

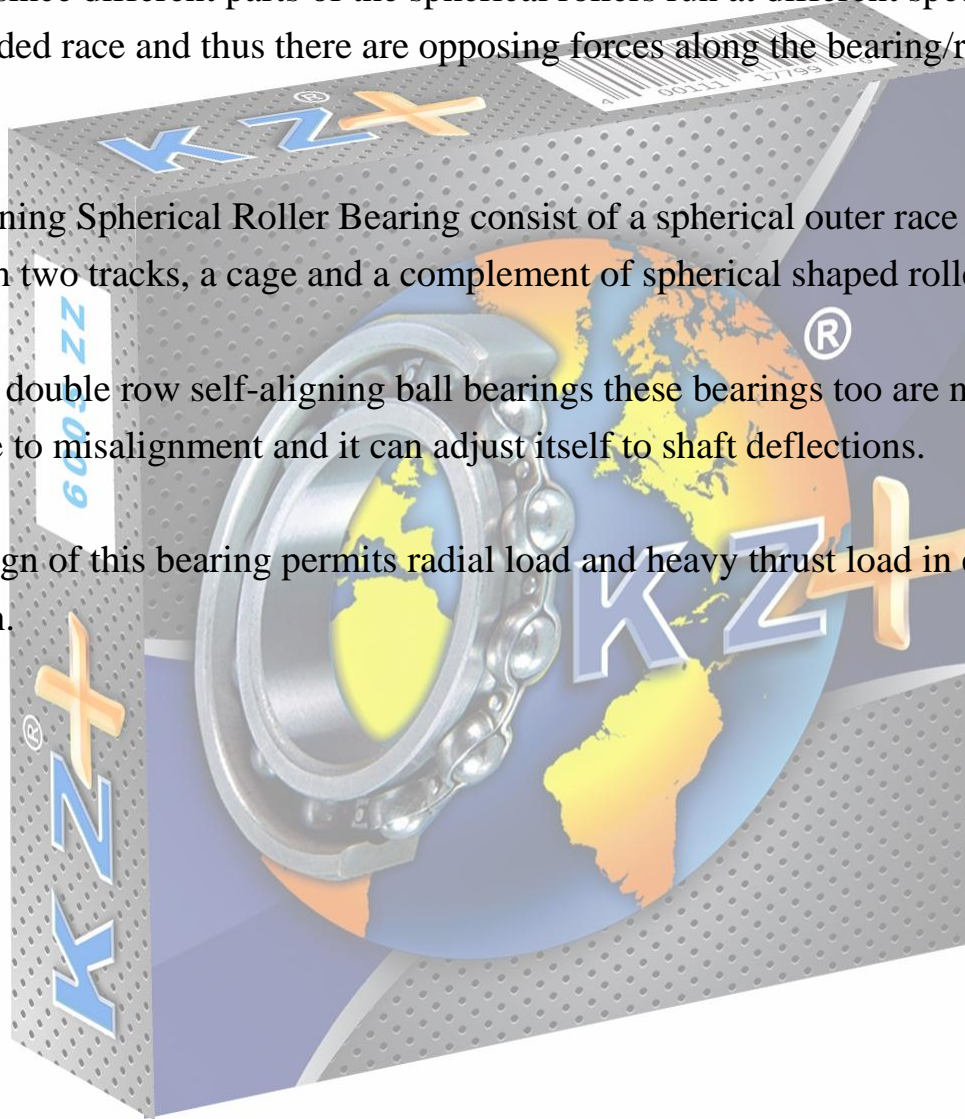
SPHERICAL ROLLER BEARINGS

Spherical roller bearings use rollers that are thicker in the middle and thinner at the ends; the race is shaped to match. Spherical roller bearings can thus adjust to support misaligned loads. However, spherical rollers are difficult to produce and thus expensive, and the bearings have higher friction than a comparable ball bearing since different parts of the spherical rollers run at different speeds on the rounded race and thus there are opposing forces along the bearing/race contact.

Self aligning Spherical Roller Bearing consist of a spherical outer race and inner race with two tracks, a cage and a complement of spherical shaped rollers.

Just like double row self-aligning ball bearings these bearings too are not sensitive to misalignment and it can adjust itself to shaft deflections.

The design of this bearing permits radial load and heavy thrust load in either direction.



BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Grease	Oil	
	d	D	B	r	C	Co	Lube	Lube	Kgs
21306	30	72	19	1.1	51.5	49.4	5800	7800	0.420
21307	35	80	21	1.5	63.1	61.3	5000	6700	0.560
21308	40	90	23	1.5	82.8	82.2	4500	6100	0.780
21309	45	100	25	1.5	102	103	4000	5400	1.040
21310	50	110	27	2	121	124	3700	4900	1.330
21311	55	120	29	2	158	191	3300	4500	1.560
21312	60	130	31	2.1	173	204	3100	4100	1.930
21313	65	140	33	2.1	198	239	2800	3800	2.410
21314	70	150	35	2.1	312	286	2700	3500	2.950
21315	75	160	37	2.1	250	321	2500	3300	3.510
21316	80	170	39	2.1	275	339	2100	2800	4.140
21317	85	180	41	3	304	387	2200	2900	4.910
21318	90	190	43	3	347	443	2100	2800	5.710
21319	95	200	45	3	373	480	1900	2600	7.050
21320	100	215	47	3	414	528	1800	2400	8.670

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Grease	Oil	
	d	D	B	r	C	Co	Lube	Lube	Kgs
22205	25	52	18	1	35.8	34.7	7700	10000	0.175
22206	30	62	20	1	49.4	48.7	6500	8700	0.280
22207	35	72	23	1.1	68.7	70.3	5500	7400	0.450
22208	40	80	23	1.1	77.5	81.5	5000	6700	0.550
22209	45	85	23	1.1	82.3	85.9	4600	6200	0.590
22210	50	90	23	1.1	87.4	93.9	4300	5700	0.640
22211	55	100	25	1.5	109	118	3800	5100	0.870
22212	60	110	28	1.5	130	144	3500	4700	1.200
22213	65	120	31	1.5	149	190	3200	4200	1.550
22214	70	125	31	1.5	161	208	3000	4000	1.640
22215	75	130	31	1.5	167	221	2900	3800	1.720
22216	80	140	33	2	201	249	2700	3500	2.120
22217	85	150	36	2	224	285	2500	3300	2.680
22218	90	160	40	2	246	330	2300	3100	3.480
22219	95	170	43	2.1	296	386	2200	2900	4.210
22220	100	180	46	2.1	335	453	2100	2800	5.060
22222	110	200	53	2.1	411	553	1900	2500	7.250
22224	120	215	58	2.1	492	673	1700	2300	9.100
22226	130	230	64	3	569	789	1600	2100	11.400
22228	140	250	68	3	658	928	1400	1900	14.700
22230	150	270	73	3	720	1020	1300	1800	18.100
22232	160	290	80	3	885	1270	1200	1600	22.900
22234	170	310	86	4	952	1390	1100	1500	28.400
22236	180	320	86	4	978	1450	1100	1400	29.800
22238	190	340	92	4	1110	1730	1000	1300	36.600
22240	200	360	98	4	1230	1930	930	1200	44.000
22244	220	400	108	4	1560	2400	820	1100	63.000
22248	240	440	120	4	1920	2990	730	970	79.400
22252	260	480	130	5	2240	3460	650	870	110.000
22256	280	500	130	5	2100	3380	610	810	114.000
22260	300	540	140	5	2690	4330	550	740	145.000
22264	320	580	150	5	2730	4540	490	660	175.000
22268	340	620	165	6	3550	5430	440	590	221.000
22272	360	650	170	6	3770	5830	410	550	248.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING (N)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Grease	Oil	
	d	D	B	r	C	Co	Lube	Lube	Kgs
22308	40	90	33	1.5	113000	73500	4500	5600	1
22309	45	100	36	1.5	138000	95000	3800	4800	1.35
22310	50	110	40	2	176000	120000	3200	4300	1.85
22311	55	120	43	2	199000	137000	3400	4000	2.35
22312	60	130	46	2.1	235000	166000	3000	3800	2.95
22313	65	120	48	2.1	253000	180000	2600	3400	3.55
22314	70	150	51	2.1	311000	228000	2400	3200	4.3
22315	75	160	55	2.1	345000	255000	2200	3000	5.25
22316	80	170	58	2.1	374000	275000	2000	2800	6.2
22317	85	180	60	3	420000	310000	1900	2600	7.25
22318	90	190	64	3	477000	365000	1800	2400	8.6
22319	95	200	67	3	518000	400000	1800	2400	10
22320	100	215	73	3	610000	475000	1700	2200	13
22322	110	240	80	3	725000	570000	1600	2000	18
22324	120	260	86	3	845000	670000	1400	1800	22
22326	130	280	93	4	978000	780000	1300	1700	28.5
22328	140	300	102	4	1130000	915000	1100	1500	34.5
22330	150	320	108	4	1270000	1040000	1000	1400	41.5
22332	160	340	114	4	1380000	1160000	950	1300	50
22334	170	360	120	4	1540000	1290000	950	1300	58.5
22336	180	380	126	4	1730000	1460000	900	1200	69
22338	190	400	138	5	1870000	1560000	850	1100	80
22340	200	420	138	5	2020000	1730000	850	1100	92.5
22344	220	460	145	5	2350000	2040000	750	950	120
22348	240	500	155	5	2710000	2360000	670	850	155

