

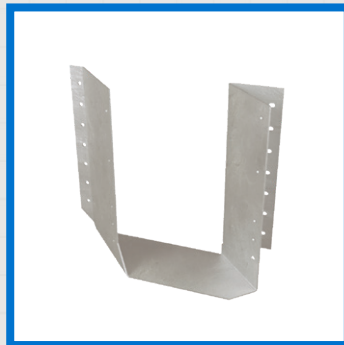
# EWP PRODUCT GUIDE



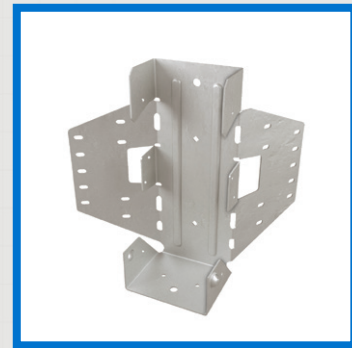
LIMIT  
STATES  
DESIGN

For Use With Products Manufactured by

**NORDIC**  
STRUCTURES



SKH2520R-2



LSSH35



THFI2514



TFL25118

Canadian Specifiers Guide

**MiTek<sup>®</sup>**

1-800-268-3434  
MiTek-ca

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## Follow these instructions to ensure the proper installation of MiTek products.

- See current MiTek Product Catalog for General Notes, Warranty, and installation information for hanger models, joist sizes, and header situations not shown.
- Loads listed address hanger/header/fastener limitations as well as joist/hanger limitations assuming header material is S-P-F or Nordic Lam.
- Uplift loads have been increased 15% for wind or seismic loads and no further increase shall be permitted. Reduce loads according to code for normal duration loading such as cantilever construction.
- If hanger height is less than 60% of joist height, joist rotation may occur, therefore supplemental lateral restraints are required, see page 3.
- The type and quantity of fasteners used to install MiTek products is critical to connector performance. To achieve the factored resistances shown in this document, install with the fasteners specified for that particular product. All specified fasteners must be properly installed prior to applying load of any kind to the connection.
- Throughout this document, dimensions are expressed in inches and loads in pounds, unless specifically noted otherwise.
- Load values for 10d and 16d designations in the fastener schedules throughout this document refer to common wire nails, unless noted otherwise.
- The factored resistances shown in this document are based on Limit States Design methodology.
- **Multiple Joist Plies:** Fasten together multiple plies of wood joists, in accordance with the manufacturer's installation guidelines, such that the joists act as a single unit.
- **Sloped Joists:** Use slope seat hangers and beveled web stiffeners whenever the slope exceeds the following:  $\frac{1}{2}:12$  for seat bearing lengths of  $2\frac{1}{2}"$  or less;  $\frac{3}{8}:12$  for bearing lengths between  $2\frac{1}{2}"$  and  $3\frac{1}{2}"$ ; and  $\frac{1}{4}:12$  for bearing lengths in excess of  $3\frac{1}{2}"$ .

**Backer Blocks** — Pattern the nails used to install backer blocks or web stiffeners in wood Joists to avoid splitting the block. The nail pattern should be sufficiently spaced to avoid the same grain line, particularly with solid sawn backer blocks. Backer blocks must be installed on wood Joists acting as the header, or supporting member. Install in accordance with the I-Joist manufacturer's installation guidelines. The nails used to install hangers mounted to a Joist header must penetrate through the web and into the backer block on the opposite side.

### Filler and Backer Block sizes

Flange Width	Backer Block Material Thickness Required*	Backer Block Minimum Depth**	Filler Block Net Depth	Filler Block Size
2-1/2" x 1-1/2"	1"	5-1/2"	9-1/2" 11-7/8" 14" 16"	2-1/8" x 6" 2-1/8" x 8" 2-1/8" x 10" 2-1/8" x 12"
3-1/2" x 1-1/2"	1-1/2"	7-1/4"	9-1/2" 11-7/8" 14" 16"	3" x 6" 3" x 8" 3" x 10" 3" x 12"
3-1/2" x 2"	1-1/2"	7-1/4"	11-7/8" 14" 16"	3" x 7" 3" x 9" 3" x 11"

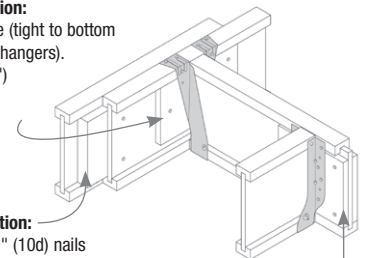
\* Minimum grade for backer block material shall be SPF No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA 0325 or CAN/CSA 0437 standard.

\*\* For face-mount hangers, use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges, use net depth minus 4-1/4".

With top flange hangers, backer block required only for factored downward loads exceeding 360 lbs or for uplift conditions

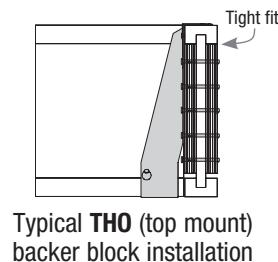
#### Backer Block Installation:

Install tight to top flange (tight to bottom flange with face mount hangers). Attach with (12) 10d (3") box nails, clinched when possible.

