

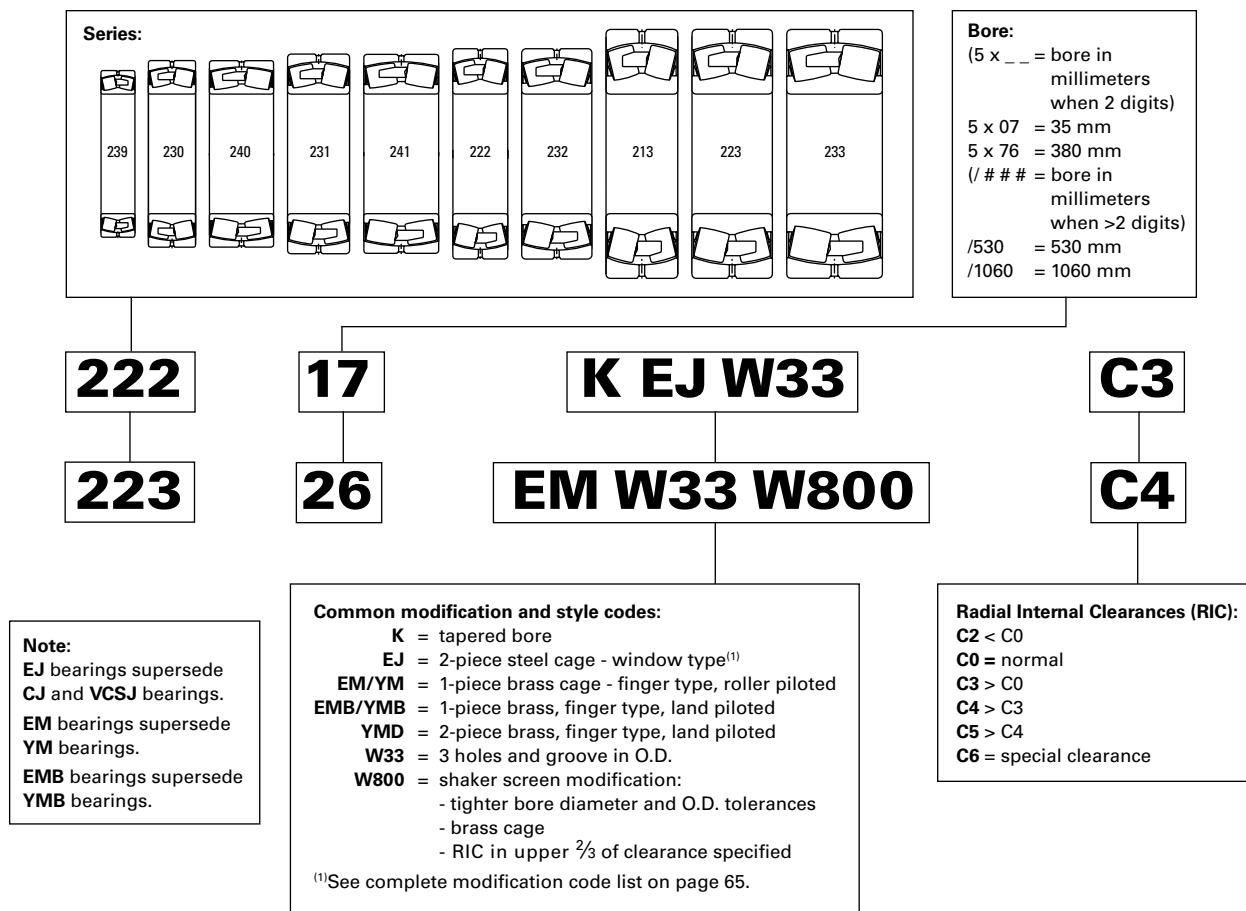
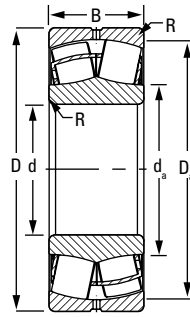
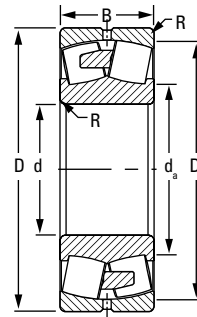
NOMENCLATURE

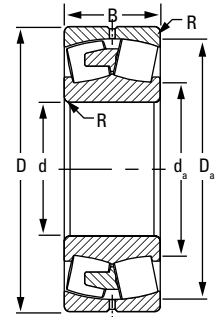
Fig. 23. Timken spherical roller bearing nomenclature.



EJ



EM/YM



EMB/YMB

Continued from previous page.

