



160, 161, 60, S60, 618, 62, S62, 622, 623, 63, S63, 64



.2ZR (.2Z)



.2RSR (.2RS)

Deep Groove Ball Bearings



72B, 73B



32B, 33B



32, 33



33DA



32B.2ZR
33B.2ZR



32B.2RSR
33B.2RSR

Angular Contact Ball Bearings, single row Angular Contact Ball Bearings, double row



B70, B719, B72
HCS70, HCS719
HSS70, HSS719



tandem
arrangement



O arrangement



X arrangement

Spindle Bearings



QJ2, QJ3



N2

Four-Point Bearings



12, 13
22, 23



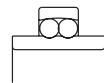
22.2RS
23.2RS



12K, 13K
22K, 23K



22K.2RS



112



adapter sleeve

Self-Aligning Ball Bearings, with cylindrical and tapered bore, adapter sleeve



NU10, 19
2, 22, 23, 3



NJ2, 22
23, 3



NUP2, 22
23, 3



N2, 3



NN30ASK

Cylindrical Roller Bearings, single row Cylindrical Roller Bearings, double row



NJ23VH



NCF29V
NCF30V



NNCV49V

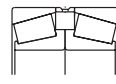


NNF50B.2LS.V
NNF50C.2LS.V

Cylindrical Roller Bearings, full complement



302, 303, 313, 320, 322
323, 329, 330, 331, 332, T.....



313N11CA



K, KH, KHM, KL, KLM, KM
(in inches)

Tapered Roller Bearings Tapered Roller Bearings, matched Tapered Roller Bearings in inch dimensions



202, 203



202K
203K



adapter sleeve

Barrel Roller Bearings, with cylindrical and tapered bore, adapter sleeve



213, 222, 223, 230, 231
232, 233, 239, 240, 241



213K, 222K, 223K, 230K
231K, 232K, 239K
240K30, 241K30



adapter sleeve



withdrawal sleeve

Spherical Roller Bearings, with cylindrical and tapered bore, adapter sleeve, withdrawal sleeve



Single row deep groove ball bearings can accommodate radial and thrust loads and can be used at high speeds. Deep groove ball bearings are non-separable. The self-aligning capacity of deep groove ball bearings is limited. Sealed deep groove ball bearings are maintenance-free and make simple constructions possible. Thanks to these capabilities and their competitive price they are the most commonly used bearing type.

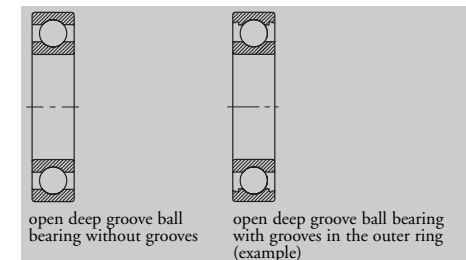
Standards

Single row deep groove ball bearings

DIN 625, part 1

Basic designs

Deep groove ball bearings are available as open basic design and with seals or shields at both sides, see page 148. For manufacturing reasons, also open bearings may have grooves in the outer ring or in the outer and the inner rings for seals or shields.



Tolerances

Single row deep groove ball bearings of basic design have normal tolerances. Bearings with narrow tolerances are supplied on request.

Tolerances: radial bearings, page 56

Bearing clearance

Single row deep groove ball bearings of basic design have normal clearance. Bearings with an increased bearing clearance are supplied on request.

Radial clearance: single row deep groove ball bearings, page 76

Cages

Basic deep groove ball bearings without cage suffix are fitted with a pressed steel cage. Deep groove ball bearings with ball riding machined brass cages are identified by the suffix M.

▼ Standard cages of deep groove ball bearings

Series	Pressed steel cage Bore reference number	Machined brass cage (M)
60	up to 30, 34	32, from 36 on
62	up to 30	from 32 on
63	up to 24	from 26 on
64	up to 14	from 15 on
160	up to 52	from 56 on
161	00, 01	
618		from 64 on
622	up to 10	
623	up to 10	

Other cage designs, e.g. polyamide cages, on request. The suitability for high speeds and high temperatures as well as the load ratings for such cages may deviate from the values indicated for bearings with standard cages.

Alignment

The self-aligning capacity of deep groove ball bearings is limited; this calls for well aligned bearing seats. Misalignment impairs the smooth running of the balls, induces additional stress in the bearing and consequently reduces the bearing service life. In order to keep additional stressing within reasonable limits, only minor misalignments – depending on the load – are permissible for deep groove ball bearings.

▼ Angle of misalignment in angular minutes

Bearing series	Low loads	High loads
62, 622, 63, 623, 64	5'...10'	8'...16'
618, 160, 60	2'...6'	5'...10'

Speed suitability

General data on the suitability for high speeds are shown on page 87 et seq. Under appropriate operating conditions, the reference speed may be exceeded up to the value for the limiting speed. Special operating conditions are taken into consideration by determining the thermally permissible operating speed. If the reference speed in the tables exceeds the limiting speed, the higher value must not be used. Restrictions for sealed bearings are described in the corresponding section on page 148.

Heat treatment

FAG deep groove ball bearings are heat-treated in such a way that they can be used at operating temperatures of up to 150 °C. Bearings with an outside diameter of more than 240 mm are dimensionally stable up to 200 °C. The limits of application of sealed bearings (see page 148) have to be observed.

FAG Deep Groove Ball Bearings

Sealed bearings · Equivalent loads

Sealed deep groove ball bearings

In addition to open deep groove ball bearings FAG supply also deep groove ball bearings with shields (non-rubbing seals) or seals (rubbing seals) on both sides. These bearings are filled, at the manufacturer's plant, with a high-quality grease tested to FAG guidelines. On request, we also supply ungreased bearings which are sealed on one side.

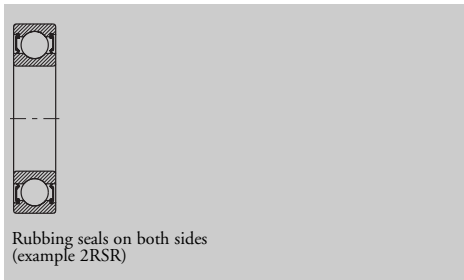
The limiting speed of bearings with shields (suffix .ZZR, bearings up to 22 mm outside diameter .2Z) is lower than that of open bearings.



Non-rubbing seals on both sides (example 2ZR)

Bearings with non-rubbing RSD seals (description on page 125) have the same favourable frictional behaviour as bearings with non-rubbing ZR seals. At stationary inner ring and rotating outer ring the lubricant loss of bearings with RSD seals is lower than of bearings with ZR seals. Deep groove ball bearings with RSD seals are available on request.

The speed of bearings with rubbing seals (.2RSR, bearings up to 22 mm outside diameter .2RS) is limited by the permissible sliding velocity of the sealing lips so that only the limiting speed is indicated in the tables.



Rubbing seals on both sides (example 2RSR)

For the suitability of sealed bearings for high temperatures see page 86; lower temperature limit $-30\text{ }^{\circ}\text{C}$.

Details on seals can be found on page 125 et seq.

Equivalent dynamic load

$$P = X \cdot F_r + Y \cdot F_a \quad [\text{kN}]$$

The contact angle of deep groove ball bearings increases with the axial load. Therefore the factors X and Y depend on the ratio $f_0 \cdot F_a / C_0$, see table below. The factor f_0 can be read off the table on page 149. C_0 is the static load rating. The values shown in the table below apply to deep groove ball bearings with normal fits (shafts machined to j5 or k5 and housings machined to J6).

Equivalent static load

$$P_0 = F_r \quad [\text{kN}] \quad \text{for} \quad \frac{F_a}{F_r} \leq 0.8$$

$$P_0 = 0.6 \cdot F_r + 0.5 \cdot F_a \quad [\text{kN}] \quad \text{for} \quad \frac{F_a}{F_r} > 0.8$$

Radial factors and thrust factors for deep groove ball bearings

$\frac{f_0 \cdot F_a}{C_0}$	Normal bearing clearance				Bearing clearance C3				Bearing clearance C4						
	$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$		$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$		$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$				
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y			
0.3	0.22	1	0	0.56	2	0.32	1	0	0.46	1.7	0.4	1	0	0.44	1.4
0.5	0.24	1	0	0.56	1.8	0.35	1	0	0.46	1.56	0.43	1	0	0.44	1.31
0.9	0.28	1	0	0.56	1.58	0.39	1	0	0.46	1.41	0.45	1	0	0.44	1.23
1.6	0.32	1	0	0.56	1.4	0.43	1	0	0.46	1.27	0.48	1	0	0.44	1.16
3	0.36	1	0	0.56	1.2	0.48	1	0	0.46	1.14	0.52	1	0	0.44	1.08
6	0.43	1	0	0.56	1	0.54	1	0	0.46	1	0.56	1	0	0.44	1

