

EWP PRODUCT GUIDE

For Use With Products Manufactured by

Integrity 

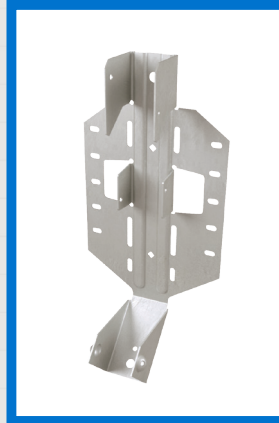
PREMIUM STRUCTURAL ENGINEERED WOOD PRODUCTS



TH017118



THF12514



LSSH179



SKH1720L

MiTek[®]

1-800-328-5934
MiTek-US.com

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

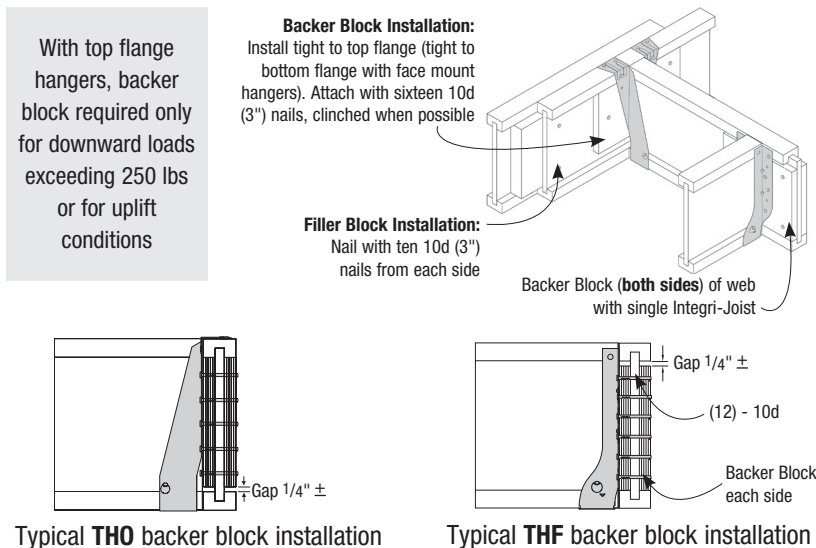
- See current MiTek USP Product Catalog for General Notes, Warranty, and installation information for hanger models, joist sizes, and header situations not shown.
- Loads listed address hanger/header/fastener limitations assuming header material is Douglas Fir-Larch, Southern Pine, or LVL manufactured in the U.S. Joist reaction should be checked by a qualified designer to ensure proper hanger selection.
- Uplift loads have been increased 60% 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 allowable loads shown in this guide, 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 guide, 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 guide refer to common wire nails, unless noted otherwise.
- The allowable loads shown in this guide are based on Allowable Stress Design methodology.
- **Multiple I-Joist Plies:** Fasten together multiple plies of wood I-Joists, in accordance with the manufacturer's installation guidelines, such that the joists act as a single unit.
- **Sloped I-Joists:** Use hangers with sloped seats and beveled web stiffeners whenever the slope exceeds the following: 1/2:12 for seat bearing lengths of 2 1/2" or less; 3/8:12 for bearing lengths between 2 1/2" and 3 1/2"; and 1/4:12 for bearing lengths in excess of 3 1/2".

Backer Blocks – Pattern the nails used to install backer blocks or web stiffeners in wood I-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 I-Joists acting

as the header, or supporting member. Install in accordance with the Integrity Engineered Wood Products installation guidelines. The nails used to install hangers mounted to an I-Joist header must penetrate through the web and into the backer block on the opposite side.



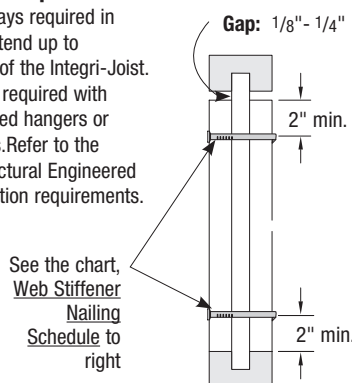
Flange Width	Depth	Backer Block		Filler Block Size
		Thickness Required	Minimum ¹ Depth	
1-3/4"	9-1/2"	23/32"	5-1/2"	1-3/8" x 6" high
	11-7/8"			1-3/8" x 8" high
	14"			1-3/8" x 10" high
	16"			1-3/8" x 12" high
2-1/16"	9-1/2"	7/8"	5-1/2"	1-3/4" x 6" high
	11-7/8"			1-3/4" x 8" high
	14"			1-3/4" x 10" high
	16"			1-3/4" x 12" high
2-5/16"	9-1/2"	1"	5-1/2"	2" x 6" high
	11-7/8"			2" x 8" high
	14"			2" x 10" high
	16"			2" x 12" high
2-1/2"	9-1/2"	1-1/8"	5-1/2"	2-1/8" x 6" high
	11-7/8"			2-1/8" x 8" high
	14"			2-1/8" x 10" high
	16"			2-1/8" x 12" high
3-1/2"	11-7/8"	1-1/2"	7-1/4"	3" x 8" high
	14"			3" x 10" high
	16"			3" x 12" high

1) For face-mount hangers use net joist depth minus 3-1/4".

Web Stiffener Attachment

Web Stiffeners may be required as noted below:

- Web stiffeners are always required in hangers that do not extend up to support the top flange of the Integri-Joist. Web stiffeners may be required with certain sloped or skewed hangers or to achieve uplift values. Refer to the Integrity Premium Structural Engineered Wood Products installation requirements.



Web Stiffener Nailing Schedule

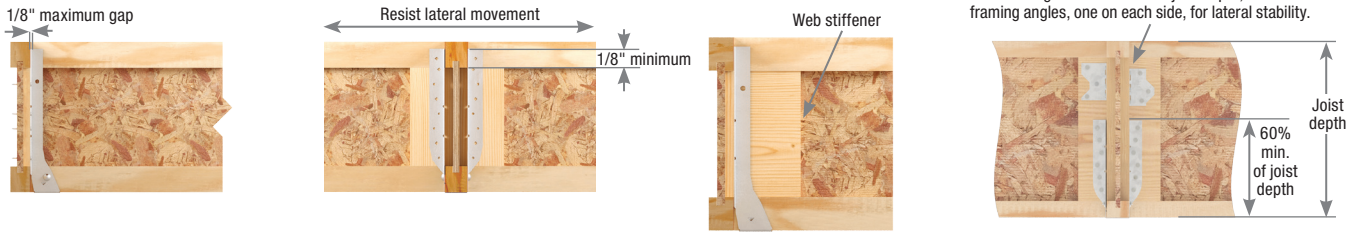
Joist Series	Joist Width	Joist Depth	Minimum Stiffener Size	Nails				
IJ-20 & IJ-50	1-3/4"	9-1/2"	19/32" x 2-5/16"	(4) 8d				
		11-7/8"						
		14"						
		16"						
IJ-45	2-1/16"	9-1/2"	3/4" x 2-5/16"	(4) 8d				
		11-7/8"						
		14"						
		16"						
IJ-40, IJ-47, IJ-60, IJ-70, IJ-77	2-5/16"	9-1/2"	1" x 2-5/16"	(4) 8d				
		11-7/8"						
		14"						
		16"						
		18"						
		20"						
IJ-80M & IJ-90	3-1/2"	9-1/2"	1-1/2" x 2-5/16"	(4) 10d				
		11-7/8"						
		14"						
		16"						
IJ-77W	2-1/2"	9-1/2"	1" x 2-5/16"	(4) 8d				
		11-7/8"						
		14"						
		16"						
IJ-77W	2-1/2"	18"	1" x 2-5/16"	(4) 8d				
		20"						
		22"						
		24"						
		IJ-80M & IJ-90			3-1/2"	18"	1-1/2" x 2-5/16"	(4) 10d
						20"		
22"								
24"								

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.

