



Four-row tapered roller bearings

1. Features

- 1) This type of bearing includes two double-row inner rings with rollers, one double-row outer ring, two single-row outer rings, and two outer ring spacers (see **Fig. 1** TYPE B). There is also a type with an inner ring spacer (see **Fig. 1** TYPE A). These bearings are manufactured so that the internal clearance values are fixed. Due to this, only parts with identical manufacturing numbers can be used, and they must be assembled according to their code numbers.
- 2) These bearings are mainly used in the roll necks of steel rolling mills and designed so that the load rating is maximized in the allowable space of the roll neck part.
- 3) Loose fitting is used to make the assembly and removal of the bearings easy. Carburizing (case hardened) steel is used to prevent inner ring cracks due to creeping and to improve shock resistance. There is also a bearing design with a helical groove in the inner ring bore to prevent wear.
- 4) The cage type includes a pressed steel cage and a pin type cage (that uses a hollow roller as shown in **Fig. 2**). The pin type cage maximizes the number of rollers in the bearing to provide increased load capacity.

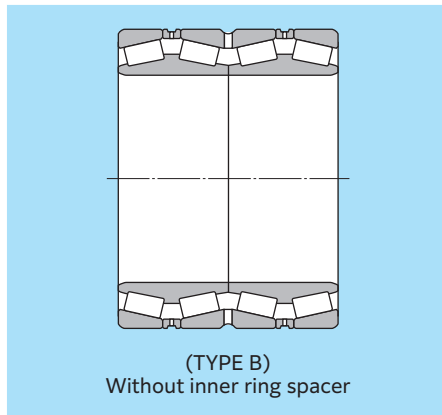
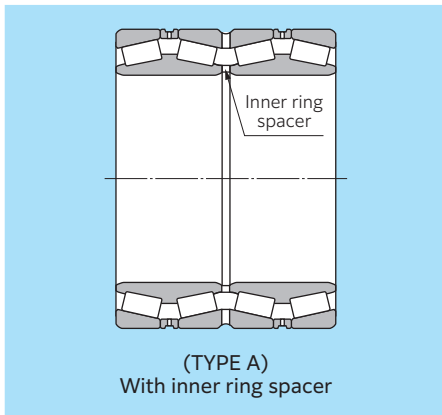


Fig. 1

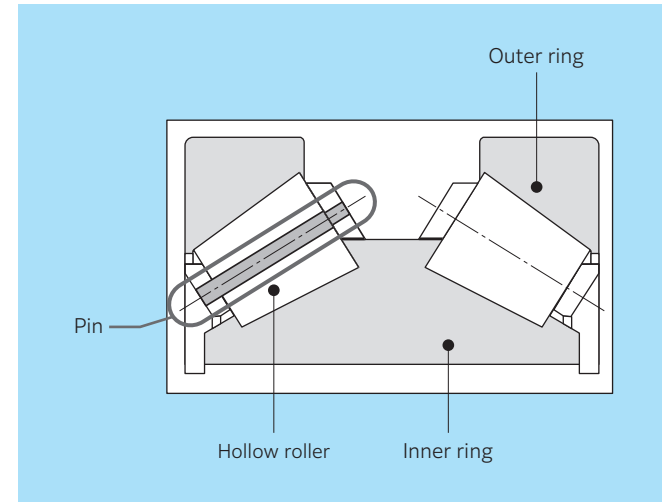


Fig. 2 Pin type cage

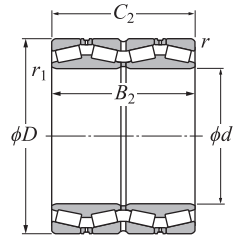
Inch series tapered roller bearings (four-row) index

Series number	Bearing number CONE / CUP	Page of bearing dimension table	Series number	Bearing number CONE / CUP	Page of bearing dimension table
8500	T-8576D / 8520 / 8520D	C-42	M257200	M257248D / M257210 / M257210D	C-46
9900	9974D / 9920 / 9920D	C-42	LM258600	LM258649D / LM258610 / LM258610D	C-46
46700	T-46791D / 46720 / 46721D	C-40	HM259000	T-HM259049D / HM259010 / HM259010D	C-46
48200	T-48290D / 48220 / 48220D	C-40	HM261000	HM261049D / HM261010 / HM261010DA	C-48
48300	T-48393D / 48320 / 48320D	C-40	M262400	M262449D / M262410 / M262410D	C-48
48600	T-48680D / 48620 / 48620D	C-40	HM262700	T-HM262749D / HM262710 / HM262710DG2	C-48
67700	67791D / 67720 / 67721D	C-40	LM263100	LM263149D / LM263110 / LM263110D	C-48
67800	T-67885D / 67820 / 67820D	C-42	M263300	M263349D / M263310 / M263310D	C-48
67900	T-67986D / 67920 / 67921D	C-42	HM265000	HM265049D / HM265010 / HM265010DG2	C-48
81000	81576D / 81962 / 81963D	C-40	HM266400	T-HM266449D / HM266410 / HM266410DG2	C-50
82600	82681D / 82620 / 82620D	C-40	M268700	T-M268749D / M268710 / M268710DG2	C-50
126000	EE126096D / 126150 / 126151D	C-44	M270700	M270749D / M270710 / M270710DG2	C-50
127000	EE127097D / 127137 / 127137D	C-42	LM272200	LM272249D / LM272210 / LM272210DG2	C-52
132000	EE132082D / 132125 / 132126D	C-42	M274100	M274149D / M274110 / M274110DG2	C-52
134000	EE134102D / 134143 / 134144D	C-44	LM274400	LM274449D / LM274410 / LM274410D	C-52
135000	EE135111D / 135155 / 135156D	C-44	275000	EE275106D / 275155 / 275156D	C-44
L163100	T-L163149D / L163110 / L163110D	C-48	275000	EE275109D / 275160 / 275161D	C-44
170000	EE171000D / 171450 / 171451D	C-44	M275300	M275349D / M275310 / M275310DG2	C-52
180000	EE181455D / 182350 / 182351D	C-48	M276400	M276449D / M276410 / M276410DG2	C-52
220000	EE221027D / 221575 / 221576D	C-44	M278700	M278749D / M278710 / M278710DAG2	C-54
M224700	T-M224749D / M224710 / M224710D	C-40	280000	EE280703D / 281200 / 281201D	C-40
M231600	T-M231649D / M231610 / M231610D	C-40	M280000	M280049D / M280010 / M280010DG2	C-54
234000	T-EE234161D / 234215 / 234216D	C-50	M280300	M280349D / M280310 / M280310DG2	C-54
M238800	T-M238849D / M238810 / M238810D	C-42	L281100	L281149D / L281110 / L281110DG2	C-54
M240600	M240648D / M240611 / M240611D	C-42	M283400	M283449D / M283410 / M283410DG2	C-54
M241500	T-M241538D / M241510 / M241510D	C-42	LM283600	LM283649D / LM283610 / LM283610DG2	C-54
244000	EE244181D / 244235 / 244236D	C-52	M284100	M284148D / M284111 / M284210DG2	C-56
M244200	T-M244249D / M244210 / M244210D	C-42	M284200	M284249D / M284210 / M284210DG2	C-56
LM247700	LM247748D / LM247710 / LM247710DA	C-44	M285800	M285848D / M285810 / M285810DG2	C-56
M249700	T-M249748D / M249710 / M249710D	C-44	LM286200	LM286249D / LM286210 / LM286210DG2	C-56
HM252300	T-HM252349D / HM252310 / HM252310D	C-44	LM287600	LM287649D / LM287610 / LM287610DG2	C-56
M252300	T-M252349D / M252310 / M252310D	C-44	290000	EE291202D / 291750 / 291751D	C-46
M255400	M255449D / M255410 / M255410DA	C-46	329000	EE329119D / 329172 / 329173D	C-46
HM256800	T-HM256849D / HM256810 / HM256810DG2	C-46	LM377400	LM377449D / LM377410 / LM377410DG2	C-54
M257100	M257149D / M257110 / M257110D	C-46	LM451300	T-LM451349D / LM451310 / LM451310D	C-44

