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ESR-2552

Reissued 03/2018

This report is subject to renewal 03/2019.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
SECTION: 06 05 23—WOOD, PLASTIC AND COMPOSITE FASTENINGS

REPORT HOLDER:

SIMPSON STRONG-TIE COMPANY INC.

EVALUATION SUBJECT:

SIMPSON STRONG-TIE® FACE-MOUNT HANGERS FOR STRUCTURAL COMPOSITE LUMBER (SCL), PREFABRICATED WOOD I-JOISTS AND GLULAM BEAMS (ENGINEERED WOOD PRODUCTS)



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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 23—Wood, Plastic, and Composite Fastenings

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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see [ESR-2552 LABC and LARC Supplement](#).

Property evaluated:

Structural

2.0 USES

The Simpson Strong-Tie® face-mount hangers described in this report are used to support structural composite lumber, prefabricated wood I-joists and glulam beams (i.e., engineered wood products) used in wood construction in accordance with Section [2304.10.3](#) of the 2018 and 2015 IBC and Section [2304.9.3](#) of the 2012, 2009, and 2006 IBC. The face-mount hangers may also be used in structures regulated under the IRC when an engineered design is submitted in accordance with Section [R301.1.3](#) of the IRC.

3.0 DESCRIPTION

3.1 General:

The Simpson Strong-Tie face-mount hangers described in this report are U-shaped hangers that have prepunched holes for the installation of nails or Simpson Strong-Drive SDS screws, depending on the hanger model, into the face of the supporting wood header or beam or ledger.

3.1.1 IUS Series Hangers: The IUS series hangers are formed from No. 18 gage galvanized steel and are used exclusively to support prefabricated wood I-joists to a

supporting wood member. See [Table 1A](#) for the IUS series hanger model numbers, hanger dimensions, and required fasteners; and [Table 1B](#) for allowable loads. See [Figures 1a, 1b, and 1c](#) for drawings of a typical IUS hanger and a typical IUS hanger installation.

3.1.2 U Series Hangers: The U series hangers are formed from No. 16 gage galvanized steel. The hangers are face-nailed to the supporting wood header, and nailed to the supported structural composite lumber or prefabricated wood I-joists with web stiffeners to accept the required size and number of joist nails shown in [Table 2](#). See [Table 2](#) for the U series hanger model numbers, hanger dimensions, required fasteners, and allowable loads. See [Figure 2](#) for a drawing of a typical U series joist hanger.

3.1.3 HU and HUC Series Hangers: The HU and HUC series hangers are formed from No. 14 gage galvanized steel, and are face-nailed to the supporting wood header/beam and nailed to the supported structural composite lumber or prefabricated wood I-joists with web stiffeners. HU hangers having a seat width (W) equal to or greater than $2\frac{9}{16}$ inches (65 mm) are available with concealed flanges and are specified with the model designation HUC. See [Table 3A](#) for hanger model numbers, hanger dimensions, and required fasteners (minimum and maximum); and [Table 3B](#) for allowable loads based on the minimum and maximum nailing schedules shown in [Table 3A](#). The HU and HUC hangers have triangular and round holes in both the U-shaped portion supporting the wood joist and in the flanges attached to the supporting wood header/beam. The minimum allowable loads are achieved by filling only the round holes with the type and size of nails shown in [Table 3A](#), and the maximum allowable loads are achieved by filling all holes (both the round and triangular) with size of nails shown in [Table 3A](#). See [Figure 3a](#) and [3b](#) for drawings of typical HU and HUC hangers, and [Figure 3c](#) for a drawing of a typical installation of an HU hanger supporting a prefabricated wood I-joist with approved web stiffeners.

3.1.4 HUS and HUSC Series Hangers: The HUS and HUSC series hangers having a seat width, W, of $3\frac{9}{16}$ inches (90 mm) are formed from No. 14 gage galvanized steel. The HUS1.81/10 hanger with a seat width, W, of $1\frac{13}{16}$ inches (46 mm) is formed from No. 16 gage galvanized steel. The HUS models having a seat width, W, of $3\frac{9}{16}$ inches (90 mm) are available with concealed flanges, which are specified with the model designation HUSC. The hangers have prepunched holes for the installation of nails that are driven at a 45-degree angle through the joist and into the header, which is

described as double shear nailing in the installation instructions. See [Table 4](#) for HUS series hanger models, hanger dimensions, required fasteners, and allowable loads. See [Figure 4](#) for a drawing of a typical HUS hanger.

3.1.5 HHUS Series Hangers: The HHUS series hangers are formed from No. 14 gage galvanized steel. The hangers have pre-punched holes for the installation of nails that are driven at a 45 degree angle through the joist and into the header, which is described as double shear nailing in the installation instructions. See [Table 5](#) for the hanger model numbers, hanger dimensions, required fasteners, and allowable loads. See [Figure 5](#) for a drawing of a typical HHUS hanger.

3.1.6 SUR/L Series Hangers: The SUR/L series hangers are formed from No. 16 gage galvanized steel. The SUR and SUL hangers are identical except they are skewed at 45 degrees to the right (SUR) and the left (SUL), respectively. See [Table 6](#) for hanger models, hanger dimensions, required fasteners, and allowable loads. See [Figure 6a](#) for a drawing of a typical SUL hanger and [Figure 6b](#) for a typical SUR hanger installation.

3.1.7 HSUR/L Series Hangers: The HSUR/L series hangers are formed from No. 14 gage galvanized steel. The HSUR and HSUL hangers are identical except they are skewed at 45 degrees to the right (HSUR) and the left (HSUL), respectively, and are designed to support prefabricated wood I-joists having approved web stiffeners, and structural composite lumber (SCL). See [Table 7](#) for the hanger model numbers, hanger dimensions, required fasteners, and allowable loads. See [Figure 7a](#) for a drawing of a typical HSUR hanger, and [Figure 7b](#) for a typical HSUR hanger installation.

3.1.8 MIU Series Joist Hangers: The MIU series hangers are formed from No. 16 gage galvanized steel and are used to support prefabricated wood I-joists or other approved wood members. Other approved wood members must be laterally supported at the ends in accordance with Section [2308.8.2](#) of the IBC and Section [R502.7](#) of the IRC. See [Table 8](#) for the MIU series hanger model numbers, hanger dimensions, required fasteners, and allowable loads. See [Figure 8a](#) for a drawing of a typical MIU hanger and [Figure 8b](#) for a drawing of a typical MIU hanger installation.

3.1.9 HGUS Series Hangers: The HGUS series hangers are formed from No. 12 gage galvanized steel and are used to support glulam beams or other approved wood members. Other approved wood members must be laterally supported at the ends in accordance with Section [2308.8.2](#) of the IBC and Section [R502.7](#) of the IRC. The hangers have prepunched holes for the installation of nails that are driven at a 45-degree angle through the joist and into the header, which is described as double shear nailing in the installation instructions. See [Table 9](#) for the HGUS series hanger model numbers, hanger dimensions, required fasteners and allowable loads. See [Figure 9](#) for a drawing of a typical HGUS hanger.

3.1.10 LGU, MGU, HGU and HHGU Series Hangers: The LGU and MGU series hangers are formed from No. 10 gage galvanized steel; HGU series hangers are formed from No. 7 gage galvanized steel; and HHGU series hangers are formed from No. 3 gage steel. The LGU, MGU, HGU and HHGU series hangers are used to support glulam beams or other approved wood members. Other approved wood members must be laterally supported at the ends in accordance with Section [2308.8.2](#) of the IBC and Section [R502.7](#) of the IRC. The hangers have pre-punched holes for the installation of Simpson

Strong-Drive SDS series wood screws (SDS). See [Table 10](#) for the LGU, MGU, HGU and HHGU series model numbers, hanger dimensions, required fasteners and allowable loads. See [Figure 10](#) for a drawing of the HHGU series hanger and a typical installation detail.

3.1.11 HUCQ Series Hangers: The HUCQ series hangers are formed from No. 14 gage galvanized steel and are used to support glulam beams or other approved wood members. Other approved wood members must be laterally supported at the ends in accordance with Section [2308.8.2](#) of the IBC and Section [R502.7](#) of the IRC. The hangers have prepunched holes for the installation of Simpson Strong-Drive SDS series wood screws (SDS). See [Table 11](#) for the HUCQ series model numbers, hanger dimensions, required fasteners and allowable loads. See [Figure 11](#) for a drawing of the HUCQ series hanger.

3.1.12 DU, DHU and DHUTF Series Hangers: The DU, DHU and DHUTF series hangers are face-mount and top-flange hangers that are formed from either No. 14 gauge or No. 12 gauge galvanized steel. They are designed to transfer joist floor loads to a wood stud wall through two layers of 5/8-inch-thick (15.9 mm) gypsum board complying with [ASTM C1396](#), and are installed using a combination of nails and Simpson Strong-Drive SDS series wood screws (SDS), which are recognized under [ESR-2236](#). These hangers are installed after the two layers of 5/8" Type X gypsum board is installed and fastened using, at a minimum, the fastener schedule in Item 14.1-5 in IBC Table 721.1(2). See [Table 12A](#) for hanger dimensions and allowable loads. See [Table 12B](#) for fastener schedule. See [Figure 12](#) for a drawing of the DU, DHU and DHUTF hangers and a typical installation.

3.2 Materials:

3.2.1 Steel: All hangers described in this report, with the exception of the HGUS and HHGU series hangers, are manufactured from galvanized steel complying with [ASTM A653](#), SS designation, Grade 33, with a minimum yield strength, F_y , of 33,000 psi (227 MPa) and a minimum tensile strength, F_u , of 45,000 psi (310 MPa). The HGUS series hangers are manufactured from galvanized steel complying with ASTM A653, SS designation, Grade 40, with a minimum yield strength, F_y , of 40,000 psi (276 MPa) and a minimum tensile strength, F_u , of 55,000 psi (379 MPa). The HHGU series hangers are manufactured from nongalvanized steel complying with [ASTM A1011](#) SS, Grade 33, with a minimum yield strength, F_y , of 33,000 psi (227 MPa) and a minimum tensile strength, F_u , of 52,000 psi (358 MPa). Base-metal thicknesses for the hangers in this report are as follows:

NOMINAL THICKNESS (gage)	MINIMUM BASE-METAL THICKNESS (inch)
No. 3	0.2285
No. 7	0.1715
No. 10	0.1275
No. 12	0.0975
No. 14	0.0685
No. 16	0.0555
No. 18	0.0444

For SI: 1 inch = 25.4 mm.

