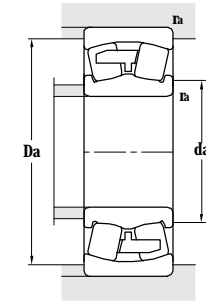
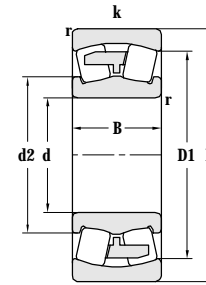
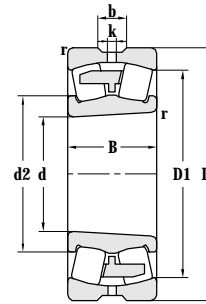
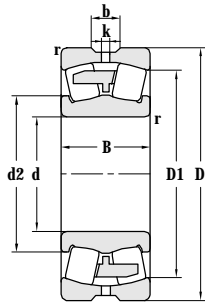


Spherical Roller Bearing(CA)

d 30-60 mm

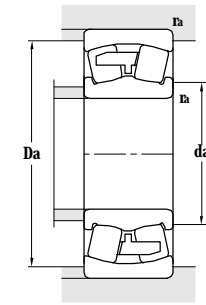
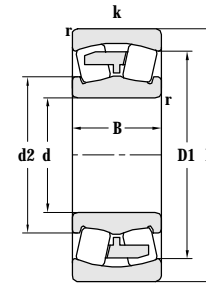
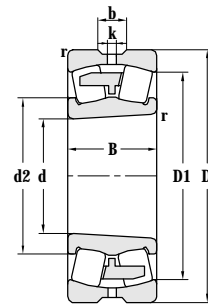
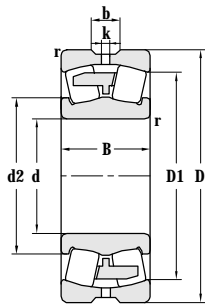


Principal dimensions				Basic load ratings		Limit speed ratings		Designations	
d	D	B	r _{min}	C _r	C _{OR}	Grease	Oil		
mm				kN		r/min			
30	68	20	1	60.8	57	6000	7500	22206X1CAN	
35	72	23	1.1	72.5	81.5	6000	7500	22207CA/W33	
	82	23	0.5	86	92	6000	7500	21307X3CA/CRA9	
40	90	33	1.5	143	133	4500	5600	22308CA 22308CA/W33	
	90	33	1.5	143	133	4500	5600	22308CH/W33	
	90	33	1.5	143	133	4500	5600	22308CAK 22308CAK/W33	
45	85	23	1.1	96.9	95	5300	6700	22209CA 22209CA/W33	
	100	36	1.5	174	174	3800	4800	22309CA 22309CA/W33	
	100	36	1.5	174	174	3800	4800	22309CAK 22309CAK/W33	
50	90	23	1.1	98.8	103	5000	6300	22210CA 22210CA/W33	
	90	23	1.1	98.8	103	5000	6300	22210/W33	
	90	23	1.1	98.8	103	5000	6300	22210CAK 22210CAK/W33	
	110	27	2	148	158	3400	4300	21310CA/C3	
	110	40	2	209	213	3400	4300	22310CA 22310CA/W33	
	110	40	2	209	213	3400	4300	22310CA/W33A	
	110	40	2	209	213	3400	4300	22310CAK 22310CAK/W33	
55	100	25	1.5	119	126	4500	5600	22211CA 22211CA/W33	
	100	25	1.5	119	126	4500	5600	22211CAK 22211CAK/W33	
	100	25	1.5	101	126	4500	5600	22211/W33	
	100	25	1.5	101	126	4500	5600	22211K/W33	
	120	43	2	257	266	3200	4000	22311CA 22311CA/W33	
	120	43	2	257	266	3200	4000	22311CA/YB2 22311CAF3	
	120	43	2	257	266	3200	4000	22311CAK 22311CAK/W33	
	60	110	28	1.5	148	158	4000	5000	22212CA 22212CA/W33
		110	28	1.5	148	158	4000	5000	22212CAK/W33
110		28	1.5	121	145	4000	5000	22212 22212/W33	
130		46	2.1	225	248	3000	3800	22312 22312/W33	
130		46	2.1	225	248	3000	3800	22312K 22312K/W33	
130		46	2.1	295	318	3000	3800	22312CA 22312CA/W33	
130		46	2.1	295	318	3000	3800	22312CA/C9-ZG	

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm	mm	mm	mm				kg
41	52.3			37	60	1	0.32	2.09	3.11	2.04	0.384
46	60	5.5	3	41	65	1					0.441
	83	69		42	75						0.652
56	74	5.5	2.5	49	81	1.5	0.39	1.73	2.58	1.69	1.02
49.9	74.3	5.5	3	49	81	1.5	0.37	1.80	2.70	1.80	1.01
56	74	5.5	2.5	49	81	1.5	0.39	1.73	2.58	1.69	0.993
57.6	73	5.5	2	52	78	1	0.28	2.40	3.50	2.50	0.629
63	81.4	5.5	2.5	54	91	1.5	0.38	1.80	2.60	1.70	1.53
63	81.4	5.5	2.5	54	91	1.5	0.38	1.80	2.60	1.70	1.52
62.2	81.6	5.5	2	57	83	1	0.26	2.60	3.90	2.50	0.630
63	81.6	5.5	2	57	83	1	0.27	2.50	3.70	2.50	0.629
62.2	81.6	5.5	2	57	83	1	0.26	2.60	3.90	2.50	0.630
69	92			60	100	2	0.24	2.80	4.20	2.80	1.34
69	90.6	5.5	2.5	60	100	2	0.38	1.80	2.60	1.70	2.17
69	90.6	5.5	2.5	60	100	2	0.38	1.80	2.60	1.70	2.06
69	90.6	5.5	2.5	60	100	2	0.38	1.80	2.60	1.70	2.13
68.8	87.3	5.5	2	64	91	1.5	0.25	2.70	4.00	2.60	0.887
68.8	87.3	5.5	2	64	91	1.5	0.25	2.70	4.00	2.60	0.879
70	87.3	5.5	2	64	91	1.5	0.26	2.60	3.90	2.50	0.742
70	87.3	5.5	2	64	91	1.5	0.26	2.60	3.90	2.50	0.724
75	99.5	5.5	2.5	65	110	2	0.37	1.80	2.70	1.80	2.60
75	99.5			65	110	2	0.37	1.80	2.70	1.80	2.60
75	99.5	5.5	2.5	65	110	2	0.37	1.80	2.70	1.80	2.42
75.2	95	5.5	2	69	101	1.5	0.24	2.80	4.20	2.80	1.01
75.2	95	5.5	2	69	101	1.5	0.24	2.80	4.20	2.80	0.982
75.5	95	5.5	2	69	101	1.5	0.27	2.50	3.70	2.50	1.09
79	108	5.5	3	72	118	2	0.40	1.68	2.50	1.64	2.93
79	108	5.5	3	72	118	2	0.40	1.68	2.50	1.64	2.86
81.4	108	5.5	3	72	118	2	0.37	1.80	2.70	1.80	3.33
81.4	108	5.5	3	72	118	2	0.37	1.80	2.70	1.80	3.33

