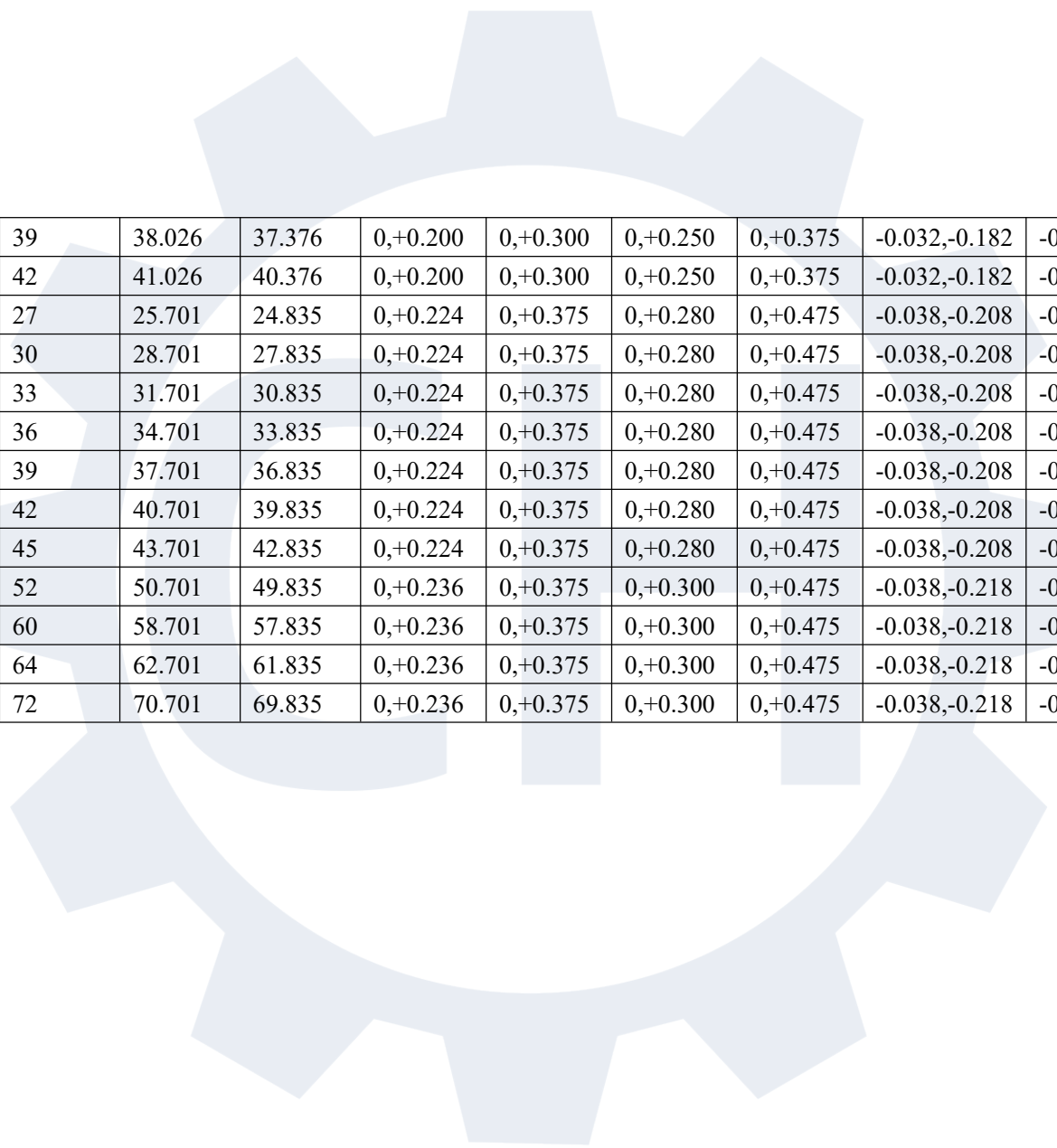


## Metric Thread

	Basic Diameter			Internal Thread Tolerance Grade				External Thread Tolerance	
	Major Diameter	Pitch Diameter	Minor Diameter	6H		7H		6g	
				Pitch Diameter Tolerance	Minor Diameter Tolerance	Pitch Diameter Tolerance	Minor Diameter Tolerance	Pitch Diameter Tolerance	Minor Diameter Tolerance
M10*1	10	9.35	8.917	0,+0.150	0,+0.236	0,+0.190	0,+0.300	-0.026,-0.138	-0.026,0.206
M12*1	12	11.35	10.917	0,+0.160	0,+0.236	0,+0.200	0,+0.300	-0.026,-0.144	-0.026,0.206
M14*1	14	13.35	12.917	0,+0.160	0,+0.236	0,+0.200	0,+0.300	-0.026,-0.144	-0.026,0.206
M12*1.25	12	11.188	10.647	0,+0.180	0,+0.265	0,+0.224	0,+0.335	-0.028,-0.160	-0.028,-0.240
M14*1.25	14	13.188	12.647	0,+0.180	0,+0.265	0,+0.224	0,+0.335	-0.028,-0.160	-0.028,-0.240
M12*1.5	12	11.026	10.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M14*1.5	14	13.026	12.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M16*1.5	16	15.026	14.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M18*1.5	18	17.026	16.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M20*1.5	20	19.026	18.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M22*1.5	22	21.026	20.376	0,+0.190	0,+0.300	0,+0.236	0,+0.375	-0.032,-0.172	-0.032,-0.268
M24*1.5	14	23.026	22.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M26*1.5	26	25.026	24.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M27*1.5	27	26.026	25.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M30*1.5	30	29.026	28.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M33*1.5	33	32.026	31.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M36*1.5	36	35.026	34.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268

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M39*1.5	39	38.026	37.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M42*1.5	42	41.026	40.376	0,+0.200	0,+0.300	0,+0.250	0,+0.375	-0.032,-0.182	-0.032,-0.268
