CONNECTOR SELECTION GUIDE

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This guide lists popular options for Simpson Strong-Tie hangers used with engineered wood products. Not all available hanger and installation combinations are listed. Use in conjunction with the current Simpson Strong-Tie *Wood Construction Connectors* catalog for detailed hanger information.

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ALLOWABLE STRESS DESIGN

800-999-5099 www.strongtie.com

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CSG-RFP09 3/09 exp. 6/11



General Notes

- 1. See current *Wood Construction Connectors* catalog for Important Information and General Notes, and for hanger models, joist sizes, and header situations not shown. See pages 10-12 for installation information.
- Unless otherwise noted, loads listed address hanger/header/fastener limitations assuming header material is Douglas Fir-Larch, Southern Pine or LVL and glulam headers made primarily of Douglas Fir/Southern Pine. Loads are in pounds. Joist reaction should be checked by a qualified designer to ensure proper hanger selection.
- 3. Uplift loads have been increased by 60% for earthquake and wind loading with no further increase allowed. Reduce loads according to code for normal duration loading such as cantilever construction.
- 4. If hanger height is less than 60% of joist height, joist rotation may occur; see information below.
- 5. Top flange hanger configuration and thickness of top flange need to be considered for flush frame conditions, see page 10.

Wood I-Joist Headers

I-Joist Headers:

When supporting one I-joist from another, backer blocks must be used. Backer blocks are to be made from plywood, OSB, or dimension lumber. The thickness of a backer block should be the same thickness as the void in the side of the I-joist and a minimum of 12" wide. Attach with 10-10d common nails clinched as necessary, prior to installing the hanger. For Top Flange hangers, install backer blocks tight to top flange. For Face Mount hangers, install backer blocks tight to bottom flange. Refer to I-Joist manufacturer literature for specific guidelines.

Top Flange Hangers:

Use $10dx1\frac{1}{2}$ " nails for all Top Flange hangers attached to an I-joist header. See table for allowable loads.

Model No.	I-Joist Header: 1½" Thick Flange Material ¹								
	DF/SCL	SPF							
ITS	1085	940							
MIT	1230	885							
LBV	1495	1350							
BA	1495	1495							

1. For flanges with thicknesses from 15⁄16" to 13⁄6", use 0.85 of the I-joist header load. For flanges with thicknesses from 1½" to 1¼", use 0.75 of the I-joist header load.

Face Mount Hangers:

For Face Mount hangers using 16d nails with headers having a flange width less than 2" wide but at least $1\frac{1}{2}$ " wide, apply a reduction factor of 0.75 to all table loads.

For Face Mount hangers using 10d nails with headers having a flange width less than $1\frac{3}{4}$ " wide but at least $1\frac{1}{2}$ " wide, apply a reduction factor of 0.85 to all table loads.





BLOCK EACH SIDE Backer block nails not shown for clarity.

2

Face Mount

- 6. For this publication, carrying members are assumed to be at least 5½" tall. The horizontal thickness of the carrying member must be at least the length of nail being used or the hanger top flange dimension, whichever is greater. <u>Exception</u>: narrower carrying members may be used with <u>face mount</u> hangers but the horizontal thickness must be at least 1¾" for 10d nails; 2" for 16d nails. Clinch nails on back side.
- THAI hangers in this publication are based on a "top flange" installation and require that the carrying member have a horizontal thickness of at least 2½". Backer blocks are required when the header is an I-joist.
- 8. All nails shown are common nails unless otherwise noted.
- 9. I-joists that are used as headers require backer blocks. See <u>Wood I-Joist</u> <u>Headers</u> below for additional information.
- 10. **Multiple Members**: Multiple members should be adequately connected together to act as one unit.

Sloped Joists:

For joists sloped up to 1/4:12, there is no reduction of load. For slopes greater than 1/4:12, see table.

Sloped Joist												
Model	Model Slope											
ITS, IUS, MIT, MIU, LBV, B, HB	1⁄2:12 max	10%										
WP, HW	3⁄4:12 max	15%										

Prevent Rotation

Hangers provide some joist rotation resistance; however, additional lateral restraint may be required for deep joists.



No Web Stiffener Installed Hanger side flange supports joist top flange.



Rotation Resistance

If non-skewed hanger side flange is less than 60% of joist depth, attach staggered A34 framing anchors above the hanger.



Web Stiffener Required Hanger side flange should be at least 60% of joist depth or potential joist rotation must be addressed.



No Web Stiffener Results in Rotation

Hanger side flange is below the joist top flange. No web stiffener results in rotation, unless restrained by other means.

HOW TO PICK A HANGER

Follow these simple steps to choose your hanger:

1	Find your joist size in this guide.
2	 Choose your header type. Solid header or I-joist. Solid headers include solid sawn Douglas Fir or Southern Pine, and LVL (manufactured in the U.S.). For I-joist header see page 2.
3	Locate your connector type in the table.Face mount, top flange, skewed, sloped, etc.
4	Select a hanger from the table.
5	Confirm that your joist load is less than the hanger load. If yes, you have successfully selected your hanger.
	If you did not find a suitable hanger; Please see the current <i>Wood Construction Connectors</i> catalog or call Simpson Strong-Tie at (800) 999-5099. You will need the following information: • Download • Uplift • Header condition • Bearing length requirement

SINGLE I-JOISTS - U.S./Allowable Load (lbs)

