

The following information is provided to help you specify and install tapping screws correctly. Care should be used when selecting and installing screws to assure optimal performance.

TERMINOLOGY

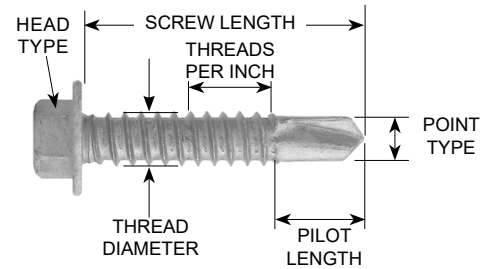
To eliminate confusion and assure the proper screw is used, specifications for tapping screws should be written to include;

1. Thread diameter
2. Threads per inch
3. Point type
4. Description of screw
5. Drive size
6. Head Style
7. Material
8. Finish / plating

Example

1/4-14 x 1" BLAZER-3 Drill Screw. 3/8" HWH.
Carbon Steel. TRI-SEAL® 1,000 hour Salt Spray coating.

Thread Diameter	Threads Per Inch	Screw Length	Point Type	Head Size & Type
1/4	- 14	x 1"	BLAZER-3	3/8" HWH



DETERMINE DRILL POINT TYPE

- Add up the total thickness that will be drilled by the screw.
- Select the desired drill point (DP) type and screw size located on the size chart below.



		Drilling and Tapping Thickness													
		Gauge	24	20	18	16	14	12	10						
		Inch	.024	.036	.048	.060	.075	.100	.105	.135	.175	.210	.250	.375	.500
Screw & Point	1/4-14 DP1	.024" - .072"													
	#8-18 DP2	.024" - .100"													
	#10-16 DP3	.024" - .175"													
	#10-24 DP3	.048" - .210"													
	#12-14 DP3	.024" - .210"													
	1/4-14 DP3	.035" - .250"													
	5/16-12 DP3	.048" - .175"													
	#12-24 DP4	.175" - .375"													
	#12-24 DP5	.175" - .500"													
	1/4-20 DP5	.175" - .500"													

INSTALLATION TECHNIQUES



Recommended Screw-Gun Speed

Using the proper tooling is important for producing consistent installation. It also minimizes potential screw or application failure caused by over-driven and under-driven fasteners.

Screw Size	Max RPM
#6, #8, #10	2,500
All wood screws	2,500
#12, 1/4", 5/16"	2,000
All DP5	2,000
304 Stainless Screws	1,200

WARNING! DO NOT USE IMPACT TOOLS FOR INSTALLATION!

Using impact tools to install pancake head screws can cause the head to separate from the body due to the high torque and impulse generate by the tool. HWH screws can also be easily overtighten which can lead to connection failure.

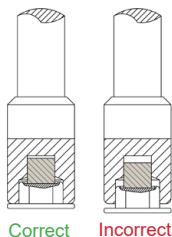
TFC is not responsible for failures caused by the use of improper tooling or improper installation.

ACCESSORY TIPS

Look familiar?



Worn out drive bits and sockets produces poor drilling, can strip the recess, and damage painted fasteners.



SET THE MAGNET!

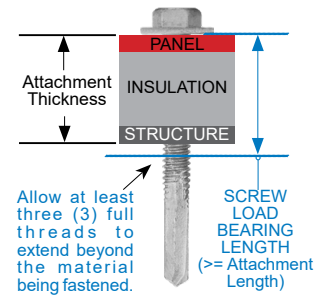
Be sure screw head engages into the socket completely. This will eliminate screw wobble, improve the drilling performance, and reduce damage to painted screw heads.

Correct Incorrect

DETERMINE FASTENER LENGTH

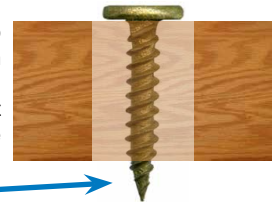
METAL

- Measure from the top surface of the material being fastened to the underside of the metal that will be drilled and tapped. Be sure to allow for any void or insulation. This is called the attachment thickness.
- Select a screw length where the attachment thickness is less than or equal to the *Load Bearing Length* listed on screw size charts



WOOD

Allow full penetration into wood decks so the screw point extends beyond the bottom side. Allow at least 1" screw embedment in 2 x structures to maintain designed pull out resistance. Greater penetration can achieve higher pull out values.



Allow screw tip to extend beyond decking.



DO

- Install fastener perpendicular to the work surface.
- Let the drill point do the work.
- Use a tool with torque control or depth sensing nose piece to prevent over-torqued and under-torqued screws.
- Allow all material to be drilled before tapping into the steel.

DO NOT

- Exert excessive pressure!
- Over drive the screw!
- **Use impact tools! (They can torque the screw to failure!)**

SEALING WASHERS

To assure a proper seal, tighten the screw until the EPDM sealant extrudes just to the outer edge of the backing material. This also is a great way to visually inspect the screw to assure it is properly sealed.



Correct



Too Tight!



Too Loose!

All information is non-binding and without guarantee. Before using the products, all specifications and calculations must be checked by a suitably qualified person and local regulations must be observed. This document is subject to revision. We reserve the right to make technical changes. (0321-1)