# **CONNECTOR SELECTION GUIDE**

for Residential Construction

SIMPSON
Strong-Tie

FOR USE WITH PRODUCTS MANUFACTURED BY:



HISTORY BUILT. FUTURE BOUND.









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.



ALLOWABLE STRESS DESIGN

(800) 999-5099 strongtie.com

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## **CONNECTOR SELECTOR NOTES**

# SIMPSON Strong-Tie

### **General Notes**

- See current Wood Construction Connectors catalog for Important Information and General Notes section and for hanger models, joist sizes, and support conditions not shown. See pages 10-11 of this guide for installation information.
- 2. Unless otherwise noted loads listed in tables are in pounds and address the attachment of the hanger to a solid support member. Loads listed under the Download heading cover Douglas Fir, Southern Pine and LVL, except for LVL made primarily from Spruce-Pine-Fir or similar low density material, use loads listed under SPF in the current Wood Construction Connectors catalog. Load resistance shown is the lower of either the hanger capacity or the I-joist bearing capacity published by the manufacturer. Joist or beam reactions should be checked by a qualified Designer to ensure proper hanger selection. See below for I-joist headers.
- Uplift loads listed for single and double I-joists assume DF/LVL flanges and 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. An I-joist must be laterally supported to prevent rotation; see Prevent Rotation below.

- 5. For top flange hangers, the configuration and thickness of the hanger top flange need to be considered for flush framing conditions, see page 10.
- 6. For this publication, support members are assumed to be at least 5½" tall. The horizontal thickness of the support member must be at least the length of the nail being used and at least the length of the hanger top flange.
  - Exception: face mount hangers may be mounted on support members narrower than the nail length provided the nail penetration is at least 1% inches for 10d or 2 inches for 16d; clinch nails on back side.
- 7. THAI hangers shown in the single and double I-joist tables are based on the "top flange" installation and require that the carrying member has a horizontal thickness of at least 2½". Install four top nails and two face nails. THAI hangers are not rated for uplift.
- 8. All nails shown are common nails unless otherwise noted.

16d = 0.162" dia. x 3½" long

10d = 0.148" dia. x 3" long

 $10d \times 1\frac{1}{2}$ " = 0.148" dia. x  $1\frac{1}{2}$ " long

## **I-Joist Headers**

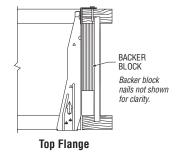
When supporting one I-joist from another, backer blocks must be used. Backer blocks are to be made from plywood, OSB, or dimension lumber. The thickness of a backer block should be the same thickness as the void in the side of the I-joist and a minimum of 12" wide. Attach with 10-10d common nails clinched 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 10dx1½" nails for all Top Flange hangers attached to an I-joist header. See table for allowable loads.

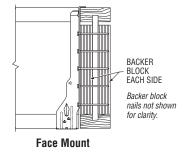
Model No.	I-Joist I 1½" Thio Mate	k Flange
	DF/SCL	SPF
ITS	1,085	940
MIT	1,230	885
BA	1,495	1,495

1. For flanges with thicknesses from 11/16" to 13/6", use 0.85 of the I-joist header load. For flanges with thicknesses from 11/6" to 11/4", use 0.75 of the I-joist header load



#### **Face Mount Hangers:**

Nails that get less than 2 inches of penetration must be clinched on the back side. Double I-joist headers must be attached together to act as a single unit.



#### **Sloped Joists:**

For joists sloped up to ¼:12, there is no reduction of load. For slopes greater than ¼:12, see table.

	Slo	ped Joist	
Mod	el	Slope	Reduction
ITS, IUS, N BA, I		½:12 max	10%
WF	)	3/4:12 max	15%
н	ı	½:12 max	0%
ПС		3/4:12 max	10%

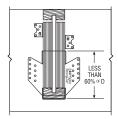
## **Prevent Rotation**

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



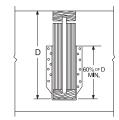
#### No Rotation Resistance

Lack of web stiffeners combined with short hanger allows unwanted rotation



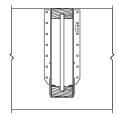
#### Rotation Prevented by Web Stiffeners

If hanger height is less than 60% of the joist height, add clips or blocking near the top.



Rotation Prevented by Web Stiffeners

Hanger height should be at least 60% of the joist height.



#### Rotation Prevented by Lateral Flange Support

Sides of hanger laterally support the top flange of the I-joist. No web stiffeners required!

## **HOW TO PICK A HANGER**



Follow these simple steps to choose your hanger: (For I-joist header, see page 2.)

1	Find your joist type in this guide. (single I-joist, double I-joist, beam)
2	Locate your connector type in the table.  • Face mount, top flange, skewed, sloped, etc.
3	Select a hanger from the table.
4	Confirm that your joist load is less than the hanger allowable load.
5	Check to see if the bearing length "B dim" meets the bearing length requirement of the I-joist manufacturer.  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 — US/Allowable Load (lb.)<sup>1,2,3</sup>



