

**REFERENCE DATA SHEETS NC41SA**  
**UN, UNC, UNF, UNEF, UNS THREAD SIZES**

Part Data				Roll Data		Attachment Data			
Size	TPI	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance
#0	- 80	0.045	0.050	35	1.684	2.574	Long	0.068	0.693
#1	- 64	0.054	0.061	28	1.626	2.570	Long	0.078	0.644
#1	- 72	0.056	0.062	28	1.673	2.574	Long	0.072	0.693
#2	- 56	0.064	0.072	24	1.654	2.573	Long	0.083	0.682
#2	- 64	0.067	0.074	24	1.706	2.577	Long	0.080	0.737
#3	- 48	0.073	0.084	21	1.659	2.574	Long	0.096	0.696
#3	- 56	0.077	0.085	20	1.638	2.573	Long	0.082	0.679
#4	- 40	0.081	0.094	19	1.674	2.576	Long	0.106	0.719
#4	- 48	0.086	0.096	18	1.658	2.575	Long	0.091	0.708
#5	- 40	0.094	0.107	16	1.618	2.573	Long	0.104	0.676
#5	- 44	0.097	0.108	16	1.652	2.575	Long	0.098	0.713
#6	- 32	0.100	0.116	15	1.622	2.573	Long	0.119	0.686
#6	- 40	0.107	0.120	14	1.598	2.572	Long	0.104	0.669
#8	- 32	0.126	0.142	12	1.609	2.574	Long	0.119	0.699
#8	- 36	0.130	0.144	12	1.650	2.577	Long	0.112	0.744
#10	- 24	0.139	0.161	11	1.651	2.578	Long	0.141	0.754
#10	- 28	0.146	0.164	11	1.702	2.581	Long	0.129	0.812
#10	- 32	0.152	0.168	10	1.601	2.575	Long	0.120	0.717
#10	- 36	0.156	0.169	10	1.626	2.577	Long	0.108	0.746
#10	- 40	0.159	0.171	10	1.652	2.579	Long	0.103	0.775
#10	- 48	0.164	0.174	10	1.693	2.581	Long	0.094	0.821
#10	- 56	0.168	0.176	9	1.550	2.573	Long	0.083	0.682
#12	- 24	0.165	0.188	9	1.585	2.575	Long	0.143	0.714
#12	- 28	0.172	0.191	9	1.636	2.579	Long	0.131	0.772
#12	- 32	0.178	0.194	9	1.675	2.581	Long	0.123	0.817
#12	- 36	0.182	0.195	9	1.698	2.582	Short	0.111	0.844
#12	- 40	0.185	0.197	8	1.530	2.573	Long	0.100	0.679
#12	- 48	0.190	0.200	8	1.563	2.575	Long	0.092	0.717
#12	- 56	0.194	0.202	8	1.586	2.577	Long	0.084	0.744
1/4	- 18	0.182	0.212	8	1.575	2.576	Long	0.163	0.721
1/4	- 20	0.189	0.216	8	1.617	2.579	Long	0.158	0.770
1/4	- 24	0.199	0.220	8	1.672	2.582	Long	0.141	0.835
1/4	- 26	0.203	0.223	8	1.705	2.583	Short	0.139	0.872
1/4	- 27	0.205	0.223	8	1.708	2.583	Short	0.133	0.877
1/4	- 28	0.206	0.225	7	1.511	2.573	Long	0.127	0.681
1/4	- 32	0.212	0.228	7	1.541	2.575	Long	0.120	0.717
1/4	- 36	0.216	0.229	7	1.558	2.577	Long	0.108	0.738
1/4	- 40	0.219	0.231	7	1.576	2.578	Long	0.103	0.759
1/4	- 48	0.224	0.234	7	1.605	2.580	Long	0.094	0.793
1/4	- 56	0.228	0.236	7	1.625	2.581	Long	0.086	0.817
1/4	- 80	0.235	0.240	7	1.667	2.583	Short	0.071	0.866

