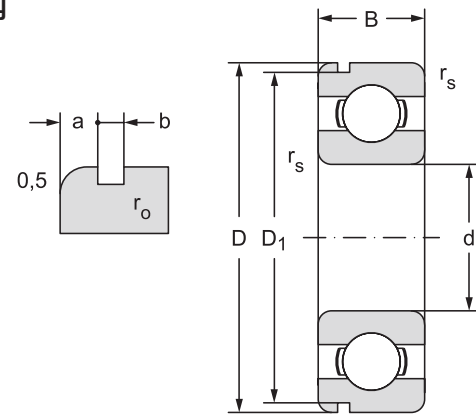


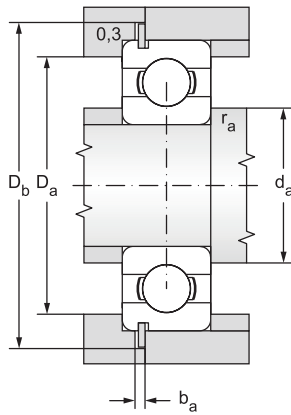
Single row ball bearings with groove for snap ring on outer race $d = 12$ to 120 mm

$d = 12$ to 45 mm



12.1.3

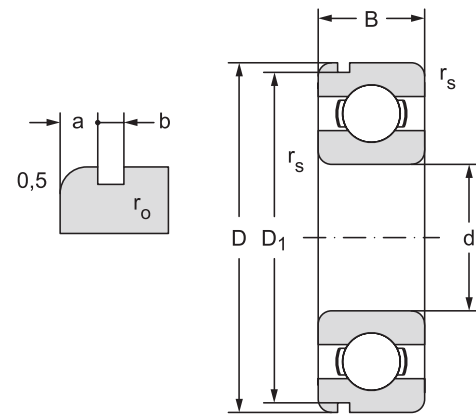
Main dimensions								Basic load rating		Fatigue load limit
d	D	B	r_s	D_1	a	b	r_o	Dynamic	Static	P_u
			min	max	max	min	max	C_r	C_{or}	
mm								kN		kN
12	32	10	0,66	30,15	2,06	1,35	0,4	6,905	3,100	0,141
	32	14	0,66	30,15	2,06	1,35	0,4	6,905	3,100	0,141
15	35	11	0,60	33,17	2,06	1,35	0,4	7,718	3,745	0,170
	35	14	0,60	33,17	2,06	1,35	0,4	7,718	3,745	0,170
17	40	12	0,60	38,10	2,06	1,35	0,4	9,534	4,734	0,215
	40	16	0,60	38,10	2,06	1,35	0,4	9,534	4,734	0,215
	47	14	1,00	44,60	2,46	1,35	0,4	13,565	6,563	0,298
20	42	12	0,60	39,75	2,06	1,35	0,4	9,371	4,972	0,226
	47	14	1,00	44,60	2,46	1,35	0,4	12,774	6,553	0,298
	52	15	1,10	49,73	2,46	1,35	0,4	15,866	7,811	0,355
	52	21	1,10	49,73	2,46	1,35	0,4	15,866	7,811	0,355
25	47	12	0,60	44,60	2,06	1,35	0,4	10,070	5,806	0,264
	52	15	1,00	49,73	2,46	1,35	0,4	14,029	7,940	0,361
	52	18	1,00	49,73	2,46	1,35	0,4	14,029	7,940	0,361
	62	17	1,10	59,61	3,28	1,90	0,6	21,123	10,806	0,491
	62	24	1,10	59,61	3,28	1,90	0,6	21,123	10,806	0,491
	80	21	1,50	76,81	3,28	1,90	0,6	36,000	19,200	0,873
30	55	13	1,00	52,60	2,08	1,90	0,4	13,243	8,253	0,375
	62	16	2,00	59,61	3,28	1,90	0,6	19,443	11,186	0,508
	62	20	2,00	59,61	3,28	1,90	0,6	19,443	11,186	0,508
	72	19	1,10	68,81	3,28	1,90	0,6	29,701	15,678	0,713
	90	23	1,50	86,79	3,28	2,70	0,6	43,000	23,700	1,077
35	62	14	1,00	59,61	2,06	1,90	0,6	15,956	10,328	0,469
	72	17	1,10	68,81	3,28	1,90	0,6	25,663	15,277	0,694
	80	21	1,50	78,81	3,28	1,90	0,6	33,367	19,230	0,874
	100	25	1,50	96,80	3,28	2,70	0,6	55,200	31,000	1,409
40	68	15	1,00	64,82	2,49	1,90	0,6	16,824	11,493	0,522
	80	18	1,10	76,81	3,28	1,90	0,6	32,633	19,887	0,904
	90	23	1,50	86,79	3,28	2,70	0,6	40,760	24,017	1,092
	110	27	2,00	106,81	3,28	2,70	0,6	63,100	36,200	1,645
45	75	16	1,00	71,83	2,49	1,90	0,6	21,100	15,300	0,695
	85	19	1,10	81,81	3,28	1,90	0,6	32,687	20,325	0,924
	100	25	1,50	96,80	3,28	2,70	0,6	52,804	31,715	1,442
	120	29	2,00	115,21	4,06	3,10	0,6	76,500	44,700	2,032



