

1. TYPE

- 1: Standard for self-aligning ball bearings
- 2: Standard for self-aligning ball bearings

2. CAGE

- No Symbol: Standard cage
- J: Pressed steel cage
- T2: Plastic cage, nylon or teflon
- L1: Machined brass cage

3. RING MODIFICATION

- K: 1:12 tapered bore

4. INTERNAL CLEARANCE

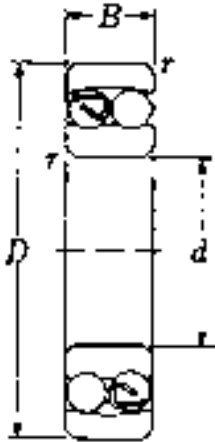
- C1: Radial clearance less than C2
- C2: Radial clearance less than normal
- C3: Radial clearance greater than normal
- C4: Radial clearance greater than C3
- C5: Radial clearance greater than C4
- CSXX: Special radial clearance;
 XX is mean value in 0.001 mm units



Units: **INCHES**
Millimeters

SELF-ALIGNING BALL BEARINGS

Bearing No.		Bore		O.D.	Width	Fillet Radius	Basic Load Ratings (lbs)		Weight (lbs)		Limiting Speeds (rpm)	
<i>12</i>	<i>12K</i>	<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i>	<i>C</i>	<i>C0</i>	<i>12</i>	<i>12K</i>	Grease	Oil	
1200	—	0.3937 10	1.1811 30	0.3543 9	0.024 0.6	1,230	268	.075	—	21,000	24,000	
1201	—	0.4724 12	1.2598 32	0.3937 10	0.024 0.6	1,260	286	.088	—	18,000	22,000	
1202	—	0.5906 15	1.3780 35	0.4331 11	0.024 0.6	1,680	395	.108	—	16,000	19,000	
1203	—	0.6693 17	1.5748 40	0.4724 12	0.024 0.6	1,770	450	.161	—	14,000	17,000	
1204	1204K	0.7874 20	1.8504 47	0.5512 14	0.039 1.0	2,230	585	.265	.26	13,000	15,000	
1205	1205K	0.9843 25	2.0472 52	0.5906 15	0.039 1.0	2,720	740	.311	.304	11,000	13,000	
1206	1206K	1.1811 30	2.4409 62	0.6299 16	0.039 1.0	3,500	1,050	.485	.476	9,200	11,000	
1207	1207K	1.3780 35	2.8346 72	0.6693 17	0.043 1.1	3,550	1,150	.712	.699	8,000	9,400	
1208	1208K	1.5748 40	3.1496 80	0.7087 18	0.043 1.1	4,350	1,470	.919	.906	7,100	8,400	
1209	1209K	1.7717 45	3.3465 85	0.7480 19	0.043 1.1	4,900	1,650	1.03	1.01	6,400	7,500	
1210	1210K	1.9685 50	3.5433 90	0.7874 20	0.043 1.1	5,100	1,820	1.16	1.14	5,800	6,800	
1211	1211K	2.1654 55	3.9370 100	0.8268 21	0.059 1.5	6,000	2,250	1.55	1.53	5,300	6,200	
1212	1212K	2.3622 60	4.3307 110	0.8661 22	0.059 1.5	6,800	2,590	1.98	1.95	4,900	5,800	
1213	1213K	2.5591 65	4.7244 120	0.9055 23	0.059 1.5	6,950	2,820	2.54	2.49	4,500	5,300	
1214	—	2.7559 70	4.9213 125	0.9449 24	0.059 1.5	7,800	3,100	2.78	—	4,200	4,900	
1215	1215K	2.9528 75	5.1181 130	0.9843 25	0.059 1.5	8,750	3,550	3	2.95	3,900	4,600	
1216	1216K	3.1496 80	5.5118 140	1.0236 26	0.079 2	8,950	3,800	3.68	3.62	3,700	4,300	
1217	1217K	3.3465 85	5.9055 150	1.1024 28	0.079 2	11,000	4,650	4.56	4.5	3,500	4,100	
1218	1218K	3.5433 90	6.2992 160	1.1811 30	0.079 2	12,800	5,300	5.56	5.47	3,300	3,800	
1219	1219K	3.7402 95	6.6929 170	1.2598 32	0.083 2.1	14,300	6,100	6.83	6.72	3,100	3,600	
1220	1220K	3.9370 100	7.0866 180	1.3386 34	0.083 2.1	15,500	6,700	8.16	8.02	2,900	3,400	
1221	—	4.1339 105	7.4803 190	1.4173 36	0.083 2.1	16,700	7,300	9.63	—	2,800	3,300	
1222	1222K	4.3307 110	7.8740 200	1.4961 38	0.083 2.1	18,100	7,950	11.4	11.2	2600	3100	



