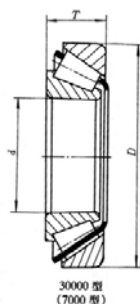


TAPER ROLLER BEARINGS

Taper roller bearings are separate bearings. the inner ring with roller and cage form the inner components, and can be **mounted** separately with outer ring. It has **tapered** raceway on inner and outer ring, and tapered rollers are mounted between the raceways. such bearing are mainly used to bear the combination load of radial and axial. The **axial** carrying capacity of the bearing is depended on the contact angle α (the outer raceway angle). the larger the α , the higher the **axial** carrying capacity of the bearing. This bearing can be **classified** into single-row, double-row and four-row taper roller bearing according to rows of rollers.

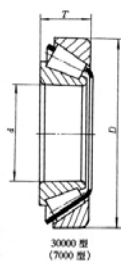
Single-row taper roller bearing can bear radial load and one direction's axial load. when the bearing bear radial load, axial **component force** will be caused, so it need a bearing that can bear opposite **axial force** to balance.

Taper roller bearing use **pressed steel plate cage**, but when the size is larger, it will **adopt the machined solid cage**, which is **welded with supporting rollers** (each roller has a supporting hole in its radial center).

SINGLE ROW TAPER ROLLER BEARINGS d150-190mm


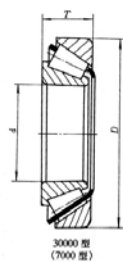
d	D	Principal dimensions						Old spec.	Designations	
		T	B	C	b	D ₁	R _{smin}			r _{smin}
mm										
150	210	38.5	36	31			2.5	2	2007930	32930
	225	48.5	45	38			3	2.5	2007130	32030
	225	48	48	36			3	2.5	2007130E	32030E
	270	49	45	38			4	3	7230E	30230
	270	77	73	60			4	3	7530E	32230
	320	72	65	55			5	4	7330E	30330
	320	114	108	90			5	4	7630E	32330
160	220	38.5	36	31			2.5	2	2007932	32932
	240	51.5	48	41			3	2.5	2007132X2	32032X2
	290	52	48	40			4	3	7232E	30232
	290	84	80	67			4	3	7532E	32232
	340	75	68	58			5	4	7332E	30332
	340	88	79	54			3.7	3.7	27332	-
	340	121	114	95			5	4	7632E	32332
	340	87.3	79.4	50.3			4.7	4.7	7832	-
170	230	38.5	36	31			2.5	2	2007934	32934
	260	57.5	54	46			3	2.5	2007134	32034
	360	80	72	62			5	4	7334E	30334
	360	127	120	100			5	4	7634	32334
180	250	45	45	34			2.5	2	2007936E	32936
	280	64	64	48			3	2.5	2007136E	32036
	280	64.5	60	52			3	2.5	2007136X2	32035X2
	290	65	63.5	48			2.3	2.3	7736	-
	320	57	52	43			5	4	7236E	30236
	320	91	86	71			5	4	7536E	32236
	380	83	75	64			5	4	7336E	30336
190	260	45	45	34			2.5	2	2007938E	32938
	260	45.5	42	36			2.5	2	2007938X2	32938X2

