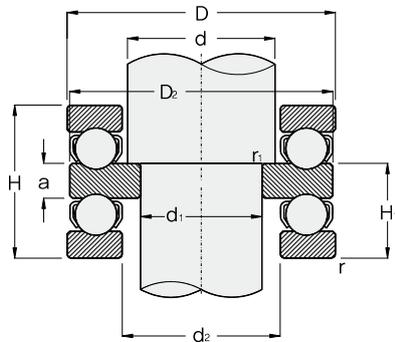
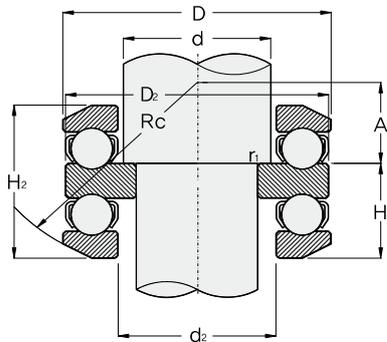


THRUST BALL BEARINGS

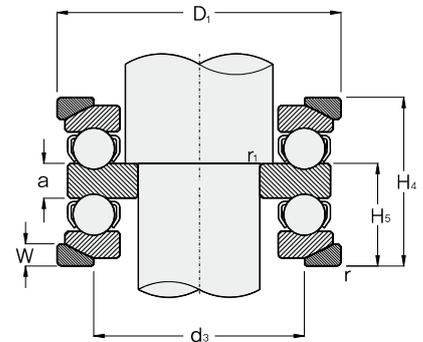
Double Direction



Double Direction(A)

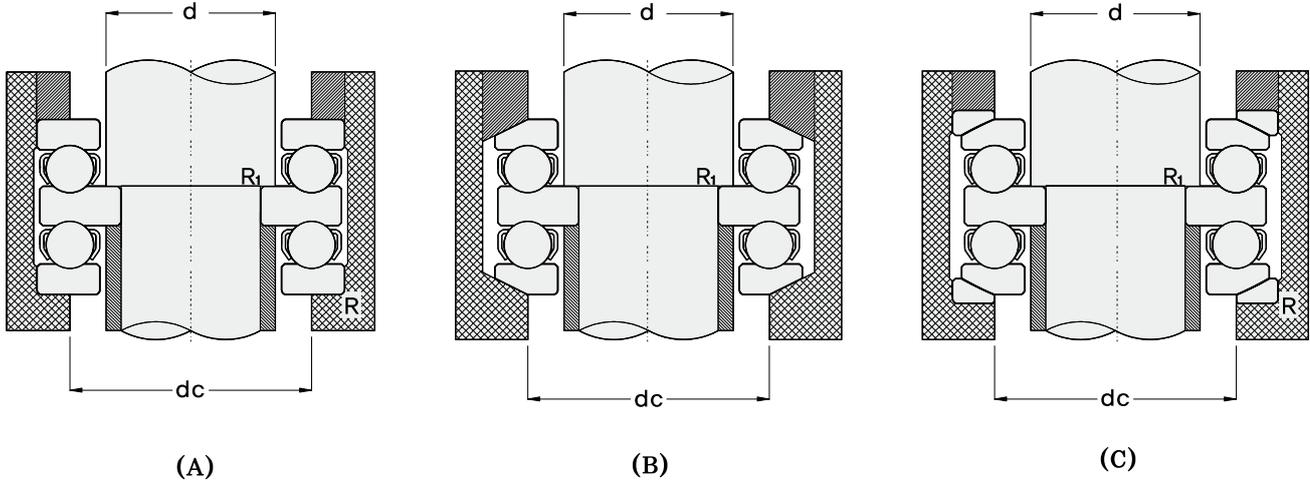


Spherical Housing Washer(B)



Spherical Housing Washer and Seating Ring(C)