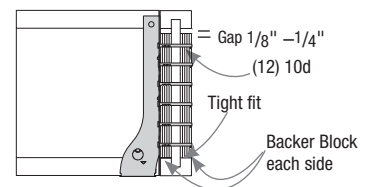


#### Filler Block Installation:

Nail with 2 rows of 3" (10d) nails at 12" o.c. (clinched when possible) on each side of double I-joist.



Typical THO (top mount) backer block installation



Typical THF (face mount) backer block installation

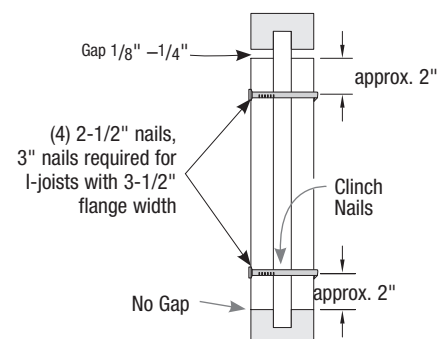
## Web Stiffener Attachment

Web Stiffeners are optional except as noted below:

- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.

Flange Width	Web Stiffener Size Each Side of Web
2-1/2"	1" x 2-5/16" minimum width
3-1/2"	1-1/2" x 2-5/16" minimum width

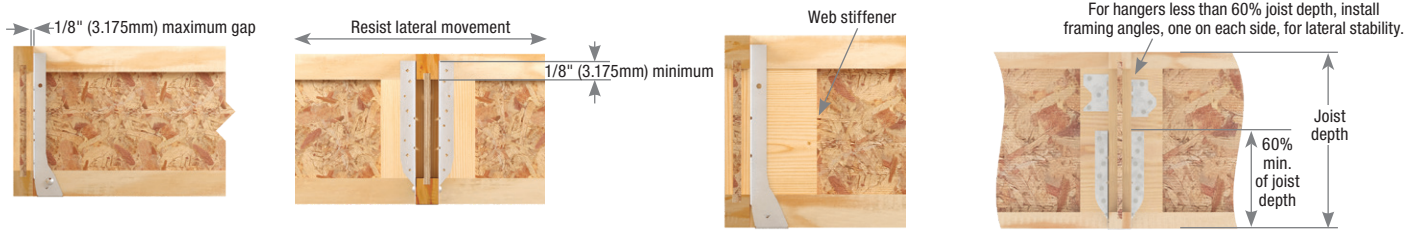
Stiffeners 1" thick are wood structural panels and stiffeners, 1-1/2" thick are SPF lumber or denser.



## Support Height & Lateral Stability

Hangers for joists **without web stiffeners** must support the I-joist's top flange and provide lateral resistance with no less than 1/8" contact. MiTek recommends that hangers for joist **with web**

**stiffeners** should be 60% of the joist height for stability during construction. If this cannot be accomplished, potential joist rotation must be resolved by other means.



(Top flange support requirements can be verified in EWP Top Mount Hangers charts under the Web Stiffener Req. column of MiTek's Product Catalog.)

## Nailer Installations

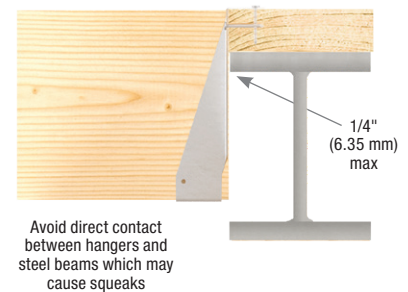
### Correct Hanger Attachment to Nailer

A nailer or sill plate is considered to be any wood member attached to a steel beam, concrete block wall, concrete stem wall, or other type of support unsuitable for nailing which is used as a nailing surface for top mount hangers to hold beams or joists.

### Nailer Sized Correctly

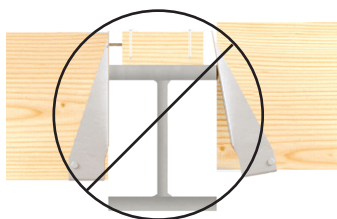
Top flange of hanger is fully supported and recommended nails have full penetration into nailer, resulting in a carried member hanging safely at the proper height.

The nailer must be sized to fit the support width as shown and be of sufficient thickness to satisfy recommended top flange nailing requirements. A design professional must specify nailer attachment to steel beams.



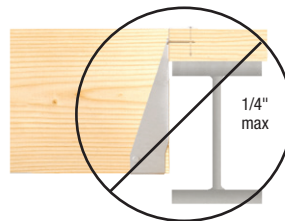
**Correct Attachment**

### Wrong Nailer Size Causes Component Failure



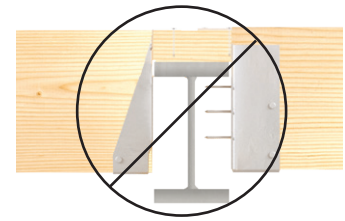
#### ⚠ Too Narrow

Top flange not fully supported can cause nail breakout. Or, by fully supporting top flange, hanger is tilted back, causing lifting of carried member which results in uneven surfaces and squeaky floors.



#### ⚠ Too Wide

Loading can cause cross grain breaking of nailer. The recommended nailer overhang is 1/4" (6.35mm) maximum per side.



#### ⚠ Too Thin

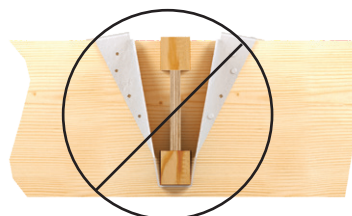
Top flange nailing cannot fully penetrate nailer, causing reduced factored resistance. Never use hangers which require multiple face nails with a nailer or sill plate since the factored resistance are dependent on all nail holes being used.

