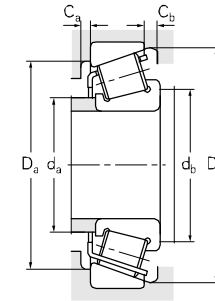
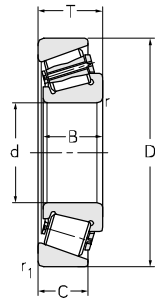
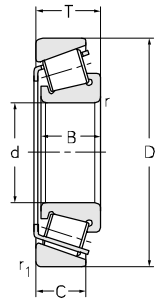


Single-row Tapered Roller Bearing(Metric)

d 90-100 mm

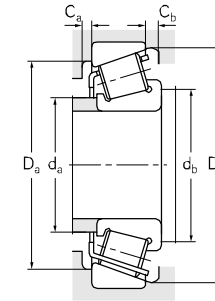
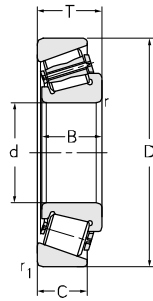
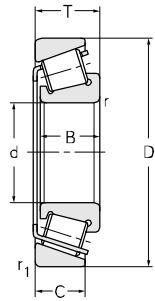


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _r	C _{0r}	Grease	Oil
											r/min	
90	190	46.5	43	36	4	4	3	3	335	410	1800	2600
	190	46.5	43	30	4	4	3	3	283	340	2000	3000
	190	67.5	64	53	4	4	3	3	485	650	1700	2400
90.5	160	42.5	40	34	2.5	2.5	2	2	274	380	2000	3000
95	130	23	22	18	1.5	1.5	1.5	1.5	79.5	135	2300	3300
	145	32	32	24	2	2	1.5	1.5	182	292	2200	3200
	145	32.4	30	26	2	2	1.5	1.5	161	248	2200	3200
	145	39	39	32.5	2	2	1.5	1.5	220	368	2200	3200
	145	39	39	32.5	2	2	1.5	1.5	220	368	2200	3200
	145	39	40	32.5	2	2	1.5	1.5	220	368	2200	3200
	160	47	47	38	3	3	3	3	286	460	2200	3200
	170	45.5	43	37	3	3	2.5	2.5	298	415	1900	2800
	170	45.5	43	37	3	3	2.5	2.5	300	415	1900	2800
	170	34.5	32	27	3	3	2.5	2.5	233	300	1900	2800
	170	47	47	37	3	3	3	3	300	460	1900	2800
	170	58	58	44	3	3	2.5	2.5	405	560	1900	2800
200	49.5	45	38	4	4	3	3	365	445	1800	2600	
	49.5	45	32	4	4	3	3	305	370	1900	2800	
	71.5	67	55	4	4	3	3	520	705	1700	2400	
	71.5	67	55	12	12	3	3	555	765	1700	2400	
	100	140	25	25	20	1.5	1.5	1.5	1.5	116	204	2400
150		32	32	24	2	2	1.5	1.5	190	281	1600	2200
165		52	52	40	2.5	2.5	2	2	301	510	2200	2800
180		63	63	48	3	3	2.5	2.5	430	655	1700	2400
180		63	63	48	3	3	2.5	2.5	450	690	1700	2400
180	37	34	29	3	3	2.5	2.5	262	340	1900	2800	
180	49	46	39	3	3	2.5	2.5	345	490	1800	2600	
215	77.5	73	60	4	4	3	3	570	780	1600	2200	
215	51.5	47	39	4	4	3	3	405	495	1700	2400	
215	56.5	51	35	4	4	3	3	430	465	1600	2200	

Designations	Abutment and fillet dimensions							Calculation coefficient			Weight	
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y	Y0		a
											kg	
30318	113	104	165	176	178	6	11	0.35	1.7	0.96	37	5.76
31318	102	104	151	176	181	6	17	0.83	0.7	0.4	59	5.53
32318	107	104	157	176	178	8	15	0.35	1.7	0.96	45	8.97
32218/YB2	101	97	136	153	155	3	8.5	0.42	1.43	0.79	37	3.48
32919X2A	102	103	117	124	126	5	7	0.38	1.59	0.87	25	0.786
32019	105	104	130	138	139	6	8	0.44	1.35	0.8	31	1.87
32019X2A	105	104	130	136	140	6	8	0.36	1.7	0.93	33	1.80
33019	105	104	128	138	140	4.5	6.5	0.28	2.2	1.19	29	2.32
33019-HD	105	104	128	138	140	4.5	6.5	0.28	2.2	1.19	29	2.32
33019X2/YB2	105	104	128	138	140	4.5	6.5	0.28	2.2	1.19	29	2.25
30619	108	107	137	149	153	4.5	9	0.34	1.8	0.97	35	3.79
32219	106	107	145	158	163	5	8.5	0.42	1.4	0.79	40	4.34
32219N1-WTL	106	107	145	158	163	5	8.5	0.42	1.4	0.79	40	4.18
30219	108	107	149	158	160	5	7.5	0.42	1.4	0.79	35	3.27
33020X3A/HA	116	107	146	159	160	7	10	0.29	2.1	1.15	33	4.26
33219	109	107	141	161	164	7	14	0.41	1.5	0.81	43	5.54
30319	118	109	172	186	185	6	12	0.35	1.7	0.96	39	6.91
31319	107	109	157	186	189	6	18	0.83	0.7	0.4	62	6.84
32319	114	109	166	186	187	8	17	0.35	1.7	0.96	47	10.0
32319/YA6	114	109	166	186	187	8	17	0.35	1.7	0.96	47	10
32920	108	105	127	134	137	3	5	0.33	1.82	1	25	1.13
302020	110	109	131	143	145	4.5	8	0.46	1.3	0.72	33	1.87
33120	111	107	140	158	160	10	12	0.41	1.48	0.81	40	4.33
33220	112	112	151	168	172	10	15	0.4	1.5	0.8	43	6.58
33220/P6XYA8	112	112	151	168	172	10	15	0.4	1.5	0.8	43	6.73
30220	114	112	157	168	169	5	8	0.42	1.4	0.79	37	3.56
32220	113	112	154	168	172	5	10	0.42	1.4	0.79	42	5.31
32320	123	115	177	201	200	8	17.5	0.35	1.7	0.9	51	13.1
30320	127	114	184	201	199	6	13	0.35	1.7	0.96	41	8.09
31320	121	115	168	201	202	7	21.5	0.83	0.72	0.4	65	8.78

