

Single-row radial ball bearings

Definition and capabilities

The single-row radial ball bearing is the most widely used type of bearings.

→ Definition

■ Cages for single-row ball bearings

The standard cage is in pressed steel or brass. Other cage types can be used: synthetic material, phenolic resin, machined brass.

→ Capabilities

■ Loads and speeds

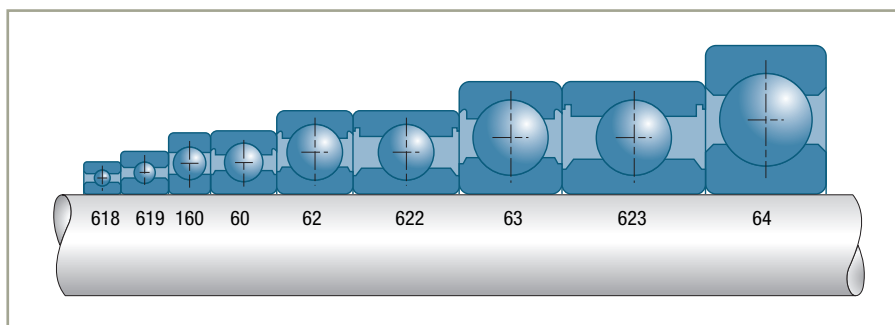
Designed to:

- withstand radial loads
- withstand axial loads in both directions
- accept high speeds of rotation

■ Misalignment

These bearings accept misalignment of between 0.10° and 0.23° depending on the residual clearance of the bearing after fitting, the bearing series and the magnitude of loads. Where misalignment is high, it is recommended to use a bearing with a synthetic material cage, as these cages display greater flexibility and good wear resistance.

Series



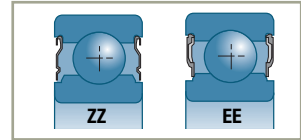


Variations

■ Standard protection and sealing

These bearings can be equipped with:

- shields (suffix ZZ)
- seals (suffix EE)



A given bearing can have a combination of types of protection and sealing, for example an E seal and a Z shield (suffix EZ).

Bearing featuring

- one or two seals or two shields are supplied pre-lubricated with general-purpose grease
- unilateral protection by a single Z shield are not supplied pre-lubricated

■ Special sealing and protection

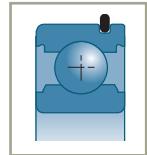
SNR proposes a range of seals for various applications:

- high speed of rotation and temperature
- reinforced sealing
- filter function for contaminated oil applications
- speed-sensing function

SNR can study jointly with the user special seals for mass production applications.

■ Groove for snap ring

Bearings are supplied with or without a snap ring.



Tolerances and clearances

■ Tolerances

Manufactured within the normal tolerance classes.

Single-row ball bearings can be supplied on request in tolerance classes ISO 6 and 5 for all or specific characteristics (e.g. bore or radial run-out in tolerance class 6).

■ Internal radial clearance

All standard production bearings are in the normal clearance group N. The other groups can be supplied on request.

For single-row radial ball bearings with a tapered bore, SNR ROULEMENTS has adopted group 3 (C3) as the standard

clearance to allow for a greater reduction in clearance resulting from fitting on a tapered seat.

The radial clearance leads to an axial clearance; a simple formula can be used to calculate the approximate size of the theoretical axial clearance J_a as a function of the operating radial clearance J_r .

$$J_a = (J_r (D-d) / 20)^{1/2}$$

Single-row radial ball bearings (continued)

■ Series 60-62-63-64-160-618-619-622-623-42-43



Bore diameter	Group 2		Group N		Group 3		Group 4		Group 5	
d (mm)	min	max	min	max	min	max	min	max	min	max
2.5 < d ≤ 6	0	7	2	13	8	23	–	–	–	–
6 < d ≤ 10	0	7	2	13	8	23	14	29	20	37
10 < d ≤ 18	0	9	3	18	11	25	18	33	25	45
18 < d ≤ 24	0	10	5	20	13	28	20	36	28	48
24 < d ≤ 30	1	11	5	20	13	28	23	41	30	53
30 < d ≤ 40	1	11	6	20	15	33	28	46	40	64
40 < d ≤ 50	1	11	6	23	18	36	30	51	45	73
50 < d ≤ 65	1	15	8	28	23	43	38	61	55	90
65 < d ≤ 80	1	15	10	30	25	51	46	71	65	105
80 < d ≤ 100	1	18	12	36	30	58	53	84	75	120
100 < d ≤ 120	2	20	15	41	36	66	61	97	90	140
120 < d ≤ 140	2	23	18	48	41	81	71	114	105	160
140 < d ≤ 160	2	23	18	53	46	91	81	130	120	180
160 < d ≤ 180	2	25	20	61	53	102	91	147	135	200
180 < d ≤ 200	2	30	25	71	63	117	107	163	150	230
200 < d ≤ 225	2	35	25	85	75	140	125	195	175	265
225 < d ≤ 250	2	40	30	95	85	160	145	225	205	300
250 < d ≤ 280	2	45	35	105	90	170	155	245	225	340
280 < d ≤ 315	2	55	40	115	100	190	175	270	245	370
315 < d ≤ 355	3	60	45	125	110	210	195	300	275	410
355 < d ≤ 400	3	70	55	145	130	240	225	340	315	460
400 < d ≤ 450	3	80	60	170	150	270	250	380	350	510
450 < d ≤ 500	3	90	70	190	170	300	280	420	390	570
500 < d ≤ 560	10	100	80	210	190	330	310	470	440	630
560 < d ≤ 630	10	110	90	230	210	360	340	520	490	690
630 < d ≤ 710	20	130	110	260	240	400	380	570	540	760
710 < d ≤ 800	20	140	120	290	270	450	430	630	600	840

Value in μm



Design criteria

■ Bearing life

■ Residual radial clearance

■ Bearings operating under heavy axial loads

The performance of bearings operating under heavy axial loads can be improved by increasing the radial clearance in order to create a contact angle in operation. The axial load F_a must not exceed a mean value of $0.5 C_0$.

This type of operation has to be studied according to the loading conditions and dimensions of the bearings. Consult with SNR.

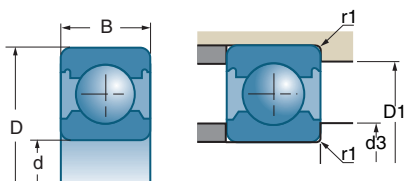
■ Unit made up by two side-by-side bearings

Each pair of bearings is calculated like a single bearing.

Suffixes and prefixes

A	Increased capacity
C3	Radial clearance of the group ISO 3
C4	Radial clearance of the group ISO 4
D..	Special grease
E - EE	Sealing by nitrile seal
E3 -EE3	Sealing by high temperature seal
F...	Special function
G14 - G15	Polyamide cage
2RS	Two-side sealing for thin section ball bearings
2Z	Two-side protection for thin section ball bearings
Z -ZZ	Protection by metal shields
Y	Brass cage

Single-row radial ball bearings (continued)



d		D	B				
mm	References	mm	mm	10°N	10°N	rpm*	rpm*
3	623	10	4	0.64	0.23	70000	80000
4	624 634	13 16	5 5	1.30 1.88	0.49 0.68	54000 45000	63000 53000
5	625 635	16 19	5 6	1.88 2.46	0.68 1.05	47000 34000	55000 40000
6	626	19	6	2.46	1.05	35000	41000
7	607 627	19 22	6 7	2.46 3.30	1.05 1.36	37000 32000	46000 37000
8	608	22	7	3.30	1.36	34000	42000
9	609 629	24 26	7 8	3.65 4.60	1.64 1.97	30000 26000	37000 30000
10	61800 61900 6000 6200 6300	19 22 26 30 35	5 6 8 9 11	1.83 2.70 4.60 6.00 7.60	0.92 1.27 1.97 2.65 3.45	34000 31000 27000 23000 19000	42000 38000 34000 27000 24000
12	61801 61901 6001 6201 6301	21 24 28 32 37	5 6 8 10 12	1.92 2.90 5.10 6.80 9.70	1.04 1.46 2.37 3.05 4.20	30000 27000 25000 21000 18000	37000 34000 32000 25000 23000
15	61802 61902 16002 6002 6202 6302	24 28 32 32 35 42	5 7 8 9 11 13	2.08 4.35 5.60 5.60 7.70 11.40	1.26 2.25 2.85 2.85 3.75 5.40	25000 23000 22000 21000 19000 15000	31000 28000 26000 26000 22000 19000
17	61803 61903 16003 6003	26 30 35 35	5 7 8 10	2.23 4.60 6.00 6.00	1.46 2.55 3.25 3.25	23000 21000 20000 19000	28000 26000 24000 24000

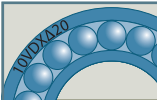
* These are the speed limits according to the SNR concept (see pages 85 to 87).