Spherical Roller Bearing(CA)

d 60-80 mm

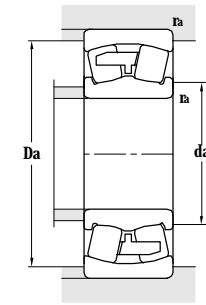
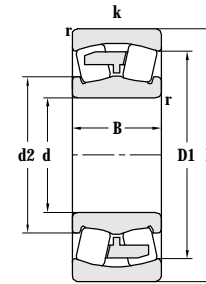
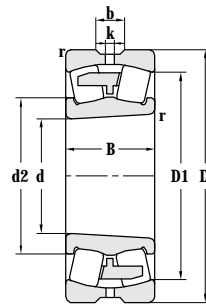
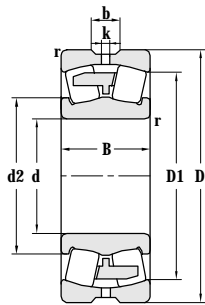


Principal dimensions				Basic load ratings		Limit speed ratings		Designations
d	D	B	r _{min}	C _r	C _{OR}	Grease	Oil	
mm				kN		r/min		
60	130	46	2.1	295	318	3000	3800	22312CA/YB2 22312CAF3
	130	46	2.1	295	318	3000	3800	22312CAK 22312CAK/W33
65	120	31	1.5	183	205	3800	4800	22213CA 22213CA/W33
	120	31	1.5	183	205	3800	4800	22213CAK 22213CAK/W33
	120	31	1.5	170	216	3800	4800	22213S/W33
	120	31	1.5	143	175	3800	4800	22213/W33
	120	31	1.5	143	175	3800	4800	22213K/W33
	140	33	2.1	224	257	2800	3600	21313CA
	140	48	2.1	262	325	2600	3400	22313CH/W33
	140	48	2.1	323	342	2600	3400	22313CA 22313CA/W33
	140	48	2.1	323	342	2600	3400	22313CAF3 22313CAKF3
	140	48	2.1	323	342	2600	3400	22313CAK 22313CAK/W33
70	125	31	1.5	162	205	3600	4500	22214CA 22214CA/W33
	125	31	1.5	162	205	3600	4500	22214CAK
	125	31	1.5	159	200	3600	4500	22214/W33
	150	35	2.1	270	309	2400	3200	21314CA
	150	51	2.1	380	408	2200	3000	22314CA 22314CA/W33
	150	51	2.1	380	408	2200	3000	22314CAK 22314CAK/W33
	150	51	2.1	380	408	2200	3000	22314CAF3 22314CAKF3
75	115	40	1.1	164	250	2900	3500	24015CA 24015CA/W33
	130	31	1.5	150	192	3400	4300	22215
	130	31	1.5	201	228	3400	4300	22215CA 22215CA/W33
	130	31	1.5	201	228	3400	4300	22215CAK
	160	55	2.1	418	451	2200	3000	22315CA 22315CA/W33
	160	55	2.1	418	451	2200	3000	22315CAF3 22315CAKF3
	160	55	2.1	418	451	2200	3000	22315CAK 22315CAK/W33
	80	140	33	2	165	225	3200	4000
140		33	2	165	225	3200	4000	22216CAK
170		58	2.1	380	495	2000	2800	22316CA 22316CA/W33
170		58	2.1	380	495	2000	2800	22316CA/C9-ZG
170		58	2.1	380	495	2000	2800	22316CA/HAC9W33YA8
170		58	2.1	380	495	2000	2800	22316CAF3

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm			mm				kg
81.4	108			72	118	2	0.37	1.80	2.70	1.80	3.33
81.4	108	5.5	3	72	118	2	0.37	1.80	2.70	1.80	3.33
81.5	103	5.5	2.5	74	111	1.5	0.25	2.70	4.00	2.50	1.56
81.5	103	5.5	2.5	74	111	1.5	0.25	2.70	4.00	2.50	1.52
80	106	5.5	3	74	111	1.5	0.25	2.70	4.00	2.50	1.57
82	103	5.5	2.5	74	111	1.5	0.27	2.50	3.70	2.50	1.57
82	103	5.5	2.5	74	111	1.5	0.27	2.50	3.70	2.50	1.54
87.9	119			77	128	2	0.25	2.70	4.00	2.60	2.58
81.6	118	8.3	4.5	77	128	2	0.35	1.90	2.90	1.80	4.92
88.6	116	5.5	3	77	128	2	0.35	1.90	2.90	1.80	4.92
88.6	116			77	128	2	0.35	1.90	2.90	1.80	4.90
88.6	116	5.5	3	77	128	2	0.35	1.90	2.90	1.80	4.90
86.8	109	6	2.5	79	116	1.5	0.24	3.00	4.60	2.80	1.83
86.8	109			79	116	1.5	0.24	3.00	4.60	2.80	1.81
87.2	109	6	2.5	79	116	1.5	0.26	2.60	3.90	2.50	1.66
95.4	127			82	138	2	0.25	2.70	4.00	2.60	3.02
95.8	125	8.3	4	82	138	2	0.35	1.90	2.90	1.80	5.23
95.8	125	8.3	4	82	138	2	0.35	1.90	2.90	1.80	5.21
95.8	125			82	138	2	0.35	1.90	2.90	1.80	5.14
87.5	100	5.5	3	82	106	1	0.32	2.09	3.11	2.04	1.48
92	114			84	121	1.5					1.73
92	114	5.5	2.5	84	121	1.5	0.24	3.00	4.60	2.80	1.71
92	114			84	121	1.5	0.24	3.00	4.60	2.80	1.67
101	133	8.3	4	87	148	2	0.35	1.90	2.90	1.80	5.44
101	133	8.3	4	87	148	2	0.35	1.90	2.90	1.80	5.40
101	133	8.3	4	87	148	2	0.35	1.90	2.90	1.80	5.32
98.9	122	5.5	2.5	91	129	2	0.24	2.80	4.20	2.80	2.08
98.9	122			91	129	2	0.24	2.80	4.20	2.80	2.03
109	142	8.3	4	92	158	2	0.34	1.99	2.96	1.94	7.47
109	142	8.3	4	92	158	2	0.34	1.99	2.96	1.94	6.54
109	142	8.3	4	92	158	2	0.34	1.99	2.96	1.94	7.36
109	142			92	158	2	0.34	1.99	2.96	1.94	7.34

Spherical Roller Bearing(CA)

d 80-95 mm

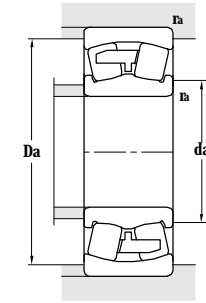
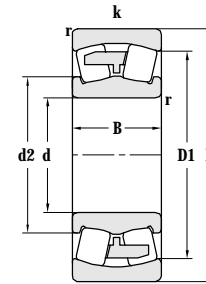
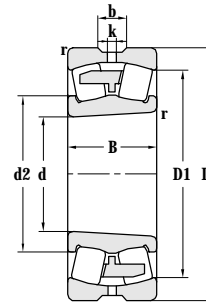
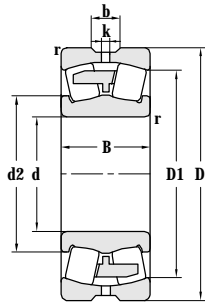