M27*2	27	25.701	24.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M30*2	30	28.701	27.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M33*2	33	31.701	30.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M36*2	36	34.701	33.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M39*2	39	37.701	36.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M42*2	42	40.701	39.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M45*2	45	43.701	42.835	0,+0.224	0,+0.375	0,+0.280	0,+0.475	-0.038,-0.208	-0.038,-0.318
M52*2	52	50.701	49.835	0,+0.236	0,+0.375	0,+0.300	0,+0.475	-0.038,-0.218	-0.038,-0.318
M60*2	60	58.701	57.835	0,+0.236	0,+0.375	0,+0.300	0,+0.475	-0.038,-0.218	-0.038,-0.318
M64*2	64	62.701	61.835	0,+0.236	0,+0.375	0,+0.300	0,+0.475	-0.038,-0.218	-0.038,-0.318
M72*2	72	70.701	69.835	0,+0.236	0,+0.375	0,+0.300	0,+0.475	-0.038,-0.218	-0.038,-0.318

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American NPSM Thread (U.S. Standard ANSI B1.20.1 Straight Pipe Thread for Mechanical Joints, 60° )

Designation	Thread Code	External Thread (Class 2A)				Internal Thread (Class 2B)			
		Major Diameter		Pitch Diameter		Minor Diameter		Pitch Diameter	
		Maximum Value	Minimum Value	Maximum Value	Minimum Value	Minimum Value	Maximum Value	Minimum Value	Maximum Value
02	1/8-27NPSM	10.084	9.906	9.462	9.370	9.093	9.246	9.489	9.609
04	1/4-18NPSM	13.360	13.132	12.454	12.342	11.887	12.217	12.487	12.634
06	3/8-18NPSM	16.815	16.586	15.890	15.776	15.316	15.545	15.926	16.076
08	1/2-14NPSM	20.904	20.650	19.733	19.604	18.974	19.279	19.771	19.942
12	3/4-14NPSM	26.264	26.010	25.077	24.943	24.333	24.638	25.118	25.293
16	1-11.5NPSM	32.842	32.537	31.417	31.270	30.505	30.759	31.460	31.653
20	1.1/4-11.5NPSM	41.605	41.300	40.173	40.020	39.268	39.497	40.218	40.416
24	1.1/2-11.5NPSM	47.676	47.371	46.241	46.086	45.339	45.568	46.286	46.487
32	2-11.5NPSM	59.715	59.411	58.278	58.120	57.379	57.607	58.326	58.532
40	2.1/2-8NPSM	72.161	71.780	70.104	69.916	68.783	69.266	70.160	70.409
48	3-8NPSM	88.062	87.681	86.009	85.816	84.684	85.166	86.068	86.319

