



Cutting your studs...and COSTS.

Mechanical Requirements

Carbon Alloy & Stainless Steel ASTM A193/ASME SA193 For Low Temperature Service

Grade	Diameter, in	Heat Treatment	Tensile Strength, min ksi	Yield Strength, min, 0.2% offset, ksi	Elongation in 4D min, %	Reduction of Area min, %	Hardness, Max	Minimum Tempering Temperature, °F
B7	2-1/2 and under	Quenched and tempered	125	105	16	50	321 HBW or 35 HRC	1100
	Over 2-1/2 to 4		115	95	16	50	321 HBW or 35 HRC	1100
B7M	4 and under	Quenched and tempered	100	80	18	50	235 HBW or 99 HRB	1150
B16	2-1/2 and under	Quenched and tempered	125	105	18	50	321 HBW or 35 HRC	1200
	Over 2-1/2 to 4		110	95	17	45	321 HBW or 35 HRC	1200
B6	Up to 4	Quenched and tempered	110	85	15	50	---	1100
B8	All diameters	Carbide solution treated	75	30	30	50	223 HBW or 96 HRB	---
B8 Class 2	3/4 and under	Carbide solution treated and strain hardened	125	100	12	35	321 HBW or 35 HRC	---
	Over 3/4 to 1, incl.		115	80	15	35	321 HBW or 35 HRC	---
	Over 1 to 1-1/4, incl.		105	65	20	35	321 HBW or 35 HRC	---
	Over 1-1/4 to 1-1/2, incl.		100	50	28	45	321 HBW or 35 HRC	---
B8M	All diameters	Carbide solution treated	75	30	30	50	223 HBW or 96 HRB	---
B8M Class 2	3/4 and under	Carbide solution treated and strain hardened	125	100	12	35	321 HBW or 35 HRC	---
	Over 3/4 to 1, incl.		115	80	15	35	321 HBW or 35 HRC	---
	Over 1 to 1-1/4, incl.		105	65	20	35	321 HBW or 35 HRC	---
	Over 1-1/4 to 1-1/2, incl.		100	50	28	45	321 HBW or 35 HRC	---

DISCLAIMER: Please note that this information is produced for general information purposes only. Please consult the appropriate material specification to ensure the specific information you require is accurate.