			Top Flang	ge					Face Mount	t					45° Ske	W		
Joist Height	Model	В	Fasten	er (in.)	Uplift	Down-	Model	В	Fastener	(in.)	Uplift	Down-	Model	B Dim	Faster	er (in.)	Uplift	Down-
	Wodei	Dim	Header	Joist	(160)	load	Wodel	Dim	Header	Joist	(160)	load	Wodei	ווווע ס	Header	Joist	(160)	load
PWI 3	30									Joist V	Width:	= 1½"			(10)	(4.0)		
9 1/2	ITS1.56/9.5	2	(6) 0.148		120	965	U210	2	(6)	(6) 0.148	990	965	SUR/L210	2	(10) 0.162 x 3½	(10) 0.148 x 1½	1,250	965
11 %	ITS1.56/11.88	2	x3	_	120	1,000	U210	2	0.148x3	x1½	990	1,000	SUR/L214	2	(12) 0.162 x 3½	(12) 0.148 x 1 ½	1,890	1,000
PWI2	20, PWI50									Joist W	/idth =	= 1¾"						
9 1/2	ITS1.81/9.5	2		_	120	940	IUS1.81/9.5	2	(8) 0.148x3	_	70	940	SUR/L1.81/9	3	(12) 0.162 x 3½		175	1,040
11 7/8	ITS1.81/11.88	2	(6)	_	120	970	IUS1.81/11.88	2	(10) 0.148x3		70	970	SUR/L1.81/11	3	(16) 0.162 x 3½	(2) 0.148 x 1½	175	1,210
14	ITS1.81/14	2	0.148 x3		120	970	IUS1.81/14	2	(12) 0.148x3	_	70	970	SUR/L1.81/14	3	(20)		175	1,040
16	ITS1.81/16	2		_	120	1,055	IUS1.81/16	2	(14) 0.148x3	_	70	1,055	SUR/L1.81/14	3	0.162 x 3½	(8) 0.148 x 1½	795	1,380
PWI4	ļ5									Joist Wi	dth = 1	21/16"				0.1107.172		
91/2	ITS2.06/9.5	2		_	120	1,000	IUS2.06/9.5	2	(8) 0.148x3	_	70	950	SUR/L2.1/9	33/16	(14) 0.162 x 3½		175	1,095
11 7/8	ITS2.06/11.88	2	(6)		120	1,040	IUS2.06/11.88	2	(10) 0.148x3	_	70	1,040	SUR/L2.1/11	33/16	(16) 0.162 x 3½	(2) 0.148 x 1½	175	1,335
14	ITS2.06/14	2	0.148 x3		120	1,040	IUS2.06/14	2	(12) 0.148x3	_	70	1,040	SUR/L2.1/14	33/16		0.140 / 172	175	1,335
16	ITS2.06/16	2			120	1,040	IUS2.06/16	2	(14) 0.148x3	_	70	1,040	SUR/L2.1/14	33/16	(18) 0.162 x 3½	(8) 0.148 x 1½	1,190	1,900
PWI 4	I 40, PWI 47, PWI 6	n. PWI	70. PWI 7	7						Joist Wi	dth=2	25/16 <sup>11</sup>				U.140 X 1 72		
91/2	ITS2.37/9.5	2			120	900	IUS2.37/9.5	2	(8)		70	900	SUR/L2.37/9	33/16	(14)		175	1,135
			(0)						0.148x3 (10)						0.162 x 3½ (16)	(2)		
11 1/8	ITS2.37/ 11.88	2	(6) 0.148	_	120	935	IUS2.37/11.88	2	0.148x3 (12)		70	935	SUR/L2.37/11	3¾6	0.162x3½	0.148x11/2	175	1,170
14	ITS2.37/14	2	x3		120	950	IUS2.37/14	2	0.148x3		70	950	SUR/L2.37/14	3¾6			175	1,200
16	ITS2.37/16	2			120	965	IUS2.37/16	2	(14) 0.148x3		70	965	SUR/L2.37/14	3¾6	(18)	(0)	1,190	1,780
18	MIT3518	2½	(8) 0.162	(2) 0.148	215	1,095	MIU2.37/18	2½	(26) 0.162 x 3 ½	(2) 0.148	230	1,095	SUR/L2.37/14	3¾6	0.162x3½	(8) 0.148 x 1½	1,190	1,955
20	MIT3520	2½	x3½	x 1½	215	1,115	MIU2.37/20	2½	(28) 0.162 x 3 ½	x1½	230	1,115	SUR/L2.37/14	3¾6			1,190	2,095
PWIS	90								,	Joist Wi	dth =	31/2"						
9 1/2	ITS3.56/9.5	2		_	120	1,405	IUS3.56/9.5	2	(10) 0.148x3	_	70	1,185	SUR/L410	2%	(14)	(6)	1,140	1,430
11 1/8	ITS3.56/11.88	2	(6) 0.148	_	120	1,470	IUS3.56/11.88	2	(12)		70	1,420	SUR/L410	2%	0.162x3½	0.162x3½	1,140	1,915
14	ITS3.56/14	2	x3		120	1,470	IUS3.56/14	2	0.148x3	_	70	1,420	SUR/L414	2%			1,490	2,015
16	ITS3.56/16	2		_	120	1,470	IUS3.56/16	2	(14) 0.148 x 3	_	70	1,470	SUR/L414	2%	(18)	(8)	1,490	2,115
18	MIT418	21/2	(8)	(2)	215	1,615	MIU3.56/18	2½	(26) 0.162 x 3½	(2)	210	1,615	SUR/L414	2%	0.162x3½	0.162x3½	1,490	2,345
20	MIT420	21/2	0.162 x3½	0.148 x 1½	215	1,615	MIU3.56/20	2½	(28) 0.162 x 31/2	0.148 x1½	210	1,615	SUR/L414	25/8			1,490	2,400
4 01							<b>.</b>			Th - D D					-			

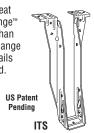
<sup>1.</sup> Shaded hangers require web stiffeners at joist ends. Joist manufacturers may also require web stiffeners for non-shaded areas.

2. Some joists may not be available in every height shown on chart. Check with manufacturer for availability.

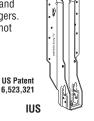
- 3. The B Dim is the length of the hanger seat.
  4. The LSSR requires web stiffeners that are 4" wide and attached with (4) nails each side.

5. Fir the LSSR, nails and loads shown are for skewed rafter condition. See Wood Construction Connectors catalog for nailing options with higher loads.

ITS - 18 gauge The ITS top flange hanger with its Strong-Grip™ seat and Funnel Flange™ installs faster than any other top flange hanger. Joist nails are not required.



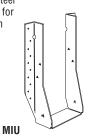
**IUS** – 18 gauge The IUS is a hybrid hanger that incorporates the advantages of face-mount and top-flange hangers. Joist nails are not required.



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).



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

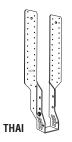


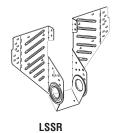
# **SINGLE I-JOISTS** — US/Allowable Load (lb.)

