

Deep groove ball bearings

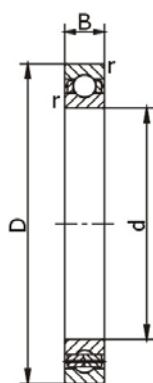
Deep groove ball bearings are commonly used in a number of applications as their simple structures and convenient using. They mainly carry radial loads, but also can carry combined loads as same as angular contact ball bearings when the radial clearance increases. They may carry pure axial loads when the speed is high and thrust ball bearings are not suitable. Comparing with other bearings, deep groove ball bearings have lower friction coefficient and higher limiting speed, but can't carry heavy loads.

After being mounted on the shaft, the bearing is able to limit axial displacement of shaft or housing in the range of axial clearance, therefore, it can be as axial locating in two directions. In addition, the bearing have certain aligning ability. While the slant angle is $2' \sim 10'$ relative to housing, it can work normally, but bearing life would be reduced.

These bearings commonly adopt ribbon steel pressed cages, and metal machined solid cages are often for large-size deep groove ball bearings.

Deep groove ball bearings are widely used in automotives, tractors, machine tools, generators, water-pumps, agriculture machinery, textile machinery, etc.

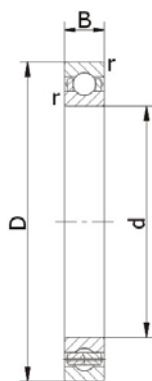
Deep groove ball bearings



Type 6000
(Type 0000)

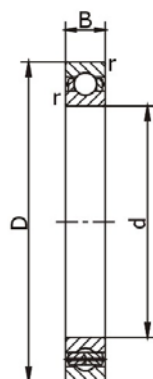
Boundary dimensions				Basic load ratings		Designations		Mass	Limiting speeds	
mm				kN					r/min	
d	D	B	r _{min}	Cr	Cor	Current	Original	kg	Grease	Oil
150	190	20	1.1	49.1	58.5	61830	1000830	1.15	3000	3600
	200	24	1.5	73	79.5	62830X1	830	2.08	2900	3500
	210	28	2	85	90.5	61930M	1000930H	2.59	2800	3400
	225	24	1.1	91.9	98.5	16030	7000130	3.62	2600	3000
	225	35	2.1	132	125	6030	130	4.24	2600	3000
	270	45	3	203	199	6230	230	10	1900	2500
	320	65	4	288	295	6330	330	22.7	1800	2300

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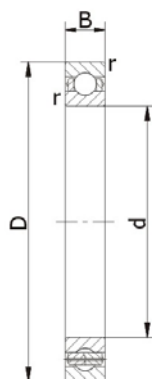
Boundary dimensions				Basic load ratings		Designations		Mass	Limiting speeds	
mm				kN					r/min	
d	D	B	r _{min}	Cr	Cor	Current	Original	kg	Grease	Oil
160	200	20	1.1	48.5	61	61832	1000832	1.23	2800	3400
	220	28	2	87	96	61932M	1000932H	2.71	2600	3200
	240	25	1.5	99	108	16032	7000132	4.2	2400	3000
	240	38	2.1	145	138	6032	132	5.15	2400	3000
	290	48	3	215	218	6232M	232H	14.5	1900	2400
	340	68	4	313	340	6332	332	29	1800	2200
170	215	22	1.1	61.5	78	61834	1000834	1.9	2600	3200
	230	28	2	88.8	100	61934	1000934	2.85	2400	3000
	240	28	2	95	107	61934X1	834	4.11	2400	3000
	260	28	1.5	118	130	16034	7000134	5.71	2200	2800
	260	42	2.1	170	170	6034	134	6.89	2200	2800
	310	52	4	245	260	6234	234	15.8	1900	2400
180	225	22	1.1	62.3	78.5	61836	1000836	1.72	2400	3000
	250	33	2	119	133	61936M	1000936H	4.16	2200	2800
	260	34	2	140	147	61936X3	736	6.1	2100	2700
	280	31	2	145	157	16036	7000136	7.5	2000	2600
	280	46	2.1	188	198	6036	136	8.88	2000	2600
	290	42	4	198	205	60136X3	836	10.7	1900	2400
	320	52	4	262	285	6236	236	15.9	1800	2200
	380	75	4	355	405	6336	336	43.1	1600	2000
190	240	24	1.5	75.1	93.5	61838M	1000838H	2.53	2200	2800
	260	33	2	117	133	61938M	1000938H	5.18	2200	2800
	290	31	2	149	168	16038	7000138	7.78	2000	2600
	290	46	2.1	188	201	6038	138K1	9.39	2000	2600
	300	42	4	208	224	61038X3	838	11.2	2000	2600
	340	55	4	285	322	6238	238	22.3	1700	2000
	400	78	5	355	415	6338	338	49.7	1600	1900
200	250	24	1.5	74	98	61840M	1000840H	2.67	2200	2800
	280	38	2.1	149	168	61940M	1000940H	7.28	2000	2600
	290	38	2.1	143	158	61940X1	840	8.6	2000	2600
	310	34	2	167	191	16040	7000140	10	1900	2400
	310	51	2.1	207	226	6040	140	12	1900	2400
	360	58	4	288	332	6240	240	26.7	1700	2000
	420	80	5	380	445	6340	340	55.3	1500	1800
220	270	24	1.5	76.5	97.8	61844M	1000844H	2.9	1900	2400
	300	38	2.1	152	178	61944	1000944	7.88	1900	2400
	340	37	2.1	180	217	16044	7000144	13.1	1800	2200
	340	56	3	252	268	6044	144	18.6	1800	2200

