**Type SMPP™ Self-clinching Nuts**

Installs into stainless steel sheets as thin as .025” / 0.64 mm

**TYPE SMPP™ SELF-CLINCHING NUTS**

- Installs into stainless steel sheets as thin as .025” / 0.64 mm.
- Corrosion resistance similar to 300 series stainless steel.
- Reduced outer dimensions and thinner sheet capabilities compared to type SP thread sizes.
- Recommended for use in stainless steel sheets HRB 90 / HB 192 or less.

**Part Number Designation**

SMPP – 440

Type and Material

Thread Code

**Threads:**

- Internal, ASME B1.1, 2B / ASME B1.13M, 6H
- Finish: Passivated and/or tested per ASTM A380
- For use in sheet hardness: HRB 90 / HB 192 or less

**Material:**

- Age hardened A286 stainless steel (non-magnetic)

**Finish:**

- Passivated

**Fastener drawings and models are available at**

www.pemnet.com
INSTALLATION(1)

1. Prepare properly sized mounting hole in sheet. Do not perform any secondary operations such as deburring.
2. Place fastener into the anvil hole and place the mounting hole over the shank of the fastener as shown in diagram.
3. With installation punch and anvil surfaces parallel, apply squeezing force until the head of the nut comes into contact with the sheet material.

PEMSERTER® Installation Tooling

<table>
<thead>
<tr>
<th>Thread Code</th>
<th>A ±.002</th>
<th>P +.000 – .001</th>
<th>R Max.</th>
<th>R +.005</th>
<th>Anvil Part Number</th>
<th>Punch Part Number</th>
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</thead>
<tbody>
<tr>
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<td>.223</td>
<td>.060</td>
<td>.010</td>
<td>.005</td>
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<td>.060</td>
<td>.010</td>
<td>.005</td>
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</tbody>
</table>

(1) For best results, we recommend using the installation punch and anvil shown. Deviations from recommended installation tooling may result in sheet distortion and reduced performance.

NOTE: Variations in hole preparation, installation tooling, installation force, and sheet material type, thickness, and hardness will affect both performance and tooling life.

PERFORMANCE DATA(1)

<table>
<thead>
<tr>
<th>Thread Code</th>
<th>Max. Mating Screw Tightening Torque (in. lbs.) (2) (3)</th>
<th>Test Sheet Thickness and Material (in.)</th>
<th>Sheet Hardness HRB</th>
<th>Installation Pushout (lbs.) (4)</th>
<th>Torque-out (lbs.) (2) (3)</th>
<th>Tensile Strength Hole Size For Pull Thru Tests (lbs.)</th>
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</thead>
<tbody>
<tr>
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<td>.029” 304 Stainless Steel</td>
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<td>4500</td>
<td>50</td>
<td>10</td>
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<tr>
<td>440</td>
<td>13</td>
<td>.029” 304 Stainless Steel</td>
<td>89</td>
<td>4500</td>
<td>75</td>
<td>15</td>
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<tr>
<td>632</td>
<td>20</td>
<td>.029” 304 Stainless Steel</td>
<td>89</td>
<td>6000</td>
<td>75</td>
<td>20</td>
</tr>
</tbody>
</table>

(1) Published installation forces are for general reference. Actual set-up and confirmation of complete installation should be made by observing proper seating of fastener as described in the installation steps. Other performance values reported are averages when all proper installation parameters and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure may affect performance. Performance testing this product in your application is recommended. We will be happy to provide technical assistance and/or samples for this purpose.

(2) Head size is adequate to ensure failure in threaded area when tested with industry standard tensile bushing diameter.

(3) Torquing value shown will induce preload of 70% of nut min axial strength with K or nut factor is equal to 0.20. In some applications tightening torque may need to be adjusted based on the actual K value. All tightening torques shown are based on 180 ksi Property Class 12.9 screws. For lower strength screws the tightening torque is proportionately less. For example, for 120 ksi screws, torque is 67% value shown. For 900 MPa screws (Property Class 9.8) torque value is 74% of value shown.

(4) Installation controlled by proper cavity depth in punch.

Specifications subject to change without notice. See our website for the most current version of this bulletin.