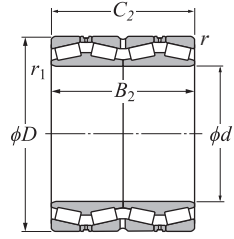
Inch series tapered roller bearings (four-row) index

Series number	Bearing number CONE / CUP	Page of bearing dimension table	Series number	Bearing number CONE / CUP	Page of bearing dimension table
526000	EE526131D / 526190 / 526191D	C-48	931000	EE931170D / 931250 / 931251XDG2	C-50
531000	EE531201D / 531300 / 531301XDG2	C-52	970000	EE971355D / 972100 / 972103D	C-48
547000	EE547341D / 547480 / 547481DG2	C-56			
640000	T-EE640193D / 640260 / 640261DG2	C-52			
649000	EE649241D / 649310 / 649311DG2	C-54			
LM654600	T-LM654644D / LM654610 / LM654610D	C-44			
LM654600	T-LM654648D / LM654610 / LM654610D	C-44			
655000	EE655271D / 655345 / 655346DG2	C-54			
LM665900	LM665949D / LM665910 / LM665910D	C-50			
M667900	M667947D / M667911 / M667911DG2	C-50			
700000	EE700090D / 700167 / 700168D	C-42			
722000	EE722111D / 722185 / 722186D	C-44			
724000	EE724121D / 724195 / 724196D	C-46			
736000	EE736173D / 736238 / 736239D	C-50			
737000	EE737179D / 737260 / 737260D	C-52			
LM742700	T-LM742749D / LM742714 / LM742714D	C-42			
755000	EE755280D / 755360 / 755361DG2	C-54			
M757400	M757448D / M757410 / M757410D	C-46			
M757400	M757449D / M757410 / M757410D	C-46			
LM761600	LM761648D / LM761610 / LM761610D	C-48			
LM761600	LM761649D / LM761610 / LM761610D	C-48			
LM763400	LM763449D / LM763410 / LM763410D	C-48			
LM765100	LM765149D / LM765110 / LM765110D	C-48			
LM767700	LM767745D / LM767710 / LM767710D	C-50			
LM767700	LM767749D / LM767710 / LM767710D	C-50			
LM769300	LM769349D / LM769310 / LM769310D	C-50			
L770800	L770849D / L770810 / L770810DG2	C-52			
LM772700	LM772749D / LM772710 / LM772710DA	C-52			
LM778500	LM778549D / LM778510 / LM778510DG2	C-54			
822000	EE822101D / 822175 / 822176D	C-44			
833000	EE833161D / 833232 / 833233D	C-50			
843000	EE843221D / 843290 / 843291D	C-54			
LM869400	T-LM869449D / LM869410 / LM869410DG2	C-50			
910000	EE911603D / 912400 / 912401D	C-50			
920000	EE921150D / 921875 / 921876D	C-46			

● Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



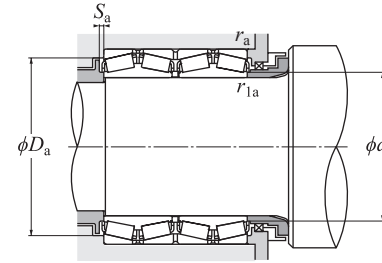
(TYPE B)
Without inner ring spacer

d 120–177.800 mm

d	Boundary dimensions				Basic load rating				a) b) c)	Bearing number ^{a) to d)}
	mm				dynamic		static			
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{1s min} ¹⁾	C _r	C _{0r}	kN	(TYPE A) With inner ring spacer	
120	170	124	124	2	2.5	430	1 020	*	E-625924	
	180	100	100	2	2.5	435	745	*	E-623024	
	200	132	132	2	2.5	710	1 220	*	E-623124	
	210	174	174	2.5	2.5	950	1 710	*	E-CRO-2418	
120.650	174.625	141.288	139.703	1.5	0.8	670	1 490	◎ *	T-E-M224749D/M224710/M224710D	
127.000	182.562	158.750	158.750	3.3	1.5	730	1 730	◎ *	T-E-48290D/48220/48220D	
130	184	134	134	2	2.5	535	1 190	*	E-625926	
135	180	160	160	2	1	555	1 360	*	E-CRO-2701	
136.525	190.500	161.925	161.925	3.3	1.5	770	1 900	◎ *	T-E-48393D/48320/48320D	
139.700	200.025	157.165	160.340	3.3	0.8	780	1 950	◎ *	T-E-48680D/48620/48620D	
140	198	144	144	2	2.5	640	1 460	*	E-625928	
	210	114	114	2	2.5	570	1 070	*	E-623028	
	210	115	115	2	2.5	570	1 070	*	E-CRO-2817	
146.050	244.475	192.088	187.325	3.3	1.5	1 060	1 980	◎ *	E-81576D/81962/81963D	
150	212	155	155	2.5	3	735	1 700	*	E-625930	
152.400	222.250	174.625	174.625	1.5	1.5	1 030	2 350	◎ *	T-E-M231649D/M231610/M231610D	
160	226	165	165	2.5	3	855	2 030	*	E-625932	
	265	173	173	2.5	2.5	1 220	2 270	*	E-CRO-3209	
165.100	225.425	165.100	168.275	3.3	0.8	830	2 220	◎ *	T-E-46791D/46720/46721D	
170	240	175	175	2.5	3	930	2 200	*	E-625934	
	260	144	144	2.5	3	930	1 730	*	E-623034	
	280	185	185	2.5	3	1 380	2 540	*	E-623134	
177.800	247.650	192.088	192.088	3.3	1.5	1 110	2 760	◎ *	E-67791D/67720/67721D	
	279.400	234.950	234.947	3.3	1.5	1 570	3 400	◎ *	E-82681D/82620/82620D	
	304.800	238.227	233.365	3.3	3.3	1 750	3 100	◎ *	E-EE280703D/281200/281201D	

1) Smallest allowable dimension for chamfer dimension r or r₁.

● Four-Row Tapered Roller Bearings



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	Y ₁	0.67	Y ₂

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	mm						e	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{1as} Max.					(approx.)
E-CRO-2451	135	151	5	2	2	0.33	2.03	3.02	1.98	8.97
	137	162.5	3.8	2	2	0.37	1.80	2.69	1.76	8.87
	143.6	176	4.1	2	2	0.37	1.80	2.69	1.76	16.7
	143	178	4.5	2	2	0.40	1.68	2.50	1.64	22.2
	129	162	3	1.5	0.8	0.33	2.03	3.02	1.98	11.5
	137	168	4.5	3.3	1.5	0.31	2.21	3.29	2.16	14.3
	144.3	164	5	2	2	0.33	2.03	3.02	1.98	11.3
	144.7	161.5	2	2	1	0.33	2.03	3.02	1.98	13.5
	144	177	4	3.3	1.5	0.32	2.10	3.13	2.06	14.8
	150	185	3	3.3	0.8	0.34	2.01	2.99	1.96	17.3
	155.8	178	5	2	2	0.33	2.03	3.02	1.98	14
	160.7	187	3.5	2	2	0.37	1.84	2.74	1.80	13.8
	159.1	187.5	3.4	2	2	0.37	1.84	2.74	1.80	13.9
	163	225	6.5	3.3	1.5	0.35	1.92	2.86	1.88	36.8
	167.5	190	5.5	2	2.5	0.33	2.03	3.02	1.98	16.9
	164.5	207	4	1.5	1.5	0.33	2.03	3.02	1.98	24.7
	177.5	202.5	5.5	2	2.5	0.33	2.03	3.02	1.98	20.2
E-CRO-3210	190	231	4.5	2	2	0.33	2.03	3.02	1.98	37
	175	209	3	3.3	0.8	0.38	1.76	2.62	1.72	20.7
	187.5	213	5.5	2	2.5	0.33	2.03	3.02	1.98	24.4
	194.8	232	3.8	2	2.5	0.37	1.80	2.69	1.76	27.5
	196.4	254	6.4	2	2.5	0.37	1.80	2.69	1.76	45.2
E-CRO-3664	192.2	217.5	5	3.3	1.5	0.44	1.54	2.29	1.50	29.4
	195	251	5	3.3	1.5	0.53	1.28	1.91	1.25	55.3
E-CRO-3663	206.2	274.5	7	3.3	3.3	0.36	1.87	2.79	1.83	69.9

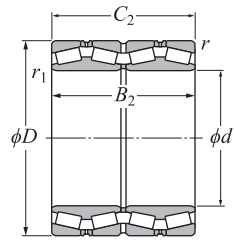
a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "*", please consult NTN Engineering.

