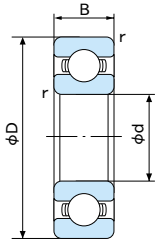
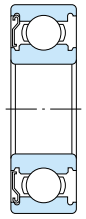
Deep-groove Ball Bearings

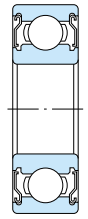
Bore Diameter : 10～25mm



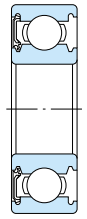
Open



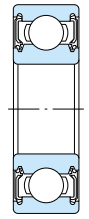
One shield (ZE)



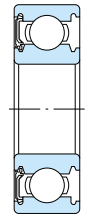
Two shields (ZZE)



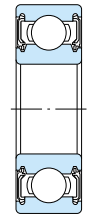
One contact seal (NSE)



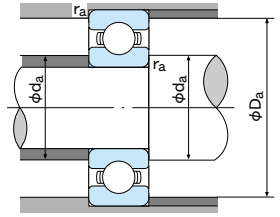
Two contact seals (2NSE)



One non-contact seal (NKE)



Two non-contact seals (2NKE)



1N=0.102kgf

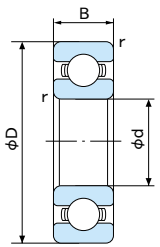
- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

Fa/Cor	e	Fa/Fr ≦ e		Fa/Fr > e	
		X	Y	X	Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

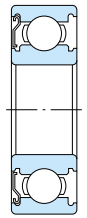
Boundary dimensions (mm)				Bearing No.							Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
													Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type		Cr(N)	Cor(N)	Open type,ZE, ZZE,NKE,2NKE	NSE,2NSE	Open type,ZE	d_a (min)	D_a (max)	r_a (max)		
10	19	5	0.3	6800	6800Z	6800ZZ	—	—	—	—	2120	985	37000	24000	44000	12	17	0.3	0.005	6800
	22	6	0.3	6900	6900ZE	6900ZZE	6900NSE	6900-2NSE	6900NKE	6900-2NKE	2490	1130	33000	22000	38000	12	20	0.3	0.009	6900
	26	8	0.3	6000	6000ZE	6000ZZE	6000NSE	6000-2NSE	6000NKE	6000-2NKE	4550	1970	30000	20000	36000	12	24	0.3	0.019	6000
	30	9	0.6	6200	6200ZE	6200ZZE	6200NSE	6200-2NSE	6200NKE	6200-2NKE	5100	2390	24000	17000	30000	15	25	0.6	0.032	6200
	35	11	0.6	6300	6300ZE	6300ZZE	6300NSE	6300-2NSE	6300NKE	6300-2NKE	8100	3450	21000	17000	26000	15	30	0.6	0.053	6300
12	21	5	0.3	6801	6801ZE	6801ZZE	6801NSE	6801-2NSE	6801NKE	6801-2NKE	1920	1040	32000	20000	39000	14	19	0.3	0.006	6801
	24	6	0.3	6901	6901ZE	6901ZZE	6901NSE	6901-2NSE	6901NKE	6901-2NKE	2700	1320	30000	19000	35000	14	22	0.3	0.011	6901
	28	8	0.3	6001	6001ZE	6001ZZE	6001NSE	6001-2NSE	6001NKE	6001-2NKE	5100	2390	27000	17000	32000	14	26	0.3	0.023	6001
	32	10	0.6	6201	6201ZE	6201ZZE	6201NSE	6201-2NSE	6201NKE	6201-2NKE	6800	3050	22000	16000	27000	17	27	0.6	0.037	6201
	37	12	1	6301	6301ZE	6301ZZE	6301NSE	6301-2NSE	6301NKE	6301-2NKE	9750	4250	19000	15000	24000	18	31	1.0	0.060	6301
15	24	5	0.3	6802	6802ZE	6802ZZE	6802NSE	6802-2NSE	6802NKE	6802-2NKE	2080	1260	27000	16000	32000	17	22	0.3	0.007	6802
	28	7	0.3	6902	6902ZE	6902ZZE	6902NSE	6902-2NSE	6902NKE	6902-2NKE	4300	2250	26000	15000	31000	17	26	0.3	0.016	6902
	32	8	0.3	16002	—	—	—	—	—	—	5600	2840	23000	—	28000	20	27	0.3	0.025	16002
