

# SUR/SUL/HSUR/HSUL SKEWED 45° HANGERS FOR I-JOIST AND SCL



**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.

The SUR/L1.81, 2.56 and New HSUR/L4.12, 4.75 and 5.12 are improved 45° skewed hangers designed specifically to ease the installation of single and double I-Joists. In addition to Positive Angle Nailing these hanger's 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 header and joist. Installation is further simplified with no required bevel cuts.

**MATERIAL:** See table. **FINISH:** Galvanized.

Some products available in Z-MAX;  
see Corrosion-Resistance, page 5.

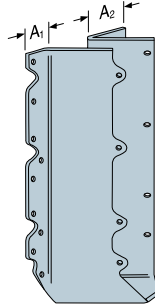
**INSTALLATION:** • Use all specified fasteners. See General Notes.

- Illustrations show left and right skews SUR/L (SUR=skewed right; SUL=skewed left).
- The joist end may be square cut or bevel cut.
- Web stiffeners are required for I-Joist applications except for the SUR/L1.81, 2.56, HSUR/L4.12, 4.75 and 5.12.
- 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 3).

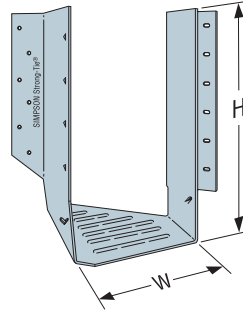
**OPTIONS:** • These hangers will accommodate a 40° to 50° skew.

- Available with the A<sub>2</sub> flange turned in on 2-2x and 4x models only (see illustration). For example, specify HSURC410, HSULC410, SURC210-2, or SULC210-2.

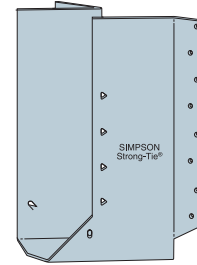
**CODES:** See page 10 for Code Listing Key Chart.



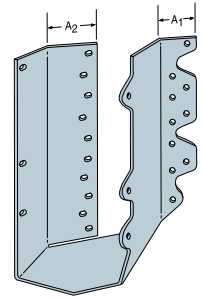
**HSUR**



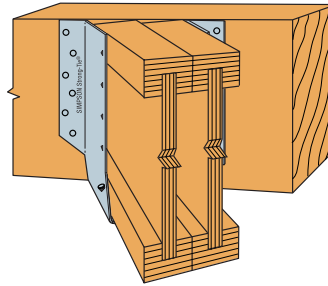
**HSUR4.12/9**



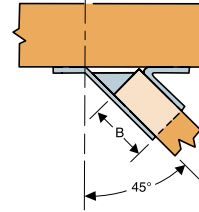
**SUL2.56/11**



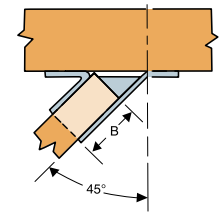
**HSULC**  
Available for 3" and 3½" wide joists only



**Typical HSUR4.12/9 Installation**



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



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

Available with additional corrosion protection. Check with factory.

