NACHI

Spherical Roller Thrust Bearings

EX Type

High Capacity and Quiet Operation

Spherical Roller Thrust Bearings EX Type

High Capacity

Using large rollers results in higher Dynamic Load Rating.

Quiet Operation

Improving internal parts quality, NACHI achieves lower noise level and 50% reductions in vibration.

200°C Operating Temperature

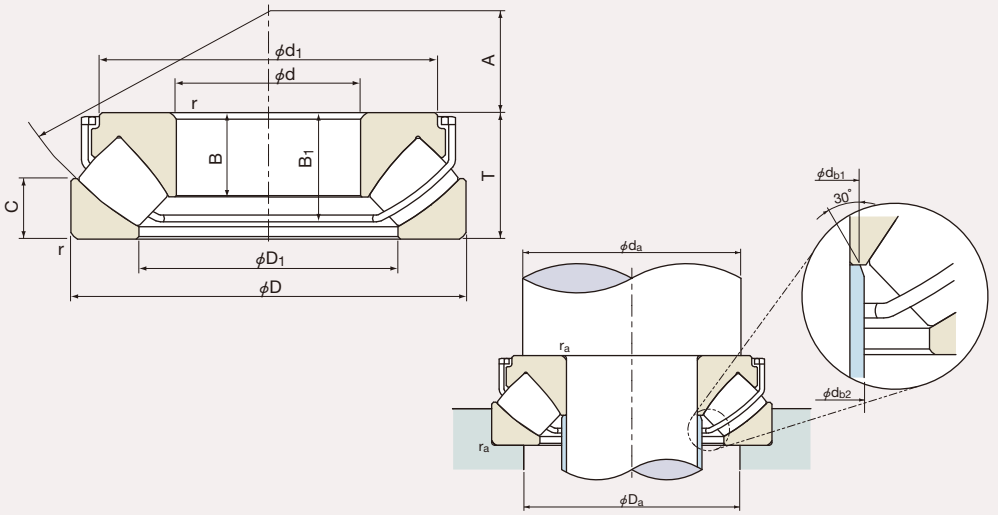
The newly developed standard heat stablization treatment process allows NACHI EX-Type Spherical Roller Thrust Bearings to be used under high operating temperature with minimal dimensional changes.

Low Heat Generation

NACHI developed the R-shaped pressed steel cage, which maximizes lubrication flow. The new cage helps reduce heat generation and extends the permissible speed

High Capacity and Quiet Operation

Spherical Roller Thrust Bearings EX Type



- Dynamic equivalent axial load
  Pa=Fa+1.2Fr
- Static equivalent axial load
  Poa=Fa+2.7Fr
  where, Fa : Axial load
  Fr : Radial load

  However $\frac{Fr}{Fa} \leqq 0.55$ must be satisfied
- In case of applied radial load, not exceed 50% of axial load.

29300EX Series

1N=0.102kgf

Bearing No.	Boundary dimensions (mm)				Basic dynamic load rating Ca (N)	Basic static load rating Coa (N)	Limiting speed (rpm)	
	d	D	T	r (min)			Grease lubrication	Oil lubrication
29317EX	85	150	39	1.5	365,000	1,060,000	1,600	2,700
29318EX	90	155	39	1.5	355,000	1,070,000	1,600	2,700
29320EX	100	170	42	1.5	435,000	1,400,000	1,500	2,500
29322EX	110	190	48	2	550,000	1,730,000	1,300	2,100
39324EX	120	210	54	2.1	670,000	2,160,000	1,100	1,900
29326EX	130	225	58	2.1	770,000	2,440,000	1,000	1,800
29328EX	140	240	60	2.1	860,000	2,840,000	950	1,600
29332EX	160	270	67	3	1,040,000	3,500,000	850	1,400