Single-row Tapered Roller Bearing(Metric)

d 105~110 mm

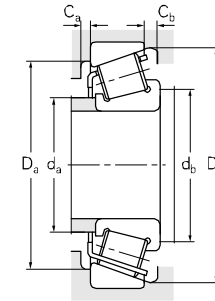
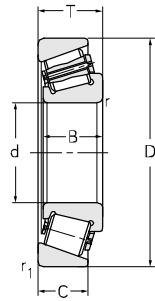
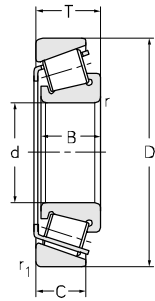


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{Or}	Grease	Oil
mm											kN	r/min
105	160	35	35	26	2.5	2.5	2	2	199	320	1900	2800
	160	35	35	26	2.5	2.5	2	2	206	340	1900	2800
	160	35.4	33	28	2.5	2.5	2	2	199	320	1900	2800
	160	43	43	34	2.5	2.5	2	2	266	405	1900	2800
	160	43	43	34	5	5	2	2	266	405	1900	2800
	160	43	43	34	8	8	2	2	266	405	1900	2800
	160	43	43	34	8	8	2	2	254	430	1900	2800
	170	56	56	44	3	3	2.5	2.5	375	605	1700	2200
	170	38	38	29	2.5	2.5	2	2	246	405	1700	2200
	190	39	36	30	3	3	2.5	2.5	292	365	1800	2600
190	68	68	52	3	3	2.5	2.5	475	730	1800	2600	
190	53	50	43	3	3	2.5	2.5	375	605	1800	2600	
215	78	73	60	3	3	3	3	550	755	1900	2800	
225	53.5	49	41	4	4	3	3	430	530	1600	2200	
225	81.5	77	63	4	4	3	3	660	915	1500	2000	
106	160	35	35	26	6.4	6.4	2	2	206	340	1900	2800
	160	35	35	26	6.4	6.4	2	2	206	340	1900	2800
	160	35	35	26	8.5	8.5	3	3	200	324	1900	2800
110	150	25.4	24	20	1.5	1.5	1.5	1.5	120	224	2000	3000
	170	47	47	37	2.5	2.5	2	2	300	465	1800	2600
	170	47	47	37	2.5	2.5	2	2	305	545	1800	2600
	170	52	52	42	2.5	2.5	2	2	310	570	1800	2600
	170	38	38	29	2.5	2.5	2	2	228	365	1800	2600
	170	38.4	36	31	2.5	2.5	2	2	198	297	1800	2600
	170	38	38	29	2.3	2.3	2.3	2.3	228	365	1800	2600
	170	38	38	29	2.5	2.5	2	2	228	365	1800	2600
	180	56	56	43	2.5	2.5	2	2	364	630	1800	2600
	190	49	49	39	3	3	3	3	360	560	1800	2600
	200	56	53	46	3	3	2.5	2.5	465	695	1700	2400
	200	56	53	46	3	3	2.5	2.5	415	600	1400	1900
200	41	38	32	3	3	2.5	2.5	320	430	1700	2400	

Designations	Abutment and fillet dimensions						Calculation coefficient				Weight kg	
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y	Y0		a
mm												
32021	116	116	143	150	154	6	9	0.44	1.35	0.8	34	2.38
32021-HD	116	116	143	150	154	6	9	0.44	1.35	0.74	34	2.38
32021X2A	116	116	143	150	154	6	9	0.36	1.69	0.93	32	2.5
33021	117	115	141	152	154	4.5	9	0.28	2.1	1.17	31	2.98
33021/YA6	117	121	141	152	154	7	9	0.28	2.1	1.17	31	2.98
33021/YA6-1	117	125	141	152	154	7	9	0.28	2.1	1.17	31	2.98
33021/YA6-1-HD	117	125	141	152	154	7	9	0.28	2.1	1.17	31	2.92
30621	125	122	148	162	164	4.5	9	0.43	1.4	0.77	37	4.71
32021X3	125	122	148	162	164	4.5	9	0.43	1.4	0.77	37	3.36
30221	125	117	162	181	177	6	9	0.42	1.4	0.79	39	4.47
33221	129	117	165	194	188	4.5	18	0.35	1.9	1.05	49	8.02
32221	120	117	161	178	180	6	10	0.43	1.4	0.8	44	6.26
32321X3	129	117	175	204	198	4.5	18	0.31	1.9	1.05	49	12.3
30321	133	119	193	211	208	7	13	0.35	1.7	0.96	43	9.38
32321	128	119	185	211	210	8	19	0.35	1.7	0.96	54	15.0
320/106/P6X	116	116	143	150	154	6	9	0.44	1.35	0.8	34	2.32
320/106/P6XYA6	116	116	143	150	154	6	9	0.44	1.35	0.8	34	2.35
320/106/YAB	116	116	143	150	154	6	9	0.44	1.35	0.74	35	2.38
32922X2A	120	118	138	143	145	7	5.4	0.28	2.1	1.117	23	1.18
33022	123	120	148	162	162	4.5	10	0.29	2.1	1.15	33	3.75
33022/P6XYA8	123	120	148	162	162	4.5	10	0.29	2.1	1.15	33	3.85
33022X2	123	120	148	162	162	4.5	10	0.29	2.1	1.15	33	4.27
32022	123	121	152	160	163	7	9	0.43	1.4	0.8	36	3.03
32022X2A	122	120	152	160	163	7	9	0.35	1.7	0.95	33	3.10
32022/YA6	123	121	152	160	163	7	9	0.43	1.4	0.8	36	3.08
32022/YA8	123	120	148	162	164	4.5	9	0.43	1.4	0.77	37	3.11
33122	121	121	155	170	174	9	13	0.43	1.4	0.8	44	5.50
33022X3A/HA	125	120	151	172	175	7	13	0.42	1.4	0.79	44	5.87
32222	124	122	170	188	192	6	10	0.42	1.4	0.79	48	7.62
32222/YA8	129	122	167	191	190	4.5	10	0.42	1.4	0.79	48	7.58
30222	132	122	171	191	187	6	9	0.42	1.4	0.79	41	5.27

Single-row Tapered Roller Bearing(Metric)

d 110~130 mm

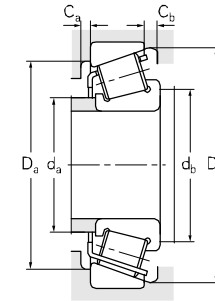
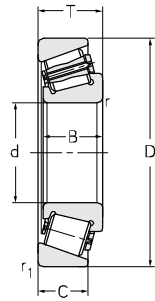
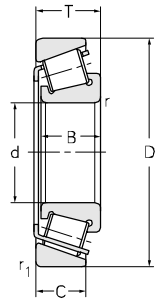


