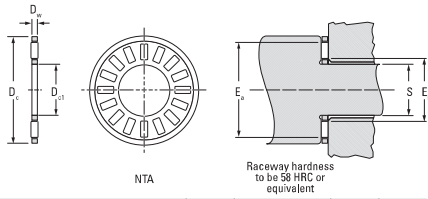


THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

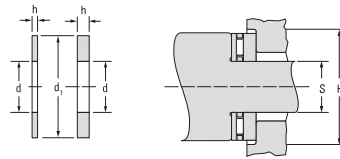
INCH SERIES

- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



Shaft Dia.	Assembly Dimensions					Assembly Designation	Load Ratings		Fatigue Load Limit C ₁	Speed Rating ¹⁾
	D ₁	D ₂	D ₃	E ₁	E ₂		Dynamic C	Static C ₀		
	mm	mm	mm	mm	mm		kN	lbf		
1/4	6.35 0.250	17.45 0.687	1.94 0.0781	6.68 0.340	14.72 0.580	NTA-411	5.12 1159	10.76 2428	1.05	26000
3/16	7.82 0.312	19.05 0.75	1.94 0.0781	6.68 0.400	16.25 0.640	NTA-512	5.83 1319	13.17 2 969	1.30	24000
1/8	9.53 0.375	20.625 0.812	1.94 0.0781	11.68 0.460	18.04 0.710	NTA-613	6.85 1569	14.32 3220	1.40	22000
3/8	12.70 0.500	23.80 0.937	1.94 0.0781	14.30 0.560	21.08 0.830	NTA-815	7.16 1619	19.13 4300	1.85	19000
1/2	14.275 0.562	25.40 1.000	1.94 0.0781	16.51 0.650	22.60 0.890	NTA-916	7.70 1739	21.53 4840	2.10	18000
5/8	15.88 0.625	28.575 1.125	1.94 0.0781	18.83 0.710	25.90 1.020	NTA-1018	9.79 2209	30.38 6830	2.85	15000

¹⁾Speed ratings listed are based on adequate oil lubrication. See page B-6-37 for lubrication information. Suggestions for an application requiring O.D. piloting should be determined in consultation with your representative.



Approx. Vt.	Thrust Washer Designation	Washer Dimensions				Piloting Dimensions		Dia. To Clear O.D.	Washer Vt.	Shaft Dia.
		d	d ₁	h		S				
		mm	mm	Max.	Min.	Max.	Min.			
0.001 0.033	TRA-411	6.35 0.250	17.45 0.687	0.81 0.032	0.76 0.030	6.25 0.247	6.27 0.247	18.28 0.719	0.001 0.033	1/4
0.001 0.033	TRB-411	6.35 0.250	17.45 0.687	1.60 0.063	1.52 0.060	6.35 0.250	6.27 0.247	18.28 0.719	0.002 0.035	
0.002 0.034	TRA-512	7.82 0.312	19.05 0.750	0.81 0.032	0.76 0.030	7.62 0.312	7.65 0.309	19.84 0.781	0.001 0.033	3/16
0.002 0.034	TRB-512	7.82 0.312	19.05 0.750	1.60 0.063	1.52 0.060	7.62 0.312	7.65 0.309	19.84 0.781	0.003 0.036	
0.002 0.034	TRA-613	9.53 0.375	20.625 0.812	0.81 0.032	0.76 0.030	9.53 0.375	9.45 0.372	21.44 0.844	0.001 0.033	1/8
0.002 0.034	TRB-613	9.53 0.375	20.625 0.812	1.60 0.063	1.52 0.060	9.53 0.375	9.45 0.372	21.44 0.844	0.003 0.036	
0.002 0.034	TRA-815	12.70 0.500	23.80 0.937	0.81 0.032	0.76 0.030	12.70 0.500	12.62 0.497	24.61 0.969	0.002 0.034	1/2
0.002 0.034	TRB-815	12.70 0.500	23.80 0.937	1.60 0.063	1.52 0.060	12.70 0.500	12.62 0.497	24.61 0.969	0.004 0.038	
0.003 0.036	TRA-916	14.275 0.562	25.40 1.000	0.81 0.032	0.76 0.030	14.275 0.562	14.20 0.559	26.19 1.031	0.002 0.035	3/16
0.003 0.036	TRB-916	14.275 0.562	25.40 1.000	1.60 0.063	1.52 0.060	14.275 0.562	14.20 0.559	26.19 1.031	0.004 0.038	
0.003 0.036	TRA-1018	15.88 0.625	28.575 1.125	0.81 0.032	0.76 0.030	15.88 0.625	15.80 0.622	28.36 1.156	0.002 0.036	1/8
0.003 0.036	TRB-1018	15.88 0.625	28.575 1.125	1.60 0.063	1.52 0.060	15.88 0.625	15.80 0.622	28.36 1.156	0.005 0.038	
0.003 0.036	TRA-1018	15.88 0.625	28.575 1.125	0.81 0.032	0.76 0.030	15.88 0.625	15.80 0.622	28.36 1.156	0.008 0.038	
0.003 0.036	TRD-1018	15.88 0.625	28.575 1.125	3.70 0.126	3.12 0.123	15.88 0.625	15.80 0.622	28.36 1.156	0.011 0.024	
0.003 0.036	TRE-1018	15.88 0.625	28.575 1.125	3.99 0.157	3.91 0.154	15.88 0.625	15.80 0.622	28.36 1.156	0.013 0.029	

