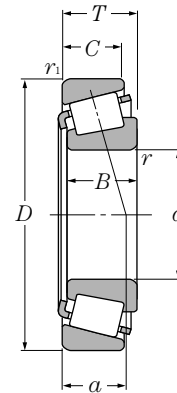


## Metric system sizes

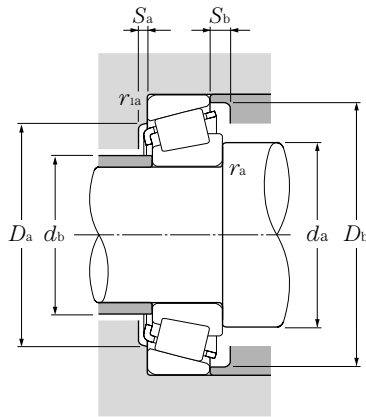


### d 15 ~ 30mm

d	Boundary dimensions						Basic load ratings				Limiting speeds		Bearing numbers
	D	T	mm			dynamic	static	dynamic	static	rpm			
			B	C	$r_{s\ min}^{\text{①}}$	$r_{ls\ min}^{\text{①}}$	kN	$C_{or}$	kgf	$C_{or}$	grease	oil	
<b>15</b>	42	14.25	13	11	1	1	23.2	20.8	2,370	2,120	9,900	13,000	4T-30302
<b>17</b>	40	13.25	12	11	1	1	20.5	20.3	2,090	2,070	9,900	13,000	4T-30203
	40	17.25	16	14	1	1	27.3	28.3	2,790	2,880	9,900	13,000	4T-32203
	40	17.25	16	14	1	1	26.2	28.2	2,670	2,870	9,900	13,000	4T-32203R <sup>®</sup>
	47	15.25	14	12	1	1	28.9	26.3	2,940	2,680	9,000	12,000	4T-30303
<b>20</b>	42	15	15	12	0.6	0.6	24.9	27.9	2,540	2,840	9,500	13,000	4T-32004X
	47	15.25	14	12	1	1	28.2	28.7	2,870	2,930	8,800	12,000	4T-30204
	47	19.25	18	15	1	1	36.5	39.5	3,700	4,000	8,800	12,000	4T-32204
	52	16.25	16	13	1.5	1.5	35.5	34.0	3,600	3,450	8,000	11,000	4T-30304A
	52	16.25	16	12	1.5	1.5	31.0	31.0	3,150	3,150	7,600	10,000	4T-30304CA
52	22.25	21	18	1.5	1.5	46.5	48.5	4,750	4,950	8,000	11,000	4T-32304	
<b>22</b>	44	15	15	11.5	0.6	0.6	27.0	31.5	2,760	3,250	8,900	12,000	4T-320/22X
<b>25</b>	47	15	15	11.5	0.6	0.6	27.8	33.5	2,830	3,450	7,900	11,000	4T-32005X
	47	17	17	14	0.6	0.6	32.5	40.5	3,300	4,150	8,000	11,000	4T-33005
	52	16.25	15	13	1	1	31.5	34.0	3,200	3,450	7,300	9,800	4T-30205
	52	19.25	18	16	1	1	42.0	47.0	4,300	4,800	7,300	9,800	4T-32205
	52	19.25	18	15	1	1	38.0	43.0	3,850	4,400	7,300	9,800	4T-32205R <sup>®</sup>
	52	19.25	18	15	1	1	38.0	46.5	3,900	4,750	7,100	9,400	4T-32205C
	52	19.25	18	15	1	1	34.5	42.0	3,500	4,250	7,100	9,400	4T-32205CR <sup>®</sup>
	52	22	22	18	1	1	47.5	57.5	4,850	5,850	7,300	9,800	4T-33205
	62	18.25	17	15	1.5	1.5	48.5	47.5	4,950	4,850	6,700	8,900	4T-30305
	62	18.25	17	14	1.5	1.5	41.5	41.5	4,250	4,250	6,400	8,500	4T-30305C
62	18.25	17	13	1.5	1.5	40.5	43.5	4,150	4,450	5,900	7,800	4T-30305D	
62	25.25	24	20	1.5	1.5	61.5	64.5	6,250	6,600	6,700	8,900	4T-32305	
<b>28</b>	52	16	16	12	1	1	33.0	40.5	3,400	4,150	7,300	9,700	4T-320/28X
	58	24	24	19	1	1	58.0	69.5	5,950	7,100	6,700	8,900	4T-332/28
<b>30</b>	55	17	17	13	1	1	37.5	46.0	3,800	4,700	6,900	9,200	4T-32006X
	55	20	20	16	1	1	42.5	54.0	4,300	5,500	6,900	9,200	4T-33006
	62	17.25	16	14	1	1	43.5	48.0	4,450	4,900	6,300	8,400	4T-30206
	62	21.25	20	17	1	1	54.5	64.0	5,600	6,550	6,300	8,400	4T-32206
	62	21.25	20	17	1	1	50.0	60.0	5,100	6,100	6,100	8,100	4T-32206C
	62	25	25	19.5	1	1	65.0	77.0	6,600	7,850	6,300	8,400	4T-33206
72	20.75	19	16	1.5	1.5	60.0	61.0	6,100	6,200	5,700	7,600	4T-30306	

① Minimal allowable dimension for chamfer dimension  $r$  or  $r_1$ .

