

## Titen HD® Heavy-Duty Screw Anchor

A high-strength screw anchor for use in cracked and uncracked concrete, as well as uncracked masonry. The Titen HD offers low installation torque and outstanding performance. Suitable in dry, interior, non-corrosive environments or temporary outdoor applications.



### Features


- Qualified for static and seismic loading conditions
- Thread design undercuts to efficiently transfer the load to the base material
- Standard fractional sizes
- Specialized heat-treating process creates tip hardness for better cutting without compromising the ductility
- No special drill bit required — designed to install using standard-sized ANSI tolerance drill bits
- Hex-washer head requires no separate washer, unless required by code, and provides a clean installed appearance
- Removable — ideal for temporary anchoring (e.g., formwork, bracing) or applications where fixtures may need to be moved
- Reuse of the anchor will not achieve listed loads and is not recommended

**Codes:** ICC-ES ESR-2713 (concrete); ICC-ES ESR-1056 (masonry); City of LA Supplement within ESR-2713 (concrete); City of LA Supplement within ESR-1056 (masonry); Florida FL15730 (concrete and masonry); FM 3017082, 3035761 and 3043442; multiple DOT listings


**Material:** Carbon steel

**Coating:** Zinc plated or mechanically galvanized. Not recommended for permanent exterior use or highly corrosive environments.

### Installation

 Holes in metal fixtures to be mounted should match the diameter specified in the table on p. 53. Use a Titen HD screw anchor one time only — installing the anchor multiple times may result in excessive thread wear and reduce load capacity.

 Do not use impact wrenches to install into hollow CMU.

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

1. Drill a hole in the base material using a carbide drill bit the same diameter as the nominal diameter of the anchor to be installed. Drill the hole to the specified embedment depth plus minimum hole depth overall (see table on p. 53) 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 the dust from drilling and tapping.
2. Insert the anchor through the fixture and into the hole.
3. Tighten the anchor into the base material until the hex-washer head contacts the fixture.



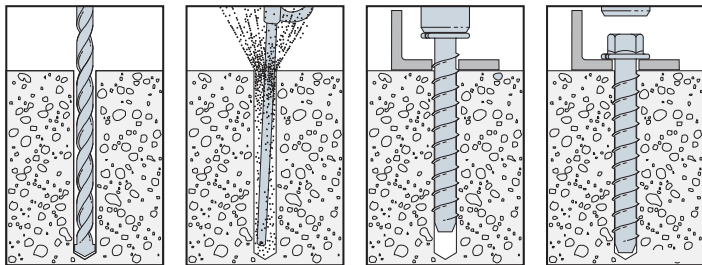
Titen HD  
Screw Anchor



Serrated teeth on the tip of the Titen HD screw anchor facilitate cutting and reduce installation torque.

## Titen HD® Heavy-Duty Screw Anchor

## Installation Sequence



## Additional Installation Information for Structural Steel

Titen HD Diameter (in.)	Wrench Size (in.)	Recommended Steel Fixture Hole Size (in.)	Minimum Hole Depth Overdrill (in.)
1/4	3/8	3/8 to 7/16	1/8
3/8	9/16	1/2 to 9/16	1/4
1/2	3/4	5/8 to 1 1/16	1/2
5/8	15/16	3/4 to 13/16	1/2
3/4	1 1/8	7/8 to 15/16	1/2

Suggested fixture hole sizes are for structural steel thicker than 12 gauge only. Larger holes are not required for wood or cold-formed steel members.

## Titen HD Anchor Product Data — Mechanically Galvanized

Size (in.)	Model No.	Thread Length (in.)	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
					Box	Carton
3/8 x 3	THD37300HMG	2 1/2	3/8	9/16	50	200
3/8 x 4	THD37400HMG	3 1/2			50	200
3/8 x 5	THD37500HMG	4 1/2			50	100
3/8 x 6	THD37600HMG	5 1/2			50	100
1/2 x 4	THD50400HMG	3 1/2	1/2	3/4	20	80
1/2 x 5	THD50500HMG	4 1/2			20	80
1/2 x 6	THD50600HMG	5 1/2			20	80
1/2 x 6 1/2	THD50612HMG	5 1/2			20	40
1/2 x 8	THD50800HMG	5 1/2			20	40
1/2 x 12	THD501200HMG	5 1/2			5	20
5/8 x 5	THDB62500HMG	4 1/2	5/8	15/16	10	40
5/8 x 6	THDB62600HMG	5 1/2			10	40
5/8 x 6 1/2	THDB62612HMG	5 1/2			10	40
5/8 x 8	THDB62800HMG	5 1/2			10	20
3/4 x 5	THD75500HMG	4 1/2	3/4	1 1/8	5	20
3/4 x 6	THDT75600HMG	4 1/2			5	20
3/4 x 8 1/2	THD75812HMG	5 1/2			5	10
3/4 x 10	THD75100HMG	5 1/2			5	10

