

ANGULAR CONTACT BALL BEARING

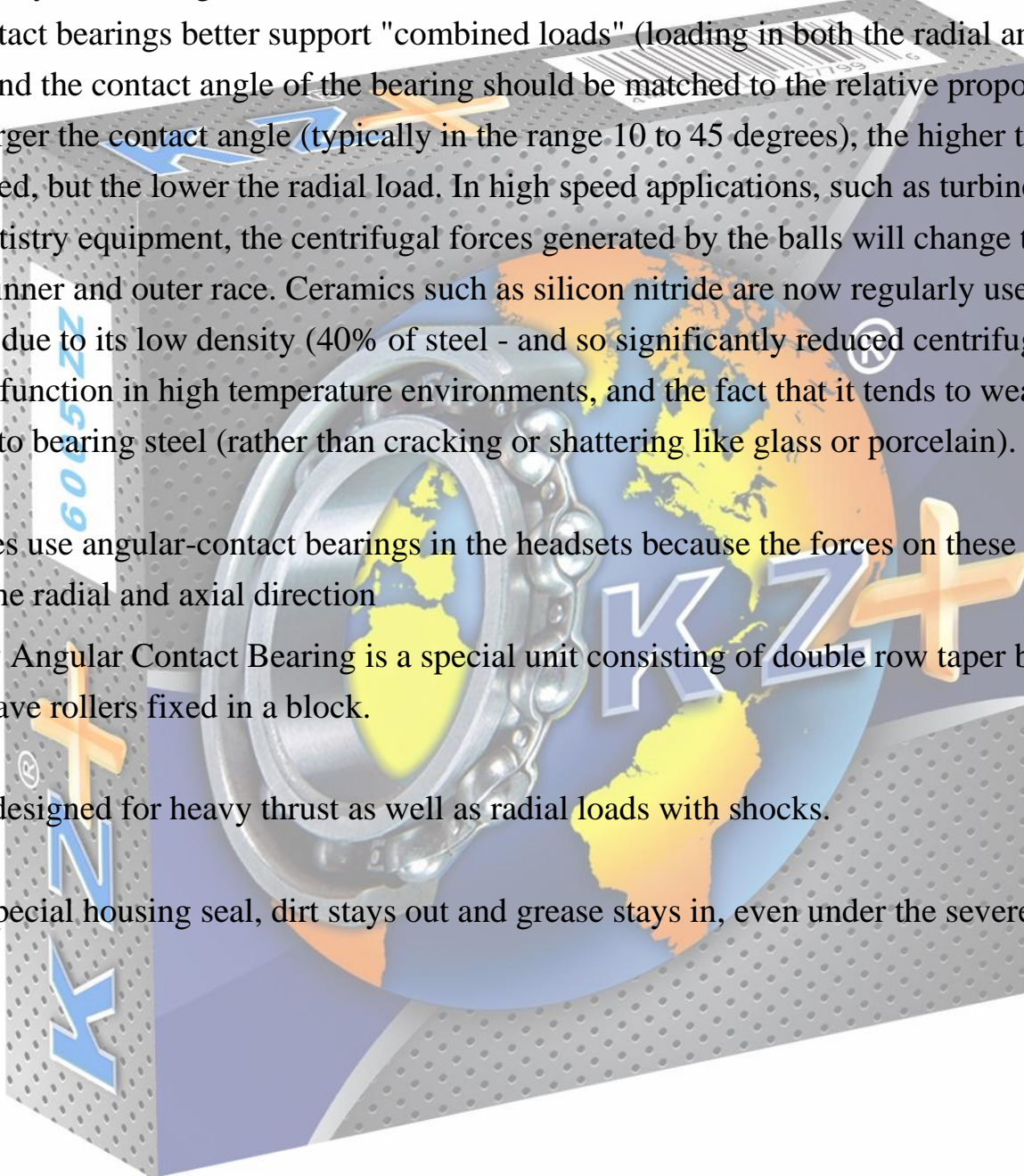
An angular contact ball bearing uses axially asymmetric races. An axial load passes in a straight line through the bearing, whereas a radial load takes an oblique path that tends to want to separate the races axially. So the angle of contact on the inner race is the same as that on the outer race. Angular contact bearings better support "combined loads" (loading in both the radial and axial directions) and the contact angle of the bearing should be matched to the relative proportions of each. The larger the contact angle (typically in the range 10 to 45 degrees), the higher the axial load supported, but the lower the radial load. In high speed applications, such as turbines, jet engines, dentistry equipment, the centrifugal forces generated by the balls will change the contact angle at the inner and outer race. Ceramics such as silicon nitride are now regularly used in such applications due to its low density (40% of steel - and so significantly reduced centrifugal force), its ability to function in high temperature environments, and the fact that it tends to wear in a similar way to bearing steel (rather than cracking or shattering like glass or porcelain).

