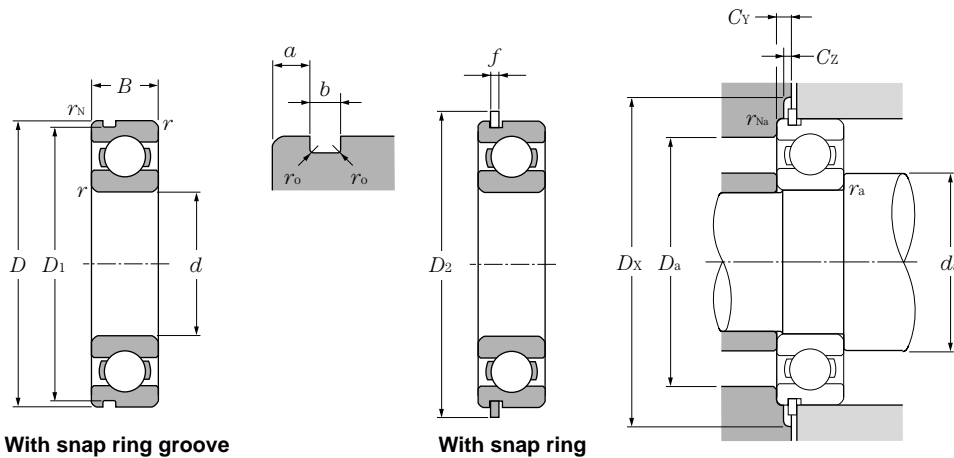


**d 90 ~ 120mm**

d	Boundary dimensions				Basic load ratings				Limiting speeds			Bearing numbers			
	mm				dynamic		static		rpm			open type	sealed type	non-contact type	contact type
	D	B	r <sub>s min</sub> <sup>①</sup>	r <sub>NS min</sub>	C <sub>r</sub>	C <sub>or</sub>	C <sub>r</sub>	C <sub>or</sub>	grease open type ZZ	oil open type LLB	LLU				
90	115	13	1	0.5	19.0	19.7	1,940	2,010	5,400	6,300	3,000	6818	ZZ	LLB	LLU
	125	18	1.1	0.5	33.0	31.5	3,350	3,200	5,100	6,000	2,900	6918	ZZ	LLB	LLU
	140	16	1		33.5	33.5	3,400	3,400	4,700	5,600		16018			
	140	24	1.5	0.5	58.0	49.5	5,950	5,050	4,700	5,600	2,800	6018	ZZ	LLB	LLU
	160	30	2	0.5	96.0	71.5	9,800	7,300	4,000	4,700	2,600	6218	ZZ	LLB	LLU
	190	43	3	0.5	143	107	14,500	10,900	3,600	4,200	2,400	6318	ZZ	LLB	LLU
95	120	13	1	0.5	19.3	20.5	1,970	2,090	5,000	5,900	2,800	6819	ZZ	LLB	LLU
	130	18	1.1	0.5	33.5	33.5	3,450	3,400	4,800	5,700	2,800	6919	ZZ	LLB	LLU
	145	16	1		34.5	35.0	3,500	3,550	4,500	5,300		16019			
	145	24	1.5	0.5	60.5	54.0	6,150	5,500	4,500	5,300	2,600	6019	ZZ	LLB	LLU
	170	32	2.1	0.5	109	82.0	11,100	8,350	3,700	4,400	2,500	6219	ZZ	LLB	LLU
	200	45	3	0.5	153	119	15,600	12,100	3,300	3,900	2,300	6319	ZZ		LLU
100	125	13	1	0.5	19.6	21.2	2,000	2,160	4,800	5,600	2,700	6820	ZZ	LLB	LLU
	140	20	1.1	0.5	41.0	39.5	4,200	4,050	4,500	5,300	2,600	6920	ZZ	LLB	LLU
	150	16	1		35.0	36.5	3,600	3,750	4,200	5,000		16020			
	150	24	1.5	0.5	60.0	54.0	6,150	5,500	4,200	5,000	2,600	6020	ZZ	LLB	LLU
	180	34	2.1	0.5	122	93.0	12,500	9,450	3,500	4,200	2,300	6220	ZZ	LLB	LLU
	215	47	3		173	141	17,600	14,400	3,200	3,700	2,200	6320	ZZ		LLU
105	130	13	1	0.5	19.8	22.0	2,020	2,240	4,600	5,400		6821			
	145	20	1.1	0.5	42.5	42.0	4,300	4,300	4,300	5,100	2,500	6921	ZZ	LLB	LLU
	160	18	1		52.0	50.5	5,300	5,150	4,000	4,700		16021			
	160	26	2	0.5	72.5	65.5	7,400	6,700	4,000	4,700	2,400	6021	ZZ	LLB	LLU
	190	36	2.1	0.5	133	105	13,600	10,700	3,400	4,000	2,300	6221	ZZ		LLU
	225	49	3		184	153	18,700	15,700	3,000	3,600	2,100	6321	ZZ		LLU
110	140	16	1	0.5	24.9	28.2	2,540	2,880	4,300	5,100		6822			
	150	20	1.1	0.5	43.5	44.5	4,450	4,550	4,100	4,800	2,400	6922	ZZ	LLB	LLU
	170	19	1		57.5	56.5	5,850	5,800	3,800	4,500		16022			
	170	28	2	0.5	82.0	73.0	8,350	7,450	3,800	4,500	2,300	6022	ZZ	LLB	LLU
	200	38	2.1	0.5	144	117	14,700	11,900	3,200	3,800	2,200	6222	ZZ		LLU
	240	50	3		205	179	20,900	18,300	2,900	3,400	1,900	6322	ZZ		LLU
120	150	16	1	0.5	28.9	33.0	2,950	3,350	4,000	4,700		6824			
	165	22	1.1	0.5	53.0	54.0	5,400	5,500	3,800	4,400		6924			
	180	19	1		63.0	63.5	6,450	6,450	3,500	4,100		16024			
	180	28	2	0.5	85.0	79.5	8,650	8,100	3,500	4,100	2,100	6024	ZZ	LLB	LLU

① Smallest allowable dimension for chamfer dimension r.



