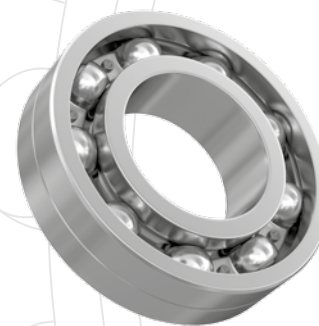


Deep Groove Ball Bearings (Single and Double Row)



Deep Groove Ball Bearings

The versatility offered by Deep Groove Ball Bearings makes them most popular of all Bearing types.

They are simple in design. KG Deep Groove Ball Bearings are available in a wide range, as defined by the ISO standard plan. These could also be made to meet customer's special dimensional requirements, but within some basic design limitations. These bearings are also available in Stainless Steel material.



Deep Groove Ball Bearings

Deep Groove Ball Bearings are

- Capable of carrying load in either direction, with relatively higher radial load carrying capacity
- Suitable for low or medium load applications
- Suitable for low, medium or even high speed applications; depending on the type and precision of selected Bearing
- Well suited for applications that require high running accuracy
- Suitable for low noise and low torque applications

KG can offer following variants

- Single and Double Row type
- Open basic design type
- As Sealed types
- With Snap Ring groove
- With Snap Ring groove and Snap Ring
- With C2, CN, C3, C4 and C5 radial clearance
- Standard precision grade (ISO Grade 0 - ABEC1) and higher precision grade (ISO Grade 1 - ABEC3)
- With extended Inner Ring
- Pressed Steel, riveted, Plastic and machined Brass Cage
- With stainless steel material with prefix "SS"



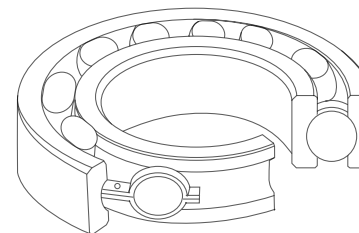
Open and closed types (with Metallic -ZZ shields and Rubber Seals-2RS)

Deep Groove Ball Bearings

Apart from the list of items presented in the following pages, many other special type of KG Deep Groove Ball Bearings have been developed to meet specific application requirements. Technical information for such Bearings, is available on request.

KG standard suffixes for Deep Groove Ball Bearings

A	Modified internal design.
C2	Radial internal clearance less than normal.
CN	Normal radial internal clearance. Generally, no special suffix is used in KG Bearings for normal radial internal clearance.
C3	Radial internal clearance higher than normal.
C4	Radial internal clearance higher than C3.
C5	Radial internal clearance higher than C4.
E	Electric motor quality.
G1-G15	KG internal grease type codes. For details, please contact KG International FZCO.
J	Pressed Steel Cage.
K	Tapered bore, with taper of 1:12.
M	Machined Brass Cage.
N	Snap Ring groove in the Outer Ring.
NR	Snap Ring groove in the Outer Ring, with Snap Ring.
P or TN	Plastic / Polyamide / Nylon Cage.
P5	Dimensional and running accuracy confirming to ISO class 5.
P6	Dimensional and running accuracy confirming to ISO class 6.
Q1-Q8	KG internal reference codes. For details please contact KG International FZCO.
RS	Rubber Seal with Steel sheet reinforcement on one side of the Bearing.
RSL	Double lip type Rubber Seal with special groove in the Inner Ring, fixed only at one side of Bearing.
2RS	Rubber Seal with Steel sheet reinforcement on both sides of the Bearing.
2RSL	Double lip type Rubber Seal with special groove in the Inner Ring, fixed at both Bearing sides.
Z	Metallic shield on one side of the Bearing.
ZZ	Metallic shield on both sides of the Bearing.
F	Used as a prefix for a Flange on Outer Ring.



Note: Most of the Bearings listed in the following pages of this chapter are available with above suffixes, subject to design or manufacturing constraints.

Miniature and Extra Small Ball Bearings

Deep Groove Ball Bearings with an outer diameter less than 9 mm are known as Miniature Ball Bearings. Deep Groove Ball Bearings having an outside diameter more than 9 mm, and bore diameter less than 10 mm are known as Extra Small Ball Bearings.

They are available in a wide range, as defined by the ISO standard plan. These types could also be made to meet customer's special dimensional requirements, but with some basic design limitations.

These bearings are also available in Stainless Steel material.

Miniature and Extra Small Ball Bearings are

- Capable of carrying relatively smaller loads
- Suitable for low, medium and high speed applications
- Suited for low noise and low torque applications

Apart from the list of items presented in the following pages, many other special type of KG Miniature and Extra Small Ball Bearings have been developed to meet specific application requirements. Technical information for such Bearings, is available on request.



Magneto Ball Bearings

Magneto bearings have a design similar to a Radial bearing. The groove in the inner ring is a little shallower than that of deep groove ball bearings and one side of the outer ring is relieved. The outer ring have only one shoulder and separable, which makes it convenient for mounting.



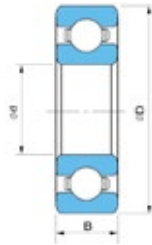
Double Row Deep Groove Ball Bearings

It correspond in design to single row deep groove ball bearings. They have deep uninterrupted raceways and high conformity between the balls and raceways. They are able to carry axial loads acting in both directions in addition to radial loads.

Double row deep groove ball bearings are very suitable for bearing arrangements where the load carrying capacity of a single row bearing is inadequate. For the same outside and bore diameters, double row bearings are slightly wider than single row bearings but have considerably higher load carrying capacity than single row bearings in the 62 and 63 series.



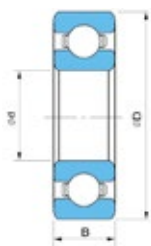
Single Row Series: 6000



Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		
3	10	4	603	603 ZZ	603 2RS	553	203	49,500	66,000	0.0014
4	12	4	604	604 ZZ	604 2RS	806	280	120,000	75,000	0.0021
5	14	5	605	605 ZZ	605 2RS	1050	500	100.000	60.000	0.0045
6	17	6	606	606 ZZ	606 ZZ	1940	720	95.000	58.000	0.006
7	19	6	607	607 ZZ	607 2RS	2340	950	85,000	53,000	0.008
8	22	7	608	608 ZZ	608 2RS	3450	1370	75,000	48,000	0.012
9	24	7	609	609 ZZ	609 2RS	3900	1660	70,000	43,000	0.014
10	26	8	6000	6000 ZZ	6000 2RS	4750	1960	67,000	40,000	0.019
12	28	8	6001	6001 ZZ	6001 2RS	5400	2360	60,000	38,000	0.021
15	32	9	6002	6002 ZZ	6002 2RS	5850	2850	50,000	32,000	0.030
17	35	10	6003	6003 ZZ	6003 2RS	6370	3250	45,000	28,000	0.038
20	42	12	6004	6004 ZZ	6004 2RS	9950	5000	38,000	24,000	0.067
25	47	12	6005	6005 ZZ	6005 2RS	11900	6550	32,000	20,000	0.078
30	55	13	6006	6006 ZZ	6006 2RS	13800	8300	28,000	17,000	0.120
35	62	14	6007	6007 ZZ	6007 2RS	16800	10200	24,000	15,000	0.150
40	68	15	6008	6008 ZZ	6008 2RS	17800	11000	22,000	14,000	0.190
45	75	16	6009	6009 ZZ	6009 2RS	22100	14600	20,000	12,000	0.240
50	80	16	6010	6010 ZZ	6010 2RS	22900	16000	18,000	11,000	0.260
55	90	18	6011	6011 ZZ	6011 2RS	29600	21200	16,000	10,000	0.390
60	95	18	6012	6012 ZZ	6012 2RS	30700	23200	15,000	9,500	0.410
65	100	18	6013	6013 ZZ	6013 2RS	31900	25000	14,000	9,000	0.440
70	110	20	6014	6014 ZZ	6014 2RS	39700	31000	13,000	8,000	0.610
75	115	20	6015	6015 ZZ	6015 2RS	41600	33500	12,000	7,500	0.650