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

MiTek recommends that hangers for joist **with web stiffeners** should



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

Nailer Installations

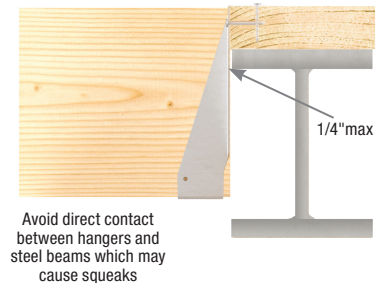
Correct Hanger Attachment to Nailer

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.

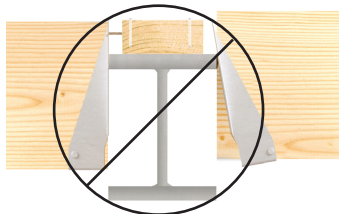
Nailer Sized Correctly

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.

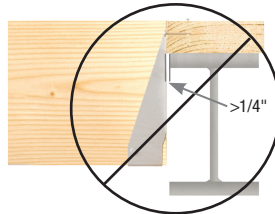


Wrong Nailer Size Causes Component Failure



! Too Narrow

Top flange not fully supported can cause nail break-out. 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" maximum per side.



! Too Thin

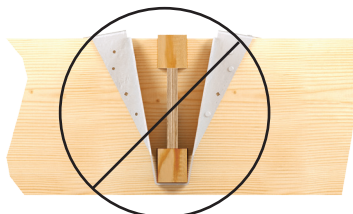
Top flange nailing cannot fully penetrate nailer, causing reduced allowable loads. Never use hangers which require multiple face nails since the allowable loads are dependent on all nail holes being used.

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

Joist Height	Adjustable Height								Skewed 45° Hangers							
	USP Stock No. ^{1,7,9}	D Dim ¹¹	Fastener Schedule ⁴				Down 100% ²	USP Stock No. ^{1,6,7}	D Dim ¹¹	Fastener Schedule ⁴				Uplift 160% ³	Down 100% ²	
			Header		Joist					Min / Max	Header		Joist			
			Qty	Type	Qty	Type					Qty	Type	Qty			Type
IJ-20 & IJ-50 Joist Width = 1-3/4"																
9-1/2	MSH1722 ¹²	1-3/4	6	10d	4	10d x 1-1/2	2335	SKH1720L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
11-7/8	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	2335	SKH1720L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
14	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	2335	SKH1724L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
16	MSH1722	1-3/4	6	10d	4	10d x 1-1/2	2335	SKH1724L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
IJ-45 Joist Width = 2-1/16"																
9-1/2	MSH2022 ¹²	1-3/4	6	10d	4	10d	2335	SKH2020L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
11-7/8	MSH2022	1-3/4	6	10d	4	10d	2335	SKH2020L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
14	MSH2022	1-3/4	6	10d	4	10d	2335	SKH2024L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
16	MSH2022	1-3/4	6	10d	4	10d	2335	SKH2024L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
IJ-40, IJ-47, IJ-60 & IJ-70 Joist Width = 2-5/16"																
9-1/2	MSH2322 ¹²	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
11-7/8	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
14	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
16	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
18	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
20	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
IJ-77w Joist Width = 2-1/2"																
9-1/2	MSH322 ¹²	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
11-7/8	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2520L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
14	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
16	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2524L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
18	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
20	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
22	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
24	MSH322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
See current MiTek USP Product Catalog for specialty hanger options																
IJ-77 Joist Width = 2-5/16"																
9-1/2	MSH2322 ¹²	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
11-7/8	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2320L/R	1-7/8	--	14	10d	10	10d x 1-1/2	1530	1650
14	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
16	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
18	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	SKH2324L/R	1-7/8	--	16	10d	10	10d x 1-1/2	1530	1890
20	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
22	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
24	MSH2322	1-3/4	6	10d	4	10d x 1-1/2	2175	--	--	--	--	--	--	--	--	
See current MiTek USP Product Catalog for specialty hanger options																
IJ-80M & IJ-90 Joist Width = 3-1/2"																
9-1/2	MSH422	1-3/4	6	10d	6	10d	2355	HD410_SK45L/R_BV ^{5,10}	2-1/2	Min 14 Max 20	16d	6 10	10d	880 1465	2155 3080	
11-7/8	MSH422	1-3/4	6	10d	6	10d	2355	HD410_SK45L/R_BV ^{5,10}	2-1/2	Min 14 Max 20	16d	6 10	10d	880 1465	2155 3080	
14	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{5,10}	2-1/2	Min 18 Max 26	16d	8 12	10d	1165 1755	2770 4005	
16	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{5,10}	2-1/2	Min 18 Max 26	16d	8 12	10d	1165 1755	2770 4005	
18	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{5,10}	2-1/2	Min 18 Max 26	16d	8 12	10d	1165 1755	2770 4005	
20	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{5,10}	2-1/2	Min 18 Max 26	16d	8 12	10d	1165 1755	2770 4005	
22	MSH422	1-3/4	6	10d	6	10d	2355	--	--	--	--	--	--	--	--	
24	MSH422	1-3/4	6	10d	6	10d	2355	--	--	--	--	--	--	--	--	
See current MiTek USP Product Catalog for specialty hanger options																

- 1) Shaded hangers require bearing/web stiffeners at joist ends.
- 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or glulam beam, Integri-Lam™ Joists, or Integri-Lam™ LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4) 10d x 1-1/2 nails are 0.148" dia. by 1-1/2" long, 10d nails are 0.148" dia. by 3" long, and 16d nails are 0.162" dia. by 3-1/2" long.
- 5) Bevel cut required on end of joist to achieve design loads.
- 6) For additional sizes, stock numbers, and modifications not shown, refer to MiTek USP's Product Catalog.
- 7) Hangers utilizing 16d nails are not compatible with I-joist headers.
- 8) Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.
- 9) MSH allowable loads 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 USP Product Catalog.
- 10) Hangers are special order. Contact MiTek for pricing and lead times.
- 11) D Dim is the length of the hanger seat.
- 12) Flanges on the bucket of the hanger may extend above the top of the joist.



