



## Tapered roller bearings

Tapered roller bearings are designed to accommodate combined loads, i.e. simultaneously acting in radial and axial loads.

Tapered roller bearings have tapered inner and outer ring raceways and tapered rollers. The projection lines of the raceways meet at a common point on the bearing axis to provide true rolling and low friction. These bearings exist in various designs, including single, double and four row arrangements and in metric and inch series.

Single row tapered roller bearings are detachable. The inner ring with tapered rolls and cage forms one assembly unit, and the outer ring the second. The structure of large numbers of tapered rollers in a single row allows bearings to handle high axial and radial load capacity. Raceway contact areas lay in straight lines, which intersect the bearing axis.

Tapered roller bearings are commonly used for moderate speed, heavy-duty applications where durability is required. Common real-world applications are in agriculture, construction and mining equipment, sports robot combat, axle systems, gear box, engine motors and reducers, propeller shafts, railroad axle-box, differentials, etc.

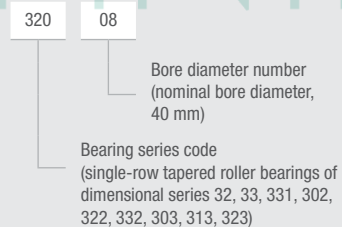
The main dimensions of metric single row tapered roller bearings conform to standard ISO 355 / DIN 720. Codex tapered roller bearings are manufactured in normal accuracy, however upon request, higher running accuracy bearings can be supplied as well.

Standard cage material is pressed window-type sheet steel.

### DESIGNATION

Metric tapered roller bearing designation

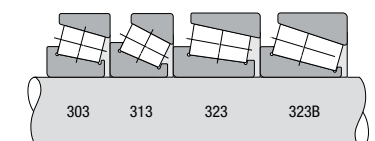
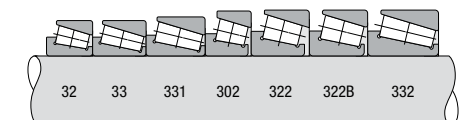
#### NOMENCLATURE:



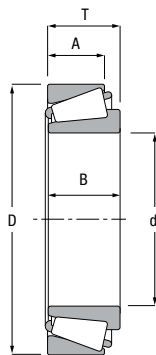
#### PREFIX/SUFFIX:

TN polyamide cage

### CODEX BASIC TYPES & SERIES



# Tapered roller bearings



d	Main dimensions (mm)				Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
	D	T	B	A	Dynamic C	Static C0			
15	42	14,25	13	11	24,5	20,0	13770	0,095	30302
17	40	13,25	12	11	22,5	18,5	13770	0,075	30203
	47	15,25	14	12	29,8	25,0	12240	0,13	30303
20	47	20,25	19	16	34,7	33,1	12240	0,17	32303
	42	15	15	12	28,8	27,0	12240	0,097	32004
	47	15,25	14	12	28,2	28,0	11475	0,12	30204
	52	16,25	15	13	36,2	32,0	10710	0,17	30304
22	52	22,25	21	18	46,5	45,0	10710	0,23	32304
	44	15	15	11,5	29,9	28,1	11475	0,1	320/22
25	47	15	15	11,5	27,8	32,5	10710	0,11	32005
	52	16,25	15	13	32,9	33,5	9945	0,15	30205
	52	19,25	18	15	36,0	43,3	9945	0,19	32205
	52	19,25	18	16	42,0	44,0	9945	0,19	32205-A
	52	22	22	18	53,4	55,5	9945	0,23	33205
	62	18,25	17	15	46,6	43,0	9180	0,26	30305
	62	18,25	17	13	39,5	40,0	8415	0,26	31305
	62	25,25	24	20	61,7	62,5	9180	0,36	32305
28	52	16	16	12	34,5	38,0	9945	0,15	320/28
	58	17,25	16	14	44,5	41,0	9180	0,25	302/28
	58	20,25	19	16	48,5	48,0	9180	0,25	322/28
30	55	17	17	13	38,8	44,0	9180	0,17	32006
	62	17,25	16	14	42,0	44,0	8415	0,23	30206
	62	21,25	20	17	57,1	56,9	8415	0,28	32206
	62	25	25	19,5	66,4	76,0	8415	0,37	33206
	72	20,75	19	16	57,2	56,0	7650	0,39	30306
	72	20,75	19	17	48,7	50,0	7268	0,39	31306
	72	28,75	27	19,5	81,5	85,0	7650	0,55	32306
32	58	17	17	13	38,5	46,0	8415	0,19	320/32

