



PRODUCT DATA SHEET

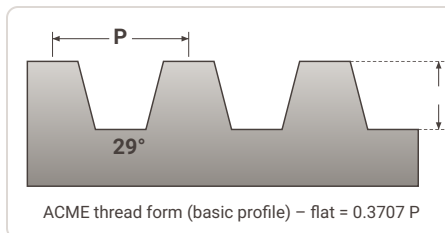
ACME Threaded Rod – 1018 & B7



MADE IN THE U.S.A.

1.0 Dimensions & Sizes ACME thread as per ASME B1.5 (inches)

- **Thread:** ACME general purpose, Class 2G, right hand, single start, 29° included thread angle.
- **Basic thread depth** = $P/2$; basic flat = $0.3707 P$.
- **Lengths stocked:** 2 ft. (24"), 3 ft. (36") and 6 ft. (72"). Custom lengths available.
- **Materials:** AISI 1018 low carbon steel and ASTM A193 B7 (4140 alloy), plain finish.



STOCKED SIZES

Size & TPI	AISI 1018 Low Carbon Steel (Plain)			ASTM A193 B7 – 4140 Alloy (Plain)		
	2 ft.	3 ft.	6 ft.	2 ft.	3 ft.	6 ft.
3/8"-12	✓	✓	✓	—	—	—
1/2"-10	✓	✓	✓	—	—	✓
5/8"-8	✓	✓	✓	✓	✓	✓
3/4"-6	✓	✓	✓	✓	✓	✓
7/8"-6	✓	✓	✓	✓	✓	✓
1"-5	✓	✓	✓	✓	✓	✓
1-1/8"-5	✓	✓	✓	✓	✓	✓
1-1/4"-5	✓	✓	✓	✓	✓	✓
1-1/2"-4	✓	✓	✓	✓	✓	✓

2.0 ACME Thread Data Class 2G external (rod) thread limits, as per ASME B1.5 (inches)

Size & TPI	Pitch (P)	Major Diameter		Pitch Diameter		Minor Diameter	
		Max	Min	Max	Min	Max	Min
3/8-12	0.0833	0.3750	0.3708	0.3284	0.3161	0.2817	0.2632
1/2-10	0.1000	0.5000	0.4950	0.4443	0.4306	0.3800	0.3594
5/8-8	0.1250	0.6250	0.6188	0.5562	0.5408	0.4800	0.4570
3/4-6	0.1667	0.7500	0.7417	0.6597	0.6423	0.5633	0.5372
7/8-6	0.1667	0.8750	0.8667	0.7842	0.7663	0.6883	0.6615
1-5	0.2000	1.0000	0.9900	0.8920	0.8726	0.7800	0.7509
1-1/8-5	0.2000	1.1250	1.1150	1.0165	0.9967	0.9050	0.8753
1-1/4-5	0.2000	1.2500	1.2400	1.1411	1.1209	1.0300	0.9998
1-1/2-4	0.2500	1.5000	1.4875	1.3652	1.3429	1.2300	1.1965

Limits for single-start, right hand, general purpose (2G) external ACME threads. Sizes and lengths not marked as stocked are available on request.

3.0 Material & Mechanical Properties

Property	AISI 1018 Low Carbon Steel	ASTM A193 Grade B7 (4140 Alloy)
Specification	AISI / SAE 1018 low carbon steel	ASTM A193/A193M Grade B7 – AISI 4140 chromium-molybdenum alloy steel
Heat Treatment	None	Quenched & tempered
Hardness	–	35 HRC max
Tensile Strength	–	Minimum 125,000 PSI
Yield Strength	–	Minimum 105,000 PSI
Elongation / Reduction of Area	–	16% min / 50% min
Chemistry (%)	C 0.15–0.20, Mn 0.60–0.90, P 0.040 max, S 0.050 max	C 0.37–0.49, Mn 0.65–1.10, P 0.035 max, S 0.040 max, Si 0.15–0.35, Cr 0.75–1.20, Mo 0.15–0.25
Thread	ACME general purpose, Class 2G, right hand, 29° (ASME B1.5)	ACME general purpose, Class 2G, right hand, 29° (ASME B1.5)
Finish	Plain (uncoated, may have a light oil)	Plain (uncoated, may have a light oil)
Origin	Made in the U.S.A. 	Made in the U.S.A. 

B7 mechanical properties apply to diameters 2-1/2" and under. 1018 rod has no specified minimum strength; material certifications available on request.

4.0 Application Notes

- ACME threaded rod turns rotary motion into straight-line motion – used in jacks, clamps, vises, valve stems, gates, presses, lifts and leveling or adjusting screws.
- The 29° trapezoid thread form carries heavy loads and is easier to make and repair than a square thread.
- Choose **1018** for general purpose, light-to-moderate loads and easy machining or welding. Choose **B7 (4140)** for high loads and wear – it is about twice as strong as 1018.
- Class 2G is the general purpose fit and has some backlash by design. Use with Class 2G ACME nuts of the same size and pitch (see the Nutty ACME Hex Nuts data sheet).
- Rod can be cut to length; chamfer and clean the cut end so the nut starts easily. Keep threads clean and lubricated – plain steel will rust, so store dry or oil 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.



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