

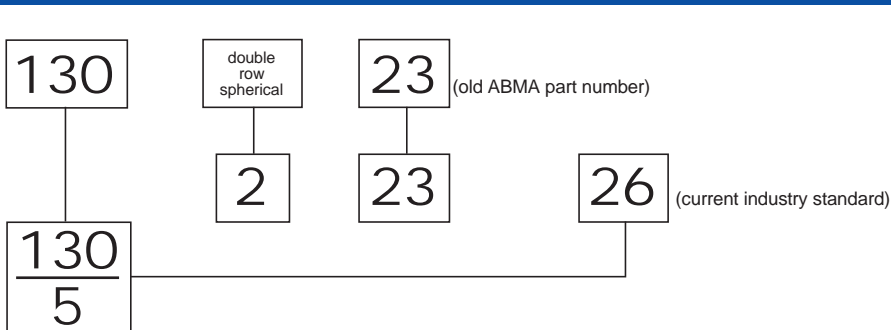
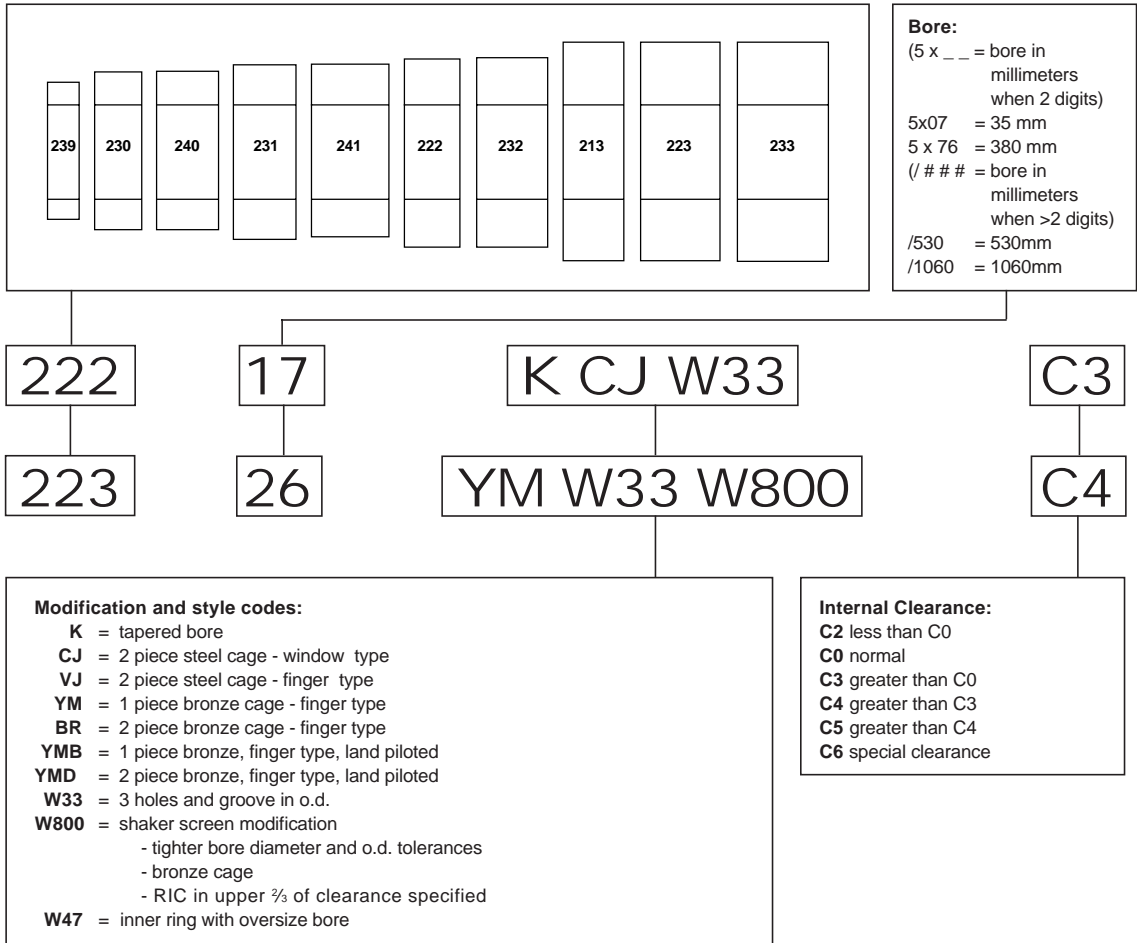
# *Spherical Roller Bearings*

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## **Nomenclature**

<b>Bore Sizes 25mm-55mm . . . . .</b>	<b>244</b>
<b>Bore Sizes 60mm-75mm . . . . .</b>	<b>245</b>
<b>Bore Sizes 80mm-100mm . . . . .</b>	<b>246</b>
<b>Bore Sizes 100mm-120mm . . . . .</b>	<b>247</b>
<b>Bore Sizes 120mm-140mm . . . . .</b>	<b>248</b>
<b>Bore Sizes 140mm-150mm . . . . .</b>	<b>249</b>
<b>Bore Sizes 150mm-170mm . . . . .</b>	<b>250</b>
<b>Bore Sizes 180mm-190mm . . . . .</b>	<b>251</b>
<b>Bore Sizes 190mm-240mm . . . . .</b>	<b>252</b>
<b>Bore Sizes 240mm-260mm . . . . .</b>	<b>253</b>
<b>Bore Sizes 260mm-320mm . . . . .</b>	<b>254</b>
<b>Bore Sizes 320mm-380mm . . . . .</b>	<b>255</b>
<b>Bore Sizes 380mm-440mm . . . . .</b>	<b>256</b>
<b>Bore Sizes 460mm-530mm . . . . .</b>	<b>257</b>
<b>Bore Sizes 530mm-630mm . . . . .</b>	<b>258</b>
<b>Bore Sizes 630mm-750mm . . . . .</b>	<b>259</b>
<b>Bore Sizes 750mm-950mm . . . . .</b>	<b>260</b>
<b>Bore Sizes 950mm-1250mm . . . . .</b>	<b>261</b>

## Torrington Spherical Roller Bearings





Torrington inventory systems are designed to provide fast delivery for frequently ordered sizes and styles. Consult a Torrington district office for up-to-date information about the availability of the bearings you have selected.

Life calculations, shaft and housing fits, internal clearances, tolerances and other technical data for these bearings are found in the Engineering section of this catalog.

These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e. 22205K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									e	$\frac{T}{R}$ X = 1					$\frac{T}{R}$ X = .67
					Y	Y	Y <sub>0</sub>	(approx.)							
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN				rpm	rpm	lbs kg	
21305VCSJ	0.9843 25	2.4409 62	0.6693 17	0.04 1	1.30 33	2.13 54	9,220 41	9,890 44	0.29	2.30	3.50	2.30	5000	7200	0.6 0.3
22205CJ	0.9843 25	2.0472 52	0.7087 18	0.04 1	1.2 30	1.85 47	9,800 44	9,900 44	0.34	2.00	2.98	1.96	8100	10800	0.4 0.2
21306VCSJ	1.1811 30	2.8346 72	0.7480 19	0.04 1	1.54 39	2.48 63	12,400 55	12,800 57	0.28	2.40	3.60	2.40	4250	6200	0.8 0.4
22206CJ	1.1811 30	2.4409 62	0.7874 20	0.04 1	1.48 38	2.2 56	13,800 61	13,100 58	0.31	2.15	3.20	2.10	6750	9000	0.6 0.3
21307VCSJ	1.3779 35	3.1496 80	0.8268 21	0.06 1.5	1.73 44	2.80 71	16,000 71	16,000 71	0.27	2.50	3.70	2.40	3750	5500	1.1 0.5
22207CJ	1.3780 35	2.8346 72	0.9055 23	0.04 1	1.78 45	2.55 65	19,900 88.5	17,500 78	0.31	2.21	3.29	2.16	5700	7600	1.0 0.5
21308VCSJ	1.5748 40	3.5433 90	0.9055 23	0.06 1.5	2.01 51	3.19 81	20,200 90	19,100 85	0.26	2.60	3.80	2.50	3500	4900	1.5 0.7
22208CJ	1.5748 40	3.1496 80	0.9055 23	0.04 1	1.98 50	2.85 72	22,900 102	20,400 91	0.27	2.47	3.67	2.41	5180	6900	1.2 0.6
22308CJ	1.5748 40	3.5433 90	1.2992 33	0.06 1.5	2.07 53	3.17 81	33,400 149	29,800 133	0.36	1.87	2.79	1.83	3900	5200	2.3 1.1
21309VCSJ	1.7717 45	3.9370 100	0.9843 25	0.06 1.5	2.24 57	3.58 91	24,700 110	23,400 104	0.26	2.60	3.90	2.60	3000	4300	2.0 0.9
22209CJ	1.7717 45	3.3465 85	0.9055 23	0.04 1	2.16 55	3.04 77	24,400 108.5	21,100 94	0.26	2.64	3.93	2.58	4800	6400	1.3 0.6
22209YM	1.7717 45	3.3465 85	0.9055 23	0.04 1	2.16 55	3.04 77	24,400 108.5	21,100 94	0.26	2.64	3.93	2.58	4800	6400	1.3 0.6
22309CJ	1.7717 45	3.9370 100	1.4173 36	0.06 1.5	2.29 58	3.53 90	41,100 183	36,400 162	0.36	1.90	2.83	1.86	3530	4700	3.1 1.4
21310VCSJ	1.9685 50	4.3307 110	1.0630 27	0.08 2	2.52 64	3.90 99	31,500 140	27,900 124	0.25	2.70	4.00	2.70	2750	3900	2.6 1.2
22210CJ	1.9685 50	3.5433 90	0.9055 23	0.04 1	2.34 59	3.24 82	26,800 119	22,600 100.5	0.24	2.84	4.23	2.78	4500	6000	1.4 0.6
22310CJ	1.9685 50	4.3307 110	1.5748 40	0.08 2	2.52 64	3.87 98	51,200 228	44,200 197	0.36	1.87	2.79	1.83	3150	4200	4.2 1.9
22310YM	1.9685 50	4.3307 110	1.5748 40	0.08 2	2.52 64	3.87 98	51,200 228	44,200 197	0.36	1.87	2.79	1.83	3150	4200	4.2 1.9
21311VCSJ	2.1654 55	4.7244 120	1.1417 29	0.08 2	2.76 70	4.29 109	38,400 171	33,700 150	0.24	2.80	4.20	2.80	2500	3600	3.3 1.5
22211CJ	2.1654 55	3.9370 100	0.9843 25	0.06 1.5	2.6 66	3.6 91	32,100 143	27,000 120	0.23	2.95	4.40	2.89	4050	5400	1.9 0.9
22311CJ	2.1654 55	4.7244 120	1.6929 43	0.08 2	2.71 69	4.23 107	59,700 265.5	52,000 231	0.36	1.87	2.79	1.83	2930	3900	5.3 2.4
22311YM	2.1654 55	4.7244 120	1.6929 43	0.08 2	2.71 69	4.23 107	59,700 265.5	52,000 231	0.36	1.87	2.79	1.83	2930	3900	5.3 2.4

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

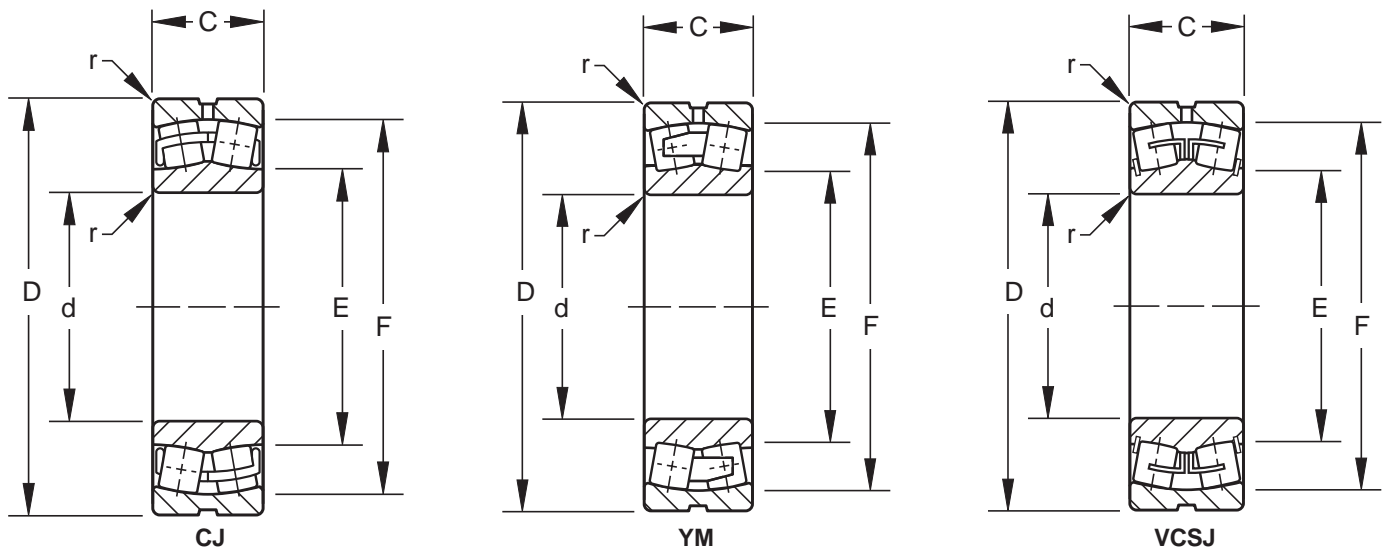
1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is >100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