SIMPSON
Strong-Tie
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			Top Fla	nge				F	ace Mou	nt			45° Skew					
Joist	Madal	В	Fasten	er Type	Uplift	Down	Madal	В	Fastene	r Type	Uplift	Down	Madal	В	Faste	ner Type	Uplift	Down
Height	wodei	Dim	Header	Joist	(160)	Load	wodei	Dim	Header	Joist	(160)	Load	wodei	Dim	Header	Joist	(160)	Load
RFPI®.	-20							Joi	st Width =	1¾"								
91⁄2	ITS1.81/9.5	2	6-10d	—	105	1520	IUS1.81/9.5	2	8-10d	—	75	935	SUR/L1.81/9	3	12-16d	2-10dx11⁄2	145	1595
117⁄8	ITS1.81/11.88	2	6-10d	—	105	1520	IUS1.81/11.88	2	10-10d	—	75	1170	SUR/L1.81/11	3	16-16d	2-10dx1½	145	2130
14	ITS1.81/14	2	6-10d	_	105	1520	IUS1.81/14	2	12-10d	_	75	1405	SUR/L1.81/14	3	20-16d	2-10dx1½	145	2500
RFPI®-400 Joist Width = 21/16"																		
91⁄2	ITS2.06/9.5	2	6-10d	_	105	1520	IUS2.06/9.5	2	8-10d	_	75	935	SUR/L2.1/9	33⁄16	14-16d	2-10dx1½	225	2015
117⁄8	ITS2.06/11.88	2	6-10d	—	105	1520	IUS2.06/11.88	2	10-10d	—	75	1170	SUR/L2.1/11	3¾16	16-16d	2-10dx11⁄2	225	2305
14	ITS2.06/14	2	6-10d	—	105	1520	IUS2.06/14	2	12-10d	—	75	1405	SUR/L2.1/11	33⁄16	16-16d	2-10dx1½	225	2305
16	ITS2.06/16	2	6-10d	_	105	1520	IUS2.06/16	2	14-10d	—	75	1640	SUR/L2.1/11	3¾16	16-16d	2-10dx1½	225	2305
RFPI ^{®.}	-40							Jois	st Width =	2 5⁄16"								
91⁄2	ITS2.37/9.5	2	6-10d	_	105	1520	IUS2.37/9.5	2	8-10d	—	75	935	SUR/L2.37/9	3¾16	14-16d	2-10dx11/2	225	2015
117⁄8	ITS2.37/11.88	2	6-10d	_	105	1520	IUS2.37/11.88	2	10-10d	_	75	1170	SUR/L2.37/11	33⁄16	16-16d	2-10dx11/2	225	2305
14	ITS2.37/14	2	6-10d	_	105	1520	IUS2.37/14	2	12-10d	—	75	1405	SUR/L2.37/14	33⁄16	18-16d	2-10dx11/2	225	2590
16	ITS2.37/16	2	6-10d	—	105	1520	IUS2.37/16	2	14-10d	—	75	1640	SUR/L2.37/14	33⁄16	18-16d	2-10dx1½	225	2590
RFPI ^{®.}	-40S, RFPI®-60	S						Joi	st Width =	2 ½"								
91⁄2	ITS2.56/9.5	2	6-10d	—	105	1520	IUS2.56/9.5	2	8-10d	—	75	935	SUR/L2.56/9	33⁄16	14-16d	2-10dx11/2	225	2015
117⁄8	ITS2.56/11.88	2	6-10d	—	105	1520	IUS2.56/11.88	2	10-10d	—	75	1170	SUR/L2.56/11	33⁄16	16-16d	2-10dx11/2	225	2305
14	ITS2.56/14	2	6-10d	—	105	1520	IUS2.56/14	2	12-10d	—	75	1405	SUR/L2.56/14	33⁄16	18-16d	2-10dx11/2	225	2590
16	ITS2.56/16	2	6-16d	_	105	1520	IUS2.56/16	2	14-10d	—	75	1640	SUR/L2.56/14	33⁄16	18-16d	2-10dx1½	225	2590
RFPI ^{®.}	-70							Jois	st Width = :	2 5⁄16"								
91⁄2	ITS2.37/9.5	2	6-10d	_	105	1520	IUS2.37/9.5	2	8-10d	_	75	935	SUR/L2.37/9	3¾16	14-16d	2-10dx11/2	225	2015
117⁄8	ITS2.37/11.88	2	6-10d	_	105	1520	IUS2.37/11.88	2	10-10d	—	75	1170	SUR/L2.37/11	3¾16	16-16d	2-10dx11/2	225	2305
14	ITS2.37/14	2	6-10d	_	105	1520	IUS2.37/14	2	12-10d	—	75	1405	SUR/L2.37/14	3¾16	18-16d	2-10dx11/2	225	2590
16	ITS2.37/16	2	6-10d	_	105	1520	IUS2.37/16	2	14-10d	—	75	1640	SUR/L2.37/14	3¾16	18-16d	2-10dx1½	225	2590
RFPI®.	-90							Joi	st Width =	31⁄2"								
117/8	ITS3.56/11.88	2	6-10d	—	105	1520	IUS3.56/11.88	2	12-10d	—	75	1405	SUR/L410	25⁄8	14-16d	6-16d	1275	1860
14	ITS3.56/14	2	6-10d	_	105	1520	IUS3.56/14	2	12-10d	—	75	1405	SUR/L414	21⁄2	18-16d	8-16d	1700	2395
16	ITS3.56/16	2	6-10d	_	105	1520	IUS3.56/16	2	14-10d	_	75	1640	SUR/L414	21⁄2	18-16d	8-16d	1700	2395

1. Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required by others for non-shaded hangers.

2. THAI hangers require a minimum of 4 top and 2 face nails installed.

3. Loads listed assume a solid header, see page 2 for I-joist headers.



ITS – 18 gauge The new ITS top flange hanger with its Strong-Grip™ seat and Funnel Flange™ secures I-joists with flange thicknesses from $1\frac{1}{8}$ " – $1\frac{1}{2}$ " and installs faster than any other top flange hanger. Joist nails are not required.



