

**TITEN®** Stainless-Steel Concrete and Masonry Screws

The new stainless-steel Titen® screws are ideal for attaching all types of components to concrete and masonry in environments where corrosion is a concern. These screws combine the versatility of our standard Titen screws with the benefits of enhanced corrosion protection. The combination of 410 stainless steel and a protective coating provides excellent corrosion resistance. Available in hex and phillips head, the Titen screws are designed for use with appropriately-sized drill bits that are included with each box.

**FEATURES:**

- 410 grade stainless steel with C4 top coat for added corrosion protection
- Suitable for concrete, brick and hollow-block applications
- Suitable for some preservative-treated wood applications
- Available in lengths from 1¼" to 4"
- 5% observed red rust after 1500 hours of ASTM B117 salt spray test\*.

\* Salt-spray test performance is based on tests on uninstalled fasteners, and may not reflect actual performance when installed. This information is provided for comparative purposes only.

**MATERIAL:** Heat-treated 410 stainless steel

**FINISH:** C4 (zinc plated with a protective overcoat)

**INSTALLATION:**

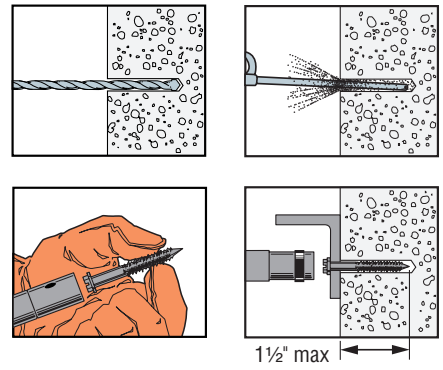
 Caution: Oversized holes in the base material will reduce or eliminate the mechanical interlock of the threads with the base material and will reduce the anchor's load capacity.

- 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 ½" 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.
- Position fixture, insert screw and tighten using drill and 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 C4 top coat provides "medium" corrosion protection (reference table on page 16 of this catalog). 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. Contact Simpson Strong-Tie for additional information.



**Installation Sequence**



Mechanical Anchors

**410 Stainless-Steel Titen® Tension and Shear Load Values in Normal-Weight Concrete**



Titen 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 ≥ 2000 psi (13.8 MPa) Concrete		f'c ≥ 4000 psi (27.6 MPa) Concrete		f'c ≥ 2000 psi (13.8 MPa) Concrete	
					Ultimate lbs. (kN)	Allow. lbs. (kN)	Ultimate lbs. (kN)	Allow. lbs. (kN)	Ultimate lbs. (kN)	Allow. lbs. (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. Concrete must be minimum 1.5 x embedment.

**410 Stainless-Steel Titen® Tension and Shear Load Values in Face Shell of Hollow and Grout-Filled CMU**



Titen 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 lbs. (kN)	Allow. lbs. (kN)	Ultimate lbs. (kN)	Allow. lbs. (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 for installations under the IBC and IRC. For installations under the UBC use a safety factor of 4.0 (multiply the tabulated allowable loads by 1.25).
2. Maximum anchor embedment is 1 1/2" (38.1 mm).

**410 Stainless-Steel Titen® Product Data**

Size (in)	Head Style	Simpson Model No.	Bit Dia. (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

\* See page 10 for an explanation of the load table icons