	32	9	0.3	6002	6002ZE	6002ZZE	6002NSE	6002-2NSE	6002NKE	6002-2NKE	5600	2840	23000	14000	28000	17	30	0.3	0.032	6002
	35	11	0.6	6202	6202ZE	6202ZZE	6202NSE	6202-2NSE	6202NKE	6202-2NKE	7650	3700	19000	13000	24000	20	30	0.6	0.045	6202
	42	13	1	6302	6302ZE	6302ZZE	6302NSE	6302-2NSE	6302NKE	6302-2NKE	11400	5400	17000	12000	20000	21	36	1.0	0.082	6302
17	26	5	0.3	6803	6803ZE	6803ZZE	6803NSE	6803-2NSE	6803NKE	6803-2NKE	2630	1570	25000	15000	30000	19	24	0.3	0.008	6803
	30	7	0.3	6903	6903ZE	6903ZZE	6903NSE	6903-2NSE	6903NKE	6903-2NKE	4600	2550	24000	14000	29000	19	28	0.3	0.018	6903
	35	8	0.3	16003	—	—	—	—	—	—	6000	3250	20000	—	24000	22	30	0.3	0.032	16003
	35	10	0.3	6003	6003ZE	6003ZZE	6003NSE	6003-2NSE	6003NKE	6003-2NKE	6000	3250	20000	13000	25000	19	33	0.3	0.039	6003
	40	12	0.6	6203	6203ZE	6203ZZE	6203NSE	6203-2NSE	6203NKE	6203-2NKE	9550	4800	17000	12000	21000	22	35	0.6	0.065	6203
	47	14	1	6303	6303ZE	6303ZZE	6303NSE	6303-2NSE	6303NKE	6303-2NKE	13600	6550	15000	11000	18000	23	41	1.0	0.115	6303
20	32	7	0.3	6804	6804ZE	6804ZZE	6804NSE	6804-2NSE	6804NKE	6804-2NKE	4000	2640	20000	12000	24000	22	30	0.3	0.019	6804
	37	9	0.3	6904	6904ZE	6904ZZE	6904NSE	6904-2NSE	6904NKE	6904-2NKE	6350	3700	19000	11000	23000	22	35	0.3	0.036	6904
	42	8	0.3	16004	—	—	—	—	—	—	7900	4500	17000	—	21000	25	37	0.3	0.050	16004
	42	12	0.6	6004	6004ZE	6004ZZE	6004NSE	6004-2NSE	6004NKE	6004-2NKE	9400	5000	17000	11000	21000	24	38	0.6	0.070	6004
	47	14	1	6204	6204ZE	6204ZZE	6204NSE	6204-2NSE	6204NKE	6204-2NKE	12800	6600	14000	10000	18000	26	41	1.0	0.106	6204
	52	15	1.1	6304	6304ZE	6304ZZE	6304NSE	6304-2NSE	6304NKE	6304-2NKE	15900	7900	13000	9500	16000	27	45	1.1	0.144	6304
22	50	14	1	62/22	62/22ZE	62/22ZZE	62/22NSE	62/22-2NSE	62/22NKE	62/22-2NKE	13900	6950	13000	9000	17000	28	44	1.0	0.120	62/22
	56	16	1.1	63/22	63/22ZE	63/22ZZE	63/22NSE	63/22-2NSE	63/22NKE	63/22-2NKE	18400	9250	12000	8000	15000	29	49	1.0	0.176	63/22
25	37	7	0.3	6805	6805ZE	6805ZZE	6805NSE	6805-2NSE	6805NKE	6805-2NKE	4300	2940	18000	10000	20000	27	35	0.3	0.022	6805
	42	9	0.3	6905	6905ZE	6905ZZE	6905NSE	6905-2NSE	6905NKE	6905-2NKE	7000	4500	16000	9500	20000	27	40	0.3	0.042	6905
	47	8	0.3	16005	—	—	—	—	—	—	6950	4600	15000	—	18000	30	42	0.3	0.060	16005
	47	12	0.6	6005	6005ZE	6005ZZE	6005NSE	6005-2NSE	6005NKE	6005-2NKE	10100	5850	15000	9000	18000	29	43	0.6	0.079	6005
	52	15	1	6205	6205ZE	6205ZZE	6205NSE	6205-2NSE	6205NKE	6205-2NKE	14000	7900	12000	8500	16000	31	46	1.0	0.128	6205
	62	17	1.1	6305	6305ZE	6305ZZE	6305NSE	6305-2NSE	6305NKE	6305-2NKE	23600	12100	11000	8000	14000	32	55	1.0	0.232	6305