**DIMENSIONS – LOAD RATINGS**

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static In All Cases X <sub>0</sub> =1	Grease	Oil		
									T ≤ e R X = 1	T > e R X = .67					Y <sub>0</sub>
					e	Y	Y	Y <sub>0</sub>	(approx.)						
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	lbs kg
21312VCSJ	2.3622 60	5.1181 130	1.2205 31	0.08 2	2.99 76	4.65 118	43,400 193	37,500 167	0.24	2.80	4.20	2.80	2300	3300	4.2 1.9
22212CJ	2.3622 60	4.3307 110	1.1024 28	0.06 1.5	2.83 72	3.95 100	39,300 175	32,800 146	0.24	2.84	4.23	2.78	3680	4900	2.6 1.2
22312CJ	2.3622 60	5.1181 130	1.8110 46	0.08 2	2.97 75	4.6 117	70,600 314	60,400 269	0.35	1.95	2.90	1.91	2700	3600	6.6 3.0
22312YM	2.3622 60	5.1181 130	1.8110 46	0.08 2	2.97 75	4.6 117	70,600 314	60,400 269	0.35	1.95	2.90	1.91	2700	3600	6.6 3.0
21313VCSJ	2.5591 65	5.5118 140	1.2992 33	0.08 2	3.23 82	5.04 128	50,100 223	43,800 195	0.23	2.90	4.30	2.80	2100	3100	5.3 2.4
22213CJ	2.5591 65	4.7244 120	1.2205 31	0.06 1.5	3.08 78	4.29 109	49,000 218	39,800 177	0.24	2.79	4.15	2.73	3380	4500	3.4 1.6
22313CJ	2.5591 65	5.5118 140	1.8898 48	0.08 2	3.21 82	4.96 126	74,100 330	64,200 286	0.33	2.06	3.06	2.01	2480	3300	8.0 3.6
22313YM	2.5591 65	5.5118 140	1.8898 48	0.08 2	3.21 82	4.96 126	74,100 330	64,200 286	0.33	2.06	3.06	2.01	2480	3300	8.0 3.6
21314VCSJ	2.7559 70	5.9055 150	1.3780 35	0.08 2	3.46 88	5.43 138	55,800 248	48,100 214	0.23	2.90	4.30	2.80	2000	2900	6.4 2.9
22214CJ	2.7559 70	4.9213 125	1.2205 31	0.06 1.5	3.31 84	4.52 115	52,400 233	41,400 184	0.22	3.01	4.48	2.94	3150	4200	3.6 1.6
22314CJ	2.7559 70	5.9055 150	2.0079 51	0.08 2	3.41 87	5.15 131	82,900 369	68,700 306	0.36	1.90	2.83	1.86	2400	3200	9.7 4.4
22314YM	2.7559 70	5.9055 150	2.0079 51	0.08 2	3.41 87	5.15 131	82,900 369	68,700 306	0.36	1.90	2.83	1.86	2400	3200	9.7 4.4
21315VCSJ	2.9528 75	6.2992 160	1.4567 37	0.08 2	3.70 94	5.83 148	64,100 285	54,600 243	0.23	2.90	4.40	2.90	1900	2700	7.7 3.5
22215CJ	2.9528 75	5.1181 130	1.2205 31	0.06 1.5	3.48 88	4.72 120	54,500 242	42,900 191	0.22	3.14	4.67	3.07	3080	4100	3.8 1.7
22315CJ	2.9528 75	6.2992 160	2.1654 55	0.08 2	3.66 93	5.51 140	92,200 410	75,900 338	0.36	1.89	2.81	1.84	2250	3000	11.9 5.4
22315YM	2.9528 75	6.2992 160	2.1654 55	0.08 2	3.66 93	5.51 140	92,200 410	75,900 338	0.36	1.89	2.81	1.84	2250	3000	11.9 5.4

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

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*Continued on the next page.*



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## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									e	$\frac{T}{R} \leq e$ X = 1					$\frac{T}{R} > e$ X = .67
					Y	Y	Y <sub>0</sub>	(approx.)							
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	lbs kg
21316VCSJ	3.1496 80	6.6929 170	1.5354 39	0.08 2	3.94 100	6.22 158	69,700 310	59,600 265	0.23	3.00	4.40	2.90	1800	2500	9.0 4.1
22216CJ	3.1496 80	5.5118 140	1.2992 33	0.08 2	3.74 95	5.08 129	62,900 280	49,100 218	0.22	3.14	4.67	3.07	2850	3800	4.7 2.2
22316CJ	3.1496 80	6.6929 170	2.2835 58	0.08 2	3.83 97	5.83 148	99,700 443.5	83,200 370	0.36	1.89	2.81	1.84	2100	2800	14.2 6.4
22316YM	3.1496 80	6.6929 170	2.2835 58	0.08 2	3.83 97	5.83 148	99,700 443.5	83,200 370	0.36	1.89	2.81	1.84	2100	2800	14.2 6.4
21317VCSM	3.3465 85	7.0866 180	1.6142 41	0.12 3	4.21 107	6.54 166	80,900 360	67,400 300	0.23	3.00	4.50	2.90	1700	2400	11.5 5.2
22217CJ	3.3465 85	5.9055 150	1.4173 36	0.08 2	3.97 101	5.47 139	72,400 322	57,300 255	0.22	3.07	4.57	3.00	2630	3500	6.0 2.7
22317CJ	3.3465 85	7.0866 180	2.3622 60	0.10 2.5	4.19 106	6.24 158	117,400 522	94,200 419	0.34	1.96	2.93	1.92	1950	2600	16.4 7.5
22317YM	3.3465 85	7.0866 180	2.3622 60	0.10 2.5	4.19 106	6.24 158	117,400 522	94,200 419	0.34	1.96	2.93	1.92	2400	3200	16.4 7.5
21318VCSM	3.5433 90	7.4803 190	1.6929 43	0.12 3	4.45 113	6.93 176	88,800 395	73,700 328	0.23	3.00	4.50	2.90	1600	2300	13.5 6.0
22218CJ	3.5433 90	6.2992 160	1.5748 40	0.08 2	4.15 105	5.76 146	87,800 390.5	68,100 303	0.23	2.90	4.31	2.83	2550	3400	7.6 3.5
22318CJ	3.5433 90	7.4803 190	2.5197 64	0.10 2.5	4.32 110	6.56 167	125,700 559	102,900 458	0.35	1.92	2.86	1.88	1880	2500	19.4 8.8
22318YM	3.5433 90	7.4803 190	2.5197 64	0.10 2.5	4.32 110	6.56 167	125,700 559	102,900 458	0.35	1.92	2.86	1.88	1880	2500	19.4 8.8
23218VJ	3.5433 90	6.2992 160	2.0630 52.4	0.08 2	4.21 107	5.87 149	106,000 470	73,100 325	0.32	2.10	3.10	2.00	1900	2700	10.0 4.5
23318YM	3.5433 90	7.4803 190	2.8740 73	0.10 2.5	4.33 110	6.56 167	149,300 664	116,100 516	0.40	1.70	2.52	1.66	1580	2100	22.2 10.1
22219CJ	3.7402 95	6.6929 170	1.6929 43	0.08 2	4.42 112	5.98 152	86,200 383	65,000 289	0.25	2.68	3.99	2.62	2400	3200	9.3 4.2
22219YM	3.7402 95	6.6929 170	1.6929 43	0.08 2	4.42 112	5.98 152	86,200 383	65,000 289	0.25	2.68	3.99	2.62	2400	3200	9.3 4.2
22319CJ	3.7402 95	7.8740 200	2.6378 67	0.10 2.5	4.67 119	6.89 175	145,900 649	113,400 504	0.35	1.93	2.88	1.89	1730	2300	22.5 10.2
22319YM	3.7402 95	7.8740 200	2.6378 67	0.10 2.5	4.67 119	6.89 175	145,900 649	113,400 504	0.35	1.93	2.88	1.89	1730	2300	22.5 10.2
22220CJ	3.9370 100	7.0866 180	1.8110 46	0.08 2	4.67 119	6.31 160	97,700 435	72,600 323	0.25	2.67	3.98	2.62	2250	3000	11.2 5.1
22220YM	3.9370 100	7.0866 180	1.8110 46	0.08 2	4.67 119	6.31 160	97,700 435	72,600 323	0.25	2.67	3.98	2.62	2250	3000	11.2 5.1
22320CJ	3.9370 100	8.4646 215	2.8740 73	0.10 2.5	4.94 125	7.37 187	170,000 756	131,700 586	0.36	1.90	2.82	1.85	1650	2200	28.7 13.0

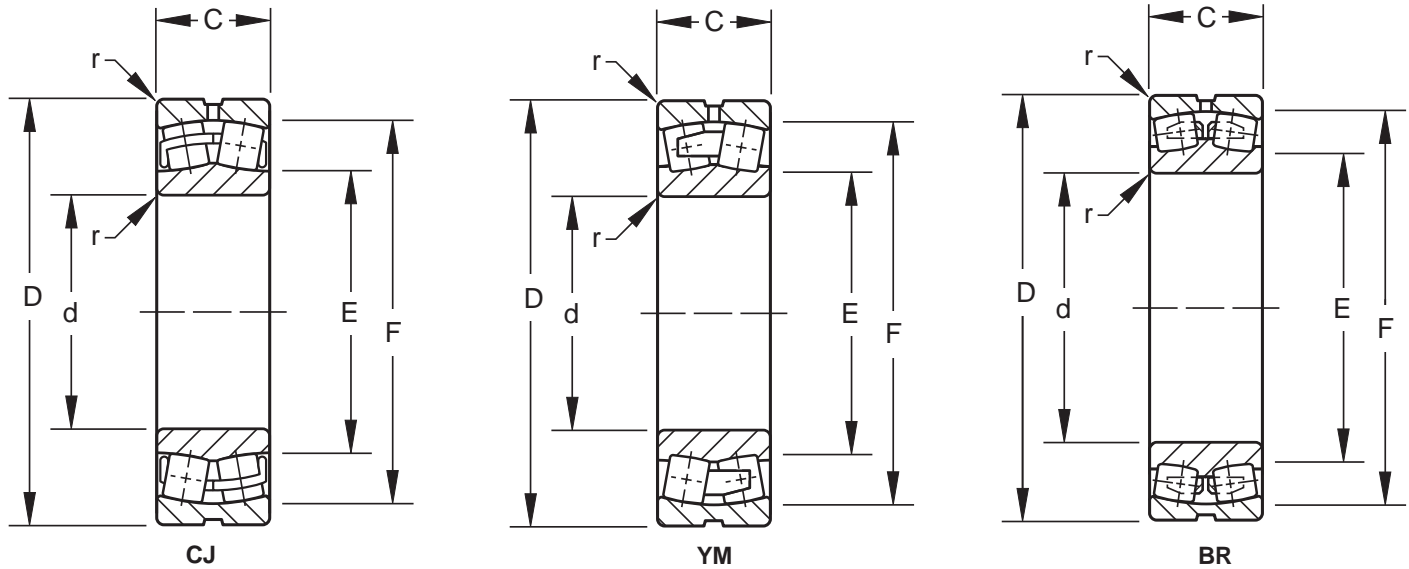
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**DIMENSIONS – LOAD RATINGS**

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>				Limiting Speed <sup>(3)</sup>		Wt.  lbs kg
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic			Grease	Oil		
									e	T R ≤ e X = 1	T R > e X = .67			Static In All Cases X <sub>0</sub> =1	
					in. mm	in. mm	in. mm	in. mm		in. mm	in. mm	lbs kN	lbs kN		
22320YM	3.9370 100	8.4646 215	2.8740 73	0.10 2.5	4.94 125	7.37 187	170,000 756	131,700 586	0.36	1.90	2.82	1.85	1650	2200	28.7 13.0
23120VJ	3.9370 100	6.4961 165	2.0472 52	0.08 2	4.41 112.00	5.94 151.00	128,000 570	85,400 380	0.28	2.39	3.56	2.39	2300	3100	9.7 4.4
23220VJ	3.9370 100	7.0866 180	2.3740 60.3	0.08 2	4.69 119	6.57 167	137,000 610	93,300 415	0.37	1.80	2.70	1.80	1700	2400	14.7 6.7
23920BR	3.9370 100	5.5118 140	1.1811 30	0.04 1	4.32 110	5.16 131	43,900 195	28,100 125	0.19	3.48	5.18	3.40	1450	2900	3.1 1.4
22222CJ	4.3307 110	7.8740 200	2.0866 53	0.08 2	5.20 132	7.04 179	124,300 553	90,400 402	0.26	2.57	3.83	2.51	2030	2700	16.1 7.3
22222YM	4.3307 110	7.8740 200	2.0866 53	0.08 2	5.20 132	7.04 179	124,300 553	90,400 402	0.26	2.57	3.83	2.51	2030	2700	16.1 7.3
22322CJ	4.3307 110	9.4488 240	3.1496 80	0.10 2.5	5.48 139	8.20 208	216,300 962	164,700 733	0.35	1.92	2.86	1.88	1500	2000	39.5 18.0
22322YM	4.3307 110	9.4488 240	3.1496 80	0.10 2.5	5.48 139	8.20 208	216,300 962	164,700 733	0.35	1.92	2.86	1.88	1500	2000	39.5 18.0
23122CJ	4.3307 110	7.0866 180	2.2047 56	0.08 2	5.00 127	6.65 169	126,000 560	79,800 355	0.30	2.20	3.30	2.20	1600	2200	12.3 5.6
23222BR	4.3307 110	7.8740 200	2.7480 69.8	0.08 2	5.20 132	7.36 187	166,000 740	112,000 500	0.35	1.90	2.90	1.90	1500	2200	21.1 9.6
23322YM	4.3307 110	9.4488 240	3.6260 92.1	0.10 2.5	5.38 137	8.25 210	240,200 1,068	181,700 808	0.4	1.67	2.49	1.63	1280	1700	45.5 20.7
23922BR	4.3307 110	5.9055 150	1.1811 30	0.04 1	4.71 120	5.57 141	53,700 239	32,600 145	0.18	3.79	5.65	3.71	1350	2700	3.4 1.5
24122CJ	4.3307 110	7.0866 180	2.7165 69	0.08 2	4.88 124	6.45 164	168,100 748	103,700 461	0.36	1.85	2.76	1.81	1130	1500	15.2 6.9
22224CJ	4.7244 120	8.4646 215	2.2835 58	0.08 2	5.58 142	7.55 192	149,800 666	106,800 475	0.27	2.51	3.74	2.46	1880	2500	20.0 9.1
22324CJ	4.7244 120	10.2362 260	3.3858 86	0.10 2.5	5.93 151	8.86 225	245,200 1,091	185,400 825	0.35	1.92	2.85	1.87	1350	1800	49.6 22.6
22324YM	4.7244 120	10.2362 260	3.3858 86	0.10 2.5	5.93 151	8.86 225	245,200 1,091	185,400 825	0.35	1.92	2.85	1.87	1350	1800	49.6 22.6

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
  - 2) Bearing load is light C/R ≥ 14.
  - 3) Calculated L10 is > 100,000HR.
  - 4) Lubrication is proper and oil, if used, is at the recommended sump level.
- For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



Torrington inventory systems are designed to provide fast delivery for frequently ordered sizes and styles. Consult a Torrington district office for up-to-date information about the availability of the bearings you have selected.

