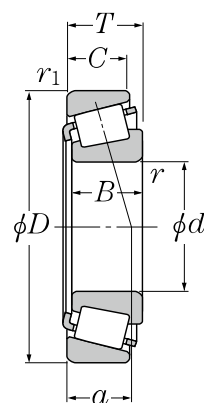


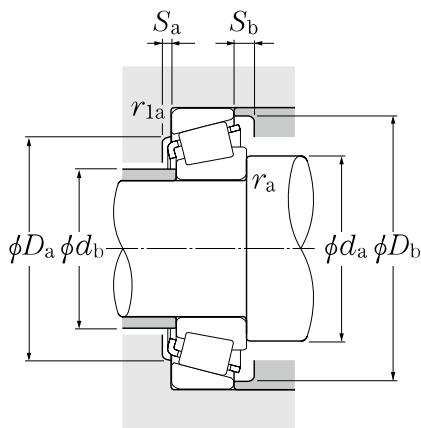
Metric series



d 45 ~ 55mm

Boundary dimensions							Basic load rating		Fatigue load limit kN C _u	Allowable speed min ⁻¹		Bearing number ²⁾
mm							dynamic	static		Grease lubrication	Oil lubrication	
d	D	T	B	C	r _s min ¹⁾	r _{ls} min ¹⁾	C _R	C _{0r}				
45	75	20	20	15.5	1	1	64.0	76.5	—	4 800	6 400	4T-32009X
	75	24	24	19	1	1	73.5	93.5	—	4 800	6 400	4T-33009
	80	26	26	20.5	1.5	1.5	94.0	115	—	4 700	6 200	4T-33109
	85	20.75	19	16	1.5	1.5	75.0	78.5	—	4 400	5 900	4T-30209
	85	24.75	23	19	1.5	1.5	91.0	100	—	4 400	5 900	4T-32209
	85	32	32	25	1.5	1.5	119	141	—	4 400	5 900	4T-33209
	95	29	26.5	20	2.5	2.5	99.5	108	—	4 100	5 500	4T-T7FC045
	100	27.25	25	22	2	1.5	123	126	—	4 000	5 300	4T-30309
	100	27.25	25	18	2	1.5	106	109	—	3 500	4 600	4T-30309D
	100	38.25	36	30	2	1.5	170	191	23.3	4 000	5 300	32309U
100	38.25	36	30	2.5	0.6	145	175	21.4	3 800	5 100	32309CU	
50	72	15	15	12	0.6	0.6	39.5	57.0	6.95	4 700	6 300	32910XU
	72	15	14	12	0.6	0.6	35.0	50.5	6.15	4 700	6 300	○ 32910
	80	20	20	15.5	1	1	69.5	88.0	—	4 400	5 800	4T-32010X
	80	24	24	19	1	1	77.5	103	—	4 400	5 800	4T-33010
	85	26	26	20	1.5	1.5	96.0	121	—	4 200	5 600	4T-33110
	90	21.75	20	17	1.5	1.5	85.5	93.0	—	4 000	5 300	4T-30210
	90	24.75	23	19	1.5	1.5	97.0	109	—	4 000	5 300	4T-32210
	90	32	32	24.5	1.5	1.5	127	158	—	4 000	5 300	4T-33210
	100	36	35	30	2.5	2.5	167	190	—	3 800	5 100	4T-T2ED050
	105	32	29	22	3	3	119	132	—	3 400	4 500	4T-T7FC050
	110	29.25	27	23	2.5	2	147	152	—	3 600	4 800	4T-30310
	110	29.25	27	19	2.5	2	126	130	—	3 200	4 200	4T-30310D
110	42.25	40	33	2.5	2	204	232	28.3	3 600	4 800	32310U	
110	42.25	40	33	2.5	2.5	178	220	—	3 500	4 600	4T-32310C	
55	80	17	17	14	1	1	49.5	73.5	8.95	4 300	5 700	32911XU
	90	23	23	17.5	1.5	1.5	89.0	118	—	4 000	5 400	4T-32011X
	90	27	27	21	1.5	1.5	102	138	—	4 000	5 400	4T-33011
	95	30	30	23	1.5	1.5	123	155	—	3 900	5 200	4T-33111
	100	22.75	21	18	2	1.5	103	111	—	3 600	4 900	4T-30211
	100	26.75	25	21	2	1.5	120	134	—	3 600	4 900	4T-32211
	100	35	35	27	2	1.5	153	188	—	3 600	4 900	4T-33211
	115	34	31	23.5	3	3	137	156	—	3 300	4 400	4T-T7FC055
	120	31.5	29	25	2.5	2	172	179	—	3 300	4 400	4T-30311
	120	31.5	29	21	2.5	2	146	154	—	2 900	3 800	4T-30311D
	120	45.5	43	35	2.5	2	238	275	33.5	3 300	4 400	32311U
	120	45.5	43	35	2.5	2.5	204	252	30.5	3 100	4 200	32311CU

1) Smallest allowable dimension for chamfer dimension r or r₁.
2) Bearings with a ○ mark do not incorporate the subunit dimensions.