d	Main dimensions (mm)				Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
	D	T	B	A	Dynamic C	Static C0			
35	62	18	18	14	43,3	54,0	8415	0,22	32007
	72	18,25	17	15	55,6	56,0	7268	0,32	30207
	72	24,25	23	19	72,5	78,0	7268	0,43	32207
	72	28	28	22	88,6	105,0	7268	0,56	33207
	80	22,75	21	18	73,1	73,0	6885	0,52	30307
	80	22,75	21	25	63,4	67,0	6503	0,52	31307
40	80	32,75	31	15	102,2	106,0	6885	0,73	32307
	68	19	19	14,5	53,1	71,0	7268	0,27	32008
	75	26	26	20,5	80,2	103,2	6885	0,51	33108
	80	19,75	18	16	62,0	68,0	6503	0,42	30208
	80	24,75	23	19	79,9	86,0	6503	0,53	32208
	80	32	32	25	104,0	131,8	6503	0,77	33208
	90	25,25	23	20	91,5	95,0	6120	0,72	30308
	90	25,25	23	17	74,5	81,0	5738	0,72	31308
45	90	35,25	33	27	110,0	140,0	6120	1	32308
	75	20	20	15,5	58,5	79,8	6503	0,34	32009
	80	26	26	20,5	85,2	114,0	6120	0,56	33109
	85	20,75	19	16	67,9	76,0	6120	0,48	30209
	85	24,75	23	19	82,5	98,0	6120	0,58	32209
	85	32	32	25	110,0	142,0	5738	0,82	33209
	100	27,25	25	22	110,0	120,0	5355	0,97	30309
	100	27,25	25	18	92,4	102,0	5126	0,95	31309
	100	38,25	36	30	150,0	170,0	5355	1,35	32309
	80	20	20	15,5	63,5	88,0	6120	0,37	32010
50	80	24	24	19	76,7	102,0	6120	0,45	33010
	85	26	26	20	87,0	121,0	5738	0,59	33110
	90	21,75	20	17	77,5	91,0	5738	0,54	30210
	90	24,75	23	19	87,7	100,0	5738	0,61	32210
	90	32	32	24,5	116,0	158,0	5355	0,9	33210
	110	29,25	27	23	134,0	140,0	4820	1,25	30310
	110	29,25	27	19	108,0	120,0	4590	1,2	31310
	110	42,25	40	33	184,5	212,0	4590	1,85	32310
	90	23	23	17,5	81,5	118,0	5355	0,55	32011
	55	90	27	27	21	95,0	137,0	5355	0,67
95		30	30	23	112,0	155,0	5126	0,86	33111
100		22,75	21	18	94,0	106,0	5126	0,7	30211
100		26,75	25	21	109,0	128,0	5126	0,83	32211
100		35	35	27	127,0	188,0	4820	1,2	33211
120		31,5	29	25	156,0	162,0	4284	1,55	30311
120		31,5	29	21	123,0	137,0	4284	1,55	31311
120		45,5	43	35	222,0	250,0	4284	2,5	32311
60	95	27	27	21	96,0	143,0	5126	0,71	33012
	100	30	30	23	114,0	167,0	4820	0,92	33112
	110	23,75	22	19	105,0	114,0	4590	0,88	30212

