

TITEN HD[®] ANCHOR

For use with Simpson Strong-Tie[®] Holdowns
in Wind and Low-Seismic Regions



The Titen HD[®] anchor offers a time-saving anchorage solution. Installing more precisely than cast-in-place bolts and faster than adhesive anchors, the Titen HD offers a simplified anchorage solution. Threads along the length of the anchor undercut the concrete during installation, resulting in a mechanical interlock that efficiently transfers load to the base material. Longer sizes of the 1/2"-diameter Titen HD provide sufficient loads to exceed the tension capacity of certain Simpson Strong-Tie holdowns in wind and low-seismic applications.

SAVES TIME ON INSTALLATION

- Eliminates the need for hanging bolts on the forms before the pour and reduces finishing time
- Reduces placement mistakes with precise placement of the anchor after the concrete has hardened
- Requires less installation time than adhesive anchor installation



Deep Embedment Titen HD Anchor Product Data

Size (in.)	Model No.	Drill Bit Diameter (in.)	Wrench Size (in.)	Quantity	
				Box	Carton
1/2 x 12	THD501200H	1/2	3/4	20	40
1/2 x 13	THD501300H				
1/2 x 14	THD501400H				
1/2 x 15	THD501500H				

1. Anchors are zinc plated, meeting ASTM B633, SC1.



Titen HD[®] screw anchor

U.S. Patent 5,674,035 and 6,623,228

Titen HD® Anchors for use with Simpson Strong-Tie® Holdowns in Wind and Low-Seismic Regions

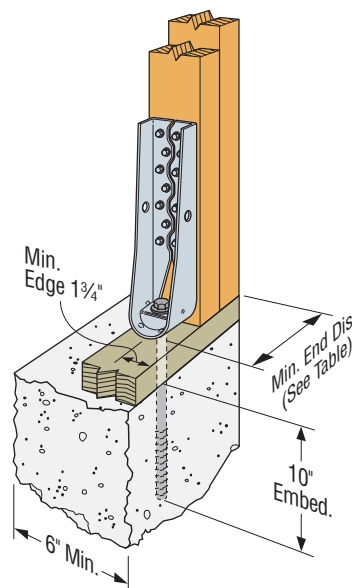
The following table provides allowable load values and solutions for the Titen HD® anchor used in conjunction with Simpson Strong-Tie® holdowns for connections between light-frame construction and concrete. The allowable load values for the Titen HD anchor are based on testing into uncracked concrete and applying a safety factor of 4.0. This table will assist in determining potential connection solutions between light-frame construction and uncracked concrete in wind and low-seismic regions (any structure in seismic design categories A & B and detached one- and two-family dwellings in seismic design category C). The use and determination of the applicability of the information presented in this table to specific projects is the responsibility of the Designer.

Table Showing Suitability of 1/2"-Diameter Titen HD® Anchor to Develop Holddown Allowable Tension Loads

		1/2" Diameter Titen HD Anchor Allowable Stress Design Tension Loads Installed Per Figure into Normal-Weight Uncracked Concrete at Various End Distances and Compressive Strengths ^{9,10}								
		f _c = 2500 psi		f _c = 4500 psi		f _c = 2500 psi		f _c = 4500 psi		
		Minimum End (in.)		Minimum End (in.)		Minimum End (in.)		Minimum End (in.)		
		4 3/8	8	4 3/8	8	4 3/8	8	4 3/8	8	
Allowable Tension Load (lbs.)^{1,2}		3570	3855	4760	5075	3570	3855	4760	5075	
Holdown	DF/SP (160)	SPF/HF (160)	Does Titen HD Allowable Load Exceed Holdown DF/SP Allowable Load?				Does Titen HD Allowable Load Exceed Holdown SPF/HF Allowable Load?			
	DTT22	2145	1835	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HDU2	3075	2215	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	HDU4	4565	3285	*	*	Yes	Yes	Yes	Yes	
	HDU5	5645	4065	*	*	*	*	*	*	
	HD2A	2455	2245	Yes	Yes	Yes	Yes	Yes	Yes	
	HTT4 ³	4235	3640	*	*	Yes	Yes	*	Yes	
	HTT5 ³	5090	4375	*	*	*	*	*	*	

* = Allowable loads for these installations shall be limited to the Titen HD® allowable load listed.

- The Titen HD® anchor allowable loads are based on testing into uncracked concrete with a factor of safety of 4.0.
- The holddown allowable loads listed are the maximum values, which include a wind/seismic 1.6 load duration factor for attachment to wood. No further increase is allowed. Reduce when other loads govern.
- Where noted in the table, other allowable loads are available for alternate fasteners. See current Simpson Strong-Tie® *Wood Construction Connectors* catalog for more information.
- Titen HD® anchor shall be installed in accordance with manufacturer's installation instructions and as illustrated in the Figure to the right.
- The minimum concrete thickness is 12 inches.
- The minimum anchor spacing is 15 inches.
- For additional information, refer to current Simpson Strong-Tie® *Anchoring and Fastening Systems for Concrete and Masonry* catalog.
- Allowable loads limited by the Titen HD® anchor may be linearly interpolated for compressive strengths between 2500 and 4500 psi.
- Allowable loads limited by the Titen HD® anchor may be linearly interpolated between 4 3/8" and 8" end distances.



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Simpson Strong-Tie offers a full line of anchors, adhesives, P.A.T. & Gas fastening and drill bits for all of your anchoring and fastening applications. Visit www.simpsonanchors.com or request our full-line catalog for complete information.

This flier is effective until January 31, 2013, and reflects information available as of October 1, 2010. This information is updated periodically and should not be relied upon after January 31, 2013; contact Simpson Strong-Tie for current information and limited warranty or see www.simpsonanchors.com.