

Single-direction thrust ball bearings

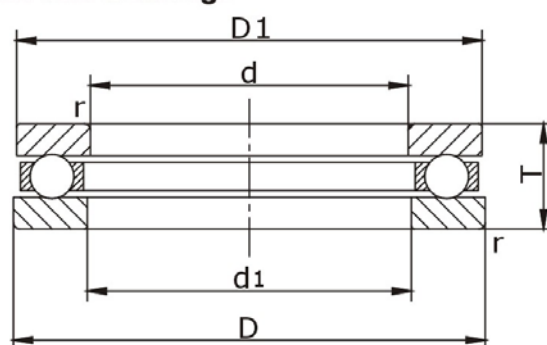
Single-direction thrust ball bearing consists of one row of balls (with cage) , a shaft washer (close fit with shaft) and a housing ring (loose fit with shaft and close fit with bore of bearing block) . They can't carry radial loads but axial loads in one direction,because the axial loads are well distributed on each ball, the loading capacity is higher, but the temperature is high while working,and their limiting speed is lower.

Thrust ball bearings can limit axial displacement of shafts or housings in one or two directions, but not radial displacement. Therefore, the bearings are usually used with deep groove ball bearings.

While mounting, the shaft and axis of housing bore must be concentric, otherwise bearing will be damaged in early period because of the stress concentration,and 0.5 ~ 1 mm radial clearance between outside diameter and bore of housing washer should be kept to avoid the influence.

Steel pressed cages are usually used in thrust ball bearings; machined solid cages should be used when outer diameter is over 250mm.

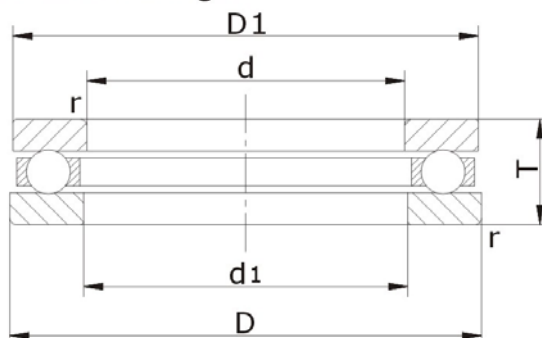
Single-direction thrust ball bearings



Type 50000
(Type 8000)

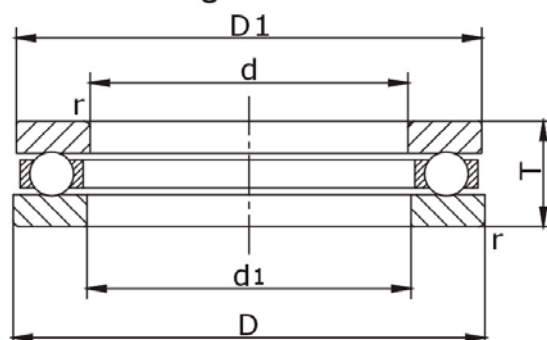
Boundary dimensions						Basic load ratings		Designations		Mass	Limiting speeds	
mm						kN					r/min	
d	d _{1min}	D	D _{1max}	T	r _{min}	Ca	Coa	Current	Original	kg	Grease	Oil
160	162	200	198	31	1	112	428	51132	8132	2.3	1000	1600
	163	225	222	51	1.5	240	768	51232	8232	6.7	750	1100
	164	270	265	87	3	470	1570	51332	8332	21.5	500	700
170	172	215	213	34	1.1	133	528	51134	8134	3.3	950	1500
	173	240	237	55	1.5	280	915	51234	8234	8.3	700	1000
	174	280	275	87	3	470	1580	51334	8334	22.5	480	670
180	183	225	222	34	1.1	135	528	51136	8136	3.6	900	1400
	183	250	247	56	1.5	285	958	51236	8236	8.08	670	950
	184	300	295	95	3	518	1820	51336	8336	28.7	430	600

