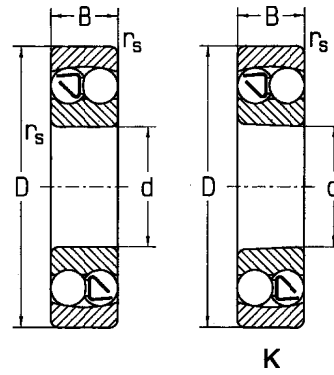


Double Row Self-Aligning Ball Bearings

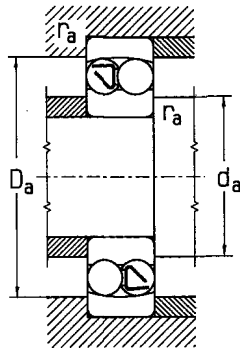
Sizes 5 mm – 17 mm



Dimensions				Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm				kN lbf		min ⁻¹		
5	19	6	0.3	2.15 482	0.24 54	27,000	32,000	135
6	19	6	0.3	2.15 482	0.24 54	27,000	32,000	126
7	22	7	0.3	2.65 596	0.28 63	27,000	32,000	127
8	22	7	0.3	2.65 596	0.28 63	27,000	32,000	108
9	26	8	0.3	3.9 874	0.4 89	27,000	32,000	129
10	30	9	0.6	5.53 1,230	1.19 266	25,000	30,000	1200
	30	14	0.6	7.28 1,630	1.58 355	25,000	30,000	2200
	35	11	0.6	7.22 1,620	1.62 362	21,000	25,000	1300
12	32	10	0.6	5.59 1,250	1.26 282	24,000	28,000	1201
	32	14	0.6	7.61 1,710	1.74 391	24,000	28,000	2201
	37	12	1	9.36 2,110	2.15 482	19,000	22,000	1301
15	35	11	0.6	7.41 1,680	1.74 391	21,000	25,000	1202
	35	14	0.6	7.61 1,710	1.81 406	21,000	25,000	2202
	42	13	1	9.56 2,150	2.28 511	17,000	20,000	1302
17	40	12	0.6	7.93 1,780	2.03 455	17,000	20,000	1203
	40	16	0.6	9.75 2,200	2.42 541	17,000	20,000	2203
	47	14	1	12.5 2,820	3.16 708	14,000	17,000	1303

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order. Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

E

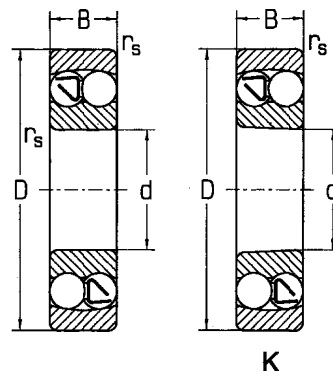


E

Abutment and Fillet Dimensions				Weight	Factors			
d	d _a min	D _a max	r _a max		e	Y ₁	Y ₂	Y ₀
mm				kg lbs				
5	7.2	15.8	0.3	0.009 0.020	0.34	1.9	2.9	2
6	8.2	17	0.3	0.009 0.020	0.34	1.9	2.9	2
7	9.2	20	0.3	0.014 0.031	0.33	1.9	2.9	2
8	10	20	0.3	0.014 0.031	0.33	1.9	2.9	2
9	12	22.5	0.3	0.022 0.048	0.34	1.9	2.9	2
10	14	26	0.6	0.034 0.075	0.32	2	3	2
	14	26	0.6	0.047 0.103	0.65	1	1.5	1
	14	31	0.6	0.058 0.128	0.33	1.9	3	2
12	16	18	0.6	0.040 0.088	0.34	1.9	2.9	2
	16	28	0.6	0.053 0.117	0.57	1.1	1.7	1.2
	17	32	1	0.067 0.148	0.35	1.8	2.8	1.9
15	19	31	0.6	0.049 0.108	0.33	1.9	2.9	2
	19	31	0.6	0.060 0.132	0.49	1.3	2	1.3
	20	36	1	0.094 0.207	0.33	1.9	2.9	2
17	21	36	0.6	0.073 0.161	0.31	2.1	3.2	2.2
	21	36	0.6	0.088 0.194	0.50	1.3	1.9	1.3
	23	41	1	0.130 0.286	0.33	1.9	3	2

