

## KZ TAPERED ROLLER BEARINGS

Tapered roller bearings use conical rollers that run on conical races. Most roller bearings only take radial loads, but tapered roller bearings support both radial and axial loads, and generally can carry higher loads than ball bearings due to greater contact area. Taper roller bearings are used, for example, as the wheel bearings of most cars, trucks, buses, and so on. The downsides to this bearing is that due to manufacturing complexities, tapered roller bearings are usually more expensive than ball bearings; and additionally under heavy loads the tapered roller is like a wedge and bearing loads tend to try to eject the roller; the force from the collar which keeps the roller in the bearing adds to bearing friction compared to ball bearings.

Tapered Roller Bearings consist of two main units. A cup and a cone. The cup is on the outer race whereas the cone consist of the inner race. The tapered rollers are guided by the high load on the inner race.

These bearings are capable of carrying both the radial and axial loads and permit fine adjustment for end play.



BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
						Dynamic C	Static Co	Grease Lube	OIL Lube	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
30202	15	35	11.75	11	10	14.9	13.4	12000	16000	0.053
30203	17	40	13.25	12	11	20.8	20.7	10000	14000	0.081
30204	20	47	15.25	14	12	27	27.2	8700	12000	0.127
30205	25	52	16.25	15	13	31.5	33.7	7800	10000	0.156
30206	30	62	17.25	16	14	41.5	44.8	6500	8700	0.236
30207	35	72	18.25	17	15	52.9	56.2	5600	7400	0.344
30208	40	80	19.75	18	16	62.9	69.2	5000	6700	0.434
30209	45	85	20.75	19	16	67.2	77.4	4600	6100	0.502
30210	50	90	21.75	20	17	76.5	91.7	4300	5700	0.566
30211	55	100	22.75	21	18	94.6	113	3900	5200	0.732
30212	60	110	23.75	22	19	106	127	3500	4700	0.945
30213	65	120	24.75	23	20	128	156	3200	4300	1.180
30214	70	125	26.25	24	21	138	173	3100	4100	1.320
30215	75	130	27.25	25	22	142	181	2900	3900	1.420
30216	80	140	28.25	26	22	161	202	2700	3600	1.720
30217	85	150	30.5	28	24	182	231	2500	3400	2.170
30218	90	160	32.5	30	26	204	261	2400	3200	2.650
30219	95	170	34.5	32	27	231	299	2200	3000	3.200
30220	100	180	37	34	29	258	338	2100	2800	3.383
30221	105	190	39	36	30	288	380	2000	2600	4.490
30222	110	200	41	38	32	324	434	1900	2500	5.330

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
30302	15	42	14.25	13	11	21.9	19.2	10000	14000	0.098
30303	17	47	15.25	14	12	27.4	24.5	9200	12000	0.133
30304	20	52	16.25	16	13	36.2	35.1	8300	11000	0.179
30305	25	62	18.25	17	15	48.2	46.9	6800	9000	0.273
30306	30	72	20.75	19	16	59.6	60.1	5800	7700	0.411
30307	35	80	22.75	21	18	76.2	78.9	5200	6900	0.527
30308	40	90	25.25	23	20	90.6	101	4500	6100	0.757
30309	45	100	27.25	25	22	113	128	4100	5400	1.010
30310	50	110	29.25	27	23	137	152	3700	4900	1.320
30311	55	120	31.5	29	25	149	170	3300	4500	1.650
30312	60	130	33.5	31	26	173	201	3100	4100	2.080
30313	65	140	36	33	28	204	239	2800	3800	2.560
30314	70	150	38	35	30	230	273	2600	3500	3.080
30315	75	160	40	37	31	260	311	2500	3300	3.650
30316	80	170	42.5	39	33	294	355	2300	3100	4.460
30317	85	180	44.5	48	34	316	384	2000	2900	5.150
30318	90	190	46.5	43	36	345	420	2100	2700	6.040
30319	95	200	49.5	45	38	372	455	2000	2600	6.960
30320	100	215	51.5	47	39	422	521	1800	2400	8.490