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## NPT Tapered Pipe Thread

Designation	Thread Code	Diameter at the reference surface			Thread length		Major diameter at end face
		Major Diameter	Pitch Diameter	Minor Diameter	Length from pipe end to reference surface	Effective length	
02	Z1/8*27	10.242	9.489	8.736	4.102	6.703	9.986
04	Z1/4*18	13.616	12.487	11.385	5.786	10.206	13.254
06	Z3/8*18	17.055	15.926	14.797	6.096	10.358	16.674
08	Z1/2*14	21.223	19.772	18.321	8.128	13.556	20.715
12	Z3/4*14	26.568	25.117	23.666	8.611	13.861	26.030
16	Z1*11.5	33.228	31.461	29.694	10.160	17.343	32.593
20	Z1.1/4*1.5	41.985	40.218	38.451	10.668	17.953	41.318
24	Z1.1/2*11.5	48.054	46.287	44.520	10.668	18.377	47.387
32	Z2*11.5	60.092	58.325	56.558	11.074	19.215	59.400
40	Z2.1/2*8	72.699	70.159	67.619	17.323	28.892	71.616
48	Z3*8	88.608	86.068	83.528	19.456	30.480	87.392

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### 55-degree American National Pipe Taper (NPT) thread

Designation	Thread Code	Basic Diameter			Internal thread		External thread			
		Major Diameter	Pitch Diameter	Minor Diameter	Pitch Diameter Tolerance	Minor Diameter Tolerance	Tolerance grade			
							A		B	
							Pitch Diameter Tolerance	Major diameter tolerance	Pitch Diameter Tolerance	Major diameter tolerance
02	G1/8*28	9.728	9.147	8.566	0.170, 0	0.282, 0	0, -0.170	0, -0.214	0, -0.214	0, -0.214
04	G1/4*19	13.157	12.301	11.445	0.125, 0	0.445, 0	0,-0.125	0, -0.250	0, -0.250	0, -0.250
06	G3/8*19	16.662	15.806	14.950	0.125, 0	0.445, 0	0, -0.125	0, -0.250	0, -0.250	0, -0.250
08	G1/2*14	20.955	19.793	18.631	0.142, 0	0.541, 0	0, -0.142	0, -0.284	0, -0.284	0, -0.284
10	G5/8*14	22.911	21.749	20.587	0.142, 0	0.541, 0	0, -0.142	0, -0.284	0, -0.284	0, -0.284
12	G3/4*14	26.441	25.279	24.117	0.142, 0	0.541, 0	0, -0.142	0, -0.284	0, -0.284	0, -0.284
16	G1*11	33.249	31.770	30.291	0.180, 0	0.640, 0	0, -0.180	0, -0.360	0, -0.360	0, -0.360
20	G1.1/4*11	41.910	40.431	38.952	0.180, 0	0.640, 0	0, -0.180	0, -0.360	0, -0.360	0, -0.360
24	G1.1/2*11	47.803	46.324	44.845	0.180, 0	0.640, 0	0, -0.180	0, -0.360	0, -0.360	0, -0.360
32	G2*11	59.614	58.135	56.656	0.180, 0	0.640, 0	0, -0.180	0, -0.360	0, -0.360	0, -0.360
40	G2.1/2*11	75.184	73.705	72.226	0.217, 0	0.640, 0	0, -0.217	0, -0.434	0, -0.434	0, -0.434
48	G3*11	87.884	86.405	84.926	0.217, 0	0.640, 0	0, -0.217	0, -0.434	0, -0.434	0, -0.434

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### 55-degree American National Pipe Taper (NPT) thread

Designation	Thread Code	Diameter at the reference surface			Reference length			Effective thread length			LD-AD-RS-TIT	Major diameter at end face
		Major Diameter	Pitch Diameter	Minor Diameter	Basic	Maximum	Minimum	Basic	Maximum	Minimum		
02	R1/8*28	9.728	9.147	8.566	4	4.9	3.1	6.5	7.4	5.6	1.1	9.478
04	R1/4*19	13.157	12.301	11.445	6	7.3	4.7	9.7	11	8.4	1.7	12.782
06	R3/8*19	16.662	15.806	14.950	6.4	7.7	5.1	10.1	11.4	8.8	1.7	16.262
08	R1/2*14	20.955	19.793	18.631	8.2	10	6.4	13.2	15	11.4	2.3	20.443
12	R3/4*14	26.441	25.279	24.117	9.5	11.3	7.7	14.5	16.3	12.7	2.3	25.847
16	R1*11	33.249	31.770	30.291	10.4	12.7	8.1	16.8	19.1	14.5	2.9	32.599
20	R1.1/4*11	41.910	40.431	38.952	12.7	15	10.4	19.1	21.4	16.8	2.9	41.116
24	R1.1/2*11	47.803	46.324	44.845	12.7	15	10.4	19.1	21.4	16.8	2.9	47.009
32	R2*11	59.614	58.135	56.656	15.9	18.2	13.6	23.4	25.7	21.1	2.9	58.620
40	R2.1/2*11	75.184	73.705	72.226	17.5	21	14	26.7	30.2	23.2	3.5	74.090
48	R3*11	87.884	86.405	84.926	20.6	24.1	17.1	29.8	33.3	26.3	3.5	86.597