The galvanized zinc coating conforms to [ASTM A924](#) and ASTM A653 with a G90 designation. Some models (designated with a model number ending with Z) are available with a G185 zinc coating specification in accordance with ASTM A653. Some models (designated with a model number ending with HDG) are available

with a hot-dip galvanization, also known as “batch” galvanization, in accordance with [ASTM A123](#), with a minimum specified coating weight of 2.0 ounces of zinc per square foot of surface area (600 g/m²), total for both sides. Model numbers in this report do not include the Z or HDG ending, but the information shown applies. The lumber treater or holder of this report (Simpson Strong-Tie Company) should be contacted for recommendations on minimum corrosion resistance of steel connectors in contact with the specific proprietary preservative treated or fire retardant treated lumber.

3.2.2 Wood: Wood headers/beams which the connectors are face nailed to, must be either sawn lumber, glued-laminated lumber, or engineered lumber having a minimum specific gravity of 0.50 (minimum equivalent specific gravity of 0.50 for engineered lumber), and having a maximum moisture content of 19 percent (16 percent for engineered lumber) except as noted in Section 4.1. The thickness of the supporting wood member (header) must be equal to or greater than the length of the fasteners specified in the tables in this report, or as required by wood member design, whichever is greater.

Supported wood members that are prefabricated wood I-joists or SCL must be recognized in a current evaluation report, which will specify the allowable shear capacity and allowable reactions at supports for the proprietary engineered wood lumber. When required, web stiffeners for prefabricated wood I-joists must comply with specifications noted in the applicable evaluation report for the I-joists. The hangers described in this evaluation report may support I-joists having a current ICC-ES evaluation report. The evaluation report for the prefabricated wood I-joist must specify a minimum bearing length that is equal to or less than the hanger bearing length. When the hangers are used to support prefabricated wood I-joists, joist end reactions must not exceed the allowable joist end reaction per the I-joist manufacturer's code report. For installation with engineered wood members, minimum allowable fastener spacing and end and edge distances, as specified in the applicable evaluation report for the engineered wood product, must be met.

3.2.3 Fasteners: Nails used for hangers described in this report must comply with [ASTM F1667](#) and have the following minimum fastener dimensions and bending yield strengths (F_{yb}):

FASTENERS	SHANK DIAMETER (inches)	NAIL LENGTH (inches)	F_{yb} (psi)
10d x 1 1/2	0.148	1 1/2	90,000
10d	0.148	3	90,000
16d x 2 1/2	0.162	2 1/2	90,000
16d	0.162	3 1/2	90,000

For **SI**: 1 inch = 25.4 mm, 1 psi = 6.895 kPa.

Some of the joist hangers described in this report are attached to the wood members using Simpson Strong-Drive SDS series wood screws as described in [ESR-2236](#).

Fasteners used in contact with preservative treated or fire retardant treated lumber must comply with Section [2304.10.5](#) of the 2018 and 2015 IBC, Section [2304.9.5](#) of the 2012, 2009 and 2006 IBC, 2015, 2012 and 2009 IRC Section [R317.3](#) or 2006 IRC Section [R319.3](#), as applicable. The chemical treatment manufacturer or this report holder (Simpson Strong-Tie Company) should be contacted for recommendations on minimum corrosion

resistance of fasteners and connection capacities of fasteners used with the specific proprietary preservative treated or fire retardant treated lumber.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The tabulated allowable loads shown in this report are based on allowable stress design (ASD) and include the load duration factor, C_D , corresponding with the applicable loads in accordance with the NDS.

Tabulated allowable loads apply to products connected to wood used under dry conditions and where sustained temperatures are 100°F (37.8°C) or less. When products are installed to wood having a moisture content greater than 19 percent (16 percent for engineered wood products), or where wet service is expected, the allowable loads must be adjusted by the wet service factor, C_M , specified in the NDS. When connectors are installed in wood that will experience sustained exposure to temperatures exceeding 100°F (37.8°C), the allowable loads in this report must be adjusted by the temperature factor, C_t , specified in the NDS.

Connected wood members must be analyzed for load-carrying capacity at the connection in accordance with the NDS and the evaluation report for the engineered wood products.

4.2 Installation:

Installation of the connectors must be in accordance with this evaluation report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.0 CONDITIONS OF USE

The Simpson Strong-Tie face-mount hangers described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The connectors must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. A copy of the instructions must be available at the jobsite at all times during installation.
- 5.2** Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.3** Adjustment factors noted in Section 4.1 and the applicable codes must be considered, where applicable.
- 5.4** Connected wood members and fasteners must comply, respectively, with Sections 3.2.2 and 3.2.3 of this report.
- 5.5** Use of connectors with preservative or fire retardant treated lumber must be in accordance with Section 3.2.1 of this report. Use of fasteners with preservative treated or fire retardant treated lumber must be in accordance with Section 3.2.3 of this report.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Joist Hangers and Similar Devices (AC13), dated March 2018.

7.0 IDENTIFICATION

7.1 The products described in this report are identified with a die-stamped or an adhesive label indicating the name of the manufacturer (Simpson Strong-Tie) the model number, and the number of an index evaluation report ([ESR-2523](#)) that is used as an identifier for the products recognized in this report.

7.2 The report holder's contact information is the following:

SIMPSON STRONG TIE COMPANY INC.
5956 WEST LAS POSITAS BOULEVARD
PLEASANTON, CALIFORNIA 94588
(800) 999-5099
www.strongtie.com

TABLE 1A—APPLICABLE MODEL NUMBERS FOR THE IUS SERIES I-JOIST HANGERS¹

MODEL NO.	DIMENSIONS ² (Inches)			FASTENERS (Quantity-Type)	
	W	H	B	Header	Joist
IUS1.81/9.5	1 ⁷ / ₈	9 ¹ / ₂	2	8-10d	—
IUS1.81/11.88		11 ¹ / ₈		10-10d	—
IUS1.81/14(min)		14		12-10d	—
IUS1.81/14(max)				14-10d	—
IUS1.81/16(min)				14-10d	—
IUS1.81/16(max)		16		16-10d	—
IUS2.06/9.5		2 ¹ / ₈		9 ¹ / ₂	2
IUS2.06/11.88	11 ¹ / ₈		10-10d	—	
IUS2.06/14(min)	14		12-10d	—	
IUS2.06/14(max)			14-10d	—	
IUS2.06/16(min)			14-10d	—	
IUS2.06/16(max)	16		16-10d	—	
IUS2.37/9.5	2 ⁷ / ₁₆		9 ¹ / ₂	2	
IUS2.37/11.88		11 ¹ / ₈	10-10d		—
IUS2.37/14(min)		14	12-10d		—
IUS2.37/14(max)			14-10d		—

MODEL NO.	DIMENSIONS ² (Inches)			FASTENERS (Quantity-Type)		
	W	H	B	Header	Joist	
IUS2.37/16(min)	2 ⁷ / ₁₆	16	2	14-10d	—	
IUS2.37/16(max)				16-10d	—	
IUS2.56/9.25	2 ⁵ / ₈	9 ¹ / ₄	2	8-10d	—	
IUS2.56/9.5		9 ¹ / ₂		8-10d	—	
IUS2.56/11.88		11 ¹ / ₈		10-10d	—	
IUS2.56/14(min)				14	12-10d	—
IUS2.56/14(max)					14-10d	—
IUS2.56/16(min)		14-10d			—	
IUS2.56/16(max)		16		16-10d	—	
IUS3.56/9.5	3 ⁵ / ₈	9 ¹ / ₂	2	10-10d	—	
IUS3.56/11.88		11 ¹ / ₈		12-10d	—	
IUS3.56/14(min)		14		12-10d	—	
IUS3.56/14(max)				14-10d	—	
IUS3.56/16(min)				14-10d	—	
IUS3.56/16(max)		16		16-10d	—	
(This section of the table is intentionally blank)						

For SI: 1 inch = 25.4 mm.

¹Model numbers ending with (min) refer to nails installed into only round holes of the hanger, and the model numbers ending with (max) refer to nails installed into both round and triangle holes of the hanger.

²Refer to [Figures 1a](#) and [1b](#) (next page) for definitions of hanger nomenclature (W, H, B).

TABLE 1B—ALLOWABLE LOADS FOR THE IUS SERIES I-JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			COMMON NAILS (Quantity-Size)		ALLOWABLE LOADS ^{2,5} (lbs)			
	W	H	B	Header	Joist	Uplift ^{3,4}			
						Download			
						C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
IUS	1 ⁷ / ₈ to 2 ⁵ / ₈	9 ¹ / ₄ to 16	2	8-10d	—	70	950	1,080	1,165
				10-10d	—	70	1,185	1,345	1,455
				12-10d	—	70	1,420	1,615	1,745
				14-10d	—	70	1,660	1,805	1,805
				16-10d	—	70	1,805	1,805	1,805
IUS	2 ¹¹ / ₁₆ to 3 ⁵ / ₈	9 ¹ / ₂ to 16	2	10-10d	—	70	1,185	1,345	1,455
				12-10d	—	70	1,420	1,615	1,745
				14-10d	—	70	1,660	1,805	1,805
				16-10d	—	70	1,805	1,805	1,805

For SI: 1 inch = 25.4 mm, 1 pound = 4.45 N.

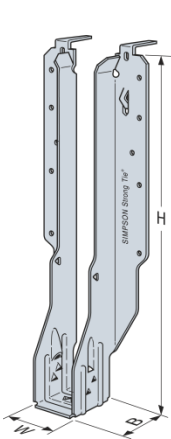
¹Refer to [Figures 1a](#) and [1b](#) (next page) for definitions of hanger nomenclature (W, H, B).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads need not be reduced when other load durations govern.

⁴Additional uplift capacity is available when installing 2-10dx1¹/₂-inch-long nails through the triangular holes that are pre-punched in the U-shaped portion of the hanger and into the stiffened web of the prefabricated wood I-joist. When these additional nails are used, the maximum allowable uplift load is 345 lbs (C_D = 1.6).

⁵The allowable loads are based on the use of prefabricated wood I-joists having flanges with an allowable compression perpendicular-to-grain, F_{c⊥}, of 750 psi. When use is to support wood I-joists with flanges having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.



