

Deep Groove Ball Bearings

└ Extra Small Ball Bearings and Miniature Ball Bearings Metric Design

Boundary Dimensions (mm)						Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)		Bearing Numbers	NSKHPS
<i>d</i>	<i>D</i>	<i>B</i>	<i>B1</i>	<i>r</i> min.	<i>r1</i> min.	<i>C_r</i>	<i>C_{0r}</i>	Grease	Oil		
1	3	1	-	0.05	-	80	23	130000	150000	681	
1	3	1.5	-	0.05	-	80	23	130000	150000	MR31	
1	4	1.6	-	0.1	-	140	36	100000	120000	691	
1.2	4	1.8	-	0.1	-	138	35	110000	130000	MR41X	
1.2	4	-	2.5	-	0.1	138	35	110000	-	MR41XZZ	
1.5	4	1.2	-	0.05	-	112	33	100000	120000	681X	
1.5	4	-	2	-	0.05	112	33	100000	-	681XZZ	
1.5	5	2	-	0.15	-	237	69	85000	100000	691X	
1.5	5	-	2.6	-	0.15	237	69	85000	-	691XZZ	
1.5	6	2.5	-	0.15	-	330	98	75000	90000	601X	
1.5	6	-	3	-	0.15	330	98	75000	-	601XZZ	
2	5	1.5	-	0.08	-	169	50	85000	100000	682	
2	5	2	-	0.1	-	187	58	85000	100000	MR52B	
2	5	-	2.3	-	0.08	169	50	85000	-	682ZZ	
2	5	-	2.5	-	0.1	187	58	85000	-	MR52BZZ	
2	6	2.3	-	0.15	-	330	98	75000	90000	692	
2	6	2.5	-	0.15	-	330	98	75000	90000	MR62	
2	6	-	2.5	-	0.15	330	98	75000	-	MR62ZZ	
2	6	-	3	-	0.15	330	98	75000	-	692ZZ	
2	7	2.5	-	0.15	-	385	127	63000	75000	MR72	
2	7	2.8	-	0.15	-	385	127	63000	75000	602	
2	7	-	3	-	0.15	385	127	63000	-	MR72ZZ	
2	7	-	3.5	-	0.15	385	127	63000	-	602ZZ	
2.5	6	1.8	-	0.08	-	208	74	71000	80000	682X	
2.5	6	-	2.6	-	0.08	208	74	71000	-	682XZZ	
2.5	7	2.5	-	0.15	-	385	127	63000	75000	692X	
2.5	7	-	3.5	-	0.15	385	127	63000	-	692XZZ	
2.5	8	2.5	-	0.2	-	560	179	60000	67000	MR82X	
2.5	8	2.8	-	0.15	-	550	175	60000	71000	602X	
2.5	8	-	4	-	0.15	550	175	60000	-	602XZZ	
3	6	2	-	0.1	-	208	74	71000	80000	MR63	
3	6	-	2.5	-	0.1	208	74	71000	-	MR63ZZ	
3	7	2	-	0.1	-	390	130	63000	75000	683A	
3	7	-	3	-	0.1	390	130	63000	-	683AZZ	
3	8	2.5	-	0.15	-	560	179	60000	67000	MR83	
3	8	3	-	0.15	-	560	179	60000	67000	693	
3	8	-	4	-	0.15	560	179	60000	-	693ZZ	
3	9	2.5	-	0.2	-	570	187	56000	67000	MR93	
3	9	3	-	0.15	-	570	187	56000	67000	603	
3	9	-	4	-	0.15	570	187	56000	-	MR93ZZ	
3	9	-	5	-	0.15	570	187	56000	-	603ZZ	
3	10	4	-	0.15	-	630	218	50000	60000	623	
3	10	-	4	-	0.15	630	218	50000	-	623ZZ	
3	13	5	-	0.2	-	1300	485	40000	48000	633	
3	13	-	5	-	0.2	1300	485	40000	-	633ZZ	