Cylindrical Bore
12



Tapered Bore
12K
Taper 1:12

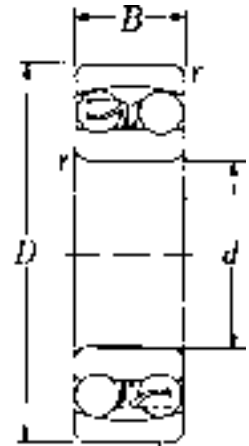
The d dimension for the tapered bore is measured from the side of the bearing with the smallest bore dimension.

SELF-ALIGNING BALL BEARINGS

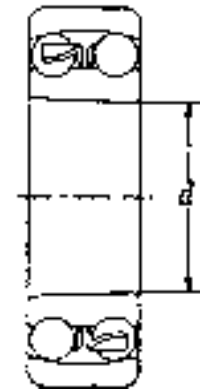
Units: INCHES
Millimeters



Bearing No.		Bore	O.D.	Width	Fillet Radius	Basic Load Ratings (lbs)		Weight (lbs)		Limiting Speeds (rpm)	
22	22K	<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i>	Dynamic <i>C</i>	Static <i>C0</i>	22	22K	Grease	Oil
2200	—	0.3937 10 30	1.1811 30 14	0.5512 14 0.6	0.024 0.6	1,640	360	0.104	—	19,000	23,000
2201	—	0.4724 12 32	1.2598 32 14	0.5512 14 0.6	0.024 0.6	1,710	390	0.117	—	17,000	20,000
2202	—	0.5906 15 35	1.3780 35 14	0.5512 14 0.6	0.024 0.6	1,730	415	0.132	—	15,000	18,000
2203	—	0.6693 17 40	1.5748 40 16	0.6299 16 0.6	0.024 0.6	2,200	545	0.194	—	13,000	16,000
2204	2204K	0.7874 20 47	1.8504 47 18	0.7087 18 1	0.039 1	2,830	745	0.309	0.300	12,000	14,000
2205	2205K	0.9843 25 52	2.0472 52 18	0.7087 18 1	0.039 1	2,760	775	0.359	0.348	10,000	12,000
2206	2206K	1.1811 30 62	2.4409 62 20	0.7874 20 1	0.039 1	3,400	1,020	0.573	0.560	8,600	10,000
2207	2207K	1.3780 35 72	2.8346 72 23	0.9055 23 1.1	0.043 1.1	4,850	1,480	0.888	0.873	7,500	8,800
2208	2208K	1.5748 40 80	3.1496 80 23	0.9055 23 1.1	0.043 1.1	5,000	1,650	1.11	1.09	6,700	7,900
2209	2209K	1.7717 45 85	3.3465 85 23	0.9055 23 1.1	0.043 1.1	5,200	1,830	1.20	1.18	6,000	7,100
2210	2210K	1.9685 50 90	3.5433 90 23	0.9055 23 1.1	0.043 1.1	5,200	1,900	1.30	1.27	5,500	6,400
2211	2211K	2.1654 55 100	3.9370 100 25	0.9843 25 1.5	0.059 1.5	5,950	2,220	1.79	1.75	5,000	5,800
2212	2212K	2.3622 60 110	4.3307 110 28	1.1024 28 1.5	0.059 1.5	7,650	2,840	2.40	2.36	4,600	5,400
2213	2213K	2.5591 65 120	4.7244 120 31	1.2205 31 1.5	0.059 1.5	9,750	3,700	3.22	3.15	4,200	5,300
2214	—	2.7559 70 125	4.9213 125 31	1.2205 31 1.5	0.059 1.5	9,850	3,850	3.35	—	3,900	4,600
2215	2215K	2.9528 75 130	5.1181 130 31	1.2205 31 1.5	0.059 1.5	9,950	4,000	3.57	3.48	3,700	4,300
2216	2216K	3.1496 80 140	5.5118 140 33	1.2992 33 2.0	.079 2.0	10,900	4,450	4.43	4.34	3,400	4,000
2217	2217K	3.3465 85 150	5.9055 150 36	1.4173 36 2.0	.079 2.0	13,100	5,300	5.56	5.42	3,200	3,800
2218	2218K	3.5433 90 160	6.2992 160 40	1.5748 40 2.0	.079 2.0	15,800	6,450	7.50	7.34	3,100	3,600
2219	2219K	3.7402 95 170	6.6929 170 43	1.6929 43 2.1	.083 2.1	18,700	7,750	9.04	8.82	2,900	3,400
2220	2220K	3.9370 100 180	7.0866 180 46	1.8110 46 2.1	.083 2.1	21,100	8,650	11.0	10.7	2,700	3,200
2221	—	4.1339 105 190	7.4803 190 50	1.9685 50 2.1	.083 2.1	24,400	10,100	13.4	—	2,600	3,100
2222	2222K	4.3307 110 200	7.8740 200 53	2.0866 53 2.1	.083 2.1	27,900	11,600	15.7	15.3	2,500	2,900



