

# Titen® Stainless Steel Concrete and Masonry Screw

Stainless steel Titen screws are ideal for attaching various types of components to concrete and masonry, such as fastening electrical boxes or light fixtures. They offer the versatility of our standard Titen screws with enhanced corrosion protection. Available in hex and Phillips flat head.

## Features

- Suitable for concrete, brick, grout-filled CMU and hollow-block applications
- Suitable for some preservative-treated wood applications
- Acceptable for exterior use
- Titen drill bits included in each box
- Available in lengths from 1 1/4"–4"

**Material:** Type 410 stainless steel

**Coating:** Zinc plated with a protective overcoat

## Installation

**Caution:** Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Steps must be taken to prevent inadvertent sustained loads above the listed allowable loads. Overtightening and bending moments can initiate cracks detrimental to the hardened screw's performance. Use the Simpson Strong-Tie Titen installation tool kit as it has a bit that is designed to reduce the potential for overtightening the screw.

**Caution:** Oversized holes in the base material will reduce or eliminate the mechanical interlock of the threads with the base material and will reduce the anchor's load capacity.

1. Drill a hole in the base material using the appropriate diameter carbide drill bit as specified in the table. Drill the hole to the specified embedment depth plus 1/2" to allow the thread tapping dust to settle and blow it clean using compressed air. Overhead installations need not be blown clean. Alternatively, drill the hole deep enough to accommodate embedment depth and dust from drilling and tapping.
2. Position fixture, insert screw and tighten using drill and Titen screw installation tool fitted with a hex socket or phillips bit.

Preservative-treated wood applications: suitable for use in non-ammonia formulations of CCA, ACQ-C, ACQ-D, CA-B, SBX/DOT and zinc borate. Acceptable for use in exterior environments. Use caution not to damage coating during installation. The 410 stainless-steel Titen with top coat provides "medium" corrosion protection. Recommendations are based on testing and experience at time of publication and may change. Simpson Strong-Tie cannot provide estimates on service life of screws.



**Titen**  
Stainless-Steel  
Phillips Flat Head Screw  
(PFSS)



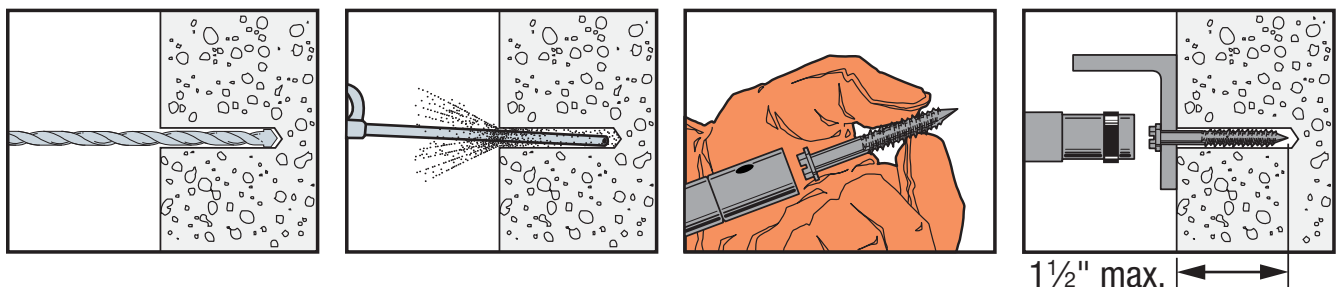
**Titen**  
Stainless-Steel  
Hex-Head Screw  
(HSS)

## Stainless-Steel Titen Product Data

Size (in.)	Head Style	Model No.	Drill Bit Diameter (in.)	Quantity	
				Box	Carton
1/4 x 1 1/4	Hex-Head	TTN25114HSS	3/16	100	1600
1/4 x 1 3/4		TTN25134HSS		100	500
1/4 x 2 1/4		TTN25214HSS		100	500
1/4 x 2 3/4		TTN25234HSS		100	500
1/4 x 3 1/4		TTN25314HSS		100	400
1/4 x 3 3/4		TTN25334HSS		100	400
1/4 x 4		TTN25400HSS		100	400
1/4 x 1 1/4	Phillips Flat-Head	TTN25114PFSS	3/16	100	1600
1/4 x 1 3/4		TTN25134PFSS		100	500
1/4 x 2 1/4		TTN25214PFSS		100	500
1/4 x 2 3/4		TTN25234PFSS		100	500
1/4 x 3 1/4		TTN25314PFSS		100	400
1/4 x 3 3/4		TTN25334PFSS		100	400
1/4 x 4		TTN25400PFSS		100	400

One drill bit is included in each box.

## Installation Sequence



1 1/2" max.

# Titen® Stainless Steel Concrete and Masonry Screw

## Stainless-Steel Titen Allowable Tension and Shear Loads in Normal-Weight Concrete



Dia. in. (mm)	Drill Bit Dia. in.	Embed. Depth in. (mm)	Critical Spacing in. (mm)	Critical Edge Dist. in. (mm)	Tension Load				Shear Load	
					$f'_c \geq 2,000$ psi (13.8 MPa) Concrete		$f'_c \geq 4,000$ psi (27.6 MPa) Concrete		$f'_c \geq 2,000$ psi (13.8 MPa) Concrete	
					Ultimate lb. (kN)	Allow. lb. (kN)	Ultimate lb. (kN)	Allow. lb. (kN)	Ultimate lb. (kN)	Allow. lb. (kN)
1/4 (6.4)	3/16	1 (25.4)	3 (76.2)	1 1/2 (38.1)	600 (2.7)	150 (0.7)	935 (4.2)	235 (1.0)	760 (3.4)	190 (0.8)
1/4 (6.4)	3/16	1 1/2 (38.1)	3 (76.2)	1 1/2 (38.1)	1,040 (4.6)	260 (1.2)	1,760 (7.8)	440 (2.0)	810 (3.6)	200 (0.9)

1. Maximum anchor embedment is 1 1/2" (38.1 mm).
2. Minimum concrete thickness is 1.5 x embedment.

## Stainless-Steel Titen Allowable Tension and Shear Loads in Face Shell of Hollow and Grout-Filled CMU



Dia. in. (mm)	Drill Bit Dia. in.	Embed. Depth in. (mm)	Critical Spacing in. (mm)	Critical Edge Dist. in. (mm)	Values for 6" or 8" Lightweight, Medium-Weight or Normal-Weight CMU			
					Tension Load		Shear Load	
					Ultimate lb. (kN)	Allow. lb. (kN)	Ultimate lb. (kN)	Allow. lb. (kN)
1/4 (6.4)	3/16	1 (25.4)	4 (101.6)	1 1/2 (38.1)	550 (2.4)	110 (0.5)	495 (2.2)	100 (0.4)

1. The tabulated allowable loads are based on a safety factor of 5.0.
2. Maximum anchor embedment is 1 1/2" (38.1 mm).

## Length Identification Head Marks on Stainless-Steel Titen Screw Anchors (corresponds to anchor length in inches)

Length ID Marking on Head		—	A	B	C	D	E	F	G	H	I	J
Length of Anchor (in.)	From	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6
	Up To But Not Including	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2

For SI: 1 inch = 25.4 mm.

\* See p. 13 for an explanation of the load table icons.