Mechanical galvanizing meets ASTM B695, Class 65, Type 1. Intended for some pressure-treated wood sill plate applications. Not for use in other corrosive or outdoor environments. Visit [strongtie.com/info](http://strongtie.com/info) for more corrosion information.

## Titen HD® Heavy-Duty Screw Anchor

## Countersunk Head Style

The countersunk head style is for applications that require a flush-mount profile. Countersinking also leaves a cleaner surface appearance for exposed through-set applications. The anchor head's 6-lobe drive eases installation and is less prone to stripping than traditional recessed anchor heads.

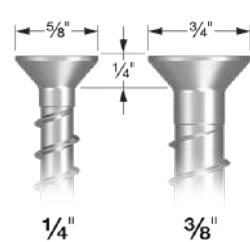
## Features

- Available in many standard lengths in  $\frac{1}{4}$ " and  $\frac{3}{8}$ " diameters
- Driver bit included in each box

**Codes:** ICC-ES ESR-2713 (concrete);  
ICC-ES ESR-1056 (masonry);  
City of LA Supplement within ESR-2713 (concrete);  
City of LA Supplement within ESR-1056 (masonry);  
Florida FL15730 (concrete and masonry)

**Material:** Carbon steel

**Coating:** Zinc plated



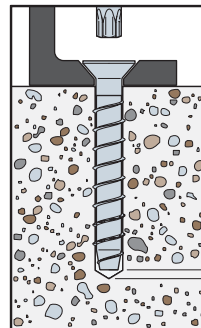
6-lobe drive

Titen HD  
Countersunk  
Head Style

## Additional Installation Information

Titen HD Diameter (in.)	Bit Size	Recommended Steel Fixture Hole Size (in.)	Minimum Hole Depth Overdrill (in.)
$\frac{1}{4}$	T30	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{1}{8}$
$\frac{3}{8}$	T50	$\frac{1}{2}$ to $\frac{9}{16}$	$\frac{1}{4}$

Suggested fixture hole sizes are for structural steel thicker than 12 gauge only. Larger holes are not required for wood or thinner cold-formed steel members.



↓  
↑  
Minimum overdrill.  
See table.

## Titen HD® Heavy-Duty Screw Anchor

## Washer-Head Head Style

The washer-head design is commonly used where a minimal head profile is necessary. The model is offered in sizes suitable for use in sill plate applications, and the washer head's low installed profile means modular wall and floor systems can be installed on top with no need for notching the wall framing to accommodate the anchor. The anchor's 6-lobe drive eases driving and is less prone to stripping.

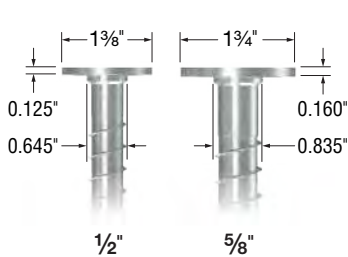
## Features

- Available in many standard lengths in  $\frac{1}{2}$ " and  $\frac{5}{8}$ " diameters
- Driver bit included in each box

**Codes:** ICC-ES ESR-2713 (concrete);  
City of LA Supplement within ESR-2713 (concrete);  
Florida FL15730 (concrete)

**Material:** Carbon steel

**Coating:** Zinc plated



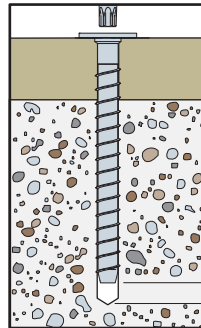
6-lobe drive

Titen HD  
Washer-Head  
Head Style

## Additional Installation Information

Titen HD Diameter (in.)	Bit Size	Recommended Steel Fixture Hole Size <sup>1,2</sup> (in.)	Minimum Hole Depth Overdrill (in.)
$\frac{1}{2}$	T50	$\frac{5}{8}$ to $1\frac{1}{16}$	$\frac{1}{2}$
$\frac{5}{8}$	T60	$\frac{3}{4}$ to $1\frac{3}{16}$	$\frac{1}{2}$