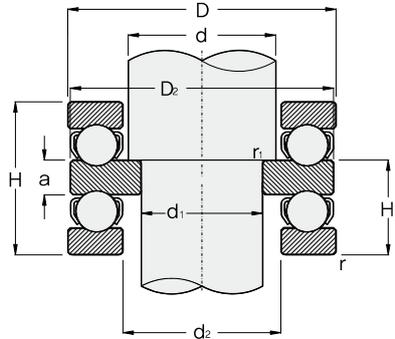
Dimensions(mm)								Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	d ₁	D	H	H ₂	H ₄	r	r ₁	(A)	(B)	(C)	C	Co	Grease	Oil
15	10	32	22	24.6	28	1	0.5	52202	54202	54202 U	1,710	2,100	5,000	7,500
20	15	40	26	27.4	32	1	0.5	52204	54204	54204 U	2,290	3,200	4,000	6,000
25	20	47	28	31.4	36	1	0.5	52205	54205	54205 U	2,860	4,250	3,800	5,600
	20	52	34	37.6	42	1.5	0.5	52305	54305	54305 U	3,650	5,200	3,200	4,800
	15	60	45	49.8	55	1.5	1	52405	54405	54405 U	5,700	7,550	2,600	4,000
30	25	52	29	32.6	37	1	0.5	52206	54206	54206 U	3,000	4,900	3,400	5,300
	25	60	38	41.2	46	1.5	0.5	52306	54306	54306 U	4,400	6,650	2,800	4,200
	20	70	52	56.2	62	1.5	1	52406	54406	54406 U	7,450	10,600	2,200	3,400
35	30	62	34	37.8	42	1.5	0.5	52207	54207	54207 U	4,050	6,600	3,000	4,500
	30	68	44	47.2	52	1.5	0.5	52307	54307	54307 U	5,700	8,850	2,500	3,700
	25	80	59	63	69	2	1	52407	54407	54407 U	8,950	13,100	2,000	3,000
40	30	68	36	38.6	44	1.5	1	52208	54208	54208 U	4,850	8,300	2,800	4,200
	30	78	49	54	59	1.5	1	52308	54308	54308 U	7,100	11,400	2,200	3,300
	30	90	65	69.4	77	2	1	52408	54408	54408 U	10,500	15,800	1,700	2,600
45	35	73	37	39.6	45	1.5	1	52209	54209	54209 U	4,900	8,850	2,600	4,000
	35	85	52	56.2	62	1.5	1	52309	54309	54309 U	8,200	13,800	2,000	3,000
	35	100	72	78.8	86	2	1	52409	54409	54409 U	13,000	20,700	1,600	2,400
50	40	78	39	42	47	1.5	1	52210	54210	54210 U	5,000	9,400	2,400	3,600
	40	95	58	64.6	70	2	1	52310	54310	54310 U	9,950	17,000	1,800	2,800
	40	110	78	83.2	92	2.5	1	52410	54410	54410 U	15,000	24,300	1,400	2,200
55	45	90	45	49.6	55	1.5	1	52211	54211	54211 U	7,150	13,400	2,100	3,200
	45	105	64	72.6	78	2	1	52311	54311	54311 U	11,800	20,600	1,600	2,400
	45	120	87	92	101	2.5	1	52411	54411	54411 U	18,500	29,500	1,300	1,900
60	50	95	46	50	56	1.5	1	52212	54212	54212 U	7,300	14,200	2,000	3,000
	50	110	64	70.6	78	2	1	52312	54312	54312 U	12,100	22,200	1,600	2,400
	50	130	93	99	107	2.5	1	52412	54412	54412 U	20,600	33,500	1,200	1,800
65	55	100	47	50.6	57	1.5	1	52213	54213	54213 U	7,700	15,900	1,900	2,800
	55	115	65	71.8	79	2	1	52313	54313	54313 U	12,500	23,800	1,600	2,300
	50	140	101	109.4	119	3	1.5	52413	54413	54413 U	23,800	41,500	1,100	1,600
70	55	105	47	50.6	57	1.5	1.5	52214	54214	54214 U	7,550	15,900	1,900	2,800
	55	125	72	80.4	88	2	1.5	52314	54314	54314 U	14,000	26,400	1,400	2,000
	55	150	107	114.2	125	3	1.5	52414	54414	54414 U	25,700	46,500	1,000	1,500



