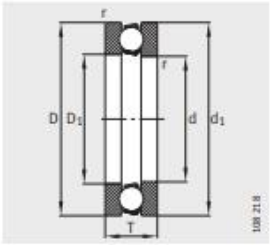
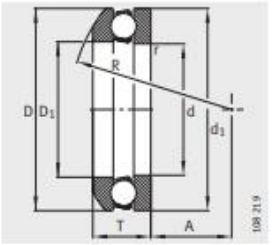
Axial deep groove ball bearings

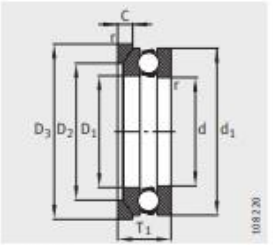
Single direction



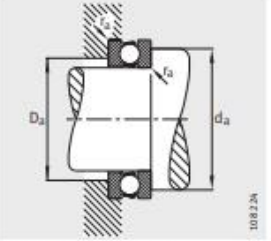
511, 512, 513, 514



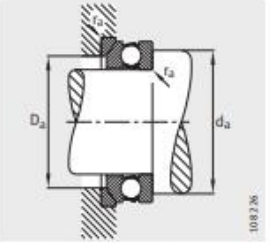
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

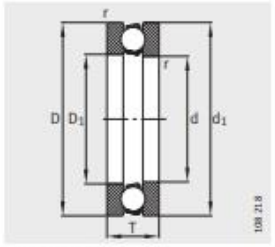
Dimension table - Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51100	–	0,018	–	**10**	24	9	11	24	0,3	–	–	–
51200	–	0,029	–	**10**	26	11	12	26	0,6	–	–	–
53200	–	0,028	–	**10**	26	11,6	12	26	0,6	22	8,5	–
53200	**U200**	0,028	0,01	**10**	26	11,6	12	26	0,6	22	8,5	18
51101	–	0,021	–	**12**	26	9	13	26	0,3	–	–	–
51201	–	0,032	–	**12**	28	11	14	28	0,6	–	–	–
53201	–	0,03	–	**12**	28	11,4	14	28	0,6	25	11,5	–
53201	**U201**	0,03	0,012	**12**	28	11,4	14	28	0,6	25	11,5	20
51102	–	0,024	–	**15**	28	9	16	28	0,3	–	–	–
51202	–	0,043	–	**15**	32	12	17	32	0,6	–	–	–
53202	–	0,046	–	**15**	32	13,3	17	32	0,6	28	12	–
53202	**U202**	0,046	0,014	**15**	32	13,3	17	32	0,6	28	12	24
51103	–	0,024	–	**17**	30	9	18	30	0,3	–	–	–
51203	–	0,05	–	**17**	35	12	19	35	0,6	–	–	–
53203	–	0,052	–	**17**	35	13,2	19	35	0,6	32	16	–
53203	**U203**	0,052	0,015	**17**	35	13,2	19	35	0,6	32	16	26
51104	–	0,037	–	**20**	35	10	21	35	0,3	–	–	–
51204	–	0,082	–	**20**	40	14	22	40	0,6	–	–	–
53204	–	0,081	–	**20**	40	14,7	22	40	0,6	36	18	–
53204	**U204**	0,081	0,021	**20**	40	14,7	22	40	0,6	36	18	30
51105	–	0,055	–	**25**	42	11	26	42	0,6	–	–	–
51205	–	0,114	–	**25**	47	15	27	47	0,6	–	–	–
53205	–	0,121	–	**25**	47	16,7	27	47	0,6	40	19	–
53205	**U205**	0,121	0,032	**25**	47	16,7	27	47	0,6	40	19	36
51305	–	0,154	–	**25**	52	18	27	52	1	–	–	–
53305	–	0,203	–	**25**	52	19,8	27	52	1	45	21	–
53305	**U305**	0,203	0,044	**25**	52	19,8	27	52	1	45	21	38
51405	–	0,295	–	**25**	60	24	27	60	1	–	–	–

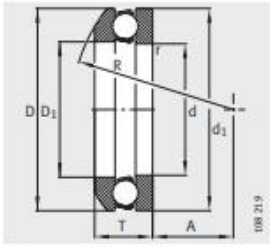
			Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	18	16	0,3	10 000	14 000	620	0,001	13 000
–	–	–	20	16	0,6	12 700	17 000	760	0,002	11 000
–	–	–	20	18	0,6	12 700	17 000	760	0,002	11 000
28	3,5	13	20	18	0,6	12 700	17 000	760	0,002	11 000
–	–	–	20	18	0,3	10 400	15 300	690	0,001	13 000
–	–	–	22	18	0,6	13 200	19 000	840	0,002	10 000
–	–	–	22	20	0,6	13 200	19 000	840	0,002	10 000
30	3,5	13	22	20	0,6	13 200	19 000	840	0,002	10 000
–	–	–	23	20	0,3	10 600	16 600	750	0,002	12 000
–	–	–	25	22	0,6	16 600	25 000	1 100	0,004	9 000
–	–	–	25	24	0,6	16 600	25 000	1 100	0,004	9 000
35	4	15	25	24	0,6	16 600	25 000	1 100	0,004	9 000
–	–	–	25	22	0,3	11 400	19 600	870	0,002	11 000
–	–	–	28	24	0,6	17 300	27 500	1 210	0,004	8 500
–	–	–	28	26	0,6	17 300	27 500	1 210	0,004	8 500
38	4	15	28	26	0,6	17 300	27 500	1 210	0,004	8 500
–	–	–	29	26	0,3	15 000	26 500	1 180	0,004	9 500
–	–	–	32	28	0,6	22 400	37 500	1 660	0,01	7 500
–	–	–	32	30	0,6	22 400	37 500	1 660	0,01	7 500
42	5	17	32	30	0,6	22 400	37 500	1 660	0,01	7 500
–	–	–	35	32	0,6	18 000	35 500	1 570	0,006	9 000
–	–	–	38	34	0,6	28 000	50 000	2 220	0,01	6 700
–	–	–	38	36	0,6	28 000	50 000	2 220	0,013	6 700
50	5,5	19	38	36	0,6	28 000	50 000	2 220	0,013	6 700
–	–	–	41	36	1	34 500	55 000	2 450	0,019	5 300
–	–	–	41	38	1	34 500	55 000	2 450	0,019	5 300
55	6	22	41	38	1	34 500	55 000	2 450	0,019	5 300
–	–	–	46	39	1	45 500	67 000	2 950	0,032	4 500