IUS – 18 gauge The IUS is a hybrid hanger that incorporates the advantages of face-mount and top-flange hangers. Joist nails are not required.



SUR/L – 16 gauge **HSUR/L** – 14 gauge All models are skewed 45°. Normally accommodates a 40° - 50° skew. The installation of these hangers does not require a beveled end cut.

SINGLE I-JOISTS - U.S./Allowable Load (lbs)

			Adjus	table I	leight		Field Slope & Skew								
			Fa	stener	Туре					Faste	ner Type				
Joist Height	Model	B	Hea	der		Uplift	Down	Model	B			Uplift	Down		
noigin		חוע	Тор	Face	Joist	(160)	Luau		ווע	Header	Joist	(160)	LUAU		
RFPI®-	-20			1		Joist W	idth = 1३	/4"		1					
91⁄2	THAI1.81/22	21⁄4	4-10d	2-10d	2-10dx1½	—	1715	LSSUI25	31⁄2	9-10d	7-10dx1½	785	995		
117⁄8	THAI1.81/22	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSUI25	31⁄2	9-10d	7-10dx1½	785	995		
14	THAI1.81/22	21⁄4	4-10d	2-10d	2-10dx1½	_	1715	LSSUI25	31⁄2	9-10d	7-10dx1½	785	995		
RFPI®.	-400		l.			Joist Wi	dth = 2½	/16 ["]							
91⁄2	THAI2.1/22	21⁄4	4-10d	2-10d	2-10dx1½	—	1715	LSSU2.1	31⁄2	9-10d	7-10dx1½	785	995		
111/8	THAI2.1/22	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU2.1	31/2	9-10d	7-10dx1½	785	995		
14	THAI2.1/22	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU2.1	31⁄2	9-10d	7-10dx1½	785	995		
16	See Wood	Constru	iction Cor	nnectors	catalog for ha	nger selec	tion.	See Wood Construction Connectors catalog for hanger selection.							
RFPI®-	-40					Joist Wi	dth = 25⁄	/16 ["]							
91⁄2	THAI3522	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSUI35	31⁄2	9-10d	7-10dx1½	785	995		
111/8	THAI3522	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSUI35	31⁄2	9-10d	7-10dx11/2	785	995		
14	THAI3522	21⁄4	4-10d	2-10d	2-10dx11⁄2	—	1715	LSSUI35	31⁄2	9-10d	7-10dx1½	785	995		
16	See Wood	Constru	iction Cor	nnectors	catalog for ha	nger selec	tion.	See Wood Co	nstruct	tion Connec	<i>ctors</i> catalog for	hanger s	election.		
RFPI®-	-40S, RFPI®-6	OS				Joist W	idth = 21	/2 ["]							
91⁄2	THAI322	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSUH310	31⁄2	14-16d	12-10dx1½	1150	1600		
111/8	THAI322	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSUH310	31⁄2	14-16d	12-10dx11/2	1150	1600		
14	THAI322	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSUH310	31⁄2	14-16d	12-10dx11/2	1150	1600		
16	See Wood	Constru	iction Cor	nnectors	catalog for ha	nger selec	tion.	See Wood Co	nstruct	tion Connec	<i>ctors</i> catalog for	hanger s	election.		
RFPI®.	-70					Joist Wi	dth = 25⁄	/16 ["]							
91⁄2	THAI3522	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSUI35	31⁄2	9-10d	7-10dx1½	785	995		
117⁄8	THAI3522	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSUI35	31⁄2	9-10d	7-10dx1½	785	995		
14	THAI3522	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSUI35	31⁄2	9-10d	7-10dx1½	785	995		
16	See Wood	Constru	iction Cor	nnectors	catalog for ha	tion.	See Wood Co	nstruct	tion Connec	<i>tors</i> catalog for	hanger s	election.			
RFPI®.	-90					Joist W	idth = 31	/2"							
117⁄8	THAI422	21⁄4	4-10d	2-10d	2-10dx11/2	—	1715	LSSU410	31/2	14-16d	12-10dx11/2	1150	1625		
14	THAI422	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU410	31⁄2	14-16d	12-10dx1½	1150	1625		
16	See Wood	Constru	iction Cor	nectors	catalog for ha	nger selec	tion.	See Wood Co	nstruct	tion Connec	<i>tors</i> catalog for	hanger s	election.		

1. See notes on page 4.



THAI – 18 gauge This hanger has extra long straps and can be field-formed to give height adjustability and top flange hanger convenience. Positive angle nailing helps minimize splitting of the I-joist's bottom flange. Minimum nailing is shown in the table above. Strap must be field-formed over the top of the header by a minimum of 21/2". Web stiffeners required when used with I-joists.



LSSU, LSSUI – 18 gauge LSSU210-2, LSSU410, and LSSUH310 – 16 gauge LSU – 14 gauge LSSU models provide uplift capacity and can be field sloped and/or skewed to 45°. Web stiffeners required when used with I-joists; cut web stiffener to match angle on sloped conditions.