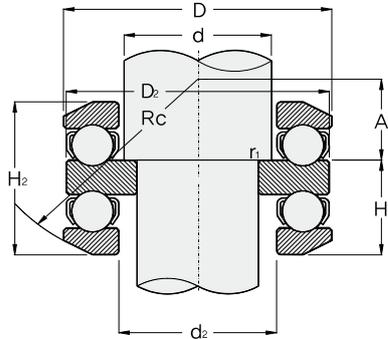
Dimensions(mm)												Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D ₂	d ₂	d ₃	D ₁	H ₁	H ₃	H _s	a	W	A ₁	Rc	dc (min)	R (max)	R ₁ (max)	(A)	(B)	(C)		
32	17	24	35	13,5	14,8	16,5	5	4	10,5	28	24	0,6	0,3	0,085	0,09	0,12	52202	
40	22	30	42	16	16,7	19	6	5	16	36	30	0,6	0,3	0,15	0,15	0,20	52204	
47	27	36	50	17,5	19,2	21,5	7	5,5	16,5	40	36	0,6	0,3	0,23	0,24	0,32	52205	
52	27	38	55	21	22,8	25	8	6	18	45	38	1	0,3	0,33	0,34	0,43	52305	
60	27	42	62	28	30,4	33	11	8	15	50	42	1	0,6	0,63	0,66	0,80	52405	
52	32	42	55	18	19,8	22	7	5,5	20	45	42	0,6	0,3	0,28	0,29	0,40	52206	
60	32	45	62	23,5	25,1	27,5	9	7	19,5	50	45	1	0,3	0,49	0,49	0,60	52306	
70	32	50	75	32	34,1	37	12	9	16	56	50	1	0,6	1,00	0,99	1,25	52406	
62	37	48	65	21	22,9	25	8	7	21	50	48	1	0,3	0,42	0,43	0,51	52207	
68	37	52	72	27	28,6	31	10	7,5	21	56	52	1	0,3	0,71	0,73	0,90	52307	
80	37	58	85	36,5	38,5	41,5	14	10	18,5	64	58	1	0,6	1,45	1,45	1,80	52407	
68	42	55	72	22,5	23,8	26,5	9	7	25	56	55	1	0,6	0,54	0,54	0,71	52208	
78	42	60	82	30,5	33	35,5	12	8,5	23,5	64	60	1	0,6	1,05	1,10	1,35	52308	
90	42	65	95	40	42,2	46	15	12	22	72	65	1	0,6	2,05	2,05	2,55	52408	
73	47	60	78	23	24,3	27	9	7,5	23	56	60	1	0,6	0,62	0,61	0,81	52209	
85	47	65	90	32	34,1	37	12	10	21	64	65	1	0,6	1,30	1,30	1,60	52309	
100	47	72	105	44,5	47,9	51,5	17	12,5	23,5	80	72	1	0,6	2,70	2,80	3,40	52409	
78	52	62	82	24	25,5	28	9	7,5	30,5	64	62	1	0,6	0,71	0,69	0,93	52210	
95	52	72	100	36	39,3	42	14	11	23	72	72	1	0,6	1,85	1,90	2,35	52310	
110	52	80	115	48	50,6	55	18	14	30	90	80	1,5	0,6	3,55	3,80	4,40	52410	
90	57	72	95	27,5	29,8	32,5	10	9	32,5	72	72	1	0,6	1,10	1,15	1,50	52211	
105	57	80	110	39,5	43,8	46,5	15	11,5	25,5	80	80	1	0,6	2,50	2,65	3,20	52311	
120	57	88	125	53,5	56	60,5	20	15,5	22,5	90	88	1,5	0,6	4,70	4,55	5,60	52411	
95	62	78	100	28	30	33	10	9	30,5	72	78	1	0,6	1,25	1,25	1,65	52212	
110	62	85	115	39,5	42,8	46,5	15	11,5	36,5	90	85	1	0,6	2,70	2,75	3,35	52312	
130	62	95	135	57	60	64	21	16	28	100	95	1,5	0,6	6,00	5,80	7,20	52412	
110	67	82	105	28,5	30,2	33,5	10	9	38,5	80	82	1	0,6	1,35	1,35	1,75	52213	
115	67	90	120	40	43,4	47	15	12,5	34,5	90	90	1	0,6	2,90	3,00	3,65	52313	
140	68	100	145	62	66,2	71	23	17,5	34	112	100	2	1	7,50	7,50	9,15	52413	
105	72	88	110	28,5	30,3	33,5	10	9	36,5	80	88	1	1	1,50	1,45	1,90	52214	
125	72	98	130	44	48,2	52	16	13	39	100	98	1	1	3,90	4,00	4,80	52314	
150	73	110	155	65,5	69,1	74,5	24	19,5	28,5	112	110	2	1	9,00	8,85	11,0	52414	