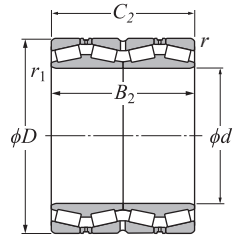
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

● Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



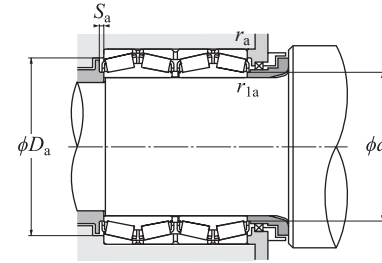
(TYPE B)
Without inner ring spacer

d 180–241.478 mm

d	Boundary dimensions				Basic load rating				a) b) c)	Bearing number ^{a) to d)}
	D	B ₂	C ₂	r _{s min} ¹⁾ r _{ls min} ¹⁾	dynamic kN	static kN	C _r	C _{0r}		
180	254	185	185	2.5 3	1 010	2 390			*	T-E-625936
187.325	269.875	211.138	211.138	3.3 1.5	1 490	3 500			◎ *	T-E-M238849D/M238810/M238810D
190	268	196	196	2.5 3	1 170	2 850			*	E-625938
	270	190	190	2.5 0.6	1 350	3 050			*	E-CRO-3813
190.000	292.100	225.425	225.425	3.3 1.5	1 740	4 150			◎ *	T-E-M241538D/M241510/M241510D
190.500	266.700	187.325	188.912	3.3 1.5	1 160	2 990			◎ *	T-E-67885D/67820/67820D
198.438	284.162	225.425	225.425	3.3 1.5	1 690	4 000			◎	E-M240648D/M240611/M240611D
200	282	206	206	2.5 3	1 330	3 300				E-625940
	290	160	160	2.5 2.5	1 060	2 210				E-CRO-4013
203.200	317.500	215.900	209.550	3.3 3.3	1 400	2 820			◎	E-EE132082D/132125/132126D
206.375	282.575	190.500	190.500	3.3 0.8	1 180	3 150			◎	T-E-67986D/67920/67921D
215.900	288.925	177.800	177.800	3.3 0.8	1 240	3 250			◎	T-E-LM742749D/LM742714/LM742714D
216.103	330.200	263.525	269.875	3.3 1.5	2 220	5 150			◎	E-9974D/9920/9920D
220	300	230	230	2.5 2.5	1 500	3 650				E-CRO-4412
	310	226	226	3 4	1 530	3 800				E-625944
	320	200	200	3 1	1 540	3 400				E-CRO-4411
	340	190	190	3 4	1 670	3 300				E-623044
220.662	314.325	239.712	239.712	3.3 1.5	2 040	4 900			◎	T-E-M244249D/M244210/M244210D
228.600	364.000	296.875	296.875	3.3 3.3	2 630	5 550				E-CRO-4606
	425.450	349.250	361.950	6.4 3.5	3 850	8 250			◎	E-EE700090D/700167/700168D
234.950	327.025	196.850	196.850	3.3 1.5	1 550	3 800			◎	T-E-8576D/8520/8520D
240	338	248	248	3 4	2 080	4 950				E-625948A
241.478	350.838	228.600	228.600	3.3 1.5	1 790	4 000			◎	E-EE127097D/127137/127137D

1) Smallest allowable dimension for chamfer dimension r or r₁.

● Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant e	Axial load factors			Mass (approx.) kg
	d _a	D _a	S _a Min.	r _{as} Max.	r _{las} Max.		Y ₁	Y ₂	Y ₀	
(TYPE B) Without inner ring spacer										
	200.5	227	5.5	2	2.5	0.33	2.03	3.02	1.98	28.9
	200	254	4	3.3	1.5	0.33	2.03	3.02	1.98	41.8
	211	238	6	2	2.5	0.33	2.03	3.02	1.98	34.7
	207.2	248.5	2	2	0.6	0.40	1.68	2.50	1.64	34.5
	222	271	5	3.3	1.5	0.33	2.03	3.02	1.98	59.6
E-CRO-3814	208	234	3	3.3	1.5	0.48	1.41	2.11	1.38	33.6
	212.1	263.9	5.5	3.3	1.5	0.33	2.03	3.02	1.98	46
	219.5	260.5	6	2	2.5	0.33	2.03	3.02	1.98	40.5
	224	267.5	5	2	2	0.37	1.80	2.69	1.76	35.1
	224	293.9	9.5	3.3	3.3	0.31	2.15	3.20	2.10	62.5
	223	260	5	3.3	0.8	0.51	1.33	1.97	1.30	35.4
	229.4	267	5	3.3	0.8	0.48	1.40	2.09	1.37	34.3
	235	300	6	3.3	1.5	0.55	1.23	1.82	1.20	82.1
	236.5	277.5	6.5	2	2	0.43	1.59	2.36	1.55	42.1
	242	284.5	6	2.5	3	0.33	2.03	3.02	1.98	53.5
	245	297	6.5	2.5	1	0.35	1.95	2.90	1.91	53
	250.5	315	5.5	2.5	3	0.37	1.80	2.69	1.76	63.2
E-CRO-4442	239.5	288.5	4	3.3	1.5	0.33	2.03	3.02	1.98	60.2
	262	334.5	6.5	3.3	3.3	0.32	2.12	3.15	2.07	117.9
	259	381	3	6.4	3.5	0.33	2.03	3.02	1.98	232
E-CRO-4704	256	301	5	3.3	1.5	0.41	1.66	2.47	1.62	53.6
E-CRO-4825	260.5	312	6	2.5	3	0.33	2.03	3.02	1.98	70
	258	325	6.5	3.3	1.5	0.35	1.91	2.85	1.87	76.4

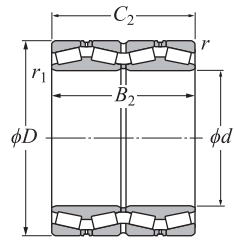
a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "*", please consult NTN Engineering.