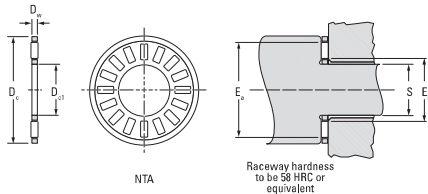
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²⁾If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

INCH SERIES

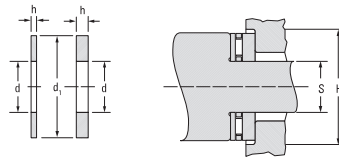
- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



NTA
Raceway hardness to be 58 HRC or equivalent

Shaft Dia.	Assembly Dimensions						Assembly Designation	Load Ratings		Fatigue Load Limit C ₁	Speed Rating ¹⁾
	D ₁	D ₂	D ₃	E ₃	E ₄	E ₅		Dynamic C	Static C ₀		
	mm	mm	mm	mm	mm	mm		kN	lbf		
1/4	15.45 0.750	31.75 1.250	1.94 0.0781	21.34 0.840	28.95 1.140	NTA-1220	16.90 2459	36.48 8200	3.40	14000	
7/8	22.23 0.875	36.50 1.437	1.94 0.0781	24.38 0.960	33.78 1.330	NTA-1423	13.63 3029	49.82 11200	4.65	12000	
3/4	22.23 0.875	42.85 1.687	1.94 0.0781	25.91 1.020	39.87 1.570	NTC-1427	16.46 4159	78.29 17600	8.95	9800	
1	25.40 1.000	39.675 1.562	1.94 0.0781	27.69 1.090	36.83 1.450	NTA-1625	13.83 3119	53.82 12100	5.90	11000	
1 1/8	28.58 1.125	44.45 1.75	1.94 0.0781	30.73 1.210	41.65 1.640	NTA-1828	16.58 3709	71.17 16000	7.30	9600	

¹⁾Speed ratings listed are based on adequate oil lubrication. See page B-6-37 for lubrication information. Suggestions for an application requiring O.D. piloting should be determined in consultation with your representative.



