

**HRC Hip Ridge Connectors**

For complementary top plate connection, see page 107

Engineered Wood & Structural Composite Lumber Connectors

The HRC series are field slopeable connectors that attach hips to ridge members or trusses. The HRC may be sloped to 45° with no reduction in loads.

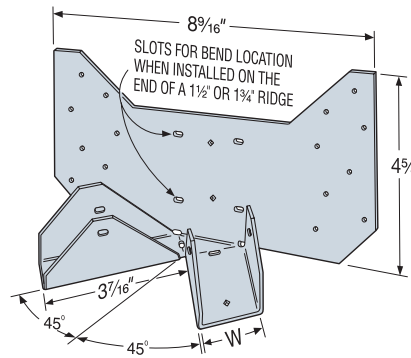
**MATERIAL:** 16 gauge

**FINISH:** Galvanized

**INSTALLATION:**

- Use all specified fasteners. See General Notes.
- On end of ridge—use optional diamond holes to secure the HRC. Bend face flanges back flush with ridge, and complete nailing.
- On face of ridge—adjust to correct height and install nails.
- Double bevel-cut hip members to achieve full bearing capacity.
- The HRC may be sloped to 45° with no reduction in loads.

**CODES:** See page 12 for Code Reference Key Chart.

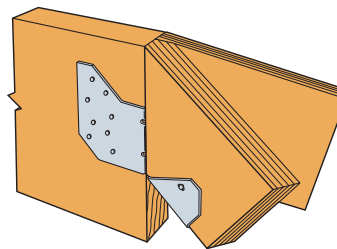


**HRC1.81**

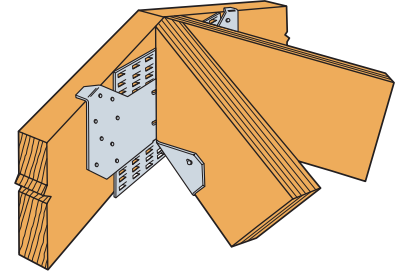
U.S. Patent  
5,380,116

Model No.	W	Member Size		Fasteners		DF/SP Allowable Loads				SPF/HF Allowable Loads				Code Ref.
		Hip	Ridge	Carrying Member	Each Hip	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Uplift (160)	Floor (100)	Snow (115)	Roof (125)	
HRC1.81	1 13/16	1 3/4"	2x or 1 3/4" wide	16-10dx1 1/2	2-10dx1 1/2	290	720	830	900	250	625	720	780	I8, F7

1. Allowable loads shown are for each hip. Total load carried by the connector is double this number.
2. Uplift loads include a 60% increase for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
3. Roof loads are 125% of floor loads unless limited by other criteria.
4. **NAILS:** 10dx1 1/2 = 0.148" dia. x 1 1/2" long. See page 16-17 for other nail sizes and information.



**Typical HRC Installation on the End of a Ridge**



**Optional HRC1.81 Installation**

**SUR/SUL/HSUR/HSUL Skewed 45° Hangers for I-Joist and SCL**



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

**FINISH:** Galvanized. Some products available in ZMAX® coating; see Corrosion Information, page 10-11.

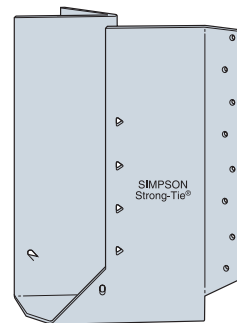
**INSTALLATION:** • Use all specified fasteners. See General Notes.

- 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 page 109).
- For I-joists with flanges less than 1 1/4", web stiffeners are required for all double joist hangers when using hangers that are 14 gauge and lighter.
- For installations to masonry or concrete, see page 140.

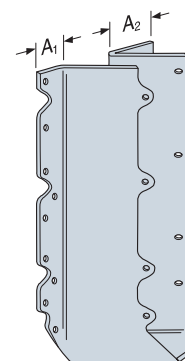
**OPTIONS:** • These hangers will accommodate a 40° to 50° skew.

