

SUR/SUL/HSUR/HSUL

Skewed 45° Hangers



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.

The SUR/L1.81, 2.06, 2.1, 2.37, 2.56 and HSUR/L series are 45° skewed hangers designed specifically to ease the installation of single and double I-joists. In addition to Positive Angle Nailing these hangers encapsulate the top flange of the I-joist, so no web stiffeners are required for standard installation.

The full range of 45° skewed hangers feature obround nail holes on the acute side, allowing nails to be easily installed parallel to the joist. Installation is further simplified with no required bevel cuts.

Material: See table on p. 165.

Finish: Galvanized. Some products available in ZMAX® coating.

Installation:

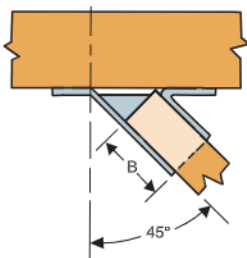
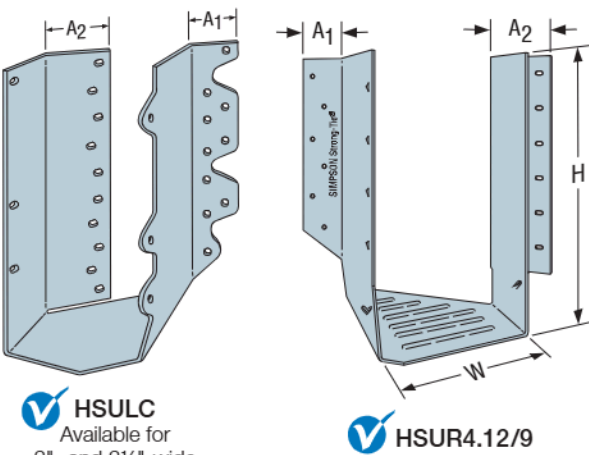
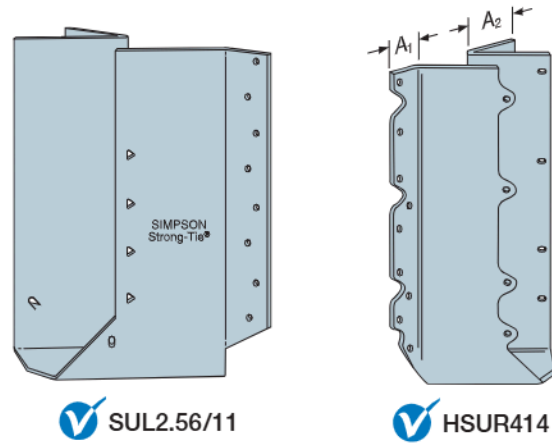
- Use all specified fasteners; see General Notes.
- Illustrations show left and right skews SUR/L (SUR = skewed right; SUL = skewed left).
- The joist end may be square cut or bevel cut.
- Fill all round and obround nail holes with specified fasteners to achieve table loads. Where noted, triangle holes in the joist flange may be filled for additional uplift capacity (see footnote on p. 165).
- For I-joists with flanges less than 1 5/16", web stiffeners are required for all double joist hangers when using hangers that are 14 gauge and lighter.

Options:

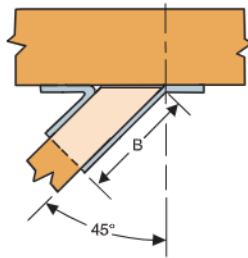
- These hangers cannot be modified but will accommodate a 40° to 50° skewed joist.
- Available with the A₂ flange turned in on (2) 2x and 4x models only (see illustration). For example, specify HSURC410, HSULC410, SURC210-2 or SULC210-2.

Codes: See p. 13 for Code Reference Key Chart

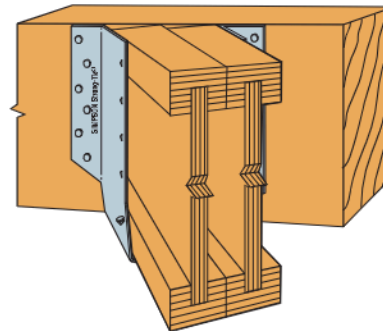
Web Applications: Visit app.strongtie.com/hs to access our Hanger Selector web application.



Typical SUR Installation with Square Cut Joist (HSUR similar)



Typical SUL Installation with Bevel Cut Joist (HSUL similar)



Typical HSUR4.12/9 Installation

SUR/SUL/HSUR/HSUL

Skewed 45° Hangers (cont.)

These products are available with additional corrosion protection. For more information, see p. 16.

SS For stainless-steel fasteners, see p. 23.

SD Many of these products are approved for installation with Strong-Drive® SD Connector screws. See pp. 362–366 for more information.

