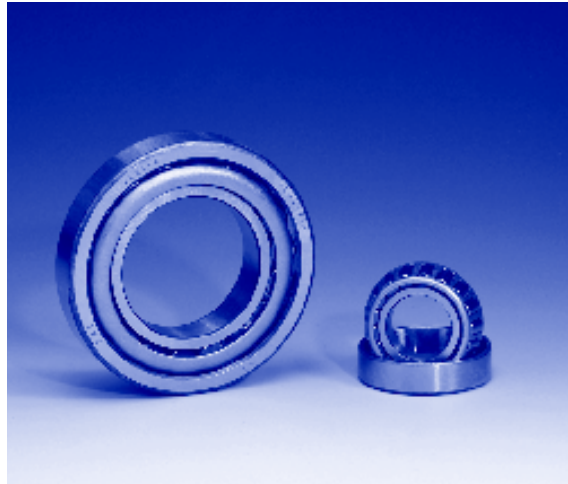


# Single Row Tapered Roller Bearings



## Single Row Tapered Roller Bearings

A design with a great number of tapered rollers in one row enables these bearings to reach high load ratings both in radial and axial directions. Axial load can be applied only in one direction and its size depends on the contact angle size. Bearings with a greater contact angle (type 313 and 323B) are suitable for greater axial forces.

Single row tapered roller bearing arrangement is usually created by a pair of bearings because of bidirectional accommodation of axial load.

Bearings are produced in design with higher utilization parameters - designation A. Besides bearings in metric dimensions bearings in inch dimensions are also produced.

## Boundary Dimensions

Boundary dimensions of metric single row tapered roller bearings comply with the standard ISO 355.

Boundary dimensions of single row tapered roller bearings in inch dimensions are according to the standard AFBMA Standard 19 (USA) from 1974.

## Designation

Bearing designation of standard bearings is in the dimension tables of this publication.

Difference from basic design is indicated by additional symbols shown in section 2.2 .

According to the dimensional plan ISO 355 the metric single row tapered roller bearing designation consists of letter and numerical symbols expressing following :

T	bearing type
2, 3, 4, 5, 7	angle series of bearing
B, C, D, E, F, G	diameter series of bearing
B, C, D, E	width series of bearing
000	bore diameter in mm

For customer's and producer's orientation previous the designation is retained in the dimension tables and designation according to ISO is also shown.

The bearings designation in inch dimensions corresponds to usual way of designation of most producers of these bearings. The number preceding the slash indicates the cone with tapered rollers and cage, the number after the slash indicates the cup.

## Cage

Single row tapered roller bearings have pressed steel cage which is not designated. Additional symbol J2 indicates a new cage design.

## Tolerance

Bearings are commonly produced in normal tolerance class P0 which is not indicated. For arrangements demanding more accuracy or working with high rotational speed, bearings in higher tolerance class P6, P6X and P5 are delivered. Delivery of bearings in P6X and P5 should be discussed in advance.

## Internal Clearance

Single row tapered roller bearings are mounted in pairs, in which required clearance, or preload are adjusted at mounting. Clearance or preload size is determined according to arrangement's requirements.

## Misalignment

Seating surface for single row tapered roller bearings must be aligned only with small deviations because ring misalignment is very small. By common operating conditions the misalignment is

- at small load ( $F_r < 0.1C_{or}$ ) 1' to 1.5'
- at great load ( $F_r \geq 0.1C_{or}$ ) 2' to 4'

## Radial Equivalent Dynamic Load

$$\begin{array}{lll} P_r = F_r & \text{for } F_a/F_r \leq e & [\text{kN}] \\ P_r = 0.4F_r + YF_a & \text{for } F_a/F_r > e & [\text{kN}] \end{array}$$

Values of factors  $e$  and  $Y$  for individual bearings are shown in the dimension tables of this publication.

If the shaft is arranged in two single row tapered roller bearings additional inner axial force rises. Load magnitude of one bearing depends on load and contact angle of the second bearing. Additional inner forces must be taken into account by calculation. In the table relations for various bearing arrangements at acting outer axial force  $K_a$ , radial  $F_{rA}$ ,  $F_{rB}$  loading bearing A and B are shown.

Radial forces act in the intersection of the contact line with bearing axis (dimensions „ $a$ “, „ $s$ “ are in the dimension tables) and in calculation are considered for positive even then, when they have reverse direction than in the picture.

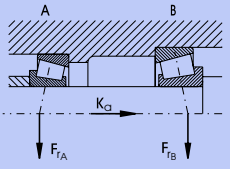
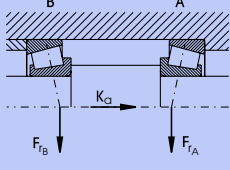
Calculated force  $F_a$  is introduced to the calculation of radial equivalent dynamic load.

## Radial Equivalent Static Load

$$P_{or} = 0.5F_r + Y_0F_a \quad (P_{or} \geq F_r) \quad [\text{kN}]$$

Values of  $Y_0$  factor for individual bearings are shown in the dimension tables of this publication.



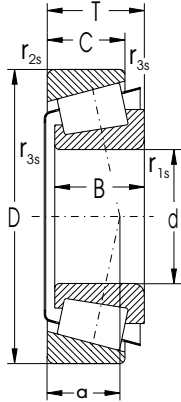
Bearing Arrangement	Force Conditions	Bearing Axial Load		
		Bearing A	Bearing B	
 	$\frac{F_{rA}}{Y_A} \leq \frac{F_{rB}}{Y_B}$ $K_a \geq 0$	$F_{aB} = \frac{0.5 F_{rB}}{Y_B}$	$F_{aA} = F_{aB} + K_a$	
	$\frac{F_{rA}}{Y_A} > \frac{F_{rB}}{Y_B}$ $K_a \geq 0.5 \left( \frac{F_{rA}}{Y_A} - \frac{F_{rB}}{Y_B} \right)$	$F_{aA} = F_{aB} + K_a$	$F_{aA} = \frac{0.5 F_{rA}}{Y_A}$	
	$\frac{F_{rA}}{Y_A} > \frac{F_{rB}}{Y_B}$ $K_a \geq 0.5 \left( \frac{F_{rB}}{Y_B} - \frac{F_{rA}}{Y_A} \right)$	$F_{aA} = \frac{0.5 F_{rA}}{Y_A}$	$F_{aB} = F_{aA} - K_a$	
	$\frac{F_{rA}}{Y_A} \leq \frac{F_{rB}}{Y_B}$ $K_a \geq 0$	$F_{aA} = \frac{0.5 F_{rA}}{Y_A}$	$F_{aB} = F_{aA} + K_a$	
	$\frac{F_{rA}}{Y_A} < \frac{F_{rB}}{Y_B}$ $K_a \geq 0.5 \left( \frac{F_{rB}}{Y_B} - \frac{F_{rA}}{Y_A} \right)$	$F_{aA} = \frac{0.5 F_{rA}}{Y_A}$	$F_{aB} = F_{aA} + K_a$	
	$\frac{F_{rA}}{Y_A} < \frac{F_{rB}}{Y_B}$ $K_a < 0.5 \left( \frac{F_{rB}}{Y_B} + \frac{F_{rA}}{Y_A} \right)^{1)}$	$F_{aA} = F_{aB} - K_a$	$F_{aB} = \frac{0.5 F_{rB}}{Y_B}$	

<sup>1)</sup> Valid for  $K_a = 0$

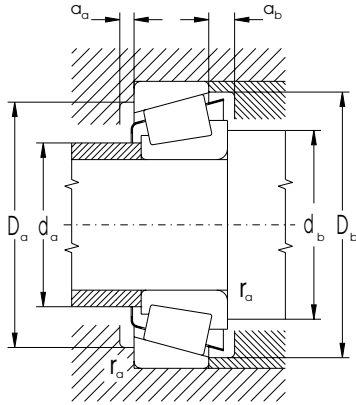


## Single Row Tapered Roller Bearings

d = 15 to 45 mm



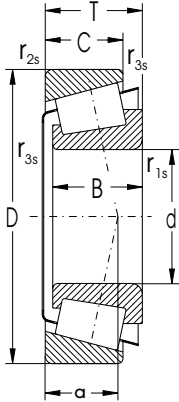
Dimensions									Basic Load Rating		Fatigue load	Limiting Speed	
d	D	B	C	T	r <sub>1s</sub>	r <sub>2s</sub>	r <sub>3s</sub>	a	Dynamic C <sub>r</sub>	Static C <sub>or</sub>	limit P <sub>u</sub>	for Lubrication with Grease Oil	
mm									kN		kN	min <sup>-1</sup>	
15	42	13	11,0	14,25	1,0	1,0			21,9	19,02	2,32	10000	14000
17	47	14	12,0	15,25	1,0	1,0	0,3	11	25,1	22,80	2,78	10000	13000
20	42	15	12,0	15,00	0,6	0,6	0,3	10	22,8	29,00	3,54	9000	13000
	47	14	12,0	15,25	1,0	1,0	0,3	11	25,1	26,10	3,18	8900	12000
	52	15	13,0	16,25	1,5	1,5	0,6	11	30,4	29,90	3,65	8400	11000
	52	21	18,0	22,25	1,5	1,5	0,6	13	43,8	45,50	5,55	8400	11000
25	47	15	11,5	15,00	0,6	0,6	0,3	12	24,2	28,70	3,50	8400	11000
	52	15	13,0	16,25	1,0	1,0	0,3	12	29,9	33,50	4,09	7500	10000
	52	18	16,0	19,25	1,0	1,0			36,4	43,20	5,27	7900	11000
	52	22	18,0	22,00	1,0	1,0			48,9	58,50	7,13	7900	10000
	62	17	15,0	18,25	1,5	1,5	0,6	13	43,8	42,10	5,13	6900	9200
	62	17	15,0	18,25	1,5	1,5	0,6	13	39,8	38,30	4,67	7100	9400
	62	17	13,0	18,25	1,5	1,5	0,6	20	36,2	39,10	4,77	6700	8900
	62	24	20,0	25,25	1,5	1,5	0,6	15	57,3	60,70	7,40	6700	8900
30	55	17	13,0	17,00	1,0	1,0	0,3	13	35,5	43,80	5,34	7100	9400
	62	16	14,0	17,25	1,0	1,0	0,3	14	39,3	42,80	5,22	6500	8700
	62	16	14,0	17,25	1,0	1,0	0,3	14	40,6	44,70	5,45	6700	8900
	62	20	17,0	21,25	1,0	1,0	0,3	15	50,1	59,60	7,27	6700	8900
	72	19	16,0	20,75	1,5	1,5	0,6	15	53,1	53,10	6,48	5600	7500
	72	19	14,0	20,75	1,5	1,5	0,6	23	46,4	50,10	6,11	5300	7100
	72	27	23,0	28,75	1,5	1,5	0,6	20	76,4	85,80	10,46	5600	7500
32	58	17	13,0	17,00	1,0	1,0	0,3	14	39,8	48,20	5,88	7100	9400
35	62	18	14,0	18,00	1,0	1,0	0,3	15	43,0	53,10	6,48	6300	8400
	72	17	15,0	18,25	1,5	1,5	0,6	15	46,4	51,10	6,23	5300	7100
	72	23	19,0	24,25	1,5	1,5	0,6	17	64,3	76,40	9,32	5300	7100
	80	21	18,0	22,75	2,0	1,5	0,6	16	65,6	69,40	8,46	5000	6700
	80	21	15,0	22,75	2,0	1,5	0,6	26	57,3	63,10	7,70	4700	6300
	80	31	25,0	32,75	2,0	1,5	0,6	20	94,4	110,00	13,41	4700	6300
40	68	19	14,5	19,00	1,0	1,0	0,3	15	48,2	64,30	7,84	5300	7100
	80	18	16,0	19,75	1,5	1,5	0,6	17	55,2	60,70	7,40	4700	6300
	80	23	19,0	24,75	1,5	1,5	0,6	18	70,8	85,50	10,43	4700	6300
	90	23	20,0	25,25	2,0	1,5	0,6	18	84,3	93,20	11,37	4500	6000
	90	23	20,0	25,25	2,0	1,5	0,6	19	82,5	94,40	11,51	4500	6000
	90	23	17,0	25,25	2,0	1,5	0,6	29	76,4	85,80	10,46	4000	5300
	90	33	27,0	35,25	2,0	1,5	0,6	22	114,0	141,00	17,20	4200	5600
	90	33	27,0	35,25	2,0	1,5	0,6	27	104,2	136,60	16,66	4100	5400
	90	33	27,0	35,25	2,0	1,5	0,6	27	104,0	144,00	17,56	4200	5600
	45	75	20	15,5	20,00	1,0	1,0	0,3	17	57,3	79,40	9,68	4700
85		19	16,0	20,75	1,5	1,5	0,6	18	61,9	70,80	8,63	4500	6000
85		23	19,0	24,75	1,5	1,5	0,6	20	73,6	90,90	11,09	4500	6000
100		25	22,0	27,25	2,0	1,5	0,6	21	107,0	118,00	14,39	4000	5300
100		25	22,0	27,25	2,0	1,5	0,6	21	104,0	117,00	14,27	4000	5300
100		25	18,0	27,25	2,0	1,5	0,6	32	92,6	104,00	12,68	3800	5000