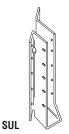


			Ad	justable Height						Field Slope	and Skew				
Joist				Fastener (in.)		Uplift				Faster	er (in.)	Uplift			
Height	Model	B Dim	Top Hea	ider Face	Joist	(160)	Download	Model	B Dim	Header	Joist	(160)	Download		
PWI 3	RO		тор	race			Joist	Width 1½"							
91/2	THAI222	21/4					985	Width 172							
117/8	THAI222	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½		1.050	See Wa	ood Cor	struction Connecto	<i>rs</i> catalog for Hang	er Selec	tion		
	20, PWI 50	274					,	Width 1¾"							
91/2	THAI1.81/22	21/4					1.040	LSSR1.81Z	1%			510	1.020		
117/8	THAI1.81/22	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½		1.105	LSSR1.817	178	(13) 0.148 x 3	(9) 0.148 x 1½	510	1,040		
14	THAI1.81/22	21/4	(4) 0.140 x 0	(2) 0.140 x 0	(L) 0.140 X 172	_	1,120	LSSR1.81Z	17/8	(10) 0.140 % 0	(0) 0.140 % 1 /2	510	1,040		
16	111/111.01/22		ood Construction (	Connectors catalog	for Hanger Selection	1,120			nstruction Connecto	rs catalog for Hang					
PWI 4	l !5	000 11		omnoctoro datalog	Tot Hanger Golootion		Joist	Width 21/16"	, ou ou		ro datalog for flang	01 00100			
9½	THAI2.1/22	21/4				_	1,120	LSSR2.1Z	1%			510	1,060		
117/8	THAI2.1/22	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½		1,420	LSSR2.1Z	17/8	_	3 (9) 0.148 x 1 ½	510	1,060		
14	THAI2.1/22	21/4	(1)	(=)			1.610	LSSR2.1Z	17/8	(10)	(0) 011 10 11 17	510	1,060		
16			ood Construction (	L	for Hanger Selection	1	1,010			nstruction Connecto	rs catalog for Hang				
	I IO, PWI 47, PWI 6							Joist Width 25/16"							
9½	THAI3522	21/4	<i>'</i>			_	1,120	LSSR2.37Z	1%			510	1,060		
117/8	THAI3522	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½		1,420	LSSR2.37Z	1%	(13) 0.148 x 3	(9) 0.148 x 1½	510	1,060		
14	THAI3522	21/4	,	,	, ,		1,610	LSSR2.37Z	1%	,		510	1,060		
16							· ·								
18		See W	lood Construction (	Connectors catalog	for Hanger Selection	1		See Wa	ood Cor	struction Connecto	rs catalog for Hang	er Selec	tion		
PWI 9	90					Joist	Width 3½"								
9½	THAI422	21/4				_	1,430	LSSR410Z	1%			695	1,430		
117/8	THAI422	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½	_	1,710	LSSR410Z	17/8	(20) 0.162 x 3½	(14) 0.162 x 3½	695	1,810		
14	THAI422	21/4	. ,	,			1,710	LSSR410Z	1%	. ,	, ,	695	1,810		
16 18 20		See W	lood Construction (	Connectors catalog		See Wood Construction Connectors catalog for Hanger Selection									

<sup>1.</sup> See notes on p.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 2½°. Web stiffeners required when used with I-Joists.

LSSR – 18 gauge, 16 gauge

LSSR 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.

**SUR/L** – 16 gauge **HSUR/L** – 14 gauge

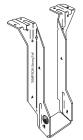
All models are skewed 45°. Normally accommodates a 40° - 50° skew. The installation of these hangers does not require a beveled end cut.

# **DOUBLE I-JOISTS** — US/Allowable Load (lb.)<sup>1,5</sup>

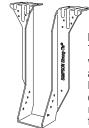


Joist			Top Flan	ge					Face Mo	ount					45° Skev	l		
Height	Model	В	Fasten	_ ` _	Uplift		Model	В	Fasten			Down-	Model	В	Fasten			Down-
Day	ble PWI 30	Dim	Header	Joist	(160)	load		Dim	Header Joist Width 3	Joist	(160)	load	····ouo·	Dim	Header	Joist	(160)	load
91/2	BA3.12X (H=9½)	3	(16) 0.162 x 3½	(8) 0.148 x 1 ½	1,225	2,085	MIU3.12/9	2½	(16) 0.162 x 3 ½	(2)	230	2,005	SUR/L210-2	2%	(14)	(6)	1,150	2,015
11%	MIT411.88	2½	(8)	(2) 0.148 x 1 ½	215	2,205	MIU3.12/11	2½	(20) 0.162 x 31/2	0.148 x 1 ½	230	2,205	SUR/L210-2	2%	0.162 x 3 ½		1,150	2,015
Dou	ble PWI 20, Do	uble	PWI 50					J	oist Width 3	1/2"								
91/2	MIT49.5	2½			215	2,100	MIU3.56/9	2½	(16) 0.162 x 3 ½		210	1,985	SUR/L410	2%	(14)	(6)	1,140	2,015
117/8	MIT411.88	2½	(8)	(2)	215	2,300	MIU3.56/11	2½	(20) 0.162 x 3 ½	(2)	210	2,165	SUR/L410	2%	0.162 x 3½	0.162 x 3 ½	1,140	2,015
14	MIT414	2½	0.162 x 3 ½	0.148 x 1 ½	215	2,350	MIU3.56/14	2½	(22) 0.162 x 3 ½	0.148 x 1 ½	210	2,165	SUR/L414	2%	(18)	(8)	1,490	2,400
16	MIT416	2½			215	2,470	MIU3.56/16		(24) 0.162 x 3 ½		210	2,275	SUR/L414	2%	0.162 x 3½	0.162 x 3 ½	1,490	2,400
Dou	ble PWI 45							,	Joist Width 4	11/8"								
9½	MIT4.28/9.5	2½			215	2,240	MIU4.28/9	2½	(16) 0.162 x 3 ½		210	2,240	HSUR/L4.28/9	3	(12) 0.162 x 3 ½		165	1,785
11 7/8	MIT4.28/11.88	2½	(8) 0.162 x 3 ½	(2) 0.148 x 1 ½	215	2,575	MIU4.28/11	2½	(20) 0.162 x 3 ½	(2)	210	2,840	HSUR/L4.28/11	3		(2)	165	2,380
14	MIT4.28/14	2½			215	2,575	MIU4.28/14	2½	(22) 0.162 x 3 ½	0.148 x 1 ½	210	3,170	HSUR/L4.28/11	3	(16) 0.162 x 3 ½	0.148 x 1 ½	165	2,380
16	BA4.28/16	3		(8) 0.148 x 1 ½			MIU4.28/16		(24) 0.162 x 3 ½		210	3,455	HSUR/L4.28/11	3			165	2,380
Dou	ble PWI 40, Dou	ıble I	PWI 47, Doub	le PWI 60, D	ouble	PWI 70	Double PWI	77	Joist Wi	dth 4%"					1	1		
9½	MIT359.5-2	2½			215	1,960	MIU4.75/9	2½	(16) 0.162 x 3 ½		210	1,960	HSUR/L4.75/9	2¾	(12) 0.162 x 3 ½		165	1,785
11 7/8	MIT3511.88-2	2½	(8)	(2)	215	2,230	MIU4.75/11	2½	(20) 0.162 x 3 ½		210	2,230	HSUR/L4.75/11	2¾	(16) 0.162 x 3 ½		165	2,380
14	MIT3514-2	2½	0.162 x 3 ½	0.148 x 1 ½	215	2,395	MIU4.75/14	2½	(22) 0.162 x 3 ½	(2)	210	2,395	HSUR/L4.75/14	2¾	(20) 0.162 x 3 ½	(2)	165	2,590
16	MIT4.75/16	2½			215	2,405	MIU4.75/16	2½	(24) 0.162 x 3 ½	0.148 x 1 ½	210	2,405	HSUR/L4.75/16	2¾	(24) 0.162 x 3 ½	0.148 x 1 ½	165	2,600
18	BA4.75/18	3	(16)	(8)	1,225	2,425	MIU4.75/18	2½	(26) 0.162 x 3 ½		210	2,600	HSUR/L4.75/16	2¾	(24) 0.162 x 3 ½		165	2,855
20	BA4.75/20	3	0.162 x 3 ½	0.148 x 1 ½	1,225	2,480	MIU4.75/20	2½	(28) 0.162 x 3 ½		210	2,615	HSUR/L4.75/16	2¾	(24) 0.162 x 3 ½		165	2,865
Dou	ble PWI 90								Joist Width	7"								
9½	BA7.12/9.5	3			1,225	2,845	HU410-2	2½	(18) 0.162 x 3 ½	(8)	1,795	2,680	HU410-2X	2½	(18) 0.162 x 3 ½	(8)	1,435	2,145
11 7/8	BA7.12/11.88	3	(16)	(8)			HU412-2	2½	(22) 0.162 x 3 ½	0.162 x 3½		-, -	HU412-2X	2½	(22) 0.162 x 3 ½	0.162 x 3½		2,620
14	BA7.12/14	3		0.148 x 1 ½	-	3,515	HU414-2	2½			2,695	3,870	HU414-2X	2½			_	3,095
16	BA7.12/16	3			-		HU414-2	2½	(26)	(12)		3,870	HU414-2X	2½	(26)	(12)		3,095
18	BA7.12/18	3			1,225	-,	HU414-2	21/2	U.162 x 3½	0.162 x 3½	<u> </u>		HU414-2X	2½	0.162 x 3½	U.162 x 3½	_,	3,095
20	BA7.12/20	3			1,225	4,720	HU414-2	21/2			2,695	3,870	HU414-2X	21/2			2,155	3,095

