



THRUST BEARING WITH FLAT SEAT

Thrust Needle Roller Bearing, Series AXK, AXW, AX TC, NTB

Thrust Parallel Roller Bearing, Series 811, 812, 893, 874, 894

The thrust needle roller bearing or thrust parallel roller bearing is such a manner that the needles (rollers) with cage are set up in the space between rollway and collar and the cage reliably guides and clamps a lot of rolling bodies. There is a little difference among the rolling bodies in the same set. The thrust needle roller bearing or thrust parallel roller bearing is the one only supporting the axial load in one direction. It is used as the bearing allocation having the good rigidity and axial small space.

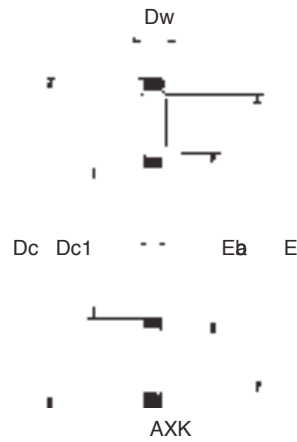
Thrust Collar, Shaft Ring and Seat Ring

Thrust Collar, Series AS, LS, GS, WS, ZS, TRA, TRB, TRC TRD.

Series AS thrust collar is punched with the high quality steel spring plate in thickness of 1mm and quenched and polished. When the surface of the adjacent parts can not be acted as rollway, although it has a good rigidity, Series AS collar shall play its full action.

Series GS, WS, LS thrust collars are made of bearing steel with the quenching process. The outer surface of GS seat ring and the inner surface of WS shaft ring are ground. Series LS thrust collar is an economic product with machining the outer and inter surfaces.

As for Series ZS thrust collar, when it is required for assembly to set up the bearing as bidirectional location, the series ZS collar can be used as axial location or seat hole location.

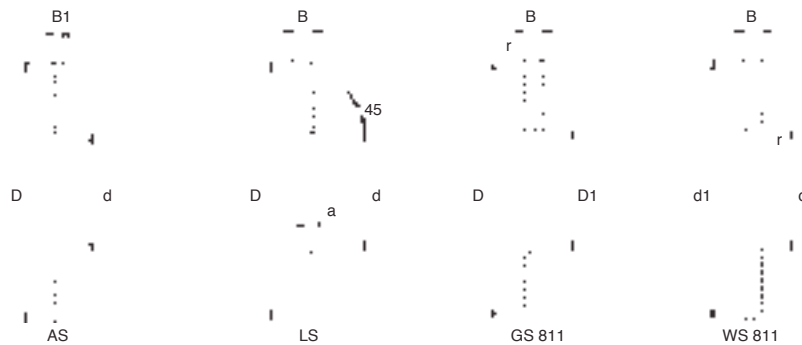


Shaft Diameter	Axial Needle Roller and Cage Assemblies		Thrust bearing washer					
	Code	Mass g	Bearing washer	Mass g	Shaft Ring	Seat Ring	Axial Bearing Washer	Mass g
4	AXK 0414TN	0.7	AS 0414	1	—	—	—	—
5	AXK 0515TN	0.8	AS 0515	1	—	—	—	—
6	AXK 0619TN	1	AS 0619	2	LS 0619	—	—	4
8	AXK 0821TN	2	AS 0821	2	LS 0821	—	—	4
10	AXK 1024	3	AS 1024	3	LS 1024	—	—	7
12	AXK 1226	3	AS 1226	3	LS 1226	—	—	8
15	AXK 1528	4	AS 1528	3	LS 1528	GS 81102	WS 81102	9
17	AXK 1730	4	AS 1730	4	LS 1730	GS 81103	WS 81103	9
20	AXK 2035	5	AS 2035	5	LS 2035	GS 81104	WS 81104	13
25	AXK 2542	7	AS 2542	7	LS 2542	GS 81105	WS 81105	19
30	AXK 3047	8	AS 3047	8	LS 3047	GS 81106	WS 81106	22
35	AXK 3552	10	AS 3552	9	LS 3552	GS 81107	WS 81107	29
40	AXK 4060	16	AS 4060	12	LS 4060	GS 81108	WS 81108	40
45	AXK 4565	18	AS 4565	13	LS 4565	GS 81109	WS 81109	50
50	AXK 5070	20	AS 5070	14	LS 5070	GS 81110	WS 81110	55
55	AXK 5578	28	AS 5578	18	LS 5578	GS 81111	WS 81111	88
60	AXK 6085	33	AS 6085	22	LS 6085	GS 81112	WS 81112	97
65	AXK 6590	35	AS 6590	24	LS 6590	GS 81113	WS 81113	115
70	AXK 7095	60	AS 7095	25	LS 7095	GS 81114	WS 81114	123
75	AXK 75100	61	AS 75100	27	LS 75100	GS 81115	WS 81115	142
80	AXK 80105	63	AS 80105	28	LS 80105	GS 81116	WS 81116	151
85	AXK 85110	67	AS 85100	29	LS 85110	GS 81117	WS 81117	159
90	AXK 90120	86	AS 90120	39	LS 90120	GS 81118	WS 81118	234
100	AXK 100135	104	AS 100135	50	LS 100135	GS 81120	WS 81120	350
110	AXK 110145	122	AS 110145	55	LS 110145	GS 81122	WS 81122	385
120	AXK 120155	131	AS 120155	59	LS 120155	GS 81124	WS 81124	415
130	AXK 130170	205	AS 130170	65	LS 130170	GS 81126	WS 81126	663
140	AXK 140180	219	AS 140180	79	LS 140180	GS 81128	WS 81128	749
150	AXK 150190	232	AS 150190	84	LS 150190	GS 81130	WS 81130	796
160	AXK 160200	246	AS 160200	89	LS 160200	GS 81132	WS 81132	842



THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES

LRT LRB



Dimension								Track size		KN		Limiting speed r/min
Dcl d	D1	Dc D	d1	Dw	B1	B r min	a	Eb	Ea	C	CO	
4	—	14	—	2	1	—	—	5	13	4.4	8	21000
5	—	15	—	2	1	—	—	6	14	4.75	9.2	21000
6	—	19	—	2	1	2.75	0.3	7	18	6.8	15.5	19000
8	—	21	—	2	1	2.75	0.3	9	20	7.8	19.4	18000
10	—	24	—	2	1	2.75	0.3	12	23	9.2	25.5	17000
12	—	26	—	2	1	2.75	0.3	14	25	9.9	29	15000
15	16	28	28	2	1	2.75	0.3	17	27	11.3	36	13000
17	18	30	30	2	1	2.75	0.3	19	29	11.9	39.5	12000
20	21	35	35	2	1	2.75	0.3	22	34	13.1	46.5	10000
25	26	42	42	2	1	3	0.6	29	41	14.7	58	8500
30	32	47	47	2	1	3	0.6	34	46	16.3	70	7500
35	37	52	52	2	1	3.5	0.6	39	51	17.8	81	6500
40	42	60	60	3	1	3.5	0.6	45	58	28	114	6000
45	47	65	65	3	1	4	0.6	50	63	30	128	5000
50	52	70	70	3	1	4	0.6	55	68	32	143	4800
55	57	78	78	3	1	5	0.6	60	76	38	186	4300
60	62	85	85	3	1	4.75	1	65	83	44.5	234	4000
65	67	90	90	3	1	5.25	1	70	88	46.5	255	3700
70	72	95	95	4	1	5.25	1	74	93	54	255	3500
75	77	100	100	4	1	5.75	1	79	98	55	265	3300
80	82	105	105	4	1	5.75	1	84	103	56	280	3100
85	87	110	110	4	1	5.75	1	89	108	58	290	3000
90	92	120	120	4	1	6.5	1	94	118	73	405	2700
100	102	135	135	4	1	7	1	105	133	91	560	2500
110	112	145	145	4	1	7	1	115	143	97	620	2300
120	122	155	155	4	1	7	1	125	153	102	680	2100
130	132	170	170	5	1	9	1	136	167	133	840	1900
140	142	180	178	5	1	9.5	1	146	177	138	900	1800
150	152	190	188	5	1	9.5	1	156	187	143	960	1700
160	162	200	198	5	1	9.5	1	166	197	145	1020	1600



Shaft Diameter	Bearing Designation	Mass	Dimension					Track size		Basic Load Rating		Limiting Speed r/min
			Dc1	D1	D	B	B1	Eb	Ea	C	Co	
mm		g								KN		
10	AXW10	8.3	10	14	27	3.2	3	12	23	9.2	25.5	16000
12	AXW12	9.1	12	16	29	3.2	3	14	25	9.9	29	14000
15	AXW15	10	10	15	21	3.2	3.5	17	27	11.3	36	13000
17	AXW17	11	17	23	33	3.2	3.5	19	29	11.9	39.5	12000
20	AXW20	14	20	26	38	3.2	3.5	22	34	13.1	46.5	10000
25	AXW25	20	25	32	45	3.2	4	29	41	14.7	58	8000
30	AXW30	22	30	37	50	3.2	4	34	46	16.3	70	7000
35	AXW35	27	35	42	55	3.2	4	39	51	17.8	81	6500
40	AXW40	39	40	47	63	4.2	4	45	58	28	114	5500
45	AXW45	43	45	52	68	4.2	4	50	63	30	128	5000
50	AXW50	49	50	58	73	4.2	4.5	55	68	32	143	4700