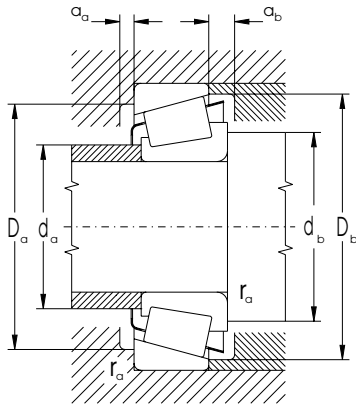
Bearing Designation		Abutment and Fillet Dimensions									Weight	Factors			
STN	ISO	d	da max	da min	D min	D max	D <sub>b</sub> min	da min	da min	ra max	~	e	Y	Y <sub>0</sub>	
mm												kg			
30302F		15	22	21	35,0	36	38,0	2	3,0	1,0	0,100	0,32	2,11		
30303AJ2	T2FB017	17	25	23	39,0	41	42,0	2	3,0	1,0	0,140	0,29	2,10	1,20	
32004AX	T3CC020	20	25	25	36,0	37	39,0	3	3,0	0,6	0,102	0,37	1,60	0,90	
30204A	T2DB020	26	26	26	39,0	41	43,0	2	3,0	1,0	0,136	0,35	1,70	1,00	
30304A	T2FB020	27	27	27	43,0	45	47,0	2	3,0	1,0	0,179	0,30	2,00	1,10	
32304A	T2FD020	27	27	27	43,0	45	47,0	2	4,0	1,0	0,267	0,30	2,00	1,10	
32005AX	T4CC025	25	30	31	40,5	42	44,0	3	3,5	0,6	0,117	0,43	1,40	0,80	
30205A	T3CC025	31	31	31	43,0	46	48,0	2	3,0	1,0	0,167	0,37	1,60	0,90	
32205F		31	31	31	43,0	46	48,0	2	3,0	1,0	0,200	0,36	1,03		
33205F		30	31	31	43,0	46	49,0	4	4,0	1,0	0,225	0,35	1,71		
30305A	T2FB025	33	32	32	53,0	55	57,0	2	3,0	1,0	0,288	0,30	2,00	1,10	
30305AJ2	T2FB025	33	32	32	53,0	55	57,0	2	3,0	1,0	0,265	0,30	2,00	1,10	
31305A	T7FB025	33	32	32	46,0	55	59,0	2	5,0	1,0	0,271	0,83	0,70	0,40	
32305A	T2FD025	33	32	32	53,0	55	57,0	2	5,0	1,0	0,404	0,30	2,00	1,10	
32006AX	T4CC030	30	35	36	47,5	49	52,0	3	4,0	1,0	0,181	0,43	1,40	0,80	
30206A	T3DB030	37	36	36	52,0	56	57,0	2	3,0	1,0	0,252	0,37	1,60	0,90	
30206AJ2	T3DB030	37	36	36	52,0	56	57,0	2	3,0	1,0	0,252	0,37	1,60	0,90	
32206A	T3DC030	37	36	36	52,0	56	58,5	2	4,0	1,0	0,320	0,37	1,60	0,90	
30306A	T2FB030	38	37	37	61,0	65	66,0	2	4,5	1,0	0,419	0,32	1,90	1,10	
31306AJ2	T7FB030	39	37	37	55,0	65	68,0	2	6,5	1,0	0,390	0,83	0,70	0,40	
32306A	T2FD030	38	37	37	61,0	65	66,0	2	5,5	1,0	0,628	0,32	1,90	1,10	
320/32AX	T4CC032	32	38	38	50,0	52	55,0	3	4,0	1,0	0,196	0,45	1,30	0,70	
32007AX	T4CC035	35	40	41	54,0	56	59,0	4	4,0	1,0	0,243	0,45	1,30	0,70	
30207A	T3DB035	43	42	42	61,0	65	67,0	3	3,0	1,0	0,361	0,37	1,60	0,90	
32207A	T3DC035	43	42	42	61,0	65	68,5	3	5,0	1,0	0,480	0,37	1,60	0,90	
30307A	T2FB035	43	44	44	68,0	71	74,0	3	4,5	1,5	0,551	0,32	1,90	1,10	
31307AJ2	T7FB035	43	44	44	61,0	71	76,0	3	7,5	1,5	0,520	0,83	0,70	0,40	
32307A	T2FE035	43	44	44	68,0	71	74,0	3	7,5	1,5	0,827	0,32	1,90	1,10	
32008AX	T3CD040	40	45	46	60,0	62	65,0	4	4,5	1,0	0,290	0,38	1,60	0,90	
30208A	T3DB040	48	47	47	68,0	73	75,5	3	3,5	1,0	0,452	0,37	1,60	0,90	
32208A	T3DC040	48	47	47	68,0	73	75,0	3	5,5	1,0	0,550	0,37	1,60	0,90	
30308A	T2FB040	50	49	49	76,0	81	82,0	3	5,0	1,5	0,773	0,35	1,70	1,00	
30308AJ2	T2FB040	50	49	49	76,0	81	82,0	3	5,0	1,5	0,773	0,35	1,70	1,00	
31308A	T7FB040	50	49	49	70,0	81	86,0	3	8,0	1,5	0,776	0,83	0,70	0,40	
32308A	T2FD040	50	49	49	76,0	81	82,0	3	8,0	1,5	1,120	0,35	1,70	1,00	
32308BA	T5FD040	50	49	49	70,0	81	85,0	4	8,0	1,5	1,110	0,54	1,10	0,60	
32308BAJ2	T5FD040	50	49	49	70,0	81	85,0	4	8,0	1,5	0,990	0,54	1,10	0,60	
32009AX	T3CC045	45	50	51	66,0	69	72,0	4	4,5	1,0	0,355	0,39	1,50	0,80	
30209A	T3DB045	53	52	52	73,0	78	80,0	3	4,5	1,0	0,527	0,41	1,50	0,80	
32209A	T3DC045	53	52	52	73,0	78	81,5	3	5,5	1,0	0,641	0,41	1,50	0,80	
30309A	T2FB045	56	54	54	85,0	91	92,0	3	5,0	1,5	1,040	0,35	1,70	1,00	
30309AJ2	T2FB045	56	54	54	85,0	91	92,0	3	5,0	1,5	1,040	0,35	1,70	1,00	
31309A	T7FB045	55	54	54	78,0	91	95,0	3	9,0	1,5	1,030	0,83	0,70	0,40	



## Single Row Tapered Roller Bearings d = 45 to 75 mm



Dimensions									Basic Load Rating		Fatigue load	Limiting Speed	
d	D	B	C	T	r <sub>1s</sub>	r <sub>2s</sub>	r <sub>3s</sub>	a	Dynamic C <sub>r</sub>	Static C <sub>or</sub>	limit P <sub>v</sub>	for Lubrication with Grease Oil	
mm									kN		kN	min <sup>-1</sup>	
45	100	36	30,0	38,25	2,0	1,5	0,6	25	144,0	181,0	22,07	3800	5000
	100	36	30,0	38,25	2,0	1,5	0,6	31	131,0	174,0	21,22	3800	5000
50	80	20	15,5	20,00	1,0	1,0	0,3	18	59,6	87,4	10,66	4500	6000
	90	20	17,0	21,75	1,5	1,5	0,6	20	70,8	87,4	10,66	4200	5600
	90	23	19,0	24,75	1,5	1,5	0,6	21	81,0	102,0	12,44	4200	5600
	110	27	23,0	29,25	2,5	2,0	0,6	23	121,0	141,0	17,20	3800	5000
	110	27	19,0	29,25	2,5	2,0	0,6	35	102,0	114,0	13,90	3300	4500
	110	40	33,0	42,25	2,5	2,0	0,6	27	174,0	224,0	27,32	3300	4500
	110	40	33,0	42,25	2,5	2,0	0,6	33	156,0	212,0	25,85	3200	4400
55	90	23	17,5	23,00	1,5	1,5	0,6	20	76,4	108,0	13,17	4000	5300
	100	21	18,0	22,75	2,0	1,5	0,6	21	81,0	96,2	11,73	3800	5000
	100	25	21,0	26,75	2,0	1,5	0,6	22	102,0	128,0	15,61	3800	5000
	120	29	25,0	31,50	2,5	2,0	0,6	25	136,0	162,0	19,76	3300	4500
	120	29	21,0	31,50	2,5	2,0	0,6	38	117,0	136,0	16,59	3000	4000
	120	43	35,0	45,50	2,5	2,0	0,6	29	200,0	256,0	31,22	3300	4500
60	95	23	17,5	23,00	1,5	1,5	0,6	21	81,0	119,0	14,51	3800	5000
	110	22	19,0	23,75	2,0	1,5	0,6	22	94,4	117,0	14,27	3300	4500
	110	28	24,0	29,75	2,0	1,5	0,6	25	126,0	162,0	19,76	3300	4500
	130	31	26,0	33,50	3,0	2,5	1,0	26	162,0	188,0	22,93	3000	4000
	130	31	22,0	33,50	3,0	2,5	1,0	41	136,0	158,0	19,27	2800	3800
	130	46	37,0	48,50	3,0	2,5	1,0	31	228,0	299,0	36,46	2800	3800
	130	46	37,0	48,50	3,0	2,5	1,0	39	200,0	293,0	35,73	2500	3300
65	100	23	17,5	23,00	1,5	1,5	0,6	23	81,0	123,0	15,00	3300	4500
	110	34	26,5	34,00	1,5	1,5	0,6	26	136,0	207,0	25,24	3800	5300
	120	23	20,0	24,75	2,0	1,5	0,6	24	112,0	136,0	16,59	3000	4000
	120	31	27,0	32,75	2,0	1,5	0,6	28	150,0	200,0	24,39	3000	4000
	120	41	32,0	41,00	2,0	1,5	0,6	30	191,0	267,0	32,56	3000	4000
	140	33	28,0	36,00	3,0	2,5	1,0	28	185,0	220,0	26,63	2800	3800
	140	33	23,0	36,00	3,0	2,5	1,0	44	150,0	178,0	21,55	2800	3800
140	48	39,0	51,00	3,0	2,5	1,0	33	261,0	331,0	40,07	2800	3800	
70	110	25	19,0	25,00	1,5	1,5	0,6	24	98,1	147,0	17,93	3300	4500
	125	24	21,0	26,25	2,0	1,5	0,6	26	121,0	153,0	18,66	3000	4000
	125	31	27,0	33,25	2,0	1,5	0,6	29	155,0	203,0	24,76	2800	3800
	150	35	30,0	38,00	3,0	2,5	1,0	30	211,0	251,0	29,75	2700	3500
	150	35	25,0	38,00	3,0	2,5	1,0	47	178,0	211,0	25,01	2700	3500
	150	51	42,0	54,00	3,0	2,5	1,0	36	293,0	398,0	47,17	2700	3500
75	115	25	19,0	25,00	1,5	1,5	0,6	25	104,0	158,0	19,27	3000	4000
	130	25	22,0	27,25	2,0	1,5	0,6	28	128,0	165,0	19,97	2800	3800
	130	31	27,0	33,25	2,0	1,5	0,6	30	162,0	220,0	26,63	2800	3800
	130	41	31,0	41,00	2,0	1,5	0,6	32	196,0	299,0	36,19	2800	3800
	160	37	31,0	40,00	3,0	2,5	1,0	32	242,0	287,0	33,35	2500	3300
	160	55	45,0	58,00	3,0	2,5	1,0	38	341,0	464,0	53,91	2400	3200
	160	55	45,0	58,00	3,0	2,5	1,0	47	304,0	464,0	53,91	2000	2700



