5	58 500	32 000	13.1	7 500	4 800	9 500	**6309**	**ZZ**	**VV**	**DDU**	**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

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.

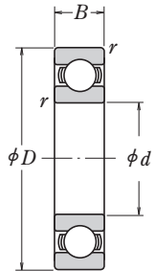
(3) Does not conform to ISO464.

Remarks 1. Diameter Series 7 (extra-thin wall) bearings are also available; please contact NSK for details.

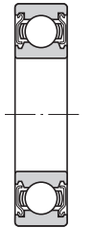
2. When using bearings with rotating outer rings, contact NSK if they are sealed, shielded, or have snap rings.

SINGLE-ROW DEEP GROOVE BALL BEARINGS

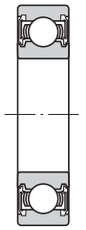
Bore Diameter 50 – 60 mm



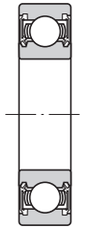
Open



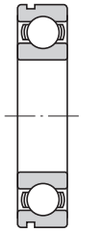
Shielded
ZZ



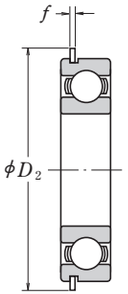
Non-Contact
Sealed
VV



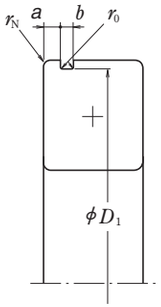
Contact
Sealed
DD · DDU

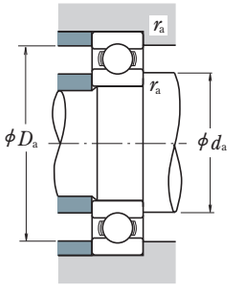


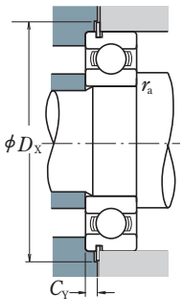
With Snap
Ring Groove
N



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.
50	65	7	0.3	7 050	6 200	17.2	9 500	5 300	11 000	**6810**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.30	0.95	63.7	0.25	0.3	67.8	0.85	52	52.5	63	0.3	68.5	1.8	0.050
	72	12	0.6	16 000	11 700	16.1	9 000	5 300	11 000	**6910**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.70	0.95	70.7	0.25	0.5	74.8	0.85	54	55	68	0.6	76	2.3	0.135
	80	10	0.6	17 000	12 400	16.1	8 500	—	10 000	**16010**	—	—	—	—	—	—	—	—	—	—	—	—	54	—	76	0.6	—	—	0.175
	80	16	1	24 000	16 600	15.6	9 500	4 800	11 000	**6010**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.49	1.9	76.81	0.6	0.5	86.6	1.7	55	58.5	75	1	88	3.8	0.261
	90	20	1.1	38 500	23 200	14.4	8 000	4 800	10 000	**6210**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.28	2.7	86.79	0.6	0.5	96.5	2.46	56.5	60	83.5	1	98	5.4	0.459
	110	27	2	68 000	38 500	13.2	7 100	4 300	8 500	**6310**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.28	2.7	106.81	0.6	0.5	116.6	2.46	59	68	101	2	118	5.4	1.06
55	72	9	0.3	9 700	8 500	17.0	8 500	4 800	10 000	**6811**	**ZZ**	**VV**	**DDU**	**N**	**NR**	1.70	0.95	70.7	0.25	0.3	74.8	0.85	57	59	70	0.3	76	2.3	0.081
	80	13	1	17 600	13 300	16.2	8 000	4 500	9 500	**6911**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.10	1.3	77.9	0.4	0.5	84.4	1.12	60	61.5	75	1	86	2.9	0.189
	90	11	0.6	21 400	16 300	16.2	7 500	—	9 000	**16011**	—	—	—	—	—	—	—	—	—	—	—	—	59	—	86	0.6	—	—	0.257
	90	18	1.1	31 000	21 200	15.3	8 500	4 500	10 000	**6011**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.87	2.7	86.79	0.6	0.5	96.5	2.46	61.5	64	83.5	1	98	5	0.381
	100	21	1.5	47 500	29 300	14.3	7 500	4 300	9 000	**6211**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.28	2.7	96.8	0.6	0.5	106.5	2.46	63	66.5	92	1.5	108	5.4	0.619
	120	29	2	78 500	44 500	13.1	6 700	4 000	8 000	**6311**	**ZZ**	**VV**	**DDU**	**N**	**NR**	4.06	3.1	115.21	0.6	0.5	129.7	2.82	64	72.5	111	2	131.5	6.5	1.37
60	78	10	0.3	12 600	10 900	16.9	8 000	4 500	9 500	**6812**	**ZZ**	**VV**	**DD**	**N**	**NR**	1.70	1.3	76.2	0.4	0.3	82.7	1.12	62	64	76	0.3	84	2.5	0.103
	85	13	1	21 400	16 300	16.2	7 500	4 300	9 000	**6912**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.10	1.3	82.9	0.4	0.5	89.4	1.12	65	66	80	1	91	2.9	0.192
	95	11	0.6	22 000	17 500	16.3	7 100	—	8 500	**16012**	—	—	—	—	—	—	—	—	—	—	—	—	64	—	91	0.6	—	—	0.281
	95	18	1.1	32 500	23 200	15.6	8 000	4 000	9 500	**6012**	**ZZ**	**VV**	**DDU**	**N**	**NR**	2.87	2.7	91.82	0.6	0.5	101.6	2.46	66.5	69	88.5	1	103	5	0.412
	110	22	1.5	57 500	36 000	14.3	6 700	3 800	8 000	**6212**	**ZZ**	**VV**	**DDU**	**N**	**NR**	3.28	2.7	106.81	0.6	0.5	116.6	2.46	68	74.5	102	1.5	118	5.4	0.783
	130	31	2.1	90 000	52 000	13.1	6 000	3 600	7 100	**6312**	**ZZ**	**VV**	**DDU**	**N**	**NR**	4.06	3.1	125.22	0.6	0.5	139.7	2.82	71	79	119	2	141.5	6.5	1.72

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.