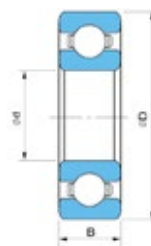


Single Row Series: 6000



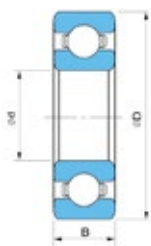
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference	Limiting	
						C	C ₀	speed	speed	
mm						N		r/min		kg
80	125	22	6016	6016 ZZ	6016 2RS	49400	40000	11,000	7,000	0.870
85	130	22	6017	6017 ZZ	6017 2RS	52000	43000	11,000	6,700	0.920
90	140	24	6018	6018 ZZ	6018 2RS	60500	50000	10,000	6,300	1.15
95	145	24	6019	6019 ZZ	6019 2RS	63700	54000	9,500	6,000	1.10
100	150	24	6020	6020 ZZ	6020 2RS	63700	54000	9,500	5,600	1.25
105	160	26	6021	6021 ZZ	6021 2RS	76100	65500	8,500	5,300	1.60
110	170	28	6022	6022 ZZ	6022 2RS	85200	73500	8,000	5,000	1.95
120	180	28	6024	6024 ZZ	6024 2RS	88400	80000	7,500	4,800	2.10
130	200	33	6026	6026 ZZ	6026 2RS	112000	100000	7,000	4,300	3.25
140	210	33	6028	6028 ZZ	6028 2RS	111000	108000	6,700	4,000	3.45
150	225	35	6030	6030 ZZ	6030 2RS	125000	125000	6,000	3,800	4.30
160	240	38	6032	6032 ZZ	6032 2RS	143000	143000	5,600	3,600	5.20
170	260	42	6034	6034 ZZ	6034 2RS	168000	173000	5,300	3,200	7.00
180	280	46	6036	6036 ZZ	6036 2RS	190000	200000	4,800	3,000	9.10
190	290	46	6038	6038 ZZ	6038 2RS	195000	216000	4,800	3,000	9.55
200	310	51	6040	6040 ZZ	6040 2RS	216000	245000	4,300	2,800	12.50
220	340	56	6044	6044 ZZ	6044 2RS	247000	290000	4,000	2,400	16.00
240	360	56	6048	6048 ZZ	6048 2RS	255000	315000	3,600	2,200	17.00
260	400	65	6052	6052 ZZ	6052 2RS	291000	375000	3,200	2,000	25.00
280	420	65	6056	6056 ZZ	6056 2RS	302000	405000	3,000	1,900	26.00
300	460	74	6060	6060 ZZ	6060 2RS	365000	520000	2,400	1,900	44.50

Single Row Series: 6200



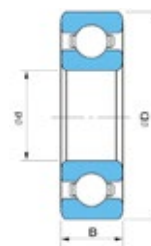
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference	Limiting	
						C	C ₀	speed	speed	
mm						N		r/min		kg
3	10	4	623	623 ZZ	623 2RS	540	180	130,000	80,000	0.0015
4	13	5	624	624 ZZ	624 2RS	936	290	110,000	67,000	0.0031
5	16	5	625	625 ZZ	625 2RS	1140	380	95,000	60,000	0.0050
6	19	6	626	626 ZZ	626 2RS	2340	950	80,000	50,000	0.0081
7	22	7	627	627 ZZ	627 2RS	3450	1370	70,000	45,000	0.012
8	24	8	628	628 ZZ	628 2RS	3900	1660	63,000	40,000	0.018
9	26	8	629	629 ZZ	629 2RS	4750	1960	60,000	38,000	0.020
10	30	9	6200	6200 ZZ	6200 2RS	5400	2360	56,000	36,000	0.031
12	32	10	6201	6201 ZZ	6201 2RS	7280	3100	50,000	32,000	0.037
15	35	11	6202	6202 ZZ	6202 2RS	8060	3750	43,000	28,000	0.045
17	40	12	6203	6203 ZZ	6203 2RS	9950	4750	38,000	24,000	0.065
20	47	14	6204	6204 ZZ	6204 2RS	13500	6550	32,000	20,000	0.110
22	50	14	62/22	62/22 ZZ	62/22 2RS	14000	7650	30,000	19,000	0.130
25	52	15	6205	6205 ZZ	6205 2RS	14800	7800	28,000	18,000	0.130
28	58	16	62/28	62/28 ZZ	62/28 2RS	16800	9500	26,000	16,000	0.170
30	62	16	6206	6206 ZZ	6206 2RS	20300	11200	24,000	15,000	0.200
35	72	17	6207	6207 ZZ	6207 2RS	27000	15300	20,000	13,000	0.290
40	80	18	6208	6208 ZZ	6208 2RS	32500	19000	18,000	11,000	0.370
45	85	19	6209	6209 ZZ	6209 2RS	35100	21600	17,000	11,000	0.420
50	90	20	6210	6210 ZZ	6210 2RS	37100	23200	15,000	10,000	0.450
55	100	21	6211	6211 ZZ	6211 2RS	46200	29000	14,000	9,000	0.610
60	110	22	6212	6212 ZZ	6212 2RS	55300	36000	13,000	8,000	0.780

Single Row Series: 6200



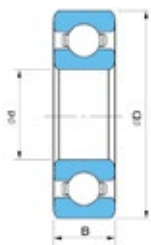
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
65	120	23	6213	6213 ZZ	6213 2RS	58500	40500	12,000	7,500	1.00
70	125	24	6214	6214 ZZ	6214 2RS	63700	45000	11,000	7,000	1.10
75	130	25	6215	6215 ZZ	6215 2RS	68900	49000	10,000	6,700	1.20
80	140	26	6216	6216 ZZ	6216 2RS	72800	55000	9,500	6,000	1.45
85	150	28	6217	6217 ZZ	6217 2RS	87100	64000	9,000	5,600	1.80
90	160	30	6218	6218 ZZ	6218 2RS	101000	73500	8,500	5,300	2.20
95	170	32	6219	6219 ZZ	6219 2RS	114000	81500	8,000	5,000	2.65
100	180	34	6220	6220 ZZ	6220 2RS	127000	93000	7,500	4,800	3.15
105	190	36	6221	6221 ZZ	6221 2RS	140000	104000	7,000	4,500	3.80
110	200	38	6222	6222 ZZ	6222 2RS	151000	118000	6,700	4,300	4.45
120	215	40	6224	6224 ZZ	6224 2RS	146000	118000	6,300	4,000	5.25
130	230	40	6226	6226 ZZ	6226 2RS	156000	132000	5,600	3,600	5.85
140	250	42	6228	6228 ZZ	6228 2RS	165000	150000	5,300	3,400	7.75
150	270	45	6230	6230 ZZ	6230 2RS	174000	166000	5,000	3,200	10
160	290	48	6232	6232 ZZ	6232 2RS	186000	186000	4,500	3,000	13
170	310	52	6234	6234 ZZ	6234 2RS	212000	224000	4,300	2,800	16
180	320	52	6236	6236 ZZ	6236 2RS	229000	240000	4,000	2,600	42
190	340	55	6238	6238 ZZ	6238 2RS	255000	280000	3,800	2,400	20
200	360	58	6240	6240 ZZ	6240 2RS	270000	310000	3,600	2,200	24
220	400	65	6244	6244 ZZ	6244 2RS	296000	365000	3,200	2,000	34
300	540	85	6260	6260 ZZ	6260 2RS	462000	670000	2,400	2,000	89