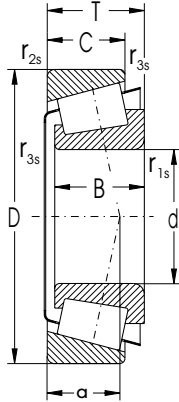
Bearing Designation		Abutment and Fillet Dimensions									Weight	Factors		
STN	ISO	d	d <sub>a</sub> max	d <sub>b</sub> min	D <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> min	a <sub>a</sub> min	a <sub>b</sub> min	r <sub>a</sub> max	~	e	Y	Y <sub>0</sub>
		mm									kg			
32309A	T2FD045	45	56	54	85	91	93,0	3	8,0	1,5	1,530	0,35	1,70	1,00
32309BAJ2	T5FD045		55	54	76	91	94,0	5	8,0	1,5	1,540	0,54	1,10	0,60
32010AX	T3CC050	50	55	56	71	74	77,0	4	4,5	1,0	0,395	0,42	1,40	0,80
30210A	T3DB050		58	57	78	83	86,5	3	4,5	1,0	0,602	0,42	1,40	0,80
32210A	T3DC050		58	57	78	83	85,0	3	5,5	1,0	0,667	0,42	1,40	0,80
30310A	T2FB050		62	60	94	100	102,0	3	6,0	2,0	1,320	0,35	1,70	1,00
31310A	T7FB050		61	60	85	100	104,0	3	10,0	2,0	1,290	0,83	0,70	0,40
32310A	T2FD050		62	60	94	100	102,0	3	9,0	2,0	2,010	0,35	1,70	1,00
32310BA	T5FD050		62	60	83	100	103,0	5	9,0	2,0	1,990	0,54	1,10	0,60
32011AX	T3CC055	55	61	62	80	83	86,0	4	5,5	1,0	0,592	0,41	1,50	0,80
30211A	T3DB055		63	64	87	91	94,0	4	4,5	1,5	0,759	0,41	1,50	0,80
32211A	T3DC055		63	64	87	91	95,0	4	5,5	1,5	0,915	0,41	1,50	0,80
30311A	T2FB055		67	65	103	110	111,0	4	6,5	2,0	1,710	0,35	1,70	1,00
31311A	T7FB055		67	65	92	110	113,0	4	10,5	2,0	1,630	0,83	0,70	0,40
32311A	T2FD055		67	65	103	110	111,0	4	10,5	2,0	2,500	0,35	1,70	1,00
32012AX	T4CC060	60	66	67	85	88	91,0	4	5,5	1,0	0,632	0,43	1,40	0,80
30212A	T3EB060		69	69	95	101	105,5	4	4,5	1,5	0,967	0,41	1,50	0,80
32212A	T3EC060		69	69	95	101	104,0	4	5,5	1,5	1,270	0,41	1,50	0,80
30312A	T2FB060		73	72	112	118	120,0	4	7,5	2,0	2,090	0,35	1,70	1,00
31312A	T7FB060		72	72	103	118	123,0	4	11,5	2,0	2,030	0,83	0,70	0,40
32312A	T2FD060		73	72	112	118	120,0	4	11,5	2,0	3,070	0,35	1,70	1,00
32312B	T5FD060		73	72	99	118	122,0	6	11,5	2,0	3,160	0,54	1,10	0,60
32013AX	T4CC065	65	71	72	90	93	97,0	4	5,5	1,0	0,675	0,46	1,30	0,70
33113A	T3DE065		74	72	96	103	106,0	6	7,5	1,0	1,300	0,39	1,50	0,80
30213A	T3EB065		75	74	105	111	113,0	4	4,5	1,5	1,230	0,41	1,50	0,80
32213A	T3EC065		75	74	105	111	115,0	4	5,5	1,5	1,660	0,41	1,50	0,80
33213A	T3EE065		75	74	102	111	115,0	6	9,0	1,5	2,060	0,39	1,50	0,90
30313A	T2GB065		80	77	121	128	130,0	4	8,0	2,0	2,550	0,35	1,70	1,00
31313A	T7GB065		78	77	109	128	132,0	4	13,0	2,0	2,450	0,83	0,70	0,40
32313A	T2GD065		80	77	121	128	130,0	4	12,0	2,0	3,770	0,35	1,70	1,00
32014AX	T4CC070	70	77	77	98	103	105,0	5	6,0	1,5	0,893	0,44	1,40	0,80
30214A	T3EB070		80	79	108	116	118,0	4	5,0	1,5	1,370	0,42	1,40	0,80
32214A	T3EC070		80	79	108	116	119,0	4	6,0	1,5	1,730	0,42	1,40	0,80
30314A	T2GB070		85	82	129	138	140,0	4	8,0	2,0	3,070	0,35	1,70	1,00
31314A	T7GB070		83	82	118	138	141,0	4	13,0	2,0	3,010	0,83	0,70	0,40
32314A	T2GD070		85	82	129	138	140,0	4	12,0	2,0	4,550	0,35	1,70	1,00
32015AX	T4CC075	75	82	82	103	108	110,0	5	6,0	1,0	0,955	0,46	1,30	0,70
30215A	T4DB075		85	84	113	121	124,0	4	5,0	1,5	1,470	0,44	1,40	0,80
32215A	T4DC075		85	84	113	121	121,0	4	6,0	1,5	1,820	0,44	1,40	0,80
33215A	T3EE075		85	84	111	121	125,0	6	10,0	1,5	2,300	0,43	1,40	0,80
30315A	T2GB075		91	87	138	148	149,0	4	9,0	2,0	3,720	0,35	1,70	1,00
32315A	T2GD075		91	87	138	148	149,0	4	13,0	2,0	5,620	0,35	1,70	1,00
32315B	T5GD075		90	87	128	148	150,0	7	12,5	2,0	5,600	0,54	1,10	0,60



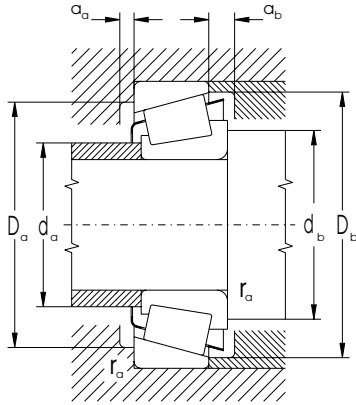


## Single Row Tapered Roller Bearings

d = 80 to 140 mm



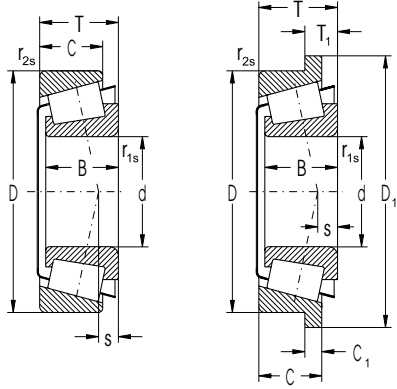
Dimensions									Basic Load Rating		Fatigue load	Limiting Speed	
d	D	B	C	T	r <sub>1s</sub>	r <sub>2s</sub>	r <sub>3s</sub>	a	C <sub>r</sub>	C <sub>or</sub>	limit	for Lubrication with	
mm									kN		kN	min <sup>-1</sup>	
					min	min	min				P <sub>u</sub>	Grease	Oil
80	125	29	22,0	29,00	1,5	1,5	0,6	27	131,0	207,0	25,06	2800	3800
	130	37	29,0	37,00	2,0	1,5	0,6	31	190,0	300,0	36,05	3200	4200
	140	26	22,0	28,25	2,5	2,0	0,6	29	144,0	178,0	21,10	2800	3800
	140	33	28,0	35,25	2,5	2,0	0,6	32	181,0	251,0	29,75	2800	3800
85	130	29	22,0	29,00	1,5	1,5	0,6	28	136,0	215,0	25,66	2800	3800
	130	36	29,5	36,00	1,5	1,5	0,6	26	195,0	319,0	38,07	3000	4000
	150	28	24,0	30,50	2,5	2,0	0,6	30	181,0	207,0	24,05	2700	3500
	150	36	30,0	38,50	2,5	2,0	0,6	34	212,4	290,2	33,72	2400	3300
	150	36	30,0	38,50	2,5	2,0	0,6	34	237,0	293,0	34,04	2700	3500
90	150	49	37,0	49,00	2,5	2,0	0,6	37	278,0	418,0	48,57	2200	3200
	140	32	24,0	32,00	2,0	1,5	0,6	30	150,0	228,0	26,66	2700	3500
	140	39	32,5	39,00	2,0	1,5	0,6	28	223,0	370,0	43,27	2800	3800
	150	45	35,0	45,00	2,5	2,0	0,6	36	265,0	420,0	48,49	2800	3800
95	160	30	26,0	32,50	2,5	2,0	0,6	31	185,0	242,0	27,60	2400	3200
	160	40	34,0	42,50	2,5	2,0	0,6	37	251,0	355,0	40,49	2400	3200
	145	32	24,0	32,00	2,0	1,5	0,6	31	174,0	280,0	32,33	2700	3500
	145	39	32,5	39,00	2,0	1,5	0,6	29	228,0	385,0	44,45	2700	3500
100	170	32	27,0	34,50	3,0	2,5	1,0	33	214,0	272,0	30,49	2000	2900
	170	43	37,0	45,50	3,0	2,5	1,0	38	310,0	437,0	48,98	2700	3500
	150	32	24,0	32,00	2,0	1,5	0,6	33	178,0	261,0	29,77	2800	3800
	150	39	32,5	39,00	2,0	1,5	0,6	29	234,0	400,0	45,62	2500	3300
105	180	34	29,0	37,00	3,0	2,5	1,0	37	266,0	346,0	38,14	2500	3300
	180	46	39,0	49,00	3,0	2,5	1,0	41	348,0	496,0	54,68	2500	3300
	160	35	26,0	35,00	2,5	2,0	0,6	35	205,0	337,0	37,77	2600	3400
	160	43	34,0	43,00	2,5	2,0	0,6	31	260,0	445,0	49,87	2400	3200
110	190	36	30,0	39,00	3,0	2,5	1,0	37	293,0	387,0	42,00	2400	3200
	190	50	43,0	53,00	3,0	2,5	1,0	44	393,0	570,0	61,86	2400	3200
	170	38	29,0	38,00	2,5	2,0	0,6	37	246,0	390,0	42,99	2500	3300
	170	47	37,0	47,00	2,5	2,0	0,6	33	300,0	520,0	57,33	2200	3000
120	200	38	32,0	41,00	3,0	2,5	1,0	39	304,0	402,0	42,98	1800	2500
	200	53	46,0	56,00	3,0	2,5	1,0	46	433,0	630,0	67,36	2200	3000
	215	40	34,0	43,50	3,0	2,5	1,0	43	339,0	452,0	47,22	1600	2200
130	215	58	50,0	61,50	3,0	2,5	1,0	52	462,0	685,0	71,56	1600	2200
	200	45	34,0	45,00	2,5	2,0	0,6	43	330,0	560,0	58,77	2100	2800
140	210	45	34,0	45,00	2,5	2,0	0,6	46	335,0	580,0	59,80	1700	2200



