

# 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.

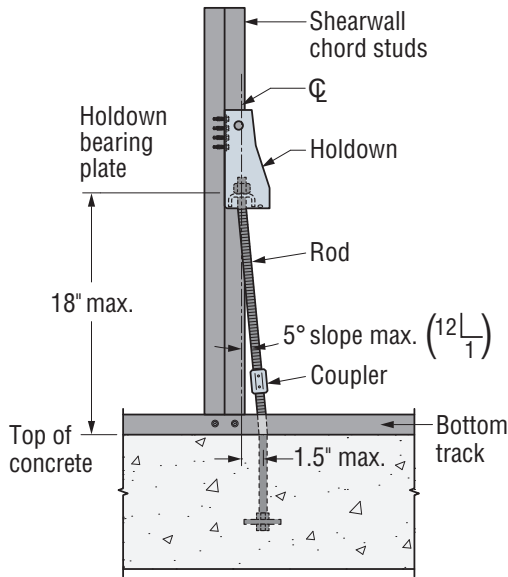
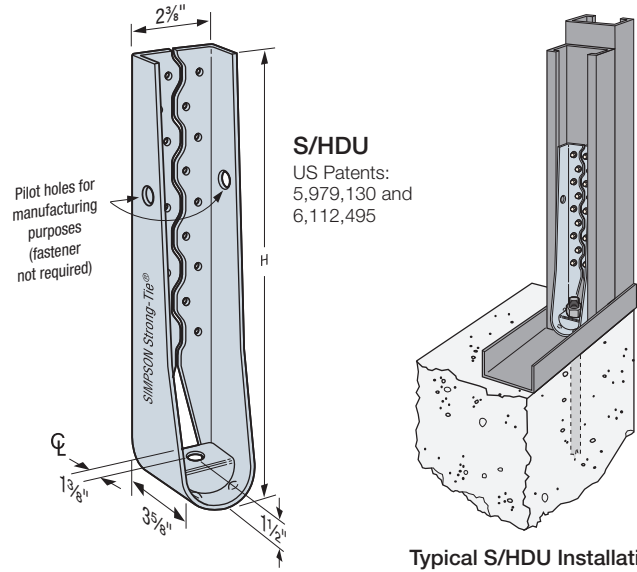
**Material:** 118 mil (10 ga.)

**Finish:** Galvanized (G90)

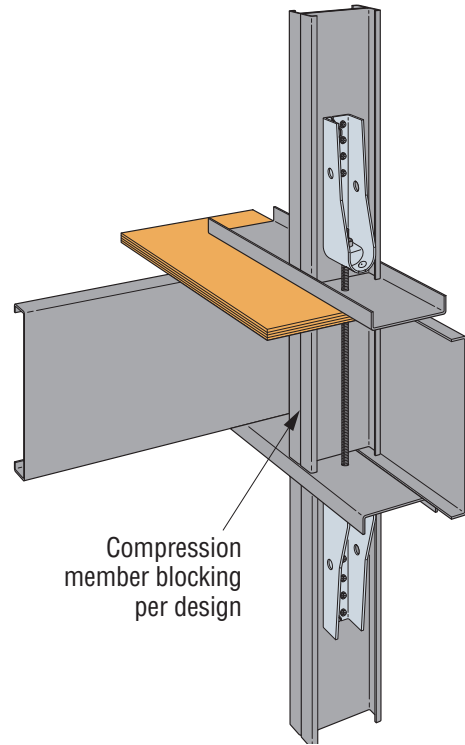
**Installation:**

- Use all specified fasteners; see General Notes
- Use standard #14 self-drilling screws to fasten to studs
- Anchor bolt washer is not required
- See SB, SSTB and PAB anchor bolts on pp. 183 and 185 for cast-in-place anchorage options
- See SET-3G™ and AT-XP® adhesive products at [strongtie.com](http://strongtie.com) for anchor bolt retrofit options

**Codes:** See p. 13 for Code Reference Key Chart



General Holdown and Tension Ties Raised Off CFS Bottom Track



Typical S/HDU Floor-to-Floor Installation

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These products are available with additional corrosion protection. Additional products on this page may also be available with this option. Check with Simpson Strong-Tie for details.