SINGLE ROW TAPER ROLLER BEARINGS d150-190mm



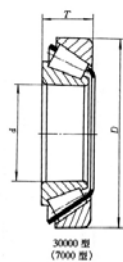
Calculation of coefficient			Basic load ratings		Speed ratings		weight	Old spec	designations
e	Y	yo	dyc Cr	stc Cor	Grease	Oil			
			KN		r/min		kg		
0.27	2.2	1.21	200	385	1500	2000	4.56	2007930	32930
0.39	1.5	0.85	255	455	1400	1900	6.85	2007130	32030
0.46	1.3	0.72	356	610	1400	1900	6.4	2007130E	32030E
0.44	1.4	0.76	490	680	1300	1800	11	7230E	30230
0.44	1.4	0.76	750	1175	1200	1700	18.7	7530E	32230
0.35	1.7	0.96	840	1085	1100	1600	25.2	7330E	30330
0.35	1.7	0.96	1275	1865	950	1400	42.7	7630E	32330
0.27	2.2	1.23	215	400	1300	1800	3.80	2007932	32932
0.37	1.6	0.89	400	675	1100	1600	7.70	2007132X2	32032X2
0.44	1.4	0.76	530	730	1100	1600	13.4	7232E	30232
0.44	1.4	0.76	890	1420	1100	1600	23.4	7532E	32232
0.35	1.7	0.96	930	1210	1000	1500	28.3	7332E	30332
0.76	0.8	0.43	750	1080	1000	1500	30	27332	-
0.35	1.7	0.96	1400	2230	1000	1500	51.7	7632E	32332
0.70	0.9	0.47	800	1060	1000	1500	40.7	7832	-
0.28	2.1	1.17	255	460	1400	1900	4	2007934	32934
0.31	1.9	1.07	440	774	1400	1900	10.1	2007134	32034
0.35	1.7	0.96	1040	1360	1100	1600	11.7	7334E	30334
0.36	1.7	0.93	1530	2315	950	1400	60.3	7634	32334
0.48	1.2	0.69	335	685	1000	1500	6.54	2007936E	32936
0.42	1.4	0.78	600	1035	950	1400	14	2007136E	32036
0.28	2.2	1.19	540	900	950	1400	13.4	2007136X2	32036X2
0.44	1.4	0.75	490	920	950	1400	15.6	7736	-
0.45	1.3	0.73	540	825	950	1400	17.8	7236E	30236
0.45	1.3	0.73	1040	1710	950	1400	30	7536E	32236
0.35	1.7	0.96	1120	1500	900	1300	45.5	7336E	30336
0.48	1.3	0.69	315	690	1100	1400	6.8	2007938E	32938
0.38	1.6	0.86	350	700	1100	1600	6.52	2007938X2	32938X2

SINGLE ROW TAPER ROLLER BEARINGS d190-280mm

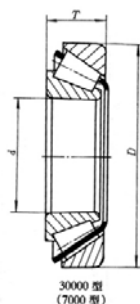


Principal dimensions									Old spec.	Designations
d	D	T	B	C	b	D ₁	R _{sm}	r _{sm}		
mm										
190	290	51	46	40			3	2.5	7138	31038
	290	64.5	60	52			3	2.5	2007138	32038
	340	60	55	46			5	4	7238E	30238
	340	97	92	75			5	4	7538E	32238
200	280	51.5	48	41			3	2.5	2007940	32940
	310	70	70	53			3	2.5	2007140E	32040
	310	70.5	66	56			3	2.5	2007140X2	32040X2
	360	64	58	48			5	4	7240E	30240
	360	104	98	82			5	4	7540E	32240
220	300	51.5	48	41			3	2.5	2007944	32944
	340	76	76	57			4	3	2007144E	32044
	340	76.5	72	62			4	3	2007144X2	32044X2
	400	72	65	54			5	4	7244E	30244
	400	114	108	90			5	4	7544E	32244
240	320	51.5	48	41			3	2.5	2007948	32948
	360	76	76	57			4	3	2007148E	32048
	360	76.5	72	62			4	3	2007148X2	32048X2
	440	128	120	100			5	4	7548E	32248
254	422.27	86.1	79.8	66.7			4.7	4.7	7951	-
260	360	63.5	63.5	48			3	2.5	2007952E	32952
	360	64.5	60	52			3	2.5	2007952X2	32952X2
	400	87	87	65			5	4	2007152E	32052
	400	87.7	82	71			5	4	2007152X2	32052X2
	480	137	130	106			5	4	7552E	32252
	540	113	102	85			6	6	7352E	30352
	540	114	102	85			6	6	7352X2	30352X2
280	380	63.5	63.5	48			3	2.5	2007956E	32956

