


TITEN® Concrete and Masonry Screws

Titen® screws are 3/16" and 1/4" diameter masonry screws for attaching all types of components to concrete and masonry. Available in hex and phillips head designs in three colors. Use with appropriately sized Titen drill bits included with each box.

Warning: Industry studies show that hardened fasteners can experience performance problems in wet or corrosive environments. Accordingly, use these products in dry, interior and non-corrosive environments only.

- MATERIAL:** Heat-treated carbon steel
- FINISH:** Zinc plated with a baked on ceramic coating
- CODES:** Florida FL 2355.1
- 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 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.
- Position fixture, insert screw and tighten using drill and installation tool fitted with a hex socket or phillips bit.

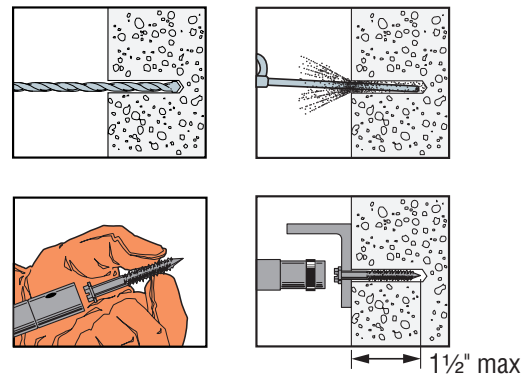
Preservative-treated wood applications: Suitable for use in non-ammonia formulations of CCA, ACQ-C, ACQ-D, CA-B, SBX/DOT and zinc borate. Use in dry, interior environments only. Use caution not to damage ceramic barrier coating during installation. Recommendations are based on testing and experience 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.



Titen® Phillips flat head screw (PF)

Titen® Hex head screw (H)

Installation Sequence



Mechanical Anchors

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)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)
3/16 (4.8)	5/32	1 (25.4)	2 1/4 (57.2)	1 1/8 (28.6)	500 (2.2)	125 (0.6)	640 (2.8)	160 (0.7)	1,020 (4.5)	255 (1.1)
3/16 (4.8)	5/32	1 1/2 (38.1)	2 1/4 (57.2)	1 1/8 (28.6)	1,220 (5.4)	305 (1.4)	1,850 (8.2)	460 (2.0)	1,670 (7.4)	415 (1.8)
1/4 (6.4)	3/16	1 (25.4)	3 (76.2)	1 1/2 (38.1)	580 (2.6)	145 (0.6)	726 (3.2)	180 (0.8)	900 (4.0)	225 (1.0)
1/4 (6.4)	3/16	1 1/2 (38.1)	3 (76.2)	1 1/2 (38.1)	1,460 (6.5)	365 (1.6)	2,006 (8.9)	500 (2.2)	1,600 (7.1)	400 (1.8)

1. Maximum anchor embedment is 1 1/2" (38.1 mm).
2. Concrete must be minimum 1.5 x embedment.



Titen® Phillips head screw available in white, standard blue and silver

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	
					Avg. Ult. lbs. (kN)	Allow. lbs. (kN)	Avg. Ult. lbs. (kN)	Allow. lbs. (kN)
3/16 (4.8)	5/32	1 (25.4)	2 1/4 (57.2)	1 1/8 (28.6)	542 (2.4)	110 (0.5)	1,016 (4.5)	205 (0.9)
1/4 (6.4)	3/16	1 (25.4)	3 (76.2)	1 1/2 (38.1)	740 (3.3)	150 (0.7)	1,242 (5.5)	250 (1.1)

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

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. See notes 1 and 2 above.



Bulk packaging available for large-volume applications

Standard Blue Titen® Product Data
($\frac{3}{16}$ " diameter)

Size (in.)	Simpson Model No. ¹	Bit Diameter (in.)	Quantity		
			Box ²	Carton ³	Bulk ⁴
$\frac{3}{16}$ X $1\frac{1}{4}$	TTN18114H	$\frac{5}{32}$	100	1600	1000
$\frac{3}{16}$ X $1\frac{3}{4}$	TTN18134H			500	
$\frac{3}{16}$ X $2\frac{1}{4}$	TTN18214H			500	
$\frac{3}{16}$ X $2\frac{3}{4}$	TTN18234H			500	
$\frac{3}{16}$ X $3\frac{1}{4}$	TTN18314H			400	
$\frac{3}{16}$ X $3\frac{3}{4}$	TTN18334H			400	
$\frac{3}{16}$ X 4	TTN18400H			400	
$\frac{3}{16}$ X $1\frac{1}{4}$	TTN18114PF			1600	
$\frac{3}{16}$ X $1\frac{3}{4}$	TTN18134PF			500	
$\frac{3}{16}$ X $2\frac{1}{4}$	TTN18214PF			500	
$\frac{3}{16}$ X $2\frac{3}{4}$	TTN18234PF			500	
$\frac{3}{16}$ X $3\frac{1}{4}$	TTN18314PF			400	
$\frac{3}{16}$ X $3\frac{3}{4}$	TTN18334PF			400	
$\frac{3}{16}$ X 4	TTN18400PF			400	

1. H Suffix: Hex Head, PF Suffix: Phillips Flat Head.
2. One drill bit is included in each box.
3. Cartons consist of boxes of 100.
4. Bulk Titen Screws come packed in a single carton, and do not include a drill bit. To order, add a "B" onto the end of the model number. Example: TTN18314HB.