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES

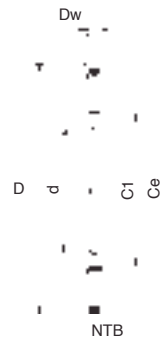
AS WS811 LS

AS

LS

WS 811

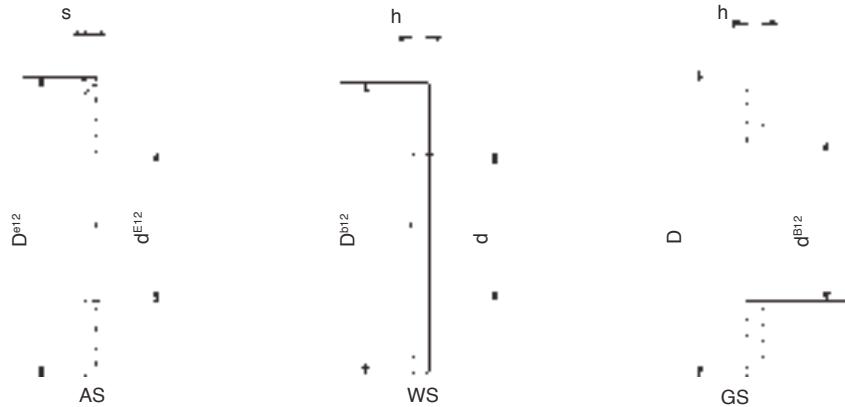
Bearing washer and bearing suitable for combination							
AS	LS	WS811	HK	HK···RS	BK	NK NKS RNA49 RNA69	NKI NKIS NA49 NA69
AS1024	LS1024	—	HK1010, HK1012	—	BK1010, BK1012	NK7/10TN	—
—	—	—	HK1015	—	BK1015	NK7/12TN	—
AS1226	LS1226	—	HK1210	—	BK1210	NK9/12TN	NKI6/12TN
—	—	—	—	—	—	NK9/16TN	NKI6/16TN
AS1528	LS1528	WS81102	HK1512, HK1516	HK1514RS	BK1512, BK1516	—	—
—	—	—	HK1522	—	—	—	—
AS1730	LS1730	WS81103	HK1712	—	—	NK15/16, NK15/20	—
AS2035	LS2035	WS81104	HK2012, HK2016	HK2018RS	BK2016	NK18/16, NK18/20	—
—	—	—	HK2020	—	BK2020	—	—
—	—	—	HK2030	—	—	—	—
AS2542	LS2542	WS81105	HK2512, HK2516	HK2518RS	—	NK24/16, NK24/20	NKI20/16
—	—	—	HK2520, HK2526	—	BK2520, BK2526	NKS20	NKI20/20
—	—	—	HK2538	—	BK2538	—	—
AS3047	LS3047	WS81106	HK3012, HK3016	HK3018RS	BK3012, BK3016	NK28/20, NK28/30	NA4904
—	—	—	HK3020, HK3026	—	BK3020, BK3026	NKS24	NA6904
—	—	—	HK3038	—	BK3038	RNA4904, RNA6904	—
AS3552	LS3552	WS81107	HK3512, HK3516	HK3518RS	—	NK32/20, NK32/30	NKIS20, NA4905
—	—	—	HK3520	—	BK3520	NKS28	NA6905
—	—	—	—	—	—	RNA4905, RNA6905	NKI28/20, NKI28/30
AS4060	LS4060	WS81108	HK4012, HK4016	HK4018RS	—	NK37/20, NK37/30	NKIS25, NA4906
—	—	—	HK4020	—	BK4020	NKS32	NA6906
—	—	—	—	—	—	RNA4906, RNA6906	NKI32/20
—	—	—	—	—	—	—	NKI32/30
AS4565	LS4565	WS81109	HK4516, HK4520	HK4518RS	BK4520	NK42/20, NK42/30	NKIS30
—	—	—	—	—	—	NKS37	NA49/32
—	—	—	—	—	—	RNA49/30, RNA69/32	NA69/32
AS5070	LS5070	WS81110	HK5020, HK5025	HK5022RS	—	NKS43	NKIS35



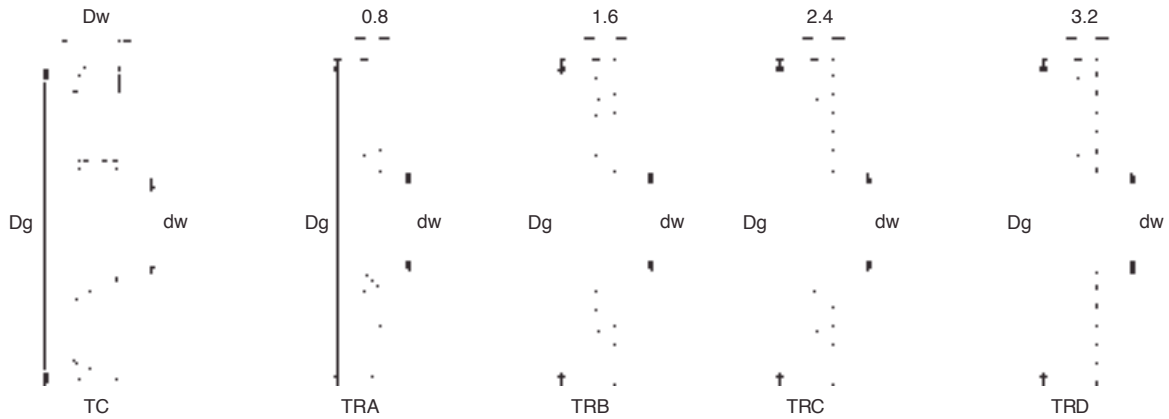
Shaft Diameter	Axial Needle Roller and Cage Assemblies						
	Axial Needle Roller and Cage Assemblies	Mass g	Thrust Sheet	Mass g	Shaft Ring	Seat Ring	Mass g
mm							
10	NTB 1024	3.3	AS 1024	2.9	WS1024	GS1024	8
12	NTB 1226	3.8	AS 1226	3.2	WS1226	GS1226	8.9
15	NTB 1528	4.1	AS 1528	3.4	WS1528	GS1528	9.3
16	NTB 1629	4.3	AS 1629	3.6	WS1629	GS1629	9.8
17	NTB 1730	4.5	AS 1730	3.7	WS1730	GS1730	10.2
18	NTB 1831	4.7	AS 1831	3.9	WS1831	GS1831	10.7
20	NTB 2035	6.1	AS 2035	5	WS2035	GS2035	13.8
25	NTB 2542	8.2	AS 2542	6.9	WS2542	GS2542	21
30	NTB 3047	9.4	AS 3047	7.9	WS3047	GS3047	24
35	NTB 3552	10.6	AS 3552	8.9	WS3552	GS3552	31.5
40	NTB 4060	22	AS 40603	12.1	WS4060	GS4060	42.5
45	NTB 4565	24.5	AS 4565	13.3	WS4565	GS4565	53.5
50	NTB 5070	26.5	AS 5070	14.5	WS5070	GS5070	58.5
55	NTB 5578	33.5	AS 5578	18.5	WS5578	GS5578	93
60	NTB 6085	38.5	AS 6085	22	WS6085	GS6085	105
65	NTB 6590	41.5	AS 6590	23.5	WS6590	GS6590	124
70	NTB 7095	61	AS 7090	25	WS7095	GS7095	132
75	NTB 75100	65	AS 75100	26.5	WS75100	GS75100	153
80	NTB 80105	68.5	AS 80105	28	WS80105	GS80105	162
85	NTB 85110	72	AS 85110	29.5	WS85110	GS85110	170
90	NTB 90120	92	AS 90120	38	WS90120	GS90120	250
100	NTB 100135	119	AS 100135	50	WS110135	GS100135	350
110	NTB 110145	129	AS 110145		WS110145	GS110145	380
120	NTB 120155	139	AS 120155		WS120155	GS120155	410
130	NTB 130170	225	AS 130170		WS130170	GS130170	660