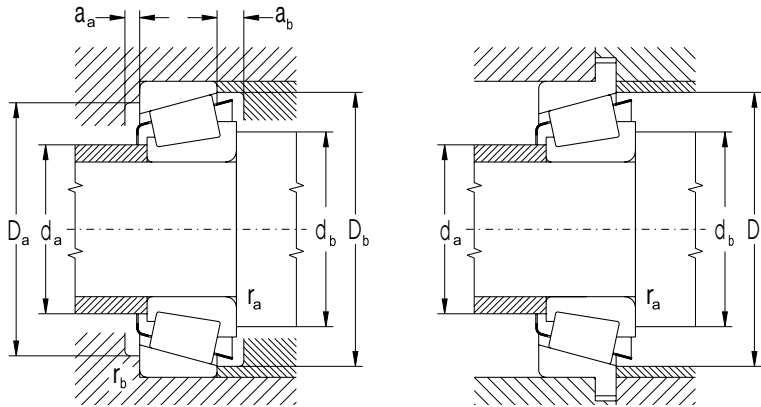
Bearing Designation		Abutment and Fillet Dimensions									Weight	Factors		
STN	ISO	d	d <sub>a</sub> max	d <sub>b</sub> min	D <sub>a</sub> min	D <sub>a</sub> max	D <sub>b</sub> min	a <sub>a</sub> min	a <sub>b</sub> min	r <sub>a</sub> max	~	e	Y	Y <sub>0</sub>
		mm									kg			
32016AX	T3CC080	80	87	87	112	118	120,0	6	7,0	1,0	1,320	0,42	1,40	0,80
33116A	T3DE080		89	89	114	121	126,0	6	8,0	1,5	1,930	0,42	1,40	0,80
30216A	T3EB080		90	90	122	130	132,0	4	6,0	2,0	1,750	0,42	1,40	0,80
32216A	T3EC080		90	90	122	130	134,0	4	7,0	2,0	2,290	0,42	1,40	0,80
32017AX	T4CC085	85	92	92	117	123	125,0	6	7,0	1,0	1,410	0,44	1,40	0,70
33017A	T2CE085		92	93	117	123	125,0	6	6,5	1,0	1,730	0,29	2,10	1,10
30217A	T3EB085		96	95	132	140	141,0	5	6,0	2,0	2,140	0,42	1,40	0,80
32217A	T3EC085		96	95	130	140	142,0	5	8,5	2,0	2,850	0,42	1,40	0,80
32217AJ2	T3EC085		96	95	130	140	142,0	5	8,5	2,0	2,850	0,42	1,40	0,80
33217A	T3EE085		96	95	128	140	144,0	7	12,0	2,0	3,690	0,42	1,40	0,80
32018AX	T3CC090	90	99	99	124	131	134,0	6	8,0	1,5	1,780	0,42	1,40	0,80
33018A	T2CE090		99	99	124	131	135,0	6	6,5	1,5	2,250	0,27	2,20	1,20
33118A	T3DE090		101	100	130	140	144,0	7	10,0	2,0	3,200	0,40	1,50	0,80
30218A	T3FB090		102	100	138	150	150,0	5	6,0	2,0	2,710	0,42	1,40	0,80
32218A	T3FC090		102	100	138	150	152,0	5	8,5	2,0	3,600	0,42	1,40	0,80
32019AX	T4CC095	95	105	104	130	136	139,0	6	8,0	1,5	1,870	0,44	1,40	0,80
33019A	T2CE095		103	104	130	136	139,0	6	6,5	1,5	2,340	0,28	2,10	1,20
30219A	T3FB095		107	110	148	158	159,0	5	7,0	2,0	3,160	0,42	1,40	0,80
32219A	T3FC095		107	110	148	158	161,0	5	10,0	2,0	4,320	0,42	1,40	0,80
32020AX	T4CC100	100	109	109	134	141	144,0	6	8,0	1,5	1,940	0,46	1,30	0,70
33020A	T2CE100		109	110	134	141	144,0	6	6,5	1,5	2,470	0,28	2,10	1,10
30220A	T3FB100		114	112	155	168	168,0	5	8,0	2,0	3,810	0,42	1,40	0,80
32220A	T3FC100		114	112	155	168	171,0	5	10,0	2,0	5,210	0,42	1,40	0,80
32021AX	T4DC105	105	116	115	143	150	154,0	6	9,0	2,0	2,510	0,44	1,40	0,70
33021A	T2DE105		116	116	143	150	153,0	6	9,0	2,0	3,060	0,28	2,10	1,20
30221A	T3FB105		120	117	163	178	178,0	8	9,0	2,0	4,940	0,42	1,40	0,80
32221A	T3FC105		120	117	163	178	178,0	6	10,0	2,0	6,380	0,42	1,40	0,80
32022AX	T4DC110	110	120	120	152	160	163,0	6	9,0	2,0	3,090	0,43	1,40	0,80
33022A	T2DE110		121	121	150	159	160,0	6	10,0	2,0	3,870	0,29	2,10	1,20
30222A	T3FB110		125	122	171	188	187,0	8	9,0	2,0	5,320	0,44	1,40	0,80
32222A	T3FC110		125	122	171	188	190,0	6	10,0	2,0	7,560	0,44	1,40	0,80
32024AX	T4DC120	120	130	130	162	170	173,0	6	9,0	2,0	3,320	0,46	1,30	0,70
30224A	T4FB120		135	132	187	203	201,0	9	9,0	2,0	6,330	0,44	1,40	0,80
32224A	T4FD120		135	132	184	203	204,0	9	11,5	2,0	9,420	0,44	1,40	0,80
32026AX	T4EC130	130	140	140	178	190	192,0	8	11,0	2,0	5,050	0,44	1,40	0,80
32028AX	T4DC140	140	150	150	186	200	202,0	8	11,0	2,0	5,260	0,46	1,30	0,70



**Single Row Tapered Roller Bearings in Inch Dimensions**  
**d = 15.875 to 38.100 mm**



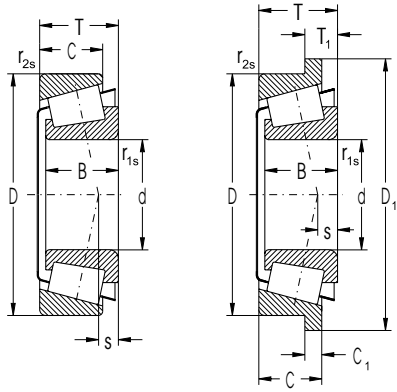
Dimensions											Basic Load Rating		Fatigue load limit	Limiting Speed for Lubrication with	
d	D	D <sub>1</sub>	B	C	C <sub>1</sub>	T	T <sub>1</sub>	r <sub>1s</sub>	r <sub>2s</sub>	s	C <sub>r</sub>	C <sub>or</sub>	P <sub>u</sub>	Grease	Oil
mm											kN		kN	min <sup>-1</sup>	
15.88	42.86		14.288	9.525		14.288		1.50	1.50	1.30	17.30	18.60	2.27	9500	14000
16.00	47.00		21.000	16.000		21.000		1.00	2.00	6.00	36.90	40.60	4.95	8400	11000
17.46	39.88		14.605	10.670		13.843		1.30	1.30	4.80	21.10	21.50	2.62	10000	13000
19.05	45.24		16.637	12.065		15.494		1.30	1.30	5.60	25.60	26.60	3.24	8900	12000
21.99	45.24		16.637	12.065		15.494		1.20	1.20	5.30	28.70	29.90	3.65	8400	11000
22.00	45.00	51.5	16.637	12.065	3.000	15.494	6.43	1.20	1.20	5.40	28.70	29.90	3.65	8400	11000
25.40	50.29		14.732	10.668		14.224		1.30	1.30	3.30	24.60	28.70	3.50	7500	10000
	* 50.29		14.732	10.668		14.224		1.30	1.30	3.30	24.60	28.70	3.50	7500	10000
	59.93		23.114	18.288		23.368		0.80	1.57	5.10	44.70	66.80	8.15	5600	7500
26.99	50.29		14.732	10.668		14.224		3.56	1.30	3.30	24.60	28.70	3.50	7500	10000
29.00	50.29		14.732	10.668		14.224		3.60	1.20	3.20	25.60	33.50	4.09	7100	9400
30.00	62.00	68.5	18.100	15.536	3.556	17.250	5.27	1.00	1.50	3.30	44.70	44.70	5.45	6700	8900
30.16	64.29		21.433	16.670		21.433		1.57	1.57	3.30	44.70	59.60	7.27	5600	7500
31.75	59.13		16.764	11.811		15.875		4.75	1.30	2.90	31.60	38.30	4.67	6700	8900
	62.00		19.050	14.288		18.161		4.75	1.30	5.20	47.30	58.40	7.12	6300	8400
34.93	65.09		18.288	13.970		18.034		4.75	1.30	3.70	43.00	53.10	6.48	5600	7500
	73.03		24.608	19.050		23.813		3.56	2.36	6.60	57.30	76.40	9.32	5300	6700
35.00	60.00		16.764	11.938		15.875		4.75	1.30	2.50	31.60	42.20	5.15	6300	8400
38.00	63.00		17.000	13.500		17.000		1.50	1.50	2.30	42.20	55.20	6.73	6700	8900
38.10	65.09		18.288	13.970		18.034		2.30	1.10	5.00	49.20	60.70	7.40	5600	7500



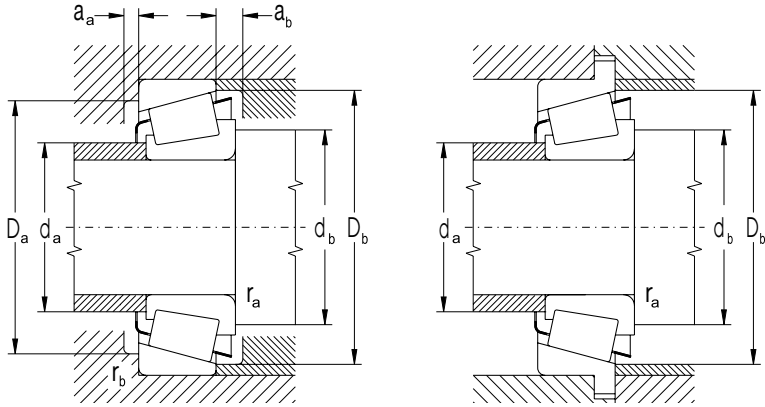
Bearing Designation Cone/ Cup	Abutment and Fillet Dimensions										Weight ~	Dimension Deviations						Factors		
	d <sub>a</sub>	d <sub>b</sub>	D <sub>a</sub>	D <sub>a</sub>	D <sub>b</sub>	a <sub>a</sub>	a <sub>b</sub>	r <sub>a</sub>	r <sub>b</sub>			Δdmp	ΔDmp	ΔTs						
	max	min	min	max	min	min	min	max	max			max	min	max	min	max	min	e	Y	Y <sub>0</sub>
	mm										kg	μm								
K-11590/ K-11520	22.5	24.5	34.5	35.0	39.5	2.0	4.5	1.5	1.5	0.063	+13	0	+25	0	+200	0	0.70	0.90	0.50	
K-HM81649/ K-HM81610	23.0	22.0	36.0	39.0	43.0	2.0	4.0	1.0	1.5	0.199	0	-13	0	-25	+200	0	0.55	1.10	0.60	
K-LM11749/ K-HM11710	23.0	24.0	33.5	35.0	37.0	2.0	3.0	1.0	1.0	0.186	+13	0	+15	0	+200	0	0.29	2.10	1.20	
K-LM11949/ K-LM11910	25.0	25.5	38.0	38.5	41.0	3.0	3.0	1.0	1.0	0.121	+20	0	+25	0	+356	0	0.30	2.00	1.10	
K-LM12749/ K-LM12710	26.0	27.5	38.0	38.5	42.5	3.0	3.0	1.2	1.2	0.119	+13	0	0	+15	+200	0	0.31	1.96	1.00	
K-LM12749/ K-LM12712B	26.0	27.5	-	-	46.0	1.2	3.5	1.3	-	0.129	-13	0	0	-15	+200	0	0.31	1.96	1.10	
K-L44643/ K-L44610	33.0	32.0	43.5	43.5	47.0	2.0	3.5	1.0	1.0	0.128	+13	0	+25	0	+200	0	0.37	1.60	0.90	
K-L44643/ K-L44610/ K-L44600LA	33.0	32.0	43.5	43.5	-	2.0	-	1.0	1.0	0.130	+13	0	+25	0	+200	0	0.37	1.60	0.90	
K-M84249/ K-M84210	33.0	32.0	46.0	53.0	56.0	3.0	4.5	0.6	1.0	0.327	+13	0	+25	0	+200	0	0.55	1.10	0.60	
K-L44649/ K-L44610	33.0	38.0	43.5	45.0	47.0	3.0	3.5	3.0	1.0	0.120	+20	0	+25	0	+356	0	0.37	1.60	0.90	
K-L45449/ K-L45410	34.0	40.0	43.5	45.0	47.0	3.0	3.5	3.0	1.0	0.113	+13	0	+15	0	+200	0	0.37	1.60	0.90	
K-JXC25640CB/ K-JXC25640D	34.5	37.0	-	-	59.0	1.2	1.7	1.5	-	0.269	0	-12	+20	0	+200	0	0.37	1.60	0.90	
K-M86649/ K-M86610	38.0	38.0	51.0	56.5	60.0	3.0	4.5	1.0	1.0	0.341	+13	0	+25	0	+200	0	0.55	1.10	0.60	
K-LM67048/ K-LM67010	38.0	44.5	51.0	52.0	55.0	3.0	4.0	3.0	1.0	0.180	+13	0	+25	0	+356	0	0.41	1.50	0.80	
K-15123/ K-15245	38.0	43.5	54.0	55.0	58.0	4.0	3.5	3.0	1.0	0.248	+13	0	+25	0	+203	0	0.35	1.70	0.90	
K-LM48548/ K-LM48510	42.0	47.0	57.0	58.0	61.0	3.0	4.0	3.0	1.0	0.244	+20	0	+25	0	+356	0	0.38	1.60	0.90	
PLC65-3	43.0	45.0	62.0	64.0	68.0	3.0	3.0	5.0	2.0	0.495	+13	0	+25	0	+200	0	0.37	1.60	0.90	
K-L68149/ K-L68111	40.0	46.0	52.0	54.0	56.0	3.0	3.5	3.0	1.0	0.176	0	-20	0	-25	+356	0	0.42	1.40	0.80	
K-JL69349/ K-JL69310	41.0	49.0	56.5	57.0	60.0	1.5	3.5	1.5	1.5	0.204	+13	0	+25	0	+200	0	0.42	1.44	0.79	
K-LM29749/ K-LM29710	42.5	46.0	58.0	60.0	62.0	4.0	4.0	2.3	1.3	0.240	+13	0	+25	0	+200	0	0.33	1.80	1.00	