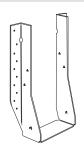
- Shaded hangers require web stiffeners at joist ends. Joist manufacturer may also require web stiffeners for non-shaded areas.
- 2. HU skewed option must be special ordered. Specify skew angle and direction (e.g.  $\,$  HU414-2X  $\,$  R45°)
- LSU hangers are not field skewable. (Field-slope only.) Skewed option must be special ordered, specify skew angle.
- 4. THAI-2 must be special ordered. Specify width between 3 1/8" and 5 5/16".
- Some joists are not available in every height shown. Check with manufacturer for availability.
- 6. HSUR has additional optional holes for increased uplift. Refer to current *Wood Construction Connectors* catalog.
- 7. The B Dim is the length of the hanger seat.
- 8. The LSSR requires web stiffeners that are 4" wide and attached with (4) nails each side.
- For the LSSR, nails and loads shown are for skewed rafter condition.
   See Wood Consruction Connectors catalog for nailing options with higher loads.



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).



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.



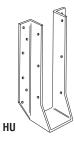
MIU – 16 gauge The MIU series features 16 gauge steel and extra nailing for higher loads than the IUS.

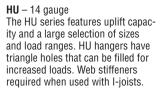
# **DOUBLE I-JOISTS** — US/Allowable Load (lb.)

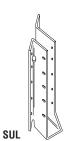


				Adjustable Heig	ht					Field Slope a			
Joist Height	Model	В	Hee	Fastener (in.)	I	Uplift	Download	Madal	B Dim	Fasten	er (in.)	Uplift	Download
neigiit	wodei	Dim	Тор	ader Face	Joist	(160)	Download	Model	B DIIII	Header	Joist	(160)	Download
Double	PWI 30		·							Joist Wid	lth 3"		
9½	THAI-2	2½	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½	_	1,710	LSSR210-2Z	1%	(20) 0.162 x 2½	(14) 0.162 x 2½	695	1,910
117/8	THAI-2	2½	(4) U.140 X 3	(2) 0.140 X 3	(2) 0.140 x 1 72	_	1,710	LSSR210-2Z	17/8	(20) 0.102 x 2 /2	(14) 0.102 x 2 /2	695	1,945
Double	PWI 20, Do	ouble P	WI 50							Joist Widt	th 3½"		
9½	THAI422	21/4				_	1,710	LSSR410Z	1%			695	2,040
117/8	THAI422	21/4	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½	_	1,710	LSSR410Z	17/8	(20) 0.162 x 2½	(14) 0.162 x 2½	695	2,075
14	THAI422	21/4				_	1,710	LSSR410Z	17/8			695	2,085
16		See	Wood Construction	on Connectors cata	alog for Hanger Se	lection		See	Wood Co	nstruction Connector	s catalog for Hanger	Selection	1
Double	PWI 45									Joist Wid	th 41/8"		
9½	THAI-2	2½				_	1,710	LSU4.28	3½			1,150	2,240
117/8	THAI-2	2½	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½	_	1,710	LSU4.28	3½	(24) 0.162 x 3½	(16) 0.148 x 1½	1,150	2,300
14	THAI-2	21/2				_	1,710	LSU4.28	3½			1,150	2,300
16		See	Wood Construction	on Connectors cata	alog for Hanger Se	lection		See	Wood Co	nstruction Connector	s catalog for Hanger	Selection	1
Double	PWI 40, Do	ouble P	WI 47, Double P	WI 60, Double PV	VI 70, Double PW	177				Joist Widt	h 4%"		
9½	THAI-2	2½				_	1,710	LSU3510-2	3½			1,150	2,240
117/8	THAI-2	21/2	(4) 0.148 x 3	(2) 0.148 x 3	(2) 0.148 x 1½	_	1,710	LSU3510-2	3½	(24) 0.162 x 3½	(16) 0.148 x 1½	1,150	2,300
14	THAI-2	2½					1,710	LSU3510-2	3½			1,150	2,300
16					1					I			
18		See	Wood Construction	on Connectors cata	alog for Hanger Se	lection		See	Wood Co	onstruction Connector	s catalog for Hanger	Selection	1
20													
Double	PWI 90									Joist Wid	th 7"		
9½										·	· · · · · ·		
117/8													
14													
16		See	Wood Construction	on Connectors cata	alog for Hanger Se	lection		See	Wood Co	onstruction Connector	s catalog for Hanger	Selection	1
18													
20													

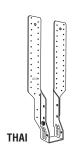
1. See table notes on p.6.







