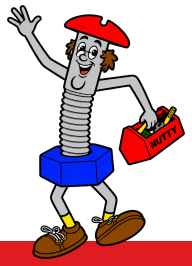
THE NUTTY COMPANY INC
FASTENER SPECIALISTS SINCE 1977

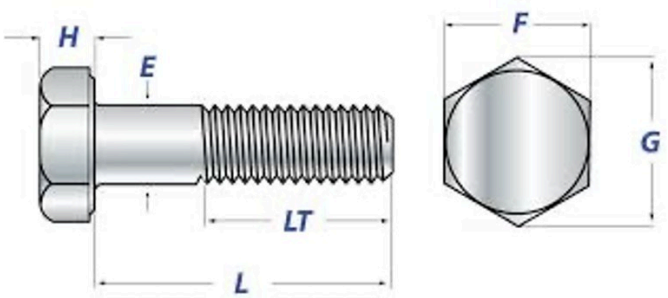
19 Seemans Lane • Milford, CT 06460 USA
203.877.1709 • 1.800.4NUTTY.1 • Fax 203.735.1097
sales@nutty.com • www.nutty.com



PRODUCT DATA SHEET

Structural Heavy Hex Bolts – A325 & A490

1.0 Dimensions As per ASME B18.2.6 (inches)



HEAD MARKINGS



A325
Plain & Hot-Dip Galvanized



A490
Plain only

- **E** = body diameter • **F** = width across flats • **G** = width across corners • **H** = head height • **LT** = thread length • **L** = bolt length
- **Standard:** ASTM F3125/F3125M, Type 1 steel • **Finishes:** A325 plain & hot-dip galvanized; A490 plain (see 3.0).

Nominal Size or Basic Product Diameter	E		F		G		H		LT
	Body Diameter		Width Across Flats		Width Across Corners		Head Height		Thread Length
	Max	Min	Max	Min	Max	Min	Max	Min	Ref
1/2	0.515	0.482	0.875	0.850	1.010	0.969	0.323	0.302	1.00
5/8	0.642	0.605	1.062	1.031	1.227	1.175	0.403	0.378	1.25
3/4	0.768	0.729	1.250	1.212	1.443	1.383	0.483	0.455	1.38
7/8	0.895	0.852	1.438	1.394	1.660	1.589	0.563	0.531	1.50
1	1.022	0.976	1.625	1.575	1.876	1.796	0.627	0.591	1.75
1-1/8	1.149	1.098	1.812	1.756	2.093	2.002	0.718	0.658	2.00
1-1/4	1.277	1.223	2.000	1.938	2.309	2.209	0.813	0.749	2.00
1-3/8	1.404	1.345	2.188	2.119	2.526	2.416	0.878	0.810	2.25
1-1/2	1.531	1.470	2.375	2.300	2.742	2.622	0.974	0.902	2.25

Notes:

- Dimensions of structural bolts are the same as heavy hex head cap screws. The only difference is that structural bolts have a longer body length and shorter thread length. Even though the mechanical properties of SAE J429 Grade 5 & 8 are similar to structural grades A325 & A490, standard heavy hex head cap screws should not be used in place of structural bolts.
- Thread class of fit – Plain finish: 2A. Hot-dip galvanized finish: 2A before coating.



Need a size, grade or finish you don't see?
Call 203.877.1709 or email sales@nutty.com – shop online at nutty.com

2.0 Mechanical Properties For full size bolt testing

2.1 STEEL TYPE 1 – ASTM F3125/F3125M GRADES A325 & A490

Grade	Size / Length	Hardness	Tensile Strength	Proof Load	Grade Marking
A325	Up to 1", length less than 2D	HRC 25 to 34	**120,000 psi min.**	**85,000 psi min.**	 **"A325" + manufacturer ID**
	Up to 1", length 2D and longer	HRC 34 max.			
	Above 1", length less than 3D	HRC 25 to 34			
	Above 1", length 3D and longer	HRC 34 max.			
A490	Up to 1", length less than 2D	HRC 33 to 38	**150,000 psi min. 173,000 psi max.**	**120,000 psi min.**	 **"A490" + manufacturer ID**
	Up to 1", length 2D and longer	HRC 38 max.			
	Above 1", length less than 3D	HRC 33 to 38			
	Above 1", length 3D and longer	HRC 38 max.			

D = nominal diameter. Bolts will have the manufacturer's identification marking in addition to the grade marking shown ("XYZ" shown as an example).

3.0 Surface Finish Plain / Hot-Dip Galvanized

Properties	A325 – Plain	A325 – Hot-Dip Galvanized (HDG)	A490 – Plain
Finish	Plain (uncoated)	Hot-dip galvanized – RoHS compliant	Plain (uncoated)
Specification	–	ASTM F2329/F2329M or ASTM A153/A153M	–
Minimum Coating Thickness	–	3/8" & under: 0.0017" (43 microns) Over 3/8": 0.0020" (50 microns)	–
Thread Class of Fit	2A	2A before coating	2A

A490 bolts are supplied plain only – ASTM F3125 does not permit hot-dip galvanizing of Grade A490 because of the risk of hydrogen embrittlement.

Disclaimer: The above is a compilation of data from various industry standards. The Nutty Company, Inc. has made every effort to present the data accurately. However, The Nutty Company, Inc. cannot be held liable for any claim traceable to any errors, typographical or otherwise, contained herein.

nutty.com Fastener Specialists Since 1977 • 19 Seemans Lane, Milford, CT 06460 **203.877.1709 • sales@nutty.com**