



ASTM and SAE Standards For Bolts

Bolt Specifications, Proof Loads, Tensile Strengths

Grade Marking	Specification	Material	Bolt and Screw Size In.	Proof Load, psi	Tensile Strength, min. psi
	SAE J429 Grade 1	Low or Medium Carbon Steel	1/4 thru 1-1/2	33,000	60,000
	ASTM A307		1/4 thru 1-1/2 Over 1-1/2 to 4		60,000 60,000
	SAE J429 Grade 2	Low or Medium Carbon Steel	1/4 thru 3/4 Over 3/4 thru 1-1/2	55,000 33,000	74,000 60,000
	SAE J429 Grade 5	Medium Carbon Steel, Quenched and Tempered	1/4 thru 1 Over 1 thru 1-1/2	85,000 74,000	120,000 105,000
	ASTM A449		1/4 thru 1 Over 1 thru 1-1/2 Over 1-1/2 thru 3	85,000 74,000 55,000	120,000 105,000 90,000
	ASTM A325 Type 1	Medium Carbon Steel, Quenched and Tempered	1/2 thru 1 Over 1 thru 1-1/2	85,000 74,000	120,000 105,000
	ASTM A325 Type 2	Low Carbon Martensite Steel, Quenched and Tempered	1/2 thru 1	85,000	120,000
	ASTM A325 Type 3	Weather Resistant Steel, Quenched and Tempered	1-1/8 thru 1-1/2 1/2 thru 1	74,000 85,000	105,000 120,000
	ASTM A354 Grade BC	Low Allow Steel Quenched and Tempered	1/4 thru 2-1/2 Over 2-1/2 thru 4	105,000 95,000	125,000 115,000
	SAE J429 Grade 8	Medium Carbon Alloy Steel, Quenched and Tempered	1/4 thru 1-1/2	120,000	150,000
	ASTM A354 Grade BD	Alloy Steel, Quenched and Tempered			
	ASTM A490 Type 1	Alloy Steel, Quenched and Tempered	1/2 thru 1-1/2	120,000	150,000
	ASTM A490 Type 2	Low Carbon Martensite Steel, Quenched and Tempered	1/2 thru 1	120,000	150,000
	ASTM A490 Type 3	Weather Resistant Alloy Steel, Quenched and Tempered	1/2 thru 1-1/2	120,000	150,000