SINGLE ROW TAPER ROLLER BEARINGS d190-280mm

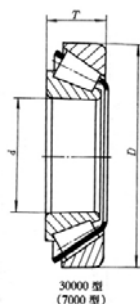


Calculation of coefficient			Basic load ratings		Speed ratings		weight	Old spec	designations
e	Y	yo	dyc Cr	stc Cor	Grease	Oil			
			KN		r/min		kg		
0.38	1.6	0.87	350	610	950	1400	10.5	7138	31038
0.37	1.6	0.89	475	880	950	1400	15.3	2007138	32038
0.44	1.4	0.76	700	980	950	1400	21.4	7238E	30238
0.44	1.4	0.76	1160	1880	950	1300	35.8	7538E	32238
0.39	1.5	0.84	350	745	1000	1500	8.8	2007940	32940
0.43	1.4	0.77	730	1300	950	1400	19	2007140E	32040
0.39	1.5	0.84	550	1050	950	1400	17.6	2007140X2	32040X2
0.44	1.4	0.76	710	1100	900	1300	25.4	7240E	30240
0.41	1.5	0.81	1375	2205	900	1300	43.5	7540E	32240
0.39	1.5	0.84	355	840	950	1400	10.1	2007944	32944
0.43	1.4	0.77	835	1490	900	1300	24.3	2007144E	32044
0.35	1.7	0.95	710	1335	900	1300	23.3	2007144X2	32044X2
0.44	1.4	0.75	990	1460	900	1300	35.1	7244E	30244
0.40	1.5	0.82	1660	2640	900	1300	58.9	7544E	32244
0.32	1.9	1.04	355	770	900	1300	10.8	2007948	32948
0.46	1.3	0.72	850	1555	850	1200	25.8	2007148E	32048
0.31	1.9	1.05	700	1410	850	1200	23.8	2007148X2	32048X2
0.40	1.5	0.83	1870	2960	800	1100	79.1	7548E	32248
0.36	1.7	0.90	1010	1760	850	1200	45.4	7951	-
0.41	1.5	0.81	665	1410	800	1100	18.8	2007952E	32952
0.3	20	1.09	530	1200	800	1100	19.2	2007952X2	32952X2
0.43	1.4	0.76	1130	2090	800	1100	37.8	2007152E	32052
0.30	2.0	1.11	1060	1935	800	1100	36.8	2007152X2	32052X2
0.43	1.4	0.77	2220	3775	750	1000	100	7552E	32252
0.35	1.7	0.94	2115	2940	670	900	111.3	7352E	30352
0.32	1.9	1.04	1950	2755	670	900	111.8	7352X2	30352X2
0.43	1.4	0.76	680	1490	800	1100	20	2007956E	32956

SINGLE ROW TAPER ROLLER BEARINGS d280-900mm


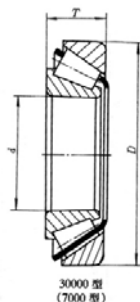
d	D	Principal dimensions							Old spec.	Designations
		T	B	C	b	D ₁	R _{smin}	r _{smin}		
mm										
280	380	64.5	60	52			3	2.5	2007956X2	32956X2
	420	87	87	65			5	4	2007156E	32056
	420	87.7	82	71			5	4	2007156X2	32056X2
300	420	74.5	72	62			4	3	2007960	32960
	460	100	100	74			5	4	2007160E	32060
	460	100.7	95	77			5	4	2007160X2	32060X2
320	480	100	100	74			5	4	2007164	32064
340	460	76	76	57			4	3	2007968E	32968
	520	86	82	64			6	6	7168	31068
360	480	76	76	57			4	4	2007972E	32972
	540	86	82	64			4	4	7172X2	31072X2
400	500	60	57	47			4	3	7880	-
420	620	95	90	67			5	5	7184	31084
500	640	87	82	72			6	3	20079/500	329/500
	720	110	100	82			6	6	71/500	310/500
630	920	135	128	94			7.5	7.5	71/630X2	310/630X2
760	890	78	75	59			4.7	4.7	78/760	-
800	980	57	57	47	12	990	4	4	70678/800	-
900	1280	190	170	135			7.5	7.5	71/900X2	310/900X2

SINGLE ROW TAPER ROLLER BEARINGS d280-900mm



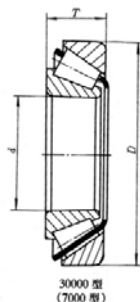
Calculation of coefficient			Basic load ratings		Speed ratings		weight	Old spec	designations
e	Y	yo	dyc	stc	Grease	Oil			
			Cr	Cor			kg		
0.32	1.9	1.03	545	1255	800	1100	21.3	2007956X2	32956X2
0.46	1.3	0.72	1150	2175	750	1000	40	2007156E	32056
0.37	1.6	0.89	990	1975	750	1000	39.6	2007156X2	32056X2
0.28	2.1	1.17	650	1810	700	950	30.2	2007960	32960
0.43	1.4	0.76	1445	2720	700	950	56.5	2007160E	32060
0.36	1.6	0.90	1370	2530	700	950	55.8	2007160X2	32060X2
0.46	1.3	0.72	1400	2940	630	850	62.7	2007164	32064
0.44	1.4	0.75	950	2120	630	850	34.7	2007968E	32968
0.29	2.1	1.14	1175	2000	600	750	55.5	7168	31068
0.46	1.3	0.72	990	2290	500	630	36.7	2007972E	32972
0.31	20	1.08	1330	2380	400	500	59.3	7172X2	31072X2
0.46	1.3	0.71	780	1895	400	500	25	7880	-
0.41	1.5	0.80	1580	2990	380	480	88	7184	31084
0.38	1.6	0.87	1565	3675	350	460	66.2	20079/500	329/500
0.32	1.9	1.02	2130	4105	320	420	120	71/500	310/500
0.33	1.8	1.00	3150	6800	280	380	268	71/630X2	310/630X2
0.32	1.9	1.04	1240	3520	130	170	78	78/760	-
0.26	1.5	0.84	1265	3600	130	170	93.4	70678/800	-
0.38	1.6	0.87	5910	13885	100	150	702	71/900X2	310/900X2

