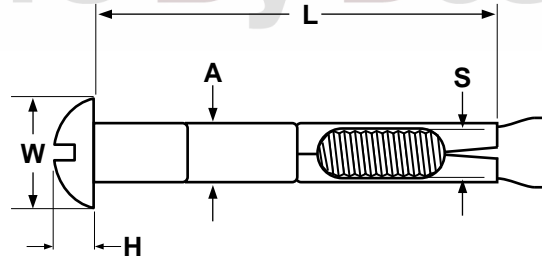


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| SLEEVE ANCHORS, ROUND HEAD |             |            |                |                        |                   |                     |                                   |                 |                         | FF-S-325, Group II, Type 3, Class 3 |                             |
|----------------------------|-------------|------------|----------------|------------------------|-------------------|---------------------|-----------------------------------|-----------------|-------------------------|-------------------------------------|-----------------------------|
| A x L                      | H           | W          | Drill Diameter | Fixture Clearance Hole | Minimum Embedment | S                   | Required Torque to Set (Ft. Lbs.) |                 | Tensile Strength (psi.) | Shear Strength (psi.)               |                             |
| Anchor Diam x Length       | Head Height | Head Width |                |                        |                   | Thread Size of Stud | Carbon Steel                      | Stainless Steel |                         |                                     | 4000 psi. Concrete Strength |
| Ref                        | Ref         |            |                |                        |                   |                     |                                   |                 |                         |                                     |                             |
| 1/4 x 2                    | 11/64       | 29/64      | 1/4            | 5/16                   | 1 1/8             | 10-24               | 4                                 | 3               | 1440                    | 1630                                |                             |
| 1/4 x 2 3/4                |             |            |                |                        |                   |                     |                                   |                 |                         |                                     |                             |
| 1/4 x 3 3/4                |             |            |                |                        |                   |                     |                                   |                 |                         |                                     |                             |
| 3/8 x 2 1/2                | 15/64       | 43/64      | 3/8            | 7/16                   | 1 5/8             | 5/16-18             | 16                                | 11              | 2700                    | 3250                                |                             |
| 3/8 x 3 3/4                |             |            |                |                        |                   |                     |                                   |                 |                         |                                     |                             |

|                                 |   |   |
|---------------------------------|---|---|
| <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 slotted, dome-shaped head 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. It is well-suited for permanently anchoring heavy equipment to concrete. |   |
| <b>Material</b>                 | <i>Steel</i><br>Threaded Bolt: AISI 1010 - 1018 steel<br>Sleeve: AISI 1010 - 1020 steel   | <i>Stainless</i><br>Threaded Bolt: 18-8 stainless steel<br>Sleeve: Type 304 stainless steel |
| <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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