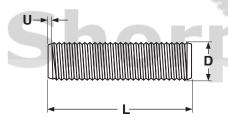
B7 Alloy

Continuous Thread Studs

Bolts & Cap Screws



B-7 CONTINUOUS THREAD STUDS ASME B18.31.2 Threads Per Inch $U_{max} = 2$ Thread Pitches Diameter **Nominal Size** D UNC UNF **UNC Threads UNF Threads** 1/2 0.5000 13 20 0.154 0.100 5/8 0.6250 18 0.182 0.111 3/4 0.7500 10 16 0.200 0.125 7/8 0.8750 9 14 0.222 0.143 8 1.0000 12 0.250 0.167 **Nominal Length Tolerance on Length** Over 1/2 thru 2.5": Over 2.5 thru 4": Over 4 thru 8": ±0.10 Over 8 thru 16": ±0.12 ±0.04 ±0.08

Description	An externally threaded fastener without a head that is threaded over its entire length.
Applications/ Advantages	B7 studs are best suited for use in temperatures between 300° - 400° C.
Material	Bolts shall be made from a grade B7 alloy which conforms to the following chemical composition requirements **Carbon**: 0.37-0.49%; **Manganese**: 0.65-1.10%; **Phosphorus**: 0.035% maximum; **Sulfur**: 0.040% maximum; **Silicon**: 0.15-0.35%; **Chromium**: 0.75-1.20%; **Molybdenum**: 0.15-0.25%
Heat Treatment	Immediately after rolling or forging, the studs are cooled to a temperature below the cooling transformation stage. Parts are then reheated to a minimum tempering temperature of 1100° F and quenched in a liquid medium.
Hardness	Studs 2.5" in diameter and smaller: Rockwell C35 maximum
Yield Strength	105,000 psi. minimum
Tensile Strength	125,000 psi. minimum
Elongation in 4D	16% minimum
Plating	Studs are typically provided plain without a secondary finish.