Limiting speed for lubrication with		Bearing designation	Abutment and Fillet Dimensions						Weight	Suitable snap ring
Grease	Oil		d	d _a	D _a	D _b	b _a	r _a		
			min	min	max	min	min	max		
min ⁻¹			mm						kg	
22000	27000	6201N	12	16,0	28,0	39,0	1,4	0,6	0,037	R32
22000	27000	62201N		16,0	28,0	39,0	1,4	0,6	0,045	R32
20000	24000	6202N	15	19,0	31,0	41,0	1,4	0,6	0,030	R35
20000	24000	62202N		19,0	31,0	41,0	1,4	0,6	0,054	R35
18000	21000	6203N	17	21,0	36,0	46,0	1,5	0,6	0,073	R40
18000	21000	62203N		21,0	36,0	46,0	1,5	0,6	0,083	R40
16000	19000	6303N		23,0	41,0	54,0	1,5	1,0	0,12	R47
17000	20000	6004N	20	24,0	38,0	47,5	1,5	0,6	0,070	R42
15000	18000	6204N		25,0	42,0	54,0	1,5	1,0	0,11	R47
14000	17000	6304N		26,0	45,0	59,0	1,5	1,0	0,15	R52
14000	17000	62304N		26,0	45,0	59,0	1,5	1,0	0,20	R52
14000	17000	6005N	25	28,0	43,0	54,0	1,5	0,6	0,082	R47
12600	15000	6205N		30,0	47,0	59,0	1,5	1,0	0,13	R52
12600	15000	62205N		30,0	47,0	59,0	1,5	1,0	0,15	R52
11000	13000	6305N		31,0	55,0	69,0	2,2	1,0	0,23	R62
11000	13000	62305N		31,0	55,0	69,0	2,2	1,0	0,32	R62
9400	11000	6405N		34,0	70,0	88,0	2,2	1,5	0,53	R80
12000	14000	6006N	30	34,0	50,0	62,0	1,5	1,0	0,12	R55
11000	13000	6206N		35,0	57,0	69,0	2,2	1,0	0,20	R62
11000	13000	62206N		35,0	57,0	69,0	2,2	1,0	0,24	R62
10000	12000	6306N		36,0	65,0	80,0	2,2	1,0	0,33	R72
8400	10000	6406N		39,0	80,0	98,0	3,0	1,5	0,73	R90
10600	12600	6007N	35	39,5	57,0	69,0	2,2	1,0	0,15	R62
9400	11000	6207N		42,0	65,0	80,0	2,2	1,0	0,28	R72
8400	10000	6307N		42,0	71,0	88,0	2,2	1,5	0,45	R80
7500	8900	6407N		44,0	90,0	108,0	3,0	1,5	0,95	R100
9400	11000	6008N	40	44,0	63,0	76,0	2,2	1,0	0,19	R68
8400	10000	6208N		47,0	73,0	88,0	2,2	1,0	0,35	R80
7900	9400	6308N		47,0	81,0	98,0	3,0	1,5	0,63	R90
6700	7900	6408N		50,0	97,0	118,0	3,0	3,0	1,23	R110
8400	10000	6009N	45	49,0	70,0	83,0	2,2	1,0	0,24	R75
7900	9400	6209N		52,0	78,0	93,0	2,2	1,0	0,40	R85
7100	8400	6309N		52,0	91,0	108,0	3,0	1,5	0,83	R100
6000	7100	6409N		55,0	107,0	131,0	3,5	2,0	1,54	R120