MSH



SKH_L
left shown

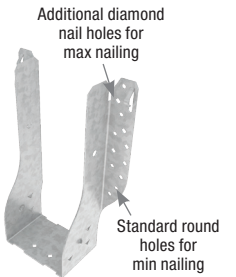
Joist Height	Top Mount Hangers ^{4,7}								Face Mount Hangers								
	USP Stock No. ^{1,6}	D Dim ⁸	Fastener Schedule ⁵				Uplift 160% ³	Down 100% ²	USP Stock No. ^{1,6}	D Dim ⁸	Min/Max	Fastener Schedule ⁵				Uplift 160% ³	Down 100% ²
			Header		Joist							Header		Joist			
			Qty	Type	Qty	Type						Qty	Type	Qty	Type		
Double IJ-20 & IJ-50 Joist Width = 3-1/2"																	
9-1/2	THO35950	2-3/8	10	10d	2	10d x 1-1/2	230	2370	IHF35925	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
11-7/8	THO35118	2-3/8	10	10d	2	10d x 1-1/2	230	2525	IHF35112	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
14	THO35140	2-3/8	12	10d	2	10d x 1-1/2	230	2400	IHF3514	2-1/2	Min 12 Max 28	10d 16d	2	10d x 1-1/2	330	1500 4115	
16	THO35160	2-3/8	12	10d	2	10d x 1-1/2	230	2400	IHF3516	2-1/2	Min 14 Max 30	10d 16d	2	10d x 1-1/2	330	1750 4410	
Double IJ-45 Joist Width = 4-1/8"																	
9-1/2	THO20950-2	3	10	16d	6	10d	1135	2920	IHF20925-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
11-7/8	THO20118-2	3	10	16d	6	10d	1135	2920	IHF20112-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
14	THO20140-2	3	10	16d	6	10d	1145	3640	IHF2014-2	2-1/2	Min 12 Max 28	10d 16d	2	10d x 1-1/2	330	1500 3965	
16	THO20160-2	3	10	16d	6	10d	1145	3640	IHF2014-2	2-1/2	Min 12 Max 28	10d 16d	2	10d x 1-1/2	330	1500 3965	
Double IJ-40, IJ-47, IJ-60 & IJ-70 Joist Width = 4-5/8"																	
9-1/2	THO23950-2	3	10	16d	6	10d	1145	3640	IHF23925-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
11-7/8	THO23118-2	3	10	16d	6	10d	1145	3640	THF23118-2	2-1/2	-- 16	10d	6	10d	1135	1890	
14	THO23140-2	3	12	16d	6	10d	1145	4420	THF23140-2	2-1/2	-- 20	10d	6	10d	1275	2660	
16	THO23160-2	3	12	16d	6	10d	1145	4420	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
18	THO23180-2	3	14	16d	6	10d	1145	5000	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
20	THO23200-2	3	14	16d	6	10d	1145	5000	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
Double IJ-77w Joist Width = 5"																	
9-1/2	THO25950-2	3	10	16d	6	10d	1145	3640	IHF25925-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
11-7/8	THO25118-2	3	10	16d	6	10d	1145	3640	IHF25112-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
14	THO25140-2	3	12	16d	6	10d	1145	4420	THF25140-2	2-1/2	-- 20	10d	6	10d	1235	2660	
16	THO25160-2	3	12	16d	6	10d	1145	4420	THF25160-2	2-1/2	-- 24	10d	6	10d	1235	3190	
18	THO25180-2	3	14	16d	6	10d	1145	5660	THF25160-2	2-1/2	-- 24	10d	6	10d	1235	3190	
20	THO25200-2	3	14	16d	6	10d	1145	5660	THF25160-2	2-1/2	-- 24	10d	6	10d	1235	3190	
22	--	--	--	--	--	--	--	--	THF25160-2	2-1/2	-- 24	10d	6	10d	1235	3190	
24	--	--	--	--	--	--	--	--	THF25160-2	2-1/2	-- 24	10d	6	10d	1235	3190	
Double IJ-77 Joist Width = 4-5/8"																	
9-1/2	THO23950-2	3	10	16d	6	10d	1145	3640	IHF23925-2	2-1/2	Min 10 Max 24	10d 16d	2	10d x 1-1/2	330	1250 3530	
11-7/8	THO23118-2	3	10	16d	6	10d	1145	3640	THF23118-2	2-1/2	-- 16	10d	6	10d	1135	1890	
14	THO23140-2	3	12	16d	6	10d	1145	4420	THF23140-2	2-1/2	-- 20	10d	6	10d	1275	2660	
16	THO23160-2	3	12	16d	6	10d	1145	4420	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
18	THO23180-2	3	14	16d	6	10d	1145	5000	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
20	THO23200-2	3	14	16d	6	10d	1145	5000	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
22	--	--	--	--	--	--	--	--	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
24	--	--	--	--	--	--	--	--	THF23160-2	2-1/2	-- 24	10d	6	10d	1275	3190	
Double IJ-80M & IJ-90 Joist Width = 7"																	
9-1/2	BPH7195	3	10	16d	6	10d	1275	3100	HD7100	2-1/2	Min 14 Max 18	16d 16d	6 8	16d 16d	1305 1845	2155 2770	
11-7/8	BPH71118	3	10	16d	6	10d	1275	3075	HD7120	2-1/2	Min 16 Max 22	16d 16d	6 8	16d 16d	1305 1845	2465 3390	
14	BPH7114	3	10	16d	6	10d	1275	3075	HD7140	2-1/2	Min 20 Max 26	16d 16d	8 12	16d 16d	1845 2765	3080 4005	
16	BPH7116	3	10	16d	6	10d	1275	3075	HD7160	2-1/2	-- 24	16d	8	10d	1560	3695	
18	BPH7118	3	10	16d	6	10d	1275	3075	HD7160	2-1/2	-- 24	16d	8	10d	1560	3695	
20	BPH7120	3	10	16d	6	10d	1275	3075	HD7160	2-1/2	-- 24	16d	8	10d	1560	3695	
22	BPH7122	3	10	16d	6	10d	1275	3075	HD7160	2-1/2	-- 24	16d	8	10d	1560	3695	
24	BPH7124	3	10	16d	6	10d	1275	3075	HD7160	2-1/2	-- 24	16d	8	10d	1560	3695	



THO Double



BPH



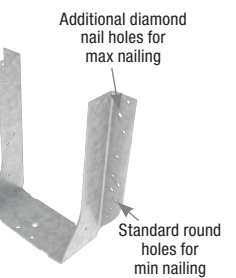
Additional diamond nail holes for max nailing

Standard round holes for min nailing

IHF



THF Double



Additional diamond nail holes for max nailing

Standard round holes for min nailing

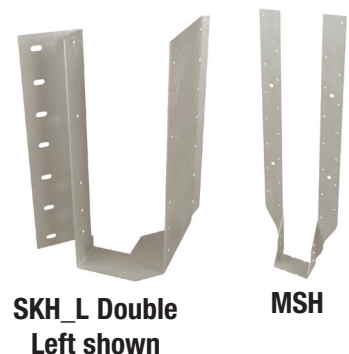
HD

- 1) Shaded hangers require bearing/web stiffeners at joist ends. Web stiffeners may be required for non-shaded hangers by Integrity Premium Structural Engineered Wood Products. See notes on page 2.
- 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or glulam beam, or Integri-Lam™ LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4) Top Mount Hangers require minimum 3" header thickness for THO series hangers; 3-1/2" minimum header thickness for all other stock numbers.