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES

AS WS
GS



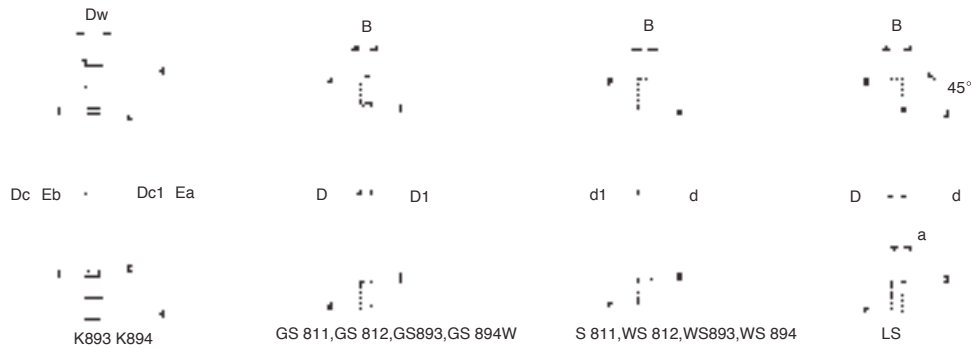
Dimension								Basicload Rating		Limiting Speed r/min
d	D	Dw	s	h	Rs (1)	Ci	Ce	c kgf	co kgf	
10	24	2	1	2.75	0.3	14	22	800	2440	15000
12	26	2	1	2.75	0.3	16	24	850	2750	13000
15	28	2	1	2.75	0.3	18	26	900	3050	12000
16	29	2	1	2.75	0.3	19	27	920	3200	11000
17	30	2	1	2.75	0.3	20	28	950	3360	11000
18	31	2	1	2.75	0.3	21	29	970	3510	10000
20	35	2	1	2.75	0.3	23	33	1200	4740	9000
25	42	2	1	3	0.6	29	40	1470	6600	7500
30	47	2	1	3	0.6	34	45	1570	7470	6500
35	52	2	1	3.5	0.6	39	50	1670	8350	5500
40	60	3	1	3.5	0.6	45	57	2470	11000	5000
45	65	3	1	4	0.6	50	62	2640	12400	4500
50	70	3	1	4	0.6	55	67	2810	13700	4000
55	78	3	1	5	0.6	61	75	3300	17500	4000
60	85	3	1	4.75	1	66	82	3900	22300	3500
65	90	3	1	5.25	1	71	87	4090	24100	3000
70	95	4	1	5.25	1	75	91	4830	24900	3000
75	100	4	1	5.75	1	80	96	4930	26100	3000
80	105	4	1	5.75	1	85	101	5050	27200	2500
85	110	4	1	5.75	1	90	106	5130	28400	2500
90	120	4	1	6.5	1	96	116	6570	40100	2500
100	135	4	1	7	1	107	131	8190	55200	2000
110	145	4		7	1	117	141	8480	59000	2000
120	155	4		7	1	127	151	8960	64700	1800
130	170	5		9	1	137	165	12300	85500	1700



