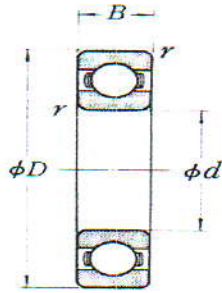


Extra Small Ball Bearings-Miniature Ball Bearings



Open Type



Shielded Type
ZZ



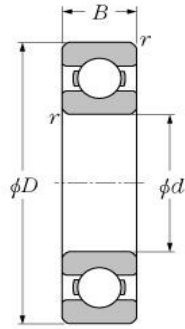
Sealed Type
2RS

Dimension table . Dimensions in mm

d	D	B	B ₁	r (min)	r ₁ (min)	Basic Load Ratings (N)		Limiting Speeds (rpm)		Bearing Numbers	shielded	sealed	Mass (g) Approx
						C _r	C _{or}	Grease	Oil				
7	11	2.5	3	0.15	0.1	432	191	40 850	47 500	677	ZZ	-	0.71
	14	3.5	5	0.15	0.15	1 111	485	38 000	42 750	687	ZZ	-	2.92
	17	5	5	0.3	0.3	1 529	675	34 200	40 850	697	ZZ	-	5.01
	19	6	6	0.3	0.3	2 223	841	34 200	40 850	607	ZZ	2RS	7.51
	22	7	7	0.3	0.3	3 135	1 301	28 500	34 200	627	ZZ	2RS	12.8
	26	9	9	0.3	0.3	3 847	1 539	26 600	32 300	637	ZZ	-	25
8	16	4	5	0.2	0.2	1 197	561	34 200	40 850	688	ZZ	2RS	4.0
	19	6	6	0.3	0.3	2 128	865	34 200	40 850	698	ZZ	2RS	7.03
	22	7	7	0.3	0.3	3 135	1 301	32 300	38 000	608	ZZ	2RS	12.2
	24	8	8	0.3	0.3	3 182	1 358	26 600	32 300	628	ZZ	2RS	17.2
	28	9	9	0.3	0.3	4 322	1 871	26 600	32 300	638	ZZ	-	28.6
9	17	4	5	0.2	0.2	1 263	632	34 200	40 850	689	ZZ	-	4.35
	20	6	6	0.3	0.3	1 634	798	32 300	38 000	699	ZZ	2RS	8.0
	24	7	7	0.3	0.3	3 182	1 358	30 400	36 100	609	ZZ	2RS	14.5
	26	8	8	0.3	0.3	4 322	1 871	26 600	32 300	629	ZZ	2RS	19.2
	30	10	10	0.6	0.6	4 845	2 270	22 800	28 500	639	ZZ	-	36



Single-row deep groove ball bearings



Open type



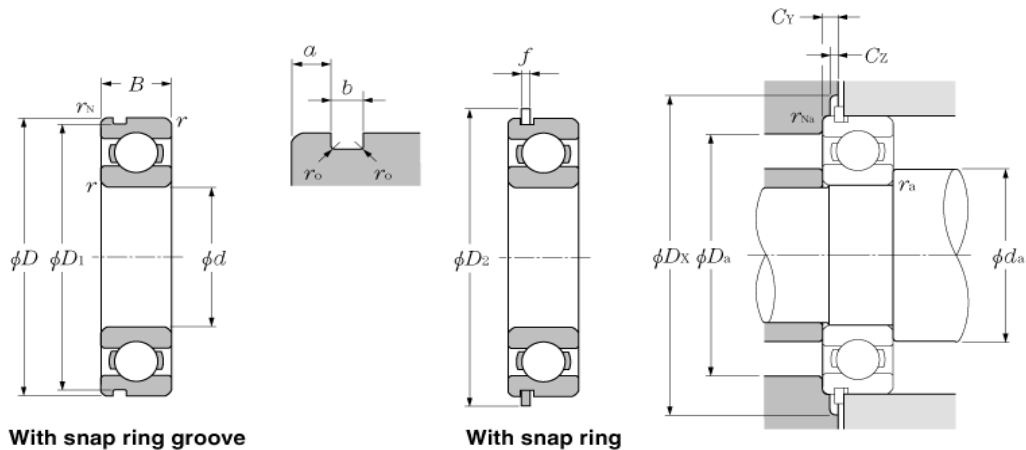
Shielded type (ZZ)



Contact sealed type (2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open z			
10	19	5	0.3	1 634	798	166	82	32 300	22 800	38 000	6800	ZZ	2RS
	22	6	0.3	2 565	1 206	261	123	30 400	20 900	36 100	6900	ZZ	2RS
	26	8	0.3	4 322	1 871	442	191	28 500	20 900	34 200	6000	ZZ	2RS
	30	9	0.6	4 845	2 270	494	232	22 800	17 100	28 500	6200	ZZ	2RS
	35	11	0.6	7 695	3 277	784	333	20 900	16 150	24 700	6300	ZZ	2RS
12	21	5	0.3	1 824	988	185	101	30 400	19 000	36 100	6801	ZZ	2RS
	24	6	0.3	2 745	1 387	280	142	28 500	19 000	34 200	6901	ZZ	2RS
	28	7	0.3	4 845	2 251	494	229	26 600	-	30 400	16001	-	-
	28	8	0.3	4 845	2 251	494	229	26 600	17 100	30 400	6001	ZZ	2RS
	32	10	0.6	6 460	2 897	660	295	20 900	16 150	26 600	6201	ZZ	2RS
	37	12	1	9 215	3 990	941	404	19 000	15 200	22 800	6301	ZZ	2RS
15	24	5	0.3	1 966	1 197	201	122	26 600	16 150	32 300	6802	ZZ	2RS
	28	7	0.3	4 132	2 147	418	219	24 700	16 150	28 500	6902	ZZ	2RS
	32	8	0.3	5 320	2 688	542	275	22 800	-	26 600	16002	-	-
	32	9	0.3	5 320	2 688	542	275	22 800	14 250	26 600	6002	ZZ	2RS
	35	11	0.6	7 267	3 562	741	361	19 000	13 300	22 800	6202	ZZ	2RS
17	42	13	1	10 830	5 177	1 111	527	16 150	12 350	19 000	6302	ZZ	2RS
	26	5	0.3	2 498	1 491	255	152	24 700	14 250	28 500	6803	ZZ	2RS
	30	7	0.3	4 370	2 422	447	247	22 800	14 250	26 600	6903	ZZ	2RS
	35	8	0.3	5 700	3 087	580	314	20 900	-	24 700	16003	-	-
	35	10	0.3	5 700	3 087	580	314	20 900	12 350	24 700	6003	ZZ	2RS
	40	12	0.6	9 072	4 560	926	466	16 150	11 400	19 000	6203	ZZ	2RS
20	47	14	1	12 920	6 317	2 320	641	14 250	10 450	17 100	6303	ZZ	2RS
	32	7	0.3	3 800	2 346	390	239	20 900	12 350	24 700	6804	ZZ	2RS
	37	9	0.3	6 080	3 515	618	356	18 050	11 400	20 900	6904	ZZ	2RS
	42	8	0.3	7 505	4 227	770	432	17 100	-	19 000	16004	-	-
	42	12	0.6	8 930	4 750	907	485	17 100	10 450	19 000	6004	ZZ	2RS
	47	14	1	12 160	6 270	1 235	637	14 250	10 450	17 100	6204	ZZ	2RS
22	52	15	1.1	15 105	7 505	1 539	765	13 300	9 500	16 150	6304	ZZ	2RS
	44	12	0.6	8 930	4 797	912	489	16 150	10 450	19 000	60/22	ZZ	2RS
	50	14	1.0	12 255	6 460	1 254	660	13 300	9 025	15 200	62/22	ZZ	2RS
	56	16	1.1	17 480	8 787	1 776	893	12 350	9 025	15 200	63/22	ZZ	2RS