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

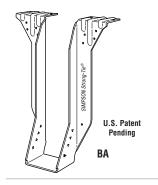
This hanger has extra long straps and can be field-formed to give height adjustability and top flange hanger convenience. Positive angle nailing helps minimize splitting of the I-joist's bottom flange. Minimum nailing is shown in the table above. Strap must be field-formed over the top of the header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

# LVL BEAMS and HEADERS — US/Allowable Load (lb.)



Joist			Top Flange						Face M	ount		
Height	Model	B Dim	Fastene	. ,	Uplift	Download	Model	B Dim	Fasten	er (in.)	Uplift	Download
1¾" LVL	Wodel	D DIIII	Header	Joist	(160)	(100)	Model	D Dilli	Header	Joist	(160)	(100)
7 1/4	BA1.81/7.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1.225	4.715	HU7	21/2	(16) 0.162 x 3½	(8) 0.148 x 1½	1.515	2.380
	WP1.81 (H=9.25)	3½	(2) 0.162 x 3½	(2) 0.148 x 1½		3,635	HU7	21/2	(16) 0.162 x 3½	(8) 0.148 x 1½	1,515	2,380
91/4	BA1.81/9.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HUS1.81/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	2,675	5,135
	MIT9.5	21/2	(8) 0.162 x 3½	(2) 0.148 x 1½	215	2,550	HU9	21/2	(24) 0.162 x 3½	(10) 0.148 x 1½	1,795	3,570
9½	BA1.81/9.5	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HUS1.81/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	2,675	5,135
	WP1.81 (H=11.25)	3½	(2) 0.162 x 3½	(2) 0.148 x 1½	_	3,635	HU11	21/2	(30) 0.162 x 3½	(10) 0.148 x 1½	1,795	4,465
111/4	BA1.81/11.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HUS1.81/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	2,675	5,135
447/	MIT11.88	2½	(8) 0.162 x 3½	(2) 0.148 x 1½	215	2,550	HU11	21/2	(30) 0.162 x 3½	(10) 0.148 x 1½	1,795	4,465
117/8	BA1.81/11.88	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HUS1.81/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	2,675	5,135
-14	MIT1.81/14	21/2	(8) 0.162 x 3½	(2) 0.148 x 1½	215	2,550	HU14	21/2	(36) 0.162 x 3½	(14) 0.148 x 1½	1,795	5,055
14	BA1.81/14	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HUS1.81/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	2,675	5,135
2 Ply 1¾"	LVL or 3½" LVL											
71/4	BA3.56/7.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS48	3	(22) 0.162 x 3½	(8) 0.162 x 3½	1,780	4,210
91/4	BA3.56/9.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
574	HB3.56/9.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HGUS410	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
9½	BA3.56/9.5	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
372	HB3.56/9.5	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HGUS410	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
111/4	BA3.56/11.25	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
1174	HB3.56/11.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HGUS412	4	(56) 0.162 x 3½	(2) 0.162 x 3½	5,040	9,400
11%	BA3.56/11.88	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
11'/8	HB3.56/11.88	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HGUS412	4	(56) 0.162 x 3½	(2) 0.162 x 3½	5,040	9,400
1.4	BA3.56/14	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
14	HGLTV3.514	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS414	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
16	BA3.56/16	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
16	HGLTV3.516	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS414	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
10	HB3.56/18	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS410	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
18	HGLTV3.518	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS414	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695

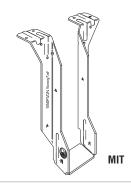
- 1. HU hangers use both round and triangle holes.
- 2. Download assumes LVL header.
- 3. When ordering the EGQ, HGU, HHGU specify height.



**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.



**WP** – Top flange – 7 gauge; Stirrup – 12 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.



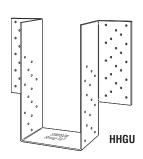
MIT – 16 gauge
The MIT's positive angle nailing helps
minimize splitting of the I-joists' bottom
flange. Features uplift capacity and
extended seat design (to allow installation
of slightly undercut joists).

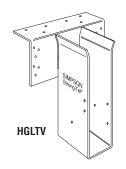
# LVL BEAMS and HEADERS — US/Allowable Load (lb.)

