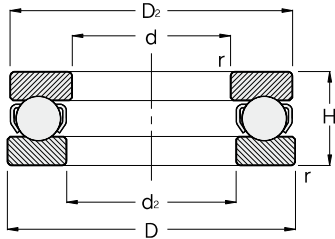
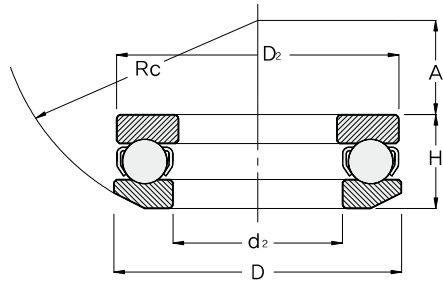


# THRUST BALL BEARINGS

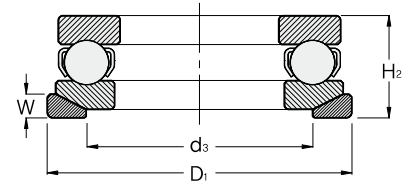
## Single Direction



Single Direction(A)

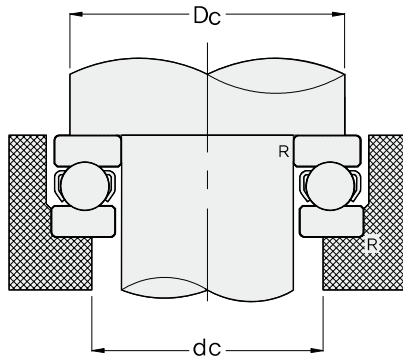


Spherical Housing Washer(B)

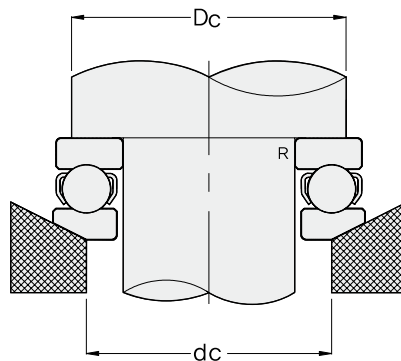


Spherical Housing Washer and Seating Ring(C)

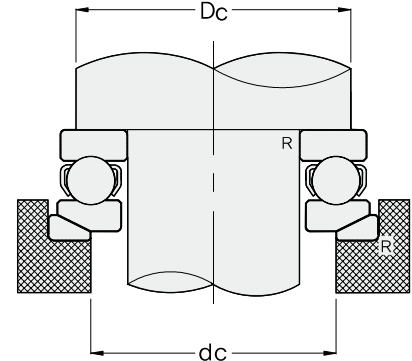
Dimensions(mm)						Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	D	H	H <sub>1</sub>	H <sub>2</sub>	r	(A)	(B)	(C)	C	Co	Grease	Oil
10	24	9	—	—	0.5	51100	—	—	1,030	1,180	6,700	10,000
	26	11	11.6	13	1	51200	53200	53200 U	1,300	1,440	6,000	9,000
12	26	9	—	—	0.5	51101	—	—	1,060	1,300	6,700	10,000
	28	11	11.4	13	1	51201	53201	53201 U	1,350	1,600	5,600	8,500
15	28	9	—	—	0.5	51102	—	—	1,080	1,410	6,300	9,500
	32	12	13.3	15	1	51202	53202	53202 U	1,710	2,100	5,000	7,500
17	30	9	—	—	0.5	51103	—	—	1,170	1,650	6,300	9,500
	35	12	13.2	15	1	51203	53203	53203 U	1,760	2,300	5,000	7,500
20	35	10	—	—	0.5	51104	—	—	1,540	2,250	5,300	8,000
	40	14	14.7	17	1	51204	53204	53204 U	2,290	3,200	4,000	6,000
25	42	11	—	—	1	51105	—	—	2,010	3,150	4,500	6,700
	47	15	16.7	19	1	51205	53205	53205 U	2,860	4,250	3,800	5,600
	52	18	19.8	22	1.5	51305	53305	53305 U	3,650	5,200	3,200	4,800
	60	24	26.4	29	1.5	51405	53405	53405 U	5,700	7,550	2,600	4,000
30	47	11	—	—	1	51106	—	—	2,100	3,550	4,300	6,500
	52	16	17.8	20	1	51206	53206	53206 U	3,000	4,900	3,400	5,300
	60	21	22.6	25	1.5	51306	53306	53306 U	4,400	6,650	2,800	4,200
	70	28	30.1	33	1.5	51406	53406	53406 U	7,450	10,600	2,200	3,400
35	52	12	—	—	1	51107	—	—	2,250	4,200	4,000	6,000
	62	18	19.9	22	1.5	51207	53207	53207 U	4,050	6,600	3,000	4,500
	68	24	25.6	28	1.5	51307	53307	53307 U	5,700	8,850	2,500	3,700
	80	32	34	37	2	51407	53407	53407 U	8,950	13,100	2,000	3,000
40	60	13	—	—	1	51108	—	—	2,770	5,300	3,600	5,300
	68	19	20.3	23	1.5	51208	53208	53208 U	4,850	8,300	2,800	4,200
	78	26	28.5	31	1.5	51308	53308	53308 U	7,100	11,400	2,200	3,300
	90	36	38.2	42	2	51408	53408	53408 U	10,500	15,800	1,700	2,600
45	65	14	—	—	1	51109	—	—	2,860	5,850	3,400	5,000
	73	20	21.3	24	1.5	51209	53209	53209 U	4,900	8,850	2,600	4,000
	85	28	30.1	33	1.5	51309	53309	53309 U	8,200	13,800	2,000	3,000
	100	39	42.4	46	2	51409	53409	53409 U	13,000	20,700	1,600	2,400
50	70	14	—	—	1	51110	—	—	2,960	6,350	3,200	4,800
	78	22	23.5	26	1.5	51210	53210	53210 U	5,000	9,400	2,400	3,600
	95	31	34.3	37	2	51310	53310	53310 U	9,950	17,000	1,800	2,800
	110	43	45.6	50	2.5	51410	53410	53410 U	15,000	24,300	1,400	2,200



(A)



(B)

