**Application and Description**

### Carbon Steel Screws

These general purpose screws are designed for normal atmospheric conditions. They should not be used in heavy industrial applications or close proximity to the ocean where corrosion can occur. They are case hardened and can tap up to 1/2” thick steel using the appropriate hole size listed on this sheet.

### 410 Stainless Steel Screws

These screws can be used in mild atmospheres, steam, and many mild chemical environments. They provide superior strength and are plated or coated to provide lubricity during tapping. 410 screws may show signs of red rust but will not rust as quickly as carbon steel screws. Not recommended for use in aluminum connection. Expansion of the aluminum may stress the screw to failure due to the screw’s hardness.

### 304 Stainless Steel Screws

These screws are used in applications that require superior corrosion resistance or ductility. The chromium in the material reacts with oxygen forming a thin, invisible, non-reactive chromium oxide film. It is resistant to ordinary rusting in wastewater treatment, food-processing environments, and a wide variety of chemicals. 304 stainless steel screws are slightly magnetic caused during head and thread forming. They are not heat treated and are plated to provide lubricity that helps minimize thread roll-over caused during tapping.

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**Material Information**

Product: TFC Tapping Screws  
General Specification: ANSI B18.6.4, AC 118)  
Material: C 1018 / C 1022  
410 Stainless Steel  
Heat Treat: Case Hardened  
Finish: .0003” Zinc Plated - 24 hrs salt spray / No red rust  
Optional: TRI-SEAL® Coated – 1,000 hrs salt spray / No red rust  
Material: Type 304 Stainless Steel (18-8)  
Heat Treat: None  
Finish: Type B & BP: .0003” Min. Cad Plating (For lubricity)  
Type A & AB: .0003” Min. Zinc Plating (For lubricity)  
Salt Spray: >2,000 hrs / No red rust

**Sealing Washer Information**

Carbon Steel Screws: 15MM O.D. Galvanized Steel / EPDM.  
Stainless Steel Screws: 15MM O.D. Stainless Steel / EPDM.  
#17 with VRT® Screws: 3/4” O.D. Galvanized Steel / EPDM.  
Zinc Cap Head and Stainless Cap Head: 5/8” O.D. Head / EPDM.

**Pressure Treated or Fire Treated Wood Connections**

Screw made of 410 or 300 series stainless steel are recommended. Carbon steel screws must be hot dipped galvanized or TRI-SEAL® coated. Do not use standard, zinc plated, carbon steel screws.

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**Hole Size and Pullout Values - Carbon Steel Tapping Screws**

**DRILL BITS SIZES**

<table>
<thead>
<tr>
<th>Screw Type</th>
<th>26ga (.018&quot;)</th>
<th>24ga (.024&quot;)</th>
<th>22ga (.030&quot;)</th>
<th>20ga (.036&quot;)</th>
<th>18ga (.048&quot;)</th>
<th>16ga (.060&quot;)</th>
<th>14ga (.075&quot;)</th>
<th>12ga (.105&quot;)</th>
<th>1/8” (.125&quot;)</th>
<th>3/16” (.187&quot;)</th>
<th>1/4” (.250&quot;)</th>
<th>3/8” (.375&quot;)</th>
<th>1/2” (.500”)</th>
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</thead>
<tbody>
<tr>
<td>#14-10 Type A</td>
<td>1/8”</td>
<td>5/32”</td>
<td>3/16”</td>
<td>Not recommended</td>
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<tr>
<td>1/4-14 Type AB</td>
<td>1/8”</td>
<td>5/32”</td>
<td>3/16”</td>
<td>#7</td>
<td>Not recommended</td>
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<tr>
<td>1/4-14 Type B</td>
<td>Not recommended</td>
<td>3/16”</td>
<td>#7</td>
<td>#1</td>
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<tr>
<td>1/4-14 Type BP</td>
<td>Not recommended</td>
<td>3/16”</td>
<td>#7</td>
<td>#1</td>
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<tr>
<td>#17-14 Type AB</td>
<td>3/16”</td>
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<td>1/4”</td>
<td>Not recommended</td>
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**PULLOUT Average Ultimate - Pounds**

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<tr>
<th>Screw Type</th>
<th>MTL Type</th>
<th>26ga (.018&quot;)</th>
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<th>20ga (.036&quot;)</th>
<th>18ga (.048&quot;)</th>
<th>16ga (.060&quot;)</th>
<th>14ga (.075&quot;)</th>
<th>12ga (.105&quot;)</th>
<th>1/8” (.125&quot;)</th>
<th>3/16” (.187&quot;)</th>
<th>1/4” (.250&quot;)</th>
<th>3/8” (.375&quot;)</th>
<th>1/2” (.500”)</th>
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<tbody>
<tr>
<td>#14-10 Type A</td>
<td>SS</td>
<td>270</td>
<td>363</td>
<td>363</td>
<td>459</td>
<td>657</td>
<td>1,194</td>
<td>1,368</td>
<td>1,780</td>
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<td></td>
<td>CS</td>
<td>276</td>
<td>342</td>
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<td>1,316</td>
<td>1,414</td>
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<tr>
<td>1/4-14 Type AB, BP</td>
<td>SS</td>
<td>216</td>
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*Denotes exceeds tensile strength of screw

**Disclaimer:** All test results and fastener recommendations are based on laboratory conditions. Because actual job site conditions vary and are uncontrollable by TFC, we assume no liability for the use of this information.

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