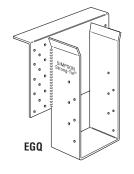


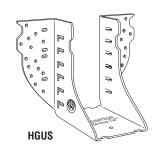
### Response				Top Flange						Face Mo	unt		
S   D   No   Header   Joist   (160)	Joist Heiaht			Fasten	er (in.)	Unlift				Faster	er (in.)	Unlift	Down-
Tival   BA5.50X (H=7.25)   3   (16) 0.162 x 3½   (8) 0.148 x 1½   1,225   4,715   HU68   2½   (14) 0.162 x 3½   (6) 0.162 x 3½   1,135   2, 9		Model	B Dim	Header	Joist			Model	B Dim	Header	Joist		load (100)
HB5.50/9.25   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HHUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.915   HB5.50/9.5   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   4   (46) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HB5.50/9.5   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/12.5   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/12.5   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/12.5   3½   (22) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/12.5   4   (56) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/12.5   4   (56) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   (10) 0.162 x 3½   2.075   5.815   HBUS5.50/10   3   (30) 0.162 x 3½   (10) 0.162 x 3½   3.565   5.916   HBS.50/14   4   (56) 0.162 x 3½   (20) 0.1	3 Ply	1¾" LVL or 5¼" LVL											
HGLTV5.37 (H=9.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (11) 0.1585 HGUS5.50/10 4 (46) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ (3.565 5.14 HBUS5.50/10 3 (30) 0.162 x 3½ (30) 0.162	71/4	BA5.50X (H=7.25)	3	(16) 0.162 x 3½	(8) 0.148 x 1½	1,225	4,715	HU68	21/2	(14) 0.162 x 3½	(6) 0.162 x 3½	1,135	2,085
H6LTV5.37 (H=9.25)	01/	HB5.50/9.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS5.50/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
HGLTV5.37 (H=9.5) HGLTV5.37 (H=9.5) HGLTV5.37 (H=9.5) HGLTV5.37 (H=9.5) HGLTV5.37 (H=11.25) HGLTV5.37 (H=12.25) HGLTV7.12 (H=9.25) HGLTV7.12 (H=11.25) HGLTV7.1	9 74	HGLTV5.37 (H=9.25)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS5.50/10	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
HGLTV5.37 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (1,00	01/	HB5.50/9.5	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS5.50/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
HGLTV5.37 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (1) 0.162 x 3	9 72	HGLTV5.37 (H=9.5)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS5.50/10	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
H6LTV5.37 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (1.120 10.585 HGUS5.50/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9.  H85.50/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HGUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9.  H85.50/14 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10.585 HGUS5.50/12 4 (56) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9.  H85.50/14 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10.585 HGUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9.  H85.50/14 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10.585 HGUS5.50/10 3 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,515 9.  H85.50/16 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,00 10.62 x 3½ 1,00 10.585 HGUS5.50/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9.  H6LTV5.37 (H=18) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10.585 HGUS5.50/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9.  H6LTV5.37 (H=18) 6 (28) SDS ½ x 3 (12) SDS ½ x 3 7,670 19.800 HGU5.50-SDS 5¼ (36) SDS ½ x 2½ (24) SDS ½ x 2½ 9,460 13 1.00 10	111/	HB5.50/11.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS5.50/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
HGLTV5.37 (H=11.875) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (10) 0.1	11 74	HGLTV5.37 (H=11.25)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS5.50/12	4	(56) 0.162 x 3½	(20) 0.162 x 3½	5,040	9,400
HGLTV5.37 (H=11.875) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ (11) 0.162 x 3½ (10) 0.1	117/	HB5.50/11.88	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS5.50/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
The book of the content of the con	11 1/8	HGLTV5.37 (H=11.875)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS5.50/12	4	(56) 0.162 x 3½	(10) 0.162 x 3½	5,040	9,400
EG05.37-SDS (H=14)   6   (28) SDS ¼ x 3   (12) SDS ½ x 3   7,670   19,800   HGUS5.50/14   4   (66) 0.162 x 3½   (22) 0.162 x 3½   5,515   9,166   16	1.4	HB5.50/14	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS5.50/10	3	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
EGG5.37-SDS (H=16) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU5.50-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13  HGLTV5.37 (H=18) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS5.50/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,120 10,585 HGUS5.50/14 4 (66) 0.162 x 3½ (24) SDS ¼ x 2½ 9,460 13  4 Ply 1¾" LVL or 7" LVL  HB7.12/9.25 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 4,095 9,124 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,140 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,140 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,140 9,124 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,140 9,124 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9,11½ HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9,11½ HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9,11½ HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾6 (30) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,11½ HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 5,040 9,11½ HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,11½ HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,040 9,11½ HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,144 1,12	14	EGQ5.37-SDS (H=14)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HGUS5.50/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
EGQ5.37-SDS (H=16)   6   (28) SDS ¼ x 3   (12) SDS ¼ x 3   7,670   19,800   HGU5.50-SDS   5¼   (36) SDS ¼ x 2½   (24) SDS ¼ x 2½   9,460   13	10	HB5.50/16	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HGUS5.50/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
EGQ5.37-SDS (H=18)   6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670    19,800    HGU5.50-SDS   5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½    9,460    13	10	EGQ5.37-SDS (H=16)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HGU5.50-SDS	51/4	(36) SDS 1/4 x 21/2	(24) SDS 1/4 x 21/2	9,460	13,160
## RF.12/9.12   Figure 14   Figure 15   Figure 16   Fi	10	HGLTV5.37 (H=18)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS5.50/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
HB7.12/9.25 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ (2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=9.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (10) 0.162 x 3½ 4,095 9, HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾ (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9, HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3¾ (50) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HGUT.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ 5,515	10	EGQ5.37-SDS (H=18)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HGU5.50-SDS	51/4	(36) SDS 1/4 x 21/2	(24) SDS 1/4 x 21/2	9,460	13,160
HGLTV7.12 (H=9.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9, HB7.12/9.5 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3 % (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9, HB7.12/11.25 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3 % (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3 % (30) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HGUT.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUST.25/14 4 (66) 0.162 x 3½	4 Ply 1	1¾" LVL or 7" LVL											
HGLTV7.12 (H=9.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9, HB7.12/9.5 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3 % (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 3 % (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5, HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3 % (30) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HB7.12/11.88 3 ½ (22) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9, HGUS7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9, HGUS7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25-SDS 5¼ (36) SDS ¼ x 2 ½ (24) SDS ¼ x 2 ½ 9,460 13 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (60) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,416 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (10) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,5	01/	HB7.12/9.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS7.25/10	35/16	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9,  HB7.12/11.25 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (20) 0.162 x 3½ 3,565 5,  HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (20) 0.162 x 3½ 3,565 5,  EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  HGLTV7.12 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,460 13	9 1/4	HGLTV7.12 (H=9.25)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/10	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
HGLTV7.12 (H=9.5) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/10 4 (46) 0.162 x 3½ (16) 0.162 x 3½ 4,095 9,  HB7.12/11.25 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 35% (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,  HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 35% (30) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 35% (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,  EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,515 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 9,460 13  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ 5,515 9,160 10,585 HGUS7.25/14 4 (66)	01/	HB7.12/9.5	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS7.25/10	35/16	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3% (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,  EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  EGQ7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,400 13	9 1/2	HGLTV7.12 (H=9.5)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/10	4	(46) 0.162 x 3½	(16) 0.162 x 3½	4,095	9,100
HGLTV7.12 (H=11.25) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HB7.12/11.88 3½ (22) 0.162 x 3½ (10) 0.162 x 3½ 2,075 5,815 HHUS7.25/10 3¾ (30) 0.162 x 3½ (10) 0.162 x 3½ 3,565 5,  EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 9,460 13	111/	HB7.12/11.25	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS7.25/10	35/16	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  EGQ7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,	11 74	HGLTV7.12 (H=11.25)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/12	4	(56) 0.162 x 3½	(20) 0.162 x 3½	5,040	9,400
EGQ7.25-SDS3 (H=11.875) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGUS7.25/12 4 (56) 0.162 x 3½ (20) 0.162 x 3½ 5,040 9,  HGLTV7.12 (H=14) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  EGQ7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,  HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,	117/	HB7.12/11.88	3½	(22) 0.162 x 3½	(10) 0.162 x 3½	2,075	5,815	HHUS7.25/10	35/16	(30) 0.162 x 3½	(10) 0.162 x 3½	3,565	5,635
EGQ7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 160 160 160 160 160 160 160 160 160	11 1/8	EGQ7.25-SDS3 (H=11.875)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HGUS7.25/12	4	(56) 0.162 x 3½	(20) 0.162 x 3½	5,040	9,400
EGQ7.25-SDS3 (H=14) 6 (28) SDS ¼ x 3 (12) SDS ¼ x 3 7,670 19,800 HGU7.25-SDS 5¼ (36) SDS ¼ x 2½ (24) SDS ¼ x 2½ 9,460 13 HGLTV7.12 (H=16) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,160 160 160 160 160 160 160 160 160 160	1.4	HGLTV7.12 (H=14)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
16	14	EGQ7.25-SDS3 (H=14)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HGU7.25-SDS	51/4	(36) SDS 1/4 x 21/2	(24) SDS 1/4 x 21/2	9,460	13,160
[10] EGQ7.25-SDS3 (H=16) 6 (28) SDS ½ x 3 (12) SDS ½ x 3 7.670 19.800 HHGU7.25-SDS 5½ (44) SDS ½ x 2½ (28) SDS ½ x 2½ 14.145 17.	10	HGLTV7.12 (H=16)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
	10	EGQ7.25-SDS3 (H=16)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HHGU7.25-SDS	51/4	(44) SDS 1/4 x 21/2	(28) SDS 1/4 x 21/2	14,145	17,345
HGLTV7.12 (H=18) 6 (18) 0.162 x 3½ (6) 0.162 x 3½ 1,120 10,585 HGUS7.25/14 4 (66) 0.162 x 3½ (22) 0.162 x 3½ 5,515 9,	10	HGLTV7.12 (H=18)	6	(18) 0.162 x 3½	(6) 0.162 x 3½	1,120	10,585	HGUS7.25/14	4	(66) 0.162 x 3½	(22) 0.162 x 3½	5,515	9,695
18 EGQ7.25-SDS3 (H=18) 6 (28) SDS ½ x 3 (12) SDS ½ x 3 7,670 19,800 HHGU7.25-SDS 5½ (44) SDS ½ x 2½ (28) SDS ½ x 2½ 14,145 17,	Iδ	EGQ7.25-SDS3 (H=18)	6	(28) SDS 1/4 x 3	(12) SDS 1/4 x 3	7,670	19,800	HHGU7.25-SDS	51/4	(44) SDS 1/4 x 21/2	(28) SDS 1/4 x 21/2	14,145	17,345