## Top Flange Hangers

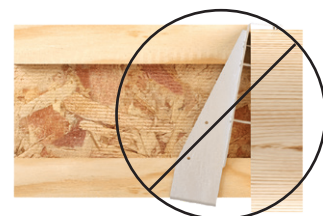
The thickness of the hanger metal and nail heads on top mount hangers must be evaluated for the effect on subsequent sheathing. Ensure the top mount hanger is installed so the flanges of the hanger are not over-spread which tends to elevate the supported I-Joist, causing uneven floor surfaces and squeaking. Similarly, ensure the hanger is installed plumb such that the face flanges of the hanger are mounted firmly against the wide-face surface of the header.



**Flush framing**



#### ⚠ Hanger over-spread



#### ⚠ Hanger not plumb

## Hanger Factored Resistance (Lbs)

Joist Height	Top Mount Hangers <sup>4,6</sup>								Face Mount Hangers									
	MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>5</sup>				S-P-F		MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>5</sup>				S-P-F		
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%	
			Qty	Type	Qty	Type						Qty	Type	Qty	Type			
NI-20, NI-40x, NI-60 Series																		
Joist Width = 2-1/2"																		
9-1/2	TFL2595	2	6	10d	2	10d x 1-1/2	1960	240	THFI2595	2	--	8	10d	--	--	1845	185	
11-7/8	TFL25118	2	6	10d	2	10d x 1-1/2	1960	240	THFI25118	2	--	10	10d	--	--	1845	185	
14	TFL2514	2	6	10d	2	10d x 1-1/2	1960	240	THFI2514	2	--	12	10d	--	--	3615	185	
16	TFL2516	2	6	10d	2	10d x 1-1/2	1960	240	IHFL2516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
18	TFI318	2-1/2	6	16d	2	10d x 1-1/2	3290	460	IHFL2516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
NI-80, NI-90 Series																		
Joist Width = 3-1/2"																		
9-1/2	THO35950	2-3/8	10	10d	2	10d x 1-1/2	2620	440	IHFL35925	2-1/2	Min	10	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
11-7/8	THO35118	2-3/8	10	10d	2	10d x 1-1/2	2620	440	IHFL35112	2-1/2	Min	10	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
14	THO35140	2-3/8	12	10d	2	10d x 1-1/2	3385	440	IHFL3514	2-1/2	Min	12	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
16	THO35160	2-3/8	12	10d	2	10d x 1-1/2	3385	440	IHFL3516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
NI-80x Series																		
Joist Width = 3-1/2"																		
18	TFI418	2-1/2	6	16d	2	10d x 1-1/2	3290	460	IHFL3516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
20	TFI420	2-1/2	6	16d	2	10d x 1-1/2	3290	460	IHFL3516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
22	TFI422	2-1/2	10	16d	2	10d x 1-1/2	4175	460	IHFL3516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	
24	TFI424	2-1/2	10	16d	2	10d x 1-1/2	4175	460	IHFL3516	2-1/2	Min	14	10d	--	--	3310	90	
											Max			2	10d x 1-1/2		385	

- 1) Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required for non-shaded hangers by Nordic.
- 2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM® header.
- 3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.
- 4) Top Mount Hangers assume supporting headers to have a minimum height of 5-1/2" and a minimum thickness of the length of the header nails or the depth of the top flange, whichever is greater. For wood nailer options or header materials not included in this table, refer to the current MiTek Product Catalog.
- 5) 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, and 16d nails are 0.162" dia. x 3-1/2" long. 16d sinkers are 0.148" dia. x 3-1/4" long and may be used where 10d commons are specified.
- 6) For top mount hangers supported by I-Joist headers with a flange thickness less than 1-1/2", consult MiTek and Nordic for hanger limitations.
- 7) Hangers utilizing 16d nails are not compatible with NI joists.



THO



TFL



TFI



THFI



IHFL

## Hanger Factored Resistance (Lbs)

Joist Height	Adjustable Height Hangers								Skewed 45° Hangers								
	MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>4</sup>				S-P-F		MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>4</sup>				S-P-F	
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
NI-20, NI-40x, NI-60 Series									Joist Width = 2-1/2"								
9-1/2	MSH322 <sup>5,8</sup>	1-3/4	6	10d	4	10d x 1-1/2	2750	--	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	2700	2240
11-7/8	MSH322 <sup>5</sup>	1-3/4	6	10d	4	10d x 1-1/2	2750	--	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	2700	2240
14	MSH322 <sup>5</sup>	1-3/4	6	10d	4	10d x 1-1/2	2750	--	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	3645	2240
16	MSH322 <sup>5</sup>	1-3/4	6	10d	4	10d x 1-1/2	2750	--	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	3645	2240
NI-80, NI-90 Series									Joist Width = 3-1/2"								
9-1/2	MSH422 <sup>5</sup>	1-3/4	6	10d	6	10d	2525	--	HD410_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	14	16d	6	10d	5030	1850
											Max	20		10		5870	3050
11-7/8	MSH422 <sup>5</sup>	1-3/4	6	10d	6	10d	2525	--	HD410_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	14	16d	6	10d	5030	1850
											Max	20		10		5870	3050
14	MSH422 <sup>5</sup>	1-3/4	6	10d	6	10d	2525	--	HD414_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	18	16d	8	10d	4180	1950
											Max	26		12		6965	2730
16	MSH422 <sup>5</sup>	1-3/4	6	10d	6	10d	2525	--	HD414_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	18	16d	8	10d	4180	1950
											Max	26		12		6965	2730
NI-80x Series									Joist Width = 3-1/2"								
18	MSH422 <sup>5,8</sup>	1-3/4	6	10d	6	10d	2525	--	HD414_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	18	16d	8	10d	4180	1950
											Max	26		12		6965	2730
20	MSH426 <sup>5,8</sup>	1-3/4	6	10d	6	10d	3405	--	HD414_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	18	16d	8	10d	4180	1950
											Max	26		12		6965	2730
22	MSH426 <sup>5,8</sup>	1-3/4	6	10d	6	10d	3405	--	HD416_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	22	16d	10	10d	4625	2730
											Max	30		14		6660	
24	MSH426 <sup>5,8</sup>	1-3/4	6	10d	6	10d	3405	--	HD416_SK45L/R_BV <sup>6,7</sup>	2-1/2	Min	22	16d	10	10d	4625	2730
											Max	30		14		6660	

