

Thrust Bearings



This version supersedes all previously published versions. All the bearing mentioned in this catalogue are manufactured with normal tolerance class. We can, however, supply other class bearing against specific requirement.

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2 WHEELERS



3 WHEELERS



4 WHEELERS



TRACTORS



LCV, HCV



INDUSTRIES



RAILWAYS



AEROSPACE



WINNER
DERIVING GRAND PRIZE

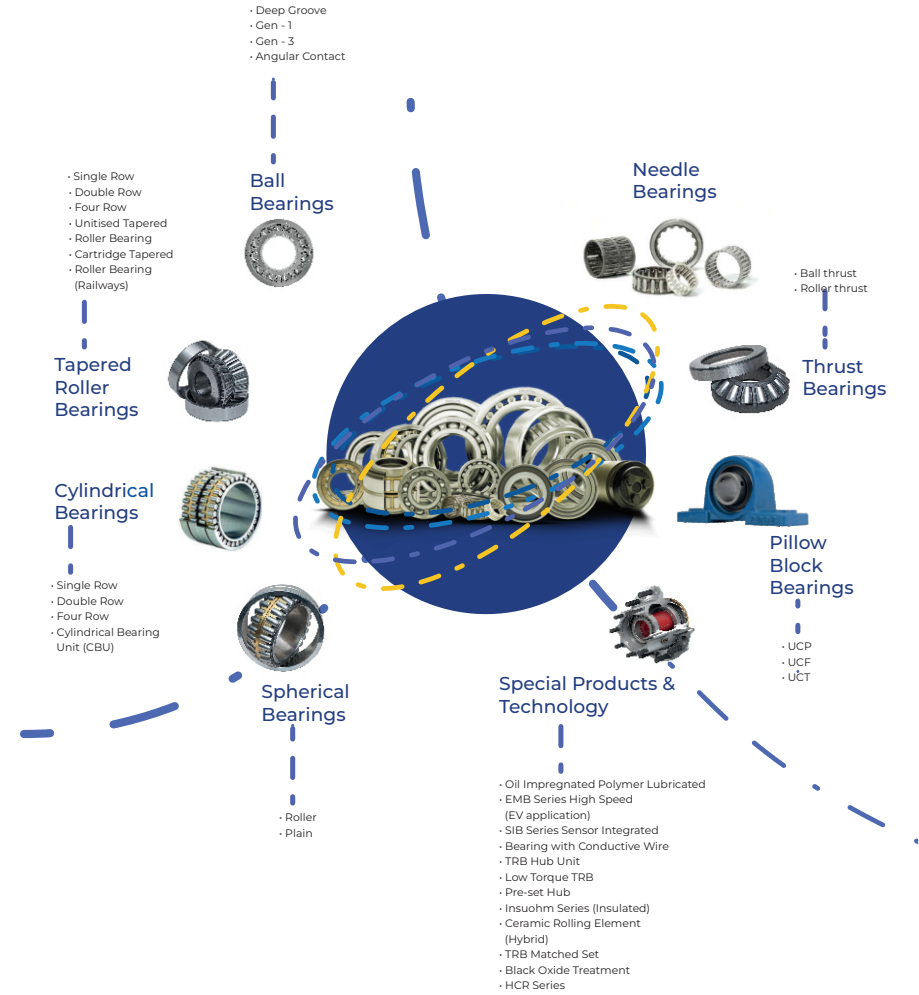
Products from NBC

Founded in 1946, NBC is India's first bearings manufacturer and the last word in quality and durability. In 2020, the company acquired leading European manufacturer, Kinex Bearings to further boost its expertise.

75 years since its beginning, NBC remains India's leading bearings manufacturer and exporter. NBC is also the world's only bearings manufacturer to receive the prestigious Deming Grand Prize for Total Quality Management.



Since the challenges faced by industry are many, NBC offers a diverse range of exceptional bearings. NBC bearings are available in sizes from 04 mm bore to 2000 mm outer diameter.

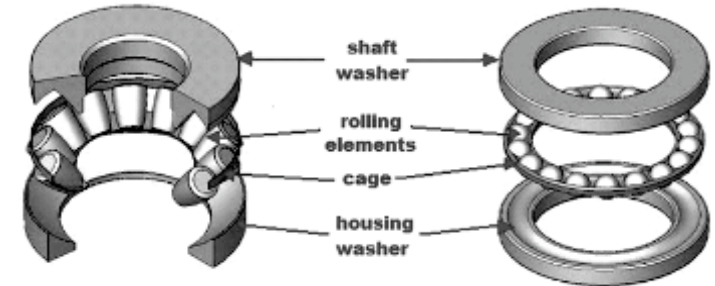


* Products with special features like high temperature application, special heat treatment, coated roller/faces and cage options are also available across product range.