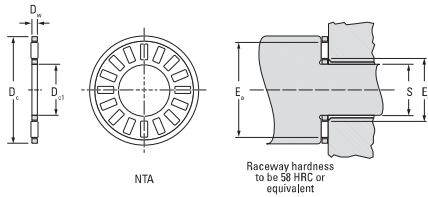
Approx. Vt.	Thrust Washer Designation	Washer Dimensions				Piloting Dimensions				Dia. To Clear O.D.	Washer Vt.	Shaft Dia.
		d	d ₁	h		S		H ²⁾				
		mm	mm	mm	mm	mm	mm	mm				
0.004 0.039	TRA-1220	15.05 0.750	31.75 1.250	0.81 0.032	0.76 0.030	15.05 0.750	18.97 0.747	32.54 1.281	0.003 0.007	1/4		
	TRB-1220	15.05 0.750	31.75 1.250	1.00 0.063	1.52 0.060	15.05 0.750	18.97 0.747	32.54 1.281	0.006 0.010			
	TRC-1220	15.05 0.750	31.75 1.250	2.41 0.095	2.34 0.092	15.05 0.750	18.97 0.747	32.54 1.281	0.010 0.021			
	TRD-1220	15.05 0.750	31.75 1.250	3.20 0.126	3.12 0.123	15.05 0.750	18.97 0.747	32.54 1.281	0.012 0.026			
	TRE-1220	15.05 0.750	31.75 1.250	3.99 0.157	3.91 0.154	15.05 0.750	18.97 0.747	32.54 1.281	0.015 0.033			
0.005 0.011	TRA-1423	22.23 0.875	36.50 1.437	0.81 0.032	0.76 0.030	22.23 0.875	22.15 0.872	37.31 1.469	0.004 0.009	7/8		
	TRB-1423	22.23 0.875	36.50 1.437	1.00 0.063	1.52 0.060	22.23 0.875	22.15 0.872	37.31 1.469	0.008 0.017			
	TRC-1423	22.23 0.875	36.50 1.437	2.41 0.095	2.34 0.092	22.23 0.875	22.15 0.872	37.31 1.469	0.012 0.026			
	TRD-1423	22.23 0.875	36.50 1.437	3.20 0.126	3.12 0.123	22.23 0.875	22.15 0.872	37.31 1.469	0.015 0.034			
0.008 0.017	TRA-1427	22.23 0.875	42.86 1.688	1.00 0.063	1.52 0.060	22.23 0.875	22.15 0.872	43.66 1.719	0.013 0.029			
	TRB-1427	22.23 0.875	42.86 1.688	2.41 0.095	2.34 0.092	22.23 0.875	22.15 0.872	43.66 1.719	0.020 0.044			
	TRC-1427	22.23 0.875	42.86 1.688	3.20 0.126	3.12 0.123	22.23 0.875	22.15 0.872	43.66 1.719	0.026 0.057			
0.006 0.013	TRA-1625	25.40 1.000	39.67 1.562	0.81 0.032	0.76 0.030	25.40 1.000	25.32 0.997	40.49 1.594	0.005 0.010	1		
	TRB-1625	25.40 1.000	39.67 1.562	1.00 0.063	1.52 0.060	25.40 1.000	25.32 0.997	40.49 1.594	0.009 0.019			
	TRC-1625	25.40 1.000	39.67 1.562	2.41 0.095	2.34 0.092	25.40 1.000	25.32 0.997	40.49 1.594	0.017 0.038			
	TRE-1625	25.40 1.000	39.67 1.562	3.99 0.157	3.91 0.154	25.40 1.000	25.32 0.997	40.49 1.594	0.021 0.047			
0.009 0.019	TRA-1828	28.58 1.125	44.45 1.750	0.81 0.032	0.76 0.030	28.58 1.125	28.50 1.122	45.24 1.781	0.006 0.013	1 1/8		
	TRB-1828	28.58 1.125	44.45 1.750	1.00 0.063	1.52 0.060	28.58 1.125	28.50 1.122	45.24 1.781	0.011 0.024			
	TRC-1828	28.58 1.125	44.45 1.750	2.41 0.095	2.34 0.092	28.58 1.125	28.50 1.122	45.24 1.781	0.017 0.037			

²⁾If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

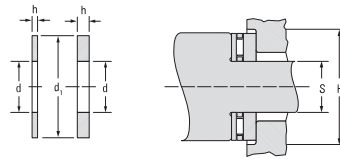
INCH SERIES

- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



Shaft Dia.	Assembly Dimensions					Assembly Designation	Load Ratings		Fatigue Load Limit C ₁	Speed Rating ¹⁾
	D ₁	D ₂	D ₃	E ₃	E ₂		Dynamic C	Static C ₀		
in	mm	mm	mm	mm	mm		kN	lbf	kN	min ⁻¹
1 1/4	31.75 1.250	45.20 1.537	1.984 0.0781	34.04 1.340	46.228 1.820	NTA-2031	26.15 4530	59.61 21500	9.55	8800
1 3/4	34.93 1.375	52.375 2.062	1.984 0.0781	37.20 1.460	49.53 1.950	NTA-2233	21.35 4800	103.20 23200	10.5	8000
1 1/2	38.10 1.500	55.55 2.187	1.984 0.0781	40.39 1.590	52.578 2.070	NTA-2435	23.22 5220	117.88 26500	12.0	7600
1 3/4	44.45 1.750	63.50 2.500	1.984 0.0781	46.74 1.840	58.928 2.320	NTA-2840	25.31 5690	137.65 30900	14.0	6800

¹⁾Speed ratings listed are based on adequate oil lubrication. See page B-6-37 for lubrication information. Suggestions for an application requiring O.D. piloting should be determined in consultation with your representative.



