

DPI®

Angular Contact Ball Bearings

Double Row Angular Contact Ball Bearings.

Angular contact ball bearings are ideal for applications which require accuracy and speed. These kinds of bearings are required to carry a combined load. The following different types of angular contact bearings are available:

1. Shield / Sealed type.

The standard contact angles are 15 degrees (C), 30 degrees (A) and 40 degrees (B). Smaller contact angles are suitable for higher speed applications. Large contact angles provide better axial resistance. These bearings are also available as matched pair bearings where they are matched as follows:

a) Back-to-Back (DB): These are arranged so that the distance between the load centers is long and hence this arrangement will sustain larger moment loads.

b) Face-to-Face (DF): These are arranged so that the distance between the load centers is short and hence ability to carry moment loads is smaller.

c) Tandem Arrangement: This arrangement is useful for applications that require high axial load.

2. Double Row Contact Bearings:

These consist of two single row angular contact ball bearings matched back-to-back with integrated inner and outer rings.

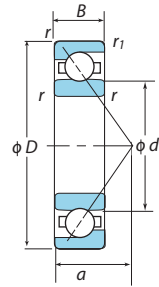
3. Four Point Contact Bearings:

These have a contact angle of 35 degrees. The inner ring is divided into 2 pieces. These are very specialized bearings.

The standard cages used are pressed steel cages. Additionally copper alloy machined cages are also available.

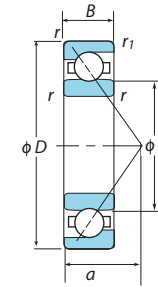
For details on boundary dimensions and specifications please refer to the tables overleaf.

Angular Contact Ball Bearings Single Row



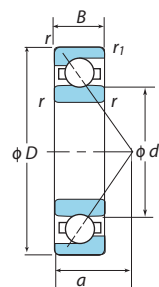
BEARING NUMBER	ГОСТ	DIMENSIONS IN - MM			BASIC LOAD RATINGS &		RPM	WEIGHT Kg
		d	D	B	Dynamic	Static		
7905		25	42	9	5720	3960	18 000	0.050
7906		30	47	9	6000	4600	15 000	0.058
7907		35	55	10	9600	7100	14 000	0.088
7908		40	62	12	10000	8100	12 000	0.130
7909		45	68	12	12500	10300	11 000	0.150
7910		50	72	12	13300	11600	9 500	0.157
7911		55	80	13	13800	12800	8 800	0.214
7912		60	85	13	14500	14000	8 000	0.230
7913		65	90	13	14600	14400	7 700	0.245
7914		70	100	16	21000	21000	7 200	0.397
7915		75	105	16	21200	21700	6 700	0.420
7916		80	110	16	21500	22400	6 200	0.444
7917		85	120	18	28800	30400	5 900	0.628
7918		90	125	18	29200	31600	5 600	0.658
7919		95	130	18	29600	32400	5 300	0.688
7920		100	140	20	38400	42000	5 000	0.934
7921		105	145	20	38800	43600	4 700	0.972
7922		110	150	20	39600	44800	4 600	1.010
7924		120	165	22	48800	55600	4 200	1.660
7926		130	180	24	66000	70000	3 800	1.820
7928		140	190	24	60400	72000	3 500	1.940
7930		150	210	28	78000	94000	3 300	2.960

Angular Contact Ball Bearings Single Row



BEARING NUMBER	ГОСТ	DIMENSIONS IN - MM			BASIC LOAD RATINGS &		RPM	WEIGHT Kg
		d	D	B	Dynamic	Static		
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

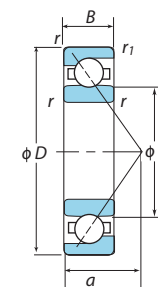
Single Row Angular Contact Ball Bearings