FAG Deep Groove Ball Bearings

Equivalent loads

Factor f_0 for deep groove ball bearings

Bore reference number	Factor f_0								
	Bearing series 618	160	161	60	62	622	63	623	64
3					12.9				
4					12.2				
5					13.2			13.2	
6					13			13	
7				13	12.4				
8				12.4	13				
9				13	12.4				
00				12.4	12.4			12.1	11.3
01				13	13			12.2	11.1
02		13.9		13.9	13.1			13.1	12.1
03	14.3			14.3	13.1			13.1	12.3
04	14.9			13.9	13.1			13.1	12.4
05	15.4			14.5	13.8			13.8	12.4
06	15.2			14.8	13.8			13.8	13
07	15.6			14.8	13.8			13.8	13.1
08	16			15.3	14			14	13
09	15.9			15.4	14.3			14.1	13
10	16.1			15.6	14.3			14.3	13
11	16.1			15.4	14.3				12.9
12	16.3			15.5	14.3				13.1
13	16.4			15.7	14.3				13.2
14	16.2			15.5	14.4				13.2
15	16.4			15.7	14.7				13.2
16	16.4			15.6	14.6				13.2
17	16.4			15.7	14.7				13.1
18	16.3			15.6	14.5				13.9
19	16.5			15.7	14.4				13.9
20	16.5			15.9	14.4				13.8
21	16.3			15.8	14.3				13.8
22	16.3			15.6	14.3				13.8
24	16.5			15.9	14.8				13.5
26	16.4			15.8	14.5				13.6
28	16.5			16	14.8				13.6
30	16.4			16	15.2				13.7
32	16.5			16	15.2				13.9
34	16.4			15.7	15.3				13.9
36	16.3			15.6	15.3				13.9
38	16.4			15.8	15				14
40	16.3			15.6	15.3				14.1
44	16.3			15.6	15.2				14.1
48	16.5			15.8	15.2				14.2
52	16.4			15.7	15.2				
56	16.5			15.9	15.3				
60	16.4			15.7					
64	15.9			16.5					
68	15.9			16.3					15.8
72	15.8			16.4					15.9
76	16			16.5					
80	15.9								
84	15.9								
88	15.8								
92	16								
96	16								
/500	15.9								
/530	15.9								
/560 ...									
/850	15.8								

FAG Deep Groove Ball Bearings

Bearings of stainless steel · Suffixes · Abutment dimensions

Bearings of stainless steel

FAG supply open deep groove ball bearings and deep groove ball bearings with seals on both sides (.2RSR) also of stainless steel X 65 Cr 13 (mat. no. 1.3541M). The balls are made of high-alloy chromium steel X 102 CrMo 17 (mat. no. 1.3543). The bearings carry the prefix S and the suffix W203B.

Example: S6204.2RSR.W203B

The corrosion-resistant bearings of series S60, S62, and S63 have the same main dimensions and load carrying capacity as through-hardening steel bearings of these dimensional series.

Stainless steel bearings are resistant to water, water vapour, alkaline solutions, photographic developers, and, to a certain extent, acids. The resistance to acids is limited specially with bearings which are sealed on both sides due to the RSR seals of nitrile butadiene rubber (NBR). Temperature and acid concentration should be observed.

In order to retain their increased resistance to corrosion, the surfaces of these bearings must not be damaged during mounting or in operation (e.g. by contact corrosion).

Suffixes

M	machined brass cage, ball riding
.2RS, .2RSR	two seals
.W203B	stainless steel bearings
.2Z, .2ZR	two shields

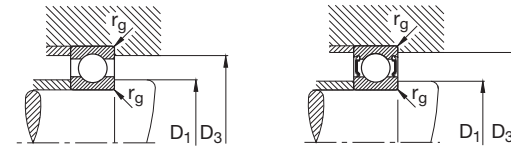
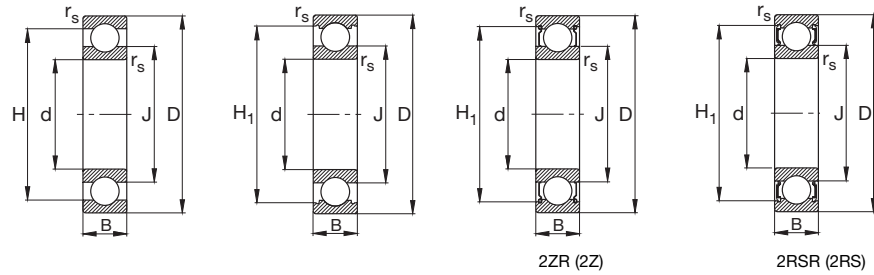
Abutment dimensions

See page 123 for general information on the abutment dimensions.

The tables list the maximum fillet radius r_f and the diameters of the abutment shoulders.

FAG Deep Groove Ball Bearings

single row

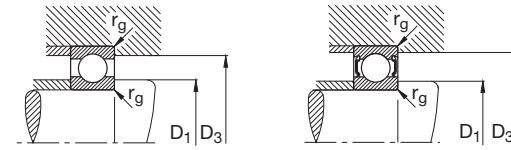
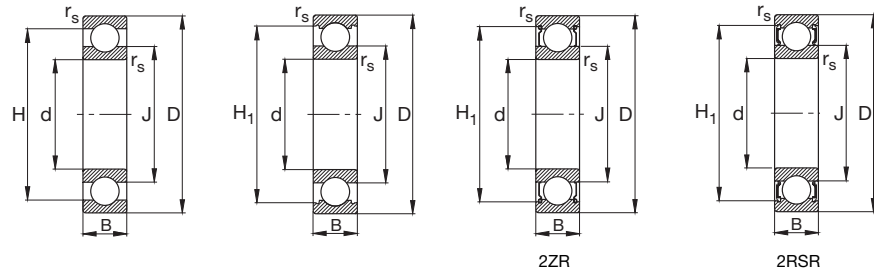


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	rs min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
3	3	10	4	0.15	7.7	8.2	5	0.001	0.64	0.22	53000	67000	623	4.4	8.6	0.15
	3	10	4	0.15	7.7	8.2	5	0.001	0.64	0.22	45000	67000	623.2Z	4.4	8.6	0.15
	3	10	4	0.15	7.7	8.2	5	0.001	0.64	0.22	32000		623.2RS	4.4	8.6	0.15
4	4	13	5	0.2	10.5	11.2	7	0.003	1.29	0.49	45000	53000	624	5.8	11.2	0.2
	4	13	5	0.2	10.5	11.2	7	0.004	1.29	0.49	38000	53000	624.2Z	5.8	11.2	0.2
	4	13	5	0.2	10.5	11.2	7	0.003	1.29	0.49	26000		624.2RS	5.8	11.2	0.2
	4	16	5	0.3	12.5	13.4	8.5	0.006	1.73	0.67	43000	43000	634	6.4	13.6	0.3
	4	16	5	0.3	12.5	13.4	8.5	0.006	1.73	0.67	36000	43000	634.2Z	6.4	13.6	0.3
	4	16	5	0.3	12.5	13.4	8.5	0.006	1.73	0.67	24000		634.2RS	6.4	13.6	0.3
5	5	16	5	0.3	12.5	13.4	8.5	0.005	1.32	0.44	43000	43000	625	7.4	13.6	0.3
	5	16	5	0.3	12.5	13.4	8.5	0.005	1.32	0.44	36000	43000	625.2Z	7.4	13.6	0.3
	5	16	5	0.3	12.5	13.4	8.5	0.005	1.32	0.44	24000		625.2RS	7.4	13.6	0.3
	5	19	6	0.3	15.5	16.7	10.8	0.008	2.55	1.04	38000	40000	635	7.4	16.6	0.3
	5	19	6	0.3	15.5	16.7	10.8	0.009	2.55	1.04	32000	40000	635.2Z	7.4	16.6	0.3
	5	19	6	0.3	15.5	16.7	10.8	0.008	2.55	1.04	22000		635.2RS	7.4	16.6	0.3
6	6	19	6	0.3	15.5	16.7	10.6	0.008	2.55	1.04	38000	38000	626	8.4	16.6	0.3
	6	19	6	0.3	15.5	16.7	10.6	0.009	2.55	1.04	32000	38000	626.2Z	8.4	16.6	0.3
	6	19	6	0.3	15.5	16.7	10.6	0.008	2.55	1.04	22000		626.2RS	8.4	16.6	0.3
7	7	19	6	0.3	15.5	16.7	10.6	0.007	2.55	1.04	38000	38000	607	9	17	0.3
	7	19	6	0.3	15.5	16.7	10.6	0.008	2.55	1.04	32000	38000	607.2Z	9	17	0.3
	7	19	6	0.3	15.5	16.7	10.6	0.007	2.55	1.04	22000		607.2RS	9	17	0.3
	7	22	7	0.3	18	19.1	12.4	0.011	3.25	1.37	36000	34000	627	9.4	19.6	0.3
	7	22	7	0.3	18	19.1	12.4	0.012	3.25	1.37	30000	34000	627.2Z	9.4	19.6	0.3
	7	22	7	0.3	18	19.1	12.4	0.011	3.25	1.37	20000		627.2RS	9.4	19.6	0.3
8	8	22	7	0.3	18	19.1	12.4	0.01	3.25	1.37	36000	36000	608	10	20	0.3
	8	22	7	0.3	18	19.1	12.4	0.011	3.25	1.37	30000	36000	608.2Z	10	20	0.3
	8	22	7	0.3	18	19.1	12.4	0.01	3.25	1.37	20000		608.2RS	10	20	0.3
9	9	24	7	0.3	19.6	20.5	14	0.015	3.65	1.63	36000	32000	609	11	22	0.3
	9	24	7	0.3	19.6	20.5	14	0.016	3.65	1.63	30000	32000	609.2ZR	11	22	0.3
	9	24	7	0.3	19.6	20.5	14	0.015	3.65	1.63	20000		609.2RSR	11	22	0.3
	9	26	8	0.3	21.4	22.5	14.7	0.02	4.55	1.96	34000	30000	629	11.4	23.6	0.3
	9	26	8	0.3	21.4	22.5	14.7	0.021	4.55	1.96	28000	30000	629.2ZR	11.4	23.6	0.3
	9	26	8	0.3	21.4	22.5	14.7	0.021	4.55	1.96	19000		629.2RSR	11.4	23.6	0.3