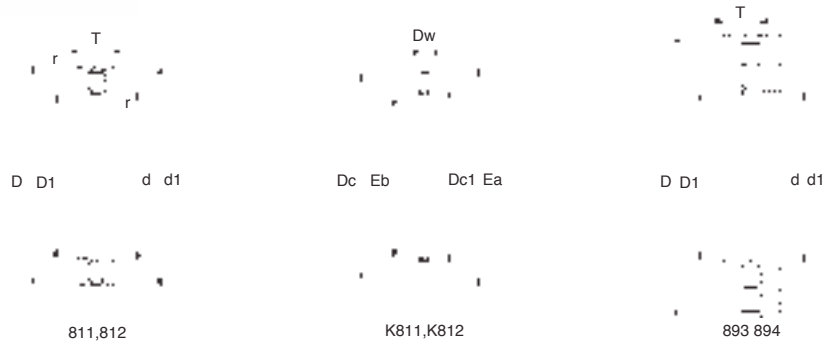
Shaft Diameter	Bearing Designation	Boundary Dimensions						Basic Load Rating		Limiting Speed	TRA TRB TRC TRD
		dw/d		Dg/D		Dw		Dynamic	Static		
		inch	mm	inch	mm	inch	mm	N		rpm	
1/4	TC411	0.250	6.35	0.687	17.45	0.0781	1.984	1370	3000	16000	411
5/16	TC512	0.312	7.49	0.750	19.05	0.0781	1.984	1560	3650	15000	512
3/8	TC613	0.375	9.52	0.812	20.62	0.0781	1.984	1620	4000	15000	613
1/2	TC815	0.500	12.70	0.937	23.80	0.0781	1.984	1920	5300	13000	815
5/8	TC1018	0.625	15.88	1.125	28.58	0.0781	1.984	2170	6600	11000	1018
3/4	TC1220	0.750	19.05	1.250	31.75	0.0781	1.984	2410	8000	9500	1220
7/8	TC1423	0.875	22.22	1.437	36.50	0.0781	1.984	2900	10500	8500	1423
	TC1427	0.875	22.22	1.687	42.85	0.0781	1.984	4400	18600	7500	1427
1	TC1525	1.000	25.40	1.562	39.67	0.0781	1.984	3150	12100	7500	1525
1 1/8	TC1828	1.125	28.58	1.750	44.45	0.0781	1.984	3850	16300	6500	1828
1 3/16	TC1931	1.188	30.16	1.937	49.20	0.0781	1.984	4500	20500	6000	1931
1 1/4	TC2013	1.250	31.75	1.937	49.20	0.0781	1.984	4500	20500	6000	2013
1 3/8	TC2233	1.375	34.92	2.062	52.37	0.0781	1.984	4600	21600	5500	2233
1 1/2	TC2435	1.500	38.10	2.187	55.55	0.0781	1.984	4850	23700	5000	2435
1 3/4	TC2840	1.750	44.45	2.500	63.50	0.0781	1.984	5600	30000	4500	2840
2	TC3244	2.000	50.80	2.750	69.85	0.0781	1.984	5800	32500	4000	3244
2 1/4	TC3648	2.250	57.15	3.000	76.20	0.0781	1.984	6000	35000	3600	3648
2 1/2	TC4052	2.500	63.50	3.250	82.55	0.0781	1.984	6200	37500	3300	4052
3	TC4860	3.000	76.20	3.750	95.25	0.0781	1.984	6600	42500	2800	4860
3 1/4	TC5266	3.250	82.55	4.125	104.78	0.1250	3.175	10900	61000	2600	5266
4 1/8	TC6681	4.125	104.78	6.062	128.57	0.1250	3.175	14200	92000	2100	6681