Single Row Series: 6300



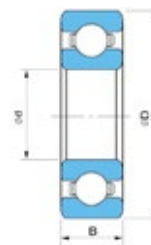
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
4	16	5	634	634 ZZ	634 2RS	1110	380	95,000	60,000	0.0054
5	19	6	635	635 ZZ	635 2RS	2340	950	80,000	50,000	0.0085
6	22	7	636	636 ZZ	636 2RS	2970	1224	40,800	30,600	0.013
7	26	9	637	637 ZZ	637 2RS	3600	1422	36,000	27,000	0.024
8	28	9	638	638 ZZ	638 2RS	4095	1773	33,600	25,200	0.027
9	30	10	639	639 ZZ	639 2RS	4590	2151	31,200	23,400	0.034
10	35	11	6300	6300 ZZ	6300 2RS	8520	3400	50,000	32,000	0.053
12	37	12	6301	6301 ZZ	6301 2RS	10100	4150	45,000	28,000	0.060
15	42	13	6302	6302 ZZ	6302 2RS	11900	5400	38,000	24,000	0.082
17	47	14	6303	6303 ZZ	6303 2RS	14300	6550	34,000	22,000	0.11
20	52	15	6304	6304 ZZ	6304 2RS	16800	7800	30,000	19,000	0.14
22	56	16	63/22	63/22 ZZ	63/22 2RS	18600	9300	28,000	18,000	0.18
25	62	17	6305	6305 ZZ	6305 2RS	23400	11600	24,000	16,000	0.23
28	68	18	63/28	63/28 ZZ	63/28 2RS	25100	13700	22,000	14,000	0.30
30	72	19	6306	6306 ZZ	6306 2RS	29600	16000	20,000	13,000	0.35
35	80	21	6307	6307 ZZ	6307 2RS	35100	19000	19,000	12,000	0.46
40	90	23	6308	6308 ZZ	6308 2RS	42300	24000	17,000	11,000	0.63
45	100	25	6309	6309 ZZ	6309 2RS	55300	31500	15,000	9,500	0.84
50	110	27	6310	6310 ZZ	6310 2RS	65000	38000	13,000	8,500	1.10
55	120	29	6311	6311 ZZ	6311 2RS	74100	45000	12,000	8,000	1.35

Single Row Series: **6300**



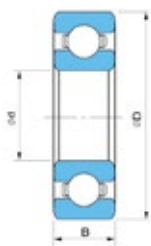
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
mm						C	C ₀			
						N		r/min		kg
60	130	31	6312	6312 ZZ	6312 2RS	85200	52000	11,000	7,000	1.70
65	140	33	6313	6313 ZZ	6313 2RS	97500	60000	10,000	6,700	2.10
70	150	35	6314	6314 ZZ	6314 2RS	111000	68000	9,500	6,300	2.55
75	160	37	6315	6315 ZZ	6315 2RS	119000	76500	9,000	5,600	3.05
80	170	39	6316	6316 ZZ	6316 2RS	130000	86500	8,500	5,300	3.65
85	180	41	6317	6317 ZZ	6317 2RS	140000	96500	8,000	5,000	4.25
90	190	43	6318	6318 ZZ	6318 2RS	151000	108000	7,500	4,800	4.95
95	200	45	6319	6319 ZZ	6319 2RS	159000	118000	7,000	4,500	5.75
100	215	47	6320	6320 ZZ	6320 2RS	174000	140000	6,700	4,300	7.10
105	225	49	6321	6321 ZZ	6321 2RS	182000	153000	6,300	4,000	8.15
110	240	50	6322	6322 ZZ	6322 2RS	203000	180000	6,000	3,800	9.65
120	260	55	6324	6324 ZZ	6324 2RS	208000	186000	5,600	3,400	12.50
130	280	58	6326	6326 ZZ	6326 2RS	229000	216000	5,000	3,200	15.00
140	300	62	6328	6328 ZZ	6328 2RS	251000	245000	4,800	3,000	18.50
150	320	65	6330	6330 ZZ	6330 2RS	276000	285000	4,300	2,800	23.00
160	340	68	6332	6332 ZZ	6332 2RS	276000	285000	4,000	2,600	26.00
170	360	72	6334	6334 ZZ	6334 2RS	312000	340000	3,800	2,400	31.00
180	380	75	6336	6336 ZZ	6336 2RS	351000	405000	3,600	2,200	36.50
190	400	78	6338	6338 ZZ	6338 2RS	371000	430000	3,400	2,200	42.00

Single Row Heavy Duty Type Series: **6400**



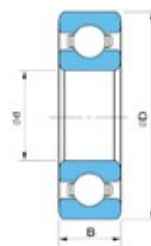
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
17	62	17	6403	6403 ZZ	6403 2RS	22900	10800	28,000	18,000	0.27
20	72	19	6404	6404 ZZ	6404 2RS	30700	15000	24,000	15,000	0.41
25	80	21	6405	6405 ZZ	6405 2RS	35800	19300	20,000	13,000	0.54
30	90	23	6406	6406 ZZ	6406 2RS	43600	23600	18,000	11,000	0.75
35	100	25	6407	6407 ZZ	6407 2RS	55300	31000	16,000	10,000	0.97
40	110	27	6408	6408 ZZ	6408 2RS	63700	36500	14,000	9,000	1.25
45	120	29	6409	6409 ZZ	6409 2RS	76100	45000	13,000	8,500	1.55
50	130	31	6410	6410 ZZ	6410 2RS	87100	52000	12,000	7,500	1.95
55	140	33	6411	6411 ZZ	6411 2RS	99500	62000	11,000	7,000	2.35
60	150	35	6412	6412 ZZ	6412 2RS	108000	69500	10,000	6,300	2.85
65	160	37	6413	6413 ZZ	6413 2RS	119000	78000	9,500	6,000	3.35
70	180	42	6414	6414 ZZ	6414 2RS	143000	104000	8,500	5,300	4.95
75	190	45	6415	6415 ZZ	6415 2RS	153000	114000	8,000	5,000	5.80
80	200	48	6416	6416 ZZ	6416 2RS	163000	125000	7,500	4,800	6.85
85	210	52	6417	6417 ZZ	6417 2RS	174000	137000	7,000	4,500	8.05
90	225	54	6418	6418 ZZ	6418 2RS	186000	150000	6,700	4,300	9.80

Single Row Thin Type Series: 16000

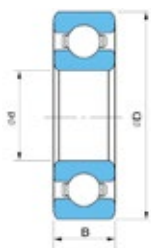


Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference	Limiting	
						C	C ₀	speed	speed	
mm						N		r/min		kg
15	32	8	16002	16002 ZZ	16002 2RS	5850	2850	50,000	32,000	0.030
17	35	8	16003	16003 ZZ	16003 2RS	6370	3250	45,000	28,000	0.038
20	42	8	16004	16004 ZZ	16004 2RS	7280	4050	38,000	24,000	0.050
25	47	8	16005	16005 ZZ	16005 2RS	8060	4750	32,000	20,000	0.060
30	55	9	16006	16006 ZZ	16006 2RS	11900	7350	28,000	17,000	0.089
35	62	9	16007	16007 ZZ	16007 2RS	13000	8150	24,000	15,000	0.11
40	68	9	16008	16008 ZZ	16008 2RS	13800	10200	22,000	14,000	0.13
45	75	10	16009	16009 ZZ	16009 2RS	16500	10800	20,000	12,000	0.17
50	80	10	16010	16010 ZZ	16010 2RS	16800	11400	18,000	11,000	0.18
55	90	11	16011	16011 ZZ	16011 2RS	20300	14000	16,000	10,000	0.27
60	95	11	16012	16012 ZZ	16012 2RS	20800	15000	15,000	9,500	0.29
65	100	11	16013	16013 ZZ	16013 2RS	22500	19600	14,000	9,000	0.30
70	110	13	16014	16014 ZZ	16014 2RS	29100	25000	13,000	8,000	0.44
75	115	13	16015	16015 ZZ	16015 2RS	30200	27000	12,000	7,500	0.46
80	125	14	16016	16016 ZZ	16016 2RS	35100	31500	11,000	7,000	0.61
85	130	14	16017	16017 ZZ	16017 2RS	35800	33500	11,000	6,700	0.64
90	140	16	16018	16018 ZZ	16018 2RS	43600	39000	10,000	6,300	0.85
95	145	16	16019	16019 ZZ	16019 2RS	44900	41500	9,500	6,000	0.89
100	150	16	16020	16020 ZZ	16020 2RS	46200	44000	9,500	5,600	0.94