Double Row Self-Aligning Ball Bearings

Sizes 20 mm – 40 mm

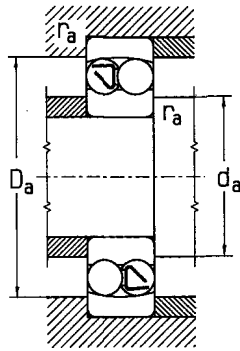


Dimensions				Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm				kN lbf		min ⁻¹		
20	47	14	1	9.95 2,240	2.66 596	14,000	17,000	1204
	47	18	1	12.5 2,820	3.29 736	14,000	17,000	2204
	52	15	1.1	12.4 2,760	3.35 750	12,600	15,000	1304
	52	21	1.1	18.2 4,060	4.73 1,060	12,000	14,000	2304
25	52	15	1	12.1 2,710	3.35 750	12,600	15,000	1205
	52	18	1	12.4 2,760	3.48 779	12,600	15,000	2205
	62	17	1.1	17.8 3,980	5.01 1,120	11,000	13,000	1305
	62	24	1.1	24.2 5,410	6.56 1,470	10,000	12,000	2305
30	62	16	1	15.6 3,480	4.73 1,060	11,000	13,000	1206
	62	20	1	15.3 3,410	4.55 1,020	11,000	13,000	2206
	72	19	1.1	21.2 4,730	6.31 1,410	9,400	11,000	1306
	72	27	1.1	31.2 7,080	8.74 1,960	8,400	10,000	2306
35	72	17	1.1	15.9 3,550	5.11 1,140	9,400	11,000	1207
	72	23	1.1	21.6 4,820	6.68 1,500	9,400	11,000	2207
	80	21	1.5	25.1 5,620	7.94 1,780	7,900	9,400	1307
	80	31	1.5	39.7 8,910	11.2 2,510	7,500	8,900	2307
40	80	18	1.1	19 4,300	6.56 1,470	7,900	9,400	1208
	80	23	1.1	22.5 5,060	7.36 1,650	7,900	9,400	2208
	90	23	1.5	29.6 6,660	9.81 2,200	7,100	8,400	1308
	90	33	1.5	44.9 10,000	13.3 2,990	6,700	7,900	2308

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order.

Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

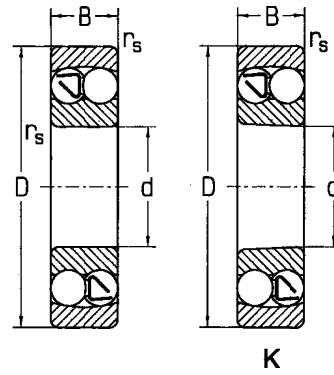
E



Abutment and Fillet Dimensions				Weight	Corresponding Adapter Sleeve	Factors			
d	d _a min	D _a max	r _a max			e	Y ₁	Y ₂	Y ₀
mm				kg lbs					
20	25	42	1	0.120 0.264	H204	0.49	1.3	2	1.4
	25	42	1	0.140 0.308	H304	0.49	1.3	2	1.4
	26	45	1	0.163 0.359	H304	0.29	2.2	3.3	2.3
	26	45	1	0.209 0.460	H2304	0.51	1.2	1.9	1.3
25	30	47	1	0.141 0.310	H205	0.27	2.3	3.6	2.4
	30	47	1	0.163 0.359	H305	0.43	1.5	2.3	1.5
	31	55	1	0.257 0.565	H305	0.28	2.3	3.5	2.4
	31	55	1	0.335 0.566	H2305	0.47	1.3	2.1	1.4
30	35	57	1	0.220 0.484	H206	0.25	2.6	4	2.7
	35	57	1	0.260 0.573	H306	0.40	1.6	2.5	1.7
	36	65	1	0.387 0.852	H306	0.26	2.5	3.8	2.6
	36	65	1	0.500 1.101	H2306	0.44	1.4	2.2	1.5
35	42	65	1	0.323 0.711	H207	0.23	2.7	4.2	2.9
	42	65	1	0.403 0.887	H307	0.37	1.7	2.6	1.8
	42	71	1.5	0.510 1.123	H307	0.25	2.6	4	2.7
	42	71	1.5	0.675 1.486	H2307	0.46	1.4	2.1	1.4
40	47	73	1	0.417 0.918	H208	0.22	2.9	4.4	3
	47	73	1	0.505 1.112	H308	0.33	1.9	2.9	2
	47	81	1.5	0.715 1.574	H308	0.24	2.6	4.1	2.7
	47	81	1.5	0.925 2.037	H2308	0.43	1.5	2.3	1.5

