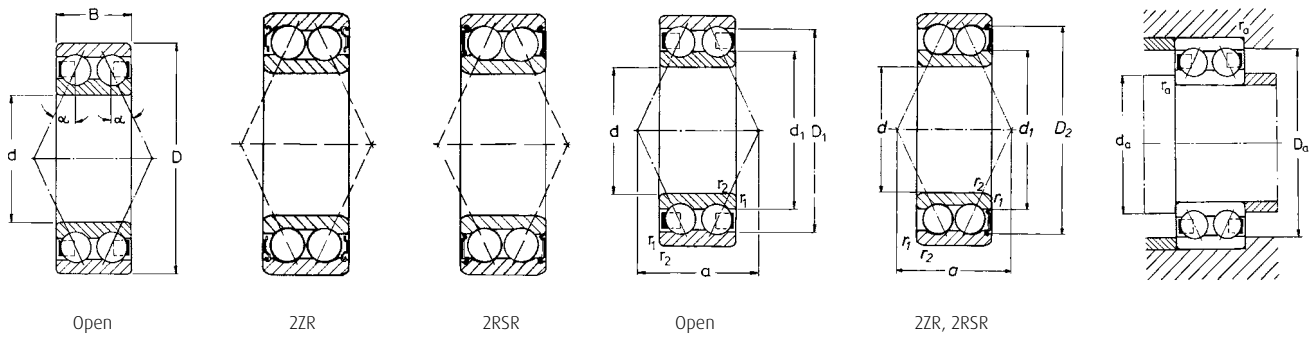


# Angular Contact Ball Bearings

Double Row | Bore 10 – 90 mm

Dimensions				Abbreviation			Load ratings		
d	D	B	r <sub>1,2</sub> min	Open	with shields	with seals	dyn. C	stat. C <sub>0</sub>	
mm							kN		
10	30	14.0	0.6	3200BTNG	..B2ZRTNG	..B2RSRTNG	7.80	4.55	
12	32	15.9	0.6	3201BTNG	..B2ZRTNG	..B2RSRTNG	10.60	5.85	
	37	19.0	1.0	3301BTNG	..B2ZRTNG	..B2RSRTNG	14.50	8.20	
15	35	15.9	0.6	3202BTNG	..B2ZRTNG	..B2RSRTNG	11.80	7.10	
	42	19.0	1.0	3302BTNG	..B2ZRTNG	..B2RSRTNG	16.30	10.00	
17	40	17.5	0.6	3203BTNG	..B2ZRTNG	..B2RSRTNG	14.60	9.00	
	47	22.2	1.0	3303BTNG	..B2ZRTNG	..B2RSRTNG	20.80	12.50	
20	47	20.6	1.0	3204BTNG	..B2ZRTNG	..B2RSRTNG	19.60	12.50	
	52	22.2	1.1	3304BTNG	..B2ZRTNG	..B2RSRTNG	23.20	15.00	
25	52	20.6	1.0	3205BTNG	..B2ZRTNG	..B2RSRTNG	21.20	14.60	
	62	25.4	1.1	3305BTNG	..B2ZRTNG	..B2RSRTNG	30.00	20.00	
30	62	23.8	1.0	3206BTNG	..B2ZRTNG	..B2RSRTNG	30.00	21.20	
	72	30.2	1.1	3306BTNG	..B2ZRTNG	..B2RSRTNG	41.50	28.50	
35	72	27.0	1.1	3207BTNG	..B2ZRTNG	..B2RSRTNG	39.00	28.50	
	80	34.9	1.5	3307BTNG	..B2ZRTNG	..B2RSRTNG	51.00	34.50	
40	80	30.2	1.1	3208BTNG	..B2ZRTNG	..B2RSRTNG	48.00	36.50	
	90	36.5	1.5	3308BTNG	..B2ZRTNG	..B2RSRTNG	62.00	45.00	
45	85	30.2	1.1	3209BTNG	..B2ZRTNG	..B2RSRTNG	48.00	37.50	
	100	39.7	1.5	3309BTNG	..B2ZRTNG	..B2RSRTNG	68.00	51.00	
50	90	30.2	1.1	3210BTNG	..B2ZRTNG	..B2RSRTNG	51.00	42.50	
	110	44.4	2.0	3310BTNG	..B2ZRTNG	..B2RSRTNG	81.00	62.00	
55	100	33.3	1.5	3211BTNG	..B2ZRTNG	..B2RSRTNG	58.50	49.00	
	120	49.2	2.0	3311BTNG	..B2ZRTNG	..B2RSRTNG	102.00	78.00	
60	110	36.5	1.5	3212BTNG	..B2ZRTNG	..B2RSRTNG	72.00	61.00	
	130	54.0	2.1	3312BTNG	..B2ZRTNG	..B2RSRTNG	125.00	98.00	
65	120	38.1	1.5	3213BTNG	..B2ZRTNG	..B2RSRTNG	80.00	73.50	
	140	58.7	2.1	3313BTNG	..B2ZRTNG	..B2RSRTNG	150.00	118.00	
70	125	39.7	1.5	3214BTNG	..B2ZRTNG	..B2RSRTNG	83.00	76.50	
	150	63.5	2.1	3314BTNG	..B2ZRTNG	..B2RSRTNG	171.50	138.20	
75	130	41.3	1.5	3215BTNG	..B2ZRTNG	..B2RSRTNG	91.50	85.00	
	160	63.5	2.1	3315BTNG	..B2ZRTNG	..B2RSRTNG	173.40	145.30	
80	140	44.4	2.0	3216BTNG	..B2ZRTNG	..B2RSRTNG	98.00	93.00	
85	150	49.2	2.0	3217BTNG	..B2ZRTNG	..B2RSRTNG	116.00	110.00	
90	160	52.4	2.0	3218BTNG	..B2ZRTNG	..B2RSRTNG	124.60	120.30	