1) Shaded hangers require web stiffeners at joist ends.

2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM® header.

3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.

4) 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, and 16d nails are 0.162" dia. x 3-1/2" long. 16d sinkers are 0.148" dia. x 3-1/4" long and may be used where 10d commons are specified.

5) MSH factored resistances listed in this table assume Top-Min mounting condition installed with 4 - 10d top nails and 2 - 10d face nails.

For MSH Face-Max and Top-Max mounting conditions not included in this table, refer to the current MiTek Product Catalog.

6) Bevel cut required on end of joist to achieve design loads.

7) Hangers are special order. Consult MiTek for pricing and lead times.

8) Flanges on the bucket of the hanger may extend above the top of the joist.

9) Hangers utilizing 16d nails are not compatible with NI joists.



**MSH**



**SKH\_L**  
left shown



**SKH\_R**  
right shown



## Hanger Factored Resistance (Lbs)

Joist Height	Top Mount Hangers <sup>4,6</sup>								Face Mount Hangers								
	MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>5</sup>				S-P-F		MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>5</sup>				S-P-F	
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%
			Qty	Type	Qty	Type						Qty	Type				
Double NI-20, NI-40x, NI-60 Series									Joist Width = 5"								
9-1/2	TH025950-2	3	10	16d	6	10d	4570	1945	IHF25925-2	2-1/2	Min	10	10d	--	--	2900	90
											Max	24	16d	2	10d x 1-1/2	4280	585
11-7/8	TH025118-2	3	10	16d	6	10d	4570	1945	IHF25112-2	2-1/2	Min	10	10d	--	--	2900	90
											Max	24	16d	2	10d x 1-1/2	4280	585
14	TH025140-2	3	12	16d	6	10d	5545	1945	THF25140-2	2-1/2	--	20	10d	6	10d	5245	2610
16	TH025160-2	3	12	16d	6	10d	5545	1945	THF25160-2	2-1/2	--	24	10d	6	10d	5245	2610
Double NI-80, NI-90 Series									Joist Width = 7"								
9-1/2	BPH7195	2-3/8	10	16d	6	10d	4340	2555	HD7100	2-1/2	Min	14	16d	6	16d	4180	2200
											Max	18		8		3480	
11-7/8	BPH71118	3	10	16d	6	10d	4305	2555	HD7120	2-1/2	Min	16	16d	6	16d	4180	2200
											Max	22		8		4710	3515
14	BPH7114	3	10	16d	6	10d	4305	2555	HD7140	2-1/2	Min	20	16d	8	16d	4180	3480
											Max	26		12		6430	3640
16	BPH7116	3	10	16d	6	10d	4305	2555	HD7160	2-1/2	--	24	16d	8	10d	4710	3515
Double NI-80x Series									Joist Width = 7"								
18	BPH7118	3	10	16d	6	10d	4305	2555	HD7180	2-1/2	--	28	16d	8	10d	6430	3515
20	BPH7120	3	10	16d	6	10d	4305	2555	HD7180	2-1/2	--	28	16d	8	10d	6430	3515
22	BPH7122	3	10	16d	6	10d	4305	2555	HD7180	2-1/2	--	28	16d	8	10d	6430	3515
24	BPH7124	3	10	16d	6	10d	4305	2555	HD7180	2-1/2	--	28	16d	8	10d	6430	3515

1) Shaded hangers require web stiffeners at joist ends.

2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM® header.

3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.

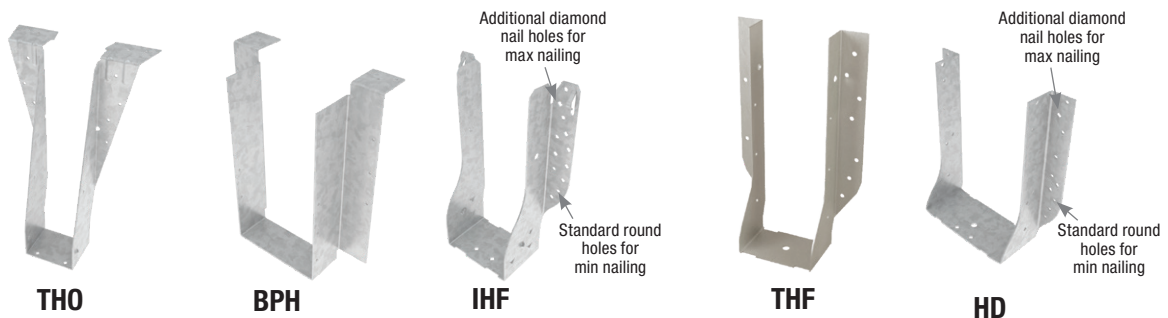
4) Top Mount Hangers assume supporting headers to have a minimum height of 5-1/2" and a minimum thickness of the length of the header nails or the depth of the top flange, whichever is greater. For wood nailer options or header materials not included in this table, refer to the current MiTek Product Catalog.