U.S. PATENT 6,523,321
FIGURE 1a
TYPICAL IUS HANGER
(SEAT STYLE A)

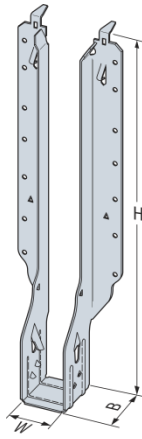


FIGURE 1b
TYPICAL IUS HANGER
(SEAT STYLE B)

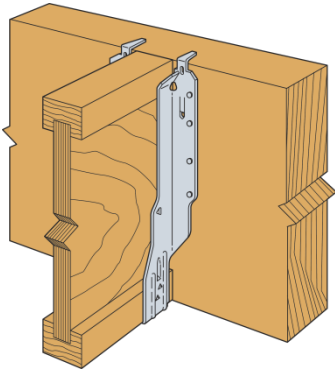


FIGURE 1c—TYPICAL IUS HANGER
INSTALLATION
(Supported Wood I-joist
without Web Stiffeners)

TABLE 2—ALLOWABLE LOADS FOR THE U SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,3,4,6} (lbs)							
						Uplift ⁵	Download						
	W	H	B	Header ⁴	Joist		C _D = 1.6	C _D = 1.0		C _D = 1.15		C _D = 1.25	
								10d	16d	10d	16d	10d	16d
U14	1 ¹³ / ₁₆	10 ¹ / ₄	2	14	6-10d x 1 ¹ / ₂	970	-	2,015	-	2,285	-	2,465	
U310	2 ⁹ / ₁₆	8 ⁷ / ₈	2	14	6-10d x 1 ¹ / ₂	970	1,705	2,015	1,930	2,285	2,075	2,465	
U314	2 ⁹ / ₁₆	10 ¹ / ₂	2	16	6-10d x 1 ¹ / ₂	970	1,945	2,305	2,205	2,615	2,375	2,820	
U3510/14	2 ⁵ / ₁₆	9	2	14	6-10d x 1 ¹ / ₂	970	-	2,015	-	2,285	-	2,465	
U3516/20	2 ⁵ / ₁₆	10 ⁹ / ₁₆	2	16	6-10d x 1 ¹ / ₂	970	-	2,305	-	2,615	-	2,820	
U410	3 ⁹ / ₁₆	8 ³ / ₈	2	14	6-10d	970	1,705	2,015	1,930	2,285	2,075	2,465	
U414	3 ⁹ / ₁₆	10	2	16	6-10d	970	1,945	2,305	2,205	2,615	2,375	2,820	
U3510-2	4 ³ / ₄	8 ³ / ₄	2	14	6-10d	970	-	2,015	-	2,285	-	2,465	
U3512-2	4 ³ / ₄	11 ¹ / ₄	2	16	6-10d	970	-	2,305	-	2,615	-	2,820	
U610	5 ¹ / ₂	8 ¹ / ₂	2	14	6-10d	970	1,705	2,015	1,930	2,285	2,075	2,465	

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 2 (this page) for definitions of hanger nomenclature (W, H, B).
²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.
³U series hangers provide torsional resistance, which is defined as a moment of not less than 75 pounds (334 N) times the depth of the joist at which the lateral movement of the top or bottom of the joist with respect to its vertical position is 0.125 inch (3.2 mm). The height, H, of the joist hanger must be at least 60 percent of the height of the joist.
⁴The quantity of 10d or 16d common nails specified in the “Header” column under “Fasteners” is required to achieve the tabulated allowable loads shown in the Allowable Download columns entitled 10d or 16d.
⁵Allowable uplift loads are for hangers installed with either 10d or 16d common nails into the supporting header/beam, and have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.
⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

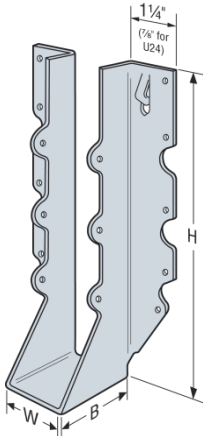


FIGURE 2—U SERIES JOIST HANGER

TABLE 3A—APPLICABLE MODEL NUMBERS FOR THE HU/HUC SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			FASTENERS ² (Minimum Quantity-Type)		FASTENERS ² (Maximum Quantity-Type)	
	W	H	B	Header	Joist	Header	Joist
HU1.81/5	1 ¹³ / ₁₆	5 ³ / ₈	2 ¹ / ₂	12-16d	4-10d x 1 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂
HU7		6 ¹¹ / ₁₆		12-16d	4-10d x 1 ¹ / ₂	16-16d	8-10d x 1 ¹ / ₂
HU9		9 ⁵ / ₁₆		18-16d	6-10d x 1 ¹ / ₂	24-16d	10-10d x 1 ¹ / ₂
HU11		11 ¹ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	30-16d	10-10d x 1 ¹ / ₂
HU14		14		28-16d	8-10d x 1 ¹ / ₂	36-16d	14-10d x 1 ¹ / ₂
HU2.1/9	2 ¹ / ₈	9	2 ¹ / ₂	14-16d	6-10d x 1 ¹ / ₂	18-16d	10-10d x 1 ¹ / ₂
HU2.1/11		11		16-16d	6-10d x 1 ¹ / ₂	22-16d	10-10d x 1 ¹ / ₂
HU359	2 ³ / ₈	8 ¹⁵ / ₁₆	2 ¹ / ₂	14-16d	6-10d x 1 ¹ / ₂	18-16d	10-10d x 1 ¹ / ₂
HU3511		11 ¹ / ₁₆		16-16d	6-10d x 1 ¹ / ₂	22-16d	10-10d x 1 ¹ / ₂
HU3514		13 ¹ / ₂		18-16d	8-10d x 1 ¹ / ₂	24-16d	12-10d x 1 ¹ / ₂
HU3516/22		14 ¹ / ₄		20-16d	8-10d x 1 ¹ / ₂	—	—
HU3524/30		18		18-16d	8-10d x 1 ¹ / ₂	24-16d	14-10d x 1 ¹ / ₂
HU310	2 ⁹ / ₁₆	8 ⁷ / ₈	2 ¹ / ₂	14-16d	6-10d x 1 ¹ / ₂	—	—
HU312		10 ⁵ / ₈		16-16d	6-10d x 1 ¹ / ₂	—	—
HU314		12 ³ / ₈		18-16d	8-10d x 1 ¹ / ₂	—	—
HU316		14 ¹ / ₈		20-16d	8-10d x 1 ¹ / ₂	—	—
HU2.75/10	2 ³ / ₄	9	2 ¹ / ₂	14-16d	6-10d x 1 ¹ / ₂	18-16d	10-10d x 1 ¹ / ₂
HU2.75/12		10 ³ / ₄		16-16d	6-10d x 1 ¹ / ₂	22-16d	10-10d x 1 ¹ / ₂
HU2.75/14		13		18-16d	8-10d x 1 ¹ / ₂	24-16d	14-10d x 1 ¹ / ₂
HU2.75/16		14 ¹ / ₁₆		20-16d	8-10d x 1 ¹ / ₂	26-16d	14-10d x 1 ¹ / ₂
HU210-2	3 ¹ / ₈	8 ¹³ / ₁₆	2 ¹ / ₂	14-16d	6-10d	18-16d	10-10d
HU212-2		10 ⁷ / ₁₆		16-16d	6-10d	22-16d	10-10d
HU216-2		13 ⁷ / ₈		20-16d	8-10d	26-16d	12-10d
HU3.25/10.5		10 ¹ / ₄		22-16d	10-10d	—	—
HU3.25/12		11 ³ / ₄		24-16d	12-10d	—	—
HU48	3 ⁹ / ₁₆	6 ¹³ / ₁₆	2 ¹ / ₂	10-16d	4-10d	14-16d	6-10d
HU410		8 ⁵ / ₈		14-16d	6-10d	18-16d	10-10d
HU412		10 ¹ / ₂		16-16d	6-10d	22-16d	10-10d
HU414		12 ⁵ / ₈		18-16d	8-10d	24-16d	12-10d
HU416		13 ⁵ / ₈		20-16d	8-10d	26-16d	12-10d
HU4.12/9	4 ¹ / ₈	8 ⁷ / ₈	2 ¹ / ₂	14-16d	6-10d	18-16d	10-10d
HU4.12/11		10 ⁹ / ₁₆		16-16d	6-10d	22-16d	10-10d
HU4.28/9	4 ⁹ / ₃₂	9	2 ¹ / ₂	18-16d	8-10d	—	—
HU4.28/11		11		22-16d	8-10d	—	—
HU4.75/9	4 ³ / ₄	9	2 ¹ / ₂	18-16d	8-10d	—	—
HU4.75/11		11		22-16d	8-10d	—	—
HU3514-2		13 ¹ / ₄		18-16d	8-10d	—	—
HU3516-2		15 ¹ / ₄		20-16d	8-10d	26-16d	12-10d
HU3520-2		19 ¹ / ₄		20-16d	8-10d	26-16d	12-10d
HU310-2	5 ¹ / ₈	8 ⁷ / ₈	2 ¹ / ₂	14-16d	6-10d	—	—
HU312-2		10 ⁹ / ₈		16-16d	6-10d	—	—
HU314-2		12 ⁹ / ₈		18-16d	8-10d	—	—
HU5.125/12	5 ¹ / ₄	10 ¹ / ₄	2 ¹ / ₂	22-16d	8-16d	—	—
HU5.125/13.5		13 ¹ / ₄		26-16d	12-16d	—	—
HU5.125/16		13 ³ / ₈		26-16d	12-16d	—	—
HU68	5 ¹ / ₂	5 ¹³ / ₁₆	2 ¹ / ₂	10-16d	4-10d	14-16d	6-10d
HU610		7 ⁹ / ₈		14-16d	6-16d	18-16d	8-16d
HU612		9 ³ / ₈		16-16d	6-16d	22-16d	8-16d
HU614		11 ⁹ / ₈		18-16d	8-16d	24-16d	12-16d
HU616		12 ¹¹ / ₁₆		20-16d	8-16d	26-16d	12-16d
HU410-2	7 ¹ / ₈	9 ¹ / ₈	2 ¹ / ₂	14-16d	6-16d	18-16d	8-16d
HU412-2		11 ¹ / ₈		16-16d	6-16d	22-16d	8-16d
HU414-2		13 ⁷ / ₈		20-16d	8-16d	26-16d	12-16d

For SI: 1 inch = 25.4 mm.