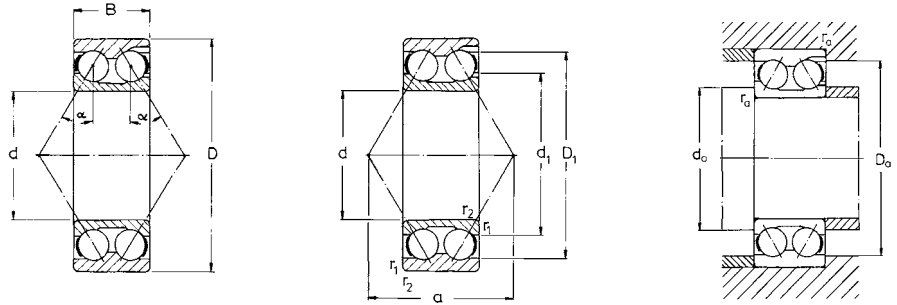


	Speed limits		Dimensions (mm)			Abutment dimensions (mm)			Weight	Abbreviation
	Grease	Oil	d <sub>1</sub>	D <sub>1</sub> , D <sub>2</sub>	a	d <sub>a</sub>	D <sub>a</sub>	r <sub>a</sub>		
	min <sup>-1</sup>				min	max	max	max	kg	
	16,000	22,000	17.9	23.9	15.1	15	25	0.6	0.043	3200BTNG
	15,000	20,000	18.3	25.7	16.6	17	27	0.6	0.051	3201BTNG
	10,500	11,500	21.1	30.4	19.4	19	32	1.0	0.090	3301BTNG
	14,000	19,000	21.0	29.3	18.0	20	30	0.6	0.058	3202BTNG
	11,000	16,000	25.6	34.2	21.2	21	36	1.0	0.112	3302BTNG
	12,000	17,000	24.0	33.1	20.5	22	35	0.6	0.085	3203BTNG
	10,000	15,000	26.2	37.7	24.0	23	41	1.0	0.161	3303BTNG
	10,000	15,000	28.9	38.7	24.2	26	41	1.0	0.139	3204BTNG
	9,000	13,000	31.2	42.6	26.4	27	45	1.0	0.197	3304BTNG
	8,500	12,000	33.9	43.7	26.5	31	46	1.0	0.159	3205BTNG
	7,500	10,000	37.1	50.0	30.7	32	55	1.0	0.316	3305BTNG
	7,000	9,500	40.0	52.7	31.4	36	56	1.0	0.265	3206BTNG
	6,300	8500	44.0	59.0	36.2	37	65	1.0	0.496	3306BTNG
	6,300	8,500	47.2	60.4	36.6	42	65	1.0	0.412	3207BTNG
	5,600	7,500	49.2	65.4	41.5	44	71	1.5	0.664	3307BTNG
	5,600	7,500	52.9	67.9	40.9	47	73	1.0	0.550	3208BTNG
	5,000	6700	55.4	74.3	46.1	49	81	1.5	0.905	3308BTNG
	5,000	6,700	57.1	72.6	43.2	52	78	1.0	0.583	3209BTNG
	4,500	6,000	62.2	81.6	50.0	54	91	1.5	1.210	3309BTNG
	4,800	6,300	61.9	78.1	45.5	57	83	1.0	0.632	3210BTNG
	4,000	5,300	68.2	89.6	54.9	60	100	2.0	1.600	3310BTNG
	4,300	5,600	68.6	85.3	49.9	64	91	1.5	0.876	3211BTNG
	3,800	5,000	75.2	98.4	61.2	65	110	2.0	2.110	3311BTNG
	3,800	5,000	75.7	94.3	55.1	69	101	1.5	1.180	3212BTNG
	3,400	4,500	81.2	108.7	67.3	72	118	2.0	2.700	3312BTNG
	3,400	4,500	84.5	103.5	59.8	74	111	1.5	1.520	3213BTNG
	3,200	4,300	88.2	118.0	73.3	77	128	2.0	3.390	3313BTNG
	3,400	4,500	86.7	106.2	61.6	79	116	1.5	1.640	3214BTNG
	3,000	4,000	94.7	125.0	80.8	84	135	2.1	4.900	3314BTNG
	3,200	4,300	92.4	112.6	65.0	89	116.6	1.5	1.910	3215BTNG
	2,800	3,800	101.4	133.0	83.8	90	143.0	2.1	5.700	3315BTNG
	3,000	4,000	98.5	120.3	69.0	91	129	2.0	2.450	3216BTNG
	2,800	3,800	106.4	128.5	74.6	100	135	2.0	3.300	3217BTNG
	2,600	3,600	113.2	136.6	78.9	109	141	2.1	4.170	3218BTNG