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{OR}	Grease	Oil
											r/min	
110	240	54.5	50	42	4	4	3	3	470	580	1600	2200
	240	63	57	38	4	4	3	3	470	595	1600	2200
	240	84.5	80	65	4	4	3	3	670	1030	1400	1900
115	190	49	49	35	2.5	2.5	2.5	2.5	282	440	1600	2200
120	165	29	29	23	1.5	1.5	1.5	2.5	189	320	1600	2200
	180	48	48	38	2.5	2.5	2	2	295	530	1800	2600
	180	48	48	38	2.5	2.5	2	2	305	550	1800	2600
	180	38	38	29	2.5	2.5	2	2	237	395	1700	2400
	180	38	38	29	2.5	2.5	2	2	250	420	1700	2400
	180	38.4	36	31	2.5	2.5	2	2	230	325	1700	2400
	180	38	38	29	2.5	2.5	2	2	250	430	1700	2400
	200	62	62	48	2.5	2.5	2	2	440	770	1700	2400
	215	61.5	58	50	3	3	2.5	2.5	480	720	1600	2200
	215	43.5	40	34	3	3	2.5	2.5	335	465	1600	2200
260	59.5	55	46	4	4	3	3	560	710	1500	2000	
260	68	62	42	4	4	3	3	531	690	1200	1700	
260	90.5	86	69	4	4	3	3	860	1330	1300	1800	
130	180	32.5	30	26	2	2	1.5	1.5	178	350	1700	2400
	200	55	55	43	2.5	2.5	2	2	385	690	1500	2000
	200	45	45	34	2.5	2.5	2	2	340	580	1600	2200
	200	45.5	42	36	2.5	2.5	2	2	271	420	1500	2000
	230	43.75	40	34	4	4	3	3	360	480	1500	2000
	230	55.75	52	42	8	8	3	3	495	750	1400	1900
	230	67.75	64	54	4	4	3	3	555	845	1500	2000
	230	67.75	64	54	4	4	3	3	555	845	1500	2000
	230	67.75	64	54	4	4	3	3	555	845	1500	2000
	280	63.75	58	49	5	5	4	4	625	800	1300	1800
280	72	66	44	5	5	4	4	620	805	1300	1800	
280	98.75	93	78	3.7	3.7	3.7	3.7	795	1250	1100	1600	

Designations	Abutment and fillet dimensions						Calculation coefficient				Weight kg	
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y	Y0		a
mm												
30322	142	124	206	226	222	8	13	0.35	1.7	0.96	45	11.1
31322	129	124	188	226	226	7	25	0.83	0.7	0.4	75	12.5
32322	137	125	198	226	222	9	19.5	0.35	1.7	0.9	55	17.9
30623	131	120	160	181	180	4.5	14	0.44	1.4	0.74	42	5.13
32924	131	118	150	158	161	4.5	6	0.35	1.7	0.95	29	1.79
33024A	132	131	160	170	171	6	10	0.3	2	1.1	36	4.17
33024-HD	132	131	160	170	171	6	10	0.31	1.97	1.08	36	4.07
32024	132	120	157	172	175	4.5	9	0.46	1.3	0.72	40	3.31
32024-HD	132	131	161	170	173	7	9	0.46	1.3	0.7	39	3.27
32024X2A	131	130	161	170	173	7	9	0.37	1.6	0.89	29	3.66
32024/YA5-ZQ/P6X	131	130	161	170	173	7	9	0.46	1.31	0.72	39	3.29
33124	135	132	177	190	190	6	9.5	0.44	1.4	0.76	45	7.74
32224	134	132	181	203	206	7	12	0.44	1.4	0.76	52	9.60
30224	139	132	187	203	203	6	9.5	0.44	1.4	0.76	45	6.32
30324	153	135	221	245	237	7	13.5	0.35	1.7	0.9	47	14.2
31324	145	135	203	245	244	9	26	0.83	0.72	0.4	78	15.6
32324	148	135	213	245	239	9	21.5	0.35	1.7	0.9	60	22.4
32926X2A	142	139	164	173	174	9	6.5	0.27	2.2	1.22	28	2.31
33026	144	138	175	193	194	9	12	0.34	1.76	0.97	42	6.04
32026	144	142	178	190	192	7	11	0.43	1.4	0.8	42	5.06
32026X2A	144	140	178	190	192	8	11	0.35	1.7	0.95	39	4.66
30226	150	144	203	216	219	7	10	0.44	1.4	0.76	47	7.02
30226X2	150	144	203	216	219	7	10	0.39	1.56	0.86	48	9.25
32226	143	144	193	216	221	7	14	0.44	1.4	0.76	56	11.8
32226-1	146	146	193	216	219	7	13.5	0.43	1.4	0.8	56	11.6
32226A	146	146	193	216	219	7	13.5	0.43	1.4	0.8	56	11.7
30326	164	150	239	263	255	8	14.5	0.35	1.7	0.9	51	17.4
31326	150	147	218	262	263	9	28	0.83	0.7	0.4	87	18.9
32326/YA6	168	144	227	280	258	4.5	22	0.32	1.9	1.04	65	26.4

Single-row Tapered Roller Bearing(Metric)

d 140~170 mm

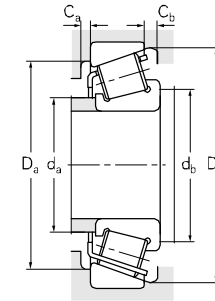
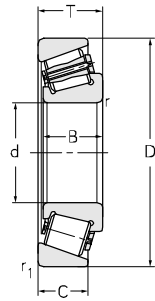
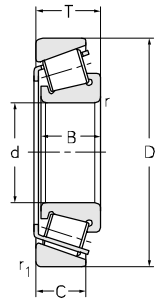