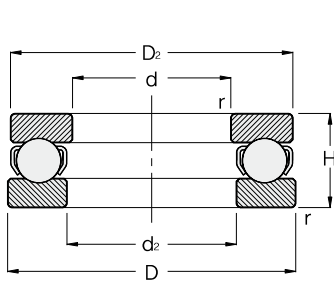


(C)

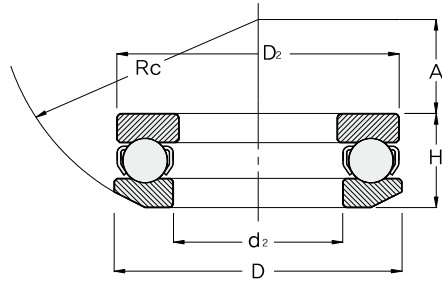
Dimensions(mm)							Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D <sub>2</sub>	d <sub>2</sub>	d <sub>3</sub>	D <sub>1</sub>	W	Rc	A	Dc(min)	dc(Max)	R(Max)	(A)	(B)	(C)	
24	11	—	—	—	—	—	18	16	0.3	0.020	—	—	51100
26	12	18	28	3.5	22	8.5	20	16	0.6	0.030	0.029	0.039	51200
26	13	—	—	—	—	—	20	18	0.3	0.022	—	—	51101
28	14	20	30	3.5	25	11.5	22	18	0.6	0.034	0.031	0.042	51201
28	16	—	—	—	—	—	23	20	0.3	0.024	—	—	51102
32	17	24	35	4	28	12	25	22	0.6	0.046	0.048	0.064	51202
30	18	—	—	—	—	—	25	22	0.3	0.028	—	—	51103
35	19	26	38	4	32	16	28	24	0.6	0.053	0.055	0.074	51203
35	21	—	—	—	—	—	29	26	0.3	0.040	—	—	51104
40	22	30	42	5	36	18	32	28	0.6	0.082	0.080	0.105	51204
42	26	—	—	—	—	—	35	32	0.6	0.059	—	—	51105
47	27	36	50	5.5	40	19	38	34	0.6	0.120	0.120	0.160	51205
52	27	38	55	6	45	21	41	36	1	0.180	0.180	0.220	51305
60	27	43	62	8	50	19	46	39	1	0.340	0.350	0.410	51405
47	32	—	—	—	—	—	40	37	0.6	0.068	—	—	51106
52	32	42	55	5.5	45	22	43	39	0.6	0.150	0.160	0.215	51206
60	32	45	62	7	50	22	48	42	1	0.270	0.270	0.325	51306
70	32	50	75	9	56	20	54	46	1	0.530	0.530	0.660	51406
52	37	—	—	—	—	—	45	42	0.6	0.085	—	—	51107
62	37	48	65	7	50	24	51	46	1	0.220	0.220	0.290	51207
68	37	52	72	7.5	56	24	55	48	1	0.390	0.400	0.480	51307
80	37	58	85	10	64	23	62	53	1	0.790	0.790	0.960	51407
60	42	—	—	—	—	—	52	48	0.6	0.120	—	—	51108
68	42	55	72	7	56	28.5	57	51	1	0.270	0.270	0.355	51208
78	42	60	82	8.5	64	28	63	55	1	0.550	0.570	0.690	51308
90	42	65	95	12	72	26	70	60	1	1.150	1.100	1.400	51408
65	47	—	—	—	—	—	57	53	0.6	0.150	—	—	51109
73	47	60	78	7.5	56	26	62	56	1	0.320	0.310	0.410	51209
85	47	65	90	10	64	25	69	61	1	0.690	0.680	0.830	51309
100	47	72	105	12.5	80	29	78	67	1	1.450	1.500	1.800	51409
70	52	—	—	—	—	—	62	58	0.6	0.160	—	—	51110
78	52	62	82	7.5	64	32.5	67	61	1	0.390	0.380	0.500	51210
95	52	72	100	11	72	28	77	68	1	1.000	1.000	1.250	51310
110	52	80	115	14	90	35	86	74	1.5	2.000	1.950	2.400	51410

# THRUST BALL BEARINGS

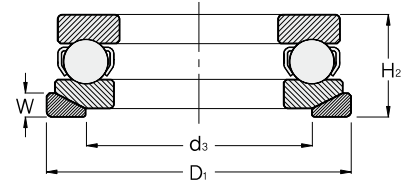
## Single Direction



Single Direction(A)

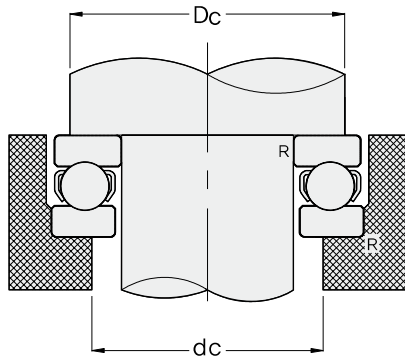


Spherical Housing Washer(B)

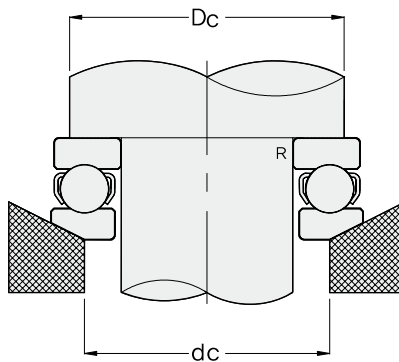


Spherical Housing Washer and Seating Ring(C)