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Part Data				Roll Data		Attachment Data				
Size	TPI	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance	
9/32	-	18	0.213	0.243	7	1.597	2.579	Long	0.165	0.774
9/32	-	28	0.237	0.256	6	1.481	2.573	Long	0.127	0.682
9/32	-	32	0.243	0.258	6	1.502	2.575	Long	0.115	0.709
9/32	-	40	0.251	0.263	6	1.544	2.578	Long	0.106	0.759
5/16	-	16	0.236	0.269	6	1.513	2.575	Long	0.171	0.713
5/16	-	18	0.244	0.274	6	1.556	2.578	Long	0.164	0.764
5/16	-	20	0.251	0.278	6	1.588	2.580	Long	0.158	0.803
5/16	-	24	0.261	0.273	6	1.636	2.583	Short	0.105	0.861
5/16	-	27	0.267	0.285	6	1.656	2.584	Short	0.132	0.887
5/16	-	28	0.269	0.287	6	1.670	2.584	Short	0.134	0.903
5/16	-	32	0.274	0.290	6	1.696	2.585	Short	0.125	0.934
5/16	-	36	0.278	0.292	5	1.426	2.572	Long	0.108	0.668
5/16	-	40	0.282	0.293	5	1.439	2.573	Long	0.098	0.685
5/16	-	48	0.287	0.296	5	1.459	2.575	Long	0.089	0.710
11/32	-	32	0.305	0.322	5	1.570	2.582	Short	0.125	0.839
3/8	-	16	0.298	0.332	5	1.576	2.582	Long	0.178	0.838
3/8	-	18	0.307	0.336	5	1.603	2.583	Short	0.168	0.874
3/8	-	19	0.310	0.339	4	1.298	2.563	Long	0.152	0.572
3/8	-	20	0.314	0.340	5	1.636	2.585	Short	0.161	0.914
3/8	-	24	0.324	0.346	5	1.676	2.585	Short	0.149	0.964
3/8	-	28	0.331	0.350	5	1.703	2.586	Short	0.139	0.998
3/8	-	32	0.337	0.353	4	1.381	2.573	Long	0.119	0.682
3/8	-	36	0.341	0.354	4	1.390	2.574	Long	0.107	0.695
3/8	-	40	0.344	0.356	4	1.401	2.575	Long	0.101	0.709
3/8	-	48	0.349	0.360	4	1.420	2.577	Long	0.097	0.733
13/32	-	28	0.362	0.381	4	1.488	2.581	Long	0.131	0.814
13/32	-	32	0.368	0.384	4	1.505	2.582	Long	0.123	0.837
7/16	-	14	0.350	0.389	4	1.477	2.580	Long	0.190	0.791
7/16	-	16	0.361	0.395	4	1.511	2.582	Long	0.180	0.836
7/16	-	18	0.369	0.398	4	1.532	2.583	Short	0.166	0.865
7/16	-	20	0.376	0.403	4	1.558	2.584	Short	0.162	0.898
7/16	-	24	0.386	0.407	4	1.586	2.585	Short	0.143	0.936
7/16	-	27	0.392	0.410	4	1.604	2.585	Short	0.134	0.960
7/16	-	28	0.394	0.412	4	1.613	2.586	Short	0.136	0.971
7/16	-	32	0.399	0.415	4	1.631	2.586	Short	0.127	0.994
7/16	-	40	0.407	0.419	4	1.654	2.586	Short	0.112	1.025
15/32	-	14	0.381	0.422	4	1.599	2.585	Short	0.202	0.944
15/32	-	32	0.430	0.446	3	1.317	2.575	Long	0.117	0.711
1/2	-	12	0.398	0.444	3	1.261	2.568	Long	0.197	0.623
1/2	-	13	0.406	0.448	3	1.279	2.570	Long	0.190	0.649
1/2	-	14	0.412	0.450	3	1.291	2.572	Long	0.180	0.667
1/2	-	16	0.415	0.458	3	1.320	2.574	Long	0.195	0.699
1/2	-	18	0.432	0.461	3	1.336	2.576	Long	0.161	0.732
1/2	-	20	0.439	0.466	3	1.356	2.578	Long	0.157	0.759
1/2	-	24	0.449	0.470	3	1.377	2.580	Long	0.139	0.790