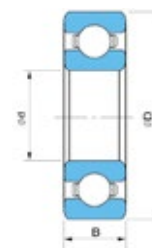
Single Row Thin Type Series: 16000



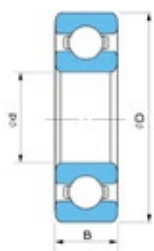
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference	Limiting	
						C	C ₀	speed	speed	
mm						N		r/min		kg
105	160	18	16021	16021 ZZ	16021 2RS	54000	51000	8,500	5,300	1.20
110	170	19	16022	16022 ZZ	16022 2RS	60500	57000	8,000	5,000	1.45
120	180	19	16024	16024 ZZ	16024 2RS	63700	64000	7,500	4,800	1.55
130	200	22	16026	16026 ZZ	16026 2RS	83200	81500	7,000	4,300	2.35
140	210	22	16028	16028 ZZ	16028 2RS	80600	86500	6,700	4,000	2.55
150	225	24	16030	16030 ZZ	16030 2RS	92300	98000	6,000	3,800	3.15
160	240	25	16032	16032 ZZ	16032 2RS	99500	108000	5,600	3,600	3.65
170	260	28	16034	16034 ZZ	16034 2RS	119000	129000	5,300	3,200	5.00
180	280	31	16036	16036 ZZ	16036 2RS	138000	146000	4,800	3,000	6.50
190	290	31	16038	16038 ZZ	16038 2RS	148000	166000	4,800	3,000	6.90
200	310	34	16040	16040 ZZ	16040 2RS	168000	190000	4,300	2,800	8.80
220	340	37	16044	16044 ZZ	16044 2RS	174000	204000	4,000	2,400	11.50
240	360	37	16048	16048 ZZ	16048 2RS	203000	255000	3,600	2,200	12.50
260	400	44	16052	16052 ZZ	16052 2RS	238000	310000	3,200	2,000	18.00
280	420	44	16056	16056 ZZ	16056 2RS	242000	335000	3,000	1,900	19.00
300	460	50	16060	16060 ZZ	16060 2RS	430000	295000	1,700	2,500	32.60



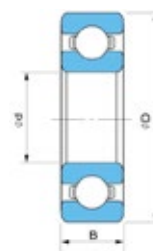
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm									N	r/min
3	7	2	683	683 ZZ	683 2RS	346	116	81,000	65,000	0.010
4	9	4	684	684 ZZ	684 2RS	585	225	81,000	61,000	0.010
5	11	3	685	685 ZZ	685 2RS	643	255	62,400	46,800	0.012
6	13	5	686	686 ZZ	686 2RS	972	396	57,600	43,200	0.019
7	14	5	687	687 ZZ	687 2RS	1053	459	54,000	40,500	0.002
8	16	5	688	688 ZZ	688 2RS	1125	537	51,600	38,700	0.003
9	17	5	689	689 ZZ	689 2RS	1557	729	49,200	36,900	0.058
10	19	5	6800	6800 ZZ	6800 2RS	1720	830	80,000	48,000	0.005
12	21	5	6801	6801 ZZ	6801 2RS	1740	915	70,000	43,000	0.006
15	24	5	6802	6802 ZZ	6802 2RS	1900	1100	60,000	38,000	0.007
17	26	5	6803	6803 ZZ	6803 2RS	2030	1270	56,000	34,000	0.008
20	32	7	6804	6804 ZZ	6804 2RS	4030	2320	45,000	28,000	0.018
25	37	7	6805	6805 ZZ	6805 2RS	4360	2600	38,000	24,000	0.022
30	42	7	6806	6806 ZZ	6806 2RS	4490	2900	32,000	20,000	0.025
35	47	7	6807	6807 ZZ	6807 2RS	4360	3350	30,000	18,000	0.029
40	52	7	6808	6808 ZZ	6808 2RS	4490	3750	26,000	16,000	0.032
45	58	7	6809	6809 ZZ	6809 2RS	6630	6100	22,000	14,000	0.04
50	65	7	6810	6810 ZZ	6810 2RS	6760	6800	20,000	13,000	0.05
55	72	9	6811	6811 ZZ	6811 2RS	9040	8800	19,000	12,000	0.08
60	78	10	6812	6812 ZZ	6812 2RS	11900	11400	17,000	11,000	0.11
65	85	10	6813	6813 ZZ	6813 2RS	12400	12700	16,000	10,000	0.13
70	90	10	6814	6814 ZZ	6814 2RS	12400	13200	15,000	9,000	0.14
75	95	10	6815	6815 ZZ	6815 2RS	12700	14300	14,000	8,500	0.15
80	100	10	6816	6816 ZZ	6816 2RS	13000	15000	13,000	8,000	0.15
85	110	13	6817	6817 ZZ	6817 2RS	19500	20800	12,000	7,500	0.27



Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
90	115	13	6818	6818 ZZ	6818 2RS	19500	22000	11,000	7,000	0.28
95	120	13	6819	6819 ZZ	6819 2RS	19900	22800	11,000	6,700	0.30
100	125	13	6820	6820 ZZ	6820 2RS	17800	18300	10,000	6,300	0.31
105	130	13	6821	6821 ZZ	6821 2RS	20800	19600	10,000	6,300	0.32
110	140	16	6822	6822 ZZ	6822 2RS	28100	26000	9,500	5,600	0.49
120	150	16	6824	6824 ZZ	6824 2RS	29100	28000	8,500	5,300	0.54
130	165	18	6826	6826 ZZ	6826 2RS	37700	43000	8,000	4,800	0.77
140	175	18	6828	6828 ZZ	6828 2RS	39000	46500	7,500	4,500	0.85
150	190	20	6830	6830 ZZ	6830 2RS	48800	61000	6,700	4,300	1.20
160	200	20	6832	6832 ZZ	6832 2RS	49400	64000	6,300	4,000	1.25
170	215	22	6834	6834 ZZ	6834 2RS	61800	78000	6,000	3,600	1.65
180	225	22	6836	6836 ZZ	6836 2RS	62400	81500	5,600	3,400	1.75
190	240	24	6838	6838 ZZ	6838 2RS	76100	98000	5,300	3,200	2.25
200	250	24	6840	6840 ZZ	6840 2RS	76100	102000	5,000	3,200	2.35
220	270	24	6844	6844 ZZ	6844 2RS	78000	110000	4,500	2,800	2.55
240	300	28	6848	6848 ZZ	6848 2RS	108000	150000	4,000	2,600	3.90
260	320	28	6852	6852 ZZ	6852 2RS	111000	163000	3,800	2,400	4.15
280	350	33	6856	6856 ZZ	6856 2RS	138000	200000	3,400	2,200	6.25
300	380	38	6860	6860 ZZ	6860 2RS	172000	245000	3,200	2,000	8.90
320	400	38	6864	6864 ZZ	6864 2RS	172000	255000	3,000	1,900	9.50
340	420	38	6868	6868 ZZ	6868 2RS	178000	275000	2,800	1,800	10.00
360	440	38	6872	6872 ZZ	6872 2RS	182000	285000	2,600	2,200	12.00
380	480	46	6876	6876 ZZ	6876 2RS	242000	390000	2,400	2,000	20.00
400	500	46	6880	6880 ZZ	6880 2RS	247000	405000	2,400	1,900	20.50

