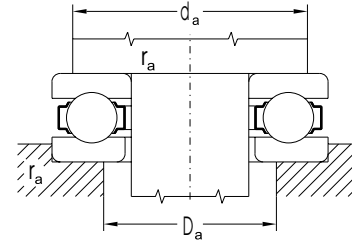
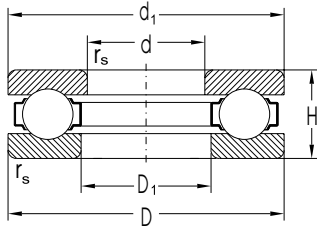


Single Direction Thrust Ball Bearings

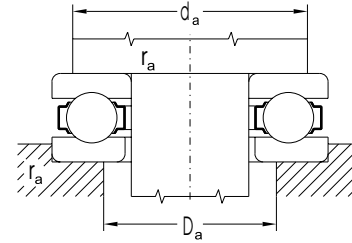
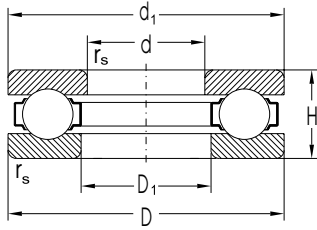
d = 10 to 70 mm



Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight	Minimum Axial Load Factor
d	D	d ₁	D ₁	H	r _s min	C _a	C _{0a}	Grease	Oil		d	d _a min	D _a max	r _a max		
mm						kN		min ⁻¹			mm				kg	
10	24	24	11	9	0.3	10.0	9.09	7900	10600	51100A	10	19	15	0.3	0.02	0.001
12	26	26	13	9	0.3	10.4	10.40	7500	10000	51101A	12	21	17	0.3	0.02	0.002
15	28	28	16	9	0.3	10.6	11.90	7100	9400	51102A	15	23	20	0.3	0.02	0.002
	32	13	17	12	0.6	15.8	16.50	6000	7900	51202A		25	22	0.6	0.05	0.004
17	30	30	18	9	0.3	11.4	14.40	7100	9400	51103A	17	25	22	0.3	0.03	0.003
	35	35	19	12	0.6	16.2	18.80	5600	7500	51203A		28	24	0.6	0.05	0.004
20	35	35	21	10	0.3	15.0	19.60	6300	8400	51104A	20	29	26	0.3	0.04	0.004
	40	40	22	14	0.6	22.4	26.10	5000	6700	51204A		32	28	0.6	0.08	0.008
25	42	42	26	11	0.6	18.1	27.10	5300	7100	51105A	25	35	32	0.6	0.06	0.006
	47	47	27	15	0.6	27.6	36.20	4500	6000	51205A		38	34	0.6	0.12	0.015
	52	52	27	18	1.0	35.5	42.20	3800	5000	51305A		41	36	1.0	0.180	0.020
	60	60	27	24	1.0	55.2	55.20	3200	4200	51405A		46	39	1.0	0.34	0.035
30	47	47	32	11	0.6	18.8	31.60	5000	6700	51106A	30	40	37	0.6	0.07	0.008
	52	52	32	16	0.6	29.3	43.80	4000	5300	51206A		43	39	0.6	0.14	0.018
	60	60	32	21	1.0	43.0	55.20	3300	4500	51306A		48	42	1.0	0.27	0.030
	70	70	32	28	1.0	72.2	81.00	2700	3500	51406A		54	46	1.0	0.53	0.085
35	52	52	37	12	0.6	20.0	38.30	4700	6300	51107A	35	45	42	0.6	0.08	0.012
	62	62	37	18	1.0	39.1	58.40	3500	4700	51207A		51	46	1.0	0.22	0.032
	68	68	37	24	1.0	55.2	73.60	2800	3800	51307A		55	48	1.0	0.39	0.050
	80	80	37	32	1.1	87.4	100.00	2200	3000	51407A		62	53	1.0	0.79	0.120
40	60	60	42	13	0.6	27.1	51.10	4200	5600	51108A	40	52	48	0.6	0.12	0.018
	68	68	42	19	1.0	43.8	70.80	3200	4200	51208A		57	51	1.0	0.27	0.047
	78	78	42	26	1.0	69.4	94.40	2700	3500	51308A		63	55	1.0	0.55	0.095
	90	90	42	36	1.1	112.0	133.00	2000	2700	51408ATNGN		70	60	1.0	1.14	0.190
45	65	65	47	14	0.6	27.6	57.30	4000	5300	51109A	45	57	53	0.6	0.15	0.025
	73	73	47	20	1.0	46.4	81.00	3000	4000	51209A		62	56	1.0	0.32	0.060
	85	85	47	28	1.0	79.4	117.00	2400	3200	51309A		69	61	1.0	0.69	0.130
	100	100	47	39	1.1	131.0	158.00	1900	2500	51409A		78	67	1.0	1.47	0.350
50	70	70	52	14	0.6	28.7	63.10	3800	5000	51110A	50	62	58	0.6	0.16	0.035
	78	78	52	22	1.0	47.3	87.40	2800	3800	51210A		67	61	1.0	0.39	0.082
55	78	78	57	16	0.6	34.8	77.90	3300	4500	51111A	55	69	64	0.6	0.24	0.040
	90	90	57	25	1.0	69.4	123.00	2500	3300	51211A		76	69	1.0	0.61	0.110
	105	105	57	35	1.1	119.0	174.00	1900	2500	51311A		85	75	1.0	1.34	0.270
	120	120	57	48	1.5	207.0	251.00	1600	2100	51411A		94	81	1.5	2.64	0.650
60	85	85	62	17	1.0	41.4	94.40	3200	4200	51112A	60	75	70	1.0	0.29	0.066
	110	110	62	35	1.1	123.0	192.00	1900	2500	51312A		90	80	1.0	1.43	0.350
65	100	100	67	27	1.0	75.0	150.00	2400	3200	51213A	65	86	79	1.0	0.77	0.170
	115	115	67	36	1.1	128.0	211.00	1800	2400	51313A		95	85	1.0	1.57	0.450
70	95	95	72	18	1.0	43.0	110.00	2800	3800	51114A	70	85	80	1.0	0.36	0.110
	105	105	72	27	1.0	76.4	162.00	2200	3000	51214A		91	84	1.0	0.81	0.210
	125	125	72	40	1.1	147.0	251.00	1700	2200	51314A		103	92	1.0	2.06	0.540
	150	150	73	60	2.0	251.0	369.00	1200	1600	51414A		118	102	2.0	5.48	1.600

