

Mini encyclopedia

72 everyday terms in plain language. A-F | A compact reference for purchasing, quality and production.

A2 / A4 stainless - ISO stainless fastener groups. Specify the complete designation, including property class.

Alloy steel - Steel alloyed for required properties. The grade and heat treatment govern performance.

Annealing - Heating and cooling used to change hardness, ductility or internal stress.

Anti-seize - Assembly compound that reduces seizure and changes friction and torque/preload behavior.

ASME B18 - A family of dimensional standards for bolts, screws, nuts, washers and related products.

ASTM - Organization publishing material, testing, coating and fastener product standards.

Bearing surface - Area under a head or nut that transfers clamp load into a joint.

Belleville washer - Conical spring washer used for controlled deflection or load compensation.

Blind rivet - Rivet installed from one side using a mandrel to form the rivet body.

Bolt - Externally threaded fastener commonly used with a nut; formal definitions depend on the standard.

Carriage bolt - Round-head bolt with a square neck that resists rotation in a prepared opening.

Case hardening - Treatment that creates a harder surface over a tougher or softer core.

Clamp load - Compressive force applied to joint members by a tightened fastener.

Class of fit - Thread tolerance and allowance designation, such as Unified inch 2A/2B.

Cold heading - Forming wire or rod in dies to produce a head or other shape with little material removal.

Countersink - Conical recess that accepts a countersunk fastener head.

Direct-assembly screw - Screw designed to form, cut or engage a mating thread during installation.

Drive recess - Head feature engaged by a driver, such as cross, hex socket, square or 6-lobe.

Ductility - Ability to deform plastically before fracture.

Electroplating - Depositing a metallic coating using current. High-strength steel needs suitable process controls.

FAI - First Article Inspection: documented verification of an initial item against specified requirements.

Finish - Surface treatment for protection, friction control, appearance or other specified performance.

Flange bolt / nut - Fastener with an integral flange that provides a larger bearing area.

Full thread - Thread over the available length defined by the product standard, excluding transitions and point.

Definitions are abbreviated. The approved drawing, order and current applicable standard remain controlling.

Standards reference: [ASME](#) [ISO](#) [ASTM](#) [IFI](#)

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72 everyday terms in plain language. G-P | A compact reference for purchasing, quality and production.

Galling - Adhesive wear or seizure between sliding metal surfaces, possible in stainless threaded joints.

Galvanic corrosion - Corrosion associated with dissimilar metals in electrical contact in an electrolyte.

Grip length - Captured material thickness, or unthreaded underhead length; clarify the context.

Hardness - Resistance to indentation; not interchangeable with strength or toughness.

Heat treatment - Controlled heating and cooling to develop required material properties.

Helical-coil insert - Wire insert fitted into a prepared STI thread to create or repair an internal thread.

Hydrogen embrittlement - Hydrogen-assisted damage that can cause delayed fracture in susceptible stressed material.

IFI - Industrial Fasteners Institute, a source of fastener engineering standards and resources.

Insert - Component installed in parent material to provide threads, reinforcement or another function.

ISO property class - Metric mechanical-property designation, such as 8.8; the full standard defines requirements.

Joint - Fastener, joined members and interfaces considered together as a load-carrying assembly.

Kanban - Replenishment using an agreed signal or consumption trigger.

K-factor - Empirical torque coefficient strongly affected by friction; validate it for the assembly.

Knurl - Pattern cut or formed on a surface for grip, retention or torque resistance.

Lead - Axial travel in one thread revolution. It equals pitch for a single-start thread.

Locknut - Nut with a locking feature. Match method, temperature and reuse limits to the application.

Lot traceability - Connection between supplied product, its manufacturing lot and associated records.

Machine screw - Threaded fastener generally used with a nut or tapped hole, in many head and drive styles.

Major diameter - Largest diameter of an external thread or corresponding largest feature of an internal thread.

Mandrel - Tool or component used to support, form or install a product, including a blind rivet.

Minor diameter - Smallest diameter of a thread form.

Nominal size - Size designation used for identification; not necessarily an exact measured dimension.

Passivation - Treatment that removes stainless surface contamination and supports its protective passive film.

Pitch - Axial spacing between corresponding points on adjacent thread forms; metric pitch is in mm.

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Standards reference: [ASME](#) [ISO](#) [ASTM](#) [IFI](#)

Mini encyclopedia

72 everyday terms in plain language. P-Y | A compact reference for purchasing, quality and production.

Pitch diameter - Theoretical thread diameter where thread and groove widths are equal; important to fit.

Plating thickness - Coating thickness, which affects protection, dimensions and thread fit.

PPAP - Production Part Approval Process: evidence that a production process can meet specified requirements.

Preload - Tension introduced into a fastener during tightening, creating compressive joint load.

Prevailing torque - Running torque from a locking feature before clamp load develops.

Proof load - Specified test load the fastener must sustain without unacceptable permanent deformation.

Retaining ring - Ring used to retain or locate components, commonly in a groove or on a shaft.

Rivet nut - Blind-installed threaded insert that provides a reusable thread in sheet or similar material.

SAE J429 - Mechanical and material requirements for covered inch-series steel externally threaded fasteners.

Self-clinching fastener - Fastener pressed into sheet so displaced material locks into a retaining feature.

Set screw - Screw that secures one member against another, often by a point contacting a shaft.

Shoulder screw - Screw with a controlled unthreaded shoulder used as a guide, bearing surface or spacer.

Socket head cap screw - Cylindrical-head screw with an internal hex drive; specify its material and strength requirements.

Standoff - Threaded or unthreaded spacer used to position panels, boards or other components.

Stud - Externally threaded rod-like fastener with threads on one end, both ends or its full length.

Tapping screw - Screw intended to form or cut a mating thread in a prepared hole.

Tensile strength - Maximum tensile stress sustained in the specified test before fracture.

Thread-forming screw - Screw that displaces material to form a mating thread without intentionally making chips.

Threadlocker - Liquid or pre-applied compound used to resist loosening or seal threaded joints.

TPI - Threads per inch: the thread count used to describe inch-series pitch.

UNC / UNF - Unified National Coarse / Fine inch thread series.

VMI - Vendor-managed inventory: replenishment to agreed signals, stock levels and responsibilities.

Washer - Part used for load distribution, protection, spacing, sealing or a specified locking function.

Yield strength - Stress associated with a specified amount of permanent deformation under the test method.

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