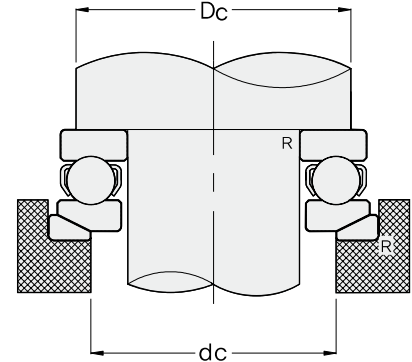
Dimensions(mm)						Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	D	H	H <sub>1</sub>	H <sub>2</sub>	r	(A)	(B)	(C)	C	Co	Grease	Oil
55	78	16	—	—	1	51111	—	—	3,600	7,850	2,800	4,300
	90	25	27.3	30	1.5	51211	53211	53211 U	7,150	13,400	2,100	3,200
	105	35	39.3	42	2	51311	53311	53311 U	11,800	20,600	1,600	2,400
	120	48	50.5	55	2.5	51411	53411	53411 U	18,500	29,500	1,300	1,900
60	85	17	—	—	1.5	51112	—	—	4,250	9,500	2,600	4,000
	95	26	28	31	1.5	51212	53212	53212 U	7,300	14,200	2,000	3,000
	110	35	38.3	42	2	51312	53312	53312 U	12,100	22,200	1,600	2,400
	130	51	54	58	2.5	51412	53412	53412 U	20,600	33,500	1,200	1,800
65	90	18	—	—	1.5	51113	—	—	4,300	9,900	2,500	3,800
	100	27	28.7	32	1.5	51213	53213	53213 U	7,700	15,900	1,900	2,800
	115	36	39.4	43	2	51313	53313	53313 U	12,500	23,800	1,600	2,300
	140	56	60.2	65	3	51413	53413	53413 U	23,800	41,500	1,100	1,600
70	95	18	—	—	1.5	51114	—	—	4,450	10,700	2,400	3,600
	105	27	28.8	32	1.5	51214	53214	53214 U	7,550	15,900	1,900	2,800
	125	40	44.2	48	2	51314	53314	53314 U	14,000	26,400	1,400	2,000
	150	60	63.6	69	3	51414	53414	53414 U	25,700	46,500	1,000	1,500
75	100	19	—	—	1.5	51115	—	—	4,450	11,100	2,200	3,400
	110	27	28.3	32	1.5	51215	53215	53215 U	7,950	17,600	1,800	2,700
	135	44	48.1	52	2.5	51315	53315	53315 U	16,200	31,000	1,300	1,900
	160	65	69	75	3	51415	53415	53415 U	25,900	47,500	950	1,400
80	105	19	—	—	1.5	51116	—	—	4,600	11,900	2,200	3,300
	115	28	29.5	33	1.5	51216	53216	53216 U	8,050	18,400	1,700	2,600
	140	44	47.6	52	2.5	51316	53316	53316 U	16,700	33,000	1,200	1,800
	170	68	72.2	78	3.5	51416	53416	53416 U	27,800	52,500	900	1,400
85	110	19	—	—	1.5	51117	—	—	4,700	12,700	2,200	3,200
	125	31	33.1	37	1.5	51217	53217	53217 U	9,800	22,300	1,600	2,400
	150	49	53.1	58	2.5	51317	53317	53317 U	21,100	41,000	1,100	1,700
	180	72	77	83	3.5	51417 X	53417 X	53417 XU	31,500	63,500	850	1,300
90	120	22	—	—	1.5	51118	—	—	6,150	16,000	2,000	3,000
	135	35	38.5	42	2	51218	53218	53218 U	11,600	26,200	1,400	2,200
	155	50	54.6	59	2.5	51318	53318	53318 U	21,900	44,000	1,100	1,600
	190	77	81.2	88	3.5	51418 X	53418 X	53418 XU	33,500	69,500	800	1,200
100	135	25	—	—	1.5	51120	—	—	8,750	22,600	1,700	2,600
	150	38	40.9	45	2	51220	53220	53220 U	13,700	31,500	1,300	1,900
	170	55	59.2	64	2.5	51320	53320	53320 U	24,300	50,500	1,000	1,500
	210	85	90	98	4	51420 X	53420 X	53420 XU	38,000	83,000	710	1,100



(A)



(B)

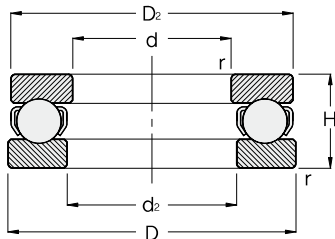


(C)

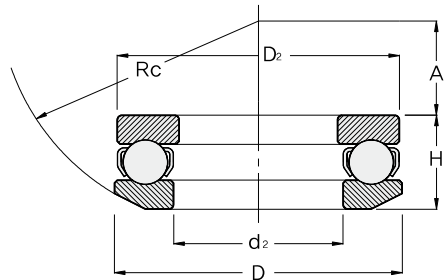
Dimensions(mm)							Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D <sub>2</sub>	d <sub>2</sub>	d <sub>3</sub>	D <sub>1</sub>	W	Rc	A	Dc(min)	dc(Max)	R (Max)	(A)	(B)	(C)	
78	57	—	—	—	—	—	69	64	0.6	0.240	—	—	51111
90	57	72	95	9	72	35	76	69	1	0.610	0.620	0.800	51211
105	57	80	110	11.5	80	30	85	75	1	1.350	1.400	1.700	51311
120	57	88	125	15.5	90	28	94	81	1.5	2.650	2.550	3.150	51411
85	62	—	—	—	—	—	75	70	1	0.290	—	—	51112
95	62	78	100	9	72	32.5	81	74	1	0.690	0.690	0.880	51212
110	62	85	115	11.5	90	41	90	80	1	1.450	1.450	1.800	51312
130	62	95	135	16	100	34	102	88	1.5	3.300	3.250	4.000	51412
90	67	—	—	—	—	—	80	75	1	0.340	—	—	51113
100	67	82	105	9	80	40	86	79	1	0.770	0.750	0.960	51213
115	67	90	120	12.5	90	38.5	95	85	1	1.550	1.600	1.950	51313
140	68	100	145	17.5	112	40	110	95	2	4.200	4.200	5.000	51413
95	72	—	—	—	—	—	85	80	1	0.360	—	—	51114
105	72	88	110	9	80	38	91	84	1	0.810	0.800	1.000	51214
125	72	98	130	13	100	43	103	92	1	2.050	2.150	2.550	51314
150	73	110	155	19.5	112	34	118	102	2	5.100	5.000	6.100	51414
100	77	—	—	—	—	—	90	85	1	0.420	—	—	51115
110	77	92	115	9.5	90	49	96	89	1	0.860	0.850	1.100	51215
135	77	105	140	15	100	37	111	99	1.5	2.700	2.700	3.250	51315
160	78	115	165	21	125	42	125	110	2	6.350	6.250	7.600	51415
105	82	—	—	—	—	—	95	90	1	0.430	—	—	51116
115	82	98	120	10	90	46	101	94	1	0.950	0.930	1.500	51216
140	82	110	145	15	112	50	116	104	1.5	2.800	2.850	3.450	51316
170	83	125	175	22	125	36	133	117	2	7.500	7.350	8.850	51416
110	87	—	—	—	—	—	100	95	1	0.460	—	—	51117
125	88	105	130	11	100	52	109	101	1	1.300	1.200	1.600	51217
150	88	115	155	17.5	112	43	124	111	1.5	3.650	3.650	4.450	51317
177	88	130	185	23	140	47	141	124	2	9.000	9.000	10.500	51417 X
120	92	—	—	—	—	—	108	102	1	0.680	—	—	51118
135	93	110	140	13.5	100	45	117	108	1	1.750	1.750	2.250	51218
155	93	120	160	18	112	40	129	116	1.5	3.900	3.850	4.700	51318
187	93	140	195	25.5	140	40	149	131	2	10.500	10.500	12.500	51418 X
135	102	—	—	—	—	—	121	114	1	0.990	—	—	51120
150	103	125	155	14	112	52	130	120	1	2.350	2.350	2.900	51220
170	103	135	175	18	125	46	142	128	1.5	5.100	5.100	6.050	51320
205	103	155	220	27	160	50	165	145	2.5	15.000	15.000	17.000	51420 X

