



Double direction angular
contact thrust ball bearings
for machine tool spindle
with UP, SP, P4, P5 grade

Dalian Goldbull Bearing Co.,Ltd

www.gb-bearing.com

Double direction angular contact thrust ball bearing

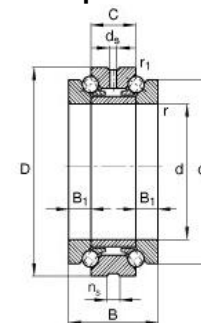
Table 1 Tolerance class SP, UP Shaft washer

d / mm		SP					UP			SP, UP	
		Δd_{mp}		Δd_s		S_i, S_e	$\Delta d_s, \Delta d_{mp}$		S_i, S_e	ΔT_s	
over	incl.	max	min	max	min	max	max	min	max	max	min
--	30	0	-8	+1	-9	3	0	-6	1.5	+50	-30
30	50		-10	+1	-11	3		-8	1.5	+60	-100
50	80		-12	+2	-14	4		-9	2	+70	-120
80	120		-15	+3	-18	4		-10	2	+85	-140
120	180		-18	+3	-21	5		-13	3	+95	-160
180	250		-22	+4	-26	5		-15	3	+120	-200
250	315		-25	+5	-30	7		-18	4	+150	-250
315	400		-30	+5	-35	7		-23	4	+200	-360
Remark: 47and 49 series shoud accord with 44 and 49 series inner diameter.											

Table 2 Tolerance class SP, UP housing washer

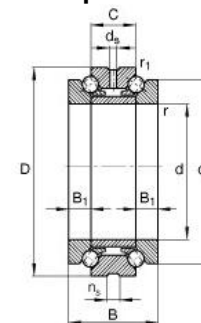
D / mm		ΔD_{mp}		ΔC_s	
over	incl.	max	min	max	min
30	50	-20	-27	0	-30
50	80	-24	-33		
80	120	-28	-38		
120	150	-33	-44		
150	180	-33	-46		
180	250	-37	-52		
250	315	-41	-59		
315	400	-46	-64		
400	500	-50	-70		
500	630	-55	-77		

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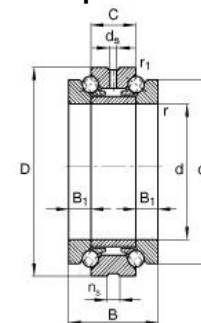
Bearing Designations		Principal Dimensions (mm)						Basic load rating (KN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (Ca)	Static (Coa)	Grease	Oil	
2268916	234916M	80	110	38	9.5	19	1	40	110	3600	4600	1.2
2268116	234416M	80	125	54	13.5	27	1.1	45	95	4400	5600	1.57
2268116K	234716M	83	125	54	13.5	27	1.1	45	95	4400	5600	1.4
2268917	234917M	85	120	44	11	22	1	45	135	3400	4400	1.8
2268117	234417M	85	130	54	13.5	27	1.1	50	110	4300	5500	2.25
2268117K	234717M	88	130	54	13.5	27	1.1	50	110	4300	5500	2.07
2268918	234918M	90	125	44	11	22	1	50	164	3200	4200	2.4
2268118	234418M	90	140	60	15	30	1.5	56	146	4200	5400	3.13
2268118K	234718M	93	140	60	15	30	1.5	56	146	4200	5400	3.0
2268919	234919M	95	130	44	11	22	1	52	178	3000	4000	2.7
2268119	234419M	95	145	60	15	30	1.5	60	150	4000	5200	3.04
2269119K	234719M	98	145	60	15	30	1.5	60	150	4000	5200	2.83
2268920	234920M	100	140	48	12	24	1	55	196	2800	3800	1.95
2268920K	234920X	104	140	48	12	24	1	55	196	2800	3800	1.8
2268120	234420M	100	150	60	15	30	1.5	63	156	3800	5000	2.66
2268120K	234720M	103	150	60	15	30	1.5	63	156	3800	5000	2.54

Double direction angular contact thrust ball bearings for machine tool spindle with UP, SP, P4, P5 grade



