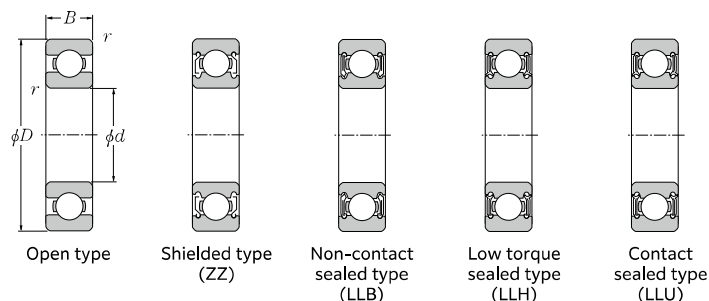


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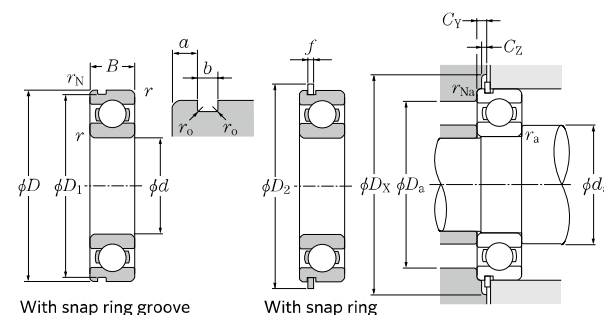


d 40 ~ 60mm

Boundary dimensions					Basic load rating		Fatigue	Factor	Allowable speed					Bearing number				
mm					dynamic	static	load		min ⁻¹									
					kN	kN	limit		Grease	Oil								
									Open type,	Open type,				Open type	Shielded or sealed type ²⁾	(See drawings)		
<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i> _{s min} ²⁾	<i>r</i> _{NS} Min.	<i>C</i> _r	<i>C</i> _{0r}	<i>C</i> _u	<i>f</i> ₀	Z, LLB	Z, LB	LLH	LLU						
											LH	LU						
40	52	7	0.3	0.3	5.65	4.40	0.291	16.3	12 000	14 000	8 000	6 700	6808JR	ZZ	LLB	LLH	LLU	
	62	12	0.6	0.5	13.5	8.90	0.645	15.8	11 000	13 000	7 500	6 300	6908	ZZ	LLB	LLH	LLU	
	68	9	0.3	—	14.0	9.65	0.685	16.0	10 000	12 000	—	—	16008	—	—	—	—	
	68	15	1	0.5	18.6	11.5	0.890	15.2	10 000	12 000	7 300	6 100	6008	ZZ	LLB	LLH	LLU	
	80	18	1.1	0.5	32.5	17.8	1.24	14.0	8 700	10 000	6 700	5 600	6208	ZZ	LLB	LLH	LLU	
	90	23	1.5	0.5	45.0	24.0	1.83	13.2	7 800	9 200	6 400	5 300	6308	ZZ	LLB	LLH	LLU	
	110	27	2	—	70.5	36.5	2.85	12.3	7 000	8 200	—	—	6408	ZZ	—	—	—	
45	58	7	0.3	0.3	5.95	4.95	0.325	16.1	11 000	12 000	—	5 900	6809JR	ZZ	LLB	—	LLU	
	68	12	0.6	0.5	14.5	10.4	0.730	16.1	9 800	12 000	—	5 600	6909	ZZ	LLB	—	LLU	
	75	10	0.6	—	14.3	10.5	0.725	16.2	9 200	11 000	—	—	16009	—	—	—	—	
	75	16	1	0.5	23.2	15.1	1.16	15.3	9 200	11 000	6 500	5 400	6009	ZZ	LLB	LLH	LLU	
	85	19	1.1	0.5	36.0	20.4	1.60	14.1	7 800	9 200	6 200	5 200	6209	ZZ	LLB	LLH	LLU	
	100	25	1.5	0.5	58.5	32.0	2.50	13.1	7 000	8 200	5 600	4 700	6309	ZZ	LLB	LLH	LLU	
