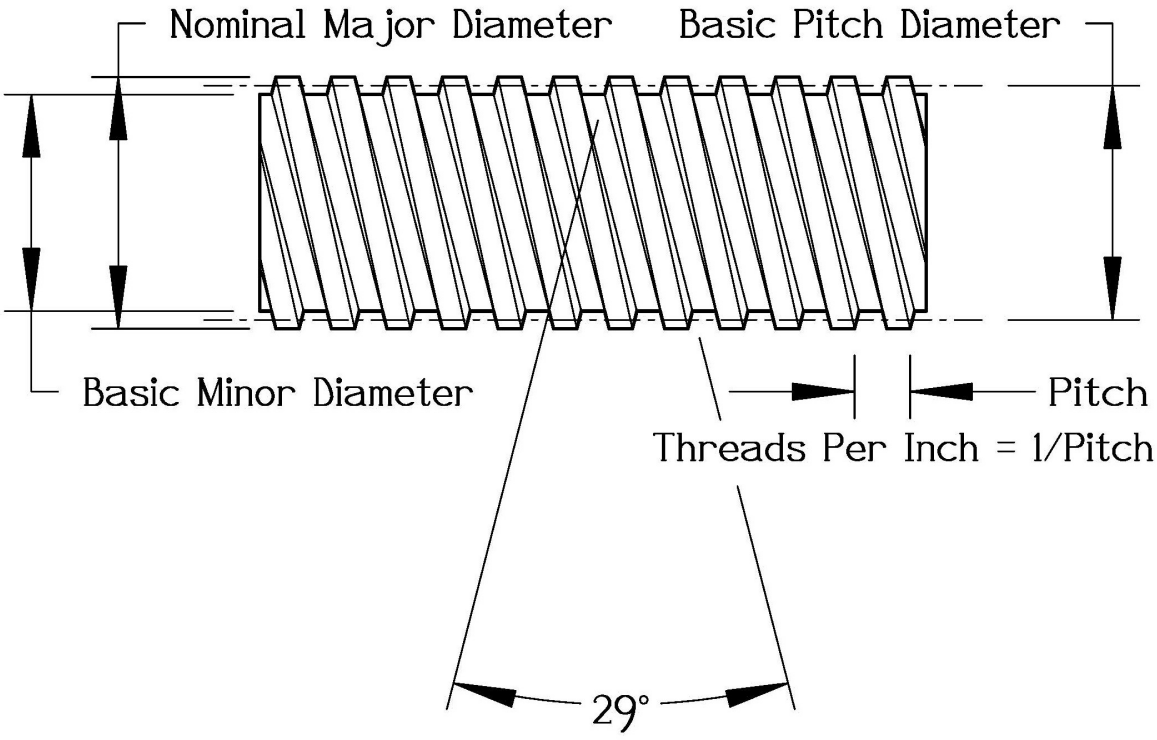
Stub Acme Thread Data Sheets:

Designer's guide to Stub Acme Threads: This section provides values and equations for application of Stub Acme threads to mechanical design operations. Definitions and equations are located on page 4.



The tables following provide information designer's need to apply 29° Stub Acme threads to projects properly. Please note that callouts for Stub Acme threads currently (2012) exist as:

X.XXXX-TPI-NG-STUB-ACME-EXTERNAL for screw threads or
X.XXXX-TPI-NG-STUB-ACME-INTERNAL for nut threads.

Where "X.XXXX" is the nominal major diameter given to four decimal places, TPI are the threads per inch, and "NG" is the class (2G, 3G, or 4G) of fit (2 is the loosest and 4 the tightest). The class of fit (see equations on page 4) has an allowance based on a combination of the square root of the nominal major diameter and the square root of the pitch.