Deep-groove Ball Bearings

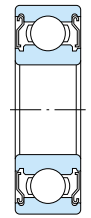
Bore Diameter : 28～50mm



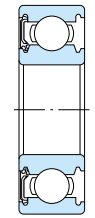
Open



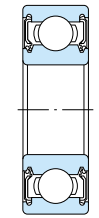
One shield (ZE)



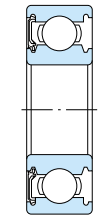
Two shields (ZZE)



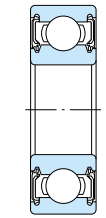
One contact seal (NSE)



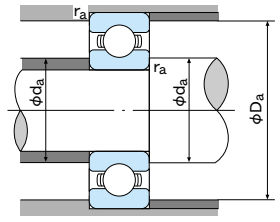
Two contact seals (2NSE)



One non-contact seal (NKE)



Two non-contact seals (2NKE)



1N=0.102kgf

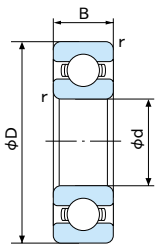
- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

Fa/Cor	e	Fa/Fr ≦ e X	Fa/Fr ≦ e Y	Fa/Fr > e X	Fa/Fr > e Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

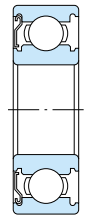
Boundary dimensions (mm)				Bearing No.							Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
													Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type		Cr(N)	Cor(N)	Open type,ZE, ZZE,NKE,2NKE	NSE,2NSE	Open type,ZE	d_a (min)	D_a (max)	r_a (max)		
28	58	16	1	62/28	62/28ZE	62/28ZZE	62/28NSE	62/28-2NSE	62/28NKE	62/28-2NKE	17900	9750	11000	8200	14000	34	52	1.0	0.175	62/28
	68	18	1.1	63/28	63/28ZE	63/28ZZE	63/28NSE	63/28-2NSE	63/28NKE	63/28-2NKE	26800	14000	10000	7000	12000	35	61	1.0	0.287	63/28
30	42	7	0.3	6806	6806ZE	6806ZZE	6806NSE	6806-2NSE	6806NKE	6806-2NKE	5350	3800	15000	8700	17000	32	40	0.3	0.026	6806
	47	9	0.3	6906	6906ZE	6906ZZE	6906NSE	6906-2NSE	6906NKE	6906-2NKE	7250	5000	14000	8200	16000	32	45	0.3	0.045	6906
	55	9	0.3	16006	—	—	—	—	—	—	9950	6550	12000	—	15000	35	50	0.3	0.085	16006
	55	13	1	6006	6006ZE	6006ZZE	6006NSE	6006-2NSE	6006NKE	6006-2NKE	13200	8300	12000	7700	15000	35	50	1.0	0.117	6006
	62	16	1	6206	6206ZE	6206ZZE	6206NSE	6206-2NSE	6206NKE	6206-2NKE	19500	11300	10000	7300	13000	36	56	1.0	0.199	6206
	72	19	1.1	6306	6306ZE	6306ZZE	6306NSE	6306-2NSE	6306NKE	6306-2NKE	26700	15000	9200	6600	11000	37	65	1.0	0.346	6306
32	65	17	1	62/32	62/32ZE	62/32ZZE	62/32NSE	62/32-2NSE	62/32NKE	62/32-2NKE	22400	13100	9500	7000	12000	38	59	1.0	0.230	62/32
	75	20	1.1	63/32	63/32ZE	63/32ZZE	63/32NSE	63/32-2NSE	63/32NKE	63/32-2NKE	30000	16200	9000	6000	11000	39	68	1.0	0.382	63/32
35	47	7	0.3	6807	6807ZE	6807ZZE	6807NSE	6807-2NSE	6807NKE	6807-2NKE	4750	3800	13000	7600	15000	37	45	0.3	0.029	6807
	55	10	0.6	6907	6907ZE	6907ZZE	6907NSE	6907-2NSE	6907NKE	6907-2NKE	10400	7150	12000	7000	14000	39	51	0.6	0.073	6907
	62	9	0.3	16007	—	—	—	—	—	—	11700	8150	11000	—	13000	40	57	0.3	0.110	16007
	62	14	1	6007	6007ZE	6007ZZE	6007NSE	6007-2NSE	6007NKE	6007-2NKE	16000	10300	11000	6800	13000	40	57	1.0	0.156	6007
	72	17	1.1	6207	6207ZE	6207ZZE	6207NSE	6207-2NSE	6207NKE	6207-2NKE	25700	15300	9000	6300	11000	42	65	1.0	0.288	6207
	80	21	1.5	6307	6307ZE	6307ZZE	6307NSE	6307-2NSE	6307NKE	6307-2NKE	33500	19200	8400	5900	10000	44	71	1.5	0.457	6307
40	52	7	0.3	6808	6808ZE	6808ZZE	6808NSE	6808-2NSE	6808NKE	6808-2NKE	5950	4900	12000	6700	14000	42	50	0.3	0.033	6808
	62	12	0.6	6908	6908ZE	6908ZZE	6908NSE	6908-2NSE	6908NKE	6908-2NKE	13700	9950	11000	6100	13000	44	58	0.6	0.108	6908
	68	9	0.3	16008	—	—	—	—	—	—	11100	8550	9700	—	12000	45	63	0.3	0.125	16008
	68	15	1	6008	6008ZE	6008ZZE	6008NSE	6008-2NSE	6008NKE	6008-2NKE	16800	11500	9500	6000	12000	45	63	1.0	0.194	6008
	80	18	1.1	6208	6208ZE	6208ZZE	6208NSE	6208-2NSE	6208NKE	6208-2NKE	29100	17900	8200	5600	10000	47	73	1.0	0.366	6208
	90	23	1.5	6308	6308ZE	6308ZZE	6308NSE	6308-2NSE	6308NKE	6308-2NKE	40500	24100	7500	5200	9000	49	81	1.5	0.633	6308
45	58	7	0.3	6809	6809ZE	6809ZZE	6809NSE	6809-2NSE	6809NKE	6809-2NKE	5350	4900	11000	5900	13000	47	56	0.3	0.040	6809
	68	12	0.6	6909	6909ZE	6909ZZE	6909NSE	6909-2NSE	6909NKE	6909-2NKE	14100	10900	10000	5600	12000	49	64	0.6	0.122	6909
	75	10	0.6	16009	—	—	—	—	—	—	12900	10500	9000	—	11000	52	68	0.6	0.170	16009
	75	16	1	6009	6009ZE	6009ZZE	6009NSE	6009-2NSE	6009NKE	6009-2NKE	20900	15200	8800	5300	11000	50	70	1.0	0.246	6009
	85	19	1.1	6209	6209ZE	6209ZZE	6209NSE	6209-2NSE	6209NKE	6209-2NKE	32500	20500	7600	5100	9300	52	78	1.0	0.407	6209
	100	25	1.5	6309	6309ZE	6309ZZE	6309NSE	6309-2NSE	6309NKE	6309-2NKE	53000	32000	6700	4600	8000	54	91	1.5	0.833	6309
50	65	7	0.3	6810	6810ZE	6810ZZE	6810NSE	6810-2NSE	6810NKE	6810-2NKE	6400	5800	10000	5300	12000	52	63	0.3	0.052	6810
	72	12	0.6	6910	6910ZE	6910ZZE	6910NSE	6910-2NSE	6910NKE	6910-2NKE	14500	11700	9500	5100	11000	54	68	0.6	0.125	6910
	80	10	0.6	16010	—	—	—	—	—	—	16100	13100	8300	—	10000	57	73	0.6	0.180	16010
	80	16	1	6010	6010ZE	6010ZZE	6010NSE	6010-2NSE	6010NKE	6010-2NKE	21800	16600	8300	4800	10000	55	75	1.0	0.264	6010
	90	20	1.1	6210	6210ZE	6210ZZE	6210NSE	6210-2NSE	6210NKE	6210-2NKE	35000	23200	7000	4700	8600	57	83	1.0	0.463	6210
	110	27	2	6310	6310ZE	6310ZZE	6310NSE	6310-2NSE	6310NKE	6310-2NKE	62000	38000	6200	4100	7300	60	100	2.0	1.07	6310