Approx. Vt.	Thrust Washer Designation	Washer Dimensions				Piloting Dimensions		Dia. To Clear O.D.	Washer Vt.	Shaft Dia.
		d	d ₁	h	S	H				
kg	lbf	mm	mm	mm	mm	mm	mm	mm	kg	in
0.010	TRD-1828	26.58 1.125	44.45 1.750	3.20 0.125	3.12 0.123	26.58 1.125	26.50 1.122	45.24 1.781	0.022	
	TRA-2031	31.75 1.250	46.20 1.837	0.81 0.032	0.76 0.030	31.75 1.250	31.67 1.247	50.01 1.969	0.007	1 1/4
0.021	TRB-2031	31.75 1.250	46.20 1.837	1.60 0.063	1.50 0.060	31.75 1.250	31.67 1.247	50.01 1.969	0.014	
	TRC-2031	31.75 1.250	46.20 1.837	2.41 0.095	2.34 0.092	31.75 1.250	31.67 1.247	50.01 1.969	0.020	
0.010	TRD-2031	31.75 1.250	46.20 1.837	3.20 0.125	3.12 0.123	31.75 1.250	31.67 1.247	50.01 1.969	0.026	
	TRF-2031	31.75 1.250	46.20 1.837	4.70 0.185	4.70 0.185	31.75 1.250	31.67 1.247	50.01 1.969	0.041	
0.010	TRA-2233	34.93 1.375	52.37 2.062	0.81 0.032	0.76 0.030	34.93 1.375	34.85 1.372	53.19 2.094	0.007	1 3/4
	TRB-2233	34.93 1.375	52.37 2.062	1.60 0.063	1.52 0.060	34.93 1.375	34.85 1.372	53.19 2.094	0.015	
0.011	TRC-2233	34.93 1.375	52.37 2.062	2.41 0.095	2.34 0.092	34.93 1.375	34.85 1.372	53.19 2.094	0.018	
	TRD-2233	34.93 1.375	52.37 2.062	3.20 0.125	3.12 0.123	34.93 1.375	34.85 1.372	53.19 2.094	0.029	
0.011	TRF-2233	34.93 1.375	52.37 2.062	3.99 0.157	3.91 0.154	34.93 1.375	34.85 1.372	53.19 2.094	0.037	
	TRF-2233	34.93 1.375	52.37 2.062	4.70 0.185	4.70 0.185	34.93 1.375	34.85 1.372	53.19 2.094	0.044	
0.011	TRA-2435	38.10 1.500	55.55 2.187	0.81 0.032	0.76 0.030	38.10 1.500	38.02 1.497	56.36 2.219	0.008	1 1/2
	TRB-2435	38.10 1.500	55.55 2.187	1.60 0.063	1.52 0.060	38.10 1.500	38.02 1.497	56.36 2.219	0.015	
0.011	TRC-2435	38.10 1.500	55.55 2.187	2.41 0.095	2.34 0.092	38.10 1.500	38.02 1.497	56.36 2.219	0.022	
	TRD-2435	38.10 1.500	55.55 2.187	3.20 0.125	3.12 0.123	38.10 1.500	38.02 1.497	56.36 2.219	0.030	
0.014	TRF-2435	38.10 1.500	55.55 2.187	4.70 0.185	4.70 0.185	38.10 1.500	38.02 1.497	56.36 2.219	0.045	
	TRA-2840	44.45 1.750	63.50 2.500	0.81 0.032	0.76 0.030	44.45 1.750	44.37 1.747	64.29 2.531	0.010	1 3/4
0.014	TRB-2840	44.45 1.750	63.50 2.500	1.60 0.063	1.52 0.060	44.45 1.750	44.37 1.747	64.29 2.531	0.020	

