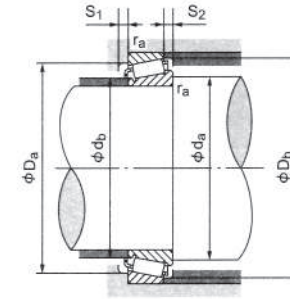
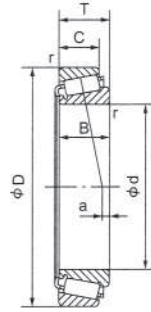


Tapered Roller Bearings

The projection lines of all the tapered surfaces meet at a common point on the bearing axis. Their design makes tapered roller bearings particularly suitable for the accommodation of combined loads. The axial load carrying capacity of the bearing is largely determined by the contact angle, the larger the angle is the higher axial load carrying capacity. An indication of the angle size is given by the calculation factor, the larger the coefficient value, the larger the contact angle and the greater the suitability of the bearing for carrying axial loads.



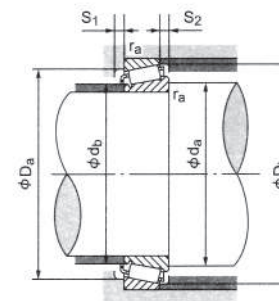
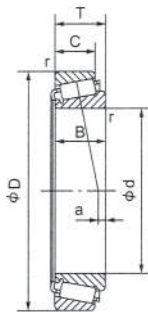
d: 15 ~ 35 mm



Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	Cone r(min)	Cup r(min)		Dynamic Cr	Static Cor	Grease	Oil	da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone r(min)			Cup r(min)
15	35	11.75	11	10	0.6	0.6	30202	15800	14500	11000	15000	20	20	28	33	2	2	0.6	0.6	3.4	0.053
	42	14.25	13	11	1	1	30302	21900	19200	10000	14000	21	22	35	38	2	3	1	1	4.3	0.095
17	40	13.25	12	11	1	1	30203	20400	20200	10000	13000	23	22	33	36.5	2	2.5	1	1	3.4	0.070
	40	17.25	16	13	1	1	32203	25400	24600	10000	13000	23	21	33	36.5	2	5	1	1	6.3	0.180
	47	15.25	14	12	1	1	30303	30000	27600	9000	12000	23	23.5	39	42	2	5	1	1	4.8	0.130
	47	20.25	19	16	1	1	32303	30500	33000	9000	12000	23	24	39	42	2	5	1	1	9.3	0.170
20	42	15	15	12	0.6	0.6	32004	25100	28200	9200	12000	25	24	35	39	3	3.5	0.6	0.6	4.6	0.100
	47	15.25	14	12	1	1	30204	29500	30500	8500	11500	26	26	39	43	2	3.5	1	1	3.9	0.120
	47	19.25	18	15	1	1	32204	27500	28000	8500	11500	26	26	39	43	2	5	1	1	6.3	0.230
	52	16.25	15	13	1.5	1.5	30304	35000	35500	8000	10700	27	27	43	47	2	5	1.5	1.5	4.7	0.170
25	52	22.25	21	18	1.5	1.5	32304	45100	46700	8400	11000	28.5	27	43	47	3	4	1.5	1.5	7.8	0.239
	47	15	15	11.5	0.6	0.6	32005	28000	34000	8000	10700	30	28.5	40	44	3	3.5	0.6	0.6	3.3	0.110
	47	17	17	14	0.6	0.6	33005	27500	37000	8000	10700	32	32	41	44	3	4	0.6	0.6	5.7	0.140
	52	16.25	15	13	1	1	30205	31500	33700	7500	10000	31	30	43	48	2	3.5	1	1	3.5	0.152
	52	19.25	18	15	1.1	1.1	32205	32500	35000	7500	10000	31	30	43	48	2	5	1	1	5.4	0.180
	62	18.25	17	15	1.5	1.5	30305	48200	46900	6800	9000	33.5	34	54	57	2	3	1.5	1.5	5.4	0.265
30	62	18.25	17	13	1.5	1.5	31305	39800	42500	5700	8000	33.5	34	47	58.5	3	5	1.5	1.5	-2.2	0.267
	62	25.25	24	20	1.5	1.5	32305	61200	64100	6900	9100	33.5	33	52	57	3	5	1.5	1.5	8.7	0.378
	55	17	17	13	1	1	32006	37500	46500	6700	9100	36	34	48	52	3	4	1	1	3.5	0.170
	55	20	20	16	1	1	33006	39500	59500	6700	9100	38	38	48	52	3	4	1	1	6.7	0.220
	62	17.25	16	14	1	1	30206	43500	48000	6200	8400	36	36.5	52	57	2	3.5	1	1	3.2	0.220
	62	21.25	20	17	1	1	32206	53000	61500	6200	8400	36	35.5	52	57	2	5	1	1	5.5	0.280
35	72	20.75	19	16	1.5	1.5	30306	59600	60100	5800	7700	38.5	40	62	66	3	4.5	1.5	1.5	5.1	0.399
	72	20.75	19	14	1.5	1.5	31306	50900	54900	4900	6800	38.5	40	55	68	3	6.5	1.5	1.5	-2.9	0.95
	72	28.75	27	23	1.5	1.5	32306	82200	91600	5900	7900	38.5	39	59	66	3	5.5	1.5	1.5	9.8	0.579
	55	14	14	11.5	0.6	0.6	32907	26200	40000	6300	8500	41	41	50	52	3	4	0.6	0.6	3.2	0.130
	62	18	18	14	1	1	32007	44500	57500	6000	8000	41	39	54	59	4	4	1	1	2.8	0.220
	62	21	21	17	1	1	33007	46000	71000	6000	8000	43	43	54	59	3	4	1	1	6.2	0.520
35	72	18.25	17	15	1.5	1.5	30207	54500	60500	5400	7200	42	42.5	61	67	3	3.5	1.5	1.5	2.8	0.320
	72	24.25	23	19	1.5	1.5	32207	70000	86000	5400	7200	42	42.5	61	67	3	5.5	1.5	1.5	6.4	0.430
	72	28	28	22	1.5	1.5	33207	86700	107000	5700	7500	43.5	42	61	68	5	6	1.5	1.5	9.6	0.542
	80	22.75	21	18	2	1.5	30307	76000	79000	5000	6700	44	43	68	74	3	6	2	1.5	5.8	0.540
	80	22.75	21	15	2	1.5	31307	63100	69100	4300	6000	45	44	66	76.5	3	7.5	2	1.5	-4.1	0.528
	80	32.75	31	25	2	1.5	32307	101000	114000	5300	7000	45	44	66	74	3	7.7	2	1.5	12.2	0.758

Note : when load center is (-), and it is out of inner ring plane

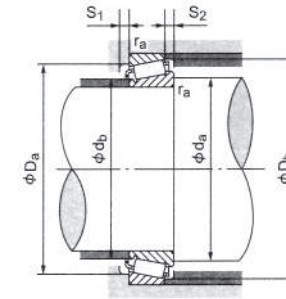
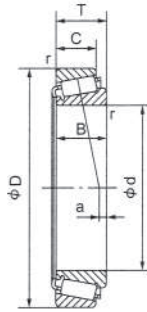
d: 40 ~ 50 mm



Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	Cone r(min)	Cup r(min)		Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	S ₁ (max)	S ₂ (max)	Cone r(min)			Cup r(min)
40	62	15	15	12	0.6	0.6	32908	32000	46000	5600	7600	46	46	56	59	3	5	0.6	0.6	3.2	0.180
	68	19	19	14.5	1	1	32008	52500	71500	5300	7200	46	45	60	65	4	4.5	1	1	4.1	0.270
	68	22	22	18	1	1	33008	59000	82000	5300	7200	48	48	60	65	4	5	1	1	6.8	0.330
	75	26	26	20.5	1.5	1.5	33108	77500	102000	5000	6700	47	47	65	72	4	5	1.5	1.5	7.3	0.520
	80	19.75	18	16	1.5	1.5	30208	63500	70500	4800	6500	47	47.5	68	75	3	3.5	1.5	1.5	2.6	0.420
	80	24.75	23	1.9	1.5	1.5	32208	78000	91500	4800	6500	47	47	68	75	3	3.5	1.5	1.5	5.6	0.530
	80	32	32	25	1.5	1.5	33208	108000	139000	5000	6700	48.5	47	67	76	5	7	1.5	1.5	11.3	0.747
	90	25.25	23	20	2	1.5	30308	90600	101000	4500	6100	50	52	77	82	3	5	2	1.5	5.4	0.756
	90	25.25	23	17	2	1.5	31308	80500	90200	3800	5300	50	51	80	86	3	8	2	1.5	-4.6	0.744
90	35.25	33	27	2	1.5	32308	116000	139000	4600	6200	50	50	73	82	3	8	2	1.5	10.9	1.04	
45	68	15	15	12	0.6	0.6	32909	34500	57000	5100	6800	51	51	61	65	3	5	0.6	0.6	2.7	0.20
	75	20	20	15.5	1	1	32009	59500	86000	4800	6500	51	50.5	67	72	4	4.5	1	1	3.6	0.34
	75	24	24	19	1	1	33009	64500	99000	4800	6500	53	53	66	71	4	5	1	1	7.3	0.44
	80	26	26	20.5	1.5	1.5	33109	79500	108000	4600	6200	52	52	69	77	4	5	1.5	1.5	6.1	0.56
	85	20.75	19	16	1.5	1.5	30209	69500	81500	4400	6000	52	52.5	73	80	3	4.5	1.5	1.5	2.3	0.47
	85	24.75	23	19	1.5	1.5	32209	83500	102000	4400	6000	52	52	73	80	3	5.5	1.5	1.5	4.4	0.58
	85	32	32	25	1.5	1.5	33209	112000	149000	4600	6200	53.5	52	76.5	81	5	7	1.5	1.5	10.2	0.803
	100	27.25	25	22	2	1.5	30309	113000	128000	4100	5400	55	59	86	82	3	5	2	1.5	5.9	0.999
	100	27.25	25	18	2	1.5	31309	95100	107000	3400	4700	55	56	90	96	3	9	2	1.5	-5.7	0.964
100	38.25	36	30	2	1.5	32309	146000	180000	4100	5500	55	56	82	93	3	8	2	1.5	11.4	1.40	
50	72	15	15	12	0.6	0.6	32910	35500	60500	4700	6300	56	56	65	69	3	5	0.6	0.6	1.5	0.21
	80	20	20	15.5	1	1	32010	62000	90500	4400	6000	56	55	72	77	4	4.5	1	1	1.9	0.37
	80	24	24	19	1	1	33010	67000	107000	4400	6000	56	56	72	76	4	5	1	1	6.2	0.45
	85	26	26	20	1.5	1.5	33110	84500	120000	4300	5700	56	56	74	82	5	6	1.5	1.5	4.9	0.60
	90	21.75	20	17	1.5	1.5	30210	79000	96000	4100	5500	57	56.5	78	85	3	4.5	1.5	1.5	1.9	0.53
	90	24.75	23	19	1.5	1.5	32210	88500	111000	4100	5500	57	56	78	85	3	6	1.5	1.5	3.2	0.61
	110	29.25	27	23	2.5	2	30310	137000	152000	3700	4900	62	65	95	102	3	6	2	2	6.4	1.29
	110	29.25	27	19	2.5	2	31310	115000	133000	3100	4300	62	62	87	105	3	10	2	2	-5.8	1.24
	110	42.25	40	33	2.5	2	32310	176000	220000	3700	5000	62	62	90	102	3	9	2	2	12.9	1.86

Note : when load center is (-), and it is out of inner ring plane

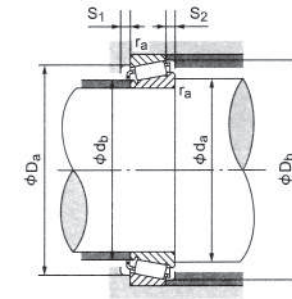
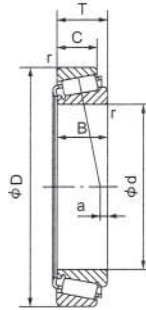
d: 55 ~ 65 mm



d	Principal Dimensions (mm)						Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)								Eff. Load Centers (mm) a	Weight (kg)
	D	T	B	C	Cone	Cup		Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	S ₁ (max)	S ₂ (max)	Cone	Cup		
	r(min)	r(min)	r(min)	r(min)	r(min)																
55	80	17	17	14	1	1	32911	47000	77000	4300	5700	62	62	73	76	4	6	1	1	2.3	0.31
	90	23	23	17.5	1.5	1.5	32011	82500	122000	4000	5400	62	61.5	81	86	4	5.5	1.5	1.5	3.2	0.55
	90	27	27	21	1.5	1.5	33011	86500	140000	4000	5400	64	64	81	86	4	6	1.5	1.5	7.3	0.70
	95	30	30	23	1.5	1.5	33111	114000	161000	3800	5200	62	62	83	91	5	7	1.5	1.5	7.7	0.86
	100	22.75	21	18	2	2	30211	94500	113000	3700	4000	64	62.5	87	94	4	4.5	2	1.5	1.6	0.69
	100	26.75	25	21	2	2	32211	110000	137000	3700	4000	64	62	87	94	4	6	2	1.5	3.7	0.83
	120	31.5	29	25	2.5	2	30311	148000	170000	3300	4400	65	67	103	111	4	7	2	2	6.5	1.56
	120	31.5	29	21	2.5	2	31311	129000	148000	2900	4000	67	68	94	113	4	10.5	2	2	-6.9	1.58
	120	45.5	43	35	2.5	2	32311	200000	250000	3400	4500	67	68	99	111	4	10.5	2	2	13.1	2.35
60	85	17	17	14	1	1	32912	45500	76000	4000	5400	67	67	77	81	4	6	1	1	1.2	0.33
	95	23	23	17.5	1.5	1.5	32012	86100	127000	3900	5200	68.5	67	85	91	4	5.5	1.5	1.5	2.0	0.609
	95	27	27	21	1.5	1.5	33012	92500	148000	3700	5000	68	68	85	90	5	6	1.5	1.5	6.5	0.73
	100	30	30	23	1.5	1.5	33112	117000	166000	3600	4900	66	66	88	97	5	7	1.5	1.5	6.5	0.94
	110	23.75	22	19	2	1.5	30212	104000	123000	3400	4600	69	68.5	95	102	4	4.5	2	1.5	1.2	0.86
	110	29.75	28	24	2	1.5	32212	131000	167000	3400	4600	69	67	95	105	4	6	2	1.5	4.7	1.14
	130	33.5	31	26	3	2.5	30312	173000	201000	3100	4100	74	77	112	150	4	7.5	2.5	2	6.5	2.03
	130	33.5	31	22	3	2.5	31312	153000	179000	2600	3700	74	73	103	123	4	11.5	2.5	2	-7.3	1.99
130	48.5	46	37	3	2.5	32312	232000	295000	3000	4100	72	72	112	120	4	11	2.5	2	16.0	2.86	
65	90	17	17	14	1	1	32913	49500	87000	3700	5000	72	72	82	86	4	6	1	1	0.0	0.36
	100	23	23	17.5	1.5	1.5	32013	90000	137000	3600	4800	73.5	72	90	97	4	5.5	1.5	1.5	0.5	0.65
	100	27	27	21	1.5	1.5	33013	98000	160000	3500	4700	72	72	90	96	5	6	1.5	1.5	5.4	0.78
	110	34	34	26.5	1.5	1.5	33113	152000	223000	3400	4600	73.5	73	96	106	6	7.5	1.5	1.5	8.1	1.30
	120	24.75	23	20	2	1.5	30213	128000	156000	3200	4300	75	77	106	116	4	4.5	2	1.5	0.6	1.16
	120	32.75	31	27	2	1.5	32213	156000	200000	3100	4200	74	74	105	112	4	6	2	1.5	5.1	1.50
	120	41	41	32	2	1.5	33213	200000	277000	3200	4300	75	74	105	115	7	9	2	1.5	11	2.01
	140	36	33	28	3	2.5	30313	204000	239000	2800	3800	79	83	122	130	4	8	2.5	2	6.7	2.52
	140	36	33	23	3	2.5	31313	176000	209000	2400	3400	79	79	111	130	4	13	2.5	2	-8.3	2.43
140	51	48	39	3	2.5	32313	276000	357000	2900	3900	79	80	117	130	4	12	2.5	2	16.3	3.64	

Note : when load center is (-), and it is out of inner ring plane

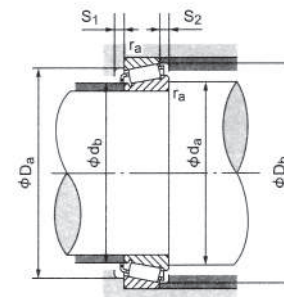
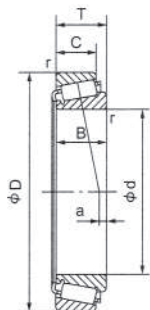
d: 70 ~ 80 mm



Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	Cone	Cup		Dynamic Cr	Static Cor	Grease	Oil	da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone			Cup
					r(min)													r(min)			
70	100	20	20	16	1	1	32914	70500	114000	3400	4600	78	78	92	96	4	6	1	1	2.4	0.53
	110	25	25	19	1.5	1.5	32014	108000	163000	3300	4400	78.5	78	98	105	5	6	1.5	1.5	1.4	0.87
	110	31	31	25.5	1.5	1.5	33014	126000	198000	3200	4300	77	78	99	105	5	6	1.5	1.5	8.1	1.10
	120	37	37	29	2	1.5	33114	171000	246000	3000	4100	78	78	106	116	6	7	2	1.5	8.4	1.72
	125	26.25	24	21	2	1.5	30214	138000	173000	3100	4100	80	81	110	118	4	5	2	1.5	0.3	1.30
	125	33.25	31	27	2	1.5	32214	157000	205000	3000	4000	79	78	108	117	4	6	2	1.5	4.5	1.61
	150	38	35	30	3	2.5	30314	230000	276000	2600	3500	84	89	130	140	4	8	2.5	2	7.5	3.05
	150	38	35	25	3	2.5	31314	197000	235000	2300	3200	84	84	118	142	4	13	2.5	2	-9.1	2.95
	150	54	51	42	3	2.5	32314	317000	414000	2700	3600	84	86	125	140	4	12	2.5	2	16.6	4.43
75	105	20	20	16	1	1	32915	75000	127000	3200	4300	82	82	97	101	5	7	1	1	1.3	0.56
	115	25	25	19	1.5	1.5	32015	110000	169000	3100	4200	83.5	83	103	110	5	6	1.5	1.5	-0.1	0.91
	115	31	31	25.5	1.5	1.5	33015	129000	206000	3000	4100	80	83	107	110	6	6	1.5	1.5	7.3	1.15
	125	37	37	29	2	1.5	33115	176000	260000	2900	3900	83	83	111	121	6	7	2	1.5	7.2	1.80
	130	27.25	25	22	2	1.5	30215	142000	181000	2900	3900	85	86	115	124	4	5	2	1.5	-0.3	1.39
	130	33.25	31	27	2	1.5	32215	165000	221000	2800	3800	84	83	113	123	4	6	2	1.5	3.4	1.70
	160	40	37	31	3	2.5	30315	250000	297000	2500	3300	89	95	139	149	4	9	2.5	2	8.1	3.52
	160	40	37	26	3	2.5	31315	218000	261000	2200	3000	87	88	125	152	5	12.5	2.5	2	-10.0	3.40
160	58	55	45	3	2.5	32315	345000	469000	2500	3300	87	90	138	149	4	12.5	2.5	2	18.5	5.22	
80	110	20	20	16	1	1	32916	72500	130000	3000	4100	87	87	101	106	5	7	1	1	0.0	0.60
	125	29	29	22	1.5	1.5	32016	147000	225000	2900	3900	88.5	89	112	120	6	7	1.5	1.5	2.3	1.29
	125	36	36	29.5	1.5	1.5	33016	157000	277000	2800	3800	87	90	112	119	6	6.5	1.5	1.5	10.4	1.65
	130	37	37	29	2	1.5	33116	191000	294000	2800	3800	90	89	114	126	6	8	2	1.5	6.5	1.90
	140	28.25	26	22	2.5	2	30216	161000	202000	2700	3600	92	91	124	132	4	6	2	2	-0.3	1.68
	140	35.25	33	28	2.5	2	32216	192000	254000	2600	3500	90	88.5	122	132	4	8	2	2	3.8	2.04
	170	42.5	39	33	3	2.5	30316	233000	263000	2300	3100	98	98	147	159	4	9	2.5	2	9.5	4.05
	170	42.5	39	27	3	2.5	31316	236000	283000	2000	2800	92	93.5	132	160	5	12.5	2.5	2	-10.5	4.00
	170	61.5	58	48	3	2.5	32316	380000	500000	2300	3100	92	96	147	159	4	13	2.5	2	19.1	6.12

Note : when load center is (-), and it is out of inner ring plane

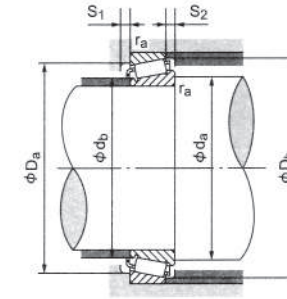
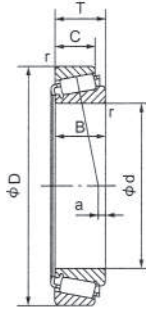
d: 85 ~ 95 mm



Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	Cone	Cup		Dynamic Cr	Static Cor	Grease	Oil	da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone			Cup
					r(min)													r(min)			
85	120	23	23	18	1.5	1.5	32917	95000	160000	2800	3800	93	93	111	115	6	8	1.5	1.5	2.0	0.85
	130	29	29	22	1.5	1.5	32017	150000	234000	2800	3700	93.5	94	117	125	6	4	1.5	1.5	1	1.36
	130	36	36	29.5	1.5	1.5	33017	172000	285000	2700	3600	92	94	118	125	6	6.5	1.5	1.5	9.4	1.74
	140	41	41	32	2.5	2.5	33117	215000	325000	2600	3500	95	95	122	135	7	9	2	2	7.4	2.50
	150	30.5	28	24	2.5	2	30217	182000	231000	2500	3400	97	97	132	141	5	6.5	2	2	0.1	2.12
	150	38.5	36	30	2.5	2	32217	212000	280000	2500	3300	95	94	130	140	5	8	2	2	4.6	2.61
	150	49	49	37	2.5	2	33217	294000	439000	2500	3400	97	95	128	144	7	12	2	2	11.9	3.62
	180	44.5	41	34	4	3	30317	260000	298000	2200	3000	105	103	155	167	5	10	3	2.5	9.5	4.74
180	44.5	41	28	4	3	31317	237000	278000	1900	2700	102	100	141	170	6	12.5	3	2.5	-10.5	4.60	
180	63.5	60	49	4	3	32317	410000	540000	2200	3000	99	101	155	167	5	14	3	2.5	19.9	6.80	
90	125	23	23	18	1.5	1.5	32918	92500	167000	2600	3600	97	97	116	120	6	8	1.5	1.5	2.0	0.89
	140	32	32	24	2	1.5	32018	178000	267000	2600	3500	100	100	125	134	6	8	2	1.5	2.2	1.76
	140	39	39	32.5	2	2	33018	216000	355000	2500	3300	99	100	127	135	7	8	2	1.5	10.6	2.20
	150	45	45	35	2.5	2	33118	258000	413000	2500	3300	102	100	130	144	7	10	2	2	9.6	3.13
	160	32.5	30	26	2.5	2	30218	204000	261000	2400	3200	102	103	140	150	5	6.5	2	2	-0.1	2.60
	160	42.5	40	34	2.5	2	32218	255000	345000	2300	3100	100	100	138	150	5	8	2	2	6.0	3.36
	190	46.5	43	36	4	3	30318	288000	330000	2000	2700	106	110	163	177	5	10	3	2.5	10.5	5.55
	190	46.5	43	30	4	3	31318	252000	297000	1800	2500	103	105	148	179	5	11	3	2.5	-10.5	5.40
190	67.5	64	53	4	3	32318	395000	500000	2000	2700	105	107	160	177	4	13	3	2.5	23.5	8.05	
95	130	23	23	18	1.5	1.5	32919	102000	181000	2500	3400	102	102	121	125	6	8	1.5	1.5	-0.2	0.88
	145	32	32	24	2	1.5	32019	182000	287000	2500	3300	105	105	130	140	6	8	2	1.5	0.8	1.84
	145	39	39	32.5	2	1.5	33019	226000	382000	2500	3300	105	104	131	139	7	6.5	2	1.5	11.2	2.29
	160	49	49	38	2.5	2.5	33119	287000	435000	2200	3000	105	105	141	154	8	10	2	2	10.9	3.99
	170	34.5	32	27	3	2.5	30219	231000	299000	2200	3000	109	110	149	159	5	7.5	2.5	2	-0.4	3.14
	170	45.5	43	37	3	2.5	32219	285000	390000	2100	2900	107	106	146	158	5	10	2.5	2	6.6	4.06
	200	49.5	45	38	4	3	30319	330000	390000	1900	2600	110	114	171	186	5	11	3	2.5	10.5	6.55
	200	49.5	45	32	3	3	31319	265000	310000	1700	2400	110	114	155	186	3	14	3	2.5	-14.4	6.45
200	71.5	67	55	4	3	32319	450000	585000	1900	2600	109	111	171	186	3	14	3	2.5	24.5	11.0	

Note : when load center is (-), and it is out of inner ring plane

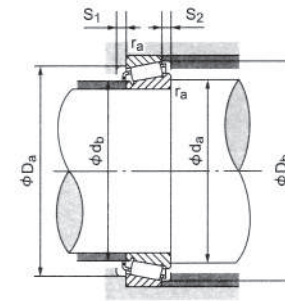
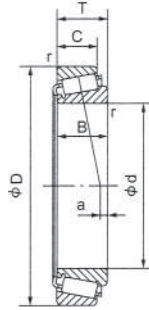
d: 100 ~ 110 mm



Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)								Eff. Load Centers (mm) a	Weight (kg)
d	D	T	B	C	Cone r(min)	Cup r(min)		Dynamic Cr	Static Cor	Grease	Oil	da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone r(min)	Cup r(min)		
100	140	25	25	20	1.5	1.5	32920	117000	210000	2300	3200	108	108	130	135	6	8	1.5	1.5	0.9	1.20
	150	32	32	24	2	1.5	32020	185000	298000	2400	3200	110	109	134	144	6	8	2	1.5	-0.6	1.92
	150	39	39	32.5	2	1.5	33020	231000	397000	2400	3200	110	108	135	143	7	6.5	2	1.5	10.4	2.39
	165	52	52	40	2.5	2.5	33120	305000	485000	2100	2900	109	109	144	160	8	10	2	2	11.2	4.13
	180	37	34	29	3	2.5	30220	258000	338000	2100	2800	114	116	157	168	5	8	2.5	2	0.2	3.76
	180	49	46	39	3	2.5	32220	315000	465000	2000	2700	112	112	155	168	5	10	2.5	2	7.2	4.99
	215	51.5	47	39	4	3	30320	365000	430000	1800	2400	118	124	183	198	5	12	3	2.5	11.5	8.00
	215	56.5	47	33	3	3	31320	288000	330000	1600	2200	115	119	181	200	5	13	3	2.5	-13.0	7.90
	215	77.5	73	60	4	3	32320	465000	670000	1800	2400	115	121	183	200	3	15	3	2.5	26.5	14.9
105	145	25	25	20	1.5	1.5	32921	118000	216000	2300	3000	113	113	135	140	6	8	1.5	1.5	-0.2	1.25
	160	35	35	26	2.5	2	32021	204000	330000	2100	2900	115	113	143	154	6	9	2	2	0.8	2.42
	160	43	43	34	2.5	2	33021	240000	400000	2100	2900	115	116	144	153	7	9	2	2	11.7	3.05
	175	56	56	44	2.5	2	33121	335000	530000	2000	2700	115	116	150	169	9	11	2.5	2	12.1	5.43
	190	39	36	30	3	2.5	30221	247000	310000	1900	2600	117	121	163	178	6	9	2.5	2	2	4.15
	190	53	50	43	3	2.5	32221	360000	510000	1900	2600	117	118	163	178	6	10	2.5	2	7.7	5.90
	225	53.5	49	41	4	3	30321	380000	450000	1700	2300	125	130	193	209	6	12	3	2.5	9.4	9.30
	225	58	51	36	4	3	31321	330000	395000	1400	2000	124	128	193	212	5	11	3	2.5	-15.7	9.20
	225	81.5	77	63	4	3	32321	635000	870000	1700	2300	119	126	193	209	6	17	3	2.5	25.8	14.7
110	150	25	25	20	1.5	1.5	32922	119000	220000	2200	2900	118	118	140	145	7	9	1.5	1.5	-1.6	1.29
	170	38	38	29	2.5	2	32022	235000	360000	2000	2700	120	119	152	163	7	9	2	2	1.5	3.06
	170	47	47	37	2.5	2	33022	273000	465000	2000	2700	121	121	154	161	7	9	2	2	13	3.89
	180	56	56	43	2.5	2	33122	345000	560000	1900	2600	120	121	155	174	9	13	2	2	10.8	5.55
	200	41	38	32	3	2.5	30222	310000	415000	1800	2400	122	125	171	188	6	9	2.5	2	0.6	5.00
	200	56	53	46	3	2.5	32222	395000	565000	1800	2400	122	124	171	188	6	10	2.5	2	8.5	6.90
	240	54.5	50	42	4	3	30322	395000	460000	1600	2100	130	135	205	222	5	12	3	2.5	8.6	10.7
	240	63	57	36	4	3	31322	370000	440000	1400	1900	130	133	205	222	4	14	3	2.5	-15.1	10.4
	240	84.5	80	65	4	3	32322	600000	785000	1600	2100	130	135	205	222	4	15	3	2.5	28.5	16.7