Main dimensions (mm)					Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
d	D	T	B	A	Dynamic C	Static C0			
60	110	29,75	28	24	131,0	160,0	4590	1,15	32212
	110	38	38	29	162,0	223,0	4590	1,6	33212
	130	33,5	31	26	182,0	196,0	4055	1,95	30312
	130	33,5	31	22	148,0	166,0	4055	1,9	31312
	130	48,5	46	37	243,0	290,0	4055	2,85	32312
65	100	23	23	17,5	84,0	127,0	4590	0,63	32013
	100	27	27	21	101,0	153,0	4820	0,78	33013
	110	34	34	26,5	145,0	208,0	4284	1,3	33113
	120	24,75	23	20	125,0	134,0	4284	1,15	30213
	120	32,75	31	27	155,0	193,0	4284	1,5	32213
	120	41	41	32	198,0	265,0	4055	2,05	33213
	140	36	33	28	203,0	228,0	3672	2,4	30313
	140	36	33	23	169,0	193,0	3672	2,35	31313
	140	51	48	39	268,0	335,0	3456	3,45	32313
	140	51	48	39	268,0	335,0	3456	3,45	32313
70	110	25	25	19	106,0	153,0	4284	0,84	32014
	110	31	31	25,5	136,0	196,0	4284	1,1	33014
	120	37	37	29	174,0	250,0	4055	1,7	33114
	125	26,25	24	21	131,0	156,0	4055	1,25	30214
	125	33,25	31	27	167,0	208,0	4055	1,6	32214
	125	41	41	32	202,0	282,0	3825	2,1	33214
	150	38	35	30	232,0	260,0	3443	2,9	30314
	150	38	35	25	192,0	220,0	3443	2,95	31314
75	105	20	20	16	71,5	115,0	4536	0,52	32915
	115	25	25	19	107,0	163,0	4055	0,9	32015
	115	31	31	25,5	141,0	228,0	4055	1,15	33015
	125	37	37	29	179,0	265,0	3825	1,8	33115
	130	27,25	25	22	140,0	176,0	3825	1,4	30215
	130	33,25	31	27	169,0	212,0	3825	1,7	32215
	130	41	41	31	210,0	298,0	3672	2,25	33215
	160	40	37	31	255,0	245,0	3290	3,45	30315
	160	40	37	26	212,0	245,0	3290	3,5	31315
	160	40	37	26	212,0	245,0	3290	3,5	31315
80	125	29	29	22	140,0	216,0	3825	1,3	32016
	125	36	36	29,5	178,0	285,0	3825	1,65	33016
	130	37	37	29	188,0	280,0	3672	1,9	33116
	140	28,25	26	22	161,0	183,0	3672	1,6	30216
	140	35,25	33	28	200,0	245,0	3443	2,05	32216
	140	46	46	35	251,0	375,0	3443	2,9	33216
	170	42,5	39	33	292,0	320,0	3290	4,1	30316
	170	42,5	39	27	222,0	265,0	3060	4,05	31316
	170	61,5	58	48	396,0	500,0	3290	6,2	32316
	170	61,5	58	48	396,0	500,0	3290	6,2	32316
85	130	29	29	22	143,0	224,0	3672	1,35	32017
	130	36	36	29,5	189,0	308,0	3672	1,75	33017
	140	41	41	32	225,0	340,0	3443	2,45	33117
	150	30,5	28	24	185,0	220,0	3290	2,05	30217
	150	38,5	36	30	225,0	285,0	3290	2,6	32217

Main dimensions (mm)					Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
d	D	T	B	A	Dynamic C	Static C0			
85	150	49	49	37	286,0	430,0	3290	3,7	33217
	180	44,5	41	34	308,0	365,0	3060	4,85	30317
	180	44,5	41	28	245,0	285,0	2907	4,6	31317
	180	63,5	60	49	409,0	530,0	3060	6,85	32317
	140	32	32	24	168,0	270,0	3290	1,75	32018
90	140	39	39	32,5	220,0	355,0	3443	2,2	33018
	150	45	45	35	267,0	390,0	3290	3,1	33118
	160	32,5	30	26	210,0	245,0	3060	2,55	30218
	160	42,5	40	34	262,0	340,0	3060	3,35	32218
	190	46,5	43	36	339,0	400,0	3060	5,65	30318
90	190	46,5	43	30	265,0	315,0	2601	5,9	31318
	190	67,5	64	53	455,0	605,0	3060	8,4	32318
	145	32	32	24	175,0	270,0	3290	1,8	32019
	145	39	39	32,5	226,0	375,0	3290	2,3	33019
	170	34,5	32	27	229,0	275,0	2907	3	30219
95	170	45,5	43	37	300,0	390,0	2907	4,05	32219
	200	49,5	45	38	346,0	390,0	2601	6,7	30319
	200	49,5	45	32	298,0	355,0	2601	6,95	31319
	200	71,5	67	55	520,0	665,0	2601	11	32319
	140	25	25	20	98,5	200,0	3672	1,15	32920
100	150	32	32	24	178,0	275,0	3060	1,9	32020
	150	39	39	32,5	229,0	390,0	3060	2,4	33020
	180	37	34	29	265,0	320,0	2754	3,65	30220
	180	49	46	39	335,0	440,0	2754	4,9	32220
	180	63	63	48	499,0	645,0	2754	6,95	33220
	215	51,5	47	39	409,0	490,0	2448	8,05	30320
	215	56,5	51	35	381,0	465,0	2295	8,6	31320
	215	77,5	73	60	578,0	780,0	2295	12,5	32320
	160	35	35	26	205,0	335,0	2907	2,4	32021
	160	43	43	34	295,0	430,0	2907	3,05	33021
105	190	39	36	30	290,0	340,0	2601	4,25	30221
	190	53	50	43	395,0	510,0	2601	6	32221
	225	81,5	77	63	625,0	815,0	2295	14,5	33221
110	150	25	25	20	129,0	224,0	3290	1,25	32922
	170	38	38	29	241,0	390,0	2754	3,05	32022
	170	47	47	37	298,0	500,0	2754	3,85	33022
	180	56	56	43	385,0	630,0	2601	5,55	33122
	200	41	38	32	328,0	400,0	2448	5,1	30222
	200	56	53	46	430,0	570,0	2448	7,1	32222
	240	54,5	50	42	485,0	585,0	2142	11	30322
	240	63	57	38	482,0	585,0	2142	12	31322
	240	84,5	80	65	635,0	830,0	2142	17	32322
	165	29	29	23	166,0	300,0	2907	1,8	32924
120	180	38	38	29	248,0	408,0	2601	3,25	32024
	180	48	48	38	312,0	540,0	2601	4,2	33024