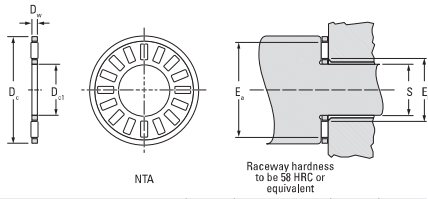
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²⁾If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

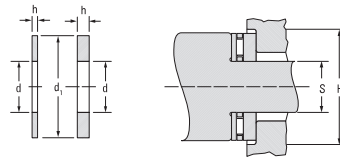
INCH SERIES

- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



Shaft Dia.	Assembly Dimensions					Assembly Designation	Load Ratings		Fatigue Load Limit C ₁	Speed Rating ¹⁾
	D ₁	D ₂	D ₃	E ₃	E ₄		Dynamic C	Static C ₀		
in	mm	mm	mm	mm	mm		kN	lbf	min ⁻¹	
2	50.80 2.000	65.85 2.590	1.984 0.0781	53.09 2.090	65.278 2.570	NTA-2244	24.02 5400	132.06 29800	12.5	6100
2 1/4	53.98 2.125	72.025 2.875	1.984 0.0781	56.39 2.220	68.58 2.700	NTA-2446	24.82 5490	137.45 30600	14.0	5800
2 1/2	57.15 2.250	76.20 3.000	1.984 0.0781	59.44 2.340	71.628 2.820	NTA-2648	24.78 5570	142.34 32000	14.6	5600
2 3/4	57.45 2.260	76.375 3.125	1.175 0.1250	59.94 2.360	75.184 2.960	NTA-2850	37.68 8470	177.04 39800	19.6	5300
2 1/2	63.50 2.500	82.55 3.250	1.984 0.0781	65.79 2.590	77.978 3.070	NTA-4052	25.53 5740	152.13 34200	15.6	5100

¹⁾Speed ratings listed are based on adequate oil lubrication. See page B-6-37 for lubrication information. Suggestions for an application requiring O.D. piloting should be determined in consultation with your representative.



Approx. Vt.	Thrust Washer Designation	Washer Dimensions				Picking Dimensions				Dia. To Clear O.D.	Washer Vt.	Shaft Dia.	
		d	d ₁	h	S	Max.	Min.	Max.	Min.				
kg	lbf	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	in
	TRC-2840	44.45 1.750	63.50 2.500	2.41 0.095	2.34 0.092	44.45 1.750	44.37 1.747	64.29 2.531	64.29 2.531	0.029 0.003			
	TRD-2840	44.45 1.750	63.50 2.500	3.20 0.126	3.12 0.123	44.45 1.750	44.37 1.747	64.29 2.531	64.29 2.531	0.038 0.004			
	TRF-2840	44.45 1.750	63.50 2.500	4.78 0.188	4.70 0.185	44.45 1.750	44.37 1.747	64.29 2.531	64.29 2.531	0.057 0.016			
0.015 0.033	TRA-3244	50.80 2.000	69.85 2.750	0.81 0.032	0.76 0.030	50.80 2.000	50.72 1.997	70.64 2.781	70.64 2.781	0.011 0.014		2	
	TRB-3244	50.80 2.000	69.85 2.750	1.60 0.063	1.52 0.060	50.80 2.000	50.72 1.997	70.64 2.781	70.64 2.781	0.022 0.004			
	TRC-3244	50.80 2.000	69.85 2.750	2.41 0.095	2.34 0.092	50.80 2.000	50.72 1.997	70.64 2.781	70.64 2.781	0.033 0.012			
	TRD-3244	50.80 2.000	69.85 2.750	3.20 0.126	3.12 0.123	50.80 2.000	50.72 1.997	70.64 2.781	70.64 2.781	0.044 0.006			
	TRF-3244	50.80 2.000	69.85 2.750	4.78 0.188	4.70 0.185	50.80 2.000	50.72 1.997	70.64 2.781	70.64 2.781	0.066 0.015			
0.016 0.036	TRA-3446	53.98 2.125	72.025 2.875	0.81 0.032	0.76 0.030	53.98 2.125	53.90 2.122	72.81 2.866	72.81 2.866	0.012 0.004		2 1/4	
	TRB-3446	53.98 2.125	72.025 2.875	1.60 0.063	1.52 0.060	53.98 2.125	53.90 2.122	72.81 2.905	72.81 2.905	0.024 0.002			
	TRC-3446	53.98 2.125	72.025 2.875	2.41 0.095	2.34 0.092	53.98 2.125	53.90 2.122	72.81 2.866	72.81 2.866	0.035 0.018			
	TRD-3446	53.98 2.125	72.025 2.875	3.20 0.126	3.12 0.123	53.98 2.125	53.90 2.122	72.81 2.866	72.81 2.866	0.047 0.010			
0.017 0.038	TRA-3648	57.15 2.250	76.20 3.000	0.81 0.032	0.76 0.030	57.15 2.250	57.07 2.247	76.99 3.031	76.99 3.031	0.012 0.006		2 1/4	
	TRB-3648	57.15 2.250	76.20 3.000	1.60 0.063	1.52 0.060	57.15 2.250	57.07 2.247	76.99 3.031	76.99 3.031	0.022 0.004			
	TRC-3648	57.15 2.250	76.20 3.000	2.41 0.095	2.34 0.092	57.15 2.250	57.07 2.247	76.99 3.031	76.99 3.031	0.037 0.008			
	TRD-3648	57.15 2.250	76.20 3.000	3.20 0.126	3.12 0.123	57.15 2.250	57.07 2.247	76.99 3.031	76.99 3.031	0.048 0.015			
	TRF-3648	57.15 2.250	76.20 3.000	4.78 0.188	4.70 0.185	57.15 2.250	57.07 2.247	76.99 3.031	76.99 3.031	0.071 0.017			
0.029 0.064	TRA-3650	57.15 2.250	76.38 3.125	2.41 0.095	2.34 0.092	57.15 2.250	57.07 2.247	80.16 3.156	80.16 3.156	0.043 0.005		2 1/4	
0.019 0.041	TRA-4052	63.50 2.500	82.55 3.250	0.81 0.032	0.76 0.030	63.50 2.500	63.42 2.497	83.34 3.281	83.34 3.281	0.013 0.009		2 1/2	
	TRB-4052	63.50 2.500	82.55 3.250	1.60 0.063	1.52 0.060	63.50 2.500	63.42 2.497	83.34 3.281	83.34 3.281	0.027 0.005			