Note : when load center is (-), and it is out of inner ring plane

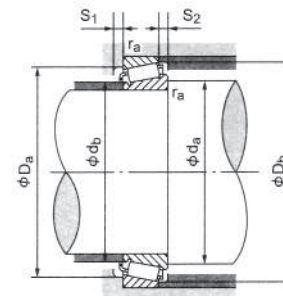
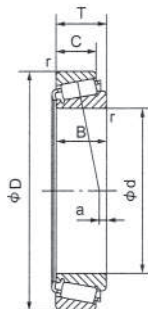
d: 120 ~ 150 mm



Principal Dimensions (mm)								Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	Cone	Cup	Dynamic Cr		Static Cor	Grease	Oil	da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone			Cup
					r(min)													r(min)			
120	165	29	29	23	1.5	1.5	32924	149000	281000	1900	2600	127	128	154	160	7	9	1.5	1.5	-0.3	2.21
	180	38	38	29	2.5	2	32024	241000	400000	1800	2500	130	128	161	173	7	9	2	2	-1.2	3.24
	180	48	48	38	2.5	2	33024	281000	495000	1800	2500	130	132	160	171	7	10	2	2	11.8	4.20
	200	62	62	48	2.5	2	33124	435000	690000	1700	2300	131	132	172	193	9	13	2	2	13.2	7.30
	215	43.5	40	34	3	2.5	30224	325000	440000	1600	2200	132	135	184	203	6	9	2.5	2	-1.1	6.01
	215	61.5	58	50	3	2.5	32224	420000	600000	1600	2200	132	134	184	204	6	11	2.5	2	9.5	8.45
	260	59.5	55	46	4	3	303024	460000	545000	1400	2000	140	145	220	239	6	12	3	2.5	10.5	13.5
	260	68	62	42	4	3	31324	405000	490000	1200	1700	140	145	220	241	5	14	3	2.5	-18.7	13.1
260	90.5	86	69	4	3	32324	815000	1140000	1400	2000	134	145	219	239	6	18	3	2.5	28	21.2	
130	180	32	32	25	2	1.5	32926	193000	350000	1800	2400	139	139	167	174	8	10	2	1.5	1.1	2.47
	200	45	45	34	2.5	2	32026	315000	530000	1700	2300	140	140	178	192	8	11	2	2	1.8	3.93
	200	55	55	43	2.5	2	33026	390000	720000	1700	2300	146	147	181	192	7	10	2	2	11.7	6.44
	230	43.75	40	34	4	3	30226	325000	425000	1500	2100	144	144	199	218	7	10	3	2.5	-1.25	6.50
	230	67.75	64	54	4	3	32226	480000	690000	1500	2100	144	144	199	220	5	11	3	2.5	10.75	10.4
	280	63.75	58	49	5	4	30326	535000	650000	1300	1800	148	163	239	258	6	12	4	3	-0.5	16.7
280	98.75	93	78	5	4	32326	815000	1130000	1300	1800	148	157	238	263	3	12	4	3	28.55	25.8	
140	190	32	32	25	2	1.5	32928	199000	370000	1700	2300	149	149	177	184	9	11	2	1.5	-1.1	2.67
	210	45	45	34	2.5	2	32028	320000	540000	1600	2100	150	149	187	202	8	11	2	2	-0.8	5.23
	210	56	56	44	2.5	2	33028	345000	695000	1600	2100	155	156	190	202	7	10	2	2	11	6.88
	250	45.75	42	36	4	3	30228	370000	490000	1400	1900	154	157	215	237	10	12	3	2.5	-1.25	5.20
	250	71.75	68	58	4	3	32228	560000	815000	1400	1900	154	156	215	237	4	11	3	2.5	11.05	13.2
	300	77	70	47	5	4	31328	595000	730000	1300	1700	158	174	256	275	5	11	4	3	10.05	20.4
300	107.75	102	85	5	4	32328	980000	1430000	1300	1700	158	168	254	280	4	15	4	3	30.55	32.7	
150	210	38	38	30	2.5	2	32930	255000	485000	1500	2100	161	161	195	202	9	11	2	2	1.5	4.10
	225	48	48	36	3	2.5	32030	370000	645000	1500	2000	162	160	200	216	8	12	2.5	2	-0.4	6.35
	225	59	59	46	3	2.5	33030	350000	800000	1500	2000	167	168	204	217	8	11	2.5	2	10.2	8.48
	270	49	45	38	4	3	30230	430000	565000	1300	1800	164	168	230	255	8	11	3	2.5	-2	10.2
	270	77	73	60	4	3	32230	610000	900000	1300	1800	164	168	230	255	5	14	3	2.5	13	16.8
	320	72	65	55	5	4	30330	680000	850000	1200	1600	168	189	275	295	6	14	4	3	10.6	24.9
320	114	108	90	5	4	32330	1160000	1750000	1200	1600	168	183	268	300	5	15	4	3	32.4	38.8	

Note : when load center is (-), and it is out of inner ring plane

d: 160 ~ 200 mm

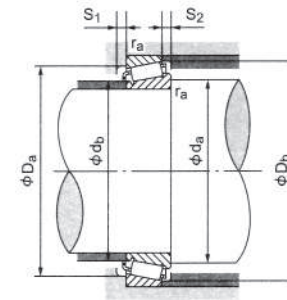
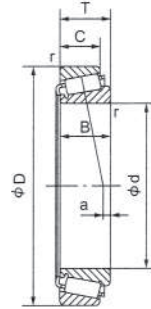


Principal Dimensions (mm)							Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)	
d	D	T	B	C	Cone	Cup		Dynamic Cr	Static Cor	Grease	Oil
					r(min)						
160	240	51	51	38	3	2.5	32032	425000	750000	1400	1900
	290	52	48	40	4	3	30232	455000	590000	1200	1600
	290	84	80	67	4	3	32232	710000	1110000	1200	1600
	340	75	68	58	5	4	30332	780000	1020000	1100	1500
	340	121	114	95	5	4	32332	1160000	1700000	1100	1500
170	260	57	57	43	3	2.5	32034	505000	885000	1300	1700
	310	57	52	43	5	4	30234	515000	715000	1100	1500
	310	91	86	71	5	4	32234	825000	1300000	1100	1500
	360	80	72	62	5	4	30334	890000	1120000	1000	1400
	360	127	120	100	5	4	32334	1210000	1780000	1000	1400
180	280	64	64	48	3	2.5	32036	635000	1120000	1200	1600
	320	57	52	43	5	4	30236	510000	675000	1100	1400
	320	91	86	71	5	4	32236	865000	1360000	1100	1400
	380	83	75	64	5	4	30336	915000	1150000	950	1300
	380	134	126	105	5	4	32336	1410000	2120000	950	1300
190	290	64	64	48	3	2.5	32038	645000	1160000	1100	1500
	340	60	55	46	5	4	30238	570000	795000	1000	1400
	340	97	92	75	5	4	32238	915000	1440000	1000	1400
	400	86	78	65	5	5	30338	1010000	1330000	900	1200
	400	140	132	109	5	5	32338	1530000	2310000	900	1200
200	310	70	70	53	3	2.5	32040	760000	1370000	1000	1400
	360	64	58	48	5	4	30240	635000	880000	9500	1300
	360	104	98	82	5	4	32240	1070000	1720000	950	1300
	420	89	80	67	5	5	30340	1090000	1450000	850	1200
	420	146	138	115	5	5	32340	1670000	2540000	850	1200

Note : when load center is (-), and it is out of inner ring plane

Abutment and Fillet Dimensions (mm)										Eff. Load Centers (mm) a	Weight (kg)
da (min)	db (min)	Da (max)	Db (max)	S1 (max)	S2 (max)	Cone	Cup	Eff. Load Centers (mm) a	Weight (kg)		
						r(min)					
171	171	213	231	10	13	2.5	2	-1.2	7.8		
174	184	250	275	9	12	3	2.5	-2.8	13.2		
174	182	244	275	6	12	3	2.5	16	21.6		
178	202	288	311	8	15	4	3	9	29.7		
178	197	287	315	6	18	4	3	38	47.0		
182	183	230	249	8	13	2.5	2	0.9	10.4		
188	195	266	290	9	12	4	3	-4.8	16.5		
188	193	264	295	6	12	4	3	17	26.9		
188	209	307	330	8	15	4	3	13	35.4		
188	207	292	330	8	18	4	3	39	36.9		
196	197	247	267	11	15	2.5	2	5.2	14.4		
198	206	276	301	9	12	4	3	-4.1	17.2		
198	203	272	305	6	12	4	3	15.6	28.0		
198	224	323	347	8	15	4	3	7	40.9		
198	220	310	350	8	18	4	3	41	64.8		
207	207	257	279	11	15	2.5	2	0.8	14.6		
208	218	292	319	9	12	4	3	-4.2	20.9		
208	216	290	330	6	12	4	3	15	33.9		
212	237	339	364	8	16	5	4	11	46.9		
212	231	327	368	8	18	5	4	42	74.8		
217	220	273	297	11	16	2.5	2	3.8	20.0		
218	229	308	336	9	12	4	3	-2	24.8		
218	229	307	340	6	13	4	3	20	41.0		
222	549	356	381	8	16	5	4	11	53.4		
222	243	343	388	8	18	5	4	44	86.0		

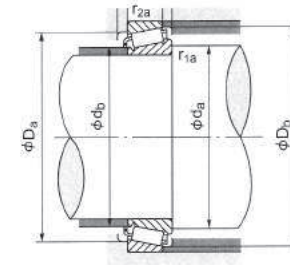
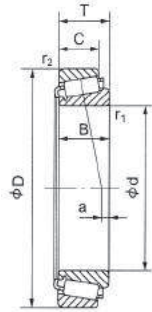
d: 220 ~ 300 mm



d	Principal Dimensions (mm)					Bearing Designations	Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)		
	D	T	B	C	Cone r(min)		Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	S ₁ (max)	S ₂ (max)			Cone r(min)	Cup
220	340	76	76	57	4	3	32044	890000	1560000	950	1300	240	240	300	326	12	17	3	2.5	3.8	24.5
	400	72	65	54	5	4	30244	825000	1240000	850	1200	238	256	344	374	9	12	4	3	-9.9	34.7
	400	114	108	90	5	4	32244	1220000	1970000	850	1200	238	250	334	375	6	13	4	3	12.1	56.0
	460	97	88	73	5	5	30344	1310000	1780000	750	1000	242	273	391	418	10	18	5	4	12	69.6
	460	154	145	122	5	5	32344	1920000	2930000	750	1000	242	267	375	423	10	18	5	4	43	108
240	360	76	76	57	4	3	32048	740000	1410000	850	1200	261	260	318	346	12	19	3	2.5	2	24.9
	440	79	72	60	5	4	30248	965000	1400000	750	1000	258	282	379	410	9	12	4	3	-6	46.4
	440	127	120	100	5	4	32248	1600000	2560000	750	1000	258	274	373	416	6	14	4	3	21	76.0
	500	105	95	80	5	5	30348	1510000	2060000	700	950	262	297	425	454	10	18	5	4	11	88.9
	500	165	155	132	5	5	32348	22200000	3400000	700	950	262	292	409	409	10	18	5	4	46	137
260	400	87	87	65	5	4	32052	1000000	1980000	800	1100	287	284	352	383	14	22	4	3	5.4	36.5
	480	89	80	67	6	5	30252	1240000	1800000	700	950	282	302	412	446	9	16	5	4	-4	62.5
	480	137	130	106	6	5	32252	1880000	3050000	700	950	282	298	409	453	6	15	5	4	24	98.1
	540	113	102	85	6	6	30352	1750000	2060000	650	900	288	322	461	492	10	19	5	5	14	111
	540	176	165	136	6	6	32352	2540000	3950000	650	900	288	315	444	444	10	24	5	5	48	187
280	420	87	87	65	5	4	32056	1070000	2080000	750	1000	305	304	370	405	14	22	4	3	4.3	39.0
	500	89	80	67	6	5	30256	1270000	1910000	620	820	302	323	432	467	9	16	5	4	-10	66.0
	500	137	130	106	6	5	32256	1780000	2990000	620	820	302	320	425	475	6	15	5	4	16	103
	580	119	108	90	6	6	30356	2010000	2790000	550	750	308	346	497	528	12	20	5	5	14	135
	580	187	175	145	6	6	32356	2900000	4500000	550	750	308	340	479	479	12	24	5	5	50	208
300	540	96	85	71	6	5	30260	1400000	2090000	570	780	322	347	465	500	9	20	5	4	-13	83.5
	540	149	140	115	6	5	32260	2040000	3450000	570	780	322	343	456	510	6	15	5	4	17	132
320	580	104	92	75	6	5	30264	1690000	2580000	530	730	342	373	500	436	9	22	5	4	-12	105
	580	159	150	125	6	5	32264	2600000	4300000	530	730	342	363	497	550	6	16	5	4	24	164

Note : when load center is (-), and it is out of inner ring plane

d: 15.875 ~ 25.000 mm

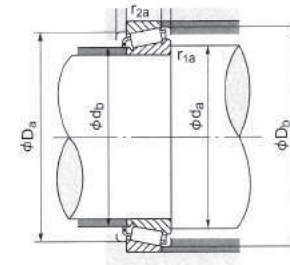
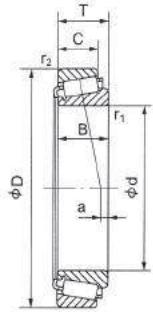


Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil
15.875	34.988	10.998	10.998	8.712	1.3	1.3	L21549	L21511	13800	13400	11000	15000
	42.862	14.288	14.288	9.525	1.5	1.5	11590	11520	17800	17800	8500	12000
16.993	39.992	12.014	11.153	9.525	0.8	1.3	A6067	A6157	14900	15700	10000	14000
17.462	39.878	13.843	14.605	10.668	1.3	1.3	LM11749	LM11710	23400	23000	10000	13000
17.463	39.878	13.843	14.605	10.668	1.2	1.2	LM11749R	LM11710	25400	25000	8800	12000
19.050	39.992	12.014	11.153	9.525	1.0	1.3	A6075	A6157	14900	15700	10000	14000
	45.237	15.494	16.637	12.065	1.3	1.3	LM11949	LM11910	29900	30500	9000	12000
	47.000	14.381	14.381	11.112	1.3	1.3	05075	05185	24900	25400	8500	11000
	49.225	18.034	19.050	14.288	1.3	1.3	09067	09195	37500	37500	8500	11000
	49.255	210.209	19.050	17.463	1.3	1.5	09067	09196	37500	37500	8500	11000
	49.225	21.209	19.050	17.463	1.3	3.5	09067	09194	37500	37500	8500	11000
	49.225	19.845	21.539	14.288	1.3	1.3	09078	09195	37500	37500	8500	11000
	49.225	23.020	21.539	17.463	1.3	1.5	09078	09196	37500	37500	8500	11000
	49.255	23.020	21.539	17.463	1.3	3.5	09078	09194	37500	37500	8500	11000
	49.225	19.845	21.539	14.288	1.3	1.3	09074	09195	37500	37500	8500	11000
	49.225	23.020	21.539	17.463	1.3	1.5	09074	09196	37500	37500	8500	11000
	49.225	23.020	21.539	17.463	1.3	3.5	09074	09194	37500	37500	8500	11000
19.987	47.000	14.381	14.381	11.112	1.5	1.3	05079	05185	24900	25400	8500	11000
20.638	49.225	19.845	19.845	15.875	1.5	1.5	12580	12520	36000	37000	8000	11000
21.430	50.005	17.526	18.288	13.970	1.3	1.3	M12649	M12610	37000	37500	8000	11000
21.987	45.237	15.494	16.637	12.065	1.27	1.27	LM12749	LM12710	30100	34600	7400	10000
	45.975	15.494	16.637	12.065	1.27	1.27	LM12749	LM12711	30100	34600	7400	10000
22.225	50.005	13.495	14.260	9.525	1.3	1.0	07087	07196	26000	27700	7500	10000
	50.005	17.526	18.288	13.970	1.3	1.3	M12618	M12610	37000	37500	8000	11000
	52.388	15.011	14.260	12.700	1.3	1.3	07067	07204	26000	27700	7500	10000
	52.388	19.368	20.168	14.288	1.5	1.5	1380	1328	42500	47500	7500	10000
	53.975	19.368	20.168	14.288	1.5	1.5	1329	1329	36700	37900	6700	9400
	57.150	22.225	22.225	17.463	0.8	1.6	1280	1220	52600	55700	6300	8900
23.612	56.896	19.368	19.837	15.875	0.8	1.3	1779	1729	40500	44000	7100	9500
24.981	50.005	13.495	14.260	9.525	1.5	1.0	07098	07196	26000	27700	7500	10000
	51.994	15.011	14.260	12.700	1.5	1.3	07098	07204	26000	27700	7500	10000
25.000	50.005	13.495	14.260	9.525	1.5	1.0	07097	07196	26000	27700	7500	10000
	51.994	15.011	14.260	12.700	1.5	1.3	07097	07204	26000	27700	7500	10000

Note : when load center is (-), and it is out of inner ring plane

Abutment and Fillet Dimensions (mm)							Eff. Load Centers (mm) a	Weight (kg)	
d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)	Cone		Cup	
21.5	19.5	29.0	32.5	1.3	1.3	3.3	0.033	0.019	
24.5	22.5	34.5	39.5	1.5	1.5	1.1	0.060	0.040	
22.0	21.0	34.0	37.0	0.8	1.3	1.5	0.040	0.032	
23.0	21.5	34.0	37.0	1.3	1.3	5.2	0.055	0.026	
23.0	21.5	34.0	37.0	1.2	1.2	5.1	0.058	0.028	
24.0	23.0	34.0	37.0	1.0	1.3	1.5	0.037	0.032	
25.0	23.5	39.5	41.5	1.3	1.3	5.6	0.080	0.045	
25.0	23.5	40.5	42.5	1.3	1.3	3.9	0.074	0.046	
25.5	24.0	42.0	44.5	1.3	1.3	9.1	0.110	0.065	
25.5	24.0	41.5	44.5	1.3	1.5	7.3	0.110	0.085	
25.5	24.0	41.5	44.5	1.3	3.5	7.3	0.110	0.081	
25.5	24.0	42.0	44.5	1.3	1.3	9.1	0.110	0.065	
25.5	24.0	41.5	44.5	1.3	1.5	7.3	0.110	0.085	
25.5	24.0	41.5	44.5	1.3	3.5	7.3	0.110	0.081	
25.5	24.0	42.0	44.5	1.3	1.3	9.1	0.110	0.065	
25.5	24.0	41.5	44.5	1.3	1.5	7.3	0.110	0.085	
25.5	24.0	41.5	44.5	1.3	3.5	7.3	0.110	0.081	
26.5	24.0	40.5	42.5	1.5	1.3	3.9	0.070	0.046	
28.5	26.0	42.5	45.5	1.5	1.5	7.1	0.115	0.066	
27.5	25.5	44.0	46.0	1.3	1.3	6.4	0.110	0.059	
27.5	26.0	40.0	42.5	1.2	1.2	5.5	0.073	0.038	
27.5	26.0	40.0	42.5	1.2	1.2	5.5	0.078	0.043	
28.5	27.0	44.5	47.0	1.3	1.0	2.9	0.095	0.035	
28.5	26.5	44.0	46.0	1.3	1.3	6.4	0.107	0.059	
28.5	27.0	44.5	47.0	1.3	1.3	4.4	0.094	0.060	
29.5	27.0	45.0	48.5	1.5	1.5	7.6	0.130	0.067	
29.5	27	46	49	1.5	1.5	7.6	0.131	0.068	
29.5	29.0	49.0	52.0	0.8	1.6	7.9	0.188	0.107	
29.5	28.5	49.0	51.0	0.8	1.3	6.8	0.143	0.100	
31.0	29.0	44.5	47.0	1.5	1.0	2.9	0.085	0.035	
31.0	29.0	45.0	48.0	1.5	1.3	2.9	0.085	0.060	
31.0	29.0	44.5	47.0	1.5	1.0	2.9	0.096	0.035	
31.0	29.0	45.0	48.0	1.5	1.3	2.9	0.096	0.060	

d: 25.400 ~ 30.213 mm

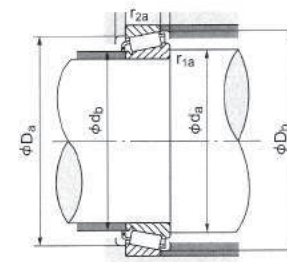
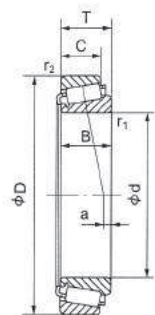


Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil
25.400	50.005	13.495	14.260	9.525	1.0	1.0	07100	07196	26000	27700	7500	10000
	50.292	14.224	14.732	10.668	1.2	1.2	L44643R	L44610	31200	37000	6500	9100
	50.292	14.224	14.732	10.668	1.3	1.3	L44643	L44610	28500	34000	7300	10000
	51.994	15.011	14.260	12.700	1.0	1.3	07100	07204	26000	27700	7500	10000
	62.000	19.050	20.638	14.288	0.8	1.3	15101	15245	45000	54500	6000	8000
	62.000	19.050	20.638	14.288	3.5	1.3	15100	15245	45000	54500	6000	8000
	63.500	20.638	20.638	15.875	0.8	1.3	15101	15250	45000	54500	6000	8000
	63.500	19.050	20.638	15.875	3.5	1.3	15100	15250	45000	54500	6000	8000
65.088	22.225	21.463	15.875	1.5	1.5	23100	23256	43000	45000	5600	8000	
26.988	50.292	14.224	14.732	10.668	3.5	1.3	44649	44610	28500	34000	7300	10000
	51.150	17.462	17.462	13.495	3.5	1.5	15580	15520	42500	49000	6700	9000
	62.000	19.050	20.638	14.288	0.8	1.3	45106	15245	45000	54500	6000	8000
28.575	57.150	19.845	19.355	15.875	3.6	1.6	1988R	1922	48800	57100	5800	8200
	68.263	22.225	22.225	17.463	0.8	1.6	02474	02420	51000	61100	5000	7000
	73.025	22.225	22.225	17.462	0.8	3.3	02872	02820	55000	65500	5200	7000
29.987	62.000	16.002	16.566	14.288	1.5	1.5	17118	17244	35000	36000	6300	8500
29.987	62.000	19.050	20.638	14.288	1.3	1.3	15117	15245	45000	54500	6000	8000
	63.500	20.638	20.638	15.875	1.3	1.3	15117	15250	45000	54500	6000	8000
	72.085	22.385	19.205	18.415	0.8	2.4	14118	14283	46100	55000	4900	6900
30.162	64.292	21.433	21.433	16.670	1.5	1.5	M86649	M86610	55000	72500	6000	8000
30.163	64.292	21.433	21.433	16.670	1.57	1.57	M86649R	M86610	55200	70700	5300	7500
30.213	62.000	19.050	20.638	14.288	0.8	1.3	15120	15245	45000	54500	6000	8000
	62.000	19.050	20.638	14.288	3.5	1.3	15118	15245	45000	54500	6000	8000
	63.500	20.638	20.638	15.875	0.8	1.3	12120	15250	45000	54500	6000	8000
	63.500	20.638	20.638	15.875	3.5	1.3	15118	15250	45000	54500	6000	8000

Note : when load center is (-), and it is out of inner ring plane

Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
30.5	29.5	44.5	47.0	1.0	1.0	2.9	0.080	0.035
31.5	29.5	44.5	47.0	1.2	1.2	3.2	0.092	0.040
31.5	29.5	44.5	47.0	1.3	1.3	3.3	0.085	0.038
30.5	44.5	45.0	48.0	1.0	1.3	4.4	0.080	0.060
32.5	31.5	55.0	58.0	0.8	1.3	5.8	0.215	0.080
38.0	31.5	55.0	58.0	3.5	1.3	4.3	0.215	0.080
32.5	31.5	56.0	58.0	0.8	1.3	7.4	0.215	0.114
38.0	31.5	56.0	58.0	3.5	1.3	4.3	0.215	0.114
39.0	34.6	53.0	61.0	1.5	1.5	2.2	0.210	0.143
37.5	31.0	44.5	47.0	3.5	1.3	3.3	0.080	0.038
38.5	32.0	51.0	53.0	3.5	1.5	2.8	0.135	0.070
33.5	33.0	55.0	58.0	0.8	1.3	5.8	0.205	0.080
39.5	33.5	51.0	53.5	3.6	1.6	5.9	0.151	0.077
36.5	36.0	59.0	63.0	0.8	1.6	5.1	0.251	0.153
37.5	37.0	62.0	68.0	0.8	3.3	3.8	0.313	0.158
37.0	35.0	54.0	57.0	1.5	1.5	3.5	0.137	0.090
36.5	35.0	55.0	58.0	1.3	1.3	5.8	0.180	0.080
36.5	35.0	56.0	59.0	1.3	1.3	5.8	0.180	0.114
52.0	43.0	54.0	62.0	0.8	2.4	4.4	0.238	0.198
41.0	38.2	54.0	61.0	1.5	1.5	3.3	0.210	0.125
41.0	38.0	54.0	61.0	1.6	1.6	3.4	0.213	0.128
36.0	35.5	55.0	58.0	0.8	1.3	5.8	0.183	0.080
41.5	35.5	55.0	58.0	3.5	1.3	5.8	0.178	0.080
36.0	35.0	56.0	58.0	0.8	1.3	7.4	0.183	0.114
41.5	35.5	56.0	58.0	3.5	1.3	7.4	0.178	0.114

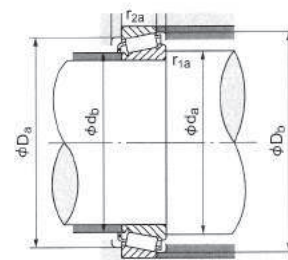
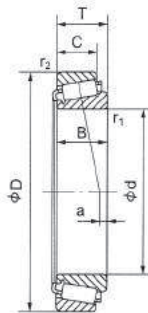
d: 31.750 ~ 36.512 mm



Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
31.750	59.131	15.875	16.764	11.811	1.3	1.3	LM67048	LM67010	36500	435000	6000	8500	42.5	36.0	52.0	56.0	3.5	1.3	2.9	0.120	0.062
	62.000	18.161	19.050	14.288	1.3	1.3	15123	43500	43500	51500	6000	8000	42.5	36.5	55.0	58.0	3.5	1.3	5.0	0.155	0.080
	62.000	19.050	20.638	14.288	0.8	1.3	12126	15245	45000	54500	6000	8000	37.0	36.5	55.0	58.0	0.8	1.3	5.8	0.167	0.080
	62.000	19.050	20.638	14.288	3.5	1.3	15125	15245	45000	54500	6000	8000	42.5	36.5	55.0	58.0	3.5	1.3	5.8	0.165	0.080
	63.500	20.638	19.050	15.875	1.3	1.3	15123	15250	45000	54500	6000	8000	42.5	36.5	56.0	59.0	3.5	1.3	7.4	0.155	0.114
	63.500	20.638	19.050	15.875	0.8	1.3	15126	15250	45000	54500	6000	8000	37.0	36.5	56.0	59.0	0.8	1.3	7.3	0.167	0.114
	63.500	20.638	20.638	15.875	0.8	1.5	15126	15250	45000	54500	6000	8000	37.0	36.5	55.0	59.0	0.8	1.5	7.3	0.167	0.114
	63.500	20.638	20.638	15.875	3.5	1.3	15125	15250	45000	54500	6000	8000	42.5	36.5	56.0	59.0	3.5	1.3	7.3	0.165	0.114
	63.500	20.638	20.638	15.875	3.5	1.5	15125	15250	45000	54500	6000	8000	42.5	36.5	55.0	59.0	3.5	1.5	7.3	0.165	0.114
	66.421	25.400	25.357	20.638	0.8	3.2	2580	2520	71400	85100	5000	7000	38.5	37.5	57.0	62.8	0.8	3.2	9.4	0.279	0.128
	68.263	22.225	22.225	17.463	3.6	1.6	02475	02420	51000	61100	5000	7000	44.5	38.5	59.0	63.0	3.6	1.6	5.1	0.223	0.153
	69.012	19.845	19.583	15.875	3.5	1.3	14125A	14276	44500	55000	5500	7500	44.0	37.5	60.0	63.0	3.5	1.3	4.3	0.220	0.135
	69.012	19.845	19.583	15.875	3.5	3.3	14125A	14274	44500	55000	5500	7500	44.0	37.5	59.0	63.0	3.5	3.3	4.3	0.220	0.130
	69.850	23.812	25.357	19.050	0.8	1.3	2580	2523	70000	84000	5600	7500	38.5	37.5	61.0	64.0	0.8	1.3	8.6	0.290	0.165
33.338	68.262	22.225	22.225	17.462	0.8	1.5	M88048	M88010	56500	71500	5600	7500	42.5	41.2	58.0	65.0	0.8	1.5	2.8	0.230	0.090
	69.012	19.845	19.583	15.875	0.8	1.2	14131	14276	46100	55000	4900	6900	52.0	13.0	60.0	63.0	0.8	1.2	4.4	0.201	0.136
	69.012	19.845	19.583	15.875	3.5	1.3	14130	14276	44500	55000	5500	7500	45.0	38.5	60.0	63.0	3.5	1.3	4.3	0.210	0.135
	69.012	19.845	19.583	15.875	3.5	3.3	14130	14276	44500	55000	5500	7500	45.0	38.0	59.0	63.0	3.5	3.3	4.3	0.210	0.130
34.925	65.088	18.034	18.288	13.970	1.3	1.3	LM48548	LM48510	48500	59000	5600	7500	46.0	40.0	58.0	61.0	3.5	1.3	3.7	0.160	0.085
	69.012	19.845	19.583	15.875	1.5	1.3	14137A	14276	44500	55000	5500	7500	42.0	40.0	60.0	63.0	1.5	1.3	4.3	0.160	0.135
	69.012	19.845	19.583	15.875	1.5	3.3	14137A	14274	44500	55000	5500	7500	42.0	40.0	59.0	63.0	1.5	3.3	4.3	0.190	0.130
	69.012	19.845	19.583	15.875	3.5	1.3	14138A	14276	44500	55000	5500	7500	46.0	40.0	60.0	63.0	3.5	1.3	4.3	0.189	0.135
	69.012	19.845	19.583	15.875	3.5	3.3	14138A	14274	44500	55000	5500	7500	46.0	40.0	59.0	63.0	3.5	3.3	4.3	0.189	0.130
	69.012	19.845	19.583	15.875	3.6	1.2	14138A	14276	46100	55000	4900	6900	52.0	43.0	60.0	63.0	3.6	1.2	4.4	0.185	0.136
	72.233	25.400	25.400	19.842	2.4	2.4	HM88649	HM88610	66900	87400	4700	6600	48.5	42.5	60.0	69.0	2.4	2.4	4.7	0.305	0.189
	73.025	23.812	24.608	19.050	1.5	0.8	25877	25821	73000	88500	5200	7100	47.0	40.5	64.0	68.0	1.5	0.8	8.1	0.310	0.165
	73.025	23.813	24.608	19.050	1.6	0.8	25877R	25821	72200	87300	4600	6500	43.0	40.5	65.0	68.0	1.6	0.8	8.2	0.309	0.167
	76.200	29.370	28.575	23.812	1.5	3.3	31597	31520	80000	96000	5000	6800	46.0	43.5	64.0	72.0	1.5	3.3	7.7	0.400	0.230
	76.200	29.370	28.575	23.813	3.6	3.3	31593	31520	80900	97400	4500	6300	55.0	45.0	64.0	72.0	3.6	3.2	7.8	0.383	0.238
80.167	29.370	30.391	23.813	3.6	3.2	3379	3320	91000	106000	4200	5900	59.0	48.0	66.0	75.0	3.6	3.2	10.7	0.503	0.220	
34.987	59.131	15.875	16.764	11.938	1.3	1.27	L68149	L68110	35700	48500	5300	7500	45.5	39.0	53.0	56.0	3.5	1.2	2.7	0.112	0.057
	59.975	15.875	16.764	11.938	1.3	1.27	L68149	L68111	35700	48500	5300	7500	45.5	39.0	53.0	56.0	3.5	1.2	2.7	0.112	0.064
35.000	59.131	15.875	16.764	11.938	1.3	1.3	L68149	34000	34000	46000	6000	8000	45.5	39.0	52.0	56.0	3.5	1.3	2.5	0.110	0.055
36.487	73.025	23.812	24.608	19.050	1.5	0.8	25880	25821	73000	88500	5200	7100	44.0	42.0	65.0	68.0	1.5	0.8	8.1	0.300	0.165
69.012	19.050	19.050	15.083	3.5	0.8	13682	13620	47000	60000	5300	7100	49.5	43.0	62.0	65.0	3.5	0.8	3.0	0.190	0.105	
36.512	76.200	29.370	28.575	23.020	3.5	3.3	HM89449	HM89410	79500	108000	5000	6800	54.0	44.6	62.0	73.0	3.5	3.3	5.6	0.370	0.250
	85.725	30.162	30.162	23.813	0.8	3.3	3878	3820	91000	115000	4300	6000	57.0	50.3	73.0	81.0	0.8	3.3	8.2	0.525	0.280

Note : when load center is (-), and it is out of inner ring plane

d: 36.513 ~ 42.875 mm

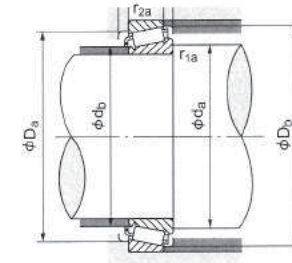
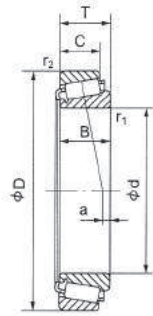


Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil
36.513	93.663	31.750	31.750	26.195	1.6	3.2	46143	46368	105000	134000	3600	5100
38.000	63.000	17.000	17.000	13.500	3.56	1.27	J169349	J169310	43500	58200	5000	7000
38.100	63.500	12.700	11.908	9.525	1.5	0.8	13889	13830	27200	34000	5400	7300
	65.088	18.034	18.288	13.70	2.3	1.3	LM29749	LM29710	45000	60000	5400	7500
	65.088	18.034	18.288	13.970	2.36	1.17	LM29749	LM29710	42900	56500	4900	6800
	65.088	18.034	18.288	13.970	1.2	1.17	LM29748	LM29710	42900	56500	4900	6800
	69.012	19.050	19.050	15.083	3.5	2.3	13685	13621	47000	60000	5300	7100
	76.200	23.812	25.654	19.050	3.5	0.8	2788	2729	68000	81000	5000	6700
	76.200	23.812	25.654	19050	3.5	3.3	2788	2720	68000	81000	5000	6700
	76.200	23.813	25.654	19.050	3.6	3.2	2788R	2720	74100	82200	4500	6300
	79.375	23.813	25.400	19.050	0.8	0.8	26878R	26822	81100	105000	4200	5900
	79.375	29.370	29.771	23.813	3.6	3.2	3490	3420	87400	105000	4300	6100
	80.167	29.370	30.391	23.812	3.5	3.3	3381	3320	86000	106000	4800	6400
	88.501	26.988	29.083	22.225	3.6	1.6	418	414	98100	112000	4000	5700
39.688	73.025	23.812	25.654	19.050	3.5	0.8	2789	2735	68000	81000	5000	6700
	73.025	25.654	22.098	21.336	0.8	2.3	M201047	M201011	63000	81000	5000	6700
	76.200	26.813	25.654	19.050	3.6	3.2	2789R	2720	74100	92200	4500	6300
40.987	67.975	17.500	18.000	13.500	1.6	1.6	LM300849	LM300311	44000	59500	4600	6500
41.275	73.025	16.667	17.462	12.700	3.5	1.5	18590	18520	46500	57000	4800	6700
	73.025	16.667	17.463	12.700	3.6	1.6	18590	18520	45900	55800	4300	6100
	73.431	19.558	19.812	14.732	3.5	0.8	LM501349	LM501310	55500	69000	4900	6700
	73.431	19.558	19.812	14.732	3.6	0.8	LM501349	LM501310	57800	73000	4400	6100
	73.431	21.430	19.812	16.604	3.6	0.8	LM501349	LM501314	57800	73000	4400	6100
	76.200	18.009	17.384	14.288	1.6	1.6	11162R	11300	51600	63300	4300	6000
	76.200	22.225	23.020	17.462	3.5	0.8	24780	24720	63500	78500	4800	6600
	76.200	25.400	23.020	20.638	3.6	2.4	24780R	24721	66300	83300	4000	5600
	79.375	23.812	25.400	19.050	3.5	0.8	26882	26822	75000	94500	4700	6300
	80.167	25.400	25.400	20.638	3.6	3.2	26882R	26820	81100	105000	4200	5900
	80.167	29.370	30.391	23.813	0.8	3.2	3384	3320	91000	106000	4200	5900
	87.313	30.163	30.886	23.813	1.6	3.2	3585R	3525	95800	120000	3900	5400
90.488	39.688	40.386	33.338	3.6	3.2	4388	4335	132000	169000	3800	5600	
42.863	87.312	30.162	30.886	23.812	3.6	3.2	3579R	3525	95800	120000	3900	5400
42.875	80.000	21.000	22.406	17.826	3.5	1.3	342S	332	69000	76000	4500	6300
	82.931	23.812	25.400	19.050	3.5	0.8	25577	25520	78500	98000	4500	6000
	82.931	26.988	25.400	22.225	3.5	2.3	25577	25523	78500	98000	4500	6000
	83.058	23.812	25.400	19.050	3.5	3.3	25577	25521	78500	98000	4500	6000

Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
68.0	56.0	72.0	86.0	1.6	3.2	7.7	0.728	0.412
49.0	41.0	60.0	56.5	3.5	1.2	2.4	0.128	0.072
45.0	42.5	59.0	60.0	1.5	0.8	0.8	0.108	0.045
46.0	42.5	59.0	62.0	2.3	1.3	4.2	0.155	0.080
46.0	42.5	59.0	62.0	2.4	1.2	4.3	0.158	0.080
49.0	42.5	59.0	62.0	3.5	1.2	4.3	0.154	0.080
49.5	43.0	61.0	65.0	3.5	2.3	3.0	0.185	0.103
50.0	43.5	68.0	70.0	3.5	0.8	8.0	0.310	0.187
50.0	43.5	66.0	70.0	3.5	3.3	8.0	0.310	0.185
50.0	43.5	61.0	69.0	3.6	3.2	8.1	0.305	0.190
60.0	50.0	65.0	73.0	0.8	0.8	7.5	0.397	0.185
52.0	45.9	67.0	74.0	3.6	3.2	8.6	0.415	0.262
46.5	45.5	70.0	74.8	3.5	3.3	18.5	0.445	0.215
51.0	44.5	77.0	80.0	3.6	1.6	10.1	0.522	0.329
52.0	45.0	65.0	70.0	3.5	0.8	8.0	0.290	0.170
45.5	47.8	64.0	69.0	0.8	2.3	5.9	0.255	0.183
52.0	45.0	61.0	69.0	3.6	3.2	8.1	0.285	0.190
55.0	47.0	58.0	64.0	3.5	1.6	3.6	0.157	0.082
53.0	46.0	66.0	69.0	3.5	1.5	2.8	0.208	0.084
53.0	46.0	66.0	69.0	3.6	1.6	2.2	0.198	0.087
53.0	46.8	67.0	70.0	3.5	0.8	3.4	0.220	0.108
53.0	46.5	46.5	70.0	3.6	0.8	3.5	0.226	0.109
53.0	46.5	46.5	69.0	3.6	0.8	3.5	0.226	0.109
49.0	46.5	46.5	72.0	1.6	1.6	0.5	0.219	0.130
54.0	47.0	47.0	72.0	3.5	0.8	1.6	0.275	0.189
54.0	47.0	47.0	72.0	3.6	2.4	4.8	0.271	0.191
54.0	47.0	47.0	74.0	3.5	0.8	7.5	0.340	0.185
60.0	50.0	50.0	73.0	3.6	3.2	7.5	0.350	0.223
59.0	48.0	48.0	75.0	0.8	3.2	10.7	3.416	0.220
63.0	54.0	54.0	81.0	1.6	3.2	9.7	0.527	0.308
57.0	54.0	54.0	85.0	3.6	3.2	14.1	0.767	0.463
63.0	75.0	54.0	81.0	3.6	3.2	9.7	0.499	0.308
54.0	47.5	47.5	75.0	3.5	1.3	6.2	0.295	0.145
50.0	49.0	49.0	77.0	3.5	0.8	6.2	0.380	0.200
55.0	49.0	49.0	77.0	3.5	2.3	9.4	0.380	0.245
55.0	49.0	49.0	77.0	3.5	3.3	6.2	0.380	0.199

Note : when load center is (-), and it is out of inner ring plane

d: 44.450 ~ 50.00 mm

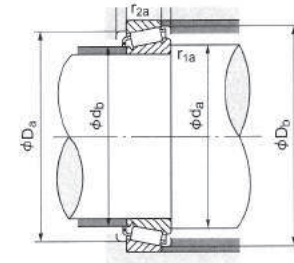
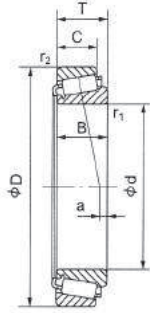


Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil
44.450	82.931	23.812	25.400	19.050	3.5	0.8	25580	25520	78500	98000	4500	6000
	82.931	26.988	25.400	22.225	3.5	2.3	25580	25523	78500	98000	4500	6000
	83.058	23.812	25.400	19.050	3.5	3.3	25580	25521	78500	98000	4500	6000
	87.312	60.162	30.886	23.812	3.5	3.3	3578	3525	90000	110000	4300	6000
	87.313	30.163	30.886	23.813	3.6	3.2	3548R	3525	95800	120000	3900	5400
	88.900	30.163	29.370	23.020	3.6	3.3	HM803149	HM803110	99600	128000	3800	5400
	90.119	23.000	21.926	21.808	3.6	2.4	355X	352	71800	81700	3800	5400
	92.075	30.163	29.370	23.020	3.6	3.2	HM803149	HM803112	99600	125000	3800	5440
	93.264	30.163	30.302	23.813	3.6	3.2	3782	3720	103000	137000	3500	4900
	95.250	30.958	28.575	22.225	3.6	0.8	HM903249	HM903210	99700	120000	3700	5100
95.250	30.958	28.301	20.638	1.2	0.8	53176	53375	88700	98400	3700	5200	
112.713	30.163	26.909	50.638	3.5	3.3	55175	55443	92000	108000	3100	4300	
114.300	44.450	44.450	34.925	3.6	3.2	65385	65320	189000	230000	3100	4400	
44.983	93.264	30.163	30.302	23.813	3.6	3.2	3776	3720	103000	137000	3500	4900
45.242	73.431	19.558	19.812	15.748	3.5	0.8	LM102949	LM102910	55500	78000	4700	6400
	77.788	198.542	19.842	15.080	3.6	0.8	LM603049	LM603011	57100	73500	4100	5700
	77.788	21.430	19.842	16.667	3.6	0.8	LM606049	LM603012	57100	73500	4100	5700
45.618	82.931	23.812	25.400	19.050	3.5	0.8	25590	25520	78500	98000	4500	6000
	82.931	26.988	25.400	22.225	3.5	2.3	25590	25523	78500	98000	4500	6000
46.038	79.375	17.463	17.463	13.495	2.8	1.6	18690	18620	47100	59100	4000	5600
	85.000	20.638	21.692	17.462	2.3	1.3	359S	354A	69000	78000	4300	6000
47.625	93.264	30.163	30.302	23.813	3.6	3.2	37790	3720	103000	137000	3500	4900
	101.600	34.925	36.068	26.988	3.5	3.3	528	522	139000	171000	3700	5000
	107.950	36.513	36.957	28.575	3.6	3.2	536	532X	138000	172000	3200	4400
	111.125	30.162	26.909	20.638	3.5	3.3	55187	55437	92000	108000	3100	4300
49.212	93.264	30.162	30.302	23.812	3.5	0.8	3781	3730	102000	134000	3800	5300
	103.188	43.658	44.475	36.512	3.5	3.3	5395	5335	177000	245000	3700	5000
	114.300	44.450	44.450	36.068	3.5	3.3	HH506348	HH506310	199000	243000	3500	4700
50.000	82.000	21.500	21.500	17.000	3.0	0.5	JLM104948	JLM104910	71700	97900	3800	5300

Note : when load center is (-), and it is out of inner ring plane

Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)	a	Cone	Cup
57.0	50.0	74.0	77.0	3.5	0.8	6.2	0.355	0.200
57.0	50.0	72.0	77.0	3.5	2.3	9.4	0.355	0.245
57.0	50.0	72.0	77.0	3.5	3.3	6.2	0.355	0.100
57.0	51.0	72.0	81.0	3.5	3.3	10.2	0.476	0.305
57.0	51.0	75.0	81.0	3.6	3.2	9.7	0.476	0.308
62.0	53.4	75.0	85.0	3.6	3.2	4.1	0.547	0.326
63.0	55.0	74.0	80.0	3.6	2.4	5.1	0.336	0.325
62.0	53.4	72.0	84.0	3.6	3.2	4.1	0.517	0.407
71.0	59.0	67.0	88.0	3.6	3.2	8.0	0.651	0.296
65.0	54.0	82.0	91.0	3.6	0.8	0.1	0.609	0.389
59.0	52.5	81.0	89.0	1.2	0.8	1.0	0.557	0.367
67.0	60.0	84.0	105.0	3.5	3.3	-7.1	0.820	0.500
79.0	59.0	97.0	107.0	3.6	3.2	12.5	1.466	0.884
59.0	53.0	82.0	88.0	3.6	3.2	8.0	0.642	0.296
56.0	50.0	98.0	70.0	3.5	0.8	4.7	0.208	0.100
57.0	50.0	71.0	74.0	3.6	0.8	2.3	0.242	0.122
57.0	50.0	71.0	74.0	3.6	0.8	2.3	0.241	0.141
58.0	51.0	74.0	77.0	3.5	0.8	6.2	0.340	0.200
58.0	51.0	72.0	77.0	3.5	2.3	6.2	0.340	0.245
56.0	51.0	71.0	74.0	2.8	1.6	1.5	0.206	0.126
55.0	51.0	77.0	80.0	2.3	1.3	4.9	0.330	0.160
71.0	59.0	82.0	88.0	3.6	3.2	8.0	0.596	0.296
62.0	55.0	89.0	95.0	3.5	3.3	12.7	0.890	0.410
76.0	64.0	94.0	100.0	3.6	3.2	12.3	1.03	0.583
69.0	62.0	82.0	105.0	3.5	3.3	-7.1	0.825	0.510
62.0	56.0	84.0	88.0	3.5	0.8	8.4	0.650	0.295
66.0	60.0	89.0	97.0	3.5	3.3	27.3	1.13	0.640
71.0	61.0	97.0	107.0	3.5	3.3	31.5	1.70	0.850
60.0	55.0	76.0	78.0	3.0	0.5	5.3	0.305	0.129

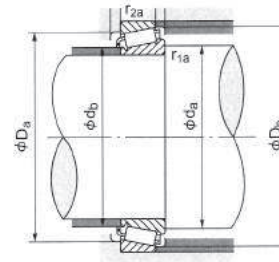
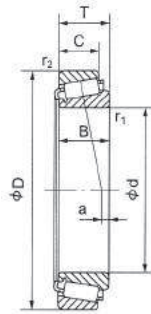
d: 50.800 ~ 57.150 mm



Principal Dimensions (mm)								Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)	a	Cone	Cup	
50.800	82.000	21.976	22.225	17.000	3.6	0.5	LM104949	JLM104910	61200	84300	3700	5200	62.0	55.0	76.0	78.0	3.6	0.5	5.2	0.288	0.129	
	82.550	21.590	22.225	16.510	3.5	1.3	LM104949	LM104911	71000	96000	4300	5700	62.0	55.0	75.0	78.0	3.5	1.3	3.9	0.285	0.150	
	82.931	21.590	22.225	16.510	3.6	1.2	LM104949	LM104912	61200	84300	3700	5200	62.0	55.0	72.0	78.0	3.6	1.2	5.2	0.287	0.140	
	85.000	17.462	17.462	13.495	3.5	1.5	18790	18720	44000	58500	4000	5600	62.0	56.0	77.0	80.0	3.5	1.5	0.7	0.235	0.134	
	88.900	17.462	17.462	13.495	3.5	1.3	18790	18724	44000	58500	4000	5300	62.0	56.0	75.5	80.5	3.5	1.3	0.7	0.235	0.134	
	88.900	20.638	22.225	16.513	1.5	1.3	368	362A	74500	89000	4000	5600	58.0	56.0	81.0	84.0	1.5	1.3	4.2	0.345	0.165	
	88.900	20.638	22.225	16.513	3.6	1.3	368A	362A	74300	87300	3700	5200	62.0	56.0	84.0	84.0	3.6	1.2	4.6	0.329	0.166	
	92.075	24.608	25.400	19.845	3.6	0.8	28580R.L	28521.L	84800	119000	3500	4900	73.0	61.0	76.0	86.0	3.6	0.8	4.7	0.455	0.247	
	93.264	30.162	30.302	23.812	3.5	0.8	3780	3730	102000	134000	3800	5300	64.0	58.0	84.0	88.0	3.5	0.8	8.2	0.558	0.295	
	93.264	30.163	30.302	23.813	3.6	3.2	3780	3720	103000	137000	3500	4900	64.0	58.0	82.0	88.0	3.6	3.2	8.0	0.539	0.296	
	101.600	31.750	31.750	25.400	3.5	3.3	49585	49520	107000	128000	3600	5000	66.0	59.0	88.0	96.0	3.5	3.3	7.1	0.750	0.385	
	101.600	34.925	36.068	26.988	0.8	3.3	529	522	139000	169000	3700	5000	59.0	58.0	89.0	95.0	0.8	3.3	12.7	0.830	0.410	
	104.775	30.162	30.958	23.812	6.4	3.3	45284	45220	131000	171000	3500	4700	71.0	59.0	95.0	99.0	6.4	3.3	7.9	0.825	0.410	
	104.775	36.212	36.512	28.575	3.5	3.3	HM807046	HM807010	147000	201000	3500	4800	70.0	63.1	89.0	100.0	3.5	3.3	7.4	0.970	0.500	
	107.950	36.512	36.957	28.575	3.5	3.3	537	532X	139000	173000	3600	4800	65.0	59.0	94.0	100.0	3.5	3.3	11.7	0.970	0.570	
	111.125	30.162	26.909	50.638	3.5	3.3	55200	55437	92000	108000	3100	4300	71.0	63.9	92.0	105.0	3.5	3.3	-7.1	0.770	0.510	
	122.238	38.100	36.678	30.162	2.3	3.3	555	553X	149000	197000	3000	4100	66.0	62.0	108.0	115.0	2.3	3.3	9.4	1.50	0.690	
	123.825	36.512	32.791	25.400	3.5	3.3	72200	72487	135000	148000	2900	4100	74.0	65.9	102.0	116.0	3.5	3.3	-1.3	1.24	0.785	
	127.000	44.450	44.450	34.925	3.5	3.3	65200	65500	198000	258000	3100	4300	75.0	69.0	107.0	119.0	3.5	3.3	9.4	1.87	1.03	
	52.388	92.075	24.608	25.400	19.845	3.6	0.8	28584R	28521	84800	119000	3500	4900	73.0	61.0	76.0	87.0	3.6	0.8	4.7	0.430	0.247
53.975	96.838	21.001	21.946	15.875	1.6	0.8	389A	382A	80400	101000	3300	4600	75.0	66.0	89.0	92.0	1.6	0.8	3.6	0.475	0.179	
	98.425	21.000	21.946	17.826	0.8	0.8	389A	382	74500	91500	3600	5000	69.0	71.0	90.0	92.0	0.8	0.8	3.0	0.380	0.225	
	104.775	30.162	29.317	24.605	3.5	3.3	456	453X	116000	150000	3400	4800	67.0	63.0	92.0	98.0	3.5	3.3	7.0	0.740	0.375	
	104.775	36.512	36.512	28.575	3.5	3.3	HM807049	HM807010	147000	201000	3500	4800	73.0	63.1	89.0	95.0	3.5	3.3	7.4	0.890	0.500	
	112.712	30.162	30.163	23.812	3.5	3.3	39578	39520	126000	168000	3100	4300	77.0	61.0	101.0	107.0	3.5	3.3	6.6	0.900	0.360	
	120.650	41.275	41.275	31.750	3.5	3.3	621	612	163000	198000	3300	4400	7.0	63.0	105.0	110.0	3.5	3.3	26.9	1.49	0.735	
	123.825	38.100	36.678	30.162	3.5	3.3	557S	552A	149000	197000	3000	4100	71.0	65.0	109.0	116.0	3.5	3.3	9.2	1.50	0.750	
	127.000	44.450	44.450	34.925	3.5	3.3	65212	65500	198000	258000	3100	4300	77.0	71.0	107.0	119.0	3.5	3.3	9.4	1.80	1.03	
	127.000	50.800	52.388	41.275	3.5	3.3	6280	6220	241000	300000	3100	4300	74.0	67.0	108.0	117.0	3.5	3.3	19.5	2.06	1.25	
	55.000	90.000	23.000	23.000	18.500	1.5	0.5	JLM506849E	JLM506810E	81400	115000	3500	4900	72.0	62.0	76.0	87.0	1.5	0.5	2.9	0.377	0.184
55.562	122.238	43.658	43.764	36.512	1.3	3.3	5566	5535	178000	263000	3000	4000	70.0	68.0	106.0	116.0	1.3	3.3	12.1	1.76	0.811	
55.563	97.630	24.608	24.608	19.446	3.6	0.8	28680	28622	89600	131000	3300	4600	68.0	62.0	88.0	92.0	3.6	0.8	3.4	0.490	0.270	
57.150	96.838	21.001	21.946	15.875	3.6	0.8	387A	382A	80400	101000	4200	5900	69.0	62.0	89.0	92.0	3.6	0.8	3.6	0.425	0.179	
	97.630	24.608	24.608	19.446	3.6	0.8	28682	28622	89600	131000	3300	4600	76.0	66.0	88.0	92.0	3.6	0.8	3.4	0.463	0.270	
	104.775	30.163	29.317	24.605	2.4	3.2	462	453X	109000	144000	3100	4300	67.0	63.0	92.0	98.0	2.4	3.2	6.6	0.678	0.382	
	104.775	30.162	30.958	23.812	2.3	0.8	45290	45221	131000	171000	3500	4700	68.0	65.0	95.0	99.0	2.3	0.8	8.0	0.765	0.350	
	104.775	30.163	29.317	24.605	3.6	3.2	469	453X	109000	144000	3100	4300	70.0	63.0	92.0	98.0	3.6	3.2	6.6	0.678	0.382	
	110.000	21.999	21.996	18.825	2.4	1.2	390	394A	86400	116000	2800	4000	86.0	77.0	101.0	104.5	2.4	1.2	0.7	0.677	0.262	
	112.712	30.162	30.048	23.812	3.5	3.3	3979	3920	118000	172000	3200	4300	72.0	66.0	99.0	106.0	3.5	3.3	4.6	0.940	0.460	
	112.713	30.163	30.163	23.813	7.9	3.2	39581	39520	147000	207000	2800	3900	81.0	66.0	101.0	107.0	7.9	3.2	6.9	1.03	0.363	
	117.475	30.162	30.162	23.812	3.5	3.3	33225	33462	112000	168000	3000	4000	74.0	68.0	104.0	112.0	3.5	3.3	2.4	1.05	0.440	
	117.475	33.338	31.750	23.812	3.5	3.3	66225	66462	118000	132000	3100	4100	72.0	63.0	98.0	113.0	3.5	3.3	-0.1	0.970	0.540	
	122.238	38.100	36.678	30.162	3.5	3.3	555S	553X	149000	197000	3000	4100	73.0	67.0	108.0	115.0	3.5	3.3	9.4	1.45	0.690	
	127.000	44.450	44.450	34.925	3.5	3.3	65225	65500	198000	258000	3100	4200	80.0	71.0	107.0	119.0	3.5	3.3	9.3	1.75	1.03	
	136.525	41.275	41.275	31.750	3.5	3.3	635	632	183000	246000	2800	3800	75.0	69.0	118.0	125.0	3.5	3.3	11.2	2.02	1.01	
	149.225	53.975	54.229	44.450	3.5	3.3	6455	6420	284000	410000	2500	3400	81.0	75.0	129.0	140.0	3.5	3.3	15.1	3.45	1.65	