FAG Deep Groove Ball Bearings

single row

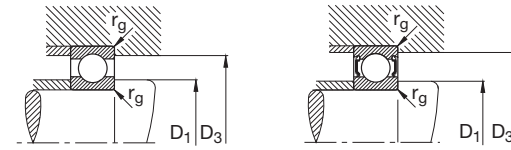
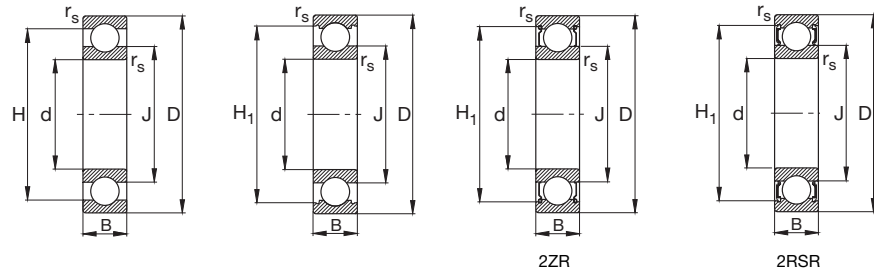


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
10	10	26	8	0.3	21.4	22.5	14.7	0.019	4.55	1.96	34000	32000	6000	12	24	0.3
	10	26	8	0.3	21.4	22.5	14.7	0.019	4.55	1.96	34000	32000	S6000.W203B	12	24	0.3
	10	26	8	0.3	21.4	22.5	14.7	0.02	4.55	1.96	28000	32000	6000.2ZR	12	24	0.3
	10	26	8	0.3	21.4	22.5	14.7	0.02	4.55	1.96	19000		6000.2RSR	12	24	0.3
	10	26	8	0.3	21.4	22.5	14.7	0.02	4.55	1.96	19000		S6000.2RSR.W203B	12	24	0.3
	10	28	8	0.3	21.4	22.5	14.7	0.024	4.55	1.96	34000		16100	12	26	0.3
	10	30	9	0.6	24	25	16.6	0.031	6	2.6	32000	26000	6200	14.2	25.8	0.6
	10	30	9	0.6	24	25	16.6	0.031	6	2.6	32000	26000	S6200.W203B	14.2	25.8	0.6
	10	30	9	0.6	24	25	16.6	0.032	6	2.6	26000	26000	6200.2ZR	14.2	25.8	0.6
	10	30	9	0.6	24	25	16.6	0.032	6	2.6	17000		6200.2RSR	14.2	25.8	0.6
	10	30	9	0.6	24	25	16.6	0.034	6	2.6	17000		S6200.2RSR.W203B	14.2	25.8	0.6
	10	30	14	0.6	23.9	24.9	16.6	0.048	6	2.6	17000		62200.2RSR	14.2	25.8	0.6
	10	35	11	0.6	27	28.6	18.1	0.055	8.15	3.45	56000	26000	6300	14.2	30.8	0.6
	10	35	11	0.6	27	28.6	18.1	0.056	8.15	3.45	56000	26000	S6300.W203B	14.2	30.8	0.6
	10	35	11	0.6	27	28.6	18.1	0.057	8.15	3.45	22000	26000	6300.2ZR	14.2	30.8	0.6
	10	35	11	0.6	27	28.6	18.1	0.057	8.15	3.45	15000		6300.2RSR	14.2	30.8	0.6
	10	35	11	0.6	27	28.6	18.1	0.058	8.15	3.45	15000		S6300.2RSR.W203B	14.2	30.8	0.6
	12	12	28	8	0.3	23.5	24.4	16.6	0.02	5.1	2.36	32000	28000	6001	14	26
12		28	8	0.3	23.5	24.4	16.6	0.021	5.1	2.36	32000	28000	S6001.W203B	14	26	0.3
12		28	8	0.3	23.5	24.4	16.6	0.02	5.1	2.36	26000	28000	6001.2ZR	14	26	0.3
12		28	8	0.3	23.5	24.4	16.6	0.022	5.1	2.36	18000		6001.2RSR	14	26	0.3
12		28	8	0.3	23.5	24.4	16.6	0.023	5.1	2.36	18000		S6001.2RSR.W203B	14	26	0.3
12		30	8	0.3	23.5	24.4	16.6	0.026	5.1	2.36	32000		16101	14	28	0.3
12		32	10	0.6	25.8	27.4	18.3	0.037	6.95	3.1	30000	26000	6201	16.2	27.8	0.6
12		32	10	0.6	25.8	27.4	18.3	0.038	6.95	3.1	30000	26000	S6201.W203B	16.2	27.8	0.6
12		32	10	0.6	25.8	27.4	18.3	0.039	6.95	3.1	24000	26000	6201.2ZR	16.2	27.8	0.6
12		32	10	0.6	25.8	27.4	18.3	0.039	6.95	3.1	16000		6201.2RSR	16.2	27.8	0.6
12		32	10	0.6	25.8	27.4	18.3	0.04	6.95	3.1	16000		S6201.2RSR.W203B	16.2	27.8	0.6
12		32	14	0.6	25.8	27.4	18.3	0.052	6.95	3.1	16000		62201.2RSR	16.2	27.8	0.6
12		37	12	1	29.6	31.4	19.5	0.062	9.65	4.15	53000	24000	6301	17.6	31.4	1
12		37	12	1	29.6	31.4	19.5	0.063	9.65	4.15	53000	24000	S6301.W203B	17.6	31.4	1
12		37	12	1	29.6	31.4	19.5	0.064	9.65	4.15	20000	24000	6301.2ZR	17.6	31.4	1
12		37	12	1	29.6	31.4	19.5	0.064	9.65	4.15	13000		6301.2RSR	17.6	31.4	1
12		37	12	1	29.6	31.4	19.5	0.065	9.65	4.15	13000		S6301.2RSR.W203B	17.6	31.4	1
15		15	32	8	0.3	26.9	28.4	20.4	0.027	5.6	2.85	30000	22000	16002	17	30
	15	32	9	0.3	26.9	28.4	20.4	0.031	5.6	2.85	30000	24000	6002	17	30	0.3
	15	32	9	0.3	26.9	28.4	20.4	0.029	5.6	2.85	30000	24000	S6002.W203B	17	30	0.3
	15	32	9	0.3	26.9	28.4	20.4	0.033	5.6	2.85	24000	24000	6002.2ZR	17	30	0.3
	15	32	9	0.3	26.9	28.4	20.4	0.033	5.6	2.85	16000		6002.2RSR	17	30	0.3
	15	32	9	0.3	26.9	28.4	20.4	0.031	5.6	2.85	16000		S6002.2RSR.W203B	17	30	0.3

FAG Deep Groove Ball Bearings

single row

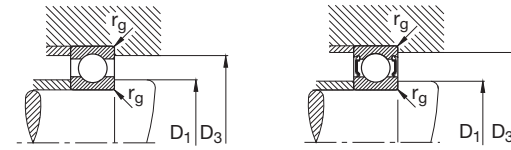
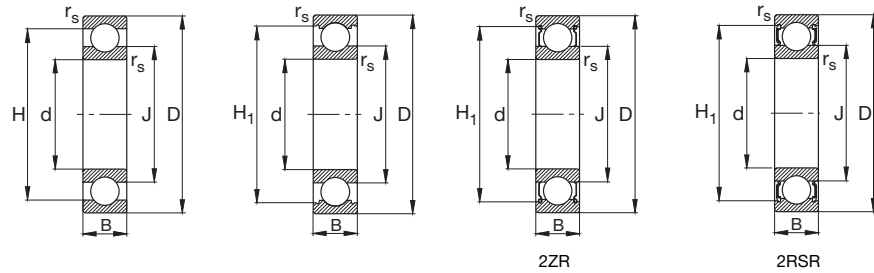