Principal dimensions					Basic load ratings				Limit speed ratings				
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _r	C _{Or}	Grease	Oil	
										r/min			
140	190	32	32	25	2	2	1.5	1.5	206	390	1600	2200	
	190	32.5	30	26	2	2	1.5	1.5	206	390	1600	2200	
	210	45	45	34	2.5	2.5	2	2	330	560	1600	2200	
	210	45.5	42	36	2.5	2.5	2	2	330	560	1600	2200	
	230	58	57	45	3	3	3	3	400	660	1600	2200	
	230	58	57	45	3	3	3	3	400	660	1600	2200	
	250	45.75	42	36	4	4	3	3	405	540	1400	1900	
	250	71.75	68	58	4	4	3	3	650	1000	1400	1900	
	300	107.75	102	85	5	5	4	4	1090	1630	1200	1700	
	300	67.75	62	53	5	5	4	4	740	945	1200	1700	
	300	77	70	47	5	5	4	4	695	900	1200	1700	
	300	90	82	60	3.7	3.7	3.7	3.7	660	915	1200	1700	
150	210	38	38	30	2.5	2.5	2	2	270	465	1500	2000	
	210	38.5	36	31	2.5	2.5	2	2	220	385	1500	2000	
	225	48	48	36	3	3	2.5	2.5	365	635	950	1400	
	225	48.5	45	38	3	3	2.5	2.5	365	635	950	1400	
	225	48.5	45	38	3	3	2.5	2.5	254	635	950	1400	
	270	49	45	38	4	4	3	3	450	605	1300	1800	
	270	77	73	60	4	4	3	3	735	1140	1200	1700	
	320	114	108	90	5	5	4	4	1280	1880	950	1400	
	320	72	65	55	5	5	4	4	815	1050	1100	1600	
	160	220	38.5	36	31	2.5	2.5	2	2	232	400	1500	2000
		240	51	51	38	3	3	2.5	2.5	415	730	1100	1600
		240	51.5	48	41	3	3	2.5	2.5	415	730	1100	1600
290		52	48	40	4	4	3	3	510	695	1100	1600	
290		84	80	67	4	4	3	3	925	1490	1100	1600	
340		88	79	54	3.7	3.7	3.7	3.7	825	1080	1000	1500	
340	121	114	95	5	5	4	4	1540	2230	1000	1500		
170	220	27	25	19.5	3	3	3	3	166	328	1600	2150	

Designations	Abutment and fillet dimensions							Calculation coefficient			Weight	
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y	Y0		a
mm												kg
32928	150	150	177	182	184	6	7	0.35	1.7	0.9	33	2.55
32928X2A	142	149	164	183	174	9	6.5	0.27	2.2	0.22	28	2.43
32028	154	150	183	202	204	4.5	11	0.46	1.3	0.72	46	5.84
32028X2A	153	150	187	201	202	8	11	0.37	1.6	0.89	42	4.94
30628	182	152	217	219	242	4.5	13	0.44	1.4	0.74	56	8.97
30628R	182	152	217	219	242	4.5	13	0.44	1.4	0.74	56	9.2
30228	162	154	219	236	234	9	11	0.44	1.4	0.76	50	8.8
32228	156	154	210	236	240	8	14	0.44	1.4	0.76	61	14.7
32328	177	156	239	287	276	9	22.8	0.37	1.6	0.9	74	35.8
30328	176	155	255	282	275	9	15	0.35	1.7	0.96	56	21.2
31328	162	157	235	282	283	9	30	0.83	0.7	0.4	93	23.4
31328X2A	176	154	228	300	276	4.5	30	0.73	0.8	0.45	91	29.0
32930	161	160	190	202	202	9	7.5	0.33	1.83	1	36	3.83
32930X2A	165	160	191	202	201	9	7.5	0.27	2.2	1.21	33	4.56
32030	161	160	197	216	217	9	13	0.46	1.3	0.72	49	6.40
32030X2	164	162	200	213	216	8	13	0.39	1.5	0.85	46	6.84
32030X2A	164	162	200	213	216	8	13	0.39	1.54	0.85	46	6.84
30230	174	164	234	256	252	9	11	0.44	1.4	0.76	53	11.2
32230	168	164	223	256	256	4.5	17	0.44	1.4	0.76	64	18.4
32330	190	166	261	307	299	4.5	24	0.35	1.7	0.96	77	42.2
30330	190	165	273	302	294	4.5	17	0.35	1.7	0.96	60	25.5
32932X2A	175	170	203	212	213	9	7.5	0.27	2.2	1.23	34	3.79
32032	174	173	211	231	232	8	13	0.46	1.3	0.72	53	7.69
32032X2A-1	175	172	213	228	231	8	13	0.37	1.6	0.89	47	7.67
30232	189	174	252	276	271	9	12	0.44	1.4	0.76	57	13.4
32232	180	174	242	276	276	10	17	0.44	1.4	0.76	70	23.3
31332	199	161	265	340	315	4.5	34	0.76	0.8	0.43	100	29.9
32332	199	176	274	327	314	4.5	26	0.35	1.7	0.96	81	51.7
32934X3	175	171	203	211	212	9	7.5	0.47	1.3	0.72	53	2.33

Single-row Tapered Roller Bearing(Metric)

d 170~190 mm

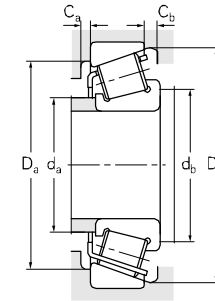
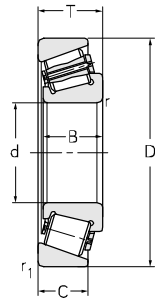
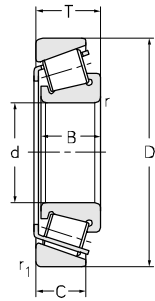


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{OR}	Grease	Oil
											r/min	
											kN	
170	230	38	38	30	2.5	2.5	2	2	280	560	1400	1900
	230	38.5	36	31	2.5	2.5	2	2	235	415	1400	1900
	260	57	57	43	3	3	2.5	2.5	520	870	1200	1700
	260	57	57	43	1.5	1.5	1.5	1.5	520	870	1600	2100
	260	57.5	54	46	3	3	2.5	2.5	430	750	1400	1900
	310	91	86	71	5	5	4	4	1010	1630	1000	1500
	360	80	72	62	5	5	4	4	945	1360	950	1400
	360	128	120	100	3.7	3.7	3.7	3.7	1430	2120	950	1400
	360	127	120	100	5	5	5	5	1440	2140	950	1400
	180	250	45	45	34	2.5	2.5	2	2	345	725	1600
250		45	42	36	2.5	2.5	2	2	345	725	1200	1700
280		64	64	48	3	3	2.5	2.5	610	1070	950	1400
280		64.5	60	52	3	3	2.5	2.5	610	1070	950	1400
280		64.5	60	52	3	3	2.5	2.5	610	1070	950	1400
290		65	63.5	48	2.3	2.3	2.3	2.3	580	1010	950	1400
300		73	70	60	3	3	3	3	730	1210	950	1400
320		57	52	43	5	5	4	4	590	820	1000	1500
320		91	86	71	5	5	4	4	940	1700	950	1400
380		83	75	64	5	5	4	4	1180	1580	900	1300
380	98	88	60	5	5	4	4	1050	1500	900	1300	
190	260	45	45	34	2.5	2.5	2	2	350	670	1100	1600
	260	45.5	42	36	2.5	2.5	2	2	350	670	1100	1600
	290	64	64	48	3	3	2.5	2.5	650	1180	1000	1500
	290	64.5	60	52	3	3	2.5	2.5	650	1180	1000	1500
	290	51	46	40	3	3	2.5	2.5	380	610	950	1400
	290	64.5	60	52	3	3	2.5	2.5	650	1180	1000	1500
	290	64.5	60	52	3	3	2.5	2.5	650	1180	1000	1500
	340	60	55	46	5	5	4	4	680	1040	950	1400
	400	103	90	62	5	5	4	4	1180	1690	810	1000