THRUST CYLINDRICAL ROLLER BEARINGS

K893 K894 GS811 S811 LS



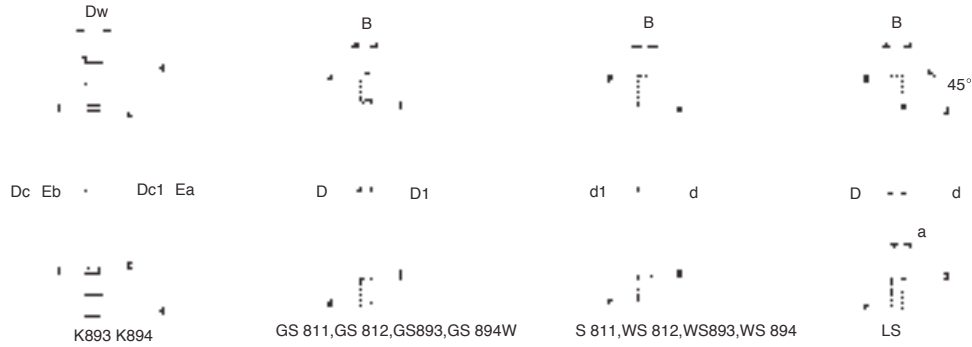
Dimension								Track size		Basic Load Rating		Limiting Speed r/min
Dcl d	D1	Dc D	d1	T	Dw	B	a r mm	Eb	Ea	Cr	Cor	
										KN		
15	16	28	28	9	3.5	2.75	0.3	16	27	14.4	28.5	13000
17	18	30	30	9	3.5	2.75	0.3	18	29	15.9	33.5	12000
20	21	35	35	10	4.5	2.75	0.3	21	34	24.9	53	10000
25	26	42	42	11	5	3	0.6	26	41	33.5	76	8500
30	32	47	47	11	5	3	0.6	31	46	35.5	86	7500
30	32	52	52	16	7.5	4.25	0.6	31	50	64	141	7000
30	32	60	60	18	5.5	6.25	1	33	59	69	197	6500
35	37	52	52	12	5	3.5	0.6	36	51	39	101	6500
35	37	62	62	18	7.5	5.25	1	39	58	80	199	6000
35	37	68	68	20	6	7	1	38	67	80	237	5500
40	42	60	60	13	6	3.5	0.6	42	58	56	148	6000
40	42	68	68	19	9	5	1	43	66	107	265	5500
40	42	78	78	22	7	7.5	1	44	77	122	385	4900
45	47	65	65	14	6	4	0.6	47	63	59	163	5000
45	47	73	73	20	9	5.5	1	48	70	105	265	4900
45	47	85	85	24	7.5	8.25	1	49	83	139	445	4400
50	52	70	70	14	6	4	0.6	52	68	61	177	4800
50	52	78	78	22	9	6.5	1	53	75	117	315	4500
50	52	95	95	27	8	9.5	1.1	56	92	167	560	4000
55	57	78	78	16	6	5	0.6	57	77	90	300	4300
55	57	90	90	25	11	7	1	59	85	154	405	4000
55	57	105	105	30	9	10.5	1.1	61	103	184	600	3600
60	62	85	85	17	7.5	4.75	1	62	82	103	315	4000
60	62	95	95	26	11	7.5	1	64	91	172	480	3700
60	62	110	110	30	9	10.5	1.1	66	108	196	670	3400
60	62	130	130	42	14	14	1.5	65	126	390	1220	3000
65	67	90	90	18	7.5	5.25	1	67	87	107	340	3700
65	67	100	100	27	11	8	1	69	96	177	500	3500
65	67	115	115	30	9	10.5	1.1	71	113	194	670	3200
65	68	140	140	45	15	15	2	70	135	445	1410	2800
70	72	95	95	18	7.5	5.25	1	72	92	111	365	3500
70	72	105	105	27	11	8	1	74	102	187	550	3300
70	72	125	125	34	10	12	1.1	76	123	239	830	3000
70	73	150	150	48	16	16	2	76	147	475	1500	2600
75	77	100	100	19	7.5	5.75	1	78	97	107	350	3300
75	77	110	110	27	11	8	1	79	106	172	500	3100
75	77	135	135	36	11	12.5	1.5	81	132	285	1010	2700
75	78	160	160	51	17	17	2	82	153	500	1580	2500
80	82	105	105	19	7.5	5.75	1	83	102	106	350	3100



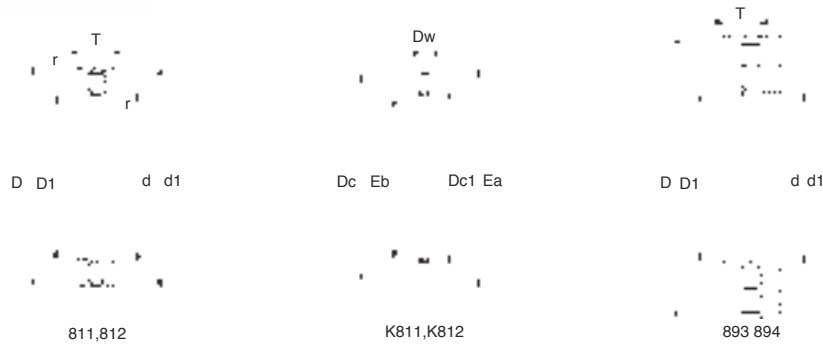
Shaft Diameter	Thrust cylindrical roller bearing		thrust cylindrical roller bearing and retainer assembly		Thrust bearing washer			
	Code	Mass Kg	Code	Mass Kg	Seat Ring	Bearing Ring	bearing washer	Mass Kg
80	81216 TN	0.9	K812 16 TN	0.234	GS812 16	WS812 16		0.333
	89316 TN	2.37	K893 16 TN	0.42	GS893 16	WS893 16		1.02
	89416	7.04	K894 16	2.04	GS894 16	WS894 16		2.5
85	81117 TN	0.42	K811 17 TN	0.118	GS811 17	WS811 17	LS85110	0.151
	81217 TN	1.26	K812 17 TN	0.28	GS812 17	WS812 17		0.49
	89317	3	K893 17	0.54	GS893 17	WS893 17		1.23
	89417	8.65	K894 17	2.71	GS894 17	WS894 17		2.97
90	81118 TN	0.62	K811 18 TN	0.15	GS811 18	WS811 18	LS90120	0.225
	81218 TN	1.77	K812 18 TN	0.542	GS812 18	WS812 18		0.614
	89318	3.28	K893 18	0.62	GS893 18	WS893 18		1.33
	89418	9.94	K894 18	3.04	GS894 18	WS894 18		3.45
100	81120 TN	0.95	K811 20 TN	0.25	GS811 20	WS811 20	LS100135	0.35
	81220 TN	2.2	K812 20 TN	0.6	GS812 20	WS812 20		0.8
	89320	4.19	K893 20	0.81	GS893 20	WS893 20		1.69
	89420	13.42	K894 20	3.92	GS894 20	WS894 20		4.75
110	811 22 TN	1.04	K811 22TN	0.27	GS811 22	WS811 22	LS110145	0.385
	812 22 TN	2.29	K812 22TN	0.53	GS812 22	WS812 22		0.88
	893 22	6.55	K893 22	1.67	GS893 22	WS893 22		2.44
	894 22	17.41	K894 22	5.11	GS894 22	WS894 22		6.15
120	811 24TN	1.12	K811 24TN	0.29	GS811 24	WS811 24	LS120155	0.415
	812 24TN	2.54	K812 24TN	0.58	GS812 24	WS812 24		0.98
	893 24	9.24	K893 24	2.44	GS893 24	WS893 24		3.4
	894 24	21.77	K894 24	6.37	GS894 24	WS894 24		7.7
130	811 26TN	1.67	K811 26TN	0.38	GS811 26	WS811 26	LS130170	0.643
	812 26TN	3.98	K812 26TN	0.92	GS812 26	WS812 26		1.53
	893 26	10	K893 26	1.91	GS893 26	WS893 26		4.045
	894 26	26.96	K894 26	7.96	GS894 26	WS894 26		9.5
140	811 28TN	1.9	K811 28TN	0.4	GS811 28	WS811 28	LS140180	0.749
	812 28	4.567	K812 28	1.197	GS812 28	WS812 28		1.634
	893 28	11.99	K893 28	2.39	GS893 28	WS893 28		4.8
	894 28	29.7	894 28	8.54	GS894 28	WS894 28		10.6
150	811 30TN	2.2	K811 30TN	0.43	GS811 30	WS811 30	LS150190	0.796
	812 30	5.886	K812 30	1.52	GS812 30	WS812 30		2.18
	893 30	12.63	K893 30	2.51	GS893 30	WS893 30		5.06
	894 30	35.36	K894 30	10.36	GS894 30	WS894 30		12.5
160	811 32TN	2.12	K811 32TN	0.44	GS811 32	WS811 32	LS160200	0.842
	812 32	7.96	K812 32	3.36	GS812 32	WS812 32		2.3
	894 32	42	K894 32	12.42	GS894 32	WS894 32		14.8
170	811 34TN	2.41	K811 34TN	0.66	GS811 34	WS811 34		1.1