Note : when load center is (-), and it is out of inner ring plane

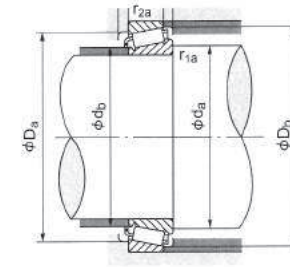
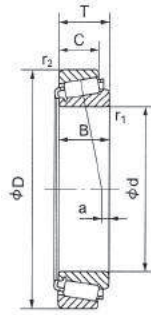
d: 58.738 ~ 65.088 mm



Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm)		Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)	a	Cone	Cup	
58.738	112.712	30.162	30.048	23.812	3.5	3.3	3981	3920	118000	172000	3200	4300	73.0	67.0	99.0	106.0	3.5	3.3	4.5	0.890	0.460	
	127.000	44.450	44.450	34.925	3.5	3.3	65231	65500	198000	258000	3100	4200	81.0	71.0	107.0	119.0	3.5	3.3	9.3	1.71	1.03	
59.987	134.983	33.449	30.925	21.948	3.6	3.6	HM911244	HM911216	153000	181000	2600	3700	100.0	75.0	98.0	122.0	3.6	3.6	-7.1	1.35	0.823	
60.325	100.000	25.400	25.400	19.845	3.6	3.2	28985	28921	91400	137000	3100	4300	73.0	67.0	89.0	96.0	3.6	3.2	2.6	0.527	0.237	
	101.600	25.400	25.400	19.845	3.6	3.2	28985	28920	91400	137000	3100	4300	73.0	67.0	89.0	96.0	3.6	3.2	2.6	0.526	0.276	
	112.713	30.162	30.048	23.812	3.5	0.8	3980	3925	118000	172000	3200	4300	74.0	68.0	101.0	106.0	3.5	0.8	4.5	0.90	0.450	
	122.238	38.100	38.354	29.718	8.0	1.5	HM212044	HM212010	187000	243000	3000	4100	85.0	70.0	110.0	116.0	8.0	1.5	10.9	1.45	0.600	
	127.000	36.512	36.512	26.988	3.5	1.5	HM813841	HM813811	113000	149000	2900	3800	80.0	73.0	113.0	121.0	3.5	1.5	3.7	1.58	0.625	
	130.175	36.512	33.338	23.812	5.0	3.3	HM911245	HM911210	146000	171000	2700	3600	87.0	74.0	109.0	123.6	5.0	3.3	-5.2	1.48	0.685	
	130.175	41.275	41.275	31.750	3.5	3.3	637	633	183000	246000	2800	3800	78.0	72.0	116.0	124.0	3.5	3.3	11.2	1.89	0.705	
	135.755	53.975	56.007	44.450	3.5	3.3	6376	6320	263000	360000	2800	3800	81.0	74.0	117.0	126.0	3.5	3.3	19.2	2.45	1.40	
136.525	46.038	46.038	36.512	3.5	3.3	H715332	H715311	184000	280000	2600	3600	84.0	78.0	118.0	132.0	3.5	3.3	8.5	2.53	1.02		
61.912	110.000	22.000	21.996	18.824	0.8	1.3	392	394A	87500	117000	3200	4300	70.0	69.0	101.0	104.5	0.8	1.3	0.8	0.615	0.265	
	122.238	38.100	36.678	30.162	3.5	3.3	554	553X	149000	197000	3000	4100	73.0	67.0	108.0	115.0	3.5	3.3	9.4	1.40	0.690	
	139.700	46.038	46.038	36.512	3.5	3.3	H715334	H715310	184000	280000	2600	3600	86.0	79.0	120.0	133.0	3.5	3.3	8.5	2.48	1.15	
	146.050	41.275	39.688	25.400	3.5	3.3	H913842	H913810	191000	221000	2400	3300	90.0	82.4	124.0	138.0	3.5	3.3	-4.3	2.25	0.900	
63.500	94.458	19.050	19.050	15.083	1.5	1.5	L610549	L610510	49000	80000	3600	4800	71.0	69.0	86.0	91.0	1.5	1.5	-0.7	0.295	0.156	
	107.950	25.400	25.400	19.050	1.6	0.8	59586	29522	82800	143000	2800	4000	73.0	71.0	91.0	104.0	1.6	0.8	0.7	0.646	0.286	
	107.950	25.400	25.400	19.050	3.5	3.3	29585	29520	94500	144000	3200	4300	77.0	71.0	96.0	103.0	3.5	3.3	0.8	0.640	0.280	
	110.000	22.000	21.996	18.824	3.5	1.3	395	394A	87500	117000	3200	4300	77.0	70.0	101.0	104.5	3.5	1.3	0.8	0.565	0.265	
	110.000	25.400	25.400	19.050	3.5	1.3	29585	29521	94500	144000	3200	4300	77.0	71.0	99.0	104.0	3.5	1.3	0.8	0.640	0.335	
	112.712	30.162	30.048	23.812	3.5	0.8	3982	3925	118000	172000	3200	4300	77.0	71.0	101.0	106.0	3.5	0.8	4.5	0.775	0.450	
	112.713	30.163	30.463	23.813	3.6	3.2	39585	39520	147000	207000	2800	3900	77.0	71.0	101.0	107.0	3.6	3.2	6.9	0.907	0.363	
	112.713	30.163	30.048	23.813	3.6	3.2	3982	3920	111000	164000	2800	4000	88.0	76.0	99.0	106.0	3.6	3.2	4.3	0.772	0.458	
	120.000	29.002	29.007	23.444	3.5	3.3	483	472A	119000	161000	3000	4000	78.0	72.0	106.0	114.0	3.5	3.3	4.0	0.985	0.445	
	120.000	29.794	30.162	23.444	0.8	0.8	33251	33472	112000	168000	3000	4000	73.0	72.0	107.0	113.0	0.8	0.8	2.6	1.03	0.510	
	122.238	38.100	38.354	29.718	7.0	3.3	HM212047	HM212011	187000	243000	3000	4100	87.0	73.0	108.0	116.0	7.0	3.3	10.9	1.45	0.600	
	122.238	38.100	38.354	29.718	7.1	3.2	HM212047UR	HM212011UR	191000	249000	2700	3800	90.0	77.0	102.0	115.0	7.1	3.2	10.8	1.35	0.605	
64.963	127.000	36.512	36.512	26.988	3.5	1.5	HM813842	HM813811	113000	149000	2900	3800	82.0	76.0	113.0	121.0	3.5	1.5	3.7	1.40	0.715	
	130.175	41.275	41.275	31.750	3.5	3.3	639	633	183000	246000	2800	3800	81.0	74.0	116.0	124.0	3.5	3.3	11.2	1.79	0.705	
	136.525	41.275	41.275	31.750	3.5	3.3	H414235	H414210	231000	300000	2700	3700	82.0	78.0	121.0	129.0	3.5	3.3	10.9	1.95	0.795	
	136.525	46.038	46.038	36.512	3.5	3.3	H715336	H715311	184000	280000	2600	3600	87.0	80.0	118.0	132.0	3.5	3.3	8.5	2.45	1.02	
	140.030	36.512	33.236	23.520	2.3	2.3	78250	78551	145000	172000	2500	3500	85.0	78.9	117.0	132.0	2.3	2.3	-8.0	1.50	0.925	
	150.089	44.450	46.673	36.512	3.5	3.3	745S	742	252000	345000	2400	3200	88.0	82.0	134.0	142.0	3.5	3.3	11.9	2.90	1.06	
	127.000	36.512	36.170	28.575	3.5	3.3	569	563	165000	232000	2800	3800	81.0	74.0	112.0	120.0	3.5	3.3	8.1	1.45	0.650	
	120.000	39.000	38.500	32.000	3.0	2.5	JH211749E	JH211710E	189000	255000	2700	3800	91.0	75.0	99.0	114.0	3.0	2.5	11.1	1.28	0.628	
65.088	135.755	53.975	56.007	44.450	3.5	3.3	6379	6320	263000	360000	2800	3800	84.0	77.4	117.0	126.0	3.5	3.3	19.2	2.25	1.40	
	136.525	46.038	46.038	36.512	3.5	3.3	H715340	H715311	184000	280000	2600	3600	88.0	82.0	118.0	132.0	3.5	3.3	8.5	2.35	1.02	

Note : when load center is (-), and it is out of inner ring plane

d: 66.675 ~ 71.438 mm

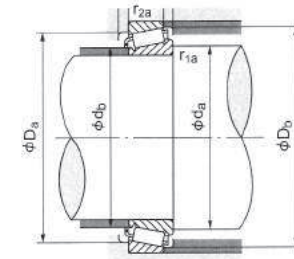
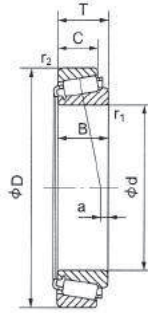


Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
66.675	110.000	21.999	21.996	18.824	3.6	1.2	395S	394A	86400	116000	2800	4000	79.0	73.0	101.0	104.5	3.6	1.2	0.7	0.516	0.262
	110.000	21.999	21.996	18.824	0.8	1.2	395A	394A	86400	116000	2800	4000	73.0	73.0	101.0	104.5	0.8	1.2	0.7	0.521	0.262
	112.713	30.163	30.048	23.813	3.6	3.2	3984	3920	111000	164000	2800	4000	88.0	76.0	99.0	106.0	3.6	3.2	4.3	0.692	0.458
	112.713	30.163	30.163	23.813	3.6	3.2	39590	39520	147000	207000	2800	3900	80.0	74.0	101.0	107.0	3.6	3.2	6.9	0.827	0.363
	112.713	30.163	30.048	23.813	5.6	3.2	3994	3920	111000	164000	2800	4000	88.0	76.0	99.0	106.0	5.6	3.2	4.3	0.692	0.458
	117.475	30.162	30.162	23.813	3.5	3.3	33262	33462	112000	168000	3000	4000	81.0	75.0	104.0	112.0	3.5	3.3	2.8	0.910	0.440
	122.238	38.100	36.678	30.162	3.5	3.3	560	553X	149000	197000	3000	4000	81.0	75.0	108.0	115.0	3.5	3.3	9.4	1.15	0.690
	122.238	38.100	68.354	29.718	3.5	1.5	HM212049	HM212010	187000	243000	3000	4100	82.0	75.5	110.0	116.0	3.5	1.5	10.9	1.25	0.600
	122.238	38.100	38.354	29.718	3.6	3.2	HM212049	HM212011	191000	249000	2700	3800	82.0	75.5	108.0	116.0	3.6	3.2	10.8	1.25	0.605
	136.525	41.275	41.275	31.750	3.5	3.3	H414242	H414210	231000	300000	2700	3700	85.0	81.0	121.0	129.0	3.5	3.3	10.9	1.95	0.795
136.525	46.039	46.038	36.512	3.5	3.3	H715341	H715311	184000	280000	2600	3600	89.0	83.0	118.0	132.0	3.5	3.3	8.5	2.30	1.02	
68.262	110.000	22.000	21.996	18.824	2.3	1.3	399A	394A	87500	117000	3200	4300	78.0	74.0	101.0	104.5	2.3	1.3	0.8	0.495	0.265
	117.475	30.162	30.162	23.812	3.5	3.3	33269	33462	112000	168000	3000	4000	82.0	76.0	104.0	112.0	3.5	3.3	2.8	0.900	0.440
	120.000	29.005	29.007	23.444	3.5	3.3	480	472A	119000	161000	3000	4000	82.0	75.0	106.0	114.0	3.5	3.3	4.0	0.890	0.445
	122.238	38.100	36.678	30.162	3.5	3.3	560S	553X	149000	197000	3000	4000	83.0	76.0	108.0	115.0	3.5	3.3	9.4	1.10	0.690
	135.525	41.275	41.275	31.750	3.5	3.3	H414245	H414210	231000	300000	2700	3700	86.0	82.0	121.0	129.0	3.5	3.3	10.9	1.90	0.795
	136.525	46.038	46.038	36.512	3.5	3.3	H715343	H715311	184000	280000	2600	3600	90.0	84.0	118.0	132.0	3.5	3.3	8.5	2.24	1.02
	152.400	47.625	46.038	31.750	3.5	3.3	9185	9121	245000	279000	2600	3500	90.0	81.3	130.0	145.0	3.5	3.3	3.7	2.57	1.21
68.263	120.000	29.794	29.007	24.237	3.6	2.0	480	472	118000	161000	2700	3700	92.0	80.0	108.0	113.0	3.6	2.0	4.1	0.826	0.494
	123.825	38.100	36.678	30.163	3.6	3.2	560S	552A	162000	223000	2700	3700	91.0	78.0	109.0	116.0	3.6	3.2	9.4	1.07	0.770
	136.525	41.275	41.275	31.750	3.6	3.2	H414245	H414210	228000	295000	2400	3400	86.0	82.0	121.0	129.0	3.6	3.2	11.0	1.91	0.804
69.850	112.712	25.400	25.400	19.050	1.5	3.3	29675	29620	86000	133000	3000	4000	80.0	77.0	101.0	109.0	1.5	3.3	-0.9	0.670	0.290
	117.475	30.163	30.163	23.813	3.6	3.2	33275	33462	118000	179000	2700	3700	84.0	77.0	104.0	112.0	3.6	3.2	2.4	0.824	0.446
	120.000	29.794	29.007	24.237	3.6	2.0	482	475	118000	161000	2700	3700	93.0	81.0	99.0	112.0	3.6	2.0	4.1	0.786	0.494
	120.000	32.545	32.545	26.195	3.5	3.3	47487	47420	123000	167000	3000	4000	84.0	78.0	107.0	114.0	3.5	3.3	6.2	0.960	0.479
	120.000	32.545	32.545	26.195	3.6	0.5	47487R	47420DM	150000	218000	2600	3700	84.0	78.0	107.0	114.0	3.6	0.5	6.0	1.00	0.487
	127.000	36.512	36.512	26.988	3.5	1.5	HM813846	HM813811	113000	149000	2800	3800	88.0	81.0	113.0	121.0	3.5	1.5	3.8	1.27	0.630
	146.050	41.275	39.688	25.400	3.6	3.2	H913849R.F	H913810F	202000	237000	2400	3300	110.0	80.0	112.0	128.0	3.6	3.2	-4.0	2.05	0.907
	146.050	41.275	41.275	31.750	3.5	3.3	655	653	188000	260000	2500	3300	88.0	82.0	131.0	139.0	3.5	3.3	7.9	2.35	0.890
	149.225	53.975	54.229	44.450	5.0	3.3	6454	6420	284000	410000	2500	3400	94.0	85.0	129.0	140.0	5.0	3.3	15.1	2.90	1.65
	150.089	44.450	46.672	36.512	3.5	3.3	745A	742	252000	345000	2400	3200	88.0	82.0	134.0	142.0	3.5	3.3	12.0	2.80	1.06
69.952	121.442	24.608	23.012	17.462	2.0	2.0	34274	34478	85600	110000	2900	3800	81.0	78.0	110.0	116.0	2.0	2.0	-1.2	0.750	0.375
71.438	117.475	30.163	23.163	23.813	3.6	3.2	33281	33462	118000	179000	2700	3700	85.0	79.0	104.0	112.0	3.6	3.2	2.4	0.784	0.446
	120.000	29.794	30.163	23.444	3.6	0.8	33281	33472	118000	179000	2700	3700	85.0	79.0	97.0	112.0	3.6	0.8	2.4	0.787	0.523
	120.000	32.545	32.545	26.195	3.5	3.3	47490	47420	123000	167000	3000	4000	86.0	79.0	107.0	114.0	3.5	3.3	6.2	0.940	0.479
	127.000	36.512	36.512	26.988	3.5	1.5	HM813849	HM813811	113000	149000	2800	3800	89.0	81.9	113.0	121.0	3.5	1.5	3.8	1.35	0.630
	130.175	41.275	41.275	31.750	3.5	3.3	644	633	151000	229000	2800	3800	87.0	81.0	116.0	124.0	3.5	3.3	11.2	1.50	1.05
	133.350	33.338	33.338	26.195	3.5	0.8	47675	47620A	151000	229000	2600	3500	88.0	82.0	121.0	128.0	3.5	0.8	3.8	1.38	0.590
	136.525	41.275	41.275	31.750	3.5	3.3	H414249	H414210	231000	300000	2700	3600	89.0	83.3	121.0	129.0	3.5	3.3	10.9	1.82	0.795
	136.525	41.275	41.275	31.750	3.6	3.2	H414249	H414210	228000	295000	2400	3400	100.0	85.0	212.0	129.0	3.6	3.2	11.0	1.79	0.804
	136.525	41.275	41.275	31.750	6.4	3.2	645	632	197000	267000	2500	3500	98.0	83.0	108.0	123.0	6.4	3.2	11.0	1.45	1.05
	136.525	46.038	46.038	36.512	3.5	3.3	H715345	H715311	184000	280000	2600	3500	93.0	87.0	118.0	132.0	3.5	3.3	8.5	2.07	1.02

Note : when load center is (-), and it is out of inner ring plane



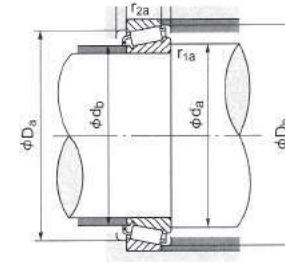
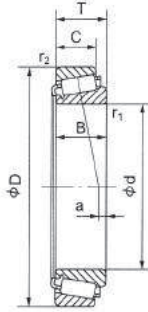
d: 73.025 ~ 84.138 mm



Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
73.025	112.713	25.400	25.400	19.050	3.6	3.2	29685	29620	97000	155000	2700	3800	86.0	80.0	101.0	109.0	3.6	3.2	-0.8	0.593	0.278
	117.475	30.163	30.163	23.813	3.6	3.2	33287	33462	118000	179000	2700	3700	87.0	80.0	104.0	112.0	3.6	3.2	2.4	0.744	0.446
	125.412	25.400	25.400	19.845	3.5	1.5	27680	27620	102000	164000	2700	3600	88.0	82.0	115.0	120.0	3.5	1.5	-0.6	0.90	0.410
	127.000	30.162	31.000	22.225	3.5	3.3	42683	42620	131000	181000	2800	3700	88.0	81.0	114.0	121.0	3.5	3.3	2.8	1.05	0.510
	127.000	36.513	36.170	28.575	3.6	3.2	567	563	156000	226000	2500	3500	88.0	81.0	112.0	120.0	3.6	3.2	7.9	1.13	0.661
	149.225	53.975	54.229	44.450	3.5	3.3	6460	6420	284000	410000	2500	3400	93.0	87.0	129.0	140.0	3.5	3.3	15.1	2.79	1.65
	149.225	53.975	54.229	44.450	7.0	3.2	6460YA	6420	285000	404000	2200	3100	111.0	88.0	129.0	141.0	7.0	3.2	14.7	2.73	1.64
150.089	44.450	46.673	36.512	3.5	3.3	744	742	252000	345000	2400	3200	91.0	85.0	134.0	142.0	3.5	3.3	12.0	2.50	1.06	
73.817	112.712	25.400	25.400	19.050	1.5	3.3	29688	29620	86000	133000	3100	4100	83.0	81.0	101.0	109.0	1.5	3.3	-0.9	0.575	0.290
74.612	139.992	36.512	36.098	28.575	3.5	3.3	577	572	171000	252000	2500	3400	91.0	85.0	125.0	133.0	3.5	3.3	5.3	1.65	0.820
76.200	125.412	25.400	25.400	19.845	3.5	1.5	27684	27620	102000	164000	2700	3600	91.0	84.0	115.0	120.0	3.5	1.5	0.6	0.83	0.410
	133.350	30.162	29.769	22.225	6.4	3.3	495AX	492A	118000	175000	2600	3500	98.0	86.0	120.0	128.0	6.4	3.3	0.8	1.20	0.430
	135.733	44.450	49.101	34.925	3.5	3.3	5760	5735	207000	295000	2600	3600	94.0	88.0	119.0	130.0	3.5	3.3	11.7	1.83	0.882
	136.525	30.162	29.769	22.225	3.5	3.3	495A	493	118000	175000	2600	3500	92.0	86.0	122.0	130.0	3.5	3.3	0.8	1.26	0.490
	139.992	36.512	36.098	28.575	3.5	3.3	575	572	171000	252000	2500	3400	92.0	86.0	125.0	133.0	3.5	3.3	5.3	1.50	0.810
	161.925	47.625	48.260	38.100	3.5	3.3	755	752	273000	390000	2300	3100	95.0	88.0	147.0	150.0	3.5	3.3	11.9	3.50	1.60
	161.926	49.212	46.038	31.750	3.5	3.3	9285	9220	230000	263000	2100	3000	103.0	90.4	138.0	153.0	3.5	3.3	0	2.90	1.40
	168.275	53.975	56.363	41.275	6.4	3.3	843	832	340000	460000	2200	3000	101.0	89.0	149.0	155.0	6.4	3.3	18.4	4.10	1.73
	171.450	49.212	46.038	31.750	3.5	3.3	9380	9321	229000	271000	2000	2700	105.0	98.2	147.0	164.0	3.5	3.3	-4.4	3.50	1.50
	190.500	57.150	57.531	46.038	3.5	3.3	HH221430	HH221410	425000	585000	1900	2600	101.0	95.0	171.0	179.0	3.5	3.3	14.4	5.80	2.90
77.788	133.350	30.162	29.769	22.225	3.5	3.3	495AS	492A	118000	175000	2600	3500	93.0	87.0	120.0	128.0	3.5	3.3	0.8	1.10	0.430
79.375	135.733	44.450	46.101	34.925	3.5	3.3	5795	5735	215000	340000	2600	3600	96.0	89.0	119.0	130.0	3.5	3.3	11.7	1.75	0.880
	146.050	41.275	41.275	31.750	3.5	3.3	661	653	188000	260000	2500	3300	96.0	90.0	131.0	139.0	3.5	3.3	7.9	2.00	0.890
	150.089	44.450	46.675	36.512	3.5	3.3	750	742	273000	390000	2400	3200	96.0	90.0	134.0	142.0	3.5	3.3	11.9	1.45	1.06
80.000	161.925	47.625	48.260	38.100	8.0	3.3	756A	752	273000	390000	2300	3100	106.0	91.0	144.0	150.0	8.0	3.3	14.9	3.02	1.60
	130.000	35.000	34.000	28.500	3.0	2.5	JM515649	JM515610	168000	256000	2400	3300	94.0	88.0	117.0	125.0	3.0	2.5	5.4	1.19	0.585
	133.350	30.162	29.769	22.225	3.5	3.3	496	492A	118000	175000	2600	3500	95.0	89.0	120.0	128.0	3.5	3.3	0.7	1.05	0.430
80.962	133.350	33.338	33.338	26.195	3.5	0.8	47681	47620A	151000	228000	2600	3500	95.0	89.0	121.0	128.0	3.5	0.8	4.3	1.18	0.59
	150.089	44.450	46.676	36.512	5.0	3.3	740	742	253000	345000	2400	3200	101.0	91.0	134.0	142.0	5.0	3.3	11.9	2.33	1.06
	168.275	53.975	56.363	41.275	0.8	3.3	838	832	340000	470000	2200	3000	90.0	89.0	149.0	155.0	0.8	3.3	18.4	4.05	1.73
	125.413	25.400	25.400	19.845	3.6	1.6	27687	27620	101000	162000	2400	3400	96.0	89.0	115.0	120.0	3.6	1.6	0.7	0.711	0.349
82.550	133.350	30.162	29.769	22.225	3.5	3.3	495	492A	118000	175000	2600	3500	97.0	90.0	120.0	128.0	3.5	3.3	0.7	1.02	0.51
	133.350	33.338	33.338	26.195	3.5	0.8	47686	47620A	151000	228000	2600	3500	97.0	90.0	121.0	128.0	3.5	0.8	3.8	1.15	0.575
	133.350	33.338	33.338	26.195	3.6	3.2	47686	47620	145000	226000	2300	3200	108.0	94.0	119.0	128.0	3.6	3.2	4.2	1.11	0.582
	133.350	33.338	33.338	26.195	6.7	3.2	47687	47620	145000	226000	2300	3200	107.0	94.0	119.0	128.0	6.7	3.2	4.2	1.10	0.582
	133.350	39.688	39.688	32.545	3.5	3.3	HM516449	HM546410	184000	320000	2600	3500	99.0	92.0	118.0	128.0	3.5	3.3	7.5	1.50	0.750
	139.992	36.512	36.098	28.575	3.5	3.3	580	572	171000	255000	2500	3400	98.0	81.0	125.0	133.0	3.5	3.3	5.3	1.35	0.810
	139.992	36.513	36.098	58.575	3.6	3.2	580R	572	175000	262000	2300	3200	98.0	91.0	125.0	133.0	3.6	3.2	5.5	1.35	0.841
	146.050	41.275	41.275	31.750	3.5	3.3	663	653	18000	260000	2500	3300	99.0	92.0	131.0	139.0	3.5	3.3	8.0	1.85	0.890
	161.925	47.625	48.260	38.100	3.5	3.3	757	752	273000	390000	2300	3100	100.0	94.0	144.0	150.0	3.5	3.3	12.1	2.95	1.60
	161.925	53.975	55.100	42.862	3.5	3.3	6559	6535	305000	460000	2300	3000	107.0	98.0	141.0	154.0	3.5	3.3	12.8	3.40	1.65
168.275	53.975	56.363	41.275	3.5	3.3	842	832	340000	470000	2200	3000	101.0	94.0	149.0	155.0	3.5	3.3	18.4	3.65	1.78	
84.138	133.350	30.162	29.769	22.225	3.5	3.3	498	492A	118000	175000	2600	3500	98.0	91.0	120.0	128.0	3.5	3.3	0.7	1.00	0.430
	171.450	49.212	46.038	31.750	3.5	3.3	9385	9321	229000	282000	2000	2700	111.0	98.2	147.0	164.0	3.5	3.3	-4.4	3.20	1.50