THRUST BALL BEARINGS

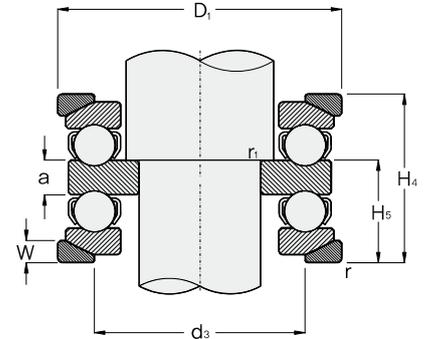
Double Direction



Double Direction(A)

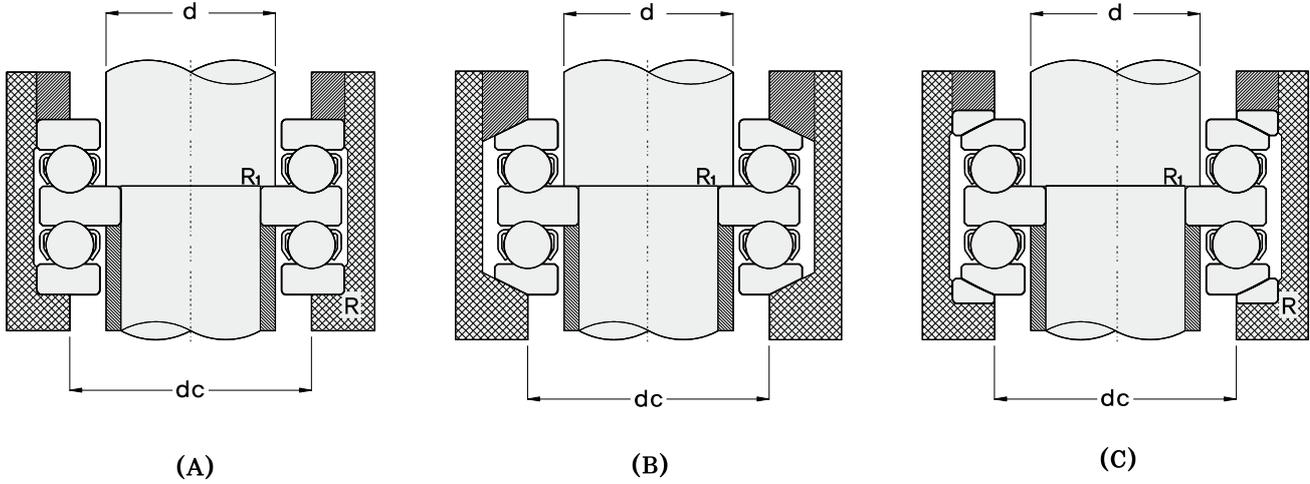


Spherical Housing Washer(B)



Spherical Housing Washer and Seating Ring(C)