Most bicycles use angular-contact bearings in the headsets because the forces on these bearings are in both the radial and axial direction

Double Row Angular Contact Bearing is a special unit consisting of double row taper bearing having concave rollers fixed in a block.

This unit is designed for heavy thrust as well as radial loads with shocks.

Due to the special housing seal, dirt stays out and grease stays in, even under the severest conditions.



BEARING NUMBER	DIMENSIONS' [mm]			LOAD RATING		RPM	Weight
				Dynamic	Static		Kgs
	d	D	B				
7905	25	42	9	5720	3960	18	0.050
7906	30	47	9	6000	4600	15	0.058
7907	35	55	10	9600	7100	14	0.088
7908	40	62	12	10000	8100	12	0.130
7909	45	68	12	12500	10300	11	0.150
7910	50	72	12	13300	11600	9	0.157
7911	55	80	13	13800	12800	8	0.214
7912	60	85	13	14500	14000	8	0.230
7913	65	90	13	14600	14400	7	0.245
7914	70	100	16	21000	21000	7	0.397
7915	75	105	16	21200	21700	6	0.420
7916	80	110	16	21500	22400	6	0.444
7917	85	120	18	28800	30400	5	0.628
7918	90	125	18	29200	31600	5	0.658
7919	95	130	18	29600	32400	5	0.688
7920	100	140	20	38400	42000	5	0.934
7921	105	145	20	38800	43600	4	0.972
7922	110	150	20	39600	44800	4	1.010
7924	120	165	22	48800	55600	4	1.660
7926	130	180	24	66000	70000	3	1.820
7928	140	190	24	60400	72000	3	1.940
7930	150	210	28	78000	94000	3	2.960

BEARING NUMBER	DIMENSIONS' [mm]			LOAD RATING		RPM	Weight
				Dynamic	Static		Kgs
	d	D	B				
7000	10	26	8	3720	1600	31000	0.230
7001	12	28	8	4000	2000	28000	0.250
7002	15	32	9	4600	2500	23000	0.035
7003	17	35	10	5700	3800	22000	0.046
7004	20	42	12	7700	4500	20000	0.080
7005	25	47	12	8700	5500	17000	0.093
7006	30	55	13	11000	7500	14000	0.135
7007	35	62	14	14100	11000	13000	0.180
7008	40	68	15	15100	11700	11000	0.222
7009	45	75	16	17800	14100	10000	0.282
7010	50	80	16	18600	16000	9800	0.306
7011	55	90	18	25000	21000	8800	0.447
7012	60	95	18	26000	22500	7700	0.478
7013	65	100	18	26400	25400	7200	0.509
7014	70	110	20	34000	31000	6600	0.705
7015	75	115	20	35100	33800	6300	0.745
7016	80	125	22	42700	40500	5800	0.994
7017	85	130	22	43500	43000	5500	1.040
7018	90	140	24	52500	51000	5200	1.350
7019	95	145	24	54000	54000	4900	1.410
7020	100	150	24	55000	56500	4600	1.470
7022	110	170	28	63900	65000	4400	2.300
7024	120	180	28	74000	75000	4200	2.470
7026	130	200	33	74900	78000	3800	3.730
7028	140	210	33	94000	100000	3500	3.960
7030	150	225	35	96000	10600	3300	4.820