Single Direction Thrust Ball Bearings

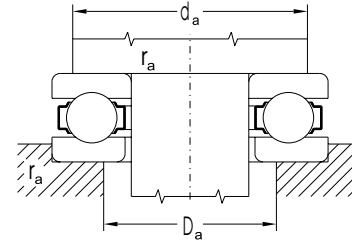
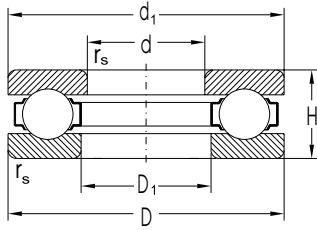
d = 75 to 150 mm



Dimensions						Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight	Minimum Axial Load Factor
d	D	d ₁	D ₁	H	r _s min	C _a	C _{0a}	Grease	Oil		d	d _a min	D _a max	r _a max		
mm						kN		min ⁻¹			mm				kg	
75	100	100	77	19	1.0	43.8	119.00	2700	3500	51115A	75	90	85	1.0	0.42	0.120
	110	110	77	27	1.0	77.9	171.00	2200	3000	51215A		96	89	1.0	0.86	0.270
	135	135	77	44	1.5	185.0	310.00	1600	2100	51315A		111	99	1.5	2.68	0.760
80	105	105	82	19	1.0	44.7	123.00	2700	3500	51116A	80	95	90	1.0	0.43	0.150
	115	115	82	28	1.0	79.4	181.00	2000	2700	51216A		101	94	1.0	0.95	0.350
	170	170	83	68	2.1	316.0	482.00	890	1200	51416		133	117	2.0	7.97	2.700
85	110	110	87	19	1.0	45.5	133.00	2700	3500	51117A	85	100	95	1.0	0.46	0.180
	125	125	88	31	1.0	96.2	215.00	1900	2700	51217A		109	101	1.0	1.29	0.430
	150	150	88	49	1.5	224.0	376.00	1300	1800	51317A		123	111	1.5	3.66	1.200
90	120	120	92	22	1.0	59.9	165.00	2200	3000	51118A	90	108	102	1.0	0.68	0.260
	155	155	93	50	1.5	233.0	406.00	1100	1500	51318		129	116	1.5	3.88	1.500
	190	187	93	77	2.1	383.0	619.00	790	1060	51418		149	131	2.0	11.20	4.100
100	135	135	102	25	1.0	85.8	228.00	2000	2700	51120A	100	121	114	1.0	0.99	0.340
	170	170	103	55	1.5	251.0	464.00	1060	1400	51320		142	128	1.5	5.11	2.000
	210	205	103	85	3.0	447.0	779.00	750	1000	51420		165	145	2.5	15.00	6.200
110	145	145	112	25	1.0	87.4	251.00	1900	2500	51122A	110	131	124	1.0	1.08	0.420
	190	187	113	63	2.0	304.0	584.00	890	1200	51322		158	142	2.0	7.87	2.800
	230	225	113	95	3.0	492.0	909.00	670	890	51422		181	159	2.5	20.20	9.000
120	155	155	122	25	1.0	89.1	271.00	1600	2100	51124	120	141	134	1.0	1.16	0.530
	210	205	123	70	2.1	348.0	708.00	790	1060	51324		173	157	2.0	10.90	4.100
	250	245	123	102	4.0	531.0	1040.00	630	840	51424		197	173	3.0	25.50	13.000
130	170	170	132	30	1.0	119.0	355.00	1400	1900	51126	130	154	146	1.0	1.87	0.650
	225	220	134	75	2.1	369.0	779.00	750	1000	51326		186	169	2.0	13.30	6.200