- 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.

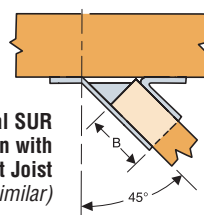
**CODES:** See page 12 for Code Reference Key Chart.



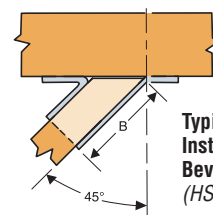
**SUR2.56/11**



**HSUR414**



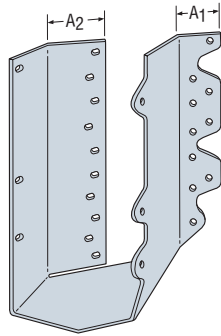
**Typical SUR Installation with Square Cut Joist (HSUR similar)**



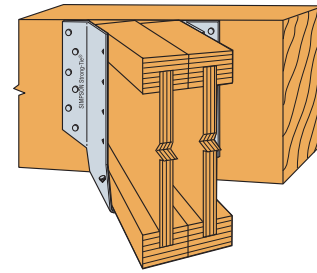
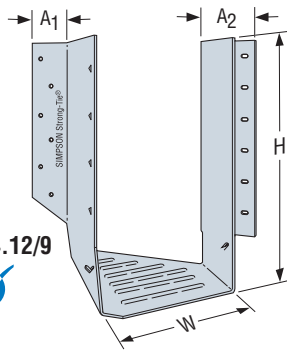
**Typical SUL Installation with Bevel Cut Joist (HSUL similar)**

**SUR/SUL/HSUR/HSUL** Skewed 45° Hangers for I-Joist and SCL

**HSULC**  
Available for  
3" and 3½"  
wide joists only



**HSUR4.12/9**



Typical HSUR4.12/9 Installation

Engineered Wood & Structural Composite Lumber Connectors

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.