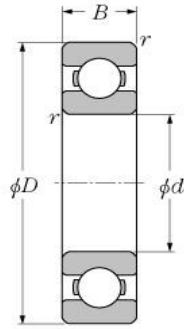


Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	da ⁽²⁾ min	da ⁽²⁾ max	D _a ⁽²⁾ max	r _a max	D _x min		C _Y max
-	-	-	-	-	-	-	-	-	12	12	17	0.3	-	-	0.005
N	NR	1.05	0.8	20.8	0.2	0.3	24.8	0.7	12	12.5	20	0.3	25.5	1.5	0.009
N	NR	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
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	0.031
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	0.051
-	-	-	-	-	-	-	-	-	14	14	19	0.3	-	-	0.006
N	NR	1.05	0.8	22.8	0.2	0.3	26.8	0.7	14	14.5	22	0.3	27.5	1.5	0.01
-	-	-	-	-	-	-	-	-	14	-	26	0.3	-	-	0.019
N	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	0.021
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	0.036
N	NR	2.06	1.35	34.77	0.4	0.5	41.3	1.12	17	18	32	1	42	2.9	0.058
-	-	-	-	-	-	-	-	-	17	17	22	0.3	-	-	0.007
N	NR	1.3	0.95	26.7	0.25	0.3	30.8	0.85	17	17	26	0.3	31.5	1.8	0.015
-	-	-	-	-	-	-	-	-	17	-	30	0.3	-	-	0.027
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	0.03
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	0.044
N	NR	2.06	1.35	39.75	0.4	0.5	46.3	1.12	20	22.5	37	1	47	2.9	0.081
-	-	-	-	-	-	-	-	-	19	19	24	0.3	-	-	0.007
N	NR	1.3	0.95	28.7	0.25	0.3	32.8	0.85	19	19.5	28	0.3	33.5	1.8	0.016
-	-	-	-	-	-	-	-	-	19	-	33	0.3	-	-	0.033
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
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	0.065
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	0.11
N	NR	1.3	0.95	30.7	0.25	0.3	34.8	0.85	22	22	30	0.3	35.5	1.8	0.017
N	NR	1.7	0.95	35.7	0.25	0.3	39.8	0.85	22	24	35	0.3	40.5	2.3	0.037
-	-	-	-	-	-	-	-	-	22	-	40	0.3	-	-	0.048
N	NR	2.06	1.35	39.75	0.4	0.5	46.3	1.12	24	25.5	38	0.6	47	2.9	0.067
N	NR	2.46	1.35	44.6	0.4	0.5	52.7	1.12	25	26.5	42	1	53.5	3.3	0.104
N	NR	2.46	1.35	49.73	0.4	0.5	57.9	1.12	26.5	28	45.5	1	58.8	3.3	0.141
N	NR	2.06	1.35	41.75	0.4	0.5	48.3	1.12	26	26.5	40	0.6	49	2.9	0.073
N	NR	2.46	1.35	47.6	0.4	0.5	55.7	1.12	27	29.5	45	1	56.5	3.3	0.116
N	NR	2.46	1.35	53.6	0.4	0.5	61.7	1.12	28.5	30.5	49.5	1	62.5	3.3	0.175



Single-row deep groove ball bearings



Open type



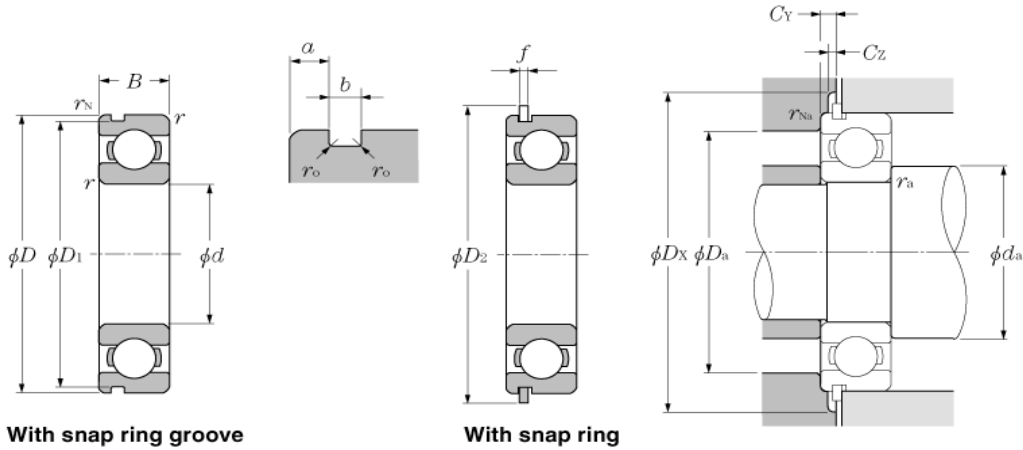
Shielded type
(ZZ)



Contact
sealed type
(2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open			
						z	2RS	z					
25	37	7	0.3	4 085	2 802	418	285	17 100	9 500	20 900	6805	ZZ	2RS
	42	9	0.3	6 697	4 322	679	437	15 200	9 500	18 050	6905	ZZ	2RS
	47	8	0.3	8 407	5 320	860	542	14 250	-	17 100	16005	-	-
	47	12	0.6	9 595	5 557	979	565	14 250	9 025	17 100	6005	ZZ	2RS
	52	15	1	13 300	7 457	1 358	760	12 350	8 550	14 250	6205	ZZ	2RS
	62	17	1.1	19 570	10 640	1 995	1 092	10 450	7 600	12 350	6305	ZZ	2RS
28	52	12	0.6	11 875	7 030	1 206	717	13 300	8 075	15 200	60/28	ZZ	2RS
	58	16	1	15 770	9 025	1 615	922	11 400	7 600	13 300	62/28	ZZ	2RS
	68	18	1.1	25 365	13 300	2 593	1 358	9500	7 125	12 350	63/28	ZZ	2RS
30	42	7	0.3	4 275	3 277	437	333	14 250	8 550	17 100	6806	ZZ	2RS
	47	9	0.3	6 887	4 750	703	485	13 300	8 075	16 150	6906	ZZ	2RS
	55	9	0.3	10 640	6 982	1 292	713	12 350	-	14 250	16006	-	-
	55	13	1	12 540	7 885	1 282	803	12 350	7 600	14 250	6006	ZZ	2RS
	62	16	1	18 525	10 735	1 881	1 092	10 450	7 125	12 350	6206	ZZ	2RS
	72	19	1.1	25 365	14 250	2 584	1 453	9 025	6 365	11 400	6306	ZZ	2RS
32	58	13	1.0	14 345	8 692	1 453	888	11 400	7 125	13 300	60/32	ZZ	2RS
	65	17	1	19 665	11 020	2 014	1 130	9 500	6 745	11 400	62/32	ZZ	2RS
	75	20	1.1	28 405	16 150	2 897	1 643	8 550	5 985	10 450	63/32	ZZ	2RS
35	47	7	0.3	4 512	3 705	461	380	12 350	7 125	15 200	6807	ZZ	2RS
	55	10	0.6	10 070	6 887	1 026	703	11 400	7 125	14 250	6907	ZZ	2RS
	62	9	0.3	11 115	7 790	1 130	793	10 450	-	12 350	16007	-	-
	62	14	1	15 200	9 785	1 548	992	10 450	6 365	12 350	6007	ZZ	2RS
	72	17	1.1	24 415	14 535	2 498	1 482	9 025	5 985	10 450	6207	ZZ	2RS
	80	21	1.5	31 825	18 240	3 230	1 862	8 075	5 700	9 500	6307	ZZ	2RS
40	52	7	0.3	4 655	4 132	475	423	11 400	6 365	13 300	6808	ZZ	2RS
	62	12	0.6	13 015	9 500	1 320	969	10 450	5 985	12 350	6908	ZZ	2RS
	68	9	0.3	11 970	9 167	1 225	936	9 500	-	11 400	16008	-	-
	68	15	1	15 960	10 925	1 624	1 121	9 500	5 700	11 400	6008	ZZ	2RS
	80	18	1.1	27 645	17 005	2 821	1 729	8 075	5 320	9 500	6208	ZZ	2RS
	90	23	1.5	38 475	22 800	3 942	2 327	7 125	5 035	8 550	6308	ZZ	2RS