- 5) 10d x 1-1/2 nails are 0.148" dia. by 1-1/2" long, 10d nails are 0.148" dia. by 3" long, and 16d nails are 0.162" dia. by 3-1/2" long. 16d sinkers (0.148" dia.) by 3-1/4" long may be substituted for 10d common nails with no load reduction.
- 6) Hangers utilizing 16d nails are not compatible with I-joist headers.
- 7) For top mount hangers supported by I-joist headers with a flange thickness less than 1-1/2", consult MiTek and Integrity Premium Structural Engineered Wood Products for hanger limitations.
- 8) D Dim is the length of the hanger seat.

Joist Height	Adjustable Height							Skewed 45° Hangers								Uplift 160% ³	Down 100% ²						
	USP Stock No. ^{1,5,6,9}	D Dim ¹⁰	Fastener Schedule ⁴				Down 100% ²	USP Stock No. ^{1,5,6}	D Dim ¹⁰	Min/Max	Fastener Schedule ⁴												
			Header		Joist						Header		Joist										
			Qty	Type	Qty	Type					Qty	Type	Qty	Type									
Double IJ-20 & IJ-50																							
Joist Width = 3-1/2"																							
9-1/2	MSH422	1-3/4	6	10d	6	10d	2355	HD410_SK45L/R_BV ^{7,8}	2-1/2	Min	14	16d	6	10d	880	2155							
										Max	20		10		1465	3080							
11-7/8	MSH422	1-3/4	6	10d	6	10d	2355	HD410_SK45L/R_BV ^{7,8}	2-1/2	Min	14	16d	6	10d	880	2155							
										Max	20		10		1465	3080							
14	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{7,8}	2-1/2	Min	18	16d	8	10d	1165	2770							
										Max	26		12		1755	4005							
16	MSH422	1-3/4	6	10d	6	10d	2355	HD414_SK45L/R_BV ^{7,8}	2-1/2	Min	18	16d	8	10d	1165	2770							
										Max	26		12		1755	4005							
Double IJ-45																							
Joist Width = 4-1/8"																							
9-1/2	See current MiTek USP Product Catalog for specialty hanger options							SKH2020L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
11-7/8								SKH2020L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
14								SKH2024L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
16								SKH2024L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
20								SKH2024L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
Double IJ-40, IJ-47, IJ-60 & IJ-70																							
Joist Width = 4-5/8"																							
9-1/2	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2320L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
11-7/8	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2320L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
14	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
16	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
18	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
20	MSH2322-2	1-3/4	6	10d	4	10d	2355	--	--	--	--	--	--	--	--								
Double IJ-77w																							
Joist Width = 5"																							
9-1/2	MSH2622-2	1-3/4	6	10d	4	10d	2355	SKH2520L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
11-7/8	MSH2622-2	1-3/4	6	10d	4	10d	2355	SKH2520L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
14	MSH2622-2	1-3/4	6	10d	4	10d	2355	SKH2524L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
16	MSH2622-2	1-3/4	6	10d	4	10d	2355	SKH2524L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
18	MSH2622-2	1-3/4	6	10d	4	10d	2355	SKH2524L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
20	MSH2622-2	1-3/4	6	10d	4	10d	2355	See current MiTek USP Product Catalog for specialty hanger options															
22	MSH2622-2	1-3/4	6	10d	4	10d	2355																
24	MSH2622-2	1-3/4	6	10d	4	10d	2355																
Double IJ-77																							
Joist Width = 4-5/8"																							
9-1/2	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2320L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
11-7/8	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2320L/R-2 ⁷	3-1/2	--	14	10d	10	10d	1645	1710							
14	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
16	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
18	MSH2322-2	1-3/4	6	10d	4	10d	2355	SKH2324L/R-2 ⁷	3-1/2	--	16	10d	10	10d	1680	1950							
20	MSH2322-2	1-3/4	6	10d	4	10d	2355	See current MiTek USP Product Catalog for specialty hanger options															
22	MSH2322-2	1-3/4	6	10d	4	10d	2355																
24	MSH2322-2	1-3/4	6	10d	4	10d	2355																
Double IJ-80M & IJ-90																							
Joist Width = 7"																							
9-1/2	MSH422-2 ¹²	2	8	16d	6	16d	3740	HD7100_SK45L/R_BV ^{7,8}	2-1/2	Min	14	16d	6	16d	980	2155							
										Max	18		8		1385	2770							
11-7/8	MSH422-2	2	8	16d	6	16d	3740	HD7120-SK45L/R_BV ^{7,8}	2-1/2	Min	16	16d	6	16d	980	2465							
										Max	22		8		1385	3390							
14	MSH422-2	2	8	16d	6	16d	3740	HD7140-SK45L/R_BV ^{7,8}	2-1/2	Min	20	16d	8	16d	1385	3080							
										Max	26		12		2075	4005							
16	MSH422-2	2	8	16d	6	16d	3740	HD7160-SK45L/R_BV ^{7,8}	2-1/2	--	24	16d	8	10d	1170	3695							
18	MSH422-2	2	8	16d	6	16d	3740	HD7180-SK45L/R_BV ^{7,8}	2-1/2	--	28	16d	8	10d	1170	4310							
20	MSH422-2	2	8	16d	6	16d	3740	HD7180-SK45L/R_BV ^{7,8}	2-1/2	--	28	16d	8	10d	1170	4310							
22	MSH422-2	2	8	16d	6	16d	3740	HD7180-SK45L/R_BV ^{7,8}	2-1/2	--	28	16d	8	10d	1170	4310							
24	MSH422-2	2	8	16d	6	16d	3740	HD7180-SK45L/R_BV ^{7,8}	2-1/2	--	28	16d	8	10d	1170	4310							

- 1) Shaded hangers require bearing/web stiffeners at joist ends.
- 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or glulam beam, Integri-Lam™ Joists, or Integri-Lam™ LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4) 10d x 1-1/2 nails are 0.148" dia. by 1-1/2" long, 10d nails are 0.148" dia. by 3" long, and 16d nails are 0.162" dia. by 3-1/2" long. 16d sinkers (0.148" dia.) by 3-1/4" long may be substituted for 10d common nails with no load reduction.
- 5) For additional sizes, stock numbers, and modifications not shown, refer to MiTek's USP Product Catalog.
- 6) Hangers utilizing 16d nails are not compatible with I-joist headers.
- 7) Bevel cut required on end of joist to achieve design loads.
- 8) Hangers are special order. Consult MiTek for pricing and lead times.
- 9) MSH allowable loads 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 USP Product Catalog.
- 10) D Dim is the length of the hanger seat.
- 11) Flanges on the bucket of the hanger may extend above the top of the joist.