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions			
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max	
15	15	35	11	0.6	29.3	30.9	21.1	0.043	7.8	3.75	26000	24000	6202	19.2	30.8	0.6	
	15	35	11	0.6	29.3	30.9	21.1	0.043	7.8	3.75	26000	24000	S6202.W203B	19.2	30.8	0.6	
	15	35	11	0.6	29.3	30.9	21.1	0.045	7.8	3.75	20000	24000	6202.2ZR	19.2	30.8	0.6	
	15	35	11	0.6	29.3	30.9	21.1	0.045	7.8	3.75	14000		6202.2RSR	19.2	30.8	0.6	
	15	35	11	0.6	29.3	30.9	21.1	0.045	7.8	3.75	14000		S6202.2RSR.W203B	19.2	30.8	0.6	
	15	35	14	0.6	29.3	30.9	21.1	0.057	7.8	3.75	14000		62202.2RSR	19.2	30.8	0.6	
	15	42	13	1	33.5	35	23.6	0.088	11.4	5.4	43000	22000	6302	20.6	36.4	1	
	15	42	13	1	33.5	35	23.6	0.088	11.4	5.4	43000	22000	S6302.W203B	20.6	36.4	1	
	15	42	13	1	33.5	35	23.6	0.09	11.4	5.4	18000	22000	6302.2ZR	20.6	36.4	1	
	15	42	13	1	33.5	35	23.6	0.09	11.4	5.4	12000		6302.2RSR	20.6	36.4	1	
	15	42	13	1	33.5	35	23.6	0.09	11.4	5.4	12000		S6302.2RSR.W203B	20.6	36.4	1	
	15	42	17	1	33.5	35	23.6	0.114	11.4	5.4	12000		62302.2RSR	20.6	36.4	1	
	17	17	35	8	0.3	29.5	30.9	22.6	0.03	6	3.25	28000	20000	16003	19	33	0.3
		17	35	10	0.3	29.4	30.8	22.6	0.038	6	3.25	28000	22000	6003	19	33	0.3
		17	35	10	0.3	29.4	30.8	22.6	0.038	6	3.25	28000	22000	S6003.W203B	19	33	0.3
17		35	10	0.3	29.4	30.8	22.6	0.04	6	3.25	22000	22000	6003.2ZR	19	33	0.3	
17		35	10	0.3	29.4	30.8	22.6	0.04	6	3.25	14000		6003.2RSR	19	33	0.3	
17		35	10	0.3	29.4	30.8	22.6	0.04	6	3.25	14000		S6003.2RSR.W203B	19	33	0.3	
17		40	12	0.6	33.1	34.4	24	0.065	9.5	4.75	22000	20000	6203	21.2	35.8	0.6	
17		40	12	0.6	33.1	34.4	24	0.065	9.5	4.75	22000	20000	S6203.W203B	21.2	35.8	0.6	
17		40	12	0.6	33.1	34.4	24	0.067	9.5	4.75	18000	20000	6203.2ZR	21.2	35.8	0.6	
17		40	12	0.6	33.1	34.4	24	0.067	9.5	4.75	12000		6203.2RSR	21.2	35.8	0.6	
17		40	12	0.6	33.1	34.4	24	0.067	9.5	4.75	12000		S6203.2RSR.W203B	21.2	35.8	0.6	
17		40	16	0.6	33.1	34.4	24	0.087	9.5	4.75	12000		62203.2RSR	21.2	35.8	0.6	
17		47	14	1	37.9	39.3	26.2	0.114	13.4	6.55	19000	20000	6303	22.6	41.4	1	
17		47	14	1	37.9	39.3	26.2	0.111	13.4	6.55	19000	20000	S6303.W203B	22.6	41.4	1	
17		47	14	1	37.9	39.3	26.2	0.117	13.4	6.55	16000	20000	6303.2ZR	22.6	41.4	1	
17		47	14	1	37.9	39.3	26.2	0.118	13.4	6.55	11000		6303.2RSR	22.6	41.4	1	
17		47	14	1	37.9	39.3	26.2	0.115	13.4	6.55	11000		S6303.2RSR.W203B	22.6	41.4	1	
17		47	19	1	37.9	39.3	26.2	0.154	13.4	6.55	11000		62303.2RSR	22.6	41.4	1	
17	62	17	1.1	50.2	52.5	36.4	0.269	22.4	11.4	28000	17000	6403	26	53	1		
20	20	42	8	0.3	34.7	36.1	27.2	0.05	6.95	4.05	22000	16000	16004	22	40	0.3	
	20	42	12	0.6	35.5	37.4	26.6	0.068	9.3	5	20000	20000	6004	23.2	38.8	0.6	
	20	42	12	0.6	35.5	37.4	26.6	0.064	9.3	5	20000	20000	S6004.W203B	23.2	38.8	0.6	
	20	42	12	0.6	35.5	37.4	26.6	0.071	9.3	5	17000	20000	6004.2ZR	23.2	38.8	0.6	
	20	42	12	0.6	35.5	37.4	26.6	0.071	9.3	5	12000		6004.2RSR	23.2	38.8	0.6	
	20	42	12	0.6	35.5	37.4	26.6	0.067	9.3	5	12000		S6004.2RSR.W203B	23.2	38.8	0.6	

FAG Deep Groove Ball Bearings

single row

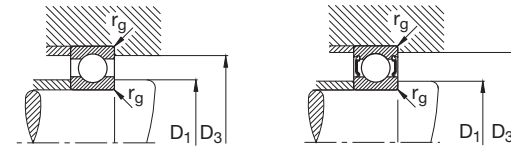
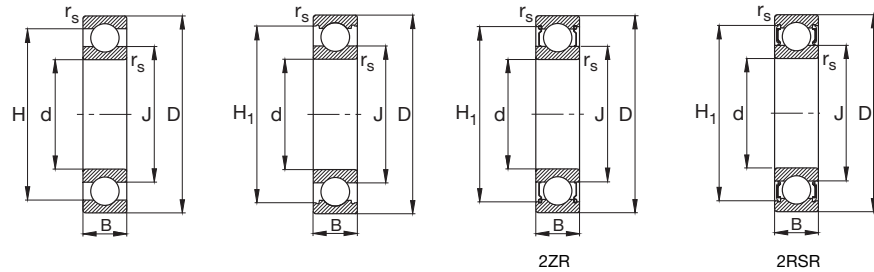


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed ≈ min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
20	20	47	14	1	38.4	41	28.8	0.105	12.7	6.55	18000	19000	6204	25.6	41.4	1
	20	47	14	1	38.4	41	28.8	0.105	12.7	6.55	18000	19000	S6204.W203B	25.6	41.4	1
	20	47	14	1	38.4	41	28.8	0.109	12.7	6.55	15000	19000	6204.2ZR	25.6	41.4	1
	20	47	14	1	38.4	41	28.8	0.109	12.7	6.55	10000		6204.2RSR	25.6	41.4	1
	20	47	14	1	38.4	41	28.8	0.108	12.7	6.55	10000		S6204.2RSR.W203B	25.6	41.4	1
	20	47	18	1	38.4	41	28.8	0.139	12.7	6.55	10000		62204.2RSR	25.6	41.4	1
	20	52	15	1.1	41.9	44.4	30.3	0.151	16	7.8	34000	18000	6304	27	45	1
	20	52	15	1.1	41.9	44.4	30.3	0.153	16	7.8	34000	18000	S6304.W203B	27	45	1
	20	52	15	1.1	41.9	44.4	30.3	0.155	16	7.8	14000	18000	6304.2ZR	27	45	1
	20	52	15	1.1	41.9	44.4	30.3	0.155	16	7.8	9500		6304.2RSR	27	45	1
20	52	21	1.1	42.1	44.4	30.3	0.209	16	7.8	9500		62304.2RSR	27	45	1	
20	72	19	1.1	55		37	0.415	30.5	15	26000	15000	6404	29	63	1	
25	25	47	8	0.3	39.7	41.1	32.2	0.055	7.2	4.65	19000	14000	16005	27	45	0.3
	25	47	12	0.6	40.2	42.5	32	0.08	10	5.85	36000	17000	6005	28.2	43.8	0.6
	25	47	12	0.6	40.2	42.5	32	0.082	10	5.85	36000	17000	S6005.W203B	28.2	43.8	0.6
	25	47	12	0.6	40.2	42.5	32	0.083	10	5.85	15000	17000	6005.2ZR	28.2	43.8	0.6
	25	47	12	0.6	40.2	42.5	32	0.084	10	5.85	10000		6005.2RSR	28.2	43.8	0.6
	25	47	12	0.6	40.2	42.5	32	0.083	10	5.85	10000		S6005.2RSR.W203B	28.2	43.8	0.6
	25	52	15	1	43.6	45.4	33.5	0.128	14	7.8	17000	17000	6205	30.6	46.4	1
	25	52	15	1	43.6	45.4	33.5	0.128	14	7.8	17000	17000	S6205.W203B	30.6	46.4	1
	25	52	15	1	43.6	45.4	33.5	0.132	14	7.8	14000	17000	6205.2ZR	30.6	46.4	1
	25	52	15	1	43.6	45.4	33.5	0.132	14	7.8	9000		6205.2RSR	30.6	46.4	1
	25	52	15	1	43.6	45.4	33.5	0.132	14	7.8	9000		S6205.2RSR.W203B	30.6	46.4	1
	25	52	18	1	43.6	45.4	33.5	0.156	14	7.8	9000		62205.2RSR	30.6	46.4	1
	25	62	17	1.1	50.2	52.5	36.4	0.234	22.4	11.4	28000	15000	6305	32	55	1
	25	62	17	1.1	50.2	52.5	36.4	0.237	22.4	11.4	28000	15000	S6305.W203B	32	55	1
	25	62	17	1.1	50.2	52.5	36.4	0.24	22.4	11.4	11000	15000	6305.2ZR	32	55	1
	25	62	17	1.1	50.2	52.5	36.4	0.242	22.4	11.4	7500		6305.2RSR	32	55	1
	25	62	17	1.1	50.2	52.5	36.4	0.245	22.4	11.4	7500		S6305.2RSR.W203B	32	55	1
	25	62	24	1.1	50.2	52.5	36.4	0.272	22.4	11.4	7500		62305.2RSR	32	55	1
25	80	21	1.5	63.1		45.4	0.56	36	19.3	22000	14000	6405	36	69	1.5	
30	30	55	9	0.3	47.5	48.8	37.7	0.082	11.2	7.35	16000	12000	16006	32	53	0.3
	30	55	13	1	47.2	49.2	38.3	0.122	12.7	8	32000	15000	6006	34.6	50.4	1
	30	55	13	1	47.2	49.2	38.3	0.109	12.7	8	32000	15000	S6006.W203B	34.6	50.4	1
	30	55	13	1	47.2	49.2	38.3	0.125	12.7	8	13000	15000	6006.2ZR	34.6	50.4	1
	30	55	13	1	47.2	49.2	38.3	0.125	12.7	8	8500		6006.2RSR	34.6	50.4	1

FAG Deep Groove Ball Bearings

single row

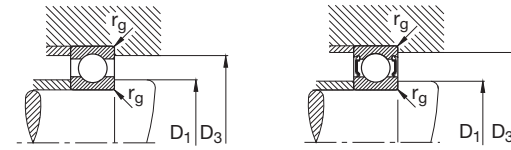
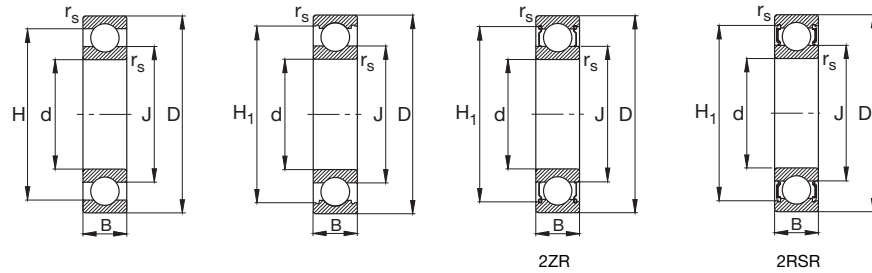


