

Self-aligning Roller Bearings

Spherical roller bearings are self-aligning and designed for heavy combination loads with wide dimension range, including ISO dimension serial and special dimension serial. Special dimension design is suitable for vibratory applications such as vibration screen or exciters. Sealed spherical roller bearing is the new design of UBC spherical roller bearings.

Spherical roller bearings have two rows of rollers with a common spherical raceway in the outer ring and two inner ring raceways inclined at an angle to the bearing axis. This gives them an attractive combination of design features, making them irreplaceable in many demanding applications. They are self-aligning and consequently insensitive to misalignment between shaft and housing and to the shaft deflection or bending.

C2: Internal radial clearance smaller than Normal

C3: Internal radial clearance bigger than Normal

C4: Internal radial clearance bigger than C3

C5: Internal radial clearance bigger than C5

2CS: Contact NBR seal on both side of the bearing

K: Tapered bore bearing, taper 1:12

K30: Tapered bore bearing, taper 1:30

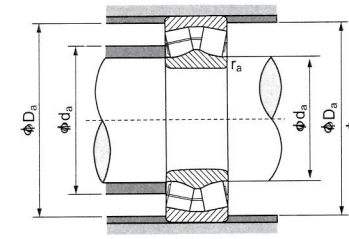
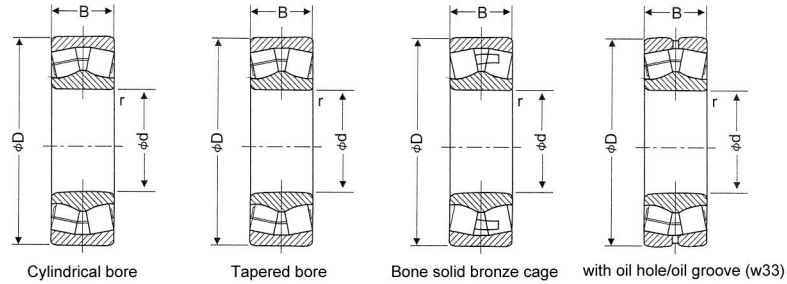
W33: Annular groove with 3 lubrication holes in outer ring

CC: Two pressed window type steel cages

CA: One-piece machined brass cage, double-pronged, retaining flanges on the inner ring and guide ring centered on the inner ring

MB: Double machined brass cages

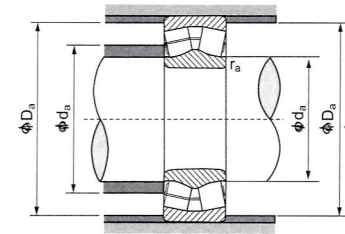
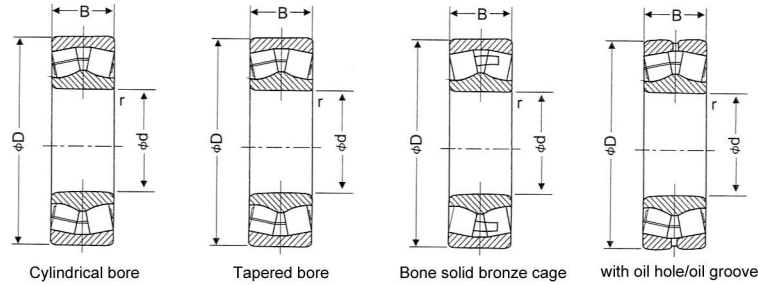
Bore diameter d: 20~75mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
20	52	15	1.1	21304CA/W33	21304CAK/W33	34000	33500
	52	18	1	22205CA/W33	22205CAK/W33	45500	48000
25	62	17	1.1	21305CA/W33	21305CAK/W33	46000	47500
	62	20	1	22206CA/W33	22206CAK/W33	61000	65000
30	72	19	1.1	21306CA/W33	21306CAK/W33	59500	62500
	72	23	1.1	22207CA/W33	22207CAK/W33	80500	88500
35	80	21	1.5	21307CA/W33	21307CAK/W33	69500	76000
	80	31	1.5	22307CA/W33	22307CAK/W33	104000	107000
40	80	23	1.1	22208CA/W33	22208CAK/W33	90500	102000
	90	23	1.5	21308CA/W33	21308CAK/W33	85500	95500
	90	33	1.5	22308CA/W33	22308CAK/W33	135000	151000
45	85	23	1.1	22209CA/W33	22209CAK/W33	95500	110000
	100	25	1.5	21309CA/W33	21309CAK/W33	108000	124000
50	100	36	1.5	22309CA/W33	22309CAK/W33	165000	182000
	90	23	1.1	22210CA/W33	22210CAK/W33	102000	122000
55	110	27	2	21310CA/W33	21310CAK/W33	128000	151000
	110	40	2	22310CA/W33	22310CAK/W33	203000	235000
60	100	25	1.5	22211CA/W33	22211CAK/W33	123000	144000
	120	29	2	21311CA/W33	21311CAK/W33	144000	165000
	120	43	2	22311CA/W33	22311CAK/W33	235000	263000
65	110	28	1.5	22212CA/W33	22212CAK/W33	151000	179000
	130	31	2.1	21312CA/W33	21312CAK/W33	168000	193000
	130	46	2.1	22312CA/W33	22312CAK/W33	281000	330000
70	120	31	1.5	22213CA/W33	22213CAK/W33	177000	209000
	140	33	2.1	21313CA/W33	21313CAK/W33	194000	232000
	140	48	2.1	22313CA/W33	22313CAK/W33	300000	355000
75	125	31	1.5	22214CA/W33	22214CAK/W33	185000	220000
	150	35	2.1	21314CA/W33	21314CAK/W33	215000	260000
	150	51	2.1	22314CA/W33	22314CAK/W33	345000	415000
75	130	31	1.5	22215CA/W33	22215CAK/W33	191000	234000
	160	37	2.1	21315CA/W33	21315CAK/W33	245000	298000
	160	55	2.1	22315CA/W33	22315CAK/W33	395000	475000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	dₐ (min)	Dₐ (max)	rₐ (max)	
7300	9000	27.0	45.0	1.0	0.18
7000	9000	30.5	46.5	1.0	0.19
6200	7800	32.0	53.0	1.0	0.29
6000	7500	35.5	56.5	1.0	0.30
5300	6600	38.0	65.0	1.0	0.43
5000	6300	42.0	65.0	1.0	0.46
4700	5900	44.0	71.0	1.5	0.57
6000	7700	43.5	71.5	1.5	0.78
4500	5600	47.0	73.0	1.0	0.56
4000	5200	50.0	81.0	1.5	0.78
4000	5300	48.5	81.5	1.5	1.07
4300	5300	52.0	78.0	1.0	0.61
3700	4600	55.0	92.0	1.5	1.05
3500	4800	53.5	91.5	1.5	1.41
3800	4800	57.0	83.0	1.0	0.65
3300	4200	61.0	101.0	2.0	1.36
3200	4300	60.0	100.0	2.0	1.92
3400	4300	63.5	91.5	1.5	0.88
3000	4100	65.0	110.0	2.0	1.70
3000	3800	65.0	110.0	2.0	2.40
3200	4000	68.5	101.5	1.5	1.20
2800	3700	72.0	118.0	2.0	2.10
2800	3600	72.0	118.0	2.0	3.05
2800	3600	73.5	111.5	1.5	1.56
2600	3400	77.0	128.0	2.0	2.60
2400	3200	77.0	128.0	2.0	3.67
2600	3400	78.5	116.5	1.5	1.65
2400	3200	82.0	138.0	2.0	3.10
2200	3000	82.0	138.0	2.0	4.45
2400	3200	83.5	121.5	1.5	1.74
2200	3000	87.0	148.0	2.0	3.80
2000	2800	87.0	148.0	2.0	5.44