# THRUST BALL BEARINGS

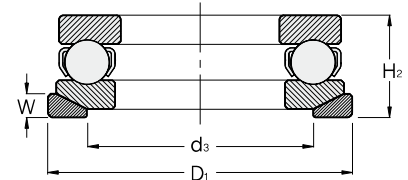
## Single Direction



Single Direction(A)

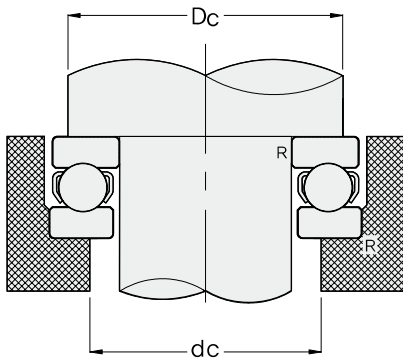


Spherical Housing Washer(B)

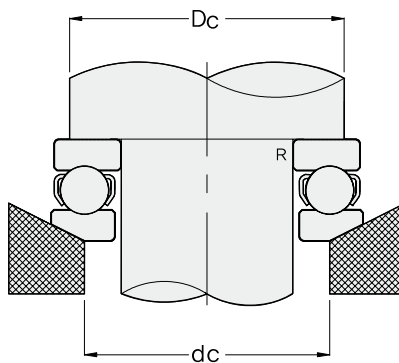


Spherical Housing Washer and Seating Ring(C)

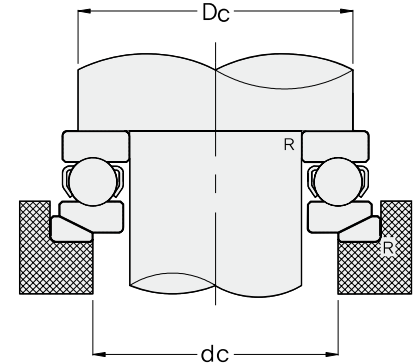
Dimensions(mm)						Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	D	H	H <sub>1</sub>	H <sub>2</sub>	r	(A)	(B)	(C)	C	Co	Grease	Oil
110	145	25	—	—	1.5	51122	—	—	8,950	23,500	1,600	2,400
	160	38	40.2	45	2	51222	53222	53222 U	13,900	33,500	1,200	1,900
	190	63	67.2	72	3	51322 X	53322 X	53322 XU	28,800	63,500	900	1,300
	230	95	99.7	109	4	51422 X	53422 X	53422 XU	42,000	97,500	630	950
120	155	25	—	—	1.5	51124	—	—	9,150	26,000	1,600	2,400
	170	39	40.8	46	2	51224	53224	53224 U	14,400	36,500	1,200	1,800
	210	70	74.1	80	3.5	51324 X	53324 X	53324 XU	33,500	78,500	800	1,200
	250	102	107.3	118	5	51424 X	53424 X	53424 XU	49,000	118,000	600	850
130	170	30	—	—	1.5	51126	—	—	10,700	28,600	1,400	2,000
	190	45	47.9	53	2.5	51226 X	53226 X	53226 XU	18,700	46,500	1,100	1,600
	225	75	80.3	86	3.5	51326 X	53326 X	53326 XU	35,500	86,500	750	1,100
	270	110	115.2	128	5	51426 X	53426 X	53426 XU	53,500	134,000	530	800
140	180	31	—	—	1.5	51128 X	—	—	11,000	31,000	1,300	2,000
	200	46	48.6	55	2.5	51228 X	53228 X	53228 XU	18,900	48,500	1,000	1,500
	240	80	84.9	92	3.5	51328 X	53328 X	53328 XU	37,500	95,000	670	1,000
	280	112	117	131	5	51428 X	53428 X	53428 XU	56,500	148,000	530	750
150	190	31	—	—	1.5	51130 X	—	—	11,200	33,000	1,300	1,900
	215	50	53.3	60	2.5	51230 X	53230 X	53230 XU	24,300	62,000	950	1,400
	250	80	83.7	92	3.5	51330 X	53330 X	53330 XU	39,000	101,000	670	1,000
	300	120	125.9	140	5	51430 X	53430 X	53430 XU	63,000	170,000	480	710
160	200	31	—	—	1.5	51132 X	—	—	11,500	35,000	1,200	1,900
	225	51	54.7	61	2.5	51232 X	53232 X	53232 XU	25,400	68,000	900	1,300
	270	87	91.7	100	4	51332 X	53332 X	53332 XU	48,500	124,000	600	900
	320	130	135.3	150	6	51432 X	53432 X	53432 XU	66,000	187,000	450	670
170	215	34	—	—	2	51134 X	—	—	13,800	42,000	1,100	1,700
	240	55	58.7	65	2.5	51234 X	53234 X	53234 XU	28,500	77,000	850	1,200
	280	87	91.3	100	4	51334 X	53334 X	53334 XU	47,500	133,000	600	900
	340	135	141	156	6	51434 X	53434 X	53434 XU	73,000	210,000	430	630
180	225	34	—	—	2	51136 X	—	—	13,800	44,500	1,100	1,700
	250	56	58.2	66	2.5	51236 X	53236 X	53236 XU	28,900	80,500	800	1,200
	300	95	99.3	109	4	51336 X	53336 X	53336 XU	49,000	142,000	560	800
	360	140	148.3	164	6	51436 X	53436 X	53436 XU	76,500	230,000	400	600
190	240	37	—	—	2	51138 X	—	—	17,500	52,500	1,000	1,500
	270	62	65.7	73	3	51238 X	53238 X	53238 XU	32,500	93,500	750	1,100
	320	105	111	121	5	51338 X	53338 X	53338 XU	56,000	165,000	500	750