Main dimensions (mm)					Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
d	D	T	B	A	Dynamic C	Static C0			
120	215	43,5	40	34	352,0	465,0	2295	6,15	30224
	215	61,5	58	50	463,0	690,0	2295	9,15	32224
	260	59,5	55	46	578,0	705,0	1989	14	30324
	260	68	62	42	543,0	695,0	1836	15,5	31324
	260	90,5	86	69	825,0	1110,0	1989	21,5	32324
130	180	32	32	25	204,0	360,0	2754	2,4	32926
	200	45	45	34	330,0	540,0	2295	4,95	32026
	230	43,75	40	34	385,0	480,0	2142	7,6	30226
	230	67,75	64	54	542,0	820,0	2142	11,5	32226
	280	63,75	58	49	655,0	795,0	1836	17	30326
140	280	72	66	44	610,0	780,0	1836	18,5	31326
	190	32	32	25	221,0	390,0	2601	2,55	32928
	210	45	45	34	365,0	385,0	2142	5,25	32028
	250	45,75	42	36	425,0	585,0	1989	8,65	30228
	250	71,75	68	58	649,0	1000,0	1989	14,5	32228
150	300	77	70	47	702,0	900,0	1683	24,5	31328
	225	48	48	36	377,0	655,0	1989	6,35	32030
	225	59	59	46	899,0	865,0	1989	8,15	33030
	270	49	45	38	450,0	865,0	1836	11	30230
	270	77	73	60	740,0	1140,0	1836	17,5	32230
160	320	82	75	50	793,0	1000,0	1530	29,5	31330
	240	51	51	38	438,0	780,0	1836	7,75	32032
	290	52	48	40	532,0	735,0	1683	13	30232
	290	84	80	67	890,0	1380,0	1683	25,5	32232
	340	75	68	58	923,0	1150,0	1530	29	30332
170	230	38	38	30	302,0	585,0	2142	4,5	32934
	260	57	57	43	531,0	910,0	1683	10,5	32034
	310	57	52	43	595,0	865,0	1530	19	30234
	310	91	86	71	990,0	1590,0	1530	28,5	32234
180	250	45	45	34	388,0	660,0	1989	6,65	32936
	280	64	64	48	667,0	1160,0	1683	14,5	32036
	320	57	52	43	645,0	815,0	1530	20	30236
	320	91	86	71	1023,0	1620,0	1454	29,5	32236
190	260	45	45	34	305,0	632,0	1836	7	32938
	290	64	64	48	705,0	1200,0	1530	15	32038
	340	60	55	46	731,0	1000,0	1377	24	30238
200	280	51	51	39	425,0	810,0	1683	9,5	32940
	310	70	70	53	760,0	1370,0	1454	19,5	32040
	360	64	58	48	741,0	1120,0	1301	25	30240
	360	104	98	82	1270,0	2000,0	1301	42,5	32240
220	300	51	51	39	525,0	895,0	1530	10	32944
	340	76	76	57	917,0	1630,0	1301	25,5	32044
	400	72	65	54	892,0	1350,0	1224	40	30244
	400	114	108	90	1550,0	2550,0	1148	60	32244

Main dimensions (mm)					Load rating (kN)		Limiting speeds * (rpm)	Weight (kg)	Designation
d	D	T	B	A	Dynamic C	Static C0			
240	320	51	51	39	536,0	980,0	1454	11	32948
	360	76	76	57	941,0	1790,0	1224	27,5	32048
	440	127	120	100	1570,0	3120,0	1071	81,5	32248
	260	400	87	87	65	1150,0	2175,0	1071	40
280	480	137	130	106	2050,0	3350,0	918	105	32252
	380	63,5	63,5	48	773,0	1390,0	1224	20	32956
300	420	87	87	65	1205,0	2290,0	995	40,5	32056
	420	76	76	57	935,0	1950,0	1071	32	32960
320	460	100	100	74	1560,0	2950,0	918	58	32060
	540	149	140	115	2225,0	4130,0	842	140	32260
320	440	76	76	57	1060,0	2220,0	995	33,5	32964
	480	100	100	74	1580,0	3040,0	842	64	32064

\* For applications close to the limiting speeds please contact Codex QA department.