With snap ring groove

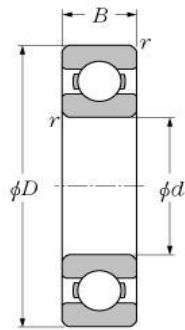
With snap ring

Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	d _a ⁽²⁾ min max		D _a ⁽²⁾ max	r _a max	D _x min		C _Y max
N	NR	1.3	0.095	35.7	0.25	0.3	39.8	0.85	27	27	35	0.3	40.5	1.8	0.021
N	NR	1.7	0.095	40.7	0.25	0.3	44.8	0.85	27	28.5	40	0.3	45.5	2.3	0.042
-	-	-	-	-	-	-	-	-	27	-	45	0.3	-	-	0.059
N	NR	2.06	1.35	44.6	0.4	0.5	52.7	1.12	29	30	43	0.6	53.5	2.9	0.078
N	NR	2.46	1.35	49.73	0.4	0.5	57.9	1.12	30	32	47	1	58.5	3.3	0.126
N	NR	3.28	1.9	59.61	0.6	0.5	67.7	1.7	31.5	36	55.5	1	68.5	4.6	0.23
N	NR	2.06	1.35	49.73	0.4	0.5	57.9	1.12	32	34	48	0.6	58.5	2.9	0.095
N	NR	2.46	1.35	55.6	0.4	0.5	63.7	1.12	33	35.5	53	1	64.5	3.3	0.172
N	NR	3.28	1.9	64.82	0.6	0.5	74.6	1.7	34.5	38	61.5	1	76	4.6	0.281
N	NR	1.3	0.95	40.7	0.25	0.3	44.8	0.85	32	32	40	0.3	45.5	1.8	0.024
N	NR	1.7	0.95	45.7	0.25	0.3	49.8	0.85	32	34	45	0.3	50.5	2.3	0.052
-	-	-	-	-	-	-	-	-	32	-	53	0.3	-	-	0.087
N	NR	2.08	1.35	52.6	0.4	0.5	60.7	1.12	35	36.5	50	1	61.5	2.9	0.113
N	NR	3.28	1.9	59.61	0.6	0.5	67.7	1.7	35	38.5	57	1	68.5	4.6	0.196
N	NR	3.28	1.9	68.81	0.6	0.5	78.6	1.7	36.5	42.5	65.5	1	80	4.6	0.339
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	0.119
N	NR	3.28	1.9	62.6	0.6	0.5	70.7	1.7	37	40	60	1	71.5	4.6	0.221
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	0.383
N	NR	1.3	0.95	45.7	0.25	0.3	49.8	0.85	37	37	45	0.3	50.5	1.8	0.027
N	NR	1.7	0.95	53.7	0.25	0.5	57.8	0.85	39	39	51	0.6	58.5	2.3	0.074
-	-	-	-	-	-	-	-	-	37	-	60	0.3	-	-	0.107
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	0.147
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	0.279
N	NR	3.28	1.9	76.81	0.6	0.5	86.6	1.7	43	47	72	1.5	88	4.6	0.449
N	NR	1.3	0.95	50.7	0.25	0.3	54.8	0.85	42	42	50	0.3	55.5	1.8	0.03
N	NR	1.7	0.95	60.7	0.25	0.5	64.8	0.85	44	46	58	0.6	65.5	2.3	0.11
-	-	-	-	-	-	-	-	-	42	-	66	0.3	-	-	0.13
N	NR	2.49	1.9	64.82	0.6	0.5	74.6	1.7	45	47.5	63	1	76	3.8	0.186
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	0.359
N	NR	3.28	2.7	86.79	0.6	0.5	96.5	2.46	48	53	82	1.5	98	5.4	0.62



Single-row deep groove ball bearings



Open type



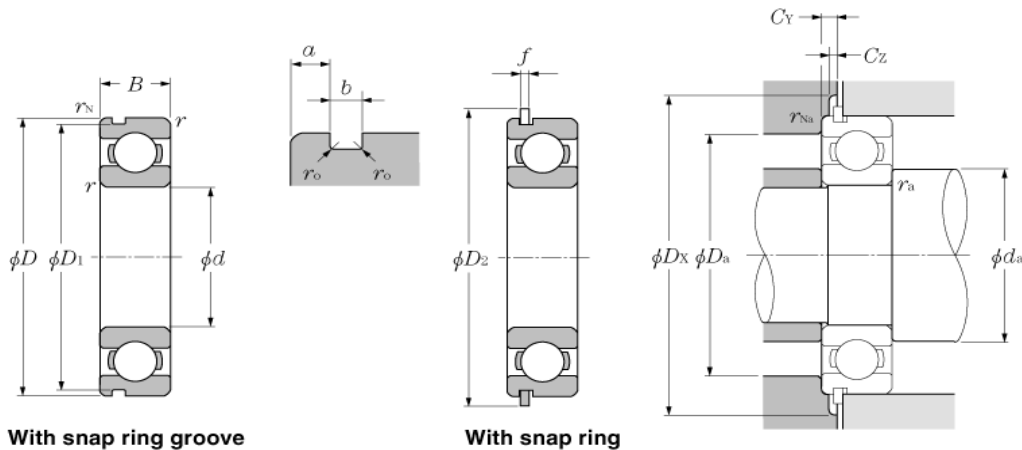
Shielded type
(ZZ)



Contact
sealed type
(2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open			
						z	2RS	z					
45	58	7	0.3	5 082	4 987	523	508	10 450	5 700	12 350	6809	ZZ	2RS
	68	12	0.6	13 395	10 355	1 368	1 054	9 025	5 320	11 400	6909	ZZ	2RS
	75	10	0.6	14 155	10 830	1 444	1 102	8 550	-	10 450	16009	-	-
	75	16	1	19 855	14 440	2 033	1 472	8 550	5 035	10 450	6009	ZZ	2RS
	85	19	1.1	29 925	19 380	3 040	1 976	7 125	5 035	8 550	6209	ZZ	2RS
	100	25	1.5	50 350	30 400	5 130	3 087	6 365	4 560	7 600	6309	ZZ	2RS
50	65	7	0.3	6 080	5 890	623	603	9 025	5 035	10 450	6810	ZZ	2RS
	72	12	0.6	13 775	11 115	1 406	1 140	8 550	5 035	10 450	6910	ZZ	2RS
	80	10	0.6	14 630	11 780	1 491	1 197	8 075	-	9 500	16010	-	-
	80	16	1	20 710	15 770	2 109	1 615	8 075	4 560	9 500	6010	ZZ	2RS
	90	20	1.1	33 250	22 040	3 420	2 251	6 745	4 560	8 075	6210	ZZ	2RS
	110	27	2	58 900	36 575	5 985	3 705	5 700	4 085	7 125	6310	ZZ	2RS
55	72	9	0.3	8 360	8 075	855	822	8 075	4 560	9 500	6811	ZZ	2RS
	80	13	1	15 200	12 635	1 548	1 282	7 600	4 275	9 025	6911	ZZ	2RS
	90	11	0.6	18 430	15 485	1 881	1 577	7 125	-	8 550	16011	-	-
	90	18	1.1	26 885	20 140	2 736	2 061	7 125	4 275	8 550	6011	ZZ	2RS
	100	21	1.5	41 325	27 835	4 227	2 831	5 985	4 085	7 125	6211	ZZ	2RS
	120	29	2	67 925	42 275	6 935	4 227	5 320	3 800	6 365	6311	ZZ	2RS
60	78	10	0.3	10 925	10 355	1 111	1 064	7 600	4 275	9 025	6812	ZZ	2RS
	85	13	1	18 430	15 485	1 881	1 577	7 125	4 085	8 550	6912	ZZ	2RS
	95	11	0.6	19 000	16 625	1 938	1 691	6 745	-	8 075	16012	-	-
	95	18	1.1	28 025	22 040	2 850	2 251	6 745	3 800	8 075	6012	ZZ	2RS
	110	22	1.5	49 875	34 200	5 082	3 515	5 320	3 610	6 745	6212	ZZ	2RS
	130	31	2.1	77 900	49 400	7 932	5 035	5 035	3 420	5 985	6312	ZZ	2RS
65	85	10	0.6	11 305	11 495	1 159	1 168	7 125	-	8 075	6813	ZZ	-
	90	13	1	16 530	15 295	1 681	1 558	6 745	3 800	8 075	6913	ZZ	2RS
	100	11	0.6	19 475	17 765	1 985	1 814	6 365	-	7 600	16013	-	-
	100	18	1.1	28 975	23 940	2 945	2 441	6 365	3 800	7 600	6013	ZZ	2RS
	120	23	1.5	54 625	38 000	5 557	3 895	5 035	3 420	5 985	6213	ZZ	2RS
	140	33	2.1	87 875	57 000	8 977	5 795	4 560	3 230	5 700	6313	ZZ	2RS