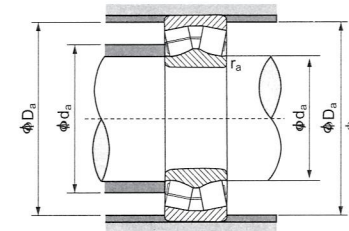
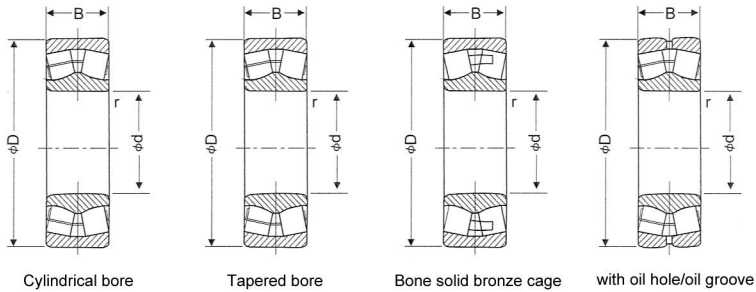
Bore diameter d: 80~110mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
80	140	33	2	22216CA/W33	22216CAK/W33	215000	269000
	140	44.4	2	23216CA/W33	23216CAK/W33	241000	335000
	170	39	2.1	21316CA/W33	21316CAK/W33	275000	339000
	170	58	2.1	22316CA/W33	22316CAK/W33	430000	520000
85	150	36	2	22217CA/W33	22217CAK/W33	255000	320000
	150	49.2	2	23217CA/W33	23217CAK/W33	285000	405000
	180	41	3	21317CA/W33	21317CAK/W33	300000	372000
	180	60	3	22317CA/W33	22317CAK/W33	480000	585000
90	160	40	2	22218CA/W33	22218CAK/W33	294000	375000
	160	52.4	2	23218CA/W33	23218CAK/W33	337000	482000
	190	43	3	21318CA/W33	21318CAK/W33	330000	410000
	190	64	3	22318CA/W33	22318CAK/W33	535000	660000
95	170	43	2.1	22219CA/W33	22219CAK/W33	335000	420000
	170	55.6	2.1	23219CA/W33	23219CAK/W33	360000	510000
	200	45	3	21319CA/W33	21319CAK/W33	362000	461000
	200	67	3	22319CA/W33	22319CAK/W33	585000	725000
100	140	30	1.1	23920CA/W33	23920CAK/W33	142000	233000
	150	37	1.5	23020CA/W33	23020CAK/W33	206000	325000
	165	52	2	23120CA/W33	23120CAK/W33	325000	500000
	180	46	2.1	22220CA/W33	22220CAK/W33	375000	480000
	180	60.3	2.1	23220CA/W33	23220CAK/W33	427000	629000
	215	47	3	21320CA/W33	21320CAK/W33	416000	524000
110	170	45	2	23022CA/W33	23022CAK/W33	298000	475000
	180	56	2	23122CA/W33	23122CAK/W33	390000	610000
	180	69	2	24122CA/W33	24122CAK/W33	455000	743000
	200	53	2.1	22222CA/W33	22222CAK/W33	490000	640000
	200	69.8	2.1	23222CA/W33	23222CAK/W33	538000	793000
	240	50	3	21322CA/W33	21322CAK/W33	485000	635000
	240	80	3	22322CA/W33	22322CAK/W33	825000	1040000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	dₐ (min)	Dₐ (max)	rₐ (max)	
2200	3000	90.0	130.0	2.0	2.19
2200	2900	90.0	130.0	2.0	2.95
2100	2800	92.0	158.0	2.0	4.50
1900	2600	92.0	158.0	2.0	6.42
2000	2800	95.0	140.0	2.0	2.75
2100	2700	95.0	140.0	2.0	3.78
2000	2600	99.0	166.0	2.5	5.30
1800	2400	99.0	166.0	2.5	7.46
1900	2600	100.0	150.0	2.0	3.50
2100	2800	100.0	150.0	2.0	4.57
1900	2500	104.0	176.0	2.5	6.10
1800	2400	104.0	176.0	2.5	8.82
1900	2600	107.0	158.0	2.0	4.24
1900	2400	107.0	158.0	2.0	5.46
1800	2300	109.0	186.0	2.5	7.10
1700	2200	109.0	186.0	2.5	10.20
2300	3000	107.0	133.0	1.0	1.46
1800	2500	117.0	141.0	1.5	2.33
1700	2200	110.0	155.0	2.0	4.49
1800	2400	112.0	168.0	2.0	5.10
1900	2500	112.0	168.0	2.0	6.76
1600	2200	114.0	201.0	2.5	8.70
1700	2200	114.0	201.0	2.5	13.1
1800	2400	120.0	160.0	2.0	3.84
1800	2400	120.0	170.0	2.0	5.70
1800	2400	120.0	170.0	2.0	6.89
1700	2200	122.0	188.0	2.0	7.36
1700	2200	122.0	188.0	2.0	9.6
1400	1900	124.0	226.0	2.5	11.6
1500	1900	124.0	226.0	2.5	18.1

