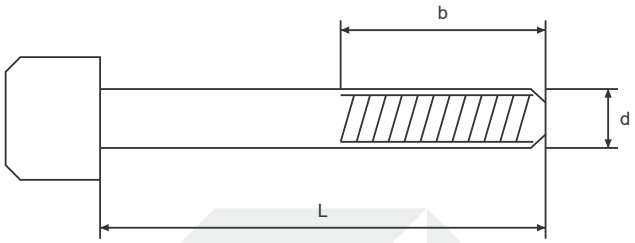
Grade A490 structural bolts

A490 bolting: coating, components and documentation are assessed against the applicable specification rather than inherited from A325.

ASTM F3125/F3125M - 26

Technical drawing and dimensions to specify



Family selection guide. The drawing only identifies dimensions to specify; it does not identify a certified item, an available size range or a complete assembly. Final geometry and dimensions must match the approved drawing.

Dimensional data for the request

Symbol	Required information	Units
d	Nominal thread and pitch	mm or inches, specify
L	Under-head length of the illustrated hex bolt	mm or inches, specify
b	Threaded length	mm or inches, specify

Attach the dimensional standard or drawing, tolerances, quantity and configuration. Mechanical properties and grades appear below; they are not geometric dimensions.

Selection and documentation

Specify the contractual standard and edition, grade, material, finish, matching components and tests. Confirm markings, batch, certificates and applicable instructions before ordering. This Dueemme guide does not replace the standard or connection design.

Standard reference: https://store.astm.org/f3125_f3125m-26.html

A325 or A490: key differences

Characteristic	A325	A490
Product	Heavy Hex	Heavy Hex
Minimum tensile strength · inch series	120 ksi	150 ksi
Current specification	F3125/F3125M	F3125/F3125M
Specify	Type, dimensions, nut, washer, finish	Type, dimensions, nut, washer, permitted coating

A490 is not an automatic replacement for A325. Joint resistance, ductility, components and installation must match the design. These values are neither allowable stresses nor tightening torques.

Heavy Hex, Twist-Off and Type

Heavy Hex identifies the head geometry. F1852 and F2280 identify Twist-Off configurations within F3125. Type 1 and Type 3 distinguish material types; Type 3 concerns weathering steel, not stainless steel.

Dimensions, thread and tightening

The inch Heavy Hex series covers diameters from ½″ to 1½″. Select length and thread position for the joint thickness and shear plane. Specify the required dimensional standard; A325M/A490M are not nominal conversions of inch products.

Nuts, washers and coatings

Specify ASTM A563 nuts and ASTM F436 washers compatible with grade, Type and finish. A coating used for A325 is not automatically permitted for A490. For pretensioned joints, request the assembly and relevant installation instructions.

Grade-specific coating review

State the specified finish, coating specification and any tests. Treatments or component combinations used for A325 are not automatically transferred to A490.

Identify the required assembly

Include type, style, thread and dimensions, together with the nut and washer required by the project. Add quantity, delivery timing and documentation requirements.