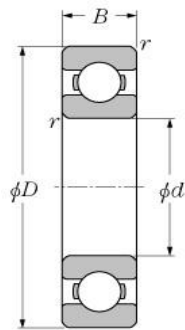


Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	d _a ⁽²⁾ min max		D _a ⁽²⁾ max	r _a max	D _x min		C _Y max
N	NR	1.3	0.95	56.7	0.25	0.3	60.8	0.85	47	47.5	56	0.3	61.5	1.8	0.038
N	NR	1.7	0.95	66.7	0.25	0.5	70.8	0.85	49	50	64	0.6	72	2.3	0.124
-	-	-	-	-	-	-	-	-	49	-	71	0.6	-	-	0.167
N	NR	2.49	1.9	71.83	0.6	0.5	81.6	1.7	50	53.5	70	1	83	3.8	0.236
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	0.413
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	0.811
N	NR	1.3	0.95	63.7	0.25	0.3	67.8	0.85	52	52.5	63	0.3	68.5	1.8	0.049
N	NR	1.7	0.95	70.7	0.25	0.5	74.8	0.85	54	55	68	0.6	76	2.3	0.133
-	-	-	-	-	-	-	-	-	54	-	76	0.6	-	-	0.175
N	NR	2.49	1.9	76.81	0.6	0.5	86.6	1.7	55	58.5	75	1	88	3.8	0.256
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	0.451
N	NR	3.28	2.7	106.81	0.6	0.5	116.6	2.46	59	68	101	2	118	5.4	1.05
N	NR	1.7	0.95	70.7	0.25	0.3	74.8	0.85	57	59	70	0.3	76	2.3	0.08
N	NR	2.1	1.3	77.9	0.4	0.5	84.4	1.12	60	61.5	75	1	86	2.9	0.184
-	-	-	-	-	-	-	-	-	59	-	86	0.6	-	-	0.257
N	NR	2.87	2.7	86.79	0.6	0.5	96.5	2.46	61.5	64	83.5	1	98	5	0.373
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	0.599
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	1.35
N	NR	1.7	1.3	76.2	0.4	0.3	82.7	1.12	62	64	76	0.3	84	2.5	0.102
N	NR	2.1	1.3	82.9	0.4	0.5	89.4	1.12	65	66	80	1	91	2.9	0.187
-	-	-	-	-	-	-	-	-	64	-	91	0.6	-	-	0.281
N	NR	2.87	2.7	91.82	0.6	0.5	101.6	2.46	66.5	69	88.5	1	103	5	0.403
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	0.762
N	NR	4.06	3.1	125.22	0.6	0.5	139.7	2.82	71	79	119	2	141.5	6.5	1.69
N	NR	1.7	1.3	82.9	0.4	0.5	89.04	1.12	69	69	81	0.6	91	2.5	0.125
N	NR	2.1	1.3	87.9	0.4	0.5	94.4	1.12	70	71.5	85	1	96	2.9	0.212
-	-	-	-	-	-	-	-	-	69	-	96	0.6	-	-	0.3
N	NR	2.87	2.7	96.8	0.6	0.5	106.5	2.46	71.5	73	93.5	1	108	5	0.43
N	NR	4.06	3.1	115.21	0.6	0.5	129.7	2.82	73	80	112	1.5	131.5	6.5	0.979
N	NR	4.9	3.1	135.23	0.6	0.5	149.7	2.82	76	85.5	129	2	152	7.3	2.08



Single-row deep groove ball bearings



Open type



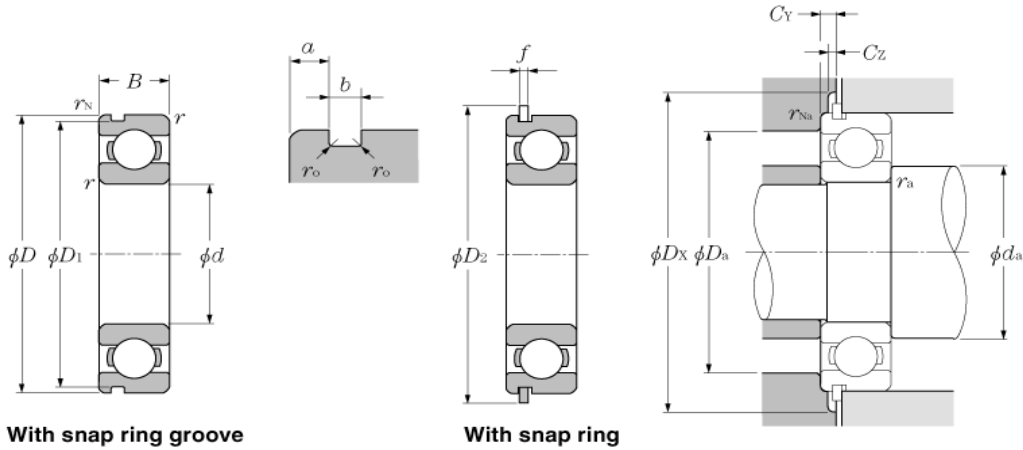
Shielded type
(ZZ)



Contact
sealed type
(2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open z			
70	90	10	0.6	11 495	12 065	1 168	1 235	6 365	-	7 600	6814	ZZ	-
	100	16	1	22 515	20 140	2 299	2 052	5 985	3 420	7 125	6914	ZZ	2RS
	110	13	0.6	25 460	22 420	2 593	2 289	5 700	-	6 745	16014	-	-
	110	20	1.1	36 100	29 450	3 705	2 992	5 700	3 420	6 745	6014	ZZ	2RS
	125	24	1.5	58 900	41 800	6 032	4 275	4 750	3 230	5 985	6214	ZZ	2RS
	150	35	2.1	98 800	64 600	10 070	6 602	4 275	3 040	5 035	6314	ZZ	2RS
75	95	10	0.6	11 875	13 205	1 216	1 339	5 985	-	7 125	6815	ZZ	-
	105	16	1.0	23 180	21 470	2 356	2 185	5 700	-	6 745	6915	ZZ	-
	115	13	0.6	26 220	24 035	2 679	2 451	5 320	-	6 365	16015	-	-
	115	20	1.1	37 525	31 825	3 847	3 230	5 320	3 230	6 365	6015	ZZ	2RS
	130	25	1.5	62 700	47 025	6 412	4 797	4 560	3 040	5 320	6215	ZZ	2RS
	160	37	2.1	107 350	73 150	11 020	7 457	4 085	2 660	4 750	6315	ZZ	2RS
80	100	10	0.6	12 065	13 775	1 225	1 396	5 700	-	6 745	6816	ZZ	2RS
	110	16	1	23 750	22 800	2 413	2 327	5 320	3 040	6 365	6916	ZZ	2RS
	125	14	0.6	30 400	28 120	3 087	2 850	5 035	-	5 985	16016	-	-
	125	22	1.1	45 125	38 000	4 607	3 847	5 035	3 040	5 985	6016	ZZ	2RS
	140	26	2	68 875	50 350	7 030	5 130	4 275	2 850	5 035	6216	ZZ	2RS
	170	39	2.1	116 850	82 175	11 875	8 407	3 800	2 660	4 560	6316	ZZ	2RS
85	110	13	1	17 765	19 000	1 814	1 938	5 320	-	6 365	6817	ZZ	-
	120	18	1.1	30 400	28 120	3 087	2 850	5 035	-	5 985	6917	ZZ	-
	130	14	0.6	31 350	29 925	3 182	3 040	4 750	-	5 700	16017	-	-
	130	22	1.1	47 025	40 850	4 797	4 180	4 750	2 850	5 700	6017	ZZ	2RS
	150	28	2	79 800	58 900	8 122	5 985	4 085	2 660	4 750	6217	ZZ	2RS
	180	41	3	126 350	92 150	12 825	9 357	3 610	2 470	4 275	6317	ZZ	2RS
90	115	13	1	18 050	19 950	1 843	2 033	5 035	-	5 985	6818	ZZ	-
	125	18	1.1	31 350	29 925	3 182	3 040	4 750	2 660	5 700	6918	ZZ	2RS
	140	16	1	39 425	37 525	4 037	3 800	4 560	-	5 320	16018	-	-
	140	24	1.5	55 100	47 500	5 652	4 797	4 560	2 660	5 320	6018	ZZ	2RS
	160	30	2	91 200	67 925	9 310	6 935	3 800	2 470	4 560	6218	ZZ	2RS
	190	43	3	135 850	101 650	13 775	10 450	3 420	2 280	4 085	6318	ZZ	2RS