Standard Blue Titen® Product Data
($\frac{1}{4}$ " diameter)

Size (in.)	Simpson Model No. ¹	Bit Diameter (in.)	Quantity		
			Box ²	Carton ³	Bulk ⁴
$\frac{1}{4}$ X $1\frac{1}{4}$	TTN25114H	$\frac{3}{16}$	100	1600	1000
$\frac{1}{4}$ X $1\frac{3}{4}$	TTN25134H			500	1000
$\frac{1}{4}$ X $2\frac{1}{4}$	TTN25214H			500	1000
$\frac{1}{4}$ X $2\frac{3}{4}$	TTN25234H			500	1000
$\frac{1}{4}$ X $3\frac{1}{4}$	TTN25314H			400	1000
$\frac{1}{4}$ X $3\frac{3}{4}$	TTN25334H			400	1000
$\frac{1}{4}$ X 4	TTN25400H			400	1000
$\frac{1}{4}$ X 5	TTN25500H			400	•
$\frac{1}{4}$ X 6	TTN25600H			400	•
$\frac{1}{4}$ X $1\frac{1}{4}$	TTN25114PF			1600	1000
$\frac{1}{4}$ X $1\frac{3}{4}$	TTN25134PF			500	1000
$\frac{1}{4}$ X $2\frac{1}{4}$	TTN25214PF			500	1000
$\frac{1}{4}$ X $2\frac{3}{4}$	TTN25234PF			500	1000
$\frac{1}{4}$ X $3\frac{1}{4}$	TTN25314PF			400	1000
$\frac{1}{4}$ X $3\frac{3}{4}$	TTN25334PF			400	1000
$\frac{1}{4}$ X 4	TTN25400PF			400	1000
$\frac{1}{4}$ X 5	TTN25500PF			400	•
$\frac{1}{4}$ X 6	TTN25600PF			400	•

1. H Suffix: Hex Head, PF Suffix: Phillips Flat Head.
2. One drill bit is included in each box.
3. Cartons consist of boxes of 100.
4. Bulk Titen Screws come packed in a single carton, and do not include a drill bit. To order, add a "B" onto the end of the model number. Example: TTN25314HB.

White Titen® Product Data
(Phillips Flat Head)

Size (in.)	Simpson Model No.	Bit Diameter (in.)	Quantity		
			Box ¹	Carton ²	Bulk ³
$\frac{3}{16}$ X $1\frac{1}{4}$	TTNW18114PF	$\frac{5}{32}$	100	1600	1000
$\frac{3}{16}$ X $1\frac{3}{4}$	TTNW18134PF			500	
$\frac{3}{16}$ X $2\frac{1}{4}$	TTNW18214PF			500	
$\frac{3}{16}$ X $2\frac{3}{4}$	TTNW18234PF			500	
$\frac{3}{16}$ X $3\frac{1}{4}$	TTNW18314PF			400	
$\frac{3}{16}$ X $3\frac{3}{4}$	TTNW18334PF			400	
$\frac{3}{16}$ X 4	TTNW18400PF			400	
$\frac{1}{4}$ X $1\frac{1}{4}$	TTNW25114PF			$\frac{3}{16}$	
$\frac{1}{4}$ X $1\frac{3}{4}$	TTNW25134PF	500	•		
$\frac{1}{4}$ X $2\frac{1}{4}$	TTNW25214PF	500	•		
$\frac{1}{4}$ X $2\frac{3}{4}$	TTNW25234PF	500	•		
$\frac{1}{4}$ X $3\frac{1}{4}$	TTNW25314PF	400	•		
$\frac{1}{4}$ X $3\frac{3}{4}$	TTNW25334PF	400	•		
$\frac{1}{4}$ X 4	TTNW25400PF	400	•		
$\frac{1}{4}$ X 5	TTNW25500PF	400	•		
$\frac{1}{4}$ X 6	TTNW25600PF	400	•		

1. One drill bit is included in each box.
2. Cartons consist of boxes of 100.
3. Bulk Titen Screws come packed in a single carton, and do not include a drill bit. To order, add a "B" onto the end of the model number. Example: TTNW18314PFB.