Joist Height	Top Mount Hangers ³								Face Mount Hangers								
	USP Stock No. ⁶	D Dim ⁸	Fastener Schedule ⁴				Uplift 160% ²	Down 100% ¹	USP Stock No.	D Dim ⁸	Fastener Schedule ⁴				Uplift 160% ²	Down 100% ¹	
			Header		Joist						Header		Joist				
			Qty	Type	Qty	Type					Qty	Type	Qty	Type			
1-3/4" Integri-Lam™ LVL																	
Header Width = 1-3/4"																	
9-1/4	BPH17925	2-3/8	10	16d	4	10d x 1-1/2	850	2970	HD17925	2-1/2	Min	18	16d	6	10d x 1-1/2	1170	2770
	PHXU17925	3-1/4	8	16d	6	10d x 1-1/2	930	4350	HUS179 ⁵	3	Max	24	16d	10	10d x 1-1/2	1900	3695
9-1/2	TH017950	2	6	10d	2	10d x 1-1/2	230	1235	HD17925	2-1/2	Min	18	16d	6	10d x 1-1/2	1170	2770
	PHXU1795	3-1/4	8	16d	6	10d x 1-1/2	930	4350	HUS179 ⁵	3	Max	24	16d	10	10d x 1-1/2	1900	3695
11-1/4	BPH17112	2-3/8	10	16d	4	10d x 1-1/2	850	2970	HD17112	2-1/2	Min	22	16d	6	10d x 1-1/2	1170	3390
	PHXU17112	3-1/4	8	16d	6	10d x 1-1/2	930	4350	HUS179 ⁵	3	Max	30	16d	12	10d x 1-1/2	1900	4320
11-7/8	TH017118	2	6	10d	2	10d x 1-1/2	230	1235	HD17112	2-1/2	Min	22	16d	6	10d x 1-1/2	1170	3390
	PHXU17118	3-1/4	8	16d	6	10d x 1-1/2	930	4350	HUS179 ⁵	3	Max	30	16d	12	10d x 1-1/2	1900	4320
14	BPH1714	2-3/8	10	16d	4	10d x 1-1/2	850	2970	HD1714	2-1/2	Min	28	16d	8	10d x 1-1/2	1550	3790
	PHXU1714	3-1/4	8	16d	6	10d x 1-1/2	930	4350	HUS179 ⁵	3	Max	36	16d	14	10d x 1-1/2	1900	4580
16	BPH1716	2-3/8	10	16d	4	10d x 1-1/2	850	2970	HD1714	2-1/2	Min	28	16d	8	10d x 1-1/2	1550	3790
	--	--	--	--	--	--	--	--	HD1714	2-1/2	Max	36	16d	14	10d x 1-1/2	1900	4580
18	--	--	--	--	--	--	--	--	HD1714	2-1/2	Min	28	16d	8	10d x 1-1/2	1550	3790
	--	--	--	--	--	--	--	--	HD1714	2-1/2	Max	36	16d	14	10d x 1-1/2	1900	4580
2 Ply 1-3/4" Integri-Lam™ LVL																	
Header Width = 3-1/2"																	
9-1/4	HBPH35925	3-1/2	22	16d	10	16d	2705	6310	THD410	3	--	38	16d	20	10d	3905	5850
	HLBH35925	6	15	NA16D-RS	6	16d	1420	10045	THDH410 ⁵	4	--	46	16d	12	16d	4445	9020
9-1/2	HBPH3595	3-1/2	22	16d	10	16d	2705	6310	THD410	3	--	38	16d	20	10d	3905	5850
	HLBH3595	6	15	NA16D-RS	6	16d	1420	10045	THDH410 ⁵	4	--	46	16d	12	16d	4445	9020
11-1/4	HBPH35112	3-1/2	22	16d	10	16d	2705	6310	THD410	3	--	38	16d	20	10d	3905	5850
	HLBH35112	6	15	NA16D-RS	6	16d	1420	10045	THDH412 ⁵	4	--	56	16d	14	16d	5260	9710
11-7/8	HBPH35118	3-1/2	22	16d	10	16d	2705	6310	THD410	3	--	38	16d	20	10d	3905	5850
	HLBH35118	6	15	NA16D-RS	6	16d	1420	10045	THDH412 ⁵	4	--	56	16d	14	16d	5260	9710
14	HBPH3514	3-1/2	22	16d	10	16d	2705	6310	THD410	3	--	38	16d	20	10d	3905	5850
	HLBH3514	6	15	NA16D-RS	6	16d	1420	10045	THDH414 ⁵	4	--	66	16d	16	16d	5655	11760
16	HBPH3516	3-1/2	22	16d	10	16d	2705	6310	THD412	3	--	48	16d	20	10d	3905	7045
	HLBH3516	6	15	NA16D-RS	6	16d	1420	10045	THDH414 ⁵	4	--	66	16d	16	16d	5655	11760
18	HBPH3518	3-1/2	22	16d	10	16d	2705	6310	THD412	3	--	48	16d	20	10d	3905	7045
	HLBH3518	6	15	NA16D-RS	6	16d	1420	10045	THDH414 ⁵	4	--	66	16d	16	16d	5655	11760

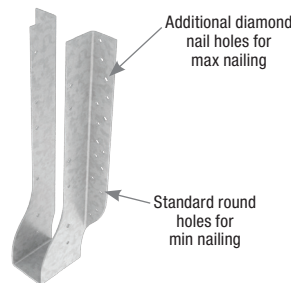
- 1) Loads listed are based on hanger attachment to a Integri-Lam™ LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek's Product Catalog for details.
- 2) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 3) Top Mount Hangers require a minimum 3" header thickness for TH0 series hangers; 3-1/2" minimum header thickness for all other stock numbers.
- 4) 10d x 1-1/2 nails are 0.148" dia. by 1-1/2" long, 10d nails are 0.148" dia. by 3" long, and 16d nails are 0.162" dia. by 3-1/2" long.
16d sinkers (0.148" dia.) by 3-1/4" long may be substituted for 10d common nails with no load reduction.
- 5) Joist nails need to be toe nailed at a 30° to 45° angle to achieve listed loads for THDH and HUS models.
- 6) For additional sizes, stock numbers, and modifications not shown, refer to MiTek's USP Product Catalog.
- 7) Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.
- 8) D Dim is the length of the hanger seat.