BEARING NUMBER	GOCT	NOMINAL DIMENSIONS [mm]						LOAD RATING (kN)				LIMITING SPEED (RPM)		Weight KG
								With Machined Cage		With Pressed Cage				
								Dynamic	Static	Dynamic	Static	Oil Lube	Grease Lube	
7200B	66200	10	30	9	0.6	0.3	4.30	2.00	4.95	2.50	22000	29000	0.031	
7201B	66201	12	32	10	0.6	0.3	6.95	3.40	7.40	3.75	20000	27000	0.038	
7202B	66202	15	35	11	0.6	0.3	7.45	3.95	7.45	3.95	18000	24000	0.048	
7203B	66203	17	40	12	0.6	0.3	9.35	5.05	9.35	5.05	16000	21000	0.070	
7204B	66204	20	47	14	1.0	0.6	13.30	7.70	14.10	8.40	13000	17000	0.112	
7205B	66205	25	52	15	1.0	0.6	14.00	8.70	14.70	9.40	12000	15000	0.135	
7206B	66206	30	62	16	1.0	0.6	19.40	12.50	20.50	13.60	9600	13000	0.208	
7207B	66207	35	72	17	1.1	0.6	25.60	17.00	27.00	18.50	8300	11000	0.295	
7208B	66208	40	80	18	1.1	0.6	30.6	21.3	32.1	23.0	7500	10000	0.382	
7209B	66209	45	85	19	1.1	0.6	34.3	24.3	36.1	26.1	7000	9400	0.430	
7210B	66210	50	90	20	1.1	0.6	35.7	26.7	37.4	28.6	6400	8500	0.485	
7211B	66211	55	100	21	1.5	1.0	44.1	33.8	46.2	36.2	5700	7600	0.635	
7212B	66212	60	110	22	1.5	1.0	53.4	41.6	55.9	44.6	5100	6900	0.820	
7213B	66213	65	120	23	1.5	1.0	60.9	49.3	63.6	52.6	4800	6400	1.020	
7214B	66214	70	125	24	1.5	1.0	63.2	50.6	69.1	57.8	4600	6100	1.120	
7215B	66215	75	130	25	1.5	1.0	71.7	59.3	74.9	63.3	4300	5800	1.230	

Rotational speed limits shown applicable for machined cage bearings only
 Rotational speed limits of pressed cage bearings to be kept under 80% of this value
 This speed limit is in case of 15 degree contact angle is applicable for bearings higher than class 5,
 Suffix B indicates the contact angle is 40, Suffix C indicates the contact angle is 30 and no suffix indicates the contact angle is 15

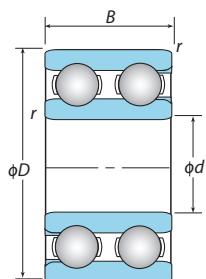
Single Row Angular Contact Ball Bearings



BEARING NUMBER	GOCT	NOMINAL DIMENSIONS [mm]					LOAD RATING (kN)				LIMITING SPEED (RPM)		Weight KG
							With Machined Cage		With Pressed Cage				
							Dynamic	Static	Dynamic	Static	Oil Lube	Grease Lube	
7300 B	66300	10	35	11	0.6	0.3	8.5	3.75	9.3	4.3	33000	27000	0.054
7301 B	66301	12	37	12	1	0.6	10.2	4.6	11.2	5.25	31000	24000	0.065
7302 B	66302	15	42	13	1	0.6	12.5	6.45	13.4	7.2	25000	20000	0.088
7303 B	66303	17	47	14	1	0.6	13.8	7.3	14.8	8.1	18000	14000	0.120
7304 B	66304	20	52	15	1.1	0.6	16.2	8.7	17.3	9.65	17000	13000	0.150
7305 B	66305	25	62	17	1.1	0.6	22.9	13.3	24.4	14.6	14000	10000	0.243
7306 B	66306	30	72	19	1.1	0.6	27.6	17.4	29.3	19	12000	8700	0.362
7307 B	66307	35	80	21	1.5	1	32.5	20.2	36.6	24.3	10000	7700	0.475
7308 B	66308	40	90	23	1.5	1	39.7	25.2	44.8	30.3	9200	6900	0.657
7309 B	66309	45	100	25	1.5	1	50.6	34.1	53.6	37.2	8200	6200	0.875
7310 B	66310	50	110	27	2	1	64.4	44.3	68.2	48.3	7300	5500	1.140
7311 B	66311	55	120	29	2	1	74.3	52	78.7	56.7	6700	5000	1.450
7312 B	66312	60	130	31	2.1	1.1	84.9	60.3	90	65.8	6200	4600	1.810
7313 B	66313	65	120	23	1.5	1	60.9	49.3	63.6	52.6	6400	4800	1.020
7314 B	66314	70	150	35	2.1	1.1	108	78.9	114	86	5400	4000	2.700
7315 B	66315	75	160	37	2.1	1.1	118	89.2	125	97.3	5000	3800	3.150

