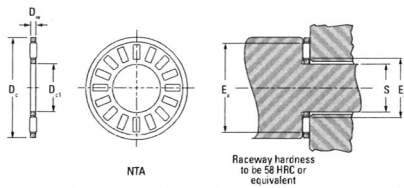


NEEDLE ROLLER BEARINGS

THRUST NEEDLE ROLLER AND CAGE ASSEMBLIES, THRUST WASHERS

INCH SERIES

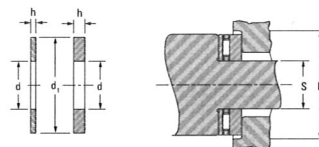
- Dimensions for bore and O.D. of thrust assemblies and washers are nominal.
- See page B-6-36 for details on piloting and backup surfaces.
- Thrust washers burnished at least one-quarter of bore area (remainder is rough breakaway finish).
- O.D. finish of washers will be as blanked.



Shaft Dia. in	Assembly Dimensions						Assembly Designation	Load Ratings		Fatigue Load Limit C ₁₀	Speed Rating ¹ min ⁻¹
	D ₁	D ₂	D ₃	D ₄	E	S		Dynamic C	Static C ₀		
	mm	mm	mm	mm	mm	mm		lbf	mm		
1 3/4	31.75 1.250	43.20 1.537	1.984 0.0781	34.04 1.240	48.228 1.820	NTA-3031	28.15 45.30	93.41 21000	9.05	8800	
1 7/8	34.50 1.375	52.375 2.062	1.984 0.0781	37.08 1.460	49.53 1.950	NTA-3223	21.35 4800	103.20 23000	10.5	8000	
1 7/2	38.10 1.500	55.55 2.187	1.984 0.0781	40.20 1.590	52.518 2.070	NTA-2425	23.22 5200	117.88 26500	12.0	7800	
1 5/8	44.45 1.750	63.50 2.500	1.984 0.0781	46.14 1.840	58.928 2.320	NTA-2640	25.21 5690	137.45 30500	14.0	8800	

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.

Needle Roller Thrust Bearings, Assemblies, Washers



Approx. Wt. kg	Thrust Washer Designation	Washer Dimensions						Pilot Dimensions		Dia. To Case O.D. H ₁₀	Washer Wt. kg	Shaft Dia. in
		d	d1	d2	h	S	H	d	S			
		mm	mm	mm	mm	mm	mm	mm	mm	mm		
0.010 0.021	TRA-1628	28.10 1.125	44.45 1.750	3.20 0.125	3.12 0.125	28.50 1.125	45.24 1.781	0.022 0.009	0.015	1 3/4		
0.010 0.021	TRA-3031	31.75 1.250	48.20 1.937	0.81 0.032	0.76 0.030	31.75 1.250	31.67 1.247	58.01 1.969	0.015	1 3/4		
0.010 0.021	TRA-3031	31.75 1.250	48.20 1.937	1.60 0.063	1.52 0.060	31.75 1.250	31.67 1.247	58.01 1.969	0.015	1 3/4		
0.010 0.021	TRA-3031	31.75 1.250	48.20 1.937	2.41 0.095	2.34 0.092	31.75 1.250	31.67 1.247	58.01 1.969	0.015	1 3/4		
0.010 0.021	TRA-3031	31.75 1.250	48.20 1.937	3.12 0.125	3.12 0.125	31.75 1.250	31.67 1.247	58.01 1.969	0.015	1 3/4		
0.010 0.021	TRA-3031	31.75 1.250	48.20 1.937	4.78 0.188	4.78 0.188	31.75 1.250	31.67 1.247	58.01 1.969	0.015	1 3/4		
0.010 0.021	TRA-3223	34.50 1.375	52.375 2.062	0.81 0.032	0.76 0.030	34.50 1.375	34.45 1.372	53.19 2.094	0.015	1 3/4		
0.010 0.021	TRA-3223	34.50 1.375	52.375 2.062	1.60 0.063	1.52 0.060	34.50 1.375	34.45 1.372	53.19 2.094	0.015	1 3/4		
0.010 0.021	TRA-3223	34.50 1.375	52.375 2.062	2.41 0.095	2.34 0.092	34.50 1.375	34.45 1.372	53.19 2.094	0.015	1 3/4		
0.010 0.021	TRA-3223	34.50 1.375	52.375 2.062	3.20 0.125	3.12 0.125	34.50 1.375	34.45 1.372	53.19 2.094	0.015	1 3/4		
0.010 0.021	TRA-3223	34.50 1.375	52.375 2.062	4.78 0.188	4.78 0.188	34.50 1.375	34.45 1.372	53.19 2.094	0.015	1 3/4		
0.010 0.021	TRA-3425	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	0.015	1 3/4		
0.010 0.021	TRA-3425	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	1 3/4		
0.010 0.021	TRA-3425	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	0.015	1 3/4		
0.010 0.021	TRA-3425	38.10 1.500	55.55 2.187	3.20 0.125	3.12 0.125	38.10 1.500	38.02 1.497	56.36 2.219	0.015	1 3/4		
0.010 0.021	TRA-3425	38.10 1.500	55.55 2.187	4.78 0.188	4.78 0.188	38.10 1.500	38.02 1.497	56.36 2.219	0.015	1 3/4		
0.010 0.021	TRA-3640	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	0.015	1 3/4		
0.010 0.021	TRA-3640	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	0.015	1 3/4		

Continued on next page.

¹ If the shaft and the housing adjacent to the bearing O.D. are not concentric, the T.A.R. between the shaft and housing should be added to this dimension.