

HYATT® SPHERICAL ROLLER BEARINGS



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SPHERICAL ROLLER BEARINGS

222 SERIES

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HYATT® SPHERICAL ROLLER BEARING



Spherical roller bearings are made in a full size range, in two load bearing types. All sizes are available with either a straight cylindrical bore or with the industry standard 1:12 tapered bore. They are used in arduous applications where high radial loads exist and there is initial misalignment or substantial shaft deflection during operation. They will also deal with axial loading, but the radial load must predominate otherwise one row of rollers becomes unloaded and can fail due to skidding. Machined bronze cage and W-33 re-lubrication features are standard.

Load carrying abilities are enhanced by the following features:

- Critical operating dimensions such as roller diameter, inner and outer race pathway diameters, relative runouts, as well as bore, outside diameter and others are carefully controlled, checked, and matched to ensure best possible performance.

SERIES 222

BASIC BEARING NUMBER		BORE A		OUTSIDE DIAMETER B		WIDTH C		MAX FILLET RADIUS	BASIC STATIC LOAD (lbs.)	BASIC DYNAMIC LOAD ¹ (lbs.)	WEIGHT ² (lbs.)	LIMITING SPEED ² (rpm)
CYLINDRICAL BORE	TAPERED BORE (K)	mm inch	tol. + .0000	mm inch	tol. + .0000	mm inch	tol. + .0000					
22208	22208K	40 1.5748	-0.013 -.0005	80 3.1496	-0.015 -.0006	23 .9055	-0.127 -.005	1.0 .039	18000	16300	1.28	6100
22209	22209K	45 1.5748	-0.013 -.0005	85 3.1496	-0.015 -.0006	23 .9055	-0.127 -.005	1.0 .039	19600	16900	1.37	5600
22210	22210K	50 1.5748	-0.015 -.0006	90 3.1496	-0.015 -.0006	23 .9055	-0.152 -.006	1.0 .039	21800	18200	1.52	5200
22211	22211K	55 2.1654	-0.015 -.0006	100 3.9370	-0.015 -.0006	25 .9843	-0.152 -.006	1.5 .059	26200	22000	2.10	4700
22212	22212K	60 2.3622	-0.015 -.0006	110 4.3307	-0.015 -.0006	28 1.1024	-0.152 -.006	1.5 .059	32400	27500	2.77	4300
22213	22213K	65 2.5591	-0.015 -.0006	120 4.7244	-0.015 -.0006	31 1.2205	-0.152 -.006	1.5 .059	39500	32300	3.79	4000
22214	22214K	70 2.7559	-0.015 -.0006	125 4.9213	-0.020 -.0008	31 1.2205	-0.152 -.006	1.5 .059	42500	33600	3.99	3700
22215	22215K	75 2.9528	-0.015 -.0006	130 5.1181	-0.020 -.0008	31 1.2205	-0.203 -.008	1.5 .059	46200	35400	4.23	3500
22216	22216K	80 3.1496	-0.020 -.0008	140 5.5118	-0.020 -.0008	33 1.2992	-0.203 -.008	2.0 .079	50400	38100	4.70	3300
22217	22217K	85 3.3465	-0.020 -.0008	150 5.9055	-0.025 -.0010	36 1.4173	-0.203 -.008	2.0 .079	57100	44300	6.49	3100
22218	22218K	90 3.5433	-0.020 -.0008	160 6.2992	-0.025 -.0010	40 1.5748	-0.203 -.008	2.0 .079	77200	57000	7.69	2800
22219	22219K	95 3.7402	-0.020 -.0008	170 6.6929	-0.025 -.0010	43 1.6929	-0.203 -.008	2.0 .079	86400	65000	9.37	2700
22220	22220K	100 3.9370	-0.020 -.0008	180 7.0866	-0.031 -.0012	46 1.8110	-0.203 -.008	2.0 .079	100600	74200	11.33	2500
22222	22222K	110 4.3307	-0.020 -.0008	200 7.8740	-0.031 -.0012	53 2.0866	-0.203 -.008	2.0 .079	122600	91100	16.07	2300
22224	22224K	120 4.7244	-0.025 -.0010	215 8.4646	-0.031 -.0012	58 2.2835	-0.254 -.010	2.0 .079	148600	108500	19.78	2100
22226	22226K	130 5.1181	-0.025 -.0010	230 9.0551	-0.031 -.0012	64 2.5197	-0.254 -.010	2.5 .098	185000	129000	25.35	2000
22228	22228K	140 5.5118	-0.025 -.0010	250 9.8425	-0.036 -.0014	68 2.6772	-0.254 -.010	2.5 .098	207900	146900	31.97	1800
22230	22230K	150 5.9055	-0.025 -.0010	270 10.6299	-0.036 -.0014	73 2.8740	-0.254 -.010	2.5 .098	234200	161800	39.90	1700
22232	22232K	160 6.2992	-0.025 -.0010	290 11.4173	-0.036 -.0014	80 3.1496	-0.254 -.010	2.5 .098	268600	186200	50.93	1600
22234	22234K	170 6.6929	-0.025 -.0010	310 12.2047	-0.036 -.0014	86 3.3858	-0.254 -.010	3.0 .118	313900	216600	60.19	1500
22236	22236K	180 7.0866	-0.031 -.0012	320 12.5984	-0.041 -.0016	86 3.3858	-0.305 -.012	3.0 .118	329600	221200	66.14	1400

¹ Dynamic Loads are based on 1 million revolutions.