5) 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, and 16d nails are 0.162" dia. x 3-1/2" long.

16d sinkers are 0.148" dia. x 3-1/4" long and may be used where 10d commons are specified.

6) For top mount hangers supported by I-Joist headers with a flange thickness less than 1-1/2", consult MiTek and Nordic for hanger limitations.

7) Hangers utilizing 16d nails are not compatible with NI joists.



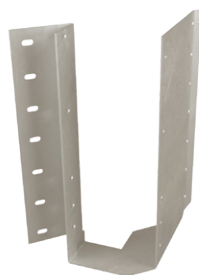
## Hangar Factored Resistance (Lbs)

Joist Height	Adjustable Height Hangers								Skewed 45° Hangers									
	MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>4</sup>				S-P-F		MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>4</sup>				S-P-F		
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%	
			Qty	Type	Qty	Type						Qty	Type					
Double NI-20, NI-40x, NI-60 Series									Joist Width = 5"									
9-1/2	See current MiTek Product Catalog for specialty hanger options								SKH2520L/R-2 <sup>6</sup>	3-1/2	--	14	10d	10	10d	4175	2740	
11-7/8									SKH2520L/R-2 <sup>6</sup>	3-1/2	--	14	10d	10	10d	4175	2740	
14									SKH2524L/R-2 <sup>6</sup>	3-1/2	--	16	10d	10	10d	3885	2735	
16									SKH2524L/R-2 <sup>6</sup>	3-1/2	--	16	10d	10	10d	3885	2735	
Double NI-80, NI-90 Series									Joist Width = 7"									
9-1/2	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7100_SK45L/R_BV <sup>6,8</sup>	2-1/2	Min Max	14 18	16d	6 8	16d	4180	1650 2610	
11-7/8	MSH422-2	2	8	16d	6	16d	5230	--	HD7120_SK45L/R_BV <sup>6,8</sup>	2-1/2	Min Max	16 22	16d	6 8	16d	4180 4710	1650 2640	
14	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7140_SK45L/R_BV <sup>6,8</sup>	2-1/2	Min Max	20 26	16d	8 12	16d	4180 6430	2610 2730	
16	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7160_SK45L/R_BV <sup>6,8</sup>	2-1/2	--	24	16d	8	10d	4710	2640	
Double NI-80x Series									Joist Width = 7"									
18	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7180_SK45L/R_BV <sup>6,8</sup>	2-1/2	--	28	16d	8	10d	6430	2640	
20	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7180_SK45L/R_BV <sup>6,8</sup>	2-1/2	--	28	16d	8	10d	6430	2640	
22	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7180_SK45L/R_BV <sup>6,8</sup>	2-1/2	--	28	16d	8	10d	6430	2640	
24	MSH422-2 <sup>7</sup>	2	8	16d	6	16d	5230	--	HD7180_SK45L/R_BV <sup>6,8</sup>	2-1/2	--	28	16d	8	10d	6430	2640	

- 1) Shaded hangers require web stiffeners at joist ends.
- 2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM® header.
- 3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.
- 4) 10d nails are 0.148" dia. x 3" long, and 16d nails are 0.162" dia. x 3-1/2" long.  
16d sinkers are 0.148" dia. x 3-1/4" long and may be used where 10d commons are specified.
- 5) For additional sizes, stock numbers, and modifications not shown, refer to MiTek's Product Catalog.
- 6) Bevel cut required on end of joist to achieve design loads.
- 7) MSH factored resistances listed in this table assume Top-Min mounting condition installed with 4 - 10d top nails and 4 - 10d face nails.  
For MSH Face-Max and Top-Max mounting conditions not included in this table, refer to the current MiTek Product Catalog.
- 8) Hangers are special order. Consult MiTek for pricing and lead times.