(A)



(B)

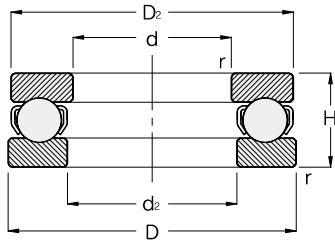


(C)

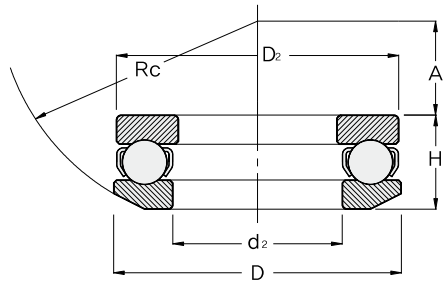
Dimensions(mm)							Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D <sub>2</sub>	d <sub>2</sub>	d <sub>3</sub>	D <sub>1</sub>	W	Rc	A	Dc(min)	dc(Max)	R (Max)	(A)	(B)	(C)	
145	112	-	-	-	-	-	131	124	1	1.10	-	-	51122
160	113	135	165	14	125	65	140	130	1	2.50	2.40	3.00	51222
187	113	150	195	20.5	140	51	158	142	2	7.50	7.50	8.70	51322 X
225	113	170	240	29	180	59	181	159	2.5	20.00	20.00	24.00	51422 X
155	122	-	-	-	-	-	141	134	1	1.15	-	-	51124
170	123	145	175	15	125	61	150	140	1	2.85	2.80	3.55	51224
205	123	165	220	22	160	63	173	157	2	10.50	10.00	12.00	51324 X
245	123	185	260	32	200	70	196	174	3	25.50	25.00	30.00	51424 X
170	132	-	-	-	-	-	154	146	1	1.70	-	-	51126
187	133	160	195	17	140	67	166	154	1.5	4.20	4.10	5.00	51226 X
220	134	177	235	26	160	53	186	169	2	12.50	12.50	15.00	51326 X
265	134	200	280	38	200	58	212	188	3	32.00	31.00	37.50	51426 X
178	142	-	-	-	-	-	164	156	1	1.90	-	-	51128 X
197	143	170	210	17	160	87	176	164	1.5	4.55	4.45	5.65	51228 X
235	144	190	250	26	180	68	199	181	2	16.00	15.50	18.50	51328 X
275	144	206	290	38	225	83	222	198	3	34.50	33.50	40.50	51428 X
188	152	-	-	-	-	-	174	166	1	2.00	-	-	51130 X
212	153	180	225	20.5	160	79	189	176	1.5	5.75	5.60	7.25	51230 X
245	154	200	260	26	200	89.5	209	191	2	16.50	16.00	19.00	51330 X
295	154	225	310	41	225	69	238	212	3	42.50	40.50	48.50	51430 X
198	162	-	-	-	-	-	184	176	1	2.10	-	-	51132 X
222	163	190	235	21	160	74	199	186	1.5	6.25	5.80	8.60	51232 X
265	164	215	280	29	200	77	225	205	2.5	21.50	21.50	25.50	51332 X
315	164	240	330	41.5	250	84	254	226	4	52.00	51.00	60.50	51432 X
213	172	-	-	-	-	-	197	188	1	2.80	-	-	51134 X
237	173	200	250	21.5	180	91	212	198	1.5	7.75	7.40	9.50	51234 X
275	174	220	290	29	225	105	235	215	2.5	22.50	22.50	27.00	51334 X
335	174	255	350	46	250	74	270	240	4	61.00	59.00	70.00	51434 X
222	183	-	-	-	-	-	207	198	1	2.95	-	-	51136 X
247	183	210	260	21.5	200	112	222	208	1.5	8.30	7.70	10.00	51236 X
295	184	240	310	32	225	91	251	229	2.5	28.50	27.50	32.50	51336 X
355	184	270	370	46.5	280	97	286	254	4	70.50	70.00	82.50	51436 X
237	193	-	-	-	-	-	220	210	1	3.80	-	-	51138 X
267	194	230	280	23	200	98	238	222	2	12.00	11.50	14.00	51238 X
315	195	255	330	33	250	104	266	244	3	36.50	37.00	43.00	51338 X

# THRUST BALL BEARINGS

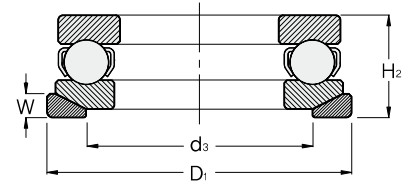
## Single Direction



Single Direction(A)

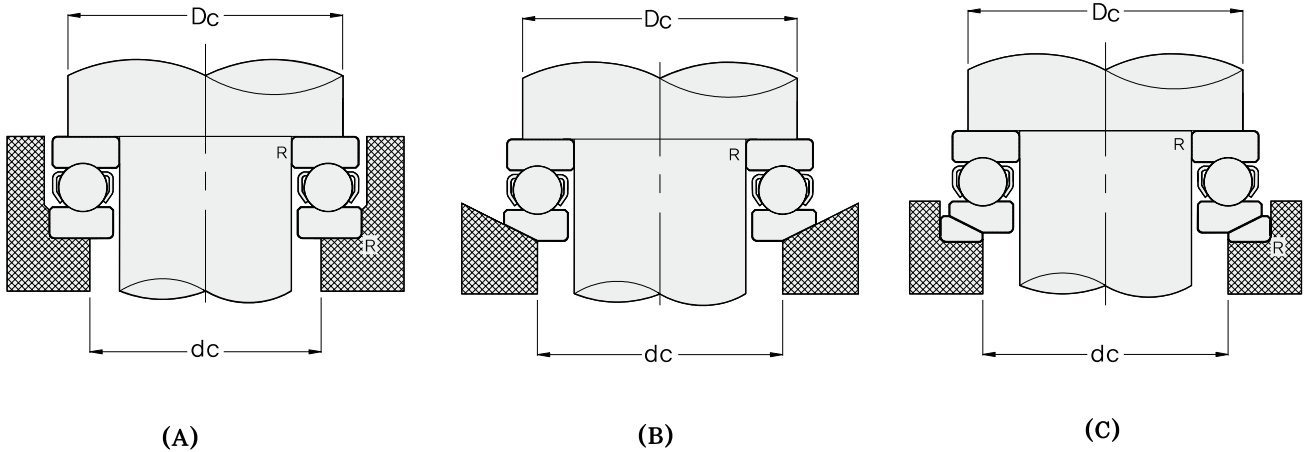


Spherical Housing Washer(B)