<sup>1.</sup> 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 and HGLTV -

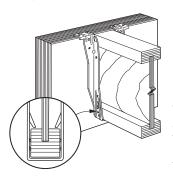
Top flange – 3 gauge Stirrup – 7 gauge This welded series provides high load carrying capacity and design flexibility and versatility. May be sloped, skewed and modified in other ways, and may be welded to steel I-beams. The GLTV may be used on 4x nailers.

EGQ – Top flange – 3 gauge Stirrup – 7 gauge A high capacity top flange connector designed for use with Structural Composite Lumber beams.

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 I-joists.

## SIMPSON Strong-Ti

## **Top-Flange Hangers**



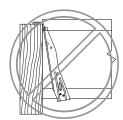
#### Flush Framing

Top flange configuration and thickness of top flange need to be considered for flush frame conditions.



#### Hanger Over-Spread

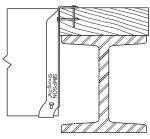
If the hanger is over-spread, it can raise the I-joist above the header and may cause uneven surfaces and squeaky floors.



#### **Hanger Not Plumb**

A hanger "kicked out" from the header can cause uneven surfaces and squeaky floors.

## **Wood Nailers**



**Correct Attachment** 



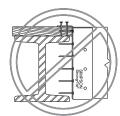
**Nailer Too Wide** 

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



**Nailer Too Narrow** 

Nailer should be full width.



Nailer Too Thin and

the wrong hanger for a nailer application.

## **Nail Hole Shapes**



#### **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.

seam.

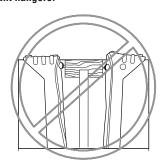


#### **Obround Holes**

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.

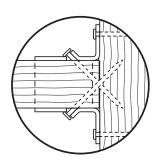
## **Toenailed I-Joist**

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



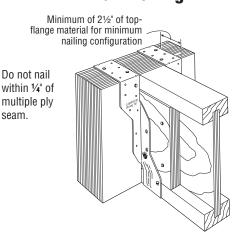
## **Double-Shear Nailing**

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



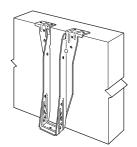
10

## **THAI Minimum Nailing**

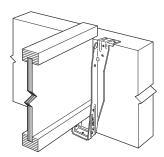




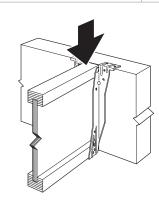
## **ITS Installation Sequence (IUS Similar)**



**STEP 1**Attach the ITS to the header



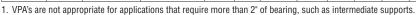
STEP 2 Slide the joist downward into the ITS until it rests above the Strong-Grip™ seat.

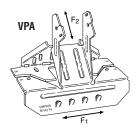


STEP 3 Firmly push or snap joist fully into the seat of the ITS.

## **VPA - Variable Pitch Connectors**

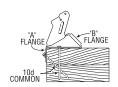
		Fast	teners	Allowable Loads										
Joist	Model			Upl		Downloa	d (100)	La	iteral L	oad (160)				
Width	No.	Top Plate	Rafter	(16	0)	Downloa	u (100)	DF	/SP	SI	PF			
		-		DF/SP	SPF	DF/SP	SPF	F <sub>1</sub>	F <sub>2</sub>	F <sub>1</sub>	F <sub>2</sub>			
11/2	VPA2	(8) 0.148 x 3	(2) 0.148 x 1½	295	250	1,050	870	375	250	325	250			
1¾	VPA25	(8) 0.148 x 3	(2) 0.148 x 1½	295	250	1,050	870	375	250	325	250			
21/16	VPA2.1	(9) 0.148 x 3	(2) 0.148 x 1½	295	250	1,230	1,020	375	250	325	250			
21/4 - 25/16	VPA35	(9) 0.148 x 3	(2) 0.148 x 1½	295	250	1,230	1,020	375	250	325	250			
21/2	VPA3	(9) 0.148 x 3	(2) 0.148 x 1½	295	250	1,230	1,020	375	250	325	250			
31/2	VPA4	(11) 0.148 x 3	(2) 0.148 x 1½	295	250	1,230	1,020	375	250	325	250			



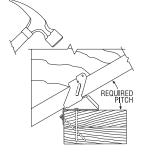


VPA – 18 gauge This variable pitch connector allows a sloped beam to sit on a top plate without having to notch, birdmouth, bevel, or toe nail. It also provides uplift capacity. Adjustable from 3:12 to 12:12 pitch.