THRUST CYLINDRICAL ROLLER BEARINGS

K893 K894 GS811 S811 LS



Dimension								Track size		Basic Load Rating		Limiting Speed r/min
Dc1 d	D1	Dc D	d1	T	Dw	B	A r	Eb	Ea	Cr kN	Cor kN	
80	82	115	115	28	11	8.5	1	84	112	201	630	3000
80	82	140	140	36	11	12.5	1.5	86	137	305	1110	2600
80	83	170	170	54	18	18	2.1	88	165	560	1770	2300
85	87	110	110	19	7.5	5.75	1	87	108	112	385	3000
85	88	125	125	31	12	9.5	1	90	119	217	660	2700
85	88	150	150	39	12	13.5	1.5	93	147	325	1140	2500
85	88	180	180	58	19	19.5	2.1	93	175	620	1980	2200
90	92	120	120	22	9	6.5	1	93	117	141	465	2700
90	93	135	135	35	14	10.5	1.1	95	129	290	890	2600
90	93	155	155	39	12	13.5	1.5	98	152	335	1200	2400
90	93	190	190	60	20	20	2.1	99	185	680	2200	2100
100	102	135	135	25	11	7	1	104	131	199	650	2500
100	103	150	150	38	15	11.5	1.1	107	142	340	1080	2300
100	103	170	170	42	13	14.5	1.5	107	167	380	1400	2100
100	103	210	210	67	22	22.5	3	111	205	850	2850	1900
110	112	145	145	25	11	7	1	114	141	207	700	2300
110	113	160	160	38	15	11.5	1.1	117	152	325	1030	2100
110	113	190	190	48	15	16.5	2	120	186	500	1870	1900
110	113	230	30	73	24	24.5	3	121	223	1000	3400	1700
120	122	155	155	25	11	7	1	124	151	214	760	2100
120	123	170	170	39	15	12	1.1	127	162	340	1120	2000
120	123	210	210	54	17	18.5	2.1	130	206	640	2420	1700
120	123	250	250	78	26	26	4	133	243	1170	4000	1600
130	132	170	170	30	12	9	1	135	165	250	900	1900
130	133	190	187	45	19	13	1.5	137	181	480	1520	1800
130	134	225	225	58	18	20	2.1	141	220	710	2700	1600
130	134	270	270	85	28	28.5	4	145	263	1330	4600	1400
140	142	180	178	31	12	9.5	1	145	175	260	960	1800
140	143	200	197	46	19	13.5	1.5	147	191	455	1450	1700
140	144	240	240	60	19	20.5	2.1	152	235	820	3200	1500
140	144	280	280	85	28	28.5	4	155	273	1390	4950	1400
150	152	190	188	31	12	9.5	1	155	185	270	1020	1700
150	153	215	212	50	21	14.5	1.5	158	211	590	1940	1600
150	154	250	250	60	19	20.5	2.1	162	245	840	3350	1400
150	154	300	300	90	30	30	4	167	293	1570	5700	1300
160	162	200	198	31	12	9.5	1	165	195	270	1050	1600
160	163	225	222	51	21	15	1.5	168	220	600	2030	1500
160	164	320	320	95	32	31.5	5	179	313	1780	6500	1200
170	172	215	213	34	14	10	1.1	176	209	360	1380	1500