Spherical Housing Washer and Seating Ring(C)

Dimensions(mm)						Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	D	H	H <sub>1</sub>	H <sub>2</sub>	r	(A)	(B)	(C)	C	Co	Grease	Oil
200	250	37	-	-	2	51140 X	-	-	17,600	54,000	1,000	1,500
	280	62	65,3	74	3	51240 X	53240 X	53240 XU	32,500	93,500	710	1,100
	340	110	118,4	130	5	51340 X	53340 X	53340 XU	61,500	188,000	480	710
220	270	37	-	-	2	51144 X	-	-	18,200	58,500	950	1,400
	300	63	65,6	75	3	51244 X	53244 X	53244 XU	33,500	102,000	710	1,000
240	300	45	-	-	2.5	51148 X	-	-	23,400	77,500	800	1,200
	340	78	81,6	92	3.5	51248 X	53248 X	53248 XU	43,000	139,000	560	850
260	320	45	-	-	2.5	51152 X	-	-	23,800	84,000	800	1,200
	360	79	82,8	93	3.5	51252 X	53252 X	53252 XU	43,500	146,000	560	800
280	350	53	-	-	2.5	51156 X	-	-	32,000	111,000	710	1,000
	380	80	85	94	3.5	51256 X	53256 X	53256 XU	46,000	165,000	530	800
300	380	62	-	-	3	51160 X	-	-	36,500	132,000	600	900
	420	95	100,5	112	4	51260 X	53260 X	53260 XU	55,000	204,000	450	670
320	400	63	-	-	3	51164 X	-	-	37,500	140,000	600	900
	440	95	100,5	112	4	51264 X	53264 X	53264 XU	59,500	226,000	450	670
340	420	64	-	-	3	51168 X	-	-	38,500	148,000	560	850
	460	96	100,3	113	4	51268 X	53268 X	53268 XU	60,500	236,000	430	650
360	440	65	-	-	3	51172 X	-	-	39,000	157,000	560	800
	500	110	116,7	130	5	51272 X	53272 X	53272 XU	72,000	295,000	380	560
380	460	65	-	-	3	51176 X	-	-	43,800	228,400	500	670
400	480	65	-	-	3	51180 X	-	-	44,800	236,500	500	670
420	500	65	-	-	3	51184 X	-	-	44,800	249,800	480	630
440	540	80	-	-	3	51188 X	-	-	54,000	305,900	430	560
460	560	80	-	-	3	51192 X	-	-	54,000	316,100	430	560
480	580	80	-	-	3	51196 X	-	-	55,000	331,400	400	530
500	600	80	-	-	3	511/500	-	-	56,000	341,600	400	530
530	640	85	-	-	3	511/530	-	-	63,200	397,600	360	480
560	670	85	-	-	3	511/560	-	-	64,200	423,100	360	480

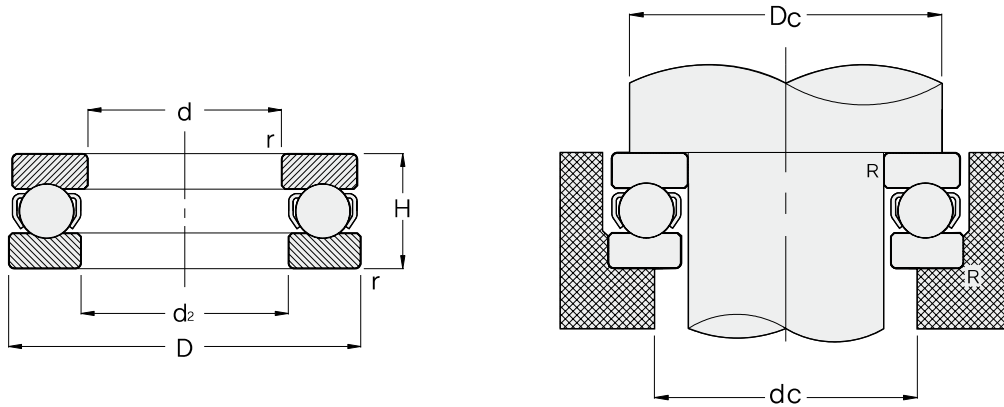


Dimensions(mm)							Abutment and fillet dimensions(mm)			Weight(Kg)			Bearing No
D <sub>2</sub>	d <sub>2</sub>	d <sub>3</sub>	D <sub>1</sub>	W	Rc	A	Dc(min)	dc(max)	R(max)	(A)	(B)	(C)	
247	203	-	-	-	-	-	230	220	1	3.95	-	-	51140X
277	204	240	290	23	225	125	248	232	2	12.50	12.00	15.00	51240X
335	205	270	350	38	250	92	282	258	3	43.50	43.50	52.00	51340X
267	223	-	-	-	-	-	250	240	1	4.30	-	-	51144X
297	224	260	310	25	225	118	268	252	2	13.50	13.00	16.00	51244X
297	243	-	-	-	-	-	276	264	1.5	6.95	-	-	51148X
335	244	290	350	30	250	122	299	281	2	23.50	21.50	26.00	51248X
317	263	-	-	-	-	-	296	284	1.5	7.45	-	-	51152X
355	264	305	370	30	280	152	319	301	2	25.50	23.00	29.00	51252X
347	283	-	-	-	-	-	322	308	1.5	12.00	-	-	51156X
375	284	325	390	31	280	143	339	321	2	27.50	25.00	31.50	51256X
376	304	-	-	-	-	-	348	332	2	17.50	-	-	51160X
415	304	360	430	34	320	164	371	349	2.5	43.00	41.50	50.00	51260X
396	324	-	-	-	-	-	368	352	2	19.00	-	-	51164X
435	325	380	450	36	320	157	391	369	2.5	45.50	44.00	53.50	51264X
416	344	-	-	-	-	-	388	372	2	20.00	-	-	51168X
455	345	400	470	36	360	199	411	389	2.5	48.50	45.00	54.50	51268X
436	364	-	-	-	-	-	408	392	2	22.00	-	-	51172X
495	365	430	510	43	360	172	442	418	3	70.00	67.00	81.50	51272X
456	384	-	-	-	-	-	428	412	2	22.50	-	-	51176X
476	404	-	-	-	-	-	448	432	2	23.50	-	-	51180X
495	424	-	-	-	-	-	468	452	2	24.50	-	-	51184X
535	444	-	-	-	-	-	500	480	2.1	40.50	-	-	51188X
555	464	-	-	-	-	-	520	500	2.1	42.00	-	-	51192X
575	484	-	-	-	-	-	540	520	2.1	43.50	-	-	51196X
595	505	-	-	-	-	-	560	540	2.1	45.00	-	-	511/500
635	535	-	-	-	-	-	596	574	2.5	55.00	-	-	511/300
665	565	-	-	-	-	-	626	604	2.5	58.00	-	-	511/560