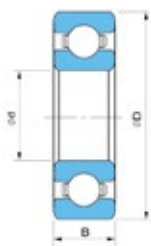


Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
3	8	4	693	693 ZZ	693 2RS	504	161	80,000	60,000	0.0008
4	11	4	694	694 ZZ	694 2RS	820	275	82,000	50,000	0.0017
5	13	4	695	695 ZZ	695 2RS	972	387	60,000	45,000	0.0025
6	15	5	696	696 ZZ	696 2RS	1566	603	56,400	42,300	0.0039
7	17	5	697	697 ZZ	697 2RS	1449	643	50,400	37,800	0.0049
8	19	6	698	698 ZZ	698 2RS	2016	814	52,000	39,000	0.0071
9	20	6	699	699 ZZ	699 2RS	1908	886	48,000	36,000	0.0076
10	22	6	6900	6900 ZZ	6900 2RS	2700	1270	70,000	45,000	0.010
12	24	6	6901	6901 ZZ	6901 2RS	2910	1460	67,000	40,000	0.011
15	28	7	6902	6902 ZZ	6902 2RS	4360	2240	56,000	34,000	0.016
17	30	7	6903	6903 ZZ	6903 2RS	4620	2550	50,000	32,000	0.016
20	37	9	6904	6904 ZZ	6904 2RS	6370	3650	43,000	26,000	0.037
25	42	9	6905	6905 ZZ	6905 2RS	7020	4300	36,000	22,000	0.045
30	47	9	6906	6906 ZZ	6906 2RS	7280	4550	30,000	19,000	0.049
35	55	10	6907	6907 ZZ	6907 2RS	10800	7800	26,000	16,000	0.080
40	62	12	6908	6908 ZZ	6908 2RS	13800	10000	24,000	14,000	0.12
45	68	12	6909	6909 ZZ	6909 2RS	14000	10800	20,000	13,000	0.14
50	72	12	6910	6910 ZZ	6910 2RS	14600	11800	19,000	12,000	0.14
55	80	13	6911	6911 ZZ	6911 2RS	16500	14000	17,000	11,000	0.19
60	85	13	6912	6912 ZZ	6912 2RS	16500	14300	16,000	10,000	0.20
65	90	13	6913	6913 ZZ	6913 2RS	17400	16000	15,000	9,500	0.22
70	100	16	6914	6914 ZZ	6914 2RS	23800	21200	14,000	8,500	0.35
75	105	16	6915	6915 ZZ	6915 2RS	24200	22400	13,000	8,000	0.37
80	110	16	6916	6916 ZZ	6916 2RS	25100	20400	12,000	7,500	0.38



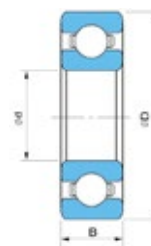
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
85	120	18	6917	6917 ZZ	6917 2RS	31900	30000	11,000	7,000	0.55
90	125	18	6918	6918 ZZ	6918 2RS	33200	31500	11,000	6,700	0.59
95	130	18	6919	6919 ZZ	6919 2RS	33800	33500	10,000	6,300	0.61
100	140	20	6920	6920 ZZ	6920 2RS	42300	41500	9,500	6,000	0.83
105	145	20	6921	6921 ZZ	6921 2RS	44200	44000	9,500	5,600	0.87
110	150	20	6922	6922 ZZ	6922 2RS	43600	45000	9,000	5,600	0.90
120	165	22	6924	6924 ZZ	6924 2RS	55300	57000	8,000	5,000	1.20
130	180	24	6926	6926 ZZ	6926 2RS	65000	67000	7,500	4,500	1.60
140	190	24	6928	6928 ZZ	6928 2RS	66300	72000	7,000	4,300	1.70
150	210	28	6930	6930 ZZ	6930 2RS	88400	93000	6,300	5,300	3.05
160	220	28	6932	6932 ZZ	6932 2RS	92300	98000	6,000	3,800	2.70
170	230	28	6934	6934 ZZ	6934 2RS	93600	106000	5,600	4,800	3.40
180	250	33	6936	6936 ZZ	6936 2RS	119000	134000	5,300	3,200	5.00
190	260	33	6938	6938 ZZ	6938 2RS	117000	134000	5,000	3,200	4.50
200	280	38	6940	6940 ZZ	6940 2RS	148000	166000	4,800	3,000	6.30
220	300	38	6944	6944 ZZ	6944 2RS	151000	180000	4,300	2,600	6.80
240	320	38	6948	6948 ZZ	6948 2RS	159000	200000	4,000	2,400	7.30
260	360	46	6952	6952 ZZ	6952 2RS	212000	270000	3,600	2,200	12.00
280	380	46	6956	6956 ZZ	6956 2RS	216000	285000	3,200	2,000	12.00
300	420	56	6960	6960 ZZ	6960 2RS	270000	375000	3,000	1,900	19.00
360	480	56	6972	6972 ZZ	6972 2RS	291000	450000	2,600	2,000	28.00
380	520	65	6976	6976 ZZ	6976 2RS	338000	540000	2,400	1,900	40.00
400	540	65	6980	6980 ZZ	6980 2RS	345000	570000	2,200	1,800	41.50

Single Row Series: 62200



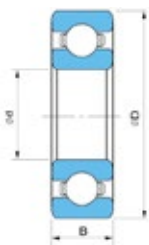
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
10	30	14	62200	62200 ZZ	62200 2RS	5070	2360	—	17,000	0.040
12	32	14	62201	62201 ZZ	62201 2RS	6890	3100	—	15,000	0.045
15	35	14	62202	62202 ZZ	62202 2RS	7800	3750	—	13,000	0.054
17	40	16	62203	62203 ZZ	62203 2RS	9560	4750	—	12,000	0.089
20	47	18	62204	62204 ZZ	62204 2RS	12700	6550	—	10,000	0.13
25	52	18	62205	62205 ZZ	62205 2RS	14000	7800	—	8,500	0.15
30	62	20	62206	62206 ZZ	62206 2RS	19500	11200	—	7,500	0.25
35	72	23	62207	62207 ZZ	62207 2RS	25500	15300	—	6,300	0.40
40	80	23	62208	62208 ZZ	62208 2RS	30700	19000	—	5,600	0.47
45	85	23	62209	62209 ZZ	62209 2RS	33200	21600	—	5,000	0.51
50	90	23	62210	62210 ZZ	62210 2RS	35100	23200	—	4,800	0.54
55	100	25	62211	62211 ZZ	62211 2RS	43600	29000	—	4,300	0.75
60	110	28	62212	62212 ZZ	62212 2RS	52700	36000	—	4,000	1.00
65	120	31	62213	62213 ZZ	62213 2RS	55900	40500	—	3,600	1.40
70	125	31	62214	62214 ZZ	62214 2RS	60500	45000	—	3,400	1.40