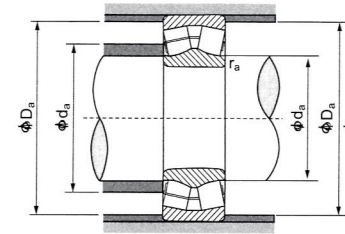
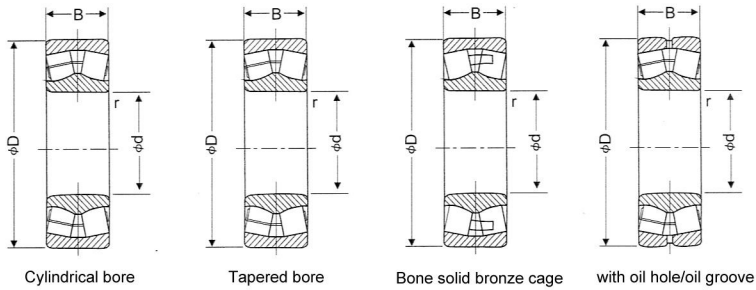
Bore diameter d: 120~150mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
120	180	46	2	23024CA/W33	23024CAK/W33	310000	515000
	180	60	2	24024CA/W33	24024CAK/W33	388000	683000
	200	62	2	23124CA/W33	23124CAK/W33	485000	720000
	200	80	2	24124CA/W33	24124CAK/W33	586000	970000
	215	58	2.1	22224CA/W33	22224CAK/W33	565000	765000
	215	76	2.1	23224CA/W33	23224CAK/W33	620000	956000
	260	55	3	21324CA/W33	21324CAK/W33	570000	765000
	260	86	3	22324CA/W33	22324CAK/W33	897000	1130000
130	180	37	1.5	23926CA/W33	23926CAK/W33	204000	355000
	200	52	2	23026CA/W33	23026CAK/W33	400000	660000
	200	69	2	24026CA/W33	24026CAK/W33	510000	900000
	210	64	2	23126CA/W33	23126CAK/W33	497000	799000
	210	80	2	24126CA/W33	24126CAK/W33	604000	1030000
	230	64	3	22226CA/W33	22226CAK/W33	655000	915000
	230	80	3	23226CA/W33	23226CAK/W33	705000	1090000
	280	93	4	22326CA/W33	22326CAK/W33	1050000	1340000
140	190	37	1.5	23928CA/W33	23928CAK/W33	248000	466000
	210	53	2	23028CA/W33	23028CAK/W33	420000	710000
	210	69	2	24028CA/W33	24028CAK/W33	510000	920000
	225	68	2.1	23128CA/W33	23128CAK/W33	568000	940000
	225	85	2.1	24128CA/W33	24128CAK/W33	685000	1180000
	250	68	3	22228CA/W33	22228CAK/W33	755000	1030000
	250	88	3	23228CA/W33	23228CAK/W33	814000	1290000
	300	102	4	22328CA/W33	22328CAK/W33	1110000	1520000
150	210	45	2	23930CA/W33	23930CAK/W33	334000	622000
	225	56	2.1	23030CA/W33	23030CAK/W33	460000	790000
	225	72	2.1	24030CA/W33	24030CAK/W33	580000	1060000
	250	80	2.1	23130CA/W33	23130CAK/W33	722000	1230000
	250	100	2.1	24130CA/W33	24130CAK/W33	888000	1520000
	270	73	3	22230CA/W33	22230CAK/W33	864000	1200000
	270	96	3	23230CA/W33	23230CAK/W33	961000	1540000
	320	108	3	22330CA/W33	22330CAK/W33	1270000	1740000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	da (min)	Dn (max)	ra (max)	
1700	2200	130.0	170.0	2.0	4.20
1700	2300	130.0	170.0	2.0	5.36
1600	2200	130.0	190.0	2.0	7.90
1600	2200	130.0	190.0	2.0	10.0
1600	2000	132.0	203.0	2.0	9.28
1500	2100	132.0	203.0	2.0	12.0
1300	1600	134.0	246.0	2.5	15.3
1300	1800	134.0	246.0	2.5	22.6
1800	2300	138.5	171.5	1.5	2.87
1600	2000	140.0	190.0	2.0	6.14
1600	2100	140.0	190.0	2.0	7.93
1500	2000	140.0	200.0	2.0	860
1500	2000	140.0	200.0	2.0	10.7
1400	1800	144.0	216.0	2.5	11.6
1400	1900	144.0	216.0	2.5	14.2
1200	1700	148.0	262.0	3.0	28.4
1700	2200	148.5	181.5	1.5	3.13
1500	1900	150.0	200.0	2.0	6.61
1500	2000	150.0	200.0	2.0	8.40
1400	1900	152.0	213.0	2.0	10.5
1400	1900	152.0	213.0	2.0	13.0
1300	1700	154.0	236.0	2.5	13.9
1300	1700	154.0	236.0	2.5	18.8
1100	1500	158.0	282.0	3.0	35.9
1600	2000	200.0	160.0	2.0	5.01
1400	1700	162.0	213.0	2.0	8.01
1400	1800	162.0	213.0	2.0	10.50
1300	1700	162.0	238.0	2.0	16.2
1300	1700	162.0	238.0	2.0	19.6
1200	1600	164.0	256.0	2.5	18.9
1200	1600	164.0	256.0	2.5	24.2
1000	1400	168.0	302.0	3.0	43.3