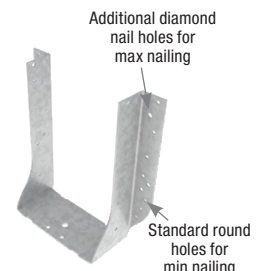
MSH



SKH\_L  
left shown



SKH\_R  
right shown



HD

## Hanger Factored Resistance (Lbs)

Joist Height	Top Mount Hangers <sup>3</sup>								Face Mount Hangers									
	MiTek Stock No.	Length of Hanger Seat (in)	Fastener Schedule <sup>4</sup>				S-P-F		MiTek Stock No.	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>4</sup>				S-P-F		
			Header		Joist		Down <sup>1</sup> 100%	Uplift <sup>2</sup> 115%				Header		Joist		Down <sup>1</sup> 100%	Uplift <sup>2</sup> 115%	
			Qty	Type	Qty	Type						Qty	Type	Qty	Type			
1-3/4" NORDIC-LAM																		
9-1/2	BPH1795	2-3/8	10	16d	4	10d x 1-1/2	4160	990	HD17925	2-1/2	Min	18	16d	6	10d x 1-1/2	4180	2050	
	PHXU1795	3-1/4	8	16d	6	10d x 1-1/2	6075	1645	HUS179 <sup>5</sup>	3	--	30	16d	10	16d	4710	3270	
11-1/4	BPH17112	2-3/8	10	16d	4	10d x 1-1/2	4160	990	HD17112	2-1/2	Min	22	16d	6	10d x 1-1/2	4710	2050	
	PHXU17112	3-1/4	8	16d	6	10d x 1-1/2	6075	1645	HUS179 <sup>5</sup>	3	--	30	16d	10	16d	6535	3270	
11-7/8	BPH17118	2-3/8	10	16d	4	10d x 1-1/2	4160	990	HD17112	2-1/2	Min	22	16d	6	10d x 1-1/2	4710	2050	
	PHXU17118	3-1/4	8	16d	6	10d x 1-1/2	6075	1645	HUS179 <sup>5</sup>	3	--	30	16d	10	16d	6535	3270	
14	BPH1714	2-3/8	10	16d	4	10d x 1-1/2	4160	990	HD1714	2-1/2	Min	28	16d	8	10d x 1-1/2	4710	2600	
	PHXU1714	3-1/4	8	16d	6	10d x 1-1/2	6075	1645	HUS179 <sup>5</sup>	3	--	30	16d	10	16d	6535	3270	
2 Ply 1-3/4" NORDIC-LAM or 3-1/2" NORDIC-LAM																		
9-1/2	HBPH3595	3-1/2	22	16d	10	16d	8640	4810	THD410	3	--	38	16d	20	10d	9815	7145	
	HLBH3595	6	15	NA16D-RS	6	16d	11730	2200	THDH410 <sup>5</sup>	4	--	46	16d	12	16d	9725	7345	
11-7/8	HBPH35118	3-1/2	22	16d	10	16d	8640	4810	THD410	3	--	38	16d	20	10d	9815	7145	
	HLBH35118	6	15	NA16D-RS	6	16d	11730	2200	THDH412 <sup>5</sup>	4	--	56	16d	14	16d	12265	8775	
14	HBPH3514	3-1/2	22	16d	10	16d	8640	4810	THD410	3	--	38	16d	20	10d	9815	7145	
	HLBH3514	6	15	NA16D-RS	6	16d	11730	2200	THDH414 <sup>5</sup>	4	--	66	16d	16	16d	15320	8905	
16	HBPH3516	3-1/2	22	16d	10	16d	8640	4810	THD412	3	--	48	16d	20	10d	9815	7145	
	HLBH3516	6	15	NA16D-RS	6	16d	11730	2200	THDH414 <sup>5</sup>	4	--	66	16d	16	16d	15320	8905	
18	HBPH3518	3-1/2	22	16d	10	16d	8640	4810	THD412	3	--	48	16d	20	10d	9815	7145	
	HLBH3518	6	15	NA16D-RS	6	16d	11730	2200	THDH414 <sup>5</sup>	4	--	66	16d	16	16d	15320	8905	
3 Ply 1-3/4" NORDIC-LAM or 5-1/2" NORDIC-LAM																		
9-1/2	HBPH5595	3-1/2	22	16d	10	16d	8635	4890	THD610	3	--	38	16d	20	10d	11245	7145	
	HLBH5595	6	15	NA16D-RS	6	16d	11730	2490	THDH610 <sup>5</sup>	4	--	46	16d	16	16d	9725	8775	
11-7/8	HBPH55118	3-1/2	22	16d	10	16d	8635	4890	THD610	3	--	38	16d	20	10d	11245	7145	
	HLBH55118	6	15	NA16D-RS	6	16d	11730	2490	THDH612 <sup>5</sup>	4	--	56	16d	20	16d	11750	8775	
14	HBPH5514	3-1/2	22	16d	10	16d	8635	4890	THD610	3	--	38	16d	20	10d	11245	7145	
	HLBH5514	6	15	NA16D-RS	6	16d	11730	2490	THDH614 <sup>5</sup>	4	--	66	16d	22	16d	15320	8905	
16	HBPH5516	3-1/2	22	16d	10	16d	8635	4890	THD612	3	--	48	16d	20	10d	11245	7145	
	HLBH5516	6	15	NA16D-RS	6	16d	11730	2490	THDH614 <sup>5</sup>	4	--	66	16d	22	16d	15320	8905	
18	HBPH5518	3-1/2	22	16d	10	16d	8635	4890	THD612	3	--	48	16d	20	10d	11245	7145	
	HLBH5518	6	15	NA16D-RS	6	16d	11730	2490	THDH614 <sup>5</sup>	4	--	66	16d	22	16d	15320	8905	
4 Ply 1-3/4" NORDIC-LAM or 7" NORDIC-LAM																		
9-1/2	HBPH7195	3-1/2	22	16d	10	16d	8635	4890	THD7210	3	--	38	16d	20	10d	11245	7145	
	HLBH7195	6	15	NA16D-RS	6	16d	11730	2490	THDH7210 <sup>5</sup>	4	--	46	16d	12	16d	9725	7345	
11-7/8	HBPH71118	3-1/2	22	16d	10	16d	8635	4890	THD7210	3	--	38	16d	20	10d	11245	7145	
	HLBH71118	6	15	NA16D-RS	6	16d	11730	2490	THDH7212 <sup>5</sup>	4	--	56	16d	14	16d	9725	8775	
14	HBPH7114	3-1/2	22	16d	10	16d	8635	4890	THD7210	3	--	38	16d	20	10d	11245	7145	
	HLBH7114	6	15	NA16D-RS	6	16d	11730	2490	THDH7214 <sup>5</sup>	4	--	66	16d	16	16d	15320	8905	
16	HBPH7116	3-1/2	22	16d	10	16d	8635	4890	HD7120	2-1/2	Min	16	16d	6	16d	4180	2200	
	HLBH7116	6	15	NA16D-RS	6	16d	11730	2490	THDH7214 <sup>5</sup>	4	Max	22	16d	8	16d	4710	3515	
18	HBPH7118	3-1/2	22	16d	10	16d	8635	4890	HD7140	2-1/2	Min	20	16d	8	16d	4180	3480	
	HLBH7118	6	15	NA16D-RS	6	16d	11730	2490	THDH7214 <sup>5</sup>	4	Max	26	16d	12	16d	6430	3640	