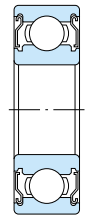
Deep-groove Ball Bearings

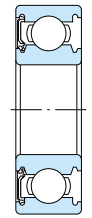
Bore Diameter : 55～80mm

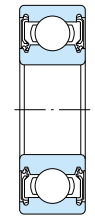


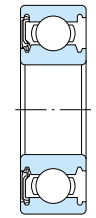
Open

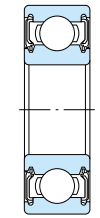

One shield (ZE)

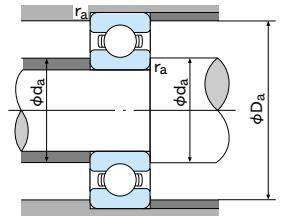

Two shields (ZZE)


One contact seal (NSE)


Two contact seals (2NSE)


One non-contact seal (NKE)


Two non-contact seals (2NKE)



1N=0.102kgf

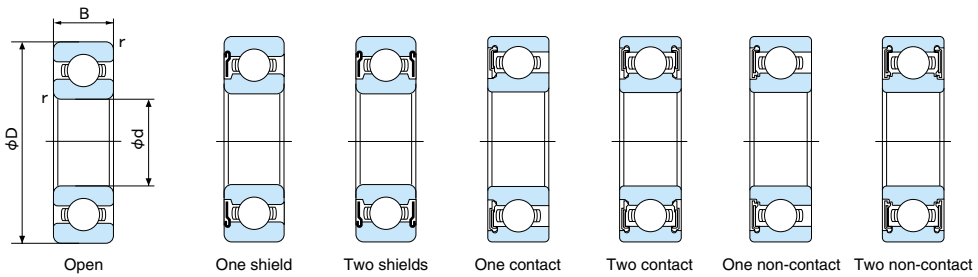
- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

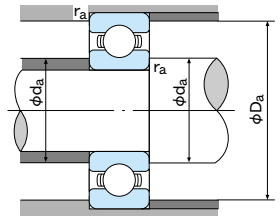
Fa/Cor	e	Fa/Fr ≦ e: X	Fa/Fr ≦ e: Y	Fa/Fr > e: X	Fa/Fr > e: Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