Designations	Abutment and fillet dimensions							Calculation coefficient				Weight		
	d _a max	d _b min	D _a min	D _a max	D _b min	C _a min	C _b min	e	Y	Y ₀	a			
											mm		kg	
32934	183	182	213	220	222	7	8	0.37	1.6	0.9	42	4.51		
	32934X2A	185	180	213	222	224	9	7.5	0.28	2.1	1.17	36	3.864	
32034	188	184	230	246	249	10	14	0.44	1.35	0.8	56	10.6		
	32034/P4YA6	188	184	230	246	249	10	14	0.44	1.35	0.8	56	10.6	
	32034X2A	187	182	230	248	249	10	14	0.31	1.9	1.07	47	10.1	
	32234	196	190	259	293	294	10	20	0.43	1.4	0.8	75	30.0	
30334	217	185	304	348	333	10	18	0.35	1.74	0.96	68	35.8		
	32334/YA6	213	184	288	360	332	4.5	28	0.36	1.7	0.92	87	63.5	
	32334/YA6-1	213	184	288	360	332	4.5	28	0.36	1.7	0.92	87	63.5	
32936	194	192	225	240	241	8	11	0.48	1.25	0.7	53	6.7		
	32936X2A	194	152	225	240	241	8	11	0.48	1.25	0.7	53	6.44	
	32036	199	192	247	268	267	9	16	0.42	1.4	0.8	75	13.9	
	32036X2A	199	192	247	268	267	9	16	0.28	2.2	1.19	53	13.0	
	32036X2A/YA8	199	192	247	268	267	9	16	0.28	2.2	1.19	53	13.1	
	32036X3A	207	196	247	290	274	4.5	17	0.44	1.4	0.75	62	15.6	
30236X3	209	198	278	302	300	4.5	14					19.8		
	30236	209	198	278	302	300	4.5	14	0.45	1.3	0.73	64	17.8	
	32236	204	200	267	303	303	10	20	0.44	1.35	0.8	78	30.2	
	30336	207	233	362	324	345	10	19	0.36	1.7	0.92	72.4	41.4	
	31336	217	220	289	368	355	12	21	0.55	0.73	0.8	120	46.4	
	32938	205	202	235	252	251	10	9.5	0.48	1.25	0.7	55	6.94	
32938X2A		205	202	235	252	251	10	9.5	0.38	1.6	0.86	49	6.52	
32038	210	204	257	276	279	10	16	0.44	1.35	0.8	62	14.5		
	32038X2A	209	202	257	278	279	10	13	0.37	1.6	0.89	58	15.28	
	32038X2A-1	215	202	256	281	272	4.5	11	0.38	1.6	0.87	53	10.5	
	32038X2A/P4	209	202	257	278	279	10	13	0.37	1.6	0.89	58	15.3	
	32038X2A/YA8	209	202	257	278	279	10	13	0.37	1.6	0.89	58	15.28	
	30238	224	210	298	323	318	9	14	0.43	1.8	0.8	63	20.6	
31338		234	203	306	388	375	13	41	0.83	0.72	0.4	126	53.3	

Single-row Tapered Roller Bearing(Metric)

d 200~240 mm

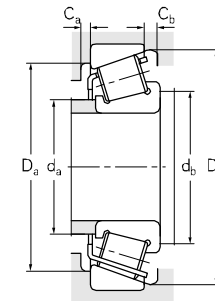
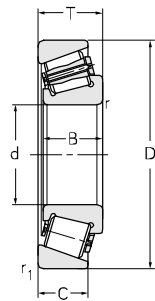
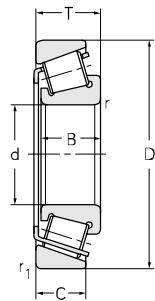


Principal dimensions					Basic load ratings				Limit speed ratings					
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{OR}	Grease	Oil		
										r/min				
mm													kN	
200	280	51	51	39	3	3	2.5	2.5	455	935	1000	1500		
	280	51.5	48	41	3	3	2.5	2.5	455	935	1000	1500		
	310	70	70	53	3	3	2.5	2.5	760	1370	950	1400		
	310	70.5	66	56	3	3	2.5	2.5	760	1370	950	1400		
	310	70	66	56	3	3	2.5	2.5	760	1370	950	1400		
	310	70	66	56	3	3	2.5	2.5	760	1370	950	1400		
	360	64	58	48	5	5	4	4	780	1100	900	1300		
	360	104	98	82	5	5	4	4	1350	2144	900	1300		
	420	146	138	115	5	5	5	5	1820	2850	800	1100		
210	285	41	40	33	4	4	3	3	360	710	1000	1500		
220	300	51	51	39	3	3	2.5	2.5	465	960	950	1400		
	300	51.5	48	41	3	3	2.5	2.5	465	960	900	1400		
	340	76	76	57	4	4	3	3	850	1520	900	1300		
	340	76	76	57	4	4	3	3	850	1520	900	1300		
	340	76.5	72	62	4	4	3	3	850	1520	950	1400		
	360	85	82	70	4	4	4	4	1000	1800	830	1050		
	400	72	65	54	5	5	4	4	975	1370	900	1300		
	400	73	65	54	3.7	3.7	4	4	975	1370	900	1300		
	400	72	65	54	5	5	4	4	993	1400	850	1200		
	400	114	108	90	5	5	4	4	1650	2770	900	1300		
	460	154	145	122	5	5	5	5	2130	3310	710	900		
240	320	51	48	41	3	3	2.5	2.5	505	1080	900	1300		
	320	51	48	41	3	3	2.5	2.5	505	1080	900	1300		
	360	76	76	57	4	4	3	3	905	1660	850	1200		
	360	76	76	57	4	4	3	3	905	1660	850	1200		
	360	76.5	72	62	4	4	3	3	770	1400	850	1200		
	440	79	72	60	5	5	4	4	1070	1550	750	1000		
	440	127	120	100	5	5	4	4	1900	3300	700	950		
	440	127	120	100	5	5	4	4	1900	3300	750	1000		
	500	165	155	132	6	6	5	5	2360	4100	670	900		