Actual Joist Size	Model No.	Web Stiff Req'd	Ga.	Dimension					Fasteners		Down Avg Upl	Allowable Loads								Code Ref.	
				W	H	B	A <sub>1</sub>	A <sub>2</sub>	Face	Joist		DF/SP Species Header			SPF Species Header						
												Uplift (133)	Uplift (160)	Floor (100)	Roof		Roof				
													Snow (115)	Const. (125)	Uplift 133/160	Floor (100)	Snow (115)	Const. (125)			
1½ x 9¼ - 12	SUR/L210	✓	16	1⅞	8	2	1⅞	1⅞	10-16d	10-10dx1½	8717	1200	1250	1330	1530	1660	1040	1150	1320	1440	26, 83, 124, 140
1½ x 10-16	SUR/L214	✓	16	1⅞	10	2	1⅞	1⅞	12-16d	12-10dx1½	8717	1440	1730	1595	1835	1995	1250	1380	1585	1725	
1¾ x 9¼ - 9½	SUR/L1.81/9	—	16	1⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	6632	145	145	1595	1835	1995	120	1380	1585	1690	124
1¾ x 11¼ - 11⅞	SUR/L1.81/11	—	16	1⅞	11	3	1⅞	2⅞	16-16d	2-10dx1½	7555	145	145	2130	2350	2350	120	1690	1690	1690	
1¾ x 14	SUR/L1.81/14	—	16	1⅞	13¾	3	1⅞	2⅞	20-16d	2-10dx1½	7833	145	145	2500	2500	2500	120	1795	1795	1795	26, 83, 124
2 x 9½ - 14	SUR/L2.06/9	✓	16	2⅞	9	2⅞	1⅞	1¼	14-16d	6-10dx1½	7558	720	765	1860	2140	2330	625	1610	1785	1785	
2⅞ x 9½	SUR/L2.1/9	—	16	2⅞	7⅞	3⅞	1⅞	2⅞	12-16d	2-10dx1½	6632	145	145	1595	1835	1995	120	1380	1585	1690	170
2⅞ x 11⅞	SUR/L2.1/11	—	16	2⅞	10	3⅞	1⅞	2⅞	16-16d	2-10dx1½	7555	145	145	2130	2130	2130	120	1690	1690	1690	
2¼-2⅞ x 9½ - 14	SUR/LI3510/12	✓	16	2⅞	9	2⅞	1⅞	1¼	14-16d	6-10dx1½	7558	720	765	1860	2140	2330	625	1610	1785	1785	26, 83, 124
2¼-2⅞ x 14-20	SUR/LI3514/20	✓	16	2⅞	13	2⅞	1⅞	1¼	18-16d	8-10dx1½	7833	960	1150	2395	2500	2500	830	1795	1795	1795	
2½ x 9¼ - 14	SUR/L310	✓	16	2⅞	8⅞	2⅞	1½	2	14-16d	6-10dx1½	7558	720	765	1860	2140	2330	625	1610	1785	1785	26, 83, 124, 140
2½ x 11¼ - 11⅞	SUR/L2.56/11	—	16	2⅞	11	3	1⅞	2⅞	16-16d	2-10dx1½	7558	145	145	2130	2130	2130	120	1535	1535	1535	
2½ x 14-20	SUR/L314	✓	16	2⅞	13	2⅞	1½	2	18-16d	8-10dx1½	7833	960	1150	2395	2500	2500	830	1795	1795	1795	26, 83, 124, 140
3 x 9¼ - 14	SUR/L210-2	✓	16	3⅞	8⅞	2⅞	1⅞	2⅞	14-16d	6-10dx1½	7558	720	765	1860	2140	2330	625	1610	1785	1785	
	HSUR/L210-2	✓	14	3⅞	8⅞	2⅞	1¼	2⅞	20-16d	6-10dx1½	12333	765	920	2680	3080	3350	930	2320	2670	2900	33, 83, 122, 124
3 x 14 - 20	SUR/L214-2	✓	16	3⅞	12⅞	2⅞	1⅞	2⅞	18-16d	8-10dx1½	7833	960	1150	2395	2500	2500	830	1795	1795	1795	26, 83, 124, 140
	HSUR/L214-2	✓	14	3⅞	12⅞	2⅞	1¼	2⅞	26-16d	8-10dx1½	15167	1020	1230	3485	4005	4355	1235	3015	3470	3770	
