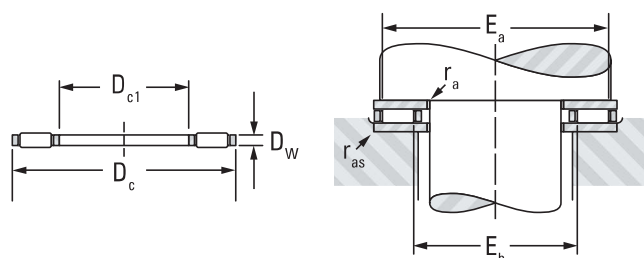




THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

METRIC SERIES

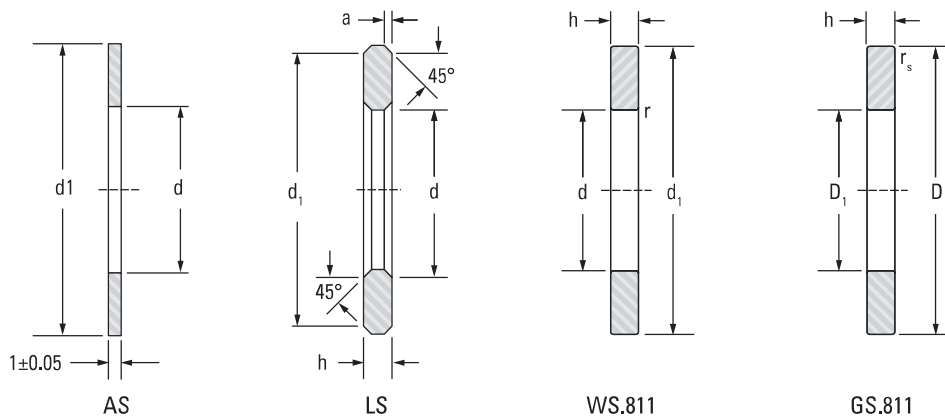
- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-280 for details on piloting and backup surfaces.
- Thrust washers burnished to at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.
- Thinner washers may be out-of-flat due to distortion in hardening in the free state (expected to flatten out under load).



FNT, AXK

Raceway contact dimensions

Shaft Dia.	D _{c1}	D _c	D _w	E _b	E _a	r _a max	Assembly Designation	Wt.	C	C ₀	Speed Rating Oil		
	Assembly Dimensions								Load Ratings				
									Dynamic	Static			
mm	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.		kg lbs.	kN lbf.		min ⁻¹		
6	6	19	2	8.0	18.0	0.3	FNT-619	0.002	6.82	15.6	21000		
	0.2362	0.7480	0.0787	0.315	0.709	0.012		0.004	1530	3510			
8	8	21	2	10.0	20.0	0.3	FNT-821	0.002	7.67	19.1	20000		
				0.394	0.787	0.012		0.004	1720	4290			
				9.6	18.6	0.3	AXK0821TN	0.001	8.34	21.1	20000		
10	10	24	2	0.378	0.732	0.012		0.002	1870	4740			
				12.0	23.0	0.3	FNT-1024	0.002	9.14	25.2	17000		
				0.3937	0.9449	0.0787	0.472	0.906	0.012		0.004	2060	5670
12	12	26	2	11.0	22.5	0.3	AXK1024	0.003	9.32	25.9	17000		
				0.433	0.886	0.012		0.007	2100	5820			
				14.0	25.0	0.3	FNT-1226	0.004	9.92	29.0	15000		
15	15	28	2	0.551	0.984	0.012		0.009	2230	6520			
				13.0	24.5	0.3	AXK1226	0.004	10.8	32.3	15000		
				0.512	0.965	0.012		0.009	2430	7260			
17	17	30	2	17.0	27.0	0.3	FNT-1528	0.004	10.2	31.3	15000		
				0.669	1.063	0.012		0.009	2290	7040			
				17.0	27.0	0.3	AXK1528	0.004	11.1	35.2	15000		
20	20	35	2	0.669	1.063	0.012		0.009	2500	7910			
				19.0	29.0	0.3	FNT-1730	0.004	10.8	34.8	14000		
				0.6693	1.1811	0.0787	0.748	1.142	0.012		0.009	2430	7820
25	25	42	2	22.0	34.0	0.3	AXK1730TN	0.004	11.7	38.7	14000		
				0.866	1.339	0.012		0.009	2630	8700			
				22.0	34.0	0.3	FNTA-2035	0.005	13.8	50.7	12000		
30	30	47	2	0.866	1.339	0.012		0.011	3100	11400			
				22.0	34.0	0.3	AXK2035	0.001	12.8	45.4	12000		
				0.866	1.339	0.012		0.001	2880	10200			
35	35	52	2	27.0	41.0	0.6	FNT-2542	0.008	18.0	75.3	9700		
				0.9843	1.6535	0.0787	1.063	1.614	0.024		0.018	4050	16900
				29.0	41.0	0.6	AXK2542	0.007	14.3	56.8	10000		
40	40	60	3	1.142	1.614	0.024		0.015	3210	12800			
				32.0	46.0	0.6	FNTA-3047	0.009	18.6	82.4	8900		
				1.1811	1.8504	0.0787	1.260	1.811	0.024		0.020	4180	18500
45	45	65	3	35.0	46.0	0.6	AXK3047	0.009	16.0	68.1	9000		
				1.378	1.811	0.024		0.020	3600	15300			
				37.0	51.0	0.6	FNT-3552	0.010	21.7	104.0	7900		
50	50	70	3	1.457	2.008	0.024		0.022	4880	23400			
				40.0	51.0	0.6	AXK3552	0.010	17.4	79.5	8100		
				1.575	2.008	0.024		0.022	3910	17900			
55	55	78	3	43.0	57.0	0.6	FNT-4060	0.020	31.5	132.0	7100		
				1.5748	2.3622	0.1181	1.693	2.244	0.024		0.044	7080	29700
				45.0	58.0	0.6	AXK4060	0.016	27.1	110.0	7000		
60	60	80	3	1.772	2.283	0.024		0.035	6090	24700			
				47.0	63.0	0.6	FNT-4565	0.024	37.6	172.0	6400		
				1.7717	2.5591	0.1181	1.850	2.480	0.024		0.053	8450	38700
65	65	85	3	50.0	63.0	0.6	AXK4565	0.020	29.0	124.0	6500		
				1.969	2.480	0.024		0.044	6520	27900			
				52.0	68.0	0.6	FNT-5070	0.026	37.9	179.0	5900		
70	70	90	3	2.047	2.677	0.024		0.057	8520	40200			
				55.0	68.0	0.6	AXK5070	0.020	30.8	137.0	6000		
				2.165	2.677	0.024		0.044	6920	30800			
75	75	100	3	57.0	76.0	0.6	FNT-5578	0.033	48.5	254.0	5300		
				2.1654	3.0709	0.1181	2.244	2.992	0.024		0.073	10900	57100
				60.0	76.0	0.6	AXK5578	0.026	39.4	195.0	5300		
80	80	110	3	2.362	2.992	0.024		0.057	8860	43800			
				62.0	80.0	0.6	FNT-6080	0.033	50.0	280.0	5000		
				2.362	2.992	0.024		0.057	8860	43800			