With snap ring groove

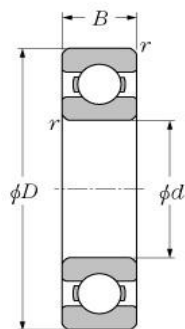
With snap ring

Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	da ⁽²⁾ min	da ⁽²⁾ max	r _a max	D _x min	C _y max		
N	NR	1.7	1.3	87.9	0.4	0.5	94.4	1.12	74	74.5	86	0.6	96	2.5	0.131
N	NR	2.5	1.3	97.9	0.4	0.5	104.4	1.12	75	77.5	95	1	106	3.3	0.343
-	-	-	-	-	-	-	-	-	74	-	106	0.6	-	-	0.437
N	NR	2.87	2.7	106.81	0.6	0.5	116.6	2.46	76.5	80.5	103.5	1	118	5	0.598
N	NR	4.06	3.1	120.22	0.6	0.5	134.7	2.82	78	84	117	1.5	136.5	6.5	1.07
N	NR	4.9	3.1	145.24	0.6	0.5	159.7	2.82	81	92	139	2	162	7.3	2.53
N	NR	1.7	1.3	92.9	0.4	0.5	99.4	1.12	79	79.5	91	0.6	101	2.5	0.145
N	NR	2.5	1.3	102.6	0.4	0.5	110.7	1.12	80	82	100	1	112	3.3	0.357
-	-	-	-	-	-	-	-	-	79	-	111	0.6	-	-	0.463
N	NR	2.87	2.7	111.81	0.6	0.5	121.6	2.46	81.5	85.5	108.5	1	123	5	0.638
N	NR	4.06	3.1	125.22	0.6	0.5	139.7	2.82	83	90	122	1.5	141.5	6.5	1.17
N	NR	4.9	3.1	155.22	0.6	0.5	169.77	2.82	86	98.5	149	2	172	7.3	3.03
N	NR	1.7	1.3	97.9	0.4	0.5	104.4	1.12	84	84.5	96	0.6	106	2.5	0.147
N	NR	2.5	1.3	107.6	0.4	0.5	115.7	1.12	85	87.5	105	1	117	3.3	0.383
-	-	-	-	-	-	-	-	-	84	-	121	0.6	-	-	0.621
N	NR	2.87	3.1	120.22	0.6	0.5	134.7	2.82	86.5	91	118.5	1	136.5	5.3	0.854
N	NR	4.9	3.1	135.23	0.6	0.5	149.7	2.82	89	95.5	131	2	152	7.3	1.38
N	NR	5.69	3.5	163.65	0.6	0.5	182.9	3.1	91	104.5	159	2	185	8.4	3.67
N	NR	2.1	1.3	107.6	0.4	0.5	115.7	1.12	90	90.5	105	1	117	2.9	0.255
N	NR	3.3	1.3	117.6	0.4	0.5	125.7	1.12	91.5	94.5	113.5	1	127	4.1	0.539
-	-	-	-	-	-	-	-	-	89	-	126	0.6	-	-	0.652
N	NR	2.87	3.1	125.22	0.6	0.5	139.7	2.82	91.5	96	123.5	1	141.5	5.3	0.899
N	NR	4.9	3.1	145.24	0.6	0.5	159.7	2.82	94	102	141	2	162	7.3	1.74
N	NR	5.69	3.5	173.66	0.6	0.5	192.9	3.1	98	110.5	167	2.5	195	8.4	4.22
N	NR	2.1	1.3	112.6	0.4	0.5	120.7	1.12	95	95.5	110	1	122	2.9	0.268
N	NR	3.3	1.3	122.6	0.4	0.5	130.7	1.12	96.5	98.5	118.5	1	132	4.1	0.566
-	-	-	-	-	-	-	-	-	95	-	135	1	-	-	0.866
N	NR	2.87	3.1	135.23	0.5	0.5	149.7	2.82	98	103	132	1.5	152	6.1	1.16
N	NR	4.9	3.1	155.22	0.5	0.5	169.7	2.82	99	107.5	151	2	172	7.3	2.15
N	NR	5.69	3.5	183.64	0.5	0.5	202.9	3.1	103	117	177	2.5	205	8.4	4.92



Single-row deep groove ball bearings



Open type



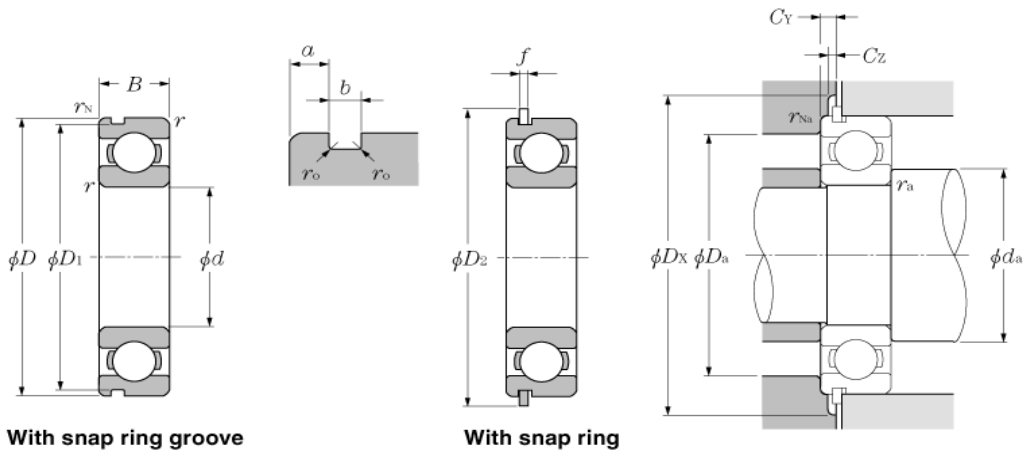
Shielded type (ZZ)



Contact sealed type (2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open z			
95	120	13	1.0	18 335	20 900	1 871	2 128	4 750	-	5 700	6819	ZZ	-
	130	18	1.1	31 825	31 825	3 277	3 230	4 560	-	5 320	6919	ZZ	-
	145	16	1	40 850	39 900	4 132	4 037	4 275	-	5 035	16019	-	-
	145	24	1.5	57 475	51 300	5 842	5 225	4 275	2 470	5 035	6019	ZZ	2RS
	170	32	2.1	103 550	77 900	10 545	7 932	3 610	2 470	4 275	6219	ZZ	2RS
	200	45	3	145 350	113 050	14 820	11 495	2 850	2 280	3 420	6319	ZZ	2RS
100	125	13	1	18 620	21 850	1 900	2 223	4 560	-	5 320	6820	ZZ	-
	140	20	1.1	40 850	39 900	4 132	4 037	4 275	2 470	5 035	6920	ZZ	2RS
	150	16	1	40 375	39 900	4 085	4 085	4 085	-	5 035	16020	-	-
	150	24	1.5	57 000	51 300	5 842	5 225	4 085	2 470	5 035	6020	ZZ	2RS
	180	34	2.1	115 900	88 350	11 875	9 025	3 420	2 280	4 085	6220	ZZ	2RS
	215	47	3	164 350	133 950	16 815	13 680	2 660	2 090	3 230	6320	ZZ	2RS
105	130	13	1	18 810	22 705	1 919	2 318	4 560	-	5 320	6821	ZZ	-
	145	20	1.1	40 375	39 900	4 085	4 085	4 085	-	5 035	6921	ZZ	-
	160	18	1	49 400	47 975	5 035	4 892	3 800	-	4 560	16021	-	-
	160	26	2	68 875	57 000	7 030	6 365	3 800	2 280	4 560	6021	ZZ	2RS
	190	36	2.1	126 350	99 750	12 920	10 165	3 230	2 090	3 800	6221	ZZ	2RS
	225	49	3	174 800	146 300	17 765	14 915	2 470	2 470	3 040	6321	ZZ	2RS
110	140	16	1	26 695	30 875	2 717	3 182	4 085	-	5 035	6822	ZZ	2RS
	150	20	1.1	41 325	42 275	4 227	4 322	4 085	-	4 750	6922	ZZ	-
	170	19	1	54 625	53 675	5 557	5 510	3 610	-	4 275	16022	-	-
	170	28	2	80 750	69 350	8 217	7 077	3 610	2 090	4 275	6022	ZZ	2RS
	200	38	2.1	136 800	111 150	13 965	11 305	2 660	2 090	3 230	6222	ZZ	2RS
	240	50	3	194 750	170 050	19 855	17 385	2 280	-	2 850	6322	ZZ	-
120	150	16	1	27 455	33 725	2 802	3 467	3 800	-	4 560	6824	-	2RS
	165	22	1.1	50 350	51 300	5 130	5 225	3 610	-	4 275	6924	ZZ	-
	180	19	1	53 675	54 625	5 510	5 557	3 420	2 090	4 085	16024	-	-
	180	28	2	83 600	76 000	8 550	7 742	3 420	1 900	4 085	6024	ZZ	2RS
	215	40	2.1	147 250	124 450	15 010	12 730	2 470	1 710	3 040	6224	ZZ	2RS
	260	55	3	196 650	175 750	20 045	17 860	2 090	-	2 660	6324	ZZ	2RS