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₂

Static equivalent radial load

$P_{0r} = 0.5 F_r + Y_0 F_a$

When $P_{0r} < F_r$ use $P_{0r} = F_r$.

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

ISO Dimension series	Installation-related dimensions									Load center mm	Constant	Axial load factors		Mass kg (approx.)
	d_a	d_b	D_a		mm D_b	S_a	S_b	r_{as}	r_{1as}					
	Min.	Max.	Max.	Min.	Min.	Min.	Max.	Max.						
3CC	50.5	51	69.5	64	72.5	4	4.5	1	1	16.5	0.39	1.53	0.84	0.341
2CE	50.5	51.5	69.5	64	71.5	4	5	1	1	16	0.29	2.04	1.12	0.405
3CE	53.5	51.5	71.5	67.5	76.5	4	5.5	1.5	1.5	19.5	0.38	1.57	0.86	0.544
3DB	53.5	53.5	76.5	72	80	3	4.5	1.5	1.5	18	0.40	1.48	0.81	0.493
3DC	53.5	53.5	76.5	71	81	3	5.5	1.5	1.5	20	0.40	1.48	0.81	0.604
3DE	53.5	52	76.5	69	82	5	7	1.5	1.5	22	0.39	1.56	0.86	0.795
7FC	57	53	83	69	91	3	9	2	2	33	0.87	0.69	0.38	0.907
2FB	55	58.5	91.5	84	93.5	3	5	2	1.5	21	0.35	1.74	0.96	1.01
7FB	55	56.5	91.5	76	96.5	3	9	2	1.5	32.5	0.83	0.73	0.40	0.966
2FD	55	56.5	91.5	80.5	93.5	3	8	2	1.5	25.5	0.35	1.74	0.96	1.45
5FD	55	55.5	91.5	73.5	95	4	9	2.5	0.6	30	0.55	1.10	0.60	1.47
2BC	54.5	55	67.5	63.5	69	3	3	0.6	0.6	13.5	0.34	1.76	0.97	0.192
	54.5	56.5	67.5	63.5	69.5	3	3	0.6	0.6	14.5	0.36	1.67	0.92	0.193
3CC	55.5	55.5	74.5	68.5	77.5	4	4.5	1	1	17.5	0.42	1.42	0.78	0.373
2CE	55.5	56	74.5	69	76.5	4	5	1	1	17.5	0.32	1.90	1.04	0.44
3CE	58.5	56.5	76.5	71	81.5	4	6	1.5	1.5	20.5	0.41	1.46	0.80	0.583
3DB	58.5	58	81.5	76.5	85.5	3	4.5	1.5	1.5	19.5	0.42	1.43	0.79	0.56
3DC	58.5	57.5	81.5	76	86	3	5.5	1.5	1.5	21	0.42	1.43	0.79	0.639
3DE	58.5	56.5	81.5	73.5	87	5	7.5	1.5	1.5	23.5	0.41	1.45	0.80	0.862
2ED	62	58	88	82	94.5	6	6	2	2	25.5	0.34	1.75	0.96	1.3
7FC	64	59	91	82	94.5	4	10	2.5	2.5	36.5	0.87	0.69	0.38	1.22
2FB	62	64.5	100	92.5	103	3	6	2	2	23	0.35	1.74	0.96	1.31
7FB	62	61.5	100	83.5	104.5	3	10	2	2	35	0.83	0.73	0.40	1.25
2FD	62	61.5	100	88	102.5	3	9	2	2	28.5	0.35	1.74	0.96	1.92
5FD	62	61.5	100	80.5	104	3	9	2	2.5	33.5	0.55	1.1	0.60	1.97
2BC	60.5	61	74.5	70.5	76.5	3	3	1	1	14.5	0.31	1.94	1.07	0.274
3CC	63.5	63	81.5	77.5	87	4	5.5	1.5	1.5	20	0.41	1.48	0.81	0.56
2CE	63.5	63	81.5	78	86	5	6	1.5	1.5	19.5	0.31	1.92	1.06	0.654
3CE	63.5	62.5	86.5	80	91	5	7	1.5	1.5	22	0.37	1.60	0.88	0.858
3DB	65	64	91.5	86	95.5	4	4.5	2	1.5	21	0.40	1.48	0.81	0.725
3DC	65	63	91.5	85	96	4	5.5	2	1.5	22.5	0.40	1.48	0.81	0.873
3DE	65	62.5	91.5	82	96.5	6	8	2	1.5	25.5	0.40	1.50	0.83	1.17
7FC	69	65.5	101	83.5	110	4	10.5	2.5	2.5	43.5	0.87	0.69	0.38	1.57
2FB	67	70.5	110	101	112	4	6.5	2	2	24.5	0.35	1.74	0.96	1.65
7FB	67	67	110	91.5	113.5	4	10.5	2	2	38	0.83	0.73	0.40	1.58
2FD	67	67.5	110	96.5	111.5	4	10.5	2	2	30.5	0.35	1.74	0.96	2.44
5FD	67	67	110	88.5	113.5	4	10	2	2.5	36.5	0.55	1.10	0.60	2.47