

SHEFFIELD™ STUD STOCK High Strength, Roll Threaded Bar

Fatigue remains the greatest cause of failure in severe service applications. Utilizing **Clean Steel Technology Production Methods** is the most effective means to combat fatigue and increase toughness.

Sheffield Stud Stock is manufactured using the “**thread rolling**” process. This process hardens the thread, resulting in higher physical properties and a greater resistance to stretching (creep). It also eliminates the tooling marks that weaken machined threads.

Advantage of Thread Rolling

Thread rolling deforms the blank material as it is forced along the contour of the die. The worked material is strain hardened, resulting in a harder and stronger product with a defined grain structure. Cut threads encourage fatigue related failure.

Sheffield Stud Stock should be considered as a suitable upgrade where maintenance applications require improved strength and durability. In high torque and high stress applications, **Sheffield Stud Stock** significantly exceeds the expected service life of other threaded products.

Sheffield Stud Stock conforms to specifications for: **ASTM A193, Grade B7.**

Improved Finish

Sheffield Stud Stock bars have smoother threads. Surface imperfections encourage failure in severe service applications. Thread rolling dies impart smooth burnished roots and flanks to threads. Rolled threads are free from the tears and tool marks typically found in cut threads.

We will cut bars in half to facilitate shipping, at no additional charge.

Past Protected Trade Name Of Pyramid Steel Company – Maintenal™ Threaded Rod



Available Sizes - National Fine

1/4" (28)	9/16" (18)	1-1/8" (12)
5/16" (24)	5/8" (18)	1-1/4" (12)
3/8" (24)	3/4" (16)	1-3/8" (12)
7/16" (20)	7/8" (14)	1-1/2" (12)
1/2" (20)	1" (12,14)	2" (12)

Available Sizes - National Coarse

1/4" (20)	9/16" (12)	1-1/8" (7)	2" (4-1/2)
5/16" (18)	5/8" (11)	1-1/4" (7)	2-1/4" (4-1/2)
3/8" (16)	3/4" (10)	1-3/8" (6)	2-1/2" (4)
7/16" (14)	7/8" (9)	1-1/2" (6)	
1/2" (13)	1" (8)	1-3/4" (5)	

Available Sizes – Eight Pitch Series

1" (8)	1-1/2" (8)	2" (8)
1-1/8" (8)	1-5/8" (8)	2-1/8" (8)
1-1/4" (8)	1-3/4" (8)	
1-3/8" (8)	1-7/8" (8)	

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Rolled Threads

Cut Thread vs. Rolled Thread

Sharp cuts, with nicks and gouges, weaken threads and can serve stress risers, which will lead to fatigue failures.

Grain structure is maintained in continuous unbroken lines, following contours and increasing tensile and shear strength.

Typical Physical Properties*

Hardness.....	321 BHN
Tensile Strength.....	156,000 P.S.I.
Yield Strength.....	134,000 P.S.I.
Grain Size.....	7
Elongation in 2".....	19%
Reduction of Area.....	53%
*Based on ½" Diameter Specimen	

Typical Applications

Post Screws	Adjustment Bolts
Anchor Bolts	Tie Rods
Pullers	Jack Screws
Lag Bolts	

Stock Lengths

10 / 12 Ft Random Lengths
 Custom Lengths Available*
 *(Contact our offices for details.)

Benefits of Sheffield™ Stud Stock

There are many key elements that make **Sheffield Stud Stock** the right threaded bar for maintenance use.

- ▶ **High Strength Alloy** – not carbon steel.
- ▶ **Threading Process** – rolled thread vs. cut thread; free of tears, tooling marks, or chatter marks, that are common in cut threads.
- ▶ **Consistency** – grain structure more uniform from strain hardening the bar.
- ▶ **Heat Treated Alloy** – thermally treated to a Rockwell “C” 28/32; (not low carbon – low hardness material).
- ▶ **Surface Finish** – smoother, less imperfections that may cause possible failure.
- ▶ **Toughness** – cleanliness and core integrity met through Clean Steel Technology.
- ▶ **Accuracy** – close, tight, precision fit, means longer service life.
- ▶ **Less Creep** – safer to use than cut threaded product. Threads will not stretch or pull apart during service.

Other Available Products

Sheffield Acme Stud Stock.....see Page 26

Sheffield Metric Stud Stock.....see Page 27

Sheffield Stainless Stud Stock.....see Page 36

Value-Added Services

We offer complete machining services: left hand thread, double leads, triple leads, special pitch bolts, double end studs, and heavy hex threaded products. Please call our offices for more details.