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	
31305	25	62	18.25	17	13	40.7	46	5600	7500	0.264
31306	30	72	20.25	19	14	75.8	82.7	5300	7000	0.550
31307	35	80	22.75	21	15	58.1	64	4500	6000	0.520
31308	40	90	25.25	23	17	74.6	60.8	4000	5300	0.685
31309	45	100	27.25	25	18	88.9	97.1	3400	4500	0.915
31310	50	110	29.25	27	19	102	112	3200	4300	1.160
31311	55	120	31.5	29	21	118	133	2800	3800	1.490
31312	60	130	33.5	31	22	140	158	2600	3600	1.830
31313	65	140	36	33	23	164	189	2200	3200	2.250
31314	70	150	38	35	30	185	215	2000	3000	2.820
31315	75	160	40	37	26	213	251	1900	2800	3.500
31316	80	170	42.5	39	27	222	275	1900	2800	4.700
31317	85	180	44.5	41	28	245	298	1800	2600	5.080
31318	90	190	46.5	43	30	270	330	1700	2400	5.920
31319	95	200	49.5	45	32	300	365	1700	2400	6.950
31320	100	215	56.5	51	35	373	459	1500	2200	8.720

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
32004	20	42	15	15	12	27.3	31.5	9700	13000	0.102
32005	25	47	15	15	11.5	30.2	37.7	8300	11000	0.118
32006	30	55	17	17	13	38.2	48	7000	9400	0.177
32007	35	62	18	18	14	45.5	59.4	6200	8200	0.231
32008	40	68	19	19	14.5	53.5	71.4	5600	7400	0.282
32009	45	75	20	20	15.5	62.8	86.5	5000	6600	0.354
32010	50	80	20	20	15.5	65.7	94.5	4600	6100	0.389
32011	55	90	23	23	17.5	84.6	121	4100	5500	0.569
32012	60	95	23	23	17.5	86.1	127	3900	5200	0.621
32013	65	100	23	23	17.5	90	137	3600	4800	0.664
32014	70	110	25	25	19	108	163	3300	4400	0.884
32015	75	115	25	25	19	110	169	3100	4200	0.930
32016	80	125	29	29	22	147	225	2900	3900	1.320
32017	85	130	29	29	22	150	234	2800	3700	1.380
32018	90	140	32	32	24	178	276	2600	3500	1.800
32019	95	145	32	32	24	182	287	2500	3300	1.880
32020	100	150	32	32	24	190	297	2000	3000	2.100
32021	105	160	35	35	26	204	334	1900	2800	2.420
32022	110	170	38	38	29	235	382	1800	2600	3.060

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
32203	17	40	17.25	16	14	27.4	27.5	10000	14000	0.104
32204	20	47	19.25	18	15	33.1	34.7	8900	12000	0.159
32205	25	52	19.25	18	16	39.8	44.8	7900	11000	0.188
32206	30	62	21.25	20	17	50.7	57.9	6500	8700	0.292
32207	35	72	24.25	23	19	69.6	82.4	5600	7500	0.453
32208	40	80	24.75	23	19	77.7	90.8	5000	6600	0.554
32209	45	85	24.75	23	19	84.2	104	4600	6100	0.597
32210	50	90	24.75	23	19	85	105	4300	5700	0.643
32211	55	100	26.75	25	21	107	133	3900	5200	0.863
32212	60	110	29.75	28	24	132	167	3500	4700	1.190
32213	65	120	32.75	31	27	157	203	3200	4300	1.580
32214	70	125	33.25	31	27	169	225	3100	4100	1.710
32215	75	130	33.25	31	27	174	234	2900	3900	1.770
32216	80	140	35.25	33	28	203	271	2700	3600	2.170
32217	85	150	38.5	36	30	232	315	2500	3400	2.800
32218	90	160	42.5	40	34	263	362	2400	3200	3.470
32219	95	170	45.5	43	37	311	439	2200	3000	4.340
32220	100	180	49	46	39	347	495	2100	2800	5.210
32222	120	200	56	53	46	438	640	1900	2500	7.450
32224	140	215	61.5	58	50	470	691	1700	2300	9.040