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Part Data				Roll Data		Attachment Data			
Size	TPI	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance
1/2	- 27	0.455	0.473	3	1.391	2.581	Long	0.131	0.810
1/2	- 28	0.456	0.475	3	1.397	2.581	Long	0.132	0.817
1/2	- 32	0.462	0.478	3	1.410	2.582	Long	0.124	0.836
1/2	- 40	0.469	0.486	3	1.441	2.583	Short	0.126	0.874
9/16	- 12	0.460	0.506	3	1.448	2.583	Short	0.210	0.872
9/16	- 14	0.475	0.513	3	1.478	2.585	Short	0.194	0.917
9/16	- 16	0.486	0.520	3	1.508	2.585	Short	0.185	0.958
9/16	- 18	0.494	0.524	3	1.528	2.586	Short	0.174	0.986
9/16	- 20	0.501	0.528	3	1.544	2.586	Short	0.166	1.009
9/16	- 24	0.511	0.533	2	1.045	2.558	Long	0.130	0.520
9/16	- 24	0.511	0.533	2	1.045	2.558	Long	0.130	0.520
9/16	- 28	0.519	0.537	2	1.057	2.560	Long	0.120	0.540
9/16	- 32	0.524	0.540	2	1.065	2.562	Long	0.112	0.553
9/16	- 40	0.532	0.545	2	1.077	2.563	Long	0.103	0.573
5/8	- 11	0.513	0.564	2	1.079	2.562	Long	0.202	0.556
5/8	- 12	0.523	0.569	2	1.091	2.564	Long	0.195	0.578
5/8	- 14	0.537	0.575	2	1.110	2.567	Long	0.177	0.611
5/8	- 16	0.548	0.582	2	1.130	2.570	Long	0.169	0.642
5/8	- 18	0.557	0.587	2	1.144	2.572	Long	0.161	0.665
5/8	- 20	0.564	0.590	2	1.154	2.573	Long	0.151	0.682
5/8	- 24	0.574	0.596	2	1.170	2.575	Long	0.139	0.708
5/8	- 24	0.574	0.596	2	1.170	2.575	Long	0.139	0.708
5/8	- 27	0.580	0.598	2	1.178	2.576	Long	0.128	0.722
5/8	- 28	0.581	0.600	2	1.182	2.576	Long	0.129	0.727
5/8	- 32	0.587	0.603	2	1.190	2.577	Long	0.121	0.741
11/16	- 12	0.585	0.631	2	1.216	2.578	Long	0.204	0.765
11/16	- 16	0.611	0.645	2	1.255	2.582	Long	0.179	0.830
11/16	- 20	0.626	0.653	2	1.279	2.583	Short	0.160	0.869
11/16	- 24	0.636	0.658	2	1.295	2.584	Short	0.145	0.895
11/16	- 27	0.642	0.660	2	1.302	2.584	Short	0.132	0.908
11/16	- 28	0.644	0.662	2	1.307	2.585	Short	0.134	0.915
11/16	- 32	0.649	0.665	2	1.315	2.585	Short	0.125	0.928
3/4	- 10	0.627	0.683	2	1.309	2.584	Short	0.234	0.900
3/4	- 12	0.648	0.694	2	1.341	2.585	Short	0.216	0.953
3/4	- 14	0.662	0.700	2	1.360	2.586	Short	0.196	0.986
3/4	- 16	0.673	0.707	2	1.380	2.586	Short	0.187	1.017
3/4	- 18	0.682	0.710	2	1.394	2.586	Short	0.172	1.040
3/4	- 20	0.689	0.716	2	1.404	2.586	Short	0.170	1.057
* 3/4	- 24	0.699	0.720	2	1.419	2.586	Short	0.150	1.082
* 3/4	- 27	0.705	0.723	2	1.427	2.586	Short	0.140	1.096
* 3/4	- 28	0.706	0.725	2	1.432	2.585	Short	0.142	1.102
* 3/4	- 32	0.712	0.727	2	1.438	2.585	Short	0.129	1.114

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Part Data				Roll Data		Attachment Data			
Size	TPI	Minor Diameter	Blank Diameter at "Y"	# of Starts	OD Large End	Centerline Height	Spring	Working Stroke	Stock Clearance
1/16	- 27	0.237	0.279	6	1.615	2.581	Long	0.197	0.816
1/8	- 27	0.330	0.372	4	1.440	2.577	Long	0.193	0.734
1/4	- 18	0.427	0.489	3	1.428	2.581	Long	0.243	0.819
3/8	- 18	0.564	0.625	2	1.229	2.578	Long	0.237	0.757

**REFERENCE DATA SHEETS NC41SA**  
**BSPT TAPERED PIPE THREAD SIZES**

Part Data				Roll Data		Attachment Data			
Size	Pitch	Minor Diameter	Blank Diameter at "Y"	# of Starts	OD Large End	Centerline Height	Spring	Working Stroke	Stock Clearance
1/16	- 28	0.246	0.281	6	1.626	2.582	Long	0.181	0.836
1/8	- 28	0.325	0.360	4	1.405	2.574	Long	0.174	0.694
1/4	- 19	0.433	0.484	3	1.418	2.581	Long	0.219	0.815
3/8	- 19	0.571	0.622	2	1.227	2.578	Long	0.216	0.762

"Y" dimension is shown in accompanying drawing.