**Single Row Tapered Roller Bearings in Inch Dimensions**  
**d = 39.688 to 146.05 mm**



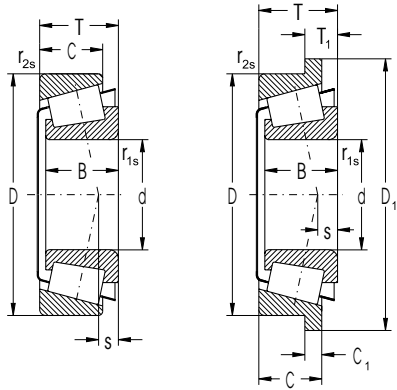
Dimensions											Basic Load Rating		Fatigue load limit	Limiting Speed for Lubrication with	
d	D	D <sub>1</sub>	B	C	C <sub>1</sub>	T	T <sub>1</sub>	r <sub>1s</sub>	r <sub>2s</sub>	s	Dynamic C <sub>r</sub>	Static C <sub>0r</sub>	P <sub>u</sub>	Grease	Oil
mm											kN		kN	min <sup>-1</sup>	
39.69	80.17	30.391	23.813			29.370		0.80	3.20	11.10	81.00	104.00	12.68	4200	5600
40.00	80.00	22.403	17.826			21.000		0.80	1.30	6.00	70.80	73.60	8.98	4700	6300
40.10	67.98	18.000	13.500			17.500		3.60	1.50	3.60	47.30	59.60	7.27	5300	7100
44.45	83.06	25.400	19.050			23.813		3.56	3.20	6.10	59.60	87.40	10.66	4200	5600
45.24	77.79	19.842	15.800			19.842		1.00	1.00	2.30	59.60	77.90	9.50	4900	6500
50.00	82.00	21.500	17.000			21.500		3.00	0.50	5.30	75.20	104.00	12.68	4500	6000
50.80	101.60	36.068	29.988			34.925		0.80	3.20	12.70	123.00	162.00	19.76	3200	4200
57.15	127.00	44.450	34.925			44.450		3.50	3.30	9.40	228.00	276.00	33.66	3000	4000
65.00	110.00	28.000	22.500			28.000		3.00	2.50	4.00	133.00	188.00	22.93	3300	4500
88.90	152.40	39.688	30.162			39.688		6.40	3.30	35.00	230.00	344.00	39.65	2000	3000
89.97	146.98	40.000	32.500			40.000		7.00	3.50	31.00	243.00	365.00	42.30	2400	3300
90.00	145.00	34.000	27.000			35.000		6.00	2.50	33.00	213.00	315.00	36.60	2200	3200
146.05	193.68	28.575	23.020			28.575		5.80	1.50	34.00	181.00	390.00	40.57	1700	2200



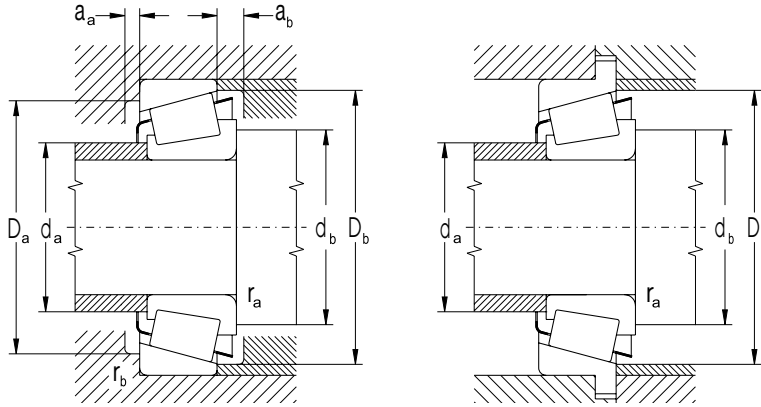
Bearing Designation Cone/ Cup	Abutment and Fillet Dimensions										Weight ~	Dimension Deviations						Factors		
	$d_a$	$d_b$	$D_a$	$D_b$	$a_a$	$a_b$	$r_a$	$r_b$	$\Delta d_{mp}$	$\Delta D_{mp}$		$\Delta T_s$	e	Y	$Y_0$					
	max	min	min	max	min	min	max	max	max	min		max	min							
	mm										kg	$\mu$ m								
K-3386/ K-3320	48.0	47.0	68.0	70.0	75.0	3.0	4.0	0.6	0.704	+13	0	+25	0	+200	0	0.27	2.20	1.20		
K-344A/ K-332	48.0	47.0	68.0	73.0	75.0	3.0	4.0	0.6	0.514	+13	0	+25	0	+203	0	0.27	2.20	1.20		
K-LM300849/ K-LM300811	45.0	52.0	58.0	61.0	63.0	4.0	4.0	0.6	0.230	+13	0	+25	0	+200	0	0.35	1.70	1.00		
K-25580/ K-25521	53.0	56.5	71.0	74.0	73.0	5.0	4.5	3.0	0.541	+13	0	+25	0	+200	0	0.33	1.80	1.00		
LM603049/ LM603011	50.0	57.0	71.0	72.0	74.0	4.5	5.5	1.0	0.378	+13	0	+25	0	+100	0	0.43	1.41	0.77		
K-JLM104948/ K-JLM104910	55.0	60.0	76.0	77.0	78.0	4.0	4.5	3.0	0.410	-12	0	-18	0	+100	0	0.31	1.10	1.08		
K-529/ K-522	61.0	63.5	87.0	89.5	94.0	6.0	7.5	0.6	1.220	+13	0	+25	0	+200	0	0.28	2.10	1.20		
K-65225/ K-65500	71.0	80.0	104.0	107.0	119.0	10.0	10.0	3.5	2.790	+13	0	+25	0	+200	0	0.49	1.20	0.70		
K-JM511946/ K-JM511910	71.0	77.0	93.0	96.0	101.0	9.5	9.5	3.0	1.050	-15	0	-15	0	+200	0	0.39	1.50	0.90		
K-HM518445/ K-HM518410	98.0	112.0	124.0	135.0	142.0	6.0	10.0	3.5	2.880	+25	0	+25	0	+200	0	0.44	1.36	0.74		
K-HM218248/ K-HM218210	99.0	112.0	128.0	133.0	141.0	6.0	7.5	3.5	2.590	+25	0	+25	0	+200	0	0.33	1.80	0.99		
K-JM718149/ K-JM718110	99.0	111.0	126.0	131.0	140.0	6.0	8.0	2.5	2.150	+25	0	+25	0	+200	0	0.44	1.35	0.74		
K-36691/ K-36620	155.0	162.0	176.0	182.0	187.0	6.0	6.5	1.5	2.310	+25	0	+25	0	+356 -254	0.37	1.60	0.90			



**Single Row Tapered Roller Bearings in Inch Dimensions**  
**d = 15,875 to 39,688 mm**



Dimensions											Basic Load Rating		Fatigue	Limiting Speed	
d	D	D <sub>1</sub>	B	C	C <sub>1</sub>	T	T <sub>1</sub>	r <sub>1s</sub>	r <sub>2s</sub>	s	C <sub>r</sub>	C <sub>or</sub>	load limit	for Lubrication with	
											Dynamic	Static	P <sub>u</sub>	Grease	Oil
mm											kN		kN	min <sup>-1</sup>	
15.875	42.862	14.288	9.525	14.288	14.288	1.5	1.5				17.8	17.7	2.16	10000	14000
19.050	49.225	19.050	14.288	18.034	18.034	1.3	1.3				37.7	37.7	4.60	8900	12000
	49.225	19.050	17.462	21.209	21.209	1.3	1.5				37.7	37.7	4.60	8900	12000
	49.225	21.539	14.288	19.845	19.845	1.5	1.3				37.7	37.7	4.60	8900	12000
25.400	57.150	19.431	14.732	19.431	19.431	1.5	1.5				44.9	52.9	6.45	6400	8600
	62.000	20.638	15.875	19.050	19.050	0.8	1.3				44.6	50.7	6.18	6400	8600
	63.500	20.638	15.875	20.638	20.638	0.8	1.5				44.6	50.7	6.18	6400	8600
26.988	62.000	20.638	14.288	19.050	19.050	0.8	1.3				44.6	50.7	6.18	6400	8600
28.575	68.262	22.225	17.462	22.225	22.225	0.8	1.5				51.0	61.1	7.45	6000	8000
	73.025	22.225	17.462	22.225	22.225	0.8	3.3				55.0	65.7	8.01	5500	7400
29.000	50.292	14.732	10.668	14.224	14.224	3.5	1.3				28.9	37.2	4.54	7600	10000
30.162	64.292	21.433	16.670	21.433	21.433	1.5	1.5				55.2	70.7	8.62	6400	8500
30.213	62.000	20.638	14.288	19.050	19.050	3.5	1.3				44.6	50.7	6.18	6400	8600
31.750	59.131	16.764	11.811	15.875	15.875						35.8	43.1	5.26	6600	8800
	62.000	20.638	14.288	19.050	19.050	0.8	1.3				44.6	50.7	6.18	6400	8600
	63.500	19.050	15.875	20.638	20.638						44.6	50.7	6.18	6400	8600
	69.012	19.583	15.875	19.845	19.845	3.5	3.3				46.1	55.0	6.71	5900	7800
33.338	68.262	22.225	17.462	22.225	22.225	0.8	1.5				56.1	71.1	8.67	6000	7900
34.925	69.012	19.583	15.875	19.845	19.845	3.5	3.3				46.1	55.0	6.71	5900	7800
	69.012	19.583	15.875	19.845	19.845	3.5	1.3				46.1	55.0	6.71	5900	7800
	72.233	25.400	19.842	25.400	25.400	2.3	2.3				66.9	87.4	10.66	5700	7600
	73.025	24.608	19.050	23.812	23.812	1.5	2.3				72.2	87.3	10.65	5600	7400
34.988	73.025	24.608	19.050	23.812	23.812	1.5	0.8				72.2	87.3	10.65	5600	7400
	76.200	28.575	23.812	29.370	29.370	1.5	3.3				80.9	97.4	11.88	5400	7200
	61.973	17.000	13.600	16.700	16.700						39.4	52.4	6.39	5600	7500
35.000	59.975	18.412	11.938	15.875	15.875	2.5	1.3				36.0	48.6	5.93	6400	8500
	65.000	20.600	17.000	18.100	18.100	2.3	1.3				45.7	53.1	6.48	5500	7400
36.487	76.200	25.654	19.050	23.812	23.812	1.5	3.3				81.1	105.0	12.80	5000	6700
36.512	76.200	28.575	23.020	29.370	29.370	3.5	3.3				79.5	107.0	13.05	5400	7200
38.100	65.088	18.288	13.970	18.034	18.034						42.9	56.5	6.89	5800	7800
	65.088	18.288	13.970	18.034	18.034	2.3	1.3				42.9	56.5	6.89	5800	7800
	65.088	18.288	15.748	19.812	19.812	2.3	1.3				42.9	56.5	6.89	5800	7800
	69.012	19.050	15.083	19.050	19.050	3.5	2.3				49.2	62.0	7.56	5600	7500
	76.200	25.654	19.050	23.812	23.812	3.5	3.3				81.1	105.0	12.80	5000	6700
	82.550	28.575	23.020	29.370	29.370	0.8	3.3				87.3	117.0	14.27	4900	6600
39.688	88.500	29.083	22.225	26.988	26.988	3.5	1.5				98.2	112.0	13.66	4900	6500
	73.025	22.098	18.500	19.395	19.395	2.3	1.3				53.0	66.3	8.09	5200	6900
	79.967	22.098	22.091	19.395	19.395	2.3	1.3				66.3	53.0	6.46	5200	6900