Designations	Abutment and fillet dimensions							Calculation coefficient				Weight		
	d _a max	d _b min	D _a min	D _a max	D _b min	C _a min	C _b min	e	Y	Y ₀	a			
mm													kg	
32940	218	215	252	271	270	4.5	11	0.39	1.5	0.84	54	9.56		
	32940X2A	220	212	251	271	270	4.5	11	0.39	1.5	0.84	54	8.86	
32040	222	214	273	296	297	11	17	0.43	1.4	0.8	66	19.5		
	32040X2A	221	212	273	298	297	11	17	0.39	1.5	0.84	65	18.2	
32040X2A/P4YA8	221	212	273	298	297	11	17	0.39	1.53	0.84	67	17.8		
32040X2A/YA8	221	212	273	298	297	11	17	0.39	1.5	0.84	65	17.8		
30240	236	218	315	342	338	9	16	0.44	1.4	0.76	70	25.4		
32240	222	218	302	342	342	11	22	0.41	1.5	0.81	84	42.6		
32340	239	253	398	346	346	11	31	0.37	1.6	0.88	107	90.5		
30642N1-WTL	218	215	252	271	270	4.5	11	0.32	1.9	1.04	52	7.28		
32944	234	234	275	286	290	9	12	0.43	1.4	0.8	58	10.0		
	32944X2A	310	232	342	291	361	10	11	0.39	1.5	0.84	66	10.1	
32044	244	234	300	325	326	12	19	0.43	1.4	0.8	72	23.9		
32044/P6-XD	244	236	300	325	326	12	19	0.43	1.4	0.8	72	24.2		
32044X2A	243	234	300	326	326	12	19	0.35	1.7	0.95	67	23.3		
32044X3	243	234	300	326	326	12	19	0.4	1.51	0.83	77	32.9		
30244	256	220	334	382	382	10	18	0.42	1.4	0.79	77	36.8		
30244A/YA6	256	220	334	382	382	10	19	0.37	1.6	0.88	71	37.6		
30244/HC	259	242	348	383	371	10	18	0.43	1.4	0.8	74	36.8		
32244	256	220	334	382	382	10	24	0.44	1.4	0.76	96	62.7		
32344	274	235	372	445	430	13	32	0.37	1.62	0.89	112	114		
32948X2A	259	252	331	387	309	10	11	0.32	1.9	1.04	52	10.8		
32948X2A/P4	259	252	331	387	309	10	11	0.32	1.9	1.04	52	11.1		
32048	262	256	318	345	346	12	19	0.46	1.3	0.7	78	26		
32048/P6-XD	262	256	318	345	346	12	19	0.46	1.3	0.7	78	26		
32048X2A	261	254	318	346	346	12	19	0.31	1.9	1.05	65	23.8		
30248	267	288	422	384	408	11	19	0.44	1.4	0.74	85	46.8		
32248	276	262	365	420	415	14	27	0.43	1.4	0.8	105	82.5		
32248/HC	276	262	365	420	415	14	27	0.43	1.4	0.8	105	82.5		
32348	279	301	478	410	464	12	33	0.37	1.6	0.88	123	147		

Single-row Tapered Roller Bearing(Metric)

d 254~300 mm

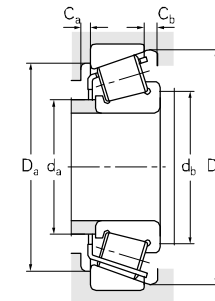
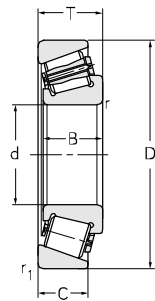
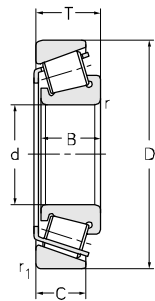


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{OR}	Grease	Oil
										r/min		
mm												
254	422.275	86.1	79.8	66.7	4.7	4.7	2.5	2.5	1010	1760	710	900
255	560	123.05	104.8	70	6	6	6	6	1920	2690	560	750
260	360	63.5	63.5	48	3	3	2.5	2.5	650	1270	800	1100
	360	63.5	63.5	48	3	3	2.5	2.5	650	1270	800	1100
	360	64.5	60	52	3	3	2.5	2.5	595	1250	800	1100
	360	64.5	60	53	3	3	2.5	2.5	630	1310	800	1100
	400	87	87	65	5	5	4	4	1100	2030	800	1100
	400	87	87	65	5	5	4	4	1100	2030	800	1100
	400	87.7	82	71	5	5	4	4	1050	1960	800	1100
	480	89	80	67	6	6	5	5	1430	2150	670	900
	480	137	130	105	6	6	5	5	2160	3650	670	900
	480	133.5	141	102.5	6	6	5	5	2280	3750	670	900
	540	114	102	85	6	6	6	6	2015	2730	670	900
280	380	63.5	63.5	48	3	3	2.5	2.5	720	1500	800	1100
	380	64.5	60	52	3	3	2.5	2.5	720	1500	800	1100
	420	87	87	65	5	5	4	4	1200	2300	750	1000
	420	87	87	65	5	5	4	4	1200	2300	750	1000
	420	87.7	82	71	5	5	4	4	1200	2300	750	1000
285	370	40	40	28	3	3	2.5	2.5	360	720	730	930
300	420	74.5	72	62	4	4	3	3	710	1810	700	950
	420	76.5	72	62	4	4	3	3	880	1870	700	950
	440	73	70	55	4	4	3	3	860	1460	700	950
	460	100	100	74	5	5	4	4	1460	2740	670	900
	460	100	100	74	5	5	4	4	1430	2740	670	900
	460	100.7	95	77	5	5	4	4	1310	2400	700	950
	540	96	85	71	6	6	5	5	1600	2500	630	760
	540	149	140	115	6	6	5	5	2610	4450	670	900

Designations	Abutment and fillet dimensions						Calculation coefficient			Weight		
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y		Y0	a
mm												
kg												
306/254	293	270	371	413	403	12	19	0.36	1.65	0.9	81	45.4
30651	329	274	435	542	510	13	53.1	0.87	0.7	0.38	171	127
32952	286	272	325	351	344	13	13	0.41	1.48	0.81	72	17.9
32952/P4	286	272	325	351	344	13	13	0.3	2	1.09	60	17.9
32952X2A	286	272	325	351	344	13	13	0.3	2	1.09	60	19.2
32952X2A-1	286	272	325	351	344	13	13	0.3	2	1.09	60	19.1
32052	287	282	352	383	383	13	12	0.43	1.4	0.8	84	39.8
32052/HC	287	282	352	383	383	13	22	0.43	1.4	0.8	84	37.5
32052X2A	287	278	352	382	383	14	22	0.3	2	1.11	71	37.8
30252	293	316	458	421	447	12	22	0.44	1.4	0.74	94	63.9
32252	305	279	394	465	451	13	32	0.43	1.4	0.77	113	105
32252X2/HC	302	285	397	465	453	12	30	0.43	1.4	0.77	111	101
30352	332	279	449	522	481	10	29	0.32	1.9	1.04	92	113
32956	305	292	344	371	364	13	13	0.43	1.4	0.77	100	20
32956X2A	305	292	344	371	364	13	13	0.32	1.9	1.03	64	21.3
32056	305	302	370	400	402	14	22	0.46	1.3	0.7	89	40.4
32056/HC	305	302	370	400	402	14	22	0.46	1.3	0.7	89	40.4
32056X2A	305	302	370	400	402	14	22	0.46	1.3	0.7	89	39.6
306/285	308	295	344	361	358	10	12	0.4	1.49	0.82	61	10.1
32960	330	314	379	409	400	13	15	0.28	2.1	1.17	67	30.2
32960X2A	330	314	379	409	400	13	15	0.28	2.12	1.17	70	30.2
32960X3B/P5	335	314	398	429	423	13	18	0.44	1.4	0.75	87	34.2
32060	330	322	404	440	439	15	26	0.43	1.4	0.8	97	56.6
32060/HC	330	322	404	440	439	15	26	0.43	1.4	0.8	97	56.6
32060X2A	329	318	404	442	439	15	26	0.36	1.7	0.9	89	57.0
30260	358	320	458	525	498	15	25	0.44	1.36	0.75	106	84.7
32260/HCYB2								0.43	1.39	0.77	126	138