Life calculations, shaft and housing fits, internal clearances, tolerances and other technical data for these bearings are found in the Engineering section of this catalog.

These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e. 22308K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.) <sup>(2)</sup>	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil	
									e	$\frac{T}{R}$ X = 1				
					Y	Y	Y <sub>0</sub>	(approx.)						
23024VJ	4.7244 120	7.0866 180	1.8110 46	0.08 2	5.50 140	6.70 170	104,100 463	61,800 275	0.24	2.78	4.13	2.71	1650 2200	9.0 4.1
23124CJ	4.7244 120	7.8740 200	2.4409 62	0.08 2	5.59 142	7.44 189	168,000 750	104,500 465	0.31	2.20	3.30	2.20	1500 2100	17.2 7.8
23224BR	4.7244 120	8.4646 215	2.9921 76	0.08 2	5.59 142	7.95 202	211,000 939	137,000 610	0.35	1.90	2.80	1.90	1400 2000	26.2 11.9
23324YM	4.7244 120	10.2362 260	4.1732 106	0.10 2.5	5.78 147	8.89 226	325,600 1,448	234,700 1,044	0.43	1.57	2.34	1.54	1200 1600	61.2 27.8
23924BR	4.7244 120	6.4961 165	1.3386 34	0.04 1	5.16 131	6.12 155	60,900 271	37,200 165.5	0.18	3.65	5.44	3.57	1200 2400	4.7 2.1
24024CJ	4.7244 120	7.0866 180	2.3622 60	0.08 2	5.17 131	6.47 164	152,100 676.5	86,000 382.5	0.32	2.12	3.15	2.07	1280 1700	11.7 5.3
24124CJ	4.7244 120	7.8740 200	3.1496 80	0.08 2	5.36 136	7.11 181	209,500 932	126,900 564.5	0.37	1.82	2.70	1.78	1050 1400	22.2 10.1
22226CJ	5.1181 130	9.0551 230	2.5197 64	0.10 2.5	5.99 152	8.12 206	180,900 805	126,400 562	0.27	2.47	3.68	2.42	1730 2300	25.0 11.4
22226YM	5.1181 130	9.0551 230	2.5197 64	0.10 2.5	5.99 152	8.12 206	180,900 805	126,400 562	0.27	2.47	3.68	2.42	1730 2300	25.0 11.4
22326CJ	5.1181 130	11.0236 280	3.6614 93	0.12 3	6.35 161	9.52 242	285,600 1,270	214,100 952	0.35	1.92	2.85	1.87	1280 1700	62.1 28.2
22326YM	5.1181 130	11.0236 280	3.6614 93	0.12 3	6.35 161	9.52 242	285,600 1,270	214,100 952	0.35	1.92	2.85	1.87	1280 1700	62.1 28.2
23026VJ	5.1181 130	7.8740 200	2.0472 52	0.08 2	6.01 153	7.41 188	128,300 571	77,600 345	0.25	2.71	4.03	2.65	1500 2000	13.0 5.9
23126BR	5.1181 130	8.2677 210	2.5197 64	0.08 2	5.87 149	7.83 199	178,000 770	106,000 470	0.31	2.30	3.40	2.30	1400 2000	19.9 8.6
23226BR	5.1181 130	9.0551 230	3.1496 80	0.10 2.5	5.98 152	8.5 216	211,000 940	134,000 600	0.35	1.90	2.80	1.80	1300 1900	31.2 14.2
23326YM	5.1181 130	11.0236 280	4.4094 112	0.12 3	6.45 164	9.62 244	347,800 1,547	244,900 1,089	0.42	1.62	2.42	1.59	1050 1400	74.7 34.0
23926BR	5.1181 130	7.0866 180	1.4567 37	0.06 1.5	5.61 142	6.67 169	67,100 298.5	41,600 185	0.17	3.95	5.88	3.86	1100 2200	6.2 2.8
24026CJ	5.1181 130	7.8740 200	2.7165 69	0.08 2	5.67 144	7.17 182	190,800 849	109,000 485	0.31	2.16	3.22	2.12	1130 1500	17.3 7.9
24126CJ	5.1181 130	8.2677 210	3.1496 80	0.08 2	5.78 147	7.48 190	224,800 1000	130,300 580	0.35	1.92	2.86	1.88	980 1300	23.6 10.7
22228CJ	5.5118 140	9.8425 250	2.6772 68	0.10 2.5	6.53 166	8.85 225	209,200 930.5	145,300 646	0.27	2.51	3.73	2.45	1650 2200	31.7 14.4
22228YM	5.5118 140	9.8425 250	2.6772 68	0.10 2.5	6.53 166	8.85 225	209,200 930.5	145,300 646	0.27	2.51	3.73	2.45	1650 2200	31.7 14.4
22328CJ	5.5118 140	11.8110 300	4.0157 102	0.12 3	6.86 174	10.3 262	341,200 1,518	251,700 1,120	0.36	1.88	2.81	1.84	1200 1600	77.9 35.4

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

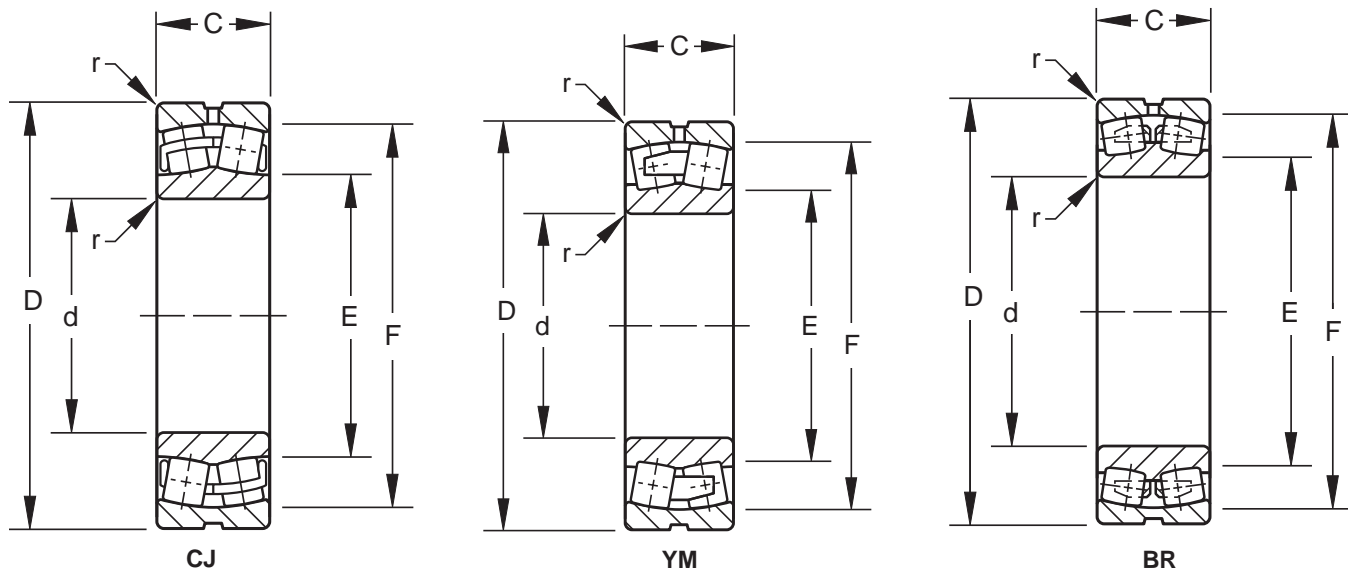
1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is > 100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



**DIMENSIONS – LOAD RATINGS**

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius ( <sup>(2)</sup>  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									e	$\frac{T}{R} \leq e$ X = 1					$\frac{T}{R} > e$ X = .67
					Y	Y	Y <sub>0</sub>								
22328YM	5.5118 140	11.8110 300	4.0157 102	0.12 3	6.86 174	10.3 262	341,200 1,518	251,700 1,120	0.36	1.88	2.81	1.84	1200	1600	77.9 35.4
23028VJ	5.5118 140	8.2677 210	2.0866 53	0.08 2	6.26 159	7.91 201	139,000 620	83,200 370	0.24	2.80	4.20	2.70	1400	1800	14.1 6.4
23128BR	5.5118 140	8.8583 225	2.6772 68	0.08 2	6.38 162.00	8.35 212.00	206,800 920	125,800 560	0.27	2.50	3.70	2.50	1300	1800	22.9 10.4
23228BR	5.5118 140	9.8425 250	3.4646 88	0.10 2.5	6.42 163	9.29 236	275,000 1220	184,000 820	0.36	1.90	2.80	1.80	1200	1700	41.0 18.6
23328YM	5.5118 140	11.8110 300	4.6457 118	0.12 3	6.89 175	10.26 261	431,900 1,921	295,100 1,313	0.41	1.64	2.45	1.61	1010	1350	90.1 41.0
23928BR	5.5118 140	7.4803 190	1.4567 37	0.06 1.5	6.02 153	7.08 180	80,000 356	46,900 209	0.17	3.90	5.81	3.81	1050	2100	6.6 3.0
24028CJ	5.5118 140	8.2677 210	2.7165 69	0.08 2	6.08 154	7.57 192	208,500 927	115,100 512	0.29	2.30	3.42	2.25	1050	1400	18.3 8.3
24128CJ	5.5118 140	8.8583 225	3.3465 85	0.08 2	6.15 156	7.98 203	256,500 1,141	147,900 658	0.35	1.94	2.88	1.89	900	1200	28.6 13.0
22230CJ	5.9055 150	10.6299 270	2.8740 73	0.10 2.5	7.04 179	9.54 242	247,200 1,100	169,100 752	0.27	2.52	3.75	2.46	1500	2000	39.9 18.2
22330CJ	5.9055 150	12.5984 320	4.2520 108	0.12 3	7.33 186	11.02 280	385,700 1,716	283,100 1,259	0.35	1.91	2.84	1.87	1130	1500	93.6 42.6
22330YM	5.9055 150	12.5984 320	4.2520 108	0.12 3	7.33 186	11.02 280	385,700 1,716	283,100 1,259	0.35	1.91	2.84	1.87	1130	1500	93.6 42.6
23030BR	5.9055 150	8.8583 225	2.2047 56	0.08 2	6.89 175	8.38 213	154 684	90,000 400	0.21	3.16	4.70	3.09	750	1500	17.1 7.8
23130BR	5.9055 150	9.8425 250	3.1496 80	0.08 2	6.97 177	9.33 237	272,000 1,210	158,000 700	0.31	2.10	3.20	2.10	1200	1700	34.7 15.8
23230BR	5.9055 150	10.6299 270	3.7795 96	0.10 2.5	6.89 175	10.00 254	319,000 1,420	211,000 940	0.36	1.90	2.80	1.80	1100	1400	52.5 23.9
23330YM	5.9055 150	12.5984 320	5.0394 128	0.12 3	7.29 185	11.02 280	478,300 2,127	332,000 1,477	0.41	1.64	2.44	1.60	940	1250	111.0 50.4
23930BR	5.9055 150	8.2677 210	1.7717 45	0.08 2	6.48 165	7.76 197	121,000 538	70,000 311	0.19	3.47	5.17	3.40	950	1900	10.6 4.8

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
  - 2) Bearing load is light C/R ≥ 14.
  - 3) Calculated L10 is > 100,000HR.
  - 4) Lubrication is proper and oil, if used, is at the recommended sump level.
- For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.