Cylindrical Bore 22

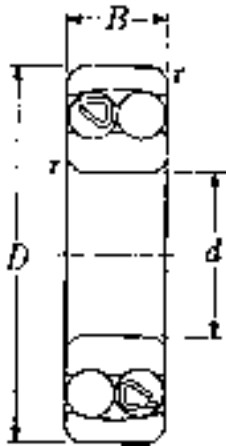


Tapered Bore 22K
Taper 1:12

The d dimension for the tapered bore is measured from the side of the bearing with the smallest bore dimension.



Units: **INCHES**
Millimeters



Cylindrical Bore
13



Tapered Bore
13K
Taper 1:12

SELF-ALIGNING BALL BEARINGS												
Bearing No.		Bore	O.D.	Width		Fillet Radius	Basic Load Ratings (lbs)		Weight (lbs)		Limiting Speeds (rpm)	
<i>13</i>	<i>13K</i>	<i>d</i>	<i>D</i>	<i>B</i>	<i>B1*</i>	<i>r</i>	<i>Dynamic C</i>	<i>Static Co</i>	<i>13</i>	<i>13K</i>	Grease	Oil
1300	—	0.3937 10	1.3780 35	0.4331 11	—	0.024 0.6	1,630	365	0.128	—	18,000	21,000
1301	—	0.4724 12	1.4567 37	0.4724 12	—	0.039 1	2,130	485	0.148	—	16,000	18,000
1302	—	0.5906 15	1.6535 42	0.5118 13	—	0.039 1	2,150	515	0.207	—	13,000	16,000
1303	—	0.6693 17	1.8504 47	0.5512 14	—	0.039 1	2,820	715	0.287	—	12,000	14,000
1304	1304K	0.7874 20	2.0472 52	0.5906 15	—	0.043 1.1	2,790	750	0.359	0.355	11,000	13,000
1305	1305K	0.9843 25	2.4409 62	0.6693 17	—	0.043 1.1	4,050	1,130	0.567	0.556	9,100	11,000
1306	1306K	1.1811 30	2.8346 72	0.7480 19	—	0.043 1.1	4,800	1,420	0.853	0.840	7,700	9,100
1307	1307K	1.3780 35	3.1496 80	0.8268 21	—	0.059 1.5	5,650	1,770	1.12	1.11	6,800	8,000
1308	1308K	1.5748 40	3.5433 90	0.9055 23	—	0.059 1.5	6,650	2,180	1.58	1.55	6,000	7,000
1309	1309K	1.7717 45	3.9370 100	0.9843 25	—	0.059 1.5	8,550	2,860	2.11	2.08	5,400	6,300