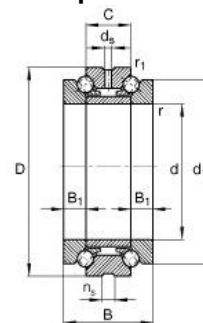
Bearing Designations		Principal Dimensions (mm)						Basic load rating (KN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (Ca)	Static (Coa)	Grease	Oil	
2268921	234921M	105	145	48	12	24	1	56	208	2600	3600	2.04
2268921K	234921X	109	145	48	12	24	1	56	208	2600	3600	1.9
2268121	234421M	105	160	66	16.5	33	2	71	176	3600	4800	3.41
2268121K	234721M	109	160	66	16.5	33	2	71	176	3600	4800	3.24
2268922	234922MM	110	150	48	12	24	1	57	215	2600	3400	2.12
2268922K	234922X	114	150	48	12	24	1	57	215	2600	3400	2.02
2268122	234422M	110	170	72	18	36	2	93	224	3400	4500	4.75
2268122K	234722	114	170	72	18	36	2	93	224	3400	4500	4.51
2268924	234924M	120	165	54	13.5	27	1	67	256	2200	3200	2.94
2268924K	234924X	124	165	54	13.5	27	1	67	256	2200	3200	2.68
2268124	234424M	120	180	72	18	36	2	95	240	3200	4300	4.72
2268124K	234724M	124	180	72	18	36	2	95	240	3200	4300	4.46
2268926	234926M	130	180	60	15	30	1.5	80	315	2000	3000	3.95
2268926K	234926X	134	180	60	15	30	1.5	80	315	2000	3000	3.23
2268126	234426M	130	200	84	21	42	2	120	300	2800	3800	6.86
2268126K	234726M	135	200	84	21	42	2	120	300	2800	3800	6.16

Double direction angular contact thrust ball bearings for machine tool spindle with UP, SP, P4, P5 grade



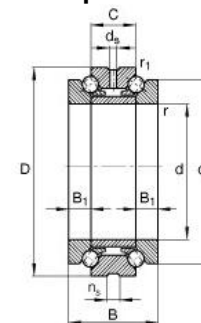
Bearing Designations		Principal Dimensions (mm)						Basic load rating (KN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (Ca)	Static (Coa)	Grease	Oil	
2268928	234928M	140	190	60	15	30	1.5	91	365	2000	2800	4.2
2268928K	234928X	144	190	60	15	30	1.5	91	365	2000	2800	3.95
2268128	234428M	140	210	84	21	42	2.1	125	320	2600	3600	8.28
2268128K	234728M	145	210	84	21	42	2.1	125	320	2600	3600	8.07
2268930	234930M	150	210	72	18	36	2	116	465	1800	2400	6.6
2268930K	234930X	155	210	72	18	36	2	116	465	1800	2400	6.2
2268130	234430M	150	225	90	22.5	45	2.1	134	355	2600	3600	9.21
2268130K	234730M	155	225	90	22.5	45	2.1	134	355	2600	3600	8.79
2268932	234932M	160	220	72	18	36	2	118	490	1700	2400	7
2268932K	234932X	165	220	72	18	36	2	118	490	1700	2400	6.6
2268132	234432M	160	240	96	24	48	2.1	160	415	2400	3400	11.1
2268132K	234732M	165	240	96	24	48	2.1	160	415	2400	3400	10.7
2268934	234934M	170	230	72	18	36	2	120	520	1600	2200	7.35
2268934K	234934X	175	230	72	18	36	2	120	520	1600	2200	6.6
2268134	234434M	170	260	108	27	54	2.1	196	520	2200	3200	15.3
2268134K	234734M	176	260	108	27	54	2.1	196	520	2200	3200	14.6