Principal dimensions				Basic load ratings		Limit speed ratings		Designations
d	D	B	r _{min}	C _r	C _{0r}	Grease	Oil	
mm				kN		r/min		
80	170	58	2.1	380	495	2000	2800	22316CAK
82.6	170	58	2.1	380	495	2000	2800	206/82.6CA/W33
85	150	36	2	193	254	3000	3800	22217CA 22217CA/W33
	150	36	2	193	254	3000	3800	22217CAK
	180	41	3	294	360	2000	2800	21317CA 21317CA/W33
	180	60	3	391	505	1900	2600	22317CA 22317CA/W33
	180	60	3	390	505	1900	2600	22317ACA
	180	60	3	391	505	1900	2600	22317CAF3
	180	60	3	391	505	1900	2600	22317CAK 22317CAK/W33
	180	60	3	391	505	1900	2600	22317CAKF3 22317CAKF3/W33
90	140	50	1.5	233	390	2600	3400	24018CA 24018CA/W33
	160	40	2	269	360	2600	3400	22218CA 22218CA/W33
	160	40	2	269	360	2600	3400	22218CAF3
	160	40	2	269	360	2600	3400	22218CAK 22218CAK/W33
	160	52.4	2	287	415	2000	2800	23218 23218/W33
	160	52.4	2	287	415	2000	2800	23218K 23218K/W33
	160	52.4	2	287	415	2000	2800	23218F3
	160	52.4	2	337	475	1900	2600	23218CA 23218CA/W33
	160	52.4	2	369	480	1900	2600	23218CA/HAC9SOW24
	160	52.4	2	337	475	1900	2600	23218CAK 23218CAK/W33
	160	67	2	334	475	1900	2600	24218X2CA/YB2
	190	64	3	580	660	1800	2400	22318CA 22318CA/W33
	190	64	3	580	660	1800	2400	22318CAF3 22318CAKF3
	190	64	3	580	660	1800	2400	22318CAK 22318CAK/W33
	190	64	3	580	660	1800	2400	22318ACA
	190	64	3	400	505	1800	2400	22318
	190	64	3	400	505	1800	2400	22318K 22318K/W33
	190	43	3	580	660	2400	3200	21318CA/W33
95	170	43	2.1	361	428	2400	3200	22219CA 22219CA/W33
	170	43	2.1	361	428	2400	3200	22219CAK 22219CAK/W33
	200	45	3	404	466	2400	3200	21319CA/W33
	200	67	3	637	727	1800	2400	22319

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm			mm				kg
109	142			92	158	2	0.34	1.99	2.96	1.94	7.40
109	142	8.3	4	92	158	2	0.34	1.99	2.96	1.94	6.37
105	132	6.5	3	96	139	2	0.24	2.80	4.20	2.80	2.69
105	132			96	139	2	0.24	2.80	4.20	2.80	2.64
118	152			99	166	2.5	0.24	2.80	4.20	2.80	5.42
115	150	8.3	4	99	166	2.5	0.34	1.99	2.96	1.94	8.19
115	150	8.3	4	99	166	2.5	0.34	1.99	2.96	1.94	8.19
115	150			99	166	2.5	0.34	1.99	2.96	1.94	8.12
115	150	8.3	4	99	166	2.5	0.34	1.99	2.96	1.94	8.08
115	150	8.3	4	99	166	2.5	0.34	1.99	2.96	1.94	8.01
106	121	5.5	3	100	125	1.5	0.33	2.00	3.00	2.00	3.25
111	139	8.3	2.5	101	149	2	0.25	2.70	4.00	2.60	3.40
111	139			101	149	2	0.25	2.70	4.00	2.60	3.38
111	139	8.3	2.5	101	149	2	0.25	2.70	4.00	2.60	3.28
111	133	5.5	2.5	101	149	2	0.35	1.90	2.90	1.80	4.64
111	133	5.5	2.5	101	149	2	0.35	1.90	2.90	1.80	4.5
111	133			101	149	2	0.35	1.90	2.90	1.80	4.61
112	136	5.5	2.5	101	149	2	0.25	2.70	4.00	2.60	4.82
112	136	5.5	2.5	101	149	2	0.25	2.70	4.00	2.60	4.72
112	136	5.5	2.5	101	149	2	0.25	2.70	4.00	2.60	4.55
112	136			101	149	2	0.31	2.20	3.30	2.20	5.87
123	159	8.3	5	104	176	2.5	0.34	1.99	2.96	1.94	11.5
123	159			104	176	2.5	0.34	1.99	2.96	1.94	11.2
123	159	8.3	5	104	176	2.5	0.34	1.99	2.96	1.94	11.1
123	159			104	176	2.5	0.34	1.99	2.96	1.94	9.44
121	159			104	176	2.5	0.36	1.87	2.79	1.83	8.62
121	159	8.3	5	104	176	2.5	0.36	1.87	2.79	1.83	8.43
112	150	8.3	4.5	104	176	2.5	0.24	2.80	4.20	2.80	5.82
119	148	8.3	3	107	158	2	0.24	2.80	4.20	2.80	4.68
119	148	8.3	3	107	158	2	0.24	2.80	4.20	2.80	4.48
112	150	8.3	4.5	107	158	2	0.24	2.80	4.20	2.80	7.48
128	167			109	186	2.5					10.4

Spherical Roller Bearing(CA)

d 95-110 mm

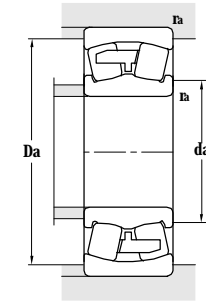
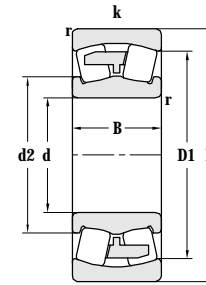
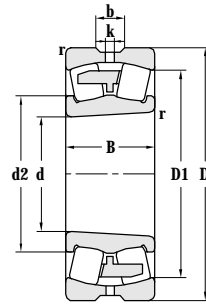
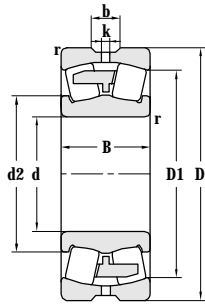