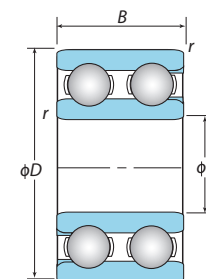
Rotational speed limits shown applicable for machined cage bearings only
 Rotational speed limits of pressed cage bearings to be kept under 80% of this value
 This speed limit is in case of 15 degree contact angle is applicable for bearings higher than class 5,
 Suffix B indicates the contact angle is 40, Suffix C indicates the contact angle is 30 and no suffix indicates the contact angle is 15

Double Row Angular Contact Ball Bearings



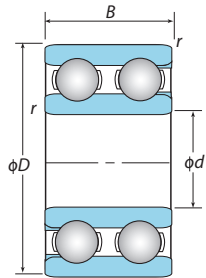
BEARING NUMBER	GOCT	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
		d	D	B	r	Dynamic C	Static Co	Oil Lube	Grease Lube	
3200	3056200	10	30	14.3	0.6	7.35	5.35	15000	20000	0.052
3201	3056201	12	32	15.9	0.6	9.70	7.15	14000	18000	0.063
3202	3056202	15	35	15.9	0.6	9.70	7.45	12000	16000	0.072
3203	3056203	17	40	17.5	0.6	13.80	10.80	11000	14000	0.100
3204	3056204	20	47	20.6	1.0	17.20	15.00	9000	12000	0.170
3205	3056205	25	52	20.6	1.0	18.90	18.20	7800	10000	0.190
3206	3056206	30	62	23.8	1.0	27.30	27.00	6500	8700	0.320
3207	3056207	35	72	27	1.1	36.80	37.50	5600	7500	0.480
3208	3056208	40	80	30.2	1.1	42.00	43.90	5000	6700	0.650
3209	3056209	45	85	30.2	1.1	45.40	51.40	4600	6100	0.710
3210	3056210	50	90	30.2	1.1	45.10	52.10	4300	5700	0.760
3211	3056211	55	100	33.3	1.5	50.90	60.20	3900	5100	1.050
3212	3056212	60	110	36.5	1.5	64.00	76.80	3500	4700	1.400
3213	3056213	65	120	38.1	1.5	76.40	97.40	3200	4300	1.750
3214	3056214	70	125	39.7	1.5	77.90	96.40	3100	4100	1.920
3215	3056215	75	130	41.3	1.5	92.40	120.00	2900	3900	2.100
3216	3056216	80	140	44.4	2.0	97.50	121.00	2700	3600	2.640
3217	3056217	85	150	49.2	2.0	114.00	143.00	2500	3400	3.390
3218	3056218	90	160	52.4	2.0	132.00	167.00	2400	3100	4.140