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These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e. 22308K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									$\frac{T}{R} \leq e$ X = 1	$\frac{T}{R} > e$ X = .67					In All Cases X <sub>0</sub> =1
					e	Y	Y	Y <sub>0</sub>	(approx.)						
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	lbs kg
24030CJ	5.9055 150	8.8583 225	2.9528 75	0.08 2	6.52 166	8.11 206	241,000 1,072	130,400 580	0.30	2.26	3.37	2.21	980	1300	22.9 10.4
24130CJ	5.9055 150	9.8425 250	3.9370 100	0.08 2	6.66 169	8.85 225	337,100 1,499	196,400 874	0.38	1.76	2.62	1.72	830	1100	43.4 19.7
22232CJ	6.2992 160	11.4173 290	3.1496 80	0.10 2.5	7.55 192	10.24 260	292,900 1,303	197,000 876	0.27	2.47	3.67	2.41	1430	1900	50.8 23.1
22332CJ	6.2992 160	13.3858 340	4.4882 114	0.12 3	7.81 198	11.72 298	431,800 1,921	314,100 1,397	0.35	1.92	2.86	1.88	1280	1700	111.3 50.6
22332YM	6.2992 160	13.3858 340	4.4882 114	0.12 3	7.81 198	11.72 298	431,800 1,921	314,100 1,397	0.35	1.92	2.86	1.88	1280	1700	111.3 50.6
23032BR	6.2992 160	9.4488 240	2.3622 60	0.08 2	7.34 186	8.93 227	183,800 817.5	104,600 465	0.26	2.58	3.84	2.52	700	1400	20.8 9.5
23132YM	6.2992 160	10.6299 270	3.3858 86	0.08 2	7.44 189	9.63 244	323,100 1,437	200,000 889	0.31	2.21	3.28	2.16	1050	1400	44.1 20.1
23232YM	6.2992 160	11.4173 290	4.0945 104	0.10 2.5	7.35 187	10.24 260	376,700 1,676	245,900 1,094	0.34	1.96	2.91	1.91	900	1200	66.0 30.0
23332YM	6.2992 160	13.3858 340	5.3543 136	0.12 3	7.96 202	11.7 297	572,400 2,546	374,700 1,667	0.42	1.62	2.41	1.58	900	1200	132.8 60.4
23932YM	6.2992 160	8.6614 220	1.7717 45	0.08 2	6.9 175	8.12 206	147,300 655	78,200 348	0.19	3.60	5.35	3.52	1650	2200	11.1 5.1
24032CJ	6.2992 160	9.4488 240	3.1496 80	0.08 2	6.97 177	8.69 221	272,300 1,211	147,100 654	0.30	2.26	3.37	2.21	900	1200	27.8 12.6
24132CJ	6.2992 160	10.6299 270	4.2913 109	0.08 2	7.14 181	9.59 244	392,900 1,748	230,900 1,027	0.39	1.74	2.59	1.70	790	1050	55.9 25.4
22234CJ	6.6929 170	12.2047 310	3.3858 86	0.12 3	7.93 201	10.93 278	326,300 1,451	224,500 999	0.28	2.44	3.63	2.38	1350	1800	62.7 28.5
22334YM	6.6929 170	14.1732 360	4.7244 120	0.12 3	8.27 210	12.43 316	503,700 2,240	361,500 1,608	0.35	1.94	2.89	1.90	980	1300	131.1 59.6
23034BR	6.6929 170	10.2362 260	2.6378 67	0.08 2	7.78 198	9.70 246	237,900 1,058	139,400 620	0.27	2.48	3.69	2.42	650	1300	28.1 12.8
23134YM	6.6929 170	11.0236 280	3.4646 88	0.08 2	7.83 194	10.02 255	353,800 1,574	211,400 940	0.30	2.27	3.38	2.22	980	1300	47.3 21.5
23234YM	6.6929 170	12.2047 310	4.3307 110	0.12 3	7.89 200	10.88 276	441,400 1,963	278,500 1,239	0.34	1.97	2.94	1.93	830	1100	80.2 36.5
23334YM	6.6929 170	14.1732 360	5.5118 140	0.12 3	8.16 207	12.43 316	585,400 2,604	407,500 1,813	0.40	1.68	2.49	1.64	830	1100	153.0 69.5
23934YM	6.6929 170	9.0551 230	1.7717 45	0.08 2	7.26 184	8.55 217	155,600 692	83,400 371	0.18	3.79	5.65	3.71	1580	2100	11.7 5.3
24034CJ	6.6929 170	10.2362 260	3.5433 90	0.08 2	7.43 189	9.37 238	335,800 1,494	181,400 807	0.31	2.16	3.22	2.12	860	1150	37.8 17.2
24134CJ	6.6929 170	11.0236 280	4.2913 109	0.08 2	7.50 191	9.94 252	416,000 1,850	239,100 1,064	0.37	1.83	2.72	1.79	750	1000	58.5 26.6

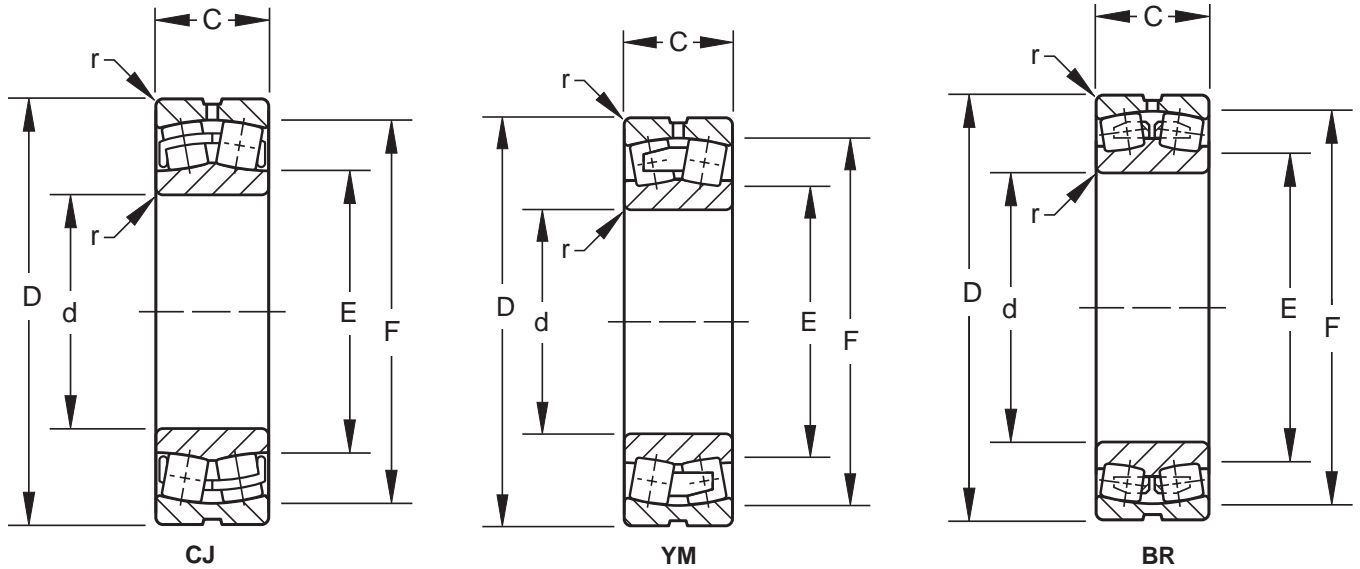
<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
- 2) Bearing load is light C/R ≥ 14.
- 3) Calculated L10 is > 100,000HR.
- 4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static In All Cases X <sub>0</sub> =1	Grease	Oil		
									T R X = 1	T R X = .67					Y
22236CJ	7.0866 180	12.5984 320	3.3858 86	0.12 3	8.37 213	11.33 288	346,400 1,541	231,100 1,028	0.27	2.54	3.78	2.48	1280	1700	65.3 29.7
22336YM	7.0866 180	14.9606 380	4.9606 126	0.12 3	8.75 222	13.13 334	553,600 2,462	395,100 1,757	0.34	1.98	2.94	1.93	900	1200	153.1 69.6
23036BR	7.0866 180	11.0236 280	2.9134 74	0.08 2	8.31 211	10.38 264	290,500 1,292	166,400 740	0.28	2.39	3.56	2.34	650	1300	36.9 16.8
23136YM	7.0866 180	11.8110 300	3.7795 96	0.10 2.5	8.08 205	10.75 273	406,400 1,808	247,200 1,100	0.31	2.20	3.28	2.15	900	1200	60.0 27.3
23236YM	7.0866 180	12.5984 320	4.4094 112	0.12 3	8.22 209	11.34 288	473,200 2,105	297,900 1,325	0.34	2.00	2.97	1.95	830	1100	85.1 38.7
23336YM	7.0866 180	14.9606 380	5.9055 150	0.12 3	8.74 222	13.01 330	690,700 3,072	455,900 2,028	0.41	1.65	2.46	1.62	790	1050	182.3 82.9
23936BR	7.0866 180	9.8425 250	2.0472 52	0.08 2	7.79 198	9.22 234	161,300 717.5	89,100 396	0.19	3.61	5.37	3.53	800	1600	17.0 7.7
24036CJ	7.0866 180	11.0236 280	3.9370 100	0.08 2	7.89 200	10.08 256	390,200 1,736	214,800 955	0.32	2.09	3.11	2.04	830	1100	49.9 22.7
24136CJ	7.0866 180	11.8110 300	4.6457 118	0.10 2.5	7.98 203	10.63 270	441,600 1,964	258,400 1,149	0.37	1.84	2.74	1.80	710	950	73.8 33.5
22238YM	7.4803 190	13.3858 340	3.6220 92	0.12 3	8.81 224	12.03 306	406,600 1,809	270,200 1,202	0.27	2.53	3.77	2.48	1200	1600	79.4 36.1
22338YM	7.4803 190	15.7480 400	5.1969 132	0.16 4	9.29 236	13.77 350	614,400 2,733	427,900 1,903	0.34	1.97	2.94	1.93	900	1200	177.5 80.7
23038BR	7.4803 190	11.4173 290	2.9528 75	0.08 2	8.71 221	10.80 274	286,600 1,275	164,100 730	0.28	2.44	3.63	2.39	600	1200	39.1 17.8
23138YM	7.4803 190	12.5984 320	4.0945 104	0.10 2.5	8.57 218	11.42 290	470,300 2,092	282,000 1,254	0.31	2.15	3.21	2.11	900	1200	74.8 34.0
23238YM	7.4803 190	13.3858 340	4.7244 120	0.12 3	8.71 221	12.02 305	536,400 2,386	335,000 1,490	0.34	1.99	2.96	1.95	750	1000	103.5 47.0
23338YM	7.4803 190	15.7480 400	6.1024 155	0.16 4	9.22 234	13.72 348	750,700 3,339	495,000 2,202	0.40	1.68	2.51	1.65	750	1000	208.4 94.7
23938YM	7.4803 190	10.2362 260	2.0472 52	0.08 2	8.15 207	9.64 245	204,600 910	108,000 480	0.18	3.84	5.72	3.75	1430	1900	17.8 8.1

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is > 100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



Torrington inventory systems are designed to provide fast delivery for frequently ordered sizes and styles. Consult a Torrington district office for up-to-date information about the availability of the bearings you have selected.

Life calculations, shaft and housing fits, internal clearances, tolerances and other technical data for these bearings are found in the Engineering section of this catalog.

These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e., 23120K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius ( <sup>(2)</sup> max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>				Limiting Speed <sup>(3)</sup>		Wt.  lbs kg
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static In All Cases X <sub>0</sub> =1 Y <sub>0</sub>	Grease	Oil		
									e	T ≤ e R X = 1 Y				T > e R X = .67 Y	
												(approx.)			
24038CJ	7.4803 190	11.4173 290	3.9370 100	0.08 2	8.29 211	10.41 264	407,400 1,812	215,200 957	0.31	2.16	3.22	2.12	790	1050	52.1 23.7
24138CJ	7.4803 190	12.5984 320	5.0394 128	0.10 2.5	8.32 211	11.26 286	520,200 2,314	304,500 1,354	0.40	1.68	2.50	1.64	680	900	92.1 41.9
22240YM	7.8740 200	14.1732 360	3.8583 98	0.12 3	9.31 236	12.71 323	455,500 2,026	300,000 1,334	0.27	2.50	3.72	2.44	1130	1500	95.3 43.3
22340YM	7.8740 200	16.5354 420	5.4331 138	0.16 4	9.74 247	14.51 369	663,200 2,950	465,400 2,070	0.33	2.02	3.01	1.98	830	1100	204.3 92.8
23040BR	7.8740 200	12.2047 310	3.2283 82	0.08 2	9.11 231	11.61 295	335,100 1,491	202,400 900	0.28	2.45	3.65	2.40	550	1100	49.9 22.7
23140YM	7.8740 200	13.3858 340	4.4094 112	0.10 2.5	9.04 230	12.12 308	517,900 2,304	312,900 1,392	0.31	2.15	3.20	2.10	830	1100	91.9 41.8
23240YM	7.8740 200	14.1732 360	5.0394 128	0.12 3	9.19 233	12.70 323	611,200 2,719	376,300 1,674	0.35	1.95	2.90	1.91	750	1000	124.5 56.6
23340YM	7.8740 200	16.5354 420	6.4961 165	0.16 4	9.67 246	14.42 366	844,000 3,754	550,400 2,448	0.41	1.66	2.47	1.62	710	950	244.2 111.0
23940YM	7.8740 200	11.0236 280	2.3622 60	0.08 2	8.63 219	10.34 263	256,300 1,140	136,700 608	0.19	3.65	5.43	3.57	1350	1800	25.0 11.4
24040CJ	7.8740 200	12.2047 310	4.2913 109	0.08 2	8.79 223	11.16 283	473,400 2,106	253,300 1,127	0.32	2.09	3.11	2.04	710	950	66.4 30.2
24140BR	7.8740 200	13.3858 340	5.5118 140	0.10 2.5	8.99 228	12.14 308	599,600 2,667	349,100 1,553	0.42	1.60	2.38	1.56	325	650	114.9 52.2
22244YM	8.6614 220	15.7480 400	4.2520 108	0.12 3	10.26 261	14.12 359	524,000 2,331	349,300 1,554	0.27	2.51	3.73	2.45	1050	1400	130.8 59.5
22344YM	8.6614 220	18.1102 460	5.7087 145	0.16 4	10.74 273	15.88 403	783,600 3,485	540,100 2,402	0.32	2.08	3.10	2.04	750	1000	256.8 116.7
23044YM	8.6614 220	13.3858 340	3.5433 90	0.10 2.5	9.73 247	12.33 313	446,800 1,987	254,000 1,130	0.24	2.77	4.13	2.71	900	1200	65.6 29.8
23144YM	8.6614 220	14.5669 370	4.7244 120	0.12 3	9.92 251.97	13.22 335.79	620,600 2,760	365,600 1,626	0.31	2.17	3.24	2.12	750	1000	115.2 52.4
23244YM	8.6614 220	15.7480 400	5.6693 144	0.12 3	10.12 257	14.11 358	759,500 3,378	466,800 2,076	0.35	1.95	2.90	1.90	680	900	174.4 79.3
23344YM	8.6614 220	18.1102 460	7.0866 180	0.16 4	10.61 269	15.81 402	1,012,000 4,501	651,800 2,899	0.40	1.67	2.48	1.63	680	900	318.8 144.9
23944BR	8.6614 220	11.8110 300	2.3622 60	0.08 2	9.48 241	11.17 284	243,000 1,081	128,100 570	0.18	3.79	5.64	3.70	650	1300	27.1 12.3
24044YM	8.6614 220	13.3858 340	4.6457 118	0.10 2.5	9.64 245	12.32 313	616,200 2,741	325,500 1,448	0.32	2.14	3.18	2.09	680	900	86.0 39.1
24144BR	8.6614 220	14.5669 370	5.9055 150	0.12 3	9.83 250	13.20 335	692,200 3,079	396,800 1,765	0.41	1.63	2.43	1.60	295	590	144.1 65.5
22248YM	9.4488 240	17.3228 440	4.7244 120	0.12 3	11.19 284	15.54 395	668,200 2,972	440,600 1,960	0.27	2.46	3.67	2.41	900	1200	177.1 80.5
22348YM	9.4488 240	19.6850 500	6.1024 155	0.16 4	11.68 297	17.29 439	897,000 3,990	615,800 2,739	0.32	2.10	3.13	2.05	680	900	323.6 147.1