Actual Joist Size (in.)	Model No.	Web Stiff Req.	Ga.	Dimensions (in.)					Fasteners (in.)		Allowable Loads								Code Ref.
				W	H	B	A ₁	A ₂	Face	Joist	DF/SP Species Header				SPF/HF Species Header				
											Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	
SS 1½x9¼-12	SUR/L210	✓	16	1¾	8¾	2	1½	1¾	(10) 0.162 x 3½	(10) 0.148 x 1½	1,250	1,440	1,630	1,760	1,075	1,240	1,400	1,515	IBC®, FL, LA
1½x10-16	SUR/L214	✓	16	1¾	10	2	1½	1¾	(12) 0.162 x 3½	(12) 0.148 x 1½	1,890	1,730	1,955	2,110	1,625	1,490	1,680	1,815	
1¾x9¼-9½	SUR/L1.81/9	—	16	1¾	9	3	1½	2¾	(12) 0.162 x 3½	(2) 0.148 x 1½	175	1,730	1,945	1,945	150	1,490	1,675	1,675	
1¾x11¼-11½	SUR/L1.81/11	—	16	1¾	11	3	1½	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	175	2,305	2,465	2,465	150	1,980	2,120	2,120	
1¾x14	SUR/L1.81/14	—	16	1¾	13¾	3	1½	2¾	(20) 0.162 x 3½	(2) 0.148 x 1½	175	2,470	2,470	2,470	150	2,125	2,125	2,125	
2x9½	SUR/L2.06/9	—	16	2¼	9½	3¾	1½	2½	(14) 0.162 x 3½	(2) 0.148 x 1½	175	2,015	2,285	2,465	150	1,735	1,965	2,120	
2x11½	SUR/L2.06/11	—	16	2¼	11¼	3¾	1½	2½	(16) 0.162 x 3½	(2) 0.148 x 1½	175	2,305	2,525	2,525	150	1,980	2,170	2,170	
2x14	SUR/L2.06/14	—	16	2¼	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2x16	SUR/L2.06/14	✓	16	2¼	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2½x9½	SUR/L2.1/9	—	16	2½	9½	3¾	1¾	2½	(14) 0.162 x 3½	(2) 0.148 x 1½	175	2,015	2,285	2,465	150	1,735	1,965	2,120	
2½x11½	SUR/L2.1/11	—	16	2½	11¼	3¾	1¾	2½	(16) 0.162 x 3½	(2) 0.148 x 1½	175	2,305	2,525	2,525	150	1,980	2,170	2,170	
2½x14	SUR/L2.1/14	—	16	2½	13¾	3¾	1¾	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2½x16	SUR/L2.1/14	✓	16	2½	13¾	3¾	1¾	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2¼-2½x9½	SUR/L2.37/9	—	16	2¾	8½	3¾	1½	2½	(14) 0.162 x 3½	(2) 0.148 x 1½	175	2,015	2,285	2,465	150	1,735	1,965	2,120	
2¼-2½x11½	SUR/L2.37/11	—	16	2¾	11¼	3¾	1½	2½	(16) 0.162 x 3½	(2) 0.148 x 1½	175	2,305	2,525	2,525	150	1,980	2,170	2,170	
2¼-2½x14	SUR/L2.37/14	—	16	2¾	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2¼-2½x16	SUR/L2.37/14	✓	16	2¾	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	175	2,525	2,525	2,525	150	2,170	2,170	2,170	
2½x9½ (3x10,12)	SUR/L2.56/9	—	16	2¾	8½	3¾	1½	2½	(14) 0.162 x 3½	(2) 0.148 x 1½	210	2,015	2,280	2,465	180	1,735	1,960	2,120	
2½-2¾x11¼-11½	SUR/L2.56/11	—	16	2¾	11¼	3¾	1½	2½	(16) 0.162 x 3½	(2) 0.148 x 1½	210	2,305	2,610	2,665	180	1,980	2,215	2,290	
2½x14 (3x14)	SUR/L2.56/14	—	16	2¾	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	210	2,525	2,525	2,525	180	2,170	2,170	2,170	
2½x16	SUR/L2.56/14	✓	16	2¾	13¾	3¾	1½	2½	(18) 0.162 x 3½	(2) 0.148 x 1½	210	2,525	2,525	2,525	180	2,170	2,170	2,170	
3x9¼-14	SUR/L210-2	✓	16	3½	8½	2¾	1¾	2¾	(14) 0.162 x 3½	(6) 0.162 x 2½	1,150	2,015	2,280	2,345	990	1,735	1,960	2,015	
	HSUR/L210-2	✓	14	3½	8½	2¾	1¼	2¾	(20) 0.162 x 3½	(6) 0.162 x 2½	1,150	2,980	3,360	3,410	990	2,565	2,890	2,935	
3x14-20	SUR/L214-2	✓	16	3½	12½	2¾	1¾	2¾	(18) 0.162 x 3½	(8) 0.162 x 2½	1,580	2,265	2,265	2,265	1,360	1,950	1,950	1,950	
	HSUR/L214-2	✓	14	3½	12½	2¾	1¼	2¾	(26) 0.162 x 3½	(8) 0.162 x 2½	1,490	3,875	4,370	4,680	1,280	3,335	3,760	4,025	