Note : when load center is (-), and it is out of inner ring plane

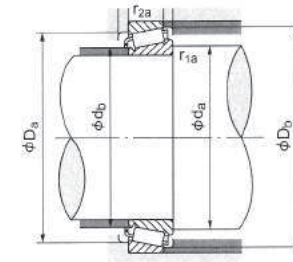
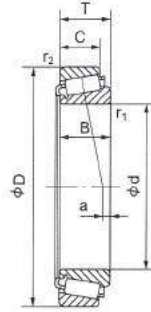
d: 85.027 ~ 95.250 mm



Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
85.027	150.089	44.450	46.672	36.512	3.5	3.3	749	742	253000	345000	2400	3200	101.0	95.0	134.0	142.0	3.5	3.3	11.9	2.15	1.05
	133.350	30.163	29.769	22.225	3.6	3.2	497	492A	133000	198000	2300	3200	99.0	93.0	120.0	128.0	3.6	3.2	0.3	0.969	0.441
	136.525	30.163	29.769	22.225	3.6	3.2	497	493	133000	198000	2300	3200	99.0	93.0	122.0	130.0	3.6	3.2	0.3	0.972	0.558
	142.138	42.862	42.862	34.133	4.8	3.3	HM617049	HM617010	210000	345000	2500	3300	106.0	93.0	125.0	137.0	4.8	3.3	7.4	1.80	0.910
85.725	152.400	39.688	36.322	30.163	3.6	3.2	596	592A	183000	287000	2100	2900	102.0	96.0	135.0	144.0	3.6	3.2	2.6	1.81	1.06
	161.925	47.625	48.260	38.100	3.5	3.3	458	752	273000	390000	2300	3100	103.0	97.0	144.0	150.0	3.5	3.3	11.9	2.65	1.60
	168.275	41.275	41.275	30.162	3.5	3.3	677	672	208000	310000	2000	2800	105.0	99.0	149.0	160.0	3.5	3.3	2.8	2.87	1.27
	168.275	53.975	56.363	41.275	3.5	3.3	841	832	340000	470000	2200	3000	101.0	94.0	149.0	155.0	3.5	3.3	18.4	3.53	1.78
87.312	190.500	57.150	57.531	44.450	8.0	3.3	869	854	365000	525000	1900	2600	120.0	105.0	171.0	179.0	8.0	3.3	15.0	5.67	2.69
	121.442	15.083	15.083	11.112	1.5	1.5	LL217849	LL217810	77500	132000	2700	3500	97.0	94.0	116.0	119.0	1.5	1.5	-0.1	0.490	0.245
	147.638	35.717	16.322	26.192	3.5	0.8	593	592XE	185000	288000	2300	3100	104.0	98.0	135.0	142.0	3.5	0.8	-1.4	1.70	1.05
	149.225	31.750	28.971	27.608	3.0	3.3	42350	42587	139000	214000	2300	3100	104.0	98.0	134.0	143.0	3.0	3.3	3.1	1.32	0.590
	152.400	39.688	36.322	30.163	3.6	3.2	593	592A	183000	287000	2100	2900	121.0	105.0	135.0	144.0	3.6	3.2	2.6	1.69	1.06
	152.400	39.688	39.688	30.163	6.4	3.2	HM518445	HM518410	548000	359000	2100	2900	110.0	98.0	135.0	114.0	4.6	3.2	6.6	2.09	0.786
	161.925	53.975	55.100	42.862	3.5	3.3	6580	6535	305000	460000	2200	3000	109.0	101.9	141.0	154.0	3.5	3.3	13.1	3.10	1.65
	161.925	53.974	55.100	42.863	3.6	3.2	6580R	6535	316000	471000	2000	2800	109.0	98.0	141.0	154.0	3.6	3.2	12.9	3.06	1.68
88.900	168.275	41.275	41.275	30.162	3.5	3.3	679	572	208000	310000	2000	2800	105.0	99.0	149.0	160.0	3.5	3.3	2.8	2.89	1.27
	168.275	53.975	56.363	41.275	3.5	3.3	850	832	340000	470000	2200	3000	106.0	100.0	149.0	155.0	3.5	3.3	18.4	3.31	1.78
	168.275	53.975	56.363	41.275	3.6	3.2	850R	832	344000	467000	2000	2800	122.0	103.0	149.0	155.0	3.6	3.2	19.0	3.26	1.75
	171.450	47.625	48.260	38.100	5.0	3.3	77350	77675	239000	340000	2100	2800	110.0	101.0	153.0	161.0	5.0	3.3	9.6	3.30	1.57
	190.500	57.150	57.531	44.450	8.0	3.3	855	854	340000	525000	1900	2600	118.0	103.0	170.0	174.0	8.0	3.3	15.4	5.05	2.69
	200.000	52.761	49.212	34.925	3.5	3.3	98350	98788	289000	365000	2000	2700	105.0	98.0	170.0	193.0	3.5	3.3	1.8	4.80	2.55
89.974	146.975	40.000	40.000	32.499	7.1	3.6	HM218248	HM218210	306000	310000	2100	3000	112.0	99.0	133.0	141.0	7.1	3.6	9.2	1.64	0.799
90.488	161.925	47.625	48.260	38.100	3.6	3.2	760	752	273000	391000	2000	2900	107.0	101.0	144.0	150.0	3.6	3.2	12.1	2.10	1.62
	146.050	33.338	34.925	26.195	3.5	3.3	47890	47820	157000	250000	2300	3100	107.0	101.0	131.0	140.0	3.5	3.3	1.0	1.63	0.660
	147.638	35.717	36.322	26.192	3.5	0.8	598	592XE	185000	288000	2300	3100	107.0	101.0	135.0	144.0	3.5	0.8	-1.5	1.65	1.05
	148.430	28.575	28.971	21.433	3.5	3.0	42362	42584	139000	214000	2300	3100	107.0	101.0	134.0	142.0	3.5	3.0	-3.1	1.30	0.550
	150.000	35.992	36.322	27.000	6.4	3.0	598A	593X	183000	287000	2100	2900	121.0	105.0	126.0	143.0	6.4	3.0	2.6	1.55	0.780
92.075	152.400	39.688	36.322	30.162	6.4	3.3	598A	592A	185000	288000	2300	2100	113.0	101.0	135.0	144.0	6.4	3.3	2.5	1.67	1.15
	152.400	39.688	36.322	30.163	6.4	3.2	598AUR	592AUR	183000	287000	2100	2900	121.0	105.0	135.0	144.0	6.4	3.2	2.6	1.57	1.06
	168.275	41.275	41.275	30.162	6.4	3.3	681A	672	208000	310000	2000	2800	116.0	104.0	149.0	160.0	6.4	3.3	2.8	2.64	1.27
	180.975	47.625	48.006	38.100	3.5	3.3	778	772	278000	415000	2000	2700	114.0	107.0	161.0	168.0	3.5	3.3	8.1	3.49	1.94
	190.500	57.150	57.531	44.450	8.0	3.3	857	854	340000	525000	1900	2600	121.0	106.0	170.0	174.0	8.0	3.3	15.4	4.83	2.69
93.662	148.430	28.575	28.971	21.433	3.0	3.0	42368	42584	139000	214000	2300	3100	107.0	102.0	134.0	142.0	3.0	3.0	-3.1	1.28	0.550
	146.050	33.338	34.925	26.195	3.5	3.3	47896	47820	157000	250000	2300	3100	110.0	103.0	131.0	140.0	3.5	3.3	1.0	1.53	0.660
	147.635	35.717	36.322	26.195	3.5	0.8	594	592XS	185000	288000	2300	3100	110.0	104.0	135.0	142.0	3.5	0.8	-1.5	2.10	1.05
	150.000	35.992	36.322	27.000	3.6	3.0	594	593X	183000	287000	2100	2900	121.0	105.0	126.0	143.0	3.6	3.0	2.6	1.43	0.780
	152.400	39.688	36.322	30.163	3.6	3.2	594	592A	183000	287000	2100	2900	121.0	105.0	135.0	144.0	3.6	3.2	2.6	1.43	1.06
95.250	157.162	36.512	36.116	26.195	3.5	3.3	52375	52618	176000	277000	2100	2900	112.0	105.0	142.0	152.0	3.5	3.3	-2.0	1.90	0.700
	168.275	41.275	41.275	30.162	3.5	3.3	683	672	208000	310000	2000	2800	113.0	106.0	149.0	160.0	3.5	3.3	2.8	2.42	1.27
	171.450	47.625	48.260	38.100	3.5	3.3	77375	77675	239000	340000	2100	2800	110.0	101.0	153.0	161.0	3.5	3.3	9.6	3.23	1.57
	190.500	57.150	57.531	44.450	8.0	3.3	864	854	365000	525000	1900	2600	123.0	108.0	170.0	174.0	8.0	3.3	9.4	4.60	2.69

Note : when load center is (-), and it is out of inner ring plane

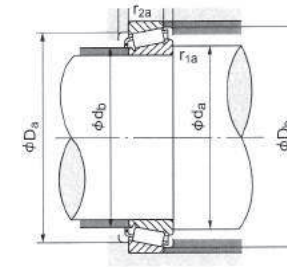
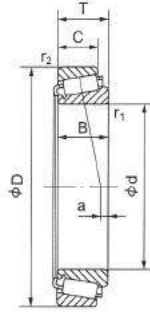
d: 98.425 ~ 127.000 mm



Principal Dimensions (mm)						Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)		
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic C _r	Static C _{0r}	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)		r _{2a} (max)	Cone	Cup
98.425	161.925	39.688	36.116	29.370	3.5	3.3	52387	52638	176000	277000	2100	2900	117.0	111.0	142.0	152.0	3.5	3.3	3.6	1.95	0.900
	168.275	41.275	41.275	30.162	3.5	3.3	685	672	208000	310000	2000	2800	116.0	109.0	149.0	160.0	3.5	3.3	2.8	2.35	1.27
	180.975	47.625	48.006	38.162	3.5	3.3	779	772	278000	415000	2000	2700	116.0	110.0	161.0	168.0	3.5	3.3	8.1	3.30	1.94
	190.500	57.150	57.531	44.450	3.5	3.3	866	854	365000	525000	1900	2600	118.0	111.0	170.0	174.0	3.5	3.3	15.4	4.45	2.69
100.000	180.975	47.625	48.006	38.100	3.5	3.3	783	772	278000	415000	2000	2700	122.0	116.0	161.0	168.0	3.5	3.3	8.1	3.22	1.94
100.012	157.162	36.512	36.116	26.195	3.5	3.3	52393	52618	176000	277000	2100	2900	116.0	109.0	142.0	152.0	3.5	3.3	0.4	1.79	0.700
101.600	157.162	36.512	36.116	26.195	3.5	3.3	52400	52618	176000	277000	2100	2900	117.0	111.0	142.0	152.0	3.5	3.3	0.4	1.70	0.700
	168.275	41.275	41.275	30.162	3.5	3.3	687	672	208000	310000	2000	2800	118.0	112.0	149.0	160.0	3.5	3.3	2.8	2.13	1.27
	180.975	47.625	48.006	38.100	3.5	3.3	780	772	278000	415000	2000	2700	119.0	113.0	161.0	168.0	3.5	3.3	8.1	3.04	1.94
	190.500	57.150	57.531	44.450	8.0	3.3	864	854	365000	525000	1900	2600	129.0	114.0	170.0	174.0	8.0	3.3	15.4	4.15	2.69
	190.500	57.150	57.531	46.038	8.0	3.3	HH221449	HH221410	425000	585000	1900	2600	131.0	115.0	171.0	179.0	8.0	3.3	15.0	4.70	2.28
	200.000	52.761	49.212	34.925	3.5	3.3	98400	98788	289000	365000	2000	2700	105.0	110.0	170.0	193.0	3.5	3.3	1.8	1.55	2.55
	212.725	66.675	66.675	53.975	7.0	3.3	941	932	455000	665000	1700	2400	141.0	128.0	187.0	193.0	7.0	3.3	19.7	6.05	4.06
104.775	212.725	66.675	66.675	53.975	7.0	3.3	HH224335	HH224310	480000	670000	1700	2300	132.0	121.0	192.0	201.0	7.0	3.3	18.9	8.30	3.02
180.975	47.625	48.006	38.100	3.5	3.3	782	772	278000	415000	2000	2700	122.0	116.0	161.0	168.0	3.5	3.3	8.1	2.90	1.94	
190.500	47.625	49.212	34.925	3.5	3.3	71412	71750	273000	425000	1800	2500	124.0	118.0	171.0	181.0	3.5	3.3	6.5	4.09	1.74	
107.950	146.050	21.433	21.433	16.670	1.5	1.5	L521949	L521910	935000	155000	2200	3000	116.0	114.0	136.0	141.0	1.5	1.5	-4.5	0.640	0.325
	158.750	23.020	21.438	15.875	3.6	3.2	37425	37625	104000	169000	1900	2700	122.0	115.0	143.0	152.0	3.6	3.2	-13.5	0.882	0.498
	159.987	34.925	34.925	26.988	3.5	3.3	LM522546	LM522510	176000	277000	2000	2800	122.0	116.0	146.0	154.0	3.5	3.3	1.4	1.55	0.775
	161.925	34.925	34.925	26.988	3.5	3.3	48190	48120	164000	280000	2100	2800	122.0	116.0	146.0	156.0	3.5	3.3	-3.9	1.60	0.830
	165.100	36.512	36.512	26.988	3.5	3.3	56425	56650	190000	305000	2000	2800	123.0	117.0	149.0	159.0	3.5	3.3	-2.0	1.75	0.850
	190.500	47.625	49.212	34.925	3.5	3.3	71425	71750	273000	425000	1800	2500	126.0	120.0	171.0	181.0	3.5	3.3	6.5	3.88	1.74
	212.725	66.675	66.675	53.975	8.0	3.3	936	932	455000	665000	1700	2400	141.0	128.0	187.0	193.0	8.0	3.3	19.7	5.86	4.06
114.300	212.725	66.675	66.675	53.975	8.0	3.3	HH224340	HH224310	480000	670000	1700	2300	139.0	126.0	192.0	201.7	8.0	3.3	18.9	7.74	3.02
114.300	177.800	41.275	41.275	30.162	3.5	3.3	66450	64700	231000	370000	1900	2600	131.0	125.0	160.0	172.0	3.5	3.3	-1.2	2.46	1.15
	181.000	34.925	31.750	25.400	3.5	3.3	68450	68712	173000	249000	1900	2500	136.0	125.0	160.0	172.0	3.5	3.3	-5.5	1.87	1.10
	190.500	47.625	49.212	34.925	3.5	3.3	71450	71750	273000	425000	1800	2500	132.0	125.0	171.0	181.0	3.5	3.3	6.5	3.48	1.74
	212.725	66.675	66.675	53.975	7.0	3.3	938	932	455000	665000	1700	2400	141.0	128.0	187.0	193.1	7.0	3.3	19.7	5.73	4.06
115.067	212.725	66.674	66.675	53.975	7.0	3.3	HH224346	HH224310	480000	670000	1700	2300	143.0	131.0	192.0	201.7	7.0	3.3	18.7	7.31	3.02
120.650	190.500	47.625	49.212	34.925	3.5	3.3	71453	71750	273000	425000	1800	2500	133.0	126.0	171.0	181.0	3.5	3.3	6.5	3.43	1.74
	169.862	25.400	26.192	20.638	1.5	1.5	L225842	L225810	128000	264000	1500	2000	140.0	137.0	157.0	165.0	1.5	1.5	0.4	1.48	0.505
	174.625	35.720	36.512	27.783	3.5	1.5	M224749	M224710	212000	385000	1900	2600	135.0	129.0	103.0	168.0	3.6	1.5	3.6	1.82	0.835
	206.375	47.625	47.625	34.925	3.3	3.3	795	792	299000	500000	1600	2200	139.0	134.0	186.0	198.0	3.3	3.3	2.1	4.52	1.92
127.000	234.950	63.500	63.500	49.212	6.4	3.3	95475	95925	500000	770000	1500	2000	152.0	140.0	209.0	217.0	6.4	3.3	14.0	8.17	3.96
127.000	165.895	18.258	17.462	13.495	1.5	1.5	LL225749	LL225710	71500	125000	1500	2000	140.0	137.0	159.0	162.0	1.5	1.5	-6.1	0.678	0.270
	180.975	25.400	26.195	20.638	1.5	1.5	L225849	L225818	128000	264000	1500	2000	140.0	137.0	157.0	165.0	1.5	1.5	0.4	1.42	1.01
	182.562	39.688	38.100	33.338	3.5	3.3	48290	48220	235000	445000	1800	2400	141.0	135.0	168.0	176.0	3.5	3.3	5.6	2.14	1.15
	196.850	46.038	46.038	38.100	3.5	3.3	67388	67322	295000	520000	1700	2300	144.0	138.0	180.0	189.0	3.5	3.3	6.4	3.62	1.44
	215.900	47.625	47.625	34.925	3.5	3.3	74500	74850	320000	565000	1500	2100	148.0	141.0	196.0	208.0	3.5	3.3	-2.2	5.01	1.93
	228.600	53.975	49.428	38.100	3.5	3.3	HM926747	HM926710	350000	500000	1500	2000	167.0	143.0	187.0	224.0	3.5	3.3	-14.4	5.85	2.94
	234.950	63.500	63.500	49.212	6.4	3.3	95500	95925	500000	770000	1500	2000	154.0	142.0	209.0	217.0	6.4	3.3	12.0	8.02	3.96

Note : when load center is (-), and it is out of inner ring plane

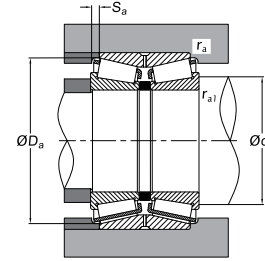
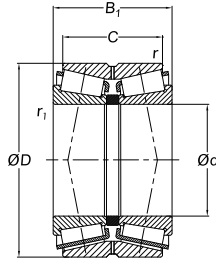
d: 128.588 ~ 187.325 mm



Principal Dimensions (mm)							Bearing Designations		Basic Load Ratings (N)		Limiting Speed (rpm)		Abutment and Fillet Dimensions (mm)						Eff. Load Centers (mm) a	Weight (kg)	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Dynamic Cr	Static Cor	Grease	Oil	d _a (min)	d _b (min)	D _a (max)	D _b (max)	r _{1a} (max)	r _{2a} (max)		Cone	Cup
128.588	190.500	34.925	31.750	25.400	3.5	3.3	48506	48750	222000	410000	1600	2100	151.0	136.0	166.0	184.0	3.5	3.3	-15.4	2.12	1.16
	206.375	47.625	47.625	34.925	3.3	3.3	799	792	299000	500000	1700	2200	146.0	140.0	186.0	198.0	3.3	3.3	2.1	3.84	1.92
133.350	190.500	39.688	39.688	33.338	3.5	3.3	48385	48320	219000	430000	1700	2300	148.0	142.0	177.0	184.0	3.3	3.3	4.0	2.41	1.15
	203.200	46.038	46.038	38.100	3.5	3.3	67390	67324	295000	520000	1700	2200	149.0	143.0	183.0	193.0	3.5	3.3	6.4	3.40	1.61
136.350	234.950	63.500	63.500	49.212	9.7	3.3	95525	95925	500000	770000	1500	2000	166.0	148.0	209.0	217.0	9.7	3.3	14.0	8.00	3.96
	190.500	39.688	39.688	33.338	3.5	3.3	48393	48320	219000	430000	1700	2300	151.0	144.0	177.0	184.0	3.5	3.3	4.0	2.21	1.15
139.700	215.900	47.625	47.625	34.925	3.5	3.3	74537	74820	320000	565000	1500	2100	148.0	141.0	196.0	208.0	3.5	3.3	-2.2	5.12	1.93
	224.600	57.150	57.150	44.450	3.5	3.3	896	892	410000	655000	1600	2100	173.0	156.0	200.0	222.0	3.5	3.3	7.6	6.18	2.76
142.875	180.975	21.433	50.638	16.670	1.5	1.5	LL428349	LL428310	120000	214000	1700	2200	150.0	145.0	175.0	175.0	1.5	1.5	-7.3	0.90	0.45
	215.900	47.625	47.625	34.925	3.5	3.3	74550	74850	320000	565000	1500	2100	158.0	151.0	196.0	208.0	3.5	3.3	-2.2	4.12	1.93
146.050	228.600	57.150	57.150	44.450	3.5	3.3	898	892	410000	655000	1600	2100	173.0	156.0	200.0	222.0	3.5	3.3	7.6	6.24	2.76
	241.300	57.150	56.642	44.450	3.5	3.3	82550	82950	410000	665000	1500	2100	179.0	161.0	205.0	230.0	3.5	3.3	3.6	6.34	3.70
149.225	254.000	66.675	66.675	47.625	7.0	3.3	99550	99100	525000	855000	1300	1800	170.0	156.0	227.0	238.0	7.0	3.3	12.2	9.87	4.28
	200.025	41.275	39.688	34.130	8.0	3.3	48684	48620	246000	505000	1600	2100	166.0	151.0	185.0	193.0	8.0	3.3	5.6	2.43	1.35
146.050	193.675	28.575	28.575	23.020	4.8	1.5	36691	36620	181000	375000	1600	2200	162.0	153.0	182.0	188.0	4.8	1.5	-4.9	1.62	0.77
	203.200	28.575	28.575	23.020	1.5	1.5	36690	36626	181000	375000	1600	2200	155.0	153.0	186.0	190.0	1.5	1.5	-4.9	1.85	0.95
149.225	241.300	57.150	56.642	44.450	3.5	3.3	82576	82950	410000	665000	1500	2100	179.0	161.0	205.0	230.0	3.5	3.3	3.6	6.34	3.70
	254.000	66.675	66.675	47.625	7.0	3.3	99575	99100	525000	855000	1300	1800	175.0	162.0	227.0	238.0	7.0	3.3	12.2	9.10	4.28
152.400	268.288	74.612	74.612	57.150	6.4	6.4	EE107057	107105	600000	925000	1300	1800	175.0	163.0	227.0	238.0	6.4	6.4	14.0	12.2	5.92
	304.800	88.900	82.550	57.150	6.4	6.4	HH932145	HH932110	730000	990000	1300	1800	208.0	172.0	245.0	293.0	6.4	6.4	-4.5	1.85	8.80
184.150	236.538	57.150	56.642	44.450	3.5	3.3	HM231149	HM231110	475000	760000	1200	1700	175.0	163.0	215.0	229.0	3.5	3.3	15.7	6.42	2.72
	254.000	66.675	66.675	47.625	7.0	3.3	99587	99100	525000	855000	1300	1800	178.0	165.0	227.0	238.0	7.0	3.3	12.2	8.73	4.28
187.325	266.700	47.625	46.833	38.100	3.6	3.2	67883	67820	339000	703000	1100	1500	232.0	207.0	234.0	259.0	3.6	3.2	-10.2	6.05	2.58
187.325	266.700	47.625	46.833	38.100	3.6	3.2	67884	67820	339000	703000	1100	1500	232.0	207.0	234.0	259.0	3.6	3.2	-10.2	5.71	2.58

Note : when load center is (-), and it is out of inner ring plane

TDO Design • Metric Size
d: 25 ~ 95 mm



Equivalent bearing load dynamic

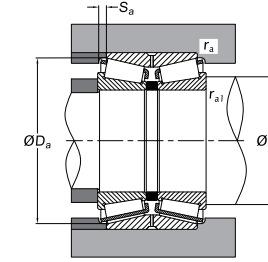
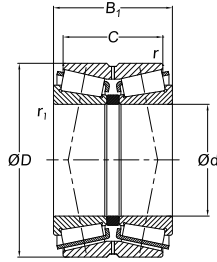
$$P_r = X F_r + Y F_a$$

$\frac{F_a}{F_r} \leq e$	$\frac{F_a}{F_r} > e$
X	X
1	0.67
Y	Y

static
 $P_{or} = F_r + Y_0 F_a$
For values of e, Y₂ and Y₀ see the table below.

