HDU *Holdown*

SIMPSON Strong-Tie®

This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

HDU Holdowns are pre-deflected during the manufacturing process, virtually eliminating deflection under load due to material stretch. They use Simpson Strong-Tie® Strong-Drive® screws (SDS) which install easily and provide reduced fastener slip. Using SDS screws results in a greater net section, when compared to bolts, as no material is removed.

The HDU series of holdowns are designed to replace previous versions of the product such as PHD's as well as bolted holdowns. The HDU2, 4 and 5 are direct replacements for the PHD2, 5 and 6, respectively.

For more information on holdown options, contact Simpson Strong-Tie.

SPECIAL FEATURES:

- Pre-deflected body virtually eliminates deflection due to material stretch.
- Uses SDS screws which install easily, reduce fastener slip, and provide a greater net section area of the post compared to bolts.
- SDS screws are supplied with the holdowns to ensure proper fasteners are used.
- No stud bolts to countersink at openings.

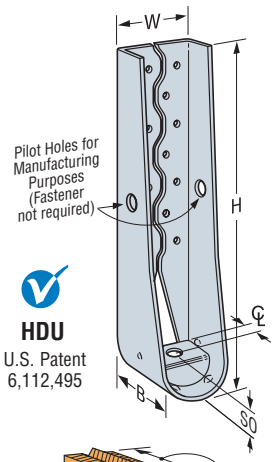
MATERIAL: See table **FINISH**: Galvanized

INSTALLATION:

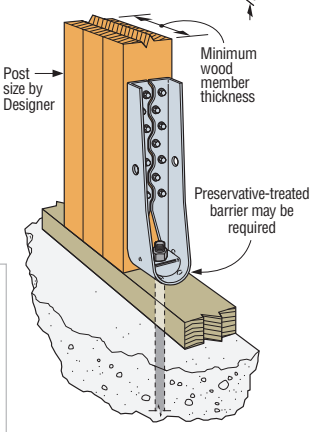
- Use all specified fasteners. See General Notes.
- For use in vertical and horizontal applications.
- No additional washer required.
- To tie multiple 2x members together, the Designer must determine the fasteners required to join the members to act as one unit without splitting the wood. See page 20 for SDS values.
- See SB and SSTB Anchor Bolts on pages 27-29 for anchorage options.
- SDS screws install best with a low speed high torque drill with a ⅜" hex head driver.
- Refer to technical bulletin T-ANCHORSPEC for post-installed anchorage solutions *(see page 191 for details)*.

CODES: See page 12 for Code Reference Key Chart.

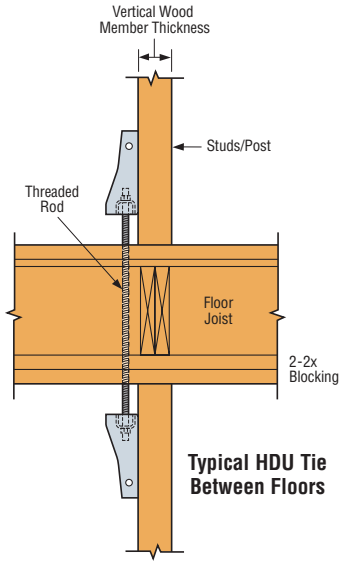
For holdowns, per ASTM test standards, anchor bolt nut should be finger-tight plus ⅓ to ½ turn with a hand wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut. Impact wrenches should not be used.



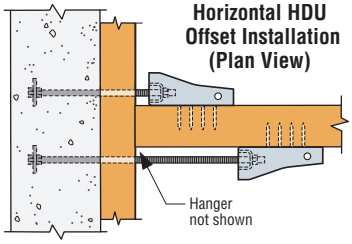
HDU
U.S. Patent 6,112,495



Vertical HDU Installation



Typical HDU Tie Between Floors



Horizontal HDU Offset Installation (Plan View)

See footnote 7

Model No.	Ga	Dimensions (in.)					Fasteners		Minimum Wood Member Thickness[4] (in.)	Allowable Tension Loads (lbs.) (160)[1]			Code Ref.
		W	H	B	℄	SO	Anchor Bolt Dia. (in.)	SDS Screws		DF/SP	SPF/HF	Deflection at Allowable Load[5,6] (in.)	
HDU2-SDS2.5	14	3	8 11/16	3¼	1 5/16	1⅜	⅝	6-SDS ¼"x2½"	3	3075	2215	0.088	I6, L24, F5
HDU4-SDS2.5	14	3	10 15/16	3¼	1 5/16	1⅜	⅝	10-SDS ¼"x2½"	3	4565	3285	0.114	
HDU5-SDS2.5	14	3	13 3/16	3¼	1 5/16	1⅜	⅝	14-SDS ¼"x2½"	3	5645	4065	0.115	
HDU8-SDS2.5	10	3	16⅝	3½	1⅜	1½	⅞	20-SDS ¼"x2½"	3	5980	4305	0.084	
									3½	6970	5020	0.116	
									4½	7870	5665	0.113	
HDU11-SDS2.5	10	3	22¼	3½	1⅜	1½	1	30-SDS ¼"x2½"	5½	9535	6865	0.137	
									7¼	11175	8045	0.137	
HDU14-SDS2.5	7	3	25 11/16	3½	1 9/16	1 9/16	1	36-SDS ¼"x2½"	7¼	14390[9]	10360	0.177	
									5½[8]	14925[8,9]	10745	0.177	

1. Allowable loads have been increased for earthquake or wind load durations with no further increase allowed; reduce where other load durations govern.
2. The Designer must specify anchor bolt type, length and embedment. See SB and SSTB Anchor Bolts *(pages 27-29)*. Refer to technical bulletin T-ANCHORSPEC for retrofit anchor solutions *(see page 191 for details)*.
3. Structural composite lumber columns have sides that show either the wide face or the edges of the lumber strands/veneers. Values in the tables reflect installation into the wide face. See technical bulletin T-SCLCOLUMN for values on the narrow face (edge) *(see page 191 for details)*.
4. Post design by Specifier. Allowable load values are based on a minimum wood member thickness in the direction of the fastener penetration. Posts may consist of multiple 2x members provided they are designed to act as one unit independently of the holdown fasteners. Holdowns shall be installed centered along the width of the attached post.
5. Tension values are valid for holdowns flush or raised off of sill plate.
6. Deflection at Highest Allowable Tension Load includes fastener slip, holdown elongation, and anchor bolt elongation (L = 6"). Additional elongation of anchor bolts shall be accounted for by the Designer when holdowns are raised higher than 6".
7. Tabulated loads may be doubled when the HDU is installed on opposite sides of the wood member provided either the post is large enough to prevent opposing holdown screw interference or the holdowns are offset to eliminate screw interferences.
8. Noted HDU14 allowable loads are based on a 5½" wide post *(6x6 min.)*. All other loads are based on 3½" wide post minimum.
9. Requires heavy hex anchor nut to achieve tabulated loads *(supplied with holdown)*.

PHD *Predeflected Holdown*

The PHD Series of pre-deflected holdowns are being replaced by HDU holdowns. For specifications that call for a PHD, contact Simpson Strong-Tie for equivalent HDU models. See above for details on the HDU series of pre-deflected holdowns.