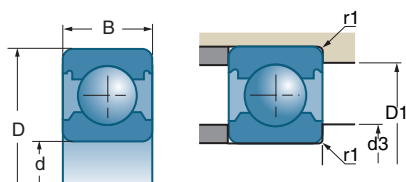
Characteristics

■ Open bearing



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
623	5.0	8.0	0.10	0.002
624	5.5	11.5	0.20	0.003
634	6.0	14.0	0.30	0.005
625	7.0	14.0	0.30	0.007
635	7.0	17.0	0.30	0.010
626	8.0	17.0	0.30	0.009
607	9.0	17.0	0.30	0.008
627	9.0	20.0	0.30	0.012
608	10.0	20.0	0.30	0.012
609	11.0	22.0	0.30	0.015
629	12.9	22.1	0.30	0.020
61800	12.0	17.0	0.30	0.005
61900	12.0	20.0	0.30	0.013
6000	12.0	24.0	0.30	0.019
6200	14.0	26.0	0.60	0.033
6300	14.0	31.0	0.60	0.055
61801	14.0	19.0	0.30	0.006
61901	14.0	22.0	0.30	0.014
6001	14.0	26.0	0.30	0.022
6201	16.0	28.0	0.60	0.038
6301	17.9	31.5	1.00	0.060
61802	17.0	22.0	0.30	0.007
61902	17.0	26.0	0.30	0.015
16002	17.0	30.0	0.30	0.026
6002	17.0	30.0	0.30	0.030
6202	19.0	31.2	0.60	0.044
6302	21.0	36.3	1.00	0.083
61803	19.0	24.0	0.30	0.008
61903	19.0	28.0	0.30	0.016
16003	19.0	33.0	0.30	0.032
6003	19.0	33.0	0.30	0.039

Single-row radial ball bearings (continued)

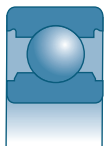


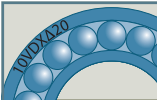
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm*	rpm*
17	6203	40	12	9.60	4.80	16000	19000
	6303	47	14	13.60	6.60	14000	17000
	6403	62	17	22.70	10.80	12000	14000
20	61804	32	7	2.95	1.87	19500	23500
	61904	37	9	6.40	3.70	17500	20500
	16004	42	8	6.80	4.10	17000	20000
	6004	42	12	9.40	5.00	16000	20000
	6204	47	14	12.80	6.70	13000	16000
	6304	52	15	15.90	7.90	12000	15000
	6404	72	19	29.50	15.50	9600	12000
25	61805	37	7	4.30	2.95	17000	20000
	61905	42	9	7.00	4.55	15000	18000
	16005	47	8	10.10	5.90	14000	17000
	6005	47	12	10.10	5.90	13000	17000
	6205	52	15	14.00	7.90	12000	14000
	6305	62	17	22.40	11.50	10000	13000
	6405	80	21	36.00	19.30	8600	11000
30	61806	42	7	4.55	3.40	14500	17500
	61906	47	9	7.20	4.35	13500	16000
	16006	55	9	11.20	7.40	11000	14000
	6006	55	13	13.20	8.30	11000	14000
	6206	62	16	19.50	11.30	10000	12000
	6306	72	19	28.00	15.80	8900	10000
	6406	90	23	43.50	23.80	7600	9300
35	61807	47	7	4.75	3.80	13000	15500
	61907	55	10	9.60	5.90	11500	14000
	16007	62	9	12.10	8.80	10000	12000
	6007	62	14	16.00	10.30	10000	12000
	6207	72	17	25.50	15.30	8900	10000
	6307	80	21	33.50	19.20	8000	9800
	6407	100	25	55.00	31.00	6800	8300
40	61808	52	7	4.90	4.15	11500	14000
	61908	62	12	12.20	7.70	10000	12000
	16008	68	9	13.20	10.30	9800	11000
	6008	68	15	16.80	11.50	9200	11000
	6208	80	18	29.00	17.90	7800	9100
	6308	90	23	40.50	23.90	7000	8200
	6408	110	27	63.00	36.50	6200	7600

* These are the speed limits according to the SNR concept (see pages 85 to 87).

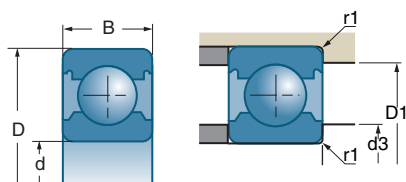


■ Open bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
6203	21.0	36.0	0.60	0.067
6303	23.0	41.0	1.00	0.113
6403	25.0	54.0	1.10	0.272
61804	22.2	29.8	0.30	0.018
61904	22.2	34.8	0.30	0.036
16004	22.0	40.0	0.30	0.050
6004	24.0	38.0	0.60	0.068
6204	26.0	41.3	1.00	0.108
6304	27.0	45.0	1.10	0.140
6404	28.0	64.0	1.10	0.408
61805	27.2	34.8	0.30	0.022
61905	27.2	39.8	0.30	0.042
16005	27.0	45.0	0.30	0.056
6005	29.0	43.0	0.60	0.083
6205	31.0	46.5	1.00	0.128
6305	32.0	55.0	1.10	0.183
6405	35.0	70.0	1.50	0.534
61806	32.2	39.8	0.30	0.026
61906	32.3	44.8	0.30	0.048
16006	32.0	53.0	0.30	0.082
6006	37.5	50.0	1.00	0.111
6206	36.0	56.0	1.00	0.199
6306	37.0	65.0	1.10	0.346
6406	40.0	80.0	1.50	0.734
61807	37.2	44.8	0.30	0.029
61907	38.6	51.4	0.60	0.074
16007	37.0	60.0	0.30	0.105
6007	40.0	57.0	1.00	0.153
6207	42.0	65.0	1.10	0.285
6307	44.0	71.0	1.50	0.446
6407	45.0	90.0	1.50	0.962
61808	42.2	49.8	0.30	0.035
61908	43.6	58.4	0.60	0.110
16008	42.0	66.0	0.30	0.120
6008	45.0	63.0	1.00	0.192
6208	47.0	73.0	1.10	0.364
6308	49.0	81.0	1.50	0.612
6408	52.0	98.0	2.00	1.216

Single-row radial ball bearings (continued)

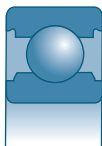


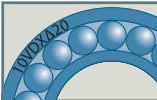
d		D	B				
mm	References	mm	mm	10°N	10°N	rpm*	rpm*
45	61809	58	7	6.60	5.90	9600	11000
	61909	68	12	14.10	10.90	9100	11000
	16009	75	10	15.90	11.90	9600	11000
	6009	75	16	21.00	15.20	8300	10000
	6209	85	19	31.50	20.70	7100	8300
	6309	100	25	53.00	31.50	6400	7900
	6409	120	29	77.00	45.00	5600	6900
50	61810	65	7	6.80	6.30	8600	10000
	61910	72	12	13.40	9.60	7900	9500
	16010	80	10	16.10	13.10	8100	9600
	6010	80	16	22.00	16.20	7600	9500
	6210	90	20	35.00	23.20	6800	8200
	6310	110	27	62.00	38.00	5600	6900
	6410	130	31	87.00	52.00	5200	6300
55	61811	72	9	9.10	8.50	7700	9600
	61911	80	13	16.60	14.10	7700	9200
	16011	90	11	19.40	16.20	7300	8600
	6011	90	18	30.50	22.00	6800	8500
	6211	100	21	43.50	29.00	6100	7400
	6311	120	29	71.00	44.50	5300	6500
	6411	140	33	100.00	62.00	4800	5800
60	61812	78	10	11.80	11.10	7100	8800
	61912	85	13	16.40	14.20	7200	8600
	16012	95	11	20.00	17.50	6800	8100
	6012	95	18	29.50	23.20	6400	8000
	6212	110	22	52.00	36.00	5500	6600
	6312	130	31	82.00	52.00	4800	5900
	6412	150	35	104.00	68.00	4200	5100
65	61813	85	10	12.30	12.00	6600	8100
	61913	90	13	17.40	16.00	6800	8100
	16013	100	11	21.70	18.90	6400	7600
	6013	100	18	30.50	25.00	6100	7500
	6213	120	23	57.00	40.00	5100	6200
	6313	140	33	93.00	60.00	4500	5500
	6413	160	37	113.00	77.00	4100	5000

* These are the speed limits according to the SNR concept (see pages 85 to 87).