Axial deep groove ball bearings

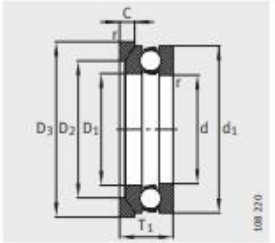
Single direction



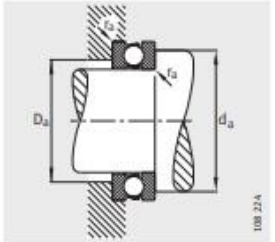
511, 512, 513, 514



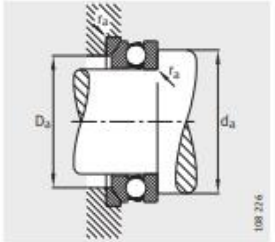
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

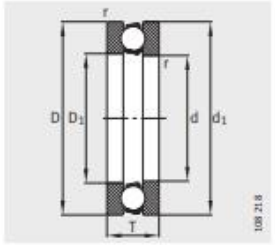
Dimension table (continued) - Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51106	–	0,063	–	**30**	47	11	32	47	0,6	–	–	–
51206	–	0,136	–	**30**	52	16	32	52	0,6	–	–	–
53206	–	0,147	–	**30**	52	17,8	32	52	0,6	45	22	–
53206	**U206**	0,147	0,038	**30**	52	17,8	32	52	0,6	45	22	42
51306	–	0,244	–	**30**	60	21	32	60	1	–	–	–
53306	–	0,303	–	**30**	60	22,6	32	60	1	50	22	–
53306	**U306**	0,303	0,056	**30**	60	22,6	32	60	1	50	22	45
51406	–	0,49	–	**30**	70	28	32	70	1	–	–	–
51107	–	0,08	–	**35**	52	12	37	52	0,6	–	–	–
51207	–	0,198	–	**35**	62	18	37	62	1	–	–	–
53207	–	0,265	–	**35**	62	19,9	37	62	1	50	24	–
53207	**U207**	0,265	0,057	**35**	62	19,9	37	62	1	50	24	48
51307	–	0,351	–	**35**	68	24	37	68	1	–	–	–
53307	–	0,437	–	**35**	68	25,6	37	68	1	56	24	–
53307	**U307**	0,437	0,083	**35**	68	25,6	37	68	1	56	24	52
51407	–	0,709	–	**35**	80	32	37	80	1,1	–	–	–
51108	–	0,114	–	**40**	60	13	42	60	0,6	–	–	–
51208	–	0,257	–	**40**	68	19	42	68	1	–	–	–
53208	–	0,259	–	**40**	68	20,3	42	68	1	56	28,5	–
53208	**U208**	0,259	0,071	**40**	68	20,3	42	68	1	56	28,5	55
51308	–	0,536	–	**40**	78	26	42	78	1	–	–	–
53308	–	0,561	–	**40**	78	28,5	42	78	1	64	28	–
53308	**U308**	0,561	0,12	**40**	78	28,5	42	78	1	64	28	60
51408	–	1,03	–	**40**	90	36	42	90	1,1	–	–	–
51109	–	0,087	–	**45**	65	14	47	65	0,6	–	–	–
51209	–	0,279	–	**45**	73	20	47	73	1	–	–	–
53209	–	0,278	–	**45**	73	21,3	47	73	1	56	26	–
53209	**U209**	0,278	0,088	**45**	73	21,3	47	73	1	56	26	60
51309	–	0,612	–	**45**	85	28	47	85	1	–	–	–
53309	–	0,783	–	**45**	85	30,1	47	85	1	64	25	–
53309	**U309**	0,783	0,173	**45**	85	30,1	47	85	1	64	25	65
51409	–	1,36	–	**45**	100	39	47	100	1,1	–	–	–

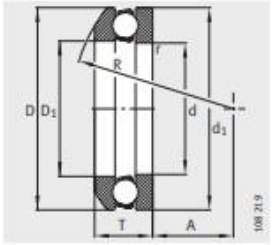
			Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	40	37	0,6	19000	40000	1770	0,009	8000
–	–	–	43	39	0,6	25000	46500	2040	0,01	6300
–	–	–	43	42	0,6	25000	46500	2040	0,01	6300
55	5,5	20	43	42	0,6	25000	46500	2040	0,01	6300
–	–	–	48	42	1	38000	65500	2850	0,028	5000
–	–	–	48	45	1	38000	65500	2850	0,028	5000
62	7	25	48	45	1	38000	65500	2850	0,028	5000
–	–	–	54	46	1	69500	112000	5000	0,075	3800
–	–	–	45	42	0,6	20000	46500	2060	0,011	7500
–	–	–	51	46	1	35500	67000	3000	0,028	5300
–	–	–	51	48	1	35500	67000	3000	0,028	5300
65	7	22	51	48	1	35500	67000	3000	0,028	5300
–	–	–	55	48	1	50000	88000	3900	0,05	4500
–	–	–	55	52	1	50000	88000	3900	0,05	4500
72	7,5	28	55	52	1	50000	88000	3900	0,05	4500
–	–	–	62	53	1	76500	127000	5600	0,11	3600
–	–	–	52	48	0,6	27000	63000	2750	0,02	6300
–	–	–	57	51	1	46500	98000	4300	0,05	4800
–	–	–	57	55	1	46500	98000	4300	0,05	4800
72	7	23	57	55	1	46500	98000	4300	0,05	4800
–	–	–	63	55	1	61000	112000	5000	0,08	4000
–	–	–	63	60	1	61000	112000	5000	0,08	4000
82	8,5	31	63	60	1	61000	112000	5000	0,08	4000
–	–	–	70	60	1	96500	170000	7500	0,18	3400
–	–	–	57	53	0,6	28000	69500	3050	0,024	6000
–	–	–	62	56	1	39000	80000	3550	0,043	4800
–	–	–	62	60	1	39000	80000	3550	0,043	4800
78	7,5	24	62	60	1	39000	80000	3550	0,043	4800
–	–	–	69	61	1	75000	140000	6300	0,12	3600
–	–	–	69	65	1	75000	140000	6300	0,12	3600
90	10	33	69	65	1	75000	140000	6300	0,12	3600
–	–	–	78	67	1	122000	220000	9800	0,3	3000