3½x9¼-14	SUR/L410	✓	16	3¾	8½	2¾	1	2¾	(14) 0.162 x 3½	(6) 0.162 x 3½	1,140	2,015	2,245	2,245	980	1,735	1,930	1,930	
	HSUR/L410	✓	14	3¾	8½	2¾	1	2¾	(20) 0.162 x 3½	(6) 0.162 x 3½	1,150	2,980	3,360	3,410	990	2,565	2,890	2,935	
3½x14-20	SUR/L414	✓	16	3¾	12½	2¾	1	2¾	(18) 0.162 x 3½	(8) 0.162 x 3½	1,490	2,400	2,400	2,400	1,280	2,065	2,065	2,065	
	HSUR/L414	✓	14	3¾	12½	2¾	1	2¾	(26) 0.162 x 3½	(8) 0.162 x 3½	1,490	3,875	4,370	4,680	1,280	3,335	3,760	4,025	
4x9½	HSUR/L4.12/9	—	14	4½	9	3	1¾	2¾	(12) 0.162 x 3½	(2) 0.148 x 1½	165	1,785	2,015	2,025	140	1,535	1,735	1,740	
4x11½	HSUR/L4.12/11	—	14	4½	11½	3	1¾	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	165	2,380	2,685	2,890	140	2,045	2,310	2,485	
4x14	HSUR/L4.12/14	—	14	4½	13¾	3	1¾	2¾	(20) 0.162 x 3½	(2) 0.148 x 1½	165	2,975	3,330	3,330	140	2,560	2,865	2,865	
4x16	HSUR/L4.12/16	—	14	4½	15¾	3	1¾	2¾	(24) 0.162 x 3½	(2) 0.148 x 1½	165	3,330	3,330	3,330	140	2,865	2,865	2,865	
4½x9½	HSUR/L4.28/9	—	14	4¾	9	3	1¾	2¾	(12) 0.162 x 3½	(2) 0.148 x 1½	165	1,785	2,015	2,025	140	1,535	1,735	1,740	
4½x11½	HSUR/L4.28/11	—	14	4¾	11½	3	1¾	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	165	2,380	2,685	2,890	140	2,045	2,310	2,485	
4½x14-16	HSUR/L4.28/11	✓	14	4¾	11½	3	1¾	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	165	2,380	2,685	2,890	140	2,045	2,310	2,485	
4¾x9½	HSUR/L4.75/9	—	14	4¾	8½	2¾	1¾	2¾	(12) 0.162 x 3½	(2) 0.148 x 1½	165	1,785	2,015	2,025	140	1,535	1,735	1,740	
4¾x11½	HSUR/L4.75/11	—	14	4¾	10½	2¾	1¾	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	165	2,380	2,685	2,890	140	2,045	2,310	2,485	
4¾x14	HSUR/L4.75/14	—	14	4¾	13¾	2¾	1¾	2¾	(20) 0.162 x 3½	(2) 0.148 x 1½	165	2,975	3,330	3,330	140	2,560	2,865	2,865	
4¾x16	HSUR/L4.75/16	—	14	4¾	15¾	2¾	1¾	2¾	(24) 0.162 x 3½	(2) 0.148 x 1½	165	3,330	3,330	3,330	140	2,865	2,865	2,865	
5x9½	HSUR/L5.12/9	—	14	5½	9	2¾	1¾	2¾	(12) 0.162 x 3½	(2) 0.148 x 1½	165	1,785	2,015	2,025	140	1,535	1,735	1,740	
5x11½	HSUR/L5.12/11	—	14	5½	11	2¾	1¾	2¾	(16) 0.162 x 3½	(2) 0.148 x 1½	165	2,380	2,685	2,890	140	2,045	2,310	2,485	
5x14	HSUR/L5.12/14	—	14	5½	13¾	2¾	1¾	2¾	(20) 0.162 x 3½	(2) 0.148 x 1½	165	2,975	3,330	3,330	140	2,560	2,865	2,865	
5x16	HSUR/L5.12/16	—	14	5½	15¾	2¾	1¾	2¾	(24) 0.162 x 3½	(2) 0.148 x 1½	165	3,330	3,330	3,330	140	2,865	2,865	2,865	

- Uplift loads have been increased for earthquake or wind loading with no further increase allowed. Reduce where other loads govern.
- Triangular nail holes may be filled with 0.148" x 1½" nails for additional uplift (requires web stiffeners).
 - SUR/SUL 9" and 11", SUR/SUL1.81/14, and all HSUR/HSUL models have additional holes that, when filled, can resist 795 lb. for DF/SP or 685 lb. for SPF/HF.
 - SUR/SUL 14" models have (6) additional holes that, when filled, can resist 1,190 lb. for DF/SP and 1,025 lb. for SPF/HF.
- When the supported member is an I-joist with flanges less than 1½" thick, the allowable uplift shall not exceed 190 lb. without web stiffeners.
- Allowable downloads are based on a joist-bearing capacity of 750 psi.
- Fasteners:** Nail dimensions are listed diameter by length. See pp. 23–24 for fastener information.