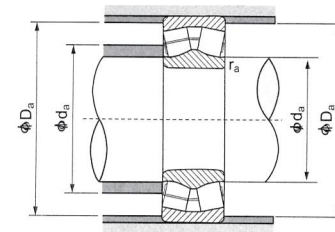
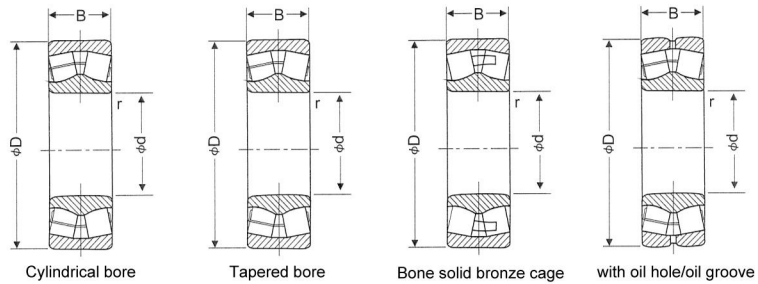
Bore diameter d: 160~190mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
160	220	45	2	23932CA/W33	23932CAK/W33	341000	649000
	240	60	2.1	23032CA/W33	23032CAK/W33	530000	915000
	240	80	2.1	24032CA/W33	24032CAK/W33	685000	128000
	270	86	2.1	23132CA/W33	23132CAK/W33	852000	1430000
	270	109	2.1	24132CA/W33	24132CAK/W33	1040000	1810000
	290	80	3	22232CA/W33	22232CAK/W33	885000	1330000
	290	104	3	23232CA/W33	23232CAK/W33	1080000	1710000
	340	114	4	22332CA/W33	22332CAK/W33	1400000	1950000
170	230	45	2	23934CA/W33	23934CAK/W33	353000	691000
	260	67	2.1	23034CA/W33	23034CAK/W33	630000	1080000
	260	90	2.1	24034CA/W33	24034CAK/W33	810000	1480000
	280	88	2.1	23134CA/W33	23134CAK/W33	910000	1530000
	280	109	2.1	24134CA/W33	24134CAK/W33	979000	1650000
	310	86	4	22234CA/W33	22234CAK/W33	1000000	1510000
	310	110	4	23234CA/W33	23234CAK/W33	1240000	1970000
	360	120	4	22334CA/W33	22334CAK/W33	1550000	2200000
180	250	52	2	23936CA/W33	23936CAK/W33	480000	939000
	280	74	2.1	23036CA/W33	23036CAK/W33	773000	1330000
	280	100	2.1	24036CA/W33	24036CAK/W33	960000	1760000
	300	96	3	23136CA/W33	23136CAK/W33	1070000	1710000
	300	118	3	24136CA/W33	24136CAK/W33	1180000	2040000
	320	86	4	22236CA/W33	22236CAK/W33	1050000	1610000
	320	112	4	23236CA/W33	23236CAK/W33	1290000	2100000
	380	126	4	22336CA/W33	22336CAK/W33	1710000	2400000
190	260	52	2	23938CA/W33	23938CAK/W33	487000	969000
	290	75	2.1	23038CA/W33	23038CAK/W33	760000	1330000
	290	100	2.1	24038CA/W33	24038CAK/W33	1020000	1920000
	320	104	3	23138CA/W33	23138CAK/W33	1240000	2120000
	320	128	3	24138CA/W33	24138CAK/W33	1370000	2380000
	340	92	4	22238CA/W33	22238CAK/W33	1140000	1740000
	340	120	4	23238CA/W33	23238CAK/W33	1490000	2450000
	400	132	5	22338CA/W33	22338CAK/W33	1870000	2670000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	d _a (min)	D _a (max)	r _a (max)	
1500	1900	170.0	210.0	2.0	5.29
1200	1300	172.0	228.0	2.0	9.74
1300	1700	172.0	228.0	2.0	12.7
1200	1600	172.0	258.0	2.0	20.5
1200	1600	172.0	258.0	2.0	25.5
1000	1400	174.0	276.0	2.5	23.7
900	1200	174.0	276.0	2.5	30.4
650	1300	178.0	322.0	3.0	51.4
1400	1800	180.0	220.0	2.0	558
1100	1500	182.0	248.0	2.0	13.1
1200	1600	182.0	248.0	2.0	17.3
1100	1500	182.0	268.0	2.0	21.6
1100	1500	182.0	268.0	2.0	26.1
950	1300	188.0	292.0	3.0	30.0
900	1200	188.0	292.0	3.0	37.0
900	1200	188.0	342.0	3.0	60.6
1300	1700	190.0	240.0	2.0	81.0
1000	1500	192.0	268.0	2.0	17.4
1100	1400	192.0	268.0	2.0	22.7
900	1200	194.0	286.0	2.5	27.9
900	1200	194.0	286.0	2.5	33.7
950	1300	198.0	302.0	3.0	30.9
850	1100	198.0	302.0	3.0	39.4
850	1100	198.0	362.0	3.0	70.5
1200	1600	200.0	250.0	2.0	84.6
950	1300	202.0	278.0	2.0	18.4
900	1200	202.0	278.0	2.0	24.6
850	1100	204.0	306.0	2.5	35.0
850	1100	204.0	306.0	2.5	42.0
900	1200	208.0	322.0	3.0	37.2
800	1000	208.0	322.0	3.0	48.0
850	1100	212.0	378.0	4.0	81.8