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
30	30	62	16	1	52.1	54.9	40	0.195	19.3	11.2	14000	14000	6206	35.6	56.4	1
	30	62	16	1	52.1	54.9	40	0.205	19.3	11.2	14000	14000	S6206.W203B	35.6	56.4	1
	30	62	16	1	52.1	54.9	40	0.201	19.3	11.2	11000	14000	6206.2ZR	35.6	56.4	1
	30	62	16	1	52.1	54.9	40	0.201	19.3	11.2	7500		6206.2RSR	35.6	56.4	1
	30	62	16	1	52.1	54.9	40	0.211	19.3	11.2	7500		S6206.2RSR.W203B	35.6	56.4	1
	30	62	20	1	52.1	54.9	40	0.245	19.3	11.2	7500		62206.2RSR	35.6	56.4	1
	30	72	19	1.1	59.6	61.6	44.6	0.355	29	16.3	24000	13000	6306	37	65	1
	30	72	19	1.1	59.6	61.6	44.6	0.355	29	16.3	24000	13000	S6306.W203B	37	65	1
	30	72	19	1.1	59.6	61.6	44.6	0.363	29	16.3	9500	13000	6306.2ZR	37	65	1
	30	72	19	1.1	59.6	61.6	44.6	0.365	29	16.3	6300		6306.2RSR	37	65	1
	30	72	19	1.1	59.6	61.6	44.6	0.365	29	16.3	6300		S6306.2RSR.W203B	37	65	1
	30	72	27	1.1	59.6	61.6	44.6	0.499	29	16.3	6300		62306.2RSR	37	65	1
	30	90	23	1.5	70.1		50.1	0.76	42.5	23.2	19000	12000	6406	41	79	1.5
	35	35	62	9	0.3	53.5	54.8	43.7	0.105	12.2	8.8	14000	10000	16007	37	60
35		62	14	1	53.3	55.4	43.2	0.157	16	10.2	28000	13000	6007	39.6	57.4	1
35		62	14	1	53.3	55.4	43.2	0.157	16	10.2	28000	13000	S6007.W203B	39.6	57.4	1
35		62	14	1	53.3	55.4	43.2	0.163	16	10.2	11000	13000	6007.2ZR	39.6	57.4	1
35		62	14	1	53.3	55.4	43.2	0.163	16	10.2	7500		6007.2RSR	39.6	57.4	1
35		62	14	1	53.3	55.4	43.2	0.163	16	10.2	7500		S6007.2RSR.W203B	39.6	57.4	1
35		72	17	1.1	60.7	63.3	47.2	0.291	25.5	15.3	24000	12000	6207	42	65	1
35		72	17	1.1	60.7	63.3	47.2	0.285	25.5	15.3	24000	12000	S6207.W203B	42	65	1
35		72	17	1.1	60.7	63.3	47.2	0.299	25.5	15.3	9500	12000	6207.2ZR	42	65	1
35		72	17	1.1	60.7	63.3	47.2	0.301	25.5	15.3	6300		6207.2RSR	42	65	1
35		72	17	1.1	60.7	63.3	47.2	0.303	25.5	15.3	6300		S6207.2RSR.W203B	42	65	1
35		72	23	1.1	60.7	63.3	47.2	0.393	25.5	15.3	6300		62207.2RSR	42	65	1
35		80	21	1.5	65.5	67.6	49.3	0.471	33.5	19	20000	12000	6307	44	71	1.5
35		80	21	1.5	65.5	67.6	49.3	0.471	33.5	19	20000	12000	S6307.W203B	44	71	1.5
35	80	21	1.5	65.5	67.6	49.3	0.481	33.5	19	8500	12000	6307.2ZR	44	71	1.5	
35	80	21	1.5	65.5	67.6	49.3	0.483	33.5	19	5600		6307.2RSR	44	71	1.5	
35	80	21	1.5	65.5	67.6	49.3	0.483	33.5	19	5600		S6307.2RSR.W203B	44	71	1.5	
35	80	31	1.5	65.5	67.6	49.3	0.687	33.5	19	5600		62307.2RSR	44	71	1.5	
35	100	25	1.5	83.3	85.6	62	0.971	53	31.5	16000	11000	6407	46	89	1.5	
40	40	68	9	0.3	59.3		49.4	0.12	13.2	10.2	13000	9000	16008	42	66	0.3
	40	68	15	1	59.1	61.6	49.3	0.194	16.6	11.6	26000	12000	6008	44.6	63.4	1
	40	68	15	1	59.1	61.6	49.3	0.196	16.6	11.6	26000	12000	S6008.W203B	44.6	63.4	1
	40	68	15	1	59.1	61.6	49.3	0.2	16.6	11.6	10000	12000	6008.2ZR	44.6	63.4	1
	40	68	15	1	59.1	61.6	49.3	0.202	16.6	11.6	6700		6008.2RSR	44.6	63.4	1

FAG Deep Groove Ball Bearings

single row

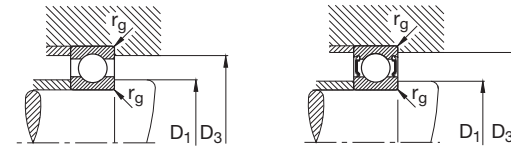
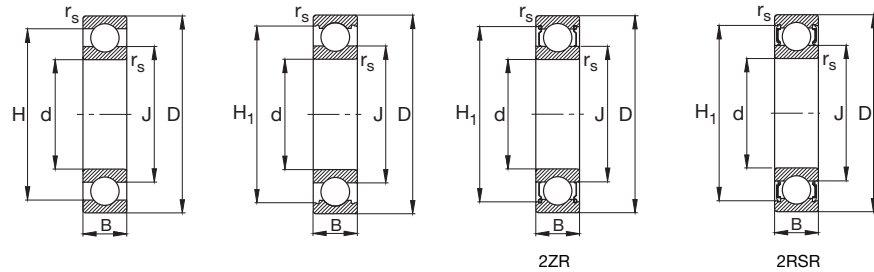


Rolling bearings can be fail-safe if $C_0/P_0 \cong 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions			
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max	
40	40	80	18	1.1	67.5	70.4	53	0.371	29	18	20000	11000	6208	47	73	1	
	40	80	18	1.1	67.5	70.4	53	0.371	29	18	20000	11000	S6208.W203B	47	73	1	
	40	80	18	1.1	67.5	70.4	53	0.382	29	18	8500	11000	6208.2ZR	47	73	1	
	40	80	18	1.1	67.5	70.4	53	0.384	29	18	5600		6208.2RSR	47	73	1	
	40	80	18	1.1	67.5	70.4	53	0.384	29	18	5600		S6208.2RSR.W203B	47	73	1	
	40	80	23	1.1	67.5	70.4	53	0.477	29	18	5600		62208.2RSR	47	73	1	
	40	90	23	1.5	74.6	76.5	55.5	0.64	42.5	25	18000	11000	6308	49	81	1.5	
	40	90	23	1.5	74.6	76.5	55.5	0.641	42.5	25	18000	11000	S6308.W203B	49	81	1.5	
	40	90	23	1.5	74.6	76.5	55.5	0.654	42.5	25	7500	11000	6308.2ZR	49	81	1.5	
	40	90	23	1.5	74.6	76.5	55.5	0.654	42.5	25	5000		6308.2RSR	49	81	1.5	
	40	90	33	1.5	74.6	76.5	55.5	0.903	42.5	25	5000		62308.2RSR	49	81	1.5	
	40	110	27	2	91.6	95.1	68	1.12	62	38	14000	10000	6408	53	97	2	
45	45	75	10	0.6	65.6		55	0.167	15.6	12.2	22000	8500	16009	48.2	71.8	0.6	
	45	75	16	1	65.5	68	54.2	0.247	20	14.3	22000	11000	6009	49.6	70.4	1	
	45	75	16	1	65.5	67.9	54.2	0.234	20	14.3	22000	11000	S6009.W203B	49.6	70.4	1	
	45	75	16	1	65.5	68	54.2	0.253	20	14.3	9000	11000	6009.2ZR	49.6	70.4	1	
	45	75	16	1	65.5	68	54.2	0.257	20	14.3	6000		6009.2RSR	49.6	70.4	1	
	45	75	16	1	65.5	67.9	54.2	0.244	20	14.3	6000		S6009.2RSR.W203B	49.6	70.4	1	
	45	85	19	1.1	71.8	74.6	57.2	0.429	31	20.4	19000	10000	6209	52	78	1	
	45	85	19	1.1	71.8	74.6	57.2	0.429	31	20.4	19000	10000	S6209.W203B	52	78	1	
	45	85	19	1.1	71.8	74.6	57.2	0.441	31	20.4	8000	10000	6209.2ZR	52	78	1	
	45	85	19	1.1	71.8	74.6	57.2	0.441	31	20.4	5300		6209.2RSR	52	78	1	
	45	85	19	1.1	71.8	74.6	57.2	0.441	31	20.4	5300		S6209.2RSR.W203B	52	78	1	
	45	85	23	1.1	71.8	74.6	57.2	0.522	31	20.4	5300		62209.2RSR	52	78	1	
	45	100	25	1.5	83.3	85.6	62	0.847	53	31.5	16000	10000	6309	54	91	1.5	
	45	100	25	1.5	83.3	85.6	62	0.859	53	31.5	16000	10000	S6309.W203B	54	91	1.5	
	45	100	25	1.5	83.3	85.6	62	0.869	53	31.5	6700	10000	6309.2ZR	54	91	1.5	
	45	100	25	1.5	83.3	85.6	62	0.867	53	31.5	4500		6309.2RSR	54	91	1.5	
	45	100	25	1.5	83.3	85.6	62	0.879	53	31.5	4500		S6309.2RSR.W203B	54	91	1.5	
	45	100	36	1.5	83.3	85.6	62	1.2	53	31.5	4500		62309.2RSR	54	91	1.5	
	45	120	29	2	100.9	104.3	75.2	1.97	76.5	47.5	13000	9500	6409	58	107	2	
	50	50	80	10	0.6	70.5		60.1	0.181	16	13.2	20000	7500	16010	53.2	76.8	0.6
		50	80	16	1	70.1	72.9	59.8	0.272	20.8	15.6	20000	10000	6010	54.6	75.4	1
		50	80	16	1	70.1	72.9	59.8	0.26	20.8	15.6	20000	10000	S6010.W203B	54.6	75.4	1
		50	80	16	1	70.1	72.9	59.8	0.282	20.8	15.6	8500	10000	6010.2ZR	54.6	75.4	1
		50	80	16	1	70.1	72.9	59.8	0.283	20.8	15.6	5600		6010.2RSR	54.6	75.4	1
50		80	16	1	70.1	72.9	59.8	0.271	20.8	15.6	5600		S6010.2RSR.W203B	54.6	75.4	1	