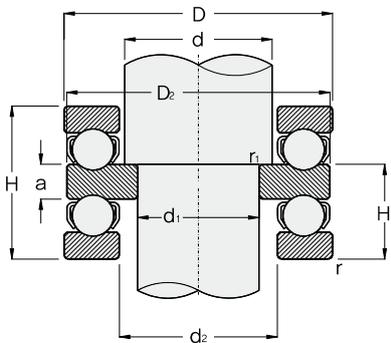
Dimensions(mm)								Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	d ₁	D	H	H ₂	H ₄	r	r ₁	(A)	(B)	(C)	C	Co	Grease	Oil
75	60	110	47	49.6	57	1.5	1.5	52215	54215	54215 U	7,950	17,600	1,800	2,700
	60	135	79	87.2	95	2.5	1.5	52315	54315	54315 U	16,200	31,000	1,300	1,900
	60	160	115	123	135	3	1.5	52415	54415	54415 U	25,900	47,500	950	1,400
80	65	115	48	51	58	1.5	1.5	52216	54216	54216 U	8,050	18,400	1,700	2,600
	65	140	79	86.2	95	2.5	1.5	52316	54316	54316 U	16,700	33,000	1,200	1,800
	65	170	120	128.4	140	3.5	1.5	52416	54416	54416 U	27,800	52,500	900	1,400
85	70	125	55	59.2	67	1.5	1.5	52217	54217	54217 U	9,800	22,300	1,600	2,400
	70	150	87	95.2	105	2.5	1.5	52317	54317	54317 U	21,100	41,000	1,100	1,700
	65	180	128	138	150	3.5	2	52417 X	54417 X	54417 XU	31,500	63,500	850	1,300
90	75	135	62	69	76	2	1.5	52218	54218	54218 U	11,600	26,200	1,400	2,200
	75	155	88	97.2	106	2.5	1.5	52318	54318	54318 U	21,900	44,000	1,100	1,600
	70	190	135	143.4	157	3.5	2	52418 X	54418 X	54418 XU	33,500	69,500	800	1,200
100	85	150	67	72.8	81	2	1.5	52220	54220	54220 U	13,700	31,500	1,300	1,900
	85	170	97	105.4	115	2.5	1.5	52320	54320	54320 U	24,300	50,500	1,000	1,500
	80	210	150	160	176	4	2	52420 X	54420 X	54420 XU	38,000	83,000	710	1,100
110	95	160	67	71.4	81	2	1.5	52222	54222	54222 U	13,900	33,500	1,200	1,900
	95	190	110	118.4	128	3	1.5	52322	54322 X	54322 XU	28,800	63,500	900	1,300
	90	230	166	-	-	4	2	52422 X	-	-	42,000	97,500	630	950
120	100	170	68	71.6	82	2	2	52224	54224	54224 U	14,400	36,500	1,200	1,800
	100	210	123	131.2	143	3.5	2	52324 X	54324 X	54324 XU	33,500	78,500	800	1,200
	95	250	177	-	-	5	2.5	52424 X	-	-	52,500	130,000	600	850
130	110	190	80	85.8	96	2.5	2	52226 X	54226 X	54226 XU	18,700	46,500	1,100	1,600
	110	225	130	-	-	3.5	2	52326 X	-	-	35,500	86,500	750	1,100
	100	270	192	-	-	5	3	52426 X	-	-	53,500	134,000	530	800
140	120	200	81	86.2	99	2.5	2	52228 X	54228 X	54228 XU	18,900	48,500	1,000	1,500
	120	240	140	-	-	3.5	2	52328 X	-	-	37,500	95,000	670	1,000
	110	280	196	-	-	5	3	52428 X	-	-	56,500	148,000	530	750
150	130	215	89	95.6	109	2.5	2	52230 X	54230 X	54230 XU	24,300	62,000	950	1,400
	130	250	140	-	-	3.5	2	52330 X	-	-	39,000	101,000	670	1,000
	120	300	209	-	-	5	3	52430 X	-	-	63,000	170,000	480	710
160	140	225	90	97.4	110	2.5	2	52232 X	54232 X	54232 XU	25,400	68,000	900	1,300
	140	270	153	-	-	4	2	52332 X	-	-	48,500	133,000	600	900
	130	320	226	-	-	6	3	52432 X	-	-	66,000	187,000	450	670