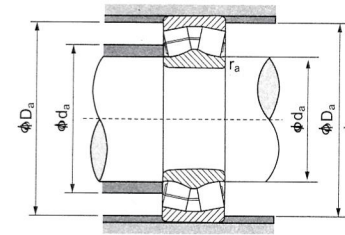
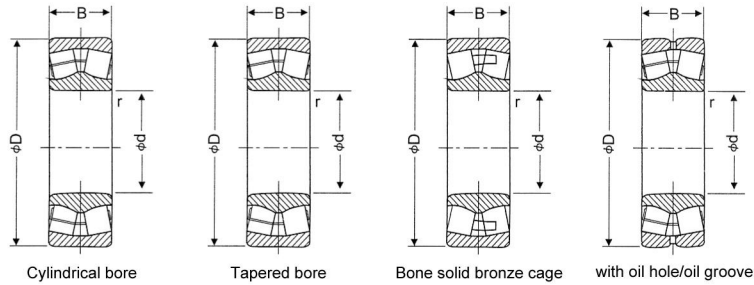
Bore diameter d: 200~260mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
200	280	60	2.1	23940CA/W33	23940CAK/W33	603000	1190000
	310	82	2.1	23040CA/W33	23040CAK/W33	900000	1560000
	310	109	2.1	24040CA/W33	24040CAK/W33	1180000	2230000
	340	112	3	23140CA/W33	23140CAK/W33	1400000	2390000
	340	140	3	24140CA/W33	24140CAK/W33	1600000	2820000
	360	98	4	22240CA/W33	22240CAK/W33	1300000	1990000
	360	128	4	23240CA/W33	23240CAK/W33	1620000	2750000
	420	138	5	22340CA/W33	22340CAK/W33	2080000	3000000
220	300	60	2.1	23944CA/W33	23944CAK/W33	605000	1190000
	340	90	3	23044CA/W33	23044CAK/W33	1060000	1880000
	340	118	3	24044CA/W33	24044CAK/W33	1400000	2670000
	370	120	4	23144CA/W33	23144CAK/W33	1620000	2870000
	370	150	4	24144CA/W33	24144CAK/W33	1820000	3250000
	400	108	4	22244CA/W33	22244CAK/W33	1540000	2380000
	400	144	4	23244CA/W33	23244CAK/W33	2100000	3500000
	460	145	5	22344CA/W33	22344CAK/W33	2430000	3600000
240	320	60	2.1	23948CA/W33	23948CAK/W33	6250000	1260000
	360	92	3	23048CA/W33	23048CAK/W33	1100000	2000000
	360	118	3	24048CA/W33	24048CAK/W33	1430000	2800000
	400	128	4	23148CA/W33	23148CAK/W33	1880000	3350000
	400	160	4	24148CA/W33	24148CAK/W33	2050000	3700000
	440	120	4	22248CA/W33	22248CAK/W33	1890000	2930000
	440	160	4	23248CA/W33	23248CAK/W33	2440000	4100000
	500	155	5	22348CA/W33	22348CAK/W33	2770000	4100000
260	360	75	2.1	23952CA/W33	23952CAK/W33	8950000	1780000
	400	104	4	23052CA/W33	23052CAK/W33	1400000	2530000
	400	140	4	24052CA/W33	24052CAK/W33	1890000	3700000
	440	144	4	23152CA/W33	23152CAK/W33	2250000	4000000
	440	180	4	24152CA/W33	24152CAK/W33	2550000	4650000
	480	130	5	22252CA/W33	22252CAK/W33	2230000	3500000
	480	174	5	23252CA/W33	23252CAK/W33	2860000	4800000
	540	165	6	22352CA/W33	22352CAK/W33	3150000	4750000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	d _a (min)	D _a (max)	r _a (max)	
1200	1500	212.0	268.0	2.0	11.9
950	1300	212.0	298.0	2.0	23.4
850	1100	212.0	298.0	2.0	31.2
800	1000	214.0	326.0	2.5	42.7
800	1000	214.0	326.0	2.5	52.9
850	1100	218.0	342.0	3.0	44.8
800	1000	218.0	342.0	3.0	57.7
800	1000	222.0	398.0	4.0	93.7
900	1200	232.0	288.0	2.0	12.6
800	1100	234.0	326.0	2.5	30.7
800	1000	234.0	326.0	2.5	40.3
700	900	238.0	352.0	3.0	54.3
750	950	238.0	352.0	3.0	66.3
800	1000	238.0	382.0	3.0	61.9
670	850	238.0	382.0	3.0	81.4
700	900	242.0	438.0	4.0	119
850	1100	252.0	308.0	2.0	13.7
800	1000	254.0	346.0	2.5	33.5
700	900	254.0	346.0	2.5	43.3
670	850	258.0	382.0	3.0	66.6
670	850	258.0	382.0	3.0	81.6
700	900	258.0	422.0	3.0	82.8
630	800	258.0	422.0	3.0	109
670	850	262.0	487.0	4.0	151
800	1000	272.0	348.0	2.0	24.9
750	950	278.0	382.0	3.0	52.7
630	800	278.0	382.0	3.0	69.6
600	750	278.0	422.0	3.0	98.4
600	750	278.0	422.0	3.0	120
670	850	282.0	458.0	4.0	113
560	700	282.0	458.0	4.0	152
600	750	288.0	512.0	5.0	228