Axial deep groove ball bearings

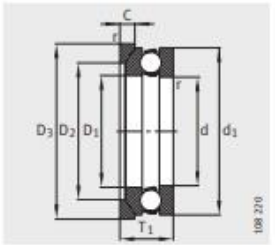
Single direction



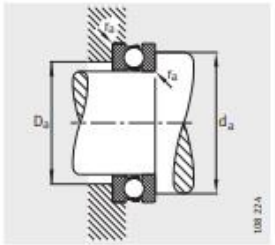
511, 512, 513, 514



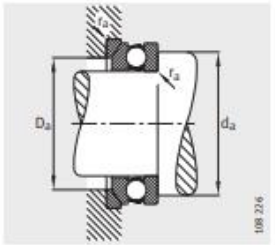
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

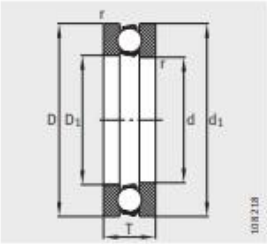
Dimension table (continued) · Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51110	–	0,151	–	**50**	70	14	52	70	0,6	–	–	–
51210	–	0,346	–	**50**	78	22	52	78	1	–	–	–
53210	–	0,341	–	**50**	78	23,5	52	78	1	64	32,5	–
53210	**U210**	0,341	0,098	**50**	78	23,5	52	78	1	64	32,5	62
51310	–	0,932	–	**50**	95	31	52	95	1,1	–	–	–
53310	–	0,97	–	**50**	95	34,3	52	95	1,1	72	28	–
53310	**U310**	0,97	0,225	**50**	95	34,3	52	95	1,1	72	28	72
51410	–	1,81	–	**50**	110	43	52	110	1,5	–	–	–
51111	–	0,208	–	**55**	78	16	57	78	0,6	–	–	–
51211	–	0,382	–	**55**	90	25	57	90	1	–	–	–
53211	–	0,609	–	**55**	90	27,3	57	90	1	72	35	–
53211	**U211**	0,609	0,152	**55**	90	27,3	57	90	1	72	35	72
51311	–	1,3	–	**55**	105	35	57	105	1,1	–	–	–
53311	–	1,38	–	**55**	105	39,3	57	105	1,1	80	30	–
53311	**U311**	1,38	0,277	**55**	105	39,3	57	105	1,1	80	30	80
51411	–	2,83	–	**55**	120	48	57	120	1,5	–	–	–
51112	–	0,278	–	**60**	85	17	62	85	1	–	–	–
51212	–	0,649	–	**60**	95	26	62	95	1	–	–	–
53212	–	0,655	–	**60**	95	28	62	95	1	72	32,5	–
53212	**U212**	0,655	0,165	**60**	95	28	62	95	1	72	32,5	78
51312	–	1,36	–	**60**	110	35	62	110	1,1	–	–	–
53312	–	1,41	–	**60**	110	38,3	62	110	1,1	90	41	–
53312	**U312**	1,41	0,31	**60**	110	38,3	62	110	1,1	90	41	85
51412-MP	–	3,51	–	**60**	130	51	62	130	1,5	–	–	–
51113	–	0,3	–	**65**	90	18	67	90	1	–	–	–
51213	–	0,684	–	**65**	100	27	67	100	1	–	–	–
53213	–	0,855	–	**65**	100	28,7	67	100	1	80	40	–
53213	**U213**	0,855	0,184	**65**	100	28,7	67	100	1	80	40	82
51313	–	1,39	–	**65**	115	36	67	115	1,1	–	–	–
53313	–	1,78	–	**65**	115	39,4	67	115	1,1	90	38,5	–
53313	**U313**	1,78	0,338	**65**	115	39,4	67	115	1,1	90	38,5	90
51413-MP	–	4,47	–	**65**	140	56	68	140	2	–	–	–

