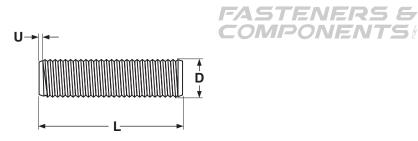
B7 Alloy

Continuous Thread Studs







B-7 CONTINUOUS THREAD STUDS ASME B18.31.2						
Nominal Size	Diameter D	Threads Per Inch		U _{max} = 2 Thread Pitches		
		UNC	UNF	UNC Threads	UNF Threads	
1/2	0.5000	13	20	0.154	0.100	
5/8	0.6250	11	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	
1	1.0000	8	12	0.250	0.167	
Tolerance on Length		Nominal Length				
		Over 1/2 thru 2.5": ±0.04	Over 2.5 thru 4": ±0.08	Over 4 thru 8": ±0.10	Over 8 thru 16": ±0.12	

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.			