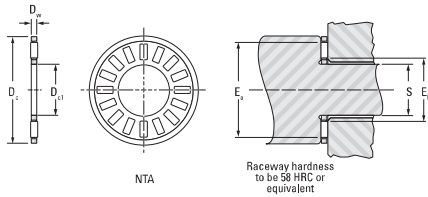
Continued on next page.

²⁾If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

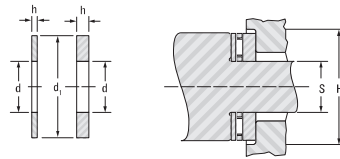
INCH SERIES

- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



Shaft Dia.	Assembly Dimensions					Assembly Designation	Load Ratings		Fatigue Load Limit C ₁	Speed Rating ¹⁾
	D ₁	D ₂	D ₃	D ₄	D ₅		Dynamic C	Static C ₀		
	mm in	mm in	mm in	mm in	mm in		kN lbf	kN		
2 1/4	69.85 2.750	92.075 3.625	3.175 0.1250	72.64 2.860	83.894 3.300	NTA-4458	47.68 10700	255.8 57500	25.8	4600
3	76.20 3.000	95.25 3.750	1.981 0.0781	78.49 3.080	96.678 3.800	NTA-4860	26.26 6060	172.1 39700	17.6	4400
3 1/4	82.65 3.250	104.78 4.125	3.175 0.1250	85.34 3.360	106.58 4.190	NTA-5286	51.60 11600	294.8 66500	33.9	4000
3 3/4	95.25 3.750	117.48 4.625	3.175 0.1250	96.04 3.800	113.28 4.460	NTA-6074	56.05 12600	344.3 77400	35.5	3500
4 1/2	104.78 4.125	128.57 5.062	3.175 0.1250	107.64 4.230	124.46 4.890	NTA-6881	63.61 14300	414.6 93000	41.3	3200

¹⁾Speed ratings listed are based on adequate oil lubrication. See page B-6-37 for lubrication information. Suggestions for an application requiring O.D. piloting should be determined in consultation with your representative.