Principal dimensions				Basic load ratings		Limit speed ratings		Designations	
d	D	B	r _{min}	C _r	C _{Or}	Grease	Oil		
mm				kN		r/min			
95	200	67	3	637	727	1800	2400	22319CA	22319CA/W33
	200	67	3	637	727	1800	2400	22319CAF3	22319CAK
	200	67	3	637	727	1800	2400	22319CAKF3	22319CAKF3/W33
100	150	37	1.5	215	400	2400	3200	23020CA	
	150	50	1.5	271	445	2400	3200	24020CA/W33	
	165	52	2	347	510	2000	2800	23120CA	23120CA/W33
	165	52	2	347	510	2000	2800	23120CAK/W33	
	165	52	2	347	465	2000	2800	23120K/W33	
	180	46	2.1	404	466	2200	3000	22220	
	180	46	2.1	404	466	2200	3000	22220CA	22220CA/W33
	180	46	2.1	404	466	2200	3000	22220CAF3	22220CAKF3
	180	46	2.1	404	466	2200	3000	22220CAK	22220CAK/W33
	180	60.3	2.1	400	570	1700	2200	23220F1/W33	
	180	60.3	2.1	451	610	1700	2200	23220CA	23220CA/W33
	180	60.3	2.1	451	610	1700	2200	23220CAK/W33	23220CAKF3/W33
	215	47	3	385	490	1700	2200	21320CA	
	215	73	3	774	903	1700	2200	22320CA	22320CA/W33
	215	73	3	774	903	1700	2200	22320CAF3	22320CAKF3
215	73	3	774	903	1700	2200	22320CAK	22320CAK/W33	
105	175	56	2	402	550	1900	2700	23121CA	23121CAL
	175	56	2	402	550	1900	2700	23121CA/W33	
110	170	45	2	295	460	2200	3000	23022CA	23022CA/W33
	170	45	2	295	460	2200	3000	23022CAF3	23022CAF3/W33
	170	60	2	394	589	2100	2800	24022CA	24022CA/W33
	170	60	2	394	589	2100	2800	24022CA/W33A	
	180	56	2	409	580	1900	2600	23122CA	23122CAK/C3W33
	180	56	2	409	580	1900	2600	23122CAF3	
	180	56	2	409	580	1900	2600	23122CAKF3/W33	
	180	82	3	510	870	1000	1400	24122X2TN1/YA6	
	180	69	2	494	750	1000	1400	24122F1/W33	
	180	69	2	494	750	1000	1400	24122CA	24122CA/W33
	200	53	2.1	530	610	2000	2800	22222CA	22222CA/W33
	200	53	2.1	530	610	2000	2800	22222CAF3	

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm			mm				
128	167	8.3	5	109	186	2.5	0.34	1.99	2.96	1.94	10.5
128	167			109	186	2.5	0.34	1.99	2.96	1.94	10.5
128	167	8.3	5	109	186	2.5	0.34	1.99	2.96	1.94	10.3
116	135			110	140	1.5	0.23	2.90	4.40	2.80	2.52
115	133	5.5	3	110	140	1.5	0.30	2.25	3.35	2.20	3.18
121	143	5.5	3	110	155	2	0.30	2.90	4.40	2.80	4.42
121	143	5.5	3	110	155	2	0.30	2.90	4.40	2.80	4.26
121	143	5.5	3	110	155	2	0.30	2.25	3.35	2.20	4.44
126	156			112	168	2					5.24
124	156	8.3	3	112	168	2	0.24	2.80	4.20	2.80	5.18
124	156			112	168	2	0.24	2.80	4.20	2.80	5.10
124	156	8.3	3	112	168	2	0.24	2.80	4.20	2.80	4.96
125	153	9.5	4	112	168	2					6.39
125	153	9.5	4	112	168	2	0.33	2.00	3.00	2.00	6.52
125	153	9.5	4	112	168	2	0.33	2.00	3.00	2.00	6.21
138	179			114	201	2.5					8.74
138	179	11.1	5	114	201	2.5	0.35	1.90	2.90	1.80	13.8
138	179			114	201	2.5	0.35	1.90	2.90	1.80	13.4
138	179	11.1	5	114	201	2.5	0.35	1.90	2.90	1.80	13.8
127	151			115	165	2	0.31	2.20	3.30	2.20	5.48
127	151	5.5	3	115	165	2	0.31	2.20	3.30	2.20	5.35
128	150	7.5	3	120	160	2	0.25	2.70	4.00	2.60	3.58
128	150	7.5	3	120	160	2	0.25	2.70	4.00	2.60	3.54
128	150	5.5	3	120	160	2	0.32	2.09	3.11	2.04	4.98
128	150	5.5	3	120	160	2	0.32	2.09	3.11	2.04	4.90
132	156	5.5	3	120	170	2	0.30	2.25	3.35	2.20	5.73
132	156			120	170	2	0.30	2.25	3.35	2.20	5.70
132	156	5.5	3	120	170	2	0.30	2.25	3.35	2.20	5.51
123	148										7.56
131	153	5.5	2.5	120	170	2					6.91
131	153	5.5	2.5	120	170	2	0.35	1.90	2.90	1.80	6.92
139	173	8.3	4	122	188	2	0.26	2.60	3.90	2.50	7.43
139	173			122	188	2	0.26	2.60	3.90	2.50	7.37

Spherical Roller Bearing(CA)

d 110~120 mm

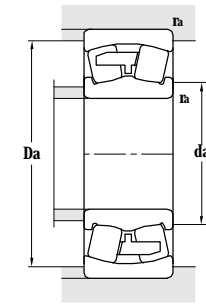
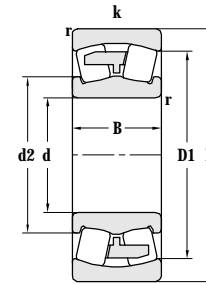
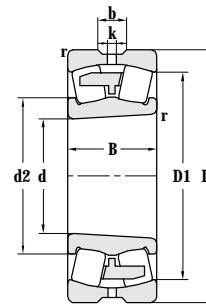
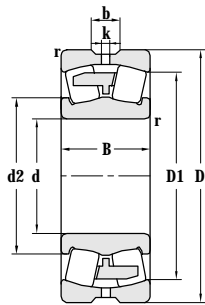


Principal dimensions				Basic load ratings		Limit speed ratings		Designations		
d	D	B	r _{min}	C _r	C _{0r}	Grease	Oil			
mm				kN		r/min				
110	200	53	2.1	530	610	2000	2800	22222CAK	22222CAK/W33	
	200	69.8	2.1	570	727	1600	2000	23222CA	23222CA/W33	
	200	69.8	2.1	570	727	1600	2000	23222CAF3	23222CAF3/W33	
	200	69.8	2.1	570	727	1600	2000	23222CAK	23222CAK/W33	
	200	69.8	2.1	570	727	1600	2000	23222CAKF3		
	200	69.8	2.1	490	740	1700	2200	23222/W33		
	240	80	3	900	1060	1600	2000	22322CA	22322CA/W33	
	240	80	3	900	1060	1600	2000	22322CAF3	22322CAF3/W33	
	240	80	3	900	1060	1600	2000	22322CAK	22322CAK/W33	
	240	50	3	420	490	1600	2000	21322CA/W33		
	120	180	46	2	340	495	2000	2800	23024CA	23024CA/W33
		180	46	2	340	495	2000	2800	23024CAK	
		180	46	2	340	495	2000	2800	23024CAKF3/W33	
		180	46	2	340	495	2000	2800	23024CA/W33A	
180		60	2	410	660	1600	2000	24024CA	24024CA/W33	
180		60	2	410	660	1600	2000	24024CA/W513		
180		60	2	410	660	1600	2000	24024F1/W33		
200		62	2	490	715	1800	2400	23124CA/W33	23124CAK/W33	
200		62	2	430	715	1900	2600	23124/W33		
200		62	2	430	715	1900	2600	23124K		
200		80	2	620	925	1400	1800	24124CA	24124CA/W33	
200		80	2	620	925	1400	1800	24124CAF3		
200		80	2	620	925	1400	1800	24124CAK30/W33		
215		58	2.1	600	730	1900	2600	22224CA	22224CAF3	
215		58	2.1	600	730	1900	2600	22224CA/W33		
215		58	2.1	600	730	1900	2600	22224CAK	22224CAK/W33	
215		58	2.1	600	730	1900	2600	22224CAKF3	22224CAKF3/W33	
215		76	2.1	660	940	1500	1900	23224CA	23224CA/W33	
215		76	2.1	660	940	1500	1900	23224CAF3/W33		
215		76	2.1	660	940	1500	1900	23224CAK/W33	23224CAKF3/W33	
240		100	2	570	925	1500	1900	24124X3CA/C9WN33		
260		86	3	920	1060	1400	1800	22324	22324/W33	
260		86	3	920	1060	1400	1800	22324K	22324K/W33	
260		86	3	920	1060	1400	1800	22324KF3	22324KF3/W33	
260		86	3	920	1060	1400	1800	22324F3	22324F3/W33	