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight
					Dynamic	Static	Grease	Oil	
	d	D	B	r	C	Co	Lube	Lube	Kgs
23022	110	170	45	2	286	478	2100	2800	3.870
23024	120	180	46	2	229	517	1900	2600	4.220
23026	130	200	52	2	377	654	1700	2300	5.990
23028	140	210	53	2	428	737	1600	2200	6.670
23030	150	225	56	2.1	467	812	1500	2000	8.010
23032	160	240	60	2.1	539	944	1400	1900	9.900
23034	170	260	67	2.1	609	1110	1300	1700	13.000
23036	180	280	74	2.1	710	1290	1200	1600	17.100
23038	190	290	75	2.1	736	1370	11000	1500	18.200
23040	200	310	82	2.1	890	1670	1000	1400	23.400
23044	220	340	90	3	984	1890	940	1300	30.600
23048	240	360	92	3	1100	2170	860	1100	33.800
23052	260	400	104	4	1330	2570	760	1000	49.300
23056	280	420	106	4	1430	2860	710	950	52.900
23060	300	460	118	4	1750	3480	630	840	73.700
23064	320	480	121	4	1830	3740	590	790	78.800
23068	340	520	133	5	2130	4330	530	710	105.000
23072	360	540	134	5	2280	4800	500	660	115.000
23080	400	600	148	5	2710	4790	420	560	155.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
					Dynamic C	Static Co	Grease Lube	Oil Lube	
	d	D	B	r	C	Co	Lube	Lube	Kgs
23120	100	165	52	2	297	493	2200	3000	4.440
23122	110	180	56	2	346	591	2000	2700	5.580
23124	120	200	62	2	447	760	1800	2400	8.090
23126	130	210	64	2	506	826	1700	2200	8.820
23128	140	225	68	2.1	561	934	1500	2100	10.500
23130	150	250	80	2.1	689	1230	1400	1900	15.900
23132	160	270	86	2.1	796	1380	1300	1700	19.900
23134	170	280	88	2.1	888	1490	1200	1600	21.700
23136	180	300	96	3	1000	1800	1100	1500	27.500
23138	190	320	104	3	1090	2000	1000	1400	34.400
23140	200	340	112	3	1240	2250	980	1300	42.400
23144	220	370	120	4	1440	2700	880	1200	53.200
23148	240	400	128	4	1630	3080	790	1100	65.600
23152	260	440	144	4	2100	3860	710	940	90.800
23156	280	460	146	5	2140	4280	660	880	96.900
23160	300	500	160	5	2490	4850	590	790	128.000
23164	320	540	176	5	2900	5700	530	700	171.000
23168	340	580	190	5	3280	6430	480	640	216.000
23172	360	600	192	5	3770	7440	440	590	228.000
23180	400	650	200	6	4310	8100	390	520	255.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]				LOAD RATING(kN)		LIMITING SPEED(RPM)		Weight Kgs
					Dynamic C	Static Co	Grease Lube	Oil Lube	
	d	D	B	r	C	Co	Lube	Lube	Kgs
23218	90	160	52.4	2	317	459	2200	3000	4.700
23220	100	180	60.3	2.1	415	599	2100	2800	6.680
23222	110	200	69.8	2.1	525	786	1900	2500	9.570
23224	120	215	76	2.1	583	894	1700	2300	11.800
23226	130	230	80	3	668	1030	1600	2100	14.000
23228	140	250	88	3	787	1230	1500	1900	18.400
23230	150	270	96	3	924	1470	1300	1800	23.800
23232	160	290	104	3	1030	1650	1200	1600	30.100
23234	170	310	110	4	1150	1870	1100	1500	36.500
23236	180	320	112	4	1190	1980	1100	1400	38.600
23238	190	340	120	4	1410	2210	1000	1300	46.000
23240	200	360	128	4	1550	2610	940	1300	56.400
23244	220	400	144	4	1880	3200	830	1100	79.200
23248	240	440	160	4	2340	3990	730	970	107.000
23252	260	480	174	5	2750	4640	640	860	140.000
23256	280	500	176	5	2690	4910	610	820	149.000
23260	300	540	192	5	3430	5910	540	720	192.000
23264	320	580	208	5	3630	6550	500	670	249.000
23268	340	620	224	6	4090	7560	450	600	306.000
23272	360	650	232	6	4960	9050	410	550	328.000
23280	400	720	256	6	5210	9850	350	470	468.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]			LOAD RATING (N)		RPM	Weight
				Dynamic	Static		Kgs
	d	D	B	C	Co		
23936	180	250	52	320000	620000	1800	8.210
23938	190	260	52	310000	600000	1800	8.600
23940	200	280	60	410000	780000	1700	12.100
23944	220	300	60	410000	780000	1600	13.100
23948	240	320	60	420000	870000	1400	14.000
23952	260	360	75	930000	1350000	1300	24.000
23956	280	380	75	630000	1320000	1200	26.400
23960	300	420	90	900000	1875000	1100	40.000
23964	320	440	90	930000	2025000	1000	43.000
23968	340	460	90	950000	2100000	1000	44.000
23972	360	480	90	965000	2175000	900	47.200
23976	380	520	106	1290000	2850000	850	69.900
23980	400	540	106	1290000	2850000	800	73.000
23984	420	560	106	1320000	3100000	750	76.200
23988	440	600	118	1575000	3675000	700	101.000
23992	460	620	118	1640000	3750000	450	107.000
23996	480	650	128	1895000	4275000	425	123.000
239/500	500	670	128	1895000	4500000	425	131.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]			LOAD RATING (N)		RPM	Weight
				Dynamic	Static		Kgs
	d	D	B	C	Co		
24024	120	180	60	280000	500000	1700	5.480
24026	130	200	69	355000	610000	1600	8.080
24028	140	210	69	370000	675000	1500	8.570
24030	150	225	75	420000	780000	1400	10.700
24032	160	240	80	490000	900000	1200	13.000
24034	170	260	90	600000	1095000	1200	17.700
24036	180	280	100	700000	1300000	1100	23.300
24038	190	290	100	730000	1350000	1100	24.300
24040	200	310	109	840000	1590000	1000	31.000
24044	220	340	118	1020000	1950000	900	40.200
24048	240	360	118	1035000	2025000	850	43.000
24052	260	400	140	1320000	2580000	750	65.200
24056	280	420	140	1400000	2850000	700	69.000
24060	300	460	160	1760000	3560000	600	98.000
24064	320	480	160	1860000	3825000	600	103.000
24068	340	520	180	2240000	4650000	550	140.000
24072	360	540	180	2330000	4910000	500	147.000
24076	380	560	180	2370000	5100000	500	153.000
24080	400	600	200	2715000	5850000	475	202.000
24084	420	620	200	2800000	6100000	400	210.000
24088	440	650	212	3060000	6600000	375	245.000
24092	460	680	218	3270000	7100000	350	276.000
24096	480	700	218	3360000	7500000	350	285.000
240/500	500	720	218	3450000	7800000	340	295.000