Single Row Series: 62300



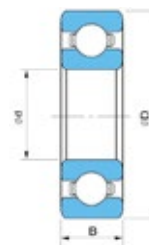
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
10	35	17	62300	62300 ZZ	62300 2RS	8060	3400	—	15,000	0.06
15	42	17	62302	62302 ZZ	62302 2RS	11400	5400	—	12,000	0.11
17	47	19	62303	62303 ZZ	62303 2RS	13500	6550	—	11,000	0.16
20	52	21	62304	62304 ZZ	62304 2RS	15900	7800	—	9,500	0.21
25	62	24	62305	62305 ZZ	62305 2RS	22500	11600	—	7,500	0.32
30	72	27	62306	62306 ZZ	62306 2RS	28100	16000	—	6,300	0.50
35	80	31	62307	62307 ZZ	62307 2RS	33200	19000	—	6,000	0.68
40	90	33	62308	62308 ZZ	62308 2RS	41000	24000	—	5,000	0.92
45	100	36	62309	62309 ZZ	62309 2RS	52700	31500	—	4,500	1.20
50	110	40	62310	62310 ZZ	62310 2RS	61800	38000	—	4,300	1.60
55	120	43	62311	62311 ZZ	62311 2RS	71500	45000	—	3,800	2.05
60	130	46	62312	62312 ZZ	62312 2RS	81900	52000	—	3,400	2.55
65	140	48	62313	62313 ZZ	62313 2RS	92300	60000	—	3,200	3.00
70	150	51	62314	62314 ZZ	62314 2RS	104000	68000	—	3,000	3.75

Single Row Series: **63000**



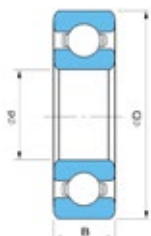
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
10	26	12	63000	63000 ZZ	63000 2RS	4620	1960	—	19,000	0.03
12	28	12	63001	63001 ZZ	63001 2RS	5070	2360	—	17,000	0.03
15	32	13	63002	63002 ZZ	63002 2RS	5590	2850	—	14,000	0.04
17	35	14	63003	63003 ZZ	63003 2RS	6050	3250	—	13,000	0.05
20	42	16	63004	63004 ZZ	63004 2RS	9360	5000	—	11,000	0.09
25	47	16	63005	63005 ZZ	63005 2RS	11200	6550	—	9,500	0.11
30	55	19	63006	63006 ZZ	63006 2RS	13300	8300	—	8,000	0.17
35	62	20	63007	63007 ZZ	63007 2RS	15900	10200	—	7,000	0.23
40	68	21	63008	63008 ZZ	63008 2RS	16800	11000	—	6,300	0.27

Industrial Ball Bearings Inch Type Series: **1600**



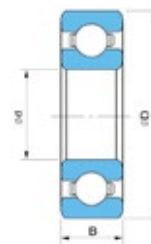
Principal dimensions				Designation			Basic Load Ratings		Mass
d		D	B				Dynamic	Static	
							C	C ₀	
in.	Fraction	in.					N		kg
0.188	3/16	0.688	0.250	1601	1601 ZZ	1601 2RS	2670	980	0.0041
0.250	1/4	0.688	0.250	1602	1602 ZZ	1602 2RS	2830	1070	0.0064
0.313	5/16	0.875	0.281	1603	1603 ZZ	1603 2RS	3320	1380	0.0095
0.375	3/8	0.875	0.281	1604	1604 ZZ	1604 2RS	3340	1425	0.0086
0.313	5/16	0.906	0.313	1605	1605 ZZ	1605 2RS	3320	1405	0.0168
0.375	3/8	0.906	0.313	1606	1606 ZZ	1606 2RS	3340	1425	0.0218
0.438	7/16	0.906	0.313	1607	1607 ZZ	1607 2RS	4520	1915	0.0222
0.375	3/8	1.125	0.375	1614	1614 ZZ	1614 2RS	5075	2315	0.0349
0.438	7/16	1.125	0.375	1615	1615 ZZ	1615 2RS	5100	2360	0.0322
0.500	1/2	1.125	0.375	1616	1616 ZZ	1616 2RS	5120	2005	0.0299
0.438	7/16	1.375	0.438	1620	1620 ZZ	1620 2RS	7525	3560	0.0454
0.500	1/2	1.375	0.438	1621	1621 ZZ	1621 2RS	7565	3630	0.0481

Industrial Ball Bearings Inch Type Series: 1600



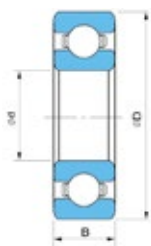
Principal dimensions				Designation			Basic Load Ratings		Mass
d		D	B				Dynamic	Static	
							C	C ₀	
in.	Fraction	in.					N		kg
0.563	9/16	1.375	0.438	1622	1622 ZZ	1622 2RS	7610	3675	0.0458
0.625	5/8	1.375	0.438	1623	1623 ZZ	1623 2RS	7655	3720	0.0399
0.625	5/8	1.625	0.500	1628	1628 ZZ	1628 2RS	9345	4875	0.0721
0.750	3/4	1.625	0.500	1630	1630 ZZ	1630 2RS	9345	4965	0.0649
0.625	5/8	1.750	0.500	1633	1633 ZZ	1633 2RS	9345	4985	0.0921
0.750	3/4	1.750	0.500	1635	1635 ZZ	1635 2RS	9415	5075	0.0848
0.750	3/4	2.000	0.563	1638	1638 ZZ	1638 2RS	10105	5745	0.1202
0.875	7/8	2.000	0.563	1640	1640 ZZ	1640 2RS	10080	5855	0.1120
1.000	1	2.000	0.563	1641	1641 ZZ	1641 2RS	10060	5990	0.1002
1.125	1 1/8	2.500	0.625	1652	1652 ZZ	1652 2RS	16035	10150	0.2100
1.250	1 1/4	2.500	0.625	1654	1654 ZZ	1654 2RS	16020	10235	0.1901
1.250	1 1/4	2.563	0.688	1657	1657 ZZ	1657 2RS	19580	11125	0.2150
1.313	1 5/16	2.563	0.688	1658	1658 ZZ	1658 2RS	19450	11570	0.2000

Series: R Inch Type



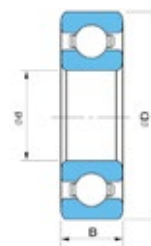
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
1.984	6.35	2.38	R 1-4	R 1-4 ZZ	R 1-4 2RS	251	80	53,325	71,100	0.35
2.38	4.762	1.588	R 133	R 133 ZZ	R 133 2RS	112	38	57,375	76,500	0.12
2.38	7.938	2.779	R 1-5	R 1-5 ZZ	R 1-5 2RS	387	137	44,550	59,400	0.69
3.175	6.356	2.38	R 144	R 144 ZZ	R 144 2RS	256	86	47,250	63,000	0.27
3.175	7.938	2.779	R 2-5	R 2-5 ZZ	R 2-5 2RS	504	162	42,525	56,700	0.61
3.175	9.525	2.779	R 2-6	R 2-6 ZZ	R 2-6 2RS	576	202	39,150	52,200	0.88
3.175	9.525	3.967	R - 2	R - 2 ZZ	R - 2 2RS	576	202	39,150	52,200	1.3
3.175	12.7	4.366	R - 2A	R - 2A ZZ	R - 2A 2RS	1035	355	34,425	45,900	2.5
3.967	7.938	2.779	R 155	R 155 ZZ	R 155 2RS	301	120	40,500	54,000	0.54