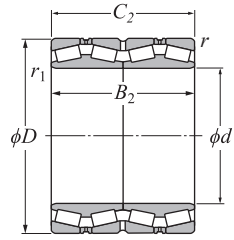
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

● Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



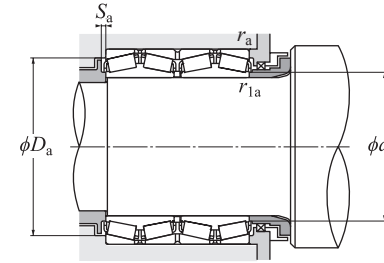
(TYPE B)
Without inner ring spacer

d 244.475–285.750 mm

d	Boundary dimensions				Basic load rating				Bearing number ^{a) to d)}	
	mm				dynamic		static			
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{1s min} ¹⁾	C _r	C _{0r}	a) b) c)	(TYPE A) With inner ring spacer	
244.475	327.025	193.675	193.675	3.3	1.5	1 580	4 100	⊙	E-LM247748D/LM247710/LM247710DA	
	381.000	304.800	304.800	4.8	3.3	2 470	5 750	⊙	E-EE126096D/126150/126151D	
245	380	255.5	254	6.4	1.5	2 280	4 750		E-CRO-4901	
254.000	358.775	269.875	269.875	3.3	3.3	2 650	6 550	⊙	T-E-M249748D/M249710/M249710D	
	368.300	204.622	204.470	3.3	1.5	1 500	3 250	⊙	E-EE171000D/171450/171451D	
	444.500	279.400	279.400	6.4	3.3	3 200	5 900	⊙	E-EE822101D/822175/822176D	
260	360	272	272	2.5	1	2 300	5 750		E-CRO-5218	
	368	268	268	4	5	2 210	5 700		E-625952	
	400	220	220	4	5	2 180	4 400		E-623052	
	400	255	255	7.5	4	2 450	5 300		E-CRO-5215	
260.350	365.125	228.600	228.600	6.4	3.3	1 940	4 550	⊙	E-EE134102D/134143/134144D	
	400.050	255.588	253.995	6.4	1.5	2 320	4 950	⊙	E-EE221027D/221575/221576D	
	422.275	314.325	317.500	3.3	6.4	3 800	7 100	⊙	T-E-HM252349D/HM252310/HM252310D	
266.700	355.600	230.188	228.600	3.3	1.5	2 040	5 350	⊙	T-E-LM451349D/LM451310/LM451310D	
	355.600	230.188	228.600	3.3	1.5	1 580	4 350		E-CRO-5305	
	393.700	269.878	269.878	6.4	3.3	2 340	6 000	⊙	E-EE275106D/275155/275156D	
269.875	381.000	282.575	282.575	3.3	3.3	2 890	6 850	⊙	T-E-M252349D/M252310/M252310D	
270	410	222	222	4	4	2 120	4 550		E-CRO-5403	
276.225	406.400	268.290	260.355	6.4	1.5	2 340	6 000	⊙	E-EE275109D/275160/275161D	
279.400	381.000	269.875	269.875	3.3	1.5	2 490	6 450		E-CRO-5628	
	393.700	269.875	269.875	6.4	1.5	2 150	5 350	⊙	E-EE135111D/135155/135156D	
	469.900	346.075	349.250	3.3	6.4	3 850	8 700	⊙	E-EE722111D/722185/722186D	
279.578	380.898	244.475	244.475	3.3	1.5	2 160	6 200	⊙	T-E-LM654644D/LM654610/LM654610D	
280	380	290	290	3.1	1.7	2 740	7 250		E-CRO-5650	
	395	288	288	4	5	2 840	7 100		E-625956	
285.750	380.898	244.475	244.475	3.3	1.5	2 160	6 200	⊙	T-E-LM654648D/LM654610/LM654610D	

1) Smallest allowable dimension for chamfer dimension *r* or *r*₁.

● Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of *e*, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	mm									
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{1as} Max.	<i>e</i>	Y ₁	Y ₂	Y ₀	(approx.)
E-CRO-4905	265	306	5	3.3	1.5	0.32	2.09	3.11	2.04	46.1
	269	343	6.5	4.8	3.3	0.52	1.31	1.95	1.28	132
	275.5	349	6.5	6.4	1.5	0.37	1.80	2.69	1.76	106.7
	272	335	5	3.3	3.3	0.33	2.03	3.02	1.98	85.6
	269	340	6	3.3	1.5	0.36	1.85	2.75	1.81	71.8
	281.9	404.9	8	6.4	3.3	0.34	1.98	2.94	1.93	185
	279	335	6.5	2.5	1	0.41	1.66	2.47	1.62	74.2
	290	338.5	6	3	3	0.33	2.03	3.02	1.98	90.3
	292	370	6.5	3	3	0.37	1.80	2.69	1.76	98.9
	293.5	360.5	8	6	3	0.39	1.71	2.54	1.67	106
	280	339	6.5	6.4	3.3	0.37	1.80	2.69	1.76	76.5
	292	366	8	6.4	1.5	0.39	1.71	2.54	1.67	117
	290	356	5.5	3.3	6.4	0.33	2.03	3.02	1.98	180
E-CRO-5307	285	331.5	6.5	3.3	1.5	0.36	1.87	2.79	1.83	62
	287	333	3.5	3.3	1.5	0.37	1.83	2.72	1.79	62.3
	290	366	5	6.4	3.3	0.40	1.68	2.50	1.64	116
E-CRO-5409	291.5	351	6	3.3	3.3	0.33	2.03	3.02	1.98	97.5
	308	375.5	6	3	3	0.27	2.49	3.71	2.43	91
	293.6	373	8	6.4	1.5	0.40	1.68	2.50	1.64	122
	298.5	355.5	5	3.3	1.5	0.37	1.80	2.69	1.76	79.6
	297	368	6.5	6.4	1.5	0.40	1.68	2.50	1.64	103
	314	430	5	3.3	6.4	0.38	1.78	2.65	1.74	258
E-CRO-5679	304.5	350.5	5	3.3	1.5	0.43	1.56	2.33	1.53	83.2
E-CRO-5676	301	353.5	6.5	2.5	1.5	0.33	2.03	3.02	1.98	105
E-CRO-5684	304.5	363.5	7	3	4	0.33	2.03	3.02	1.98	111
E-CRO-5710	304.5	350.5	5	3.3	1.5	0.43	1.56	2.33	1.53	82.5

a) Bearing numbers marked "⊙" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "*", please consult NTN Engineering.

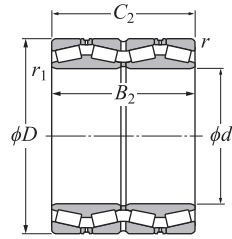
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

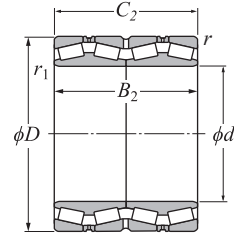
Special Application Bearings

Special Application Bearings

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



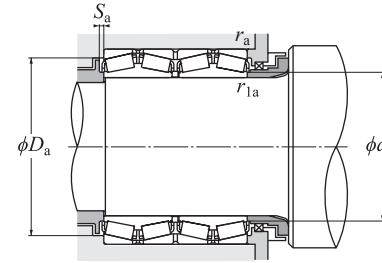
(TYPE B)
Without inner ring spacer

d 288.925–330 mm

d	Boundary dimensions					Basic load rating		a) b) c)	Bearing number ^{a) to d)}
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{ls min} ¹⁾	dynamic	static		
	mm					kN			
288.925	406.400	298.450	298.450	3.3	3.3	3 300	8 300	◎	E-M255449D/M255410/M255410DA
292.100	476.250	296.047	292.100	3.3	1.5	3 400	6 800	◎	E-EE921150D/921875/921876D
300	424	310	310	4	5	2 850	7 450	◎	E-625960
	430	280	280	4	4	2 990	7 100	◎	E-CRO-6019
	430	300	300	4	4	2 990	7 100	◎	E-CRO-6022
	460	360	360	4	4	4 500	10 100	◎	E-CRO-6015
	470	270	270	4	4	3 500	7 250	☆	E-CRO-6012
	470	292	292	4	4	3 900	8 300	☆	E-CRO-6013
	500	332	332	5	6	4 000	8 100	◎	E-623160
300.038	422.275	311.150	311.150	3.3	3.3	3 700	9 600	◎ ☆	T-E-HM256849D/HM256810/HM256810DG2
304.648	438.048	279.400	279.400	3.3	3.3	2 740	6 500	◎	E-EE329119D/329172/329173D
	438.048	280.990	279.400	4.8	3.3	2 920	6 900	◎	E-M757448D/M757410/M757410D
304.800	419.100	269.875	269.875	6.4	1.5	2 650	6 850	◎	E-M257149D/M257110/M257110D
	444.500	247.650	241.300	1.5	8	2 050	4 600	◎	E-EE291202D/291750/291751D
	495.300	342.900	349.250	6.4	3.3	4 050	9 400	◎	E-EE724121D/724195/724196D
304.902	412.648	266.700	266.700	3.3	3.3	2 860	7 450	◎	E-M257248D/M257210/M257210D
305.003	438.048	280.990	279.400	4.8	3.3	2 920	6 900	◎	E-M757449D/M757410/M757410D
310	430	310	310	4	2.2	3 200	8 100	◎	E-CRO-6213
	430	310	310	5.5	2.2	3 400	8 600	◎	E-CRO-6204
317.500	422.275	269.875	269.875	3.3	1.5	2 510	7 050	◎	E-LM258649D/LM258610/LM258610D
	447.675	327.025	327.025	3.3	3.3	3 800	9 550	◎	T-E-HM259049D/HM259010/HM259010D
320	460	338	338	4	5	3 250	8 650	◎	E-625964
327	445	230	230	4	2	2 380	5 650	◎	E-CRO-6501
330	470	340	340	2.5	2.5	3 500	10 200	◎	E-CRO-6604
	510	340	340	6	6	4 300	9 650	◎	E-CRO-6602