Stub Acme Thread Data Sheets:

Stub ACME Screw Thread Data:

Thread Designation:	Tap Clear Dia:	Tap Bore Dia (Max):	Tensile Area (in²):	Equiv Pin Dia (in):	Screw Shear Area (in²/in):	Nut Shear Area (in²/in):
.2500-16-2G-STUB-ACME	.1946	.2175	.0347	.2103	.3338	.3849
.2500-16-3G-STUB-ACME	.1988	.2175	.0359	.2138	.3338	.3848
.2500-16-4G-STUB-ACME	.1999	.2175	.0362	.2147	.3338	.3848
.3125-14-2G-STUB-ACME	.2511	.2746	.0565	.2682	.4236	.4830
.3125-14-3G-STUB-ACME	.2557	.2746	.0581	.2720	.4235	.4830
.3125-14-4G-STUB-ACME	.2568	.2746	.0585	.2730	.4235	.4830
.3750-12-2G-STUB-ACME	.3057	.3300	.0829	.3248	.5105	.5812
.3750-12-3G-STUB-ACME	.3107	.3300	.0850	.3289	.5104	.5811
.3750-12-4G-STUB-ACME	.3119	.3300	.0855	.3299	.5104	.5811
.4375-12-2G-STUB-ACME	.3680	.3925	.1177	.3871	.6087	.6793
.4375-12-3G-STUB-ACME	.3731	.3925	.1203	.3913	.6086	.6792
.4375-12-4G-STUB-ACME	.3743	.3925	.1209	.3924	.6085	.6792
.5000-10-2G-STUB-ACME	.4197	.4450	.1530	.4414	.6910	.7774
.5000-10-3G-STUB-ACME	.4252	.4450	.1562	.4460	.6909	.7773
.5000-10-4G-STUB-ACME	.4266	.4450	.1570	.4471	.6909	.7772
.6250-8-2G-STUB-ACME	.5185	.5563	.2369	.5492	.8637	.9716
.6250-8-3G-STUB-ACME	.5246	.5563	.2413	.5543	.8634	.9714
.6250-8-4G-STUB-ACME	.5262	.5563	.2424	.5556	.8634	.9713
.7500-6-2G-STUB-ACME	.6169	.6583	.3360	.6541	1.0203	1.1642
.7500-6-3G-STUB-ACME	.6239	.6583	.3420	.6599	1.0199	1.1637
.7500-6-4G-STUB-ACME	.6256	.6583	.3435	.6614	1.0198	1.1636
.8750-6-2G-STUB-ACME	.7416	.7833	.4764	.7788	1.2166	1.3604
.8750-6-3G-STUB-ACME	.7487	.7833	.4837	.7848	1.2161	1.3599
.8750-6-4G-STUB-ACME	.7505	.7833	.4856	.7863	1.2159	1.3598
1.0000-5-2G-STUB-ACME	.8454	.8900	.6191	.8879	1.3808	1.5534
1.0000-5-3G-STUB-ACME	.8532	.8900	.6282	.8943	1.3801	1.5526
1.0000-5-4G-STUB-ACME	.8551	.8900	.6305	.8960	1.3799	1.5524
1.1250-5-2G-STUB-ACME	.9702	1.0150	.8054	1.0126	1.5770	1.7496
1.1250-5-3G-STUB-ACME	.9781	1.0150	.8159	1.0192	1.5761	1.7487
1.1250-5-4G-STUB-ACME	.9801	1.0150	.8185	1.0209	1.5759	1.7484
1.2500-5-2G-STUB-ACME	1.0949	1.1400	1.0161	1.1374	1.7732	1.9458
1.2500-5-3G-STUB-ACME	1.1030	1.1400	1.0281	1.1441	1.7722	1.9447
1.2500-5-4G-STUB-ACME	1.1050	1.1400	1.0311	1.1458	1.7719	1.9444
Thread Designation:	Tap Clear Dia:	Tap Bore Dia (Max):	Tensile Area (in²):	Equiv Pin Dia (in):	Screw Shear Area (in²/in):	Nut Shear Area (in²/in):

Stub Acme Thread Data Sheets:

Stub ACME Screw Thread Data:

Thread Designation:	Tap Clear Dia:	Tap Bore Dia (Max):	Tensile Area (in²):	Equiv Pin Dia (in):	Screw Shear Area (in²/in):	Nut Shear Area (in²/in):
1.3750-4-2G-STUB-ACME	1.1885	1.2375	1.2052	1.2387	1.9207	2.1363
1.3750-4-3G-STUB-ACME	1.1973	1.2375	1.2195	1.2461	1.9193	2.1347
1.3750-4-4G-STUB-ACME	1.1995	1.2375	1.2231	1.2479	1.9189	2.1343
1.5000-4-2G-STUB-ACME	1.3132	1.3625	1.4602	1.3635	2.1168	2.3324
1.5000-4-3G-STUB-ACME	1.3222	1.3625	1.4762	1.3710	2.1151	2.3306
1.5000-4-4G-STUB-ACME	1.3244	1.3625	1.4802	1.3728	2.1147	2.3301
1.7500-4-2G-STUB-ACME	1.5628	1.6125	2.0438	1.6132	2.5089	2.7245
1.7500-4-3G-STUB-ACME	1.5720	1.6125	2.0633	1.6208	2.5069	2.7223
1.7500-4-4G-STUB-ACME	1.5743	1.6125	2.0681	1.6227	2.5064	2.7218
2.0000-4-2G-STUB-ACME	1.8124	1.8625	2.7254	1.8628	2.9010	3.1166
2.0000-4-3G-STUB-ACME	1.8218	1.8625	2.7484	1.8707	2.8986	3.1141
2.0000-4-4G-STUB-ACME	1.8241	1.8625	2.7541	1.8726	2.8980	3.1134
2.2500-3-2G-STUB-ACME	2.0103	2.0667	3.3769	2.0735	3.2089	3.4959
2.2500-3-3G-STUB-ACME	2.0208	2.0667	3.4055	2.0823	3.2050	3.4917
2.2500-3-4G-STUB-ACME	2.0234	2.0667	3.4127	2.0845	3.2041	3.4906
2.5000-3-2G-STUB-ACME	2.2599	2.3167	4.2392	2.3232	3.6004	3.8874
2.5000-3-3G-STUB-ACME	2.2706	2.3167	4.2718	2.3322	3.5960	3.8826
2.5000-3-4G-STUB-ACME	2.2733	2.3167	4.2800	2.3344	3.5949	3.8814
2.7500-3-2G-STUB-ACME	2.5095	2.5667	5.1994	2.5730	3.9919	4.2789
2.7500-3-3G-STUB-ACME	2.5205	2.5667	5.2362	2.5820	3.9869	4.2735
2.7500-3-4G-STUB-ACME	2.5232	2.5667	5.2454	2.5843	3.9856	4.2722
3.0000-2-2G-STUB-ACME	2.6563	2.7250	5.9191	2.7452	4.2036	4.6318
3.0000-2-3G-STUB-ACME	2.6689	2.7250	5.9646	2.7558	4.1944	4.6216
3.0000-2-4G-STUB-ACME	2.6721	2.7250	5.9760	2.7584	4.1921	4.6191
3.5000-2-2G-STUB-ACME	3.1557	3.2250	8.2689	3.2447	4.9826	5.4108
3.5000-2-3G-STUB-ACME	3.1686	3.2250	8.3241	3.2555	4.9714	5.3986
3.5000-2-4G-STUB-ACME	3.1719	3.2250	8.3379	3.2582	4.9686	5.3956
4.0000-2-2G-STUB-ACME	3.6551	3.7250	11.0108	3.7442	5.7618	6.1900
4.0000-2-3G-STUB-ACME	3.6684	3.7250	11.0760	3.7553	5.7484	6.1757
4.0000-2-4G-STUB-ACME	3.6717	3.7250	11.0923	3.7581	5.7451	6.1721
4.5000-2-2G-STUB-ACME	4.1545	4.2250	14.1448	4.2438	6.5410	6.9693
4.5000-2-3G-STUB-ACME	4.1681	4.2250	14.2203	4.2551	6.5255	6.9528
4.5000-2-4G-STUB-ACME	4.1715	4.2250	14.2392	4.2579	6.5217	6.9487
5.0000-2-2G-STUB-ACME	4.6540	4.7250	17.6710	4.7434	7.3203	7.7487
5.0000-2-3G-STUB-ACME	4.6679	4.7250	17.7571	4.7549	7.3027	7.7300
5.0000-2-4G-STUB-ACME	4.6713	4.7250	17.7787	4.7578	7.2983	7.7253
Thread Designation:	Tap Clear Dia:	Tap Bore Dia (Max):	Tensile Area (in²):	Equiv Pin Dia (in):	Screw Shear Area (in²/in):	Nut Shear Area (in²/in):

