

Thrust Needle Roller Bearings AX, AXW Series

Thrust Cylindrical Roller Bearings 811, 812, 893, 874, 894 Series

Thrust needle and retainer assembly are composed of a set of tray ring gaskets combined with retainer with roll bearings (needles). The stand leads and holds many rolling elements (only very tiny differences among the elements in the same group). The thrust needle bearings or Thrust cylindrical roller bearings can support the bearings with the axial directional load and so they can be used as the bearings with good rigidity and minimum axial occupied spaces. If the surface of the adjacent parts can be used as a tray for the rolling needles and the holding stand assembly, configuration of bearings can be very compacted. In case this disposition can not be realized, AS series tray assembly should be recommended when the support space is big enough so that a small axial cross sectional altitude can be achieved. Same effectiveness can be ensured in different cases when combined with the relatively thicker ring gaskets of LS, GS, WS, ZS series. The applicable gaskets series of AS, LS, GS, WS, ZS are optional and will be ordered separately by the buyers.

Thrust Washers AS, LS, GS, WS, ZS Series

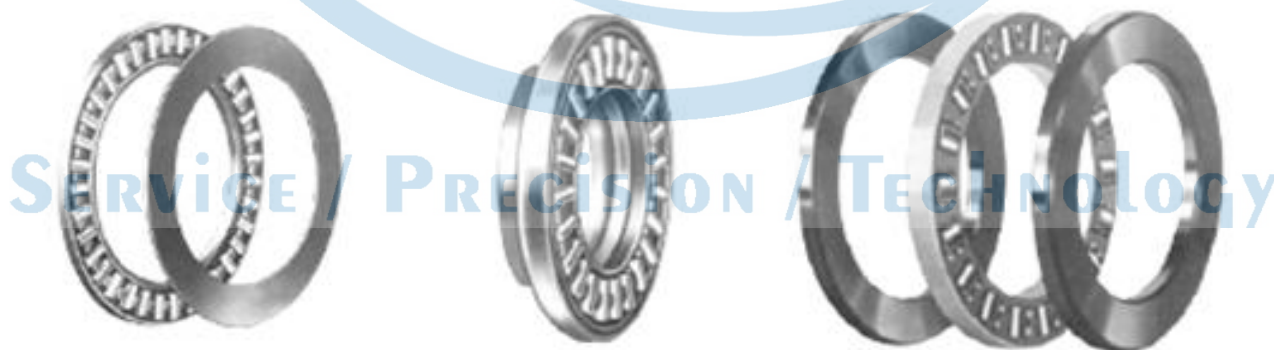
1mm thick thrust washer model AS is made of quality spring steel through pressing, it will be most suitable for the surface of the adjacent part when it is not rigid enough for trays.

Thrust washer model GS, WS, LS are made of bearing steel through quenching. The outer surface of housing ring and the inner surface of blowout patch are made through grinding while the outer and inner surface of model LS are economically turned. The middle ZS series can be positioned axially or as per housing holes.

Thrust washer model ZS series are allocated as bidirectional positioning bearings, we will provide the ZS middle series,

Related Designing

The bearing case and its axial support must keep straight to the rotary axis, the support of the bearing gaskets in the whole tray must be reliable. The sizes of Ea, Eb must be verified carefully when AS series gaskets are used so that the gaskets are fully supported. The hardness of the related trays should be HRC58-64 and the roughness Ra0.4um when independent gaskets are not used. The bearing capacity and the life will be apparently reduced when the related technical data can be reached.



Thrust needle roller bearings AXK
Thrust washers AS

Axial needle roller bearings AXW
Thrust gaskets with fixed
centering sheath

Thrust cylindrical roller
bearings 811, 812

Description		Shaft tolerance	Hole tolerance
Thrust needle bearing AXK	Shaft Leads	h8	-
Thrust cylindrical roller bearing K 811, K 812, K 893, K 874, K 894	Shaft Leads	h8	-
	Housing leads	-	H11
Housing ring(locating) GS 811,GS 812		-	H7 (HS)
Shaft ring(locating) WS 811,WS 812,		h6(h8)	-
ZS	Shaft locating	h6(h8)	
	Housing Locating	-	-
LS AS	Housing ring	Shaft unlimited	H7 (HS)
	Shaft ring	h10	H11 Bore unlimited

Bearing part	Series	ID	Tolerance	OD	Tolerance	L	Tolerance
Thrust bearing and retainer assembly	AXK	Dc1	E10	Dc	c21	Dw	
Thrust bearing	AXW	Dc1	E10	-	-	B	-0.2mm
Thrust cylindrical bearing and retainer assembly	K811,K812	Dc1	E11	Dc	a13	Dw	
Seat ring(locating)	GS811,812	D	-	D	Follow DIN620	B	h11
Shaft ring(locating)	WS811,812	d	Follow DIN620		-	B	
Middle ring		d		D		B	
	ZS		Follow DIN	d	Follow DIN		
Bearing washer		d	620	D	620	B	
Thrust washer	LS	d	E12	D	a12	B1	±
	AS						0.05mm
			E12		e12		

Special requirements

SPT Bearing would recommend our customers to select the standard products. When the standard dimensions can not be satisfied, we can also accept orders with special dimensions from the customers if the orders are economically reasonable.