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

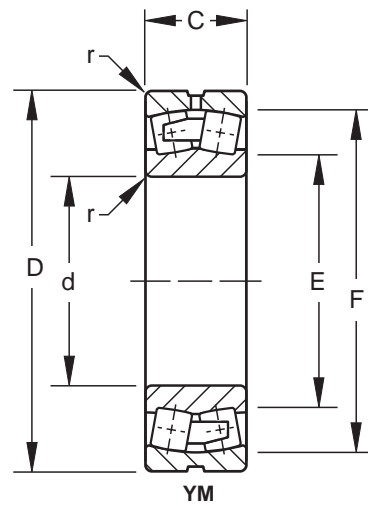
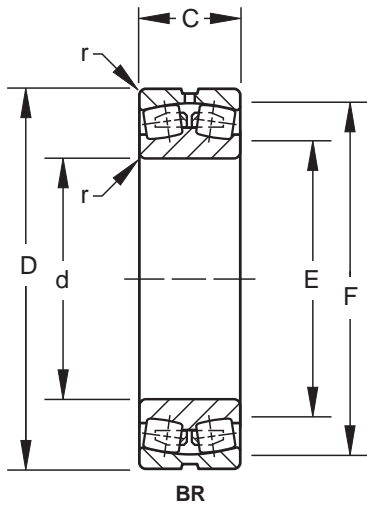
1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is > 100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static In All Cases X <sub>0</sub> =1	Grease	Oil		
									T/R ≤ e X = 1	T/R > e X = .67					e
					(approx.)		rpm	rpm							
23048YM	9.4488 240	14.1732 360	3.6220 92	0.10 2.5	10.53 267	13.13 334	483,900 2,152	266,000 1,183	0.23	2.91	4.34	2.85	900	1200	71.9 32.7
23148YM	9.4488 240	15.7480 400	5.0394 128	0.12 3	10.85 275	14.33 363	719,400 3,200	414,700 1,845	0.30	2.28	3.40	2.23	710	950	142.2 64.7
23248YM	9.4488 240	17.3228 440	6.2992 160	0.12 3	11.07 281	15.50 394	942,100 4,190	570,800 2,539	0.35	1.92	2.86	1.88	600	800	236.1 107.3
23348YM	9.4488 240	19.6850 500	7.6772 195	0.16 4	11.55 293	17.21 437	1,195,000 5,315	760,700 3,384	0.40	1.67	2.49	1.64	600	800	407.1 185.1
23948YM	9.4488 240	12.5984 320	2.3622 60	0.08 2	10.24 260	11.92 303	306,100 1,362	149,700 666	0.16	4.19	6.24	4.09	1130	1500	29.2 13.3
24048YM	9.4488 240	14.1732 360	4.6457 118	0.10 2.5	10.44 265	13.12 333	657,200 2,923	338,000 1,503	0.29	2.31	3.44	2.26	640	850	92.2 41.9
24148BR	9.4488 240	15.7480 400	6.2992 160	0.12 3	10.73 273	14.32 364	818,000 3,638	459,100 2,042	0.41	1.67	2.48	1.63	270	540	177.8 80.8
22252YM	10.2362 260	18.8976 480	5.1181 130	0.16 4	12.16 309	16.93 430	792,700 3,526	517,500 2,302	0.27	2.46	3.66	2.41	830	1100	229.7 104.4
22352YM	10.2362 260	21.2598 540	6.4961 165	0.20 5	12.64 321	18.70 475	1,031,000 4,586	702,600 3,125	0.32	2.13	3.17	2.08	680	900	401.1 182.3
23052YM	10.2362 260	15.7480 400	4.0945 104	0.12 3	11.48 292	14.53 369	621,600 2,765	345,200 1,535	0.24	2.85	4.24	2.78	830	1100	104.3 47.4
23152YM	10.2362 260	17.3228 440	5.6693 144	0.12 3	11.89 302	15.72 399	891,300 3,965	503,900 2,241	0.30	2.23	3.31	2.18	640	850	196.9 89.5
23252YM	10.2362 260	18.8976 480	6.8504 174	0.16 4	12.14 308	16.93 430	1,098,000 4,884	657,800 2,926	0.34	1.98	2.95	1.94	560	750	307.4 139.7
23352YM	10.2362 260	21.2598 540	8.1102 206	0.20 5	12.5 318	18.61 473	1,358,000 6,040	860,600 3,828	0.39	1.71	2.54	1.67	560	750	500.7 227.6
23952YM	10.2362 260	14.1732 360	2.9528 75	0.08 2	11.18 284	13.32 338	421,900 1,877	213,900 951	0.18	3.74	5.56	3.65	1050	1400	50.5 22.9
24052BR	10.2362 260	15.7480 400	5.5118 140	0.12 3	11.52 293	14.49 368	750,900 3,340	385,200 1,713	0.34	2.01	2.99	1.96	300	600	140.4 63.8

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is >100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.

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Torrington inventory systems are designed to provide fast delivery for frequently ordered sizes and styles. Consult a Torrington district office for up-to-date information about the availability of the bearings you have selected.

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These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e., 23120K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static  In All Cases X <sub>0</sub> =1	Grease	Oil		
									T ≤ e R X = 1	T > e R X = .67					Y
					e	Y	Y	Y <sub>0</sub>	(approx.)		rpm	rpm	lbs kg		
24152YM	10.2362 260	17.3228 440	7.0866 180	0.12 3	11.62 295	15.65 398	1,141,000 5,075	614,200 2,732	0.39	1.75	2.60	1.71	480	640	246.1 111.8
22256YMB	11.0236 280	19.6850 500	5.1181 130	0.16 4	12.99 330	17.70 450	836,200 3,719	530,000 2,357	0.26	2.58	3.85	2.53	830	1100	242.0 110.0
22356YMB	11.0236 280	22.8346 580	6.8898 175	0.20 5	13.58 345	20.11 511	1,195,000 5,315	806,000 3,585	0.32	2.13	3.17	2.08	600	800	489.9 222.7
23056YMB	11.0236 280	16.5354 420	4.1732 106	0.12 3	12.27 312	15.32 389	636,300 2,830	346,000 1,539	0.23	2.92	4.35	2.86	750	1000	112.7 51.2
23156YMB	11.0236 280	18.1102 460	5.7480 146	0.16 4	12.59 319	16.47 418	944,600 4,202	524,400 2,333	0.30	2.26	3.36	2.21	600	800	211.0 95.9
23256YMB	11.0236 280	19.6850 500	6.9291 176	0.16 4	12.97 329	17.73 450	1,190,000 5,293	689,100 3,065	0.33	2.07	3.08	2.02	530	700	327.7 149.0
23356YMB	11.0236 280	22.8346 580	8.8189 224	0.20 5	13.43 341	20.01 508	1,596,000 7,099	996,700 4,433	0.40	1.69	2.52	1.65	530	700	627.1 285.0
23956YMB	11.0236 280	14.9606 380	2.9528 75	0.08 2	11.98 304	14.11 358	461,200 2,051	224,800 1,000	0.18	3.80	5.66	3.72	980	1300	53.7 24.4
24056YMB	11.0236 280	16.5354 420	5.5118 140	0.12 3	12.2 310	15.28 388	927,400 4,125	456,400 2,030	0.30	2.25	3.35	2.20	530	700	148.9 67.7
24156YMB	11.0236 280	18.1102 460	7.0866 180	0.16 4	12.55 319	16.48 419	1,146,000 5,097	601,200 2,674	0.36	1.86	2.77	1.82	450	600	260.2 118.3
22260YMB	11.8110 300	21.2598 540	5.5118 140	0.16 4	13.98 355	19.07 484	972,300 4,325	609,300 2,710	0.26	2.57	3.83	2.52	750	1000	306.3 139.2
23060YMB	11.8110 300	18.1102 460	4.6457 118	0.12 3	13.22 336	16.74 425	808,900 3,598	441,800 1,965	0.24	2.87	4.27	2.80	680	900	155.7 70.8
23160YMB	11.8110 300	19.6850 500	6.2992 160	0.16 4	13.58 345	17.81 452	1,160,000 5,160	632,400 2,813	0.30	2.25	3.35	2.20	560	750	277.8 126.3
23260YMB	11.8110 300	21.2598 540	7.5591 192	0.16 4	13.91 353	18.95 481	1,397,000 6,214	788,300 3,506	0.34	2.00	2.98	1.96	490	650	420.0 190.9
23960BR	11.8110 300	16.5354 420	3.5433 90	0.10 2.5	12.94 329	15.53 394	508,100 2,260	265,400 1,180	0.19	3.47	5.16	3.39	500	1000	84.4 38.4
24060BR	11.8110 300	18.1102 460	6.2992 160	0.12 3	13.25 337	16.68 424	1,038,000 4,617	518,100 2,305	0.33	2.02	3.01	1.98	260	520	211.1 96.0
24160BR	11.8110 300	19.6850 500	7.8740 200	0.16 4	13.62 346	17.88 454	1,335,000 5,938	693,200 3,083	0.40	1.68	2.50	1.64	215	430	347.2 157.8
22264YMB	12.5984 320	22.8346 580	5.9055 150	0.16 4	14.99 381	20.42 519	1,133,000 5,040	700,000 3,114	0.26	2.58	3.84	2.52	710	950	380.9 173.1
23064YMB	12.5984 320	18.8976 480	4.7638 121	0.12 3	14.06 357	17.48 444	879,800 3,913	457,600 2,035	0.23	2.93	4.36	2.86	640	850	168.1 76.4
23164YMB	12.5984 320	21.2598 540	6.9291 176	0.16 4	14.44 367	19.27 489	1,348,000 5,996	749,100 3,332	0.31	2.14	3.19	2.10	530	700	361.3 164.2
23264YMB	12.5984 320	22.8346 580	8.1890 208	0.16 4	14.94 379	20.29 515	1,605,000 7,139	891,100 3,964	0.34	1.98	2.94	1.93	450	600	528.1 240.0
23964BR	12.5984 320	17.3228 440	3.5433 90	0.10 2.5	13.80 351	16.30 414	547,500 2,435	271,200 1,206	0.18	3.69	5.49	3.60	450	900	89.1 40.5