CHIHENG

## American standard thread

Designation	Thread Code	External thread					Internal thread				
		Tolerance grade 2A					Tolerance Grade 2B				
		Major Diameter		Pitch Diameter		Minor Diameter Maximum	Minor Diameter		Pitch Diameter		Major Diameter Minimum
		Maximum	Minimum	Maximum	Minimum		Minimum	Maximum	Minimum	Maximum	
JIC Thread											
02	5/16×24UNF	7.910	7.727	7.221	7.127	6.650	6.782	7.036	7.249	7.371	7.938
03	3/8*24UNF	9.497	9.314	8.809	8.712	8.237	8.382	8.636	8.837	8.961	9.525
04	7/16*20UNF	11.079	10.874	10.254	10.147	9.568	9.728	10.033	10.287	10.424	11.113
05	1/2*20UNF	12.667	12.461	11.841	11.732	11.156	11.328	11.608	11.875	12.017	12.7
06	9/16*18UNF	14.252	14.031	13.335	13.221	12.573	12.751	13.081	13.371	13.52	14.288
08	3/4*16UNF	19.012	18.773	17.981	17.854	17.12	17.323	17.678	18.019	18.184	19.05
10	7/8*14UNF	22.184	21.923	21.006	20.869	20.025	20.269	20.676	21.046	21.224	22.225
12	1.1/16*12UNF	26.944	26.655	25.57	25.425	24.425	24.689	25.146	25.613	25.801	26.988
16	1.5/16*12UNF	33.294	33.005	31.92	31.773	30.775	31.039	31.496	31.963	32.154	33.338
20	1.5/8*12UNF	41.229	40.94	39.855	39.705	38.71	38.989	39.446	39.901	40.094	41.275
24	1.7/8*12UNF	47.579	47.29	46.205	46.053	45.06	45.339	45.796	46.251	46.449	47.625
32	2.1/2*12UNF	63.452	63.162	62.078	61.92	60.932	61.214	61.671	62.126	62.332	63.5
40	3812UNF	76.157	75.862	74.778	74.618	73.632	73.914	74.371	74.826	75.034	76.2