Approx. Vt.	Thrust Washer Designation	Washer Dimensions				Picking Dimensions				Dia. To Clear O.D.		Washer Vt.	Shaft Dia.
		d	d ₁	h		S		H ²⁾					
		mm in	mm in	Max.	Min.	Max.	Min.	mm in	mm in	kg lbf	in		
0.037 0.002	TRC-4052	63.50 2.500	82.55 3.250	2.41 0.095	2.34 0.092	63.50 2.500	63.42 2.497	83.34 3.281	83.34 3.281	0.041 0.001			
	TRD-4052	63.50 2.500	82.55 3.250	3.20 0.126	3.12 0.123	63.50 2.500	63.42 2.497	83.34 3.281	83.34 3.281	0.054 0.019			
0.037 0.002	TRA-4458	69.85 2.750	92.08 3.625	0.81 0.032	0.76 0.030	69.85 2.750	69.77 2.747	92.86 3.656	92.86 3.656	0.016 0.005	2 1/4		
	TRB-4458	69.85 2.750	92.08 3.625	1.50 0.063	1.32 0.060	69.85 2.750	69.77 2.747	92.86 3.656	92.86 3.656	0.035 0.011			
0.022 0.001	TRC-4458	69.85 2.750	92.08 3.625	2.41 0.095	2.34 0.092	69.85 2.750	69.77 2.747	92.86 3.656	92.86 3.656	0.051 0.015			
	TRD-4458	69.85 2.750	92.08 3.625	3.20 0.126	3.12 0.123	69.85 2.750	69.77 2.747	92.86 3.656	92.86 3.656	0.069 0.152			
0.022 0.001	TRA-4860	76.20 3.000	95.25 3.750	0.81 0.032	0.76 0.030	76.20 3.000	76.12 2.997	96.04 3.781	96.04 3.781	0.015 0.004	3		
	TRB-4860	76.20 3.000	95.25 3.750	1.50 0.063	1.32 0.060	76.20 3.000	76.12 2.997	96.04 3.781	96.04 3.781	0.032 0.008			
0.042 0.002	TRC-5286	82.65 3.250	104.78 4.125	0.81 0.032	0.76 0.030	82.65 3.250	82.47 3.247	105.56 4.156	105.56 4.156	0.020 0.004	3 1/4		
	TRD-5286	82.65 3.250	104.78 4.125	3.20 0.126	3.12 0.123	82.65 3.250	82.47 3.247	105.56 4.156	105.56 4.156	0.080 0.178			
0.050 0.11	TRA-6074	95.25 3.750	117.48 4.625	0.81 0.032	0.76 0.030	95.25 3.750	95.17 3.747	118.26 4.656	118.26 4.656	0.023 0.005	3 3/4		
	TRB-6074	95.25 3.750	117.48 4.625	1.50 0.063	1.32 0.060	95.25 3.750	95.17 3.747	118.26 4.656	118.26 4.656	0.046 0.011			
0.050 0.11	TRC-6074	95.25 3.750	117.48 4.625	2.41 0.095	2.34 0.092	95.25 3.750	95.17 3.747	118.26 4.656	118.26 4.656	0.069 0.152			
	TRD-6074	95.25 3.750	117.48 4.625	3.20 0.126	3.12 0.123	95.25 3.750	95.17 3.747	118.26 4.656	118.26 4.656	0.092 0.202			
0.062 0.136	TRA-6881	104.78 4.125	128.57 5.062	0.81 0.032	0.76 0.030	104.78 4.125	104.70 4.122	129.39 5.094	129.39 5.094	0.027 0.005	4 1/2		
	TRB-6881	104.78 4.125	128.57 5.062	2.41 0.095	2.34 0.092	104.78 4.125	104.70 4.122	129.39 5.094	129.39 5.094	0.081 0.178			
0.062 0.136	TRC-6881	104.78 4.125	128.57 5.062	3.20 0.126	3.12 0.123	104.78 4.125	104.70 4.122	129.39 5.094	129.39 5.094	0.109 0.24			
	TRD-6881	104.78 4.125	128.57 5.062	4.78 0.188	4.70 0.185	104.78 4.125	104.70 4.122	129.39 5.094	129.39 5.094	0.161 0.364			

²⁾If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.I.R. between the shaft and housing should be added to this dimension.