Principal Dimensions (mm)						Bearing Designations	Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B ₁	C	r (min)	r ₁ (min)		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
25	62	40	29.5	1.5	0.6	25KDE13	71000	90000	32	59	1.5	0.6	0.83	0.82	1.22	0.80	0.505
30	72	45	31.5	1.5	0.6	30KDE13	89000	113000	37	68	1.5	0.6	0.83	0.82	1.22	0.80	0.755
35	80	51	35.5	2	0.6	35KDE13	114000	149000	44	76	2	0.6	0.83	0.82	1.22	0.80	1.04
40	80	45	37.5	1.5	0.6	40KBE02	109000	141000	47	75	1.5	0.6	0.37	1.80	2.68	1.76	0.900
	80	55	43.5	1.5	0.6	40KBE22	134000	183000	47	75	1.5	0.6	0.37	1.80	2.68	1.76	1.12
	90	56	45.5	2	0.6	40KBE03	156000	202000	49	82	2	0.6	0.35	1.96	2.91	1.91	1.52
45	90	56	39.5	2	0.6	40KDE13	138000	181000	49	86	2	0.6	0.83	0.82	1.22	0.80	1.43
	85	47	37.5	1.5	0.6	45KBE02	120000	163000	52	80	1.5	0.6	0.40	1.67	2.48	1.63	1.02
	85	55	43.5	1.5	0.6	45KBE22	143000	205000	52	80	1.5	0.6	0.40	1.67	1.48	1.63	1.21
50	100	60	49.5	2	0.6	45KBE03	190000	250000	54	93	2	0.6	0.35	1.96	2.91	1.91	1.99
	100	60	41.5	2	0.6	45KDE13	168000	224000	54	95	2	0.6	0.83	0.82	1.22	0.80	1.88
	90	49	39.5	1.5	0.6	50KBE02	136000	193000	57	85	1.5	0.6	0.42	1.61	2.39	1.57	1.14
55	90	55	43.5	1.5	0.6	50KBE22	152000	223000	57	85	1.5	0.6	0.42	1.61	2.39	1.57	1.31
	110	64	51.5	2.5	0.6	50KBE03	222000	294000	60	102	2	0.6	0.35	1.96	2.91	1.91	2.56
	110	64	43.5	2.5	0.6	50KDE13	194000	259000	60	104	2	0.6	0.83	0.82	1.22	0.80	2.41
60	100	51	41.5	2	0.6	55KBE02	163000	226000	64	94	2	0.6	0.40	1.67	2.48	1.63	1.48
	100	60	48.5	2	0.6	55KBE22	185000	275000	64	94	2	0.6	0.40	1.67	2.48	1.63	1.77
	120	70	57	2.5	0.6	55KBE03	254000	340000	65	111	2	0.6	0.35	1.96	2.91	1.91	3.31
65	120	70	49	2.5	0.6	55KDE13	217000	297000	65	113	2	0.6	0.83	0.82	1.22	0.80	3.13
	110	53	43.5	2	0.6	60KBE02	178000	246000	69	102	2	0.6	0.40	1.67	2.48	1.63	1.88
	110	66	54.5	2	0.6	60KBE22	226000	335000	69	102	2	0.6	0.40	1.67	2.48	1.63	2.38
70	130	74	59	3	1	60KBE03	297000	400000	72	120	2.5	1	0.35	1.96	2.91	1.91	4.10
	130	74	51	3	1	60KDE13	259000	350000	72	123	2.5	1	0.83	0.82	1.22	0.80	3.87
	120	56	46.5	2	0.6	65KBE02	211000	296000	74	113	2	0.6	0.40	1.67	2.48	1.63	2.37
75	120	73	61.5	2	0.6	65KBE22	267000	400000	74	112	2	0.6	0.40	1.67	2.48	1.63	3.15
	140	79	63	3	1	65KBE03	340000	465000	77	130	2.5	1	0.35	1.96	2.91	1.91	5.06
	140	79	53	3	1	65KDE13	297000	410000	77	133	2.5	1	0.83	0.82	1.22	0.80	4.77
80	125	59	48.5	2	0.6	70KBE02	229000	330000	79	118	2	0.6	0.42	1.61	2.39	1.57	2.63
	125	74	61.5	2	0.6	70KBE22	270000	410000	79	117	2	0.6	0.42	1.61	2.39	1.57	3.37
	150	83	67	3	1	70KBE03	390000	540000	82	140	2.5	1	0.35	1.96	2.91	1.91	6.08
85	150	83	57	3	1	70KDE13	345000	485000	82	142	2.5	1	0.83	0.82	1.22	0.80	5.74
	130	62	51.5	2	0.6	75KBE02	246000	365000	84	124	2	0.6	0.44	1.55	2.31	1.52	2.90
	130	74	61.5	2	0.6	75KBE22	274000	440000	84	123	2	0.6	0.44	1.55	2.31	1.52	3.54
90	160	87	69	3	1	75KBE03	365000	600000	87	149	2.5	1	0.35	1.96	2.91	1.91	7.23
	140	64	51.5	2.5	0.6	80KBE02	270000	390000	90	132	2	0.6	0.42	1.61	2.39	1.57	3.52
	140	78	63.5	2.5	0.6	80KBE22	310000	505000	90	132	2	0.6	0.42	1.61	2.39	1.57	4.37
95	170	92	73	3	1	80KBE03	400000	650000	92	159	2.5	1	0.35	1.96	2.91	1.91	8.62
	150	70	57	2.5	0.6	85KBE02	300000	465000	95	141	2	0.6	0.42	1.61	2.39	1.57	4.45
	150	86	69	2.5	0.6	85KBE22	365000	560000	95	140	2	0.6	0.42	1.61	2.39	1.57	5.57
100	180	98	77	4	1	85KBE03	445000	740000	99	167	3	1	0.35	1.96	2.91	1.91	10.3
	160	74	61	2.5	0.6	90KBE02	335000	510000	100	150	2	0.6	0.42	1.61	2.39	1.57	5.39
	160	94	77	2.5	0.6	90KBE22	420000	695000	100	150	2	0.6	0.42	1.61	2.39	1.57	6.98
110	190	102	81	4	1	90KBE03	450000	815000	104	177	3	1	0.35	1.96	2.91	1.91	11.9
	170	78	63	3	1	95KBE02	365000	570000	107	159	2.5	1	0.42	1.61	2.39	1.57	6.45
	170	100	83	3	1	95KBE22	485000	780000	107	158	2.5	1	0.42	1.61	2.39	1.57	7.92
120	108	85	4	1	95KBE03	565000	890000	109	186	3	1	0.35	1.96	2.91	1.91	13.9	

TDO Design • Metric Size
d: 100 ~ 160 mm



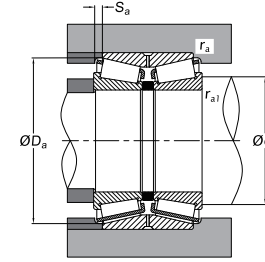
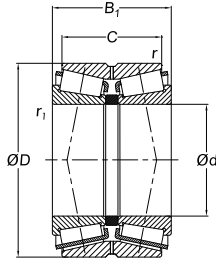
Equivalent bearing load
dynamic
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{or} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0
see the table below.

d	Principal Dimensions (mm)					Bearing Designations	Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
	D	B ₁	C	r (min)	r ₁ (min)		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
100	180	83	67	3	1	100KBE02	410000	660000	112	168	2.5	1	0.42	1.61	2.39	1.57	7.74
	180	107	87	3	1	100KBE22	545000	935000	112	168	2.5	1	0.42	1.61	2.39	1.57	10.2
	215	112	87	4	1	100KBE03	625000	990000	114	200	3	1	0.35	1.96	2.91	1.91	16.9
105	190	88	70	3	1	105KBE02	460000	730000	117	178	2.5	1	0.42	1.61	2.39	1.57	9.19
	190	115	95	3	1	105KBE22	605000	1020000	117	178	2.5	1	0.42	1.61	2.39	1.57	12.2
	225	116	91	4	1	105KBE03	655000	1070000	119	209	3	1	0.35	1.96	2.91	1.91	19.1
110	180	70	56	2.5	0.6	110KBE031	286000	500000	120	168	2	0.6	0.35	1.92	2.86	1.88	6.47
	180	56	50	2.5	0.6	110KBE131	246000	380000	120	169	2	0.6	0.35	1.95	2.90	1.91	3.36
	200	92	74	3	1	110KBE02	500000	830000	122	188	2.5	1	0.42	1.61	2.39	1.57	10.7
	200	121	101	3	1	110KBE22	595000	940000	122	188	2.5	1	0.42	1.61	2.39	1.57	14.3
120	240	118	93	4	1	110KBE03	680000	1180000	124	222	3	1	0.35	1.96	2.91	1.91	22.3
	180	58	46	2.5	0.6	120KBE030	221000	375000	130	170	2	0.6	0.35	1.95	2.90	1.91	4.43
	180	46	41	2.5	0.6	120KBE130	186000	295000	130	171	2	0.6	0.35	1.95	2.90	1.91	3.90
	200	78	62	2.5	0.6	120KBE031	405000	710000	130	186	2	0.6	0.35	1.95	2.90	1.91	9.10
	200	62	55	2.5	0.6	120KBE131	295000	455000	130	185	2	0.6	0.35	1.95	2.90	1.91	7.48
	215	97	78	3	1	120KBE02	515000	880000	132	203	2.5	1	0.44	1.55	2.31	1.52	12.9
	215	132	109	3	1	120KBE22	720000	1270000	132	203	2.5	1	0.44	1.55	2.31	1.52	17.8
130	260	128	101	4	1	120KBE03	795000	1340000	134	239	3	1	0.35	1.96	2.91	1.91	28.3
	200	65	52	2.5	0.6	130KBE030	300000	525000	140	189	2	0.6	0.35	1.95	2.90	1.91	6.37
	200	52	46	2.5	0.6	130KBE130	285000	490000	140	187	2	0.6	0.35	1.95	2.90	1.91	5.66
	210	80	64	2.5	0.6	130KBE031	380000	670000	140	195	2	0.6	0.36	1.87	2.79	1.83	9.91
	210	64	57	2.5	0.6	130KBE131	310000	500000	140	196	2	0.6	0.36	1.87	2.79	1.83	8.20
	230	98	78.5	4	1	130KBE02	560000	960000	144	218	3	1	0.44	1.55	2.31	1.52	14.7
	230	145	117.5	4	1	130KBE22	825000	1560000	144	218	3	1	0.44	1.55	2.31	1.52	22.1
140	280	137	107.5	5	1.5	130KBE03	915000	1620000	148	258	4	1.5	0.35	1.96	2.91	1.91	35.1
	210	66	53	2.5	0.6	140KBE030	310000	560000	150	198	2	0.6	0.47	1.43	2.12	1.40	6.86
	210	53	47	2.5	0.6	140KBE130	252000	425000	150	199	2	0.6	0.33	2.03	3.02	1.98	6.12
	225	84	68	3	1	140KBE031	420000	720000	152	213	2.5	1	0.35	1.95	2.90	1.91	11.09
	225	68	61	3	1	140KBE131	400000	705000	152	212	2.5	1	0.35	1.95	2.90	1.91	9.94
	250	102	82.5	4	1	140KBE02	640000	1070000	154	237	3	1	0.44	1.55	2.31	1.52	18.2
	250	153	125.5	4	1	140KBE22	960000	1820000	154	237	3	1	0.44	1.55	2.31	1.52	27.8
150	300	145	115.5	5	1.5	140KBE03	1020000	1660000	158	277	4	1.5	0.35	1.96	2.91	1.91	42.5
	225	70	56	3	1	150KBE030	345000	565000	162	213	2.5	1	0.33	2.03	3.02	1.98	8.35
	225	56	50	3	1	150KBE130	262000	430000	162	215	2.5	1	0.33	2.03	3.02	1.98	7.42
	250	100	80	3	1	150KBE031	570000	1050000	162	235	2.5	1	0.35	1.95	2.90	1.91	18.2
	250	80	71	3	1	150KBE131	520000	905000	162	233	2.5	1	0.35	1.95	2.90	1.91	15.1
	270	109	87	4	1	150KBE02	735000	1220000	164	255	3	1	0.44	1.55	2.31	1.52	22.9
	270	164	130	4	1	150KBE22	1050000	1980000	164	255	3	1	0.44	1.55	2.31	1.52	35.1
160	320	154	120	5	1.5	150KBE03	1170000	1840000	168	295	4	1.5	0.35	1.96	2.91	1.91	51.2
	240	75	60	3	1	160KBE030	385000	675000	172	227	2.5	1	0.33	2.03	3.02	1.98	10.2
	240	60	53	3	1	160KBE130	315000	495000	172	229	2.5	1	0.33	2.03	3.02	1.98	9.05
	270	108	86	3	1	160KBE031	675000	1160000	172	254	2.5	1	0.35	1.95	2.90	1.91	23.3
	270	86	76	3	1	160KBE131	530000	890000	172	253	2.5	1	0.35	1.95	2.90	1.91	19.2
	290	115	91	4	1	160KBE02	785000	1180000	174	275	3	1	0.44	1.55	2.31	1.52	28.0
160	290	178	144	4	1	160KBE22	1220000	2210000	174	275	3	1	0.44	1.55	2.31	1.50	44.2
	340	160	126	5	1.5	160KBE03	1350000	2040000	178	311	4	1.5	0.36	1.90	2.80	1.80	59.9

TDO Design • Metric Size
d: 170 ~ 300 mm



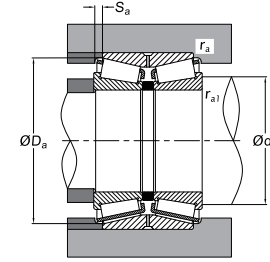
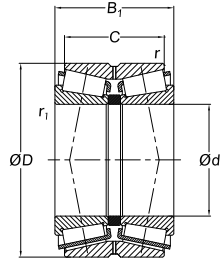
Equivalent bearing load dynamic
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{0r} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0 see the table below.

Principal Dimensions (mm)						Bearing Designations	Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B ₁	C	r (min)	r ₁ (min)		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
170	260	84	67	3	1	170KBE030	530000	1000000	182	244	2.5	1	0.33	2.03	3.02	1.98	13.8
	260	67	60	3	1	170KBE130	350000	585000	182	246	2.5	1	0.33	2.03	3.02	1.98	12.2
	280	110	88	3	1	170KBE031	705000	1240000	182	262	2.5	1	0.33	2.06	3.06	2.01	24.8
	280	88	78	3	1	170KBE131	545000	935000	182	264	2.5	1	0.33	2.06	3.06	2.01	20.5
	310	125	97	5	1.5	170KBE02	885000	1430000	188	290	4	1.5	0.44	1.55	2.31	1.52	35.0
	310	192	152	5	1.5	170KBE22	1420000	2610000	188	295	4	1.5	0.44	1.55	2.31	1.52	54.7
180	280	93	74	3	1	180KBE030	555000	975000	192	262	2.5	1	0.33	2.03	3.02	1.98	18.1
	280	74	66	3	1	180KBE130	450000	650000	192	265	2.5	1	0.33	2.03	3.02	1.98	16.0
	300	120	96	4	1.5	180KBE031	805000	1460000	194	281	3	1.5	0.33	2.06	3.06	2.01	31.5
	300	96	85	4	1.5	180KBE131	660000	1130000	194	281	3	1.5	0.33	2.06	3.06	2.01	26.1
	320	127	99	5	1.5	180KBE02	875000	1350000	198	301	4	1.5	0.45	1.5	2.23	1.47	37.0
	320	192	152	5	1.5	180KBE22	1480000	2720000	198	305	4	1.5	0.45	1.5	2.23	1.47	57.0
190	290	94	75	3	1	190KBE030	585000	1120000	202	273	2.5	1	0.33	2.03	3.02	1.98	19.1
	290	75	67	3	1	190KBE130	485000	850000	202	276	2.5	1	0.32	2.12	3.15	2.07	17.0
	320	130	104	4	1.5	190KBE031	1030000	1960000	204	296	3	1.5	0.35	1.95	2.90	1.91	39.3
	320	104	92	4	1.5	190KBE131	750000	1280000	204	298	3	1.5	0.35	1.95	2.90	1.91	32.5
	340	133	105	5	1.5	190KBE02	975000	1600000	208	319	4	1.5	0.44	1.55	2.31	1.52	44.0
	340	204	160	5	1.5	190KBE22	1580000	2880000	208	330	4	1.5	0.44	1.55	2.31	1.52	68.8
200	310	103	82	3	1	200KBE030	705000	1270000	212	295	2.5	1	0.33	2.03	3.02	1.98	54.5
	310	82	73	3	1	200KBE130	530000	880000	212	295	2.5	1	0.32	2.12	3.15	2.07	21.7
	340	140	112	4	1.5	200KBE031	1030000	1770000	214	318	3	1.5	0.35	1.95	2.90	1.91	48.2
	340	112	100	4	1.5	200KBE131	1000000	1770000	214	316	3	1.5	0.35	1.95	2.90	1.91	39.9
	360	142	110	5	1.5	200KBE02	1090000	1760000	218	336	4	1.5	0.44	1.55	2.31	1.52	53.0
	360	218	174	5	1.5	200KBE22	1830000	3450000	218	340	4	1.5	0.41	1.66	2.47	1.62	82.8
220	340	113	90	4	1.5	220KBE031	815000	1620000	234	320	3	1.5	0.32	2.12	3.15	2.07	32.2
	340	90	80	4	1.5	220KBE130	650000	1170000	234	325	3	1.5	0.32	2.12	3.15	2.07	28.5
	370	150	120	5	1.5	220KBE031	1240000	2400000	238	348	4	1.5	0.35	1.95	2.90	1.91	60.5
	370	120	107	5	1.5	220KBE131	955000	1640000	238	347	4	1.5	0.35	1.95	2.90	1.91	50.0
	400	158	122	5	1.5	220KBE02	1410000	2480000	238	374	4	1.5	0.40	1.70	2.50	1.60	73.4
	240	360	115	92	4	1.5	240KBE030	850000	1780000	254	340	3	1.5	0.32	2.12	3.15	2.07
360		92	82	4	1.5	240KBE130	680000	1230000	254	345	3	1.5	0.32	2.12	3.15	2.07	31.2
400		160	128	5	1.5	240KBE031	1480000	2850000	258	372	4	1.5	0.35	1.95	2.90	1.91	74.6
400		128	114	5	1.5	240KBE131	1160000	2130000	258	377	4	1.5	0.35	1.95	2.90	1.91	61.8
400		130	104	5	1.5	260KBE030	1100000	2160000	278	383	4	1.5	0.32	2.12	3.15	2.07	50.9
400		104	92	5	1.5	260KBE130	835000	1520000	278	382	4	1.5	0.33	2.03	3.02	1.98	45.3
260	440	180	144	5	1.5	260KBE031	1910000	3750000	278	409	4	1.5	0.35	1.95	2.90	1.91	103
	440	144	128	5	1.5	260KBE131	1350000	2540000	278	415	4	1.5	0.35	1.95	2.90	1.91	85.5
	420	133	106	5	1.5	280KBE030	1240000	2580000	298	396	4	1.5	0.33	2.03	3.02	1.98	55.3
	420	106	94	5	1.5	280KBE130	905000	1670000	298	403	4	1.5	0.33	2.03	3.02	1.98	48.9
	460	183	146	6	1.5	280KBE031	1960000	3950000	302	429	5	2	0.35	1.95	2.90	1.91	111
	460	146	130	6	2	280KBE131	1530000	3000000	302	434	5	2	0.35	1.95	2.90	1.91	91.6
300	460	148	118	5	1.5	300KBE030	1520000	3150000	318	437	4	1.5	0.32	2.12	3.15	2.07	76.3
	460	118	105	5	1.5	300KBE130	1060000	2030000	318	436	4	1.5	0.32	2.12	3.15	2.07	67.6
	500	200	160	6	2	300KBE031	2100000	4100000	322	474	5	2	0.35	1.95	2.90	1.91	146
	500	160	142	6	2	300KBE131	1780000	3050000	322	471	5	2	0.35	1.95	2.90	1.91	121

TDO Design • Metric Size
d: 320 ~ 500 mm



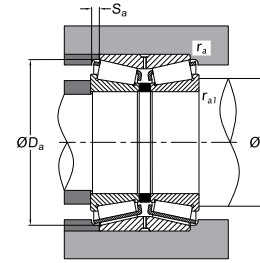
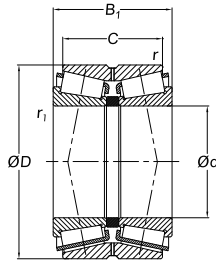
Equivalent bearing load dynamic
 $P_i = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{or} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0
see the table below.

d	Principal Dimensions (mm)					Bearing Designations	Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
	D	B ₁	C	r (min)	r ₁ (min)		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
320	480	151	121	6	1.5	320KBE030	1560000	3200000	338	455	5	1.5	0.32	2.12	3.15	2.07	81.9
	480	121	108	5	1.5	320KBE130	1330000	2680000	338	453	4	1.5	0.32	2.12	3.15	2.07	73.0
	540	220	176	6	2	320KBE031	2530000	5050000	342	499	5	2	0.35	1.95	2.90	1.91	190
	540	176	157	6	2	320KBE131	2150000	3850000	342	502	5	2	0.35	1.95	2.90	1.91	157
340	520	165	133	6	2	340KBE030	1890000	3950000	362	488	5	2	0.32	2.12	3.15	2.07	108
	520	133	118	6	2	340KBE130	1600000	3150000	362	489	5	2	0.32	2.12	3.15	2.07	97.2
	580	238	190	6	2	340KBE031	2100000	6250000	362	537	5	2	0.35	1.95	2.90	1.91	239
	580	190	169	6	2	340KBE131	2460000	4600000	362	540	5	2	0.35	1.95	2.90	1.91	198
360	540	169	134	6	2	360KBE030	1980000	4400000	382	514	5	2	0.32	2.12	3.15	2.07	116
	540	134	120	6	2	360KBE130	1460000	2800000	382	511	5	2	0.32	2.12	3.15	2.07	102
	600	240	192	6	2	360KBE031	3200000	6650000	382	558	5	2	0.39	1.74	2.90	1.70	252
	600	192	171	6	2	360KBE131	2830000	5600000	382	559	5	2	0.35	1.94	2.59	1.91	208
380	560	171	135	6	2	380KBE030	2000000	4550000	402	532	5	2	0.39	1.74	2.59	1.70	123
	560	135	122	6	2	380KBE130	1700000	3550000	402	531	5	2	0.32	2.12	3.15	2.07	108
	620	243	194	6	2	380KBE031	3350000	7100000	402	578	5	2	0.35	1.95	2.90	1.91	266
	620	194	173	6	2	380KBE131	2900000	5900000	402	579	5	2	0.39	1.74	2.59	1.71	219
400	600	185	148	6	2	400KBE030	2430000	5350000	422	566	5	2	0.32	2.12	3.15	2.07	157
	600	148	132	6	2	400KBE130	2020000	4200000	422	566	5	2	0.32	2.12	3.15	2.07	139
	650	250	200	6	3	400KBE031	3550000	7650000	428	607	5	2.5	0.35	1.95	2.90	1.91	299
	650	200	178	6	3	400KBE131	3100000	6400000	428	608	5	2.5	0.35	1.95	2.90	1.91	247
420	620	188	150	6	2	420KBE030	3400000	5450000	442	585	5	2	0.39	1.74	2.59	1.70	166
	620	150	134	6	2	420KBE130	1870000	3950000	442	582	5	2	0.33	2.03	3.02	1.98	147
	700	280	224	6	3	420KBE031	4350000	9250000	448	652	5	2.5	0.39	1.74	2.59	1.70	400
	700	224	200	6	3	420KBE131	3900000	7950000	448	651	5	2.5	0.39	1.74	2.59	1.70	331
440	650	196	157	6	3	440KBE030	2730000	6150000	468	614	5	2.5	0.39	1.74	2.59	1.70	190
	650	157	140	6	3	440KBE130	2200000	4650000	468	615	5	2.5	0.33	2.03	3.02	1.98	169
	720	283	226	6	3	440KBE031	4450000	9750000	468	572	5	2.5	0.40	1.68	2.51	1.65	419
	720	226	201	6	3	440KBE131	4000000	8350000	468	654	5	2.5	0.40	1.70	2.60	1.70	346
460	680	204	163	6	3	460KBE030	3300000	8150000	488	648	5	2.5	0.39	1.74	2.59	1.70	217
	680	163	145	6	3	460KBE130	2420000	5150000	488	642	5	2.5	0.37	1.83	2.72	1.78	193
	760	300	240	7.5	4	460KBE031	5050000	11100000	490	707	6	3	0.39	1.74	2.59	1.70	500
	760	240	214	7.5	4	460KBE131	4550000	9600000	496	709	6	3	0.39	1.70	2.60	1.70	414
480	700	206	165	6	3	480KBE030	3050000	7050000	508	662	5	2.5	0.33	2.03	3.02	1.98	227
	700	165	147	6	3	480KBE130	2200000	4750000	508	665	5	2.5	0.33	2.03	3.02	1.98	202
	790	310	248	7.5	4	480KBE031	5100000	11000000	516	736	6	3	0.39	1.74	2.59	1.70	556
	790	248	221	7.5	4	480KBE131	4800000	10100000	516	737	6	3	0.39	1.74	2.59	1.70	460
500	720	209	167	6	3	500KBE030	3150000	7400000	528	683	5	2.5	0.42	1.62	2.41	1.58	238
	720	167	149	6	3	500KBE130	2520000	5550000	528	684	5	2.5	0.40	1.71	2.54	1.67	211
	830	330	264	7.5	4	500KBE031	5750000	12500000	536	752	6	3	0.39	1.70	2.60	1.70	660
	830	264	235	7.5	4	500KBE131	5200000	11000000	536	774	6	3	0.39	1.70	2.60	1.70	546

TDO Design • Inch Size
d: 139.700~228.600mm



Equivalent bearing load
dynamic
 $P_d = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static

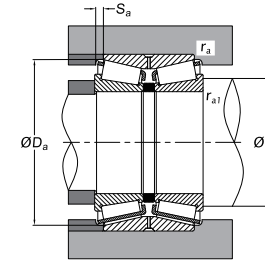
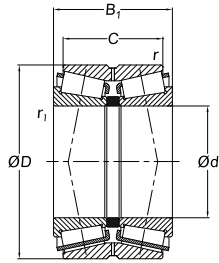
$P_{0r} = F_r + Y_0 F_a$

For values of e, Y₂ and Y₀ see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B ₁	C		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
139.700	307.975	200.025	155.575	HH234031/HH234011D	1740	2780	180	285	9.7	2.3	0.33	2.07	3.08	2.02	65.9
152.400	307.975	200.025	146.050	EE450601/451215D	1510	2620	189	275	9.7	2.3	0.33	2.07	3.08	2.02	62.6
	307.975	200.025	155.575	HH234048/HM234011D	1740	2780	191	285	9.7	2.3	0.33	2.07	3.08	2.02	62.6
160.325	288.925	142.875	111.125	HM237532/HM237510D	1160	2140	192	271	7.0	1.5	0.32	2.12	3.15	2.07	36.1
165.100	288.925	142.875	111.125	94649/94114D	940	1900	197	272	7.0	1.5	0.47	1.44	2.15	1.41	35.1
	288.925	142.875	111.125	HM237535/HM237510	1160	2140	195	271	7.0	1.5	0.32	2.12	3.15	2.07	35.1
174.625	288.925	142.875	111.125	94687/94114D	940	1900	204	272	7.0	1.5	0.47	1.44	2.15	1.41	33.1
	288.925	142.875	111.125	HM237542/HM237510D	1160	2140	202	271	7.0	1.5	0.32	2.12	3.15	2.07	33.1
177.800	288.925	142.875	111.125	94700/94114D	940	1900	207	272	7.0	1.5	0.47	1.44	2.15	1.41	32.4
	288.925	142.875	111.125	HM237545/HM237510D	1160	2140	205	271	7.0	1.5	0.32	2.12	3.15	2.07	32.4
	320.675	185.738	138.112	EE222070/222127D	1300	2480	204	298	3.5	1.5	0.40	1.68	2.50	1.64	57.8
	320.675	185.738	138.112	H239640/H239612D	1590	2790	202	301	3.5	1.5	0.32	2.12	3.15	2.07	57.8
187.325	282.575	107.950	79.375	87737/87112D	625	1230	207	267	3.5	1.5	0.42	1.62	2.42	1.59	21.2
	320.675	185.738	138.112	H239649/H239612D	1590	2790	214	301	5.5	1.5	0.32	2.12	3.15	2.07	55
190.500	282.575	107.950	79.375	87750/87112D	625	1230	209	267	3.5	1.5	0.42	1.62	2.42	1.59	20.6
	317.500	146.050	111.125	93750/93127D	1060	2310	218	300	4.3	1.5	0.52	1.29	1.92	1.26	41.2
	368.300	193.675	136.525	EE420751/421451D	1670	3200	227	334.4	6.4	1.5	0.40	1.68	2.50	1.64	84.1
193.675	282.575	107.950	79.375	87762/87112D	625	1230	211	267	3.5	1.5	0.42	1.62	2.42	1.59	20
200.025	292.100	125.415	101.600	M241543/M241510D	915	2070	219	279	3.5	1.5	0.33	2.03	3.02	1.98	24.8
	317.500	146.050	111.125	93787/93727D	1060	2310	225	300	4.3	1.5	0.52	1.29	1.92	1.26	38.8
	384.175	238.125	193.675	H247535/H247510	2500	5450	241	362	6.4	1.5	0.33	2.03	3.02	1.98	112
203.200	276.225	90.485	73.025	LM241149/LM241110D	585	1380	220	267	3.5	0.8	0.32	2.12	3.15	2.07	13.8
	282.575	101.600	82.550	67983/67920D	620	1570	222	275	3.5	0.8	0.51	1.33	1.97	1.30	17.1
	292.100	125.415	101.600	M241547/M241510D	915	2070	221	279	3.5	1.5	0.33	2.03	3.02	1.98	24.1
	317.500	146.050	111.125	93800/93127D	1060	2310	227	300	4.3	1.5	0.52	1.29	1.92	1.26	37.1
	368.300	193.675	136.525	EE420801/421451D	1670	3200	230	334.4	3.3	1.5	0.40	1.68	2.50	1.64	79.9
204.788	292.100	125.415	101.600	M241549/M241510D	915	2070	223	279	3.5	1.5	0.33	2.03	3.02	1.98	23.8
206.375	282.575	101.600	82.550	67985/67920D	620	1570	224	275	3.5	0.8	0.51	1.33	1.97	1.30	16.5
	336.550	211.138	169.862	H242649/H242610D	1900	4050	231	318	3.3	1.5	0.33	2.03	3.02	1.98	65.2
209.550	282.575	101.600	82.550	67989/67920D	620	1570	227	275	3.5	0.8	0.51	1.33	1.97	1.30	16
	317.500	146.050	111.125	93825/93127D	1060	2310	233	300	4.3	1.5	0.52	1.29	1.92	1.26	36.3
212.725	285.750	98.425	76.200	LM742745/LM742710D	650	1640	230	279	3.5	0.8	0.48	1.40	2.09	1.37	15.7
215.900	285.750	98.425	76.200	LM742749/LM742710D	650	1640	233	279	3.5	0.8	0.48	1.40	2.09	1.37	15.1
	287.338	69.850	50.800	543085/543115D	355	810	232	276	3.5	0.8	0.38	1.77	2.64	1.73	11
220.662	314.325	131.762	106.362	M244249/M244210D	1070	2450	245	300	6.4	1.5	0.33	2.03	3.02	1.98	28.9
228.460	431.800	196.850	111.125	EE113091/113171D	1470	2480	274	397	6.4	3.3	0.88	0.77	1.14	0.75	116
228.600	327.025	114.300	82.550	8573/8520D	815	1900	255	313	6.4	1.5	0.41	1.66	2.47	1.62	27.3
	355.600	152.400	111.125	96900/96140D	1100	2540	260	334	7.0	1.5	0.59	1.14	1.70	1.12	49.4
	355.600	152.400	111.125	EE130902/131401D	1230	2510	257	330	6.8	1.5	0.33	2.04	3.04	2.00	49.4
	355.600	152.400	114.300	HM746646/HM746610D	1230	2490	258	339	6.4	1.5	0.47	1.43	2.12	1.40	49.4

Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

TDO Design • Inch Size
d: 228.600~280.192mm



Equivalent bearing load dynamic
 $P_d = X F_r + Y F_a$

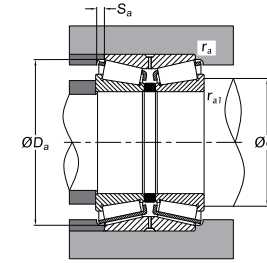
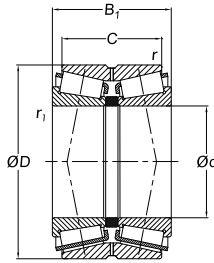
$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{st} = F_r + Y_0 F_a$
For values of e, Y₂ and Y₀ see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B ₁	C		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
228.600	358.775	152.400	117.475	M249732/M249710D	1390	3300	256	343	3.5	1.5	0.33	2.03	3.02	1.98	50.9
	400.050	187.325	136.525	EE430900/431576D	1620	3250	271	367	10.5	1.5	0.44	1.54	2.29	1.50	88.3
	488.950	254.000	152.400	HH949549/HH949510DG2	2700	4550	297	456	6.4	1.5	0.94	0.72	1.07	0.70	207
231.775	358.775	152.400	117.475	M249734/M249710D	1390	3300	263	343	6.4	1.5	0.33	2.03	3.02	1.98	50
234.950	311.150	98.425	73.025	LM446349/LM446310D	695	1640	252	301	3.5	0.8	0.36	1.86	2.77	1.82	17.9
	327.025	114.300	82.550	8575/8520D	815	1900	259	313	6.4	1.5	0.41	1.66	2.47	1.62	25.9
	355.600	152.400	111.125	96925/96140D	1100	2540	265	334	7.0	1.5	0.59	1.14	1.70	1.12	47.5
	384.175	238.125	193.675	H247549/H247510D	2500	5450	269	362	6.4	1.5	0.33	2.03	3.02	1.98	96.2
237.330	358.775	152.400	117.475	M249736/M249710D	1390	3300	267	343	6.4	1.5	0.33	2.03	3.02	1.98	48.2
241.300	327.025	114.300	82.550	8578/8520D	815	1900	264	313	6.4	1.5	0.41	1.66	2.47	1.62	24.3
	349.148	127.000	101.600	EE127095/127136D	940	2010	267	329	6.4	1.5	0.35	1.91	2.85	1.87	35.4
	368.300	120.650	85.725	EE170950/171450D	790	1630	269	337	6.4	1.5	0.36	1.85	2.76	1.81	40.8
	393.700	157.162	109.538	EE275095/275156D	1340	2800	278	378.1	6.4	1.5	0.40	1.68	2.50	1.64	66.5
	406.400	215.900	184.150	H249148/H249111D	2460	4750	273	385	6.4	1.5	0.33	2.03	3.02	1.98	101
	444.500	209.550	158.750	EE923095/923176DG2	2380	4250	277	407	6.4	1.5	0.34	2.00	2.98	1.96	128
244.475	381.000	171.450	127.000	EE126097/126151D	1300	2880	275	358	6.4	1.5	0.52	1.31	1.95	1.28	64
247.650	368.300	120.650	85.725	EE170975/171451D	790	1630	274	337	6.4	1.5	0.36	1.85	2.76	1.81	39.2
	406.400	247.650	203.200	HH249949/HH249910D	2830	6000	284	383	6.4	1.5	0.33	2.03	3.02	1.98	112
249.250	381.000	171.450	127.000	EE126098/126151D	1300	2880	279	358	6.4	1.5	0.52	1.31	1.95	1.28	62.2
254.000	323.850	63.500	50.800	29875/29820D	216	635	267	312	1.5	0.8	0.35	1.95	2.90	1.91	11.2
	358.775	152.400	117.475	M249749/M249710D	1390	3300	274	343	3.5	1.5	0.33	2.03	3.02	1.98	42.8
	365.125	130.175	98.425	EE134100/134144D	1050	2380	281	347	6.4	1.5	0.37	1.80	2.69	1.76	39.2
	393.700	157.162	109.538	EE275100/275156D	1340	2800	287	378	6.4	1.5	0.40	1.68	2.50	1.64	62.2
	422.275	178.592	139.700	HM252343/HM252310D	2000	3600	287	400	6.8	1.5	0.33	2.03	3.02	1.98	88.9
	533.400	276.225	165.100	HH953749/HH953710D	2880	5200	328	496	6.4	1.5	0.94	0.71	1.06	0.70	266
260.350	365.125	130.175	98.425	EE134102/134144D	1050	2380	286	347	6.4	1.5	0.37	1.80	2.69	1.76	37.3
	400.050	155.575	107.950	EE221026/221576D	1220	2460	296	372	9.7	1.5	0.39	1.71	2.54	1.67	62.7
	419.100	184.150	136.525	EE435102/435165D	1580	3250	295	395	6.4	1.5	0.61	1.11	1.66	1.09	86.8
	422.275	178.592	139.700	HM252348/HM252310D	2000	3600	292	400	6.8	1.5	0.33	2.03	3.02	1.98	86.3
	488.950	254.000	196.850	EE295102/295192D	3000	5950	299	451	6.4	1.5	0.31	2.16	3.22	2.12	190
263.525	355.600	127.000	101.600	LM451345/LM451310D	1070	2670	283	343	3.5	1.5	0.36	1.87	2.79	1.83	31.7
266.700	323.850	63.500	50.800	29880/29820D	216	635	277	312	1.5	0.8	0.35	1.95	2.90	1.91	9.37
	355.600	127.000	101.600	LM451349/LM451310D	1070	2670	285	343	3.5	1.5	0.36	1.87	2.79	1.83	30.7
	393.700	157.162	109.538	EE275105/275156D	1340	2800	296	378	6.4	1.5	0.40	1.68	2.50	1.64	57.6
	269.875	381.000	158.750	123.825	M252349/M252310D	1520	3600	296	364	6.4	1.5	0.33	2.03	3.02	1.98
273.050	393.700	157.162	109.538	EE275180/275156D	1340	2800	301	378	6.4	1.5	0.40	1.68	2.50	1.64	55.3
279.400	374.650	104.775	79.375	L555233/L555210D	810	2020	300	362	3.5	1.5	0.40	1.68	2.50	1.64	28.5
	469.900	200.025	149.225	EE722110/722186D	2030	4350	321	433	9.7	1.5	0.38	1.78	2.65	1.74	125
	488.950	254.000	196.850	EE295110/295192D	3000	5950	303	451	1.3	1.5	0.31	2.16	3.22	2.12	179
279.982	380.898	139.700	107.950	LM654642/LM654610D	1140	3100	302	368	3.5	1.5	0.43	1.56	2.33	1.53	40.7
280.192	406.400	149.225	117.475	EE128111/128160D	1310	3100	309	384	6.8	1.5	0.39	1.75	2.61	1.71	56.5

Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

TDO Design • Inch Size
d: 285.750~406.400mm



Equivalent bearing load
dynamic
 $P_r = X F_r + Y F_a$

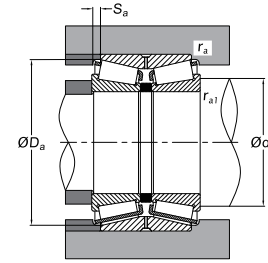
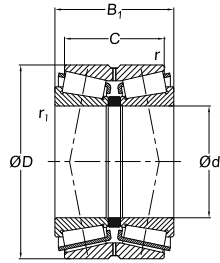
$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{0r} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0
see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors			Weight (kg)	
d	D	B ₁	C		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂		Y ₀
285.750	358.775	76.200	53.975	545112/545142DA	450	1080	302	345	3.5	1.5	0.49	1.38	2.05	1.34	15.7
	380.898	139.700	107.950	LM654649/LM654610D	1140	3100	306	368	3.5	1.5	0.43	1.56	2.33	1.53	38.7
	501.650	203.200	120.650	EE147112/147198D	1960	3700	329	468	6.4	3.3	0.84	0.81	1.20	0.79	151
288.925	406.400	165.100	130.175	M255449/M255410DA	1740	4150	316	388	6.4	1.5	0.34	2.00	2.98	1.96	59
	374.650	104.775	79.375	L555249/L555210D	810	2020	309	362	3.5	1.5	0.40	1.68	2.50	1.64	25.2
292.100	469.900	200.025	149.225	EE722115/722186D	2030	4350	330	433	9.7	1.5	0.38	1.78	2.65	1.74	118
	444.500	146.050	98.425	EE291175/291751D	1080	2300	332	414	8.0	1.5	0.38	1.78	2.65	1.74	69.3
298.450	444.500	301.625	247.650	HH258248/HH258210DG2	4200	9800	342	467	6.4	1.5	0.33	2.03	3.02	1.98	205
299.974	495.300	301.625	247.650	HH258248/HH258210DG2	4200	9800	342	467	6.4	1.5	0.33	2.03	3.02	1.98	205
300.038	422.275	174.625	136.525	HM256849/HM256810DG2	1950	4800	328	403	6.4	1.5	0.34	2.00	2.99	1.96	67.4
304.800	393.700	107.950	82.550	L357049/L357010D	835	2070	329	380	6.4	1.5	0.36	1.87	2.79	1.83	29.3
	438.048	165.100	120.650	EE129120X/129120D	1380	3200	334	411	6.4	1.5	0.42	1.62	2.42	1.59	71.4
	444.500	146.050	98.425	EE291201/291751D	1080	2300	337	414	8.0	1.5	0.38	1.78	2.65	1.74	66.8
	495.300	196.850	146.050	EE724120/724196D	2120	4700	359	459	16.0	1.5	0.40	1.68	2.50	1.64	131
	444.500	146.050	98.425	EE291250/291751D	1080	2300	346	414	8.0	1.5	0.38	1.78	2.65	1.74	61.8
317.500	447.675	180.975	146.050	HM259049/HM259010D	1990	4800	341	428	3.5	1.5	0.33	2.02	3.00	1.97	78.8
	622.300	304.800	174.625	H961649/H961610DG2	3250	6250	410	582	14.3	3.3	0.95	0.71	1.06	0.70	382
	482.600	133.350	88.900	EE161300/161901D	1200	2870	367	455	7.0	1.5	0.50	1.35	2.01	1.32	72.2
330.200	482.600	177.800	127.000	EE526130/526191D	1640	3950	360	454	6.4	1.5	0.39	1.72	2.56	1.68	96.3
	469.900	190.500	152.400	HM261049/HM261010DA	2320	5500	363	449	6.4	1.5	0.33	2.02	3.00	1.97	91.3
342.900	457.098	142.875	104.775	LM961548/LM961511D	1210	3300	367	443.1	3.3	1.5	0.71	0.95	1.41	0.93	57.1
	533.400	165.100	114.300	EE971354/972102D	1830	3450	373	996	4.8	1.5	0.33	2.03	3.02	1.98	120
346.075	482.600	133.350	88.900	EE161363/161901D	1200	2870	379	455	7.0	1.5	0.50	1.35	2.01	1.32	66
	488.950	200.025	158.750	HM262749/HM262710DG2	2540	6400	377	467	6.4	1.5	0.33	2.02	3.00	1.97	104
349.250	514.350	193.675	152.400	EE333137/333203D	2040	4550	382	478	6.4	1.5	0.36	1.85	2.76	1.81	121
355.600	444.500	136.525	111.125	L163149/L163110D	1120	3500	374	430	3.5	1.5	0.31	2.02	3.27	2.15	42.5
	482.600	133.350	88.900	EE161400/161901D	1200	2870	386	455	7.0	1.5	0.50	1.35	2.01	1.32	62.1
	501.650	155.575	107.950	EE231400/231976D	1500	3650	388	481	6.4	1.5	0.44	1.53	2.28	1.50	85.2
	514.350	193.675	152.400	EE333140/333203D	2040	4550	387	478	6.4	1.5	0.36	1.85	2.76	1.81	117
368.249	523.875	214.312	169.862	HM265049/HM265010DG2	2610	6550	400	499	6.4	1.5	0.33	2.03	3.02	1.98	142
371.475	501.650	155.575	107.950	EE231462/231976D	1550	3650	400	481	6.4	1.5	0.44	1.53	2.28	1.50	77.3
381.000	508.000	139.700	88.900	EE192150/192201D	920	2270	410	482	6.4	1.5	0.53	1.27	1.89	1.24	69
	546.100	222.250	177.800	HM266446/HM266410D	2950	7350	415	519	6.4	1.5	0.33	2.03	3.02	1.98	149
	590.550	244.475	193.675	M268730/M268710DG2	3650	9450	425	561	6.4	1.5	0.33	2.03	3.02	1.98	247
384.175	441.325	68.262	52.388	LL365340/LL365310D	360	1060	399	433	3.5	0.8	0.34	1.99	2.96	1.94	14.1
	546.100	222.250	177.800	HM266448/HM266410D	2950	7350	417	519	6.4	1.5	0.33	2.03	3.02	1.98	146
	546.100	222.250	177.800	HM266449/HM266410DG2	3150	8050	417	520	6.4	1.5	0.33	2.03	3.02	1.98	146
385.762	514.350	177.800	139.700	LM665949/LM665910D	2120	5550	415	495	6.4	1.5	0.42	1.61	2.40	1.58	90
396.875	539.750	142.875	101.600	EE234156/234213D	1330	3300	428	516	6.4	1.5	0.47	1.43	2.12	1.40	83.6
	546.100	158.750	117.475	EE234156/234216D	1330	3300	428	516	6.4	1.5	0.47	1.43	2.12	1.40	97.7
406.400	539.750	142.875	101.600	EE234160/234213D	1330	3300	435	518	6.4	1.5	0.47	1.43	2.12	1.40	78.8
	609.600	187.325	123.825	EE911600/912401D	2110	4650	443	570	6.8	1.5	0.38	1.76	2.62	1.72	169

Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

TDO Design • Inch Size
d: 415.925~1270.000mm



Equivalent bearing load
dynamic
 $P_d = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static

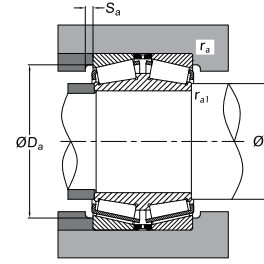
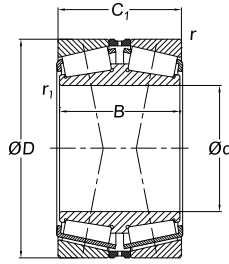
$P_{or} = F_r + Y_0 F_a$

For values of e, Y₁ and Y₀ see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B ₁	C		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
415.925	590.550	244.475	193.675	M268749/M268710DG2	3650	9450	451	561	6.4	1.5	0.33	2.03	3.02	1.98	188
431.800	571.500	155.575	111.125	LM869448/LM869410D	1880	4950	457	549	3.3	1.5	0.55	1.24	1.84	1.21	95.3
	603.250	159.639	104.775	EE241701/242377D	1670	4100	446	561	6.4	1.5	0.53	1.28	1.91	1.25	124
447.675	673.100	192.639	127.000	EE571703/572651D	2560	5350	472	630	6.4	1.5	0.40	1.68	2.50	1.64	225
	635.000	257.175	206.375	M270749/M270710DAG2	4150	11100	484	606	6.4	1.5	0.33	2.03	3.02	1.98	228
457.200	596.900	165.100	120.650	EE244180/244236D	1670	4700	494	570	9.7	1.5	0.40	1.67	2.49	1.63	106
	730.148	254.000	177.800	EE671801/672875D	4350	8750	507	681	9.7	1.5	0.39	1.72	2.56	1.68	360
479.425	679.450	276.225	222.250	M272749/M272710DG2	4900	13000	516	648	6.4	1.5	0.33	2.03	3.02	1.98	310
482.600	615.950	184.150	146.050	LM272249/LM272210DG2	2320	6700	513	597	6.4	1.5	0.33	2.03	3.02	1.98	118
	634.873	177.800	142.875	EE243190/243251D	2000	6150	516	609	6.4	1.5	0.34	1.98	2.94	1.93	148
488.950	634.873	180.975	136.525	LM772748/LM772710DA	2500	6950	522	613	6.4	1.5	0.47	1.43	2.12	1.40	130
	660.400	206.375	158.750	EE640192/640261DG2	3150	8050	522	627	6.4	1.5	0.31	2.20	3.27	2.15	178
489.026	634.873	177.800	142.875	EE243192/243251D	2000	6150	522	609	6.4	1.5	0.34	1.98	2.94	1.93	140
498.475	634.873	177.800	142.875	EE243196/243251D	2000	6150	528	609	6.4	1.5	0.34	1.98	2.94	1.93	129
508.000	838.200	304.800	222.250	EE426200/426331D	5450	12800	564	768	9.7	3.3	0.48	1.41	2.09	1.37	592
533.400	812.800	269.875	187.325	EE626210/626321D	4450	10400	585	762	9.7	3.3	0.44	1.52	2.26	1.49	444
536.575	761.873	311.150	247.650	M276449/M276410DG2	5900	15200	576	726	6.4	1.5	0.33	2.03	3.02	1.98	398
549.275	692.150	174.625	136.525	L476549/L476510D	2320	6950	579	666	6.4	1.5	0.38	1.79	2.67	1.75	135
558.800	736.600	165.100	114.300	EE542220/542291D	2050	5400	594	705	6.4	3.3	0.51	1.32	1.96	1.29	166
	736.600	187.328	138.112	EE843220/843291D	2500	6750	591	708	6.4	1.5	0.34	1.98	2.94	1.93	189
571.500	736.600	225.425	177.800	LM377449/LM377410D	3150	8800	594	708	6.4	1.5	0.35	1.95	2.90	1.91	227
	812.800	333.375	263.525	M278749/M278710DAG2	6950	18300	615	774	6.4	1.5	0.33	2.03	3.02	1.98	487
609.600	787.400	206.375	158.750	EE649240/649311DG2	3750	10100	642	764	6.4	1.5	0.33	2.03	3.02	1.98	235
	812.800	190.500	146.050	EE743240/743321D	2860	7850	645	765	6.4	3.3	0.33	2.06	3.06	2.01	241
660.400	812.800	203.200	158.750	L281148/L281110DA	3250	10300	693	789	6.4	1.5	0.37	1.80	2.69	1.76	199
711.200	914.400	190.500	139.700	EE755280/755361DG2	3100	8950	750	876	6.4	3.3	0.38	1.77	2.64	1.73	275
723.900	914.400	187.325	139.700	EE755285/755361DG2	3100	8950	756	876	5.5	3.3	0.38	1.77	2.64	1.73	256
977.900	1130.300	139.700	101.600	LL687949/LL687910D	2050	7200	1010	1100	6.4	3.3	0.44	1.54	2.30	1.51	196
1270.000	1435.100	146.050	101.600	LL889049/LL889010D	2730	10100	1305	1400	6.4	3.3	0.58	1.17	1.75	1.15	285

Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

TDI Design • Metric Size
d: 110 ~ 500 mm



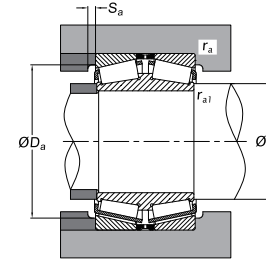
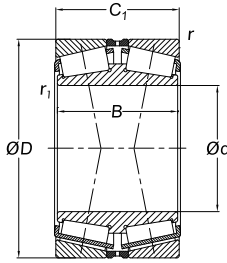
Equivalent bearing load
dynamic
 $P_t = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$	$\frac{F_a}{F_r} > e$
$X \quad Y$	$X \quad Y$
1 Y_1 0.67 Y_2	

static
 $P_{0r} = F_r + Y_0 F_a$
For values of e , Y_1 and Y_0
see the table below.

Principal Dimensions (mm)						Bearing Designations	Basic Load Ratings (N)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B	C ₁	r (min)	r ₁ (min)		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
110	180	56	56	2	2.5	110KBD031	300000	505000	128	160	2	2	0.35	1.95	2.90	1.91	5.40
120	180	46	46	2	2.5	120KBD030	229000	424000	138	163	2	2	0.26	2.55	3.80	2.50	4.08
	220	62	62	2	2.5	120KBD031	353000	598000	142	178	2	2	0.35	1.95	2.90	1.91	7.92
130	200	52	52	2	2.5	130KBD030	300000	548000	152	179	2	2	0.27	2.47	3.67	2.41	5.96
	210	64	64	2	2.5	130KBD031	412000	657000	153	185	2	2	0.36	1.87	2.79	1.83	8.41
140	210	53	53	2	2.5	140KBD030	311000	564000	159	188	2	2	0.27	2.47	3.67	2.41	6.45
	225	68	68	2.5	3	140KBD031	486000	807000	160	210	2	2.5	0.40	1.68	2.50	1.64	10.0
150	225	56	56	2.5	3	150KBD030	355000	686000	174	203	2	2.5	0.26	2.55	3.80	2.50	7.78
	250	80	80	2.5	3	150KBD031	593000	955000	179	220	2	2.5	0.35	1.95	2.90	1.91	15.5
160	240	60	60	2.5	3	160KBD030	421000	705000	184	217	2	2.5	0.24	2.79	4.15	2.73	9.22
	270	86	86	2.5	3	160KBD031	678000	1100000	193	237	2	2.5	0.35	1.95	2.90	1.91	19.8
170	260	67	67	2.5	3	170KBD030	521000	956000	195	233	2	2.5	0.31	2.21	3.29	2.16	12.4
	280	88	88	2.5	3	170KBD031	723000	1210000	201	247	2	2.5	0.33	2.03	3.02	1.98	21.6
180	280	74	74	2.5	3	180KBD030	575000	1050000	208	250	2	2.5	0.28	2.43	3.61	2.37	16.8
	300	96	96	3	4	180KBD031	860000	1370000	210	263	2.5	3	0.35	1.95	2.90	1.91	26.5
190	290	75	75	2.5	3	190KBD030	599000	1130000	219	260	2	2.5	0.26	2.55	3.80	2.50	17.7
	320	104	104	3	4	190KBD031	981000	1590000	224	280	2.5	3	0.35	1.95	2.90	1.91	34.0
200	310	82	82	2.5	3	200KBD030	728000	1410000	234	280	2	2.5	0.26	2.55	3.80	2.50	22.9
	340	112	112	3	4	200KBD031	1080000	1840000	244	300	2.5	3	0.35	1.95	2.90	1.91	41.9
220	340	90	90	3	4	220KBD030	804000	1460000	259	306	2.5	3	0.28	2.43	3.61	2.37	28.5
	370	120	120	4	5	220KBD031	1210000	2060000	263	324	3	4	0.35	1.95	2.90	1.91	50.8
240	360	92	92	3	4	240KBD030	915000	1790000	271	325	2.5	3	0.32	2.12	3.15	2.07	32.2
	400	128	128	4	5	240KBD031	1430000	2470000	286	354	3	4	0.35	1.95	2.90	1.91	65.4
260	400	104	104	4	5	260KBD030	1140000	2120000	302	360	3	4	0.25	2.74	4.08	2.68	48.1
	440	144	144	4	5	260KBD031	1890000	3440000	313	386	3	4	0.35	1.95	2.90	1.91	92.2
280	420	106	106	4	5	280KBD030	1190000	2470000	321	370	3	4	0.25	2.69	4.00	2.63	51.9
	460	118	118	4	5	300KBD030	1610000	3150000	350	418	3	4	0.25	2.74	4.08	2.68	78.5
300	500	160	160	5	6	300KBD031	2120000	4240000	356	440	4	5	0.35	1.95	2.90	1.91	129
	480	121	121	4	5	320KBD030	1630000	3180000	368	434	3	4	0.26	2.55	3.80	2.50	77.8
320	540	176	176	5	6	320KBD031	2690000	5280000	378	474	4	5	0.32	2.12	3.15	2.07	167
	580	190	190	5	6	340KBD031	3290000	5470000	401	515	4	5	0.32	2.12	3.15	2.07	202
360	540	134	134	5	6	360KBD030	2050000	3910000	408	488	4	5	0.32	2.12	3.15	2.06	101
	600	192	192	5	6	360KBD031	3360000	6750000	419	528	4	5	0.32	2.12	3.15	2.06	228
380	560	135	135	5	6	380KBD030	2060000	3790000	428	510	4	5	0.27	2.47	3.67	2.41	112
	620	194	194	5	6	380KBD031	3070000	6360000	445	545	4	5	0.32	2.12	3.15	2.07	234
400	600	148	148	5	6	400KBD030	2410000	4960000	452	545	4	5	0.33	2.03	3.02	1.98	143
	650	200	200	6	6	400KBD031	3850000	7810000	458	580	5	5	0.39	1.74	2.59	1.70	265
420	700	224	224	6	6	420KBD031	4710000	6380000	488	623	5	5	0.39	1.74	2.59	1.70	352
	650	157	157	6	6	440KBD030	2750000	5500000	500	592	5	5	0.28	2.43	3.61	2.37	182
440	720	226	226	6	6	440KBD031	4990000	9130000	506	642	5	5	0.39	1.74	2.59	1.70	367
	680	163	163	6	6	460KBD030	3000000	5660000	510	616	5	5	0.39	1.74	2.59	1.70	197
480	700	165	165	6	6	480KBD030	3060000	6710000	531	625	5	5	0.40	1.68	2.50	1.64	215
	500	720	167	167	6	6	500KBD030	3430000	7350000	545	645	5	5	0.39	1.74	2.59	1.70