Boundary dimensions (mm)				Bearing No.							Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
													Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type		Cr(N)	Cor(N)	Open type,ZE, ZZE,NKE,2NKE	NSE,2NSE NSL,2NSL	Open type,ZE	d_a (min)	D_a (max)	r_a (max)		
55	72	9	0.3	6811	6811Z	6811ZZ	—	—	—	—	8800	8100	8500	—	10000	57	70	0.3	0.083	6811
	80	13	1	6911	6911Z	6911ZZ	—	—	—	—	16000	13200	8000	—	9000	60	75	1.0	0.177	6911
	90	11	0.6	16011	—	—	—	—	—	—	15200	13500	7500	—	9000	62	83	0.6	0.260	16011
	90	18	1.1	6011	6011ZE	6011ZZE	6011NSE	6011-2NSE	6011NKE	6011-2NKE	28300	21300	7500	4400	9000	61	84	1.0	0.384	6011
	100	21	1.5	6211	6211ZE	6211ZZE	6211NSE	6211-2NSE	6211NKE	6211-2NKE	43500	29300	6300	4200	7700	64	91	1.5	0.607	6211
	120	29	2	6311	6311ZE	6311ZZE	6311NSE	6311-2NSE	6311NKE	6311-2NKE	71500	44500	5600	3800	6600	65	110	2.0	1.37	6311
60	78	10	0.3	6812	6812Z	6812ZZ	—	—	—	—	11500	10600	8000	—	9500	62	76	0.3	0.106	6812
	85	13	1	6912	6912Z	6912ZZ	—	—	—	—	15200	13500	7500	—	9000	65	80	1.0	0.191	6912
	95	11	0.6	16012	—	—	—	—	—	—	16200	14300	7000	—	8200	67	88	0.6	0.280	16012
	95	18	1.1	6012	6012ZE	6012ZZE	6012NSE	6012-2NSE	6012NKE	6012-2NKE	29400	23200	7000	4100	8300	66	89	1.0	0.418	6012
	110	22	1.5	6212	6212ZE	6212ZZE	6212NSE	6212-2NSE	6212NKE	6212-2NKE	52500	36000	5800	3800	7100	69	101	1.5	0.783	6212
	130	31	2.1	6312	6312ZE	6312ZZE	6312NSE	6312-2NSE	6312NKE	6312-2NKE	82000	52000	5100	3500	6100	72	118	2.0	1.70	6312
65	85	10	0.6	6813	6813Z	6813ZZ	—	—	—	—	11900	11500	7500	—	8500	69	81	0.6	0.125	6813
	90	13	1	6913	6913Z	6913ZZ	—	—	—	—	17400	16000	7000	—	8500	70	85	1.0	0.200	6913
	100	11	0.6	16013	—	—	—	—	—	—	20500	18600	6500	—	7500	72	93	0.6	0.300	16013
	100	18	1.1	6013	6013ZE	6013ZZE	6013NSE	6013-2NSE	6013NKE	6013-2NKE	30500	25200	6500	3800	7800	71	94	1.0	0.438	6013
	120	23	1.5	6213	6213ZE	6213ZZE	6213NSE	6213-2NSE	6213NKE	6213-2NKE	57000	40000	5300	3500	6500	74	111	1.5	0.990	6213
	140	33	2.1	6313	6313ZE	6313ZZE	6313NSE	6313-2NSE	6313NKE	6313-2NKE	92500	59500	4700	3300	5700	77	128	2.0	2.08	6313
70	90	10	0.6	6814	6814Z	6814ZZ	—	—	—	—	12100	11900	7000	—	8000	74	86	0.6	0.135	6814
	100	16	1	6914	6914Z	6914ZZ	—	—	—	—	23700	21100	6500	—	7500	75	95	1.0	0.327	6914
	110	13	0.6	16014	—	—	—	—	—	—	26800	23600	6000	—	7000	77	103	0.6	0.433	16014
	110	20	1.1	6014	6014ZE	6014ZZE	6014NSE	6014-2NSE	6014NKE	6014-2NKE	38000	31000	6000	3500	7100	76	104	1.0	0.607	6014
	125	24	1.5	6214	6214ZE	6214ZZE	6214NSE	6214-2NSE	6214NKE	6214-2NKE	62000	44000	5000	3300	5900	79	116	1.5	1.07	6214
	150	35	2.1	6314	6314ZE	6314ZZE	6314NSE	6314-2NSE	6314NKE	6314-2NKE	104000	68000	4400	3100	5300	82	138	2.0	2.52	6314
75	95	10	0.6	6815	6815Z	6815ZZ	—	—	—	—	12500	12800	6500	—	7500	79	91	0.6	0.145	6815
	105	16	1	6915	6915Z	6915ZZ	—	—	—	—	20800	19700	6200	—	7200	80	100	1.0	0.345	6915
	115	13	0.6	16015	—	—	—	—	—	—	27600	25300	5500	—	6500	82	108	0.6	0.457	16015
	115	20	1.1	6015	6015ZE	6015ZZE	6015NSE	6015-2NSE	6015NKE	6015-2NKE	39500	33500	5700	3300	6700	81	109	1.0	0.645	6015
	130	25	1.5	6215	6215ZE	6215ZZE	6215NSE	6215-2NSE	6215NKE	6215-2NKE	66000	49500	4800	3100	5600	84	121	1.5	1.18	6215
	160	37	2.1	6315	6315ZE	6315ZZE	6315NSE	6315-2NSE	6315NKE	6315-2NKE	113000	77000	4100	2900	5000	87	148	2.0	3.02	6315
80	100	10	0.6	6816	6816Z	6816ZZ	—	—	—	—	12700	13300	6000	—	7000	84	96	0.6	0.155	6816
	110	16	1	6916	6916Z	6916ZZ	—	—	—	—	27600	25300	5500	—	6500	85	105	1.0	0.363	6916
	125	14	0.6	16016	—	—	—	—	—	—	32000	29600	5300	—	6200	87	118	0.6	0.597	16016
	125	22	1.1	6016	6016Z	6016ZZ	—	—	—	—	47500	39500	5300	—	6200	86	119	1.0	0.855	6016
	140	26	2	6216	6216Z	6216ZZ	6216NSL	6216-2NSL	6216NK	6216-2NK	72500	53000	4500	3000	5200	90	130	2.0	1.40	6216
	170	39	2.1	6316	6316Z	6316ZZ	6316NSL	6316-2NSL	6316NK	6316-2NK	123000	86500	3800	2700	4500	92	158	2.0	3.59	6316

Deep-groove Ball Bearings

Bore Diameter : 80～110mm





1N=0.102kgf

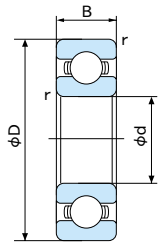
- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

Fa/Cor	e	Fa/Fr ≦ e		Fa/Fr > e	
		X	Y	X	Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