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm	mm	mm	mm				kg
139	173	8.3	4	122	188	2	0.26	2.60	3.90	2.50	7.25
138	168	12	5	122	188	2	0.34	1.99	2.96	1.94	10.1
138	168	12	5	122	188	2	0.34	1.99	2.96	1.94	9.79
138	168	12	5	122	188	2	0.34	1.99	2.96	1.94	9.83
138	168	12	5	122	188	2	0.34	1.99	2.96	1.94	9.77
139	168	12	5	122	188	2	0.35	1.90	2.90	1.80	9.54
151	197	13.9	6	122	188	2.5	0.31	2.20	3.30	2.20	18.9
151	197	13.9	6	122	188	2.5	0.31	2.20	3.30	2.20	18.7
151	197	13.9	6	122	188	2.5	0.31	2.20	3.30	2.20	18.5
150	202	7.5	3								11.7
139	162	5.5	3	130	170	2	0.23	2.90	4.40	2.80	4.44
139	162	5.5	3	130	170	2	0.23	2.90	4.40	2.80	4.42
139	162	5.5	3	130	170	2	0.23	2.90	4.40	2.80	4.34
139	162	7	4	130	170	2					4.39
139	158	5.5	4	130	170	2	0.31	2.20	3.30	2.20	5.83
139	158	5.5	4	130	170	2	0.31	2.20	3.30	2.20	5.79
139	158	5.5	4	130	170	2					5.5
146	174	5.5	3	130	190	2	0.30	2.30	3.40	2.20	12.2
146	174	5.5	3	130	190	2	0.31	2.20	3.30	2.20	7.97
146	174	5.5	3	130	190	2	0.31	2.20	3.30	2.20	7.73
146	167	5.5	3	130	190	2	0.30	2.30	3.40	2.20	10
146	167	5.5	3	130	190	2	0.30	2.30	3.40	2.20	9.95
146	167	5.5	3	130	190	2	0.30	2.30	3.40	2.20	9.88
149	187			132	203	2	0.26	2.60	3.90	2.50	9.87
149	187	11.1	4	132	203	2	0.26	2.60	3.90	2.50	9.53
149	187	11.1	4	132	203	2	0.26	2.60	3.90	2.50	9.76
149	187	11.1	4	132	203	2	0.26	2.60	3.90	2.50	9.68
150	182	8.3	5	132	203	2	0.35	1.90	2.90	1.80	12.1
150	182	8.3	5	132	203	2	0.35	1.90	2.90	1.80	12.0
150	182	8.3	5	132	203	2	0.35	1.90	2.90	1.80	11.9
146	167			130	190	2	0.38	1.80	2.60	1.70	21.3
157	218			134	246	2.5					21.7
157	218			134	246	2.5					21.3
157	218			134	246	2.5					21.1
157	218			134	246	2.5					21.2

Spherical Roller Bearing(CA)

d 120~130 mm

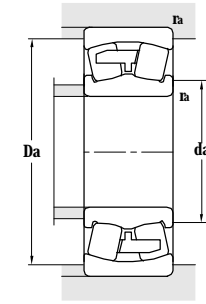
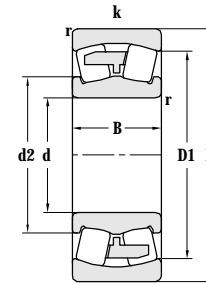
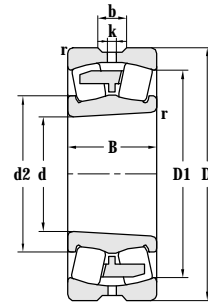
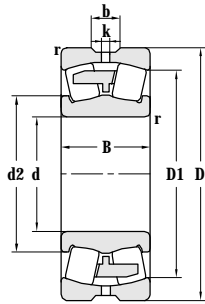


Principal dimensions				Basic load ratings		Limit speed ratings		Designations
d	D	B	r _{min}	C _r	C _{0r}	Grease	Oil	
mm				kN		r/min		
120	260	86	3	920	1100	1400	1800	22324CA 22324CA/W33
	260	86	3	920	1100	1400	1800	22324CAN/W33
	260	86	3	920	1100	1400	1800	22324CAF3 22324CAK
	260	86	3	920	1100	1400	1800	22324CAKF3 22324CAKF3/W33
	260	86	3	920	1100	1400	1800	22324ACA
130	200	52	2	410	580	1900	2600	23026CA 23026CA/W33
	200	52	2	410	580	1900	2600	23026CAF3 23026CAF3/W33
	200	52	2	410	580	1900	2600	23026CAK
	200	52	2	410	580	1900	2600	23026CAKF3 23026CAKF3/W33
	200	52	2	370	670	1900	2600	23026NR
	200	69	2	510	810	1800	2400	24026CA/W33 24026CA/W513
	200	69	2	510	820	1800	2400	24026F1/W33
	210	64	2	530	790	1700	2200	23126CA 23126CA/W33
	210	64	2	530	790	1700	2200	23126CAKF3/W33
	210	80	2	650	980	1700	2200	24126CA 24126CA/W33
	210	80	2	650	980	1700	2200	24126CAK/W33
	210	80	2	650	980	1700	2200	24126CAK30/W33
	220	73	3	740	1000	1700	2200	23226X3CAQ1/HG2P63
	230	64	3	700	880	1800	2400	22226CA 22226CA/W33
	230	64	3	700	880	1800	2400	22226CAK 22226CAK/W33
	230	64	3	700	880	1800	2400	22226CAKF3
	230	80	3	580	910	1400	1800	23226/W33
	230	80	3	740	1020	1300	1700	23226CA 23226CA/W33
	230	80	3	740	1020	1300	1700	23226CAF3 23226CAF3/W33
	230	80	3	740	1020	1300	1700	23226CAF3/HAC9SOW20X
	230	80	3	740	1020	1300	1700	23226CAK 23226CAKF3
	280	93	4	810	1250	1300	1700	22326 22326/W33
	280	93	4	810	1250	1300	1700	22326K 22326K/W33
	280	93	4	810	1250	1300	1700	22326F3
	280	93	4	810	1250	1300	1700	22326KF3
	280	93	4	1060	1300	1300	1700	22326CA 22326CA/W33
	280	93	4	1060	1300	1300	1700	22326CAF3 22326CAF3/W33
	280	93	4	1060	1300	1300	1700	22326CAK 22326CAK/W33
	280	93	4	1060	1300	1300	1700	22326ACA
	280	93	4	1060	1300	1300	1700	22326CAQ1/HA