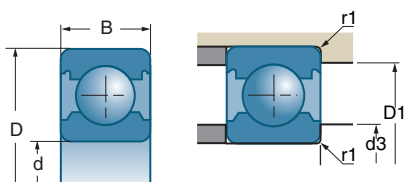


■ Open bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
61809	47.6	55.4	0.30	0.039
61909	49.2	63.8	0.60	0.130
16009	49.0	71.0	0.60	0.167
6009	50.0	70.0	1.00	0.243
6209	52.0	78.0	1.10	0.416
6309	54.0	91.0	1.50	0.825
6409	57.0	108.0	2.00	1.526
61810	52.6	62.4	0.30	0.052
61910	54.2	67.8	0.60	0.130
16010	54.0	76.0	0.60	0.181
6010	55.0	75.0	1.00	0.250
6210	57.0	83.0	1.10	0.453
6310	61.0	99.0	2.00	1.070
6410	64.0	116.0	2.10	1.880
61811	57.6	69.4	0.30	0.084
61911	60.4	74.6	1.00	0.180
16011	59.0	86.0	0.60	0.266
6011	61.0	84.0	1.10	0.362
6211	64.0	91.0	1.50	0.603
6311	66.0	109.0	2.00	1.347
6411	69.0	126.0	2.10	2.302
61812	62.6	75.4	0.30	0.105
61912	65.4	79.6	1.00	0.190
16012	64.0	91.0	0.60	0.283
6012	66.0	89.0	1.10	0.411
6212	69.0	101.0	1.50	0.785
6312	73.0	117.0	2.10	1.680
6412	74.0	136.0	2.10	2.870
61813	69.2	80.8	0.60	0.130
61913	70.4	84.6	1.00	0.200
16013	69.0	96.0	0.60	0.300
6013	71.0	94.0	1.10	0.444
6213	74.0	111.0	1.50	0.991
6313	78.0	127.0	2.10	2.077
6413	79.0	146.0	2.10	3.420

Single-row radial ball bearings (continued)



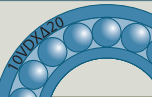
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm*	rpm*
70	61814	90	10	12.40	12.40	6100	7600
	61914	100	16	23.70	18.30	6100	7300
	16014	110	13	28.00	25.00	5800	7000
	6014	110	20	38.00	31.00	5500	6800
	6214	125	24	62.00	44.00	4900	5800
	6314	150	35	104.00	68.00	4200	5100
	6414	180	42	143.00	103.00	3700	4500
75	61815	95	10	12.90	13.30	5800	7100
	61915	105	16	24.40	22.50	5800	7000
	16015	115	13	28.50	27.00	5500	6600
	6015	115	20	39.50	33.50	5200	6500
	6215	130	25	67.00	48.00	4600	5600
	6315	160	37	113.00	77.00	3900	4800
80	61816	100	10	13.00	13.80	5500	6700
	61916	110	16	25.00	23.90	5500	6600
	16016	125	14	32.00	31.00	5100	6000
	6016	125	22	47.50	39.50	4800	6000
	6216	140	26	73.00	53.00	4300	5200
	6316	170	39	123.00	86.00	3700	4500
	6416	200	48	163.00	125.00	3300	4000
85	61817	110	13	19.30	19.80	5000	6200
	16017	130	14	34.00	33.50	4900	5800
	6017	130	22	49.50	43.00	4600	5700
	6217	150	28	84.00	62.00	4000	4800
	6317	180	41	133.00	97.00	3500	4300
90	61818	115	13	19.50	20.50	4800	5900
	16018	140	16	41.50	39.50	4600	5400
	6018	140	24	58.00	49.50	4300	5300
	6218	160	30	96.00	71.00	3800	4600
	6318	190	43	143.00	107.00	3300	4000
95	61819	120	13	19.80	21.30	4600	5600
	6019	145	24	60.00	54.00	4000	5000
	6219	170	32	109.00	82.00	3600	4300
	6319	200	45	144.00	113.00	3100	3800

* These are the speed limits according to the SNR concept (see pages 85 to 87).

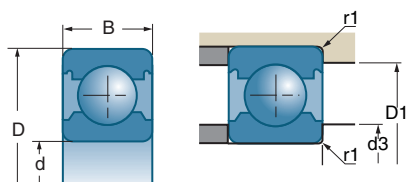


■ Open bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
61814	74.2	85.8	0.60	0.140
61914	75.4	94.6	1.00	0.360
16014	74.0	106.0	0.60	0.438
6014	76.0	104.0	1.10	0.610
6214	79.0	116.0	1.50	1.055
6314	83.0	137.0	2.10	2.580
6414	86.0	164.0	3.00	5.090
61815	79.2	90.8	0.60	0.150
61915	80.4	99.6	1.00	0.360
16015	79.0	111.0	0.60	0.463
6015	81.0	109.0	1.10	0.640
6215	84.0	121.0	1.50	1.190
6315	88.0	147.0	2.10	3.031
61816	84.2	95.2	0.60	0.155
61916	85.4	104.6	1.00	0.380
16016	84.0	121.0	0.60	0.609
6016	86.0	119.0	1.10	0.870
6216	91.0	129.0	2.00	1.420
6316	93.0	157.0	2.10	3.605
6416	96.0	184.0	3.00	8.070
61817	90.4	104.6	1.00	0.270
16017	89.0	126.0	0.60	0.666
6017	91.0	124.0	1.10	0.900
6217	96.0	139.0	2.00	1.820
6317	99.0	166.0	3.00	4.210
61818	95.4	109.6	1.00	0.280
16018	95.0	135.0	1.00	0.866
6018	98.0	132.0	1.50	1.175
6218	101.0	149.0	2.00	2.180
6318	104.0	176.0	3.00	5.020
61819	100.4	114.6	1.00	0.295
6019	103.0	137.0	1.50	1.220
6219	108.0	157.0	2.10	2.800
6319	109.0	186.0	3.00	6.140

Single-row radial ball bearings (continued)

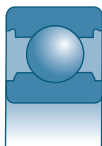


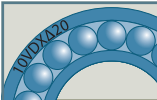
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm*	rpm*
100	61820	125	13	20.10	22.00	4400	5400
	16020	150	16	44.00	44.50	4200	5000
	6020	150	24	60.00	54.00	4000	4900
	6220	180	34	122.00	93.00	3400	4100
	6320	215	47	164.00	135.00	2900	3600
105	61821	130	13	20.80	23.60	4200	5100
	6021	160	26	72.00	66.00	3700	4600
	6221	190	36	133.00	104.00	3200	3900
110	61822	140	16	28.00	30.50	3900	4800
	16022	170	19	57.00	57.00	3700	4500
	6022	170	28	82.00	73.00	3500	4400
	6222	200	38	144.00	117.00	3100	3700
	6322	240	50	189.00	165.00	2600	3200
120	61824	150	16	29.00	33.00	3600	4500
	16024	180	19	61.00	64.00	3500	4200
	6024	180	28	85.00	79.00	3300	4100
	6224	215	40	145.00	123.00	2800	3400
	6324	260	55	212.00	190.00	2400	3000
130	61826	165	18	38.00	43.00	3600	4400
	16026	200	22	79.00	82.00	3200	3800
	6026	200	33	106.00	101.00	3000	3700
	6226	230	40	167.00	146.00	2600	3000
	6326	280	58	229.00	214.00	2200	2700
140	61828	175	18	39.00	46.00	3400	4100
	16028	210	22	81.00	87.00	3000	3600
	6028	210	33	109.00	107.00	2800	3500
	6228	250	42	177.00	165.00	2400	5400
	6328	300	62	255.00	246.00	2100	2600
150	61830	190	20	51.00	60.00	3100	3800
	6030	225	35	123.00	124.00	2600	3300
	6230	270	45	176.00	168.00	2200	2700
	6330	320	65	280.00	290.00	1900	2400
160	61832	200	20	52.00	62.00	3000	3600
	16032	240	25	102.00	113.00	2600	3100

* These are the speed limits according to the SNR concept (see pages 85 to 87).