SINGLE ROW TAPER ROLLER BEARINGS INCH SERIES d96.838-838.2mm



d	D	Principal dimensions					Old spec.	Designations
		T	B	C	R _{smin}	r _{smin}		
mm								
96.838	188.912	50.8	46.038	31.75	3.5	3.3	90381/90744	90381/90744
266.7	444.5	120.65	117.475	88.9				H842849/H852810
110	165	35	35	26.5	3	2.5	JM822049/JM822010	JM822049/JM822010
114.3	190.5	47.625	49.212	34.925	2.9	2.8	71450/71750	71450/71750
114.3	212.725	66.675	66.675	53.975	7	3.3	HH224346/HH224310	HH224346/HH224310
115.087	190.5	47.625	49.212	34.925	2.9	2.8	71453/71750	71453/71750
123.825	254	77.788	82.55	61.912	9.7	6.4	HH228344/1TH228310	HH228344/1TH228310
127	254	77.788	82.55	61.912	9.7	6.4	HH228349/HH228310	HH228349/HH228310
190.5	365.049	92.075	88.897	63.5	6.4	3.3	EE420751/421437	EE420751/421437
200	300	65	62	51	3	1.5	JHM840449/3HM840410	JHM840449/3HM840410
247.65	406.4	115.888	117.475	93.662	6.4	6.4	HH249949/HH249910	HH249949/HH249910
381	479.425	49.213	47.625	34.925	6.4	3.3	538300/P6	538300/P6
498.475	634.873	80.962	80.962	63.5	6.4	3.3	EE243196/243250	EE243196/243250
584.2	685.8	49.212	49.212	34.925	3.5	3.3	LL778149/LL778110	LL778149/LL778110
759925	889	88.9	88.9	72	3.3	3.3	L183448/L183410	L183448/L183410
762	889	88.9	88.9	72	3.3	3.3	L183449/L183410	L183449/L183410
838.2	1041.4	93.662	88.9	66.675	6.4	6.4	EE763330/763410	EE763330/763410

SINGLE ROW TAPER ROLLER BEARINGS INCH d96.838-838.2mm



Calculation Of coefficient			Basic load ratings		Speed ratings		weight	Old spec	designations
e	Y	yo	dyc Cr	stc Cor	Grease	Oil			
			KN		r/min		kg		
0.87	0.7	0.38	220	350	1900	2800	5.5	90381/90744	9038L/90744
			1510	2880			72.1		H842849/H852810
0.49	1.2	0.67	195	325	1900	2800	2.5	JM822049/M822010	JM822049/M822010
0.42	1.4	0.79	300	465	1700	2400	5.1	71450/71750	71450/71750
0.33	1.8	1.01	500	775	1700	2400	10.1	HH224346mH224310	HH224346MH224310
0.42	1.4	0.79	300	465	1700	2400	5.1	71453/71750	71453/71750
0.32	1.9	1.03	795	1150	1700	2400	18.8	HH228344/H228310	HH228344/H228310
0.32	1.9	1.03	750	1155	1700	2400	182	HH228349/HH228310	HH228349/HH228310
0.40	1.5	0.82	1090	1595	800	14100	38.5	EE4207511421437	EE20751/421437
0.53	1.1	0.62	600	1105	850	1200	152	JHM840449/JHM840410	JHM840449/JHM840410
0.33	1.8	1.00	1580	3010	670	900	60.5	HH249949/HH249910	HH249949/HH249910
0.38	1.6	0.88	580	1350	600	750	19	538300/P6	538300/P6
0.34	1.6	0.96	1375	1980	360	480	62.3	EE243196/243250	EE243196/243250
0.44	1.4	0.76	655	1880	340	450	28.5	LL778149/LL778110	LL778149/LL778110
0.32	1.9	1.04	1830	5510	260	360	89.8	L183448/L183410	L183448/L183410
0.32	1.9	1.04	1830	5510	260	360	88.1	L183449/183410	L183449/L183410
0.43	1.4	0.76	2280	6280	200	260	168	EE763330/763410	EE763330/76341