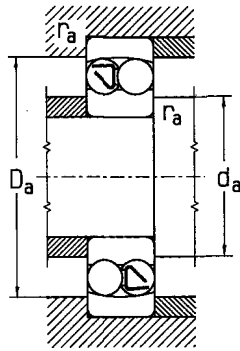
Double Row Self-Aligning Ball Bearings

Sizes 45 mm – 65 mm



Dimensions				Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm				kN lbf		min ⁻¹		
45	85	19	1.1	21.6 4,860	7.36 1,650	7,500	8,900	1209
	85	23	1.1	23.4 5,310	8.1 1,810	7,500	8,900	2209
	100	25	1.5	37.7 8,410	12.8 2,870	6,300	7,500	1309
	100	36	1.5	54 12,100	16.5 3,690	6,000	7,100	2309
50	90	20	1.1	22.9 5,110	8.1 1,810	7,100	8,400	1210
	90	23	1.1	23.4 5,310	8.41 1,880	7,100	8,400	2210
	110	27	2	43.6 9,810	14.1 3,160	5,600	6,700	1310
	110	40	2	63.7 14,400	20 4,470	5,300	6,300	2310
55	100	21	1.5	26.5 5,960	10 2,240	6,300	7,500	1211
	100	25	1.5	26.5 5,960	10 2,240	6,300	7,500	2211
	120	29	2	50.7 11,400	18.1 4,060	5,300	6,300	1311
	120	43	2	76.1 17,100	23.7 4,310	5,000	6,000	2311
60	110	22	1.5	30.2 6,810	11.7 2,610	5,600	6,700	1212
	110	28	1.5	33.8 7,640	12.6 2,820	5,600	6,700	2212
	130	31	2	57.2 12,800	20.7 4,640	4,700	5,600	1312
	130	46	2	87.1 19,600	28.2 6,310	4,500	5,300	2312
65	120	23	1.5	31.2 7,080	12.3 2,760	4,300	6,300	1213
	120	31	1.5	43.6 9,810	16.5 3,690	5,300	6,300	2213
	140	33	2.1	61.8 13,900	22.8 5,110	4,500	5,300	1313
	140	48	2.1	95.6 21,500	32.2 7,220	4,200	5,000	2313

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order. Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