Single-row Tapered Roller Bearing(Metric)

d 320~420 mm

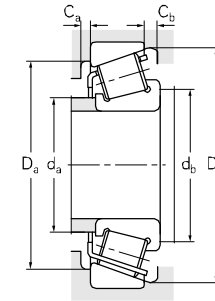
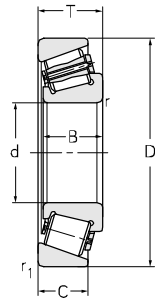
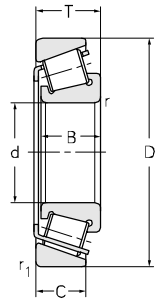


Principal dimensions	Basic load ratings								Limit speed ratings			
	d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _R	C _{OR}	Grease
mm	kN								r/min			
320	440	76	72	62	4	4	3	3	960	1940	670	900
	480	100	100	74	5	5	4	4	1540	2940	630	850
	480	100	100	74	5	5	4	4	1550	2940	630	850
	480	95	95	70	5	5	4	4	1480	2860	630	850
	580	104	92	75	6	6	5	5	1700	2560	530	750
340	460	76	76	57	4	4	3	3	1000	2350	500	830
	460	76	76	57	4	4	3	3	1000	2350	500	830
	460	76	72	63	4	4	3	3	920	1990	500	830
	500	100	100	74	5	5	5	5	1800	3050	500	630
	500	100	100	74	5	5	5	5	1530	3050	500	630
	520	86	82	64	5	5	4	4	1200	2050	500	630
360	480	76	76	57	4	4	4	4	970	2220	500	630
	530	80	66	59	5	5	5	5	1030	1900	500	630
	540	86	82	63.5	5	5	4	4	1270	2200	480	600
	650	155	150	110	7.5	7.5	7.5	7.5	2900	5650	400	500
380	520	87	82	71	5	5	4	4	1190	2670	560	750
	620	112	106	92	5	5	5	5	2170	3800	400	500
400	500	60	57	47	4	4	3	3	460	950	400	500
	540	70	65	48	4	4	4	4	965	1930	350	450
	540	70	70	53	5	5	4	4	1040	2320	350	450
	540	87	82	71	5	5	4	4	1280	2880	380	480
	600	125	118	100	6	6	5	5	2170	4550	400	500
	750	130	115	77	6	6	6	6	2660	4180	320	430
420	560	70	65	51	4	4	4	4	1020	2090	420	560
	560	70	65	51	4	4	4	4	1020	2090	420	560
	560	87	82	72	5	5	4	4	1170	2900	420	560
	560	70	65	51	4	4	4	4	1020	2090	420	560
	620	95	90	67	5	5	5	5	1560	2930	380	480

Designations	Abutment and fillet dimensions						Calculation coefficient			Weight		
	d _a max	d _b min	D _a min	D _a max	D _b min	C _a min	C _b min	e	Y		Y ₀	a
	mm									kg		
32964X2A	343	337	402	424	426	13	19	0.43	1.4	0.8	84	32.1
32064	354	336	419	467	463	13	26	0.46	1.3	0.72	104	62.7
32064/HC	354	336	419	467	463	13	26	0.46	1.3	0.72	104	62.7
32064X2	354	336	419	467	463	13	26	0.46	1.3	0.72	104	57.7
30264	353	381	558	503	533	14	29	0.44	1.4	0.74	114	103
32968	361	357	421	444	446	14	19	0.44	1.35	0.8	90	36.5
32968/P4	361	357	421	444	446	14	19	0.44	1.35	0.8	90	31.6
32968X2A	361	357	421	444	446	14	19	0.41	1.45	0.8	91	31.6
32068X3/HCYB2	371	356	442	484	481	12	26	0.4	1.49	0.82	99	62.8
32068X3/YB2	371	356	442	484	481	12	26	0.4	1.49	0.82	99	62.8
31068X2	378	367	462	507	483	13	20	0.29	2.09	1.15	78	73.9
32972	388	374	433	467	468	13	19	0.46	1.3	0.72	97	38.5
30672/P5	410	376	476	515	502	13	21	0.4	1.5	0.82	95	53.2
31072X2	401	390	482	526	509	13	21	0.37	1.61	0.89	97	73.1
30672-1	410	376	476	515	502	13	21	0.6	1.01	0.55	169	219
32976	407	406	502	478	501	16	16	0.39	1.6	0.86	95	50.0
31176X2	431	396	534	604	590	12	20	0.46	1.3	0.72	126	123
30680	368	414	406	489	430	13	13	0.38	1.6	0.86	77	25.1
31980	450	436	500	550	530	8	8	0.42	1.5	0.9	100	39.7
31980X2	450	436	500	550	530	8	8	0.42	1.5	0.9	100	44
32980	450	436	500	550	530	8	8	0.4	1.4	0.8	185	54.1
32080	443	420	527	585	574	14	25	0.36	1.67	0.92	118	118
30680-1	480	470	617	730	688	15	15	0.7	0.86	0.47	189	222
31984	458	436	528	528	549	13	28	0.41	1.5	0.81	106	41.7
31984/HC	458	436	528	528	549	13	28	0.41	1.5	0.81	106	41.8
32984X2	448	435	507	547	547	10	15	0.41	1.46	0.8	107	56.8
31984/P4	458	436	528	528	549	13	28	0.41	1.5	0.81	106	41.7
31084X2	470	436	552	605	586	13	28	0.41	1.5	0.8	111	88.3