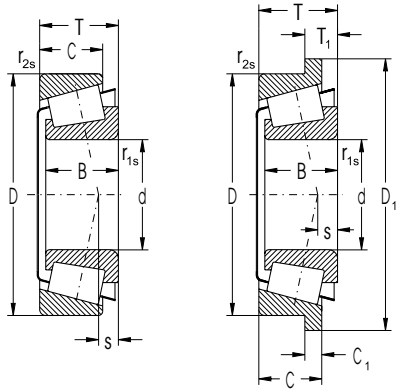


Bearing Designation	Abutment and Fillet Dimensions										Weight	Dimension Deviations						Factors		
	Cone/		D <sub>a</sub>	D <sub>s</sub>	D <sub>b</sub>	a <sub>a</sub>	a <sub>b</sub>	r <sub>a</sub>	r <sub>b</sub>	~		Δdmp		ΔDmp		ΔTs		e	Y	Y <sub>0</sub>
	max	min										max	min	max	min	max	min			
Cup	mm										kg	μm								
11590/11520	22.5	24.5	34.5		39.5	2.0	4.5	1.5	1.5	0.10	+13	0	+25	0	+203	0	0.70	0.85	1.20	
09067/09195	24.0	25.5	42.0		44.5	4.0	4.5	1.3	1.3	0.17	+13	0	+25	0	+203	0	0.27	2.26		
09067/09196	24.0	25.5	41.5		44.5	1.0	4.5	1.3	1.5	0.19	+13	0	+25	0	+203	0	0.27	2.26	1.20	
09074/09195	24.0	26.0	42.0		44.5	4.0	4.5	1.5	1.3	0.18	+13	0	+25	0	+203	0	0.27	2.26		
M84548/84510	33.0	36.0	48.5		54.0	2.5	5.0	1.5	1.5	0.23	+13	0	+25	0	+203	0	0.55	1.10	1.00	
15101/15245	31.5	32.5	55.0		58.0	5.0	5.0	0.8	1.3	0.29	+13	0	+25	0	+203	0	0.35	1.71		
15101/15250X	31.5	32.5	55.0		59.0	3.0	5.0	0.8	1.5	0.32	+13	0	+25	0	+203	0	0.35	1.71	1.00	
15106/15245	33.0	33.5	55.0		58.0	5.0	5.0	0.8	1.3	0.28	+13	0	+25	0	+203	0	0.35	1.71		
02474/0220	36.0	36.5	59.0		63.0	3.0	5.5	0.8	1.5	0.40	+13	0	+25	0	+203	0	0.42	1.44	0.77	
02872/02820	37.0	37.5	62.0		68.0	3.0	5.0	0.8	3.3	1.04	+13	0	+25	0	+203	0	0.45	1.32		
F15029/L45410	33.0	39.5	44.5		48.0	4.0	3.5	4.0	3.5	0.11	+13	0	+25	0	+203	0	0.37	1.62	1.08	
M86649/86610	38.2	41.0	54.0		61.0	3.0	5.3	1.5	1.5	0.33	+13	0	+25	0	+203	0	0.55	1.10		
15118/15245	35.5	41.5	55.0		58.0	5.0	5.0	3.5	1.3	0.26	+13	0	+25	0	+203	0	0.35	1.71	1.20	
LM67048 RS	36.0	42.5	52.0		56.0	4.5	3.5		1.2	0.17	+13	0	+25	0	+203	0	0.41	1.46		
/67010																			0.70	
151126/15245	36.5	37.0	55.0		58.0	5.0	5.0	0.8	1.3	0.25	+13	0	+25	0	+203	0	0.35	1.71		
15123/15250X	31.5	32.5	55.0		59.0	3.0	5.0	0.8	1.5	0.32	+13	0	+25	0	+203	0	0.35	1.71	0.90	
14125A/14274	40.0	46.0	60.0		63.0	3.0	4.5	3.5	1.3	0.32	+13	0	+25	0	+203	0	0.38	1.57		
M88048/88010	41.0	42.5	58.0		65.0	3.0	4.0	0.8	1.5	0.37	+13	0	+25	0	+203	0	0.55	1.10	0.74	
14138A/14274	40.0	46.0	60.0		63.0	3.0	4.5	3.5	1.3	0.32	+13	0	+25	0	+203	0	0.38	1.57		
14138A/14276	40.0	46.0	60.0		63.0	3.0	4.5	3.5	1.3	0.32	+13	0	+25	0	+203	0	0.38	1.57	0.99	
HM88649	42.5	48.5	60.0		69.0	4.0	5.5	2.3	2.3	0.50	+13	0	+25	0	+203	0	0.55	1.10		
/88610																			0.74	
25877/25820	40.5	43.0	64.0		68.0	4.5	5.5	1.5	2.3	0.46	+13	0	+25	0	+203	0	0.29	2.07		
25877/25821	40.5	43.0	65.0		68.0	4.5	5.5	1.5	0.8	0.46	+13	0	+25	0	+203	0	0.29	2.07	0.90	
31594/31520	43.5	46.0	64.0		72.0	2.5	6.0	1.5	3.3	0.62	+13	0	+25	0	+203	0	0.40	1.49		
LM78349	40.0	46.0	54.0		59.0	3.0	4.0		1.5	0.19	0	-13	0	-25	+203	0	0.44	1.35		
/78310A																				
F15036	45.5	39.0	53.0		56.0	4.0	3.0	2.5	1.3	0.19	+13	0	+25	0	+203	0	0.42	1.44		
/JL68111Z																				
U298/U261+collar																				
2780/2720	42.5	44.5	66.0		70.0	5.0	5.0	1.5	3.3	0.52	+13	0	+25	0	+203	0	0.30	1.98		
HM89449/89410	44.5	54.0	62.0		73.0	3.0	5.5	3.5	3.3	0.62	+13	0	+25	0	+203	0	0.55	1.10		
LM29748/29710	42.5	49.0	59.0		62.0	3.0	4.5		1.3	0.22	+13	0	+25	0	+203	0	0.33	1.80		
LM29749/29710	42.5	46.0	59.0		62.0	3.0	4.5	2.3	1.3	0.22	+13	0	+25	0	+203	0	0.33	1.80		
LM29749/29711	42.5	46.0	58.0		62.0	1.5	4.5	2.3	1.3	0.24	+13	0	+25	0	+203	0	0.33	1.80		
13685/13621	43.0	49.5	61.0		65.0	2.5	4.0	3.5	2.3	0.28	+13	0	+25	0	+203	0	0.40	1.49		
2788/2720	43.5	50.0	66.0		70.0	5.0	5.0	3.5	3.3	0.49	+13	0	+25	0	+203	0	0.30	1.98		
HM801346	49.1	51.0	68.0		78.0	3.0	6.0	0.8	3.3	0.76	+13	0	+25	0	+203	0	0.55	1.10		
/801310																				
418/414	44.5	51.0	77.0		80.0	5.0	6.0	3.5	1.5	0.82	+13	0	+25	0	+203	0	0.26	2.28		
U399/U360+collar																				
U399/U365+collar																				