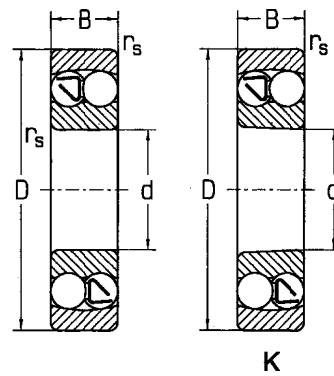


E

Abutment and Fillet Dimensions				Weight	Corresponding Adapter Sleeve	Factors			
d	d _a min	D _a max	r _a max			e	Y ₁	Y ₂	Y ₀
mm				kg lbs					
45	52	78	1	0.465 1.024	H209	0.21	3	4.6	3.1
	52	78	1	0.545 1.200	H309	0.31	2.1	3.2	2.2
	52	91	1.5	0.957 2.107	H309	0.25	2.5	3.9	2.7
	52	91	1.5	1.23 2.708	H2309	0.42	1.5	2.3	1.6
50	57	83	1	0.525 1.156	H210	0.20	3.1	4.9	3.3
	57	83	1	0.590 1.299	H310	0.29	2.2	3.4	2.3
	60	100	2	1.21 2.66	H310	0.24	2.7	4.1	2.8
	60	100	2	1.64 3.61	H2310	0.43	1.5	2.3	1.6
55	62	91	1.5	0.705 1.552	H211	0.20	3.2	5	3.4
	62	91	1.5	0.810 1.784	H311	0.28	2.3	3.5	2.4
	65	110	2	1.58 3.48	H311	0.24	2.7	4.2	2.8
	65	110	2	2.10 4.62	H2311	0.41	1.5	2.4	1.6
60	67	101	1.5	0.900 1.982	H212	0.19	3.4	5.3	3.6
	67	101	1.5	1.09 2.40	H312	0.28	2.3	3.5	2.4
	72	118	2	1.96 4.32	H312	0.23	2.8	4.3	2.9
	72	118	2	2.60 5.73	H2312	0.41	1.6	2.4	1.6
65	72	111	1.5	1.15 2.53	H213	0.17	3.7	5.7	3.9
	72	111	1.5	1.46 3.21	H313	0.28	2.2	3.5	2.3
	76	128	2	2.45 5.39	H313	0.23	2.8	4.3	2.9
	76	128	2	3.23 7.11	H2313	0.38	1.6	2.5	1.7

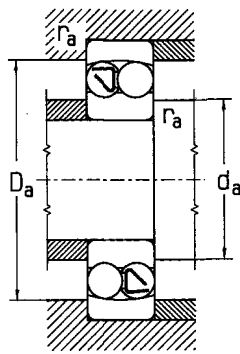
Double Row Self-Aligning Ball Bearings

Sizes 70 mm – 80 mm



Dimensions				Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm				kN lbf		min ⁻¹		
70	125	24	1.5	34.5 7,790	13.6 3,040	5,000	6,000	1214
	125	31	1.5	44.2 10,000	17.1 3,830	5,000	6,000	2214
	150	35	2.1	74.1 16,800	27.6 6,190	4,000	4,700	1314
	150	51	2.1	111 25,100	37.6 8,410	3,800	4,500	2314
75	130	25	1.5	39 8,740	15.5 3,480	4,700	5,600	1215
	130	31	1.5	44.2 10,000	17.8 3,980	4,700	5,600	2215
	160	37	2.1	79.3 17,700	29.9 6,680	3,800	4,500	1315
	160	55	2.1	124 27,600	43 9,620	3,500	4,200	2315
80	140	26	2	39.7 8,910	16.8 3,760	4,500	5,300	1216
	140	33	2	48.8 11,000	20 4,470	4,500	5,300	2216
	170	39	2.1	88.4 20,000	32.9 7,360	3,500	4,200	1316
	170	58	2.1	135 30,400	48.2 10,600	3,300	4,000	2316

Bearing designations printed in bold face type are currently in our manufacturing schedule. Those shown in normal face type are made to order. Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