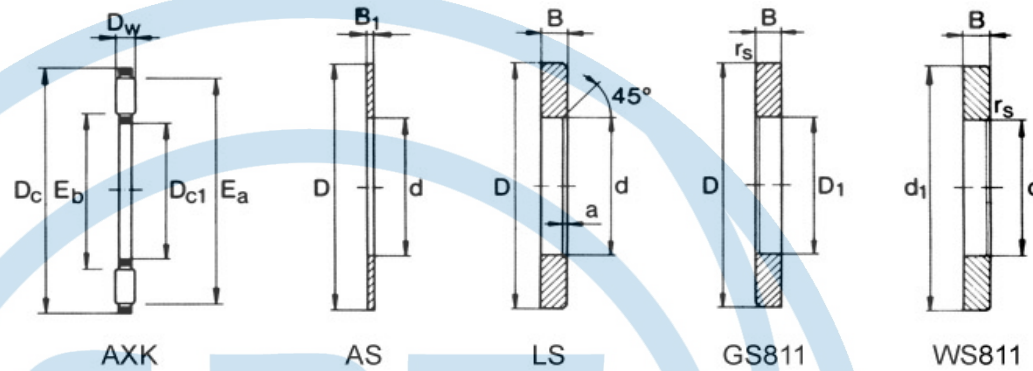
At the same time we would supply our products with BS standards.

Thrust Roller Bearings and Thrust Washers



Axial Needle Roller and Cage Assemblies
Series AXK

Axial bearing washers
Series AS, LS, GS 811, WS 811



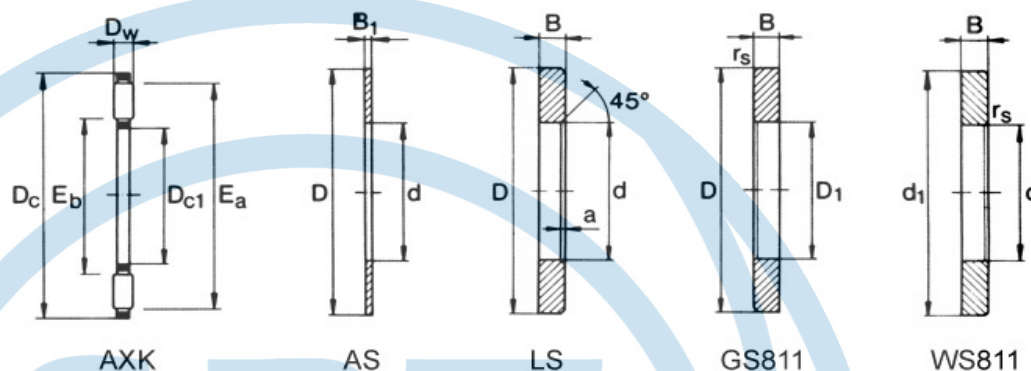
Shaft Diameter (mm)	Bearing Designation	Mass (g)	Thrust washers	Mass (g)	Bearing washers	Housing washers	Shaft washers	Mass (g)	Dimensions (mm)							Basic Load Rating		Limiting Speed Oil
									D_{C1}/d	D_1	D_C / D	d_1	D_w	B_1	B	Dyn. C(N)	Stat. Co(N)	
4	AXK 0414 TN	0.8	AS 0414	1	-	-	-		4		14		2	1		4300	7800	17500
5	AXK 0515 TN	0.9	AS 0515	1	-	-	-		5		15		2	1		4500	8900	15000
6	AXK 0619 TN	1.1	AS 0619	2	LS 0619	-	-	4	6		19		2	1	2.75	6500	14500	14000
8	AXK 0821 TN	2	AS 0821	2	LS 0821	-	-	4	8		21		2	1	2.75	7500	16500	13500
10	AXK 1024	3.1	AS 1024	3	LS 1024	-	-	7	10		24		2	1	2.75	9000	23000	13000
12	AXK 1226	3.1	AS 1226	3	LS 1226	-	-	8	12		26		2	1	2.75	9500	25000	12500
15	AXK 1528	4.1	AS 1528	3	LS 1528	GS 81102	WS 81102	9	15	16	28	28	2	1	2.75	11000	34000	10000
17	AXK 1730	4.4	AS 1730	4	LS 1730	GS 81103	WS 81103	9	17	18	30	30	2	1	2.75	11500	35000	9500
20	AXK 2035	5.2	AS 2035	5	LS 2035	GS 81104	WS 81104	13	20	21	35	35	2	1	2.75	12500	45000	7800
25	AXK 2542	7.2	AS 2542	7	LS 2542	GS 81105	WS 81105	19	25	26	42	42	2	1	3	13000	55000	6500
30	AXK 3047	8.2	AS 3047	8	LS 3047	GS 81106	WS 81106	22	30	32	47	47	2	1	3	15000	65000	5500
35	AXK 3552	10	AS 3552	9	LS 3552	GS 81107	WS 81107	29	35	37	52	52	2	1	3.5	15500	80000	4800
40	AXK 4060	16.2	AS 4060	12	LS 4060	GS 81108	WS 81108	40	40	42	60	60	3	1	3.5	25000	110000	4200
45	AXK 4565	18.2	AS 4565	13	LS 4565	GS 81109	WS 81109	50	45	47	65	65	3	1	4	28000	110000	3900
50	AXK 5070	20.5	AS 5070	14	LS 5070	GS 81110	WS 81110	55	50	52	70	70	3	1	4	32000	120000	3500
55	AXK 5578	28.5	AS 5578	18	LS 5578	GS 81111	WS 81111	88	55	57	78	78	3	1	5	35000	150000	3100