21 Thrust Bearing

Types of Thrust Roller Bearing

A thrust bearing is designed to support predominantly axial load. They are available in steel and brass cage.



Thrust bearings come in several varieties.

- Thrust ball bearings, consists of balls supported in a ring, can be used in low thrust applications where there is less axial load.



- Cylindrical thrust roller bearings consist of straight rollers arranged. They have high load carrying capacity and , but tend to wear due to the differences in radial speed and friction which is higher than with ball bearings.



- Tapered roller thrust bearings consist of tapered rollers arranged so that their axes all converge at a point on the axis of the bearing. They are used in pairs to accommodate axial thrust in either direction, as well as radial loads. They can support greater thrust loads than the ball type due to the larger contact area.

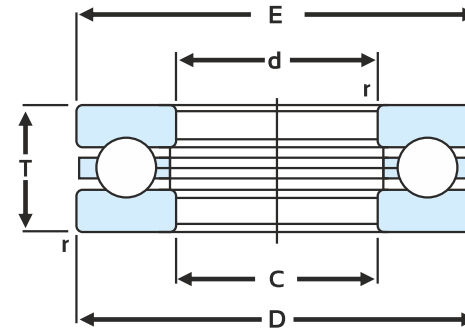
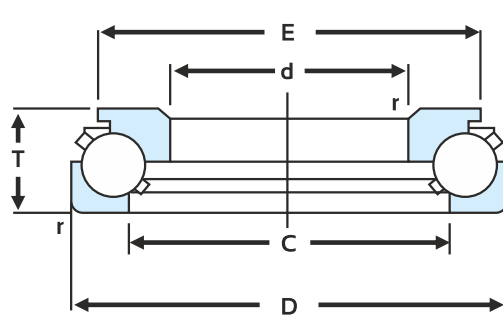


- Spherical roller thrust bearings use rollers of spherical shape, rolling inside a housing washer with a raceway with spherical inner shape. They can accommodate combined radial and axial loads and also accommodate misalignment of the shafts.



Note: Replacing a spherical roller bearing of same size but with different design (brass or steel cage) may require to modify the existing sleeve or use a new sleeve during mounting. For support contact application engineer.

Thrust Ball Bearing



Equivalent bearing load
dynamic

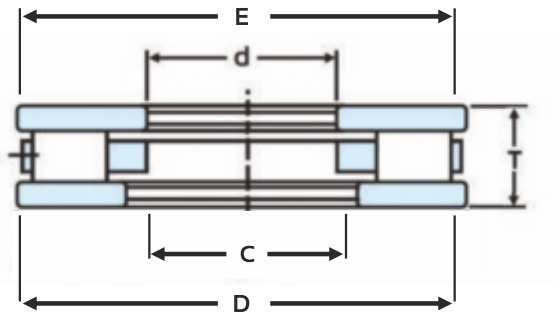
$$P_a = F_a$$

Static

$$P_{0a} = F_a$$

Boundary Dimension						Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Type	Mass Kg. (Approx.)
						Dynamic	Static	Dynamic	Static				
mm						KN		Kgf		Cu			
d	C	D	E	T	r	Ca	Coa	Ca	Coa				
100	123	220	100	143	2.1	325	931	33140	94934	33	48324	Ball	23
110	113	187	190	63	2.0	280	705	28511	71919	26	51322	Ball	7.2
280	284	380	375	80	2.1	493	1980	50271	201901	50	51256M	Ball	25.3
710	711	950	950	185	8.0	1397	8018	142452	817616	127	N1013	Ball	407