Model	H (in.)	Fasteners		Stud Member Thickness <sup>2</sup> mil (ga.)	ASD		LRFD		Nominal Tension Load <sup>5</sup> (lb.)	Code Ref.				
		Anchor Bolt Diameter <sup>1</sup> (in.)	Stud Fasteners		Tension Load (lb.)	Deflection at ASD Load <sup>4</sup> (in.)	Tension Load (lb.)	Deflection at LRFD Load <sup>4</sup> (in.)						
S/HDU4	7 7/8	5/8	(6) #14	33 (20)	1,195	0.069	1,795	0.116	3,575	—				
				43 (18)	1,780	0.068	2,670	0.106	5,095					
				54 (16)	2,550	0.031	4,080	0.053	6,900					
				S/HDU6	10 3/8	5/8	(12) #14	2-33 (2-20)	2,320	0.093	3,705	0.149	5,685	IBC, FL, LA
								2-43 (2-18)	3,825	0.115	6,105	0.190	9,365	
								2-54 (2-16)	3,970	0.093	6,345	0.156	9,730	
3/16" A36 Steel	4,470	0.063	7,165					0.103	12,120					
S/HDU9	12 3/8	7/8	(18) #14	33 (20)	2,390	0.064	3,590	0.119	6,590	—				
				43 (18)	3,295	0.054	5,270	0.108	8,915					
				54 (16)	5,100	0.073	8,160	0.167	13,805					
				68 (14)	5,570	0.052	8,915	0.095	15,075					
				S/HDU11	16 3/8	7/8	(27) #14	2-33 (2-20)	4,895	0.125	8,495	0.250	10,470	IBC, FL, LA
								2-43 (2-18)	6,125	0.119	9,690	0.250	15,460	
								2-54 (2-16)	6,125	0.108	9,785	0.234	15,005	
								3/16" A36 Steel	7,000	0.069	10,000	0.185	14,695	
S/HDU11	16 3/8	7/8	(27) #14	33 (20)	2,855	0.029	4,570	0.045	7,730	—				
				43 (18)	3,725	0.037	5,960	0.061	10,080					
				54 (16)	6,750	0.071	10,805	0.131	18,270					
				68 (14)	8,355	0.087	13,370	0.159	22,610					
				S/HDU11	16 3/8	7/8	(27) #14	97 (12)	8,355	0.087	13,370	0.159	22,610	IBC, FL, LA
								2-33 (2-20)	6,965	0.103	11,125	0.189	13,165	
								2-43 (2-18)	9,255	0.125	15,485	0.250	21,810	
								2-54 (2-16)	9,990	0.106	15,960	0.225	24,480	
								3/16" A36 Steel	14,625	0.136	20,890	0.185	31,455	
								43 (18)	4,225	0.039	6,765	0.062	11,440	
54 (16)	7,665	0.070	12,265	0.109	20,740									
68 (14)	9,655	0.087	15,450	0.143	26,130									
97 (12) <sup>3</sup>	14,925	0.129	23,880	0.235	40,385									
S/HDU11	16 3/8	7/8	(27) #14	2-33 (2-20)	6,965	0.103	11,125	0.189	13,165	IBC, FL, LA				
				2-43 (2-18)	9,595	0.096	15,330	0.162	23,515					
				2-54 (2-16)	9,675	0.110	15,460	0.158	23,710					
				2-43 (2-18) <sup>3</sup>	11,100	0.125	17,500	0.250	24,955					
				2-54 (2-16) <sup>3</sup>	12,175	0.125	19,445	0.243	29,825					
3/16" A36 Steel <sup>3</sup>	16,010	0.127	22,875	0.185	31,715									

- The designer shall specify the foundation anchor material type, embedment, and configuration. Some of the tabulated holdown tension loads exceed the tensile strength of typical ASTM A36 or A307 anchor bolts.
- It is acceptable to use the capacity listed for the thickest single member or back-to-back members for thicker stud members in the same configuration. Stud design by specifier.
- A heavy hex nut for the anchor bolt is required to achieve the table loads for S/HDU11.
- Deflection at ASD or LRFD is the deflection of the fastener slip, holdown deformation, and anchor rod elongation for holdowns installed up to 4" above the top of concrete when loaded to the ASD and LRFD load, respectively. Holdowns may be installed raised to 18" above the top of concrete, with no load reduction provided that additional elongation of the anchor rod is accounted for. This movement is strictly due to the holdown deformation under a static load test attached to members listed in the table above.
- The Nominal Tension Load is based on the tested average ultimate (peak) load and is provided for design under section E1 of AISI S400 that categorized the holdowns as capacity-protected components. Based on AISI S400, the nominal load shall be greater than or equal to the required strength. Per AISI S400, holdowns are Capacity Protected Components and they are not part of the designated energy-dissipating mechanism. Nominal strength to resist amplified seismic load is not required.
- See the current *Fastening Systems* catalog at [strongtie.com](http://strongtie.com) for more information on Simpson Strong-Tie fasteners.