② This bearing does not incorporate the subunit dimensions.



### Equivalent bearing load

**dynamic**  
 $P_r = XF_r + YF_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	$Y_2$

**static**

$$P_{or} = 0.5F_r + Y_oF_a$$

When  $P_{or} < F_r$  use  $P_{or} = F_r$

For values of  $e$ ,  $Y_2$  and  $Y_o$  see the table below.

Dimensions series to ISO	Abutment and fillet dimensions										Load center mm	Constant $e$	Axial load factors		Mass kg (approx.)		
	mm												$a$	$e$		$Y_2$	$Y_o$
	$d_a$ min	$d_b$ max	$D_a$ max	$D_b$ min	$S_a$ min	$S_b$ min	$r_{as}$ max	$r_{1as}$ max									
2FB	20.5	22	36.5	35	38	2	3	1	1	9.5	0.29	2.11	1.16	0.098			
2DB	22.5	23	34.5	33	37	2	2	1	1	9.5	0.35	1.74	0.96	0.08			
2DD	22.5	23	34.5	33	37	2	3	1	1	11.5	0.31	1.92	1.06	0.102			
	22.5	22	34.5	33	36.5	2	3	1	1	11	0.35	1.74	0.96	0.104			
2FB	22.5	24	41.5	40	42	3	3.5	1	1	10.5	0.29	2.11	1.16	0.134			
3CC	24.5	25	37.5	36	39	3	3	0.6	0.6	10.5	0.37	1.60	0.88	0.097			
2DB	25.5	27	41.5	40	44	2	3	1	1	11.5	0.35	1.74	0.96	0.127			
2DD	25.5	26	41.5	39	43	2	4	1	1	12.5	0.33	1.81	1.00	0.16			
2FB	28.5	28	43.5	42.5	47.5	3	3	1.5	1.5	10.5	0.30	2.00	1.10	0.176			
	28.5	27.5	43.5	39.5	48	3	4	1.5	1.5	13.5	0.55	1.10	0.60	0.17			
2FD	28.5	27	43.5	43	47	3	4	1.5	1.5	14	0.30	2.00	1.10	0.245			
3CC	26.5	27	39.5	38	41	3	3.5	0.6	0.6	11	0.40	1.51	0.83	0.106			
4CC	29.5	30	42.5	40	44	3	3.5	0.6	0.6	12	0.43	1.39	0.77	0.114			
2CE	29.5	29	42.5	40	43.5	3	3	0.6	0.6	11	0.29	2.07	1.14	0.13			
3CC	30.5	31	46.5	44	48	2	3	1	1	12.5	0.37	1.60	0.88	0.154			
2CD	30.5	31	46.5	43	48	2	4	1	1	14	0.36	1.67	0.92	0.187			
	30.5	31	46.5	43	48	2	4	1	1	13.5	0.37	1.60	0.88	0.181			
5CD	30.5	30	46.5	42	49	2	4	1	1	16	0.58	1.03	0.57	0.19			
	30.5	30	46.5	42	49	2	4	1	1	16	0.55	1.10	0.60	0.19			
2DE	30.5	30	46.5	43	49	4	4	1	1	14	0.35	1.71	0.94	0.217			
2FB	33.5	34	53.5	52	57	3	3	1.5	1.5	13	0.30	2.00	1.10	0.272			
	33.5	34	53.5	48	58	3	4	1.5	1.5	16	0.55	1.10	0.60	0.264			
7FB	33.5	34	53.5	45.5	58.5	3	5	1.5	1.5	20	0.83	0.73	0.40	0.284			
2FD	33.5	32	53.5	52	57	3	5	1.5	1.5	16	0.30	2.00	1.10	0.381			
4CC	33.5	33	46.5	45	49	3	4	1	1	12.5	0.43	1.39	0.77	0.146			
2DE	33.5	34	52.5	49	55	5	5	1	1	15.5	0.34	1.77	0.97	0.293			
4CC	35.5	35	49.5	48	52	3	4	1	1	13.5	0.43	1.39	0.77	0.166			
2CE	35.5	35.5	49.5	46.5	52	3	4	1	1	13	0.29	2.06	1.13	0.201			
3DB	35.5	37	56.5	53	57	2	3	1	1	13.5	0.37	1.60	0.88	0.241			
3DC	35.5	37	56.5	52	58	2.5	4	1	1	15.5	0.37	1.60	0.88	0.301			
5DC	35.5	35	56.5	49	59.5	2	5	1	1	18.5	0.56	1.07	0.59	0.294			
2DE	35.5	36	56.5	53	59	5	5.5	1	1	16	0.34	1.76	0.97	0.344			
2FB	38.5	40	63.5	62	66	3	4.5	1.5	1.5	15	0.31	1.90	1.05	0.408			