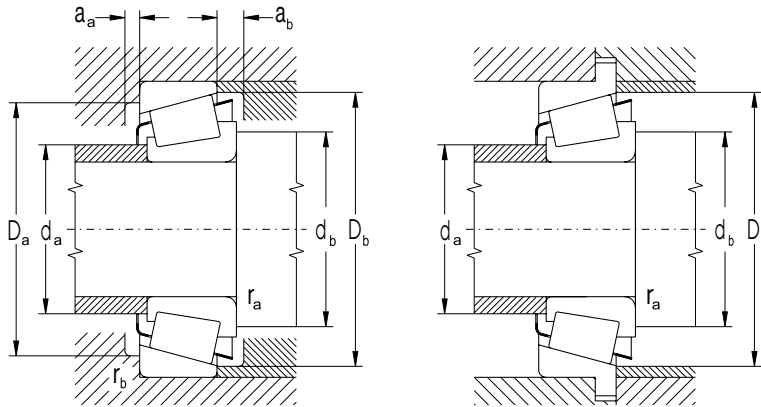




**Single Row Tapered Roller Bearings in Inch Dimensions**  
**d = 40.988 to 50.800 mm**



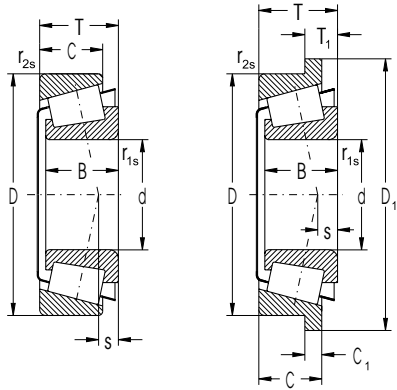
Dimensions											Basic Load Rating		Fatigue	Limiting Speed	
d	D	D <sub>1</sub>	B	C	C <sub>1</sub>	T	T <sub>1</sub>	r <sub>1s</sub>	r <sub>2s</sub>	s	Dynamic C <sub>r</sub>	Static C <sub>or</sub>	load limit P <sub>u</sub>	for Grease	with Oil
mm											kN		kN	min <sup>-1</sup>	
40.988	67.975	18.000	13.500		17.500			**	1.5		46.1	63.5		5400	7200
41.275	73.025	17.462	12.700		16.667			3.5	1.5		45.9	55.8	6.80	5200	6900
	73.431	19.812	14.732		19.558			3.5	0.8		57.8	73.0	8.90	5200	7000
	73.431	19.812	16.604		21.430			3.5	0.8		57.8	73.0	8.90	5200	7000
	76.200	23.020	17.462		22.225			3.5	0.8		66.3	83.3	10.16	5200	6900
	87.312	30.886	23.812		30.162			1.5	3.3		95.8	120.0	14.63	4600	6200
	88.900	29.370	23.020		30.162			3.5	3.3		99.6	125.0	15.24	4600	6100
42.875	82.931	25.400	19.050		23.812			3.5	0.8		77.2	100.0	12.20	4800	6300
	82.931	25.400	22.225		26.988			3.5	2.3		77.2	100.0	12.20	4800	6300
	83.058	25.400	19.050		23.812			3.5	3.3		77.2	100.0	12.20	4800	6300
44.450	104.775	36.512	28.575		36.512			3.5	3.3		141.0	195.0	23.78	3800	5100
	83.058	25.400	19.114		23.876			3.5	2.0		77.2	100.0	12.20	4800	6300
	88.900	29.370	23.020		30.162			3.6	3.2		99.6	125.0	15.24	4600	6100
	93.264	30.302	23.812		30.162			3.5	3.3		103.0	137.0	16.71	4200	5500
	95.250	28.575	22.225		30.958			3.5	0.8		99.7	120.0	14.63	3700	5100
45.000	80.000	26.000	22.000		24.000			2.3	1.3		61.2	79.0	9.63	4500	6100
45.230	79.985	20.638	15.080		19.842			2.0	1.3		62.0	78.5	9.57	4800	6400
45.242	73.431	19.812	15.748		19.558			3.5	0.8		55.6	78.1	9.52	5100	6700
	77.788	19.842	15.080		19.842			3.6	0.8		57.1	73.5	8.96	4900	6500
	77.788	19.842	16.667		21.430			3.6	0.8		57.1	73.5	8.96	4900	6500
45.618	82.931	25.400	22.225		26.988			3.5	2.3		77.2	100.0	12.20	4800	6300
45.987	74.976	18.000	14.000		18.000			2.3	1.5		52.6	74.6	9.10	5000	6600
46.038	79.375	17.462	13.495		17.462			2.8	1.5		47.1	59.1	7.21	4800	6400
50.000	82.000	21.500	17.000		21.500			3.0	0.5		71.7	97.9	11.94	4500	6000
50.800	104.775	36.512	28.575		36.512			3.5	3.3		141.0	195.0	23.78	3800	5100
	82.000	22.225	17.000		21.976			3.5	0.5		61.2	84.3	10.28	4500	6000
	82.550	22.225	16.510		21.590			3.5	1.3		61.2	84.3	10.28	4500	6000
	85.000	17.462	13.495		17.462			3.5	1.5		49.7	65.5	7.99	4400	5900



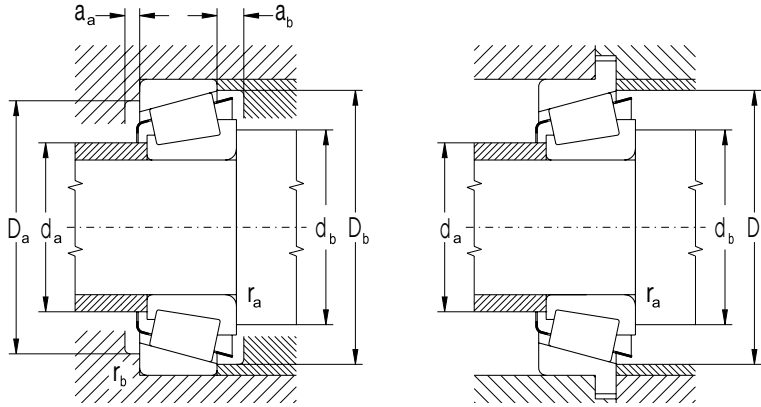
Bearing Designation	Abutment and Fillet Dimensions										Weight	Dimension Deviations						Factors			
	Cone/		$d_a$	$d_b$	$D_a$	$D_b$	$a_a$	$a_b$	$r_a$	$r_b$		~	$\Delta d_{mp}$		$\Delta D_{mp}$		$\Delta T_s$		e	Y	$Y_0$
	max	min	min	max	min	min	min	max	max	max			min	max	min	max	min				
Cup	mm										kg	$\mu m$									
<b>LM300849</b>	45.0	52.0	61.0		65.0	3.5	5.0	**	1.5	0.23	0	-13	0	-25	+203	0	0.35	1.72	1.20		
<b>/300811</b>																					
<b>18590/18520</b>	46.0	53.0	66.0		69.0	4.0	5.5	3.5	1.5	0.27	+13	0	+25	0	+203	0	0.35	1.71	1.20		
<b>LM501349</b>	46.5	53.0	67.0		70.0	3.5	5.5	3.5	0.8	0.32	+13	0	+25	0	+203	0	0.40	1.50			
<b>/501310</b>																		1.00			
<b>LM501349</b>	46.5	53.0	66.0		70.0	1.5	5.5	3.5	0.8	0.34	+13	0	+25	0	+203	0	0.40	1.50			
<b>/501314</b>																		1.00			
<b>24780/24720</b>	47.0	54.0	68.0		72.0	3.5	5.5	3.5	0.8	0.41	+13	0	+25	0	+203	0	0.39	1.53			
<b>3585/3525</b>	48.0	50.0	75.0		81.0	3.5	6.5	1.5	3.3	0.82	+13	0	+25	0	+203	0	0.31	1.96	0.77		
<b>HM803146</b>	53.0	60.0	74.0		85.0	4.0	7.5	3.5	3.3	0.89	+13	0	+25	0	+203	0	0.55	1.10			
<b>/803110</b>																		1.08			
<b>25577/25520</b>	49.0	55.0	74.0		77.0	4.5	5.5	3.5	0.8	0.58	+13	0	+25	0	+203	0	0.33	1.79			
<b>25577/25523</b>	51.0	58.0	72.0		77.0	1.0	5.5	3.5	2.3	0.58	+13	0	+25	0	+203	0	0.33	1.79	1.20		
<b>25577/25521</b>	51.0	58.0	72.0		77.0	1.0	5.5	3.5	2.3	0.58	+13	0	+25	0	+203	0	0.33	1.79			
<b>HM807040</b>	59.0	66.0	89.0		100.0	4.0	7.0	3.5	3.3	1.62	+13	0	+25	0	+203	0	0.49	1.23	0.70		
<b>/807010</b>																					
<b>2580/25522</b>	50.0	57.0	73.0		77.0	4.5	5.5	3.5	2.0	0.56	+13	0	+25	0	+203	0	0.33	1.79	0.90		
<b>HM803149</b>	53.4	62.0	74.0		85.0	7.5	4.0	3.6	3.2	0.84	+13	0	+25	0	+203	0	0.55	1.10			
<b>/803010</b>																		0.74			
<b>3782/3720</b>	52.0	58.0	82.0		88.0	3.5	7.0	3.5	3.3	0.95	+13	0	+25	0	+203	0	0.34	1.77			
<b>HM903249</b>	54.0	65.0	81.0		91.0	2.0	7.0	3.5	0.8	1.00	+13	0	+25	0	+203	0	0.74	0.81	0.99		
<b>/903210</b>																					
<b>U2497/U460L</b>																			0.74		
<b>17887/17831</b>	51.0	56.0	71.0		74.0	3.5	5.0	2.0	1.3	0.40	+13	0	+25	0	+203	0	0.37	1.60			
<b>LM102949</b>	50.0	56.0	68.0		70.0	3.0	4.5	3.5	0.8	0.31	+13	0	+25	0	+203	0	0.31	1.97	0.90		
<b>/102910</b>																					
<b>LM603049</b>	50.0	57.0	71.0		74.0	5.0	3.5	3.6	0.8	0.36	+13	0	+25	0	+203	0	0.43	1.41			
<b>/603011</b>																					
<b>LM603049</b>	50.0	57.0	71.0		74.0	5.0	2.0	3.6	0.8	0.37	+13	0	+25	0	+203	0	0.43	1.41			
<b>/603012</b>																					
<b>25590/25523</b>	51.0	58.0	72.0		77.0	1.0	5.5	3.5	2.3	0.58	+13	0	+25	0	+203	0	0.33	1.79			
<b>LM503349</b>	51.0	55.0	67.0		71.0	3.5	5.0	2.3	1.5	0.30	0	-13	0	-25	+203	0	0.40	1.49			
<b>/503310</b>																					
<b>18690/18620</b>	51.0	56.0	71.0		74.0	3.5	5.0	2.8	1.5	0.33	+13	0	+25	0	+203	0	0.37	1.60			
<b>JLM104948</b>	55.0	60.0	76.0		78.0	4.0	5.5	3.0	0.5	0.41	0	-12	0	-18	+203	0	0.31	1.97			
<b>/104910</b>																					
<b>HM807046</b>	63.0	70.0	89.0		100.0	4.0	7.0	3.5	3.3	1.49	+13	0	+25	0	+203	0	0.49	1.23			
<b>/807010</b>																					
<b>LM104949</b>	55.0	62.0	76.0		78.0	5.5	4.5	3.5	0.5	0.42	+13	0	+25	0	+203	0	0.31	1.97			
<b>/104910</b>																					
<b>LM104949</b>	55.0	62.0	75.0		78.0	4.5	5.5	3.5	1.3	0.42	+13	0	+25	0	+203	0	0.31	1.97			
<b>/104911</b>																					
<b>18790/18720</b>	56.0	62.0	77.0		80.0	3.5	5.0	3.5	1.5	0.36	+13	0	+25	0	+203	0	0.41	1.48			



**Single Row Tapered Roller Bearings in Inch Dimensions**  
**d = 50.800 to 92.075 mm**



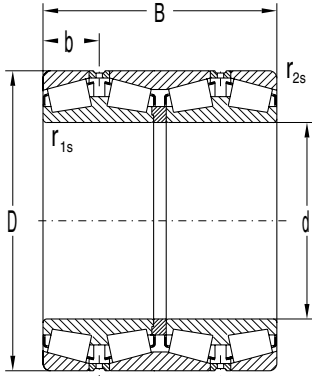
Dimensions											Basic Load Rating		Fatigue	Limiting Speed	
d	D	D <sub>1</sub>	B	C	C <sub>1</sub>	T	T <sub>1</sub>	r <sub>1s</sub>	r <sub>2s</sub>	s	C <sub>r</sub>	C <sub>or</sub>	load limit	for Lubrication with	
mm											kN		kN	min <sup>-1</sup>	
50.800	88.900	22.225	16.513	20.638	3.5	1.3	74.3	87.3	10.65	4400	5800				
	90.000	22.225	15.875	20.000	3.5	2.0	74.3	87.3	10.65	4400	5800				
	92.075	25.400	19.845	24.608	3.5	0.8	84.8	119.0	14.51	4200	5600				
	93.264	30.302	23.812	30.162	3.5	3.3	103.0	137.0	16.71	4200	5500				
52.388	92.075	25.400	19.845	24.608	3.5	0.8	84.8	119.0	14.51	4200	5600				
	93.264	30.302	23.812	30.162	2.3	3.3	95.8	120.0	14.63	4600	6200				
55.000	90.000	23.000	18.500	23.000	1.5	0.5	81.4	115.0	14.02	4200	5500				
57.150	104.775	29.317	24.605	30.162	2.3	3.3	109.0	144.0	17.56	3700	4900				
	96.838	21.946	15.875	21.000	2.3	0.8	80.4	101.0	12.32	3900	5200				
	96.838	21.946	20.274	25.400	2.3	2.3	80.4	101.0	12.32	3900	5200				
	96.838	21.946	15.875	21.000	3.5	0.8	80.4	101.0	12.32	3900	5200				
	96.838	21.946	20.274	25.400	3.5	2.3	80.4	101.0	12.32	3900	5200				
	96.838	21.946	15.875	21.000	5.0	0.8	80.4	101.0	12.32	3900	5200				
	96.838	21.946	20.274	25.400	5.0	2.3	80.4	101.0	12.32	3900	5200				
	96.838	21.946	20.274	25.400	0.8	0.8	80.4	101.0	12.32	3900	5200				
	98.425	21.946	17.826	21.000	2.4	0.8	80.4	101.0	12.32	3900	5200				
	98.425	21.946	17.826	21.000	3.5	0.8	80.4	101.0	12.32	3900	5200				
63.500	107.950	25.400	19.050	25.400	3.5	3.3	92.8	143.0	17.44	3400	4500				
	112.712	30.048	23.812	30.162	3.5	3.3	111.0	164.0	20.00	3400	4500				
66.675	110.000	21.996	18.824	22.000	0.8	1.3	86.4	116.0	14.15	3400	4500				
	112.712	30.048	23.812	30.162	3.5	3.3	111.0	164.0	20.00	3400	4500				
	112.712	30.048	23.812	30.162	5.5	3.3	111.0	164.0	20.00	3400	4500				
	122.238	38.354	29.718	38.100	3.5	3.3	191.0	249.0	30.37	3200	4300				
68.262	110.000	21.996	18.824	22.000	5.0	1.3	86.4	116.0	14.15	3400	4500				
69.850	117.475	30.162	23.812	30.162	3.5	3.3	118.0	179.0	21.83	3200	4200				
	120.000	30.162	23.444	29.794	3.5	0.8	118.0	179.0	21.83	3200	4200				
71.438	117.475	30.162	23.812	30.162	3.5	3.3	118.0	179.0	21.83	3200	4200				
73.025	112.712	25.400	19.050	25.400	3.5	3.3	97.0	155.0	18.90	3200	4300				
	117.475	30.162	23.812	30.162	3.5	3.3	118.0	179.0	21.83	3200	4200				
80.962	150.089	46.672	36.512	44.450	5.0	3.3	264.0	368.0	42.98	2500	3400				
82.550	125.412	25.400	19.845	25.400	3.5	1.5	101.0	162.0	19.53	2900	3800				
	133.350	33.338	26.195	33.338	3.5	3.3	154.0	245.0	29.20	2700	3700				
	139.992	36.098	28.575	36.512	3.5	3.3	175.0	262.0	30.94	2700	3600				
	146.050	41.275	31.750	41.275	3.5	3.3	208.0	301.0	35.26	2600	3400				
85.026	150.089	46.672	36.512	44.450	3.5	3.3	264.0	368.0	42.75	2500	3400				
89.974	146.975	40.000	32.500	40.000	7.0	3.5	206.0	310.0	35.93	2500	3300				
92.075	152.400	36.322	30.162	39.688	3.5	3.3	183.0	287.0	32.95	2400	3300				