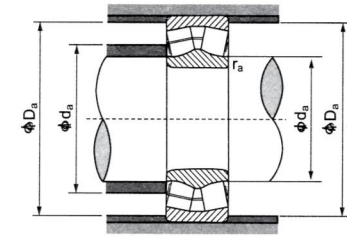
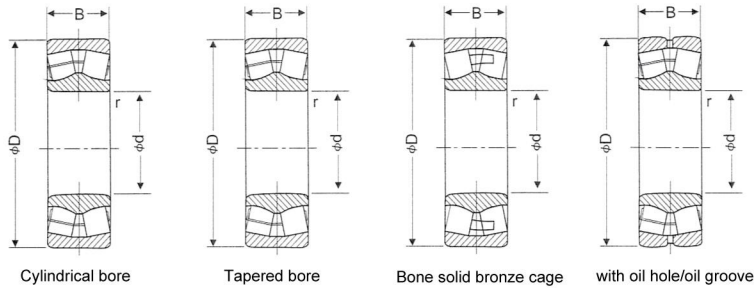
Bore diameter d: 280~340mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
280	380	75	2.1	23956CA/W33	23956CAK/W33	905000	1840000
	420	106	4	23056CA/W33	23056CAK/W33	1460000	2720000
	420	140	4	24056CA/W33	24056CAK/W33	1930000	3900000
	460	146	5	23156CA/W33	23156CAK/W33	2310000	4200000
	460	180	5	24156CA/W33	24156CAK/W33	2580000	4800000
	500	130	5	22256CA/W33	22256CAK/W33	2320000	3700000
	500	176	5	23256CA/W33	23256CAK/W33	3000000	5200000
	580	175	6	22356CA/W33	22356CAK/W33	3550000	5450000
300	420	90	3	23960CA/W33	23960CAK/W33	1250000	2520000
	460	118	4	23060CA/W33	23060CAK/W33	1800000	3300000
	460	160	4	24060CA/W33	24060CAK/W33	2420000	4850000
	500	160	5	23160CA/W33	23160CAK/W33	2650000	4750000
	500	200	5	24160CA/W33	24160CAK/W33	3200000	6100000
	540	140	5	22260CA/W33	22260CAK/W33	2670000	4300000
	540	192	5	23260CA/W33	23260CAK/W33	3550000	6250000
	620	185	7.5	22360CA/W33	22360CAK/W33	3950000	6050000
320	440	90	3	23964CA/W33	23964CAK/W33	1270000	2610000
	480	121	4	23064CA/W33	23064CAK/W33	1860000	3500000
	480	160	4	24064CA/W33	24064CAK/W33	2470000	5100000
	540	176	5	23164CA/W33	23164CAK/W33	3150000	5700000
	540	218	5	24164CA/W33	24164CAK/W33	3650000	6900000
	580	150	5	22264CA/W33	22264CAK/W33	3050000	4900000
	580	208	5	23264CA/W33	23264CAK/W33	4050000	7200000
	460	90	3	23968CA/W33	23968CAK/W33	1320000	2790000
340	520	133	5	23068CA/W33	23068CAK/W33	2270000	4300000
	520	180	5	24068CA/W33	24068CAK/W33	2960000	6050000
	580	190	5	23168CA/W33	23168CAK/W33	3700000	6750000
	580	243	5	24168CA/W33	24168CAK/W33	4350000	8300000
	620	165	6	22268CA/W33	22268CAK/W33	4050000	6850000
	620	224	6	23268CA/W33	23268CAK/W33	4550000	8000000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	d_a (min)	D_a (max)	r_a (max)	
750	950	292.0	368.0	2.0	39.7
700	900	298.0	402.0	3.0	72.8
600	750	298.0	402.0	3.0	98.7
560	700	302.0	438.0	4.0	129
560	700	302.0	438.0	4.0	160
630	800	302.0	478.0	4.0	144
530	670	302.0	478.0	4.0	196
560	700	308.0	552.0	5.0	279
670	850	314.0	406.0	2.5	23.7
630	800	318.0	442.0	3.0	48.9
560	700	318.0	442.0	3.0	65.7
530	670	322.0	478.0	4.0	92
530	670	322.0	478.0	4.0	113
600	750	322.0	518.0	4.0	107
480	600	322.0	518.0	4.0	142
520	650	336.0	584.0	6.0	187
630	800	334.0	426.0	2.5	41.8
600	750	338.0	462.0	3.0	78.6
530	670	338.0	462.0	3.0	104
480	600	342.0	518.0	4.0	168
480	600	342.0	518.0	4.0	206
550	680	342.0	558.0	4.0	179
450	560	342.0	558.0	4.0	244
600	750	354.0	446.0	2.5	44.1
560	700	362.0	498.0	4.0	104
480	600	362.0	498.0	4.0	141
450	560	362.0	558.0	4.0	212
450	560	362.0	558.0	4.0	267
500	620	368.0	592.0	5.0	224
400	530	368.0	592.0	5.0	299