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<i>d</i>	<i>D</i>	<i>B</i>	<i>B1</i>	<i>r</i> min.	<i>r1</i> min.	<i>C_r</i>	<i>C_{0r}</i>	Grease	Oil		
4	7	2	-	0.1	-	310	115	60000	67000	MR74	
4	7	-	2.5	-	0.1	310	115	60000	-	MR74ZZ	
4	8	2	-	0.15	-	395	139	56000	67000	MR84	
4	8	-	3	-	0.1	395	139	56000	-	MR84ZZ	
4	9	2.5	-	0.1	-	640	225	53000	63000	684	
4	9	-	4	-	0.1	640	225	53000	-	684ZZ	
4	10	3	-	0.2	-	710	270	50000	60000	MR104B	
4	10	-	4	-	0.15	710	270	50000	-	MR104BZZ	
4	11	4	-	0.15	-	960	345	48000	56000	694	
4	11	-	4	-	0.15	960	345	48000	-	694ZZ	
4	12	4	-	0.2	-	960	345	48000	56000	604	
4	12	-	4	-	0.2	960	345	48000	-	604ZZ	
4	13	5	-	0.2	-	1300	485	40000	48000	624	
4	13	-	5	-	0.2	1300	485	40000	-	624ZZ1	
4	16	5	-	0.3	-	1730	670	36000	43000	634	
4	16	-	5	-	0.3	1730	670	36000	-	634ZZ	
5	8	2	-	0.1	-	310	120	53000	63000	MR85	
5	8	-	2.5	-	0.1	310	120	53000	-	MR85ZZ	
5	9	2.5	-	0.15	-	430	168	50000	60000	MR95	
5	9	-	3	-	0.15	430	168	50000	-	MR95ZZ1	
5	10	3	-	0.15	-	430	168	50000	60000	MR105	
5	10	-	4	-	0.15	430	168	50000	-	MR105ZZ	
5	11	3	-	0.15	-	715	281	45000	53000	685	
5	11	-	4	-	0.15	715	276	48000	-	MR115ZZ	
5	11	-	4	-	0.15	715	276	48000	-	MR115VV	
5	11	-	5	-	0.15	715	281	45000	-	685ZZ	
5	13	4	-	0.2	-	1080	430	43000	50000	695	
5	13	-	4	-	0.2	1080	430	43000	-	695ZZ	
5	13	-	4	-	0.2	1080	430	43000	-	695VV	
5	13	-	4	-	0.2	1080	430	40000	-	695DD	
5	14	5	-	0.2	-	1330	505	40000	50000	605	
5	14	-	5	-	0.2	1330	505	40000	-	605ZZ	
5	14	-	5	-	0.2	1330	505	38000	-	605DD	
5	16	5	-	0.3	-	1730	670	36000	43000	625	
5	16	-	5	-	0.3	1730	670	36000	-	625ZZ1	
5	16	-	5	-	0.3	1730	670	36000	-	625VV	
5	16	-	5	-	0.3	1730	670	32000	-	625DD	
5	19	6	-	0.3	-	2340	885	32000	40000	635	
5	19	-	6	-	0.3	2340	885	32000	-	635ZZ1	
5	19	-	6	-	0.3	2340	885	32000	-	635VV	
5	19	-	6	-	0.3	2340	885	30000	-	635DD	
6	10	2.5	-	0.15	-	495	218	45000	53000	MR106	
6	10	-	3	-	0.1	495	218	45000	-	MR106ZZ1	
6	12	3	-	0.2	-	715	292	43000	50000	MR126	
6	12	-	4	-	0.15	715	292	43000	-	MR126ZZ	

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d	Boundary Dimensions (mm)					Basic Load Ratings (N)		Limiting Speeds (min ⁻¹)		Bearing Numbers	NSKHPS
	D	B	B1	r min.	r1 min.	C _r	C _{0r}	Grease	Oil		
6	12	-	4	-	0.15	715	292	40000	-	MR126DD	
6	13	3.5	-	0.15	-	1080	440	40000	50000	686A	
6	13	-	5	-	0.15	1080	440	40000	-	686AZZ	
6	13	-	5	-	0.15	1080	440	40000	-	686AVV	
6	13	-	5	-	0.15	1080	440	38000	-	686ADD	
6	15	5	-	0.2	-	1730	670	40000	45000	696	
6	15	-	5	-	0.2	1730	670	40000	-	696ZZ1	
6	15	-	5	-	0.2	1730	670	40000	-	696VV	
6	15	-	5	-	0.2	1730	670	36000	-	696DD	
6	17	6	-	0.3	-	2260	835	38000	45000	606	
6	17	-	6	-	0.3	2260	835	38000	-	606ZZ	
6	17	-	6	-	0.3	2260	835	38000	-	606VV	
6	17	-	6	-	0.3	2260	835	34000	-	606DD	
6	19	6	-	0.3	-	2340	885	32000	40000	626	
6	19	-	6	-	0.3	2340	885	32000	-	626ZZ1	
6	19	-	6	-	0.3	2340	885	32000	-	626VV	
6	19	-	6	-	0.3	2340	885	30000	-	626DD	
6	22	7	-	0.3	-	3300	1370	30000	36000	636	
6	22	-	7	-	0.3	3300	1370	30000	-	636ZZ	
6	22	-	7	-	0.3	3300	1370	30000	-	636VV	
6	22	-	7	-	0.3	3300	1370	28000	-	636DD	
7	11	2.5	-	0.15	-	455	201	43000	50000	MR117	
7	11	-	3	-	0.1	455	201	43000	-	MR117ZZ	
7	13	3	-	0.2	-	540	276	40000	48000	MR137	
7	13	-	4	-	0.15	540	276	40000	-	MR137ZZ	
7	14	3.5	-	0.15	-	1170	510	40000	45000	687	
7	14	-	5	-	0.15	1170	510	40000	-	687ZZ1	
7	14	-	5	-	0.15	1170	510	40000	-	687VV	
7	14	-	5	-	0.15	1170	510	34000	-	687DD	
7	17	5	-	0.3	-	1610	710	36000	43000	697	
7	17	-	5	-	0.3	1610	710	36000	-	697ZZ1	
7	17	-	5	-	0.3	1610	710	36000	-	697VV	
7	17	-	5	-	0.3	1610	710	28000	-	697DD	
7	19	6	-	0.3	-	2340	885	36000	43000	607	
7	19	-	6	-	0.3	2340	885	36000	-	607ZZ1	
7	19	-	6	-	0.3	2340	885	36000	-	607VV	
7	19	-	6	-	0.3	2340	885	32000	-	607DD	
7	22	7	-	0.3	-	3300	1370	30000	36000	627	
7	22	-	7	-	0.3	3300	1370	30000	-	627ZZ	
7	22	-	7	-	0.3	3300	1370	30000	-	627VV	
7	22	-	7	-	0.3	3300	1370	28000	-	627DD	
7	26	9	-	0.3	-	4050	1620	28000	34000	637	
7	26	-	9	-	0.3	4050	1620	28000	-	637ZZ1	
8	12	2.5	-	0.15	-	545	275	40000	48000	MR128	
8	12	-	3.5	-	0.1	545	275	40000	-	MR128ZZ1	