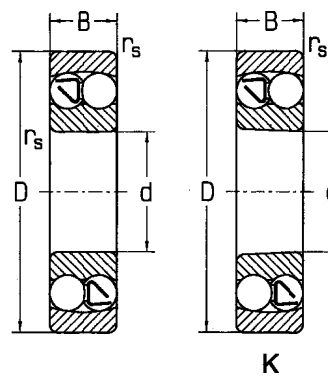


Abutment and Fillet Dimensions				Weight	Corresponding Adapter Sleeve	Factors			
d	d _a min	D _a max	r _a max			e	Y ₁	Y ₂	Y ₀
mm				kg lbs					
70	77	116	1.5	1.26 2.77	–	0.18	3.5	5.4	3.7
	77	116	1.5	1.52 3.35	–	0.27	2.4	3.7	2.5
	81	138	2	2.99 6.58	–	0.22	2.8	4.4	3
	81	138	2	3.90 8.59	–	0.38	1.7	2.6	1.8
75	82	121	1.5	1.36 2.99	H215	0.18	3.6	5.6	3.8
	82	121	1.5	1.62 3.56	H315	0.25	2.5	3.9	2.6
	86	148	2	3.56 7.84	H315	0.22	2.8	4.4	3
	86	148	2	4.72 10.39	H2315	0.38	1.7	2.6	1.7
80	90	130	2	1.67 3.68	H216	0.16	3.9	6.1	4.1
	90	130	2	2.01 4.43	H316	0.25	2.5	3.9	2.6
	91	158	2	4.18 9.20	H316	0.22	2.9	4.5	3.1
	91	158	2	6.10 13.43	H2316	0.37	1.7	2.6	1.8

E

Double Row Self-Aligning Ball Bearings

Sizes 85 mm – 110 mm



E

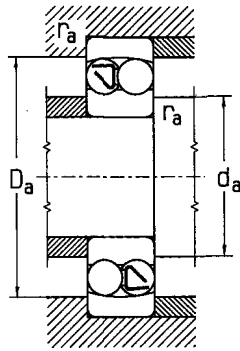
Dimensions					Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	B ₁ ¹⁾	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm					kN lbf		min ⁻¹		
85	150	28	–	2	48.8 11,000	20.3 4,550	4,000	4,700	1217
	150	36	–	2	58.5 13,100	23.7 5,310	4,000	4,700	2217
	180	41	–	3	97.5 22,000	37.6 8,410	3,300	4,000	1317
	180	60	–	3	140 31,600	51.1 11,400	3,200	3,800	2317
90	160	30	–	2	57.2 12,800	23.3 5,210	3,800	4,500	1218
	160	40	–	2	70.2 15,800	28.7 6,430	3,800	4,500	2218
	160	43	45	3	117 26,100	44.7 10,000	3,200	3,800	1318
	190	64	–	3	153 34,100	57.3 12,800	3,000	3,500	2318
95	170	32	–	2.1	63.7 14,400	27.1 6,070	3,500	4,200	1219
	170	43	–	2.1	83.2 18,800	34.1 7,640	3,500	4,200	2219
	200	45	48	3	133 29,900	51.1 11,400	3,000	3,500	1319
	200	67	–	3	165 36,900	64.3 14,400	2,800	3,300	2319
100	180	34	–	2.1	68.9 15,500	29.3 6,560	3,300	4,000	1220
	180	46	–	2.1	97.5 22,000	40.6 9,090	3,300	4,000	2220
	215	47	52	3	143 32,200	58.4 13,100	2,800	3,300	1320
	215	73	–	3	190 43,000	77.9 17,400	2,700	3,200	2320
110	200	38	–	2.1	88.4 20,000	38.3 8,580	3,000	3,500	1222
	200	53	–	2.1	124 27,600	52.1 11,700	3,000	3,500	2222
	240	50	55	3	163 36,200	70.8 15,800	2,700	3,200	1322
	240	80	–	3	216 48,200	94.4 21,100	2,500	3,000	2322

Bearing designations printed in bold face type are currently in our manufacturing schedule.

Those shown in normal face type are made to order.

Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

¹⁾ The dimension B₁ indicates the bearing width measured over balls if they protrude from the bearing side face.