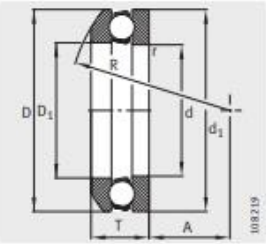
			Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	62	58	0,6	29000	75000	3300	0,03	5600
–	–	–	67	61	1	50000	106000	4700	0,07	4300
–	–	–	67	62	1	50000	106000	4700	0,07	4300
82	7,5	26	67	62	1	50000	106000	4700	0,07	4300
–	–	–	77	68	1	86500	170000	7500	0,18	3400
–	–	–	77	72	1	86500	170000	7500	0,18	3400
100	11	37	77	72	1	86500	170000	7500	0,18	3400
–	–	–	86	74	1,5	137000	255000	11400	0,4	2800
–	–	–	69	64	0,6	30500	75000	3300	0,036	5300
–	–	–	76	69	1	61000	134000	6100	0,11	3800
–	–	–	76	72	1	61000	134000	6100	0,11	3800
95	9	30	76	72	1	61000	134000	6100	0,11	3800
–	–	–	85	75	1	102000	208000	9000	0,26	3200
–	–	–	85	80	1	102000	208000	9000	0,26	3200
110	11,5	42	85	80	1	102000	208000	9000	0,26	3200
–	–	–	94	81	1,5	180000	360000	19000	0,67	2600
–	–	–	75	70	1	41500	112000	5000	0,063	4800
–	–	–	81	74	1	62000	140000	6200	0,12	3800
–	–	–	81	78	1	62000	140000	6200	0,12	3800
100	9	31	81	78	1	62000	140000	6200	0,12	3800
–	–	–	90	80	1	100000	208000	9000	0,28	3200
–	–	–	90	85	1	100000	208000	9000	0,28	3200
115	11,5	42	90	85	1	100000	208000	9000	0,28	3200
–	–	–	102	88	1,5	200000	400000	21300	1	2200
–	–	–	80	75	1	38000	100000	4400	0,063	4500
–	–	–	86	79	1	64000	150000	6600	0,14	3600
–	–	–	86	82	1	64000	150000	6600	0,14	3600
105	9	32	86	82	1	64000	150000	6600	0,14	3600
–	–	–	95	85	1	106000	220000	9700	0,32	3000
–	–	–	95	90	1	106000	220000	9700	0,32	3000
120	12,5	43	95	90	1	106000	220000	9700	0,32	3000
–	–	–	110	95	2	216000	450000	23500	1,1	2000

Axial deep groove ball bearings

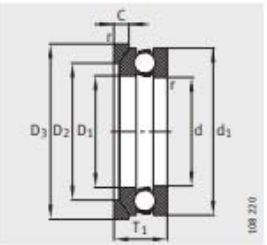
Single direction



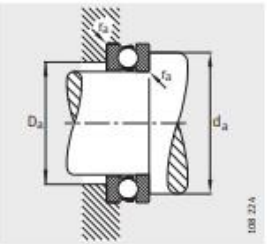
511, 512, 513, 514



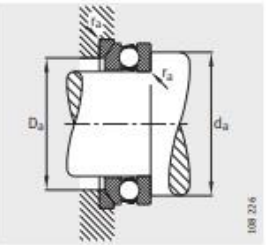
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

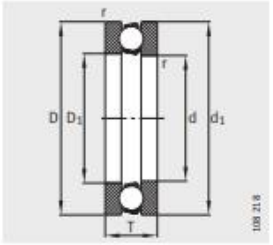
Dimension table (continued) - Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51114	–	0,352	–	**70**	95	18	72	95	1	–	–	–
51214	–	0,727	–	**70**	105	27	72	105	1	–	–	–
53214	–	0,903	–	**70**	105	28,8	72	105	1	80	38	–
53214	**U214**	0,903	0,187	**70**	105	28,8	72	105	1	80	38	88
51314	–	1,9	–	**70**	125	40	72	125	1,1	–	–	–
53314	–	2,09	–	**70**	125	44,2	72	125	1,1	100	43	–
53314	**U314**	2,09	0,408	**70**	125	44,2	72	125	1,1	100	43	98
51414-MP	–	5,49	–	**70**	150	60	73	150	2	–	–	–
51115	–	0,365	–	**75**	100	19	77	100	1	–	–	–
51215	–	0,819	–	**75**	110	27	77	110	1	–	–	–
53215	–	1,01	–	**75**	110	28,3	77	110	1	90	49	–
53215	**U215**	1,01	0,21	**75**	110	28,3	77	110	1	90	49	92
51315	–	2,59	–	**75**	135	44	77	135	1,5	–	–	–
53315	–	3,19	–	**75**	135	48,1	77	135	1,5	100	37	–
53315	**U315**	3,19	0,544	**75**	135	48,1	77	135	1,5	100	37	105
51415-MP	–	6,82	–	**75**	160	65	78	160	2	–	–	–
51116	–	0,384	–	**80**	105	19	82	105	1	–	–	–
51216	–	0,908	–	**80**	115	28	82	115	1	–	–	–
53216	–	0,903	–	**80**	115	29,5	82	115	1	90	46	–
53216	**U216**	0,903	0,218	**80**	115	29,5	82	115	1	90	46	98
51316	–	2,69	–	**80**	140	44	82	140	1,5	–	–	–
53316	–	2,75	–	**80**	140	47,6	82	140	1,5	112	50	–
53316	**U316**	2,75	0,57	**80**	140	47,6	82	140	1,5	112	50	110
51416-MP	–	7,95	–	**80**	170	68	83	170	2,1	–	–	–
51117	–	0,404	–	**85**	110	19	87	110	1	–	–	–
51217	–	1,21	–	**85**	125	31	88	125	1	–	–	–
53217	–	1,22	–	**85**	125	33,1	88	125	1	100	52	–
53217	**U217**	1,22	0,29	**85**	125	33,1	88	125	1	100	52	105
51317	–	3,48	–	**85**	150	49	88	150	1,5	–	–	–
53317	–	3,51	–	**85**	150	53,1	88	150	1,5	112	43	–
53317	**U317**	3,51	0,803	**85**	150	53,1	88	150	1,5	112	43	115
51417-MP	–	9,3	–	**85**	180	72	88	177	2,1	–	–	–