Thrust Roller Bearings and Thrust Washers



Axial Needle Roller and Cage Assemblies
Series AXK

Axial bearing washers
Series AS, LS, GS 811, WS 811



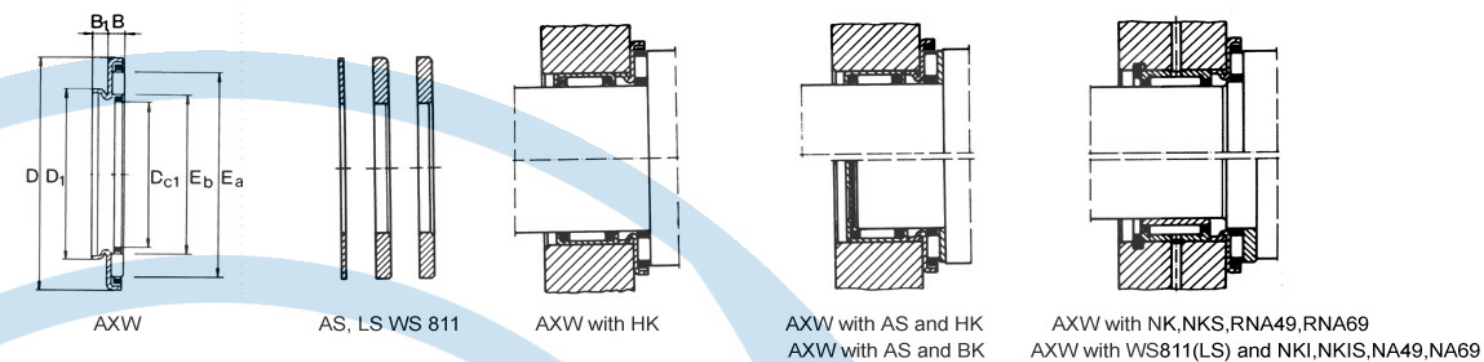
Shaft Diameter (mm)	Bearing Designation	Mass (g)	Thrust washers	Mass (g)	Bearing washers	Housing washers	Shaft washers	Mass (g)	Dimensions (mm)							Basic Load Rating		Limiting Speed Oil
									D_{C1}/d	D_1	D_C / D	d_1	D_w	B_1	B	Dyn. C(N)	Stat. Co(N)	
60	AXK 6085	33	AS 6085	22	LS 6085	GS 81112	WS 81112	97	60	62	85	85	3	1	4.75	42000	220000	3000
65	AXK 6590	35.5	AS 6590	24	LS 6590	GS 81113	WS 81113	115	65	67	90	90	3	1	5.25	45000	230000	2800
70	AXK 7095	60.5	AS 7095	25	LS 7095	GS 81114	WS 81114	123	70	72	95	95	4	1	5.25	52000	230000	2600
75	AXK 75100	62	AS 75100	27	LS 75100	GS 81115	WS 81115	142	75	77	100	100	4	1	5.75	52000	240000	2400
80	AXK 80105	64	AS 80105	28	LS 80105	GS 81116	WS 81116	151	80	82	105	105	4	1	5.75	55000	250000	2300
85	AXK 85110	68	AS 85110	29	LS 85110	GS 81117	WS 81117	159	85	87	110	110	4	1	5.75	56000	260000	2200
90	AXK 90120	87	AS 90120	39	LS 90120	GS 81118	WS 81118	234	90	92	120	120	4	1	6.5	72000	380000	2100
100	AXK 100135	106	AS 100135	50	LS 100135	GS 81120	WS 81120	350	100	102	135	135	4	1	7	90000	550000	1900
110	AXK 110145	122	AS 110145	55	LS 110145	GS 81122	WS 81122	385	110	112	145	145	4	1	7	96000	600000	1800
120	AXK 120155	131	AS 120155	59	LS 120155	GS 81124	WS 81124	415	120	122	155	155	4	1	9	100000	650000	1650
130	AXK 130170	205	AS 130170	65	LS 130170	GS 81126	WS 81126	663	130	132	170	170	5	1	9.5	130000	830000	1600

SERVICE / PRECISION / TECHNOLOGY

Thrust Roller Bearings and Thrust Washers



Axial needle roller bearings
with centring spigot on the bearing washer
Series AXW