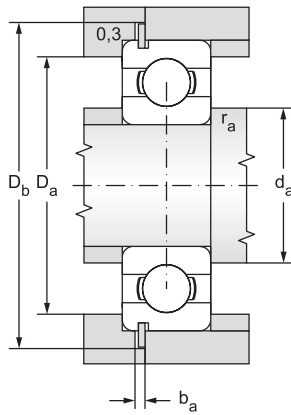
Single row ball bearings with groove
for snap ring on outer race

d = 50 to 85 mm



12.1.3

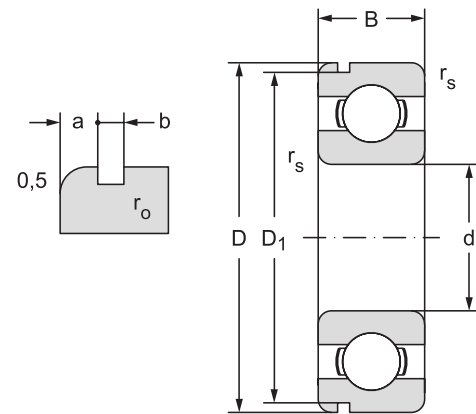
Main dimensions								Basic load rating		Fatigue load limit
d	D	B	r _s	D ₁	a	b	r _o	Dynamic	Static	P _u
			min	max	max	min	max	C _r	C _{or}	
mm								kN		kN
50	80	16	1,00	76,81	2,49	1,90	0,6	21,720	16,650	0,757
	90	20	1,10	86,79	3,28	2,70	0,6	35,066	23,226	1,056
	110	27	2,00	106,81	3,28	2,70	0,6	61,900	37,600	1,709
55	90	18	1,10	86,79	2,87	2,70	0,6	28,200	21,318	0,969
	100	21	1,50	96,80	3,28	2,70	0,6	43,350	29,397	1,336
	120	29	2,00	115,21	4,06	3,10	0,6	71,000	44,700	2,032
	140	33	2,10	135,23	4,90	3,10	0,6	100,000	61,900	2,814
60	95	18	1,10	91,82	2,87	2,70	0,6	29,343	23,256	1,057
	110	22	1,50	106,81	3,82	2,70	0,6	52,486	35,786	1,627
	130	31	2,10	125,22	4,06	3,10	0,6	81,500	52,100	2,368
	150	35	2,10	145,24	4,90	3,10	0,6	110,000	69,400	3,079
65	100	18	1,10	96,80	2,87	2,70	0,6	30,500	25,100	1,141
	120	23	1,50	115,21	4,06	3,10	0,6	57,210	40,011	1,819
	140	33	2,10	135,23	4,90	3,10	0,6	92,600	59,600	2,676
	160	37	2,10	155,22	4,90	3,10	0,6	117,950	78,329	3,357
70	110	20	1,10	106,81	2,87	2,70	0,6	37,960	30,959	1,407
	125	24	1,50	120,22	4,06	3,10	0,6	62,000	43,800	1,991
	150	35	2,10	145,24	4,90	3,10	0,6	104,000	68,100	2,951
	180	42	3,00	173,66	5,69	3,50	0,6	114,000	104,000	4,228
75	115	20	1,10	111,81	2,87	2,70	0,6	39,747	33,170	1,508
	130	25	1,50	125,22	4,06	3,10	0,6	66,170	49,311	2,214
	160	37	2,10	155,22	4,90	3,10	0,6	114,000	76,400	3,204
	190	45	3,00	183,64	5,69	3,50	0,6	152,529	112,922	4,459
80	125	22	1,10	120,22	2,87	3,10	0,6	47,500	39,800	1,787
	140	26	2,00	135,23	4,90	3,10	0,6	72,200	53,100	2,301
	170	39	2,10	163,65	5,69	3,50	0,6	122,850	86,226	3,506
	200	48	3,00	193,65	5,69	3,50	0,6	163,587	124,984	4,801
85	130	22	1,10	125,22	2,87	3,10	0,6	49,794	42,609	1,868
	150	28	2,00	145,24	4,90	3,10	0,6	83,299	63,675	2,670
	180	41	3,00	173,66	5,69	3,50	0,6	132,507	96,069	3,794