DOUBLE I-JOISTS – U.S./Allowable Load (lbs)

SIMPSON	
Strong-Tie	

			Top Fla	nge					Face M	ount			45° Skew					
Joist	Madal	В	Faster	ier Type	Uplift	Down	Madal	В	Faster	er Type	Uplift	Down	Madal	В	Faster	ier Type	Uplift	Down
Height	wodei	Dim	Header	Joist	(160)	Load	Model	Dim	Header	Joist	(160)	Load	wodei	Dim	Header	Joist	(160)	Load
Doub	le RFPI®-20							Ja	ist Widtl	1 = 3½"								
91⁄2	MIT49.5	21⁄2	8-16d	2-10dx1½	215	2305	MIU3.56/9	21⁄2	16-16d	2-10dx11/2	230	2270	SUR/L410	25⁄8	14-16d	6-16d	1275	1860
117⁄8	MIT411.88	21⁄2	8-16d	2-10dx11/2	215	2305	MIU3.56/11	21⁄2	20-16d	2-10dx11/2	230	2840	SUR/L410	25⁄8	14-16d	6-16d	1275	1860
14	MIT414	21/2	8-16d	2-10dx1½	215	2305	MIU3.56/14	21⁄2	22-16d	2-10dx11/2	230	3145	SUR/L414	21⁄2	18-16d	8-16d	1700	2395
Double RFPI®-400 Joist Width = 41%"																		
91⁄2	MIT4.28/9.5	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.28/9	21⁄2	16-16d	2-10dx11/2	230	2270	HSUR/L4.28/9	3	12-16d	2-10dx11/2	145	1655
117⁄8	MIT4.28/11.88	21/2	8-16d	2-10dx11/2	215	2305	MIU4.28/11	21⁄2	20-16d	2-10dx11/2	230	2840	HSUR/L4.28/11	3	16-16d	2-10dx11/2	145	2210
14	MIT4.28/14	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.28/14	21⁄2	22-16d	2-10dx11/2	230	3125	HSUR/L4.28/11	3	16-16d	2-10dx11/2	145	2210
16	LBV4.28/16	21⁄2	10-16d	2-10dx1½	265	2460	MIU4.28/16	21⁄2	24-16d	2-10dx11/2	230	3410	HSUR/L4.28/11	3	16-16d	2-10dx11/2	145	2210
Doub	le RFPI®-40							Ja	ist Widtl	1 = 45⁄8"								
91⁄2	MIT359.5-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/9	21⁄2	16-16d	2-10dx11/2	230	2270	HSUR/L4.75/9	23⁄4	12-16d	2-10dx11/2	145	1655
117⁄8	MIT3511.88-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/11	21⁄2	20-16d	2-10dx11/2	230	2840	HSUR/L4.75/11	23⁄4	16-16d	2-10dx11/2	145	2210
14	MIT3514-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/14	21⁄2	22-16d	2-10dx11/2	230	3125	HSUR/L4.75/14	23⁄4	20-16d	2-10dx11/2	145	2760
16	MIT4.75/16	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/16	21⁄2	24-16d	2-10dx11/2	230	3410	HSUR/L4.75/16	23⁄4	24-16d	2-10dx11/2	145	3050
Doub	le RFPI®-40S,	RFP	®-60S					J	loist Wid	th = 5"								
91⁄2	MIT39.5-2	21/2	8-16d	2-10dx1½	215	2305	MIU5.12/9	21⁄2	16-16d	2-10dx11/2	230	2270	HSUR/L5.12/9	213/16	12-16d	2-10dx11/2	145	1655
111/8	MIT311.88-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU5.12/11	21⁄2	20-16d	2-10dx11/2	230	2840	HSUR/L5.12/11	2 ¹³ ⁄16	16-16d	2-10dx11/2	145	2210
14	MIT314-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU5.12/14	21⁄2	22-16d	2-10dx11/2	230	3125	HSUR/L5.12/14	2 ¹³ ⁄16	20-16d	2-10dx11/2	145	2760
16	MIT5.12/16	21⁄2	8-16d	2-10dx11/2	215	2305	MIU5.12/16	21⁄2	24-16d	2-10dx11/2	230	3410	HSUR/L5.12/16	213/16	24-16d	2-10dx11⁄2	145	3050
Doub	le RFPI®-70							Jo	ist Widtl	1 = 45%"								
91⁄2	MIT359.5-2	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/9	21⁄2	16-16d	2-10dx11⁄2	230	2270	HSUR/L4.75/9	23⁄4	12-16d	2-10dx11⁄2	145	1655
117⁄8	MIT3511.88-2	21⁄2	8-16d	2-10dx1½	215	2305	MIU4.75/11	21⁄2	20-16d	2-10dx11/2	230	2840	HSUR/L4.75/11	23⁄4	16-16d	2-10dx11/2	145	2210
14	MIT3514-2	21⁄2	8-16d	2-10dx1½	215	2305	MIU4.75/14	21⁄2	22-16d	2-10dx11/2	230	3125	HSUR/L4.75/14	23⁄4	20-16d	2-10dx11/2	145	2760
16	MIT4.75/16	21⁄2	8-16d	2-10dx11/2	215	2305	MIU4.75/16	21⁄2	24-16d	2-10dx11/2	230	3410	HSUR/L4.75/16	23⁄4	24-16d	2-10dx11/2	145	3050
Doub	le RFPI®-90							J	oist Wid	th = 7"								
117⁄8	B7.12/11.88	21⁄2	14-16d	6-16d	1010	3800	HU412-2	21⁄2	22-16d	8-16d	1715	2950	HU412-2X ²	21/2	22-16d	8-16d	1285	2360
14	B7.12/14	21⁄2	14-16d	6-16d	1010	3800	HU414-2	21⁄2	26-16d	12-16d	2575	3485	HU414-2X ²	21/2	26-16d	12-16d	1930	2790
16	B7.12/16	21/2	14-16d	6-16d	1010	3800	HU414-2	21⁄2	26-16d	12-16d	2575	3485	HU414-2X ²	21/2	26-16d	12-16d	1930	2790

1. Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required by others for non-shaded hangers. 2. Skew option must be special ordered. Specify skew angle and

direction (e.g. HU412-2x, SKR45°).



