

HIGH TENSILE NUT BOLT

Heavy-Duty Fastening Solution for Industrial, Structural, Automotive & Infrastructure Applications

Product Overview

High Tensile Nut Bolts are premium-quality fastening solutions engineered for heavy-duty industrial and structural applications where exceptional strength, durability and reliable load performance are required. Manufactured from high-grade alloy or carbon steel and heat-treated for enhanced mechanical properties, these fasteners are designed to withstand high loads, vibration and mechanical stress.

Available in grades 8.8, 10.9 and 12.9, High Tensile Nut Bolts are widely used in construction, automotive, machinery, power plants, railways, bridges, infrastructure and heavy engineering applications. Their precision threading and robust construction support secure and dependable fastening in demanding environments.

Key Specifications

Parameter	Specification
Product Name	High Tensile Nut Bolt
Material	High-grade Alloy Steel / Carbon Steel
Common Grades	8.8 / 10.9 / 12.9
Manufacturing	Cold or Hot Forging + Precision Machining
Heat Treatment	Heat-treated for enhanced strength and durability
Load Bearing Capacity	Up to 150 kN*
Surface Treatments	Black Oxide / Zinc Plating / Hot-Dip Galvanizing
Threading	Standard or Customized
Standards	ISO 898-1 / DIN 933 / ISO 4017 / IS 1363 / IS 1364
Packaging	Boxes / Bags / Bulk Packaging
Minimum Order Quantity	1,000 Pieces
Customization	Size / Shape / Finish / Threading

*Actual load capacity depends on bolt diameter, grade, joint design, installation method and applicable engineering requirements.

Superior Strength and Versatility

- **High Strength Grades:** Grades 8.8, 10.9 and 12.9 provide options for different high-load fastening requirements.
- **Heavy Engineering:** Suitable for structural assemblies, machinery and equipment subjected to significant mechanical stress.
- **Vibration Resistance:** Designed for demanding applications where vibration and cyclic loading may occur.
- **Temperature Performance:** Suitable for specified industrial environments subject to correct grade and application selection.
- **Reliable Fastening:** Precision threading supports secure assembly and compatibility with appropriate mating components.

Advanced Surface Treatments for Longevity

High Tensile Nut Bolts can be supplied with protective surface treatments such as black oxide, zinc plating or hot-dip galvanizing. These finishes help improve resistance to corrosion, rust and environmental exposure, supporting longer service life in appropriate applications. The selected coating should be matched to the required environment, dimensional tolerances and installation conditions.

Customized Solutions for Unique Requirements

Customized High Tensile Nut Bolts can be manufactured according to customer drawings or samples. Customization may include non-standard dimensions, bolt length, diameter, threading, grade, surface coating and finish. This flexibility helps achieve precise fitment for specialized machinery, structural assemblies and industrial projects.

Major Applications

Industry	Typical Applications
Construction	Structural steelwork, bridges, infrastructure and heavy fabrication
Automotive	Vehicle assemblies, chassis and high-load mechanical components
Heavy Engineering	Machinery, equipment and industrial fabrication
Power Plants	Industrial equipment and structural fastening applications
Railways	Infrastructure, equipment and structural assemblies
Industrial Projects	Plant machinery, fabrication and maintenance work

FAQ's of High Tensile (HT) Nut Bolts

Q: How are High Tensile Nut Bolts manufactured to ensure strength and durability?

A: These fasteners are manufactured through cold or hot forging using suitable alloy or carbon steel, followed by precision machining and heat treatment. Surface treatments such as black oxide, zinc plating or galvanizing can provide additional protection against corrosion and wear.

Q: What applications are best suited for High Tensile Nut Bolts?

A: HT Nut Bolts are suitable for automotive, construction, heavy engineering, industrial fabrication and machinery assembly applications where high strength, reliable fastening and resistance to mechanical stress are required.

Q: When should I choose customized Nut Bolts, and how can I specify my requirements?

A: Choose customized fasteners when your project requires non-standard dimensions, finishes or threading. A technical drawing or physical sample can be supplied so that the required specifications can be reviewed and produced accordingly.

Q: Where are rust-proof High Tensile Nut Bolts most beneficial?

A: Surface-treated HT Nut Bolts are particularly useful in outdoor, humid and industrial environments where protection against corrosion is important. The coating should be selected according to the environmental exposure and engineering requirements.

Q: What is the minimum order quantity and what packaging options are available?

A: The stated minimum order quantity is 1,000 pieces. Bolts can be supplied in boxes, bags or bulk packaging depending on quantity, handling and transportation requirements.

Q: What benefits do ISO, DIN and IS standard-compliant bolts offer?

A: Fasteners manufactured to recognized ISO, DIN and IS specifications can provide consistent dimensional and mechanical requirements, reliable load performance, precise threading and compatibility with established engineering practices.

Q: How can I ensure the bolts are reusable and maintain performance over time?

A: Follow the recommended installation torque and use appropriate tools and mating components. Avoid overtightening, damage to threads and excessive corrosion. Reuse should always be based on the applicable engineering standard and inspection requirements.

Product Note: Final grade, dimensions, mechanical properties, coating thickness, torque requirements, load capacity and applicable standards should be verified against the supplier's technical datasheet or drawing for the exact High Tensile Nut Bolt being ordered.