Cylindrical Roller Thrust Bearing



Equivalent bearing load

dynamic

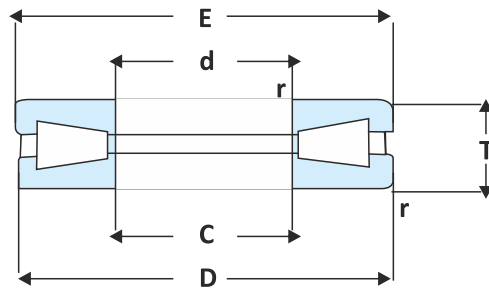
$$P_a = F_a$$

Static

$$P_{oa} = F_a$$

Boundary Dimension						Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Type	Mass Kg. (Approx.)
						Dynamic	Static	Dynamic	Static				
mm						KN		Kgf		Cu			
d	C	D	E	T	r	Ca	Coa	Ca	Coa				
76.2	82.55	119.84	116.66	25.4	9.5X45°	175	467	17845	47579	21	T624	CRB	1.07
88.9	90.475	138.887	129.362	33.325	-	186	528	18966	53840	62	AT626	CRB	1.87
152.4	154	254	252.4	50.8	4.0	802	3214	81780	327744	317	9923	CRB	10.98
260	260.5	420	419.5	95	5.0	1475	5850	150406	596525	494	9809352	CRB	58
304.8	307.181	609.6	607.219	114.3	9.5	4493	23042	458151	2349543	1781	N1011	CRB	157

Taper Roller Thrust Bearing



**Equivalent bearing load
dynamic**

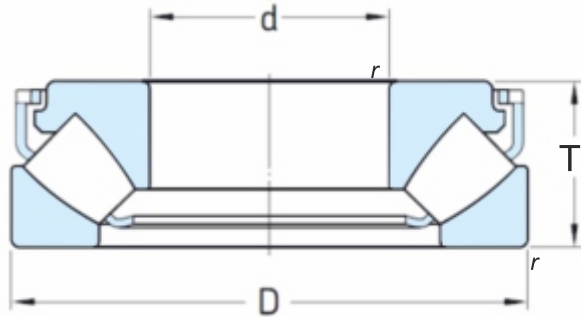
$$P_a = F_a$$

Static

$$P_{0a} = F_a$$

Boundary Dimension						Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Type	Mass Kg. (Approx.)
						Dynamic	Static	Dynamic	Static				
mm						KN		Kgf		Cu			
d	C	D	E	T	r	Ca	Coa	Ca	Coa				
127	127	266.7	266.7	58.738	4.8	1350	4480	137660	456826	445.89	T511-TTHD	TRB	19
203.2	203.2	419.1	419.1	92.075	9.7	2789	10600	284394	1080882	919.60	T811-TTHD	TRB	69
228.6	228.6	482.6	482.6	104.775	11.2	3500	14700	356895	1498959	1225.22	T911-TTHD	TRB	103
260	265	480	475	132	6.0	3300	12800	336501	1305216	1054.23	9019452	TRB	115
279.4	282.575	603.25	601.726	136.525	11.2	7701	7900	785271	805563	617.14	T1100-TTHD	TRB	198
279.4	282.575	603.25	601.726	136.525	11.2	7910	32703	806583	3334725	2554.74	N1146	TRB	198

Spherical Roller Thrust Bearing



Equivalent bearing load

dynamic

$$P_a = F_a + 1.2F$$

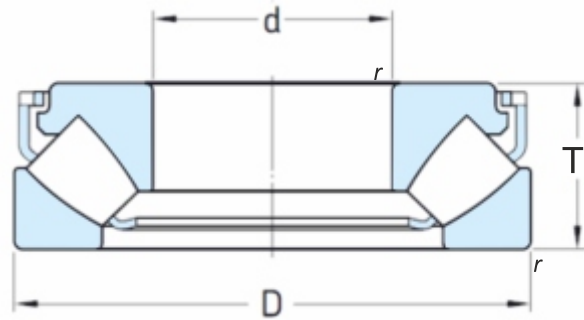
Static

$$P_{0a} = F_a + 1.2F$$

$$\text{When } \frac{Fr}{F_a} \leq 0.55$$

Boundary Dimensions				Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Mass Kg. (Approx.)
				Dynamic	Static	Dynamic	Static			
mm				KN		Kgf		C _u		
d	D	T	r	Ca	Coa	Ca	Coa			
60	130	42	1.5	320	950	32630	96872	116	29412EM	2.800
70	150	48	2.0	400	1260	40788	128482	149	29414EM	4.100
80	170	54	2.1	490	1600	49965	163152	182	29416EM	5.810
90	190	60	2.1	580	1980	59143	201901	218	29418EM	7.550
100	210	67	3.0	715	2420	72909	246767	259	29420EM	10.900
110	230	73	3.0	850	2900	86675	295713	302	29422EM	12.700
110	190	48	2.0	610	1730	62202	176408	187	29322E	5.240
120	210	54	2.1	765	2100	78007	214137	220	29324E	7.320
120	250	78	4.0	1120	3370	114206	343639	342	29424EM	17.900
130	270	85	4.0	1380	3850	140719	392585	381	29426E	22.100
130	270	85	4.0	1360	4310	138679	439491	427	29426EM	22.800
130	225	58	2.1	753	2500	76783	254925	257	29326E	8.860
140	240	60	2.1	850	2840	86675	289595	286	29328EM	11.000
150	250	60	2.1	1020	2900	104009	295713	287	29330EM	11.500
150	250	60	2.1	1000	2900	101970	295713	287	29330E	10.900