1. For anchor threads to clear, fixture hole sizes are suggested for installation through structural steel thicker than 12 gauge. Larger holes are not required for wood or thinner cold-formed steel members.
2. In order for washer head to seat against steel fixture, larger fixture hole may be required to accommodate collar underneath washer head. See the figure above for collar dimensions.



Minimum overdrill.  
See table.

## Titen HD® Heavy-Duty Screw Anchor

Titen HD Anchor Product Data — Zinc Plated<sup>1</sup>

Size (in.)	Model No.	Thread Length (in.)	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
					Box	Carton
¼ x 1 7/8	THDB25178H	1 ½	¼	¾	100	500
¼ x 2 ¾	THDB25234H	2 ¾	¼	¾	50	250
¼ x 3	THDB25300H	2 ¾	¼	¾	50	250
¼ x 3 ½	THDB25312H	3 ½	¼	¾	50	250
¼ x 4	THDB25400H	3 ¾	¼	¾	50	250
¾ x 1 ¾	THD37134H <sup>2,3</sup>	1 ¼	¾	9/16	50	250
¾ x 2 ½	THD37212H <sup>2,3</sup>	2	¾	9/16	50	200
¾ x 3	THD37300H	2 ½	¾	9/16	50	200
¾ x 4	THD37400H	3 ½	¾	9/16	50	200
¾ x 5	THD37500H	4 ½	¾	9/16	50	100
¾ x 6	THD37600H	5 ½	¾	9/16	50	100
½ x 3	THD50300H <sup>2,4</sup>	2 ½	½	¾	25	100
½ x 4	THD50400H	3 ½	½	¾	20	80
½ x 5	THD50500H	4 ½	½	¾	20	80
½ x 6	THD50600H	5 ½	½	¾	20	80
½ x 6 ½	THD50612H	5 ½	½	¾	20	40
½ x 8	THD50800H	5 ½	½	¾	20	40
½ x 12	THD501200H	5 ½	½	¾	5	25
½ x 13	THD501300H	5 ½	½	¾	5	25
½ x 14	THD501400H	5 ½	½	¾	5	25
½ x 15	THD501500H	5 ½	½	¾	5	25
⅝ x 4	THDB62400H <sup>2,4</sup>	3 ½	⅝	1 5/16	10	40
⅝ x 5	THDB62500H	4 ½	⅝	1 5/16	10	40
⅝ x 6	THDB62600H	5 ½	⅝	1 5/16	10	40
⅝ x 6 ½	THDB62612H	5 ½	⅝	1 5/16	10	40
⅝ x 8	THDB62800H	5 ½	⅝	1 5/16	10	20
⅝ x 10	THDB62100H	5 ½	⅝	1 5/16	10	20
¾ x 4	THD75400H <sup>2,5</sup>	3 ½	¾	1 ½	10	40
¾ x 5	THD75500H	4 ½	¾	1 ½	5	20
¾ x 6	THDT75600H	4 ½	¾	1 ½	5	20
¾ x 7	THD75700H	5 ½	¾	1 ½	5	10
¾ x 8 ½	THD75812H	5 ½	¾	1 ½	5	10
¾ x 10	THD75100H	5 ½	¾	1 ½	5	10

- Length of anchor is measured from underside of head to end of anchor.
- These models do not meet minimum embedment depth requirements for strength design.
- Installation torque shall not exceed 25 ft.-lb. using a manual torque wrench or maximum torque rating of 100 ft.-lb. when installed with impact wrench.
- Installation torque shall not exceed 50 ft.-lb. using a manual torque wrench or maximum torque rating of 100 ft.-lb. when installed with impact wrench.
- Installation torque shall not exceed 50 ft.-lb. using a manual torque wrench or maximum torque rating of 135 ft.-lb. when installed with impact wrench.