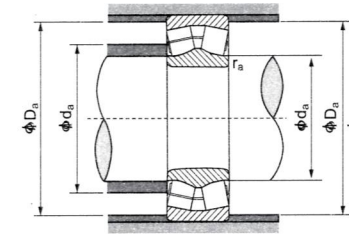
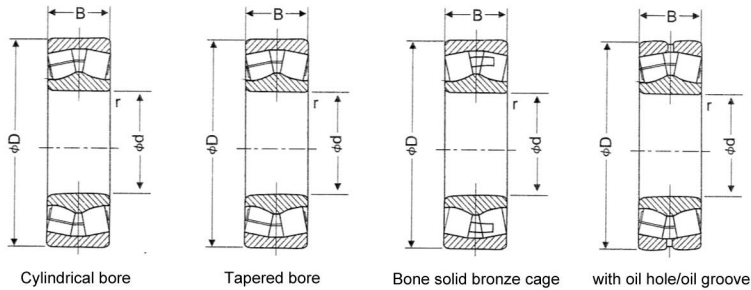
Bore diameter d: 360~440mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
360	480	90	3	23972CA/W33	23972CAK/W33	1360000	2960000
	540	134	5	23072CA/W33	23072CAK/W33	2320000	4500000
	540	180	5	24072CA/W33	24072CAK/W33	3050000	6350000
	600	192	5	23172CA/W33	23172CAK/W33	3850000	7250000
	600	243	5	24172CA/W33	24172CAK/W33	4500000	8750000
	650	232	6	23272CA/W33	23272CAK/W33	5000000	9000000
380	520	106	4	23976CA/W33	23976CAK/W33	1720000	3650000
	560	135	5	23076CA/W33	23076CAK/W33	2370000	4700000
	560	180	5	24076CA/W33	24076CAK/W33	3100000	6650000
	620	194	5	23176CA/W33	23176CAK/W33	3900000	7400000
	620	243	5	24176CA/W33	24176CAK/W33	4650000	9300000
	680	240	6	23276CA/W33	23276CAK/W33	5400000	9800000
400	540	106	4	23980CA/W33	23980CAK/W33	1780000	3900000
	600	148	5	23080CA/W33	23080CAK/W33	2800000	5500000
	600	200	5	24080CA/W33	24080CAK/W33	3600000	7650000
	650	220	6	23180CA/W33	23180CAK/W33	4150000	7900000
	650	250	6	24180CA/W33	24180CAK/W33	4950000	9850000
	720	256	6	23280CA/W33	23280CAK/W33	6100000	11100000
420	560	106	4	23984CA/W33	23984CAK/W33	1810000	4000000
	620	150	5	23084CA/W33	23084CAK/W33	2910000	5850000
	620	200	5	24084CA/W33	24084CAK/W33	3700000	8000000
	700	224	6	23184CA/W33	23184CAK/W33	4900000	9250000
	700	280	6	24184CA/W33	24184CAK/W33	6000000	12000000
	760	272	7.5	23284CA/W33	23284CAK/W33	6750000	12500000
440	600	118	4	23988CA/W33	23988CAK/W33	2230000	4900000
	650	157	6	23088CA/W33	23088CAK/W33	3100000	6250000
	650	212	6	24088CA/W33	24088CAK/W33	4150000	9000000
	720	226	6	23188CA/W33	23188CAK/W33	5150000	10000000
	720	280	6	24188CA/W33	24188CAK/W33	6150000	12700000
	790	280	7.5	23288CA/W33	23288CAK/W33	7200000	13300000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	d _a (min)	D _a (max)	r _a (max)	
600	750	374.0	466.0	2.5	46
430	670	382.0	518.0	4.0	110
450	560	382.0	518.0	4.0	148
430	530	382.0	578.0	4.0	225
430	530	382.0	578.0	4.0	279
380	500	388.0	622.0	5.0	342
530	670	398.0	502.0	3.0	68.2
500	630	402.0	538.0	4.0	116
450	560	402.0	538.0	4.0	154
400	500	402.0	598.0	4.0	236
400	500	402.0	598.0	4.0	290
360	480	408.0	652.0	5.0	383
500	630	418.0	522.0	3.0	71.4
480	600	422.0	578.0	4.0	151
400	500	422.0	578.0	4.0	204
380	480	428.0	622.0	5.0	266
380	480	428.0	622.0	5.0	330
340	450	428.0	692.0	5.0	461
480	600	438.0	542.0	3.0	74.4
450	560	442.0	598.0	4.0	158
380	480	442.0	598.0	4.0	212
360	450	448.0	672.0	5.0	354
360	450	448.0	672.0	5.0	437
330	430	456.0	724.0	6.0	548
450	560	458.0	582.0	3.0	101
430	530	468.0	622.0	5.0	183
360	450	468.0	622.0	5.0	247
340	430	468.0	692.0	5.0	371
340	430	468.0	692.0	5.0	460
320	400	476.0	754.0	6.0	605

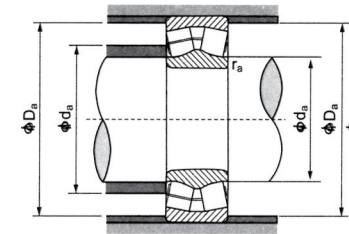
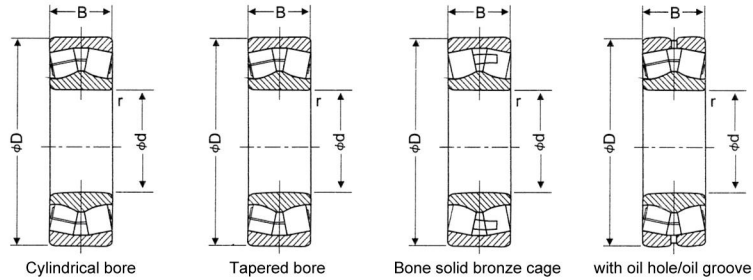
Bore diameter d: 460~600mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
460	620	118	4	23992CA/W33	23992CAK/W33	2220000	4900000
	680	163	6	23092CA/W33	23092CAK/W33	3400000	68500000
	680	218	6	24092CA/W33	24092CAK/W33	4400000	9650000
	760	240	7.5	23192CA/W33	23192CAK/W33	5750000	11200000
	760	300	7.5	24192CA/W33	24192CAK/W33	6800000	13900000
	830	296	7.5	23292CA/W33	23292CAK/W33	7650000	14500000
480	650	128	5	23996CA/W33	23996CAK/W33	2390000	5450000
	700	165	6	23096CA/W33	23096CAK/W33	3500000	7250000
	700	218	6	24096CA/W33	24096CAK/W33	4550000	10100000
	790	248	7.5	23196CA/W33	23196CAK/W33	6100000	12000000
	790	308	7.5	24196CA/W33	24196CAK/W33	7150000	14800000
	870	340	7.5	23296CA/W33	23296CAK/W33	8150000	15400000
500	670	128	5	239/500CA/W33	239/500CAK/W33	2450000	5700000
	720	167	6	230/500CA/W33	230/500CAK/W33	3650000	7650000
	720	218	6	240/500CA/W33	240/500CAK/W33	4650000	10500000
	860	264	7.5	231/500CA/W33	231/500CAK/W33	6700000	13000000
	860	325	7.5	241/500CA/W33	241/500CAK/W33	7950000	16200000
	920	336	7.5	232/500CA/W33	232/500CAK/W33	9500000	17800000
530	710	136	5	239/530CA/W33	239/530CAK/W33	2940000	6800000
	780	185	6	230/530CA/W33	230/530CAK/W33	4500000	9450000
	780	250	6	240/530CA/W33	240/530CAK/W33	5600000	12500000
	870	272	7.5	231/530CA/W33	231/530CAK/W33	7350000	14600000
	980	355	9.5	232/530CA/W33	232/530CAK/W33	11000000	21000000
	750	140	5	239/560CA/W33	239/560CAK/W33	3050000	6950000
560	820	195	6	230/560CA/W33	230/560CAK/W33	5050000	10800000
	820	258	6	240/560CA/W33	240/560CAK/W33	6000000	13500000
	920	280	7.5	231/560CA/W33	231/560CAK/W33	7950000	15800000
	1030	365	9.5	232/560CA/W33	232/560CAK/W33	11500000	22000000
600	800	150	5	239/600CA/W33	239/600CAK/W33	3450000	8050000
	870	200	6	230/600CA/W33	230/600CAK/W33	5500000	12000000
	870	272	6	240/600CA/W33	240/600CAK/W33	6500000	14900000
	980	300	7.5	231/600CA/W33	231/600CAK/W33	8700000	17500000
	1090	388	9.5	232/600CA/W33	232/600CAK/W33	12900000	25100000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	da (min)	Da (max)	ra (max)	
430	530	478.0	602.0	3.0	105
400	500	488.0	652.0	5.0	208
340	430	488.0	652.0	5.0	279
320	400	496.0	724.0	6.0	446
320	400	496.0	724.0	6.0	550
300	380	496.0	794.0	6.0	709
430	530	502.0	628.0	4.0	126
380	480	508.0	672.0	5.0	217
340	430	508.0	672.0	5.0	290
300	380	516.0	754.0	6.0	495
300	380	516.0	754.0	6.0	625
280	360	516.0	834.0	6.0	820
400	500	522.0	648.0	4.0	130
380	480	528.0	692.0	5.0	228
320	400	528.0	692.0	5.0	330
280	360	536.0	794.0	6.0	584
280	360	536.0	794.0	6.0	718
260	340	536.0	884.0	6.0	1000
360	450	552.0	688.0	4.0	156
370	450	558.0	752.0	5.0	308
300	370	558.0	752.0	5.0	417
260	340	566.0	834.0	6.0	640
220	300	574.0	936.0	8.0	1215
340	430	582.0	728.0	4.0	177
340	430	588.0	792.0	5.0	359
280	350	588.0	792.0	5.0	468
240	320	596.0	884.0	6.0	732
190	270	612.0	992.0	8.0	1390
320	400	622.0	778.0	4.0	214
320	400	628.0	842.0	5.0	408
260	330	628.0	842.0	5.0	551
200	280	636.0	944.0	6.0	887
160	240	654.0	1048	8.0	1640