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm			mm				kg
165	215	13.9	6	134	246	2.5	0.34	1.99	2.96	1.94	23.3
165	215	13.9	6	134	246	2.5	0.34	1.99	2.96	1.94	23.1
165	215			134	246	2.5	0.34	1.99	2.96	1.94	23.1
165	215	13.9	6	134	246	2.5	0.34	1.99	2.96	1.94	22.8
165	215			134	246	2.5	0.34	1.99	2.96	1.94	22.8
153	179	9.5	4	140	190	2	0.24	2.80	4.20	2.80	7.04
153	179	9.5	4	140	190	2	0.24	2.80	4.20	2.80	6.75
153	179			140	190	2	0.24	2.80	4.20	2.80	6.68
153	179	9.5	4	140	190	2	0.24	2.80	4.20	2.80	6.57
153	176			140	190	2					6.38
151	175	5.5	3	140	190	2	0.32	2.09	3.11	2.04	7.76
151	175	5.5	3	140	190	2					7.72
156	183	8.3	4	140	200	2	0.28	2.40	3.50	2.50	10.7
156	183	8.3	4	140	200	2	0.28	2.40	3.50	2.50	10.1
153	180	8.3	4	140	200	2	0.35	1.90	2.90	1.80	10.6
153	180	8.3	4	140	200	2	0.35	1.90	2.90	1.80	10.2
153	180	8.3	4	140	200	2	0.35	1.90	2.90	1.80	10.4
157	188			140	210	2	0.32	2.09	3.11	2.04	11.3
162	200	10	5	144	216	2.5	0.27	2.50	3.70	2.50	12.4
162	200	10	5	144	216	2.5	0.27	2.50	3.70	2.50	12.2
162	200			144	216	2.5	0.27	2.50	3.70	2.50	12.1
164	194	12	5	144	216	2.5	0.34	1.99	2.96	1.94	14.9
161	194	12	5	144	216	2.5	0.33	2.00	3.00	2.00	15.9
161	194	12	5	144	216	2.5	0.33	2.00	3.00	2.00	15.8
161	194	12	5	144	216	2.5	0.33	2.00	3.00	2.00	15.8
161	194			144	216	2.5	0.33	2.00	3.00	2.00	15.9
176	235	16.7	6	148	262	3					27.2
176	235	16.7	6	148	262	3					26.6
176	235			148	262	3					27.1
176	235			148	262	3					26.5
178	232	16.7	6	148	262	3	0.34	1.99	2.96	1.94	28.9
178	232	16.7	6	148	262	3	0.34	1.99	2.96	1.94	28.4
178	232	16.7	6	148	262	3	0.34	1.99	2.96	1.94	26.3
178	232			148	262	3	0.34	1.99	2.96	1.94	28.9
178	232			148	262	3	0.34	1.99	2.96	1.94	28.9

Spherical Roller Bearing(CA)

d 140~150 mm

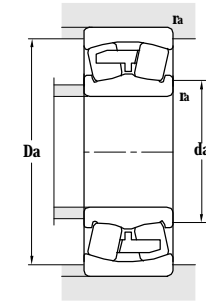
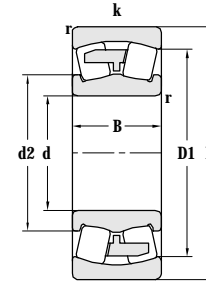
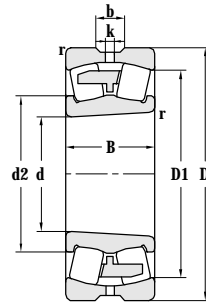
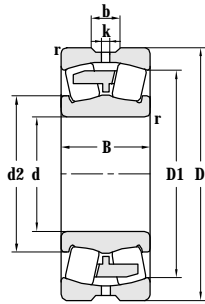


Principal dimensions				Basic load ratings		Limit speed ratings		Designations
d	D	B	r _{min}	C _r	C _{OR}	Grease	Oil	
mm				kN		r/min		
140	210	53	2	440	655	1800	2400	23028 23028/W33
	210	53	2	440	655	1800	2400	23028K 23028K/W33
	210	53	2	440	655	1800	2400	23028F3 23028F3/W33
	210	53	2	440	655	1800	2400	23028KF3 23028KF3/W33
	210	53	2	440	706	1800	2400	23028CA 23028CA/W33
	210	53	2	440	706	1800	2400	23028CAF3
	210	53	2	440	706	1800	2400	23028CAK 23028CAKF3
	210	69	2	540	960	1800	2400	24028CA 24028CA/W33
	210	69	2	540	960	1800	2400	24028CAK30/W33
	211.5	69	2	540	960	1800	2400	24028CAX1/W33
	225	68	2.1	550	865	1600	2000	23128 23128/W33
	225	68	2.1	550	865	1600	2000	23128K 23128K/W33
	225	68	2.1	550	865	1600	2000	23128F3
	225	68	2.1	550	865	1600	2000	23128KF3
	225	68	2.1	550	865	1600	2000	23128N
	225	68	2.1	600	935	1600	2000	23128CA 23128CA/W33
	225	68	2.1	600	935	1600	2000	23128CAN
	225	85	2.1	730	1150	850	1100	24128CA 24128CA/W33
	225	85	2.1	730	1150	850	1100	24128CAF3
	225	85	2.1	730	1150	850	1100	24128CAK30/W33
	250	68	3	680	1000	1700	2200	22228CA 22228CA/W33
	250	68	3	680	1000	1700	2200	22228CAF3 22228CAF3/W33
	250	68	3	680	1000	1700	2200	22228CAK 22228CAK/W33
	250	68	3	680	1000	1700	2200	22228CAKF3/W33
	250	88	3	770	1095	1300	1700	23228K/W33
	250	88	3	910	1365	1200	1600	23228CA/W33 23228CAF3/W33
	250	88	3	910	1365	1200	1600	23228CAK/W33
	300	102	4	1230	1950	1100	1500	22328CA 22328CA/W33
	300	102	4	1230	1950	1100	1500	22328CAF3 22328CAQ1/HA
	300	102	4	1230	1950	1100	1500	22328CAK 22328CAK/W33
	300	102	4	1230	1950	1100	1500	22328CAN/W33
	300	102	4	1230	1950	1100	1500	22328CAQ1/HA
300	118	4	1230	1950	1100	1500	23328CA	
150	225	56	2.1	485	795	1700	2200	23030CA 23030CA/W33
	225	56	2.1	485	795	1700	2200	23030CAK