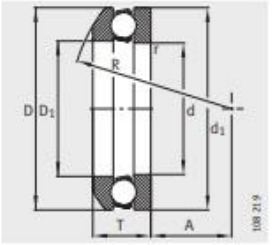
			Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	85	80	1	40 000	110 000	4 850	0,075	4 300
–	–	–	91	84	1	65 500	160 000	7 000	0,16	3 600
–	–	–	91	88	1	65 500	160 000	7 000	0,16	3 600
110	9	32	91	88	1	65 500	160 000	7 000	0,16	3 600
–	–	–	103	92	1	134 000	290 000	12 900	0,5	2 800
–	–	–	103	98	1	134 000	290 000	12 900	0,5	2 800
130	13	48	103	98	1	134 000	290 000	12 900	0,5	2 800
–	–	–	118	102	2	236 000	500 000	25 500	1,4	1 900
–	–	–	90	85	1	44 000	122 000	5 500	0,095	4 000
–	–	–	96	89	1	67 000	170 000	7 500	0,18	3 400
–	–	–	96	92	1	67 000	170 000	7 500	0,18	3 400
115	9,5	32	96	92	1	67 000	170 000	7 500	0,18	3 400
–	–	–	111	99	1,5	163 000	360 000	15 400	0,75	2 400
–	–	–	111	105	1,5	163 000	360 000	15 400	0,75	2 400
140	15	52	111	105	1,5	163 000	360 000	15 400	0,75	2 400
–	–	–	126	109	2	250 000	560 000	27 000	1,8	1 800
–	–	–	95	90	1	45 000	129 000	5 700	0,1	4 000
–	–	–	101	94	1	75 000	190 000	8 500	0,22	3 400
–	–	–	101	98	1	75 000	190 000	8 500	0,22	3 400
120	10	33	101	98	1	75 000	190 000	8 500	0,22	3 400
–	–	–	116	104	1,5	160 000	360 000	15 100	0,8	2 400
–	–	–	116	110	1,5	160 000	360 000	15 100	0,8	2 400
145	15	52	116	110	1,5	160 000	360 000	15 100	0,8	2 400
–	–	–	134	116	2,1	270 000	620 000	29 000	2,2	1 700
–	–	–	100	95	1	45 500	134 000	6 000	0,11	3 800
–	–	–	109	101	1	98 000	250 000	10 900	0,38	3 000
–	–	–	109	105	1	98 000	250 000	10 900	0,38	3 000
130	11	37	109	105	1	98 000	250 000	10 900	0,38	3 000
–	–	–	124	111	1,5	186 000	415 000	16 700	1,1	2 200
–	–	–	124	115	1,5	186 000	415 000	16 700	1,1	2 200
155	17,5	58	124	115	1,5	186 000	415 000	16 700	1,1	2 200
–	–	–	142	123	2,1	290 000	680 000	32 000	2,8	1 700

Axial deep groove ball bearings

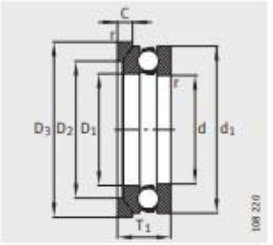
Single direction



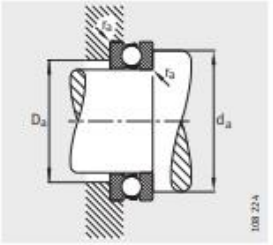
511, 512, 513, 514



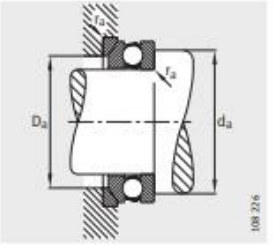
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

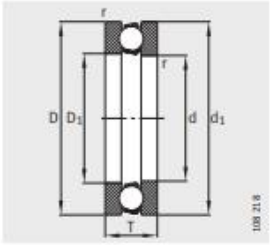
Dimension table (continued) - Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51118	–	0,617	–	**90**	120	22	92	120	1	–	–	–
51218	–	1,66	–	**90**	135	35	93	135	1,1	–	–	–
53218	–	1,7	–	**90**	135	38,5	93	135	1,1	100	45	–
53218	**U218**	1,7	0,425	**90**	135	38,5	93	135	1,1	100	45	110
51318	–	3,75	–	**90**	155	50	93	155	1,5	–	–	–
53318	–	3,81	–	**90**	155	54,6	93	155	1,5	112	40	–
53318	**U318**	3,81	0,83	**90**	155	54,6	93	155	1,5	112	40	120
51418-MP	–	11,1	–	**90**	190	77	93	187	2,1	–	–	–
51120	–	1,26	–	**100**	135	25	102	135	1	–	–	–
51220	–	2,21	–	**100**	150	38	103	150	1,1	–	–	–
53220	–	2,23	–	**100**	150	40,9	103	150	1,1	112	52	–
53220	**U220**	2,23	0,507	**100**	150	40,9	103	150	1,1	112	52	125
51320	–	4,94	–	**100**	170	55	103	170	1,5	–	–	–
53320	–	4,99	–	**100**	170	59,2	103	170	1,5	125	46	–
53320	**U320**	4,99	0,95	**100**	170	59,2	103	170	1,5	125	46	135
51420-MP	–	14,8	–	**100**	210	85	103	205	3	–	–	–
51122	–	1,45	–	**110**	145	25	112	145	1	–	–	–
51222	–	2,28	–	**110**	160	38	113	160	1,1	–	–	–
53222	–	2,24	–	**110**	160	40,2	113	160	1,1	125	65	–
53222	**U222**	2,24	0,56	**110**	160	40,2	113	160	1,1	125	65	135
51322-MP	–	7,85	–	**110**	190	63	113	187	2	–	–	–
53322-MP	–	7,85	–	**110**	190	67,2	113	187	2	140	51	–
53322-MP	**U322**	7,85	1,28	**110**	190	67,2	113	187	2	140	51	150
51422-MP	–	19,9	–	**110**	230	95	113	225	3	–	–	–
51124	–	1,54	–	**120**	155	25	122	155	1	–	–	–
51224	–	2,66	–	**120**	170	39	123	170	1,1	–	–	–
53224	–	2,58	–	**120**	170	40,8	123	170	1,1	125	61	–
53224	**U224**	2,58	0,65	**120**	170	40,8	123	170	1,1	125	61	145
51324-MP	–	9,3	–	**120**	210	70	123	205	2,1	–	–	–
53324-MP	–	9,18	–	**120**	210	74,1	123	205	2,1	160	63	–
53324-MP	**U324**	9,18	2,02	**120**	210	74,1	123	205	2,1	160	63	165
51424-MP	–	25,1	–	**120**	250	102	123	245	4	–	–	–