1) Smallest allowable dimension for chamfer dimension *r* or *r*₁.

Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of *e*, *Y*₁, *Y*₂ and *Y*₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	d _a	D _a	S _a Min.	r _{as} Max.	r _{las} Max.		e	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer	mm									kg
E-CRO-5815	311	376	5	3.3	3.3	0.34	2.00	2.98	1.96	125
	314	442	7	3.3	1.5	0.29	2.30	3.42	2.25	208
	329	389.5	7	3	4	0.33	2.03	3.02	1.98	138
	325.5	394.5	8	3	3	0.47	1.45	2.16	1.42	132
	323	393.5	3	3	3	0.47	1.45	2.16	1.42	141
	333.5	421.5	10	3	3	0.31	2.21	3.29	2.16	180
E-CRO-6033	348	432.5	7	3	3	0.37	1.80	2.69	1.76	152
	347	430	7	3	3	0.37	1.80	2.69	1.76	164
	346.5	449	5	4	4	0.40	1.68	2.50	1.64	257
	322	394	6	3.3	3.3	0.34	2.00	2.99	1.96	143
	327	410	8	3.3	3.3	0.33	2.04	3.04	2.00	143
	328	407	7	4.8	3.3	0.47	1.43	2.12	1.40	140
E-CRO-6148	330.5	387	5	6.4	1.5	0.33	2.03	3.02	1.98	115
	328	416	9.5	1.5	8	0.38	1.78	2.65	1.74	127
	334	450	3	6.4	3.3	0.40	1.68	2.50	1.64	273
E-CRO-6144	328.5	385.5	5	3.3	3.3	0.32	2.12	3.15	2.07	107
	328	407	7	4.8	3.3	0.47	1.43	2.12	1.40	139
	333	396.5	8.5	3	2	0.40	1.68	2.50	1.64	133
	333.5	397	7.5	4	2	0.33	2.03	3.02	1.98	136
E-CRO-6431	342.5	393.5	7	3.3	1.5	0.32	2.10	3.13	2.06	110
	340	418	5	3.3	3.3	0.33	2.02	3.00	1.97	161
	355	420.5	7	3	4	0.33	2.03	3.02	1.98	183
	353.5	416	5.5	3	2	0.33	2.03	3.02	1.98	99.8
	370	431.5	5.5	2	2	0.33	2.02	3.00	1.97	141
	368	462	5	5	5	0.40	1.68	2.50	1.64	221

a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "☆", please consult NTN Engineering.

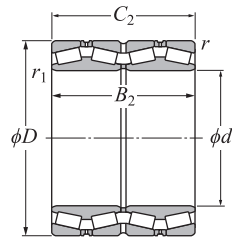
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

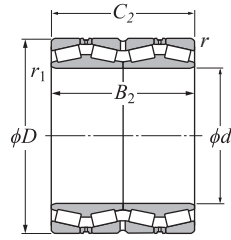
Special Application Bearings

Special Application Bearings

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



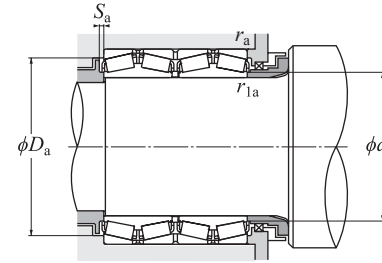
(TYPE B)
Without inner ring spacer

d 330.200–380 mm

d	Boundary dimensions						Basic load rating		a) b) c)	Bearing number ^{a) to d)}
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{ls min} ¹⁾	dynamic	static	(TYPE A) With inner ring spacer		
	mm						kN			
330.200	482.600	306.388	311.150	3.3	1.5	3 100	7 900	◎	E-EE526131D/526190/526191D	
	533.400	254.000	254.000	6	6	3 550	6 750	◎	E-CRO-6606	
333.375	469.900	342.900	342.900	3.3	3.3	4 400	11 000	◎	E-HM261049D/HM261010/HM261010DA	
340	480	350	350	5	6	3 800	10 400		E-625968	
	520	278	278	5	6	3 600	7 500		E-623068	
341.312	457.098	254.000	254.000	3.3	1.5	2 630	6 900	◎	E-LM761648D/LM761610/LM761610D	
342.900	533.400	307.985	301.625	3.3	3.3	3 500	6 900	◎	E-EE971355D/972100/972103D	
343.052	457.098	254.000	254.000	3.3	1.5	2 640	6 900	◎	E-LM761649D/LM761610/LM761610D	
	457.098	254.000	254.000	3.3	1.5	2 700	6 750	◎	E-CRO-6910	
346.075	488.950	358.775	358.775	3.3	3.3	4 850	12 800	◎ ☆	T-E-HM262749D/HM262710/HM262710DG2	
347.662	469.900	292.100	292.100	3.3	3.3	3 550	9 100	◎	E-M262449D/M262410/M262410D	
355.600	444.500	241.300	241.300	3.3	1.5	2 020	6 450	◎	T-E-L163149D/L163110/L163110D	
	457.200	252.412	252.412	3.3	1.5	2 730	7 850	◎	E-LM263149D/LM263110/LM263110D	
	482.600	265.112	269.875	3.3	1.5	3 100	7 650	◎	E-LM763449D/LM763410/LM763410D	
	488.950	317.500	317.500	3.3	1.5	3 850	10 000	◎	E-M263349D/M263310/M263310D	
360	508	370	370	5	6	4 100	11 200		E-625972	
	520	370	370	5.5	3.5	4 950	12 300		E-CRO-7220	
	520	410	410	5	5	5 700	14 700	☆	E-CRO-7217	
	540	340	340	5	3	4 850	11 100		E-CRO-7211	
	600	396	396	5	6	6 100	13 000		E-623172	
368.300	523.875	382.588	382.588	6.4	3.3	4 950	13 100	◎ ☆	E-HM265049D/HM265010/HM265010DG2	
	596.900	342.900	342.900	6.4	6.4	4 750	10 600	◎	E-EE181455D/182350/182351D	
374.650	501.650	250.825	260.350	3.3	1.5	3 000	6 250	◎	E-LM765149D/LM765110/LM765110D	
380	536	390	390	5	6	5 450	14 100		E-625976	
	560	282	282	5	6	3 950	8 700		E-623076	
	560	285	285	5	5	3 600	7 700		E-CRO-7612	

1) Smallest allowable dimension for chamfer dimension *r* or *r*₁.