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

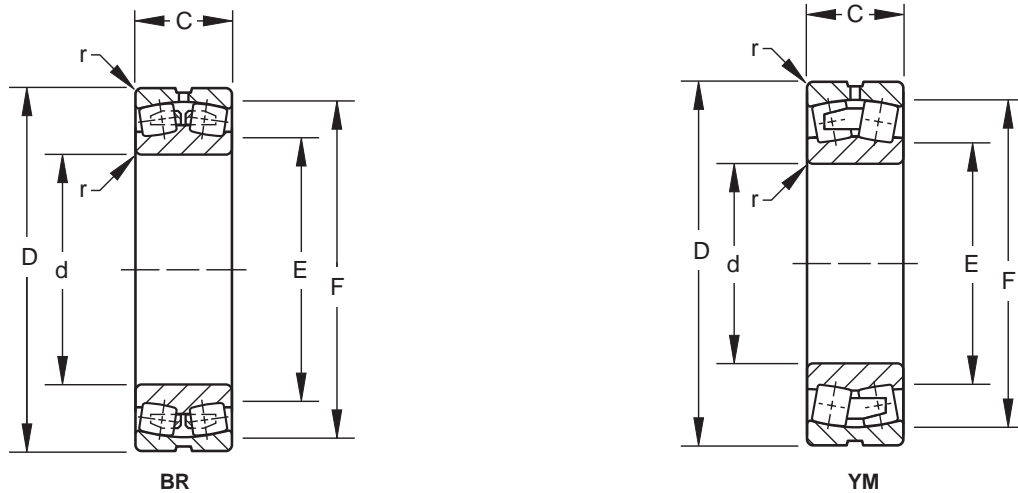
1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is > 100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>				Limiting Speed <sup>(3)</sup>		Wt.  lbs kg
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									$\frac{T}{R} \leq e$ X = 1	$\frac{T}{R} > e$ X = .67				In All Cases X <sub>0</sub> =1	
					e	Y	Y	Y <sub>0</sub>	(approx.)						
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	lbs kg
24064YMB	12.5984 320	18.8976 480	6.2992 160	0.12 3	13.93 354	17.47 444	1,219,000 5,422	588,400 2,617	0.30	2.24	3.34	2.19	470	620	222.2 101.0
24164BR	12.5984 320	21.2598 540	8.5827 218	0.16 4	14.44 367	19.22 488	1,457,000 6,481	779,900 3,469	0.41	1.64	2.45	1.61	200	400	447.6 203.4
23068YMB	13.3858 340	20.4724 520	5.2362 133	0.16 4	15.11 384	18.91 480	1,049,000 4,666	546,100 2,429	0.23	2.96	4.40	2.89	600	800	223.4 101.5
23168YMB	13.3858 340	22.8346 580	7.4803 190	0.16 4.0	15.64 397	20.70 526	1,552,000 6,903	842,600 3,748	0.30	2.22	3.30	2.17	490	650	455.2 206.9
23268YMB	13.3858 340	24.4094 620	8.8189 224	0.20 5	15.71 399	21.79 553	1,864,000 8,291	1,056,000 4,697	0.35	1.91	2.84	1.86	430	570	653.3 297.0
23968YMB	13.3858 340	18.1102 460	3.5433 90	0.10 2.5	14.54 369	17.09 434	687,400 3,058	322,600 1,435	0.18	3.83	5.70	3.75	790	1050	93.7 42.6
24068BR	13.3858 340	20.4724 520	7.0866 180	0.16 4	15.03 382	18.92 481	1,349,000 6,000	659,600 2,934	0.33	2.04	3.03	1.99	230	460	302.3 137.4
24168YMB	13.3858 340	22.8346 580	9.5669 243	0.16 4	15.13 384	20.67 525	1,990,000 8,852	1,052,000 4,679	0.39	1.71	2.55	1.67	370	490	582.2 264.6
23072YMB	14.1732 360	21.2598 540	5.2756 134	0.16 4	15.85 403	19.65 499	1,044,000 4,644	537,600 2,391	0.23	2.94	4.38	2.88	560	750	235.6 107.1
23172YMB	14.1732 360	23.6220 600	7.5591 192	0.16 4	16.49 419	21.50 546	1,654,000 7,357	872,300 3,880	0.29	2.29	3.42	2.24	470	620	480.0 218.2
23272YMB	14.1732 360	25.5906 650	9.1339 232	0.20 5	16.55 420	22.93 582	2,000,000 8,896	1,133,000 5,040	0.35	1.95	2.91	1.91	410	540	737.4 335.2
23972BR	14.1732 360	18.8976 480	3.5433 90	0.10 2.5	15.36 390	17.88 454	610,900 2,717	288,900 1,285	0.16	4.10	6.11	4.01	425	850	98.4 44.8
24072BR	14.1732 360	21.2598 540	7.0866 180	0.16 4	15.72 399	19.70 500	1,377,000 6,125	673,300 2,995	0.32	2.13	3.18	2.09	220	440	316.4 143.8
24172BR	14.1732 360	23.6220 600	9.5669 243	0.16 4	16.32 415	21.45 545	1,988,000 8,843	998,900 4,443	0.41	1.66	2.47	1.62	180	360	607.5 276.1
23076YMB	14.9606 380	22.0472 560	5.3150 135	0.16 4	16.62 422	20.47 520	1,157,000 5,146	581,200 2,585	0.22	3.08	4.58	3.01	560	750	247.9 112.7
23176YMB	14.9606 380	24.4094 620	7.6378 194	0.16 4	16.97 431	22.28 566	1,724,000 7,668	922,200 4,102	0.30	2.28	3.39	2.23	450	600	505.2 229.6
23276YMB	14.9606 380	26.7717 680	9.4488 240	0.20 5	17.39 442	24.06 611	2,166,000 9,634	1,221,000 5,431	0.34	1.98	2.95	1.94	380	510	828.1 376.4
23976BR	14.9606 380	20.4724 520	4.1732 106	0.12 3	16.3 414	19.27 489	787,900 3,505	379,400 1,688	0.18	3.71	5.52	3.62	375	750	144.9 65.9

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
- 2) Bearing load is light C/R ≥ 14.
- 3) Calculated L10 is >100,000HR.
- 4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.

**Continued on the next page.**



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These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e., 23120K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>				Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static  In All Cases X <sub>0</sub> =1 Y <sub>0</sub>	Grease	Oil			
									$\frac{T}{R} \leq e$ X = 1 Y	$\frac{T}{R} > e$ X = .67 Y						
					e											
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN						rpm	rpm	lbs kg
24076YMB	14.9606 380	22.0472 560	7.0866 180	0.16 4	16.44 418	20.48 520	1,607,000 7,148	755,200 3,359	0.29	2.32	3.45	2.27	400	530	330.5 150.2	
24176YMB	14.9606 380	24.4094 620	9.5669 243	0.16 4	16.72 425	22.31 567	2,238,000 9,955	1,141,000 5,075	0.37	1.84	2.74	1.80	340	450	632.8 287.6	
22380YMB	15.7480 400	32.2835 820	9.5669 243	0.24 6	19.55 497	28.69 729	2,293,000 10,199	1,477,000 6,570	0.30	2.28	3.40	2.23	450	600	1351.1 614.1	
23080YMB	15.7480 400	23.6220 600	5.8268 148	0.16 4	17.58 447	21.86 555	1,353,000 6,018	685,000 3,047	0.23	2.98	4.44	2.92	530	700	321.2 146.0	
23180YMB	15.7480 400	25.5906 650	7.8740 200	0.20 5	17.88 454	23.36 593	1,845,000 8,207	978,500 4,352	0.29	2.32	3.46	2.27	430	570	569.7 258.9	
23280YMB	15.7480 400	28.3465 720	10.0787 256	0.20 5	18.36 466	25.43 646	2,462,000 10,951	1,374,000 6,112	0.34	1.96	2.93	1.92	370	490	995.6 452.5	
23980YMB	15.7480 400	21.2598 540	4.1732 106	0.12 3	17.16 436	20.09 510	910,100 4,048	415,000 1,846	0.17	3.99	5.94	3.90	680	900	151.4 68.8	
24080BR	15.7480 400	23.6220 600	7.8740 200	0.16 4	17.52 445	21.78 553	1,696,000 7,544	800,300 3,560	0.32	2.14	3.19	2.09	200	400	434.0 197.3	
24180YMB	15.7480 400	25.5906 650	9.8425 250	0.20 5	17.67 449	23.36 593	2,354,000 10,471	1,186,000 5,275	0.35	1.91	2.84	1.87	320	430	712.1 323.7	
23084YMB	16.5354 420	24.4094 620	5.9055 150	0.16 4	18.38 467	22.65 575	1,446,000 6,432	713,000 3,171	0.22	3.05	4.54	2.98	490	650	338.6 153.9	
23184YMB	16.5354 420	27.5591 700	8.8189 224	0.20 5.0	18.89 479.81	25.04 636.02	2,194,000 9,759	1,171,000 5,209	0.31	2.21	3.28	2.16	400	530	762.24 346.47	
23284YMB	16.5354 420	29.9213 760	10.7087 272	0.24 6	19.29 490	26.8 681	2,690,000 11,965	1,499,000 6,668	0.35	1.90	2.83	1.86	350	460	1184.12 538.24	
23984YMB	16.5354 420	22.0472 560	4.1732 106	0.12 3	17.89 454	20.88 530	960,600 4,273	434,300 1,932	0.16	4.14	6.17	4.05	640	850	157.81 71.73	
24084YMB	16.5354 420	24.4094 620	7.874 200	0.16 4	18.25 464	22.68 576	1,782,000 7,926	844,400 3,756	0.30	2.23	3.31	2.18	180	380	451.4 205.18	
24184YMB	16.5354 420	27.5591 700	11.0236 280	0.2 5	18.64 473	25.04 636	2,808,000 12,490,000	1,423,000 6,330,000	0.37	1.81	2.70	1.77	300	400	952.79 433.09	
23088YMB	17.3228 440	25.5906 650	6.1811 157	0.20 5.0	19.26 489	23.74 603	1,585,000 7,050,000	776,800 3,455,000	0.22	3.04	4.53	2.97	490	650	389.95 177.25	
23188YMB	17.3228 440	28.3465 720	8.8976 226	0.20 5.0	19.68 499.87	25.85 656.59	2,342,000 10,417,000	1,224,000 5,444,000	0.30	2.26	3.37	2.21	380	510	796.51 362.05	
23288YMB	17.3228 440	31.1024 790	11.0236 280	0.24 6	20.15 512	27.93 709	3,010,000 13,388,000	1,652,000 7,348,000	0.35	1.95	2.91	1.91	330	440	1307.97 594.53	
23988BR	17.3228 440	23.622 600	4.6457 118	0.12 3	18.98 482	20.88 567	1,057,000 4,702,000	477,300 2,123,000	0.18	3.85	5.74	3.77	325	650	213.06 96.85	
24088BR	17.3228 440	25.5906 650	8.3465 212	0.2 5	19.23 488	23.69 602	1,996,000 8,878,000	911,400 4,054,000	0.31	2.21	3.29	2.16	180	360	526.56 239.35	
24188YMB	17.3228 440	28.3465 720	11.0236 280	0.20 5	19.49 495	25.81 656	2,934,000 13,050	1,451,000 6,454	0.36	1.88	2.79	1.84	290	380	986.8 448.6	

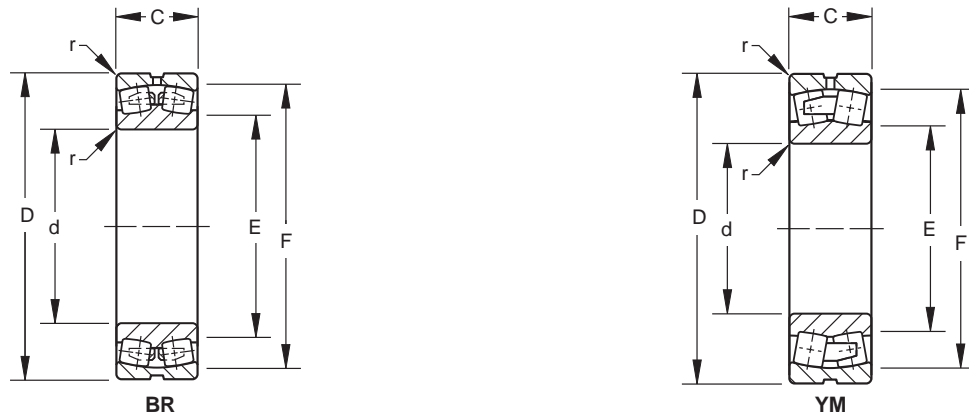
<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
  - 2) Bearing load is light C/R ≥ 14.
  - 3) Calculated L10 is > 100,000HR.
  - 4) Lubrication is proper and oil, if used, is at the recommended sump level.
- For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.





## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									$\frac{T}{R} \leq e$ X = 1	$\frac{T}{R} > e$ X = .67					In All Cases X <sub>0</sub> =1
					e	Y	Y	Y <sub>0</sub>	(approx.)						
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN				rpm	rpm	lbs kg	
23092YMB	18.1102 460	26.7717 680	6.4173 163	0.20 5	20.14 512	24.83 631	1,722,000 7,659	840,000 3,736	0.22	3.06	4.56	2.99	460	610	443.6 201.6
23192YMB	18.1102 460	29.9213 760	9.4488 240	0.24 6	20.64 524	27.23 692	2,529,000 11,249	1,330,000 5,916	0.30	2.24	3.33	2.19	370	490	953.1 433.2
23292YMB	18.1102 460	32.6772 830	11.6535 296	0.24 6	21.07 535	29.36 746	3,187,000 14,176	1,770,000 7,873	0.34	1.96	2.93	1.92	320	420	1533.0 696.8
23992BR	18.1102 460	24.4094 620	4.6457 118	0.12 3	19.86 504	22.9 582	1,057,000 4,702	460,400 2,048	0.16	4.13	6.15	4.04	320	640	221.3 100.6
24092YMB	18.1102 460	26.7717 680	8.5827 218	0.20 5	19.98 507	24.82 630	2,349,000 10,448	1,068,000 4,750	0.28	2.37	3.53	2.32	330	440	593.3 269.7
24192YMB	18.1102 460	29.9213 760	11.8110 300	0.24 6	20.36 517	27.24 692	3,363,000 14,959	1,668,000 7,419	0.37	1.82	2.71	1.78	280	370	1191.4 541.6
23096YMB	18.8976 480	27.5591 700	6.4961 165	0.20 5	20.96 532	25.61 650	1,814,000 8,069	863,000 3,839	0.22	3.14	4.67	3.07	440	590	464.8 211.3
23196YMB	18.8976 480	31.1024 790	9.7638 248	0.24 6	21.54 547	28.31 719	2,827,000 12,574	1,456,000 6,476	0.30	2.26	3.36	2.21	350	470	1059.5 481.6
23296YMB	18.8976 480	34.2520 870	12.2047 310	0.24 6	22.08 561	30.66 779	3,736,000 16,618	2,010,000 8,940	0.35	1.92	2.85	1.87	300	400	1771.0 805.0
23996BR	18.8976 480	25.5906 650	5.0394 128	0.16 4	20.56 522	24.16 614	1,220,000 5,427	559,300 2,488	0.17	3.86	5.75	3.78	305	610	266.8 121.3
24096YMB	18.8976 480	27.5591 700	8.5827 218	0.20 5	20.73 527	25.67 652	2,472,000 10,995	1,118,000 4,973	0.28	2.45	3.64	2.39	320	420	614.1 279.1
24196YMB	18.8976 480	31.1024 790	12.1260 308	0.24 6	21.34 542	28.24 717	3,657,000 16,266	1,763,000 7,842	0.37	1.85	2.75	1.80	260	350	1315.8 598.1
230/500YMB	19.6850 500	28.3465 720	6.5748 167	0.20 5	21.68 551	26.48 673	1,857,000 8,260	888,600 3,952	0.21	3.26	4.85	3.18	430	570	486.4 221.1
231/500YMB	19.6850 500	32.6772 830	10.3937 264	0.24 6	22.54 573	29.64 753	3,170,000 14,100	1,613,000 7,175	0.30	2.22	3.30	2.17	340	450	1257.3 571.5
232/500YMB	19.6850 500	36.2205 920	13.2283 336	0.24 6	23.04 585	32.41 823	4,069,000 18,099	2,228,000 9,910	0.36	1.90	2.83	1.86	290	380	2174.4 988.4
239/500BR	19.6850 500	26.3780 670	5.0394 128	0.16 4	21.43 544	24.96 634	1,287,000 5,725	570,900 2,539	0.17	4.02	5.98	3.93	295	590	276.3 125.6
240/500YMB	19.6850 500	28.3465 720	8.5827 218	0.20 5	21.52 547	26.47 672	2,539,000 11,293	1,132,000 5,035	0.27	2.51	3.74	2.45	310	410	634.9 288.6
241/500YMB	19.6850 500	32.6772 830	12.7953 325	0.24 6	22.16 563	29.72 755	3,989,000 17,743	1,960,000 8,718	0.37	1.81	2.69	1.77	260	340	1547.8 703.6
230/530YMB	20.8661 530	30.7087 780	7.2835 185	0.20 5	23.16 588	28.54 725	2,212,000 9,839	1,065,000 4,737	0.21	3.14	4.68	3.07	400	530	657.4 298.8