# CHIHENG

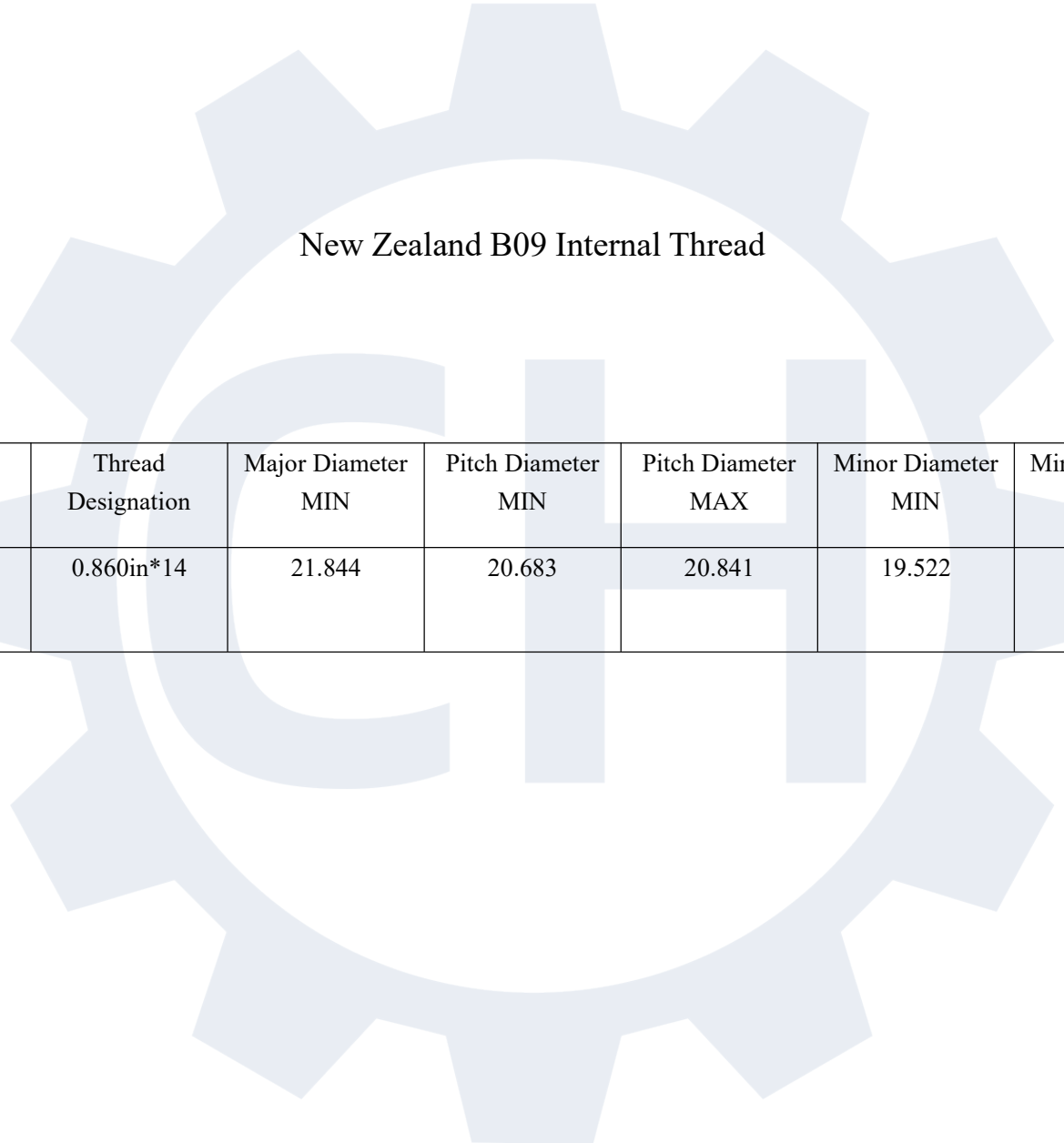
18HK	1.1/2*10UNF	38.052	37.724	36.401	36.238	35.029	35.357	35.890	36.449	36.660	38.100
ORFS Thread											
04	9/16*18UNF	14.252	14.031	13.335	13.221	12.573	12.751	13.081	13.371	13.52	14.288
06	11/16*16UNF	17.427	17.188	16.396	16.274	15.535	15.748	16.104	16.431	16.589	17.463
08	13/16*16UNF	20.599	20.361	19.568	19.444	18.707	18.923	19.279	19.606	19.766	20.638
10	1*14UNSF	25.357	25.095	24.178	24.036	23.195	23.444	23.825	24.221	24.407	25.4
12	1.3/16*12UN	30.119	29.83	28.754	28.598	27.6	27.864	28.321	28.788	28.979	30.163
16	1.7/16*12UN	36.467	36.177	35.093	34.943	33.947	34.214	34.671	35.138	35.331	36.513
20	1.11/16*12UN	42.817	42.527	41.443	41.29	40.297	40.564	41.021	41.488	41.686	42.863
24	2*12UN	50.754	50.465	49.38	49.25	48.235	48.514	48.971	49.426	49.627	50.8
SAE Thread											
06	5/8×18UNF	15.839	15.618	14.923	14.803	14.161	14.351	14.681	14.958	15.11	15.875
12	1.1/16*14UNF	26.947	26.683	25.743	25.608	24.74	24.968	25.375	25.783	25.961	26.987
Other American Standard Threads											
	9/16*16UN	14.252	14.013	13.221	13.101	12.36	12.573	12.929	13.256	13.411	14.288
	7/8*12UN	22.182	21.892	20.808	20.668	19.662	19.939	20.396	20.851	21.034	22.225
	2.1/4*12UN	57.104	56.815	55.73	55.575	54.585	54.864	55.321	55.776	55.976	57.15

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## Removable Core and Sleeve Connection Thread