Four-Row Tapered Roller Bearings



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	Y ₁	0.67	Y ₂

Static equivalent radial load

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

For values of *e*, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	mm						<i>e</i>	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{las} Max.					
	351	449	3	3.3	1.5	0.39	1.72	2.56	1.68	197
	378.5	488	6.5	5	5	0.37	1.80	2.69	1.76	221
E-CRO-6711	356.5	434	5	3.3	3.3	0.33	2.02	3.00	1.97	187
	373	440.5	7	4	5	0.33	2.03	3.02	1.98	200
	382.5	478	6.5	4	4	0.37	1.80	2.69	1.76	213
	359	432	5	3.3	1.5	0.47	1.43	2.12	1.40	125
	370	501	11	3.3	3.3	0.33	2.03	3.02	1.98	252
	367	424.5	5	3.3	1.5	0.47	1.43	2.12	1.40	117
E-CRO-6945	361	426	5	3.3	1.5	0.47	1.43	2.12	1.40	105
	368	456	6	3.3	3.3	0.33	2.02	3.00	1.97	227
	365	444	8	3.3	3.3	0.33	2.03	3.02	1.98	148
	370	422	6.5	3.3	1.5	0.31	2.20	3.27	2.15	89.5
	372	434	6	3.3	1.5	0.32	2.12	3.15	2.07	106
E-CRO-7123	379.5	449	3	3.3	1.5	0.47	1.43	2.14	1.40	145
	374	459	5	3.3	1.5	0.33	2.03	3.02	1.98	173
E-CRO-7227	394	466.5	7	4	5	0.33	2.03	3.02	1.98	236
	391.5	478	5	4.5	3	0.33	2.03	3.02	1.98	260
	396	478	8.5	4	4	0.33	2.03	3.02	1.98	297
	400	496	5	4	2.5	0.33	2.03	3.02	1.98	270
E-CRO-7228	416.5	541.5	8	4	5	0.40	1.68	2.50	1.64	447
	408	481.5	6	6.4	3.3	0.33	2.03	3.02	1.98	280
E-CRO-7406	421	552	7.5	6.4	6.4	0.42	1.62	2.42	1.59	373
	393	472	2	3.3	1.5	0.47	1.43	2.12	1.40	145
	410	494	8	4	5	0.33	2.03	3.02	1.98	277
	421	518.5	6.5	4	4	0.37	1.80	2.69	1.76	240
	420	517	7	4	4	0.40	1.68	2.50	1.64	208

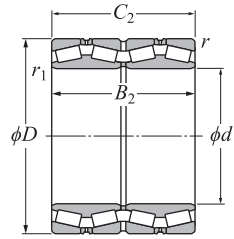
a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "☆", please consult NTN Engineering.

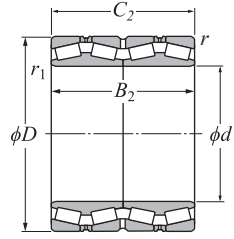
c) Bearing numbers marked "☆☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



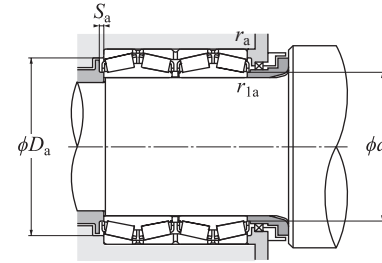
(TYPE B)
Without inner ring spacer

d 380–447.675 mm

d	Boundary dimensions				Basic load rating				Bearing number ^{a) to d)}
	mm				dynamic		static		
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{1s min} ¹⁾	C _r	C _{0r}	a) b) c)	(TYPE A) With inner ring spacer
380	560	360	360	6	1.5	5 150	12 100	◎	E-CRO-7622
	560	360	360	5	1.5	5 600	13 500	☆	E-CRO-7621
384.175	546.100	400.050	400.050	6.4	3.3	6 000	16 100	◎	☆ T-E-HM266449D/HM266410/HM266410DG2
385.762	514.350	317.500	317.500	3.3	3.3	4 000	11 100	◎	E-LM665949D/LM665910/LM665910D
390	510	350	350	3.5	1.5	4 100	11 800		E-CRO-7801
393.700	546.100	288.925	288.925	6.4	1.5	3 550	10 200	◎	E-LM767745D/LM767710/LM767710D
400	564	412	412	5	6	5 400	14 700		E-625980
	635	470	470	5	2.5	8 000	18 000		E-CRO-8010
406.400	546.100	268.288	288.925	6.4	1.5	2 740	7 000	◎	T-E-EE234161D/234215/234216D
	546.100	288.925	288.925	6.4	1.5	3 550	10 200	◎	E-LM767749D/LM767710/LM767710D
	565.150	381.000	381.000	6.4	3.3	5 300	14 100		E-CRO-8103
	590.550	400.050	400.050	6.4	3.3	5 350	13 600	◎	E-EE833161D/833232/833233D
	609.600	309.562	317.500	6.4	3.5	4 100	9 600	◎	E-EE911603D/912400/912401D
409.575	546.100	334.962	334.962	6.4	1.5	4 400	12 700	◎	☆ E-M667947D/M667911/M667911DG2
415.925	590.550	434.975	434.975	6.4	3.3	6 950	18 900	◎	☆ T-E-M268749D/M268710/M268710DG2
420	592	432	432	5	6	5 950	16 300		E-625984
431.800	571.500	279.400	279.400	3.3	1.5	3 550	9 850	◎	T-E-LM869449D/LM869410/LM869410D
	571.500	336.550	336.550	6.4	1.5	4 100	11 800	◎	E-LM769349D/LM769310/LM769310D
	635.000	355.600	355.600	6.4	6.4	6 300	15 000	◎	☆ E-EE931170D/931250/931251XDG2
432.003	609.524	317.500	317.500	6.4	3.5	4 850	11 500	◎	E-EE736173D/736238/736239D
440	620	454	454	6	6	7 200	19 900		E-625988
	635	470	470	6.4	3.3	7 900	22 100	☆	E-CRO-8808
	650	355	355	7.5	4	5 950	13 400	☆	E-CRO-8807
447.675	635.000	463.550	463.550	6.4	3.3	7 900	22 100	◎	☆ E-M270749D/M270710/M270710DG2

1) Smallest allowable dimension for chamfer dimension r or r₁.

Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	mm						e	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{1as} Max.					
	416.5	514	7	5	1.5	0.40	1.68	2.50	1.64	302
	423	514.5	6.5	4	1.5	0.40	1.68	2.50	1.64	312
	411	507	6.5	6.4	3.3	0.33	2.03	3.02	1.98	312
	409	482	7	3.3	3.3	0.42	1.61	2.40	1.58	240
	411.5	478	7	3	1.5	0.33	2.03	3.02	1.98	186
	418	510	6.5	6.4	1.5	0.48	1.42	2.11	1.38	219
	434	518	7	4	5	0.33	2.03	3.02	1.98	324
	447	579.5	6.5	4	2	0.33	2.03	3.02	1.98	564
	425	504	1.5	6.4	1.5	0.48	1.42	2.11	1.39	190
	427	510	6.5	6.4	1.5	0.48	1.42	2.11	1.38	201
	441	524.5	6.5	6.4	3.3	0.35	1.95	2.90	1.91	310
	435	549	6.5	6.4	3.3	0.33	2.07	3.09	2.03	395
	437	567	1.5	6.4	3.5	0.38	1.76	2.62	1.72	332
	431	510	5.5	6.4	1.5	0.42	1.61	2.40	1.58	226
	444	548.9	9	6.4	3.3	0.33	2.03	3.02	1.98	421
E-CRO-8414	457	545	7	4	5	0.33	2.03	3.02	1.98	374
	453	537	8	3.3	1.5	0.55	1.24	1.84	1.21	193
	453	534	6.5	6.4	1.5	0.44	1.52	2.26	1.49	232
	468.1	591.1	6.6	6.4	6.4	0.32	2.12	3.15	2.07	402
	459	570	6.5	6.4	3.5	0.35	1.95	2.90	1.91	297
E-CRO-8839	479	572.5	8	5	5	0.33	2.03	3.02	1.98	430
	494	585	9	6.4	3.3	0.33	2.03	3.02	1.98	498
	498	601	9	6	3	0.33	2.03	3.02	1.98	400
	478	591	8	6.4	3.3	0.33	2.03	3.02	1.98	509

a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "☆", please consult NTN Engineering.