1310	1310K	1.9685 50	4.3307 110	1.0630 27	—	0.079 2.0	9,750	3,150	2.67	2.62	4,900	5,800
1311	1311K	2.1654 55	4.7244 120	1.1417 29	—	0.079 2.0	11,600	4,000	3.48	3.44	4,500	5,200
1312	1312K	2.3622 60	5.1181 130	1.2205 31	—	0.083 2.1	12,900	4,700	4.32	4.25	4,100	4,800
1313	1313K	2.5591 65	5.5118 140	1.2992 33	—	0.083 2.1	13,900	5,150	5.40	5.31	3,800	4,500
1314	—	2.7559 70	5.9055 150	1.3780 35	—	0.083 2.1	16,700	6,250	6.59	—	3,500	4,200
1315	1315K	2.9528 75	6.2992 160	1.4567 37	—	0.083 2.1	17,800	6,750	7.85	7.74	3,300	3,900
1316	1316K	3.1496 80	6.6929 170	1.5354 39	—	0.083 2.1	19,900	7,450	9.22	9.08	3,100	3,600
1317	1317K	3.3465 85	7.0866 180	1.6142 41	—	0.118 3	22,000	8,500	11.0	10.8	2,900	3,400
1318	1318K	3.5433 90	7.4803 190	1.6929 43	1.772 45	0.118 3	26,100	10,000	12.8	12.6	2,700	3,200
1319	1319K	3.7402 95	7.8740 200	1.7717 45	1.890 48	0.118 3	29,600	11,400	14.7	14.5	2,600	3,000
1320	1320K	3.9370 100	8.4646 215	1.8504 47	2.047 52	0.118 3	32,000	12,900	18.3	18.1	2,400	2,900
1321	—	4.1339 105	8.8583 225	1.9291 49	2.126 54	0.118 3	35,000	14,500	22.0	—	2,300	2,700
1322	1322K	4.3307 110	9.4488 240	1.9685 50	2.165 55	0.118 3	37,000	16,100	26.0	25.8	2,200	2,600

* B₁ is the combined width of the balls. Note that for bearings No. 1318(K) - 1322(K), the balls project beyond the ring face (B₁>B).

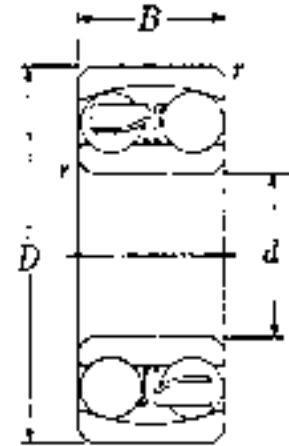
The d dimension for the tapered bore is measured from the side of the bearing with the smallest bore dimension.