Actual Joist Size	Model No.	Web Stiff Req'd	Ga	Dimensions					Fasteners		Allowable Loads								Code Ref.
				W	H	B	A <sub>1</sub>	A <sub>2</sub>	Face	Joist	DF/SP Species Header				SPF/HF Species Header				
											Uplift (160)	Floor (100)	Roof Snow (115)	Roof Const (125)	Uplift (160)	Floor (100)	Roof Snow (115)	Roof Const (125)	
1½x9¼-12	SUR/L210	✓	16	1⅞	8	2	1⅞	1⅞	10-16d	10-10dx1½	1250	1330	1530	1660	1040	1150	1320	1440	17, F6
1½x10-16	SUR/L214	✓	16	1⅞	10	2	1⅞	1⅞	12-16d	12-10dx1½	1730	1595	1835	1995	1250	1380	1585	1725	
1¾x9¼-9½	SUR/L1.81/9	—	16	1⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	145	1595	1835	1995	120	1380	1585	1690	170
1¾x11¼-11⅞	SUR/L1.81/11	—	16	1⅞	11	3	1⅞	2⅞	16-16d	2-10dx1½	145	2130	2350	2350	120	1690	1690	1690	
1¾x14	SUR/L1.81/14	—	16	1⅞	13¾	3	1⅞	2⅞	20-16d	2-10dx1½	145	2500	2500	2500	120	1795	1795	1795	19, F8
2x9½	SUR/L2.06/9	—	16	2⅞	9⅞	3⅞	1⅞	2⅞	14-16d	2-10dx1½	225 <sup>3</sup>	2015	2280	2465	180	1735	1960	2120	
2x11⅞	SUR/L2.06/11	—	16	2⅞	11¼	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	170
2x14-16	SUR/L2.06/11	✓	16	2⅞	11¼	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	
2⅞x9½	SUR/L2.1/9	—	16	2⅞	9⅞	3⅞	1⅞	2⅞	14-16d	2-10dx1½	225 <sup>3</sup>	2015	2280	2465	180	1735	1960	2120	170
2⅞x11⅞	SUR/L2.1/11	—	16	2⅞	11¾	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	
2⅞x14-16	SUR/L2.1/11	✓	16	2⅞	11¾	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	170
2¼-2⅞x9½	SUR/L2.37/9	—	16	2⅞	8⅞	3⅞	1⅞	2⅞	14-16d	2-10dx1½	225 <sup>3</sup>	2015	2280	2465	180	1735	1960	2120	
2¼-2⅞x11⅞	SUR/L2.37/11	—	16	2⅞	11⅞	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	170
2¼-2⅞x14	SUR/L2.37/14	—	16	2⅞	13⅞	3⅞	1⅞	2⅞	18-16d	2-10dx1½	225 <sup>3</sup>	2590	2665	2665	180	2225	2290	2290	
2¼-2⅞x16	SUR/L2.37/14	✓	16	2⅞	13⅞	3⅞	1⅞	2⅞	18-16d	2-10dx1½	225 <sup>3</sup>	2590	2665	2665	180	2225	2290	2290	170
2½x9½ (3x10,12)	SUR/L2.56/9	—	16	2⅞	8⅞	3⅞	1⅞	2⅞	14-16d	2-10dx1½	225 <sup>3</sup>	2015	2280	2465	180	1735	1960	2120	
2½-2⅞x11¼-11⅞	SUR/L2.56/11	—	16	2⅞	11¾	3⅞	1⅞	2⅞	16-16d	2-10dx1½	225 <sup>3</sup>	2305	2610	2665	180	1980	2245	2290	170
2½x14 (3x14)	SUR/L2.56/14	—	16	2⅞	13¾	3⅞	1⅞	2⅞	18-16d	2-10dx1½	225 <sup>3</sup>	2590	2665	2665	180	2225	2290	2290	
2½x16	SUR/L2.56/14	✓	16	2⅞	13¾	3⅞	1⅞	2⅞	18-16d	2-10dx1½	225 <sup>3</sup>	2590	2665	2665	180	2225	2290	2290	17, F6
3x9¼-14	SUR/L210-2	✓	16	3⅞	8⅞	2⅞	1⅞	2⅞	14-16d	6-10dx1½	765	1860	2140	2330	625	1610	1785	1785	
	HSUR/L210-2	✓	14	3⅞	8⅞	2⅞	1¼	2⅞	20-16d	6-10dx1½	920	2680	3080	3350	930	2320	2670	2900	170
3x14-20	SUR/L214-2	✓	16	3⅞	12⅞	2⅞	1⅞	2⅞	18-16d	8-10dx1½	1150	2395	2500	2500	830	1795	1795	1795	
	HSUR/L214-2	✓	14	3⅞	12⅞	2⅞	1¼	2⅞	26-16d	8-10dx1½	1230	3485	4005	4355	1235	3015	3470	3770	19, F8
3½x9¼-14	SUR/L410	✓	16	3⅞	8½	2⅞	1	2⅞	14-16d	6-16d	1275	1860	2140	2330	920	1610	1785	1785	