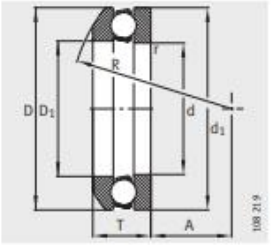
Mounting dimensions						Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	108	102	1	45 500	140 000	6 100	0,13	3 800
–	–	–	117	108	1	118 000	300 000	12 300	0,53	2 800
–	–	–	117	110	1	118 000	300 000	12 300	0,53	2 800
140	13,5	42	117	110	1	118 000	300 000	12 300	0,53	2 800
–	–	–	129	116	1,5	193 000	455 000	17 700	1,2	2 000
–	–	–	129	120	1,5	193 000	455 000	17 700	1,2	2 000
160	18	59	129	120	1,5	193 000	455 000	17 700	1,2	2 000
–	–	–	150	130	2,1	305 000	750 000	34 000	3,4	1 600
–	–	–	121	114	1	85 000	270 000	13 000	0,36	3 200
–	–	–	130	120	1	122 000	320 000	14 400	0,67	2 600
–	–	–	130	125	1	122 000	320 000	14 400	0,67	2 600
155	14	45	130	125	1	122 000	320 000	14 400	0,67	2 600
–	–	–	142	128	1,5	240 000	585 000	21 900	1,9	1 900
–	–	–	142	135	1,5	240 000	585 000	21 900	1,9	1 900
175	18	64	142	135	1,5	240 000	585 000	21 900	1,9	1 900
–	–	–	166	144	2,5	365 000	965 000	41 000	5,3	1 500
–	–	–	131	124	1	86 500	290 000	13 400	0,43	3 200
–	–	–	140	130	1	134 000	365 000	16 000	0,85	2 400
–	–	–	140	135	1	134 000	365 000	16 000	0,85	2 400
165	14	45	140	135	1	134 000	365 000	16 000	0,85	2 400
–	–	–	158	142	2	280 000	750 000	27 000	3	1 700
–	–	–	158	150	2	280 000	750 000	27 000	3	1 700
195	20,5	72	158	150	2	280 000	750 000	27 000	3	1 700
–	–	–	182	158	2,5	415 000	1 140 000	46 500	7,5	1 300
–	–	–	141	134	1	90 000	310 000	13 900	0,48	3 000
–	–	–	150	140	1	134 000	390 000	14 200	0,95	2 200
–	–	–	150	145	1	134 000	390 000	14 200	0,95	2 200
175	15	46	150	145	1	134 000	390 000	14 200	0,95	2 200
–	–	–	174	156	2,1	325 000	915 000	31 500	4,5	1 600
–	–	–	174	165	2,1	325 000	915 000	31 500	4,5	1 600
220	22	80	174	165	2,1	325 000	915 000	31 500	4,5	1 600
–	–	–	198	172	3	425 000	1 220 000	47 500	9	1 200

Axial deep groove ball bearings

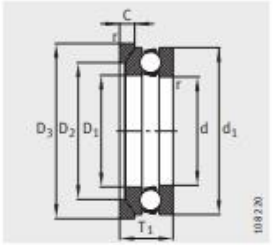
Single direction



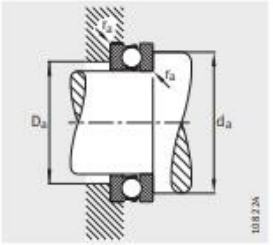
511, 512, 513



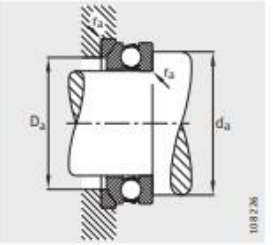
532, 533
Spherical housing locating washer



532, 533
Spherical housing locating washer, seating washer U2, U3



Mounting dimensions



Mounting dimensions

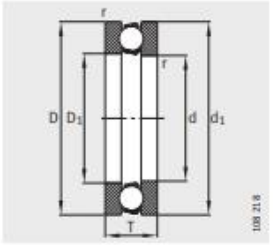
Dimension table (continued) - Dimensions in mm

Designation		Mass m		Dimensions								
Bearing	Seating washer	Bearing ≈kg	Seating washer ≈kg	d	D	T	D_1	d_1	r min.	R	A	D_2
51126	–	2,28	–	**130**	170	30	132	170	1	–	–	–
51226	–	3,96	–	**130**	190	45	133	187	1,5	–	–	–
53226	–	3,9	–	**130**	190	47,9	133	187	1,5	140	67	–
53226	**U226**	3,9	0,9	**130**	190	47,9	133	187	1,5	140	67	160
51326-MP	–	13	–	**130**	225	75	134	220	2,1	–	–	–
51128	–	2,51	–	**140**	180	31	142	178	1	–	–	–
51228	–	4,3	–	**140**	200	46	143	197	1,5	–	–	–
53228	–	4,25	–	**140**	200	48,6	143	197	1,5	160	87	–
53228	**U228**	4,25	1,22	**140**	200	48,6	143	197	1,5	160	87	170
51328-MP	–	15,6	–	**140**	240	80	144	235	2,1	–	–	–
51130-MP	–	2,17	–	**150**	190	31	152	188	1	–	–	–
51230-MP	–	6,08	–	**150**	215	50	153	212	1,5	–	–	–
53230-MP	–	5,95	–	**150**	215	53,3	153	212	1,5	160	79	–
53230-MP	**U230**	5,95	1,69	**150**	215	53,3	153	212	1,5	160	79	180
51330-MP	–	16,2	–	**150**	250	80	154	245	2,1	–	–	–
53330-MP	–	12,8	–	**150**	250	83,7	154	245	2,1	200	89,5	–
53330-MP	**U330**	12,8	3,1	**150**	250	83,7	154	245	2,1	200	89,5	200
51132-MP	–	2,29	–	**160**	200	31	162	198	1	–	–	–
51232-MP	–	6,53	–	**160**	225	51	163	222	1,5	–	–	–
53232-MP	–	6,45	–	**160**	225	54,7	163	222	1,5	160	74	–
53232-MP	**U232**	6,45	1,81	**160**	225	54,7	163	222	1,5	160	74	190
51332-MP	–	21,2	–	**160**	270	87	164	265	3	–	–	–
51134-MP	–	3,08	–	**170**	215	34	172	213	1,1	–	–	–
51234-MP	–	8,12	–	**170**	240	55	173	237	1,5	–	–	–
53234-MP	–	7,91	–	**170**	240	58,7	173	237	1,5	180	91	–
53234-MP	**U234**	7,91	2,14	**170**	240	58,7	173	237	1,5	180	91	200
51334-MP	–	22,2	–	**170**	280	87	174	275	3	–	–	–