THDT75600H



THD75700H

## Titen HD® Heavy-Duty Screw Anchor






## Titen HD Anchor Product Data — Countersunk — Zinc Plated

Size (in.)	Model No.	Thread Length (in.)	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
					Box	Carton
¼ x 1½	THDB25178CS	1½	¼	T30	100	500
¼ x 2¾	THDB25234CS	2¾	¼	T30	50	250
¼ x 3½	THDB25312CS	3½	¼	T30	50	250
¼ x 4½	THDB25412CS	4½	¼	T30	50	250
⅜ x 2½	THD37212CS <sup>†</sup>	2	⅜	T50	50	200
⅜ x 3	THD37300CS	2½	⅜	T50	50	200
⅜ x 4	THD37400CS	3½	⅜	T50	50	200
⅜ x 5	THD37500CS	4½	⅜	T50	50	100

† This model does not meet minimum embedment depth requirements for strength design and require maximum installation torque of 25 ft.-lb. using a torque wrench, driver drill or cordless ¼" impact driver with a maximum permitted torque rating of 100 ft.-lb.

1. Length of anchor is measured from top of head to bottom of anchor.

## Titen HD Anchor Product Data — Washer Head — Zinc Plated

Size (in.)	Model No.	Thread Length (in.)	Drill Bit Diameter (in.)	Bit Size	Quantity	
					Box	Carton
 ½ x 6	THD50600WH	5½	½	T50	15	60
 ½ x 8	THD50800WH	5½	½	T50	15	30
 ⅝ x 6	THDB62600WH	5½	⅝	T60	10	40
 ⅝ x 8	THDB62800WH	5½	⅝	T60	10	20
 ⅝ x 10	THDB62100WH	5½	⅝	T60	10	20

1. Length of anchor is measured from underside of head to bottom of anchor.

## Stainless-Steel Titen HD® Heavy-Duty Screw Anchor

The Titen HD stainless-steel screw anchor for concrete and masonry sets the standard for when the job calls for installation in multiple types of environments. It is the ultimate choice to provide fast and efficient installation, combined with long-lasting corrosion resistance for an unsurpassed peace-of-mind.

**Innovative** — The serrated carbon-steel threads on the tip of the stainless-steel Titen HD are vital because they undercut the concrete as the anchor is driven into the hole, making way for the rest of the threads to interlock with the concrete.

**Corrosion Resistant** — Type 304SS has very good corrosion resistance for general exterior environments and those where chemicals such as fertilizers, soil and acid rain are present. Type 316SS has the maximum corrosion resistance for severe environments, such as marine and seaside applications. It is resistant to chlorine, chlorides (salt), sulfuric acids and a wide range of chemicals.




### Features

- Ideal for exterior or corrosive environments
- Less carbon steel, less expansion
- An extensive variety of sizes offered; along with several different material types to match your installation needs

**Codes:** IAPMO UES ER-493 (concrete);  
ICC-ES ESR-1056 (masonry);  
City of LA Supplement within ER-493 (concrete);  
City of LA Supplement within ESR-1056 (masonry);  
Florida FL15730 (masonry); FL16230 (concrete)

**Material:** Type 316 and Type 304 stainless steel with carbon-steel lead threads

### Installation

-  **Caution:** Holes in steel fixtures to be mounted should match the diameter specified in the table on p. 59 if steel is thicker than 12 gauge.
  -  **Caution:** Use a Titen HD screw anchor one time only — installing the anchor multiple times may result in excessive thread wear and reduce load capacity.  
Do not use impact wrenches to install into hollow CMU.
  -  **Caution:** Oversized holes in base material will reduce or eliminate the mechanical interlock of the threads with the base material and reduce the anchor's load capacity.
1. Drill a hole in the base material using a carbide drill bit (complying with ANSI B212.15) with the same diameter as the nominal diameter of the anchor to be installed. Drill the hole to the specified minimum hole depth overdrill (see table on p. 59) 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 the dust from drilling and tapping.
  2. Insert the anchor through the fixture and into the hole.
  3. Tighten the anchor into the base material until the hex-washer head contacts the fixture.