Shaft Diameter (mm)	Designation	Dimensions (mm)					Raceway dimensions (mm)		Basic Load Ratings (N)		Limiting Speed	Suitable bearing washers and bearings							
		D _{c1}	D ₁	D	B	B1	Eb	Ea	Dyn. C	Stat. C ₀		nG/grease min-1	Designation						
											AS		LS	WS 811	HK Drawn cup needle roller bearings	HK..RS Drawn cup needle roller bearings	BK Drawn cup needle roller bearings	NK, NKS, RNA 49, RNA 69 Needle roller bearings	NKI, NKIS NA 49, NA 69 Needle roller bearings
10	AXW 10	10	14	27	3.2	3	12	23	9200	25500	14000	AS 1024	LS 1024	-	HK 1010, HK 1012	-	BK 1010,BK 1012	NK 7/10 TN	-
															HK 1015		BK 1015	NK 7/12 TN	
12	AXW 12	12	16	29	3.2	3	14	25	9900	29000	13000	AS 1226	LS 1226	-	HK 1210	-	BK 1210	NK 9/12 TN	NKI 6/12 TN
																		NK 9/16 TN	NKI 6/16 TN
15	AXW 15	15	21	31	3.2	3.5	17	27	11300	36000	11000	AS 1528	LS 1528	WS 81102	HK 1512, HK 1516	HK 1514 RS	BK 1512, BK 1516	-	-
															HK 1522		BK 1522		
17	AXW 17	17	23	33	3.2	3.5	19	29	11900	39500	10000	AS 1730	LS 1730	WS 81103	HK 1712	-	BK 1712	NK 15/16, NK 15/20	-
20	AXW 20	20	26	38	3.2	3.5	22	34	13100	46500	8500	AS 2035	LS 2035	WS 81104	HK 2012, HK 2016	HK 2018 RS	BK 2012, BK 2016	NK 18/16, NK 18/20	-
															HK 2020		BK 2020		
															HK 2030		BK 2030		
25	AXW 25	25	32	45	3.2	4	29	41	14700	58000	7000	AS 2542	LS 2542	WS 81105	HK 2512, HK 2516	HK 2518 RS	BK2512,BK2516	NK2 4/16, NK 24/20	NKI 20/16
															HK 2520, HK 2526		BK2520,BK2526	NKS 20	NKI 20/20
															HK 2538		BK2538		
30	AXW 30	30	37	50	3.2	4	34	46	16300	70000	6000	AS 3047	LS 3047	WS 81106	HK 3012, HK 3016	HK 3018 RS	BK 3012, BK 3016	NK 28/20, NK 28/30	NA 4904
															HK 3020, HK 3026		BK 3020, BK 3026	NKS 24	NA 6904
															HK 3038		BK 3038	RNA 4904, RNA 6904	
35	AXW 35	35	42	55	3.2	4	39	51	17800	81000	5500	AS 3552	LS 3552	WS 81107	HK 3512, HK 3516	HK 3518 RS	BK 3512, BK 3516	NK 32/20, NK 32/30	NKIS 20,NA 4905
															HK 3520		BK 3520	NKS 28	NA 6905
																		RNA 4905, RNA 6905	NKI 28/20, NKI 28/30
40	AXW 40	40	47	63	4.2	4	45	58	28000	114000	4700	AS 4060	LS 4060	WS 81108	HK 4012, HK 4016	HK 4018 RS	BK 4012, BK 4016	NK 37/20, NK 37/30	NKIS 25, NA 4906
															HK 4020		BK 4020	NKS 32	NA 6906
																		RNA 4906, RNA 6906	NKI 32/20
																			NKI 32/30
45	AXW 45	45	52	68	4.2	4	50	63	30000	128000	4300	AS 4565	AS 4565	WS 81109	HK 4516, HK 4520	HK 4518 RS	BK 4516, BK 4520	NK 42/20, NK 42/30	NKIS 30
																		NKS 37	NA 49/32
																		RNA 49/32, RNA 69/32	NA 69/32
50	AXW 50	50	58	73	4.2	4.5	55	68	32000	143000	3900	AS 5070	AS 5070	WS 81110	HK 5020, HK 5025	HK 5022 RS	BK 5020, BK 5025	NKS 43	NKIS 35

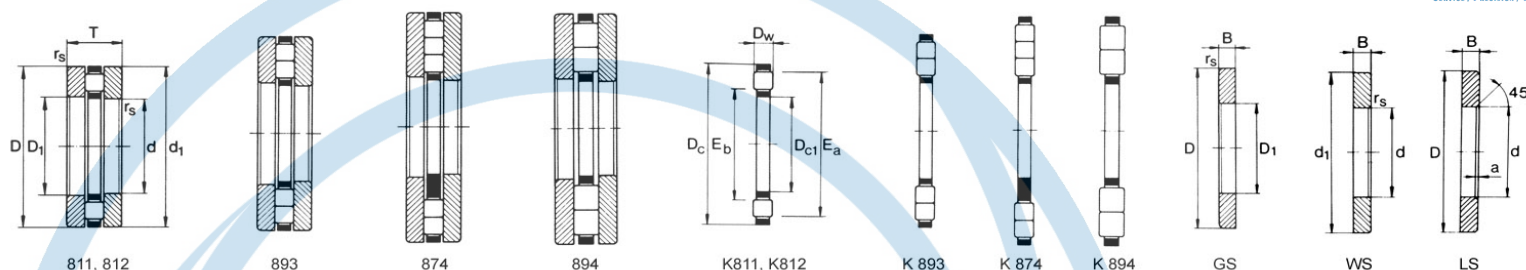
The oil should be cooled completely at limit speed with oil lubrication. The permissible value for grease lubrication is 25% of those shown in the list. Higher value can be achieved in appropriate cooling condition.

