












QualityNut Bolt Company

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MARKINGS	GRADE SPECIFICATION	TYPE OF FASTENER	TYPE OF STEEL	NOMINAL DIAMETER RANGE	MECHANICAL PROPERTIES		
					PROOF LOAD PSI	YIELD STRENGTH MIN.PSI	TENSILE STRENGTH MIN.PSI
 NONE	ASTM A 307	BOLTS	LOW CARBON STEEL	1/4 - 4			60,000
	SAE J429	STUDS	LOW OR MEDIUM	1/4 - 3/4	55,000	57,000	74,000
	GRADE 2	SCREWS	CARBON STEEL	3/4 - 1 1/2	33,000	36,000	60,000
	SAE J429	BOLTS, STUDS & SCREWS	MEDIUM CARBON STEEL	1/4 - 1"	85,000	92,000	120,000
	GRADE 5		QUENCHED & TEMPERED	1 - 1 1/2	75,000	81,000	105,000
	ASTM A325	HIGH STRENGTH STRUCTURAL BOLTS	MEDIUM CARBON STEEL	1/2 - 1"	85,000	92,000	120,000
	TYPE 1		QUENCHED & TEMPERED	1 1/8 - 1 1/2	74,000	81,000	105,000
	ASTM A325	HIGH STRENGTH STRUCTURAL BOLTS	LOW CARBON	1/2 - 1"	85,000	92,000	120,000
	TYPE 2		MARTENSITIC STEEL QUENCHED & TEMPERED				
	ASTM A325	HIGH STRENGTH STRUCTURAL BOLTS	ATMOSPHERIC CORROSION	1/2 - 1"	85,000	92,000	120,000
	TYPE 3		RESISTING STEEL QUENCHED & TEMPERED				
	SAE J429 GRADE 8	BOLTS	MEDIUM CARBON	1/4 - 1 1/2	120,000	130,000	150,000
		SCREWS	ALLOY STEEL QUENCHED				
		STUDS	& TEMPERED				
	SAE J429 GRADE 8.2	BOLTS	LOW CARBON	1/4 - 1"	120,000	130,000	150,000
		SCREWS	MARTENSITIC STEEL QUENCHED & TEMPERED				
	ASTM A490	HIGH STRENGTH STRUCTURAL BOLTS	ALLOY STEEL	1/2 - 1 1/2	120,000	130,000	150,000
			QUENCHED & TEMPERED				180,000 MIN. & MAX.
	GRADE 9	BOLTS	HIGH CARBON	1/4 - 1 1/2	145,000	155,000	180,000
		SCREWS	ALLOY STEEL				
METRICS							
 NONE	ISO R898 CLASS 4.6	BOLTS	LOW OR MEDIUM CARBON STEEL		33,000	36,000	60,000
	ISO R898 CLASS 5.8		SCREWS				
	ISO R898 CLASS 8.8	STUDS	MEDIUM CARBON STEEL QUENCHED & TEMPERED		85,000	92,000	120,000
	ISO R898 CLASS 10.9		ALLOY STEEL QUENCHED & TEMPERED				

Proof Load = The rated load a bolt must be capable to withstand without permanent set (damage or elongation).

Yield Strength = The load capabilities of a bolt as measured electronically with an extensometer + recorder.

Tensile Strength = The maximum load (tensile strength) a bolt is capable of sustaining.