Stainless-Steel  
Titen HD  
Screw Anchor

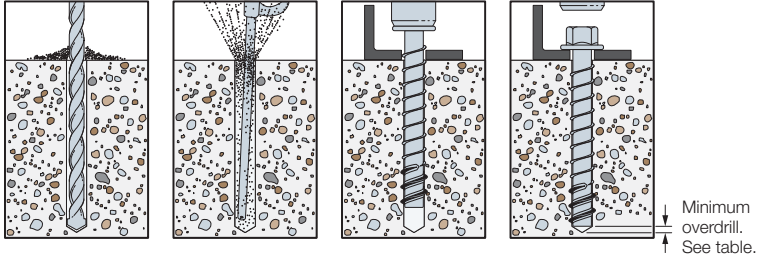
US Patents: 8,747,042 B2  
and 9,517,519



Innovative carbon-steel thread effectively cuts the concrete while significantly limiting the amount of carbon steel in the anchor, minimizing the amount of corrosion potential that can occur in an exterior corrosive environment.

## Stainless-Steel Titen HD® Heavy-Duty Screw Anchor

## Installation Sequence



## Additional Installation Information

Titen HD® Diameter (in.)	Wrench Size (in.)	Recommended Steel Fixture Hole Size (in.)	Minimum Hole Depth Overdrill (in.)
1/4	3/8	3/8 to 7/16	1/8
3/8	9/16	1/2 to 9/16	1/4
1/2	3/4	5/8 to 11/16	1/2
5/8	15/16	3/4 to 13/16	1/2
3/4	1 1/8	7/8 to 15/16	1/2

Suggested fixture hole sizes are for structural steel thicker than 12 gauge only. Larger holes are not required for wood or cold-formed steel members.

## Stainless-Steel Titen HD Anchor Product Data — Hex Washer Head

Size (in.)	Model No. (Type 316)	Model No. (Type 304)	Thread Length (in.)	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
						Box	Carton
1/4 x 2	THDC25200H6SS <sup>†</sup>	—	1 1/8	1/4	3/8	50	250
1/4 x 2 3/8	THDC25238H6SS	—	2 1/4	1/4	3/8	50	250
1/4 x 3	THDC25300H6SS	—	2 7/8	1/4	3/8	50	250
1/4 x 4	THDC25400H6SS	—	3 3/8	1/4	3/8	50	250
3/8 x 3	THD37300H6SS	THD37300H4SS	2 1/2	3/8	9/16	50	200
3/8 x 4	THD37400H6SS	THD37400H4SS	3 1/2	3/8	9/16	50	200
3/8 x 5	THD37500H6SS	THD37500H4SS	4 1/2	3/8	9/16	50	100
3/8 x 6	THD37600H6SS	THD37600H4SS	5 1/2	3/8	9/16	50	100
1/2 x 3	THD50300H6SS <sup>†</sup>	THD50300H4SS <sup>†</sup>	2 1/2	1/2	3/4	25	100
1/2 x 4	THD50400H6SS	THD50400H4SS	3 1/2	1/2	3/4	20	80
1/2 x 5	THD50500H6SS	THD50500H4SS	4 1/2	1/2	3/4	20	80
1/2 x 6	THD50600H6SS	THD50600H4SS	5 1/2	1/2	3/4	20	80
1/2 x 6 1/2	THD50612H6SS	THD50612H4SS	6	1/2	3/4	20	40
1/2 x 8	THD50800H6SS	THD50800H4SS	6 7/8	1/2	3/4	20	40
5/8 x 4	THDB62400H6SS <sup>†</sup>	THDB62400H4SS <sup>†</sup>	3 1/2	5/8	15/16	10	40
5/8 x 5	THDB62500H6SS	THDB62500H4SS	4 1/2	5/8	15/16	10	40
5/8 x 6	THDB62600H6SS	THDB62600H4SS	5 1/2	5/8	15/16	10	40
5/8 x 6 1/2	THDB62612H6SS	THDB62612H4SS	6	5/8	15/16	10	40
5/8 x 8	THDB62800H6SS	THDB62800H4SS	7 1/16	5/8	15/16	10	20
3/4 x 4	THD75400H6SS <sup>†</sup>	THD75400H4SS <sup>†</sup>	3 1/2	3/4	1 1/8	10	40
3/4 x 5	THD75500H6SS <sup>†</sup>	THD75500H4SS <sup>†</sup>	4 1/2	3/4	1 1/8	5	20
3/4 x 6	THD75600H6SS	THD75600H4SS	5 1/2	3/4	1 1/8	5	20
3/4 x 7	THD75700H6SS	THD75700H4SS	6 1/2	3/4	1 1/8	5	10
3/4 x 8 1/2	THD75812H6SS	THD75812H4SS	7 3/16	3/4	1 1/8	5	10

<sup>†</sup> Does not meet minimum embedment in code report.