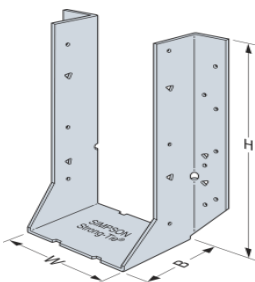
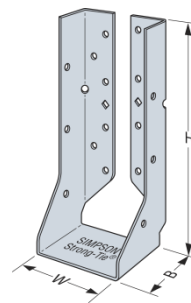
¹Refer to Figures 3a and 3b (this page) for definitions of hanger nomenclature (W, H, B).²The Fastener column with “minimum quantity” refers to hangers installed with the designated type of nails into only round pre-punched holes of the hanger, and the Fastener column with “maximum quantity” refers to HU series and HUC series hangers installed with the designated type of nails into both round and triangle pre-punched holes of the hanger. The hanger size and fastener quantity are used to determine allowable loads noted in [Table 3B](#).FIGURE 3a—
HU SERIES HANGERSFIGURE 3b—
HUC SERIES HANGERS

TABLE 3B—ALLOWABLE LOADS FOR THE HU AND HUC SERIES JOIST HANGERS¹

MODEL NO.	DIMENSIONS ² (inches)			FASTENERS (Quantity - Type)		ALLOWABLE LOADS ^{3,4,6} (lbs)			
						Uplift ⁵	Download		
	W	H	B	Header	Joist	C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
HU/HUC (Min Nailing)	1 ¹³ / ₁₆	5 ³ / ₈ to 6 ¹¹ / ₁₆	2 ¹ / ₂	12-16d	4-10d x 1 ¹ / ₂	610	1,785	2,015	2,165
	2 ¹ / ₈ to 7 ¹ / ₈	7 ⁵ / ₈ to 9 ¹ / ₈	2 ¹ / ₂	10-16d	4-10d	760	1,490	1,680	1,805
				14-16d	6-10d x 1 ¹ / ₂	915	2,085	2,350	2,530
				14-16d	6-10d	1,135	2,085	2,350	2,530
				14-16d	6-16d	1,345	2,085	2,350	2,530
	2 ¹ / ₈ to 7 ¹ / ₈	9 ³ / ₈ to 11 ¹ / ₈	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	915	2,380	2,685	2,890
				16-16d	6-10d	1,135	2,380	2,685	2,890
				16-16d	6-16d	1,345	2,380	2,685	2,890
				18-16d	6-10d x 1 ¹ / ₂	915	2,680	3,020	3,250
	1 ¹³ / ₁₆ to 5 ¹ / ₂	9 to 18	2 ¹ / ₂	18-16d	8-10d x 1 ¹ / ₂	1,515	2,680	3,020	3,250
				18-16d	8-10d	1,515	2,680	3,020	3,250
				18-16d	8-16d	1,795	2,680	3,020	3,250
				20-16d	8-10d x 1 ¹ / ₂	1,515	2,975	3,360	3,610
	2 ³ / ₈ to 7 ¹ / ₈	12 ¹ / ₁₆ to 19 ¹ / ₄	2 ¹ / ₂	20-16d	8-10d	1,515	2,975	3,360	3,610
				20-16d	8-16d	1,795	2,975	3,360	3,610
	1 ¹³ / ₁₆ to 5 ¹ / ₄	10 ¹ / ₄ to 11 ¹ / ₁₆	2 ¹ / ₂	22-16d	6-10d x 1 ¹ / ₂	915	3,275	3,695	3,970
				22-16d	8-10d	1,515	3,275	3,695	3,970
				22-16d	10-10d	1,795	3,275	3,695	3,970
				22-16d	8-16d	1,795	3,275	3,695	3,970
HU/HUC (Max Nailing)	3 ¹ / ₄	11 ³ / ₄	2 ¹ / ₂	24-16d	12-10d	1,795	3,570	4,030	4,335
	5 ¹ / ₄	13 ¹ / ₄ to 13 ³ / ₈	2 ¹ / ₂	26-16d	12-16d	2,695	3,870	4,365	4,695
	1 ¹³ / ₁₆	14	2 ¹ / ₂	28-16d	8-10d x 1 ¹ / ₂	1,515	4,165	4,420	4,505
	1 ¹³ / ₁₆	5 ³ / ₈ to 6 ¹¹ / ₁₆	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	915	2,380	2,685	2,890
				16-16d	8-10d x 1 ¹ / ₂	1,515	2,380	2,685	2,890
				14-16d	6-10d	1,135	2,085	2,350	2,530
				18-16d	10-10d x 1 ¹ / ₂	1,795	2,680	3,020	3,250
	2 ¹ / ₈ to 7 ¹ / ₈	7 ⁵ / ₈ to 9 ¹ / ₈	2 ¹ / ₂	18-16d	10-10d	1,795	2,680	3,020	3,250
				22-16d	10-10d x 1 ¹ / ₂	1,795	3,275	3,695	3,970
				22-16d	10-10d	1,795	3,275	3,695	3,970
				22-16d	8-16d	1,795	3,275	3,695	3,970
	2 ¹ / ₈ to 7 ¹ / ₈	9 ³ / ₈ to 11 ¹ / ₈	2 ¹ / ₂	24-16d	10-10d x 1 ¹ / ₂	1,795	3,570	4,030	4,335
				24-16d	12-10d x 1 ¹ / ₂	1,795	3,570	4,030	4,335
				24-16d	14-10d x 1 ¹ / ₂	1,795	3,570	4,030	4,335
				24-16d	12-10d	1,795	3,570	4,030	4,335
	1 ¹³ / ₁₆ to 5 ¹ / ₂	9 ⁵ / ₁₆ to 18	2 ¹ / ₂	24-16d	12-16d	2,695	3,570	4,030	4,335
				26-16d	14-10d x 1 ¹ / ₂	1,795	3,870	4,365	4,695
				26-16d	12-10d	1,795	3,870	4,365	4,695
				26-16d	12-16d	2,695	3,870	4,365	4,695
	2 ³ / ₄ to 7 ¹ / ₈	13 ⁵ / ₈ to 19 ¹ / ₄	2 ¹ / ₂	30-16d	10-10d x 1 ¹ / ₂	1,795	4,465	4,705	4,810
				36-16d	14-10d x 1 ¹ / ₂	1,795	5,055	5,275	5,420

For SI: 1 inch = 25.4 mm, 1 psi = 6.89 kPa, 1 lbf = 4.45 N.

¹HU hanger series with widths (W) equal to or greater than 2⁹/₁₆ inches (65 mm) are available with concealed flanges and are specified as HUC hanger series.

²Refer to [Figures 3a](#) and [3b](#) (previous page) for definitions of hanger nomenclature (W, H, B).

³Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

⁴HU series and HUC series hangers provide torsional resistance, which is defined as a moment of not less than 75 pounds (334 N) times the depth of the joist at which the lateral movement of the top or bottom of the joist with respect to its vertical position is 0.125 inch (3.2 mm). The height, H, of the joist hanger must be at least 60 percent of the height of the joist.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi for all models except those specific to glulam sizes, which are based on an allowable F_{c⊥} of 650 psi. When use is to support members having an F_{c⊥} of less than 750 psi or 650 psi, respectively, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

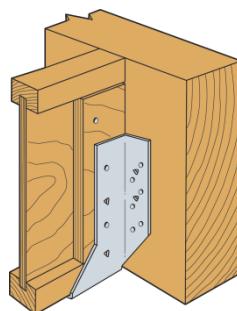


FIGURE 3c—TYPICAL HU HANGER

TABLE 4—ALLOWABLE LOADS FOR THE HUS SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,3,6} (lbs)			
	W	H	B	Header	Joist ⁴	Uplift ⁵	Download		
						C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
HUS46	3 ⁹ / ₁₆	5	2	4-16d	4-16d	1,165	1,065	1,210	1,305
HUS48	3 ⁹ / ₁₆	6 ¹⁵ / ₁₆	2	6-16d	6-16d	1,320	1,595	1,815	1,960
HUS410	3 ⁹ / ₁₆	8 ¹⁵ / ₁₆	2	8-16d	8-16d	2,990	2,125	2,420	2,615
HUS412	3 ⁹ / ₁₆	10 ¹ / ₂	2	10-16d	10-16d	3,435	2,660	3,025	3,265
HUS1.81/10	1 ¹³ / ₁₆	8 ⁷ / ₈	3	30-16d	10-16d	2,675	5,135	5,295	5,400

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 4 (this page) for definitions of hanger nomenclature (W, H, B).

²Tabulated allowable load capacities must be selected based on duration of load as permitted by the applicable building code.

³HUS hangers provide torsional resistance, which is defined as a moment of not less than 75 pounds (334 N) times the depth of the joist at which the lateral movement of the top or bottom of the joist with respect to its vertical position is 0.125 inch (3.2 mm). The height, H, of the joist hanger must be at least 60 percent of the height of the joist.

⁴Joist nails must be driven at a 45-degree angle through the joist into the header/beam (double shear nailing) to achieve the tabulated loads.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

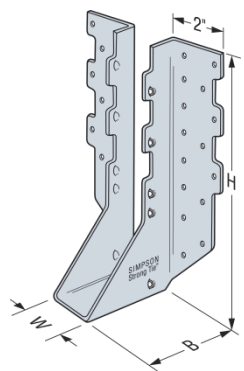


FIGURE 4—HUS JOIST HANGER (see Table 4)

TABLE 5—ALLOWABLE LOADS FOR THE HHUS SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,3} (lbs)			
	W	H	B	Header	Joist ⁴	Uplift ⁵	Download		
						C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
HHUS46	3 ⁵ / ₈	5 ¹ / ₈	3	14-16d	6-16d	1,320	2,785 ⁶	3,155 ⁶	3,405 ⁶
HHUS48	3 ⁵ / ₈	7	3	22-16d	8-16d	1,780	4,210 ⁶	4,770 ⁶	5,140 ⁶
HHUS410	3 ⁵ / ₈	9	3	30-16d	10-16d	3,565	5,635	6,380	6,445
HHUS5.50/10	5 ¹ / ₂	9	3	30-16d	10-16d	3,565	5,635	6,380	6,880
HHUS7.25/10	7 ¹ / ₄	9	3 ⁵ / ₁₆	30-16d	10-16d	3,565	5,635	6,380	6,880

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 5 (this page) for definitions of hanger nomenclature (W, H, B).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³HHUS hangers provide torsional resistance, which is defined as a moment of not less than 75 pounds (334 N) times the depth of the joist at which the lateral movement of the top or bottom of the joist with respect to its vertical position is 0.125 inch (3.2 mm). The height, H, of the joist hanger must be at least 60 percent of the height of the joist.