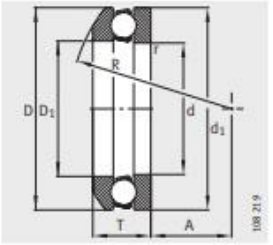
			Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
D_3	C	T_1	d_a min.	D_a max.	r_a max.	dyn. C_a N	stat. C_{0a} N	C_{ua} N	A	n_G min^{-1}
–	–	–	154	146	1	112 000	390 000	17 200	0,75	2 800
–	–	–	166	154	1,5	183 000	540 000	18 900	1,7	1 900
–	–	–	166	160	1,5	183 000	540 000	18 900	1,7	1 900
195	17	53	166	160	1,5	183 000	540 000	18 900	1,7	1 900
–	–	–	187	168	2,1	360 000	1 060 000	35 000	6	1 500
–	–	–	164	156	1	112 000	400 000	16 900	0,85	2 600
–	–	–	176	164	1,5	190 000	570 000	19 200	1,9	1 900
–	–	–	176	170	1,5	190 000	570 000	19 200	1,9	1 900
210	17	55	176	170	1,5	190 000	570 000	19 200	1,9	1 900
–	–	–	200	180	2,1	405 000	1 250 000	40 000	8	1 400
–	–	–	174	166	1	110 000	400 000	16 700	0,9	2 400
–	–	–	189	176	1,5	236 000	735 000	24 200	2,8	1 800
–	–	–	189	180	1,5	236 000	735 000	24 200	2,8	1 800
225	20,5	60	189	180	1,5	236 000	735 000	24 200	2,8	1 800
–	–	–	210	190	2,1	415 000	1 340 000	41 500	9,5	1 400
–	–	–	210	200	2,1	415 000	1 340 000	41 500	9,5	1 400
260	26	92	210	200	2,1	415 000	1 340 000	41 500	9,5	1 400
–	–	–	184	176	1	112 000	430 000	17 200	1	2 200
–	–	–	199	186	1,5	240 000	765 000	24 700	3,2	1 700
–	–	–	199	190	1,5	240 000	765 000	24 700	3,2	1 700
235	21	61	199	190	1,5	240 000	765 000	24 700	3,2	1 700
–	–	–	226	204	2,5	465 000	1 560 000	47 000	13	1 200
–	–	–	197	188	1	132 000	500 000	19 400	1,4	2 000
–	–	–	212	198	1,5	285 000	930 000	28 500	4,5	1 600
–	–	–	212	200	1,5	285 000	930 000	28 500	4,5	1 600
250	21,5	65	212	200	1,5	285 000	930 000	28 500	4,5	1 600
–	–	–	236	214	2,5	465 000	1 560 000	46 000	13	1 200