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	D	B	B1	r min.	r1 min.	C _r	C _{0r}	Grease	Oil		
8	14	3.5	-	0.2	-	820	385	38000	45000	MR148	
8	14	-	4	-	0.15	820	385	38000	-	MR148ZZ	
8	14	-	4	-	0.15	820	385	38000	-	MR148VV	
8	14	-	4	-	0.15	820	385	32000	-	MR148DD	
8	16	4	-	0.2	-	1610	710	36000	43000	688A	
8	16	-	5	-	0.2	1610	710	36000	-	688AZZ1	
8	16	-	5	-	0.2	1610	710	36000	-	688AVV	
8	16	-	5	-	0.2	1610	710	28000	-	688ADD	
8	19	6	-	0.3	-	2240	910	36000	43000	698	
8	19	-	6	-	0.3	2240	910	36000	-	698ZZ	
8	19	-	6	-	0.3	2240	910	36000	-	698VV	
8	19	-	6	-	0.3	2240	910	28000	-	698DD	
8	22	7	-	0.3	-	3300	1370	34000	40000	608	
8	22	-	7	-	0.3	3300	1370	34000	-	608ZZ	
8	22	-	7	-	0.3	3300	1370	34000	-	608VV	
8	22	-	7	-	0.3	3300	1370	28000	-	608DD	
8	24	8	-	0.3	-	3350	1430	28000	34000	628	
8	24	-	8	-	0.3	3350	1430	28000	-	628ZZ	
8	24	-	8	-	0.3	3350	1430	28000	-	628VV	
8	24	-	8	-	0.3	3350	1430	24000	-	628DD	
8	28	9	-	0.3	-	4550	1970	28000	34000	638	
8	28	-	9	-	0.3	4550	1970	28000	-	638ZZ1	
8	28	-	9	-	0.3	4550	1970	28000	-	638VV	
8	28	-	9	-	0.3	4550	1970	22000	-	638DD	
9	17	4	-	0.2	-	1330	665	36000	43000	689	
9	17	-	5	-	0.2	1330	665	36000	-	689ZZ1	
9	17	-	5	-	0.2	1330	665	36000	-	689VV	
9	17	-	5	-	0.2	1330	665	24000	-	689DD	
9	20	6	-	0.3	-	1720	840	34000	40000	699	
9	20	-	6	-	0.3	1720	840	34000	-	699ZZ1	
9	20	-	6	-	0.3	1720	840	34000	-	699VV	
9	20	-	6	-	0.3	1720	840	24000	-	699DD	
9	24	7	-	0.3	-	3350	1430	32000	38000	609	
9	24	-	7	-	0.3	3350	1430	32000	-	609ZZ	
9	24	-	7	-	0.3	3350	1430	32000	-	609VV	
9	24	-	7	-	0.3	3350	1430	24000	-	609DD	
9	26	8	-	0.3	-	4550	1970	28000	34000	629	
9	26	-	8	-	0.3	4550	1970	28000	-	629ZZ	
9	26	-	8	-	0.3	4550	1970	28000	-	629VV	
9	26	-	8	-	0.3	4550	1970	22000	-	629DD	
9	30	10	-	0.6	-	5100	2390	24000	30000	639	
9	30	-	10	-	0.6	5100	2390	24000	-	639ZZ	
9	30	-	10	-	0.6	5100	2390	24000	-	639VV	