Spherical Roller Thrust Bearing



Equivalent bearing load

dynamic

$$P_a = F_a + 1.2F$$

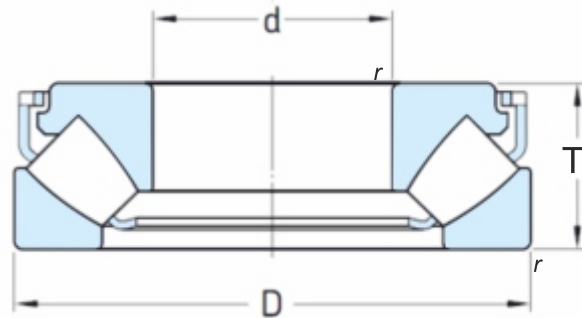
Static

$$P_{0a} = F_a + 1.2F$$

$$\text{When } \frac{Fr}{F_a} \leq 0.55$$

Boundry Dimensions				Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Mass Kg. (Approx.)
				Dynamic	Static	Dynamic	Static			
mm				KN		Kgf		C _u		
d	D	T	r	Ca	Coa	Ca	Coa			
170	340	103	5.0	2360	6550	240649	667904	603	29434E	40.000
170	280	67	3.0	1220	3600	124403	367092	344	29334EM	15.500
180	360	109	5.0	2600	7350	265122	749480	665	29436E	47.700
190	380	115	5.0	2500	8300	254925	846351	739	29438EJ	60.500
190	380	230	5.0	2654	8306	270628	846963	740	29438DE	112.000
190	380	230	5.0	2850	8000	290615	815760	713	29438D	118.000
190	320	78	4.0	1170	4850	119305	494555	447	29338EM	25.000
200	340	85	4.0	1600	5200	163152	530244	471	29340EJ	28.500
200	340	85	4.0	1860	5500	189664	560835	498	29340E	28.700
260	420	95	5	2300	7800	234531	795366	659	29352EM	49.000
260	480	132	6.0	4050	12900	412979	1315413	1062	29452E	97.800
300	480	109	5.0	2700	10850	275319	1106375	880	29360EM	73.500
300	480	109	5.0	2700	10850	275319	1106375	880	29360MB	72.700
320	500	109	5.0	3250	10600	331403	1080882	847	9039364X	75.400
320	500	109	5.0	3250	10300	331403	1050291	823	29364 MB	75.800

Spherical Roller Thrust Bearing



Equivalent bearing load

dynamic

$$P_a = F_a + 1.2F$$

Static

$$P_{0a} = F_a + 1.2F$$

$$\text{When } \frac{Fr}{F_a} \leq 0.55$$

Boundry Dimensions				Basic Load Rating				Fatigue Load Limit (KN)	Bearing Number	Mass Kg. (Approx.)
				Dynamic	Static	Dynamic	Static			
mm				KN		Kgf		C _u		
d	D	T	r	Ca	Coa	Ca	Coa			
360	500	85	4	1840	8200	187625	836154	455	29272M	45.90
360	640	170	7.5	5340	19700	544520	2008809	1130	29472	245.0
380	520	85	5.0	2000	9550	203940	973814	742	29276EM	51.50
380	670	175	7.5	6800	24000	693396	2447280	1780	29476EM	245.0
400	710	185	7.5	7600	26200	774972	2671614	1911	29480EM	290.0
420	580	95	5.0	1950	9500	198842	968715	715	29284EM	77.0
440	780	206	9.5	7650	30000	780071	3059100	1570	29488	394.0
460	800	206	9.5	7620	30500	777011	3110085	2141	29492EM	420.0
480	850	224	9.5	9300	36500	948321	3721905	1920	29496	493.0
500	870	224	9.5	9320	37100	950360	3783087	2540	294/500M	540.0
560	980	250	12.0	11900	48600	1213443	4955742	3213	294/560E	760.0
630	1090	280	12.0	14400	62000	1468368	6322140	3965	294/630EM	1010.0
750	1280	315	15.0	18700	85000	1906839	8667450	5172	294/750EF	1569.0
750	1280	315	15.0	15000	76000	1529550	7749720	4624	294/750EM	1520.0