S/HDU *Holdowns*

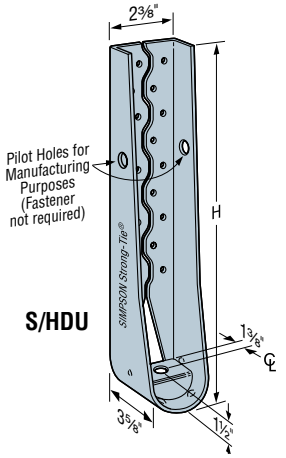
The S/HDU series of holdowns combines performance with ease of installation. The pre-deflected geometry virtually eliminates material stretch, resulting in low deflection under load. Installation using self-drilling screws into the studs reduces installation time and saves labor cost.

MATERIAL: 118 mil (10 ga)

FINISH: Galvanized

INSTALLATION: • Use all specified fasteners. See General Notes.
- Use #14 screws to fasten to studs
- For the S/HDU11 use heavy hex nuts on the anchor bolt.

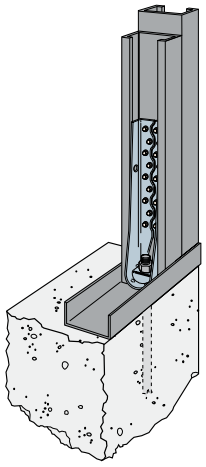
CODES: See page 8 for Code Listing Key Chart.



S/HDU

NEW

Available 1st Quarter 2008



Typical S/HDU Installation

Model	Height	Fasteners		Stud Member Type mil (ga)	ASD			LRFD		Nominal Tension Load	Code Ref.
		Fdn Anchor Diameter	Stud Fasteners		Tension Load (100)	Tension Load (133)	Deflection at ASD Load	Tension Load	Deflection at LRFD Load		
S/HDU4	7⅞	⅝	6 – #14	2-33 (2-20ga)	2320	2320	0.093	3705	0.149	5685	151
				2-43 (2-18ga)	3825	3825	0.115	6105	0.190	9365	
				2-54 (2-16ga)	3970	3970	0.093	6345	0.156	9730	
				Steel Fixture	3970	3970	0.038	6345	0.061	12120	
S/HDU6	10⅜	⅝	12 – #14	2-33 (2-20ga)	4895	4895	0.125	8850	0.271	10470	
				2-43 (2-18ga)	5875	6125	0.119	9785	0.258	15460	
				2-54 (2-16ga)	5875	6125	0.108	9785	0.234	15005	
				Steel Fixture	5875	6125	0.061	9785	0.157	14695	
S/HDU9	12⅞	⅞	18 – #14	2-33 (2-20ga)	6965	6965	0.103	11125	0.189	13165	
				2-43 (2-18ga)	9255	9255	0.125	15960	0.262	21810	
				2-54 (2-16ga)	9990	9990	0.106	15960	0.225	24480	
				Steel Fixture	9990	9990	0.059	15960	0.075	31455	
S/HDU11[1,2]	16⅝	⅞	27 – #14	2-33 (2-20ga)	6965	6965	0.103	11125	0.189	13165	
				2-43 (2-18ga)	11100	11100	0.125	19610	0.262	24955	
				2-54 (2-16ga)	11500	12175	0.125	19445	0.243	29825	
				Steel Fixture	11500	12175	0.107	19445	0.153	31715	

1. Heavy hex nut is required to achieve the table loads for S/HDU11.
2. Allowable tension loads for S/HDU11 with regular hex nut for 2-43 mil is 9595 lb. and for 2-54 mil is 9675 lb.
3. The Designer shall specify the anchor embedment and configuration. See SSTB Anchor Bolts.
4. Back-to-back stud members are required unless otherwise specified.
5. ¼" self-drilling screws can be substituted for #14.
6. See page 20 and 21 for anchor bolt retrofit.
7. Tabulated loads shown at (100) do not include steel stress increase. Tabulated loads shown at (133) include a ⅓ stress increase on the steel. Refer to page 12 for additional information.
8. Deflection Load: The deflection of a holdown measured between the anchor bolt and the strap portion of the holdown when loaded to the highest load listed in the catalog table. This movement is strictly due to the holdown deformation under a static load test with attached to members listed in the table above.
9. Nominal Tension Load is based on the average peak load from tests. AISI Lateral Design standard requires holdown to have nominal strength to resist lesser of amplified seismic load or what the system can deliver.

S/LTT & S/HTT *Tension Ties*

The S/HTT14 is a single-piece formed tension tie—no rivets, and a 4-ply formed seat. No washers are required.

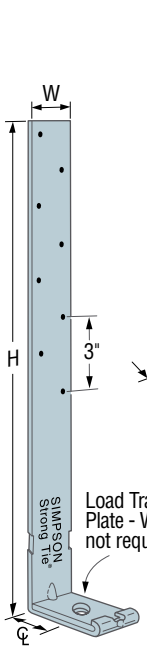
The S/LTT and S/HTT Tension Ties are ideal for retrofit or new construction projects. They provide high strength, post-pour, concrete-to-steel connections.

MATERIAL: See table

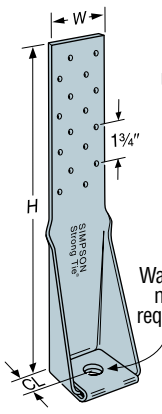
FINISH: Galvanized

INSTALLATION: • Use all specified fasteners.
- Use the specified number and type of screws to attach the strap portion to the steel stud. Bolt the base to the wall or foundation with a suitable anchor; see table for the required bolt diameter.
- Do not install S/LTT20 raised off of the bottom track.
- Refer to technical bulletin T-ANCHORSPEC for post-installed anchorage solutions.

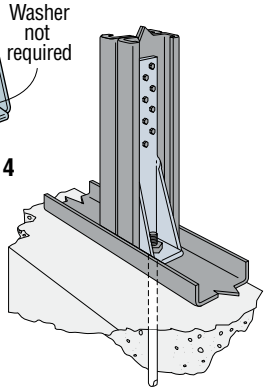
CODE: See page 6 for Code Listing Key Chart.



S/LTT20



S/HTT14



Typical S/HTT14 Installation as a Holdown

Model No.	Material mil (ga)		Dimensions			Fasteners		Allowable Tension Loads		Holdown[6] Deflection at Highest Allowable Design Load	Nominal Tension Load	Code Ref.
	Strap	Plate	W	H	CL	Anchor Bolts	Screws	(100)	(133)			
S/LTT20	97 (12 ga)	229 (3 ga)	2	20	1½	½	8- #10	1415	1600	0.183	4870	28, 104, 151
S/HTT14	111 (11 ga)	–	2½	15	1¼	⅝	14- #10	4325	4325	0.142	10595	

1. The Designer shall specify the anchor embedment and configuration. See SSTB Anchor Bolts.
2. Tabulated loads shown at (100) do not include steel stress increase. Tabulated loads shown at (133) include a ⅓ stress increase on the steel. Refer to page 12 for additional information.
3. Back-to-back stud members are required unless otherwise specified. The design of the studs is the responsibility of the building designer.
4. The allowable tension load of the S/HTT14 is 2475 lbs. when connected to a single 33 mil (20 ga.) stud.
5. S/LTT and S/HTT allowable tension loads at ⅛" deflection are 1200 lb and 3715 lb respectively.
6. See S/HDU notes regarding deflection at highest allowable design load.