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

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<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

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## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors (1)				Limiting Speed(3)		Wt.
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									e	$\frac{T}{R} \leq e$ X = 1				$\frac{T}{R} > e$ X = .67	
					Y	Y	Y <sub>0</sub>	(approx.)							
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	lbs kg
231/530YMB	20.8661 530	34.2520 870	10.7087 272	0.24 6	23.75 603	31.20 792	3,440,000 15,301	1,746,000 7,766	0.30	2.27	3.38	2.22	320	430	1404.9 638.6
232/530YMB	20.8661 530	38.5827 980	13.9764 355	0.28 7	24.45 621	34.53 877	4,614,000 20,523	2,520,000 11,209	0.35	1.91	2.85	1.87	270	360	2617.5 1189.8
239/530BR	20.8661 530	27.9528 710	5.3543 136	0.16 4	22.60 574	26.33 669	1,468,000 6,530	644,000 2,865	0.17	4.00	5.96	3.92	280	560	329.4 149.7
240/530YMB	20.8661 530	30.7087 780	9.8425 250	0.20 5	22.96 583	28.52 724	3,114,000 13,851	1,387,000 6,169	0.28	2.37	3.53	2.32	290	380	888.4 403.8
241/530YMB	20.8661 530	34.2520 870	13.1890 335	0.24 6	23.49 597	31.15 791	4,443,000 19,762	2,120,000 9,430	0.37	1.84	2.74	1.80	240	320	1730.3 786.5
230/560YMB	22.0472 560	32.2835 820	7.6772 195	0.20 5	24.39 620	30.07 764	2,461,000 10,947	1,176,000 5,231	0.22	3.14	4.67	3.07	380	500	759.2 345.1
231/560YMB	22.0472 560	36.2205 920	11.0236 280	0.24 6	25.14 639	32.99 838	3,731,000 16,595	1,891,000 8,411	0.29	2.33	3.47	2.28	300	400	1618.8 735.8
232/560YMB	22.0472 560	40.5512 1030	14.3701 365	0.28 7	26.04 661	36.12 917	5,089,000 22,636	2,685,000 11,943	0.34	1.96	2.91	1.91	260	340	2959.7 1345.3
239/560YMB	22.0472 560	29.5276 750	5.5118 140	0.16 4	23.89 607	27.94 710	1,656,000 7,366	728,700 3,241	0.16	4.21	6.27	4.12	480	640	378.1 171.9
240/560BR	22.0472 560	32.2835 820	10.1575 258	0.20 5	24.40 620	29.91 760	3,078,000 13,691	1,355,000 6,027	0.29	2.30	3.43	2.25	145	290	1004.5 456.6
241/560YMB	22.0472 560	36.2205 920	13.9764 355	0.24 6	24.78 629	33.01 838	4,960,000 22,062	2,374,000 10,560	0.36	1.87	2.78	1.83	230	300	2052.4 932.9
230/600YMB	23.6220 600	34.2520 870	7.8740 200	0.20 5	26.14 664	31.92 811	2,663,000 11,845	1,243,000 5,529	0.21	3.27	4.87	3.20	350	470	861.3 391.5
231/600YMB	23.6220 600	38.5827 980	11.8110 300	0.24 6	26.83 681	35.22 895	4,290,000 19,082	2,149,000 9,559	0.29	2.32	3.46	2.27	290	380	1954.5 888.4
232/600YMB	23.6220 600	42.9134 1090	15.2756 388	0.28 7	28.50 724	38.57 980	5,845,000 25,999	2,935,000 13,055	0.33	2.03	3.02	1.98	240	320	3486.4 1584.7
239/600BR	23.6220 600	31.4961 800	5.9055 150	0.16 4	25.75 654	29.71 755	1,802,000 8,015	757,000 3,367	0.15	4.37	6.51	4.27	250	500	455.7 207.1
240/600YMB	23.6220 600	34.2520 870	10.7087 272	0.20 5	25.90 658	31.90 810	3,821,000 16,996	1,646,000 7,321	0.28	2.44	3.64	2.39	260	340	1171.4 532.5
241/600YMB	23.6220 600	38.5827 980	14.7638 375	0.24 6	26.59 675	35.14 893	5,518,000 24,544	2,591,000 11,525	0.36	1.89	2.81	1.85	210	280	2443.1 1110.5
230/630YMB	24.8031 630	36.2205 920	8.3465 212	0.24 6	27.43 697	33.75 857	3,048,000 13,558	1,431,000 6,365	0.21	3.18	4.74	3.11	340	450	1034.0 470.0
231/630YMB	24.8031 630	40.5512 1030	12.4016 315	0.24 6	28.17 716	37.01 940	4,823,000 21,453	2,390,000 10,631	0.29	2.30	3.42	2.25	270	360	2269.6 1031.6
232/630YMB	24.8031 630	45.2756 1150	16.2205 412	0.35 9	29.13 740	40.44 1027	6,493,000 28,881	3,356,000 14,927	0.35	1.94	2.89	1.90	230	310	4138.0 1880.9
239/630BR	24.8031 630	33.4646 850	6.4961 165	0.20 5	27.05 687	31.68 805	2,149,000 9,559	931,000 4,141	0.17	3.93	5.85	3.84	235	470	583.0 265.0

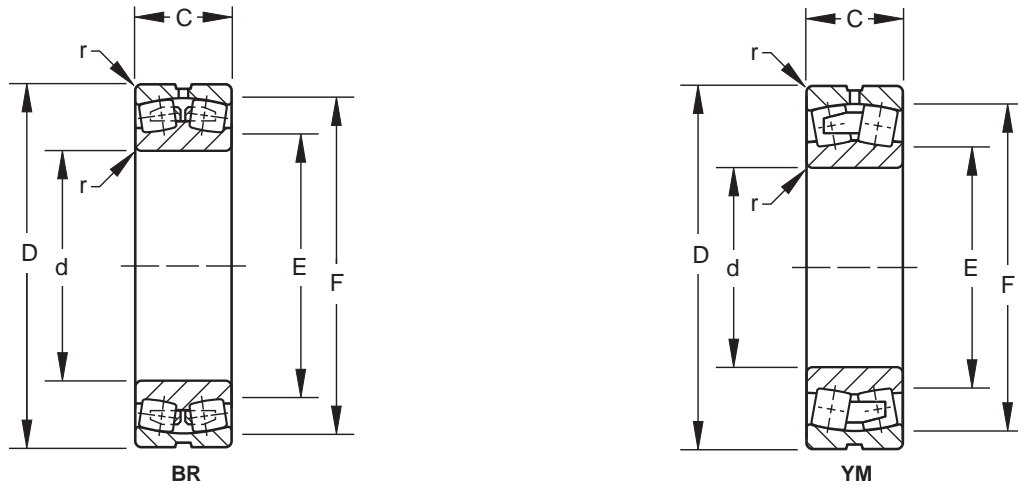
(1) These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

(2) Maximum shaft or housing fillet radius which bearing corners will clear.

(3) The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
- 2) Bearing load is light C/R ≥ 14.
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For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial Load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static  In All Cases X <sub>0</sub> =1	Grease	Oil		
									T/R ≤ e X = 1	T/R > e X = .67					e
					in. mm	in. mm	lbs kN	lbs kN				(approx.)	rpm		
240/630BR	24.8031 630	36.2205 920	11.4173 290	0.24 6	27.33 694	33.71 856	4,012,000 17,845	1,751,000 7,788	0.29	2.30	3.42	2.24	130	260	1414.5 642.9
241/630YMB	24.8031 630	40.5512 1030	15.7480 400	0.24 6	27.84 707	36.95 939	6,267,000 27,876	2,917,000 12,975	0.37	1.84	2.74	1.80	200	270	2882.0 1310.0
230/670YMB	26.3780 670	38.5827 980	9.0551 230	0.24 6	29.28 744	35.83 910	3,587,000 15,955	1,625,000 7,228	0.22	3.12	4.65	3.05	320	420	1276.6 580.2
231/670YMB	26.3780 670	42.9134 1090	13.2283 336	0.24 6	29.94 760	39.17 995	5,337,000 23,739	2,610,000 11,609	0.29	2.31	3.44	2.26	260	340	2695.1 1225.0
232/670YMB	26.3780 670	48.0315 1220	17.2441 438	0.35 9	30.93 786	42.94 1091	7,347,000 32,679	3,761,000 16,729	0.35	1.94	2.89	1.90	220	290	4940.4 2245.6
239/670BR	26.3780 670	35.4331 900	6.6929 170	0.20 5	28.76 731	33.41 849	2,318,000 10,310	976,000 4,341	0.17	4.06	6.04	3.97	220	440	666.1 302.8
240/670YMB	26.3780 670	38.5827 980	12.1260 308	0.24 6	29.04 738	35.81 910	4,958,000 22,053	2,087,000 9,283	0.28	2.39	3.55	2.33	230	300	1709.5 777.0
241/670YMB	26.3780 670	42.9134 1090	16.2205 412	0.24 6	29.58 751	39.18 995	6,830,000 30,380	3,175,000 14,122	0.36	1.90	2.82	1.85	190	250	3304.6 1502.1
230/710YMB	27.9528 710	40.5512 1030	9.2913 236	0.24 6	30.91 785	37.79 960	3,795,000 16,880	1,726,000 7,677	0.21	3.26	4.86	3.19	300	400	1425.9 648.1
231/710YMB	27.9528 710	45.2756 1150	13.5827 345	0.28 7	31.85 809	41.24 1047	5,880,000 26,154	2,802,000 12,463	0.28	2.38	3.54	2.32	240	320	3063.7 1392.6
232/710YMB	27.9528 710	50.3937 1280	17.7165 450	0.35 9	32.59 828	45.22 1149	8,029,000 35,713	4,095,000 18,215	0.34	1.97	2.93	1.93	200	270	5538.7 2517.6
239/710BR	27.9528 710	37.4016 950	7.0866 180	0.20 5	30.36 771	35.40 899	2,699,000 12,005	1,132,000 5,035	0.17	4.05	6.03	3.96	210	420	778.1 353.7
240/710YMB	27.9528 710	40.5512 1030	12.4016 315	0.24 6	30.67 779	37.77 959	5,258,000 23,388	2,221,000 9,879	0.27	2.49	3.71	2.44	220	290	1903.2 865.1
241/710YMB	27.9528 710	45.2756 1150	17.2441 438	0.28 7	31.31 795	41.33 1050	7,722,000 34,347	3,520,000 15,657	0.36	1.87	2.78	1.83	180	240	3889.6 1768.0
230/750YMB	29.5276 750	42.9134 1090	9.8425 250	0.24 6	32.68 830	39.96 1015	4,266,000 18,975	1,923,000 8,554	0.21	3.26	4.85	3.18	290	380	1697.1 771.4
231/750YMB	29.5276 750	48.0315 1220	14.3701 365	0.28 7	33.48 850	43.93 1116	6,552,000 29,143	3,192,000 14,198	0.28	2.38	3.55	2.33	230	300	3667.1 1666.9
232/750YMB	29.5276 750	53.5433 1360	18.7008 475	0.43 11	34.57 878	47.95 1218	9,007,000 40,063	4,557,000 20,270	0.34	1.98	2.95	1.94	200	260	6633.9 3015.4
239/750BR	29.5276 750	39.3701 1000	7.2835 185	0.20 5	32.00 813	37.29 947	2,897,000 12,886	1,212,000 5,391	0.16	4.15	6.19	4.06	200	400	878.2 399.2

<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is >100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.

**Continued on the next page.**



# SPHERICAL ROLLER BEARINGS

Torrington inventory systems are designed to provide fast delivery for frequently ordered sizes and styles. Consult a Torrington district office for up-to-date information about the availability of the bearings you have selected.

Life calculations, shaft and housing fits, internal clearances, tolerances and other technical data for these bearings are found in the Engineering section of this catalog.

These bearings are available with a tapered bore for adapter type mounting. To order, add suffix K to bearing number (i.e., 23120K).