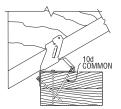
## **VPA Installation**



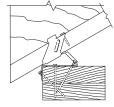
STEP 1 Install top nails and face PAN nails in "A" flange to outside wall top plate.



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



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.

## **TB - Tension Bridging**

Joist				Joist Spacing (in.)												
Height	12	16	19.2	24	30	32	36	42	48							
9½	TB20	TB27	TB27	TB30	TB36	TB36	TB42	TB48	TB54							
1117/8	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							
18	TB27	TB30	TB30	TB36	TB42	TB42	TB48	TB54	TB56							
20	TB30	TB30	TB36	TB36	TB42	TB42	TB48	TB54	TB56							



For all bridging avoid contact between steel members (this may cause squeaks).

Typical TB Installation



## **Alternate Hanger Solutions**

#### **Single Hangers:**

Example: 16" PWI 40, 900 lb. reaction

Alternative A: Rotation Prevented By Lateral Support

Use IUS2.37/16 — no web stiffeners required (as noted in table)

Alternative B: Rotation Prevented By Web Stiffeners Hanger height must be at least 60% of I-joist height. Try IUS2.37/11.88 (H = 11%).  $16" \times 60\% \ge 9.6"$  min. Allowable load is 1,185 lb.

OK, web stiffeners required.

Alternative C: Rotation Prevented By Web Stiffeners Try IUS2.37/9.5 (H =  $9\frac{1}{2}$ ). Allowable load is 950 lb. OK, web stiffeners and blocking near top are required since H < 9.6"

#### **Double Hangers:**

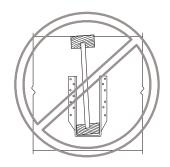
Example: Double 18" PWI 70 1,800 lb. reaction

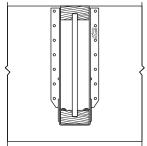
Alternative A: Rotation Prevented By Lateral Support
Use MIU4.75/18 – no web stiffeners required (as noted in table)

Alternative B: Rotation Prevented By Web Stiffeners Hanger height must be at least 60% of I-joist height. Try MIU4.75/14 (H=14)  $18 \times 60\% = 10.8$ " min. Allowable load is 3,170 lb. OK, web stiffeners required.

Alternative C: Rotation Prevented By Web Stiffeners
Try MIU4.75/9 (H = 9.03"). Allowable load is 2,305 lb.
OK, web stiffeners and blocking near top are required since H < 10.8"

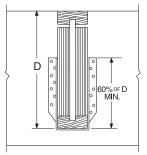
See Simpson Strong-Tie® Wood Construction Connectors catalog for other solutions.





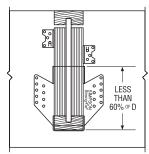
# Alternate A Rotation Prevented By Lateral Flange Support

Sides of hanger laterally support the top flange of the I-joist. No web stiffeners required!



Alternate B
Rotation Prevented By Web
Stiffeners

Hanger height should be at least 60% of the joist height.



#### Alternate C Rotation Prevented by Web Stiffeners

If hanger height is less than 60% of the joist height, add clips or blocking near the top.



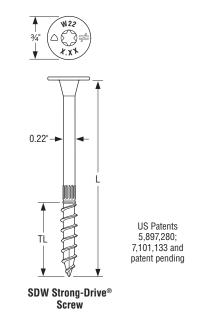
## **SDW Strong-Drive® Structural Wood Screws**

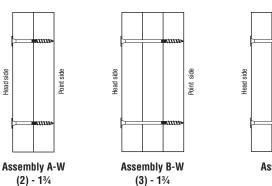
#### INSTALLATION

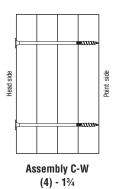
- SDW screws install best with a low-speed ½" drill and a T-40 6-lobe bit.
   The matched bit included with the screws is recommended for best results.
- Screw heads that are countersunk flush to the wood surface are acceptable if the screw has not spun out.
- Individual screw locations may be adjusted up to 3" to avoid conflicts with other hardware or to avoid lumber defects.
- · Predrilling is typically not required.

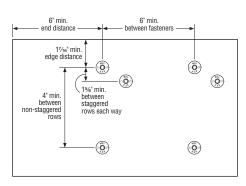
## Screw Dimensions

Model No.	Nominal Screw Length (L) (in)	Thread Length (TL) (in)	Head Stamp Length
SDW22338	3%	1%16	3.37
SDW22500	5	1%16	5.00
SDW22634	6¾	1%16	6.75









**Spacing Requirements** 

# Sideloaded 1¾ Multi-Ply SCL Assemblies — Allowable Uniform Load Applied to Either Outside Member

Multiple Members		Nominal Screw Length	Loaded Side	Structural Composite Lumber					
				SDW @ 12" o.c.		SDW @ 16" o.c.		SDW @ 24" o.c.	
Assembly	Components	(in)		2 Rows	3 Rows	2 Rows	3 Rows	2 Rows	3 Rows
A-W	2-ply SCL	3%	Either	1,600	2,400	1,200	1,800	800	1,200
B-W	3-ply SCL	5	Head	1,200	1,800	900	1,350	600	900
			Point	900	1,350	675	1,015	450	675
C-W	4-ply SCL	63/4	Head	1,065	1,600	800	1,200	535	800
			Point	800	1,200	600	900	400	600

- 1. Each ply is assumed to carry same proportion of load.
- 2. Loads may be applied to the head side and point side concurrently provided neither published allowable load is exceeded.
- (Example: a 3-ply assembly with a head side load of 1300 plf and point side load of 1000 plf may be fastened together with 3 rows of SDW @ 16" o.c.)
- 3. When hangers are installed on point side, hanger face fasteners must be a minimum of 3" long.
- 4. This table assumes an equivalent Specific Gravity of 0.50 or higher.
- Loads in this table are based on the overall capacity of the Simpson Strong-Tie® SDW22 fasteners. The capacity of the multi-ply assembly must be checked by a qualified Designer.

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.