TDI Design • Inch Size
d: 152.400~355.600mm



Equivalent bearing load dynamic
 $P_r = X F_r + Y F_a$

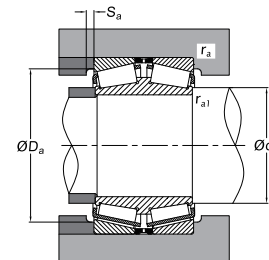
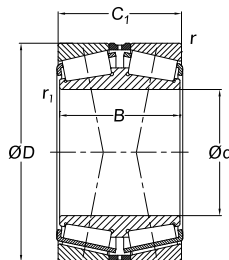
$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{0r} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0 see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B	C ₁		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
152.400	307.975	171.450	161.924	450900D/451212	1510	2620	187.5	269	9.7	6.8	0.33	2.07	3.08	2.02	60.5
177.800	288.925	123.825	123.825	94706D/94113	940	1900	195	259	1.5	3.3	0.47	1.44	2.15	1.41	31.6
	288.925	123.825	123.825	HM237546D/HM237510	1160	2140	194	266	1.5	3.3	0.32	2.12	3.15	2.07	31.6
187.325	319.964	161.925	168.276	H239649D/H239610	1590	2790	209	293	3.3	4.8	0.32	2.12	3.15	2.07	53.7
190.500	365.049	152.400	158.750	EE420750D/421437	1670	3200	221	329	3.3	3.3	0.40	1.68	2.50	1.64	72.8
203.200	317.500	123.825	123.825	93800D/93125	1060	2310	222	286	1.5	3.3	0.52	1.29	1.92	1.26	36.3
	365.049	152.400	158.750	EE420800D/421437	1670	3200	230	329	3.3	3.3	0.40	1.68	2.50	1.64	69.0
206.375	336.550	184.150	180.976	H242649D/H242610	1900	4050	227	306	1.5	3.3	0.33	2.03	3.02	1.98	64.1
215.900	285.750	85.725	85.725	LM742749D/LM742710	650	1640	229	266	2.3	3.3	0.48	1.40	2.09	1.37	14.8
219.075	358.775	200.025	196.850	H244849D/H244810A	2130	4550	242	323	1.5	6.4	0.33	2.03	3.02	1.98	79.5
220.662	314.325	115.888	115.888	M244249D/M244210	1070	2450	235	293	1.5	3.3	0.33	2.03	3.02	1.98	28.6
228.600	400.050	139.700	139.700	EE529091D/529157	1500	2870	256	367	3.3	3.3	0.31	2.18	3.24	2.13	74.2
241.478	349.148	107.950	107.950	EE127097D/127135	940	2010	258	325	1.5	3.3	0.35	1.91	2.85	1.87	33.8
244.475	327.025	92.075	92.075	LM247748D/LM247710A	835	2050	257	310	1.5	3.3	0.32	2.09	3.11	2.04	21.4
	381.000	146.050	146.050	EE126096D/126150	1300	2880	269	343	3.3	4.8	0.52	1.31	1.95	1.28	61.4
247.650	406.400	219.075	215.900	HH249949D/HH249910	2830	6000	278	366	3.3	6.4	0.33	2.03	3.02	1.98	112.0
254.000	358.775	130.175	130.175	M249748D/M249710	1390	3300	273	335	3.3	3.3	0.33	2.03	3.02	1.98	41.2
	368.300	92.862	92.710	EE170975D/171450	790	1630	269	340	1.5	3.3	0.36	1.85	2.76	1.81	32.5
260.350	400.050	114.300	119.060	EE221025D/221575	1220	2460	290	366	6.4	6.4	0.39	1.71	2.54	1.67	52.0
266.700	355.600	109.538	107.950	LM451349D/LM451310	1070	2670	281	335	1.5	3.3	0.36	1.87	2.79	1.83	29.9
269.875	381.000	136.525	136.525	M252349D/M252310	1520	3600	290	356	3.3	3.3	0.33	2.03	3.02	1.98	48.6
276.225	393.700	130.175	130.175	EE275109D/275155	1340	2800	294	366	1.5	6.4	0.40	1.68	2.50	1.64	50.5
279.400	393.700	127.000	127.000	EE135111D/135155	1130	2670	297	368	1.5	6.4	0.40	1.68	2.50	1.64	48.1
	457.200	244.475	244.475	HH255149D/HH255110	3550	7900	309	412	1.5	6.4	0.33	2.03	3.02	1.98	158.0
285.750	380.898	117.475	117.475	LM654648D/LM654610	1140	3100	302	356	1.5	3.3	0.43	1.56	2.33	1.53	36.7
288.925	406.400	144.462	144.463	M255449D/M255410A	1740	4150	310	379	3.3	3.3	0.34	2.00	2.98	1.96	58.1
300.038	422.275	150.812	150.813	HM256849D/HM256810G2	1950	4800	322	394	3.3	3.3	0.34	2.00	2.99	1.96	65.6
304.648	438.048	131.762	131.762	EE329119D/329172	1440	3250	327	410	3.3	3.3	0.33	2.04	3.04	2.00	64.3
304.800	419.100	130.175	130.175	M257149D/M257110	1400	3400	322	392	1.5	6.4	0.33	2.03	3.02	1.98	53.1
	444.500	107.950	111.126	EE291200D/291750	1080	2300	337	416	7.9	1.5	0.38	1.78	2.65	1.74	55.7
304.902	412.648	128.588	128.588	M257248D/M257210	1500	3700	325	388	3.3	3.3	0.32	2.12	3.15	2.07	49.0
305.000	438.048	134.145	138.112	M757449D/M757410	1530	3450	328	407	3.3	4.8	0.47	1.43	2.12	1.40	65.3
317.500	422.275	128.588	128.587	LM258648D/LM258610	1320	3500	334	398	1.5	3.3	0.32	2.10	3.13	2.06	49.1
	447.675	158.750	158.750	HM259049D/HM259010	1990	4800	340	418	3.3	3.3	0.33	2.02	3.00	1.97	77.9
333.375	469.900	166.688	166.688	HM261049D/HM261010	2320	5500	357	439	3.3	3.3	0.33	2.02	3.00	1.97	90.1
343.052	457.098	122.238	122.238	LM761649D/HM261010A	1380	3450	361	432	1.5	3.3	0.47	1.43	2.12	1.40	55.0
346.075	488.950	174.625	174.625	HM262749D/HM262710G2	2490	6150	371	456	3.3	3.3	0.33	2.02	3.00	1.97	103.0
347.662	469.900	138.112	138.112	M262449D/M262410	1860	4550	369	443	3.3	3.3	0.33	2.03	3.02	1.98	68.0
355.600	444.500	114.300	112.712	L163149D/L163110	1120	3500	370	422	1.5	3.3	0.31	2.20	3.27	2.15	40.1
	457.200	120.650	120.650	LM263149D/LM263110	1440	3900	372	434	1.5	3.3	0.32	2.12	3.15	2.07	49.1
	482.600	128.588	133.350	LM763449D/LM763410	1630	3850	375	453	1.5	3.3	0.47	1.43	2.14	1.40	67.4

Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

TDI Design • Inch Size
d: 355.600~501.650mm



Equivalent bearing load dynamic
 $P_r = X F_r + Y F_a$

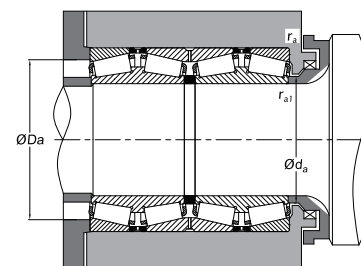
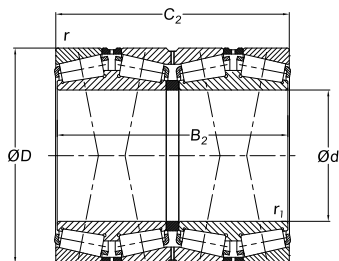
$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

static
 $P_{or} = F_r + Y_0 F_a$
For values of e , Y_2 and Y_0
see the table below.

Principal Dimensions (mm)				Bearing Designations	Basic Load Ratings (kN)		Abutment and Fillet Dimensions (mm)				Calculation Factors				Weight (kg)
d	D	B	C ₁		Dynamic Cr	Static Cor	d _a (min)	D _a (max)	r _a (max)	r _{a1} (max)	e	Y ₁	Y ₂	Y ₀	
355.600	488.950	153.988	153.988	M263349D/M263310	2030	5000	374	459	1.5	3.3	0.33	2.03	3.02	1.98	85.4
	501.650	111.125	127.000	EE231401D/231975	1550	3650	382	472	3.3	3.3	0.44	1.53	2.28	1.50	68.5
368.300	523.875	185.738	185.738	HM265049D/HM265010G2	2610	6550	394	487	3.3	6.4	0.33	2.03	3.02	1.98	130.0
384.175	546.100	193.675	193.675	HM266449D/HM266410G2	3150	8050	411	507	3.3	6.4	0.33	2.03	3.02	1.98	153.0
393.700	546.100	138.112	138.112	LM767745D/LM767710	1870	5100	418	510	1.5	6.4	0.48	1.42	2.11	1.38	97.4
406.400	546.100	138.112	138.112	LM767749D/LM767710	1870	5100	427	510	1.5	6.4	0.48	1.42	2.11	1.38	90.5
	590.550	193.675	193.674	EE833160XD/833232	2820	6800	435	549	3.3	6.4	0.33	2.07	3.09	2.03	175.0
409.575	546.100	161.925	161.925	M667947D/M667910G2	2390	6350	431	510	1.5	6.4	0.42	1.61	2.40	1.58	104.0
415.925	590.550	209.550	209.550	M268749D/M268710G2	3650	9450	444	549	3.3	6.4	0.33	2.03	3.02	1.98	181.0
431.800	571.500	133.350	136.526	LM869449D/LM869410	1880	4950	453	537	1.5	3.3	0.55	1.24	1.84	1.21	92.1
	571.500	161.925	161.925	LM769349D/LM769310	2160	5900	453	534	1.5	6.4	0.44	1.52	2.26	1.49	112.0
447.675	635.000	223.838	223.838	M270749D/M270710AG2	4150	11100	478	591	3.3	6.4	0.33	2.03	3.02	1.98	224.0
457.200	596.900	133.350	136.525	L770847D/L770810AG2	2070	5200	478	567	1.5	3.3	0.47	1.43	2.12	1.40	96.7
	596.900	133.350	136.525	L770849D/L770810	2070	5200	478	567	1.5	3.3	0.47	1.43	2.12	1.40	96.7
479.425	679.450	238.125	238.125	M272749D/M272710G2	4900	13000	510	633	3.3	6.4	0.33	2.03	3.02	1.98	293.0
482.600	615.950	158.750	158.750	LM272249D/LM272210G2	2320	6700	504	585	3.3	6.4	0.33	2.03	3.02	1.98	115.0
	647.700	201.612	201.612	M272647D/M272610G2	3700	10100	510	609	3.3	6.4	0.33	2.03	3.02	1.98	185.0
489.026	634.873	153.988	153.988	LM772749D/LM772710A	2500	6950	516	600	3.3	3.3	0.47	1.43	2.12	1.40	124.0
501.650	711.200	250.825	250.825	M274149D/M274110G2	5050	13700	534	663	3.3	6.4	0.33	2.03	3.02	1.98	314.0

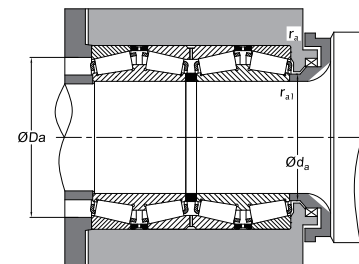
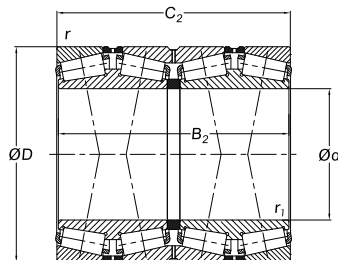
Note: Bearing chamfers r and r₁ should be larger than the max value of r_a and r_{a1}.

Metric Size
d: 100 ~ 500 mm



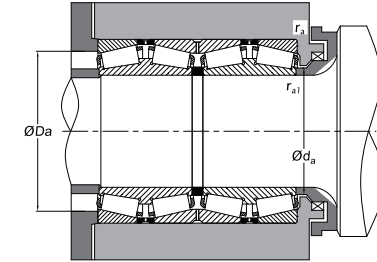
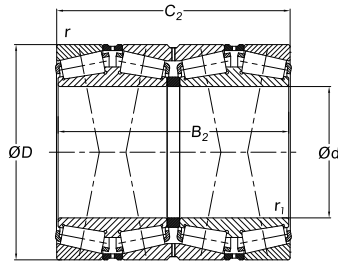
Principal Dimensions (mm)								Bearing Designations	Basic Load Ratings (N)		r (min)	r ₁ (min)	Abutment and Fillet Dimensions (mm)				Weight (kg)
d		D		B ₂		C ₂			Dynamic Cr	Static Cor			d _a	D _a	r _a (max)	r _{a1} (max)	
(mm)	(inch)	(mm)	(inch)	(mm)	(inch)	(mm)	(inch)										
100	3.9370	140	5.5118	104	4.0945	104	4.0945	100KBV039	300000	725000	2	2	108	130	2	2	5.0
110	4.3307	155	6.1023	114	4.4882	114	4.4882	110KBV039	365000	790000	2.5	2.5	120	145	2	2	6.4
120	4.7244	170	6.6929	124	4.8819	124	4.8819	120KBV039	435000	910000	2.5	2.5	130	160	2	2	8.5
130	5.1181	184	7.2441	134	5.2756	134	5.2756	130KBV039	555000	1330000	2.5	2.5	140	174	2	2	12.3
140	5.5118	198	7.7952	144	5.6693	144	5.6693	140KBV039	580000	1330000	2.5	2.5	153	184	2	2	13.3
150	5.9055	212	8.3465	155	6.1024	155	6.1024	150KBV039	680000	1550000	2.5	2.5	161	200	2	2	15.0
160	6.2992	226	8.8976	165	6.4961	165	6.4961	160KBV039	725000	1950000	2.5	2.5	173	208	2	2	20.2
170	6.6929	240	9.4488	175	6.8898	175	6.8898	170KBV039	915000	2220000	2.5	2.5	183	225	2	2	23.7
180	7.0866	254	10.0000	185	7.2835	185	7.2835	180KBV039	980000	2410000	2.5	2.5	193	235	2	2	28.0
190	7.4803	268	10.5512	196	7.7165	196	7.7165	190KBV039	1030000	2760000	2.5	2.5	204	245	2	2	33.0
200	7.8740	282	11.1024	206	8.1102	206	8.1102	200KBV039	1290000	3400000	2.5	2.5	215	263	2	2	49.2
220	8.6614	310	12.2047	226	8.8976	226	8.8976	220KBV039	1500000	4000000	3	3	234	296	2.5	2.5	52.7
240	9.4488	338	13.3071	248	9.7638	248	9.7638	240KBV039	1740000	4450000	3	3	260	310	2.5	2.5	68.3
260	10.2362	368	14.4882	268	10.5512	268	10.5512	260KBV039	2010000	5750000	4	4	282	348	3	3	90.0
280	11.0236	395	15.5512	288	11.3386	288	11.3386	280KBV039	2540000	7050000	4	4	300	374	3	3	108
300	11.8110	424	16.6929	310	12.2047	310	12.2047	300KBV039	2600000	6800000	4	4	320	394	3	3	137
320	12.5984	460	18.1102	338	13.3071	338	13.3071	320KBV039	3100000	8800000	4	4	340	428	3	3	183
340	13.3858	480	18.8976	350	13.7795	350	13.7795	340KBV039	3400000	10100000	5	5	362	458	4	4	198
360	14.1732	508	20.0000	370	14.5669	370	14.5669	360KBV039	4050000	11900000	5	5	382	486	4	4	233
380	14.9606	536	21.1024	390	15.3543	390	15.3543	380KBV039	4450000	13600000	5	5	408	500	4	4	271
400	15.7480	564	22.2047	412	16.2205	412	16.2205	400KBV039	4700000	14000000	5	5	422	542	4	4	317
420	16.5354	592	23.3071	432	17.0079	432	17.0079	420KBV039	4900000	14000000	5	5	450	556	4	4	366
440	17.3228	620	24.4094	454	17.8740	454	17.8740	440KBV039	6500000	19900000	6	6	474	574	5	5	422
460	18.1102	650	25.5906	474	18.6614	474	18.6614	460KBV039	6800000	19600000	6	6	488	622	5	5	487
480	18.8976	678	26.6929	494	19.4488	494	19.4488	480KBV039	7350000	22900000	6	6	545	637	5	5	552
500	19.6850	705	27.7559	515	20.2755	515	20.2755	500KBV039	7650000	24000000	6	6	528	677	5	5	650

Inch Size
d: 120.650~317.500mm



Principal Dimensions (mm)								Bearing Designations	Basic Load Ratings (kN)		r (min)	r ₁ (min)	Abutment and Fillet Dimensions (mm)				Weight (kg)
d	D		B ₂		C ₂		Dynamic Cr		Static Cor	d _a			D _a	r _a (max)	r _{a1} (max)		
120.650	4.750	174.625	6.875	141.288	5.563	139.703	5.500	M224749D/M224710/M224710D	510	1220	1.5	0.8	129	163	1.5	0.8	11.5
127.000	5.000	182.562	7.187	158.750	6.250	158.750	6.250	48290D/48220/48220D	660	1730	3.3	1.5	137	168	3.3	1.5	14.3
136.525	5.375	190.500	7.500	161.925	6.375	161.925	6.375	48393D/48320/48320D	715	1900	3.3	1.6	147	183	3.2	1.5	14.9
139.700	5.500	200.025	7.875	157.165	6.188	160.340	6.313	48680D/48620/48620D	700000	1950000	3.3	0.8	150	185	3.3	0.8	17.3
152.400	6.000	222.250	8.750	174.625	6.875	174.625	6.875	M231649D/M231610/M231610D	930	2350	1.5	1.5	165	207	1.5	1.5	24.7
165.100	6.500	225.425	8.875	168.275	6.625	168.275	6.625	46791D/46720/46721D	745	2220	3.3	0.8	175	209	3.3	0.8	20.7
177.800	7.000	247.650	9.750	192.088	7.563	192.088	7.563	67791D/67720/67721D	990	2720	3.3	1.5	190	229	3.2	1.5	29.0
177.800	7.000	279.400	11.000	234.950	9.250	234.947	9.250	82681D/82620/82620D	1420	3400	3.3	1.5	195	251	3.3	1.5	55.3
177.800	7.000	304.800	12.000	238.227	9.379	233.365	9.188	EE280700D/281200/281201D	1580	3100	3.3	3.3	198	279	3.3	3.3	69.9
187.325	7.375	269.875	10.625	211.138	8.313	211.138	8.313	M238849D/M238810/M238810D	1240	3400	3.3	1.5	200	250	3.3	1.5	41.8
190.500	7.500	266.700	10.500	187.325	7.375	188.912	7.437	67885D/67820/67820D	1030	2900	3.3	1.5	204	246	3.2	1.5	37.7
198.438	7.813	284.162	11.187	225.425	8.875	225.425	8.875	M240648D/M240611/M240611D	1530	4000	3.3	1.5	212	264	3.3	1.5	46.0
203.200	8.000	317.500	12.500	215.900	8.500	209.550	8.250	EE132082D/132125/132126D	1270	2820	3.3	3.3	224	294	3.3	3.3	62.5
206.375	8.125	282.575	11.125	190.500	7.500	190.500	7.500	67986D/67920/67920D	1120	2890	3.3	0.8	219	260	3.3	0.8	35.4
215.900	8.500	288.925	11.375	177.800	7.000	177.800	7.000	LM742749D/LM742714/LM742714D	1110	3250	3.3	0.8	227	267	3.3	0.8	34.3
216.103	8.508	330.200	13.000	263.525	10.375	269.875	10.625	9974D/9920/9920D	2000	5150	3.3	1.5	235	277	3.3	1.5	82.1
220.662	8.687	314.325	12.375	239.712	9.437	239.712	9.437	M244249D/M244210/M244210D	1840	4900	3.3	1.5	235	293	3.3	1.5	60.2
228.600	9.000	425.450	16.750	349.250	13.750	361.950	14.250	EE700090D/700167/700168D	3450	8250	6.4	3.5	263	381	6.4	3.5	232.0
234.950	9.250	327.025	12.875	196.850	7.750	196.850	7.750	8576D/8520/8520D	1370	3700	3.3	1.5	250	305	3.3	1.5	53.6
244.475	9.625	327.025	12.875	193.675	7.625	193.675	7.625	LM247748D/LM247710/LM247710D	1370	3550	3.3	1.5	258	309	3.2	1.5	43.0
254.000	10.000	358.775	14.125	269.875	10.625	239.875	9.444	M249748D/M249710/M249710D	2120	5800	3.4	1.6	275	335	3.2	1.5	85.5
260.350	10.250	422.275	16.625	314.325	12.375	317.500	12.500	HM252348D/HM252310/HM252310D	2980	7150	3.3	6.4	297	404	3.2	6.4	178.0
266.700	10.500	393.700	15.500	269.878	10.625	269.878	10.625	EE275106D/275155/275156D	2110	6000	6.4	3.3	292	367	6.4	3.3	116.0
266.700	10.500	355.600	14.000	230.188	9.063	228.600	9.000	LM451349D/LM451310/LM451310D	1790	5200	3.3	1.5	280	335	3.2	1.5	64.4
269.875	10.625	381.000	15.000	282.575	11.125	282.575	11.125	M252349D/M252310/M252310D	2470	6850	3.3	3.3	290	356	3.3	3.3	97.5
276.225	10.875	406.400	16.000	268.290	10.563	260.355	10.250	EE275109D/275160/275161D	2110	6000	6.4	1.5	294	366	6.4	1.5	122.0
279.400	11.000	393.700	15.500	269.875	10.625	269.875	10.625	EE135111D/135155/135156XD	1920	5300	6.4	1.5	297	357	6.4	1.5	103.0
279.578	11.007	380.898	14.996	244.475	9.625	244.475	9.625	LM654644D/LM654610/LM654610D	1950	6200	3.3	1.5	297	356	3.3	1.5	83.2
285.750	11.250	380.898	14.996	244.475	9.625	244.475	9.625	LM654648D/LM654610/LM654610D	1870	6300	3.3	1.5	296	362	3.2	1.5	84.3
288.925	11.375	406.400	16.000	298.450	11.750	298.450	11.750	M255449D/M255410/M255410DA	2980	8300	3.3	3.3	310	379	3.3	3.3	125.0
292.100	11.500	476.250	18.750	296.047	11.655	292.100	11.500	EE921150D/921875/921876D	3050	6800	3.3	1.5	321	441	3.3	1.5	208.0
300.038	11.813	422.275	16.625	311.150	12.250	311.150	12.250	HM256849D/HM256810/HM256810D	3350	9600	3.3	3.3	322	394	3.3	3.3	143.0
304.648	11.994	438.048	17.246	280.990	11.063	279.400	11.000	M757448D/M757410/M757410D	2630	4630	4.8	3.3	328	407	4.8	3.3	140.0
304.800	12.000	419.100	16.500	269.875	10.625	269.875	10.625	M257149D/M257110/M257110D	2460	7050	6.4	1.5	320	383	6.4	1.5	110.0
304.902	12.004	412.648	16.246	266.700	10.500	266.700	10.500	M257248D/M257210/M257210D	2610	7450	3.3	3.3	325	388	3.3	3.3	107.0
305.003	12.008	438.048	17.246	280.990	11.063	279.400	11.000	M757449D/M757410/M757410D	2630	6900	4.8	3.3	328	407	4.8	3.3	139.0
317.500	12.500	422.275	16.625	269.875	10.625	269.875	10.625	LM258649D/LM258610/LM258610D	2260	7050	3.3	1.5	334	398	3.3	1.5	110.0

Inch Size
d: 317.500~508.000mm



Principal Dimensions (mm)								Bearing Designations	Basic Load Ratings (kN)		r (min)	r _i (min)	Abutment and Fillet Dimensions (mm)				Weight (kg)
d		D		B ₂		C ₂			Dynamic Cr	Static Cor			d _a	D _a	r _A (max)	r _{A1} (max)	
317.500	12.500	447.675	17.625	327.025	12.875	327.025	12.875		HM259049D/HM259010/HM259010D	3400			9550	3.3	3.3	340	
330.200	13.000	482.600	19.000	306.388	12.063	311.150	12.250	EE526131D/526190/526191D	2810	7900	3.3	1.5	351	448	3.3	1.5	197.0
333.375	13.125	469.900	18.500	342.900	13.500	342.900	13.500	HM261049D/HM261010/HM261010D	3450	9900	3.2	3.2	352	451	3.2	3.2	193.0
341.312	13.437	457.098	17.996	254.000	10.000	254.000	10.000	LM761648D/LM761610/LM76160D	2370	6900	3.3	1.5	359	432	3.3	1.5	125.0
343.052	13.506	457.098	17.996	254.000	10.000	254.000	10.000	LM761649D/LM761610/LM761610D	2480	7150	3.3	1.5	356	428	3.2	1.5	113.0
346.075	13.625	488.950	19.250	358.775	14.125	358.775	14.125	HM262749D/HM262710/HM262710D	3950	11600	3.3	3.3	365	452	3.2	3.2	208.0
347.662	13.687	469.900	18.500	292.100	11.500	292.100	11.500	M262449D/M262410/M262410D	3200	9100	3.3	3.3	369	443	3.3	3.3	148.0
355.600	14.000	444.500	17.500	241.300	9.500	241.300	9.500	L163149D/L163110/L163110D	1760	6200	3.3	1.5	370	422	3.3	1.5	89.5
355.600	14.000	457.200	18.000	252.412	9.937	252.412	9.937	LM263149D/LM263110/LM263110D	2470	7850	3.3	1.5	372	434	3.3	1.5	106.0
355.600	14.000	482.600	19.000	265.112	10.437	269.875	10.625	LM763449D/LM763410/LM763410D	2790	7650	3.3	1.5	375	453	3.3	1.5	145.0
355.600	14.000	488.950	19.250	317.500	12.500	317.500	12.500	M263349D/M263310/M263310D	3500	10000	3.3	1.5	374	459	3.3	1.5	173.0
368.300	14.500	523.875	20.625	382.588	15.063	382.588	15.063	HM265049D/HM265010/HM265010D	4450	13100	6.4	3.3	394	487	6.4	3.3	280.0
368.300	14.500	596.900	23.500	342.900	13.500	342.900	13.500	EE181455D/182350/182351D	4600	10600	6.4	6.4	421	541	6.4	6.4	373.0
374.650	14.750	501.650	19.750	250.825	9.875	260.350	10.250	LM765149D/LM765110/LM765110D	2360	6250	3.3	1.5	393	472	3.3	1.5	145.0
384.175	15.125	546.100	21.500	400.050	15.750	400.050	15.750	HM266449D/HM266410/HM266410D	5750	16600	6.4	3.3	414	507	6.4	3.2	308.0
385.762	15.187	514.350	20.250	317.500	12.500	317.500	12.500	LM665949D/LM665910/LM665910D	3650	11100	3.3	3.3	409	482	3.3	3.3	240.0
393.700	15.500	546.100	21.500	288.925	11.375	288.925	11.375	LM767745D/LM767710/LM767710D	3200	10200	6.4	1.5	418	510	6.4	1.5	219.0
406.400	16.000	546.100	21.500	268.288	10.563	288.925	11.375	EE234161D/234215/234216D	2290	6550	6.4	1.5	438	505	6.4	1.5	190.0
406.400	16.000	546.100	21.500	288.925	11.375	288.925	11.375	LM767749D/LM767710/LM767710D	3200	10200	6.4	1.5	427	510	6.4	1.5	201.0
406.400	16.000	590.550	23.250	400.050	15.750	400.050	15.750	EE833161D/833232/833233D	4850	13600	6.4	3.3	448	549	6.4	3.3	395.0
409.575	16.125	546.100	21.500	334.962	13.187	334.962	13.187	M667947D/M667911/M667911D	4100	12700	6.4	1.5	431	510	6.4	1.5	226.0
415.925	16.375	590.550	23.250	434.975	17.125	434.975	17.125	M268749D/M268710/M268710D	6300	18900	6.4	3.3	444	549	6.4	3.3	421.0
431.800	17.000	571.500	22.500	279.400	11.000	279.400	11.000	LM869449D/LM869410/LM869410D	3200	9850	3.3	1.5	453	537	3.3	1.5	193.0
431.800	17.000	571.500	22.500	336.550	13.250	336.550	13.250	LM769349D/LM769310/LM769310D	3700	11800	6.4	1.5	453	534	6.4	1.5	232.0
431.800	17.000	635.000	25.000	355.600	14.000	355.600	14.000	EE931170D/931250/931251XD	5650	15000	6.4	6.4	490	607	6.4	6.4	402.0
447.675	17.625	635.000	25.000	463.550	18.250	463.550	18.250	M270749D/M270710/M270710D	7100	22100	6.4	3.3	478	591	6.4	3.3	509.0
457.200	18.000	596.900	23.500	276.225	10.875	279.400	11.000	L770849D/L770810/L770810D	2900	9150	3.3	1.5	478	567	3.3	1.5	201.0
457.200	18.000	660.400	26.000	323.850	12.750	323.847	12.750	EE737179D/737260/737260D	4150	11200	6.4	3.3	495	616	6.4	3.3	379.0
479.425	18.875	679.450	26.750	495.300	19.500	495.300	19.500	M272749D/M272710/M272710XD	6450	18900	6.4	3.2	510	633	6.4	3.2	590.0
482.600	19.000	615.950	24.250	330.200	13.000	330.200	13.000	LM272249D/LM272210/LM272210D	4000	13400	6.4	3.3	504	585	6.4	3.3	250.0
482.600	19.000	647.700	25.500	417.512	16.437	417.512	16.437	M272647D/M272610/M272610D	5950	14800	6.4	3.3	505	611	6.4	3.2	432.0
488.950	19.250	660.400	26.000	365.125	14.375	361.950	14.250	EE640193D/640260/640261D	5350	16100	6.4	8.0	519	624	6.4	5.0	364.0
489.026	19.253	634.873	24.995	320.675	12.625	320.675	12.625	LM772749D/LM772710/LM772710DA	3650	12000	3.3	3.3	513	600	2.5	2.5	268.0
501.650	19.750	711.200	28.000	520.700	20.500	520.700	20.500	M274149D/M274110/M274110D	8650	27300	6.4	3.3	534	663	6.4	3.3	726.0
508.000	20.000	762.000	30.000	463.550	18.250	463.550	18.250	EE531201D/531300/531301XD	7800	21400	6.4	6.4	549	711	5.0	5.0	740.0