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0	
mm				mm			mm				kg
162	187	8.3	4	150	200	2					6.8
162	187	8.3	4	150	200	2					6.36
162	187	8.3	4	150	200	2					6.73
162	187	8.3	4	150	200	2					6.29
162	188	8.3	4.5	150	200	2	0.23	2.90	4.40	2.80	6.70
162	188			150	200	2	0.23	2.90	4.40	2.80	6.68
162	188			150	200	2	0.23	2.90	4.40	2.80	6.50
162	185	5.5	3	150	200	2	0.30	2.30	3.40	2.20	8.31
162	185	5.5	3	150	200	2	0.30	2.30	3.40	2.20	8.17
162	183	5.5	3	150	200	2	0.30	2.30	3.40	2.20	8.58
166	196			152	213	2					10.9
166	196	8.3	5	152	213	2					10.9
166	196			152	213	2					10.8
166	196			152	213	2					10.7
166	196			152	213	2					10.9
166	196	8.3	5	152	213	2	0.29	2.30	3.50	2.40	10.9
166	196	8.3	5	152	213	2	0.29	2.30	3.50	2.40	10.9
165	192	8.3	4.5	152	213	2	0.37	1.80	2.70	1.80	13.5
165	192			152	213	2	0.37	1.80	2.70	1.80	13.5
165	192	8.3	4.5	152	213	2	0.37	1.80	2.70	1.80	13.2
176	218	11.1	5	154	236	2.5	0.26	2.60	3.90	2.50	16.2
176	218	11.1	5	154	236	2.5	0.26	2.60	3.90	2.50	15.6
176	218	11.1	5	154	236	2.5	0.26	2.60	3.90	2.50	15.0
176	218	11.1	5	154	236	2.5	0.26	2.60	3.90	2.50	14.8
172	215	15	6	154	236	2.5	0.36	1.87	2.79	1.83	18.3
173	215	15	6	154	236	2.5	0.33	2.00	3.00	2.00	19.7
173	215	15	6	154	236	2.5	0.33	2.00	3.00	2.00	19.3
191	249	16.7	7	158	282	3	0.35	1.90	2.90	1.80	36.0
191	249			158	282	3	0.35	1.90	2.90	1.80	35.9
191	249	16.7	7	158	282	3	0.35	1.90	2.90	1.80	36.2
191	249	16.7	7	158	282	3					36.0
191	249	16.7	7	158	282	3					36.2
190	243			158	280	3	0.40	1.69	2.51	1.65	41.7
174	201	8.3	4.5	162	213	2	0.22	3.00	4.60	2.80	8.01
174	201	8.3	4.5	162	213	2	0.22	3.00	4.60	2.80	7.41

Spherical Roller Bearing(CA)

d 150~160 mm

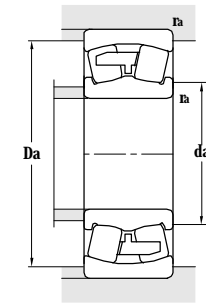
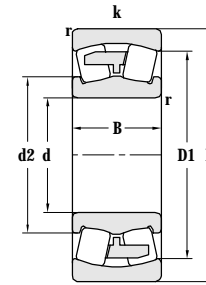
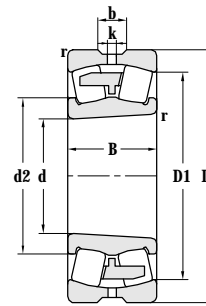
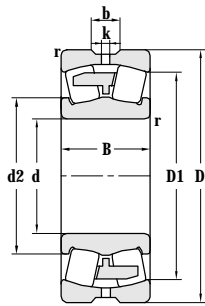


Principal dimensions				Basic load ratings		Limit speed ratings		Designations	
d	D	B	r _{min}	C _r	C _{OR}	Grease	Oil		
mm				kN		r/min			
150	225	56	2.1	485	795	1700	2200	23030CAF3	
	225	75	2.1	620	1050	1300	1700	24030CA/W33	
	225	75	2.1	620	990	1300	1700	24030CA/W33X	
	250	80	2.1	660	625	1400	1800	23130	
	250	80	2.1	660	625	1400	1800	23130K	
	250	80	2.1	660	625	1400	1800	23130F3	
	250	80	2.1	660	625	1400	1800	23130KF3	
	250	80	2.1	790	1140	1400	1800	23130CA	
	250	80	2.1	790	1140	1400	1800	23130CAK	
	250	80	2.1	790	1140	1400	1800	23130CAF3	
	250	100	2.1	970	1450	800	1000	24130CA	
	250	100	2.1	970	1450	800	1000	24130CAK	
	270	73	3	810	1050	1600	2000	22230CA	
	270	73	3	810	1050	1600	2000	22230CAF3	
	270	73	3	810	1050	1600	2000	22230ACA	
	270	96	3	1030	1550	1100	1500	23230CA	
	270	96	3	1030	1550	1100	1500	23230CAK/W33	
	270	96	3	1030	1550	1100	1500	23230CA/HCW33	
	300	118	4	1780	1110			23328CA	
	320	108	4	1390	1810	1000	1400	22330CA	
	320	108	4	1390	1810	1000	1400	22330CA/HCW33	
	320	108	4	1390	1810	1000	1400	22330CAK	
	160	240	60	2.1	415	860	1700	2200	23032
		240	60	2.1	415	860	1700	2200	23032K
240		60	2.1	415	860	1700	2200	23032F3	
240		60	2.1	415	860	1700	2200	23032KF3	
240		60	2.1	555	875	1700	2200	23032CA	
240		60	2.1	555	875	1700	2200	23032CAK/W33	
240		60	2.1	555	875	1700	2200	23032CAF3	
240		80	2.1	600	1020	1100	1500	24032K/W33	
240		80	2.1	710	1210	1100	1500	24032CA/W33	
240		80	2.1	710	1210	1100	1500	24032CAF3/W33	
240		80	2.1	710	1210	1100	1500	24032CAK30F3	
240		80	2.1	710	1210	1200	1600	24032K/W33	
270		86	2.1	930	1300	1300	1700	23132	
270		86	2.1	930	1300	1300	1700	23132K	