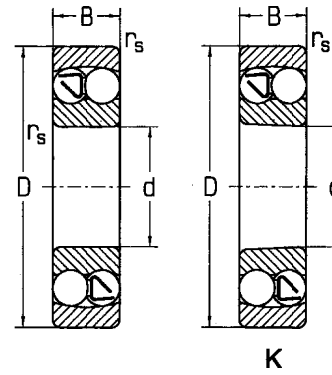


E

Abutment and Fillet Dimensions				Weight	Corresponding Adapter Sleeve	Factors			
d	d _a min	D _a max	r _a max			e	Y ₁	Y ₂	Y ₀
mm				kg					
85	95	140	2	2.07	H217	0.17	3.7	5.7	3.9
	95	140	2	4.56	H317	0.25	2.5	3.8	2.6
	98	166	2.5	5.55	H317	0.22	2.9	4.5	3
	98	166	2.5	4.98 10.97 6.71 14.78	H2317	0.37	1.7	2.7	1.8
90	100	150	2	2.52	H218	0.17	3.8	5.8	3.9
	100	150	2	5.55	H318	0.27	2.4	3.6	2.5
	103	176	2.5	3.20 7.05	H318	0.22	2.8	4.4	3
	103	176	2.5	5.80 12.77 7.96 17.53	H2318	0.38	1.7	2.6	1.8
95	107	158	2	3.10	H219	0.17	3.7	5.7	3.9
	107	158	2	6.83	H319	0.27	2.4	3.6	2.5
	109	186	2.5	3.95 8.70	H319	0.23	2.8	4.3	2.9
	109	186	2.5	6.69 14.73 9.21 20.23	H2319	0.38	1.7	2.6	1.8
100	112	168	2	3.70	H220	0.17	3.6	5.6	3.8
	112	168	2	8.15	H320	0.27	2.4	3.6	2.5
	113	201	2.5	4.72 10.39	H320	0.24	2.7	4.1	2.8
	113	201	2.5	8.30 18.2 11.7 25.8	H2320	0.38	1.7	2.6	1.7
110	122	188	2	5.15	H222	0.17	3.6	5.6	3.8
	122	188	2	11.34	H322	0.28	2.3	3.5	2.4
	124	226	2.5	6.84 15.06	H322	0.22	2.8	4.4	3
	124	226	2.5	11.8 26.0 17.3 38.1	H2322	0.37	1.7	2.7	1.8

Double Row Self-Aligning Ball Bearings

Sizes 120 mm – 150 mm



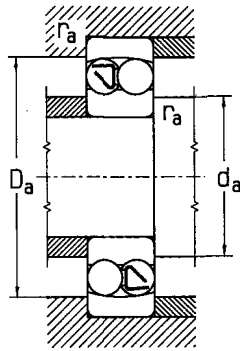
Dimensions					Basic Load Rating		Limiting Speed for Lubricating by		Bearing Designation
d	D	B	B ₁ ¹⁾	r _s min	Dynamic C _r	Static C _{0r}	Grease	Oil	
mm							min ⁻¹		
120	215	42	45	2.1	119 <i>26,600</i>	52.1 <i>11,700</i>	2,800	3,300	1224
	260	55	62	3	196 <i>43,800</i>	90.9 <i>20,300</i>	2,500	3,000	1324
130	230	46	48	3	126 <i>28,200</i>	59.6 <i>13,300</i>	2,700	3,200	1226
140	250	50	54	3	159 <i>35,500</i>	72.2 <i>16,200</i>	2,500	3,000	1228
150	270	54	56	3	171	85.8	2,400	2,800	1230
					<i>38,300</i>	<i>19,200</i>			

Bearing designations printed in bold face type are currently in our manufacturing schedule.

Those shown in normal face type are made to order.

Double Row Self-Aligning Ball Bearings are available with either a cylindrical or tapered bore.

¹⁾ The dimension B₁ indicates the bearing width measured over balls if they protrude from the bearing side face.



Abutment and Fillet Dimensions				Weight – kg lbs	Corresponding Adapter Sleeve	Factors			
d	d _a min	D _a max	r _a max			e	Y ₁	Y ₂	Y ₀
mm									
120	132	203	2	6.75	–	0.19	3.3	5.1	3.4
	134	246	2.5	14.86 15.5 34.1	–	0.24	2.7	4.1	2.8
130	144	216	2.5	8.30 18.28	–	0.19	3.3	5	3.4
140	154	236	2.5	10.9 24.0	–	0.20	3.1	4.8	3.3
150	164	256	2.5	13.8 30.4	–	0.19	3.2	5	3.4

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