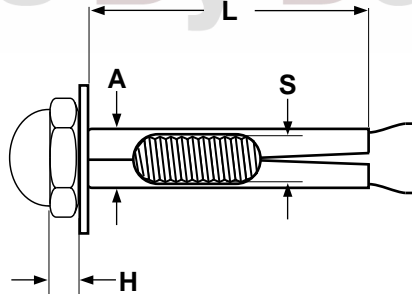


Fasteners By Design Inc.



SLEEVE ANCHORS, ACORN NUT										FF-S-325, Group II, Type 3, Class 3	
A x L	H	F	W	Drill Diameter	Fixture Clearance Hole	Minimum Embedment	S  Thread Size of Stud	Required Torque to Set (Ft. Lbs.)		Tensile Strength (psi.)	Shear Strength (psi.)
Anchor Diam x Length	Nut Side Height	Head Width	Washer O.D.					Carbon Steel	Stainless Steel	4000 psi. Concrete Strength	
Ref	Ref	Ref	Ref								
1/4 x 5/8	3/16	3/8	1/2	1/4	5/16	1/2	10-24	4	3	-	-
1/4 x 1 3/8						1 1/8				1440	1630
1/4 x 2 1/4											

<b>Description</b>	A device for giving stability to one part of a structure by making it fast to another consisting of (A) a threaded stud with a conical end flared outward; (B) a hollow, cylindrical dilating sleeve assembled over the stud and positioned against the minor diameter of the cone; (C) a washer and low-crown cap nut assembled at the end opposite the cone.	
<b>Applications/ Advantages</b>	The anchor works by expanding against the material in which it is embedded. When the flat head is turned clockwise the conical end is pulled into the dilating sleeve pushing it outward 360° around the anchor into the masonry. They are designed to be used in solid or hollow masonry, including cinder block, brick, marble and concrete. One advantage of the sleeve anchor is that it can be removed after it's been installed. Another is that the length of the sleeve induces less stress on the substrate than does a wedge anchor. The acorn nut variety is preferred when a decorative finished look is desired (ie. attaching theater seating to the floor).	
<b>Material</b>	<p><i>Steel</i></p> <p>Acorn Nut: AISI 1010 - 1018 steel Washer: Hot-rolled, hot-rolled &amp; pickled, or cold-rolled steel Threaded Bolt: AISI 1010 - 1018 steel Sleeve: AISI 1010 - 1020 steel</p>	<p><i>Stainless</i></p> <p>Acorn Nut: Type 304 stainless steel Washer: 18-8 stainless steel Threaded Bolt: 18-8 stainless steel Sleeve: Type 304 stainless steel</p>
<b>Anchor Spacing</b>	Anchors should be installed with a minimum of 10 anchor diameters between each other and a minimum of 5 diameters from the edge.	
<b>Tensile Strength</b>	The suggested safe working load is one-fourth of the average proof test load shown in the above table.	
<b>Shear Strength</b>	The suggested safe working load is one-fourth of the average proof test load shown in the above table.	
<b>Plating</b>	Steel sleeve anchors are usually supplied plated zinc.	Stainless sleeve anchors usually have no additional finish applied.

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