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Part Data				Roll Data		Attachment Data			
Size	TPI	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance
1/8	- 27	0.344	0.371	4	1.440	2.577	Long	0.154	0.748
1/4	- 18	0.447	0.488	3	1.420	2.582	Long	0.196	0.831
3/8	- 18	0.583	0.624	2	1.219	2.578	Long	0.193	0.766

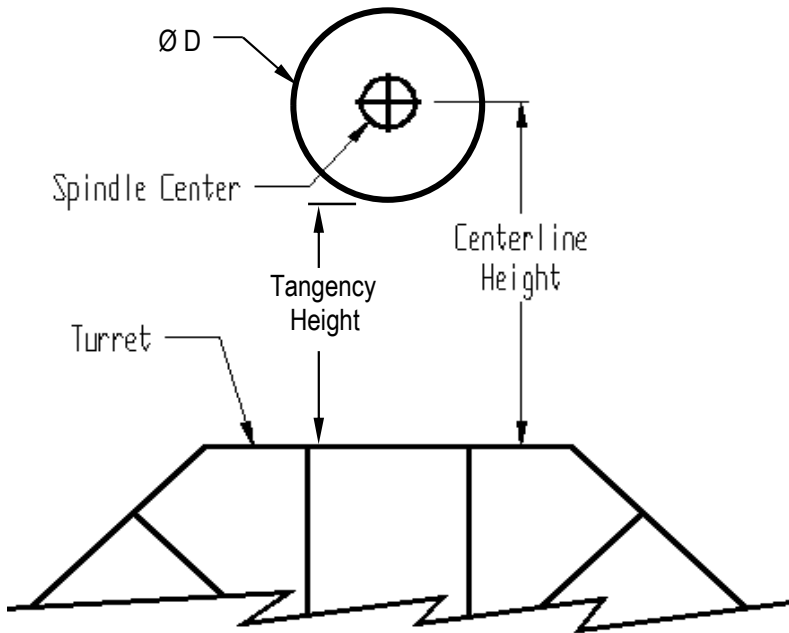
**REFERENCE DATA SHEETS NC41SA**  
**BSP STRAIGHT PIPE THREAD SIZES**

Part Data				Roll Data		Attachment Data			
Size	TPI	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance
1/16	- 28	0.255	0.281	6	1.621	2.582	Short	0.156	0.840
1/8	- 28	0.334	0.358	4	1.395	2.574	Long	0.143	0.693
1/4	- 19	0.446	0.482	3	1.402	2.581	Long	0.183	0.812
3/8	- 19	0.584	0.620	2	1.211	2.578	Long	0.180	0.759

**REFERENCE DATA SHEETS NC41SA**  
**UN, UNC, UNF, UNEF, UNS THREAD SIZES**

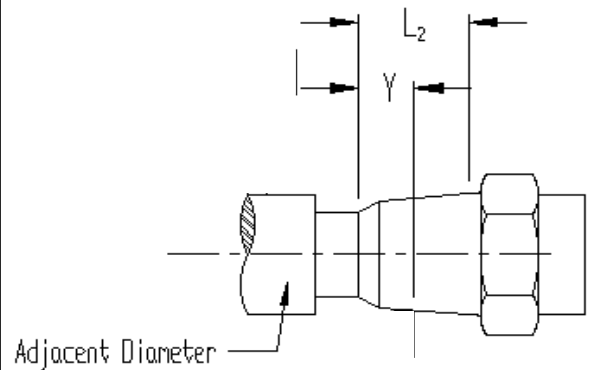
Part Data					Roll Data		Attachment Data			
Size	Pitch	Minor Diameter	Blank Diameter	# of Starts	OD	Centerline Height	Spring	Working Stroke	Stock Clearance	
M1.6	X	0.35	0.045	0.051	34	1.669	2.573	Long	0.070	0.678
M2	X	0.4	0.059	0.066	26	1.638	2.571	Long	0.079	0.661
M2.5	X	0.45	0.076	0.084	21	1.695	2.577	Long	0.085	0.735
M3	X	0.5	0.093	0.103	17	1.676	2.576	Long	0.093	0.733
M3.5	X	0.6	0.108	0.120	14	1.612	2.573	Long	0.102	0.684
M4	X	0.7	0.123	0.137	13	1.693	2.579	Long	0.114	0.780
M5	X	0.8	0.157	0.173	10	1.658	2.579	Long	0.120	0.779
M6	X	1	0.187	0.208	8	1.580	2.576	Long	0.137	0.731
M8	X	0.75	0.278	0.293	5	1.479	2.576	Long	0.116	0.721
M8	X	1	0.266	0.286	6	1.657	2.584	Short	0.140	0.887
M8	X	1.25	0.253	0.280	6	1.601	2.581	Long	0.157	0.818
M10	X	0.75	0.357	0.372	4	1.458	2.579	Long	0.118	0.779
M10	X	1.25	0.332	0.359	4	1.382	2.573	Long	0.152	0.678
M10	X	1.5	0.320	0.352	5	1.679	2.585	Short	0.180	0.963
M12	X	1	0.423	0.444	3	1.301	2.573	Long	0.135	0.688
*M12	X	1.25	0.411	0.437	4	1.697	2.586	Short	0.166	1.072
M12	X	1.5	0.399	0.431	4	1.659	2.586	Short	0.183	1.022
M12	X	1.75	0.387	0.424	4	1.621	2.586	Short	0.195	0.972
M14	X	1.5	0.477	0.510	3	1.480	2.585	Short	0.179	0.921
M14	X	2	0.453	0.497	3	1.423	2.582	Short	0.204	0.840
M15	X	1	0.541	0.562	2	1.104	2.567	Long	0.131	0.609
M16	X	1.5	0.556	0.588	2	1.144	2.572	Long	0.165	0.664
M16	X	2	0.532	0.575	2	1.106	2.566	Long	0.189	0.602
M17	X	1	0.620	0.641	2	1.261	2.582	Short	0.141	0.845
M18	X	1	0.659	0.680	2	1.340	2.585	Short	0.144	0.963
M18	X	1.5	0.635	0.667	2	1.302	2.584	Short	0.177	0.901