⁴Joist nails must be driven at a 45-degree angle through the joist into the header/beam (double shear nailing) to achieve the tabulated loads.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads for model numbers HHUS46 and HHUS48 are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

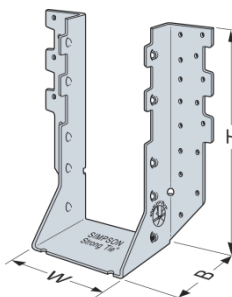


FIGURE 5—HHUS JOIST HANGER (see Table 5)

TABLE 6—ALLOWABLE LOADS FOR THE SUR/SUL SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)					FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,6} (lbs)			
	W	H	B	A ₁	A ₂	Header	Joist	Uplift ⁵	Download		
								C _D =1.6	C _D =1.0	C _D =1.15	C _D =1.25
SUR/L210	1 ⁹ / ₁₆	8	2	1 ¹ / ₈	1 ⁵ / ₁₆	10-16d	10-10d x 1 ¹ / ₂	1,585	1,440	1,635	1,760
SUR/L214	1 ⁹ / ₁₆	10	2	1 ¹ / ₈	1 ⁵ / ₁₆	12-16d	12-10d x 1 ¹ / ₂	1,930	1,730	1,960	2,115
SUR/L1.81/9	1 ¹³ / ₁₆	9	3	1 ⁵ / ₈	2 ⁵ / ₁₆	12-16d	2-10d x 1 ¹ / ₂	225 ^{3,4}	1,730	1,955	1,955
SUR/L1.81/11	1 ¹³ / ₁₆	11	3	1 ⁵ / ₈	2 ⁵ / ₁₆	16-16d	2-10d x 1 ¹ / ₂	225 ^{3,4}	2,305	2,560	2,560
SUR/L1.81/14	1 ¹³ / ₁₆	13 ³ / ₄	3	1 ⁵ / ₈	2 ⁵ / ₁₆	20-16d	2-10d x 1 ¹ / ₂	225 ^{3,4}	2,560	2,560	2,560
SUR/L2.06/9	2 ¹ / ₁₆	9 ¹ / ₁₆	3 ³ / ₁₆	1 ⁵ / ₈	2 ¹ / ₈	14-16d	2-10d x 1 ¹ / ₂	225 ³	2,015	2,285	2,465
SUR/L2.06/11	2 ¹ / ₁₆	11 ¹ / ₄	3 ³ / ₁₆	1 ⁵ / ₈	2 ¹ / ₈	16-16d	2-10d x 1 ¹ / ₂	225 ³	2,305	2,615	2,665
SUR/L2.06/14	2 ¹ / ₁₆	13 ⁵ / ₈	3 ³ / ₁₆	1 ⁵ / ₈	2 ¹ / ₈	18-16d	2-10d x 1 ¹ / ₂	225 ³	2,590	2,665	2,665
SUR/L2.1/9	2 ¹ / ₈	9 ¹ / ₁₆	3 ³ / ₁₆	1 ⁹ / ₁₆	2 ¹ / ₈	14-16d	2-10d x 1 ¹ / ₂	225 ³	2,015	2,285	2,465
SUR/L2.1/11	2 ¹ / ₈	11 ³ / ₁₆	3 ³ / ₁₆	1 ⁹ / ₁₆	2 ¹ / ₈	16-16d	2-10d x 1 ¹ / ₂	225 ³	2,305	2,615	2,665
SUR/L2.1/14	2 ¹ / ₈	13 ⁹ / ₁₆	3 ³ / ₁₆	1 ⁹ / ₁₆	2 ¹ / ₈	18-16d	2-10d x 1 ¹ / ₂	225 ³	2,590	2,665	2,665
SUR/L2.37/9	2 ³ / ₈	8 ¹⁵ / ₁₆	3 ³ / ₁₆	1 ⁵ / ₁₆	2 ¹ / ₈	14-16d	2-10d x 1 ¹ / ₂	225 ³	2,015	2,285	2,465
SUR/L2.37/11	2 ³ / ₈	11 ³ / ₁₆	3 ³ / ₁₆	1 ⁵ / ₁₆	2 ¹ / ₈	16-16d	2-10d x 1 ¹ / ₂	225 ³	2,305	2,615	2,665
SUR/L2.37/14	2 ³ / ₈	13 ⁷ / ₁₆	3 ³ / ₁₆	1 ⁵ / ₁₆	2 ¹ / ₈	18-16d	2-10d x 1 ¹ / ₂	225 ³	2,590	2,665	2,665
SUR/L2.56/9	2 ⁹ / ₁₆	8 ¹³ / ₁₆	3 ³ / ₁₆	1 ¹ / ₈	2 ¹ / ₈	14-16d	2-10d x 1 ¹ / ₂	225 ³	2,015	2,285	2,465
SUR/L2.56/11	2 ⁹ / ₁₆	11 ³ / ₁₆	3 ³ / ₁₆	1 ¹ / ₈	2 ¹ / ₈	16-16d	2-10d x 1 ¹ / ₂	225 ³	2,305	2,615	2,665
SUR/L2.56/14	2 ⁹ / ₁₆	13 ⁵ / ₁₆	3 ³ / ₁₆	1 ¹ / ₈	2 ¹ / ₈	18-16d	2-10d x 1 ¹ / ₂	225 ³	2,590	2,665	2,665
SUR/L210-2	3 ¹ / ₈	8 ¹¹ / ₁₆	2 ⁵ / ₈	1 ⁷ / ₁₆	2 ³ / ₈	14-16d	6-16d x 2 ¹ / ₂	1,160	2,015	2,285	2,345
SUR/L214-2	3 ¹ / ₈	12 ¹¹ / ₁₆	2 ⁷ / ₁₆	1 ⁷ / ₁₆	2 ³ / ₈	18-16d	8-16d x 2 ¹ / ₂	1,505	2,345	2,345	2,345
SUR/L46	3 ⁹ / ₁₆	4 ³ / ₄	2 ⁵ / ₈	1	2 ³ / ₈	8-16d	4-16d	730	1,150	1,305	1,325
SUR/L410	3 ⁹ / ₁₆	8 ¹ / ₂	2 ⁵ / ₈	1	2 ³ / ₈	14-16d	6-16d	1,160	2,015	2,285	2,345
SUR/L414	3 ⁹ / ₁₆	12 ¹ / ₂	2 ⁵ / ₈	1	2 ³ / ₈	18-16d	8-16d	1,505	2,345	2,345	2,345

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 6a (this page) for definitions of hanger nomenclature (W, H, B, A₁, A₂).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³Optional triangle holes may be filled (requires web stiffeners) for additional uplift resistance. When a total of six 10d x 1¹/₂" nails are installed into the joist for 9- and 11-inch models, an uplift value of 825 lbs may be used. When a total of eight 10d x 1¹/₂" nails are installed into the joist for 14-inch models, an uplift value of 1,190 lbs may be used.

⁴Uplift value based on use of LVL joist member. When using an I-joist as the joist member, allowable uplift must be taken as 140 lbs.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

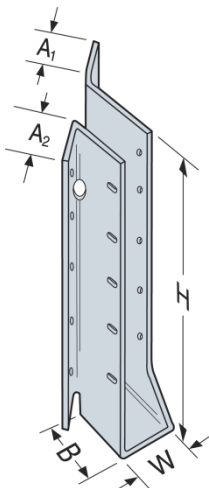


FIGURE 6a—SUL SERIES JOIST HANGER

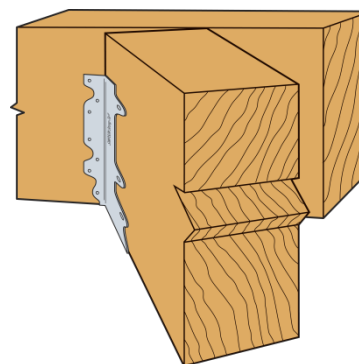


FIGURE 6b—TYPICAL SUR HANGER INSTALLATION

TABLE 7—ALLOWABLE LOADS FOR THE HSUR/HSUL SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)					FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,3} (lbs)			
	W	H	B	A ₁	A ₂	Header	Joist	Uplift ⁴	Download		
								C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
HSUR/L210-2	3 ¹ / ₈	8 ¹¹ / ₁₆	2 ⁷ / ₁₆	1 ³ / ₄	2 ³ / ₈	20-16d	6-16d x 2 ¹ / ₂	1,160	2,975	3,360	3,410
HSUR/L214-2	3 ¹ / ₈	12 ¹¹ / ₁₆	2 ⁷ / ₁₆	1 ³ / ₄	2 ³ / ₈	26-16d	8-16d x 2 ¹ / ₂	1,505	3,870	4,365	4,695
HSUR/L46	3 ⁹ / ₁₆	4 ³ / ₄	2 ⁷ / ₁₆	1	2 ³ / ₁₆	12-16d	4-16d	730	1,785	1,795	1,795
HSUR/L410	3 ⁹ / ₁₆	8 ¹ / ₂	2 ⁷ / ₁₆	1	2 ³ / ₁₆	20-16d	6-16d	1,160	2,975	3,360	3,410
HSUR/L414	3 ⁹ / ₁₆	12 ¹ / ₂	2 ⁷ / ₁₆	1	2 ³ / ₁₆	26-16d	8-16d	1,505	3,870	4,365	4,685
HSUR/L4.12/9	4 ¹ / ₈	9	3	1 ⁷ / ₁₆	2 ³ / ₈	12-16d	2-10d x 1 ¹ / ₂	145 ⁴	1,725	1,725	1,725
HSUR/L4.12/11	4 ¹ / ₈	11 ¹ / ₈	3	1 ⁷ / ₁₆	2 ³ / ₈	16-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,380	2,685	2,890
HSUR/L4.12/14	4 ¹ / ₈	13 ³ / ₄	3	1 ⁷ / ₁₆	2 ³ / ₈	20-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,975	3,330	3,330
HSUR/L4.12/16	4 ¹ / ₈	15 ³ / ₄	3	1 ⁷ / ₁₆	2 ³ / ₈	24-16d	2-10d x 1 ¹ / ₂	145 ⁴	3,330	3,330	3,330
HSUR/L4.28/9	4 ⁵ / ₁₆	9	3	1 ⁷ / ₁₆	2 ³ / ₈	12-16d	2-10d x 1 ¹ / ₂	145 ⁴	1,725	1,725	1,725
HSUR/L4.28/11	4 ⁵ / ₁₆	11 ¹ / ₈	3	1 ⁷ / ₁₆	2 ³ / ₈	16-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,380	2,685	2,890
HSUR/L4.75/9	4 ³ / ₄	8 ¹⁵ / ₁₆	2 ³ / ₄	1 ⁷ / ₁₆	2 ³ / ₈	12-16d	2-10d x 1 ¹ / ₂	145 ⁴	1,725	1,725	1,725
HSUR/L4.75/11	4 ³ / ₄	10 ¹⁵ / ₁₆	2 ³ / ₄	1 ⁷ / ₁₆	2 ³ / ₈	16-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,380	2,685	2,890
HSUR/L4.75/14	4 ³ / ₄	13 ³ / ₄	2 ³ / ₄	1 ⁷ / ₁₆	2 ³ / ₈	20-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,975	3,330	3,330
HSUR/L4.75/16	4 ³ / ₄	15 ³ / ₄	2 ³ / ₄	1 ⁷ / ₁₆	2 ³ / ₈	24-16d	2-10d x 1 ¹ / ₂	145 ⁴	3,330	3,330	3,330
HSUR/L5.12/9	5 ¹ / ₈	9	2 ¹³ / ₁₆	1 ⁷ / ₁₆	2 ³ / ₈	12-16d	2-10d x 1 ¹ / ₂	145 ⁴	1,725	1,725	1,725
HSUR/L5.12/11	5 ¹ / ₈	11	2 ¹³ / ₁₆	1 ⁷ / ₁₆	2 ³ / ₈	16-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,380	2,685	2,890
HSUR/L5.12/14	5 ¹ / ₈	13 ³ / ₄	2 ¹³ / ₁₆	1 ⁷ / ₁₆	2 ³ / ₈	20-16d	2-10d x 1 ¹ / ₂	145 ⁴	2,975	3,330	3,330
HSUR/L5.12/16	5 ¹ / ₈	15 ³ / ₄	2 ¹³ / ₁₆	1 ⁷ / ₁₆	2 ³ / ₈	24-16d	2-10d x 1 ¹ / ₂	145 ⁴	3,330	3,330	3,330