1. Anchor length is measured from under head to bottom of anchor.



## Stainless-Steel Titen HD® Heavy-Duty Screw Anchor

## Stainless-Steel Countersunk Head Style

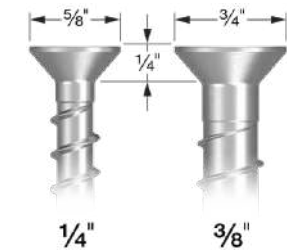
The countersunk head style is for applications that require a flush-mount profile. Countersinking also leaves a cleaner surface appearance for exposed through-set applications. The anchor head's 6-lobe drive eases installation and is less prone to stripping than traditional recessed anchor heads.

## Features

- Available in many standard lengths in  $\frac{1}{4}$ " and  $\frac{3}{8}$ " diameters
- Countersunk head allows screw anchor applications incompatible with a hex head
- Driver bit included in each box

**Codes:** IAPMO UES ER-493 (concrete); ICC-ES ESR-1056 (masonry); City of LA Supplement within ER-493 (concrete); City of LA Supplement within ESR-1056 (masonry); Florida FL15730 (masonry); FL16230 (concrete)

**Material:** Type 316 stainless steel with carbon-steel lead threads



6-lobe drive



Stainless-Steel Titen HD Countersunk Head Style Screw Anchor

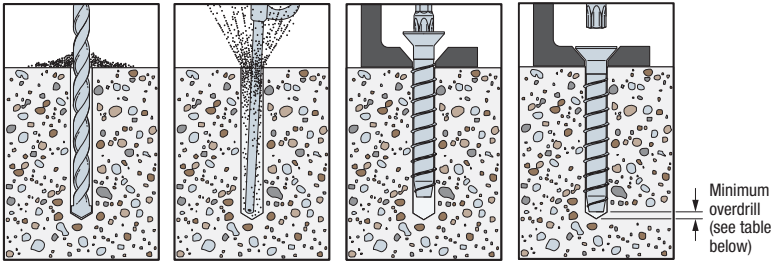
## Additional Installation Information

Titen HD Diameter (in.)	Bit Size	Recommended Steel Fixture Hole Size (in.)	Minimum Hole Depth Overdrill (in.)
$\frac{1}{4}$	T30	$\frac{3}{8}$ to $\frac{7}{16}$	$\frac{1}{8}$
$\frac{3}{8}$	T50	$\frac{1}{2}$ to $\frac{9}{16}$	$\frac{1}{4}$

Suggested fixture hole sizes are for structural steel thicker than 12 gauge only. Larger holes are not required for wood or thinner cold-formed steel members.

## Stainless-Steel Titen HD® Heavy-Duty Screw Anchor

## Installation Sequence



## Stainless-Steel Titen HD Anchor Product Data — Countersunk Head

Size (in.)	Model No. (Type 316)	Thread Length (in.)	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
					Box	Carton
1/4 x 2 3/8	THDC25238CS6SS†	2	1/4	T30	25	250
1/4 x 3	THDC25300CS6SS	2 5/8	1/4	T30	25	250
1/4 x 4	THDC25400CS6SS	3 5/8	1/4	T30	25	250
3/8 x 2 1/2	THD37212CS6SS†	2	3/8	T50	25	125
3/8 x 3	THD37300CS6SS	2 1/2	3/8	T50	25	125
3/8 x 4	THD37400CS6SS	3 1/2	3/8	T50	25	125

† These models do not meet minimum embedment depth requirements for strength design and require maximum installation torque of 25 ft.-lb. using a torque wrench, driver drill or cordless 1/4" impact driver with a maximum permitted torque rating of 100 ft.-lb.

1. Anchor length is measured from top of head to bottom of anchor.

For additional load information, see [strongtie.com](http://strongtie.com).