

ASTM F3148 - Grade 144 structural assemblies

Technical reference sheet | Rev. 29.09.2026

Fixed-spline assemblies: identify the bolt, nut, washer arrangement and installation requirements together.

A complete assembly, not a generic bolt

Identify the entire system: bolt, nut, washers, dimensions, finish, equipment and installation procedure. Components with the same diameter are not automatically interchangeable.

Data required for supply

Technical field	Requirement
Rm min.	144 ksi
Configuration	Fixed-spline
Dimensions	Diameter, length and grip range of the selected system
Installation	Instructions and checks for the specific assembly

Do not infer equivalence between standards from tensile strength in ksi alone. Check the standard and proposed system for temperature, exposure and outdoor-use limitations.

Keep F3148 and F3125 distinct

The appearance of 144 ksi in the current F3125 title does not make the specifications interchangeable. Always state the full designation, edition and required system.

Configuration and installation

Provide type, dimensions, specified installation method or equipment, and required tests. Installation instructions or torque values are not derived from the grade alone.

Project-specific documentation

Assembly and traceability

Lot, markings, component list and conformity documents relevant to the supply.

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State the required documents. Applicability and availability are confirmed during enquiry review.

Testing and coatings

Dimensional reports, mechanical tests, coating reports and ROCAP where applicable to the specification.

Related standards and components

From grade to assembly configuration: Heavy Hex bolts and Twist-Off assemblies, with dedicated A325 and A490 grades.

Very-high-strength bolt, nut and washer assemblies, handled through a specification distinct from F3125.

Application sectors

Steelwork, structures and infrastructure.

Enquiries and supply

Specify standard, grade, dimensions, finish, quantity and required documents. This technical reference sheet does not replace the lot documentation, manufacturer installation instructions or project design.