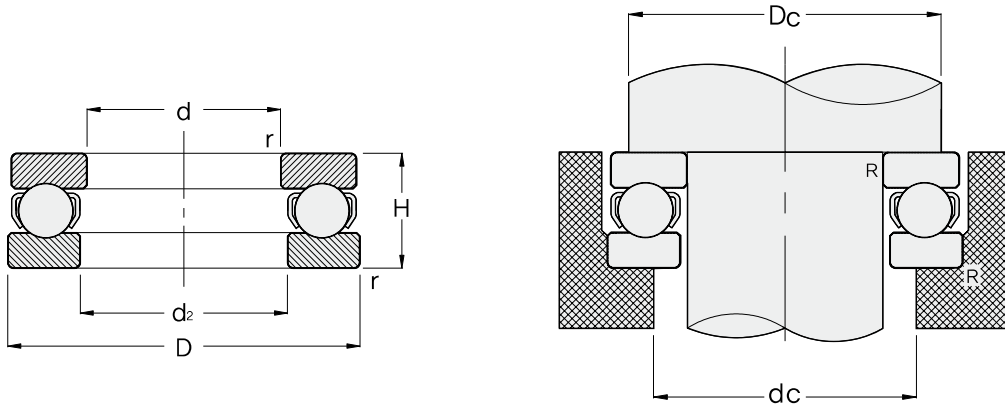
# THRUST BALL BEARINGS

## Single Direction



### 2900

Bearing No	Dimensions(mm)					Abutment and Fillet Dimensions (mm)			Load Rating(Kgf)	
	d	d <sub>2</sub> (min)	D	H	r	Dc(min)	dc(max)	R(max)	C	Co
2900	10	11	26	12	1	19	17	0.6	995	1,390
2901	12	13	28	12	1	21	19	0.6	1,040	1,540
2902	15	16	31	12	1	24	22	0.6	1,120	1,850
2903	18	19	35	12	1	28	25	0.6	1,130	2,010
2904	20	21	37	12	1	30	27	0.6	1,160	2,160
2904 1/2	22	23	42	14	1	34	30	0.6	1,480	2,820
2905	25	26	45	14	1	37	33	0.6	1,510	3,000
2906	30	32	50	14	1	42	38	0.6	1,580	3,450
2907	35	37	55	16	1	47	43	0.6	2,340	5,050
2908	40	42	60	16	1	52	48	0.6	2,450	5,650
2909	45	47	68	16	1	59	54	0.6	2,540	6,300
2910	50	52	74	18	1	64	60	0.6	3,000	7,650
2911	55	57	78	18	1	69	64	0.6	3,150	8,400
2912	60	62	82	18	1	73	69	0.6	3,200	8,750
2913	65	67	90	20	1	80	75	0.6	3,250	9,550
2914	70	72	95	20	1	85	80	0.6	3,400	10,300
2915	75	77	100	20	1	90	85	0.6	3,500	11,100
2916	80	82	110	22	1	98	92	0.6	4,500	13,800
2917	85	87	115	22	1	103	97	0.6	4,650	14,900
2918	90	92	120	22	1	108	102	0.6	4,700	15,400
2919	95	97	130	25	1	116	109	0.6	5,900	19,100
2920	100	102	135	25	1	121	114	0.6	6,100	20,600
2922	110	112	145	25	1	131	124	0.6	6,850	23,400
2924	120	122	160	27	1	144	136	0.6	7,700	27,300