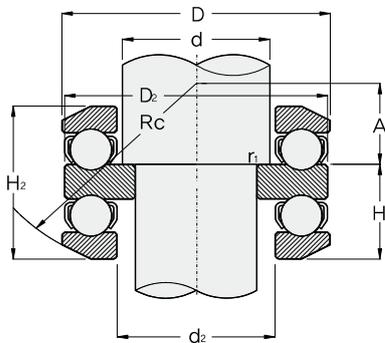
Dimensions(mm)											Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D ₂	d ₂	d ₃	D ₁	H ₁	H ₃	H ₅	a	W	A ₁	Rc	dc (min)	R (max)	R ₁ (max)	(A)	(B)	(C)	
110	77	92	115	28.5	29.8	33.5	10	9.5	47.5	90	92	1	1	1.55	1.55	2.05	52215
135	77	105	140	48.5	52.6	56.5	18	15	32.5	100	105	1.5	1	4.85	5.00	6.10	52315
160	78	115	165	70.5	74.5	80.5	26	21	36.5	125	115	2	1	11.0	11.0	13.5	52415
115	82	98	120	29	30.5	34	10	10	45	90	98	1	1	1.70	1.65	2.15	52216
140	82	110	145	48.5	52.1	56.5	18	15	45.5	112	110	1.5	1	5.05	5.20	6.40	52316
170	83	125	175	73.5	77.7	83.5	27	22	30.5	125	125	2	1	13.0	13.5	16.0	52416
125	88	105	130	33.5	35.6	39.5	12	11	49.5	100	105	1	1	2.35	2.30	3.00	52217
150	88	115	155	53	57.1	62	19	17.5	39	112	115	1.5	1	6.45	6.40	8.05	52317
179.5	88	130	185	78.5	83.5	89.5	29	23	40.5	140	130	2	1	16.6	16.0	19.0	52417 X
135	93	110	140	38	41.5	45	14	13.5	42	100	110	1	1	3.20	3.25	4.20	52218
155	93	120	160	53.5	58.1	62.5	19	18	36.5	112	120	1.5	1	6.60	6.75	8.45	52318
189.5	93	140	195	82.5	86.7	93.5	30	25.5	34.5	140	140	2	1	18.2	18.5	22.5	52418 X
150	103	125	155	41	43.9	48	15	14	49	112	125	1	1	4.30	4.25	5.4	52220
170	103	135	175	59	63.2	68	21	18	42	125	135	1.5	1	8.90	8.95	10.5	52320
209.5	103	155	220	91.5	96.5	104.5	33	27	43.5	160	155	2.5	1	26.5	29.0	32.0	52420 X
160	113	135	165	41	43.2	48	15	14	62	125	135	1	1	4.50	4.25	5.35	52222
189.5	113	150	195	67	71.2	76	24	20.5	47	140	150	2	1	13.0	13.5	16.0	52322 X
229	113	-	-	101.5	-	-	37	-	-	-	159	2.5	1	35.0	-	-	52422 X
170	123	145	175	41.5	43.3	48.5	15	15	58.5	125	145	1	1	5.25	5.15	6.45	52224
209.5	123	165	220	75	79.1	85	27	22	58	160	165	2	1	16.5	19.0	23.0	52324 X
249	123	-	-	108.5	-	-	40	-	-	-	174	3	1.5	44.5	-	-	52424 X
189.5	133	160	195	49	51.9	57	18	17	63	140	160	1.5	1	7.75	7.50	9.30	52226 X
224	134	-	-	80	-	-	30	-	-	-	169	2	1	21.5	-	-	52326 X
269	134	-	-	117	-	-	42	-	-	-	188	3	2	56.5	-	-	52426 X
199.5	143	170	210	49.5	52.1	58.5	18	17	83.5	160	170	1.5	1	8.35	8.10	10.5	52228 X
239	144	-	-	85.5	-	-	31	-	-	-	181	2	1	28.0	-	-	52328 X
279	144	-	-	120	-	-	44	-	-	-	198	3	2	61.0	-	-	52428 X
214.5	153	180	225	54.5	57.8	64.5	20	20.5	74.5	160	180	1.5	1	10.5	10.0	13.5	52230 X
249	154	-	-	85.5	-	-	31	-	-	-	191	2	1	29.0	-	-	52330 X
299	154	-	-	127.5	-	-	46	-	-	-	212	3	2	74.0	-	-	52430 X
224.5	163	190	235	55	58.7	65	20	21	70	160	190	1.5	1	11.0	10.5	14.0	52232 X
269	164	-	-	93	-	-	33	-	-	-	205	2.5	1	38.0	-	-	52332 X
319	164	-	-	138	-	-	50	-	-	-	226	4	2	90.5	-	-	52432 X

THRUST BALL BEARINGS

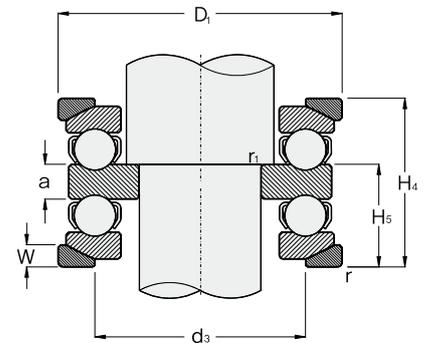
Double Direction



Double Direction(A)