MIT - 16 gauge The MIT's Positive Angle Nailing helps minimize splitting of the I-joist's bottom flange. Features uplift capacity and extended seat design (to allow installation of slightly undercut joists).

3. Loads listed assume a solid header, see page 2 for

I-joist headers. 4. LSU3510-2, LSU4.28 & LSU5.12 are field-sloped only. Skewed option must be special ordered, specify skew angle.

5. THAI hangers require a minimum of 4 top and 2 face nails installed. THAI-2 must be special ordered. Specify width between 31/8" and 55/16".

> • .

MIU



LBV - 14 gauge The LBV is designed especially for use with multiple ply headers 11/2" to 13/4" thick, and may be used for weld-on applications.



B – 12 gauge The B series offers versatility for I-joists and SCL lumber. Enhanced load capacity widens the range of applications for these hangers.

MIU – 16 gauge The MIU series features 16 gauge steel and extra nailing for higher loads than the IUT.

DOUBLE I-JOISTS - U.S./Allowable Load (lbs)

			Adjı	ıstable H	eight					Field Slo	ope & Skew		
		_	F	astener T	ype					Faste	ner Type		
Joist Heinht	Model	B	Hea	ader	1	Uplift (160)	Down	Model	B	Usedau	la tat	Uplift (160)	Down Load
morgin			Тор	Face	JOIST	(100)	Luau			Header	JOIST	(100)	Luau
Double	RFPI®-20					Joist	Width =	3 ½"					
91⁄2	THAI422 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU410	31⁄2	14-16d	12-10dx1½	1150	1625
111/8	THAI422 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU410	31⁄2	14-16d	12-10dx1½	1150	1625
14	THAI422 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2	_	1715	LSSU410	31⁄2	14-16d	12-10dx1½	1150	1625
Double	RFPI®-400					Width = 4	4 1⁄8"						
91⁄2	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	_	2020	LSU4.28 ⁴	31⁄2	24-16d	16-10dx1½	1150	2300
117⁄8	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	—	2020	LSU4.284	31⁄2	24-16d	16-10dx1½	1150	2300
14	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	—	2020	LSU4.28 ⁴	31⁄2	24-16d	16-10dx1½	1150	2300
16	See Woo	od Const	ruction Co	onnectors o	atalog for hai	nger sele	ctions.	See Wood	Constru	ction Conne	<i>ctors</i> catalog fo	or hanger se	lections.
Double	RFPI®-40					Joist	Width = 4	4 5⁄8"					
91⁄2	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2		2020	LSU3510-24	31⁄2	24-16d	16-10dx1½	1150	2300
111/8	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	_	2020	LSU3510-24	31⁄2	24-16d	16-10dx1½	1150	2300
14	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	—	2020	LSU3510-2 ⁴	31⁄2	24-16d	16-10dx1½	1150	2300
16	See Woo	d Const	ruction Co	onnectors c	atalog for har	nger sele	ctions.	See Wood	Construc	tion Conne	<i>ctors</i> catalog fo	r hanger se	lections.
Double	RFPI®-40S	, RFPI	®-60S			Joist	Width =	5"					
91⁄2	THAI-2 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2	_	2020	LSU5.124	31⁄2	24-16d	16-10dx1½	885	1790
111/8	THAI-2 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2		2020	LSU5.124	31⁄2	24-16d	16-10dx1½	885	1790
14	THAI-2 ⁵	21⁄4	4-10d	2-10d	2-10dx11/2	—	2020	LSU5.124	31⁄2	24-16d	16-10dx1½	885	1790
16	See Woo	od Const	ruction Co	onnectors o	atalog for hai	nger sele	ctions.	See Wood	Constru	ction Conne	<i>ctors</i> catalog fo	or hanger se	lections.
Double	RFPI®-70					Joist	Width =	4 5%"					
91⁄2	THAI-2⁵	21⁄2	4-10d	2-10d	2-10dx11/2	_	2020	LSU3510-24	31⁄2	24-16d	16-10dx1½	1150	2300
117⁄8	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2		2020	LSU3510-2 ⁴	31⁄2	24-16d	16-10dx1½	1150	2300
14	THAI-2 ⁵	21⁄2	4-10d	2-10d	2-10dx11/2	—	2020	LSU3510-2 ⁴	31⁄2	24-16d	16-10dx1½	1150	2300
16	See Woo	d Const	ruction Co	onnectors c	atalog for har	ctions.	See Wood	Construc	tion Conne	<i>ctors</i> catalog fo	r hanger se	lections.	
Double	RFPI®-90					Joist	Width =	7"					
117⁄8													
14	See Woo	od Consi	truction Co	onnectors o	atalog for ha	nger sele	ctions.	See Wood (Construc	tion Connec	c <i>tors</i> catalog for	r hanger sel	ections.
16													

1. See notes on page 6.



SUL

SUR/L – 16 gauge HSUR/L – 14 gauge All models are skewed 45°. Normally accommodates a 40°- 50° skew. The installation of these hangers does not require a beveled end cut.



THAI – 18 gauge THAI-2 – 14 gauge

This hanger has extra long straps and can be field-formed to give height adjustability and top flange hanger convenience. Positive angle nailing helps minimize splitting of the I-joist's bottom flange. Minimum nailing is shown in the table above. Strap must be field-formed over the top of the header by a minimum of 2½". Web stiffeners required when used with I-joists.



LSSU/LSSUI – 18 gauge LSSU210-2, LSSU410 – 16 gauge LSU – 14 gauge LSSU models provide uplift capacity and can be field sloped and/or skewed to 45°. Web stiffeners required when used with I-joists.