d	D, d ₁	D ₁	h (h ₁₁)	Washer Designation	Wt.	Washer Designation	a	Wt.	Washer Designation		r _s min	Wt.
Washer Dimensions				Thin		Heavy	Chamfer		Shaft Piloted	Housing Piloted	Radius	
mm in.	mm in.	mm in.	mm in.		kg lbs.		mm in.	kg lbs.			mm in.	kg lbs.
6 0.2362	19 0.7480			AS0619	0.001 0.002							
8 0.3150	21 0.8268		2.75 0.108	AS0821	0.002 0.004	LS0821	0.30 0.012	0.004 0.009				
10 0.3937	24 0.9449		2.75 0.108	AS1024	0.003 0.007	LS1024	0.50 0.020	0.008 0.018				
12 0.4724	26 1.0236		2.75 0.108	AS1226	0.003 0.007	LS1226	0.50 0.020	0.009 0.020				
15 0.5906	28 1.1024	16 0.6299	2.75 0.108	AS1528	0.003 0.007	LS1528	0.50 0.020	0.010 0.022	WS.81102	GS.81102	0.30 0.012	0.010 0.022
17 0.6693	30 1.1811	18 0.7087	2.75 0.108	AS1730	0.003 0.007	LS1730	0.50 0.020	0.011 0.024	WS.81103	GS.81103	0.30 0.012	0.011 0.024
20 0.7874	35 1.3780	21 0.8268	2.75 0.108	AS2035	0.005 0.011	LS2035	0.50 0.020	0.014 0.031	WS.81104	GS.81104	0.30 0.012	0.014 0.031
25 0.9843	42 1.6535	26 1.0236	3.00 0.118	AS2542	0.007 0.015	LS2542	1.00 0.039	0.021 0.046	WS.81105	GS.81105	0.60 0.024	0.021 0.046
30 1.1811	47 1.8504	32 1.2598	3.00 0.118	AS3047	0.008 0.018	LS3047	1.00 0.039	0.023 0.051	WS.81106	GS.81106	0.60 0.024	0.023 0.051
35 1.3780	52 2.0472	37 1.4567	3.50 0.138	AS3552	0.009 0.020	LS3552	1.00 0.039	0.030 0.066	WS.81107	GS.81107	0.60 0.024	0.032 0.071
40 1.5748	60 2.3622	42 1.6535	3.50 0.138	AS4060	0.012 0.026	LS4060	1.00 0.039	0.041 0.090	WS.81108	GS.81108	0.60 0.024	0.043 0.095
45 1.7717	65 2.5591	47 1.8504	4.00 0.157	AS4565	0.013 0.029	LS4565	1.00 0.039	0.052 0.115	WS.81109	GS.81109	0.60 0.024	0.054 0.119
50 1.9685	70 2.7559	52 2.0472	4.00 0.157	AS5070	0.014 0.031	LS5070	1.00 0.039	0.056 0.123	WS.81110	GS.81110	0.60 0.024	0.059 0.130
55 2.1654	78 3.0709	57 2.2441	5.00 0.197	AS5578	0.018 0.040	LS5578	1.00 0.039	0.091 0.201	WS.81111	GS.81111	0.60 0.024	0.094 0.207

