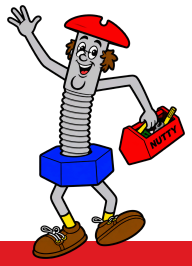
THE NUTTY COMPANY INC
FASTENER SPECIALISTS SINCE 1977

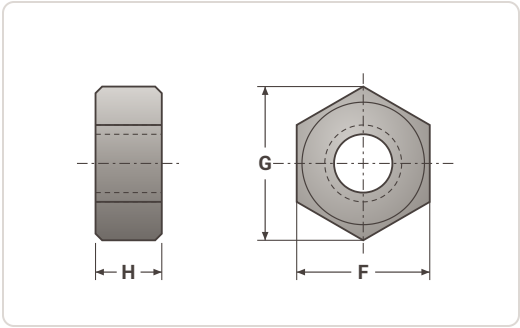
19 Seemans Lane • Milford, CT 06460 USA
203.877.1709 • 1.800.4NUTTY.1 • Fax 203.735.1097
sales@nutty.com • www.nutty.com



PRODUCT DATA SHEET

ACME Hex Nuts – Regular & Heavy Hex

1.0 Dimensions Hex as per ASME B18.2.2 (inches)



- **Thread:** ACME general purpose Class 2G, right hand, 29° thread angle, as per ASME B1.5.
- **Regular hex** (finished pattern) and **heavy hex** bodies as per ASME B18.2.2.
- **Material:** plain low carbon steel.
- **F** = width across flats (wrench size) **G** = width across corners **H** = thickness
- **Stocked:** regular hex 3/8"–1-1/2"; heavy hex 1/2", 5/8", 3/4" and 1".

PLAIN STEEL

Size & Pitch (TPI)	Regular (Finished) Hex							Heavy Hex						
	F – Flats		G – Corners		H – Thick.		Stocked	F – Flats		G – Corners		H – Thick.		Stocked
	Max	Min	Max	Min	Max	Min		Max	Min	Max	Min	Max	Min	
3/8–12	0.563	0.551	0.650	0.628	0.337	0.320	✓	0.688	0.669	0.794	0.763	0.377	0.341	–
1/2–10	0.750	0.736	0.866	0.840	0.448	0.427	✓	0.875	0.850	1.010	0.969	0.504	0.464	✓
5/8–8	0.938	0.922	1.083	1.051	0.559	0.535	✓	1.062	1.031	1.227	1.175	0.631	0.587	✓
3/4–6	1.125	1.088	1.299	1.240	0.665	0.617	✓	1.250	1.212	1.443	1.382	0.758	0.710	✓
7/8–6	1.312	1.269	1.516	1.447	0.776	0.724	✓	1.438	1.394	1.660	1.589	0.885	0.833	–
1–5	1.500	1.450	1.732	1.653	0.887	0.831	✓	1.625	1.575	1.876	1.796	1.012	0.956	✓
1-1/8–5	1.688	1.631	1.949	1.859	0.999	0.939	✓	1.812	1.756	2.093	2.002	1.139	1.079	–
1-1/4–5	1.875	1.812	2.165	2.066	1.094	1.030	✓	2.000	1.938	2.309	2.209	1.251	1.187	–
1-1/2–4	2.250	2.175	2.598	2.480	1.317	1.245	✓	2.375	2.300	2.742	2.622	1.505	1.433	–

Dimensions in inches. Wrench sizes – regular hex: 3/8" = 9/16", 1/2" = 3/4", 5/8" = 15/16", 3/4" = 1-1/8", 7/8" = 1-5/16", 1" = 1-1/2", 1-1/8" = 1-11/16", 1-1/4" = 1-7/8", 1-1/2" = 2-1/4". Heavy hex: 3/8" = 11/16", 1/2" = 7/8", 5/8" = 1-1/16", 3/4" = 1-1/4", 7/8" = 1-7/16", 1" = 1-5/8", 1-1/8" = 1-13/16", 1-1/4" = 2", 1-1/2" = 2-3/8". Sizes not marked as stocked are available on request.

2.0 Material & Specifications

Property	Regular Hex & Heavy Hex ACME Nuts
Material	Low carbon steel
Hardness	Rockwell B68 to C32 (typical, as ASTM A563 Grade A)
Thread	ACME general purpose, Class 2G, right hand, 29° thread angle (ASME B1.5)
Hex dimensions	ASME B18.2.2 – regular (finished) hex and heavy hex
Finish	Plain (uncoated, may have a light oil)
Mates with	Class 2G ACME threaded rod and screws of the same size and pitch

3.0 ACME Thread Data

Class 2G internal (nut) thread, as per ASME B1.5 (inches)

Size & TPI	Pitch (P)	Major Dia.	Pitch Dia.		Minor Dia.		Thread Depth (basic, P/2)
		Min	Min	Max	Min	Max	
3/8-12	0.0833	0.385	0.3333	0.3457	0.2917	0.2967	0.0417
1/2-10	0.1000	0.520	0.4500	0.4637	0.4000	0.4050	0.0500
5/8-8	0.1250	0.645	0.5625	0.5779	0.5000	0.5062	0.0625
3/4-6	0.1667	0.770	0.6667	0.6841	0.5833	0.5917	0.0833
7/8-6	0.1667	0.895	0.7917	0.8095	0.7083	0.7167	0.0833
1-5	0.2000	1.020	0.9000	0.9194	0.8000	0.8100	0.1000
1-1/8-5	0.2000	1.145	1.0250	1.0448	0.9250	0.9350	0.1000
1-1/4-5	0.2000	1.270	1.1500	1.1701	1.0500	1.0600	0.1000
1-1/2-4	0.2500	1.520	1.3750	1.3973	1.2500	1.2625	0.1250

Limits for single-start, right hand, general purpose (2G) ACME nuts. Use with Class 2G external threads of the same size and pitch.

APPLICATION NOTES

- ACME nuts turn rotary motion into straight-line motion on ACME threaded rod – used in jacks, clamps, vises, valve stems, gates, presses and leveling or adjusting screws.
- The 29° trapezoid thread carries heavy loads and is easier to make and repair than a square thread.
- Heavy hex nuts are wider and thicker than regular hex nuts, so they give more thread engagement and a larger wrenching and bearing surface for higher loads.
- Class 2G is the general purpose fit and has some backlash by design. For lead screws that need low backlash, use a Class 3G/4G or anti-backlash nut.
- Keep the threads clean and lubricated. Plain steel will rust – store dry, or oil the nut and rod in use.

Disclaimer: The above is a compilation of data from various industry standards. The Nutty Company, Inc. has made every effort to present the data accurately. However, The Nutty Company, Inc. cannot be held liable for any claim traceable to any errors, typographical or otherwise, contained herein.

Need a size, pitch or material you don't see?

Call 203.877.1709 or email sales@nutty.com – shop online at nutty.com