Hose Number	Thread Code	External thread					Internal thread				
		Tolerance Grade 2B									
		Major Diameter		Pitch Diameter		Minor Diameter	Minor Diameter		Pitch Diameter		Major Diameter
		Maximum	Minimum	Maximum	Minimum		Minimum	Maximum	Minimum	Maximum	
R5-04	9/32*32	7.120	6.967	6.604	6.523	6.175	6.294	6.472	6.629	6.736	7.145
R5-05	46/127*28	9.197	9.032	8.608	8.516	8.115	8.234	8.463	8.636	8.753	9.225
R5-06	107/254*28	10.685	10.520	10.095	10.004	9.603	9.735	9.938	10.123	10.240	10.713
R5-08	9/16*24	14.257	14.074	13.569	13.470	12.997	13.132	13.386	13.599	13.729	14.288
R5-10	11/16*24	17.432	17.249	16.744	16.642	16.172	16.307	16.561	16.774	16.906	17.463
R5-12	13/16*20	20.599	20.399	19.779	19.667	19.347	19.253	19.558	19.812	19.982	20.638
R5-16	1.1/16*18	26.952	26.731	26.035	25.916	25.273	25.451	25.781	26.071	26.228	26.988
R5-20	1.5/16*18	33.299	33.078	32.382	32.258	31.620	31.801	32.131	32.421	32.581	33.338
R5-24	1.9/16*18	39.649	39.428	38.732	38.605	37.970	38.151	38.481	38.771	38.936	39.688
R5-32	2*18	50.762	50.541	49.845	49.715	49.083	49.276	49.606	49.883	50.053	50.800
2A-04	7/16*20	11.079	10.874	10.254	10.147	9.568	9.728	10.033	10.287	10.424	11.113
2A-06	9/16*18	14.252	14.031	13.335	13.221	12.573	12.751	13.081	13.371	13.520	14.288
2A-08	5/8*18	15.839	15.618	14.923	14.803	14.161	14.351	14.681	14.958	15.110	15.875
2A-10	3/4*18	19.014	18.793	18.098	17.981	17.336	17.526	17.856	18.133	18.285	19.050
2A-12	7/8*18	22.189	21.968	21.273	21.156	20.511	20.701	21.031	21.308	21.460	22.225
2A-16	1.3/16*16	30.124	29.870	29.093	28.964	28.232	28.448	28.804	29.131	29.299	30.163
2A-20	1.9/16*18	39.649	39.428	38.732	38.605	37.970	38.151	38.481	38.771	38.936	39.688

# CHIHENG



New Zealand B09 Internal Thread

Designation	Thread Designation	Major Diameter MIN	Pitch Diameter MIN	Pitch Diameter MAX	Minor Diameter MIN	Minor Diameter MAX
B-09	0.860in*14	21.844	20.683	20.841	19.522	

CHIHENG

## NPTF + Seal Pipe Thread

Designation	Thread Code	External Thread Small End Pitch Diameter	External Thread Large End Pitch Diameter	External Thread Small End Major Diameter Minimum	Maximum minor diameter of external thread	Full thread length of external thread	Major diameter of internal thread	Minor diameter of internal thread	Minimum minor diameter of internal thread	Maximum minor diameter of internal thread	Full thread length of internal thread
2	1/8-27NPTF	9.233	9.652	9.871	9.960	6.703	9.489	9.058	8.763	8.851	6.924
4	1/4-18NPTF	12.126	12.764	13.128	13.215	10.206	12.487	11.862	11.398	11.486	10.020
6	3/8-18NPTF	15.545	16.193	16.547	16.634	10.358	15.926	15.281	14.837	14.924	10.330
8	1/2-14NPTF	19.264	20.111	20.616	20.703	13.556	19.772	18.926	18.333	18.420	13.571
12	3/4-14NPTF	24.579	25.445	25.931	26.018	13.861	25.117	24.239	23.678	23.768	14.054
16	1-11.5NPTF	30.826	31.910	32.474	32.562	17.343	31.461	30.411	29.725	29.813	16.787
20	1.1/4-11.5NPTF	39.551	40.673	41.199	41.287	17.953	40.218	39.136	38.482	38.570	17.295
24	1.1/2-11.5NPTF	45.621	46.769	47.269	47.357	18.377	46.287	45.207	44.551	44.640	17.295
32	2-11.5NPTF	57.633	58.834	59.281	59.369	19.215	58.325	57.219	56.589	56.677	17.701
40	2.1/2-8NPTF	69.076	70.882	71.476	71.559	28.893	70.159	68.481	67.676	67.759	26.848
48	3-8NPTF	84.852	86.757	87.252	87.335	30.480	86.068	84.257	83.585	83.668	28.981

Note: 1. The full thread length of the external thread in the table includes a chamfer not exceeding one pitch length.

2. The full thread length of the internal thread in the table excludes the tapered bore beyond the intersection of the pitch diameter and chamfer. That is, the full thread length equals the complete internal thread length plus one pitch.

# CHIHENG