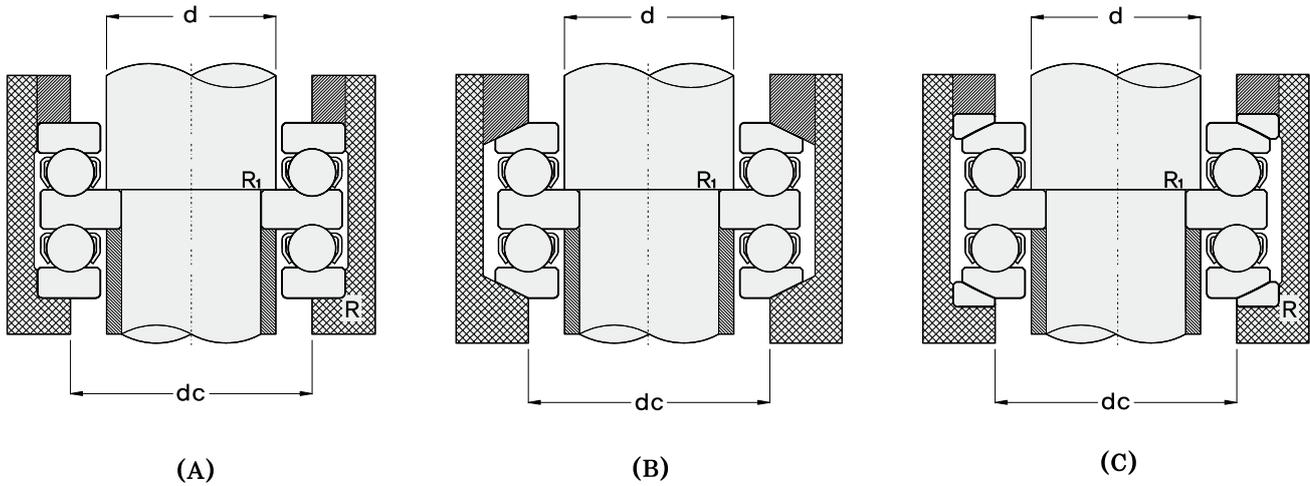


Spherical Housing Washer(B)



Spherical Housing Washer and Seating Ring(C)

Dimensions(mm)								Bearing Series			Load Rating(Kgf)		Limiting Speed(rpm)	
d	d ₁	D	H	H ₂	H ₄	r	r ₁	(A)	(B)	(C)	C	Co	Grease	Oil
170	150	240	97	104.4	117	2.5	2	52234 X	54234 X	54234 XU	28,500	77,000	850	1,200
	150	280	153	—	—	4	2	52334 X	—	—	47,500	133,000	600	900
	135	340	236	—	—	6	3.5	52434 X	—	—	73,000	210,000	430	630
180	150	250	98	102.4	118	2.5	3	52236 X	54236 X	54236 XU	28,900	80,500	800	1,200
	150	300	165	—	—	4	3	52336 X	—	—	49,000	142,000	560	800
	140	360	245	—	—	6	4	52436 X	—	—	76,500	230,000	400	600
190	160	270	109	116.4	131	3	3	52238 X	54238 X	54238 XU	32,500	93,500	750	1,100
	160	320	183	—	—	5	3	52338 X	—	—	56,000	165,000	500	750
200	170	280	109	115.6	133	3	3	52240 X	54240 X	54240 XU	32,500	93,500	710	1,100
	170	340	192	—	—	5	3	52340 X	—	—	61,500	188,000	480	710
220	190	300	110	115.2	134	3	3	52244 X	54244 X	54244 XU	33,500	102,000	710	1,000



Dimensions(mm)											Abutment and fillet dimensions(mm)			Weight(kg)			Bearing No
D ₂	d ₂	d ₃	D ₁	H ₁	H ₃	H ₅	a	W	A ₁	Rc	dc (min)	R (max)	R ₁ (max)	(A)	(B)	(C)	
239,5	173	200	250	59	62,7	69	21	21,5	87	180	200	1,5	1	14,0	12,5	16,5	52234X
279	174	-	-	93	-	-	33	-	-	-	215	2,5	1	39,5	-	-	52334X
339	174	-	-	143	-	-	50	-	-	-	240	4	2	108	-	-	52434X
249	183	210	260	59,5	61,7	69,5	21	21,5	108,5	200	210	1,5	2	15,0	16,0	19,5	52236X
299	184	-	-	101	-	-	37	-	-	-	229	2,5	2	50,5	-	-	52336X
359	184	-	-	148,5	-	-	52	-	-	-	254	4	2,5	126	-	-	52436X
269	194	230	280	66,5	70,2	77,5	24	23	93,5	200	230	2	2	21,5	20,0	25,5	52238X
319	195	-	-	111,5	-	-	40	-	-	-	244	3	2	65,5	-	-	52338X
279	204	240	290	66,5	69,8	78,5	24	23	120,5	225	240	2	2	23,0	21,0	27,5	52240X
339	205	-	-	117	-	-	42	-	-	-	258	3	2	77,5	-	-	52340X
299	224	260	310	67	69,6	79	24	25	114	225	260	2	2	24,0	23,0	29,5	52244X