TH0



HBPH



HD



HUS

Joist Height	Top Mount Hangers ³								Face Mount Hangers								
	USP Stock No.	D Dim ⁷	Fastener Schedule ⁴				Uplift 160% ²	Down 100% ¹	USP Stock No.	D Dim ⁷	Fastener Schedule ⁴				Uplift 160% ²	Down 100% ¹	
			Header		Joist						Header		Joist				
			Qty	Type	Qty	Type					Qty	Type	Qty	Type			
3 Ply 1-3/4" Integri-Lam™ LVL																	
Header Width = 5-1/4"																	
9-1/4	HBPH55925	3-1/2	22	16d	10	16d	2705	6235	THD610	3	--	38	16d	20	10d	4010	6535
	HLBH55925	6	15	NA16D-RS	6	16d	1580	10045	THDH610 ⁵	4	--	46	16d	16	16d	5260	9020
9-1/2	HBPH5595	3-1/2	22	16d	10	16d	2705	6235	THD610	3	--	38	16d	20	10d	4010	6535
	HLBH5595	6	15	NA16D-RS	6	16d	1580	10045	THDH610 ⁵	4	--	46	16d	16	16d	5260	9020
11-1/4	HBPH55112	3-1/2	22	16d	10	16d	2705	6235	THD610	3	--	38	16d	20	10d	4010	6535
	HLBH55112	6	15	NA16D-RS	6	16d	1580	10045	THDH612 ⁵	4	--	56	16d	20	16d	5260	9740
11-7/8	HBPH55118	3-1/2	22	16d	10	16d	2705	6235	THD610	3	--	38	16d	20	10d	4010	6535
	HLBH55118	6	15	NA16D-RS	6	16d	1580	10045	THDH612 ⁵	4	--	56	16d	20	16d	5260	9740
14	HBPH5514	3-1/2	22	16d	10	16d	2705	6235	THD610	3	--	38	16d	20	10d	4010	6535
	HLBH5514	6	15	NA16D-RS	6	16d	1580	10045	THDH614 ⁵	4	--	66	16d	22	16d	5655	11760
16	HBPH5516	3-1/2	22	16d	10	16d	2705	6235	THD612	3	--	48	16d	20	10d	4010	8255
	HLBH5516	6	15	NA16D-RS	6	16d	1580	10045	THDH614 ⁵	4	--	66	16d	22	16d	5655	11760
18	HBPH5518	3-1/2	22	16d	10	16d	2705	6235	THD612	3	--	48	16d	20	10d	4010	8255
	HLBH5518	6	15	NA16D-RS	6	16d	1580	10045	THDH614 ⁵	4	--	66	16d	22	16d	5655	11760
4 Ply 1-3/4" Integri-Lam™ LVL																	
Header Width = 7"																	
9-1/4	HBPH71925	3-1/2	22	16d	10	16d	2705	6235	THD7210	3	--	38	16d	20	10d	4010	6535
	HLBH71925	6	15	NA16D-RS	6	16d	1580	10045	THDH7210 ⁵	4	--	46	16d	12	16d	4445	9020
9-1/2	HBPH7195	3-1/2	22	16d	10	16d	2705	6235	THD7210	3	--	38	16d	20	10d	4010	6535
	HLBH7195	6	15	NA16D-RS	6	16d	1580	10045	THDH7210 ⁵	4	--	46	16d	12	16d	4445	9020
11-1/4	HBPH71112	3-1/2	22	16d	10	16d	2705	6235	THD7210	3	--	38	16d	20	10d	4010	6535
	HLBH71112	6	15	NA16D-RS	6	16d	1580	10045	THDH7212 ⁵	4	--	56	16d	14	16d	5260	9020
11-7/8	HBPH71118	3-1/2	22	16d	10	16d	2705	6235	THD7210	3	--	38	16d	20	10d	4010	6535
	HLBH71118	6	15	NA16D-RS	6	16d	1580	10045	THDH7212 ⁵	4	--	56	16d	14	16d	5260	9020
14	HBPH7114	3-1/2	22	16d	10	16d	2705	6235	THD7210	3	--	38	16d	20	10d	4010	6535
	HLBH7114	6	15	NA16D-RS	6	16d	1580	10045	THDH7214 ⁵	4	--	66	16d	16	16d	5655	11760
16	HBPH7116	3-1/2	22	16d	10	16d	2705	6235	HD7120	2-1/2	Min	16	16d	6	16d	1305	2465
										Max	22	16d	8	16d	1845	3390	
	HLBH7116	6	15	NA16D-RS	6	16d	1580	10045	THDH7214 ⁵	4	--	66	16d	16	16d	5655	11760
18	HBPH7118	3-1/2	22	16d	10	16d	2705	6235	HD7140	2-1/2	Min	20	16d	8	16d	1845	3080
										Max	26	16d	12	16d	2765	4005	
	HLBH7118	6	15	NA16D-RS	6	16d	1580	10045	THDH7214 ⁵	4	--	66	16d	16	16d	5655	11760

- 1) Loads listed are based on hanger attachment to a Integri-Lam™ LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek's USP Product Catalog for details.
- 2) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 3) Top Mount Hangers require a minimum 3" header thickness for THO series hangers; 3-1/2" minimum header thickness for all other stock numbers.
- 4) 10d nails are 0.148" dia. by 3" long, and 16d nails are 0.162" dia. by 3-1/2" long.
16d sinkers (0.148" dia.) by 3-1/4" long may be substituted for 10d common nails with no load reduction.
- 5) Joist nails need to be toe nailed at a 30° to 45° angle to achieve listed loads for THDH models.
- 6) Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.
- 7) D Dim is the length of the hanger seat.



PHXU



HLBH



THD



THDH

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:

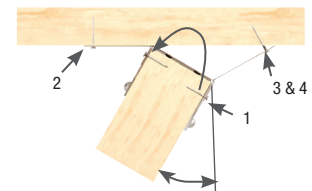
- Use all specified fasteners. (See LSSH Figure 1)

Steps:

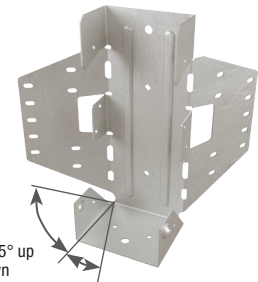
1. Position LSSH connector against plumb-cut end of joist. Fasten joist side flanges on both sides with 10d (0.148") x 1-1/2" nails. Bend seat up to fit against joist bottom and drive (1) 10d (0.148") x 1-1/2" nail through bottom seat into joist bottom flange. Drive (2) 10d (0.148") x 1-1/2" nail at downward angle through dimpled nailing guides.
 2. Lean connector and rafter end against ridge beam at desired position. Install 10d (0.148" x 3") or 16d (0.162" x 3-1/2") 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") or 16d (0.162" x 3-1/2") 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.



Typical LSSH installation



Skew to 45° maximum
LSSH Figure 1



Slope to 45° up or down
LSSH

Joist Height	USP Stock No. ^{1,6}	Installation Type	Fastener Schedule ⁴				DF	
			Header		Joist		Uplift ³ 160%	Down ² 100%
			Qty	Type	Qty	Type		
IJ-20 & IJ-50								
Joist Width = 1-3/4"								
9-1/2 – 14	LSSH179	Sloped Only	10	10d	7	10d x 1-1/2	880	1200
		Skewed Only or Sloped & Skewed	10	10d	7	10d x 1-1/2	880	1200
IJ-45								
Joist Width = 2-1/16"								
9-1/2 – 16	LSSH20	Sloped Only	10	10d	7	10d x 1-1/2	795	1200
		Skewed Only or Sloped & Skewed	10	10d	7	10d x 1-1/2	795	1200
IJ-40, IJ-47, IJ-60, IJ-70 & IJ-77								
Joist Width = 2-5/16"								
11-7/8 – 24	LSSH23	Sloped Only	10	10d	7	10d x 1-1/2	795	1200
		Skewed Only or Sloped & Skewed	10	10d	7	10d x 1-1/2	795	1200
IJ-77w								
Joist Width = 2-1/2"								
9-1/2 – 16	LSSH25	Sloped Only	18	16d	12	10d x 1-1/2	945	2095
		Skewed Only or Sloped & Skewed	14	16d	12	10d x 1-1/2	945	1610
IJ-80M & IJ-90								
Joist Width = 3-1/2"								
9-1/2 – 24	LSSH35	Sloped Only	18	16d	12	10d x 1-1/2	1310	2645
		Skewed Only or Sloped & Skewed	14	16d	12	10d x 1-1/2	1310	1610