Series: **R** Inch Type



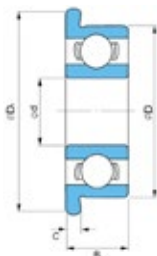
Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm								N	r/min	
4.762	7.938	2.779	R 156	R 156 ZZ	R 156 2RS	355	129	39,150	52,200	0.44
4.762	9.525	3.175	R 166	R 166 ZZ	R 166 2RS	639	241	37,125	49,500	0.8
4.762	12.7	3.967	R - 3	R - 3 ZZ	R - 3 2RS	1179	441	32,400	43,200	2.2
6.35	9.525	3.175	R 168	R 168 ZZ	R 168 2RS	241	122	34,425	45,900	0.6
6.35	12.7	3.175	R 188	R 188 ZZ	R 188 2RS	747	333	31,050	41,400	1.6
6.35	15.875	4.978	R - 4	R - 4 ZZ	R - 4 2RS	1332	553	29,025	38,700	4.4
6.35	19.05	5.566	R - 4A	R - 4A ZZ	R - 4A 2RS	2016	796	27,000	36,000	7
7.938	12.7	3.967	R 1810	R 1810 ZZ	R 1810 2RS	481	244	32,400	43,200	1.7
9.525	22.225	5.566	R - 6	R - 6 ZZ	R - 6 2RS	3015	1269	25,650	34,200	9

Other types of Miniature and Extra Small Bearings



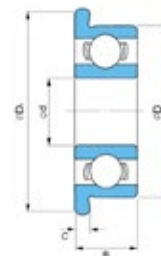
Principal dimensions			Designation	Basic Load Ratings		Speed Ratings	Wt.
d	D	B		Dynamic	Static		
				C	C ₀		
mm				N	r/min	gms.	
1.500	4.000	1.200	015M04	101	30	108,000	0.100
1.500	5.000	2.000	015M05	216	62	90,000	0.220
1.500	6.000	2.500	015M06	297	89	81,000	0.350
2.000	5.000	2.000	2M05	169	53	90,000	0.170
2.000	6.000	2.500	2M06	297	89	81,000	0.300
2.000	7.000	2.500	2M07	346	115	67,500	0.450
2.500	8.000	2.500	025M08	504	161	60,300	0.550
3.000	6.000	2.000	3M06	188	66	72,000	0.200
3.000	8.000	2.500	3M08	504	161	60,300	0.500
3.000	9.000	3.000	3M09	576	203	58,500	0.800
4.000	8.000	2.000	4M07	355	126	60,300	0.400
4.000	9.000	2.500	4M08	576	203	54,900	0.650
4.000	11.000	4.000	4M10	643	255	47,700	1.600
5.000	8.000	2.000	5M08	250	118	56,700	0.250
5.000	9.000	2.500	5M09	391	151	54,000	0.550
5.000	10.000	3.000	5M10	391	151	52,200	0.900
7.000	11.000	2.500	7M11	409	181	45,000	0.700
7.000	13.000	3.000	7M13	747	337	43,200	1.500
7.000	14.000	3.500	687	1053	459	40,500	2.000
7.000	17.000	5.000	697	1449	643	37,800	4.800
8.000	12.000	2.200	8M12	481	244	43,200	0.700
8.000	14.000	3.500	8M14	738	346	40,500	1.900
8.000	16.000	4.000	688	1125	531	38,700	3.000
9.000	17.000	4.000	689	1557	729	36,900	5.800

Single Row Flange Type



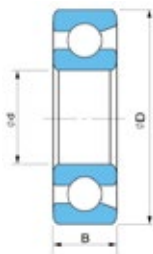
Principal dimensions					Designation	Basic Load Ratings		Speed Ratings	Mass
d	D	D ₁	B	C		Dynamic	Static		
						C	C ₀		
mm						N		r/min	gms.
1.500	4.000	5.000	1.200	0.400	F015M04	101	30	108,000	0.120
1.500	5.000	6.500	2.000	0.600	F015M05	216	62	90,000	0.260
1.500	6.000	7.500	2.500	0.600	F015M06	297	89	81,000	0.420
2.000	5.000	6.100	1.500	0.500	F682	169	53	90,000	0.190
2.000	5.000	6.200	2.000	0.600	F2M05	169	53	90,000	0.210
2.000	6.000	7.500	2.300	0.600	F692	297	89	81,000	0.350
2.000	6.000	7.200	2.500	0.600	F2M06	297	89	81,000	0.360
2.000	7.000	8.200	2.500	0.600	F2M07	346	115	67,500	0.490
2.000	7.000	9.500	2.800	0.700	F602	346	115	67,500	0.600
2.500	6.000	7.100	1.800	0.500	F68/2.5	188	66	72,000	0.250
2.500	7.000	8.500	2.500	0.700	F69/2.5	346	115	67,500	0.500
2.500	8.000	9.200	2.500	0.600	F025M08	504	161	60,300	0.680
2.500	9.000	9.500	2.800	0.700	F60/2.5	495	157	60,300	0.710
3.000	6.000	7.200	2.000	0.600	F3M06	188	66	72,000	0.260
3.000	7.000	8.100	2.000	0.500	F683	346	116	65,700	0.380
3.000	8.000	9.200	2.500	0.600	F3M08	504	161	60,300	0.560
3.000	8.000	9.500	3.000	0.700	F693	504	161	60,300	0.710
3.000	9.000	10.200	2.500	0.600	F3M09	576	203	59,400	0.840
3.000	9.000	10.500	3.000	0.700	F603	576	203	58,500	0.930
3.000	10.000	11.500	4.000	1.000	F623	553	203	49,500	1.650
4.000	7.000	8.200	2.000	0.600	F4M07	283	103	61,200	0.300
4.000	8.000	9.200	2.000	0.600	F4M08	355	126	60,300	0.470
4.000	9.000	10.300	2.500	0.600	F684	576	203	54,900	0.740
4.000	10.000	11.200	3.000	0.600	F4M10	585	212	49,500	1.000
4.000	11.000	12.500	4.000	1.000	F694	643	255	47,700	1.800
4.000	12.000	13.500	4.000	1.000	F604	873	324	42,300	3.100
4.000	13.000	15.000	5.000	1.000	F624	1170	436	40,500	4.100

Single Row Flange Type



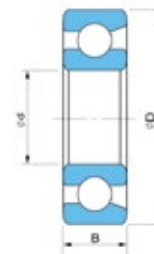
Principal dimensions					Designation	Basic Load Ratings		Speed Ratings	Mass
d	D	D ₁	B	C		Dynamic	Static		
						C	C ₀		
mm						N		r/min	gms.
5.000	8.000	9.200	2.000	0.600	F5M08	250	118	56,700	0.330
5.000	9.000	10.200	2.500	0.600	F5M09	391	151	54,000	0.600
5.000	10.000	11.200	3.000	0.600	F5M10	391	151	52,200	1.000
5.000	11.000	12.500	3.000	0.800	F685	643	255	46,800	1.300
5.000	13.000	15.000	4.000	1.000	F695	972	387	45,000	2.700
5.000	14.000	16.000	5.000	1.000	F605	1197	454	40,500	4.200
5.000	16.000	18.000	5.000	1.000	F625	1557	603	38,700	6.200
6.000	10.000	11.200	2.500	0.600	F6M10	445	197	47,700	0.650
6.000	12.000	13.200	3.000	0.600	F6M12	643	263	45,000	1.500
6.000	13.000	15.000	3.500	1.000	F686	972	396	43,200	2.200
6.000	15.000	17.000	5.000	1.200	F696	1566	603	42,300	4.200
6.000	17.000	19.000	6.000	1.200	F606	2034	756	37,800	6.200
6.000	19.000	22.000	6.000	1.500	F626	2358	954	34,200	8.700
7.000	11.000	12.200	2.500	0.600	F7M11	409	181	45,000	0.800
7.000	13.000	14.200	3.000	0.600	F7M13	747	337	43,200	1.600
7.000	14.000	16.000	3.500	1.000	F687	1053	459	40,500	2.500
7.000	17.000	19.000	5.000	1.200	F697	1449	643	37,800	5.300
7.000	19.000	22.000	6.000	1.500	F607	2358	954	36,000	8.400
8.000	12.000	13.200	2.500	0.600	F8M12	481	244	43,200	0.820
8.000	14.000	15.600	3.500	0.800	F8M14	738	346	40,500	2.100
8.000	16.000	18.000	4.000	1.000	F688	1125	531	38,700	3.400
8.000	19.000	22.000	6.000	1.500	F698	2016	814	37,800	8.200
8.000	22.000	25.000	7.000	1.500	F608	2970	1224	34,200	12.600
9.000	17.000	19.000	4.000	1.000	F689	1557	729	36,900	6.000
9.000	20.000	23.000	6.000	1.500	F699	1908	886	36,000	8.800