Limiting speed for lubrication with		Bearing designation	Abutment and Fillet Dimensions						Weight	Suitable snap ring
Grease	Oil		d	d _a	D _a	D _b	b _a	r _a		
		min		min	max	min	min	max	~	
min ⁻¹			mm						kg	
7900	9400	6010N	50	54,0	75,0	88,0	2,2	1,0	0,26	R80
7100	8400	6210N		57,0	83,0	98,0	3,0	1,0	0,46	R90
6300	7500	6310N		60,0	100,0	118,0	3,0	2,0	1,06	R110
7100	8400	6011N	55	60,0	84,0	98,0	3,0	1,0	0,38	R90
6700	7900	6211N		62,0	91,0	108,0	3,0	1,5	0,60	R100
5600	6700	6311N		65,0	110,0	131,0	3,5	2,0	1,38	R120
5300	6300	6411N		68,0	126,0	151,0	3,5	2,0	2,29	R140
6700	7900	6012N	60	65,0	88,0	103,0	3,0	1,0	0,41	R95
6000	7100	6212N		67,0	101,0	110,0	3,0	1,5	0,77	R110
5300	6300	6312N		72,0	118,0	141,0	3,5	2,0	1,72	R130
4700	5600	6412N		73,0	136,0	162,0	3,5	2,0	2,76	R150
6300	7500	6013N	65	70,0	93,0	108,0	3,0	1,0	0,44	R100
5300	6300	6213N		72,0	111,0	131,0	3,5	1,5	1,00	R120
5000	6000	6313N		76,0	128,0	148,0	3,5	2,0	2,10	R140
4500	5300	6413N		78,0	146,0	172,0	3,5	2,0	3,28	R160
5600	6700	6014N	70	75,0	103,0	118,0	3,0	1,0	0,60	R110
5300	6300	6214N		77,0	116,0	136,0	3,5	1,5	1,07	R125
4700	5600	6314N		81,0	138,0	162,0	3,5	2,0	2,54	R150
4000	4700	6414N		85,0	164,0	195,0	4,5	2,5	4,85	R180
5300	6300	6015N	75	80,0	108,0	123,0	3,0	1,0	0,64	R115
5000	6000	6215N		82,0	121,0	141,0	3,5	1,5	1,18	R130
4200	5000	6315N		86,0	148,0	172,0	3,5	2,0	3,06	R160
3800	4500	6415N		90,0	174,0	205,0	4,5	2,5	5,74	R190
5000	6000	6016N	80	85,0	118,0	136,0	3,5	1,0	0,85	R125
4700	5600	6216N		90,0	130,0	151,0	3,5	2,0	1,40	R140
4000	4700	6316N		91,0	158,0	185,0	3,5	2,0	3,63	R170
3500	4200	6416N		95,0	184,0	215,0	4,5	2,5	6,72	R200
4700	5600	6017N	85	91,5	123,5	141,0	3,5	1,0	0,89	R130
4200	5000	6217N		95,0	140,0	162,0	3,5	2,0	1,80	R150
3800	4500	6317N		98,0	166,0	195,0	4,5	2,5	4,20	R180

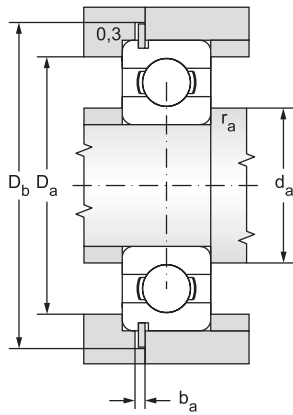
Single row ball bearings with groove
for snap ring on outer race

d = 90 to 120 mm



12.1.3

Main dimensions								Basic load rating		Fatigue load limit
d	D	B	r _s	D ₁	a	b	r _o	Dynamic	Static	P _u
			min	max	max	min	max	C _r	C _{or}	
mm								kN		kN
90	140	24	1,50	135,23	3,71	3,10	0,6	58,400	49,200	2,085
	160	30	2,00	155,22	4,90	3,10	0,6	96,200	70,800	2,878
95	200	45	3,00	193,65	5,69	3,50	0,6	152,444	117,366	4,393
100	150	24	1,50	145,24	3,71	3,10	0,6	60,096	54,244	2,205
105	190	36	2,10	183,64	5,96	3,50	0,6	132,297	104,833	3,924
120	180	28	2,00	173,66	3,71	3,50	0,6	85,000	79,400	2,947



Limiting speed for lubrication with		Bearing designation	Abutment and Fillet Dimensions						Weight	Suitable snap ring
Grease	Oil		d	d _a	D _a	D _b	b _a	r _a		
			min	min	max	min	min	max	~	
min ⁻¹			mm						kg	
4500	5300	6018N	90	96,0	132,0	151,0	3,5	1,5	1,17	R140
4000	4700	6218N		100,0	150,0	172,0	3,5	2,0	2,16	R160
3300	4000	6319N	95	109,0	186,0	215,0	4,5	2,5	5,72	R200
4200	5000	6020N	100	106,0	142,0	162,0	3,5	1,5	1,27	R150
3300	4000	6221N	105	117,0	178,0	205,0	4,5	2,0	3,74	R190
3300	4000	6024N	120	188,0	171,0	195,0	4,5	2,0	2,10	R180