	120	29	2	—	85.5	45.0	3.50	12.1	6 300	7 400	—	—	6409	ZZ	—	—	—	
50	65	7	0.3	0.3	7.30	6.10	0.405	16.1	9 600	11 000	—	5 300	6810JR	ZZ	LLB	—	LLU	
	72	12	0.6	0.5	14.9	11.2	0.765	16.3	8 900	11 000	6 100	5 100	6910	ZZ	LLB	LLH	LLU	
	80	10	0.6	—	14.7	11.3	0.760	16.4	8 400	9 800	—	—	16010	—	—	—	—	
	80	16	1	0.5	24.2	16.6	1.24	15.5	8 400	9 800	6 000	5 000	6010	ZZ	LLB	LLH	LLU	
	90	20	1.1	0.5	39.0	23.2	1.82	14.4	7 100	8 300	5 700	4 700	6210	ZZ	LLB	LLH	LLU	
	110	27	2	0.5	68.5	38.5	2.99	13.2	6 400	7 500	5 000	4 200	6310	ZZ	LLB	LLH	LLU	
	130	31	2.1	—	92.0	49.5	3.85	12.5	5 700	6 700	—	—	6410	ZZ	—	—	—	
55	72	9	0.3	0.3	9.75	8.10	0.540	16.2	8 700	10 000	—	4 800	6811JR	ZZ	LLB	—	LLU	
	80	13	1	0.5	17.7	13.3	0.915	16.2	8 200	9 600	5 500	4 600	6911	ZZ	LLB	LLH	LLU	
	90	11	0.6	—	20.6	15.3	1.06	16.2	7 700	9 000	—	—	16011	—	—	—	—	
	90	18	1.1	0.5	31.5	21.2	1.62	15.3	7 700	9 000	—	4 500	6011	ZZ	LLB	—	LLU	
	100	21	1.5	0.5	48.0	29.2	2.29	14.3	6 400	7 600	—	4 300	6211	ZZ	LLB	—	LLU	
	120	29	2	0.5	79.5	45.0	3.50	13.2	5 800	6 800	—	3 900	6311	ZZ	LLB	—	LLU	
	140	33	2.1	—	98.5	54.0	4.20	12.7	5 200	6 100	—	—	6411	ZZ	—	—	—	
60	78	10	0.3	0.3	12.7	10.6	0.705	16.3	8 000	9 400	—	4 400	6812	ZZ	LLB	—	LLU	
	85	13	1	0.5	18.2	14.3	0.965	16.4	7 600	8 900	—	4 300	6912	ZZ	LLB	—	LLU	
	95	11	0.6	—	22.1	17.5	1.20	16.3	7 000	8 300	—	—	16012	—	—	—	—	
	95	18	1.1	0.5	32.5	23.2	1.73	15.6	7 000	8 300	—	4 100	6012	ZZ	LLB	—	LLU	
	110	22	1.5	0.5	58.0	36.0	2.83	14.3	6 000	7 000	4 500	3 800	6212	ZZ	LLB	LLH	LLU	
	130	31	2.1	0.5	90.5	52.0	4.10	13.2	5 400	6 300	—	3 600	6312	ZZ	LLB	—	LLU	
	150	35	2.1	—	113	64.5	4.90	12.6	4 800	5 700	—	—	6412	ZZ	—	—	—	

