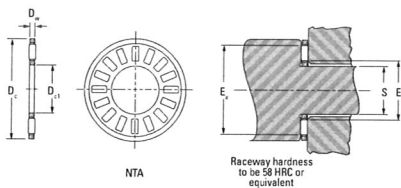


NEEDLE ROLLER BEARINGS

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.



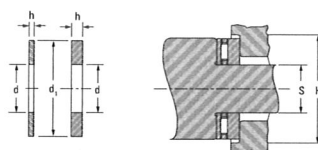
NTA

Raceway hardness to be 58 HRC or equivalent

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	D ₅	D ₆		Dynamic C	Static C ₀		
1/4	19.05 0.750	31.75 1.250	1.984 0.0781	21.34 0.840	28.956 1.140		NTA-1225	19.90 2490	36.48 8200	3.40	14000
1/2	22.23 0.875	36.50 1.437	1.984 0.0781	24.58 0.960	33.782 1.330		NTA-1423	13.43 3000	49.82 11000	4.85	12000
3/4	22.23 0.875	42.85 1.687	1.984 0.0781	25.91 1.020	35.818 1.410		NTC-1427	18.46 4100	78.29 17000	8.05	9800
1	25.40 1.000	38.615 1.520	1.984 0.0781	27.68 1.090	36.83 1.450		NTA-1625	13.43 3110	53.82 12100	5.00	11000
1 1/4	28.58 1.125	44.45 1.750	1.984 0.0781	30.73 1.210	41.606 1.640		NTA-1828	15.68 3500	71.17 15000	7.30	9800

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

Needle Roller Thrust Bearings, Assemblies, Washers



Approx. V _h	Thrust Washer Designation	Washer Dimensions						Fitting Dimensions						D ₁ To Clear O.D.	Washer V _h	Shaft Dia.
		d	d ₁	h	h ₁	h ₂	h ₃	d	d ₁	h	h ₁	h ₂	h ₃			
0.004 0.009	TRA-1225	19.05 0.750	31.75 1.250	0.81 0.032	0.76 0.030	19.05 0.750	18.57 0.747	32.54 1.281	32.54 1.281	0.003 0.013	0.007 0.021	0.006 0.021	0.006 0.021	1/4	0.003 0.007	1/4
	TRB-1225	19.05 0.750	31.75 1.250	1.60 0.063	1.52 0.060	19.05 0.750	18.57 0.747	32.54 1.281	32.54 1.281	0.006 0.013	0.007 0.021	0.006 0.021	0.006 0.021		0.006 0.021	
	TRC-1225	19.05 0.750	31.75 1.250	2.41 0.095	2.34 0.092	19.05 0.750	18.57 0.747	32.54 1.281	32.54 1.281	0.010 0.021	0.007 0.021	0.006 0.021	0.006 0.021		0.010 0.021	
	TRD-1225	19.05 0.750	31.75 1.250	3.20 0.126	3.12 0.123	19.05 0.750	18.57 0.747	32.54 1.281	32.54 1.281	0.012 0.021	0.007 0.021	0.006 0.021	0.006 0.021		0.012 0.021	
	TRA-1229	19.05 0.750	31.75 1.250	3.99 0.157	3.91 0.154	19.05 0.750	18.57 0.747	32.54 1.281	32.54 1.281	0.015 0.023	0.007 0.021	0.006 0.021	0.006 0.021		0.015 0.023	
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	37.31 1.469	0.004 0.017	0.007 0.021	0.004 0.017	0.004 0.017	1/2	0.004 0.017	1/2
	TRB-1423	22.23 0.875	36.50 1.437	1.60 0.063	1.52 0.060	22.23 0.875	22.15 0.872	37.31 1.469	37.31 1.469	0.006 0.017	0.007 0.021	0.006 0.017	0.006 0.017		0.006 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	37.31 1.469	0.012 0.021	0.007 0.021	0.006 0.017	0.006 0.017		0.012 0.021	
	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	37.31 1.469	0.015 0.023	0.007 0.021	0.006 0.017	0.006 0.017		0.015 0.023	
0.006 0.013	TRA-1427	22.23 0.875	42.86 1.688	1.60 0.063	1.52 0.060	22.23 0.875	22.15 0.872	43.66 1.719	43.66 1.719	0.013 0.025	0.007 0.021	0.006 0.017	0.006 0.017		0.013 0.025	
	TRB-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	43.66 1.719	0.020 0.044	0.007 0.021	0.006 0.017	0.006 0.017		0.020 0.044	
	TRC-1427	22.23 0.875	42.86 1.688	4.41 0.173	4.34 0.170	22.23 0.875	22.15 0.872	43.66 1.719	43.66 1.719	0.025 0.057	0.007 0.021	0.006 0.017	0.006 0.017		0.025 0.057	
0.006 0.013	TRA-1625	25.40 1.000	38.615 1.520	0.81 0.032	0.76 0.030	25.40 1.000	25.32 1.000	40.49 1.594	40.49 1.594	0.005 0.021	0.007 0.021	0.005 0.021	0.005 0.021	1	0.005 0.021	1
	TRB-1625	25.40 1.000	38.615 1.520	1.60 0.063	1.52 0.060	25.40 1.000	25.32 1.000	40.49 1.594	40.49 1.594	0.009 0.021	0.007 0.021	0.005 0.021	0.005 0.021		0.009 0.021	
	TRC-1625	25.40 1.000	38.615 1.520	3.20 0.126	3.12 0.123	25.40 1.000	25.32 1.000	40.49 1.594	40.49 1.594	0.012 0.021	0.007 0.021	0.005 0.021	0.005 0.021		0.012 0.021	
	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	45.24 1.781	0.006 0.021	0.007 0.021	0.005 0.021	0.005 0.021	1 1/4	0.006 0.021	1 1/4
0.009 0.019	TRA-1828	28.58 1.125	44.45 1.750	1.60 0.063	1.52 0.060	28.58 1.125	28.50 1.122	45.24 1.781	45.24 1.781	0.009 0.021	0.007 0.021	0.005 0.021	0.005 0.021		0.009 0.021	
	TRB-1828	28.58 1.125	44.45 1.750	3.20 0.126	3.12 0.123	28.58 1.125	28.50 1.122	45.24 1.781	45.24 1.781	0.012 0.021	0.007 0.021	0.005 0.021	0.005 0.021		0.012 0.021	
	TRC-1828	28.58 1.125	44.45 1.750	4.41 0.173	4.34 0.170	28.58 1.125	28.50 1.122	45.24 1.781	45.24 1.781	0.015 0.023	0.007 0.021	0.005 0.021	0.005 0.021		0.015 0.023	

¹ 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.

Continued on next page.