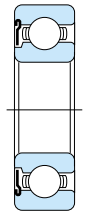
Boundary dimensions (mm)				Bearing No.							Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
													Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type		Cr(N)	Cor(N)	Open type,Z, ZZ,NK,2NK	NSL,2NSL	Open type,Z	d_a (min)	D_a (max)	r_a (max)		
85	110	13	1	6817	6817Z	6817ZZ	—	—	—	—	18700	19000	5500	—	6500	90	105	1.0	0.265	6817
	120	18	1.1	6917	6917Z	6917ZZ	—	—	—	—	32000	29600	5200	—	6300	91	113	1.0	0.517	6917
	130	14	0.6	16017	—	—	—	—	—	—	31500	29800	5000	—	6000	92	123	0.6	0.626	16017
	130	22	1.1	6017	6017Z	6017ZZ	—	—	—	—	49500	43000	5000	—	6000	91	124	1.1	0.895	6017
	150	28	2	6217	6217Z	6217ZZ	6217NSL	6217-2NSL	6217NK	6217-2NK	84000	62000	4200	2800	4900	95	140	2.0	1.79	6217
	180	41	3	6317	6317Z	6317ZZ	6317NSL	6317-2NSL	6317NK	6317-2NK	133000	96500	3600	2600	4300	99	166	2.5	4.23	6317
90	115	13	1	6818	6818Z	6818ZZ	—	—	—	—	19000	19700	5300	—	6200	95	110	1.0	0.280	6818
	125	18	1.1	6918	6918Z	6918ZZ	—	—	—	—	33000	31500	5000	—	6000	96	119	1.0	0.540	6918
	140	16	1	16018	—	—	—	—	—	—	41500	39500	4800	—	5600	99	131	1.0	0.848	16018
	140	24	1.5	6018	6018Z	6018ZZ	—	—	—	—	58000	49500	4700	—	5600	97	133	1.5	1.17	6018
	160	30	2	6218	6218Z	6218ZZ	6218NSL	6218-2NSL	6218NK	6218-2NK	96000	71500	3900	2600	4600	100	150	2.0	2.15	6218
	190	43	3	6318	6318Z	6318ZZ	6318NSL	6318-2NSL	6318NK	6318-2NK	143000	107000	3400	2400	4000	104	176	2.5	4.91	6318
95	120	13	1	6819	6819Z	6819ZZ	—	—	—	—	19300	20500	5000	—	6000	100	115	1.0	0.298	6819
	130	18	1.1	6919	6919Z	6919ZZ	—	—	—	—	33500	33500	4700	—	5500	101	124	1.0	0.567	6919
	145	16	1	16019	—	—	—	—	—	—	41000	39500	4600	—	5300	104	136	1.0	0.885	16019
	145	24	1.5	6019	6019Z	6019ZZ	—	—	—	—	60500	54000	4500	—	5300	102	138	1.5	1.22	6019
	170	32	2.1	6219	6219Z	6219ZZ	6219NSL	6219-2NSL	6219NK	6219-2NK	109000	81500	3700	2400	4300	107	158	2.0	2.62	6219
	200	45	3	6319	6319Z	6319ZZ	6319NSL	6319-2NSL	6319NK	6319-2NK	153000	118000	3200	2200	3800	109	186	2.5	5.67	6319
100	125	13	1	6820	6820Z	6820ZZ	—	—	—	—	19600	21200	4600	—	5500	105	120	1.0	0.311	6820
	140	20	1.1	6920	6920Z	6920ZZ	—	—	—	—	37000	36500	4400	—	5300	106	134	1.0	0.771	6920
	150	16	1	16020	—	—	—	—	—	—	37500	39500	4300	—	5000	109	141	1.0	0.910	16020
	150	24	1.5	6020	6020Z	6020ZZ	—	—	—	—	60000	54000	4200	—	5000	107	143	1.5	1.26	6020
	180	34	2.1	6220	6220Z	6220ZZ	6220NSL	6220-2NSL	6220NK	6220-2NK	122000	93000	3500	2300	4100	112	168	2.0	3.14	6220
	215	47	3	6320	6320Z	6320ZZ	6320NSL	6320-2NSL	6320NK	6320-2NK	173000	141000	3000	2100	3600	114	201	2.5	7.00	6320
105	130	13	1	6821	—	—	—	—	—	—	19900	21900	4500	—	5500	110	125	1.0	0.325	6821
	145	20	1.1	6921	—	—	—	—	—	—	42500	42000	4200	—	5100	111	139	1.0	0.793	6921
	160	18	1	16021	—	—	—	—	—	—	37500	50500	4000	—	4800	114	151	1.0	1.20	16021
	160	26	2	6021	6021Z	6021ZZ	—	—	—	—	72500	65500	4000	—	4800	113	152	2.0	1.60	6021
	190	36	2.1	6221	6221Z	6221ZZ	—	—	—	—	133000	104000	3200	—	3900	117	178	2.0	3.76	6221
	225	49	3	6321	6321Z	6321ZZ	—	—	—	—	184000	153000	2800	—	3400	119	211	2.5	8.05	6321
110	140	16	1	6822	—	—	—	—	—	—	27300	29400	4200	—	5100	115	135	1.0	0.510	6822
	150	20	1.1	6922	—	—	—	—	—	—	38000	38500	4000	—	5000	116	144	1.0	0.830	6922
	170	19	1	16022	—	—	—	—	—	—	44000	45000	3800	—	4500	119	161	1.0	1.46	16022
	170	28	2	6022	6022Z	6022ZZ	—	—	—	—	84500	73000	3800	—	4500	118	162	2.0	1.97	6022
	200	38	2.1	6222	6222Z	6222ZZ	—	—	—	—	144000	117000	3000	—	3700	122	188	2.0	4.36	6222
	240	50	3	6322	6322Z	6322ZZ	—	—	—	—	205000	179000	2600	—	3200	124	226	2.5	9.54	6322

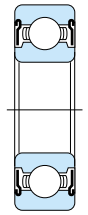
Deep-groove Ball Bearings

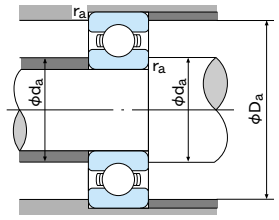
Bore Diameter : 120～170mm



Open


One shield
(Z)


Two shields
(ZZ)



- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

Fa/Cor	e	Fa/Fr ≦ e X	Fa/Fr ≦ e Y	Fa/Fr > e X	Fa/Fr > e Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