Magneto Bearings



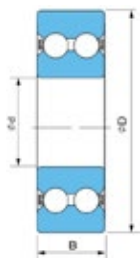
Principal dimensions			Designation	Basic Load Ratings		Speed ratings		Mass
d	D	B		Dynamic	Static	Reference speed	Limiting speed	
				C	C ₀	Grease	Oil	
mm				N		r/min		
4	16	5	E4	1550	260	34,000	4,000	0.005
5	16	5	E5	1550	260	34,000	4,000	0.005
6	21	7	E6	2800	450	30,000	36,000	0.011
7	22	7	E7	3100	550	28,000	34,000	0.012
8	24	7	E8	3200	600	28,000	34,000	0.014
9	28	8	E9	4250	830	26,000	32,000	0.022
10	28	8	E10	4250	830	26,000	32,000	0.021
11	32	7	E11	3500	800	22,000	28,000	0.027
12	32	7	E12	3500	800	22,000	28,000	0.027
13	30	7	E13	3500	800	22,000	28,000	0.031

Magneto Bearings



Principal dimensions			Designation	Basic Load Ratings		Speed ratings		Mass
d	D	B		Dynamic	Static	Reference speed	Limiting speed	
				C	C ₀	Grease	Oil	
mm				N		r/min		
14	35	8	E14	4500	1100	19,000	24,000	0.034
15	35	8	E15	4500	1100	19,000	24,000	0.043
15	40	10	B015	7350	1700	18,000	22,000	0.055
17	40	10	L17	5700	1450	17,000	2,0000	0.053
17	44	11	B017	8800	2100	15,000	18,000	0.073
19	40	9	E19	3450	1000	17,000	2,0000	0.048
20	47	12	E20	8800	2240	14,000	17,000	0.087
20	47	14	L20	8800	2240	14,000	17,000	0.1
20	52	15	M20	1220	3000	13,000	16,000	0.138
25	52	15	L25	8650	2400	12,000	15,000	0.122
25	62	17	M25	16000	4000	11,000	14,000	0.217

Double Row Series: 4200

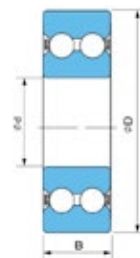


***Note:**

- Open types bearings are with Steel cage and Close types (2RS and ZZ) are with Nylon/Polyamide cage.

Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm									N	r/min
10	30	14	4200	4200 ZZ	4200 2RS	9230	5200	40,000	22,000	0.049
12	32	14	4201	4201 ZZ	4201 2RS	10600	6200	36,000	20,000	0.052
15	35	14	4202	4202 ZZ	4202 2RS	11900	7500	32,000	17,000	0.059
17	40	16	4203	4203 ZZ	4203 2RS	14800	9500	28,000	15,000	0.09
20	47	18	4204	4204 ZZ	4204 2RS	17800	12500	24,000	13,000	0.14
25	52	18	4205	4205 ZZ	4205 2RS	19000	14600	20,000	11,000	0.17
30	62	20	4206	4206 ZZ	4206 2RS	26000	20800	17,000	9,500	0.29
35	72	23	4207	4207 ZZ	4207 2RS	35100	28500	15,000	8,000	0.40
40	80	23	4208	4208 ZZ	4208 2RS	37100	32500	13,000	7,000	0.50
45	85	23	4209	4209 ZZ	4209 2RS	39000	36000	12,000	6,700	0.54
50	90	23	4210	4210 ZZ	4210 2RS	41000	40000	11,000	6,000	0.58
55	100	25	4211	4211 ZZ	4211 2RS	44900	44000	10,000	5,600	0.80
60	110	28	4212	4212 ZZ	4212 2RS	57200	55000	9,500	5,300	1.10
65	120	31	4213	4213 ZZ	4213 2RS	67600	67000	8,500	4,800	1.45
70	125	31	4214	4214 ZZ	4214 2RS	70200	73500	8,000	4,300	1.50
75	130	31	4215	4215 ZZ	4215 2RS	72800	80000	7,500	4,000	1.60
80	140	33	4216	4216 ZZ	4216 2RS	80600	90000	7,000	3,800	2.00
85	150	36	4217	4217 ZZ	4217 2RS	93600	102000	7,000	3,600	2.55
90	160	40	4218	4218 ZZ	4218 2RS	112000	122000	6,300	3,400	3.20
100	180	46	4220	42 20 ZZ	4220 2RS	140000	156000	5,600	3,000	4.70

Double Row Series: 4300



***Note:**

- Open types bearings are with Steel cage and Close types (2RS and ZZ) are with Nylon/Polyamide cage.

Principal dimensions			Designation			Basic Load Ratings		Speed Ratings		Mass
d	D	B				Dynamic	Static	Reference speed	Limiting speed	
						C	C ₀			
mm						N		r/min		kg
12	37	17	4301	4301 ZZ	4301 2RS	13000	7800	34,000	18,000	0.092
15	42	17	4302	4302 ZZ	4302 2RS	14800	9500	28,000	15,000	0.12
17	47	19	4303	4303 ZZ	4303 2RS	19500	13200	24,000	13,000	0.16
20	52	21	4304	4304 ZZ	4304 2RS	23400	16000	22,000	12,000	0.21
25	62	24	4305	4305 ZZ	4305 2RS	31900	22400	18,000	10,000	0.34
30	72	27	4306	4306 ZZ	4306 2RS	41000	30000	16,000	8,500	0.50
35	80	31	4307	4307 ZZ	4307 2RS	50700	38000	14,000	7,500	0.68
40	90	33	4308	4308 ZZ	4308 2RS	55900	45000	12,000	6,700	0.95
45	100	36	4309	4309 ZZ	4309 2RS	68900	56000	11,000	6,000	1.25
50	110	40	4310	4310 ZZ	4310 2RS	81900	69500	10,000	5,300	1.70
55	120	43	4311	4311 ZZ	4311 2RS	97500	83000	9,000	5,000	2.15
60	130	46	4312	4312 ZZ	4312 2RS	112000	98000	8,500	4,500	2.65
65	140	48	4313	4313 ZZ	4313 2RS	121000	106000	8,000	4,300	3.25
70	150	51	4314	4314 ZZ	4314 2RS	138000	125000	7,000	3,800	3.95
75	160	55	4315	4315 ZZ	4315 2RS	156000	143000	6,700	3,600	4.80



Self-aligning Ball Bearings



Self-aligning Ball Bearings

The Inner Ring of Self-aligning Bearings has two Raceways, and Outer Ring has one spherical Raceway with its centre at the axis of Bearing. These Bearings have a self-aligning character, hence the name.

These Bearings are suitable for applications where small deflection of shaft may occur in usage.