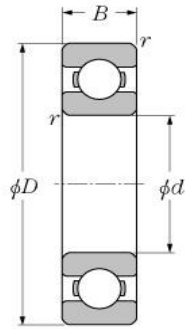


Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	da ⁽²⁾ min	da ⁽²⁾ max	r _a max	D _x min	C _Y max		
N	NR	2.1	1.3	117.6	0.5	0.5	125.7	1.12	100	101.5	115	1	127	2.9	0.288
N	NR	3.3	1.3	127.6	0.5	0.5	135.7	1.12	101.5	103.5	123.5	1	137	4.1	0.581
-	-	-	-	-	-	-	-	-	100	-	140	1	-	-	0.904
N	NR	3.71	3.1	140.23	0.5	0.5	154.7	2.82	103	108.5	137	1.5	157	6.1	1.2
N	NR	5.69	3.5	163.65	0.5	0.5	182.9	3.1	106	114	159	2	185	8.4	2.59
N	NR	5.69	3.5	193.65	0.5	0.5	212.9	3.1	108	123.5	187	2.5	215	8.4	5.76
N	NR	2.1	1.3	122.6	0.5	0.5	130.7	1.12	105	105.5	120	1	132	2.9	0.302
N	NR	3.3	1.9	137.6	0.5	0.5	145.7	1.7	106.5	111	133.5	1	147	4.7	0.807
-	-	-	-	-	-	-	-	-	105	-	145	1	-	-	0.936
N	NR	3.71	3.1	145.24	0.5	0.5	159.7	2.82	108	112.5	142	1.5	162	6.1	1.25
N	NR	5.69	3.5	173.66	0.5	0.5	192.9	3.1	111	121.5	169	2	195	8.4	3.12
-	-	-	-	-	-	-	-	-	113	133	202	2.5	-	-	7.04
N	NR	2.1	1.3	127.6	0.5	0.5	135.7	1.12	110	110.5	125	1	137	2.9	0.315
N	NR	3.3	1.9	142.6	0.5	0.5	150.7	1.7	111.5	116	138.5	1	152	4.7	0.835
-	-	-	-	-	-	-	-	-	110	-	155	1	-	-	1.23
N	NR	3.71	3.1	155.22	0.5	0.5	169.7	2.82	114	120	151	2	172	6.4	1.56
N	NR	5.69	3.5	183.64	0.5	0.5	202.9	3.1	116	127.5	179	2	205	8.4	3.73
-	-	-	-	-	-	-	-	-	118	-	212	2.5	-	-	8.09
N	NR	2.5	1.9	137.6	0.6	0.5	145.7	1.7	115	117	135	1	147	3.9	0.487
N	NR	3.3	1.9	147.6	0.6	0.5	155.7	1.7	116.5	121	143.5	1	157	4.7	0.87
-	-	-	-	-	-	-	-	-	115	-	165	1	-	-	1.5
N	NR	3.71	3.5	163.65	0.6	0.5	182.9	3.1	119	124.5	161	2	185	6.4	1.91
N	NR	5.69	3.5	193.65	0.6	0.5	212.9	3.1	121	134	189	2	215	8.4	4.45
-	-	-	-	-	-	-	-	-	123	148.5	227	2.5	-	-	9.51
N	NR	2.5	1.9	147.6	0.6	0.5	155.7	1.7	125	127	145	1	157	3.9	0.526
N	NR	3.7	1.9	161.8	0.6	0.5	171.5	1.7	126.5	132	158.5	1	173	5.1	1.19
-	-	-	-	-	-	-	-	-	125	-	175	1	-	-	1.59
N	NR	3.71	3.5	173.66	0.6	0.5	192.9	3.1	129	134.5	171	2	195	6.4	2.05
-	-	-	-	-	-	-	-	-	131	146	204	2	-	-	5.29
-	-	-	-	-	-	-	-	-	133	161	247	2.5	-	-	12.5



Single-row deep groove ball bearings



Open type



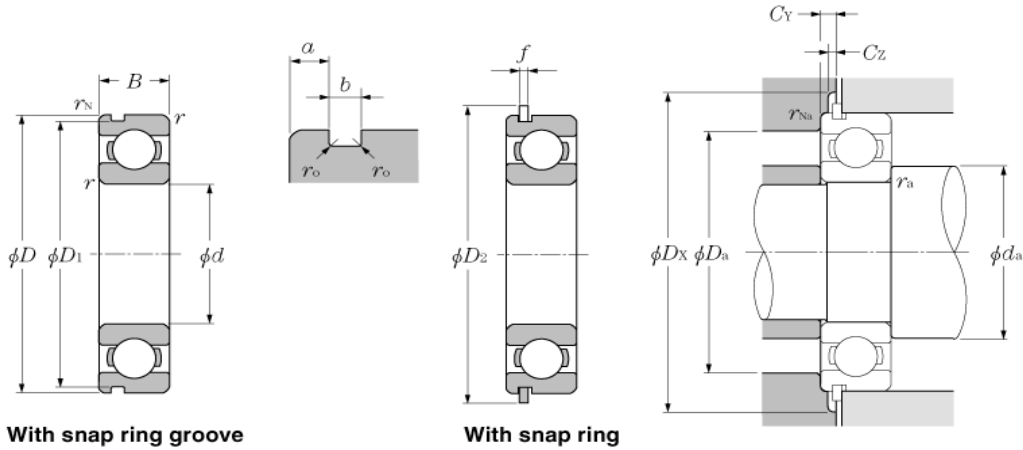
Shielded type (ZZ)



Contact sealed type (2RS)