LVL BEAMS and HEADERS - U.S./Allowable Load (lbs)

		Top F	lange				Face Mount							
Joist	Madal	В	Faste	ner Type	Uplift	Down ¹	Madal	В	Faste	ener Type	Uplift	Down Load		
Height	Model	Dim	Header	Joist	(160)	Load	Wouer	Dim	Header	Joist	(160)	(100)		
1 ¾"	RIGIDLAM® LVL				Joist	Width =	= 1¾"							
01/	MIT9.5	21⁄2	8-16d	2-10dx1½	215	2550	HU9	21⁄2	24-16d	10-10dx1½	1440	3215		
91/2	LBV1.81/9.5	3	10-16d	2-10dx11/2	265	2910	HUS1.81/10	3	30-16d	10-16d	3000	4900		
1174	MIT11.88	21⁄2	8-16d	2-10dx1½	215	2550	HU11	21⁄2	30-16d	10-10dx1½	1440	4020		
11'/8	BA1.81/11.88	3	16-16d	8-10dx1½	1170	4715	HUS1.81/10	3	30-16d	10-16d	3000	4900		
14	MIT1.81/14	21⁄2	8-16d	2-10dx11/2	215	2550	HU14	21⁄2	36-16d	14-10dx1½	2015	4540		
14	LBV1.81/14	3	10-16d	2-10dx11/2	265	2910	HUS1.81/10	3	30-16d	10-16d	3000	4900		
2 Ply	1¾" RIGIDLAM® L	VL			Joist	Width =	= 31/2"							
01/	LBV3.56/9.5	21⁄2	10-16d	2-10dx11⁄2	265	2910	HHUS410	3	30-16d	10-16d	3430	5190		
972	HB3.56/9.5	31⁄2	22-16d	10-16d	2610	5815	HGUS410	4	46-16d	16-16d	3630	8780		
1174	BA3.56/11.88	3	16-16d	8-10dx1½	1170	4715	HHUS410	3	30-16d	10-16d	3430	5190		
117/8	HB3.56/11.88	31⁄2	22-16d	10-16d	2610	5815	HGUS412	4	56-16d	20-16d	4055	9155		
14	BA3.56/14	3	16-16d	8-10dx1½	1170	4715	HHUS410	3	30-16d	10-16d	3430	5190		
14	GLTV3.514	5	10-16d	6-16d	1640	7500	HGUS414	4	66-16d	22-16d	5380	10015		
16	BA3.56/16	3	16-16d	8-10dx1½	1170	4715	HHUS410	3	30-16d	10-16d	3430	5190		
10	GLTV3.516	5	10-16d	6-16d	1640	7500	HGUS414	4	66-16d	22-16d	5380	10015		
18	HB3.56/18	31⁄2	22-16d	10-16d	2610	5815	HHUS410	3	30-16d	10-16d	3430	5190		
10	HGLTV3.518	6	18-16d	6-16d	1640	10500	HGUS414	4	66-16d	22-16d	5380	10015		

1. Down load column for top flange hangers represents floor loads (100%)

and may not be increased for other load durations. 2. HU hangers use both round and triangle holes.

3. When ordering the EGQ, HGU, HHGU specify height.



BA – 14 gauge The BA series offers versatility for I-joists and SCL lumber. Enhanced load capacity widens the range of applications for these hangers.



W, WI – Top flange – 12 gauge; Stirrup – 12 gauge
WP, WPI, WPU – Top flange – 7 gauge; Stirrup – 12 gauge
HWU – Top flange – 3 gauge; Stirup – 10 gauge
HWU – Top flange – 3 gauge; Stirup – 10 gauge
This welded series offers the greatest design flexibility and versatility, and a large selection of sizes. Suitable for welded and nailer applications, and modifications including slopes and skews.







LBV – 14 gauge The LBV is designed especially for use with multiple ply headers $1\frac{1}{2}$ " to $1\frac{3}{4}$ " thick, and may be used for weld-on applications.

LVL BEAMS and HEADERS - U.S./Allowable Load (lbs)