	HSUR/L410	✓	14	3⅞	8½	2⅞	1	2⅞	20-16d	6-16d	1285	2680	3080	3350	930	2320	2670	2900	17, 19, F8
3½x14-20	SUR/L414	✓	16	3⅞	12½	2⅞	1	2⅞	18-16d	8-16d	1700	2395	2500	2500	1225	1795	1795	1795	
	HSUR/L414	✓	14	3⅞	12½	2⅞	1	2⅞	26-16d	8-16d	1715	3485	4005	4355	1235	3015	3470	3770	
4x9½	HSUR/L4.12/9	—	14	4⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	145 <sup>3</sup>	1655	1905	2020	120	1440	1655	1700	170
4x11⅞	HSUR/L4.12/11	—	14	4⅞	11⅞	3	1⅞	2⅞	16-16d	2-10dx1½	145 <sup>3</sup>	2210	2540	2760	120	1920	2210	2400	
4x14	HSUR/L4.12/14	—	14	4⅞	13¾	3	1⅞	2⅞	20-16d	2-10dx1½	145 <sup>3</sup>	2760	3050	3050	120	2400	2410	2410	170
4x16	HSUR/L4.12/16	—	14	4⅞	15¾	3	1⅞	2⅞	24-16d	2-10dx1½	145 <sup>3</sup>	3050	3050	3050	120	2410	2410	2410	
4⅞x9½	HSUR/L4.28/9	—	14	4⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	145 <sup>3</sup>	1655	1905	2020	120	1440	1655	1700	170
4⅞x11⅞	HSUR/L4.28/11	—	14	4⅞	11⅞	3	1⅞	2⅞	16-16d	2-10dx1½	145 <sup>3</sup>	2210	2540	2760	120	1920	2210	2400	
4⅞x14-16	HSUR/L4.28/11	✓	14	4⅞	11⅞	3	1⅞	2⅞	16-16d	2-10dx1½	145 <sup>3</sup>	2210	2540	2760	120	1920	2210	2400	170
4⅞x9½	HSUR/L4.75/9	—	14	4⅞	8⅞	2¼	1⅞	2⅞	12-16d	2-10dx1½	145 <sup>3</sup>	1655	1905	2020	120	1440	1655	1700	
4⅞x11⅞	HSUR/L4.75/11	—	14	4⅞	10⅞	2¼	1⅞	2⅞	16-16d	2-10dx1½	145 <sup>3</sup>	2210	2540	2760	120	1920	2210	2400	170
4⅞x14	HSUR/L4.75/14	—	14	4⅞	13¾	2¼	1⅞	2⅞	20-16d	2-10dx1½	145 <sup>3</sup>	2760	3050	3050	120	2400	2410	2410	
4⅞x16	HSUR/L4.75/16	—	14	4⅞	15¾	2¼	1⅞	2⅞	24-16d	2-10dx1½	145 <sup>3</sup>	3050	3050	3050	120	2410	2410	2410	170
5x9½	HSUR/L5.12/9	—	14	5⅞	9	2⅞	1⅞	2⅞	12-16d	2-10dx1½	145 <sup>3</sup>	1655	1905	2020	120	1440	1655	1700	
5x11⅞	HSUR/L5.12/11	—	14	5⅞	11	2⅞	1⅞	2⅞	16-16d	2-10dx1½	145 <sup>3</sup>	2210	2540	2760	120	1920	2210	2400	170
5x14	HSUR/L5.12/14	—	14	5⅞	13¾	2⅞	1⅞	2⅞	20-16d	2-10dx1½	145 <sup>3</sup>	2760	3050	3050	120	2400	2410	2410	
5x16	HSUR/L5.12/16	—	14	5⅞	15¾	2⅞	1⅞	2⅞	24-16d	2-10dx1½	145 <sup>3</sup>	3050	3050	3050	120	2410	2410	2410	

- Uplift loads have been increased by 60% for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
- Roof construction loads are 125% of floor loads unless limited by other criteria.
- Triangle nail holes may be filled (requires web stiffeners) with 10dx1½" nails for additional uplift.
  - 9- and 11-inch models have (4) additional holes, that when filled can resist 795 lbs. for Douglas Fir or Southern Pine or 685 lbs. for SPF/HF.
  - 14-inch models have (6) additional holes, that when filled can resist 1190 lbs. for Douglas Fir and 1025 lbs. for SPF/HF.
- When the supported member is an I-joist with flanges less than 1⅞ inches thick, the allowable uplift shall not exceed 190 lbs. without web stiffeners.
- NAILS:** 16d = 0.162" dia. x 3½" long, 10dx1½ = 0.148" dia. x 1½" long. See page 16-17 for other nail sizes and information.