Bearing Designation	Abutment and Fillet Dimensions										Weight	Dimension Deviations						Factors				
	Cone/		D <sub>a</sub>	D <sub>b</sub>	D <sub>b</sub>	a <sub>a</sub>	a <sub>b</sub>	r <sub>a</sub>	r <sub>b</sub>	r <sub>a</sub>		r <sub>b</sub>	~	Δdmp		ΔDmp		ΔTs		e	Y	Y <sub>0</sub>
	max	min												max	min	max	min	max	min			
Cup	mm										kg	μm										
368A/362A	56.0	62.0	81.0		84.0	5.0	5.5	3.5	1.3	0.50	+13	0	+25	0	+203	0	0.32	1.88	1.20			
368A/362X	56.0	62.0	81.0		84.0	5.0	5.5	3.5	2.0	0.51	+13	0	+25	0	+203	0	0.32	1.88				
28580/28521	57.0	63.0	83.0		87.0	3.5	5.0	3.5	0.8	0.69	+13	0	+25	0	+203	0	0.38	1.59	1.20			
3780/3720	58.0	64.0	82.0		88.0	3.5	7.0	3.5	3.3	0.84	+13	0	+25	0	+203	0	0.34	1.77				
28584/28521	58.0	65.0	83.0		87.0	3.5	5.0	3.5	0.8	0.66	+13	0	+25	0	+203	0	0.38	1.59	1.00			
3767/3720	59.0	63.0	82.0		88.0	3.5	7.0	2.3	3.3	0.81	+13	0	+25	0	+203	0	0.34	1.77				
JLM506849	61.0	63.0	82.0		86.0	3.5	5.0	1.5	0.5	0.55	0	-15	0	-18	+203	0	0.40	1.49	1.00			
/506810																						
462/453X	63.0	67.0	92.0		98.0	3.0	5.5	2.3	3.3	1.04	+13	0	+25	0	+203	0	0.34	1.79	0.77			
387/382A	62.0	66.0	89.0		92.0	5.5	6.0	2.3	0.8	0.58	+13	0	+25	0	+203	0	0.35	1.69				
387/382S	62.0	69.0	87.0		91.0	5.5	6.0	3.5	2.3	0.64	+13	0	+25	0	+203	0	0.35	1.69	1.08			
387A/382A	62.0	69.0	89.0		92.0	6.0	5.5	3.5	0.8	0.57	+13	0	+25	0	+203	0	0.35	1.69				
387A/382S	62.0	69.0	87.0		91.0	1.0	6.0	3.5	2.3	0.64	+13	0	+25	0	+203	0	0.35	1.69	1.20			
387AS/382A	62.0	72.0	89.0		92.0	5.5	6.0	5.0	0.8	0.56	+13	0	+25	0	+203	0	0.35	1.69				
387AS/382S	62.0	69.0	87.0		91.0	5.5	6.0	3.5	2.3	0.64	+13	0	+25	0	+203	0	0.35	1.69	0.70			
387S/382S	62.0	69.0	87.0		91.0	5.5	6.0	3.5	2.3	0.64	+13	0	+25	0	+203	0	0.35	1.69				
387/382A	62.0	66.0	89.0		92.0	6.0	5.0	2.4	0.8	0.61	+13	0	+25	0	+203	0	0.35	1.69	0.90			
387A/382	62.0	69.0	90.0		92.0	5.5	4.0	3.5	0.8	0.62	+13	0	+25	0	+203	0	0.35	1.69				
29585/29520	71.0	77.0	96.0		103.0	3.0	6.0	3.5	3.3	0.91	+13	0	+25	0	+203	0	0.46	1.31	0.74			
3982/3920	71.0	77.0	99.0		106.0	3.5	6.5	3.5	3.3	1.22	+13	0	+25	0	+203	0	0.40	1.49				
395A/394A	73.0	73.0	101.0		104.0	4.5	4.0	0.8	1.3	1.06	+13	0	+25	0	+203	0	0.40	1.49	0.99			
3984/3920	74.0	80.0	99.0		106.0	3.5	6.5	3.5	3.3	0.78	+13	0	+25	0	+203	0	0.40	1.49				
3994/3920	74.0	84.0	99.0		106.0	3.5	6.5	5.5	3.5	1.15	+13	0	+25	0	+203	0	0.40	1.49	0.74			
HM212049	82.0	75.0	108.0		116.0	9.0	6.5	3.5	3.3	1.84	+13	0	+25	0	+203	0	0.34	1.78				
/212011																			0.90			
399AS/394A	74.0	83.0	101.0		104.0	4.5	4.0	5.0	1.3	0.72	+13	0	+25	0	+203	0	0.40	1.49				
33275/33462	77.0	84.0	104.0		112.0	3.5	6.5	3.5	3.3	1.25	+13	0	+25	0	+203	0	0.44	1.38				
33275/33472	77.0	84.0	104.0		112.0	3.5	6.5	3.5	3.3	1.25	+13	0	+25	0	+203	0	0.44	1.38				
33281/33462	79.0	85.0	104.0		112.0	3.5	6.5	3.5	3.3	1.18	+13	0	+25	0	+203	0	0.44	1.38				
29685/29620	80.0	86.0	101.0		109.0	3.5	6.0	3.5	3.3	0.88	+13	0	+25	0	+203	0	0.49	1.23				
33287/33462	80.0	87.0	104.0		112.0	3.5	6.5	3.5	3.3	1.17	+13	0	+25	0	+203	0	0.44	1.38				
740/742	91.0	101.0	134.0		142.0	7.0	9.5	5.0	3.3	3.39	+25	0	+25	0	+203	0	0.33	1.84				
27687/27620	89.0	96.0	115.0		120.0	4.0	6.5	3.5	1.5	1.04	+25	0	+25	0	+203	0	0.42	1.44				
47686/47620	90.0	97.0	119.0		128.0	5.0	7.5	3.5	3.3	1.69	+25	0	+25	0	+203	0	0.40	1.48				
580/572	91.0	98.0	125.0		133.0	4.0	7.0	3.5	3.3	2.14	+25	0	+25	0	+203	0	0.40	1.49				
663/653	92.0	99.0	131.0		139.0	5.0	8.0	3.5	3.3	2.75	+25	0	+25	0	+203	0	0.41	1.47				
749/742	95.0	101.0	134.0		142.0	7.0	9.5	3.5	3.3	3.21	+25	0	+25	0	+203	0	0.33	1.84				
HM218248	99.0	112.0	133.0		141.0	5.5	9.0	7.0	3.5	2.36	0	-25	0	-25	+203	0	0.33	1.80				
/218210																						
598/592A	101.0	107.0	135.0		144.0	1.0	8.0	3.5	3.3	2.61	+25	0	+25	0	+203	0	0.44	1.36				



**Four - Row Tapered Roller Bearings**  
 **$d = 160$  to  $630$  mm**



Dimensions						Basic Load Rating		Fatigue load limit	Limiting Speed for Lubrication with		Bearing Designation
d	D	B	$r_s$	a	b	Dyn. $C_r$	Stat. $C_{or}$	$P_u$	Grease	Oil	
mm						kN		kN	min <sup>-1</sup>		
160	240	145	2.5	2.5	34.25	799	1724	170.77	710	940	<b>36032</b>
170	260	160	2.5	2.5	37.75	990	2140	207.43	630	840	<b>36034</b>
180	280	180	2.5	2.5	42.50	1147	2494	236.90	590	780	<b>36036</b>
190	290	180	2.5	2.5	42.50	1170	2597	243.55	540	720	<b>36038</b>
200	310	200	2.5	2.5	47.50	1415	3112	286.59	500	670	<b>36040</b>
220	340	218	3.0	3.0	51.75	1682	3766	337.22	420	560	<b>36044</b>
240	360	218	3.0	3.0	51.75	1704	3923	344.09	400	530	<b>36048</b>
260	400	250	4.0	4.0	59.75	2234	5082	433.18	330	450	<b>36052</b>
280	420	250	4.0	4.0	59.75	2267	5294	443.35	320	420	<b>36056</b>
300	460	290	4.0	4.0	69.25	2908	6755	551.92	290	380	<b>36060</b>
320	480	290	4.0	4.0	69.25	2958	7036	566.10	260	340	<b>36064</b>
340	520	325	5.0	5.0	77.50	3523	8529	671.50	240	320	<b>36068</b>
360	480	218	3.0	3.0	51.75	2170	5992	475.10	240	320	<b>36972</b>
	540	325	5.0	5.0	77.50	3583	8868	688.73	220	290	<b>36072</b>
380	560	325	5.0	5.0	77.50	3645	9202	705.41	200	260	<b>36076</b>
400	600	355	5.0	5.0	84.75	4338	10633	800.11	190	250	<b>36080</b>
420	620	355	5.0	5.0	84.75	4422	11052	821.91	180	240	<b>36084</b>
500	720	400	6.0	6.0	95.00	5387	14325	1015.50	140	190	<b>360/500</b>
525	780	450	6.0	6.0	106.50	6663	17558	1219.80	126	170	<b>360/525</b>
530	780	450	6.0	6.0	106.50	6663	17558	1218.40	120	160	<b>360/530</b>
630	920	515	7.5	7.5	125.00	8730	24230	1598.63	94	126	<b>360/630</b>

Weight	Factors			
	e	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>0</sub>
kg				
23.6	0.45	1.5	2.2	1.5
30.0	0.46	1.5	2.2	1.5
40.5	0.45	1.5	2.2	1.5
42.5	0.47	1.4	2.2	1.4
51.5	0.44	1.5	2.3	1.5
71.6	0.45	1.5	2.3	1.5
76.3	0.48	1.4	2.1	1.4
111.0	0.44	1.5	2.3	1.5
117.0	0.47	1.4	2.1	1.4
169.0	0.44	1.5	2.3	1.5
177.0	0.47	1.4	2.2	1.4
241.0	0.44	1.5	2.3	1.5
113.0	0.43	1.6	2.3	1.5
253.0	0.46	1.5	2.2	1.4
263.0	0.48	1.4	2.1	1.4
339.0	0.44	1.5	2.3	1.5
351.0	0.46	1.5	2.2	1.4
504.0	0.47	1.4	2.1	1.4
713.0	0.45	1.5	2.2	1.5
693.0	0.45	1.5	2.2	1.5
1090.0	0.44	1.5	2.3	1.5