Dimension table . Dimensions in mm

Boundary Dimensions (mm)				Basic Load Ratings (N)				Limiting Speeds (rpm)			Bearing Numbers		
d	D	B	r min	C _r	C _{or}	{kgf}		Grease		Oil	Open	Shielded	Sealed
						C _r	C _{or}	z	RS	Open z			
130	165	18	1.1	35 150	41 800	3 562	4 227	3 420	-	4 085	6826	-	2RS
	180	24	1.5	61 750	64 125	6 317	6 507	3 230	-	3 800	6926	ZZ	-
	200	22	1.1	71 725	73 625	7 315	7 505	2 850	1 805	3 420	16026	-	-
	200	33	2	100 700	95 950	10 260	9 785	2 850	-	3 420	6026	ZZ	2RS
	230	40	3	158 650	138 700	16 150	14 155	2 280	-	2 850	6226	ZZ	-
	280	58	4	217 550	203 300	22 230	20 710	2 090	-	2 470	6326	ZZ	-
140	175	18	1.1	36 575	45 600	3 705	4 607	3 230	-	3 800	6828	-	-
	190	24	1.5	63 175	68 400	6 460	6 935	3 040	-	3 610	6928	ZZ	-
	210	22	1.1	73 625	78 375	7 505	7 980	2 660	1 710	3 230	16028	-	-
	210	33	2	104 500	103 550	10 640	10 545	2 660	1 615	3 230	6028	ZZ	2RS
	250	42	3	157 700	142 500	16 150	14 535	2 090	-	2 660	6228	ZZ	2RS
	300	62	4	240 350	233 700	24 510	23 845	1 900	-	2 280	6328	ZZ	-
150	190	20	1.1	45 125	55 575	4 607	5 652	3 040	-	3 610	6830	-	-
	210	28	2	80 750	85 975	8 217	8 740	2 470	-	3 040	6930	ZZ	-
	225	24	1.1	79 800	86 450	8 122	8 787	2 470	1 615	2 850	16030	-	-
	225	35	2.1	119 700	119 700	12 160	12 160	2 470	-	2 850	6030	ZZ	2RS
	270	45	3	167 200	159 600	17 100	16 245	1 900	-	2 470	6230	ZZ	-
	320	65	4	260 300	269 800	26 600	27 455	1 710	-	2 090	6330	ZZ	-
160	200	20	1.1	46 075	57 950	4 702	5 937	2 470	-	3 040	6832	-	2RS
	220	28	2	82 650	91 200	8 407	9 310	2 470	-	2 850	6932	ZZ	-
	240	25	1.5	94 050	102 600	9 595	10 450	2 280	-	2 660	16032	-	-
	240	38	2.1	130 150	128 250	13 205	13 110	2 280	1 520	2 660	6032	ZZ	2RS
	290	48	3	175 750	176 700	17 955	18 050	1 805	-	2 280	6232	ZZ	-
	340	68	4	264 100	272 650	26 885	27 740	1 615	-	1 900	6332	-	-



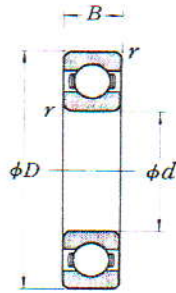
With snap ring groove

With snap ring

Dimension table . Dimensions in mm

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) approx	
		a max	b min	D ₁ max	r _o max	r _N min	D ₂ max	f max	da ⁽²⁾ min	da ⁽²⁾ max	r _a max	D _x min	C _Y max		
N	NR	3.3	1.9	161.8	0.6	0.5	171.5	1.7	136.5	138	158.5	1	173	4.7	0.742
N	NR	3.7	1.9	176.8	0.6	0.5	186.5	1.7	138	144	172	1.5	188	5.1	1.55
-	-	-	-	-	-	-	-	-	136.5	-	193.5	1	-	-	2.38
N	NR	5.69	3.5	193.65	0.6	0.5	212.9	3.1	139	148.5	191	2	215	8.4	3.26
-	-	-	-	-	-	-	-	-	143	157.5	217	2.5	-	-	5.93
-	-	-	-	-	-	-	-	-	146	175	264	3	-	-	15.2
N	NR	3.3	1.9	171.8	0.6	0.5	181.5	1.7	146.5	-	168.5	1	183	4.7	0.815
N	NR	3.7	1.9	186.8	0.6	0.5	196.5	1.7	148	153.5	182	1.5	198	5.1	1.64
-	-	-	-	-	-	-	-	-	146.5	-	203.5	1	-	-	2.82
-	-	-	-	-	-	-	-	-	149	158.5	201	2	-	-	3.48
-	-	-	-	-	-	-	-	-	153	171.5	237	2.5	-	-	7.68
-	-	-	-	-	-	-	-	-	156	187	284	3	-	-	18.5
N	NR	3.3	1.9	186.8	0.6	0.5	196.5	1.7	156.5	-	183.5	1	198	4.7	1.13
-	-	-	-	-	-	-	-	-	159	166	201	2	-	-	2.98
-	-	-	-	-	-	-	-	-	156.5	-	218.5	1	-	-	3.6
-	-	-	-	-	-	-	-	-	161	170	214	2	-	-	4.17
-	-	-	-	-	-	-	-	-	163	186	257	2.5	-	-	9.99
-	-	-	-	-	-	-	-	-	166	203	304	3	-	-	22.7
N	NR	3.3	1.9	196.8	0.6	0.5	206.5	1.7	166.5	170.5	193.5	1	208	4.7	1.4
-	-	-	-	-	-	-	-	-	169	176	211	2	-	-	3.13
-	-	-	-	-	-	-	-	-	168	-	232	1.5	-	-	4.25
-	-	-	-	-	-	-	-	-	171	181	229	2	-	-	5.15
-	-	-	-	-	-	-	-	-	173	202	277	2.5	-	-	12.8
-	-	-	-	-	-	-	-	-	176	-	324	3	-	-	26.1

Extra Small Ball Bearings-Miniature Ball Bearings



Open Type



Shielded Type
ZZ

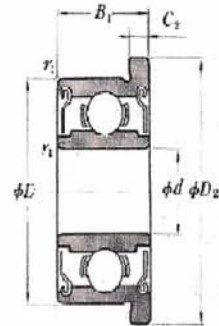
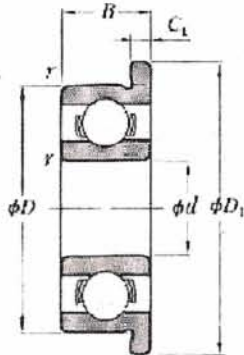


Sealed Type
2RS

Dimension table . Dimensions in mm

d	D	B	B ₁	r (min)	r ₁ (min)	Basic Load Ratings (N)		Limiting Speeds (rpm)		Bearing Numbers	shielded	sealed	Mass (g) Approx
						C _r	C _{or}	Grease	Oil				
2	5	1.5	2.3	0.08	0.08	161	48	80 750	95 000	682	ZZ	-	0.17
	6	2.3	3	0.15	0.15	314	93	71 250	85 500	692	ZZ	-	0.37
2.5	6	1.8	2.6	0.08	0.08	198	70	67 450	76 000	682	ZZ	-	0.28
	8	2.8	4	0.15	0.15	523	166	57 000	67 450	602	ZZ	-	0.80
3	6	2	2.5	0.1	0.1	198	70	67 450	76 000	673	ZZ	-	0.28
	7	2	3	0.1	0.1	295	105	59 850	71 250	683	ZZ	-	0.42
	8	3	4	0.15	0.15	523	162	60 800	72 200	693	ZZ	-	0.81
	10	4	4	0.15	0.15	599	207	47 500	57 000	623	ZZ	-	1.64
4	9	2.5	4	0.1	0.1	608	214	50 350	59 850	684	ZZ	-	0.98
	11	4	4	0.15	0.15	912	328	45 600	53 200	694	ZZ	-	1.75
	12	4	4	0.2	0.2	912	328	45 600	53 200	604	ZZ	-	2.29
	13	5	5	0.2	0.2	1 235	461	38 000	45 600	624	ZZ	-	3.04
	16	5	5	0.3	0.3	1 643	637	34 200	40 850	634	ZZ	-	5.21
5	8	2	2.5	0.1	0.1	295	114	50 350	59 850	675	ZZ	-	0.34
	11	3	5	0.15	0.15	679	267	42 750	50 350	685	ZZ	-	1.93
	13	4	4	0.2	0.2	1 026	409	40 850	47 500	695	ZZ	2RS	2.42
	14	5	5	0.2	0.2	1 263	480	38 000	47 500	605	ZZ	-	3.42
	16	5	5	0.3	0.3	1 643	637	34 200	40 850	625	ZZ	2RS	4.86
	19	6	6	0.3	0.3	2 223	841	30 400	38 000	635	ZZ	2RS	8.34
6	13	3.5	5	0.15	0.15	1 026	418	38 000	47 500	686	ZZ	2RS	2.64
	15	5	5	0.2	0.2	1 643	637	38 000	42 750	696	ZZ	2RS	3.72
	17	6	6	0.3	0.3	2 147	793	36 100	42 750	606	ZZ	2RS	5.95
	19	6	6	0.3	0.3	2 223	841	30 400	38 000	626	ZZ	2RS	7.94
	22	7	7	0.3	0.3	3 135	1 301	28 500	34 200	636	ZZ	-	14