Axial deep groove ball bearings

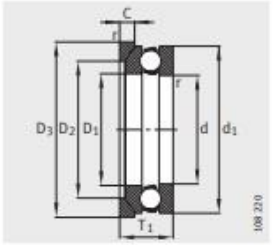
Single direction



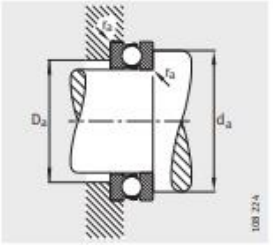
511, 512, 513



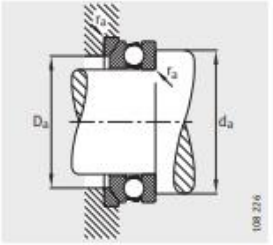
532
Spherical housing locating washer



532
Spherical housing locating washer, seating washer U2



Mounting dimensions



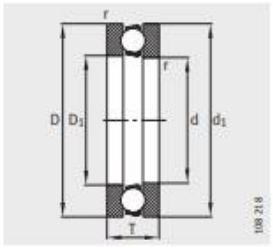
Mounting dimensions

Dimension table (continued) - Dimensions in mm

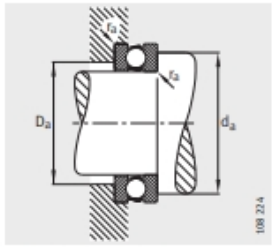
Designation		Mass m		Dimensions									Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
Bearing	Seating washer	Bearing	Seating washer	d	D	T	D_1	d_1	r	R	A	D_2	D_3	C	T_1	d_a	D_a	r_a	dyn. C_a	stat. C_{0a}	C_{ua}	A	n_G
		≈kg	≈kg						min.							min.	max.	max.	N	N	N		min^{-1}
51136-MP	–	3,06	–	**180**	225	34	183	222	1,1	–	–	–	–	–	–	207	198	1	134 000	530 000	20 100	1,5	2 000
51236-MP	–	8,56	–	**180**	250	56	183	245	1,5	–	–	–	–	–	–	222	208	1,5	305 000	1 040 000	31 500	5,3	1 600
53236-MP	–	8,19	–	**180**	250	58,2	183	245	1,5	200	112	–	–	–	–	222	210	1,5	305 000	1 040 000	31 500	5,3	1 600
53236-MP	**U236**	8,19	1,25	**180**	250	58,2	183	245	1,5	200	112	210	260	21,5	66	222	210	1,5	305 000	1 040 000	31 500	5,3	1 600
51336-MP	–	24,8	–	**180**	300	95	184	295	3	–	–	–	–	–	–	252	228	2,5	520 000	1 830 000	52 000	18	1 100
51138-MP	–	3,94	–	**190**	240	37	193	237	1,1	–	–	–	–	–	–	220	210	1	170 000	655 000	23 200	2,4	1 800
51238-MP	–	11,6	–	**190**	270	62	194	265	2	–	–	–	–	–	–	238	222	2	335 000	1 160 000	34 500	7	1 500
53238-MP	–	11,5	–	**190**	270	65,7	195	265	2	200	98	–	–	–	–	238	230	2	335 000	1 160 000	34 500	7	1 500
53238-MP	**U238**	11,5	2,65	**190**	270	65,7	195	265	2	200	98	230	280	23	73	238	230	2	335 000	1 160 000	34 500	7	1 500
51338-MP	–	31,9	–	**190**	320	105	195	315	4	–	–	–	–	–	–	268	242	3	600 000	2 200 000	61 000	26	1 000
51140-MP	–	4,12	–	**200**	250	37	203	247	1,1	–	–	–	–	–	–	230	220	1	170 000	655 000	22 700	2,4	1 800
51240-MP	–	12	–	**200**	280	62	204	275	2	–	–	–	–	–	–	248	232	2	340 000	1 220 000	35 000	8	1 400
51340-MP	–	40,9	–	**200**	340	110	205	335	4	–	–	–	–	–	–	284	256	3	620 000	2 400 000	65 000	30	950
51144-MP	–	4,54	–	**220**	270	37	223	267	1,1	–	–	–	–	–	–	250	240	1	176 000	735 000	24 500	3	1 700
51244-MP	–	13,1	–	**220**	300	63	224	295	2	–	–	–	–	–	–	268	252	2	355 000	1 340 000	36 500	9,5	1 300
51148-MP	–	7,41	–	**240**	300	45	243	297	1,5	–	–	–	–	–	–	276	264	1,5	232 000	965 000	31 000	5	1 600
51248-MP	–	22,9	–	**240**	340	78	244	335	2,1	–	–	–	–	–	–	300	280	2,1	465 000	1 860 000	48 000	18	1 100
51152-MP	–	7,89	–	**260**	320	45	263	317	1,5	–	–	–	–	–	–	296	284	1,5	236 000	1 020 000	31 500	5,6	1 500
51252-MP	–	24,8	–	**260**	360	79	264	355	2,1	–	–	–	–	–	–	320	300	2,1	490 000	2 040 000	52 000	22	1 000
51156-MP	–	12	–	**280**	350	53	283	347	1,5	–	–	–	–	–	–	322	308	1,5	315 000	1 340 000	40 500	10	1 300
51256-MP	–	23,7	–	**280**	380	80	284	375	2,1	–	–	–	–	–	–	340	320	2,1	490 000	2 160 000	53 000	24	950
51160-MP	–	17,1	–	**300**	380	62	304	376	2	–	–	–	–	–	–	348	332	2	365 000	1 600 000	46 000	14	1 200
51260-MP	–	41,8	–	**300**	420	95	304	415	3	–	–	–	–	–	–	372	348	2,5	585 000	2 700 000	63 000	38	850
51164-MP	–	18,5	–	**320**	400	63	324	396	2	–	–	–	–	–	–	368	352	2	375 000	1 700 000	47 500	16	1 100
51264-MP	–	44,6	–	**320**	440	95	325	435	3	–	–	–	–	–	–	392	368	2,5	600 000	2 800 000	64 000	43	850

Axial deep groove ball bearings

Single direction



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Mounting dimensions

Dimension table (continued) - Dimensions in mm

Designation	Mass	Dimensions						Mounting dimensions			Basic load ratings		Fatigue limit load	Minimum load factor	Limiting speed
	m	d	D	T	D_1	d_1	r	d_a	D_a	r_a	dyn. C_a	stat. C_{0a}	C_{ua}	A	n_G
	≈kg						min.	min.	max.	max.	N	N	N		min^{-1}
51168-MP	19,9	**340**	420	64	344	416	2	388	372	2	380 000	1 800 000	49 000	18	1 000
51268-MP	47,6	**340**	460	96	345	455	3	412	388	2,5	620 000	3 050 000	67 000	50	800
51172-MP	21,5	**360**	440	65	364	436	2	408	392	2	405 000	2 000 000	45 000	22	1 000
51272-MP	70,4	**360**	500	110	365	495	4	444	416	3	720 000	3 650 000	79 000	70	700
51176-MP	22,4	**380**	460	65	384	456	2	428	412	2	430 000	2 240 000	48 500	24	950
51180-MP	23,5	**400**	480	65	404	476	2	448	432	2	440 000	2 320 000	49 500	28	900
51184-MP	24,4	**420**	500	65	424	495	2	468	452	2	440 000	2 450 000	51 000	30	900
51192-MP	37,2	**460**	560	80	464	555	2,1	520	500	2,1	530 000	3 100 000	61 000	50	800
511/500-MP	44,9	**500**	600	80	505	595	2,1	560	540	2,1	550 000	3 350 000	63 000	56	750
511/530-MP	55,9	**530**	640	85	535	635	3	596	574	2,5	620 000	3 900 000	73 000	80	670
511/560-MP	58,8	**560**	670	85	565	665	3	626	604	2,5	630 000	4 150 000	74 000	85	670