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 7a (this page) for definitions of hanger nomenclature (W, H, B, A₁, A₂).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³When I-joists are the supported member as shown in Figure 7b, each I-joist must have web stiffeners installed in accordance with the I-joist manufacturer's evaluation report, and the minimum required quantity and type of nails, as specified in the column entitled FASTENERS must be nailed directly into the web stiffeners and/or I-joist.

⁴Optional triangular holes may be filled (requires web stiffeners) for additional uplift. When a total of six 10d x 1¹/₂" nails are installed into the joist, an uplift value of 505 lbs may be used.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

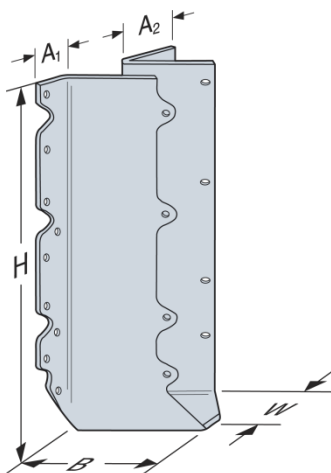


FIGURE 7a—HSUR JOIST HANGER

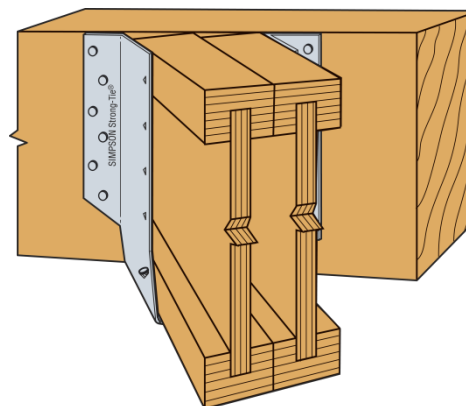
FIGURE 7b—TYPICAL HSUR JOIST HANGER INSTALLATION
(Web Stiffeners not shown for Clarity—See Footnote 3 to Table 7)

TABLE 8—ALLOWABLE LOADS FOR THE MIU SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (in.)			FASTENERS ^{3,4}		ALLOWABLE LOADS (lbs) ^{2,5,6,7}			
						Uplift ^{3,4,5}	Download		
	W	H	B	Header	Joist	C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
MIU1.56/7	1 ⁹ / ₁₆	6 ¹⁵ / ₁₆	2 ¹ / ₂	10-16d	4-10d x 1 ¹ / ₂	555	1,440	1,635	1,760
MIU1.56/9		8 ¹⁵ / ₁₆		16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU1.56/11		11 ¹ / ₁₆		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU1.56/14		13 ⁷ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,550	3,610
MIU1.81/7	1 ¹³ / ₁₆	6 ¹⁵ / ₁₆	2 ¹ / ₂	10-16d	4-10d x 1 ¹ / ₂	555	1,440	1,635	1,760
MIU1.81/9		8 ¹³ / ₁₆		16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU1.81/11		11 ¹ / ₁₆		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU1.81/14		13 ⁵ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU1.81/16		15 ⁵ / ₁₆		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,902	4,045
MIU1.81/18		17 ⁵ / ₁₆		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,020	4,045
MIU2.1/11	2 ¹ / ₈	11 ¹ / ₁₆	2 ¹ / ₂	20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU2.37/7	2 ³ / ₈	6 ¹⁵ / ₁₆	2 ¹ / ₂	10-16d	4-10d x 1 ¹ / ₂	555	1,440	1,635	1,760
MIU2.37/9		9		16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU2.37/11		11 ¹ / ₁₆		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU2.37/14		13 ¹ / ₂		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU2.37/16		15 ¹ / ₂		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU2.37/18		17 ¹ / ₂		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,045	4,045
MIU2.37/20		19 ¹ / ₂		28-16d	6-10d x 1 ¹ / ₂	965	4,030	4,060	4,060
MIU2.56/9	2 ⁹ / ₁₆	8 ¹⁵ / ₁₆	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU2.56/11		11 ¹ / ₁₆		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU2.56/13		12 ¹ / ₄		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU2.56/14		13 ⁷ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU2.56/16		15 ⁷ / ₁₆		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU2.56/18		17 ⁷ / ₁₆		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,045	4,045
MIU2.56/20		19 ⁷ / ₁₆		28-16d	6-10d x 1 ¹ / ₂	965	4,030	4,060	4,060
MIU3.12/9	3 ¹ / ₈	9 ¹ / ₁₆	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU3.12/11		11 ¹ / ₈		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU3.56/9	3 ⁹ / ₁₆	8 ¹³ / ₁₆	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU3.56/11		11 ¹ / ₈		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU3.56/14		13 ⁵ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU3.56/16		15 ⁵ / ₁₆		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU3.56/18		17 ⁵ / ₁₆		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,045	4,045
MIU3.56/20		19 ⁵ / ₁₆		28-16d	6-10d x 1 ¹ / ₂	965	4,030	4,060	4,060
MIU4.12/9	4 ¹ / ₈	9 ¹ / ₁₆	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU4.12/11		11 ¹ / ₈		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU4.12/14		13 ⁹ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU4.12/16		15 ⁹ / ₁₆		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU4.28/9	4 ⁵ / ₁₆	9	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU4.28/11		11 ¹ / ₈		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU4.28/14		13 ¹ / ₂		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU4.28/16		15 ¹ / ₂		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045

Please refer to next page for continuation of Table 8.

TABLE 8—ALLOWABLE LOADS FOR THE MIU SERIES JOIST HANGERS (Continued)

MODEL NO.	DIMENSIONS ¹ (in.)			FASTENERS ^{3,4}		ALLOWABLE LOADS (lbs) ^{2,5,6,7}			
						Uplift ^{3,4,5}	Download		
	W	H	B	Header	Joist	C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
MIU4.75/9	4 ³ / ₄	9	2 ¹ / ₂	16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU4.75/11		11 ¹ / ₁₆		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU4.75/14		13 ¹ / ₂		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU4.75/16		15 ¹ / ₂		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU4.75/18		17 ¹ / ₂		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,045	4,045
MIU4.75/20		19 ¹ / ₂		28-16d	6-10d x 1 ¹ / ₂	965	4,030	4,060	4,060
MIU5.12/7	5 ¹ / ₈	6 ¹⁵ / ₁₆	2 ¹ / ₂	10-16d	4-10d x 1 ¹ / ₂	555	1,440	1,635	1,760
MIU5.12/9		8 ¹³ / ₁₆		16-16d	6-10d x 1 ¹ / ₂	965	2,305	2,615	2,820
MIU5.12/11		11 ¹ / ₈		20-16d	6-10d x 1 ¹ / ₂	965	2,880	3,135	3,135
MIU5.12/14		13 ⁵ / ₁₆		22-16d	6-10d x 1 ¹ / ₂	965	3,170	3,595	3,875
MIU5.12/16		15 ⁵ / ₁₆		24-16d	6-10d x 1 ¹ / ₂	965	3,455	3,920	4,045
MIU5.12/18		17 ⁵ / ₁₆		26-16d	6-10d x 1 ¹ / ₂	965	3,745	4,045	4,045
MIU5.12/20		19 ⁵ / ₁₆		28-16d	6-10d x 1 ¹ / ₂	965	4,030	4,060	4,060

For **SI**: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 8a (this page) for definitions of hanger nomenclature (W, H and B).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁴Total number of joist nails specified in the table must be installed to resist tabulated uplift loads. The bottom two 10dx1¹/₂ nails must be installed at a 45-degree angle into the bottom flange of the prefabricated wood I-joist, as shown in the detail in Figure 8b (on this page). These nails are designated as PAN nails.

⁵Web stiffeners must be installed on wood I-joists, with the following exception: An alternate reduced uplift capacity of 230 lbs can be obtained without using web stiffeners and all of the specified joist nails indicated in the table by installing two angled PAN nails at the hanger seat into the bottom flange of the wood I-joist as shown in the detail in Figure 8b (on this page).

⁶For joist members other than prefabricated wood I-joists, lateral support must be provided at the ends in accordance with Section [2308.8.2](#) of the IBC or Section [R502.7](#) of the IRC.