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	Kgs
7200B	10	30	9	0.6	4.3	2	22000	29000	0.031
7201B	12	32	10	0.6	6.95	3.4	20000	27000	0.038
7202B	15	35	11	0.6	7.45	3.95	18000	24000	0.048
7203B	17	40	12	0.6	9.35	5.05	16000	21000	0.070
7204B	20	47	14	1	13.3	7.7	13000	17000	0.112
7205B	25	52	15	1	14	8.7	12000	15000	0.135
7206B	30	62	16	1	19.4	12.5	9600	13000	0.208
7207B	35	72	17	1.1	25.6	17	8300	11000	0.295
7208B	40	80	18	1.1	30.6	21.3	7500	10000	0.382
7209B	45	85	19	1.1	34.3	24.3	7000	9400	0.430
7210B	50	90	20	1.1	35.7	26.7	6400	8500	0.485
7211B	55	100	21	1.5	44.1	33.8	5700	7600	0.635
7212B	60	110	22	1.5	53.4	41.6	5100	6900	0.820
7213B	65	120	23	1.5	60.9	49.3	4800	6400	1.020
7214B	70	125	24	1.5	63.2	50.6	4600	6100	1.120
7215B	75	130	25	1.5	71.7	59.3	4300	5800	1.230

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	Kgs
7300 B	10	35	11	0.6	8.5	3.75	33000	27000	0.054
7301 B	12	37	12	1	10.2	4.6	31000	24000	0.065
7302 B	15	42	13	1	12.5	6.45	25000	20000	0.088
7303 B	17	47	14	1	13.8	7.3	18000	14000	0.120
7304 B	20	52	15	1.1	16.2	8.7	17000	13000	0.150
7305 B	25	62	17	1.1	22.9	13.3	14000	10000	0.243
7306 B	30	72	19	1.1	27.6	17.4	12000	8700	0.362
7307 B	35	80	21	1.5	32.5	20.2	10000	7700	0.475
7308 B	40	90	23	1.5	39.7	25.2	9200	6900	0.657
7309 B	45	100	25	1.5	50.6	34.1	8200	6200	0.875
7310 B	50	110	27	2	64.4	44.3	7300	5500	1.140
7311 B	55	120	29	2	74.3	52	6700	5000	1.450
7312 B	60	130	31	2.1	84.9	60.3	6200	4600	1.810
7313 B	65	120	23	1.5	60.9	49.3	6400	4800	1.020
7314 B	70	150	35	2.1	108	78.9	5400	4000	2.700
7315 B	75	160	37	2.1	118	89.2	5000	3800	3.150

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	Kgs
3200	10	30	14.3	0.6	7.35	5.35	15000	20000	0.052
3201	12	32	15.9	0.6	9.7	7.15	14000	18000	0.063
3202	15	35	15.9	0.6	9.7	7.45	12000	16000	0.072
3203	17	40	17.5	0.6	13.8	10.8	11000	14000	0.100
3204	20	47	20.6	1	17.2	15	9000	12000	0.170
3205	25	52	20.6	1	18.9	18.2	7800	10000	0.190
3206	30	62	23.8	1	27.3	27	6500	8700	0.320
3207	35	72	27	1.1	36.8	37.5	5600	7500	0.480
3208	40	80	30.2	1.1	42	43.9	5000	6700	0.650
3209	45	85	30.2	1.1	45.4	51.4	4600	6100	0.710
3210	50	90	30.2	1.1	45.1	52.1	4300	5700	0.760
3211	55	100	33.3	1.5	50.9	60.2	3900	5100	1.050
3212	60	110	36.5	1.5	64	76.8	3500	4700	1.400
3213	65	120	38.1	1.5	76.4	97.4	3200	4300	1.750
3214	70	125	39.7	1.5	77.9	96.4	3100	4100	1.920
3215	75	130	41.3	1.5	92.4	120	2900	3900	2.100
3216	80	140	44.4	2	97.5	121	2700	3600	2.640
3217	85	150	49.2	2	114	143	2500	3400	3.390
3218	90	160	52.4	2	132	167	2400	3100	4.140