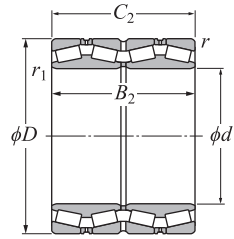
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

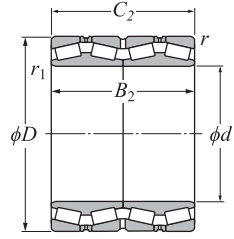
Special Application Bearings

Special Application Bearings

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



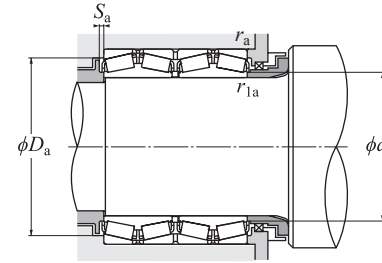
(TYPE B)
Without inner ring spacer

d 457.200–555.625 mm

d	Boundary dimensions				Basic load rating				a) b) c)	Bearing number ^{a) to d)}
	mm				dynamic static kN					
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{ls min} ¹⁾	C _r	C _{0r}		(TYPE A) With inner ring spacer	
457.200	596.900	276.225	279.400	3.3	1.5	3 200	9 150	⊙	E-L770849D/L770810/L770810D	
	596.900	276.225	276.225	3.3	1.6	3 200	9 400	⊙	E-EE244181D/244235/244236D	
	660.400	323.850	323.847	6.4	3.3	4 600	11 200	⊙	E-EE737179D/737260/737260D	
460	650	474	474	6	6	7 200	19 900		E-625992A	
475	660	450	450	5	3	7 250	20 400		E-CRO-9501	
480	678	494	494	6	6	6 950	19 600		E-625996	
	678	494	494	6	6	6 950	19 600		E-CRO-9612	
482.600	615.950	330.200	330.200	6.4	3.3	4 400	13 400	⊙ ☆	E-LM272249D/LM272210/LM272210DG2	
488.950	660.400	365.125	361.950	6.4	8	5 950	16 100	⊙ ☆	T-E-EE640193D/640260/640261DG2	
489.026	634.873	320.675	320.675	3.3	3.3	4 750	12 000	⊙	E-LM772749D/LM772710/LM772710DA	
500	670	515	515	5	1.5	7 450	24 600		E-CRO-10008	
	705	515	515	6	6	9 350	27 100	☆	E-6259/500	
	730	420	420	6	6	8 250	19 900	☆	E-CRO-10023	
501.650	711.200	520.700	520.700	6.4	3.3	9 600	27 300	⊙ ☆	E-M274149D/M274110/M274110DG2	
508.000	762.000	463.550	463.550	6.4	6.4	8 600	21 400	⊙ ☆	E-EE531201D/531300/531301XDG2	
509.948	654.924	377.000	379.000	6.4	1.5	5 650	17 600	☆	E-CRO-10208	
514.350	673.100	422.275	422.275	6.4	3.3	6 600	20 500	⊙	E-LM274449D/LM274410/LM274410D	
519.112	736.600	536.575	536.575	6.4	3.3	10 100	28 700	⊙ ☆	E-M275349D/M275310/M275310DG2	
520	735	535	535	5	7	10 100	28 700	☆	E-CRO-10402	
533.400	965.200	495.300	495.300	7.5	7.5	12 300	28 700	☆	E-CRO-10702	
536.575	761.873	558.800	558.800	6.4	3.3	11 200	30 500	⊙ ☆	E-M276449D/M276410/M276410DG2	
555.625	698.500	349.250	349.250	6.4	3.2	4 850	14 300		E-CRO-11101	

1) Smallest allowable dimension for chamfer dimension r or r₁.

Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass kg (approx.)
	mm									
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{las} Max.	e	Y ₁	Y ₂	Y ₀	
	478	567	5.5	3.3	1.5	0.47	1.43	2.12	1.40	201
	478	567	5.5	3.3	1.6	0.40	1.67	2.49	1.63	207
	489	614.9	6.5	6.4	3.3	0.37	1.80	2.69	1.76	379
	499	598.5	7	5	5	0.33	2.03	3.02	1.98	493
E-CRO-9508	510.5	611.5	10	4	2.5	0.34	1.98	2.94	1.93	465
	525.5	623	7	5	5	0.33	2.03	3.02	1.98	563
	525	622.5	2	5	5	0.33	2.03	3.02	1.98	554
	504	585	6.5	6.4	3.3	0.33	2.03	3.02	1.98	250
	516	624	9	6.4	8	0.31	2.20	3.27	2.15	364
	516	600	6.5	3.3	3.3	0.47	1.43	2.12	1.40	268
	526.5	619	8	4	1.5	0.40	1.68	2.50	1.64	598
	553	649.5	7.5	5	5	0.33	2.03	3.02	1.98	632
	554	675	7.5	5	5	0.40	1.68	2.50	1.64	606
	534	663	9.5	6.4	3.3	0.33	2.03	3.02	1.98	726
	550.7	710.9	9.5	6.4	6.4	0.38	1.77	2.64	1.73	740
E-CRO-10214	540	611.5	5	6.4	1.5	0.41	1.65	2.46	1.61	320
	540	636	8	6.4	3.3	0.33	2.03	3.02	1.98	390
E-CRO-10408	569	677	9.5	6.4	3.3	0.33	2.03	3.02	1.98	761
	569	676.5	11	4	6	0.33	2.03	3.02	1.98	750
	680	854.5	7.5	6	6	0.32	2.12	3.15	2.07	1662
	564	711	9.5	6.4	3.3	0.33	2.03	3.02	1.98	890
E-CRO-11103	581	659	6.5	6.4	3.3	0.33	2.03	3.02	1.98	298

a) Bearing numbers marked "⊙" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "☆", please consult NTN Engineering.

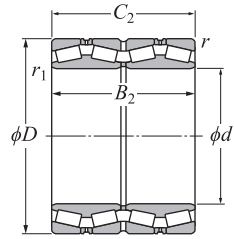
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