Extra Small Ball Bearings-Miniature Ball Bearings

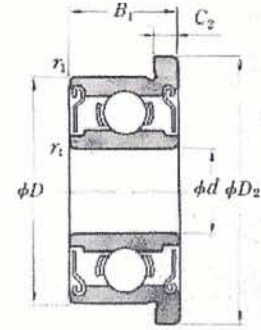
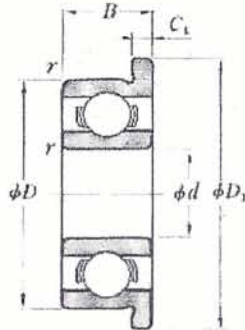


Dimension table . Dimensions in mm

d	D	D ₁	D ₂	B	B ₁	C ₁	C ₂	r (min)	r ₁ (min)	Basic Load Ratings (N)		Limiting Speeds (rpm)		Bearing Numbers	Bearing Numbers	shielded	Mass (g) Approx
										C _r	C _{or}	Grease	Oil				
2	5	6.1	6.1	1.5	2.3	0.5	0.6	0.08	0.08	161	48	80 750	950 000	WF682zz	LF-520	ZZ	0.21
	6	7.5	7.5	2.3	3	0.6	0.8	0.15	0.15	314	93	71 250	85 500	WF692zz	LF-620	ZZ	0.46
2.5	6	7.1	7.1	1.8	2.6	0.5	0.8	0.08	0.08	198	70	67 450	76 000	F68/2.5zz	LF-625	ZZ	0.43
3	6	7.2	7.2	2	2.5	0.6	0.6	0.1	0.1	198	70	67 450	76 000		LF-630	ZZ	0.34
	7	8.1	8.1	2	3	0.5	0.8	0.1	0.1	295	105	59 850	71 250	WF683zz	LF-730	ZZ	0.50
	8	9.5	9.5	3	4	0.7	0.9	0.15	0.15	532	170	57 000	63 650	WF693zz	LF-830	ZZ	0.95
	9	10.5	-	3	-	0.7	-	0.15	-	542	178	53 200	63 650	WF603zz	LF-930	ZZ	-
	10	11.5	11.5	4	4	1	1	0.15	0.15	599	207	47 500	57 000	WF623zz	LF-1030	ZZ	1.84
4	7	8.2	8.2	2	2.5	0.6	0.6	0.1	0.1	295	109	57 000	63 650		LF-740	ZZ	0.34
	8	9.2	9.2	2	3	0.6	0.6	0.15	0.1	375	132	53 200	63 650		LF-840	ZZ	0.63
	9	10.3	10.3	2.5	4	0.6	1	0.1	0.1	608	214	50 350	59 850	WF684zz	LF-940	ZZ	1.13
	10	11.2	11.6	3	4	0.6	0.8	0.2	0.15	556	194	45 600	53 200	R1040zz	LF-1040	ZZ	1.5
	11	12.5	12.5	4	4	1	1	0.15	0.15	912	328	45 600	53 200	WF694zz	LF-1140	ZZ	1.96
	12	13.5	13.5	4	4	1	1	0.2	0.2	912	328	45 600	53 200	WF604zz	LF-1240	ZZ	2.48
	13	15	15	5	5	1	1	0.2	0.2	1235	461	38 000	45 600	WF624zz	LF-1340	ZZ	3.04
16	18	18	5	5	1	1	0.3	0.3	1 643	637	34 200	40 850	WF634zz	LF-1640	ZZ	5.57	
5	8	9.2	9.2	2	2.5	0.6	0.6	0.1	0.1	295	114	50 350	59 850		LF-850	ZZ	0.41
	9	10.2	10.2	2.5	3	0.6	0.6	0.15	0.15	409	160	47 500	57 000		LF-950	ZZ	0.62
	10	11.2	11.6	3	4	0.6	0.8	0.15	0.15	409	160	47 500	57 000		LF-1050	ZZ	1.43
	11	12.5	12.5	3	5	0.8	1	0.15	0.15	679	267	42 750	50 350	F685zz	LF-1150	ZZ	2.14
	13	15	15	4	4	1	1	0.2	0.2	1 026	409	40 850	47 500	WF695zz	LF-1350	ZZ	2.76
	14	16	16	5	5	1	1	0.2	0.2	1 263	480	38 000	47 500	WF605zz	LF-1450	ZZ	3.88
	16	18	18	5	5	1	1	0.3	0.3	1 643	637	34 200	40 850	WF625zz	LF-1650	ZZ	5.22
	19	22	22	6	6	1.5	1.5	0.3	0.3	2 223	841	30 400	38 000	WF635zz	LF-1950	ZZ	9.39



Extra Small Ball Bearings-Miniature Ball Bearings



Dimension table . Dimensions in mm

d	D	D ₁	D ₂	B	B ₁	C ₁	C ₂	r (min)	r ₁ (min)	Basic Load Ratings (N)		Limiting Speeds (rpm)		Bearing Numbers	Bearing Numbers	shielded	Mass (g) Approx
										C _r	C _{or}	Grease	Oil				
6	10	11.2	11.2	2.5	3	0.6	0.6	0.15	0.1	470	207	42 750	50 350		LF-1060	ZZ	0.75
	12	13.2	13.6	3	4	0.6	0.8	0.2	0.15	679	277	40 850	47 500		LF-126	ZZ	1.9
	13	15	15	3.5	5	1	1.1	0.15	0.15	1 026	418	38 000	47 500	WF686zz	LF-1360	ZZ	3.02
	15	17	17	5	5	1.2	1.2	0.2	0.2	1 643	637	38 000	42 750	WF696zz	LF-1560	ZZ	4.26
	17	19	19	6	6	1.2	1.2	0.3	0.3	2 147	793	36 100	42 750	WF606zz	LF-1760	ZZ	6.57
	19	22	22	6	6	1.5	1.5	0.3	0.3	2 223	841	30 400	38 000	WF626zz	LF-1960	ZZ	8.99
7	11	12.2	12.2	2.5	3	0.6	0.6	0.15	0.1	432	191	40 850	47 500		LF-1170	ZZ	0.81
	13	14.2	14.6	3	4	0.6	0.8	0.2	0.15	513	262	38 000	45 600		LF-1370	ZZ	2.2
	14	16	16	3.5	5	1	1.1	0.15	0.15	1 111	485	38 000	42 750	WF687zz	LF-1470	ZZ	2.2
	17	19	19	5	5	1.2	1.2	0.3	0.3	1 529	679	34 200	40 850	WF697zz	LF-697	ZZ	5.54
	19	22	22	6	6	1.5	1.5	0.3	0.3	2 223	841	34 200	40 850	WF607zz	LF-1970	ZZ	8.56
	22	25	25	7	7	1.5	1.5	0.3	0.3	3 135	1 301	28 500	34 200	WF627zz	LF-2270	ZZ	14
8	12	13.2	13.6	2.5	4	0.6	0.8	0.15	0.1	518	261	38 000	45 600		LF-1280	ZZ	1.13
	14	15.6	15.6	3.5	4	0.8	0.8	0.2	0.15	779	366	36 100	42 750		LF-1480	ZZ	2.35
	16	18	18	4	5	1	1.1	0.2	0.2	1 197	561	34 200	40 850	WF688zz	LF-1680	ZZ	4.45
	19	22	22	6	6	1.5	1.5	0.3	0.3	2 128	865	34 200	40 850	WF698zz	LF-1980	ZZ	8.25
	22	25	25	7	7	1.5	1.5	0.3	0.3	3 135	1 301	32 300	38 000	WF608zz	LF-2280	ZZ	13.4
9	17	19	19	4	5	1	1.1	0.2	0.2	1 263	632	34 200	40 850	WF689zz	LF-1790	ZZ	4.83
	20	23	23	6	6	1.5	1.5	0.3	0.3	1 624	803	32 300	38 000	WF699zz	LF-2090	ZZ	9.18
	24	-	-	7	7	-	-	0.3	0.3	3 182	1 358	30 400	36 100	WF609zz	LF-609	ZZ	14.5
10	19	-	-	7	7	-	-	0.3	0.3	1 634	798	32 300	38 000		LF-1910	ZZ	0.05
12	24	-	-	6	6	-	-	0.3	0.3	2 745	1 387	28 500	34 200	F6901zz	LF-1224	ZZ	0.01