

HEX TAP BOLTS

Description	Grade-2 Tap Bolt: A low carbon, hex head bolt with a machined point which is threaded to the head. Grade-5 Tap Bolt: A tap bolt made from medium carbon steel. Grade-8 Tap Bolt: A tap bolt made from medium carbon alloy steel and heat-treated.
Applications/ Advantages	Grade-2 Tap Bolt: To be used in4rilled and tapped holes which are threaded full length. Used instead of a stud and a nut. Grade-5 Tap Bolt: Us to mount motors to machinery; also popular in automotive and truck repair. Grade-8 Tap Bolt: Used in automotive and fleet industries where greater tensile strength is required than can be met by a grade-5.
Material	Grade-2 Tap Bolt: AISI 1006 - 1025 or equivalent steel. Grade-5 Tap Bolt: AISI 1030 - 1541 or equivalent medium carbon steel. Steel is also acceptable. Grade-8 Tap Bolt: Medium carbon alloy steel. Note: For diameters 1/4 through 7/16 inch, it is permissible to use AISI 1541 steel.
Heat Treatment	Grade-5 Tap Bolt: Bolts shall be heat treated, oil or water quenched, at the option of the manufacturer, and tempered at a minimum tempering temperature of 800°F. Grade-8 Tap Bolt: Bolts shall be heat treated, oil quenched and tempered at a minimum tempering temperature of 800°F.
Core Hardness	Grade-2 Tap Bolt: Rockwell B80 - B100 Grade-5 Tap Bolt: Rockwell C25 - C34 Grade-8 Tap Bolt: Rockwell C33 - C39
Surface Hardness	Grade-5 Tap Bolt: Rockwell 30N54 maximum Grade-8 Tap Bolt: Rockwell 30N58.6 maximum
Proof Load	Grade-2 Tap Bolt: 55,000 psi. Grade-5 Tap Bolt: 85,000 psi. Grade-8 Tap Bolt: 120,000 psi,
Yield Strength*	Grade-2 Tap Bolt: 57,000 psi. minimum Grade-5 Tap Bolt: 92,000 psi. minimum Grade-8 Tap Bolt: 130,000 psi. minimum
Tensile Strength	Grade-2 Tap Bolt: 74,000 psi. minimum Grade-5 Tap Bolt: 120,000 psi. minimum Grade-8 Tap Bolt: 150,000 psi. minimum
Elongation*	Grade-2 Tap Bolt: 18% minimum Grade-5 Tap Bolt: 14% minimum Grade-8 Tap Bolt: 12% minimum
Reduction of Area*	Grades-2, 5 & 8 Tap Bolts: 35% minimum (all sizes)
Plating	See Appendix-A for plating information.