

Spherical Roller Bearing Model Reference Data

Detailed reference values for 14 exact models. Boundary dimensions can identify a bearing, but ratings, speeds, cage design, clearance, bore type, and other suffix details must match the selected product.

Boundary Dimensions

Model	Series	Bore d (mm)	OD D (mm)	Width B (mm)	Design references
21310	21300	50	110	27	EJ
21312	21300	60	130	31	EJ
22218	22200	90	160	40	EJ, EM
22220	22200	100	180	46	EJ, EM
22222	22200	110	200	53	EJ, EM
22315	22300	75	160	55	EJ, EM
22318	22300	90	190	64	EJ, EM
22320	22300	100	215	73	EJ, EM
22322	22300	110	240	80	EJ, EM
23024	23000	120	180	46	EJ
23120	23100	100	165	52	EJ, EM
23220	23200	100	180	60.3	EJ, EM
24024	24000	120	180	60	EJ
24124	24100	120	200	80	EJ

Load, Speed, and Mass Reference

Model	Design	d	D	B	C kN	C0 kN	Oil rpm	Grease rpm	Thermal rpm	Mass kg
21310	EJ	50	110	27	163	151	5900	4900	7710	1.2
21312	EJ	60	130	31	225	219	5100	4200	6660	2.0
22218	EJ	90	160	40	355	388	4300	3500	5520	3.5
22218	EM	90	160	40	355	388	4300	3500	5790	3.5
22220	EJ	100	180	46	435	502	3800	3100	4990	5.0
22220	EM	100	180	46	435	502	3800	3100	5230	5.0
22222	EJ	110	200	53	555	653	3500	2900	4410	7.2
22222	EM	110	200	53	555	653	3500	2900	4800	7.2
22315	EJ	75	160	55	450	478	4000	3400	4330	5.2
22315	EM	75	160	55	450	478	4000	3400	4750	5.4
22318	EJ	90	190	64	606	659	3400	2900	3640	8.3
22318	EM	90	190	64	606	659	3400	2900	4190	8.8
22320	EJ	100	215	73	804	910	2800	2400	3250	12.7
22320	EM	100	215	73	768	853	2900	2500	3810	12.8
22322	EJ	110	240	80	949	1050	2500	2100	2890	17.8
22322	EM	110	240	80	949	1050	2500	2200	3540	17.8
23024	EJ	120	180	46	408	574	3300	2700	4260	4.0
23120	EJ	100	165	52	446	583	3200	2700	4070	4.4
23120	EM	100	165	52	446	583	3200	2700	4060	4.4
23220	EJ	100	180	60.3	554	678	2700	2300	3780	6.6
23220	EM	100	180	60.3	554	678	2700	2300	3440	6.6
24024	EJ	120	180	60	523	762	2700	2200	3410	5.2
24124	EJ	120	200	80	778	1080	1700	1600	2660	10.0

Mounting and Calculation Reference

Model	Design	r max mm	Shaft da mm	Housing Da mm	e	Y1	Y2	Y0	Cg
21310	EJ	2	67	99	0.24	2.83	4.21	2.76	0.055
21312	EJ	2	80	116	0.23	2.91	4.33	2.84	0.054
22218	EJ	2	105	146	0.23	2.9	4.31	2.83	0.064
22218	EM	2	105	146	0.23	2.9	4.31	2.83	0.064
22220	EJ	2	120	163	0.24	2.85	4.24	2.78	0.069
22220	EM	2	120	163	0.24	2.85	4.24	2.78	0.069
22222	EJ	2	133	182	0.25	2.73	4.06	2.67	0.074
22222	EM	2	133	182	0.25	2.73	4.06	2.67	0.074
22315	EJ	2	97	144	0.33	2.04	3.04	2.0	0.061
22315	EM	2	97	144	0.33	2.04	3.04	2.0	0.061
22318	EJ	2.5	116	171	0.32	2.09	3.11	2.04	0.069
22318	EM	2.5	116	171	0.32	2.09	3.11	2.04	0.069
22320	EJ	2.5	131	193	0.33	2.06	3.07	2.02	0.075
22320	EM	2.5	130	193	0.33	2.06	3.07	2.02	0.074
22322	EJ	2.5	144	215	0.32	2.08	3.1	2.04	0.079
22322	EM	2.5	144	215	0.32	2.08	3.1	2.04	0.079
23024	EJ	2	134	167	0.22	3.02	4.49	2.95	0.074
23120	EJ	2	114	150	0.28	2.35	3.5	2.3	0.067
23120	EM	2	114	150	0.28	2.35	3.5	2.3	0.067
23220	EJ	2	119	164	0.3	2.22	3.3	2.17	0.07
23220	EM	2	119	164	0.3	2.22	3.3	2.17	0.07
24024	EJ	2	132	167	0.29	2.32	3.45	2.26	0.073
24124	EJ	2	135	182	0.36	1.86	2.77	1.82	0.075

How to Use This Reference

Use the tables to prepare a model enquiry or to screen an existing bearing reference. They do not replace confirmation of the selected bearing design and complete suffix.

Tapered-bore versions may use K after the bearing number. Availability and suffix conventions must be confirmed for the selected manufacturer.

Oil, grease, and thermal reference speeds are design references, not universal application limits. Fit, clearance, load, temperature, lubrication, and surrounding components can reduce the permissible operating speed.

Ratings, speeds, cage references, mounting data, and calculation factors are reference values for the listed design. Manufacturers and internal designs can differ even when boundary dimensions match. Confirm the selected brand, full suffix, clearance, and application before ordering.

Quotation Checklist

Send	Include
Bearing identity	Complete marking, model number, brand if relevant, and clear photos
Configuration	Cylindrical or tapered bore, suffix, internal clearance, cage, and lubrication feature
Operating context	Application, radial and axial load, speed, temperature, lubrication, and environment
Order context	Quantity, destination, required delivery timing, and document requirements

Do not approve a replacement from boundary dimensions alone. Confirm the complete bearing designation and operating requirements before ordering.