⁷The tabulated allowable loads are based on the use of prefabricated wood I-joists having flanges with an allowable compression perpendicular-to-grain, F_{c⊥}, of 750 psi. When use is to support members having an F_{c⊥} of less than 750 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

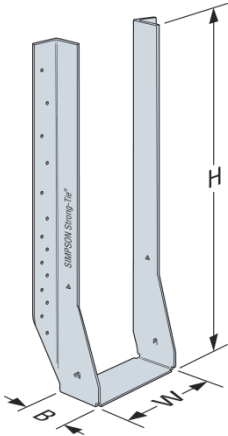


FIGURE 8a—MIU JOIST HANGER

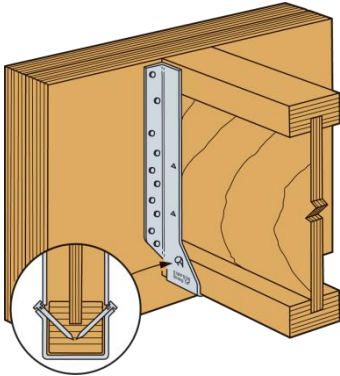


FIGURE 8b—ALTERNATE MIU JOIST HANGER INSTALLATION
(See Footnotes 3 and 4 to Table 8)

TABLE 9—ALLOWABLE LOADS FOR THE HGUS SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (Inches)			FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,5} (lbs)			
						Uplift ⁴	Download		
	W	H	B	Header	Joist ³	C _D = 1.6	C _D = 1.0	C _D = 1.15	C _D = 1.25
HGUS2.75/10	2 ³ / ₄	8 ⁷ / ₈	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS2.75/12	2 ³ / ₄	10 ⁷ / ₈	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS2.75/14	2 ³ / ₄	12 ⁷ / ₈	4	66-16d	22-16d	5,515	9,695	9,695	9,695
HGUS3.25/10	3 ¹ / ₄	8 ⁵ / ₈	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS3.25/12	3 ¹ / ₄	10 ⁵ / ₈	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS46	3 ⁵ / ₈	5 ⁵ / ₁₆	4	20-16d	8-16d	2,155	4,360	4,885	5,230
HGUS48	3 ⁵ / ₈	7 ¹ / ₁₆	4	36-16d	12-16d	3,235	7,460	7,460	7,460
HGUS410	3 ⁵ / ₈	9 ¹ / ₁₆	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS412	3 ⁵ / ₈	10 ⁷ / ₁₆	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS414	3 ⁵ / ₈	12 ⁷ / ₁₆	4	66-16d	22-16d	5,515	9,695	9,695	9,695
HGUS5.25/10	5 ¹ / ₄	9 ¹ / ₁₆	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS5.25/12	5 ¹ / ₄	10 ⁵ / ₈	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS5.5/8	5 ¹ / ₂	6 ¹⁵ / ₁₆	4	36-16d	12-16d	3,235	7,460	7,460	7,460
HGUS5.5/10	5 ¹ / ₂	8 ¹⁵ / ₁₆	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS5.5/12	5 ¹ / ₂	10 ¹ / ₂	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS5.5/14	5 ¹ / ₂	12 ¹ / ₂	4	66-16d	22-16d	5,515	9,695	9,695	9,695
HGUS5.62/10	5 ⁵ / ₈	8 ⁷ / ₈	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS5.62/12	5 ⁵ / ₈	10 ⁷ / ₁₆	4	56-16d	20-16d	5,040	9,400	9,400	9,400
HGUS5.62/14	5 ⁵ / ₈	12 ⁷ / ₁₆	4	66-16d	22-16d	5,515	9,695	9,695	9,695
HGUS6.88/10	5 ⁵ / ₈	8 ¹³ / ₁₆	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS6.88/12	6 ⁷ / ₈	10 ¹³ / ₁₆	4	56-16d	20-16d	5,045	9,400	9,400	9,400
HGUS6.88/14	6 ⁷ / ₈	12 ¹³ / ₁₆	4	66-16d	22-16d	5,515	9,695	9,695	9,695
HGUS7.25/8	7 ¹ / ₄	7 ¹ / ₄	4	36-16d	12-16d	3,235	7,460	7,460	7,460
HGUS7.25/10	7 ¹ / ₄	8 ⁵ / ₈	4	46-16d	16-16d	4,095	9,100	9,100	9,100
HGUS7.25/12	7 ¹ / ₄	10 ⁵ / ₈	4	56-16d	20-16d	5,040	9,400	9,400	9,499
HGUS7.25/14	7 ¹ / ₄	12 ⁵ / ₈	4	66-16d	22-16d	5,515	9,695	9,695	9,695

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 9 (this page) for definitions of hanger nomenclature (W, H, B).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³Joist nails must be driven at a 45-degree angle through the joist into the header/beam (double shear nailing) to achieve the tabulated loads.

⁴The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁵The allowable loads are based on the use of an engineered wood joist member with an allowable $F_{c\perp}$ of 750 psi for all models except those specific to glulam sizes, which are based on an allowable $F_{c\perp}$ of 650 psi. When use is to support members having an $F_{c\perp}$ of less than 750 psi or 650 psi, respectively, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

⁶For supported members other than glulam beams, lateral support must be provided at the ends in accordance with Section 2308.8.2 of the IBC or Section R502.7 of the IRC.

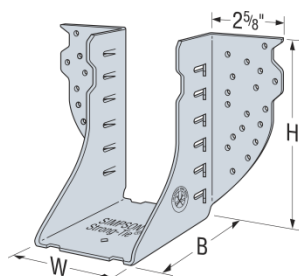


FIGURE 9—HGUS SERIES JOIST HANGER

TABLE 10—ALLOWABLE LOADS FOR THE LGU, MGU, HGU AND HHGU SERIES HANGERS

MODEL No.	DIMENSIONS ¹ (inches)					FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,6,7} (lbs)			
	W	H ⁴ (min)	B	h _a ³	a	Header	Joist	Uplift ⁵	Download		
LGU3.25-SDS	3 ¹ / ₄	8	4 ¹ / ₂	7 ³ / ₈	3 ¹ / ₄	16 SDS ¹ / ₄ "x 2 ¹ / ₂ "	12 SDS ¹ / ₄ "x 2 ¹ / ₂ "	5,555	6,720	7,310	7,310
LGU3.63-SDS	3 ⁵ / ₈										
LGU5.25-SDS	5 ¹ / ₄										
MGU3.63-SDS	3 ⁵ / ₈	9 ¹ / ₄	4 ¹ / ₂	8 ⁵ / ₈	4	24 SDS ¹ / ₄ "x 2 ¹ / ₂ "	16 SDS ¹ / ₄ "x 2 ¹ / ₂ "	7,260	9,450	9,450	9,450
MGU5.25-SDS	5 ¹ / ₄										
MGU5.50-SDS	5 ¹ / ₂										
MGU5.62-SDS	5 ⁵ / ₈										
MGU7.00-SDS	7										
HGU3.63-SDS	3 ⁵ / ₈	11	5 ¹ / ₄	10 ³ / ₈	4 ³ / ₄	36 SDS ¹ / ₄ "x 2 ¹ / ₂ "	24 SDS ¹ / ₄ "x 2 ¹ / ₂ "	9,460	13,160	13,160	13,160
HGU5.25-SDS	5 ¹ / ₄										
HGU5.50-SDS	5 ¹ / ₂										
HGU5.62-SDS	5 ⁵ / ₈										
HGU7.00-SDS	7										
HGU7.25-SDS	7 ¹ / ₄										
HGU9.00-SDS	9										
HHGU5.50-SDS	5 ¹ / ₂	13	5 ¹ / ₄	12 ³ / ₈	4 ³ / ₄	44 SDS ¹ / ₄ "x 2 ¹ / ₂ "	28 SDS ¹ / ₄ "x 2 ¹ / ₂ "	14,145	17,345	17,345	17,345
HHGU5.62-SDS	5 ⁵ / ₈										
HHGU7.00-SDS	7										
HHGU7.25-SDS	7 ¹ / ₄										
HHGU9.00-SDS	9										

For **SI**: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 10 (this page) for definitions of hanger nomenclature (W, H, B, h_a and a).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³The supporting member (header) height must be at least as high as the flange height, h_a.

⁴The H dimension must be specified. The maximum H dimension is 30 inches.

⁵The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁶The allowable loads are based on the use of an engineered wood joist member with an allowable F_{c⊥} of 650 psi. When use is to support members having an F_{c⊥} of less than 650 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

⁷For supported members other than glulam beams, lateral support must be provided at the ends in accordance with Section 2308.8.2 of the IBC or Section R502.7 of the IRC.

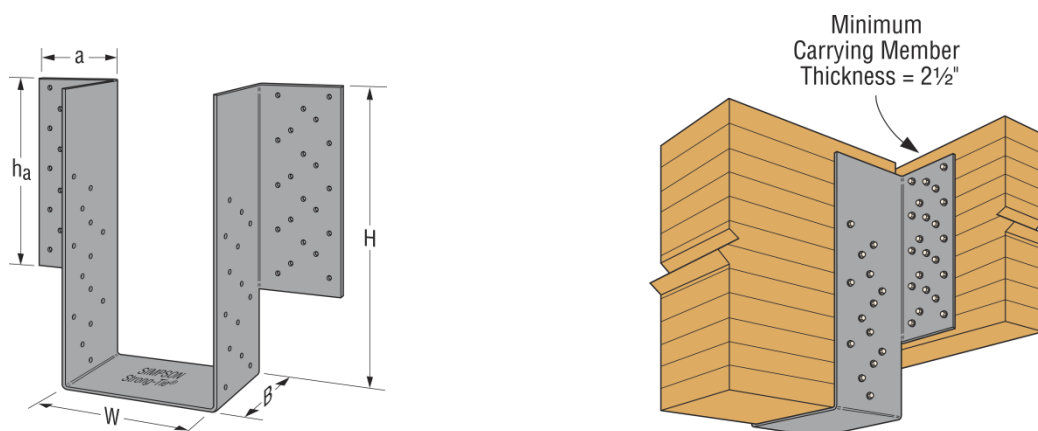


FIGURE 10—DIMENSIONS AND TYPICAL INSTALLATION OF THE LGU, MGU, HGU AND HHGU SERIES HANGERS

TABLE 11—ALLOWABLE LOADS FOR THE HUCQ SERIES JOIST HANGERS

MODEL NO.	DIMENSIONS ¹ (inches)			FASTENERS (Quantity-Type)		ALLOWABLE LOADS ^{2,3,5} (lbs)			
						Uplift ⁴	Download		
	W	H	B	Header	Joist	C _D =1.6	C _D =1.0	C _D =1.15	C _D =1.25
HUCQ1.81/9-SDS	1 ¹³ / ₁₆	9	3	8-SDS ¹ / ₄ " x 1 ³ / ₄ "	4-SDS ¹ / ₄ " x 1 ³ / ₄ "	1,310	2,000	2,300	2,500
HUCQ1.81/11-SDS	1 ¹³ / ₁₆	11	3	10-SDS ¹ / ₄ " x 1 ³ / ₄ "	4-SDS ¹ / ₄ " x 1 ³ / ₄ "	1,310	2,500	2,875	3,125
HUCQ410-SDS	3 ⁹ / ₁₆	9	3	12-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,265	4,500	4,500	4,500
HUCQ412-SDS	3 ⁹ / ₁₆	11	3	14-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,265	5,045	5,045	5,045
HUCQ5.25/9-SDS	5 ¹ / ₄	9	3	12-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,265	4,500	4,500	4,500
HUCQ5.25/11-SDS	5 ¹ / ₄	11	3	14-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,265	5,045	5,045	5,045
HUCQ610-SDS	5 ⁹ / ₁₆	9	3	12-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,325	4,680	5,185	5,185
HUCQ612-SDS	5 ⁹ / ₁₆	11	3	14-SDS ¹ / ₄ " x 2 ¹ / ₂ "	6-SDS ¹ / ₄ " x 2 ¹ / ₂ "	2,325	5,185	5,185	5,185