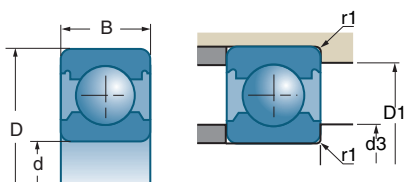


■ Open bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
61820	105.4	119.6	1.00	0.310
16020	105.0	145.0	1.00	0.929
6020	108.0	142.0	1.50	1.260
6220	113.0	167.0	2.10	3.129
6320	114.0	201.0	3.00	7.560
61821	110.4	124.6	1.00	0.330
6021	114.0	151.0	2.00	1.590
6221	118.0	177.0	2.10	3.860
61822			1.00	0.500
16022	115.0	165.0	1.00	1.510
6022	119.0	161.0	2.00	1.490
6222	123.0	187.0	2.10	3.860
6322	124.0	226.0	3.00	10.300
61824	125.4	144.6	1.00	0.550
16024	125.0	175.0	1.00	1.600
6024	129.0	171.0	2.00	2.090
6224	133.0	202.0	2.10	5.600
6324	134.0	246.0	3.00	12.800
61826	137.6	157.4	1.10	0.780
16026	136.0	194.0	1.10	2.410
6026	138.8	191.2	2.00	3.270
6226	144.0	216.0	3.00	6.220
6326	148.0	262.0	4.00	18.200
61828	147.6	167.4	1.10	0.830
16028	146.0	204.0	1.00	2.530
6028	149.0	201.0	2.00	3.570
6228	154.0	236.0	3.00	7.470
6328	157.0	283.0	3.00	22.100
61830	157.6	182.4	1.10	1.350
6030	159.0	216.0	2.10	4.380
6230	164.0	256.0	2.50	10.300
6330	167.0	303.0	3.00	26.600
61832	167.6	192.4	1.10	1.400
16032	167.0	233.0	1.50	3.770

Single-row radial ball bearings (continued)

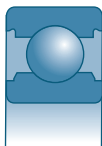


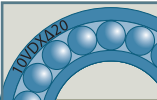
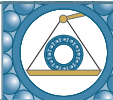
d		D	B				
mm	References	mm	mm	10°N	10°N	rpm*	rpm*
160	6032 6232 6332	240 290 340	38 48 68	137.00 199.00 300.00	135.00 203.00 325.00	2500 2100 1800	3000 2500 2200
170	61834 16034 6034 6234	215 260 260 310	22 28 42 52	61.00 123.00 168.00 212.00	73.00 136.00 172.00 224.00	2800 2400 2300 2000	3300 2900 2800 2400
180	61836 16036 6036 6236	225 280 280 320	22 31 46 52	62.00 131.00 188.00 226.00	76.00 146.00 196.00 244.00	2700 2300 2100 1900	3200 2800 2700 2300
190	61838 16038 6038 6238	240 290 290 340	24 31 46 55	69.00 149.00 195.00 255.00	85.00 167.00 213.00 280.00	2500 2200 2000 1800	3000 2600 2500 2100
200	61840 16040 6040 6240	250 310 310 360	24 34 51 58	70.00 175.00 214.00 270.00	88.00 202.00 238.00 310.00	2400 2000 1900 1700	2900 2400 2400 2000
220	61844	270	24	73.00	97.00	2200	2600
240	61848	300	28	92.00	120.00	2000	2400
260	61852	320	28	94.00	128.00	1900	2200
280	61856	350	33	126.00	170.00	1700	2000
300	61860	380	38	148.00	198.00	1600	1900
320	61864	400	38	154.00	213.00	1500	1800
340	61868	420	38	155.00	219.00	1400	1700
360	61872	440	38	160.00	234.00	1350	1600

* These are the speed limits according to the SNR concept (see pages 85 to 87).

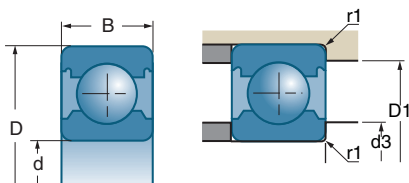


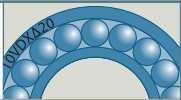
■ Open bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
6032	170.0	230.0	2.10	6.120
6232	174.0	276.0	2.50	14.300
6332	177.0	323.0	3.00	31.500
61834	177.6	207.4	1.10	1.600
16034	177.0	253.0	1.50	5.130
6034	180.0	250.0	2.10	8.200
6234	187.0	293.0	3.00	17.700
61836	187.6	217.4	1.10	2.000
16036	189.0	271.0	2.00	6.920
6036	190.0	270.0	2.10	10.700
6236	197.0	303.0	3.00	18.300
61838	199.0	231.0	1.50	2.700
16038	199.0	281.0	2.00	7.090
6038	200.0	280.0	2.10	11.270
6238	207.0	323.0	3.00	22.200
61840	209.0	241.0	1.50	2.700
16040	219.0	301.0	2.00	9.110
6040	210.0	300.0	2.10	14.430
6240	217.0	343.0	3.00	26.500
61844	229.0	261.0	1.50	2.900
61848	251.0	289.0	2.00	4.500
61852	271.0	309.0	2.00	4.800
61856	291.0	339.0	2.00	7.300
61860	314.0	366.0	2.10	10.500
61864	334.0	386.0	2.10	11.000
61868	354.0	406.0	2.10	11.500
61872	374.0	426.0	2.10	12.000

Single-row radial ball bearings (continued)

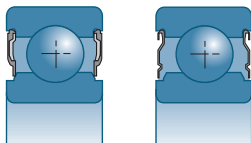


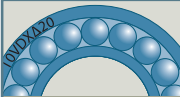
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm EE/2RS*	rpm ZZ*
3	623 EE 623 ZZ	10	4	0.64	0.23	47000	70000
4	604 ZZ 624 EE 624 ZZ 634 EE 634 ZZ	12 13 16	4 5 5	0.71 1.3 1.88	0.27 0.5 0.68	36000 25000	60000 54000 46000
5	625 EE 625 ZZ 635 ZZ	16 19	5 6	1.88 2.46	0.68 1.05	31000	47000 34000
6	626 EE 626 ZZ	19	6	2.46	1.05	23000	35000
7	607 EE 607 ZZ 627 EE 627 ZZ	19 22	6 7	2.46 3.3	1.05 1.36	25000 21000	37000 32000
8	608 EE 608 ZZ	22	7	3.3	1.36	23000	34000
9	609 EE 609 ZZ 629 EE 629 ZZ	24 26	7 8	3.65 4.6	1.64 1.97	20000 17000	30000 26000
10	61800 EE 61800 ZZ 61900 EE 61900 ZZ 6000 EE 6000 ZZ 63000 EE 6200 EE 6200 ZZ 62200 EE 62200 ZZ 6300 EE 6300 ZZ 62300 EE	19 22 26 26 30 30 35 35	5 6 8 12 9 14 11 17	1.83 2.7 4.6 4.6 6 6 7.6 8.1	0.92 1.27 1.97 1.97 2.65 2.65 3.45 3.45	22000 20000 18000 18000 15000 15000 13000 13000	34000 31000 27000 27000 23000 18000 20000
12	61801 EE 61801 ZZ 61901 EE 61901 ZZ 6001 EE 6001 ZZ 63001 EE 6201 EE 6201 ZZ 62201 EE 6301 EE 6301 ZZ 62301 EE	21 24 28 28 32 32 37 37	5 6 8 12 10 14 12 17	1.92 2.9 5.1 5.1 6.8 6.9 9.7 9.7	1.04 1.46 2.37 2.37 3.05 3.1 4.2 4.2	20000 18000 16000 16000 14000 14000 12000 12000	30000 27000 25000 21000 18000
15	61802 EE 61802 ZZ 61902 EE 61902 ZZ 6002 EE 6002 ZZ 63002 EE	24 28 32 32	5 7 9 13	2.08 4.35 5.6 5.6	1.26 2.25 2.85 2.85	17000 15000 14000 14000	25000 23000 21000

* These are the speed limits according to the SNR concept (see pages 85 to 87).