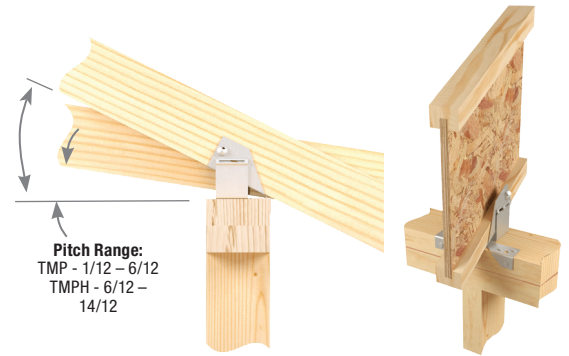
1) Shaded hangers require bearing/web stiffeners at joist ends.
 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or Integri-Lam™ LVL header. Loads are governed by test results; no further increase shall be permitted.
 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
 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.
 5) Hangers utilizing 16d nails are not compatible with I-joist headers.
 6) Supplemental lateral support connection recommended when hanger height is less than 60% of joist height.

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. The TMP automatically adjusts to pitches from 1/12 to 6/12 and the TMPH from 6/12 to 14/12.

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. Installing the **TMP** require driving specified nails through the opposing slots in the pocket. **TMPH** installation involves sliding the fulcrum until it supports the pocket at the desired pitch and nailing down through the fulcrum base into the top plate to lock the fulcrum into position.

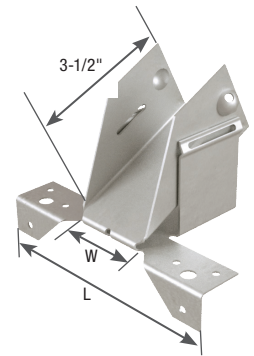


Typical TMP installation

TMP chart

Joist Height	USP Stock No.	Fastener Schedule ⁴				DF	
		Plate		Rafter		Uplift ³ 160%	Down ² 100%
		Qty	Type	Qty	Type		
IJ-20 & IJ-50		Joist Width = 1-3/4"					
All	TMP175	6	10d	4	10d x 1-1/2	250	1705
IJ-45		Joist Width = 2-1/16"					
All	TMP21	6	10d	4	10d x 1-1/2	250	1705
IJ-40, IJ-47, IJ-60, IJ-70 & IJ-77		Joist Width = 2-5/16"					
All	TMP23	6	10d	4	10d x 1-1/2	250	1705
IJ-77w		Joist Width = 2-1/2"					
All	TMP25	6	10d	4	10d x 1-1/2	250	1705
IJ-80M & IJ-90		Joist Width = 3-1/2"					
All	TMP4	6	10d	4	10d x 1-1/2	250	1705

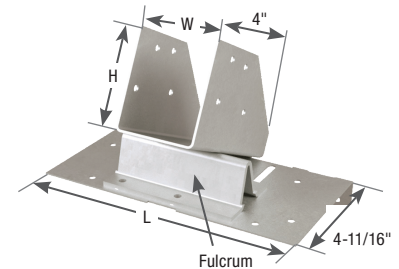
- 1) Bearing/web stiffeners may be required for hangers by Integrity Premium Structural Engineered Wood Products.
- 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or Integri-Lam™ LVL header. Loads are governed by test results; no further increase shall be permitted.
- 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 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.



TMP



Typical TMPH installation



TMPH

TMPH chart

Joist Height	USP Stock No. ¹	Fastener Schedule ⁴				DF										
		Plate		Rafter		According to Pitch ²										Uplift ³ 160%
		Top Qty	Side Qty	Type	Qty	Type	6/12	7/12	8/12	9/12	10/12	11/12	12/12	13/12	14/12	
IJ-20 & IJ-50		Joist Width = 1-3/4"														
All	TMPH175	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	260
IJ-45		Joist Width = 2-1/16"														
All	TMPH21	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	260
IJ-40, IJ-47, IJ-60, IJ-70 & IJ-77		Joist Width = 2-5/16"														
All	TMPH23	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	260
IJ-77w		Joist Width = 2-1/2"														
All	TMPH25	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	260
IJ-80M & IJ-90		Joist Width = 3-1/2"														
All	TMPH4	8	2	10d	8	10d x 1-1/2	3190	3290	3390	3140	2900	2710	2520	2230	1950	260

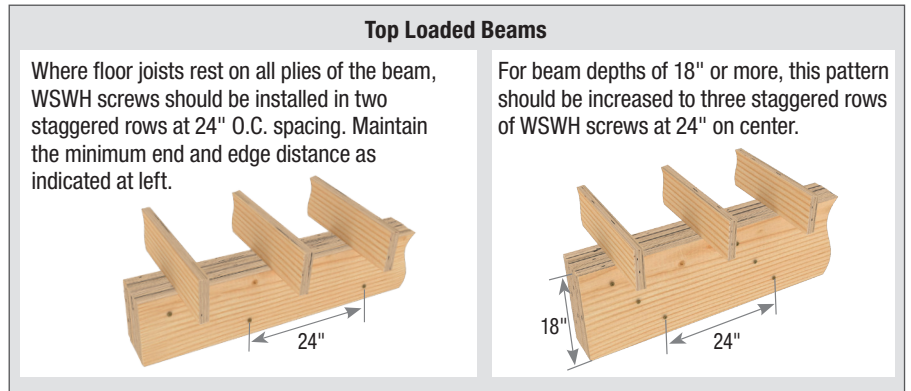
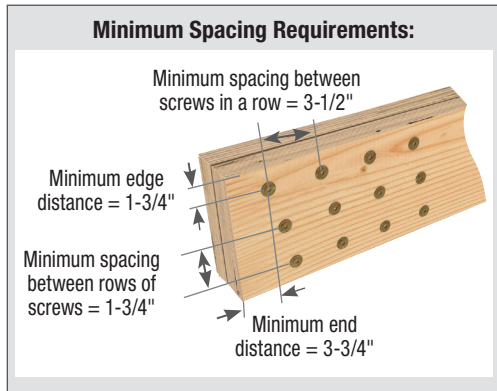
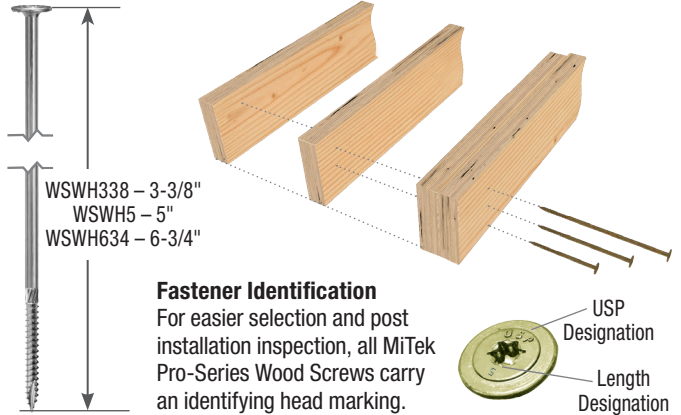
- 1) Bearing/web stiffeners are required for all Wood I-Joist installations.
- 2) Loads listed are based on hanger attachment to a DF-L or SP species solid sawn or Integri-Lam™ LVL header. Loads are governed by test results; no further increase shall be permitted.
- 3) Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 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.