- Factored resistance is based on hanger attachment to S-P-F or NORDIC-LAM® header.
- Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.
- Top Mount Hangers assume supporting headers to have a minimum height of 5-1/2" and a minimum thickness of the length of the header nails or the depth of the top flange, whichever is greater. For wood nailer options or header materials not included in this table, refer to the current MiTek Product Catalog.
- 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long, and 16d nails are 0.162" dia. x 3-1/2" long, NA16D-RS are 10d (0.148" dia.) x 3-1/2" long ring shank nails. 16d sinkers are 0.148" dia. x 3-1/4" long and may be used where 10d commons are specified.
- Joist nails need to be toe nailed at a 30° to 45° angle to achieve listed loads for THDH and HUS models.



BPH



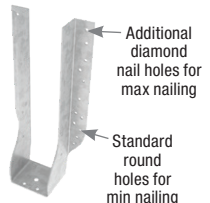
HLBH



HBPH



PHXU



HD



HUS



THDH



THD



# Field Slope/Skew Hangers

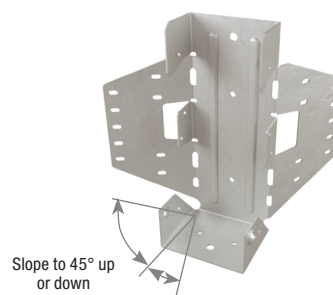
The LSSH series connects rafters to ridge beams in vaulted roof structures. This series is field adjustable to meet a variety of skew and/or slope applications. Slopes and skews 0° to 45°.

## Installation:

- Use all specified fasteners.

## Steps:

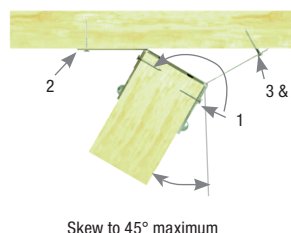
1. Position LSSH connector against plumb-cut end of joist. Fasten joist side flanges on both sides with 10d (0.148") x 1-1/2" HDG nails. Bend seat up to fit against joist bottom and drive (1) 10d (0.148") x 1-1/2" HDG nail through bottom seat into joist bottom flange. Drive (2) 10d (0.148") x 1-1/2" HDG nails at downward angle through dimpled nailing guides.
  2. Lean connector and rafter end against ridge beam at desired position. Install 10d (0.148" x 3") HDG or 16d (0.162" x 3-1/2") HDG nails through nail holes into ridge beam at right 90° angle. If skewing the rafter, only drive nails into ridge beam on inside flange.
  3. Bend flange to desired angle.
  4. Hammer outside flange until edge touches header. Fasten outside flange to ridge by driving 10d (0.148" x 3") HDG or 16d (0.162" x 3-1/2") HDG nails through nail holes.
- Web stiffeners are required for all wood I-Joist installations.
  - Designer may consider adding a tension restraint for the supported member for roof slopes exceeding 6/12.



LSSH



Typical LSSH installation



## Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Installation Type	Fastener Schedule <sup>5</sup>				S-P-F	
				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%
				Qty	Type	Qty	Type		
NI-20, NI-40x, NI-60 Series				Joist Width = 2-1/2"					
ALL	LSSH25-TZ	3	Sloped Only	18	16d HDG	12	10d x 1-1/2 HDG	2980	1575
			Skewed Only <u>or</u> Sloped & Skewed	14	16d HDG	12	10d x 1-1/2 HDG	1830	1575
NI-80, NI-80x NI-90 Series				Joist Width = 3-1/2"					
ALL	LSSH35-TZ <sup>4</sup>	3	Sloped Only	18	16d HDG	12	10d x 1-1/2 HDG	3860	2145
			Skewed Only <u>or</u> Sloped & Skewed	14	16d HDG	12	10d x 1-1/2 HDG	2195	2145

1) Shaded hangers require web stiffeners at joist ends.

2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM® header.

3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.

4) Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.

5) **NAILS:** 10d x 1-1/2 HDG nails are 0.148" dia. x 1-1/2" long, 16d HDG nails are 0.162" dia. x 3-1/2" long.