Thrust Roller Bearings and Thrust Washers



Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894



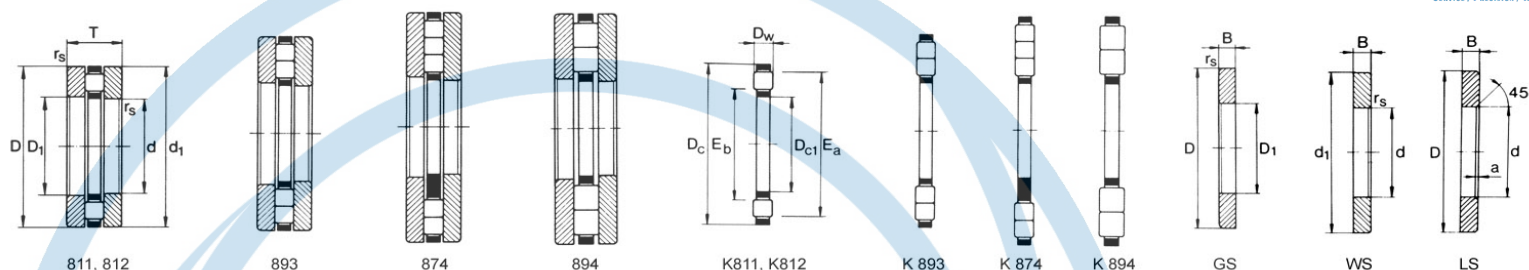
Shaft diameter (mm)	Axial cylindrical roller bearings	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
	Complete bearing		Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
		Bearing designation																
15	81102 TN	K 81102 TN	GS 81102	WS 81102	LS 1528	15	16	28	28	9	3.5	2.75	0.3	16	27	14.1	28.5	11000
17	81103 TN	K 81103 TN	GS 81103	WS 81103	LS 1730	17	18	30	30	9	3.5	2.75	0.3	18	29	15.9	33.5	10000
20	81104 TN	K 81104 TN	GS 81104	WS 81104	LS 2035	20	21	35	35	10	4.5	2.75	0.3	21	34	24.9	53	8500
25	81105 TN	K 81105 TN	GS 81105	WS 81105	LS 2542	25	26	42	42	11	5	3	0.6	26	41	33.5	76	7000
30	81106 TN	K 81106 TN	GS 81106	WS 81106	LS 3047	30	32	47	47	11	5	3	0.6	31	46	35.5	86	6000
	81206 TN	K 81206 TN	GS 81206	WS 81206	--	30	32	52	52	16	7.5	4.25	0.6	31	50	64	141	6000
	89306 TN	K 89306 TN	GS 89306	WS 89306	--	30	32	60	60	18	5.5	6.25	1	33	59	69	197	5000
35	81107 TN	K 81107 TN	GS 81107	WS 81107	LS 3552	35	37	52	52	12	5	3.5	0.6	36	51	39	101	5500
	81207 TN	K 81207 TN	GS 81207	WS 81207	--	35	37	62	62	18	7.5	5.25	1	39	58	80	199	4900
	89307 TN	K 89307 TN	GS 89307	WS 89307	--	35	37	68	68	20	6	7	1	38	67	80	237	4600
	--	K 89407 TN	--	--	--	35	--	80	--	--	9	--	--	38	78	155	430	4200
40	81108 TN	K 81108 TN	GS 81108	WS 81108	LS 4060	40	42	60	60	13	6	3.5	0.6	42	58	56	148	4800
	81208 TN	K 81208 TN	GS 81208	WS 81208	--	40	42	68	68	19	9	5	1	43	66	107	265	4400
	89308 TN	K 89308 TN	GS 89308	WS 89308	--	40	42	78	78	22	7	7.5	1	44	77	122	385	4000
	87408	K 87408	GS 87408	WS 87408	--	40	42	90	90	23	6.5	8.25	1.1	45	89	135	480	3600
	--	K 89408 TN	--	--	--	40	--	90	--	--	10	--	--	43	87	200	580	3700
45	81109 TN	K 81109 TN	GS 81109	WS 81109	LS 4565	45	47	65	65	14	6	4	0.6	47	63	59	163	4400
	81209 TN	K 81209 TN	GS 81209	WS 81209	--	45	47	73	73	20	9	5.5	1	48	70	105	265	4000
	89309 TN	K 89309 TN	GS 89309	WS 89309	--	45	47	85	85	24	7.5	8.25	1	49	83	139	445	3600

Thrust Roller Bearings and Thrust Washers



Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894



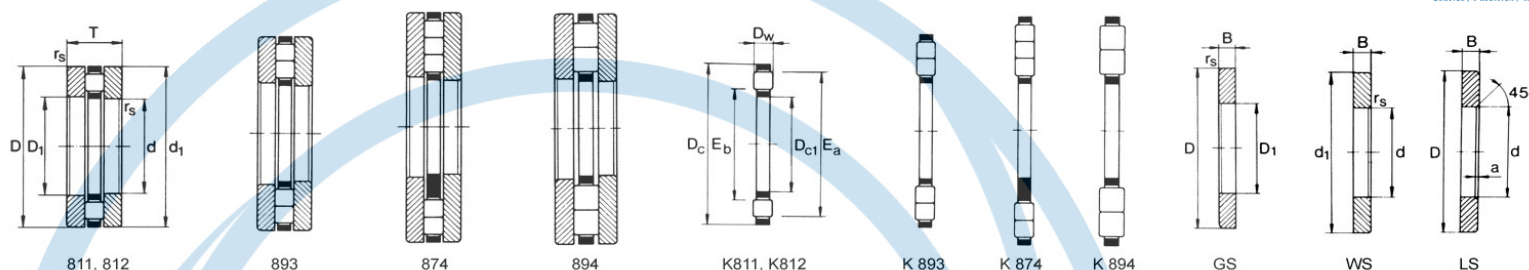
Shaft diameter (mm)	Axial cylindrical roller bearings	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
	Complete bearing		Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
		Bearing designation																
45	87409	K 87409	GS 87409	WS 87409	--	45	47	100	100	25	7	9	1.1	52	98	154	560	3200
	--	K 89409 TN	--	--	--	45	--	100	--	--	11	--	--	49	97	239	700	3300
50	81110 TN	K 81110 TN	GS 81110	WS 81110	LS 5070	50	52	70	70	14	6	4	0.6	52	68	61	177	4000
	81210 TN	K 81210 TN	GS 81210	WS 81210	--	50	52	78	78	22	9	6.5	1	53	75	117	315	3700
	89310 TN	K 89310 TN	GS 89310	WS 89310	--	50	52	95	95	27	8	9.5	1.1	56	92	167	560	3200
	87410 TN	K 87410 TN	GS 87410	WS 87410	--	50	52	110	110	27	8	9.5	1.5	54	107	200	74	2900
	--	K 89410 TN	--	--	--	50	--	110	--	--	12	--	--	54	107	295	900	3000
55	81111 TN	K 81111 TN	GS 81111	WS 81111	LS 5578	55	57	78	78	16	6	5	0.6	57	77	90	300	3600
	81211 TN	K 81211 TN	GS 81211	WS 81211	--	55	57	90	90	25	11	7	1	59	85	154	405	3300
	89311 TN	K 89311 TN	GS 89311	WS 89311	--	55	57	105	105	30	9	10.5	1.1	61	103	184	600	2900
	87411	K 87411 TN	GS 87411	WS 87411	--	55	57	120	120	29	8	10.5	1.5	65	118	222	870	2600
	--	K 89411 TN	--	--	--	55	--	120	--	--	13	--	--	59	116	340	1050	2700
60	81112 TN	K 81112 TN	GS 81112	WS 81112	LS 6085	60	62	85	85	17	7.5	4.75	1	62	82	103	315	3300
	81212 TN	K 81212 TN	GS 81212	WS 81212	--	60	62	95	95	26	11	7.5	1	64	91	172	480	3100
	89312 TN	K 89312 TN	GS 89312	WS 89312	--	60	62	110	110	30	9	10.5	1.1	66	108	196	670	2700
	87412	K 87412	GS 87412	WS 87412	--	60	62	130	130	32	9	11.5	1.5	68	128	260	1000	2500
	89412 TN	K 89412 TN	GS 89412	WS 89412	--	60	62	130	130	42	14	14	1.5	65	126	390	1220	2500
65	81113 TN	K 81113 TN	GS 81113	WS 81113	LS 6590	65	67	90	90	18	7.5	5.25	1	67	87	107	340	3100
	81213 TN	K 81213 TN	GS 81213	WS 81213	--	65	67	100	100	27	11	8	1	69	96	177	500	2900

