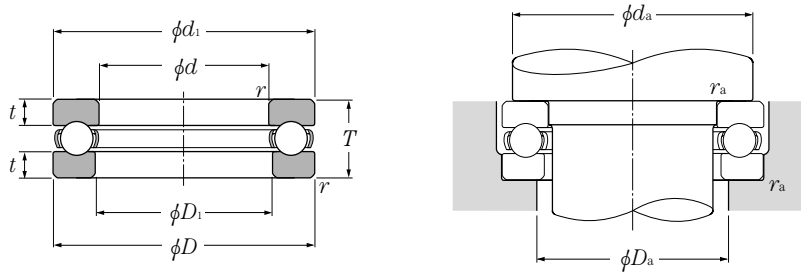


# Single Direction Thrust Ball Bearings



**Equivalent bearing load**

**dynamic**

$$P_a = F_a$$

**static**

$$P_{0a} = F_a$$

d 50 ~ 90mm

	Boundary dimensions				Basic load ratings				Limiting speeds		Bearing numbers	Dimensions			Abutment and fillet dimensions			Mass kg (approx.)
	mm				dynamic kN		static kgf		min <sup>-1</sup>			mm			mm			
d	D	T	r <sub>s min</sub> <sup>1)</sup>	C <sub>a</sub>	C <sub>0a</sub>	C <sub>a</sub>	C <sub>0a</sub>	grease	oil	d <sub>1s max</sub> <sup>2)</sup>	D <sub>1s min</sub> <sup>3)</sup>	t	d <sub>a min</sub>	D <sub>a max</sub>	r <sub>as max</sub>			
50	95	31	1.1	96.5	202	9 850	20 600	1 800	2 600	51310	95	52	9.2	77	68	1	0.951	
	110	43	1.5	148	283	15 100	28 800	1 400	2 000		51410A	110	52	12.9	86	74	1.5	1.9
55	78	16	0.6	35.0	93.0	3 550	9 500	2 800	4 000	51111	78	57	5	69	64	0.6	0.226	
	90	25	1	69.5	159	7 100	16 200	2 100	3 000	51211	90	57	7.5	76	69	1	0.608	
	105	35	1.1	119	246	12 200	25 100	1 600	2 300	51311	105	57	10.2	85	75	1	1.29	
	120	48	1.5	178	360	18 200	36 500	1 300	1 800	51411	120	57	14.8	94	81	1.5	2.52	
60	85	17	1	41.5	113	4 200	11 500	2 600	3 700	51112	85	62	5	75	70	1	0.296	
	95	26	1	73.5	179	7 500	18 200	2 000	2 800	51212	95	62	8	81	74	1	0.676	
	110	35	1.1	123	267	12 600	27 200	1 600	2 300	51312	110	62	10.2	90	80	1	1.37	
	130	51	1.5	214	435	21 800	44 500	1 200	1 700	51412	130	62	15.3	102	88	1.5	3.12	
65	90	18	1	41.5	117	4 250	12 000	2 400	3 500	51113	90	67	5.5	80	75	1	0.338	
	100	27	1	75.0	189	7 650	19 200	1 900	2 700	51213	100	67	8.4	86	79	1	0.767	
	115	36	1.1	128	287	13 000	29 300	1 500	2 200	51313	115	67	10.7	95	85	1	1.51	
	140	56	2	232	495	23 600	50 500	1 100	1 600	51413	140	68	17.2	110	95	2	3.96	
70	95	18	1	43.0	127	4 400	12 900	2 400	3 400	51114	95	72	5.5	85	80	1	0.356	
	105	27	1	76.0	199	7 750	20 200	1 800	2 600	51214	105	72	8.4	91	84	1	0.793	
	125	40	1.1	148	340	15 100	34 500	1 400	2 000	51314	125	72	12	103	92	1	2.01	
	150	60	2	250	555	25 500	56 500	1 000	1 500	51414	150	73	18.6	118	102	2	4.86	
75	100	19	1	44.5	136	4 550	13 900	2 200	3 200	51115	100	77	6	90	85	1	0.399	
	110	27	1	77.5	209	7 900	21 300	1 800	2 600	51215	110	77	8.4	96	89	1	0.874	
	135	44	1.5	171	395	17 400	40 500	1 300	1 800	51315	135	77	13.4	111	99	1.5	2.61	
	160	65	2	269	615	27 400	63 000	940	1 400	51415	160	78	20.4	125	110	2	5.97	
80	105	19	1	44.5	141	4 550	14 400	2 200	3 100	51116	105	82	6	95	90	1	0.422	
	115	28	1	78.5	218	8 000	22 300	1 700	2 400	51216	115	82	8.9	101	94	1	0.916	
	140	44	1.5	176	425	18 000	43 000	1 200	1 800	51316	140	82	13.4	116	104	1.5	2.72	
	170	68	2.1	270	620	27 500	63 500	890	1 300	51416	170	83	21.3	133	117	2	7.77	
85	110	19	1	46.0	150	4 700	15 300	2 100	3 000	51117	110	87	6	100	95	1	0.444	
	125	31	1	95.5	264	9 700	26 900	1 600	2 200	51217	125	88	9.8	109	101	1	1.25	
	150	49	1.5	201	490	20 500	50 000	1 100	1 600	51317	150	88	15	124	111	1.5	3.52	
	180	72	2.1	288	685	29 400	70 000	840	1 200	* 51417	177	88	22.7	141	124	2	9.17	
90	120	22	1	59.5	190	6 100	19 400	1 900	2 700	51118	120	92	7	108	102	1	0.687	
	135	35	1.1	117	325	11 900	33 000	1 400	2 000	51218	135	93	11.2	117	108	1	1.7	
	155	50	1.5	198	490	20 200	50 000	1 100	1 600	51318	155	93	15.5	129	116	1.5	3.74	
	190	77	2.1	305	750	31 500	76 500	790	1 100	* 51418	187	93	24.5	149	131	2	11	

1) Smallest allowable dimension for chamfer dimension r. 2) Maximum allowable dimension for shaft washer outer dimension d<sub>1</sub>. 3) Smallest allowable dimension for housing washer inner dimension D<sub>1</sub>. Note: Bearing numbers marked " \* " signify bearings where the bearing shaft washer outer diameter is smaller than the housing shaft washer outer diameter. Therefore when using these bearings, it is possible to use the housing bore as is, without providing a ground undercut on the outer diameter section of the bearing shaft washer as shown in the drawing.