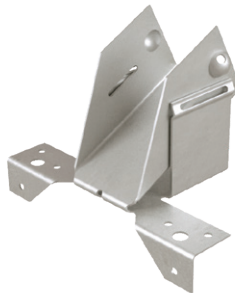
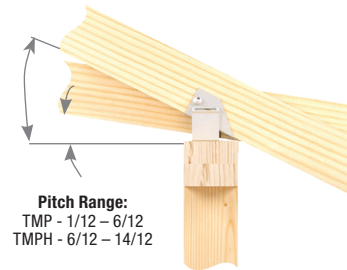
# Variable Pitch Connectors



The TMP and TMPH are designed to make rafter-to-plate connections and eliminate time-consuming bird's-mouth notching or bevel plate installation.

## Installation:

- Use all specified fasteners.
- Position connector on top plate. Fasten connector to outside of top plate with specified nails. Insert rafter into rafter pocket. Adjust rafter and pocket to correct pitch. Fasten rafter to connector with specified nails. For **TMP**: drive specified nails through the opposing slots in the pocket. For **TMPH**: slide the fulcrum until it supports the pocket at the desired pitch and drive nails down through the fulcrum base into the top plate to lock the fulcrum into position.



**TMP**



**Typical TMP installation**



**Typical TMPH installation**

## TMP Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No. <sup>1</sup>	Fastener Schedule <sup>4</sup>				S-P-F	
		Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 115%
		Qty	Type	Qty	Type		
NI-20, NI-40x, NI-60 Series		Joist Width = 2-1/2"					
All	TMP25	6	10d	4	10d x 1-1/2	2175	315
NI-80, NI-80x NI-90 Series		Joist Width = 3-1/2"					
All	TMP4	6	10d	4	10d x 1-1/2	2175	315



**TMPH**

- 1) Web stiffeners may be required for hanger by Nordic.
- 2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM<sup>®</sup> header.
- 3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.
- 4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

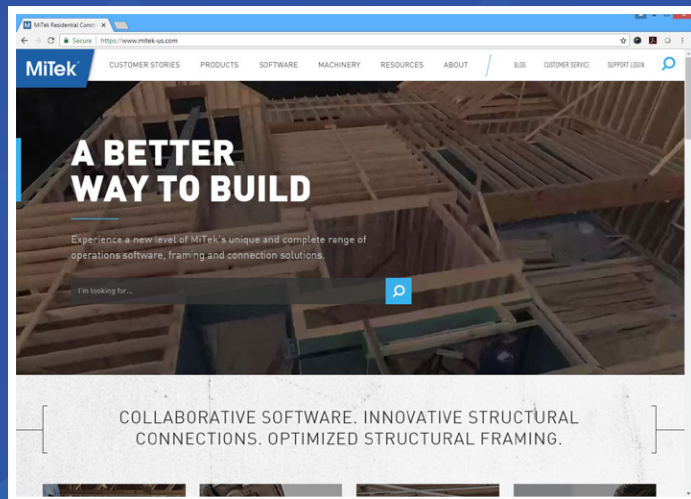
## TMPH Hanger Factored Resistance (Lbs)

Joist Height	MiTek Stock No. <sup>1</sup>	Fastener Schedule <sup>4</sup>				Wood Species	S-P-F					Uplift <sup>3</sup> 115%	
		Header		Joist			According to Pitch <sup>2</sup>						
		Qty	Type	Qty	Type		6/12	7/12	8/12	10/12	12/12		
NI-20, NI-40x, NI-60 Series						Joist Width = 2-1/2"							
All	TMPH25	10	10d	8	10d x 1-1/2	S-P-F	4100	4225	4350	3510	3235	295	
NI-80, NI-80x NI-90 Series						Joist Width = 3-1/2"							
All	TMPH4	10	10d	8	10d x 1-1/2	S-P-F	4100	4225	4350	3510	3235	295	

- 1) Web stiffeners are required for all Wood I-Joist installations.
- 2) Factored resistance is based on hanger attachment to S-P-F species solid sawn or NORDIC-LAM<sup>®</sup> header.
- 3) Factored uplift resistances have been increased 15% for short-term loads such as wind and earthquake; reduce for other load durations in accordance with the code.
- 4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 10d nails are 0.148" dia. x 3" long.

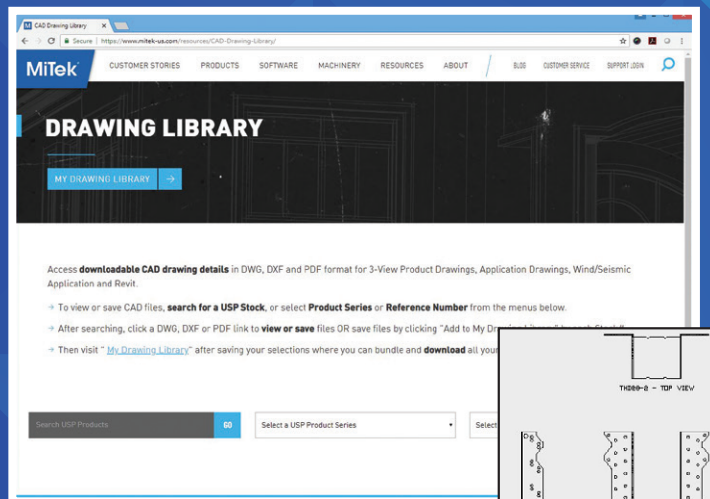
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