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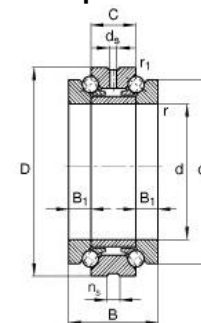
Bearing Designations		Principal Dimensions (mm)						Basic load rating (KN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (Ca)	Static (Coa)	Grease	Oil	
2268936	234936M	180	250	84	21	42	2	158	655	1500	2000	10.7
2268936K	234936X	186	250	84	21	42	2	158	655	1500	2000	9.8
2268136	234436M	180	280	120	30	60	2.1	224	585	2000	3000	20.5
2268136K	234736M	187	280	120	30	60	2.1	224	585	2000	3000	19.6
2268938	234938M	190	260	84	21	42	2	161	695	1400	2000	11
2268938K	234938X	196	260	84	21	42	2	161	695	1400	2000	8.2
2268138	234438M	190	290	120	30	60	2.1	232	630	1900	2800	24.1
2268138K	234738M	197	290	120	30	60	2.1	232	630	1900	2800	21.2
2268940	234940M	200	280	96	24	48	2	204	855	1300	1800	15.7
2268940K	234940XM	207	280	96	24	48	2	204	855	1300	1800	14.5
2268140	234440M	200	310	132	33	66	2.1	270	720	1800	2600	30.9
2268140K	234740M	207	310	132	33	66	2.1	270	720	1800	2600	28.6
2268944	234944M	220	300	96	24	48	2	210	930	1200	1700	17
2268944K	234944X	227	300	96	24	48	2	210	930	1200	1700	15.5
2268144	234444M	220	340	144	36	72	3	325	900	1600	2200	36.9
2268144K	234744M	228	340	144	36	72	3	325	900	1600	2200	35.3

Double direction angular contact thrust ball bearings for machine tool spindle with UP, SP, P4, P5 grade



Bearing Designations		Principal Dimensions (mm)						Basic load rating (kN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (C _a)	Static (C _{0a})	Grease	Oil	
2268948	234948M	240	320	96	24	48	2	213	980	1100	1500	18.3
2268948K	234948X	247	320	96	24	48	2	213	980	1100	1500	16.6
2268148	234448M	240	360	144	36	72	3	335	965	1500	2000	38.9
2268148K	234748M	248	360	144	36	72	3	335	965	1500	2000	37.2
2268952	234952M	260	360	120	30	60	2	315	1390	1000	1400	30
2268952K	234952X	269	360	120	30	60	2	315	1390	1000	1400	27.8
2268152	234452M	260	400	164	41	82	3	390	1180	1400	1900	56.5
2268152K	234752M	269	400	164	41	82	3	390	1180	1400	1900	54.1
2268956	234956M	280	380	120	30	60	2	320	1470	900	1300	33.5
2268956K	234956X	289	380	120	30	60	2	320	1470	900	1300	30.9
2268156	234456M	280	420	164	41	82	3	400	1270	1300	1800	57.1
2268156K	234756M	289	420	164	41	82	3	400	1270	1300	1800	54.5
2268960	234960M	300	420	144	36	72	3	395	1810	850	1200	53
2268960K	234960X	310	420	144	36	72	3	395	1810	850	1200	49
2268160	234460M	300	460	190	47.5	95	3	455	1530	1200	1700	90.7
2268160K	234760M	310	460	190	47.5	95	3	455	1530	1200	1700	86.5

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Bearing Designations		Principal Dimensions (mm)						Basic load rating (KN)		Speed ratings (rpm)		Weight (kg)
Old spec	Designations	d	D	T	B	C	r	Dynamic (Ca)	Static (Coa)	Grease	Oil	
2268964	234964M	320	440	144	36	72	3	405	2000	800	1100	55.3
2268964K	234964X	330	440	144	36	72	3	405	2000	800	1100	51.5
2268164	234464M	320	480	190	47.5	95	3	465	1630	1200	1700	90.3
2268164K	234768M	330	480	190	47.5	95	3	465	1630	1200	1700	86.5
2268168	234468M	340	520	212	53	106	3	550	2000	1100	1600	122
2268168K	234768M	350	520	212	53	106	3	550	2000	1100	1600	117
2268172	234472M	360	540	212	53	106	3	560	2040	1000	1500	128
2268172K	234772M	370	540	212	53	106	3	560	2040	1000	1500	123
2268176	234476M	380	560	212	53	106	3	570	2200	1000	1500	133
2268176K	234776M	390	560	212	53	106	3	570	2200	1000	1500	128
2268180	234480M	400	600	236	59	118	3	655	2550	900	1300	198
2268180K	234780M	410	600	236	59	118	3	655	2550	900	1300	187