Shaft Diameter	Thrust cylindrical roller bearing		thrust cylindrical roller bearing and retainer assembly		Thrust bearing washer			
	Code	Mass Kg	Code	Mass Kg	Seat Ring	Bearing Ring	Bearing washer	Mass Kg
170	812 34	7.69	K812 34	1.89	GS812 34	WS812 34		2.9
	894 34	51.87	K894 34	14.87	GS894 34	WS894 34		18.5
180	811 36	3.04	K811 36	0.8	GS811 36	WS811 36		1.1
	812 36	8.24	K812 36	1.98	GS812 36	WS812 36		3.13
	894 36	60.19	K894 36	17.59	GS894 36	WS894 36		21.3
190	811 38	3.84	K811 38	0.94	GS811 38	WS811 38		1.45
	812 38	10.4	K812 38/	2.73	GS812 38	WS812 38		3.835
	894 38	65.7	K894 38	14.5	GS894 38	WS894 38		25.6
200	811 40	4	K811 40	0.98	GS811 40	WS811 40		1.51
	812 40	11.91	K812 40	3.09	GS812 40	WS812 40		4.41
	894 40	74.8	K894 40	16.2	GS894 40	WS894 40		29.3
220	811 44	4.5	K811 44	1.32	GS811 44	WS811 44		1.59
	812 44	12.85	K812 44	3.35	GS812 44	WS812 44		4.75
	894 44	84.4	K894 44	20	GS894 44	WS894 44		32.2
240	811 48	7.25	K811 48	2.11	GS811 48	WS811 48		2.57
	812 48	21.95	K812 48	5.65	GS812 48	WS812 48		8.15
	894 48	87.8	K894 48	19.2	GS894 48	WS894 48		34.3
260	811 52	7.83	K811 52	2.3	GS811 52	WS811 52		2.765
	812 52	23.9	K812 52	6.1	GS812 52	WS812 52		8.9
	894 52	114	K894 52	25.5	GS894 52	WS894 52		44.25
280	811 56	10.3	K811 56	3	GS811 56	WS811 56		3.65
	812 56	25.9	K812 56	6.4	GS812 56	WS812 56		9.75
	894 56	142	K894 56	30.8	GS894 56	WS894 56		55.6
300	811 60	16.67	K811 60	4.83	GS811 60	WS811 60		5.92
	812 60	40.55	K812 60	10.15	GS812 60	WS812 60		15.2
	894 60	153	K894 60	32.7	GS894 60	WS894 60		60.15
320	811 64	17.82	K811 64	5.12	GS811 64	WS811 64		6.35
	894 64	193	K894 64	70	GS894 64	WS894 64		61.5

THRUST CYLINDRICAL ROLLER BEARINGS

K893 K894 GS811 S811 LS



Dimension								Track size		Basic Load Rating		Limiting Speed r/min
Dcl d	D1	Dc D	d1	T	Dw	B	A r	Eb	Ea	Cr kN	Cor kN	
170	173	240	237	55	22	16.5	1.5	180	235	680	2340	1400
170	174	340	340	103	34	34.5	5	191	233	1990	7400	1100
180	183	225	222	34	14	10	1.1	185	219	340	1300	1400
180	183	250	247	56	22	17	1.5	190	245	690	2440	1300
180	184	360	360	109	3	36.5	5	200	351	2210	8200	1100
190	193	240	237	37	15	11	1.1	197	233	385	1500	1300
190	194	270	267	62	26	18	2	200	265	880	3000	1300
190	195	380	380	115	38	38.5	5	214	373	2450	9200	1000
200	203	250	247	37	15	11	1.1	206	243	390	1550	1300
200	204	280	277	62	26	18	2	210	275	900	3150	1200
200	205	400	400	122	40	41	5	226	393	2700	10200	950
220	223	270	267	37	15	11	1.1	226	263	420	1730	1200
220	224	300	297	63	26	18.5	2	230	296	940	3450	1100
220	225	420	420	122	40	41	6	244	411	2900	11500	900
240	243	300	297	45	18	13.5	1.5	248	296	600	2500	1100
240	244	340	335	78	32	23	2.1	261	335	1370	5000	1000
240	245	440	440	122	40	41	6	266	433	3000	12200	850
260	263	320	317	45	18	13.5	1.5	268	316	620	2650	1000
260	264	360	355	79	32	23.5	2.1	280	353	1440	5400	950
260	265	480	480	132	44	44	6	288	472	3600	14700	800
280	283	350	347	53	22	15.5	4.5	288	346	860	3650	900
280	284	380	375	80	32	24	2.1	300	373	1460	5600	850
280	285	520	520	145	48	48.5	6	311	512	4200	17600	700
300	304	380	376	62	25	18.5	2	315	373	1060	4500	850
300	304	420	415	95	38	28.5	3	328	413	1930	7300	800
300	305	540	540	145	48	48.5	6	331	533	4350	18500	700
320	324	400	396	63	25	19	2	334	394	1100	4750	800
320	325	580	575	155	68	43.5	6	340	573	5500	19900	550