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	
3302	15	42	19	1	15.2	11.9	10000	14000	0.132
3303	17	47	22.2	1	21.7	17.1	9400	13000	0.192
3304	20	52	22.2	1.1	20.8	18.4	8200	11000	0.230
3305	25	62	25.4	1.1	28.9	26.5	6800	9100	0.369
3306	30	72	30.2	1.1	38.1	36.1	5800	7800	0.585
3307	35	80	34.9	1.5	48.6	46.8	5200	7000	0.816
3308	40	90	36.5	1.5	54.1	53.8	4600	6100	1.070
3309	45	100	39.7	1.5	66.1	67.3	4100	5500	1.420
3310	50	110	44.4	2	86.1	88.6	3800	5000	1.950
3311	55	120	49.2	2	101	106	3400	4500	2.530
3312	60	130	54	2.1	125	132	3100	4200	3.240
3313	65	140	58.7	2.1	142	153	2900	3900	4.080
3314	70	150	63.5	2.1	151	160	2700	3600	5.040
3315	75	160	68.3	2.1	169	189	2500	3300	6.160
3316	80	170	68.3	2.1	184	213	2400	3100	6.930
3317	85	180	73	3	188	219	2200	3000	8.300
3318	90	190	73	3	205	242	2100	2800	9.230

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	Kgs
5203	17	40	17.5	0.6	13.2	8.15	11000	14000	0.091
5204	20	47	20.6	1	19.7	12.5	8800	12000	0.120
5205	25	52	20.6	1	21.4	14.8	7700	10000	0.190
5206	30	62	23.8	1	29.7	21.3	6400	8600	0.290
5207	35	72	27	1.1	39.2	29	5500	7300	0.430
5208	40	80	30.2	1.1	44.4	33.6	5000	6700	0.570
5209	45	85	30.2	1.1	49.9	38.4	4600	6100	0.620
5210	50	90	30.2	1.1	53.3	43.6	4300	5600	0.670
5211	55	100	33.3	1.5	65.9	55.2	3800	5100	0.960
5212	60	110	36.5	1.5	74.4	60.8	3500	4700	1.360
5213	65	120	38.1	1.5	86.9	75.3	3200	4300	1.660
5214	70	125	39.7	1.5	94.5	82.6	3100	4100	1.810

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Oil	Grease	
	d	D	B	r	C	Co	Lube	Lube	Kgs
5304	20	52	22.2	1.1	24.7	15	8300	11000	0.230
5305	25	62	25.4	1.1	32.7	20.8	6900	9200	0.340
5306	30	72	30.2	1.1	41	28.5	5800	7700	0.510
5307	35	80	34.9	1.5	51.2	36.2	5100	6800	0.790
5308	40	90	36.5	1.5	62.7	45.4	4600	6100	1.050
5309	45	100	39.7	1.5	75.1	55.7	4100	5500	1.420
5310	50	110	44.4	2	88.5	67	3600	4800	1.930
5311	55	120	49.2	2	110	85.1	3300	4500	2.300
5312	60	130	54	2.1	126	98.7	3100	4100	3.160
5313	65	140	58.7	2.1	142	113	2900	3900	3.910
5314	70	150	63.5	2.1	160	129	2700	3600	4.890
5315	75	160	68.3	2.1	174	147	2500	3300	5.970