



# SYSTEM FOCUS



CUSTOM KITTING AND LABELING SPECIALIST



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*Inside Client Success*

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*Please contact me with any questions regarding our products and services.*

*Our focus is to make your business thrive and your success is our success.*

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## Do you know what grade fastener you need?

ASTM, SAE AND ISO GRAD MARKINGS AND MECHANICAL PROPERTIES FOR STEEL FASTENERS					
Grade Marking	Specification	Material	Bolt and Screw Size in.	Proof Load. psi	Tensile Strength min. psi
	SAE-Grade 1	Low Carbon Steel	1/4 thru 1-1/2	33,000	60,000
	ASTM-A 307		1/4 thru 1-1/2	33,000	60,000
			Over 1-1/2 thru 4	55,000	55,000
	SAE-Grade 2	Low Carbon Steel	1/4 thru 3/4	55,000	74,000
			Over 3/4 thru 1-1/2	33,000	60,000
	SAE-Grade 5	Medium Carbon Steel, Quenched and Tempered	1/4 thru 1	85,000	120,000
	ASTM-A 449		Over 1 thru 1-1/2	74,000	105,000
			Over 1 thru 1-1/2	74,000	105,000
			Over 1-1/2 thru 3	55,000	90,000
	ASTM-A 325	Medium Carbon Steel Quenched and Tempered	1/2, 5/8, 3/4 7/8, 1 1-1/8 thru 1-1/2	85,000 78,000 74,000	120,000 115,000 105,000
	SAE-Grade 8	Medium Carbon Alloy Steel, Quenched and Tempered	1/4 thru 1-1/2	120,000	150,000
	ASTM-A 354 Grade BD	Alloy Steel, Quenched and Tempered			
	ASTM-A 490	Alloy Steel, Quenched and Tempered	1/2 thru 2-1/2 Over 2-1/2 thru 4	120,000 105,000	150,000 140,000

**ASTM Specifications**  
 A 307 - Low Carbon Steel Externally and Internally Threaded Standard Fasteners  
 A 325 - High Strength Steel Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washers.  
 A 449 - Quenched and Tempered Steel Bolts and Studs  
 A 490 - High Strength Alloy Steel Bolts for Structural Steel Joints, including Suitable Nuts and Plain Hardened Washers.

Fasteners, such as bolts and screws, bear markings on their top or side that provide crucial information about their properties. Grade 8 bolts, symbolized by markings like "8.8" or "G8," are highly sought after for their exceptional strength, making them ideal for heavy machinery, critical structural steel connections, and demanding industrial applications. In contrast, grade 5 bolts, marked as "5.8" or "G5," are commonly employed in automotive assemblies, construction projects, and general-purpose applications. Their balance of strength and cost-effectiveness makes them suitable for structural assemblies, engine components, and various construction needs. These markings serve as a guide for selecting the right fasteners for specific tasks, ensuring reliability and safety in diverse industries.