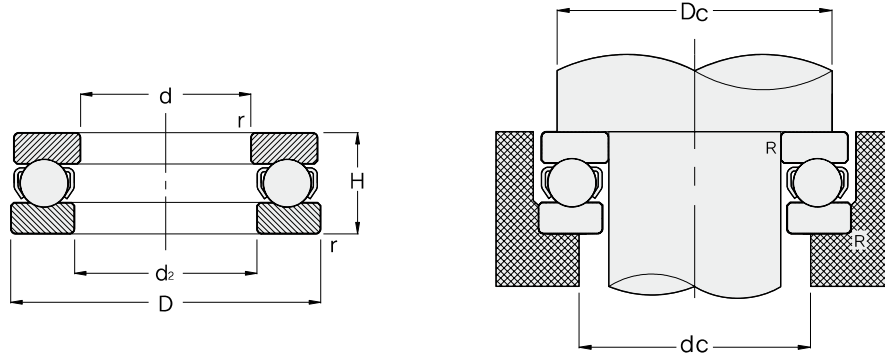


900

Bearing No	Dimensions(mm)					Abutment and Fillet Dimensions (mm)			Load Rating(Kgf)	
	d	d <sub>2</sub> (min)	D	H	r	Dc(min)	dc(max)	R(max)	C	Co
900	10	11	25	12	1	19	16	0.6	995	1,390
902	15	16	35	14	1	27	23	0.6	1,510	2,300
904	20	22	40	14	1	32	28	0.6	1,750	3,050
905	25	27	48	15.5	1	39	34	0.6	2,150	4,100
906	30	32	53	15.5	1	44	39	0.6	2,280	4,700
907	35	37	62	18	1	51	46	0.6	3,050	6,350
908	40	42	64	18	1	55	49	0.6	2,840	6,500
909	45	47	73	22	1	62	56	0.6	3,900	9,050
910	50	52	78	22	1	67	61	0.6	4,450	10,500
911	55	57	88	24.5	1	75	68	0.6	5,450	12,900
912	60	62	90	24.5	1	78	72	0.6	4,700	12,400
913	65	67	100	27	1.5	86	79	1	5,500	15,300
914	70	72	103	27	1.5	90	83	1	5,800	16,100
915	75	77	110	27	1.5	96	89	1	6,050	16,900
916	80	82	115	29	1.5	101	94	1	6,800	19,100
917	85	88	125	30.5	1.5	109	101	1	8,700	23,900
918	90	93	135	30.5	1.5	117	108	1	10,200	29,000
920	100	103	150	32.5	1.5	130	120	1	12,100	34,500
922	110	113	160	40	2	140	130	1	14,000	40,500
924	120	123	170	43	2	150	140	1	14,200	42,500

# THRUST BALL BEARINGS

## Single Direction

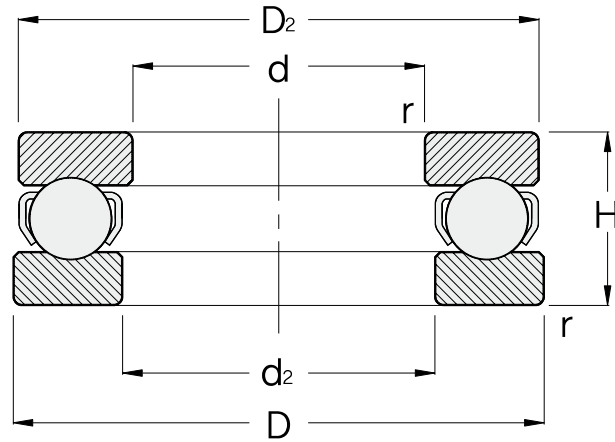


### 3900

Bearing No	Dimensions(mm)					Abutment and Fillet Dimensions (mm)			Load Rating(Kgf)	
	d	d <sub>2</sub> (min)	D	H	r	Dc(min)	dc(max)	R(max)	C	Co
3905	25	27	52	16	1.5	42	36	1	2,130	4,100
3906	30	32	60	19	1.5	48	42	1	2,970	5,900
3907	35	37	68	22	1.5	55	48	1	3,950	8,050
3908	40	42	76	25	1.5	62	54	1	4,800	9,700
3909	45	47	85	28	1.5	69	61	1	6,300	13,300
3910	50	52	92	31	1.5	75	67	1	7,600	16,400
3911	55	57	100	33	1.5	82	73	1	8,600	19,400
3912	60	62	106	35	2	88	78	1	9,300	21,300
3913	65	67	112	36	2	93	84	1	10,000	23,300
3914	70	72	120	38	2	100	90	1	11,200	27,200
3915	75	77	128	41	2	107	96	1	12,400	29,800
3916	80	83	136	44	2	114	102	1	14,300	34,500
3917	85	88	145	47	2	121	109	1	16,200	39,500
3918	90	93	155	50	2	129	116	1	18,200	45,000
3920	100	103	172	57	2	143	129	1	20,600	53,000

### inch

Bearing No	Dimensions(mm)					Load Rating(Kgf)	
	d	d <sub>2</sub> (min)	D	H	r	C	Co
1/2	12,700	13,5	28	12	1	980	1,370
5/8	15,875	16,5	32	12	1	1,060	1,670
3/4	19,050	20,0	35	12	1	1,150	1,780
7/8	22,225	23,0	42	14	1	1,430	2,750
1	25,400	26,5	45	14	1	1,470	2,930
1 1/4	31,750	32,5	53	16	1	2,300	5,000
1 1/2	38,100	40,0	60	16	1	2,450	5,400
2	50,800	52,0	74	18	1	2,850	7,500



**Series 0**

Bearing No	Dimensions(mm)						Load Rating(Kgf)	
	d	d <sub>2</sub>	D <sub>2</sub>	D	H	r	C	Co
04	12,700	13,1	31,750	32,544	15,875	0,8	1,300	2,020
05	15,875	16,3	34,925	35,719	15,875	0,8	1,350	2,220
06	19,050	19,4	38,100	38,894	15,875	0,8	1,670	2,810
07	22,225	22,6	41,275	42,069	15,875	0,8	1,790	3,650
08	25,400	25,8	44,450	45,244	15,875	1,6	2,080	3,800
09	28,575	29,0	47,625	48,419	15,875	1,6	2,100	3,850
010	31,750	32,1	52,388	53,181	18,256	1,6	2,180	4,400
011	34,925	35,3	55,562	56,356	18,256	1,6	2,340	5,050
012	38,100	38,5	58,738	59,531	18,256	1,6	2,380	5,350
013	41,275	41,7	61,912	62,706	18,256	1,6	2,440	5,450
014	44,450	44,8	67,469	68,262	19,050	1,6	2,540	6,300
015	47,625	48,4	70,644	71,438	19,050	1,6	2,950	7,250
016	50,800	51,6	74,612	75,406	19,050	2,4	3,000	7,600
017	53,975	54,8	80,962	81,756	22,225	2,4	3,100	7,700
018	57,150	57,9	84,138	84,931	22,225	2,4	3,200	8,750
019	60,325	61,1	90,488	91,281	25,400	2,4	4,400	11,100
020	63,500	64,3	93,662	94,456	25,400	2,4	3,240	9,550
021	66,675	67,5	96,838	97,631	25,400	2,4	4,750	13,000
022	69,850	70,6	101,600	102,394	25,400	2,4	5,680	14,500
023	73,025	73,8	104,775	105,569	25,400	2,4	5,950	16,100
024	76,200	77,8	109,538	111,125	28,575	3,2	6,050	16,900
026	82,550	81,1	120,650	122,238	31,750	3,2	7,650	20,500
028	88,900	90,5	127,000	128,588	31,750	3,2	7,800	21,600
030	95,250	96,8	133,350	134,938	31,750	3,2	7,900	22,700
032	101,600	103,2	146,050	147,638	34,925	3,2	9,500	22,800
036	114,300	115,9	165,100	166,688	44,450	4,8	12,300	35,500