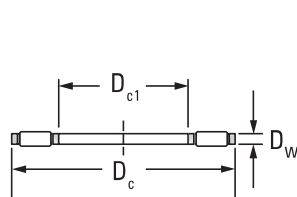
Continued on next page.



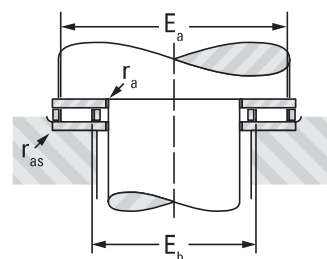
THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS - continued

METRIC SERIES

- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-280 for details on piloting and backup surfaces.
- Thrust washers burnished to at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.
- Thinner washers may be out-of-flat due to distortion in hardening in the free state (expected to flatten out under load).



FNT, AXK



Raceway contact dimensions

Shaft Dia.	D _{c1}	D _c	D _w	E _b	E _a	r _a max	Assembly Designation	Wt.	C	C ₀	Speed Rating Oil
	Assembly Dimensions								Load Ratings		
									Dynamic	Static	
mm	mm in.	mm in.	mm in.	mm in.	mm in.	mm in.		kg lbs.	kN lbf.		min ⁻¹
60	60 2.3622	85 3.3465	3 0.1181	65.0 2.559	83.0 3.268	0.6 0.024	AXK6085	0.035 0.077	44.5 10000	234.0 52600	4900
65	65 2.5591	90 3.5433	3 0.1181	70.0 2.756	88.0 3.465	0.6 0.024	AXK6590	0.036 0.079	46.7 10500	254 57100	4600
70	70 2.7559	95 3.7402	4 0.1575	73.0 2.874	93.0 3.661	0.6 0.024	FNTA-7095	0.057 0.126	66.6 15000	333 74900	4400
				74.0 2.913	93.0 3.661	0.6 0.024	AXK7095	0.055 0.121	53.8 12100	253 56900	4400
75	75 2.9528	100 3.9370	4 0.1575	78.0 3.071	98.0 3.858	0.6 0.024	FNT-75100	0.064 0.141	71.6 16100	374 84100	4100
				79.0 3.110	98.0 3.858	0.6 0.024	AXK75100	0.058 0.128	55.1 12400	266 59800	4200
80	80 3.1496	105 4.1339	4 0.1575	83.0 3.268	103.0 4.055	0.6 0.024	FNTA-80105	0.062 0.137	71.3 16100	379 85200	3900
				84.0 3.307	103.0 4.055	0.6 0.024	AXK80105	0.092 0.203	56.4 12700	279 62700	4000
85	85 3.3465	110 4.3307	4 0.1575	89.0 3.504	108.0 4.252	0.6 0.024	AXK85110	0.063 0.139	57.6 12900	291 65400	3800
90	90 3.5433	120 4.7244	4 0.1575	94.0 3.701	118.0 4.646	0.6 0.024	AXK90120	0.081 0.179	72.9 16400	405 91000	3500
100	100 3.9370	135 5.3150	4 0.1575	105.0 4.134	133.0 5.236	0.6 0.024	AXK100135	0.106 0.234	90.2 20300	552 124000	3100
110	110 4.3307	145 5.7087	4 0.1575	115.0 4.528	143.0 5.630	0.6 0.024	AXK110145	0.117 0.258	93.2 21000	591 133000	2800
120	120 4.7244	155 6.1024	4 0.1575	125.0 4.921	153.0 6.024	0.6 0.024	AXK120155	0.126 0.278	98.5 22100	650 146000	2700
130	130 5.1181	170 6.6929	5 0.1969	136.0 5.354	167.0 6.575	0.6 0.024	AXK130170	0.198 0.437	132 29700	829 186000	2400
140	140 5.5118	180 7.0866	5 0.1969	146.0 5.748	177.0 6.969	0.6 0.024	AXK140180	0.221 0.487	136 30600	887 199000	2300
150	150 5.9055	190 7.4803	5 0.1969	156.0 6.142	187.0 7.362	0.6 0.024	AXK150190	0.225 0.496	141 31700	944 212000	2200
160	160 6.2992	200 7.8740	5 0.1969	166.0 6.535	197.0 7.756	0.6 0.024	AXK160200	0.249 0.549	146 32800	1000 225000	2100