Bore diameter d: 630~950mm



Principal dimensions				Designation		Basic load rating	
d	D	B	r (min)	Cylindrical bore	Tapered bore	Dynamic Cr(N)	Static Cor(N)
630	850	165	6	239/630CA/W33	239/630CAK/W33	4150000	9700000
	920	212	7.5	230/630CA/W33	230/630CAK/W33	6000000	13100000
	1030	315	7.5	231/630CA/W33	231/630CAK/W33	9700000	19800000
670	900	170	6	239/670CA/W33	239/670CAK/W33	4450000	10500000
	980	230	7.5	230/670CA/W33	230/670CAK/W33	6950000	15300000
	980	3080	7.5	240/670CA/W33	240/670CAK/W33	8650000	19800000
	1090	336	7.5	231/670CA/W33	231/670CAK/W33	11000000	23000000
710	950	180	6	239/710CA/W33	239/710CAK/W33	5000000	12100000
	1030	236	7.5	230/710CA/W33	230/710CAK/W33	7450000	16600000
	1150	345	9.5	231/710CA/W33	231/710CAK/W33	12100000	25300000
750	1000	185	6	239/750CA/W33	239/750CAK/W33	5400000	13200000
	1090	250	7.5	230/750CA/W33	230/750CAK/W33	8400000	18900000
	1220	365	9.5	231/750CA/W33	231/750CAK/W33	13000000	27700000
800	1060	195	6	239/800CA/W33	239/800CAK/W33	5850000	14500000
	1150	258	7.5	230/800CA/W33	230/800CAK/W33	8800000	20900000
	1150	345	7.5	240800CA/W33	240800CAK/W33	11100000	27200000
	1280	375	9.5	231/800CA/W33	231/800CAK/W33	14400000	31000000
850	1120	200	6	239/850CA/W33	239/850CAK/W33	6200000	15600000
	1220	272	7.5	230/850CA/W33	230/850CAK/W33	9750000	22500000
900	1180	206	6	239/900CA/W33	239/900CAK/W33	6700000	17000000
	1280	280	7.5	230/900CA/W33	230/900CAK/W33	10500000	25400000
950	1250	224	7.5	239/950CA/W33	239/950CAK/W33	7750000	19900000
	1360	300	7.5	230/950CA/W33	230/950CAK/W33	11600000	27200000

Limiting speed		Abutment and fillet Dimensions, mm			Ref. Weight kg
Grease	Oil	d _a (min)	D _a (max)	r _a (max)	
280	360	658.0	822.0	5.0	273
290	380	666.0	884.0	6.0	487
190	260	666.0	994.0	6.0	1070
260	340	698.0	872.0	5.0	316
270	340	706.0	944.0	6.0	603
230	290	706.0	944.0	6.0	801
180	240	706.0	1054	6.0	1260
240	320	738.0	922.0	5.0	369
250	320	746.0	994.0	6.0	676
170	220	754.0	1106	8.0	1432
220	300	778.0	972.0	5.0	417
230	300	786.0	1054	6.0	803
150	190	794.0	1176	8.0	1710
200	280	825.0	1032	5.0	470
210	270	836.0	1114	6.0	910
200	250	836.0	1114	6.0	1200
160	210	844.0	1236	8.0	1910
190	260	878.0	1092	5.0	546
190	240	886.0	1184	6.0	1059
180	240	928.0	1152	5.0	618
180	220	936.0	1244	5.0	1200
170	220	986.0	1214	6.0	763
160	200	986.0	1324	6.0	1450