Thrust Roller Bearings and Thrust Washers



Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894



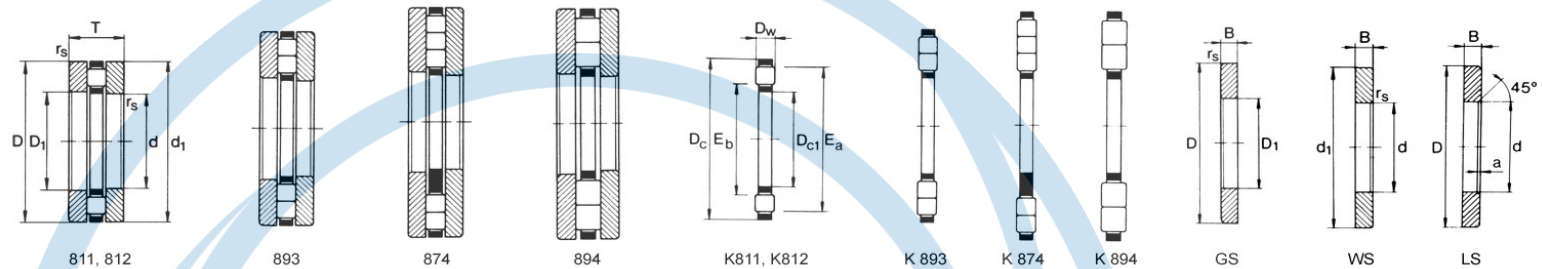
Shaft diameter (mm)	Axial cylindrical roller bearings Complete bearing	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
			Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
			Bearing designation															
65	89313 TN	K 89313 TN	GS 89313	WS 89313	--	65	67	115	115	30	9	10.5	1.1	71	113	194	670	2600
	87413	K 87413	GS 87413	WS 87413	--	65	68	140	140	34	10	12	2	72	137	300	1140	2300
	89413 TN	K 89413 TN	GS 89413	WS 89413	--	65	68	140	140	45	15	15	2	70	135	445	1410	2300
70	81114 TN	K 81114 TN	GS11 14	WS11 14	LS 7095	70	72	95	95	18	7.5	5.25	1	72	92	111	365	2900
	81214 TN	K 81214 TN	GS 81214	WS 81214	--	70	72	105	105	27	11	8	1	74	102	187	550	2700
	89314 TN	K 89314 TN	GS 89314	WS 89314	--	70	72	125	125	34	10	12	1.1	76	123	239	830	2400
	87414	K 87414	GS 87414	WS 87414	--	70	73	150	150	36	11	12.5	2	76	147	360	1380	2200
	89414	K 89414	GS 89414	WS 89414	--	70	73	150	150	48	16	16	2	78	147	450	1390	2100
75	81115 TN	K 81115 TN	GS 81115	WS 81115	LS 75100	75	77	100	100	19	7.5	5.75	1	78	97	105	340	2700
	81215 TN	K 81215 TN	GS 81215	WS 81215	--	75	77	110	110	27	11	8	1	79	106	172	500	2600
	89315 TN	K 89315 TN	GS 89315	WS 89315	--	75	77	135	135	36	11	12.5	1.5	81	132	285	1010	2200
	87415	K 87415	GS 87415	WS 87415	--	75	78	160	160	28	12	13	2	80	157	430	1660	2000
	89415	K 89415	GS 89415	WS 89415	--	75	78	160	160	51	17	17	2	84	156	500	1580	2000
80	81116 TN	K 81116 TN	GS 81116	WS 81116	LS 80105	80	82	105	105	19	7.5	5.75	1	83	102	106	350	2600
	81216 TN	K 81216 TN	GS 81216	WS 81216	--	80	82	115	115	28	11	8.5	1	84	112	201	630	2400
	89316 TN	K 89316 TN	GS 89316	WS 89316	--	80	82	140	140	36	11	12.5	1.5	86	137	305	1110	2100
	87416	K 87416	GS 87416	WS 87416	--	80	83	170	170	41	12	14.5	2.1	89	167	450	1810	1900
	89416	K 89416	GS 89416	WS 89416	--	80	83	170	170	54	18	18	2.1	89	166	560	1770	1900
85	81117 TN	K 81117 TN	GS 81117	WS 81117	LS 85110	85	87	110	110	19	7.5	5.75	1	87	108	112	385	2500

