



A-325 HEAVY HEX STRUCTURAL BOLTS TECHNICAL DATA

BOLT "GRIP-LENGTH" CHART FOR A325 AND A490 HIGH STRENGTH BOLTS

GRIP IS THICKNESS OF MATERIAL TO BE CONNECTED EXCLUSIVE OF WASHERS.

FOR EACH FLAT WASHER USED, ADD 5/32 INCH TO GRIP. FOR EACH BEVELED WASHER USED, ADD 5/16 INCH TO GRIP.

GRIP INCHES	BOLT DIAMETER INCHES									
	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	
3/4	1-1/2	1-3/4	----	2	----	----	2-1/2	----	2-3/4	
13/16	1-1/2	1-3/4	2	2	2-1/4	2-1/2	2-1/2	2-3/4	2-3/4	
7/8	1-3/4	1-3/4	2	2	2-1/4	2-1/2	2-1/2	2-3/4	2-3/4	
15/16	1-3/4	2	2	2-1/4	2-1/4	2-1/2	2-3/4	2-3/4	3	
1	1-3/4	2	2	2-1/4	2-1/4	2-1/2	2-3/4	2-3/4	3	
1-1/16	1-3/4	2	2-1/4	2-1/4	2-1/2	2-3/4	2-3/4	3	3	
2	2	2	2-1/4	2-1/4	2-1/2	2-3/4	2-3/4	3	3	
1-3/16	2	2-1/4	2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	
1-1/4	2	2-1/4	2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	
1-5/16	2	2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	3-1/4	
1-3/8	2-1/4	2-1/4	2-1/2	2-1/2	2-3/4	3	3	3-1/4	3-1/4	
1-7/16	2-1/4	2-1/2	2-1/2	2-3/4	2-3/4	3	3-1/4	3-1/4	3-1/2	
1-1/2	2-1/4	2-1/2	2-1/2	2-3/4	2-3/4	3	3-1/4	3-1/4	3-1/2	
1-9/16	2-1/4	2-1/2	2-3/4	2-3/4	3	3-1/4	3-1/4	3-1/2	3-1/2	
1-5/8	2-1/2	2-1/2	2-3/4	2-3/4	3	3-1/4	3-1/4	3-1/2	3-1/2	
1-11/16	2-1/2	2-3/4	2-3/4	3	3	3-1/4	3-1/2	3-1/2	3-3/4	
1-3/4	2-1/2	2-3/4	2-3/4	3	3	3-1/4	3-1/2	3-1/2	3-3/4	
1-13/16	2-1/2	2-3/4	3	3	3-1/4	3-1/2	3-1/2	3-3/4	3-3/4	
1-7/8	2-3/4	2-3/4	3	3	3-1/4	3-1/2	3-1/2	3-3/4	3-3/4	
1-15/16	2-3/4	3	3	3-1/4	3-1/4	3-1/2	3-3/4	3-3/4	4	
2	2-3/4	3	3	3-1/4	3-1/4	3-1/2	3-3/4	3-3/4	4	
2-1/16	2-3/4	3	3-1/4	3-1/4	3-1/2	3-3/4	3-3/4	4	4	
2-1/8	3	3	3-1/4	3-1/4	3-1/2	3-3/4	3-3/4	4	4	
2-3/16	3	3-1/4	3-1/4	3-1/2	3-1/2	3-3/4	4	4	4-1/4	
2-1/4	3	3-1/4	3-1/4	3-1/2	3-1/2	3-3/4	4	4	4-1/4	
2-5/16	3	3-1/4	3-1/2	3-1/2	3-3/4	4	4	4-1/4	4-1/4	
2-3/8	3-1/4	3-1/4	3-1/2	3-1/2	3-3/4	4	4	4-1/4	4-1/4	