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
32303	17	47	20.25	19	16	31.9	29.9	9400	13000	0.170
32304	20	52	22.5	21	18	45.1	46.7	8400	11000	0.224
32305	25	62	25.25	24	20	61.2	64.1	6900	9100	0.386
32306	30	72	28.75	27	23	82.2	91.6	5900	7900	0.588
32307	35	80	32.75	31	25	101	114	5300	7000	0.776
32308	40	90	35.25	33	27	116	139	4600	6200	1.060
32309	45	100	38.25	36	30	146	180	4100	5500	1.430
32310	50	110	42.25	40	33	176	220	3700	5000	1.890
32311	55	120	45.5	43	35	200	250	3400	4500	2.380
32312	60	130	48.5	46	37	244	315	3100	4200	2.990
32313	65	140	51	48	39	276	357	2900	3900	3.640
32314	70	150	54	51	42	317	414	2700	3600	4.500
32315	75	160	58	55	45	340	444	2500	3300	5.410
32316	80	170	61.5	58	48	383	503	2300	3100	6.310
32317	85	180	63.5	60	49	439	587	2200	3000	7.420
32318	90	190	67.5	64	53	461	614	2100	2800	8.610
32319	95	200	71.5	67	55	517	695	2000	2600	10.100
32320	100	215	77.5	73	60	579	783	1800	2400	13.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
33005	25	47	17	17	14	33.5	42.3	8300	11000	0.131
33006	30	55	20	20	16	43.2	55.2	7000	9400	0.203
33007	35	62	21	20	16	40.8	53.8	6200	8200	0.250
33008	40	68	22	22	18	60.4	84.6	5500	7400	0.326
33009	45	75	24	24	19	69.6	101	5000	6700	0.416
33010	50	80	24	24	19	73	110	4600	6100	0.451
33011	55	90	27	27	21	96.5	149	4100	5400	0.672
33012	60	95	27	27	21	101	162	3900	5200	0.719
33013	65	100	27	27	21	103	169	3600	4800	0.762
33014	70	110	31	31	25.5	134	208	3300	4400	1.090
33015	75	115	31	31	25.5	141	225	3200	4200	1.160
33016	80	125	36	36	29.5	173	228	2900	3900	1.630
33017	85	130	36	36	29.5	177	300	2800	3700	1.720
33018	90	140	39	39	32.5	221	367	2600	3400	2.220
33019	95	145	39	39	32.5	226	382	2500	3300	2.310
33020	100	150	39	39	32.5	231	397	2400	3200	2.400
33021	105	160	43	43	34	267	461	2200	3000	3.080
33022	110	170	47	47	37	287	502	2100	2800	3.810



BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
						Dynamic	Static	Grease	OIL	
						C	Co	Lube	Lube	
33108	40	75	26	26	20.5	82.2	108	5200	6900	0.508
33109	45	80	26	26	20.5	87.5	120	4800	6400	0.563
33110	50	85	26	26	20	89.4	127	4400	5900	0.594
33111	55	95	30	30	23	116	161	4000	5300	0.868
33112	60	100	30	30	23	118	170	3700	5000	0.923
33113	65	110	34	34	26.5	152	223	3400	4600	1.330
33114	70	120	37	37	29	181	266	3100	4200	1.710
33115	75	125	37	37	29	186	280	3000	4000	1.840
33116	80	130	37	37	29	191	294	2800	3800	1.930
33117	85	140	41	41	32	224	346	2600	3500	2.430
33118	90	150	45	45	35	258	413	2500	3300	3.130
33119	95	160	49	49	38	304	473	2300	3100	3.890
33120	100	165	52	52	40	325	523	2200	3000	4.290

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]					LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
						Dynamic	Static	Grease	OIL	
	d	D	T	B	C	C	Co	Lube	Lube	Kgs
33205	25	52	22	22	18	48.9	58.5	7900	10000	0.225
33206	30	62	25	25	19.5	66.4	79.4	6500	8700	0.359
33207	35	72	28	28	22	87.6	107	5700	7500	0.551
33208	40	80	32	32	25	108	139	5000	6700	0.758
33209	45	85	32	32	25	112	149	4600	6200	0.818
33210	50	90	32	32	24.5	119	167	4300	5700	0.887
33211	55	100	35	35	27	142	189	3900	5200	1.180
33212	60	110	38	38	29	174	239	3600	4700	1.570
33213	65	120	41	41	32	200	277	3200	4300	2.020
33214	70	125	41	41	32	206	294	3100	4100	2.160
33215	75	130	41	41	31	212	310	2900	3900	2.260
33216	80	140	46	46	35	250	371	2700	3600	2.990
33217	85	150	49	49	37	294	439	2500	3400	3.630
33218	90	160	55	55	42	343	527	2400	3200	4.760
33219	95	170	58	58	44	374	852	2200	2900	5.660
33220	100	180	63	63	48	431	680	2100	2800	6.920