Thrust Roller Bearings and Thrust Washers



Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894



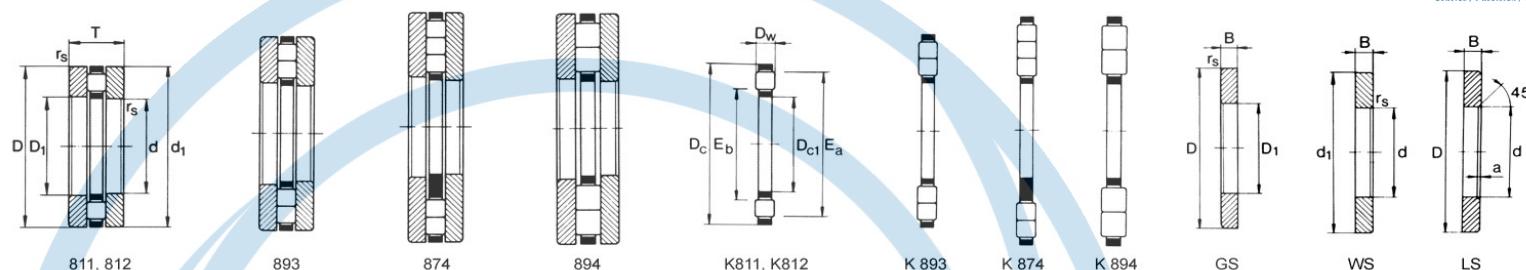
Shaft diameter (mm)	Axial cylindrical roller bearings	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
	Complete bearing		Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
		Bearing designation																
85	81217 TN	K 81217 TN	GS 81217	WS 81217	--	85	88	125	125	31	12	9.5	1	90	119	217	660	2300
	89317	K 89317 TN	GS 89317	WS 89317	--	85	88	150	150	39	12	13.5	1.5	93	147	325	1140	2000
	87417	K 87417	GS 87417	WS 87417	--	85	88	180	180	42	13	14.5	2.1	92	176	485	1920	1800
	89417	K 89417	GS 89417	WS 89417	--	85	88	180	180	58	19	19.5	2.1	94	176	620	1980	1800
90	81118 TN	K 81118 TN	GS 81118	WS 81118	LS 90120	90	92	120	120	22	9	6.5	1	93	117	141	465	2300
	81218 TN	K 81218 TN	GS 81218	WS 81218	--	90	93	135	135	35	14	10.5	1.1	95	129	290	890	2100
	89318	K 89318	GS 89318	WS 89318	--	90	93	155	155	39	12	13.5	1.5	98	152	330	1200	1900
	87418	K 87418	GS 87418	WS 87418	--	90	93	190	190	45	13	16	2.1	102	186	510	2090	1700
	89418	K 89418	GS 89418	WS 89418	--	90	93	190	190	60	20	20	2.1	100	186	680	2200	1700
100	81120 TN	K 81120 TN	GS 81120	WS 81120	LS 100135	100	102	135	135	25	11	7	1	104	131	199	650	2000
	81220	K 81220	GS 81220	WS 81220	--	100	103	150	150	38	15	11.5	1.1	107	142	285	840	1900
	89320	K 89320	GS 89320	WS 89320	--	100	103	170	170	42	13	14.5	1.5	109	167	380	1400	1700
	87420	K 87420	GS 87420	WS 87420	--	100	103	210	210	50	15	17.5	3	110	206	680	2800	1500
	89420	K 89420	GS 89420	WS 89420	--	100	103	210	210	67	22	22.5	3	112	206	850	2850	1500
110	81122	K 81122	GS 81122	WS 81122	LS 110145	110	112	145	145	25	11	7	1	114	141	195	650	1900
	81222	K 81222	GS 81222	WS 81222	--	110	113	160	160	38	15	11.5	1.1	117	152	300	940	1800
	89322	K 89322	GS 89322	WS 89322	--	110	113	190	190	48	15	16.5	2	120	186	500	1870	1600
	87422*	K 87422*	GS 87422*	WS 87422*	--	110	113	230	230	54	17	18.5	3	117	225	810	3350	1400
	89422	K 89422	GS 89422	WS 89422	--	110	113	230	230	73	24	24.5	3	123	225	1000	3400	1400