Double Row Angular Contact Ball Bearings



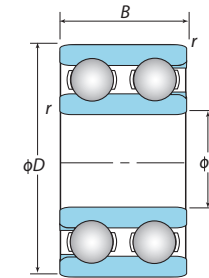
BEARING NUMBER	GOCT	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight KG
		d	D	B	r	Dynamic C	Stctic Co	Oil Lube	Grease Lube	
3302	3056302	15	42	19.0	1.0	15.20	11.90	10000	14000	0.132
3303	3056303	17	47	22.2	1.0	21.70	17.10	9400	13000	0.192
3304	3056304	20	52	22.2	1.1	20.80	18.40	8200	11000	0.230
3305	3056305	25	62	25.4	1.1	28.90	26.50	6800	9100	0.369
3306	3056306	30	72	30.2	1.1	38.10	36.10	5800	7800	0.585
3307	3056307	35	80	34.9	1.5	48.60	46.80	5200	7000	0.816
3308	3056308	40	90	36.5	1.5	54.10	53.80	4600	6100	1.070
3309	3056309	45	100	39.7	1.5	66.10	67.30	4100	5500	1.420
3310	3056310	50	110	44.4	2.0	86.10	88.60	3800	5000	1.950
3311	3056311	55	120	49.2	2.0	101.00	106.00	3400	4500	2.530
3312	3056312	60	130	54.0	2.1	125.00	132.00	3100	4200	3.240
3313	3056313	65	140	58.7	2.1	142.00	153.00	2900	3900	4.080
3314	3056314	70	150	63.5	2.1	151.00	160.00	2700	3600	5.040
3315	3056315	75	160	68.3	2.1	169.00	189.00	2500	3300	6.160
3316	3056316	80	170	68.3	2.1	184.00	213.00	2400	3100	6.930
3317	3056317	85	180	73.0	3.0	188.00	219.00	2200	3000	8.300
3318	3056318	90	190	73.0	3.0	205.00	242.00	2100	2800	9.230

Double Row Angular Contact Ball Bearings



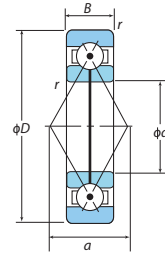
BEARING NUMBER	FOCT	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)		WEIGHT KG
						Open		Shielded / Sealed		Oil Lube	Grease Lube	
						Dynamic	Static	Dynamic	Static			
d	D	B	r	C	Co	C	Co					
5203		17	40	17.5	0.6	13.20	8.15	12.70	8.35	11000	14000	0.091
5204		20	47	20.6	1.0	19.70	12.50	16.00	10.80	8800	12000	0.120
5205		25	52	20.6	1.0	21.40	14.80	18.90	13.80	7700	10000	0.190
5206		30	62	23.8	1.0	29.70	21.30	25.40	18.30	6400	8600	0.290
5207		35	72	27	1.1	39.20	29.00	31.70	24.60	5500	7300	0.430
5208		40	80	30.2	1.1	44.40	33.60	36.50	29.10	5000	6700	0.570
5209		45	85	30.2	1.1	49.90	38.40	41.70	33.90	4600	6100	0.620
5210		50	90	30.2	1.1	53.30	43.60	44.10	37.90	4300	5600	0.670
5211		55	100	33.3	1.5	65.90	55.20	52.90	44.70	3800	5100	0.960
5212		60	110	36.5	1.5	74.40	60.80	62.60	55.90	3500	4700	1.360
5213		65	120	38.1	1.5	86.90	75.30	69.20	63.10	3200	4300	1.660
5214		70	125	39.7	1.5	94.50	82.60	76.30	70.30	3100	4100	1.810

Double Row Angular Contact Ball Bearings



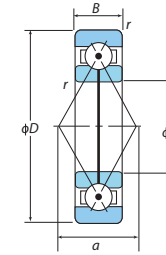
BEARING NUMBER	FOCT	NOMINAL DIMENSIONS [mm]				LOAD RATING(kN)				LIMITING SPEED(RPM)		WEIGHT KG
						Open		Shielded / Sealed		Oil Lube	Grease Lube	
						Dynamic	Static	Dynamic	Static			
d	D	B	r	C	Co	C	Co					
5304		20	52	22.2	1.1	24.70	15.00	19.80	12.80	8300	11000	0.230
5305		25	62	25.4	1.1	32.70	20.80	27.50	18.50	6900	9200	0.340
5306		30	72	30.2	1.1	41.00	28.50	34.30	25.20	5800	7700	0.510
5307		35	80	34.9	1.5	51.20	36.20	46.10	32.80	5100	6800	0.790
5308		40	90	36.5	1.5	62.70	45.40	51.40	37.80	4600	6100	1.050
5309		45	100	39.7	1.5	75.10	55.70	68.90	51.40	4100	5500	1.420
5310		50	110	44.4	2.0	88.50	67.00	81.80	62.20	3600	4800	1.930
5311		55	120	49.2	2.0	110.00	85.10	95.70	74.30	3300	4500	2.300
5312		60	130	54	2.1	126.00	98.70	110.00	87.10	3100	4100	3.160
5313		65	140	58.7	2.1	142.00	113.00	142.00	113.00	2900	3900	3.910
5314		70	150	63.5	2.1	160.00	129.00	160.00	129.00	2700	3600	4.890
5315		75	160	68.3	2.1	174.00	147.00	174.00	147.00	2500	3300	5.970