## Centerline Height Definition

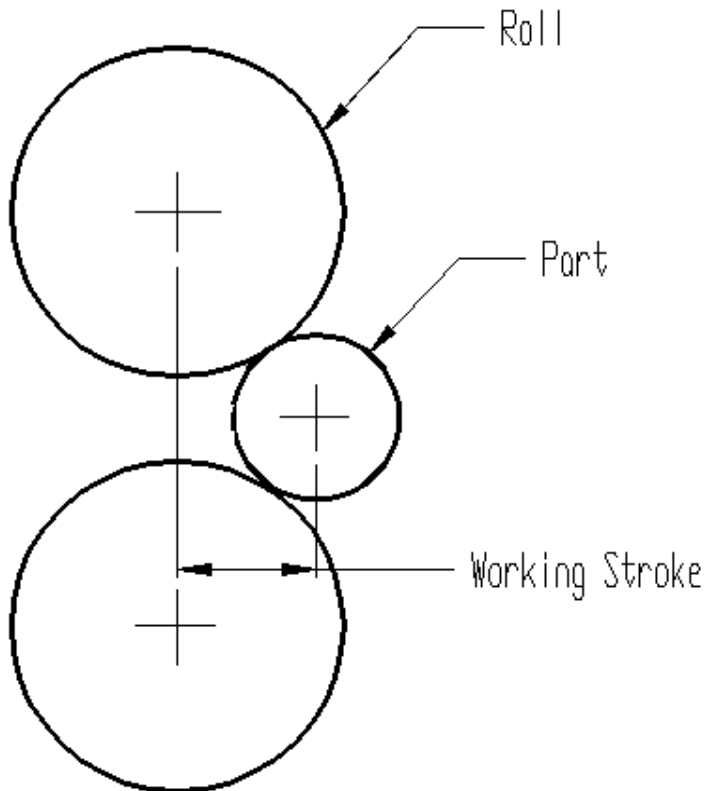


$$\text{Centerline Height} = \text{Tangency Height} + (\text{Ø D} / 2)$$

## Taper Pipe Diameter Definition



## Working Stroke Definition



BLANK SPECIFICATIONS			
PIPE SIZE NPT & NPTF	Y	L2	B.D. @ Y
1/16-27	.130	.261	.279
1/8-27	.132	.264	.372
1/4-18	.200	.402	.489
3/8-18	.203	.408	.625
1/2-14	.266	.534	.774
3/4-14	.273	.546	.985
1" -11 1/2	.341	.683	1.235
1 1/4-11 1/2	.353	.707	1.579
1 1/2-11 1/2	.362	.724	1.818
PIPE SIZE BSPT	Y	L2	B.D. @ Y
1/16-28	.1563	.255	.281
1/8-28	.1563	.255	.360
1/4-19	.2367	.381	.484
3/8-19	.2500	.394	.622
1/2-14	.3214	.517	.779
3/4-14	.3750	.571	.995
1" -11	.4091	.659	1.250
1 1/4-11	.5000	.750	1.591
1 1/2-11	.5000	.750	1.823