FAG Deep Groove Ball Bearings

single row

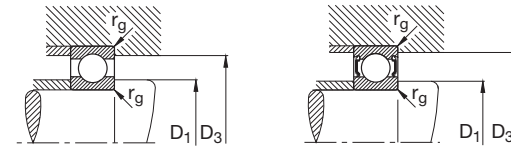
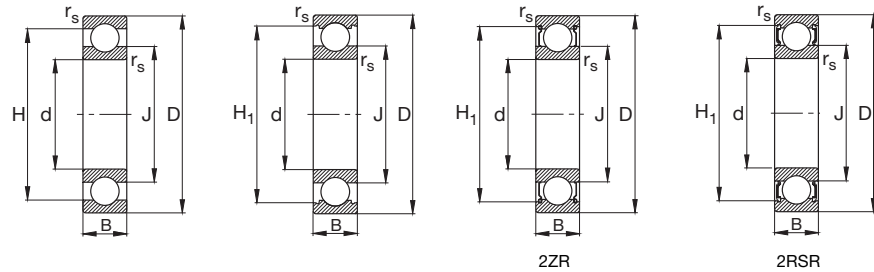


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed ≈ min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
50	50	90	20	1.1	77.9	80	62	0.466	36.5	24	18000	9500	6210	57	83	1
	50	90	20	1.1	77.9	80	62	0.469	36.5	24	18000	9500	S6210.W203B	57	83	1
	50	90	20	1.1	77.9	80	62	0.478	36.5	24	7500	9500	6210.2ZR	57	83	1
	50	90	20	1.1	77.9	80	62	0.48	36.5	24	4800		6210.2RSR	57	83	1
	50	90	23	1.1	77.9	80	62	0.543	36.5	24	4800		62210.2RSR	57	83	1
	50	110	27	2	91.6	95.1	68	1.1	62	38	14000	9500	6310	61	99	2
	50	110	27	2	91.6	95.1	68	1.12	62	38	6000	9500	6310.2ZR	61	99	2
	50	110	27	2	91.6	95.1	68	1.12	62	38	4000		6310.2RSR	61	99	2
	50	110	27	2	91.6	95.1	68	1.11	62	38	4000		S6310.2RSR.W203B	61	99	2
	50	110	40	2	91.6	95.1	68	1.59	62	38	4000		62310.2RSR	61	99	2
50	130	31	2.1	108.4	113.1	81.6	1.96	81.5	52	12000	9000	6410	64	116	2.1	
55	55	90	11	0.6	78		67.1	0.266	19.3	16.3	18000	7000	16011	58.2	86.8	0.6
	55	90	18	1.1	78.9	81.5	66.2	0.397	28.5	21.2	18000	9500	6011	61	84	1
	55	90	18	1.1	78.9	81.5	66.2	0.403	28.5	21.2	18000	9500	S6011.W203B	61	84	1
	55	90	18	1.1	78.9	81.5	66.2	0.408	28.5	21.2	7500	9500	6011.2ZR	61	84	1
	55	90	18	1.1	78.9	81.5	66.2	0.41	28.5	21.2	5000		6011.2RSR	61	84	1
	55	100	21	1.5	86.1	88.2	68.7	0.616	43	29	16000	8500	6211	64	91	1.5
	55	100	21	1.5	86.1	88.2	68.7	0.617	43	29	16000	8500	S6211.W203B	64	91	1.5
	55	100	21	1.5	86.1	88.2	68.7	0.632	43	29	6700	8500	6211.2ZR	64	91	1.5
	55	100	21	1.5	86.1	88.2	68.7	0.632	43	29	4300		6211.2RSR	64	91	1.5
	55	120	29	2	100.9	104.3	75.2	1.39	76.5	47.5	13000	9000	6311	66	109	2
55	120	29	2	100.9	104.3	75.2	1.43	76.5	47.5	5300	9000	6311.2ZR	66	109	2	
55	120	29	2	100.9	104.3	75.2	1.43	76.5	47.5	3600		6311.2RSR	66	109	2	
55	140	33	2.1	117.5	122.2	88.6	1.38	93	60	11000	8500	6411	69	126	2.1	
60	60	95	11	0.6	82.9		72.1	0.283	20	17.6	17000	6300	16012	63.2	91.8	0.6
	60	95	18	1.1	83.9	86	71.3	0.419	29	23.2	17000	8500	6012	66	89	1
	60	95	18	1.1	83.8		71.3	0.416	29	23.2	16000	8500	S6012.W203B	66	89	1
	60	95	18	1.1	83.9	86	71.3	0.431	29	23.2	7000	8500	6012.2ZR	66	89	1
	60	95	18	1.1	83.9	86	71.3	0.432	29	23.2	4500		6012.2RSR	66	89	1
	60	110	22	1.5	95.6	97.7	75.8	0.789	52	36	14000	8000	6212	69	101	1.5
	60	110	22	1.5	95.6	97.7	75.8	0.795	52	36	14000	8000	S6212.W203B	69	101	1.5
	60	110	22	1.5	95.6	97.7	75.8	0.807	52	36	6000	8000	6212.2ZR	69	101	1.5
	60	110	22	1.5	95.6	97.7	75.8	0.809	52	36	4000		6212.2RSR	69	101	1.5
	60	130	31	2.1	108.4	113.1	81.3	1.75	81.5	52	12000	8500	6312	72	118	2.1
60	130	31	2.1	108.4	113.1	81.3	1.79	81.5	52	5000	8500	6312.2ZR	72	118	2.1	
60	130	31	2.1	108.4	113.1	81.3	1.79	81.5	52	3400		6312.2RSR	72	118	2.1	
60	150	35	2.1	124.9	130.2	95.1	2.89	104	68	10000	8000	6412	74	136	2.1	

FAG Deep Groove Ball Bearings

single row

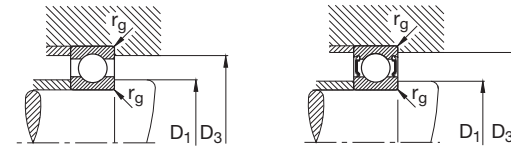
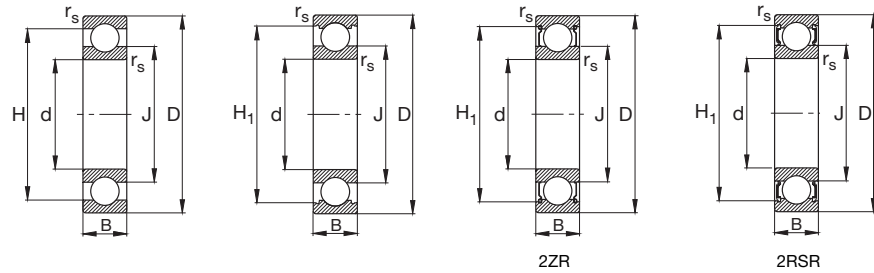


Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
65	65	100	11	0.6	87.9		77.1	0.302	21.2	19.6	16000	6000	16013	68.2	96.8	0.6
	65	100	18	1.1	88.8	91.5	76.2	0.448	30.5	25	15000	8000	6013	71	94	1
	65	100	18	1.1	88.8	91.5	76.2	0.464	30.5	25	6300	8000	6013.2ZR	71	94	1
	65	100	18	1.1	88.8	91.5	76.2	0.463	30.5	25	4300		6013.2RSR	71	94	1
	65	120	23	1.5	103.1	106.3	82	1	60	41.5	13000	7500	6213	74	111	1.5
	65	120	23	1.5	103.1	106.3	82	1.03	60	41.5	5300	7500	6213.2ZR	74	111	1.5
	65	120	23	1.5	103.1	106.3	82	1.03	60	41.5	3600		6213.2RSR	74	111	1.5
	65	140	33	2.1	117.5	122.2	88.6	2.14	93	60	11000	8000	6313	77	128	2.1
	65	140	33	2.1	117.5	122.2	88.3	2.18	93	60	4500	8000	6313.2ZR	77	128	2.1
	65	140	33	2.1	117.5	122.2	88.3	2.18	93	60	3000		6313.2RSR	77	128	2.1
65	160	37	2.1	133.2		101.7	3.49	114	76.5	9500	7500	6413	79	146	2.1	
70	70	110	13	0.6	96.2		83.7	0.438	28	25	14000	6000	16014	73.2	106.8	0.6
	70	110	20	1.1	97.3	100	82.8	0.622	38	31	14000	7500	6014	76	104	1
	70	110	20	1.1	97.3	100	82.8	0.642	38	31	6000	7500	6014.2ZR	76	104	1
	70	110	20	1.1	97.3	100	82.8	0.64	38	31	4000		6014.2RSR	76	104	1
	70	125	24	1.5	108	110.7	86.8	1.09	62	44	12000	7000	6214	79	116	1.5
	70	125	24	1.5	108	110.7	86.8	1.11	62	44	5000	7000	6214.2ZR	79	116	1.5
	70	125	24	1.5	108	110.7	86.8	1.11	62	44	3400		6214.2RSR	79	116	1.5
	70	150	35	2.1	124.9	130.2	95.1	2.61	104	68	10000	7500	6314	82	138	2.1
	70	150	35	2.1	124.9	130.2	94.8	2.66	104	68	4300	7500	6314.2ZR	82	138	2.1
	70	150	35	2.1	124.9	130.2	94.8	2.66	104	68	2800		6314.2RSR	82	138	2.1
70	180	42	3	151.6		114.4	5.06	132	96.5	8500	6700	6414	86	164	2.5	
75	75	115	13	0.6	101.2		88.7	0.463	28.5	27	13000	5600	16015	78.2	111.8	0.6
	75	115	20	1.1	102.6	105.3	88	0.654	39	33.5	13000	7000	6015	81	109	1
	75	115	20	1.1	102.6	105.3	88	0.676	39	33.5	5600	7000	6015.2ZR	81	109	1
	75	115	20	1.1	102.6	105.3	88	0.678	39	33.5	3800		6015.2RSR	81	109	1
	75	130	25	1.5	112.8	115.5	92.1	1.18	65.5	49	11000	6700	6215	84	121	1.5
	75	130	25	1.5	112.8	115.5	92.1	1.21	65.5	49	4800	6700	6215.2ZR	84	121	1.5
	75	130	25	1.5	112.8	115.5	92.1	1.22	65.5	49	3200		6215.2RSR	84	121	1.5
	75	160	37	2.1	133.2		101.8	3.18	114	76.5	9500	7000	6315	87	148	2.1
	75	160	37	2.1	133.2	137.2	101.4	3.23	114	76.5	4000	7000	6315.2ZR	87	148	2.1
	75	190	45	3	151.6		114.4	7	132	96.5	8500	6300	6415M	91	174	2.5
80	80	125	14	0.6	110.7		96.9	0.609	32	31	13000	5300	16016	83.2	121.8	0.6
	80	125	22	1.1	111	113.7	93.7	0.867	47.5	40	12000	7000	6016	86	119	1
	80	125	22	1.1	111	113.7	93.7	0.893	47.5	40	5000	7000	6016.2ZR	86	119	1

FAG Deep Groove Ball Bearings

single row



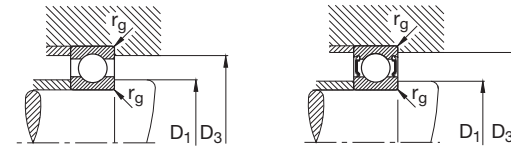
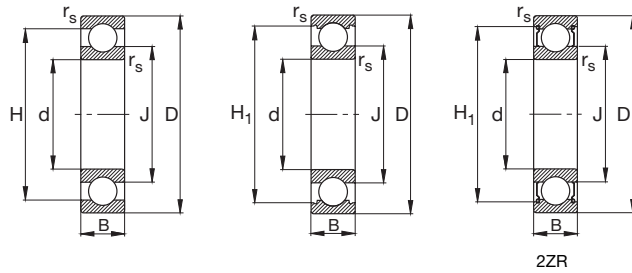
Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed ≈ min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
80	80	140	26	2	121.2		98.9	1.46	72	53	11000	6300	6216	91	129	2
	80	140	26	2	121.2	124.5	98.5	1.49	72	53	4500	6300	6216.2ZR	91	129	2
	80	140	26	2	121.2	124.5	98.5	1.49	72	53	3000		6216.2RSR	91	129	2
	80	170	39	2.1	141.8		108.6	3.75	122	86.5	9000	6700	6316	92	158	2.1
	80	170	39	2.1	141.8	145.5	108.2	3.82	122	86.5	3800	6700	6316.2ZR	92	158	2.1
	80	200	48	3	162.1		117.9	8.29	163	125	7500	6000	6416M	96	184	2.5
85	85	130	14	0.6	113.8		101.6	0.666	34	33.5	12000	5000	16017	88.2	126.8	0.6
	85	130	22	1.1	116		99.6	0.916	49	43	11000	6700	6017	91	124	1
	85	130	22	1.1	116	119.2	99.2	0.939	49	43	4800	6700	6017.2ZR	91	124	1
	85	150	28	2	129.6		106.6	1.87	83	64	10000	6000	6217	96	139	2
	85	150	28	2	129.6	133.8	106.2	1.91	83	64	4300	6000	6217.2ZR	96	139	2
	85	180	41	3	151.6		114.4	4.25	132	96.5	8000	6300	6317	99	166	2.5
	85	180	41	3	151.6	154.9	114	4.33	132	96.5	3400	6300	6317.2ZR	99	166	2.5
	85	210	52	4	173		122.9	9.58	173	137	7000	5600	6417M	105	190	3
90	90	140	16	1	122.7		107.6	0.866	41.5	39	11000	5000	16018	94.6	135.4	1
	90	140	24	1.5	123.7		106.6	1.21	58.5	50	11000	6300	6018	97	133	1.5
	90	140	24	1.5	123.7	126.8	106.2	1.23	58.5	50	4500	6300	6018.2ZR	97	133	1.5
	90	160	30	2	139.4		112.7	2.21	96.5	72	9000	6000	6218	101	149	2
	90	160	30	2	139.4	143.4	112.3	2.26	96.5	72	3800	6000	6218.2ZR	101	149	2
	90	190	43	3	157.1		123.8	5.43	134	102	8000	6000	6318	104	176	2.5
	90	190	43	3	157.1	160.7	123.3	5.53	134	102	3400	6000	6318.2ZR	104	176	2.5
	90	225	54	4	184		132.2	11.7	196	163	6700	5300	6418M	110	205	3
95	95	145	16	1	128.3		113.8	0.922	40	40.5	11000	4800	16019	99.6	140.4	1
	95	145	24	1.5	129		111	1.27	60	54	10000	6000	6019	102	138	1.5
	95	170	32	2.1	146.6		118.7	2.73	108	81.5	8500	5600	6219	107	158	2.1
	95	170	32	2.1	146.6	150.9	118.3	2.79	108	81.5	3600	5600	6219.2ZR	107	158	2.1
	95	200	45	3	165		129.1	6.23	143	112	7500	5600	6319	109	186	2.5
	95	200	45	3	165	170.4	128.7	6.34	143	112	3200	5600	6319.2ZR	109	186	2.5
100	100	150	16	1	132.7		117.6	0.956	44	44	10000	4500	16020	104.6	145.4	1
	100	150	24	1.5	134		116.6	1.32	60	54	9500	5600	6020	107	143	1.5
	100	150	24	1.5	134	137.3	116.2	1.35	60	54	4000	5600	6020.2ZR	107	143	1.5

FAG Deep Groove Ball Bearings

single row

Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

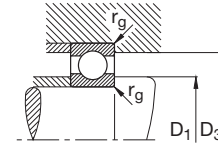
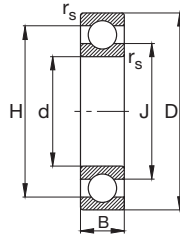


Shaft	Dimensions							Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	H ₁ ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
100	100	180	34	2.1	154.8		125.2	3.3	122	93	8000	5300	6220	112	168	2.1
	100	180	34	2.1	154.8	158.9	124.7	3.36	122	93	3400	5300	6220.2ZR	112	168	2.1
	100	215	47	3	179		138.6	7.67	163	134	7000	5000	6320	114	201	2.5
	100	215	47	3	179	184.6	138.1	7.78	163	134	3000	5000	6320.2ZR	114	201	2.5
105	105	160	18	1	141.2		124.2	1.24	54	54	9500	4500	16021	109.6	155.4	1
	105	160	26	2	142.4		122.1	1.67	71	64	9000	5600	6021	113.8	151.2	2
	105	160	26	2	142.4	145.3	121.7	1.7	71	64	3800	5600	6021.2ZR	113.8	151.2	2
	105	190	36	2.1	163.2		131.9	3.88	132	104	7500	5000	6221	117	178	2.1
	105	190	36	2.1	163.2	168.1	131.5	3.99	132	104	3200	5000	6221.2ZR	117	178	2.1
	105	225	49	3	187		144.5	8.7	173	146	6700	4800	6321	119	211	2.5
110	110	170	19	1	149.5		130.7	1.51	57	57	9000	4300	16022	114.6	165.4	1
	110	170	28	2	150.9		129.2	2.06	80	71	8500	5600	6022	118.8	161.2	2
	110	170	28	2	150.9	155	128.7	2.11	80	71	3600	5600	6022.2ZR	118.8	161.2	2
	110	200	38	2.1	171.6		138.5	4.64	143	116	7000	4800	6222	122	188	2.1
	110	200	38	2.1	171.6	177.2	138	4.8	143	116	3000	4800	6222.2ZR	122	188	2.1
	110	240	50	3	197.4		153.4	10.3	190	166	6300	4500	6322	124	226	2.5
110	240	50	3	197.4	203.1	152.8	10.5	190	166	2600	4500	6322.2ZR	124	226	2.5	
120	120	180	19	1	159.5		140.7	1.62	61	64	8000	4000	16024	124.6	175.4	1
	120	180	28	2	161.2		139.9	2.18	83	78	8000	5000	6024	128.8	171.2	2
	120	180	28	2	161.2	165.4	139.4	2.23	83	78	3400	5000	6024.2ZR	128.8	171.2	2
	120	215	40	2.1	184.9		151.6	5.62	146	122	6700	4500	6224	132	203	2.1
	120	260	55	3	214.8		165.1	12.8	212	190	6000	4000	6324	134	246	2.5
130	130	200	22	1.1	176.6		154.8	2.41	78	81.5	7500	3800	16026	136	194	1
	130	200	33	2	178.5		152.8	3.34	104	100	7000	4500	6026	138.8	191.2	2
	130	200	33	2	177.8	182	152.8	3.45	104	100	3000	4500	6026.2ZR	138.8	191.2	2
	130	230	40	3	198.5		161.5	6.24	166	146	6300	4000	6226	144	216	2.5
	130	280	58	4	231.2		178.9	18.3	228	216	5600	3800	6326M	147	263	3
140	140	210	22	1.1	186.6		164.8	2.55	80	86.5	7000	3600	16028	146	204	1
	140	210	33	2	187.4		162.4	3.57	108	108	6700	4300	6028	148.8	201.2	2
	140	210	33	2	187.4	191.3	161.8	3.65	108	108	2800	4300	6028.2ZR	148.8	201.2	2