# Angular Contact Ball Bearings

Double Row with filling slot | Bore 10 – 70 mm

Dimensions				Abbreviation	Load ratings		Speed limits		
d	D	B	r <sub>1,2</sub> min		dyn. C	stat. C <sub>0</sub>	Grease	Oil	
mm					kN		min <sup>-1</sup>		
10	30	14.0	0.6	3200J	8.0	5.9	17,000	24,000	
12	32	15.9	0.6	3201J	9.5	7.1	15,000	20,000	
15	35	15.9	0.6	3202J	10.8	9.0	13,000	18,000	
	42	19.0	1.0	3302J	14.5	12.3	12,000	17,000	
17	40	17.5	0.6	3203J	12.6	10.8	12,000	17,000	
	47	22.2	1.0	3303J	20.7	16.7	10,000	15,000	
20	47	20.6	1.0	3204J	17.2	15.3	10,000	15,000	
	52	22.2	1.1	3304J	20.8	18.5	9,500	14,000	
25	52	20.6	1.0	3205J	19.0	18.5	8,500	12,000	
	62	25.4	1.1	3305J	28.9	26.7	7,500	10,000	
30	62	23.8	1.0	3206J	27.2	27.3	7,000	9,500	
	72	30.2	1.1	3306J	38.1	36.5	6,300	8,500	
35	72	27.0	1.1	3207J	36.8	38.0	6,300	8,500	
	80	34.9	1.5	3307J	48.5	47.5	5,600	7,500	
40	80	30.2	1.1	3208J	42.0	44.8	5,600	7,500	
	90	36.5	1.5	3308J	59.8	64.8	4,800	6,300	
45	85	30.2	1.1	3209J	45.4	52.1	5,000	6,700	
	100	39.7	1.5	3309J	73.1	80.9	4,300	5,600	
50	90	30.2	1.1	3210J	48.2	56.0	4,800	6,300	
	110	44.4	2.0	3310J	87.6	98.3	4,000	5,300	
55	100	33.3	1.5	3211J	55.7	69.9	4,300	5,600	
	120	49.2	2.0	3311J	100.5	115.3	3,600	4,800	
60	110	36.5	1.5	3212J	71.4	86.1	3,800	5,000	
	130	54.0	2.1	3312J	116.1	135.3	3,400	4,500	
65	120	38.1	1.5	3213J	76.4	98.4	3,600	4,800	
	140	58.7	2.1	3313J	133.7	156.4	3,200	4,300	
70	125	39.7	1.5	3214J	84.2	109.5	3,200	4,300	
	150	63.5	2.1	3314J	146.9	175.5	2,800	3,800	



	Dimensions (mm)			Abutment dimensions (mm)			Weight kg	Abbreviation
	$d_1$	$D_1$	a	$d_a$ max	$D_a$ max	$r_a$ max		
	17.2	24.4	20	14	26	0.6	0.052	3200J
	19.3	26.9	22	16	28	0.6	0.063	3201J
	22.6	30.4	24	19	31	0.6	0.072	3202J
	24.9	34.4	27	21	36	1.0	0.132	3302J
	25.5	33.8	27	21	36	0.6	0.103	3203J
	27.6	40.0	31	23	41	1.0	0.192	3303J
	29.5	40.5	32	26	41	1.0	0.168	3204J
	32.0	43.0	34	27	45	1.0	0.230	3304J
	34.6	45.1	35	31	46	1.0	0.194	3205J
	38.5	52.5	40	32	55	1.0	0.369	3305J
	41.2	54.0	41	36	56	1.0	0.316	3206J
	45.4	61.3	47	37	65	1.0	0.585	3306J
	47.8	63.3	47	42	65	1.0	0.484	3207J
	50.8	69.2	54	44	71	1.5	0.816	3307J
	54.0	70.4	53	47	73	1.0	0.654	3208J
	59.4	80.1	59	49	81	1.5	1.070	3308J
	59.8	76.4	56	52	78	1.0	0.709	3209J
	66.2	89.1	64	54	91	1.5	1.400	3309J
	63.7	80.8	59	57	83	1.0	0.764	3210J
	72.5	96.4	73	60	100	2.0	1.950	3310J
	72.0	89.7	64	64	91	1.5	1.050	3211J
	80.2	106.4	80	65	110	2.0	2.550	3311J
	78.2	98.3	71	69	101	1.5	1.400	3212J
	86.2	115.0	86	72	118	2.0	3.250	3312J
	84.7	105.8	76	74	111	1.5	1.750	3213J
	92.5	123.0	94	77	128	2.0	4.100	3313J
	88.7	111.5	81	79	116	1.5	1.900	3214J
	98.5	131.0	101	82	138	2.0	5.050	3314J