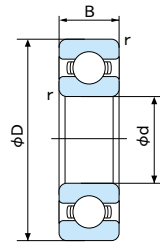
1N=0.102kgf

Boundary dimensions (mm)				Bearing No.							Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
													Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type		Cr(N)	Cor(N)	Open type,Z, ZZ,NK,2NK	NSL,2NSL	Open type,Z	d_a (min)	D_a (max)	r_a (max)		
120	150	16	1	6824	—	—	—	—	—	—	28300	31500	4000	—	4800	125	145	1.0	0.549	6824
	165	22	1.1	6924	—	—	—	—	—	—	53000	54000	3700	—	4600	126	159	1.0	1.13	6924
	180	19	1	16024	—	—	—	—	—	—	48000	50000	3500	—	4200	129	171	1.0	1.80	16024
	180	28	2	6024	6024Z	6024ZZ	—	—	—	—	88000	79500	3500	—	4200	128	172	2.0	2.67	6024
	215	40	2.1	6224	6224Z	6224ZZ	—	—	—	—	145000	118000	2800	—	3400	132	203	2.0	5.15	6224
	260	55	3	6324	6324Z	6324ZZ	—	—	—	—	207000	185000	2400	—	3000	134	246	2.5	14.6	6324
130	165	18	1.1	6826	—	—	—	—	—	—	37000	41000	3600	—	4400	136	158	1.0	0.790	6826
	180	24	1.5	6926	—	—	—	—	—	—	65000	67000	3400	—	4200	137	173	1.5	1.78	6926
	200	22	1.1	16026	—	—	—	—	—	—	55000	59500	3200	—	3600	144	186	1.0	2.69	16026
	200	33	2	6026	6026Z	6026ZZ	—	—	—	—	106000	101000	3200	—	3800	138	192	2.0	3.92	6026
	230	40	3	6226	6226Z	6226ZZ	—	—	—	—	167000	146000	2600	—	3200	144	216	2.5	5.82	6226
	280	58	4	6326	6326Z	6326ZZ	—	—	—	—	229000	214000	2200	—	2800	148	262	3.0	18.2	6326
140	175	18	1.1	6828	—	—	—	—	—	—	38000	44500	3400	—	4000	146	169	1.0	0.840	6828
	190	24	1.5	6928	—	—	—	—	—	—	66500	71000	3200	—	3800	147	183	1.5	1.90	6928
	210	22	1.1	16028	—	—	—	—	—	—	56000	62000	3000	—	3500	154	196	1.0	2.86	16028
	210	33	2	6028	6028Z	6028ZZ	—	—	—	—	110000	109000	3000	—	3600	148	202	2.0	4.15	6028
	250	42	3	6228	6228Z	6228ZZ	—	—	—	—	166000	150000	2400	—	2900	154	236	2.5	7.47	6228
	300	62	4	6328	6328Z	6328ZZ	—	—	—	—	253000	246000	2100	—	2600	158	282	3.0	21.8	6328
150	190	20	1.1	6830	—	—	—	—	—	—	47500	54500	3100	—	3500	156	184	1.0	1.20	6830
	210	28	2	6930	—	—	—	—	—	—	85500	87000	2800	—	3100	158	202	2.0	2.64	6930
	225	24	1.1	16030	—	—	—	—	—	—	76500	82500	2600	—	3200	164	211	1.0	3.58	16030
	225	35	2.1	6030	6030Z	6030ZZ	—	—	—	—	126000	126000	2600	—	3200	159	216	2.0	4.48	6030
	270	45	3	6230	6230Z	6230ZZ	—	—	—	—	176000	168000	2200	—	2600	164	256	2.5	9.41	6230
	320	65	4	6330	—	—	—	—	—	—	274000	284000	2000	—	2400	168	302	3.0	26.2	6330
160	200	20	1.1	6832	—	—	—	—	—	—	48500	56500	2800	—	3100	166	194	1.0	1.30	6832
	220	28	2	6932	—	—	—	—	—	—	87500	95500	2600	—	2900	168	212	2.0	3.01	6932
	240	38	2.1	6032	—	—	—	—	—	—	137000	135000	2400	—	3000	169	231	2.0	5.89	6032
	290	48	3	6232	6232Z	6232ZZ	—	—	—	—	185000	186000	2000	—	2400	174	276	2.5	14.3	6232
	340	68	4	6332	—	—	—	—	—	—	278000	287000	1800	—	2000	178	322	3.0	28.6	6332
170	215	22	1.1	6834	—	—	—	—	—	—	60000	70500	2600	—	3000	177	208	1.0	1.85	6834
	230	28	2	6934	—	—	—	—	—	—	86000	95000	2400	—	2800	178	222	2.0	3.17	6934
	260	42	2.1	6034	—	—	—	—	—	—	161000	160000	2200	—	2800	179	251	2.0	7.92	6034
	310	52	4	6234	—	—	—	—	—	—	212000	224000	1900	—	2300	188	292	3.0	17.5	6234
	360	72	4	6334	—	—	—	—	—	—	325000	355000	1600	—	1900	188	342	3.0	34.0	6334

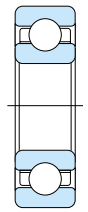
NACHI

Deep-groove Ball Bearings

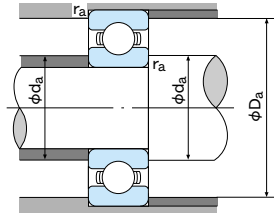
Bore Diameter : 180～320mm



Open



Open
(Machined cage)



- Dynamic equivalent radial load
  Pr=XFr+YFa
- Static equivalent radial load
  Larger value of following to be used:
  Por=0.6Fr+0.5Fa
  Por=Fr

$\frac{Fa}{Cor}$	e	$\frac{Fa}{Fr} \leqq e$ X	$\frac{Fa}{Fr} \leqq e$ Y	$\frac{Fa}{Fr} > e$ X	$\frac{Fa}{Fr} > e$ Y
0.014	0.19				2.30
0.028	0.22	1	0	0.56	1.99
0.056	0.26				1.71
0.084	0.28				1.55
0.11	0.30	1	0	0.56	1.45
0.17	0.34				1.31
0.28	0.38				1.15
0.42	0.42	1	0	0.56	1.04
0.56	0.44				1.00