			Top Fla	nge		Face Mount								
Joist	Medel	В	Fasten	er Type	Uplift	Down ¹	Madal	В	Fasten	er Type	Uplift	Down Load		
Height	Wouei	Dim	Header	Joist	(160)	Load	Wouei	Dim	Header	Joist	(160)	(100)		
3 Ply	1¾" RIGIDLAN	® LV	L		J	oist Wid	th = 5¼"							
01/	HB5.50/9.5	3½	22-16d	10-16d	2610	5815	HHUS5.50/10	3	30-16d	10-16d	3430	5190		
972	GLTV5.59	5	10-16d	6-16d	1640	7500	HGUS5.50/10	4	46-16d	16-16d	3630	8780		
447/	HB5.50/11.88	31⁄2	22-16d	10-16d	2610	5815	HHUS5.50/10	3	30-16d	10-16d	3430	5190		
111/8	HGLTV5.511	6	18-16d	6-16d	1640	10500	HGUS5.50/12	4	56-16d	20-16d	4055	9155		
14	HB5.50/14	31⁄2	22-16d	10-16d	2610	5815	HHUS5.50/10	3	30-16d	10-16d	3430	5190		
14	EGQ5.50-SDS ³	6	28-SDS1⁄4x3	12-SDS1/4x3	6365	19800	HGUS5.50/14	4	66-16d	22-16d	5380	10015		
16	GLTV5.516	5	10-16d	6-16d	1640	7500	HGUS5.50/14	4	66-16d	22-16d	5380	10015		
10	EGQ5.50-SDS ³	6	28-SDS1⁄4x3	12-SDS1⁄4x3	6365	19800	HGU5.50-SDS ³	51⁄4	36-SDS1/4x21/2	24-SDS1/4x21/2	9895	14145		
10	HGLTV5.518	6	18-16d	6-16d	1640	10500	HGUS5.50/14	4	66-16d	22-16d	5380	10015		
10	EGQ5.50-SDS ³	6	28-SDS1⁄4x3	12-SDS1⁄4x3	6365	19800	HGU5.50-SDS ³	51⁄4	36-SDS1/4x21/2	24-SDS1/4x21/2	9895	14145		
4 Ply	1¾" RIGIDLAN	® LV	L			Joist Wi	dth = 7"							
014	HB7.12/9.5	31⁄2	22-16d	10-16d	2610	5815	HHUS7.25/10	35⁄16	30-16d	10-16d	3430	5190		
372	GLTV49.5-2	5	10-16d	6-16d	1640	7500	HGUS7.25/10	4	46-16d	16-16d	3630	8780		
1174	GLTV411.88-2	5	10-16d	6-16d	1640	7500	HHUS7.25/10	35⁄16	30-16d	10-16d	3430	5190		
117/8	EGQ7.25-SDS ³	6	28-SDS1⁄4x3	12-SDS1⁄4x3	6365	19800	HGUS7.25/12	4	56-16d	20-16d	4055	9835		
14	GLTV414-2	5	10-16d	6-16d	1640	7500	HGUS7.25/14	4	66-16d	22-16d	5380	11110		
14	EGQ7.25-SDS ³	6	28-SDS1⁄4x3	12-SDS1⁄4x3	6365	19800	HGU7.25-SDS ³	51⁄4	36-SDS1/4x21/2	24-SDS1/4x21/2	9895	14145		
16	HGLTV416-2	6	18-16d	6-16d	1640	10500	HGUS7.25/14	4	66-16d	22-16d	5380	11110		
16	EGQ7.25-SDS ³	6	28-SDS1⁄4x3	12-SDS1⁄4x3	6365	19800	HHGU7.25-SDS ³	51⁄4	44-SDS1/4x21/2	28-SDS1/4x21/2	14550	17845		
10	HGLTV418-2	6	18-16d	6-16d	1640	10500	HGUS7.25/14	4	66-16d	22-16d	5380	11110		
10	EGQ7.25-SDS ³	6	28-SDS1/4x3	12-SDS1/4x3	6365	19800	HHGU7.25-SDS ³	51⁄4	44-SDS1/4x21/2	28-SDS1/4x21/2	14550	17845		

1. See notes on page 8.



HGU – 7 gauge HHGU – 3 gauge The GU hangers are a high-capacity girder hanger designed for situations where the header and joist are flush at top.



GLTV & HGLTV – Top flange – 3 gauge Stirrup – 7 gauge This welded series provides high load carrying capacity and design flexibility and versatility. May be sloped, skewed and modified in other ways, and may be welded to steel I-beams. The GLTV may be used on 4x nailers. 9





HGUS – 12 gauge HHUS – 14 gauge Features double shear nailing for high strength and lowest installed cost due to the reduced nail quantity requirement. Not suitable for use with l-joists.

connector designed for use with Structural Composite Lumber beams.

EGQ – Top flange – 3 gauge

Stirrup – 7 gauge

A high capacity top flange

GENERAL CONNECTOR INSTALLATION



Top Flange Hangers



Wood Nailers



Correct Attachment



Nailer Too Wide The loading may cause cross-grain bending. As a general rule, the maximum allowable overhang is 1/4". depending on nailer thickness.



Hanger Over-Spread

If the hanger is over-spread, it can raise

cause uneven surfaces and squeaky floors.

the I-Joist above the header and may

Nailer Too Narrow A maximum mismatch of 1/8" for normal installations is acceptable.



Hanger Not Plumb A hanger "kicked out" from the header can cause uneven surfaces and squeaky floors.



Nailer Too Thin and the wrong hanger for a nailer application.

Nail Hole Shapes

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Round Holes All holes must be filled except for the THAI adjustable height hanger. Refer to load tables for THAI nail quantities.

Triangle Holes

Provided on some products in addition to round holes. Round and triangle holes must be filled to achieve the published maximum load value.

Diamond Holes Optional holes to temporarily secure connectors to the member during installation.

Used to provide easier nailing access in tight locations. All holes must be filled except for the LSSU hanger when skewed. Refer to load tables for LSSU nail quantities.

Toe Nailed I-Joist



Toe nailing causes squeaks and improper hanger installations. Do not toe nail I-joists prior to installing either top flange or face mount hangers.

 \triangle

Double Shear Nailing



The nail is installed into joist and header, distributing load through two points on each nail for greater strength.

Alternate Joist Installation with NO JOIST NAILS

Install Simpson's SD8x1.25 screw through the existing hole in the bottom of the seat. It is not necessary to bend tabs or install nails through tabs in ITT hangers when the screw is installed. This installation works for I-joists with 11/8" or greater depth of bottom flange. This application is not recommended for seat

 $\langle \rangle$

SD8x1.25 widths > $2\frac{3}{4}$ ". (Actual Size)

	n en							
Model No.		Uplift (160)						
	Joist	Joist Widths						
	Fasteners	1½	- 1 ¾	2 - 2 ½				
			SPF	DF	SPF			
IUS	Simpson SD8x1.25	150	105	95	95			
ITT	Tapping Screw ¹	130	90	65	65			
ITS	Screw in the seat is not recommended for the ITS							





Obround Holes

GENERAL CONNECTOR INSTALLATION

ITS Installation Sequence (IUS Similar)



STEP 1 Attach the ITS to the header



ACTUAL SIZE

10dx11/2 nail

(Simpson's

N10 nail

shown).

Use a

STEP 2 Slide the I-joist downward into the ITS until it rests above the Strong-Grip[™] seat.