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static	Grease	Oil		
									$\frac{T}{R} \leq e$ X = 1	$\frac{T}{R} > e$ X = .67					In All Cases X <sub>0</sub> =1
					e	Y	Y	Y <sub>0</sub>	(approx.)						
	in. mm	in. mm	in. mm	in. mm	in. mm	in. mm	lbs kN	lbs kN					rpm	rpm	
240/750YMB	29.5276 750	42.9134 1090	13.1890 335	0.24 6	32.43 824	39.94 1014	5,935,000 26,399	2,481,000 11,035	0.27	2.48	3.69	2.42	200	270	2274.1 1033.7
241/750YMB	29.5276 750	48.0315 1220	18.7008 475	0.28 7	33.06 840	43.86 1114	8,802,000 39,151	4,000,000 17,792	0.36	1.86	2.77	1.82	170	230	4772.2 2169.2
230/800YMB	31.4961 800	45.2756 1150	10.1575 258	0.24 6	34.98 888	42.29 1074	4,572,000 20,336	2,009,000 8,936	0.19	3.50	5.22	3.43	270	360	1910.7 868.5
231/800YMB	31.4961 800	50.3937 1280	14.3701 365	0.28 7	35.66 906	46.12 1171	7,168,000 31,883	3,381,000 15,039	0.28	2.45	3.65	2.40	220	290	3954.2 1797.4
232/800YMB	31.4961 800	55.9055 1420	19.2126 488	0.43 11	36.81 935	50.09 1272	9,899,000 44,031	4,825,000 21,462	0.33	2.04	3.03	1.99	190	250	7288.4 3312.9
239/800BR	31.4961 800	41.7323 1060	7.6772 195	0.20 5	34.17 868	39.64 1007	3,102,000 13,798	1,282,000 5,702	0.16	4.20	6.25	4.10	185	370	1023.3 465.1
240/800YMB	31.4961 800	45.2756 1150	13.5827 345	0.24 6	34.54 877	42.19 1072	6,496,000 28,894	2,651,000 11,792	0.26	2.55	3.80	2.50	190	250	2555.0 1161.4
241/800YMB	31.4961 800	50.3937 1280	18.7008 475	0.28 7	35.27 896	46.06 1170	9,431,000 41,949	4,167,000 18,535	0.35	1.95	2.90	1.90	160	210	5145.9 2339.0
230/850YMB	33.4646 850	48.0315 1220	10.7087 272	0.24 6	36.94 938	44.81 1138	5,254,000 23,370	2,292,000 10,195	0.20	3.37	5.02	3.30	260	340	2260.5 1027.5
231/850YMB	33.4646 850	53.5433 1360	15.7480 400	0.35 9	37.87 962	49.01 1245	8,140,000 36,207	3,801,000 16,907	0.28	2.44	3.63	2.39	200	270	4892.0 2223.6
232/850YMB	33.4646 850	59.0551 1500	20.2756 515	0.43 11	38.98 990	53.03 1347	10,878,000 48,385	5,282,000 23,494	0.33	2.06	3.06	2.01	170	230	8536.0 3880.0
239/850BR	33.4646 850	44.0945 1120	7.8740 200	0.20 5	36.19 919	41.35 1050	3,302,000 14,687	1,285,000 5,716	0.15	4.54	6.76	4.44	175	350	1154.3 524.7
240/850YMB	33.4646 850	48.0315 1220	14.3701 365	0.24 6	36.67 931	44.79 1138	7,318,000 32,550	2,962,000 13,175	0.26	2.56	3.81	2.50	180	240	3033.4 1378.8
230/900YMB	35.4331 900	50.3937 1280	11.0236 280	0.24 6	38.96 990	47.15 1198	5,815,000 25,865	2,503,000 11,133	0.20	3.41	5.08	3.33	240	320	2516.9 1144.0
231/900YMB	35.4331 900	55.9055 1420	16.2205 412	0.35 9	40.06 1018	51.18 1300	8,862,000 39,418	4,005,000 17,814	0.27	2.49	3.71	2.43	200	260	5393.3 2451.5
232/900YMB	35.4331 900	62.2047 1580	20.2756 515	0.43 11	41.56 1056	56.03 1423	11,563,000 51,432	5,558,000 24,722	0.32	2.11	3.13	2.06	170	220	9424.0 4283.6
239/900YMB	35.4331 900	46.4567 1180	8.1102 206	0.20 5	38 965	43.78 1112	4,110,000 18,281	1,601,000 7,121	0.14	4.69	6.98	4.58	310	410	1301.8 591.7
240/900YMB	35.4331 900	50.3937 1280	14.7638 375	0.24 6	38.69 983	47.12 1197	7,994,000 35,557	3,200,000 14,234	0.26	2.60	3.87	2.54	170	230	3370.8 1532.2
241/900YMB	35.4331 900	55.9055 1420	20.2756 515	0.35 9	39.67 1008	51.12 1298	11,457,000 50,961	4,872,000 21,671	0.34	2.00	2.98	1.96	140	190	6741.6 3064.4
230/950YMB	37.4016 950	53.5433 1360	11.8110 300	0.24 6	41.19 1046	50.13 1273	6,194,000 27,551	2,723,000 12,112	0.19	3.49	5.19	3.41	230	300	3083.1 1401.4
231/950YMB	37.4016 950	59.0551 1500	17.2441 438	0.35 9	42.29 1074	54.05 1373	9,978,000 44,382	4,463,000 19,851	0.27	2.47	3.68	2.42	180	240	6404.2 2911.0
239/950YMB	37.4016 950	49.2126 1250	8.8189 224	0.24 6	40.34 1025	46.73 1187	4,657,000 20,714	1,834,000 8,158	0.15	4.39	6.54	4.29	290	380	1604.2 729.2
240/950YMB	37.4016 950	53.5433 1360	16.2205 412	0.24 6	40.90 1039	49.98 1269	9,287,000 41,309	3,683,000 16,382	0.27	2.53	3.77	2.47	160	210	4234.1 1924.6

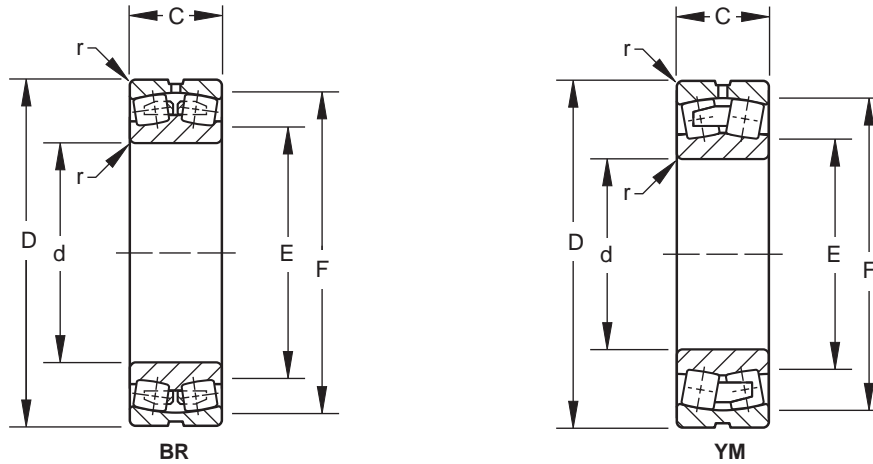
<sup>(1)</sup> These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

<sup>(2)</sup> Maximum shaft or housing fillet radius which bearing corners will clear.

<sup>(3)</sup> The limiting speeds shown in these tables are applicable under the following conditions:

- 1) Cooling conditions are normal.
- 2) Bearing load is light C/R ≥ 14.
- 3) Calculated L10 is > 100,000HR.
- 4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.



## DIMENSIONS – LOAD RATINGS

Bearing Number	d Bore	D O.D.	C Width	r Fillet <sup>(2)</sup> Radius  (max.)	Shoulder Diameter		Load Ratings		Equivalent Radial load Factors <sup>(1)</sup>			Limiting Speed <sup>(3)</sup>		Wt.  lbs kg	
					E Shaft	F Housing	Static Load Rating C <sub>0</sub>	Dynamic Load Rating C	Dynamic		Static  In All Cases X <sub>0</sub> =1 Y <sub>0</sub>	Grease	Oil		
									$\frac{T}{R} \leq e$ X = 1 Y	$\frac{T}{R} > e$ X = .67 Y					(approx.)
					e										
241/950YMB	37.4016 950	59.0551 1500	21.4567 545	0.35 9.0	41.89 1064	53.99 1371	12,845,000 57,135	5,412,000 24,073	0.34	2.00	2.97	1.95	140	180	7968.75 3622.16
230/1000YMB	39.3701 1000	55.9055 1420	12.1260 308	0.24 6	43.36 1101	52.23 1327	7,218,000 32,106	3,010,000 13,388	0.20	3.44	5.12	3.36	220	290	3396.9 1544.0
231/1000YMB	39.3701 1000	62.2047 1580	18.1890 462	0.35 9	44.54 1131	56.92 1446	11,132,000 49,515	4,935,000 21,951	0.27	2.47	3.68	2.42	170	230	7501.6 3409.8
239/1000YMB	39.3701 1000	51.9685 1320	9.2913 236	0.24 6	42.53 1080	49.28 1252	5,186,000 23,067	2,027,000 9,016	0.15	4.39	6.54	4.29	270	360	1901.1 864.1
240/1000YMB	39.3701 1000	55.9055 1420	16.2205 412	0.24 6	43.06 1094	52.33 1329	9,387,000 41,753	3,729,000 16,587	0.25	2.69	4.01	2.63	150	200	4543.9 2065.4
241/1000YMB	39.3701 1000	62.2047 1580	22.8346 580	0.35 9	44.08 1120	56.85 1444	14,475,000 64,385	6,031,000 26,826	0.34	1.98	2.95	1.93	130	170	9417.6 4280.7
230/1060YMB	41.7323 1060	59.0551 1500	12.7953 325	0.28 7	45.87 1165	55.26 1404	8,048,000 35,798	3,331,000 14,816	0.20	3.44	5.12	3.36	200	270	3972.3 1805.6
231/1060YMB	41.7323 1060	65.3543 1660	18.7008 475	0.43 11	46.99 1194	60.01 1524	12,036,000 53,536	5,328,000 23,699	0.27	2.53	3.77	2.48	170	220	8411.6 3823.5
239/1060YMB	41.7323 1060	55.1181 1400	9.8425 250	0.24 6	45.06 1145	52.27 1328	5,952,000 26,474	2,304,000 10,248	0.16	4.25	6.32	4.15	260	340	2268.9 1031.3
240/1060YMB	41.7323 1060	59.0551 1500	17.2441 438	0.28 7	45.55 1157	55.23 1403	11,131,000 49,511	4,280,000 19,037	0.26	2.61	3.88	2.55	140	190	5353.4 2433.4
230/1120YMB	44.0945 1120	62.2047 1580	13.5827 345	0.28 7	48.37 1229	58.28 1480	9,038,000 40,201	3,705,000 16,480	0.20	3.42	5.09	3.34	200	260	4649.5 2113.4
231/1120YMB	44.0945 1120	68.8976 1750	18.7008 475	0.43 11	49.67 1262	63.34 1609	12,606,000 56,071	5,616,000 24,980	0.25	2.67	3.98	2.62	160	210	9319.3 4236.0
239/1120YMB	44.0945 1120	57.4803 1460	9.8425 250	0.24 6	47.43 1205	54.70 1389	6,094,000 27,106	2,333,000 10,377	0.15	4.62	6.87	4.51	250	330	2379.6 1081.6
240/1120YMB	44.0945 1120	62.2047 1580	18.1890 462	0.28 7	48.05 1220	58.25 1480	12,505,000 55,622	4,760,000 21,172	0.26	2.62	3.90	2.56	140	180	6226.3 2830.1
230/1180YMB	46.4567 1180	65.3543 1660	13.9764 355	0.28 7	50.89 1293	61.31 1557	9,782,000 43,510	4,000,000 17,792	0.19	3.50	5.21	3.42	180	240	5251.1 2386.9
231/1180YMB	46.4567 1180	72.8346 1850	19.6850 500	0.43 11	52.45 1332	66.87 1698	14,034,000 62,423	6,204,000 27,595	0.25	2.68	4.00	2.62	150	200	11014.2 5006.4
239/1180YMB	46.4567 1180	60.6299 1540	10.7087 272	0.24 6	49.98 1269	57.67 1465	7,087,000 31,523	2,665,000 11,854	0.15	4.48	6.67	4.38	230	310	2890.0 1313.7
240/1180YMB	46.4567 1180	65.3543 1660	18.7008 475	0.28 7	50.56 1284	61.28 1557	13,438,000 59,772	5,114,000 22,747	0.25	2.67	3.98	2.61	130	170	7026.2 3193.7
230/1250YMB	49.2126 1250	68.8976 1750	14.7638 375	0.28 7	53.95 1370	64.57 1640	10,970,000 48,795	4,352,000 19,358	0.19	3.50	5.21	3.42	170	230	6103.6 2774.4
231/1250YMB	49.2126 1250	76.7717 1950	20.8661 530	0.43 11	55.38 1407	70.62 1794	15,747,000 70,043	6,895,000 30,669	0.25	2.67	3.98	2.62	140	190	12882.2 5855.5
239/1250YMB	49.2126 1250	64.1732 1630	11.0236 280	0.24 6	52.94 1345	61.07 1551	7,679,000 34,156	2,886,000 12,837	0.15	4.60	6.85	4.50	220	290	3325.1 1511.4
240/1250YMB	49.2126 1250	68.8976 1750	19.6850 500	0.28 7	53.62 1362	64.53 1639	14,985,000 66,653	5,534,000 24,615	0.25	2.68	3.99	2.62	130	170	8138.2 3699.2

(1) These factors apply for both inch and metric calculations. See Engineering section for instructions on use.

(2) Maximum shaft or housing fillet radius which bearing corners will clear.

(3) The limiting speeds shown in these tables are applicable under the following conditions:

1) Cooling conditions are normal.

2) Bearing load is light C/R ≥ 14.

3) Calculated L10 is > 100,000HR.

4) Lubrication is proper and oil, if used, is at the recommended sump level.

For conditions other than above, bearing selection should be reviewed with a Torrington sales engineer.