WSWH Series Washer Head Screw Applications - Joining 2, 3, or 4 Ply Integri-Lam™ LVL Members

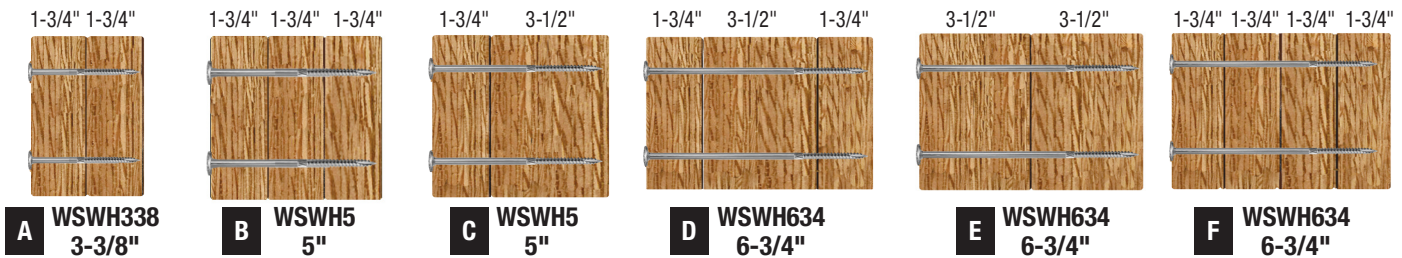


Installation:

- Using a standard 1/2" low speed/high torque drill, install screws into the side of the outermost ply. As the threads fully engage the final ply, allow the underside of the washer head to pull the plies firmly together. Washer head will install flush with the surface of the wood, but do not overdrive as this may damage the beam.
- Beams wider than 7" require special consideration by the design professional. The values in the table below do not apply.
- Excessively warped or curved LVL should never be forced into alignment by use of clamps, screws or bolts as splitting may occur, potentially decreasing the carrying capacity of the beam.
- A qualified designer or engineer should always be consulted for critical assemblies and fastening requirements.



Fastener Size Selection by Assembly Type



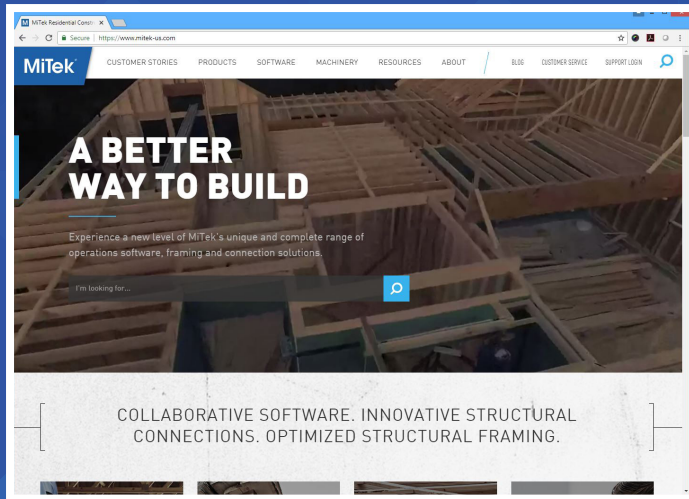
Side Loaded Beams – Where floor joists are joined to the side of the beam (typically using a joist hanger), this load chart must be used to establish the proper pattern based on the design load as determined by the engineer and noted on the plans.

Length (in)	MiTek USP Stock No.	No. of Rows	Spacing Between Screws in a Row (in)	Allowable Side Loads by Assembly Type (lbs/lineal ft) (See Graphics) ^{1,2,3,4}							
				A	B	C	D	E	F		
3-3/8	WSWH338	2	24	640	--	--	--	--	--		
			19.2	800							
			16	955							
		3	24	955	--	--	--	--	--		
			19.2	1195							
			16	1435							
5	WSWH5	2	24	--	535	535	--	--	--		
			19.2	--	670	670					
			16	--	805	805					
		3	24	--	805	805	--	--	--		
			19.2	--	1005	1005					
			16	--	1210	1210					
		6-3/4	WSWH634	2	24	--	--	--	475	715	475
					19.2	--	--	--	595	895	595
					16	--	--	--	715	1075	715
3	24			--	--	--	715	1075	715		
	19.2			--	--	--	895	1345	895		
	16			--	--	--	1075	1610	1075		

- 1) Allowable loads are derived from tested fastener values as reported in ICC-ES ESR #2761. (Visit icc-es.org)
- 2) The uniform loads in this table relate only to the capacity of the fastener to transfer shear loads between plies. The capacity of the EWP beam may be less and should be checked against the manufacturer's literature.
- 3) Values listed reflect 100% load duration. (CD=1.0) The designer may apply adjustment factors to increase or decrease these loads per the National Design Specification for Wood (NDS) based on conditions for each assembly.
- 4) Load values depicted assume all uniform load is applied to the outermost ply or point of entry for the screw.
- 5) To minimize rotation, 7" wide beams shall be side loaded only when loads are applied to both sides of the beam with the lesser loaded side bearing at least 25% of the overall design load.

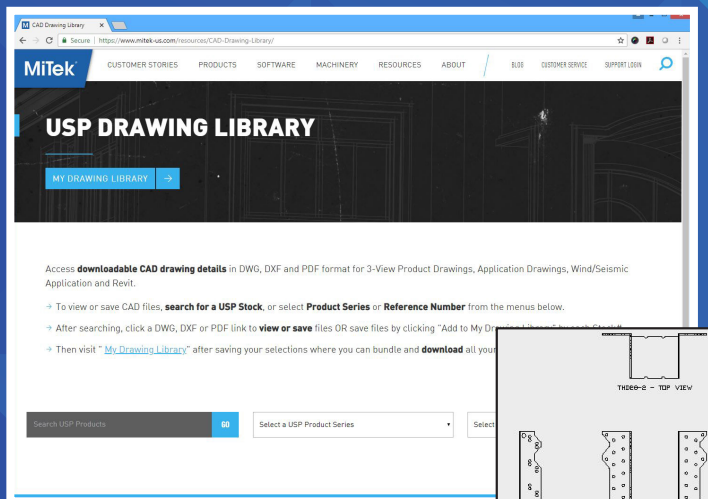
SPECIFICATION TOOLS

Available at [MiTek-US.com](https://www.mittek-us.com)



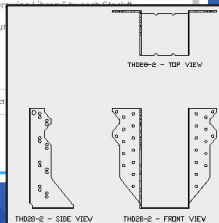
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