STEP 3 Firmly push or snap I-joist fully into the seat of the ITS.

The tab

is now

correctly

installed.

IUT & ITT Tab Installation (VPA Similar)



Bend the tab with a hammer.

ACUTE

2. Skew flange to form

acute angle. Bend

other flange back.

centerline of slots.

Bend one time only.

Bend along the

VPA Installation



STEP 1 Install top nails and face PAN nails in "A" flange to outside wall top plate.

LSSU Installation



1. Nail hanger to slope-cut joist, installing seat nail first. No bevel necessary for skewed installation.



STEP 2 Seat rafter with a hammer, adjusting "B" flange to the required pitch.



Hammer

splitting.

the nail in at

approx. 45°

angle to limit

STEP 3 Install "B" flange nails in the obround nail holes, locking the pitch.



STEP 4 Bend tab with hammer and install nail into tab nail hole. Hammer nail in at approx. 45° angle to limit splitting.





SIMPSON Strong-Tie

3. Attach hanger to

an angle.

header, acute angle

first. Install nails at

GENERAL CONNECTOR INSTALLATION

TB - Tension Bridging

Joist				Joist	Spacing (Inches)			
Height	12	16	19.2	24	30	32	36	42	48
91⁄2	TB20	TB27	TB27	TB30	TB36	TB36	TB42	TB48	TB54
117⁄8	TB20	TB27	TB27	TB30	TB36	TB36	TB42	TB48	TB54
14	TB27	TB27	TB27	TB36	TB36	TB42	TB42	TB48	TB54
16	TB27	TB27	TB30	TB36	TB42	TB42	TB42	TB48	TB54

VPA - Variable Pitch Connectors

		Fas	Allowable Loads									
Joist Model Width No.	Model No	/lodel No Top	Deffer	Uplift (160)		Download (100)		Lateral L		Load (160)		-
	Plate	DF/SP	SPF	DF/SP	SPF	F ₁	F,	F,	F,	1. VPA's are not		
1¾	VPA25	8-10d	2-10dx1½	295	250	1050	870	375	250	325	250	appropriate for applications that require more than 2" of bearing, such as
21/16	VPA2.1	9-10d	2-10dx1½	295	250	1230	1020	375	250	325	250	
25/16	VPA35	9-10d	2-10dx11/2	295	250	1230	1020	375	250	325	250	
21/2	VPA3	9-10d	2-10dx11/2	295	250	1230	1020	375	250	325	250	
3½	VPA4	11-10d	2-10dx11/2	295	250	1230	1020	375	250	325	250	supports.

STRONG-DRIVE[®] SCREW INSTALLATION FOR LVL

INSTALLATION

- No pre-drilling required.
- · See illustrations for SDS positioning on different assemblies.
- SDS screws install best with a low speed 1/2" drill with a 3/8" hex head driver.
- · Do not over-drive the SDS screws.



Screw Dimensions

Model No.	L ₁ (in.)	T (in.)	Head Stamp	
SDS25312	31⁄2	21⁄4	S3.5	
SDS25412	41⁄2	23⁄4	S4.5	
SDS25600	6	31⁄4	S6	

DESIGN

- Allowable load values are derived from testing based on ICC ESR-2236. The Designer shall apply adjustment factors per current NDS. Loads shown are $C_D = 1.0$. Increase as allowed per code to a maximum $C_D = 1.60$.
- · This document uses Douglas Fir-Larch values (G = 0.5), as per the manufacturer specifications.
- · The designer shall specify the location of all screws (stagger screws on opposite faces). Minimum recommended spacing—Wide Face: end distance 4", edge distance 11/2", spacing parallel to grain 4", spacing perpendicular to grain 2".
- · Uniform loads in the table below are based on the capacity of the fasteners to transfer loads between plies. The capacity of the LVL beam may be less and should be checked by a qualified designer or with the manufacturer's literature.



MAXIMUM ALLOWABLE UNIFORM LOAD (LBS PER LINEAL FT)										
Μ	ultiple Members	SDS Screv	vs, 12" OC	SDS Scre	ws, 16" OC	SDS Screws, 24" OC				
Assembly	Assembly Components		3 Rows	2 Rows	3 Rows	2 Rows	3 Rows			
А	2 pieces (all 1¾)	1360	2040	1020	1530	680	1020			
B1	3 pieces (all 1¾)	1020	1530	765	1150	510	765			
B2	3 pieces (all 1¾)	1290	1935	970	1450	645	970			
С	4 pieces (all 1¾)	1110	1665	835	1250	555	835			
D	2 pieces (1¾ - 3½)	1020	1530	765	1150	510	765			
E	3 pieces (1¾ - 3½ - 1¾)	905	1360	680	1020	455	680			
F	2 pieces (31/2 - 31/2)	1360	2040	1020	1530	680	1020			

1. If 7" wide beams are not equally loaded on each side, the plf load from the lesser side should be at least 25% of the opposite side. 2. Quantity and spacing of screws in table are for each screw head side of the assembly as shown in the Assembly figures above. 3. The design professional shall ensure that adequate lateral bracing is provided to prevent displacement of the beam due to the torsion created by the structural members framing into the side of the beam assembly.

CSG-RFP09 3/09 exp. 6/11

Refer to the current Wood Construction Connectors catalog for General Notes, Warranty Information and other important information, including Terms and Conditions of Sale, Building Code Evaluation listings and Corrosion Resistance.

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SIMPSON Strong-Tie





VPA - 18 gauge This variable pitch connector allows a sloped beam to sit on a top plate without having to notch, birdmouth, bevel, or toe nail. It also provides uplift capacity. Adjustable from 3:12 to 12:12 pitch.