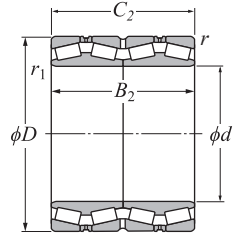
Special Application Bearings

Special Application Bearings

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



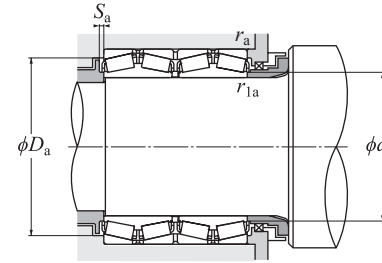
(TYPE B)
Without inner ring spacer

d 558.800–749.300 mm

d	Boundary dimensions				Basic load rating				Bearing number ^{a) to d)}
	mm				dynamic		static		
	D	B ₂	C ₂	r _{s min} ¹⁾	r _{ls min} ¹⁾	C _r	C _{0r}	a) b) c)	(TYPE A) With inner ring spacer
558.800	736.600	322.265	322.268	6.4	3.3	4 750	13 500	◎	E-EE843221D/843290/843291D
	736.600	409.575	409.575	6.4	3.3	6 750	20 500	◎	☆ E-LM377449D/LM377410/LM377410DG2
570	780	515	515	6	6	10 200	31 000	☆	E-CRO-11402
571.500	812.800	593.725	593.725	6.4	3.3	13 200	36 500	◎	☆ E-M278749D/M278710/M278710DAG2
584.200	762.000	396.875	401.638	6.4	3.3	7 300	22 300	◎	☆ E-LM778549D/LM778510/LM778510DG2
585.788	771.525	479.425	479.425	6.4	3.3	8 150	25 700	☆	E-CRO-11701
595.312	844.550	615.950	615.950	6.4	3.3	13 600	39 000	☆	E-CRO-11913
	844.550	615.950	615.950	6.4	3.3	14 000	40 500	◎	☆ E-M280049D/M280010/M280010DG2
609.600	787.400	361.950	361.950	6.4	3.3	7 150	20 300	◎	☆ E-EE649241D/649310/649311DG2
	863.600	660.400	660.400	6.4	3.3	15 000	42 000	◎	☆ E-M280349D/M280310/M280310DG2
611.500	832.800	593.725	593.725	6.4	3.3	12 700	37 500	☆	E-CRO-12202
630	920	600	600	7.5	7.8	14 600	39 000	☆	E-CRO-12604
650	1 030	560	560	7.5	12	15 000	35 000	☆	E-CRO-13001
660	1 070	642	642	7.5	7.5	17 000	43 500	☆	E-CRO-13202
660.400	812.800	365.125	365.125	6.4	3.3	6 900	23 200	◎	☆ E-L281149D/L281110/L281110DG2
670	960	700	700	7.5	7.5	18 500	51 500	☆	E-CRO-13401
	1 090	710	710	7.5	7.5	21 200	50 000	☆	E-CRO-13404
	1 090	710	710	7.5	7.5	19 300	47 500	☆	E-CRO-13402
685.800	876.300	352.425	355.600	6.4	3.3	6 700	21 800	◎	☆ E-EE655271D/655345/655346DG2
711.200	914.400	317.500	317.500	6.4	16	5 900	17 900	◎	☆ E-EE755280D/755360/755361DG2
730.250	1 035.050	755.650	755.650	6.4	3.3	20 100	59 500	◎	☆ E-M283449D/M283410/M283410DG2
749.300	990.600	605.000	605.000	6.4	3.3	14 000	45 500	◎	☆ E-LM283649D/LM283610/LM283610DG2

1) Smallest allowable dimension for chamfer dimension r or r₁.

Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	mm						e	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer	d _a	D _a	S _a Min.	r _{as} Max.	r _{las} Max.					
E-CRO-11216	585	699	8.5	6.4	3.3	0.34	1.98	2.94	1.93	388
	602	688	8	6.4	3.3	0.35	1.95	2.90	1.91	502
	622	723	7.5	5	5	0.33	2.03	3.02	1.98	625
	609	756	11	6.4	3.3	0.33	2.03	3.02	1.98	1 080
	615	717	7	6.4	3.3	0.47	1.43	2.14	1.40	511
	628	717.5	9.5	6.4	3.3	0.35	1.95	2.90	1.91	610
	654	781	7	6.4	3.3	0.33	2.03	3.02	1.98	1 135
	633	786	11	6.4	3.3	0.33	2.03	3.02	1.98	1 160
	636	747	9.5	6.4	3.3	0.33	2.03	3.02	1.98	458
	648	807	13.5	6.4	3.3	0.33	2.03	3.02	1.98	1 250
	660	776	11.5	6.4	3.3	0.33	2.03	3.02	1.98	960
	702	848.5	7.5	6	6	0.33	2.03	3.02	1.98	1 390
	765	947.5	8.5	6	10	0.32	2.12	3.15	2.07	1 760
	778	964	9	6	6	0.32	2.12	3.15	2.07	1 950
E-CRO-13211	695	770.5	9	6.4	3.3	0.37	1.80	2.69	1.76	448
	740	888.5	8	6	6	0.33	2.03	3.02	1.98	1 600
	782	996.5	13.5	6	6	0.29	2.32	3.45	2.26	2 690
	799	995.5	13.5	6	6	0.32	2.12	3.15	2.07	2 600
E-CRO-13708	738	824	8	6.4	3.3	0.42	1.61	2.40	1.58	539
	762	873	8	6.4	16	0.38	1.77	2.64	1.73	527
E-CRO-14601	804	961	13	6.4	3.3	0.33	2.03	3.02	1.98	2 210
	786	936	10.5	6.4	3.3	0.33	2.03	3.02	1.98	1 250

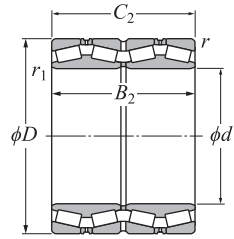
a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "☆", please consult NTN Engineering.

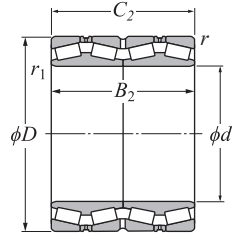
c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.

Four-Row Tapered Roller Bearings



(TYPE A)
With inner ring spacer



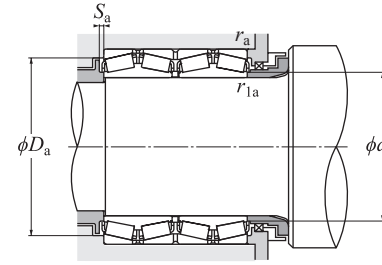
(TYPE B)
Without inner ring spacer

d 762.000–938.212 mm

d	Boundary dimensions					Basic load rating		Bearing number ^{a) to d)}		
	d	D	B ₂	C ₂	r _{s min} ¹⁾ / r _{1s min} ¹⁾	dynamic kN	static kN	a) b) c)	(TYPE A) With inner ring spacer	
762.000	1 066.800	723.900	736.600	12.7	4.3	19 500	58 500	◎	☆ E-M284148D/M284111/M284210DG2	
	1 079.500	787.400	787.400	12.7	4.8	21 100	65 000	◎	☆ E-M284249D/M284210/M284210DG2	
825.500	1 168.400	844.550	844.550	12.7	4.8	24 700	76 500	◎	☆ E-M285848D/M285810/M285810DG2	
840	1 170	840	840	6	6	24 300	76 500		☆ E-CRO-16803	
863.600	1 130.300	669.925	669.925	12.7	4.8	17 500	59 500	◎	☆ E-LM286249D/LM286210/LM286210DG2	
	1 219.200	876.300	889.000	12.7	4.8	26 700	83 000	◎	☆ E-EE547341D/547480/547481DG2	
938.212	1 270.000	825.500	825.500	12.7	4.8	25 000	80 000	◎	☆ E-LM287649D/LM287610/LM287610DG2	

1) Smallest allowable dimension for chamfer dimension r or r₁.

Four-Row Tapered Roller Bearings



Dynamic equivalent radial load

$$P_r = XF_r + YF_a$$

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

Static equivalent radial load

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

For values of e, Y₁, Y₂ and Y₀ see the table below.

Bearing number ^{a) to d)}	Installation-related dimensions					Constant	Axial load factors			Mass
	d _a	D _a	S _a Min.	r _{as} Max.	r _{1as} Max.		e	Y ₁	Y ₂	
(TYPE B) Without inner ring spacer										
	819	978	3.5	12.7	4.3	0.33	2.03	3.02	1.98	2 220
	810	1 005	13	12.7	4.8	0.33	2.03	3.02	1.98	2 480
	879	1 085	13	12.7	4.8	0.33	2.03	3.02	1.98	3 010
	918	1 081	12	5	5	0.33	2.03	3.02	1.98	3 970
E-CRO-17302	928	1 056	11	12.7	4.8	0.33	2.03	3.02	1.98	1 950
E-CRO-17301	946	1 123.5	6.5	12.7	4.8	0.33	2.03	3.02	1.98	3 640
E-CRO-18802	1 015	1 183	10	12.7	4.8	0.33	2.03	3.02	1.98	4 100

a) Bearing numbers marked "◎" designate inch series bearings.

b) When adopting bearings with bearing numbers marked with "*", please consult NTN Engineering.

c) Bearing numbers marked "☆" designate bearings with hollow rollers and pin type cages.

d) Contact NTN Engineering for bearing numbers (TYPE B) without an inner ring spacer that are not listed.