GRIP INCHES	BOLT DIAMETER INCHES									
	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	
2-7/16	3-1/4	3-1/2	3-1/2	3-3/4	3-3/4	4	4-1/4	4-1/4	4-1/2	
2-1/2	3-1/4	3-1/2	3-1/2	3-3/4	3-3/4	4	4-1/4	4-1/4	4-1/2	
2-9/16	3-1/4	3-1/2	3-3/4	3-3/4	4	4-1/4	4-1/4	4-1/2	4-1/2	
2-5/8	3-1/2	3-1/2	3-3/4	3-3/4	4	4-1/4	4-1/4	4-1/2	4-1/2	
2-11/16	3-1/2	3-3/4	3-3/4	4	4	4-1/4	4-1/2	4-1/2	4-3/4	
2-3/4	3-1/2	3-3/4	3-3/4	4	4	4-1/4	4-1/2	4-1/2	4-3/4	
2-13/16	3-1/2	3-3/4	4	4	4-1/4	4-1/2	4-1/2	4-3/4	4-3/4	
2-7/8	3-3/4	3-3/4	4	4	4-1/4	4-1/2	4-1/2	4-3/4	4-3/4	
2-15/16	3-3/4	4	4	4-1/4	4-1/4	4-1/2	4-3/4	4-3/4	5	
3	3-3/4	4	4	4-1/4	4-1/4	4-1/2	4-3/4	4-3/4	5	
3-1/16	3-3/4	4	4-1/4	4-1/4	4-1/2	4-3/4	4-1/2	5	5	
3-1/8	4	4	4-1/4	4-1/4	4-1/2	4-3/4	4-3/4	5	5	
3-3/16	4	4-1/4	4-1/4	4-1/2	4-1/2	4-3/4	5	5	5-1/4	
3-1/4	4	4-1/4	4-1/4	4-1/2	4-1/2	4-3/4	5	5	5-1/4	
3-5/16	4	4-1/4	4-1/2	4-1/2	4-3/4	5	5	5-1/4	5-1/4	
3-3/8	4-1/4	4-1/4	4-1/2	4-1/2	4-3/4	5	5	5-1/4	5-1/4	
3-7/16	4-1/4	4-1/2	4-1/2	4-3/4	4-3/4	5	5-1/4	5-1/4	5-1/2	
3-1/2	4-1/4	4-1/2	4-1/2	4-3/4	4-3/4	5	5-1/4	5-1/4	5-1/2	
3-9/16	4-1/4	4-1/2	4-3/4	4-3/4	5	5-1/4	5-1/4	5-1/2	5-1/2	
3-5/8	4-1/2	4-1/2	4-3/4	4-3/4	5	5-1/4	5-1/4	5-1/2	5-1/2	
3-11/16	4-1/2	4-3/4	4-3/4	5	5	5-1/4	5-1/2	5-1/2	5-3/4	
3-3/4	4-1/2	4-3/4	4-3/4	5	5	5-1/4	5-1/2	5-1/2	5-3/4	
3-13/16	4-1/2	4-3/4	5	5	5-1/4	5-1/2	5-1/2	5-3/4	5-3/4	
3-7/8	4-3/4	4-3/4	5	5	5-1/4	5-1/2	5-1/2	5-3/4	5-3/4	
3-15/16	4-3/4	5	5	5-1/4	5-1/4	5-1/2	5-3/4	5-3/4	6	
4	4-3/4	5	5	5-1/4	5-1/4	5-1/2	5-3/4	5-3/4	6	
4-1/16	4-3/4	5	5-1/4	5-1/4	5-1/2	5-3/4	5-3/4	6	6	

A325 STRUCTURAL BOLTS TYPE I

Leland offers ASTM A325 bolts type I as complete assemblies or bolts only.

Bolts are typically supplied as plain or hot dip galvanized, in diameters from 1/2" to 1-1/4" and lengths to 8".

Fully threaded bolts are available, (thread to head, in lengths up to four times the diameter).

All of these bolts are heat treated to a minimum tensile strength of 120 KSI up to 1" diameter, and 105 KSI over 1".

A325 STRUCTURAL BOLTS TYPE III

ASTM A325 type III structural bolts are made of a special chemistry corrosion resistant, or weathering steel, an alloy steel, containing copper, chromium and nickel. Type III fasteners are primarily used in outdoor structures. As the surface of the steel corrodes, the type III material forms a fine-textured oxide coating. This oxide coating seals the surface of the base metal and appears to be a uniform fine grained, deep brown rust color.

Structural bolts in grade A325 type III all have mechanical properties identical to the standard fasteners properties.

Thus, type III structural fasteners can be substituted for standard structural fasteners.

A490 STRUCTURAL BOLTS TYPE I

ASTM A490 structural bolts type I are only supplied in plain (black) finish. These bolts are heat-treated to a tensile strength range greater than 150 KSI. Medium carbon, alloy steel is used for these bolts.

All test results and suggestions are based on laboratory tests. Specific job site conditions should be taken into consideration when specifying the proper fastener. Because applications vary, we assume no liability for use of this information.