Bearing Part Number	Bearing Dimensions			Load Ratings		Cage Type	Mounting Data			Equivalent Radial Load Factors ⁽²⁾				Geometry Factor ⁽³⁾ C _g	Speed Reference			Weight
	Bore d	O.D. D	Width B	Dynamic C	Static C ₀		Fillet ⁽¹⁾ (Max.) R	Backing Diameter		Dynamic		Static	Thermal Reference Speed ⁽⁴⁾		Limiting Speed ⁽⁵⁾			
								Shaft d _a	Housing D _a	e	F _a ≤ e F _r X = 1 Y	F _a > e F _r X = 0.67 Y				In All Cases Y ₀		
	mm in.	mm in.	mm in.	kN lbf.	kN lbf.		mm in.	mm in.	mm in.						RPM	RPM	RPM	kg lbs.
22222	110 4.3307	200 7.8740	53 2.0866	555 125000	653 147000	EM	2 0.08	133 5.2	182 7.2	0.25	2.73	4.06	2.67	0.074	3500	2900	4800	7.2 15.8
23222	110 4.3307	200 7.8740	69.8 2.7480	710 160000	887 199000	EJ	2 0.08	131 5.2	182 7.2	0.32	2.11	3.14	2.06	0.074	2300	2000	3390	9.6 21.1
23222	110 4.3307	200 7.8740	69.8 2.7480	710 160000	887 199000	EM	2 0.08	131 5.2	182 7.2	0.32	2.11	3.14	2.06	0.074	2300	2000	3100	9.6 21.1
22322	110 4.3307	240 9.4488	80 3.1496	949 213000	1050 236000	EJ	2.5 0.1	144 5.7	215 8.5	0.32	2.08	3.10	2.04	0.079	2500	2100	2890	17.8 39.2
22322	110 4.3307	240 9.4488	80 3.1496	949 213000	1050 236000	EM	2.5 0.1	144 5.7	215 8.5	0.32	2.08	3.10	2.04	0.079	2500	2200	3540	17.8 39.2
23322	110 4.3307	240 9.4488	92.1 3.6260	979 220000	1080 243000	EM	2.5 0.1	136 5.4	209 8.2	0.40	1.67	2.49	1.63	0.077	1800	1600	2490	20.4 44.9
23024	120 4.7244	180 7.0866	46 1.8110	408 91700	574 129000	EJ	2 0.08	134 5.3	167 6.6	0.22	3.02	4.49	2.95	0.074	3300	2700	4260	4.0 8.8
24024	120 4.7244	180 7.0866	60 2.3622	523 117000	762 171000	EJ	2 0.08	132 5.2	167 6.6	0.29	2.32	3.45	2.26	0.073	2700	2200	3410	5.2 11.4
23124	120 4.7244	200 7.8740	62 2.4409	621 140000	816 183000	EJ	2 0.08	138 5.4	182 7.2	0.28	2.38	3.54	2.32	0.075	2600	2200	3460	7.9 17.4
23124	120 4.7244	200 7.8740	62 2.4409	621 140000	816 183000	EM	2 0.08	138 5.4	182 7.2	0.28	2.38	3.54	2.32	0.075	2600	2200	3420	7.9 17.4
24124	120 4.7244	200 7.8740	80 3.1496	778 175000	1080 242000	EJ	2 0.08	135 5.3	182 7.2	0.36	1.86	2.77	1.82	0.075	1700	1600	2660	10.0 22.0
22224	120 4.7244	215 8.4646	58 2.2835	647 145000	772 174000	EJ	2 0.08	143 5.6	196 7.7	0.25	2.70	4.02	2.64	0.078	3200	2600	4060	9.0 19.8
22224	120 4.7244	215 8.4646	58 2.2835	647 145000	772 174000	EM	2 0.08	143 5.6	196 7.7	0.25	2.70	4.02	2.64	0.078	3200	2600	4440	9.0 19.8
23224	120 4.7244	215 8.4646	76 2.9921	824 185000	1040 234000	EJ	2 0.08	142 5.6	197 7.7	0.32	2.10	3.13	2.05	0.078	2100	1800	3100	11.8 26.0
23224	120 4.7244	215 8.4646	76 2.9921	824 185000	1040 234000	EM	2 0.08	142 5.6	197 7.7	0.32	2.10	3.13	2.05	0.078	2100	1800	2910	11.8 26.0
22324	120 4.7244	260 10.2362	86 3.3858	1080 244000	1210 272000	EJ	2.5 0.1	157 6.2	234 9.2	0.32	2.11	3.15	2.07	0.083	2200	1900	2680	21.4 48.4

⁽¹⁾Maximum shaft or housing fillet radius that bearing corners will clear.

⁽²⁾These factors apply for both inch and metric calculations. See engineering section for instructions on use.

⁽³⁾Geometry constant for Lubrication Life Factor a31 is found in the Bearing Ratings section of the Engineering Manual (order no. 10424).

⁽⁴⁾See thermal reference speed in the Engineering Manual (order no. 10424) and on page 61.

⁽⁵⁾See limiting speed on page 61.

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