With snap ring groove

With snap ring

### Equivalent bearing load

#### dynamic

$$P_r = X F_r + Y F_a$$

$\frac{F_a}{C_{or}}$	$e$	$\frac{F_a}{F_r}$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0.010	0.18	1	0	0.56	2.46
0.020	0.20				2.14
0.040	0.24				1.83
0.070	0.27				1.61
0.10	0.29				1.48
0.15	0.32				1.35
0.20	0.35				1.25
0.30	0.38				1.13
0.40	0.41				1.05
0.50	0.44				1.00

#### static

$$P_{or} = 0.6 F_r + 0.5 F_a$$

When  $P_{or} < F_r$  use  $P_{or} = F_r$

Bearing numbers		Snap ring groove dimensions mm				Snap ring dimensions mm		Abutment and fillet dimensions mm								Mass <sup>④</sup> kg
snap ring groove	snap ring	$D_1$ max	$a$ max	$b$ min	$r_0$ max	$D_2$ max	$f$ max	$d_a$ min	$d_a$ max <sup>③</sup>	$D_a$ max	$D_X$ (approx.)	$C_Y$ max	$C_Z$ min	$r_{as}$ max	$r_{Na}$ max	(approx.)
N	NR	112.6	2.1	1.3	0.4	120.7	1.12	95	96	110	122	2.9	1.2	1	0.5	0.285
N	NR	122.6	3.3	1.3	0.4	130.7	1.12	96.5	99	118.5	132	4.1	1.2	1	0.5	0.554
								95	135					1		0.848
N	NR	135.23	3.71	3.1	0.6	149.7	2.82	98	102	132	152	6.1	2.9	1.5	0.5	1.02
N	NR	155.22	4.9	3.1	0.6	169.7	2.82	99	109	151	172	7.3	2.9	2	0.5	2.15
N	NR	183.64	5.69	3.5	0.6	202.9	3.1	103	118	177	205	8.4	3.1	2.5	0.5	4.91
N	NR	117.6	2.1	1.3	0.4	125.7	1.12	100	101	115	127	2.9	1.2	1	0.5	0.3
N	NR	127.6	3.3	1.3	0.4	135.7	1.12	101.5	104	123.5	137	4.1	1.2	1	0.5	0.579
								100	140					1		0.885
N	NR	140.23	3.71	3.1	0.6	154.7	2.82	103	109	137	157	6.1	2.9	1.5	0.5	1.08
N	NR	163.65	5.69	3.5	0.6	182.9	3.1	106	116	159	185	8.4	3.1	2	0.5	2.62
N	NR	193.65	5.69	3.5	0.6	212.9	3.1	108	125	187	215	8.4	3.1	2.5	0.5	5.67
N	NR	122.6	2.1	1.3	0.4	130.7	1.12	105	106	120	132	2.9	1.2	1	0.5	0.313
N	NR	137.6	3.3	1.9	0.6	145.7	1.7	106.5	110	133.5	147	4.7	1.7	1	0.5	0.785
								105	145					1		0.91
N	NR	145.24	3.71	3.1	0.6	159.7	2.82	108	110	142	162	6.1	2.9	1.5	0.5	1.15
N	NR	173.66	5.69	3.5	0.6	192.9	3.1	111	122	169	195	8.4	3.1	2	0.5	3.14
								113	133	202				2.5		7
N	NR	127.6	2.1	1.3	0.4	135.7	1.12	110		125	137	2.9	1.2	1	0.5	0.33
N	NR	142.6	3.3	1.9	0.6	150.7	1.7	111.5	115	138.5	152	4.7	1.7	1	0.5	0.816
								110	155					1		1.2
N	NR	155.22	3.71	3.1	0.6	169.7	2.82	114	119	151	172	6.1	2.9	2	0.5	1.59
N	NR	183.64	5.69	3.5	0.6	202.9	3.1	116	125	179	205	8.4	3.1	2	0.5	3.7
								118	134	212				2.5		8.05
N	NR	137.6	2.5	1.9	0.6	145.7	1.7	115		135	147	3.9	1.7	1	0.5	0.515
N	NR	147.6	3.3	1.9	0.6	155.7	1.7	116.5	120	143.5	157	4.7	1.7	1	0.5	0.849
								115	165					1		1.46
N	NR	163.65	3.71	3.5	0.6	182.9	3.1	119	126	161	185	6.4	3.1	2	0.5	1.96
N	NR	193.65	5.69	3.5	0.6	212.9	3.1	121	132	189	215	8.4	3.1	2	0.5	4.36
								123	149	227				2.5		9.54
N	NR	147.6	2.5	1.9	0.6	155.7	1.7	125		145	157	3.9	1.7	1	0.5	0.555
N	NR	161.8	3.7	1.9	0.6	171.5	1.7	126.5		158.5	173	5.1	1.7	1	0.5	1.15
								125		175				1		1.56
N	NR	173.66	3.71	3.5	0.6	192.9	3.1	129	136	171	195	6.4	3.1	2	0.5	2.07

② Sealed and shielded bearings are also available.

③ This dimension applies to sealed and shielded bearings.

④ Does not include bearings with snap rings.