SELF-ALIGNING BALL BEARINGS

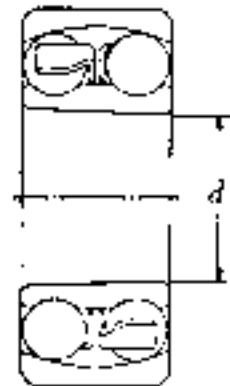
Units: INCHES
Millimeters



Bearing No.		Bore	O.D.	Width	Fillet Radius	Basic Load Ratings (lbs)		Weight (lbs)		Limiting Speeds (rpm)	
23	23K	<i>d</i>	<i>D</i>	<i>B</i>	<i>r</i>	Dynamic <i>C</i>	Static <i>C0</i>	22	22K	Grease	Oil
2300	—	0.3937 10	1.3780 35	0.6693 17	0.024 0.6	2,270	485	0.183	—	17,000	20,000
2301	—	0.4724 12	1.4567 37	0.6693 17	0.039 1	2,640	610	0.201	—	15,000	17,000
2302	—	0.5906 15	1.6535 42	0.6693 17	0.039 1	2,700	650	0.251	—	13,000	15,000
2303	—	0.6693 17	1.8504 47	0.7480 19	0.039 1	3,250	800	0.348	—	11,000	14,000
2304	2304K	0.7874 20	2.0472 52	0.8268 21	0.043 1.1	4,050	1,060	0.461	0.452	10,000	12,000
2305	2305K	0.9843 25	2.4409 62	0.9449 24	0.043 1.1	5,500	1,480	0.739	0.721	8,500	10,000
2306	2306K	1.1811 30	2.8346 72	1.0630 27	0.043 1.1	7,050	1,970	1.10	1.08	7,200	8,500
2307	2307K	1.3780 35	3.1496 80	1.2205 31	0.059 1.5	8,850	2,530	1.49	1.45	6,300	7,400
2308	2308K	1.5748 40	3.5433 90	1.2992 33	0.059 1.5	10,100	3,050	2.04	1.99	5,600	6,600
2309	2309K	1.7717 45	3.9370 100	1.4173 36	0.059 1.5	12,200	3,750	2.71	2.65	5,000	5,900
2310	2310K	1.9685 50	4.3307 110	1.5748 40	0.079 2.0	14,500	4,550	3.62	3.53	4,600	5,400
2311	2311K	2.1654 55	4.7244 120	1.6929 43	0.079 2.0	16,900	5,400	4.63	4.52	4,200	4,900
2312	2312K	2.3622 60	5.1181 130	1.8110 46	0.083 2.1	19,600	6,350	5.73	5.58	3,800	4,500
2313	2313K	2.5591 65	5.5118 140	1.8898 48	0.083 2.1	21,600	7,300	7.12	6.94	3,600	4,200
2314	—	2.7559 70	5.9055 150	2.0079 51	0.083 2.1	24,600	8,450	8.60	—	3,300	3,900
2315	2315K	2.9528 75	6.2992 160	2.1654 55	0.083 2.1	27,700	9,650	10.4	10.2	3,100	3,600
2316	2316K	3.1496 80	6.6929 170	2.2835 58	0.083 2.1	28,800	10,200	13.4	13.1	2,900	3,400
2317	2317K	3.3465 85	7.0866 180	2.3622 60	0.118 3	31,500	11,500	15.5	15.2	2,700	3,200
2318	2318K	3.5433 90	7.4803 190	2.5197 64	0.118 3	34,000	12,900	18.6	18.2	2,600	3,000
2319	2319K	3.7402 95	7.8740 200	2.6378 67	0.118 3	37,000	14,500	21.6	21.1	2,400	2,800
2320	2320K	3.9370 100	8.4646 215	2.8740 73	0.118 3	43,000	17,800	27.3	26.7	2,300	2,700
2321	—	4.1339 105	8.8583 225	3.0315 77	0.118 3	46,000	19,500	31.5	—	2,200	2,600
2322	2322K	4.3307 110	9.4488 240	3.1496 80	0.118 3	48,500	21,300	38.1	37.3	2,100	2,400



Cylindrical Bore
23



Tapered Bore
23K
Taper 1:12

The *d* dimension for the tapered bore is measured from the side of the bearing with the smallest bore dimension.