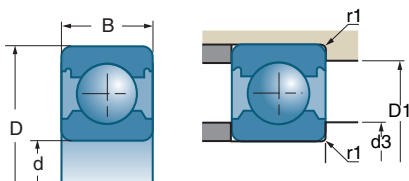


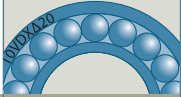
■ Sealed and shielded bearing



		d3 min	D1 max	r1 max	
References		mm	mm	mm	kg
623 EE	623 ZZ	5.0	8.0	0.10	0.0015
624 EE 634 EE	604 ZZ	5.4	10.6	0.20	0.0021
	624 ZZ	5.5	11.5	0.20	0.0060
	634 ZZ	6.0	14.0	0.30	0.0050
625 EE	625 ZZ	7.0	14.0	0.30	0.0070
	635 ZZ	7.0	17.0	0.30	0.0100
626 EE	626 ZZ	8.0	17.0	0.30	0.0090
607 EE	607 ZZ	9.0	17.0	0.30	0.0120
627 EE	627 ZZ	9.0	20.0	0.30	0.0120
608 EE	608 ZZ	10.0	20.0	0.30	0.0120
609 EE 629 EE	609 ZZ	11.0	22.0	0.30	0.0140
	629 ZZ	12.9	22.1	0.30	0.0200
61800 EE	61800 ZZ	12.0	17.0	0.30	0.0050
61900 EE	61900 ZZ	12.0	20.0	0.30	0.0130
6000 EE	6000 ZZ	12.0	24.0	0.30	0.0190
63000 EE		12.0	24.0	0.30	0.0280
6200 EE	6200 ZZ	14.0	26.0	0.60	0.0330
62200 EE	62200 ZZ	14.0	26.0	0.60	0.0480
6300 EE	6300 ZZ	14.0	31.0	0.60	0.0550
62300 EE		14.0	31.0	0.60	0.0790
61801 EE	61801 ZZ	14.0	19.0	0.30	0.0060
61901 EE	61901 ZZ	14.0	22.0	0.30	0.0140
6001 EE	6001 ZZ	14.0	26.0	0.30	0.0220
63001 EE		14.0	26.0	0.30	0.0290
6201 EE	6201 ZZ	16.0	28.0	0.60	0.0380
62201 EE		16.0	28.0	0.60	0.0490
6301 EE	6301 ZZ	17.9	31.5	1.00	0.0620
62301 EE		17.9	31.5	1.00	0.0700
61802 EE	61802 ZZ	17.0	22.0	0.30	0.0070
61902 EE	61902 ZZ	17.0	26.0	0.30	0.0150
6002 EE	6002 ZZ	17.0	30.0	0.30	0.0300
63002 EE		17.0	30.0	0.30	0.0440

Single-row radial ball bearings (continued)

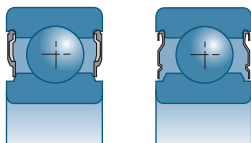


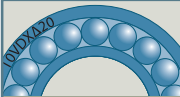
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm EE/2RS*	rpm ZZ*
15	6202 EE 6202 ZZ	35	11	7.7	3.75	12000	19000
	62202 EE	35	14	7.7	3.75	12000	
	6302 EE 6302 ZZ	42	13	11.3	5.4	11000	16000
	62302 EE	42	17	11.3	5.4	11000	
17	61803 EE 61803 ZZ	26	5	2.23	1.46	15000	23000
	61903 EE 61903 ZZ	30	7	4.6	2.55	14000	21000
	6003 EE 6003 ZZ	35	10	6	3.25	12000	19000
	63003 EE	35	14	6	3.25	12000	
	6203 EE 6203 ZZ	40	12	9.5	4.75	10000	16000
	62203 EE	40	16	9.5	4.75	11000	
	6303 EE 6303 ZZ	47	14	13.6	6.6	9300	14000
	62303 EE	47	19	13.6	6.6	9400	
20	61804 2RS 61804 ZZ	32	7	2.95	1.87	11500	19500
	61904 2RS 61904 ZZ	37	9	6.4	3.7	11000	17500
	6004 EE 6004 ZZ	42	12	9.4	5	10000	16000
	63004 EE	42	16	9.4	5	10000	
	6204 EE 6204 ZZ	47	14	12.8	6.6	9300	14000
	62204 EE	47	18	12.8	6.6	9500	
	6304 EE 6304 ZZ	52	15	15.9	7.9	8600	12000
	62304 EE	52	21	15.9	7.9	8600	
25	61805 2RS 61805 ZZ	37	7	4.3	2.95	9800	17000
	61905 2RS 61905 ZZ	42	9	7	4.55	9800	15000
	6005 EE 6005 ZZ	47	12	10.1	5.8	9300	14000
	63005 EE	47	16	10.1	5.8	9300	
	6205 EE 6205 ZZ	52	15	14	7.9	8100	12000
	62205 EE	52	18	14	7.9	8100	
	6305 EE 6305 ZZ	62	17	23.6	12.1	7100	10000
	62305 EE	62	24	23.6	12.1	7100	
30	61806 2RS 61806 ZZ	42	7	4.55	3.4	8400	14500
	61906 2RS 61906 ZZ	47	9	7.2	5	8100	13500
	6006 EE 6006 ZZ	55	13	13.2	8.3	7800	11000
	63006 EE	55	19	13.2	8.3	7800	
	6206 EE 6206 ZZ	62	16	19.5	11.3	6800	10000
	62206 EE	62	20	19.5	11.3	6900	
	6306 EE 6306 ZZ	72	19	27	15.2	5800	8900
	62306 EE	72	27	28	15.8	6000	

* These are the speed limits according to the SNR concept (see pages 85 to 87).

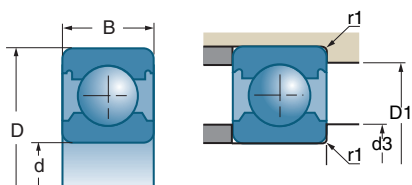


■ Sealed and shielded bearing (continued)



		d3 min	D1 max	r1 max	
References		mm	mm	mm	kg
6202 EE	6202 ZZ	19.0	31.2	0.60	0.0460
62202 EE		19.0	31.2	0.60	0.0530
6302 EE	6302 ZZ	21.0	36.3	1.00	0.0830
62302 EE		21.0	36.3	1.00	0.1080
61803 EE	61803 ZZ	19.0	24.0	0.30	0.0080
61903 EE	61903 ZZ	19.0	28.0	0.30	0.0160
6003 EE	6003 ZZ	19.0	33.0	0.30	0.0390
63003 EE		19.0	33.0	0.30	0.0550
6203 EE	6203 ZZ	21.0	36.0	0.60	0.0677
62203 EE		21.0	36.0	0.60	0.0820
6303 EE	6303 ZZ	23.0	41.0	1.00	0.1130
62303 EE		23.0	41.0	1.00	0.1460
61804 2RS	61804 ZZ	22.2	29.8	0.30	0.0180
61904 2RS	61904 ZZ	22.2	34.8	0.30	0.0360
6004 EE	6004 ZZ	24.0	38.0	0.60	0.0680
63004 EE		24.0	38.0	0.60	0.0820
6204 EE	6204 ZZ	26.0	41.3	1.00	0.1000
62204 EE		26.0	41.3	1.00	0.1310
6304 EE	6304 ZZ	27.0	45.0	1.10	0.1470
62304 EE		27.0	45.0	1.10	0.1970
61805 2RS	61805 ZZ	27.2	34.8	0.30	0.0220
61905 2RS	61905 ZZ	27.2	39.8	0.30	0.0420
6005 EE	6005 ZZ	29.0	43.0	0.60	0.0800
63005 EE		29.0	43.0	0.60	0.1050
6205 EE	6205 ZZ	31.0	46.5	1.00	0.1270
62205 EE		31.0	46.5	1.00	0.1480
6305 EE	6305 ZZ	32.0	55.0	1.10	0.2250
62305 EE		32.0	55.0	1.10	0.3170
61806 2RS	61806 ZZ	32.2	39.8	0.30	0.0260
61906 2RS	61906 ZZ	32.3	44.8	0.30	0.0480
6006 EE	6006 ZZ	35.0	50.0	1.00	0.1160
63006 EE		35.0	50.0	1.00	0.1660
6206 EE	6206 ZZ	36.0	56.0	1.00	0.1990
62206 EE		36.0	56.0	1.00	0.2360
6306 EE	6306 ZZ	37.0	65.0	1.10	0.3500
62306 EE		37.0	65.0	1.10	0.4730

