

Specifications

DESCRIPTION - continuous threaded stud bolts for use in high temperature, high pressure applications.

NOMINAL SIZE D - is the nominal size or diameter of stud bolts.

LENGTH L - length of stud bolt is measured by its overall length. End of first thread is defined as the intersection of major diameter of thread with the base of the point. Tolerance on stud bolt length for lengths 12 in. and under shall be plus or minus 1/16 in.; for lengths over 12 in. to 18 in. incl., shall be plus or minus 1/8 in.; and for lengths over 18 in. shall be plus or minus 1/4 in.

POINT - both ends of stud bolt shall be pointed, and points shall be flat and chamfered. When flat and chamfered, the diameter of the flat shall not exceed the minor diameter of the thread.

THREADS - unified coarse thread series. Class 2A for all sizes 1 in. and under, and Unified 8-thread series, Class 2A for all sizes over 1 in.

MATERIAL - material physical properties shall be specified by purchaser, and shall be as required by ASTM, ASME and ANSI codes and specifications current at the time of ordering.

DESIGNATION - when specifying dimensions of stud bolts, it is recommended they be given in the following order: D x L.

COMPOSITION ASTM A193 GRADE B7

Chemical	Range		Check Variation Over or Under
	Studs	2H Nuts	
Carbon, max	0.37-0.49	0.40 Min.	0.02
Manganese, max.	0.65-1.10	1.00 MAX	0.04
Phosphorus, max.	0.035 MAX	.04 MAX	0.005 Over
Sulphur, max.	0.04	0.05 MAX	0.005 Over
Silicone	0.15-0.35	.40 MAX	0.02
Chromium	0.75-1.20		0.05
Molybdenum	0.15-0.25		0.02

TENSILE REQUIREMENTS ASTM A193 GD-B7

Diameter in Inches	Minimum Tempering Temp.F (C)	Tensile Strength min. psi (MPa)	Yield Point min. psi. (NPAa)	Elongation in 2 Inches min. pct.	Reduction of Area min. pct.
2-1/2 and Under	1100 (593)	125,000 (860)	105,000 (720)	16	50
Over 2-1/2 to 4 incl.	1100 (593)	115,000 (790)	95,000 (655)	16	50

HARDNESS ASTM A194 GRADE 2H NUTS

Brinell Hardness	24 Hour Temp. Test	Brinell Hardness After Test
248,352	1000°F (538°C)	179 Min.