29400EX Series

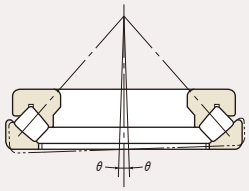
Bearing No.	Boundary dimensions (mm)				Basic dynamic load rating Ca (N)	Basic static load rating Coa (N)	Limiting speed (rpm)	
	d	D	T	r (min)			Grease lubrication	Oil lubrication
29412EX	60	130	42	1.5	350,000	915,000	1,800	2,800
29413EX	65	140	45	2	410,000	1,110,000	1,700	2,700
29414EX	70	150	48	2	490,000	1,350,000	1,600	2,400
29415EX	75	160	51	2	525,000	1,470,000	1,600	2,300
29416EX	80	170	54	2.1	580,000	1,630,000	1,500	2,100
29417EX	85	180	58	2.1	640,000	1,810,000	1,300	2,000
29418EX	90	190	60	2.1	710,000	2,080,000	1,300	1,900
29420EX	100	210	67	3	870,000	2,530,000	1,100	1,700
29422EX	110	230	73	3	1,060,000	3,150,000	950	1,500
29424EX	120	250	78	4	1,210,000	3,750,000	900	1,400
29426EX	130	270	85	4	1,400,000	4,300,000	850	1,200
29428EX	140	280	85	4	1,410,000	4,350,000	850	1,200
29430EX	150	300	90	4	1,630,000	5,150,000	800	1,100
29432EX	160	320	95	5	1,820,000	5,750,000	750	1,000

Note: For heavy load application, da should be large enough to support the shaft washer rib.

Because there are many sliding surfaces in Spherical Roller Thrust Bearings (cage-to-guide-sleeve and roller-ends-to-rib), oil lubricant (not grease) should be used.

●Aligning angle

Maximum permissible misalignment angle is about 2° under general service conditions. If the aligning advantages of this bearing type are to be realized, care must be taken to provide clearance for parts in the surrounding structure.



●The safty-facter "So" must be over 4.

●Minimum axial load

To prevent damage caused by sliding motion between the rollers and raceway, spherical roller thrust bearings must be subjected to a load more than the minimum load, Fa min.

$$F_{a\,min} = \frac{C_{oa}}{1000}$$

Reference dimensions (mm)						Abutment and fillet dimensions (mm)			Spacer dimensions (mm)		Mass (kg) (Reference)	Bearing No.
d_1	D_1	B	B_1	C	A	d_a (min)	D_a (max)	r_a (max)	d_{b1} (max)	d_{b2} (max)		
134	110.5	25	35	19	50	115	135	1.5	90	90	2.67	**29317EX**
135.2	116	23.8	35.1	19	52	120	140	1.5	95	95	2.75	**29318EX**
146.9	126	27	38.2	21	58	130	150	1.5	105	107	3.61	**29320EX**
165.1	140.6	30.9	44	23	64	145	165	2	116	117	5.22	**29322EX**
184.5	155	34.5	48.7	26	70	160	180	2	127	128	7.30	**39324EX**
197.4	165.8	36.8	52.7	28	76	170	195	2	136	138	8.82	**29326EX**
218.4	179	38.5	54.8	29	82	185	205	2	147.5	149	10.5	**29328EX**
243.4	199.8	44	61.4	32	92	210	235	2.5	166	174	14.5	**29332EX**

Reference dimensions (mm)						Abutment and fillet dimensions (mm)			Spacer dimensions (mm)		Mass (kg) (Reference)	Bearing No.
d_1	D_1	B	B_1	C	A	d_a (min)	D_a (max)	r_a (max)	d_{b1} (max)	d_{b2} (max)		
113	87	27	37.1	20	38	91	108	1.5	66	66	2.50	**29412EX**
123	93.5	29.5	40	21	42	99	115	2	72	72	3.20	**29413EX**
128.3	98.4	32	42.7	23	44	106	125	2	75.5	77.5	3.82	**29414EX**
140	105.6	34.5	45.6	24	47	113	132	2	82.5	82.5	4.70	**29415EX**
149	113	36	48.2	26	50	120	140	2	88	88	5.60	**29416EX**
158.2	120.5	37	50.6	28	54	130	150	2	94	94	6.69	**29417EX**
162	127	40.5	53	29	56	135	157	2	99	99	7.83	**29418EX**
181	139	44.5	59.6	32	62	150	175	2.5	108	110	10.6	**29420EX**
199.6	153.4	48	64.4	35	69	165	190	2.5	119.5	120	14	**29422EX**
218	166.5	54	70.9	37	74	180	205	3	131	132	17.6	**29424EX**
236.4	181	56	75	41	81	195	255	3	141.5	143	22.3	**29426EX**
246	196	53.6	74.4	41	86	205	235	3	153	160	22.8	**29428EX**
264.4	207.5	58.5	80.8	44	92	220	250	3	163	169	27.8	**29430EX**
283.8	222	62.5	85.7	45	99	230	265	4	174.5	181	33.4	**29432EX**