Thrust Roller Bearings and Thrust Washers



Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894

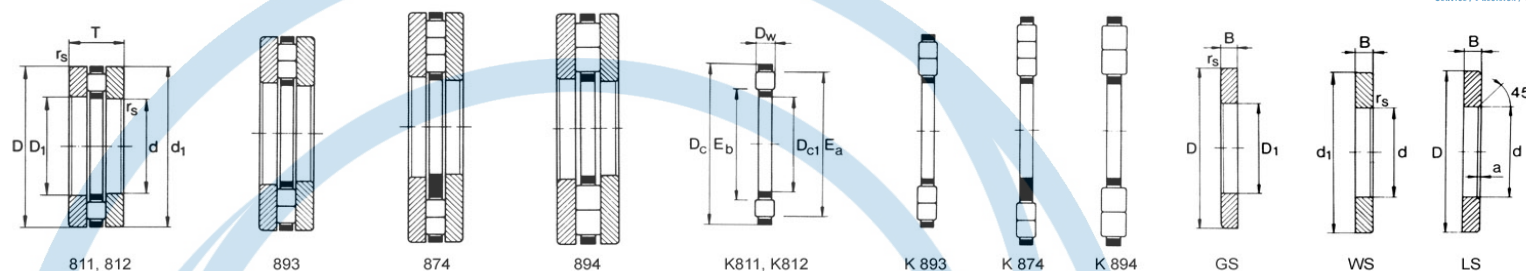


Shaft diameter (mm)	Axial cylindrical roller bearings	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
	Complete bearing		Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
		Bearing designation																
120	81124	K 81124	GS 81124	WS 81124	LS 120155	120	122	155	155	25	11	7	1	124	151	203	700	1700
	81224	K 81224	GS 81224	WS 81224	--	120	123	170	170	39	15	12	1.1	127	162	310	980	1700
	89324	K 89324	GS 89324	WS 89324	--	120	123	210	210	54	17	18.5	2.1	130	206	640	2420	1400
	87424*	K 87424*	GS 87424*	WS 87424*	--	120	123	250	250	58	18	20	4	131	244	960	4100	1300
	89424	K 89424	GS 89424	WS 89424	--	120	123	250	250	78	26	26	4	135	245	1160	4000	1300
130	81126	K 81126	GS 81126	WS 81126	LS 130170	130	132	170	170	30	12	9	1	135	165	233	810	1600
	81226	K 81226	GS 81226	WS 81226	--	130	133	190	190	45	19	13	1.5	137	181	425	1290	1500
	89326	K 89326	GS 89326	WS 89326	--	130	134	225	225	58	18	20	2.1	141	220	710	2700	1300
	87426*	K 87426*	GS 87426*	WS 87426*	--	130	134	270	270	63	19	22	4	144	265	1050	4550	1200
	89426	K 89426	GS 89426	WS 89426	--	130	134	270	270	85	28	28.5	4	147	265	1330	4600	1200
140	81128	K 81128	GS 81128	WS 81128	LS 140180	140	142	180	180	31	12	9.5	1	145	175	242	870	1500
	81228	K 81228	GS 81228	WS 81228	--	140	143	200	200	46	19	13.5	1.5	147	191	445	1450	1400
	89328	K 89328	GS 89328	WS 89328	--	140	144	240	240	60	19	20.5	2.1	152	235	820	3200	1200
	87428*	K 87428*	GS 87428*	WS 87428*	--	140	144	280	280	63	19	22	4	155	276	1110	4950	1100
	89428	K 89428	GS 89428	WS 89428	--	140	144	280	280	85	28	28.5	4	157	275	1380	4950	1100
150	81130	K 81130	GS 81130	WS 81130	LS 150190	150	152	190	190	31	12	9.5	1	155	185	250	930	1400
	81230	K 81230	GS 81230	WS 81230	--	150	153	215	215	50	21	14.5	1.5	158	211	590	1940	1300
	89330	K 89330	GS 89330	WS 89330	--	150	154	250	250	60	19	20.5	2.1	162	245	840	3350	1200
	87430*	K 87430*	GS 87430*	WS 87430*	--	150	154	300	300	67	21	23	4	162	295	1260	5500	1000

Thrust Roller Bearings and Thrust Washers

Axial cylindrical roller bearings

Series 811, 812, 893, 874, 894



Shaft diameter (mm)	Axial cylindrical roller bearings	Axial cylindrical roller and cage assembly	Axial bearing washers			Dimensions (mm)								Raceway dimensions		Basic load ratings		Limiting Speed ¹⁾
	Complete bearing		Housing loc.washer	Shaft loc.washer	Bearing washer	DC1 d	D1	Dc	d1	T	Dw	B	a rs min.	Eb	Ea	dyn. C kN	Stat. Co kN	N _G min-1
		Bearing designation																
150	89430	K 89430	GS 89430	WS 89430	--	150	154	300	300	90	30	30	4	168	295	1570	5700	1000
160	81132	K 81132	GS 81132	WS 81132	LS 160200	160	162	200	200	31	12	9.5	1	165	195	260	990	1300
	81232	K 81232	GS 81232	WS 81232	--	160	163	225	225	51	21	15	1.5	168	220	600	2030	1200
	89332*	K 89332*	GS 89332*	WS 89332*	--	160	164	270	270	67	21	23	3	174	265	970	3900	1100
	87432*	K 87432*	GS 87432*	WS 87432*	--	160	164	320	320	73	22	25.5	5	177	316	1450	6600	1000
	89432	K 89432	GS 89432	WS 89432	--	160	164	320	320	95	32	31.5	5	179	315	1780	6500	950
170	81134	K 81134	GS 81134	WS 81134	--	170	172	215	215	34	14	10	1.1	176	209	325	1220	1200
	81234	K 81234	GS 81234	WS 81234	--	170	173	240	240	55	22	16.5	1.5	180	235	680	2340	1100
	89334*	K 89334*	GS 89334*	WS 89334*	--	170	174	280	280	67	21	23	3	185	276	1000	4050	1000
	87434*	K 87434*	GS 87434*	WS 87434*	--	170	174	340	340	78	24	27	5	184	335	1620	7300	900
	89434	K 89434	GS 89434	WS 89434	--	170	174	340	340	103	--	--	5	191	335	1990	7400	900

TN = Plastic cage, permissible operating temperature: 120°C (continuous operation).

1) Limiting speed for oil lubrication. For grease lubrication, 25% of the values given in the table is permissible.

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