Single-row radial ball bearings (continued)

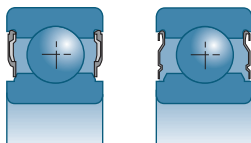


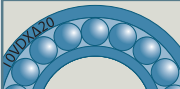
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm EE/2RS*	rpm ZZ*
35	61807 2RS 61807 ZZ	47	7	4.75	3.8	7300	13000
	61907 2RS	55	10	9.6	5.9	8000	
	6007 EE 6007 ZZ	62	14	16	10.3	6800	10000
	63007 EE	62	20	16	10.3	6800	
	6207 EE 6207 ZZ	72	17	25.5	15.3	5900	8900
	62207 EE	72	23	25.5	15.3	5900	
	6307 EE 6307 ZZ	80	21	33.5	19.2	5300	8000
	62307 EE	80	31	33.5	19.2	5300	
40	61808 2RS 61808 ZZ	52	7	4.9	4.15	6500	11500
	6008 EE 6008 ZZ	68	15	16.8	11.5	6100	9200
	63008 EE	68	21	16.8	11.5	6100	
	6208 EE 6208 ZZ	80	18	29.5	18.1	5200	7800
	62208 EE	80	23	29	17.9	5300	
	6308 EE 6308 ZZ	90	23	40.5	23.9	4700	7000
	62308 EE	90	33	40.5	23.9	4800	
45	61809 EE 61809 2ZY	58	7	6.6	5.9	6400	10500
	6009 EE 6009 ZZ	75	16	21	15.2	5500	8300
	6209 EE 6209 ZZ	85	19	32.5	20.5	4900	7300
	62209 EE	85	23	32.5	20.5	4900	
	6309 EE 6309 ZZ	100	25	53	31.5	4200	6200
50	61810 EE 61810 2ZY	65	7	6.8	6.3	5700	9300
	6010 EE 6010 ZZ	80	16	21.8	16.6	5000	7600
	6210 EE 6210 ZZ	90	20	35	23.2	4500	6800
	62210 EE	90	23	35	23.2	4500	
	6310 EE 6310 ZZ	110	27	62	38	3700	5600
55	61811 EE 61811 2ZY	72	9	9.1	8.5	5100	8400
	6011 EE 6011 ZZ	90	18	28.5	21.3	4500	6800
	6211 EE 6211 ZZ	100	21	43.5	29	4100	6100
	6311 EE 6311 ZZ	120	29	71	44.5	3500	5300
60	61812 EE 61812 2ZY	78	10	11.8	11.1	4700	7700
	6012 EE 6012 ZZ	95	18	29.5	23.2	4300	6400
	6212 EE 6212 ZZ	110	22	52	36	3600	5500
	6312 EE 6312 ZZ	130	31	82	52	3200	4800

* These are the speed limits according to the SNR concept (see pages 85 to 87).

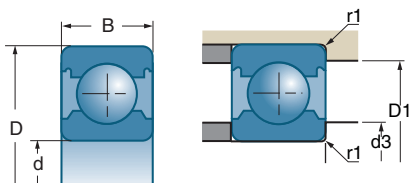


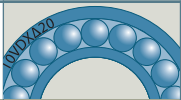
■ Sealed and shielded bearing (continued)



		d3 min	D1 max	r1 max	
References		mm	mm	mm	kg
61807 2RS	61807 ZZ	37.2	44.8	0.30	0.0290
61907 2RS		38.6	51.4	0.60	0.0740
6007 EE	6007 ZZ	40.0	57.0	1.00	0.1330
63007 EE		40.0	57.0	1.00	0.2140
6207 EE	6207 ZZ	42.0	65.0	1.10	0.2850
62207 EE		42.0	65.0	1.10	0.3750
6307 EE	6307 ZZ	44.0	71.0	1.50	0.4460
62307 EE		44.0	71.0	1.50	0.6580
61808 2RS	61808 ZZ	42.2	49.8	0.30	0.0350
6008 EE	6008 ZZ	45.0	63.0	1.00	0.1920
63008 EE		45.0	63.0	1.00	0.2620
6208 EE	6208 ZZ	47.0	73.0	1.10	0.3670
62208 EE		47.0	73.0	1.10	0.4600
6308 EE	6308 ZZ	49.0	81.0	1.50	0.6120
62308 EE		49.0	81.0	1.50	0.8740
61809 EE	61809 ZZY	47.6	55.4	0.30	0.0390
6009 EE	6009 ZZ	50.0	70.0	1.00	0.2480
6209 EE	6209 ZZ	52.0	78.0	1.10	0.4040
62209 EE		52.0	78.0	1.10	0.4810
6309 EE	6309 ZZ	54.0	91.0	1.50	0.8250
61810 EE	61810 ZZY	52.6	62.4	0.30	0.0520
6010 EE	6010 ZZ	55.0	75.0	1.00	0.2654
6210 EE	6210 ZZ	57.0	83.0	1.10	0.4530
62210 EE		57.0	83.0	1.10	0.5140
6310 EE	6310 ZZ	61.0	99.0	2.00	1.0700
61811 EE	61811 ZZY	57.6	69.4	0.30	0.0840
6011 EE	6011 ZZ	61.0	84.0	1.10	0.3880
6211 EE	6211 ZZ	64.0	91.0	1.50	0.6030
6311 EE	6311 ZZ	66.0	109.0	2.00	1.3800
61812 EE	61812 ZZY	62.6	75.4	0.30	0.1050
6012 EE	6012 ZZ	66.0	89.0	1.10	0.4114
6212 EE	6212 ZZ	69.0	101.0	1.50	0.7850
6312 EE	6312 ZZ	73.0	117.0	2.10	1.7200

Single-row radial ball bearings (continued)

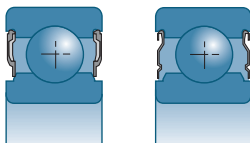


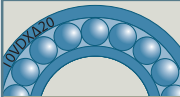
d		D	B				
mm	References	mm	mm	10 ³ N	10 ³ N	rpm EE/2RS*	rpm ZZ*
65	61813 EE 61813 ZZ	85	10	12.3	12	4400	7100
	6013 EE 6013 ZZ	100	18	30.5	25	4000	6100
	6213 EE 6213 ZZ	120	23	57	40	3400	5100
	6313 EE 6313 ZZ	140	33	93	60	3000	4500
70	61814 EE 61814 ZZ	90	10	12.4	12.4	4100	6700
	6014 EE 6014 ZZ	110	20	38	31	3700	5500
	6214 EE 6214 ZZ	125	24	62	44	3200	4900
	6314 EE 6314 ZZ	150	35	104	68	2800	4200
75	61815 EE 61815 ZZ	95	10	12.9	13.3	3800	6300
	6015 EE 6015 ZZ	115	20	39.5	33.5	3500	5200
	6215 EE 6215 ZZ	130	25	67	48	3100	4600
	6315 EE 6315 ZZ	160	37	113	77	2600	3900
80	61816 EE 61816 ZZ	100	10	13	13.8	3600	6000
	6016 EE 6016 ZZ	125	22	47.5	39.5	3200	4800
	6216 EE 6216 ZZ	140	26	73	53	2900	4300
	6316 EE 6316 ZZ	170	39	123	86	2400	3700
85	61817 EE 61817 ZZ	110	13	19.3	19.8	3300	5500
	6017 EE 6017 ZZ	130	22	49.5	43	3100	4600
	6217 EE 6217 ZZ	150	28	84	62	2700	4000
	6317 EE 6317 ZZ	180	41	133	97	2300	3500
90	61818 EE 61818 ZZ	115	13	19.5	20.5	3200	5200
	6018 EE 6018 ZZ	140	24	58	49.5	2800	4300
	6218 EE 6218 ZZ	160	30	96	71	2500	3800
	6318 EE 6318 ZZ	190	43	143	107	2200	3300
95	61819 EE 61819 ZZ	120	13	19.8	21.3	3000	5000
	6019 EE 6019 ZZ	145	24	60	54	2700	4000
	6219 EE 6219 ZZ	170	32	109	82	2400	3600
	6319 EE 6319 ZZ	170	32	109	82		3100
100	61820 EE 61820 ZZ	125	13	20.1	22	2900	4800
	6020 EE 6020 ZZ	150	24	60	54	2600	4000
	6220 EE 6220 ZZ	180	34	122	93	2300	3400
	6320 EE 6320 ZZ	180	34	122	93		2900

* These are the speed limits according to the SNR concept (see pages 85 to 87).