Stub Acme Thread Data Sheets:

Stub ACME Screw Thread Data:

Thd Clr Dia	= Diameter to be turned to clear threading tool on external threads.
Tap Bore Dia	= Maximum Bore Diameter for Minor Diameter of internal threads.
Tensile Area	= Effective Tensile Area (in^2) for externally threaded parts.
Equiv Pin Dia	= Diameter of Column or Pin used for column or bending calculations.
Screw Shear Area	= The amount of shear engagement per inch of length in an external thread.
Nut Shear Area	= The amount of shear engagement per inch of length in an internal thread.

External Threads (Screws):

Major Diameter (Max):	Nominal Major Diameter
Major Diameter (Min):	Nominal Major Diameter - max(.05/tpi, .005)
Basic Pitch Diameter:	Nominal Major Diameter - .30/TPI
Basic Minor Diameter:	Nominal Major Diameter - .60/TPI
Pitch Diameter Maximum (2G):	Basic Pitch Diameter - .004√Nominal Major Diameter)
Pitch Diameter Maximum (3G):	Basic Pitch Diameter - .003√Nominal Major Diameter)
Pitch Diameter Maximum (4G):	Basic Pitch Diameter - .002√Nominal Major Diameter)
Pitch Diameter Minimum (2G):	Basic Pitch Diameter - .003√Nominal Major Diameter) - .015√1/TPI)
Pitch Diameter Minimum (3G):	Basic Pitch Diameter - .0014√Nominal Major Diameter) - .007√1/TPI)
Pitch Diameter Minimum (4G):	Basic Pitch Diameter - .001√Nominal Major Diameter) - .005√1/TPI)
Minor Diameter Max (< 10TPI):	Basic Minor Diameter - .010
Minor Diameter Max (≥ 10TPI):	Basic Minor Diameter - .020
Minor Diameter Minimum (2G):	Minor Diameter Maximum – 0045√Nominal Major Diameter) - .0225√1/TPI)
Minor Diameter Minimum (3G):	Minor Diameter Maximum – 0021√Nominal Major Diameter) - .0105√1/TPI)
Minor Diameter Minimum (4G):	Minor Diameter Maximum – 0015√Nominal Major Diameter) - .0075√1/TPI)

Internal Threads (Nuts):

Major Diameter Min (< 10TPI):	Nominal Major Diameter + .020
Major Diameter Min (≥ 10TPI):	Nominal Major Diameter + .010
Major Diameter Max (< 10TPI):	Major Diameter Minimum + .020
Major Diameter Max (≥ 10TPI):	Major Diameter Minimum + .010
Pitch Diameter Minimum:	Nominal Major Diameter - .15/TPI
Pitch Diameter Maximum (2G):	Basic Pitch Diameter + .003√Nominal Major Diameter) + .015√1/TPI)
Pitch Diameter Maximum (3G):	Basic Pitch Diameter + .0014√Nominal Major Diameter) + .007√1/TPI)
Pitch Diameter Maximum (4G):	Basic Pitch Diameter + .001√Nominal Major Diameter) + .005√1/TPI)
Minor Diameter Minimum:	Basic Minor Diameter
Minor Diameter Maximum:	Basic Diameter Minimum + max(.05/tpi, .005)