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190	193	240	237	37	1.1	172	678	51138	8138	4.2	850	1300
	194	270	267	62	2	328	1160	51238	8238	13	630	900
	195	320	315	105	4	608	2220	51338	8338	34.5	400	560
200	203	250	247	37	1.1	172	698	51140	8140	3.8	800	1200
	204	280	277	62	2	350	1210	51240	8240	11.9	600	850
	205	340	335	110	4	660	2220	51340	8340	31.8	360	500
220	223	270	267	37	1.1	188	782	51144	8144	4.6	750	1100
	224	300	297	63	2	365	1360	51244	8244	13.3	560	800
240	243	300	297	45	1.5	258	1040	51148	8148	7.5	700	1000
	244	340	335	78	2.1	468	1870	51248	8248	23.5	450	630
	245	380	375	112	4	695	2870	51348	8348	51	320	450
260	263	320	317	45	1.5	270	1140	51152	8152	8.1	670	950
	264	360	355	79	2.1	488	2050	51252	8252	25.5	430	600
280	283	350	347	53	1.5	338	1430	51156	8156	11.8	560	800
	284	380	375	80	2.1	490	2140	51256	8256	27.5	400	560
300	304	380	376	62	2	415	1860	51160	8160	17.5	500	700
	304	420	415	95	3	578	2670	51260	8260	42.5	360	560
320	324	400	396	63	2	418	1920	51164	8164	18.8	480	670
	325	440	435	95	3	612	2920	51264	8264	45.5	340	480
340	344	420	416	64	2	428	2050	51168	8168	19.8	450	630
	345	460	455	96	3	620	3040	51268	8268	45	320	450
	345	540	535	160	5	1120	5720	51368	8368	142	150	220
360	364	440	436	65	2	432	2110	51172	8172	21.1	430	600
	365	500	495	110	4	775	3940	51272	8272	69.2	260	380
380	384	460	456	65	2	440	2210	51176	8176	23	430	600
	385	520	515	112	4	788	4120	51276	8276	73	240	360
400	404	480	476	65	2	452	2320	51180	8180	23	400	560
	405	540	535	112	4	802	4310	51280	8280	74.5	220	340
420	424	500	495	65	2	462	2480	51184	8184	25.5	380	530
	422	550	550	80	5	463	2574	51784	8784	53.6	310	430
440	444	540	535	80	2.1	527	3000	51188	8188	42	360	500
	444	540	535	60	2.1	360	2112	59188/YB2	9008188	28.2	320	470
	445	600	595	130	5	808	4430	51288	8288	109	180	280
460	464	560	555	80	2.1	578	3310	51192	8192	41.7	320	450
	465	620	615	130	5	892	5230	51292	8292	114	170	260
480	484	580	575	80	2.1	592	3490	51196	8196	42.5	300	430
	485	730	725	195	6	1065	6886	51396	8396	308	230	330
500	504	600	595	80	2.1	595	3570	511/500	81/500	45.7	280	400
	505	670	665	135	5	1020	6200	512/500	82/500	137	150	220
	505	750	745	150	6	950	6320	593/500	90083/500	228	180	220

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d	d _{1min}	D	D _{1max}	T	r _{min}	Ca	Coa	Current	Original	kg	Grease	Oil
530	534	640	635	85	3	708	4000	511/530	81/530	55.8	260	380
560	560.6	610	610	30	1.1	128	960	590/560	90089/560	9.55	560	800
600	604	710	705	67	3	690	4215	591/600	90081/600	50.1	380	500
630	635	850	845	175	6	1320	9300	512/630	82/630	252	100	160
670	672	730	730	45	1.5	284	2160	510/670	10089/670	20.5	530	700
	675	800	795	105	4	860	5020	511/670	81/670	92.2	160	240
710	715	850	845	85	4	478	846	591/710	90081/710	86	130	180
	715	950	945	109	6	787	980	572/710	70082/710	199	130	180
	715	950	945	145	6	1025	1296	592/710	90082/710	284	120	160
750	755	900	895	90	4	810	6210	591/750	90081/750	105	160	240
780	782	930	930	100	3.5	800	6069	517/780	87/780	129	150	200
800	802.5	870	867.5	53	1.5	334	2880	510/800	10089/800	32.5	430	560
	805	950	945	90	4	685	5895	591/800	90081/800	110	300	400
	805	950	945	120	4	909	8100	511/800	81/800	155	240	340
850	852.5	920	917.5	53	1.5	339	3105	510/850	10089/850	34.5	–	–
	855	1000	995	90	4	685	6120	591/850	90081/850	115	–	–
	855	1000	995	120	4	954	8550	511/850	81/850	165	–	–
900	903	980	977	63	2	474	4410	510/900	10089/900	49	–	–
	906	1060	1054	95	5	567	6885	591/900	90081/900	140	–	–
	906	1060	1054	130	5	1026	9720	511/900	81/900	205	–	–
950	953	1080	1074	63	2	486	4590	510/950	10089/950	52	–	–
	956	1120	1114	103	5	767	7335	591/950	90081/950	170	–	–
	956	1120	1114	135	5	1197	10800	511/950	81/950	235	–	–
1000	1003.5	1090	1086.5	70	2.1	514	4950	510/1000	10089/1000	68.5	–	–
	1006	1180	1174	109	5	831	8235	591/1000	90081/1000	210	–	–
	1006	1180	1174	140	5	1197	11880	511/1000	81/1000	275	–	–
1060	1063.5	1150	1146.5	70	2.1	677	5265	510/1060	10089/1060	72.5	–	–
	1066	1250	1244	115	5	909	9360	591/1060	90081/1060	240	–	–
	1066	1250	1244	150	5	1287	13500	511/1060	81/1060	330	–	–
1120	1126	1320	1314	160	5	1377	14670	511/1120	81/1120	395	–	–
1180	1188	1400	1392	175	6	1602	18000	511/1180	81/1180	495	–	–
1400	1408	1630	1622	180	8	1710	21240	511/1400	81/1400	665	–	–