3½ x 9¼ - 14	SUR/L410	✓	16	3⅞	8½	2⅞	1	2⅞	14-16d	6-16d	7558	1065	1275	1860	2140	2330	920	1610	1785	1785	26, 83, 124, 140
	HSUR/L410	✓	14	3⅞	8½	2⅞	1	2⅞	20-16d	6-16d	12333	1070	1285	2680	3080	3350	930	2320	2670	2900	
3½ x 14 - 20	SUR/L414	✓	16	3⅞	12½	2⅞	1	2⅞	18-16d	8-16d	7833	1420	1700	2395	2500	2500	1225	1795	1795	1795	26, 83, 124, 140
	HSUR/L414	✓	14	3⅞	12½	2⅞	1	2⅞	26-16d	8-16d	15167	1430	1715	3485	4005	4355	1235	3015	3470	3770	
4 x 9½	HSUR/L4.12/9	—	14	4⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	6068	145	145	1655	1905	2020	120	1440	1655	1700	170
4 x 11½	HSUR/L4.12/11	—	14	4⅞	11	3	1⅞	2⅞	16-16d	2-10dx1½	9377	145	145	2210	2540	2760	120	1920	2210	2400	
4 x 14	HSUR/L4.12/14	—	14	4⅞	13¾	3	1⅞	2⅞	20-16d	2-10dx1½	9377	145	145	2760	3050	3050	120	2400	2410	2410	
4 x 16	HSUR/L4.12/16	—	14	4⅞	15¾	3	1⅞	2⅞	24-16d	2-10dx1½	9377	145	145	3050	3050	3050	120	2410	2410	2410	
4⅞ x 9½	HSUR/L4.28/9	—	14	4⅞	9	3	1⅞	2⅞	12-16d	2-10dx1½	6068	145	145	1655	1905	2020	120	1440	1655	1700	170
4⅞ x 11½	HSUR/L4.28/11	—	14	4⅞	11	3	1⅞	2⅞	16-16d	2-10dx1½	9377	145	145	2210	2540	2760	120	1920	2210	2400	
4⅞ x 9½	HSUR/L4.75/9	—	14	4⅞	8⅞	2⅞	1⅞	2⅞	12-16d	2-10dx1½	6068	145	145	1655	1905	2020	120	1440	1655	1700	
4⅞ x 11½	HSUR/L4.75/11	—	14	4⅞	10⅞	2⅞	1⅞	2⅞	16-16d	2-10dx1½	9377	145	145	2210	2540	2760	120	1920	2210	2400	
4⅞ x 14	HSUR/L4.75/14	—	14	4⅞	13¾	2⅞	1⅞	2⅞	20-16d	2-10dx1½	9377	145	145	2760	3050	3050	120	2400	2410	2410	
4⅞ x 16	HSUR/L4.75/16	—	14	4⅞	15¾	2⅞	1⅞	2⅞	24-16d	2-10dx1½	9377	145	145	3050	3050	3050	120	2410	2410	2410	
5 x 9½	HSUR/L5.12/9	—	14	5⅞	9	2⅞	1⅞	2⅞	12-16d	2-10dx1½	6068	145	145	1655	1905	2020	120	1440	1655	1700	
5 x 11½	HSUR/L5.12/11	—	14	5⅞	11	2⅞	1⅞	2⅞	16-16d	2-10dx1½	9377	145	145	2210	2540	2760	120	1920	2210	2400	
5 x 14	HSUR/L5.12/14	—	14	5⅞	13¾	2⅞	1⅞	2⅞	20-16d	2-10dx1½	9377	145	145	2760	3050	3050	120	2400	2410	2410	
5 x 16	HSUR/L5.12/16	—	14	5⅞	15¾	2⅞	1⅞	2⅞	24-16d	2-10dx1½	9377	145	145	3050	3050	3050	120	2410	2410	2410	

1. Uplift loads have been increased by 33% and 60% for earthquake or wind loading with no further increase allowed; reduce where other loads govern.  
2. Roof construction loads are 125% of floor loads unless limited by other criteria.

3. For additional uplift on hanger with two joist nails, use web stiffeners which extend past the edge of the hanger and fill four triangle holes with N10 nails for an allowable uplift of 480 lbs. (133).  
4. For SPF uplift, use 0.86 x DF/SP uplift load.