Angular Contact Ball Bearings



BEARING NUMBER	ГОСТ	DIMENSIONS IN - MM			BASIC LOAD RATINGS &		RPM	WEIGHT Kg
		d	D	B	Dynamic	Static		
QJ 203	176203	17	40	12	11900	7900	16000	0.082
QJ 205	176205	25	52	15	18800	15000	12000	0.160
QJ 206	176206	30	62	16	26300	21400	10000	0.240
QJ 207	176207	35	72	17	34600	29000	8500	0.346
QJ 208	176208	40	80	18	39500	33700	7500	0.450
QJ 209	176209	45	85	19	43900	38200	7200	0.520
QJ 210	176210	50	90	20	46300	42000	6400	0.603
QJ 211	176211	55	100	21	59500	57400	6000	0.780
QJ 212	176212	60	110	22	69200	65000	5400	0.987
QJ 213	176213	65	120	23	78000	78000	4800	1.240
QJ 214	176214	70	125	24	85500	85500	4800	1.360
QJ 215	176215	75	130	25	87800	91500	4500	1.530
QJ 216	176216	80	140	26	103000	110000	4000	1.830
QJ 217	176217	85	150	28	111000	120000	3800	2.300
QJ 218	176218	90	160	30	130000	140000	3600	2.760
QJ 219	176219	95	170	32	150000	160000	3400	3.350
QJ 220	176220	100	180	34	168000	180000	3200	4.020
QJ 221	176221	105	190	36	198000	230000	2900	4.750
QJ 222	176222	110	200	38	198000	230000	2900	5.620
QJ 224	176224	120	215	40	214000	255000	2700	6.750
QJ 226	176226	130	230	40	222000	297000	2400	7.280
QJ 228	176228	140	250	42	245000	330000	2200	9.330
QJ 230	176230	150	270	45	250000	450000	2000	11.800

Angular Contact Ball Bearings



BEARING NUMBER	ГОСТ	DIMENSIONS IN - MM			BASIC LOAD RATINGS &		RPM	WEIGHT Kg
		d	D	B	Dynamic	Static		
QJ 303	176303	17	47	14	17500	11000	14000	0.140
QJ 304	176304	20	52	15	22200	15000	13000	0.176
QJ 305	176305	25	62	17	30000	20200	11000	0.274
QJ 306	176306	30	72	19	37000	29000	10000	0.420
QJ 307	176307	35	80	21	44400	35000	8500	0.570
QJ 308	176308	40	90	23	53600	44000	7200	0.780
QJ 309	176309	45	100	25	70200	57300	6400	1.050
QJ 310	176310	50	110	27	83200	68600	5700	1.380
QJ 311	176311	55	120	29	95200	81000	5100	1.760
QJ 312	176312	60	130	31	109000	93800	4800	2.180
QJ 313	176313	65	140	33	124000	109000	4500	2.700
QJ 314	176314	70	150	35	140000	124000	4100	3.270
QJ 315	176315	75	160	37	150000	140000	3800	3.900
QJ 316	176316	80	170	39	162000	156000	3600	4.640
QJ 317	176317	85	180	41	175000	177000	3400	5.430
QJ 318	176318	90	190	43	198000	213000	3200	6.310
QJ 319	176319	95	200	45	214000	236000	3000	7.410
QJ 320	176320	100	215	47	230000	255000	2800	9.140
QJ 322	176322	110	240	50	273000	322000	2500	12.000
QJ 324	176324	120	260	55	292000	367000	2400	15.900
QJ 326	176326	130	280	58	317000	420000	2200	18.500
QJ 328	176328	140	300	62	351000	480000	2000	22.600
QJ 330	176330	150	320	65	370000	530000	1800	26.800