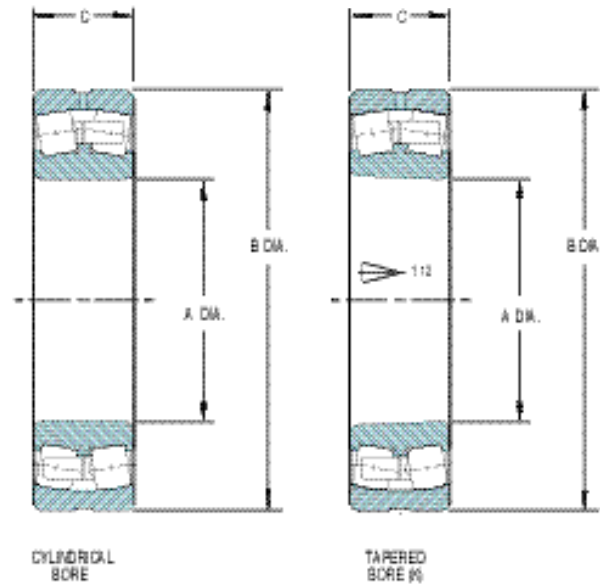
² Weight and Limiting Speed are based on an open, oiled bearing.

C3 Internal Clearance standard. Available in C2, C0, & C4 Internal Clearance upon request.

- Two rows of long, large diameter rollers.
- Heavy bronze cages counter vibration.
- Standard W-33 relubrication, together with special roller-end lubricant distribution.

The spherical design coupled with the positive roller guidance feature makes these spherical bearings the choice for tough moment load applications which require self-aligning capability.

Suggested applications include vibratory systems, speed reducers, conveyors, and other heavy machinery used in process industries.



SERIES 223

BASIC BEARING NUMBER		BORE A		OUTSIDE DIAMETER B		WIDTH C		MAX FILLET RADIUS	BASIC STATIC LOAD (lbs.)	BASIC DYNAMIC LOAD ¹ (lbs.)	WEIGHT ² (lbs.)	LIMITING SPEED ² (rpm)
CYLINDRICAL BORE	TAPERED BORE (K)	mm inch	tol. +.0000	mm inch	tol. +.0000	mm inch	tol. +.0000					
22308	22308K	40 1.5748	-0.013 -.0005	90 3.5433	-0.015 -.0006	33 1.2992	-0.127 -.005	1.5 .059	27800	25800	2.34	5500
22309	22309K	45 1.7717	-0.013 -.0005	100 3.9370	-0.015 -.0006	36 1.4173	-0.127 -.005	1.5 .059	35300	32600	3.09	4900
22310	22310K	50 1.9685	-0.015 -.0006	110 4.3307	-0.015 -.0006	40 1.5748	-0.152 -.006	2.0 .079	45700	40300	4.12	4400
22311	22311K	55 2.1654	-0.015 -.0006	120 4.7244	-0.020 -.0008	43 1.6929	-0.152 -.006	2.0 .079	51000	45800	9.61	4100
22312	22312K	60 2.3622	-0.015 -.0006	130 5.1181	-0.020 -.0008	46 1.8110	-0.152 -.006	2.0 .079	57700	51600	6.53	3800
22313	22313K	65 2.5591	-0.015 -.0006	140 5.5118	-0.020 -.0008	48 1.8898	-0.152 -.006	2.0 .079	64800	56500	8.91	3500
22314	22314K	70 2.7559	-0.015 -.0006	150 5.9055	-0.025 -.0010	51 2.0079	-0.152 -.006	2.0 .079	75100	65400	9.55	3200
22315	22315K	75 2.9528	-0.015 -.0006	160 6.2992	-0.025 -.0010	55 2.1654	-0.152 -.006	2.0 .079	91700	75300	11.84	3000
22316	22316K	80 3.1496	-0.020 -.0008	170 6.6929	-0.025 -.0010	58 2.2835	-0.203 -.008	2.0 .079	105100	86200	14.15	2800
22317	22317K	85 3.3465	-0.020 -.0008	180 7.0866	-0.031 -.0012	60 2.3622	-0.203 -.008	2.5 .098	115400	93900	16.50	2700
22318	22318K	90 3.5433	-0.020 -.0008	190 7.4803	-0.031 -.0012	64 2.5197	-0.203 -.008	2.5 .098	122700	97200	19.07	2500
22319	22319K	95 3.7402	-0.020 -.0008	200 7.8740	-0.031 -.0012	67 2.6378	-0.203 -.008	2.5 .098	141500	113700	22.62	2400
22320	22320K	100 3.9370	-0.020 -.0008	215 8.4646	-0.031 -.0012	73 2.8740	-0.203 -.008	2.5 .098	164300	132100	28.66	2200
22322	22322K	110 4.3307	-0.020 -.0008	240 9.4488	-0.031 -.0012	80 3.1496	-0.203 -.008	2.5 .098	211100	167100	44.91	2000
22324	22324K	120 4.7244	-0.025 -.0010	260 10.2362	-0.036 -.0014	86 3.3858	-0.254 -.010	2.5 .098	239600	189400	52.91	1900
22326	22326K	130 5.1181	-0.025 -.0010	280 11.0236	-0.036 -.0014	93 3.6614	-0.254 -.010	3.0 .118	278600	212500	63.71	1700
22328	22328K	140 5.5118	-0.025 -.0010	300 11.8110	-0.036 -.0014	102 4.0157	-0.254 -.010	3.0 .118	332200	254700	79.37	1600
22330	22330K	150 5.9055	-0.025 -.0010	320 12.5984	-0.041 -.0016	108 4.2520	-0.254 -.010	3.0 .118	373300	284600	96.12	1500

¹ Dynamic Loads are based on 1 million revolutions.

² Weight and Limiting Speed are based on an open, oiled bearing.

C3 Internal Clearance standard. Available in C2, C0, & C4 Internal Clearance upon request.