FAG Deep Groove Ball Bearings

single row

Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

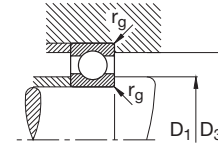
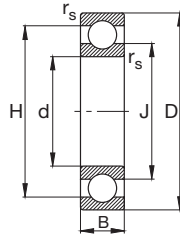


Shaft	Dimensions						Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
140	140	250	42	3	213.7	175.9	8.07	176	166	6000	3600	6228	154	236	2.5
	140	300	62	4	248.7	191.3	22.3	255	245	5300	3400	6328M	157	283	3
150	150	225	24	1.1	199.6	176	3.17	91.5	98	6700	3400	16030	156	219	1
	150	225	35	2.1	200.7	175.1	4.38	122	125	6300	4000	6030	160.2	214.8	2.1
	150	270	45	3	229.1	191.6	10.3	176	170	5600	3400	6230	164	256	2.5
	150	320	65	4	266.1	205.6	26.5	280	290	4800	3200	6330M	167	303	3
160	160	240	25	1.5	212.4	187.3	3.8	102	114	6300	3200	16032	167	233	1.5
	160	240	38	2.1	214.6	186.2	6.16	134	137	6300	3800	6032M	170.2	229.8	2.1
	160	290	48	3	244.8	205	14.7	200	204	5600	3000	6232M	174	276	2.5
	160	340	68	4	280.9	219.7	31.8	300	325	4300	3000	6332M	177	323	3
170	170	260	28	1.5	228.6	202.3	5.15	122	137	6000	3000	16034	177	253	1.5
	170	260	42	2.1	231.2	199.4	7.13	170	173	5600	3400	6034	180.2	249.8	2.1
	170	310	52	4	260.7	219.1	18.3	212	224	5300	3000	6234M	187	293	3
	170	360	72	4	298	232.6	37.3	325	365	4000	2800	6334M	187	343	3
180	180	280	31	2	238.8	211.9	6.92	132	146	5600	2800	16036	188.8	271.2	2
	180	280	46	2.1	247.9	212.8	10.7	186	196	5600	3200	6036M	190.2	269.8	2.1
	180	320	52	4	271.9	228.7	19	224	245	4800	2800	6236M	197	303	3
	180	380	75	4	315.4	245.5	43.6	355	405	3800	2600	6336M	197	363	3
190	190	290	31	2	255.1	225.8	7.04	150	166	5300	2600	16038	198.8	281.2	2
	190	290	46	2.1	257.9	222.6	11.3	196	212	5300	3000	6038M	200.2	279.8	2.1
	190	340	55	4	291.5	239.9	22.6	255	280	4300	2600	6238M	207	323	3
	190	400	78	5	330.5	260.1	50.4	375	440	3600	2400	6338M	210	380	4
200	200	310	34	2	276.4	244.4	9	176	204	4800	2600	16040	208.8	301.2	2
	200	310	51	2.1	274.7	235.8	14.4	212	240	4800	3000	6040M	210.2	299.8	2.1
	200	360	58	4	304.9	255.7	27.2	270	310	4000	2400	6240M	217	343	3

FAG Deep Groove Ball Bearings

single row

Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.

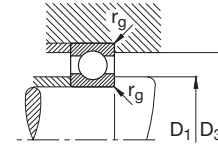
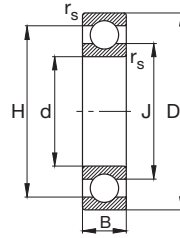


Shaft	Dimensions						Mass ≈ kg	Load rating		Limiting speed min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
200	200	420	80	5	345.9	274.6	56.6	380	465	3400	2400	6340M	220	400	4
220	220	340	37	2.1	298.1	262.8	11.8	200	240	4300	2200	16044	230.2	329.8	2.1
	220	340	56	3	303.1	258.1	18.8	245	290	4000	2600	6044M	232.4	327.6	2.5
	220	400	65	4	337.6	282.1	37.9	300	355	3600	2200	6244M	237	383	3
	220	460	88	5	382.9	299.4	73.7	440	560	3200	2000	6344M	240	440	4
240	240	360	37	2.1	317.4	283.1	12.7	204	255	3800	2000	16048	250.2	349.8	2.1
	240	360	56	3	321.9	278.8	20.5	255	315	3800	2400	6048M	252.4	347.6	2.5
	240	440	72	4	369.6	309.9	51.3	360	475	3400	2000	6248M	257	423	3
	240	500	95	5	411.3	328.7	96.4	465	620	3000	1900	6348M	260	480	4
260	260	400	44	3	351.2	310	19.1	236	310	3600	1900	16052	272.4	387.6	2.5
	260	400	65	4	356.9	304.6	29.8	300	390	3400	2200	6052M	274.6	385.4	3
	260	480	80	5	402.4	337.3	68.4	405	560	3000	1800	6252M	280	460	4
280	280	420	44	3	370.6	330.2	23.4	240	325	3400	1800	16056M	292.4	407.6	2.5
	280	420	65	4	375.1	325.6	33.5	310	425	3400	2000	6056M	294.6	405.4	3
	280	500	80	6	423	356.7	72.9	425	600	3000	1700	6256M	291	489	5
300	300	460	50	4	404	357.3	32.6	300	430	3200	1600	16060M	314.6	445.4	3
	300	460	74	4	410.8	350.8	44.5	365	510	3000	1900	6060M	314.6	445.4	3
320	320	400	38	2.1	373.8	346.9	11.3	153	212	3400	1800	61864M	330.2	389.8	2.1
	320	480	50	4	423	377.8	34.9	305	455	3000	1500	16064M	334.6	465.4	3
	320	480	74	4	430.8	370.9	47.4	380	560	3000	1800	6064M	334.6	465.4	3
340	340	420	38	2.1	394.2	366.7	12	156	220	3200	1700	61868M	350.2	409.8	2.1
	340	520	57	4	457.1	403.6	47.5	355	550	2800	1400	16068M	354.6	505.4	3
	340	520	82	5	468.1	402.5	66.2	440	695	2800	1600	6068M	358	502	4
360	360	440	38	2.1	412.9	387.7	12.8	160	236	3200	1600	61872M	370.2	429.8	2.1

FAG Deep Groove Ball Bearings

single row

Rolling bearings can be fail-safe if $C_0/P_0 \geq 8$, see page 41.



Shaft	Dimensions						Mass ≈ kg	Load rating		Limiting speed ≈ min ⁻¹	Reference speed	Code Bearing FAG	Abutment dimensions		
	d mm	D	B	r _s min	H ≈	J ≈		dyn. C kN	stat. C ₀				D ₁ min mm	D ₃ max	r _g max
360	360	540	57	4	478.1	423.4	49.4	365	585	2800	1300	16072M	374.6	525.4	3
	360	540	82	5	489	423.6	66.2	455	735	2600	1500	6072M	378	522	4
380	380	480	46	2.1	445.9	414.1	20.6	220	320	3000	1500	61876M	390.2	469.8	2.1
	380	560	57	4	498	443.4	51.7	375	620	2600	1300	16076M	394.6	545.4	3
400	400	500	46	2.1	467.2	433.1	21.7	220	335	2800	1400	61880M	410.2	489.8	2.1
420	420	520	46	2.1	485.8	454.3	22.8	224	345	2800	1400	61884M	430.2	509.8	2.1
440	440	540	46	2.1	505.9	474.2	23.8	228	355	2600	1200	61888M	450.2	529.8	2.1
460	460	580	56	3	540.6	501	36.5	290	480	2400	1300	61892M	472.4	567.6	2.5
480	480	600	56	3	560.5	521.2	38.6	300	500	2200	1200	61896M	492.4	587.6	2.5
500	500	620	56	3	580.4	539.3	39.7	300	520	2000	1100	618/500M	512.4	607.6	2.5
530	530	650	56	3	610.4	571	41.4	310	550	2000	1100	618/530M	542.4	637.6	2.5
560	560	680	56	3	640.3	601.2	43.6	310	570	1900	1000	618/560M	572.4	667.6	2.5
600	600	730	60	3	687.8	643.5	54.2	355	670	1800	900	618/600M	612.4	717.6	2.5
630	630	780	69	4	730.5	681.1	75.9	400	780	1600	900	618/630M	644.6	765.4	3
670	670	820	69	4	770.3	721.1	79.4	405	815	1500	800	618/670M	684.6	805.4	3
710	710	870	74	4	817.1	764.4	97.3	450	950	1400	750	618/710M	724.6	855.4	3
750	750	920	78	5	864.9	806.6	114	510	1120	1300	750	618/750M	768	902	4
800	800	980	82	5	920.1	861.6	137	550	1270	1300	670	618/800M	818	962	4
850	850	1030	82	5	970	911.7	145	550	1290	1200	630	618/850M	868	1012	4