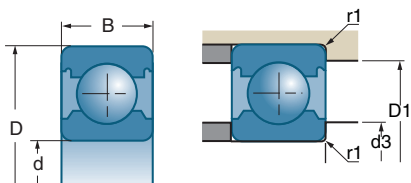


■ Sealed and shielded bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
61813 EE 61813 ZZ	69.2	80.8	0.60	0.1300
6013 EE 6013 ZZ	71.0	94.0	1.10	0.4540
6213 EE 6213 ZZ	74.0	111.0	1.50	0.9910
6313 EE 6313 ZZ	78.0	127.0	2.10	2.0770
61814 EE 61814 ZZ	74.2	85.8	0.60	0.1400
6014 EE 6014 ZZ	76.0	104.0	1.10	0.6100
6214 EE 6214 ZZ	79.0	116.0	1.50	1.0000
6314 EE 6314 ZZ	83.0	137.0	2.10	2.5660
61815 EE 61815 ZZ	79.2	90.8	0.60	0.1500
6015 EE 6015 ZZ	81.0	109.0	1.10	0.6400
6215 EE 6215 ZZ	84.0	121.0	1.50	1.1900
6315 EE 6315 ZZ	88.0	147.0	2.10	3.1200
61816 EE 61816 ZZ	84.2	95.2	0.60	0.1550
6016 EE 6016 ZZ	86.0	119.0	1.10	0.8700
6216 EE 6216 ZZ	91.0	129.0	2.00	1.4200
6316 EE 6316 ZZ	93.0	157.0	2.10	3.7000
61817 EE 61817 ZZ	90.4	104.6	1.00	0.2700
6017 EE 6017 ZZ	91.0	124.0	1.10	0.9000
6217 EE 6217 ZZ	96.0	139.0	2.00	1.8500
6317 EE 6317 ZZ	99.0	166.0	3.00	4.2100
61818 EE 61818 ZZ	95.4	109.6	1.00	0.2800
6018 EE 6018 ZZ	98.0	132.0	1.50	1.1750
6218 EE 6218 ZZ	101.0	149.0	2.00	2.2500
6318 EE 6318 ZZ	104.0	176.0	3.00	4.9730
61819 EE 61819 ZZ	100.4	114.6	1.00	0.2950
6019 EE 6019 ZZ	103.0	137.0	1.50	1.2200
6219 EE 6219 ZZ	108.0	157.0	2.10	2.8000
6319 EE 6319 ZZ	108.0	157.0	2.10	2.6700
61820 EE 61820 ZZ	105.4	119.6	1.00	0.3100
6020 EE 6020 ZZ	108.0	142.0	1.50	1.2600
6220 EE 6220 ZZ	113.0	167.0	2.10	3.1200
6320 EE 6320 ZZ	113.0	167.0	2.10	3.1870

Single-row radial ball bearings (continued)

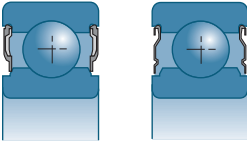


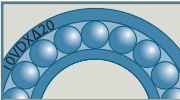
d		D	B				
mm	References	mm	mm	10°N	10°N	rpm EE/2RS*	rpm ZZ*
105	61821 EE 61821 ZZY 6021 EE	130 160	13 26	20.8 72	23.6 66	2800 2400	4600
110	61822 EE 61822 ZZY 6022 EE	140 170	16 28	28 82	30.5 73	2600 2300	4300
120	61824 EE 61824 ZZY 6024 EE	150 180	16 28	29 85	33 79	2400 2200	4000
130	61826 2RS 61826 ZZ	165	18	38	43	2000	3600
140	61828 2RS 61828 ZZ 6028 EE	175 210	18 33	39 109	46 107	1850 2800	3400
160	6032 EE	240	38	137	135	2500	

* These are the speed limits according to the SNR concept (see pages 85 to 87).

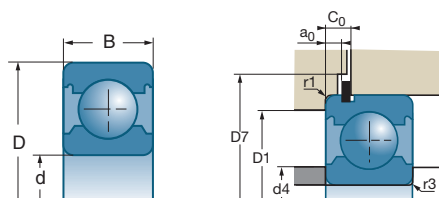


■ Sealed and shielded bearing (continued)



	d3 min	D1 max	r1 max	
References	mm	mm	mm	kg
61821 EE 61821 ZZY 6021 EE	110.4 114.0	124.6 151.0	1.00 2.00	0.3300 1.5900
61822 EE 61822 ZZY 6022 EE	115.4 119.0	134.6 161.0	1.00 2.00	0.5000 1.4900
61824 EE 61824 ZZY 6024 EE	125.4 129.0	144.6 171.0	1.00 2.00	0.5500 2.1400
61826 2RS 61826 2Z	137.6	157.4	1.10	0.7800
61828 2RS 61828 2Z 6028 EE	147.6 149.0	167.4 201.0	1.10 2.00	0.8300 3.6500
6032 EE	170.0	230.0	2.10	6.3000

Single-row radial ball bearings (continued)

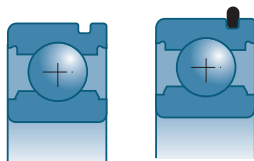


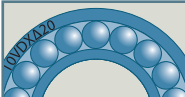
d			D	B					a0 min	a0 max
mm	References		mm	mm	10 ⁶ N	10 ⁶ N	rpm*	rpm*	mm	mm
10	6200 N	6200 NR	30	9	6	2.65	23000	27000	1.9	2.06
12	6201 N	6201 NR	32	10	6.9	3.1	21000	25000	1.9	2.06
15	6002 N	6002 NR	32	9	5.6	2.85	21000	26000	1.9	2.06
	6202 N	6202 NR	35	11	7.7	3.75	19000	22000	1.9	2.06
17	6003 N	6003 NR	35	10	6	3.25	19000	23000	1.9	2.06
	6203 N	6203 NR	40	12	9.5	4.75	16000	19000	1.9	2.06
20	6004 N	6004 NR	42	12	9.4	5	16000	20000	1.9	2.06
	6204 N	6204 NR	47	14	12.8	6.6	14000	16000	2.31	2.46
	6304 N	6304 NR	52	15	15.9	7.9	12000	15000	2.31	2.46
25	6005 N	6005 NR	47	12	10.1	5.8	14000	18000	1.9	2.06
	6205 N	6205 NR	52	15	14	7.9	12000	14000	2.31	2.46
	6305 N	6305 NR	62	17	23.6	12.1	10000	13000	3.07	3.28
30	6006 N	6006 NR	55	13	13.2	8.3	12000	15000	1.88	2.08
	6206 N	6206 NR	62	16	19.5	11.3	10000	12000	3.07	3.28
	6306 N	6306 NR	72	19	28	15.8	8900	10000	3.07	3.28
35	6007 N	6007 NR	62	14	16	10.3	10000	12000	1.88	2.08
	6207 N	6207 NR	72	17	25.5	15.3	8700	10000	3.07	3.28
	6307 N	6307 NR	80	21	33.5	19.2	8000	9800	3.07	3.28
40	6008 N	6008 NR	68	15	16.8	11.5	9200	11000	2.29	2.49
	6208 N	6208 NR	80	18	29	17.9	7800	9100	3.07	3.28
	6308 N	6308 NR	90	23	40.5	23.9	7200	8800	3.07	3.28
	6408 N	6408 NR	110	27	63	36.5	6200	7600	3.07	3.28
45	6009 N	6009 NR	75	16	21	15.2	8300	10000	2.29	2.49
	6209 N	6209 NR	85	19	32.5	20.5	7300	8800	3.07	3.28
	6309 N	6309 NR	100	25	53	31.5	6400	7800	3.07	3.28
	6409 N	6409 NR	120	29	77	45	5600	6900	3.86	4.06
50	6010 N	6010 NR	80	16	21.8	16.6	7600	9400	2.29	2.49
	6210 N	6210 NR	90	20	35	23.2	6900	8200	3.07	3.28
	6310 N	6310 NR	110	27	62	38	5800	7100	3.07	3.28

* These are the speed limits according to the SNR concept (see pages 85 to 87).