1) Smallest allowable dimension for chamfer dimension r . 2) This bearing number is for double sealed and double shielded type bearings, but single sealed and single shielded type are also available. B-26

-NTN



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

$\frac{f_0 \cdot F_a}{C_{0r}}$	e	$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0.172	0.19				2.30
0.345	0.22				1.99
0.689	0.26				1.71
1.03	0.28				1.55
1.38	0.30	1	0	0.56	1.45
2.07	0.34				1.31
3.45	0.38				1.15
5.17	0.42				1.04
6.89	0.44				1.00

Static equivalent radial load

$$P_{0r} = 0.6F_r + 0.5F_a$$

When $P_{0r} < F_r$ use $P_{0r} = F_r$.

Bearing number		Snap ring groove dimensions				Snap ring dimensions		Installation-related dimensions								Mass ⁵⁾	
		mm				mm		mm								kg	
Groove / Snap ring ¹⁾ (See drawings)		D ₁ Max.	a Max.	b Min.	r _o Max.	D ₂ Max.	f Max.	Min.	d _a Max. ⁴⁾	D _a Max.	D _X (approx.)	C _Y Max.	C _Z Min.	r _{as} Max.	r _{Nas} Max.	(approx.)	
N	NR	50.7	1.3	0.95	0.25	54.8	0.85	42	43	50	55.5	1.9	0.9	0.3	0.3	0.033	
N	NR	60.7	1.7	0.95	0.25	64.8	0.85	44	45	58	65.5	2.3	0.9	0.6	0.5	0.11	
—	—	—	—	—	—	—	—	42	—	66	—	—	—	0.3	—	0.125	
N	NR	64.82	2.49	1.9	0.6	74.6	1.7	45	47	63	76	3.8	1.7	1	0.5	0.19	
N	NR	76.81	3.28	1.9	0.6	86.6	1.7	46.5	51	73.5	88	4.6	1.7	1	0.5	0.366	
N	NR	86.79	3.28	2.7	0.6	96.5	2.46	48	54	82	98	5.4	2.5	1.5	0.5	0.63	
—	—	—	—	—	—	—	—	49	61.5	101	—	—	—	2.0	—	1.23	
N	NR	56.7	1.3	0.95	0.25	60.8	0.85	47	48	56	61.5	1.9	0.9	0.3	0.3	0.04	
N	NR	66.7	1.7	0.95	0.25	70.8	0.85	49	51	64	72	2.3	0.9	0.6	0.5	0.128	
—	—	—	—	—	—	—	—	49	—	71	—	—	—	0.6	—	0.171	
N	NR	71.83	2.49	1.9	0.6	81.6	1.7	50	52.5	70	83	3.8	1.7	1	0.5	0.237	
N	NR	81.81	3.28	1.9	0.6	91.6	1.7	51.5	55.5	78.5	93	4.6	1.7	1	0.5	0.398	
N	NR	96.8	3.28	2.7	0.6	106.5	2.46	53	61.5	92	108	5.4	2.5	1.5	0.5	0.814	
—	—	—	—	—	—	—	—	54	66.5	111	—	—	—	2	—	1.53	
N	NR	63.7	1.3	0.95	0.25	67.8	0.85	52	54	63	68.5	1.9	0.9	0.3	0.3	0.052	
N	NR	70.7	1.7	0.95	0.25	74.8	0.85	54	55.5	68	76	2.3	0.9	0.6	0.5	0.132	
—	—	—	—	—	—	—	—	54	—	76	—	—	—	0.6	—	0.18	
N	NR	76.81	2.49	1.9	0.6	86.6	1.7	55	57.5	75	88	3.8	1.7	1	0.5	0.261	
N	NR	86.79	3.28	2.7	0.6	96.5	2.46	56.5	60	83.5	98	5.4	2.5	1	0.5	0.454	
N	NR	106.81	3.28	2.7	0.6	116.6	2.46	59	68.5	101	118	5.4	2.5	2	0.5	1.07	
—	—	—	—	—	—	—	—	61	73.5	119	—	—	—	2	—	1.88	
N	NR	70.7	1.7	0.95	0.25	74.8	0.85	57	59	70	76	2.3	0.9	0.3	0.3	0.083	
N	NR	77.9	2.1	1.3	0.4	84.4	1.12	60	61.5	75	86	2.9	1.2	1	0.5	0.18	
—	—	—	—	—	—	—	—	59	—	86	—	—	—	0.6	—	0.258	
N	NR	86.79	2.87	2.7	0.6	96.5	2.46	61.5	64	83.5	98	5	2.5	1	0.5	0.388	
N	NR	96.8	3.28	2.7	0.6	106.5	2.46	63	67	92	108	5.4	2.5	1.5	0.5	0.601	
N	NR	115.21	4.06	3.1	0.6	129.7	2.82	64	74	111	131.5	6.5	2.9	2	0.5	1.37	
—	—	—	—	—	—	—	—	66	80	129	—	—	—	2	—	2.29	
N	NR	76.2	1.7	1.3	0.4	82.7	1.12	62	64.5	76	84	2.5	1.2	0.3	0.3	0.106	
N	NR	82.9	2.1	1.3	0.4	89.4	1.12	65	66.5	80	91	2.9	1.2	1	0.5	0.193	
—	—	—	—	—	—	—	—	64	—	91	—	—	—	0.6	—	0.283	
N	NR	91.82	2.87	2.7	0.6	101.6	2.46	66.5	69	88.5	103	5	2.5	1	0.5	0.414	
N	NR	106.81	3.28	2.7	0.6	116.6	2.46	68	75	102	118	5.4	2.5	1.5	0.5	0.783	
N	NR	125.22	4.06	3.1	0.6	139.7	2.82	71	80.5	119	141.5	6.5	2.9	2	0.5	1.73	
—	—	—	—	—	—	—	—	71	86	139	—	—	—	2	—	2.77	

3) Sealed and shielded bearings are also available. 4) This dimension applies to sealed and shielded bearings.

5) Does not include bearings with snap rings.

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