1N=0.102kgf

Boundary dimensions (mm)				Bearing No.						Basic dynamic load rating	Basic static load rating	Limiting speed (rpm)			Abutment and fillet dimensions (mm)			Mass (kg)	Bearing No.
												Grease lubrication		Oil lubrication					
d	D	B	r (min)	Open type	Shield type		Contact seal type		Non-contact seal type	Cr(N)	Cor(N)	Open type,Z, ZZ,NK,2NK	NSL,2NSL	Open type,Z	d_a (min)	D_a (max)	r_a (max)		
180	225	22	1.1	6836	—	—	—	—	—	—	60500	73000	2400	—	2900	187	218	1.0	2.02	6836
	250	33	2	6936	—	—	—	—	—	—	106000	117000	2200	—	2600	188	242	2.0	4.68	6936
	280	46	2.1	6036	—	—	—	—	—	—	174000	180000	2100	—	2600	189	271	2.0	10.3	6036
	320	52	4	6236	—	—	—	—	—	—	227000	242000	1800	—	2200	198	302	3.0	18.3	6236
	380	75	4	6336	—	—	—	—	—	—	325000	360000	1500	—	1900	198	362	3.0	41.9	6336
190	240	24	1.5	6838	—	—	—	—	—	—	73000	88000	2200	—	2600	198	232	1.5	2.60	6838
	260	33	2	6938	—	—	—	—	—	—	108000	123000	2100	—	2500	198	252	2.0	4.90	6938
	290	46	2.1	6038	—	—	—	—	—	—	188000	200000	2000	—	2500	199	281	2.0	10.8	6038
	340	55	4	6238	—	—	—	—	—	—	255000	282000	1700	—	2000	208	322	3.0	23.0	6238
	400	78	5	6338	—	—	—	—	—	—	355000	415000	1500	—	1800	212	378	4.0	48.2	6338
200	250	24	1.5	6840	—	—	—	—	—	—	74000	91000	2100	—	2500	208	242	1.5	2.70	6840
	280	38	2.1	6940	—	—	—	—	—	—	130000	146000	2000	—	2500	209	271	2.0	6.88	6940
	310	51	2.1	6040	—	—	—	—	—	—	202000	222000	1900	—	2400	209	301	2.0	13.9	6040
	360	58	4	6240	—	—	—	—	—	—	268000	310000	1600	—	1900	218	342	3.0	28.2	6240
	420	80	5	6340	—	—	—	—	—	—	380000	445000	1300	—	1700	222	398	4.0	54.6	6340
220	270	24	1.5	6844	—	—	—	—	—	—	76500	98000	1900	—	2400	228	262	1.5	2.98	6844
	300	38	2.1	6944	—	—	—	—	—	—	132000	154000	1800	—	2300	229	291	2.0	7.45	6944
	340	56	3	6044	—	—	—	—	—	—	214000	248000	1700	—	2200	230	330	2.5	18.4	6044
	400	65	4	6244	—	—	—	—	—	—	310000	375000	1400	—	1700	238	382	3.0	37.0	6244
240	300	28	2	6848	—	—	—	—	—	—	98500	127000	1800	—	2100	250	291	2.0	4.60	6848
	320	38	2.1	6948	—	—	—	—	—	—	154000	186000	1700	—	2000	249	311	2.0	8.02	6948
	360	56	3	6048	—	—	—	—	—	—	222000	268000	1600	—	1900	250	350	2.5	19.6	6048
	440	72	4	6248	—	—	—	—	—	—	340000	430000	1200	—	1500	258	322	3.0	49.9	6248
260	320	28	2	6852	—	—	—	—	—	—	101000	136000	1600	—	2000	269	311	2.0	4.95	6852
	360	46	2.1	6952	—	—	—	—	—	—	204000	254000	1500	—	1800	269	351	2.0	13.4	6952
	400	65	4	6052	—	—	—	—	—	—	252000	320000	1400	—	1700	272	388	3.0	29.3	6052
	480	80	5	6252	—	—	—	—	—	—	400000	540000	1100	—	1400	282	458	4.0	67.5	6252
280	350	33	2	6856	—	—	—	—	—	—	133000	177000	1500	—	1800	290	341	2.0	7.35	6856
	380	46	2.1	6956	—	—	—	—	—	—	209000	270000	1400	—	1700	289	371	2.0	14.3	6956
	420	65	4	6056	—	—	—	—	—	—	266000	350000	1300	—	1600	293	405	3.0	31.0	6056
	500	80	5	6256	—	—	—	—	—	—	400000	550000	950	—	1200	302	478	4.0	71.0	6256
300	380	38	2.1	6860	—	—	—	—	—	—	166000	219000	1400	—	1600	311	369	2.0	10.4	6860
	420	56	3	6960	—	—	—	—	—	—	269000	370000	1300	—	1500	311	409	2.5	22.8	6960
	460	74	4	6060	—	—	—	—	—	—	355000	490000	1200	—	1500	313	447	3.0	43.8	6060
	540	85	5	6260	—	—	—	—	—	—	465000	670000	850	—	1100	322	518	4.0	88.6	6260
320	400	38	2.1	6864	—	—	—	—	—	—	164000	218000	1300	—	1500	330	389	2.0	10.9	6864
	440	56	3	6964	—	—	—	—	—	—	266000	370000	1200	—	1300	331	429	2.5	24.1	6964
	480	74	4	6064	—	—	—	—	—	—	340000	470000	1100	—	1300	333	467	3.0	46.1	6064