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight	
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0		
mm				mm			mm				kg	
174	201			162	213	2	0.22	3.00	4.60	2.80	7.96	
175	196	5.5	3	162	213	2	0.31	2.20	3.30	2.20	9.39	
175	196	5.5	3	162	213	2	0.31	2.20	3.30	2.20	9.39	
182	216	11.1	5	162	238	2					15.8	
182	216	11.1	5	162	238	2					16.1	
182	216	11.1	5	162	238	2					15.6	
182	216	11.1	5	162	238	2					15.9	
182	216	11.1	5	162	238	2	0.30	2.30	3.40	2.20	16.5	
182	216	11.1	5	162	238	2	0.30	2.30	3.40	2.20	16.4	
182	216	11.1	5	162	238	2	0.30	2.30	3.40	2.20	16.4	
180	208	8.3	4.5	162	238	2	0.37	1.80	2.70	1.80	19.2	
180	208	8.3	4.5	162	238	2	0.37	1.80	2.70	1.80	19.0	
189	234	12	6	164	256	2.5	0.26	2.60	3.90	2.50	18.7	
189	234			164	256	2.5	0.26	2.60	3.90	2.50	18.5	
189	234			164	256	2.5	0.26	2.60	3.90	2.50	18.2	
188	228	11.1	6	164	256	2.5	0.35	1.90	2.90	1.80	26.6	
188	228	11.1	6	164	256	2.5	0.35	1.90	2.90	1.80	26.3	
188	228	11.1	6	164	256	2.5	0.35	1.90	2.90	1.80	26.5	
190	243			168	275	3					41.7	
203	265	16.7	9	168	302	3	0.36	1.87	2.79	1.83	41.0	
203	265	16.7	9	168	302	3	0.36	1.87	2.79	1.83	40.6	
203	265			168	302	3	0.36	1.87	2.79	1.83	41.1	
185	213	11.1	4	172	228	2					10.2	
	185	213	11.1	4	172	228	2				9.89	
	185	213	11.1	4	172	228	2				10	
	185	213			172	228	2				9.7	
	186	216	8.3	5	172	228	2	0.22	3.00	4.60	2.80	10.0
	186	216	8.3	5	172	228	2	0.22	3.00	4.60	2.80	9.5
	186	216			172	228	2	0.22	3.00	4.60	2.80	9.97
	183	209	8.3	5	172	228	2					12.1
	183	209	8.3	5	172	228	2	0.30	2.30	3.40	2.20	13.2
	183	209	8.3	5	172	228	2	0.30	2.30	3.40	2.20	13.2
	184	209	8.3	5	172	228	2	0.32	2.09	3.11	2.04	12.1
	188	234	13.9	6	172	258	2					21.2
	188	234			172	258	2					20.6

Spherical Roller Bearing(CA)

d 160~170 mm



Principal dimensions				Basic load ratings		Limit speed ratings		Designations	
d	D	B	r _{min}	C _r	C _{OR}	Grease	Oil		
mm				kN		r/min			
160	270	86	2.1	930	1300	1300	1700	23132F3	23132F3/W33
	270	86	2.1	930	1300	1300	1700	23132N	
	270	86	2.1	930	1430	1300	1700	23132CA	23132CA/W33
	270	86	2.1	930	1430	1300	1700	23132CAK	
	270	86	2.1	930	1430	1300	1700	23132CAF3	
	270	86	2.1	685	1140	1400	1800	23132K	
	270	86	2.1	930	1300	1400	1800	23132CK	23132CK/W33
	270	109	2.1	1120	1690	700	900	24132CA/HAC9SOW20X	
	270	109	2.1	1120	1690	700	900	24132CA/W33	24132CA/W33X
	270	109	2.1	1120	1690	700	900	24132CAK30/C3W33	
	290	80	3	950	1380	1500	1900	22232CA	22232CAF3
	290	80	3	950	1300	1500	1900	22232CAK	
	290	80	3	950	1300	1500	1900	22233ACA	
	290	104	3	900	1600	1000	1400	23232	
	290	104	3	900	1600	1000	1400	23232K	
	290	104	3	900	1600	1000	1400	23232F3	
	290	104	3	1160	1770	1000	1400	23232CA	23232CA/W33
	290	104	3	1160	1770	1000	1400	23232CAK	23232CAK/W33
	340	114	4	1200	1800	950	1300	22332	22332/W33
	340	114	4	1200	1800	950	1300	22332K	22332K/W33
	340	114	4	1200	1800	950	1300	22332F3	
	340	114	4	1200	1800	950	1300	22332KF3	
	340	114	4	1520	1860	950	1300	22332CAK	
	340	114	4	1520	2050	950	1300	22332CA	22332CA/W33
	340	114	4	1520	2050	950	1300	22332CAF3	22332CAF3/W33
	340	114	4	1520	2050	950	1300	22332CAK	
	340	114	4	1200	1800	950	1300	22332Q1/W33	
	340	114	4	1520	2050	950	1300	22332CAK3/W33	
170	230	45	2	310	715	1700	2200	23934CA/W33	
	260	67	2.1	510	1070	1600	2000	23034	23034/W33
	260	67	2.1	510	1070	1600	2000	23034K	23034K/W33
	260	67	2.1	510	1070	1600	2000	23034YA2	
	260	67	2.1	510	1070	1600	2000	23034F3	
	260	67	2.1	510	1070	1600	2000	23034KF3	
	260	67	2.1	670	1090	1600	2000	23034CA	23034CA/W33

Other dimensions				Contact surface and chamfer dimensions			Calculation coefficient				Weight	
d2	D1	b	k	da	Da	ra	e	Y1	Y2	Y0		
mm				mm			mm				kg	
188	234			172	258	2						21
188	234			172	258	2						21
188	234	13.9	6	172	258	2	0.30	2.30	3.40	2.20		21.9
188	234			172	258	2	0.30	2.30	3.40	2.20		21.7
188	234			172	258	2	0.30	2.30	3.40	2.20		21.9
195	234			172	258	2	0.30	2.30	3.40	2.20		21.9
193	231			172	258	2	0.34	1.99	2.96	1.94		20.6
193	231	13.9	6	172	258	2	0.34	1.99	2.96	1.94		21.2
195	225	8.3	4	172	258	2	0.40	1.69	2.51	1.65		23.4
193	225	8.3	4	172	258	2	0.40	1.69	2.51	1.65		24.6
193	225	8.3	4	172	258	2	0.40	1.69	2.51	1.65		24.2
193	249			174	276	2.5	0.27	2.50	3.70	2.50		24.6
201	249			174	276	2.5	0.27	2.50	3.70	2.50		23.8
201	249			174	276	2.5	0.27	2.50	3.70	2.50		24.1
198	244			174	276	2.5						36.1
198	244			174	276	2.5						34.3
198	244			174	276	2.5						35.9
189	244	13.9	7	174	276	2.5	0.35	1.90	2.90	1.80		30.2
200	244	13.9	7	174	276	2.5	0.35	1.90	2.90	1.80		28.9
212	283	16.7	7	178	322	3						50.2
212	283	16.7	7	178	322	3						49.5
212	283			178	322	3						49.7
212	283			178	322	3						49
201	284			178	322	3	0.35	1.90	2.90	1.80		52.8
201	284	16.7	7	178	322	3	0.35	1.90	2.90	1.80		51.6
216	284	16.7	7	178	322	3	0.35	1.90	2.90	1.80		51.8
201	284	16.7	7	178	322	3	0.35	1.90	2.90	1.80		51.6
212	283	16.7	7	178	322	3						50.2
216	284	16.7	7	178	322	3	0.35	1.90	2.90	1.80		51.8
189	212	5.5	3	182	213	2						5.45
200	231	11.1	5	182	248	2						13.7
200	231	11.1	5	182	248	2						13.3
200	231			182	248	2						13.6
200	231			182	248	2						13.6
200	231			182	248	2						13.2
198	231	11.1	5	182	248	2	0.23	2.90	4.40	2.80		14.1