BEARING NUMBER	NOMINAL DIMENSIONS' [mm]			LOAD RATING (N)		RPM	Weight
				Dynamic	Static		Kgs
	d	D	B	C	Co		
24122	110	180	69	345000	560000	1150	6.520
24124	120	200	80	430000	710000	1000	10.100
24126	130	210	80	440000	750000	1000	10.200
24128	140	225	85	500000	870000	930	12.400
24130	150	250	100	670000	1140000	850	18.700
24132	160	270	109	780000	1320000	750	24.300
24134	170	280	109	800000	1390000	720	25.600
24136	180	300	118	915000	1620000	680	32.100
24138	190	320	128	1050000	1875000	630	40.100
24140	200	340	140	1185000	2100000	590	50.100
24144	220	370	150	1380000	2510000	530	62.500
24148	240	400	160	1575000	2900000	500	78.800
24152	260	440	180	1960000	3600000	450	108.000
24156	280	460	180	2000000	3825000	425	114.000
24160	300	500	200	2460000	4720000	380	152.000
24164	320	540	218	2800000	5325000	360	196.000
24168	340	580	243	3495000	6480000	340	225.000
24172	380	600	243	3360000	6480000	320	265.000
24176	380	620	243	3450000	6860000	220	292.000
24180	400	650	250	3660000	7300000	200	329.000
24184	420	700	280	4310000	8550000	180	440.000
24188	440	720	280	4485000	9150000	180	456.000
24192	460	760	300	5430000	10950000	170	550.000
24196	480	790	308	5430000	11250000	160	608.000
241/500	500	830	325	6470000	12750000	150	716.000