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mm				kN					r/min	
d	D	B	r _{min}	Cr	Cor	Current	Original	kg	Grease	Oil
220	400	65	4	355	365	6244	244	37.4	1500	1800
	460	88	5	410	520	6344	344	73.9	1300	1600
240	300	28	2	83.5	108	61848	1000848	4.48	1800	2200
	320	38	2.1	154	190	61948M	1000948H	8.49	1800	2200
	360	37	2.1	196	243	16048	7000148	13.9	1700	2000
	360	56	3	270	292	6048	148	19.9	1700	2000
	390	55	4	279	345	60148X3	748	27.2	1500	1800
	440	72	4	358	467	6248	248	50.5	1300	1600
	500	95	5	470	625	6348	348	94.4	1100	1400
250	305	20	1	62.5	103	60848X3	848	3.18	1800	2200
	330	30	1.5	142	185	60948X3	848	7.33	1800	2200
	340	35	2.1	158	201	60048X3	848	9.58	1700	2000
260	320	28	2	101	148	61852M	1000852H	4.84	1700	2000
	360	46	2.1	210	268	61952M	1000952H	14	1600	1900
	400	44	3	237	310	16052	7000152	21.1	1500	1800
	400	65	4	291	375	6052M	152H	29.4	1500	1800
	480	80	5	400	540	6252	252	67	1100	1400
	540	102	6	505	710	6352	352	118	1000	1300
280	350	33	2	133	191	61856	1000856	7.2	1600	1900
	380	46	2.1	209	272	61956M	1000956H	15.1	1500	1800
	380	60	2.1	227	298	62956	2956	20.6	1500	1800
	420	44	3	243	330	16056	7000156	22.7	1400	1700
	420	65	4	300	410	6056	156	31.2	1400	1700
	460	63	4	340	460	60156X2	856	44.5	1100	1300
	500	80	5	400	550	6256	256	70.4	1100	1400
	580	108	6	570	840	6356	356	144	950	1200
300	360	25	2	105	166	60860X1	760	5.05	1500	1800
	380	38	2.1	166	233	61860	1000860	10.3	1400	1700
	395	35	2.1	183	253	60860X3	860	12.1	1400	1700
	420	56	3	269	370	61960M	1000960H	23.9	1300	1600
	460	50	4	285	405	16060	7000160	31.5	1200	1500
	460	74	4	355	500	6060	160	44.2	1200	1500
	540	85	5	465	670	6260	260	87.8	1000	1300
320	400	38	2.1	168	244	61864	1000864	10.8	1300	1600
	440	56	3	275	392	61964	1000964	25.3	1200	1500
	480	50	4	293	430	16064	7000164	33.2	1100	1400
	480	74	4	390	570	6064	164	46.5	1100	1400
	580	92	5	530	805	6264	264	111	950	1200