Single-row Tapered Roller Bearing(Metric)

d 420~830 mm

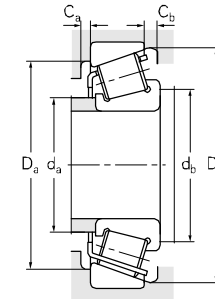
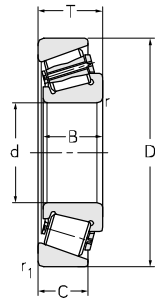
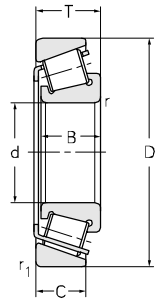


Principal dimensions					Basic load ratings				Limit speed ratings			
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _r	C _{Or}	Grease	Oil
										r/min		
420	620	95	90	67	5	5	5	5	1560	2940	380	480
	620	125	118	100	6	6	5	5	2300	5100	380	480
	700	130	122	92	6	6	6	6	2700	4990	350	440
440	620	95	90	67	5	5	5	5	1400	2900	360	460
	650	130	126	104	6	6	6	6	2620	5650	350	450
460	600	87	82	71	5	5	4	4	1340	3150	360	460
	600	87	85	63.5	4	4	4	4	1300	3010	360	460
	620	80	74	58	4	4	4	4	1260	2570	350	450
	680	105	100	78	6	6	6	6	1990	3700	330	440
470	630	80	80	62	5	5	5	5	1410	3100	350	450
530	710	88	82	62	5	5	5	5	1560	3150	340	450
600	720	73	69	56	3	3	3	3	1230	3320	340	450
	870	124	118	89	6	6	6	6	3150	6650	340	450
610	820	105	95	80	6	6	6	6	1830	4200	350	460
630	850	132	132	95	6	6	6	6	3080	7150	360	450
	920	134	128	94	7.5	7.5	7.5	7.5	3410	7100	320	430
710	950	114	106	80	6	6	6	6	2860	6900	260	360
	950	130	122	95	6	6	6	6	3400	7800	260	360
710.5	950	130	122	95	6	6	6	6	3400	7800	260	360
711	950	114	106	80	6	6	6	6	2800	6900	260	360
760	890	78	75	59	4.7	4.7	4.7	4.7	1360	3520	250	340
830	1080	156	156	118	6	6	6	6	4600	12000	230	430
	1100	156	152	118	6	6	6	6	4600	12400	230	430

Designations	Abutment and fillet dimensions							Calculation coefficient			Weight	
	d _a max	d _b min	D _a min	D _a max	D _b min	C _a min	C _b min	e	Y	Y ₀		a
mm												kg
31084X2/P5	470	436	552	605	586	13	28	0.41	1.5	0.8	111	88.3
	473	444	572	572	600	13	28	0.37	1.6	0.88	120	125
	491	440	607	680	646	13	38	0.32	1.88	1.04	116	175
32988X3	480	455	555	605	590	10	28	0.41	1.46	0.8	114	81.3
	485	460	574	630	621	12	26	0.36	1.67	0.92	125	141
30692/HC	489	475	546	587	588	12	16	0.47	1.28	0.7	123	59.5
	499	473	569	607	600	12	22	0.4	1.49	0.82	108	59.4
	499	473	569	607	600	12	22	0.4	1.49	0.82	108	62.3
	514	480	613	660	645	10	27					117
31092X2	514	480	613	660	645	10	27					117
30694	509	485	579	615	605	10	18	0.32	1.88	1.04	94	66
319/530X2	573	546	655	695	683	13	26	0.39	1.5	0.84	118	81.5
306/600	624	611	679	709	706	10	17	0.37	1.64	0.9	113	53
	624	611	679	709	706	10	17	0.41	1.45	0.8	155	231
310/600X2	624	611	679	709	706	10	17	0.41	1.45	0.8	155	231
306/610	662	630	741	800	781	13	25	0.37	1.6	0.88	139	139
329/630	675	649	766	832	821	13	37	0.46	1.3	0.72	168	200
	704	631	819	902	867	13	40	0.43	1.4	0.78	166	286
306/630	675	649	766	832	821	13	37	0.46	1.3	0.72	168	200
	704	631	819	902	867	13	40	0.43	1.4	0.78	166	286
319/710	774	729	864	932	909	13	34	0.46	1.3	0.72	175	210
	774	729	864	932	909	13	34	0.43	1.41	0.78	177	238
319/710X2	774	729	864	932	909	13	34	0.43	1.41	0.78	177	238
319/710.5	774	729	864	932	909	13	34	0.43	1.41	0.78	177	238
319/711	773	731	864	932	909	13	34	0.43	1.41	0.78	61	209
306/760/HC	785	776	393	870	870	13	22	0.32	1.9	1.04	71	78.3
306/830/HCYB2	882	851	995	1080	1067	13	38	0.44	1.36	0.75	209	360
	882	850	995	1080	1067	13	38	0.44	1.36	0.75	208	398
306/830/HCR	882	850	995	1080	1067	13	38	0.44	1.36	0.75	208	398

Single-row Tapered Roller Bearing(Metric)

d 831~1000 mm



Principal dimensions									Basic load ratings		Limit speed ratings	
d	D	T	B	C	r _{radial}	r _{axial}	r _{1radial}	r _{1axial}	C _r	C _{0r}	Grease	Oil
										kN	r/min	
831	1080	156	156	118	6	6	6	6	4600	12000	230	430
	1100	156	152	118	6	6	6	6	4600	12400	230	430
850	1030	90	88	64	6	6	6	6	2200	5900	200	300
900	1180	124	122	87	6	6	6	6	3500	9000	170	230
	1280	190	170	135	7.5	7.5	7.5	7.5	6430	14600	170	220
950	1250	140	132	100	7.5	7.5	7.5	7.5	4400	10500	160	220
1000	1420	210	195	150	7.5	7.5	7.5	7.5	8100	18000	140	210

Designations	Abutment and fillet dimensions							Calculation coefficient			Weight	
	da _{max}	db _{min}	Da _{min}	Da _{max}	Db _{min}	Ca _{min}	Cb _{min}	e	Y	Y0	a	kg
306/831/HCYB2	882	851	995	1080	1067	13	38	0.44	1.36	0.75	209	359
306/831/HCR	882	851	995	1080	1067	13	38	0.44	1.36	0.75	209	397
318/850X2	892	869	968	1012	1004	13	26	0.44	1.4	0.75	176	140
319/900X2	965	920	1092	1160	1142	13	37	0.41	1.49	0.82	194	327
306/900/HC	990	920	1142	1230	1265	13	55	0.44	1.4	0.74	242	246
319/950X2/HCR	1023	975	1158	1225	1200	13	40	0.33	1.82	1	183	416
306/1000	1090	1070	1265	1390	1358	16	20	0.46	1.3	0.72	278	966