Silver Titen® Product Data
(Phillips Flat Head)

Size (in.)	Simpson Model No.	Bit Diameter (in.)	Quantity		
			Box ¹	Carton ²	Bulk ³
$\frac{3}{16}$ X $1\frac{1}{4}$	TTNS18114PF	$\frac{5}{32}$	100	1600	1000
$\frac{3}{16}$ X $1\frac{3}{4}$	TTNS18134PF			500	
$\frac{3}{16}$ X $2\frac{1}{4}$	TTNS18214PF			500	
$\frac{3}{16}$ X $2\frac{3}{4}$	TTNS18234PF			500	
$\frac{3}{16}$ X $3\frac{1}{4}$	TTNS18314PF			400	
$\frac{3}{16}$ X $3\frac{3}{4}$	TTNS18334PF			400	
$\frac{3}{16}$ X 4	TTNS18400PF			400	
$\frac{1}{4}$ X $1\frac{1}{4}$	TTNS25114PF			$\frac{3}{16}$	
$\frac{1}{4}$ X $1\frac{3}{4}$	TTNS25134PF	500	•		
$\frac{1}{4}$ X $2\frac{1}{4}$	TTNS25214PF	500	•		
$\frac{1}{4}$ X $2\frac{3}{4}$	TTNS25234PF	500	•		
$\frac{1}{4}$ X $3\frac{1}{4}$	TTNS25314PF	400	•		
$\frac{1}{4}$ X $3\frac{3}{4}$	TTNS25334PF	400	•		
$\frac{1}{4}$ X 4	TTNS25400PF	400	•		
$\frac{1}{4}$ X 5	TTNS25500PF	400	•		
$\frac{1}{4}$ X 6	TTNS25600PF	400	•		

1. One drill bit is included in each box.
2. Cartons consist of boxes of 100.
3. Bulk Titen Screws come packed in a single carton, and do not include a drill bit. To order, add a "B" onto the end of the model number. Example: TTNS18314PFB.

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:

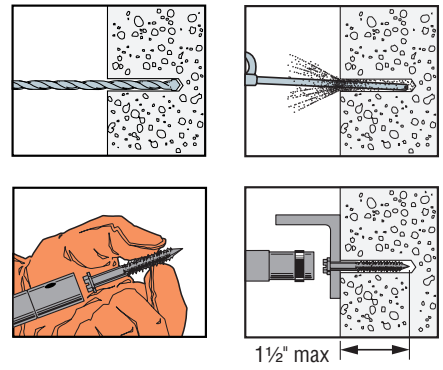
 Caution: Oversized holes in the base material will reduce or eliminate the mechanical interlock of the threads with the base material and will reduce the anchor's load capacity.

- 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
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

TITEN® SCREW – Installation Tool

Makes installation of Titen screws quick and easy. Works with drills with a standard three-jaw style chuck. Available in a rugged plastic box ideal for storage of the tool and screws.

Eight piece kit includes:

- Drill bit holder
- 5/8" sleeve
- 1/4" and 3/16" hex sockets
- Phillips bit socket
- #2 & #3 Phillips bits
- Allen wrench

Titen® Installation Tool

Model No.	Quantity	
	Box	Carton
TTNT01	1	24



Titen® Screw Installation Kit (Model TTNT01)

TITEN® SCREW – Drill Bits

The same bits that come included with boxes of Titen screws are also available separately. They work with the Titen Installation Tool as well as drills with a standard three-jaw style chuck.

Titen® Drill Bits

Size (in.)	Model No.	Use With		Quantity	
		Screw	Length	Box	Carton
5/32 X 3 1/2	MDB15312	3/16" dia.	To 1 3/4	12	48
5/32 X 4 1/2	MDB15412		To 3 1/4		
5/32 X 5 1/2	MDB15512		To 4		
3/16 X 3 1/2	MDB18312	1/4" dia.	To 1 3/4		
3/16 X 4 1/2	MDB18412		To 3 1/4		
3/16 X 5 1/2	MDB18512		To 4		



Titen® Screw Drill Bit

TITEN® SCREW – SDS-Plus Drill Bit/Driver

This SDS-Plus shank bit works with the Titen Installation Tool to allow pre-drilling and installation of Titen screws using a rotohammer. Rotohammer must be in rotation-only mode before driving screws.



Titen® Screw Drill Bit / Driver

Special hex adaptor (included with the Titen Screw Installation Kit) allows the Titen Installation Tool to slide over the bit and lock in, ready to drive screws.



Titen® Drill Bit/Driver Product Data

Size (in.)	Model No.	For Screw Dia. (in.)	Drilling Depth (in.)	Overall Length (in.)
5/32 X 5	MDBP15500H	3/16	2 1/4	5
5/32 X 6	MDBP15600H		3 1/4	6
5/32 X 7	MDBP15700H		4 1/4	7
3/16 X 5	MDBP18500H	1/4	2 1/4	5
3/16 X 6	MDBP18600H		3 1/4	6
3/16 X 7	MDBP18700H		4 1/4	7

Titen® Drill Bit/Driver - Bulk Packs of 25

Size (in.)	Model No.	For Screw Dia. (in.)	Drilling Depth (in.)	Overall Length (in.)
5/32 X 5	MDBP15500HB	3/16	2 1/4	5
5/32 X 7	MDBP15700HB		4 1/4	7
3/16 X 5	MDBP18500HB		1/4	2 1/4
3/16 X 7	MDBP18700HB	4 1/4		7

1. Titen Drivers are sold individually.