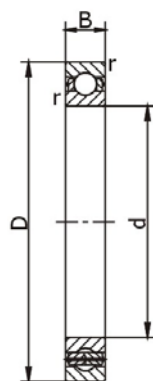
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mm				kN					r/min	
d	D	B	r _{min}	Cr	Cor	Current	Original	kg	Grease	Oil
340	420	38	2.1	175	265	61868	1000868	11.5	1200	1500
	460	56	3	292	418	61968	1000968	26.6	1100	1400
	520	57	4	345	520	16068	7000168	45	1000	1300
	520	82	5	440	660	6068	168	62.3	1000	1300
	620	92	6	530	820	6268	268	129	900	1100
360	440	38	2.1	192	290	61872	1000872	11.8	1100	1400
	480	56	3	280	425	61972	1000972	27.9	1100	1400
	540	57	4	351	550	16072	7000172	49	1000	1300
	540	82	5	460	720	6072	172	65.3	1000	1300
	550	85	5	460	720	61072X3	872	72.6	1000	1300
380	480	46	2.1	238	375	61876	1000876	19.5	1000	1300
	520	44	3	256	390	16976	7000976	30.5	1000	1300
	520	65	4	325	510	61976	1000976	40	1000	1300
	560	57	4	377	620	16076	7000176	51	950	1200
	560	82	5	455	725	6076	176	68	950	1200
400	500	46	2.1	241	390	61880	1000880	20.5	1000	1300
	540	65	4	335	540	61980F3	1000980	42	950	1200
	600	90	5	510	825	6080	180	88.4	900	1100
420	520	46	2.1	245	410	61884	1000884	21.4	950	1200
	560	65	4	340	570	61984	1000984	43.6	900	1100
	620	90	5	530	895	6084	184	92.2	900	1100
440	540	46	2.1	249	425	61888	1000888	22.3	900	1100
	600	74	4	395	680	61988F3	1000988	60.2	900	1100
	650	94	6	550	965	6088	188	106	850	1000
460	580	56	3	310	550	61892	1000892	34.3	900	1100
	620	74	4	405	720	61992	1000992	62.6	850	1000
	680	100	6	605	1080	6092	192	123	800	950
480	600	56	3	315	575	61896	1000896	35.4	850	1000
	650	78	5	450	815	61996	1000996	73.5	800	950
	700	100	6	605	1090	6096	196	127	750	900
500	620	56	3	320	600	618/500	10008/500	37.2	800	950
	670	78	5	460	865	619/500	10009/500	82	750	900
	720	100	6	630	1170	60/500	1/500	131	750	900
530	650	56	3	325	625	618/530	10008/530	39.8	750	900
	710	82	5	455	870	619/530	10009/530	89.8	750	900
	780	112	6	680	1300	60/530	1/530	184	700	850
560	680	56	3	330	650	618/560	10008/560	41.5	700	850
	750	85	5	525	1040	619/560	10009/560	105	670	800

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mm				kN					r/min	
d	D	B	r _{min}	Cr	Cor	Current	Original	kg	Grease	Oil
600	730	60	3	355	735	618/600	10008/600	50.9	670	800
	800	90	5	550	1160	619/600	10009/600	120	630	750
	870	118	6	790	1640	60/600	1/600	236	600	700
630	780	69	4	420	890	618/630	10008/630	71.3	630	750
	810	60	4	438	882	67/630	—	85.2	600	700
	850	100	6	625	1350	619/630	10009/630	163	600	700
	920	128	7.5	750	1620	60/630N1	1/630K	285	560	670
670	820	69	4	435	965	618/670	10008/670	75.4	560	670
	900	103	6	675	1460	619/670	10009/670	181	530	630
	980	136	7.5	765	1730	60/670	1/670	351	500	600
710	870	74	4	480	1100	618/710	10008/710	92.6	530	630
	950	106	6	715	1640	619/710	10009/710	220	500	600
	1030	140	7.5	1020	2310	60/710	1/710	386	480	560
750	920	78	5	525	1260	618/750	10008/750	110	500	600
	1000	112	6	785	1840	619/750	10009/750	245	480	560
	1090	150	7.5	995	2360	60/750	1/750	485	450	530
800	980	82	5	530	1310	618/800	10008/800	132	450	530
	1060	115	6	825	2050	619/800	10009/800	275	430	500
850	1030	82	5	559	1421	618/850	10008/850	140	430	500
900	1090	85	5	618	1532	618/900	10008/900	160	380	450
1000	1220	100	6	637	1250	618/1000	10008/1000	245	340	400
1060	1280	100	6	728	1500	618/1060	10008/1060	260	300	360
1120	1360	106	6	765	1960	618/1120	10008/1120	315	—	—
1140	1380	106	6	858	2390	618/1140	10008/1140	324	—	—
1180	1420	106	6	792	2210	618/1180	10008/1180	342	—	—
1320	1600	122	6	956	2350	618/1320	10008/1320	500	—	—
1400	1700	132	7.5	1120	2750	618/1400	10008/1400	615	—	—