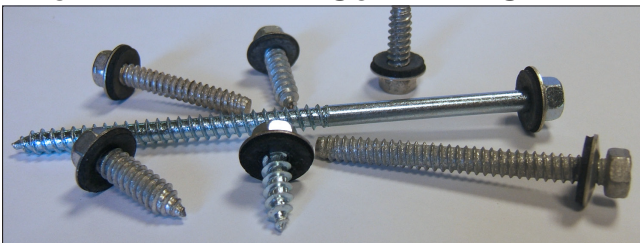




# CARBON STEEL & STAINLESS STEEL SELF-TAPPING SCREWS

## FASTENER DATA AND SUBMITTAL SHEET



### 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

**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.

**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.

### 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.

### Mechanical Properties

Screw Type	Major Dia.	Torsional Lb-in.	Material	Tensile Lbs.	Shear Lbs.
#14-10 Type A	.235"	125	Carbon Steel	3,150	2,150
	.246"		304 SS	2,925	1,925
1/4-14 Type AB & B	.237"	150	Carbon Steel	3,850	2,575
	.246"		304 SS	3,700	2,800
#17-14 Type AB	.280"	170	Carbon Steel	5,890	3,285
	.290"		304 SS	5,200	3,125

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

Use 135° split point drill bits for optimal performance.

Screw Type	DRILL BITS SIZES														
	26ga (.018")	24ga (.024")	22ga (.030")	20ga (.036")	18ga (.048")	16ga (.060")	14ga (.075")	12ga (.105")	1/8" (.125")	10ga (.134")	3/16" (.187")	1/4" (.250")	3/8" (.375")	1/2" (.500")	
#14-10 Type A	1/8"	5/32"			3/16"		Not recommended								
1/4-14 Type AB	1/8"	5/32"			3/16"		#7			Not recommended					
1/4-14 Type B	Not recommended					3/16"		#7			#1				
1/4-14 Type BP	Not recommended					3/16"		#7			#1				
#17-14 Type AB	3/16"				1/4"				Not recommended						

Screw Type	MTL TYPE	PULLOUT Average Ultimate - Pounds														
		26ga (.018")	24ga (.024")	22ga (.030")	20ga (.036")	18ga (.048")	16ga (.060")	14ga (.075")	12ga (.105")	1/8" (.125")	10ga (.134")	3/16" (.187")	1/4" (.250")	5/16" (.375")	3/8" (.312")	1/2" (.500")
#14-10 Type A	SS	270	363	363	459	657	1,194	1,368	1,780	1,812						
	CS	276	342	342	464	747	1316	1414								
1/4-14 Type AB, B, BP	SS	216	344	344	411	541	686	983	1,698	2,242	2,855	2,693	3,695	3,746	3,784	3,790
	CS				444	676	1137	1477	1932	2426		3047	4591*	4587*	4621*	
#17-14 Type AB	CS	410			522		879	1277	2185							

\*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.