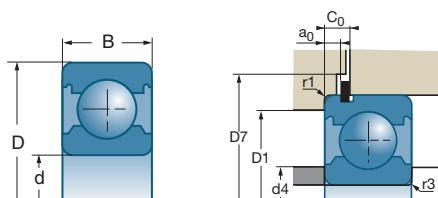


■ Bearing with groove or groove and snap ring



		c0 min	c0 max	d4 min	D1 max	D7 min	r3 max	r1 max	snap ring	
References		mm	mm	mm	mm	mm	mm	mm		kg
6200 N	6200 NR	2.92	3.18	14.0	26.0	36	0.6	0.6	R 30	0.033
6201 N	6201 NR	2.92	3.18	16.0	28.0	38	0.6	0.6	R 32	0.039
6002 N	6002 NR	2.92	3.18	17.0	30.0	38	0.3	0.3	R 32	0.030
6202 N	6202 NR	2.92	3.18	19.0	31.2	41	0.6	0.6	R 35	0.045
6003 N	6003 NR	2.92	3.18	19.0	33.0	41	0.3	0.3	R 35	0.039
6203 N	6203 NR	2.92	3.18	21.0	36.0	46	0.6	0.6	R 40	0.065
6004 N	6004 NR	2.92	3.18	24.0	38.0	47.5	0.6	0.5	R 42	0.068
6204 N	6204 NR	3.33	3.58	26.0	41.3	54	1	0.6	R 47	0.106
6304 N	6304 NR	3.33	3.58	27.0	45.0	59	1.1	0.6	R 52	0.145
6005 N	6005 NR	2.92	3.18	29.0	43.0	54	0.6	0.5	R 47	0.080
6205 N	6205 NR	3.33	3.58	31.0	46.5	59	1	0.5	R 52	0.126
6305 N	6305 NR	4.67	4.98	32.0	55.0	69	1.1	0.6	R 62	0.225
6006 N	6006 NR	2.9	3.2	35.0	50.0	62	1	0.5	R 55	0.116
6206 N	6206 NR	4.67	4.98	36.0	56.0	69	1	0.5	R 62	0.199
6306 N	6306 NR	4.67	4.98	37.0	65.0	80	1.1	0.6	R 72	0.346
6007 N	6007 NR	3.48	3.78	40.0	57.0	69	1	0.5	R 62	0.153
6207 N	6207 NR	4.67	4.98	42.0	65.0	80	1.1	0.5	R 72	0.285
6307 N	6307 NR	4.67	4.98	44.0	71.0	88	1.5	0.5	R 80	0.446
6008 N	6008 NR	3.89	4.19	45.0	63.0	76	1	0.6	R 68	0.192
6208 N	6208 NR	4.67	4.98	47.0	73.0	88	1.1	0.5	R 80	0.373
6308 N	6308 NR	5.43	5.74	49.0	81.0	97.5	1.5	0.6	R 90	0.625
6408 N	6408 NR	5.43	5.74	52.0	98.0	118	2	0.6	R 110	1.214
6009 N	6009 NR	3.89	4.19	50.0	70.0	83	1	0.6	R 75	0.244
6209 N	6209 NR	4.67	4.98	52.0	78.0	93	1.1	0.5	R 85	0.404
6309 N	6309 NR	5.43	5.74	54.0	91.0	108	1.5	0.5	R 100	0.825
6409 N	6409 NR	6.58	6.88	57.0	108.0	131	2	0.6	R 120	1.513
6010 N	6010 NR	3.89	4.19	55.0	75.0	88	1	0.5	R 80	0.267
6210 N	6210 NR	5.43	5.74	57.0	83.0	97.5	1.1	0.6	R 90	0.439
6310 N	6310 NR	5.43	5.74	61.0	99.0	118	2	0.6	R 110	1.070

Single-row radial ball bearings (continued)

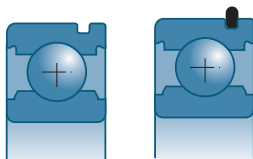


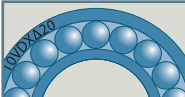
d			D	B					a0 min	a0 max
mm	References		mm	mm	10°N	10°N	rpm*	rpm*	mm	mm
55	6011 N	6011 NR	90	18	28.5	21.3	6800	8500	2.67	2.87
	6211 N	6211 NR	100	21	43.5	29	6200	7400	3.07	3.28
	6311 N	6311 NR	120	29	71	44.5	5200	6500	3.86	4.06
	6411 N	6411 NR	140	33	100	62	4800	5800	4.65	4.9
60	6212 N	6212 NR	110	22	52	36	5600	6800	3.07	3.28
	6312 N	6312 NR	130	31	82	52	4800	5900	3.86	4.06
65	6013 N	6013 NR	100	18	30.5	25	6100	7500	2.67	2.87
	6213 N	6213 NR	120	23	57	40	5100	6200	3.86	4.06
	6313 N	6313 NR	140	33	93	60	4500	5600	4.65	4.9
70	6014 N	6014 NR	110	20	38	31	5500	6800	2.67	2.87
85	6017 N	6017 NR	130	22	49.5	43	4700	5800	2.67	2.87
	6217 N	6217 NR	150	28	83	64	4100	4900	4.65	4.9
90	6018 N	6018 NR	140	24	58	49.5	4300	5300	3.45	3.71
100	6020 N	6020 NR	150	24	60	54	4000	4900	3.45	3.71
120	6024 N	6024 NR	180	28	85	79	3300	4100	3.45	3.71

* These are the speed limits according to the SNR concept (see pages 85 to 87).



■ Bearing with groove or groove and snap ring (*continued*)



		c0 min	c0 max	d4 min	D1 max	D7 min	r3 max	r1 max	snap ring	
References		mm	mm	mm	mm	mm	mm	mm		kg
6011 N	6011 NR	5.03	5.33	61.0	84.0	97.5	1.1	0.6	R 90	0.388
6211 N	6211 NR	5.43	5.74	64.0	91.0	107.5	1.5	0.6	R 100	0.598
6311 N	6311 NR	6.58	6.88	66.0	109.0	131	2	0.5	R 120	1.380
6411 N	6411 NR	7.37	7.72	69.0	126.0	151	2.1	0.6	R 140	2.283
6212 N	6212 NR	5.43	5.74	69.0	101.0	118	1.5	0.6	R 110	0.763
6312 N	6312 NR	6.58	6.88	73.0	117.0	141	2.1	0.6	R 130	1.685
6013 N	6013 NR	5.03	5.33	71.0	94.0	107.5	1.1	0.6	R 100	0.432
6213 N	6213 NR	6.58	6.88	74.0	111.0	131	1.5	0.5	R 120	0.990
6313 N	6313 NR	7.37	7.72	78.0	127.0	151	2.1	0.6	R 140	2.060
6014 N	6014 NR	5.03	5.33	76.0	104.0	117.5	1.1	0.5	R 110	0.610
6017 N	6017 NR	5.39	5.69	91.0	124.0	141	1.1	0.6	R 130	0.879
6217 N	6217 NR	7.37	7.72	96.0	139.0	161	2	0.6	R 150	1.776
6018 N	6018 NR	6.17	6.53	98.0	132.0	151	1.5	0.6	R 140	1.175
6020 N	6020 NR	6.17	6.53	108.0	142.0	161	1.5	0.6	R 150	1.260
6024 N	6024 NR	6.45	6.81	129.0	171.0	194	2	0.6	R 180	2.100