For **SI**: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

¹Refer to Figure 11 (this page) for definitions of hanger nomenclature (W, H, B).

²Tabulated allowable loads must be selected based on duration of load as permitted by the applicable building code.

³The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable uplift loads must be reduced when other load durations govern.

⁴The allowable loads are based on the use of an engineered wood joist member with an allowable $F_c \perp$ of 650 psi. When use is to support members having an $F_c \perp$ of less than 650 psi, it must be verified that the combination of bearing capacity and joist nail capacity is adequate.

⁵For supported members other than glulam beams, lateral support must be provided at the ends in accordance with Section 2308.8.2 of the IBC or Section R502.7 of the IRC.

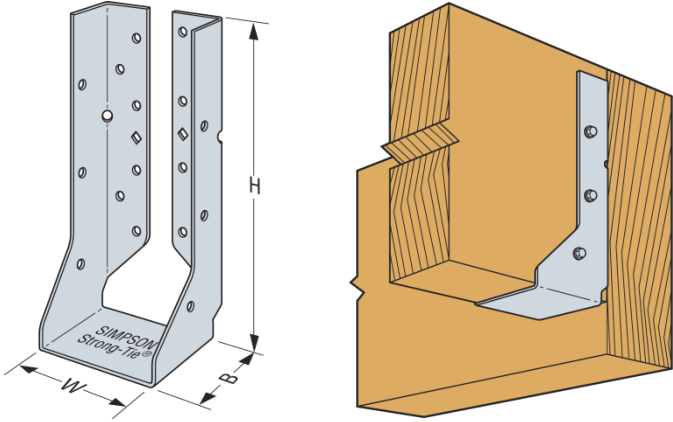


FIGURE 11—DIMENSIONS AND TYPICAL INSTALLATION OF THE HUCQ SERIES HANGERS

TABLE 12A—ALLOWABLE LOADS FOR DU, DHU AND DHUTF SERIES JOIST HANGERS

MODEL SERIES	PRODUCT DIMENSIONS (inches)				INSTALLATION CONDITION ^{1,6,7}	ALLOWABLE LOADS (lbs)	
	W	H	Ga	B		Uplift C _D =1.60 ^{3,4}	Download C _D =1.00 ²
DU	1 ⁹ / ₁₆ to 2 ³ / ₈	9 ¹ / ₈ to 15 ¹⁵ / ₁₆	14	2.5	Over (2) layers ⁵ / ₈ " gypsum wallboard	95	1,110
DHU DHUTF	1 ⁹ / ₁₆ to 3 ⁹ / ₁₆	9 ¹ / ₈ to 23 ¹⁵ / ₁₆	12	3	Over (2) layer ⁵ / ₈ " gypsum wallboard	95	1,410 ⁵

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45N.

¹Loads assume two layers of ⁵/₈-inch-thick Type X gypsum wallboard fastened using, at a minimum, the fastener schedule in Items 14.1-5 in IBC Table 721.1(2). Wall assembly must consist of minimum two 2x4 top plate members with studs spaced not more than 16 inches on center. Top plate member splices must occur at a stud location.

²Hangers spaced closer than 16 inches on center shall reduce capacity proportionately.

³Triangle nail holes may be filled with (4) additional 10d x 1¹/₂ inch long nails to achieve an allowable uplift load of 750 lbs.

⁴DF carried members with minimum 1¹/₂ inches x 2¹/₂ inches solid sawn dimensions increase the allowable uplift load to 170 lbs.

⁵Allowable download may be increased to 1,610 lbf for DF/SP using the DHU3.56/24 or DHUTF3.56/24 model hangers.

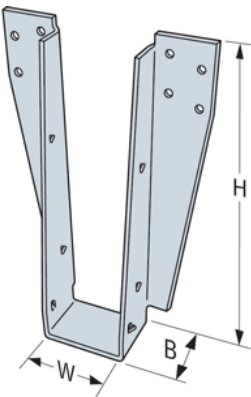
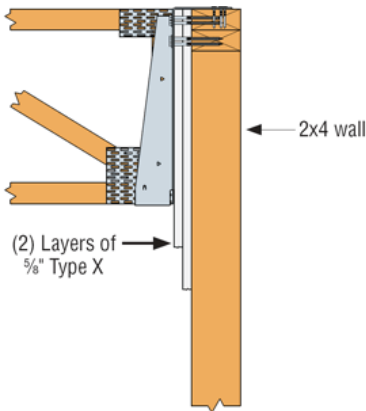
⁶DU and DHU are mounted with the top of the hanger flush with the top of the wall and tight to the gypsum wallboard.

⁷Wall top plates must be restrained to prevent rotation. Use an SSP stud plate tie to connect the wall top plate to each wall stud on the opposite face of the wall or provide equivalent restraint by another method as determined by the designer. The Simpson Strong-tie Company SSP is a cold-formed, galvanized steel, strap connector that has a bent end that when installed bears on the top of the wall top plate. The SSP is to be attached to the side of the wall top plates with three 10d common nails, and attached to the wall stud with four 10d common nails.

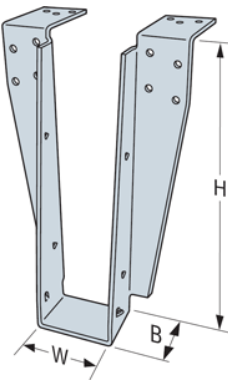
TABLE 12B—FASTENER SCHEDULE FOR DHU, DHU AND DHUTF SERIES HANGERS

SERIES	FASTENERS		
	Joist ¹	Face	Top
DU	(2) 10d x 1 ¹ / ₂ "	(4) SDS ¹ / ₄ " x 3.5"	-
DHU	(2) 10d x 1 ¹ / ₂ "	(8) SDS ¹ / ₄ " x 3.5"	-
DHUTF	(2) 10d x 1 ¹ / ₂ "	(8) SDS ¹ / ₄ " x 3.5"	(6) 10d x 1 ¹ / ₂ "

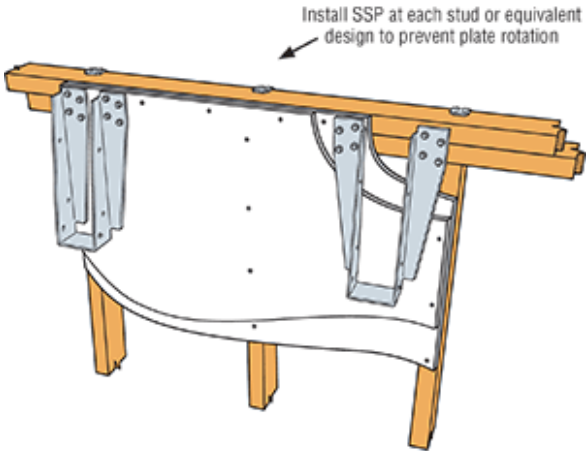
¹The two nails must be installed in the positive angle nailing (PAN) holes close to the hanger seat.



DHU (DU Similar)



DHUTF



Typical DHU Installation

FIGURE 12—DU, DHU AND DHUTF HANGERS

ICC-ES Evaluation Report

ESR-2552 LABC and LARC Supplement

Issued July 2018

This report is subject to renewal March 2019.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 23—Wood, Plastics, and Composite Fastenings

REPORT HOLDER:

SIMPSON STRONG-TIE COMPANY INC.

EVALUATION SUBJECT:

**SIMPSON STRONG-TIE® FACE-MOUNT HANGERS FOR STRUCTURAL COMPOSITE LUMBER (SCL),
PREFABRICATED WOOD I-JOISTS AND GLULAM BEAMS (ENGINEERED WOOD PRODUCTS)**

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Simpson Strong-Tie® face-mount hangers for structural composite lumber (SCL), prefabricated wood I-joists and glulam beams (engineered wood products), described in ICC-ES master evaluation report [ESR-2552](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2017 *City of Los Angeles Building Code* (LABC)
- 2017 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Simpson Strong-Tie® face mount hangers for structural composite lumber (SCL), prefabricated wood I-joists and glulam beams (engineered wood products), described in Sections 2.0 through 7.0 of the master evaluation report [ESR-2552](#), comply with the LABC Chapter 23, and the LARC, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Simpson Strong-Tie® face mount hangers for structural composite lumber (SCL), prefabricated wood I-joists and glulam beams (engineered wood products), described in this evaluation report supplement, must comply with all of the following conditions:

- All applicable sections in the master evaluation report [ESR-2552](#).
- The design, installation, conditions of use and identification are in accordance with the 2015 *International Building Code*® (2015 IBC) provisions noted in the master evaluation report [ESR-2552](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- The supported end of joist or beam must be within $\frac{1}{4}$ -inch from the supporting member.
- Solid blocking must be required for all joist hangers supporting roof joists having one end twisted more than one-half degree per foot of length relative to the other end, except as specifically noted in the master evaluation report.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the master report, reissued March 2018 and revised July 2018.