	270	265	134	110	4.0	631.0	1280.00	560	750	51426		213	187	3.0	32.00	18.000
140	240	235	144	80	2.1	414.0	962.00	710	940	51328	140	199	181	2.0	15.90	8.000
150	190	188	152	31	1.0	123.0	398.00	1300	1800	51130	150	174	166	1.0	2.20	0.950

Single Direction Thrust Ball Bearings

d = 160 to 1000 mm



Dimensions							Basic Load Rating		Limiting Speed for Lubrication with		Bearing Designation	Abutment and Fillet Dimensions				Weight ~	Minimum Axial Load Factor
d	D	d ₁	D ₁	H	r _s min	C _a Dynamic	C _{oa} Static	Grease	Oil	d		d _a min	D _a max	r _a max			
mm							kN		min ⁻¹			mm				kg	
160	200	198	162	31	1.0	126.0	422.00	1300	1800	51132	160	184	176	1.0	2.33	1.200	
	225	222	163	51	1.5	276.0	722.00	890	1200	51232		199	186	1.5	6.67	3.200	
170	215	213	172	34	1.1	158.0	511.00	1200	1600	51134	170	197	188	1.0	3.31	1.500	
	240	237	173	55	1.5	282.0	750.00	840	1100	51234		212	198	1.5	8.28	4.600	
180	225	222	185	34	1.1	165.0	562.00	1100	1500	51136	180	207	198	1.0	3.48	1.900	
	250	247	183	56	1.5	304.0	858.00	840	1100	51236		222	208	1.5	8.85	5.500	
190	240	237	193	37	1.1	185.0	631.00	1060	1400	51138	190	220	210	1.0	4.06	2.400	
	270	267	194	62	2.0	355.0	1020.00	750	1000	51238		238	222	2.0	11.90	7.500	
200	250	247	203	37	1.1	188.0	656.00	1060	1400	51140	200	230	220	1.0	4.24	3.100	
	280	277	204	62	2.0	355.0	1020.00	750	1000	51240		248	232	2.0	12.40	9.500	
220	270	267	223	37	1.1	192.0	722.00	1000	1300	51144	220	250	240	1.0	4.62	4.600	
	300	297	243	45	1.5	261.0	926.00	840	1100	51148		276	264	1.5	7.55	6.500	
300	420	415	304	95	3.0	584.0	2240.00	500	670	51260	300	372	348	2.5	43.10	40.000	
320	440	435	325	95	3.0	614.0	2495.00	470	630	51264	320	392	368	2.5	45.50	48.000	
340	420	416	344	64	2.0	419.0	1780.00	600	790	51168	340	388	372	2.0	20.30	19.000	
360	440	436	364	65	2.0	430.0	1880.00	560	750	51172	360	408	392	2.0	21.80	22.000	
420	500	495	424	65	2.0	490.0	2255.00	530	710	51184	420	470	450	2.0	25.00	30.000	
1000	1180	1175	1005	140	5.0	1377.0	11595.00	210	280	511/1000	1000	1110	1070	4.0	270.00	720.000	